APPENDIX A CONNECTION ASSESSMENT

Engineering Connection Assessment

P2237 Forty Mile Wind Power Plant Connection

RES Forty Mile Wind LP

Date: April 28, 2022
Version: Final
Classification: Public

Role	Name	Date	Signature
Prepared	Jian Shang, P.Eng.	April 28, 2022	Jian
Reviewed	Myron Jin-Li, P.Eng.	April 28, 2022	Myron Jin-Li
Approved	Pravin Koshti, P.Eng.	April 28,2022	Pravin Koshti

PROFESSIONAL ENGINEER ALBERTA
JIAN SHANG
May 2, 2022
ID#: 154696

PERMIT TO PRACTICE
INDEPENDENT SYSTEM OPERATOR
RM SIGNATURE: Robert Dunbar
RM APEGA ID #: 86358
DATE: 2022-05-08
PERMIT NUMBER: P008200
The Association of Professional Engineers and Geoscientists of Alberta (APEGA)

NOTE:

The conclusions and recommendations in this report are based on the results presented in *Attachment A: Engineering Connection Assessment: Study Results*, which was prepared by a third party consultant in accordance with the AESO Connection Process.

The AESO has reviewed the *Engineering Connection Assessment: Study Results*, and finds it acceptable for the purpose of assessing the potential impacts of the proposed connection on the performance of the Alberta interconnected electric system.

Contents

Tables

Figures

Attachments

1 Introduction

This AESO Engineering Connection Assessment describes the engineering studies that were completed to assess the impact of the Project (as defined below) on the performance of the Alberta interconnected electric system (AIES). This report also provides the AESO's conclusions and recommendations based on the results of the engineering studies.

Attached to this Engineering Connection Assessment are the results of the engineering studies (see Attachment A) and the scope and methodology used to perform the studies (see Attachment A1 to Attachment A). These attachments provide details regarding the technical criteria, assumptions, and methods for performing these engineering studies, and the results of the engineering studies.

1.1 Project Overview

RES Forty Mile Wind LP (Market Participant) has submitted a request for system access service to the Alberta Electric System Operator (AESO) to connect its approved Forty Mile Wind Power Plant (Facility) to the AIES. The Facility is located in the AESO planning area of Medicine Hat (Area 4). The Facility includes an approved collector substation, designated as Forty Mile 516S substation.

The Market Participant's request includes: a request for a new system access service in the area, with a Rate STS, *Supply Transmission Service*, contract capacity of 266 MW and a Rate DTS, *Demand Transmission Service*, contract capacity of 2 MW; and a request for transmission development (collectively, the Project).

The scheduled in-service date (ISD) for the Project is September 1, 2023.

2 Assessment Scope

2.1 Objectives

The objectives of the AESO Engineering Connection Assessment are as follows:

- Assess the impact of the Project on the performance of the AIES.
- Evaluate Project connection alternatives and identify the AESO's preferred alternative.
- Recommend mitigation measures, if required, to reliably connect the Project to the AIES.
- Identify Project dependencies, including any TFO projects or AESO plans to expand or enhance the transmission system that must be completed prior to connection.

2.2 Existing System

Geographically, the Project is located in the AESO planning area of Medicine Hat (Area 4), which is part of the AESO South planning region. Medicine Hat (Area 4) is surrounded by the planning areas of Vauxhall (Area 52), Empress (Area 48), and Brooks (Area 47).

From a transmission system perspective, Medicine Hat (Area 4) consists primarily of a 138 kV and 240 kV transmission system. Medicine Hat (Area 4) is connected to the AESO planning area of Brooks (Area 47) through the 240 kV transmission lines 1034L and 1035L and 138 kV transmission line 100L, connected to the AESO planning area of Empress (Area 48) through the 138 kV transmission line 658L, and connected to the AESO planning area of Vauxhall (Area 52) through the 138 kV transmission line 879L.

Existing constraints in the South planning region are managed in accordance with the procedures set out in Section 302.1 of the ISO rules, Real Time Transmission Constraint Management (TCM Rule).

2.3 Study Area

The Study Area for the Project consists of the AESO Planning areas of Medicine Hat (Area 4), Brooks (Area 47), Empress (Area 48), and Vauxhall (Area 52), including the tie lines connecting these planning areas to the rest of the AIES. All transmission facilities within the Study Area will be studied and monitored for violations of the Reliability Criteria (defined in Section 3.1 of Attachment A1).

3 Connection Alternatives

3.1 Overview

The AESO, in consultation with the TFO in the Study Area and the Market Participant, examined five transmission alternatives to meet the Market Participant's request for system access service, as detailed in Section 3.2.

3.2 Connection Alternatives Examined

Below is a description of the developments associated with the transmission alternatives that were examined for the Project.

Alternative 1 – Radial 240 kV connection to Whitla 251S substation

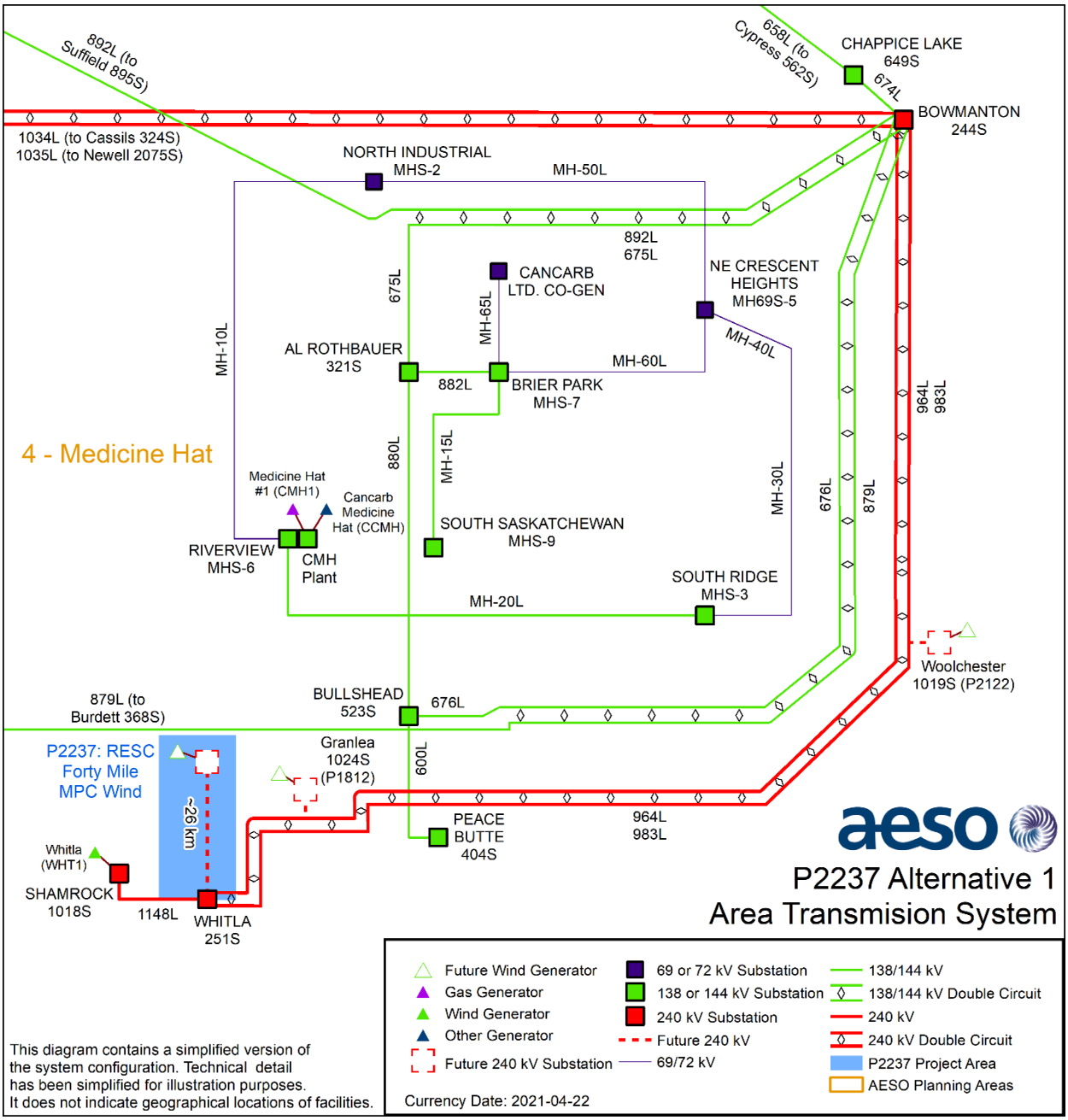
This alternative includes the following developments:

- Add one 240 kV circuit, approximately 26 km in length,[1] to connect the Facility to the existing Whitla 251S substation using a radial configuration; and
- Add or modify associated equipment as required for the above transmission developments.

The proposed connection configuration is shown in Figure 3-1

[1] Exact line length to be determined by the Market Participant

Figure 3-1: Connection Alternative 1



Alternative 2 – T-tap connection to the 240 kV transmission line 983L

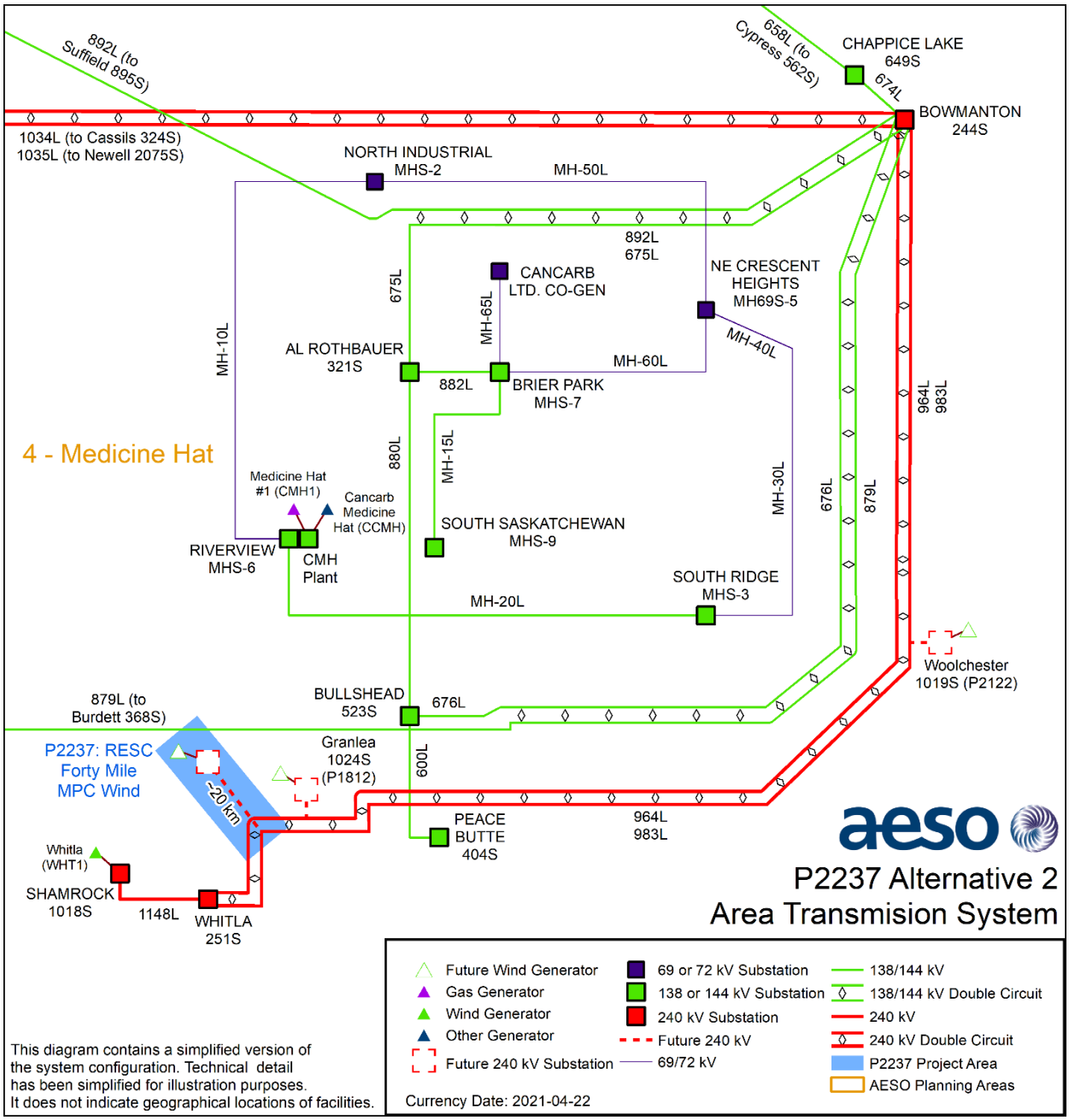
This alternative includes the following developments:

- Add one 240 kV circuit, approximately 20 km in length,[2] to connect the Facility to the existing 240kV transmission line 983L (between the Bowmanton 244S substation and the Whitla 251S substation) using a T-tap configuration; and
- Add or modify associated equipment as required for the above transmission developments.

The proposed connection configuration is shown in Figure 3-2.

[2] Exact line length to be determined by the Market Participant

Figure 3-2: Connection Alternative 2



Alternative 3 – T-tap connection to the 240 kV transmission line 964L

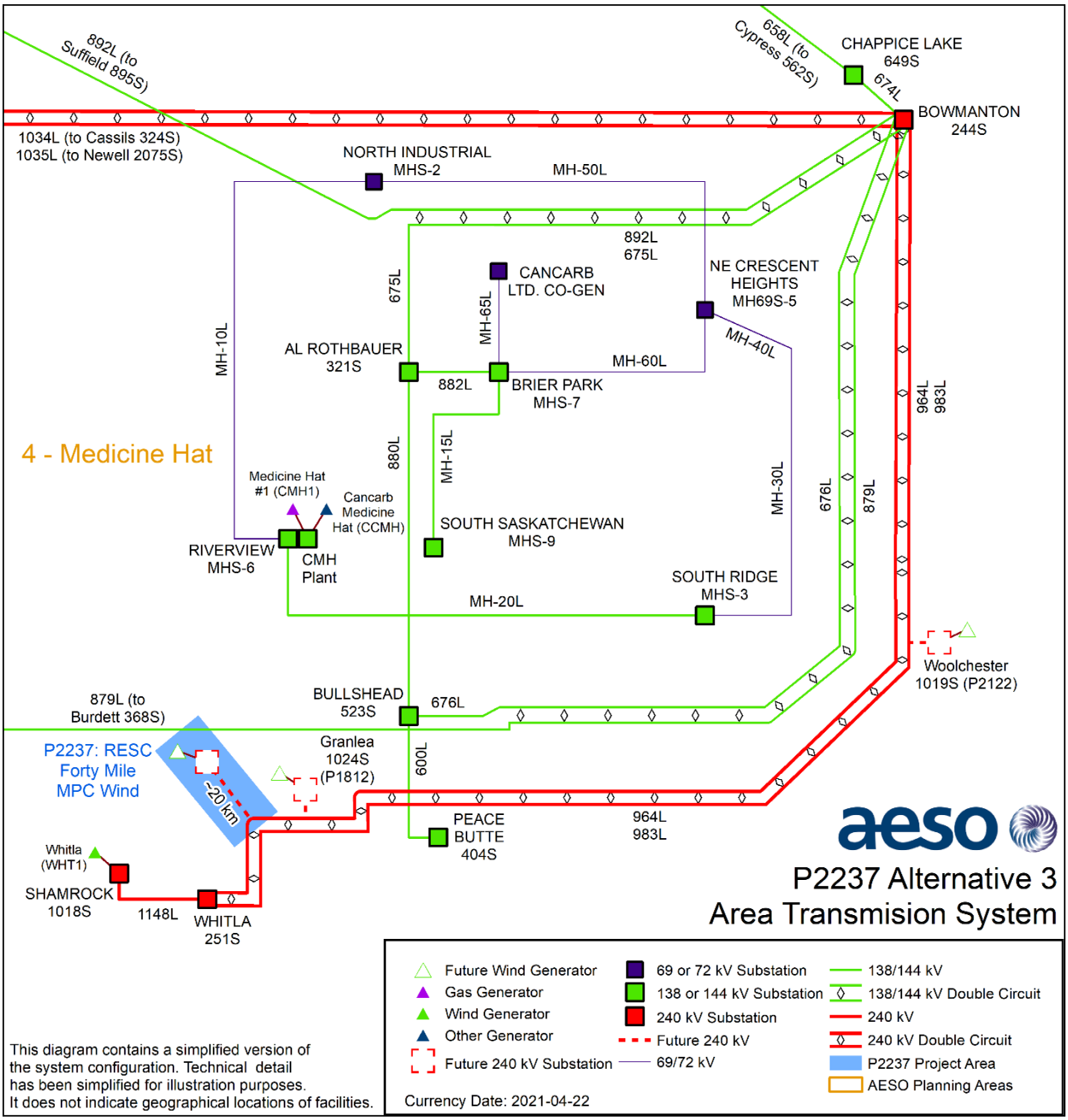
This alternative includes the following developments:

- Add one 240 kV circuit, approximately 20 km in length,[3] to connect the Facility to the existing 240 kV transmission line 964L (between the Bowmanton 244S substation and the Whitla 251S substation) using a T-tap configuration; and
- Add or modify associated equipment as required for the above transmission developments.

The proposed connection configuration is shown in Figure 3-3.

[3] Exact line length to be determined by the Market Participant

Figure 3-3: Connection Alternative 3



Alternative 4A – In-and-out connection to the 240 kV transmission line 964L between Whitla 251S and Granlea T-tap

This alternative includes the following developments:

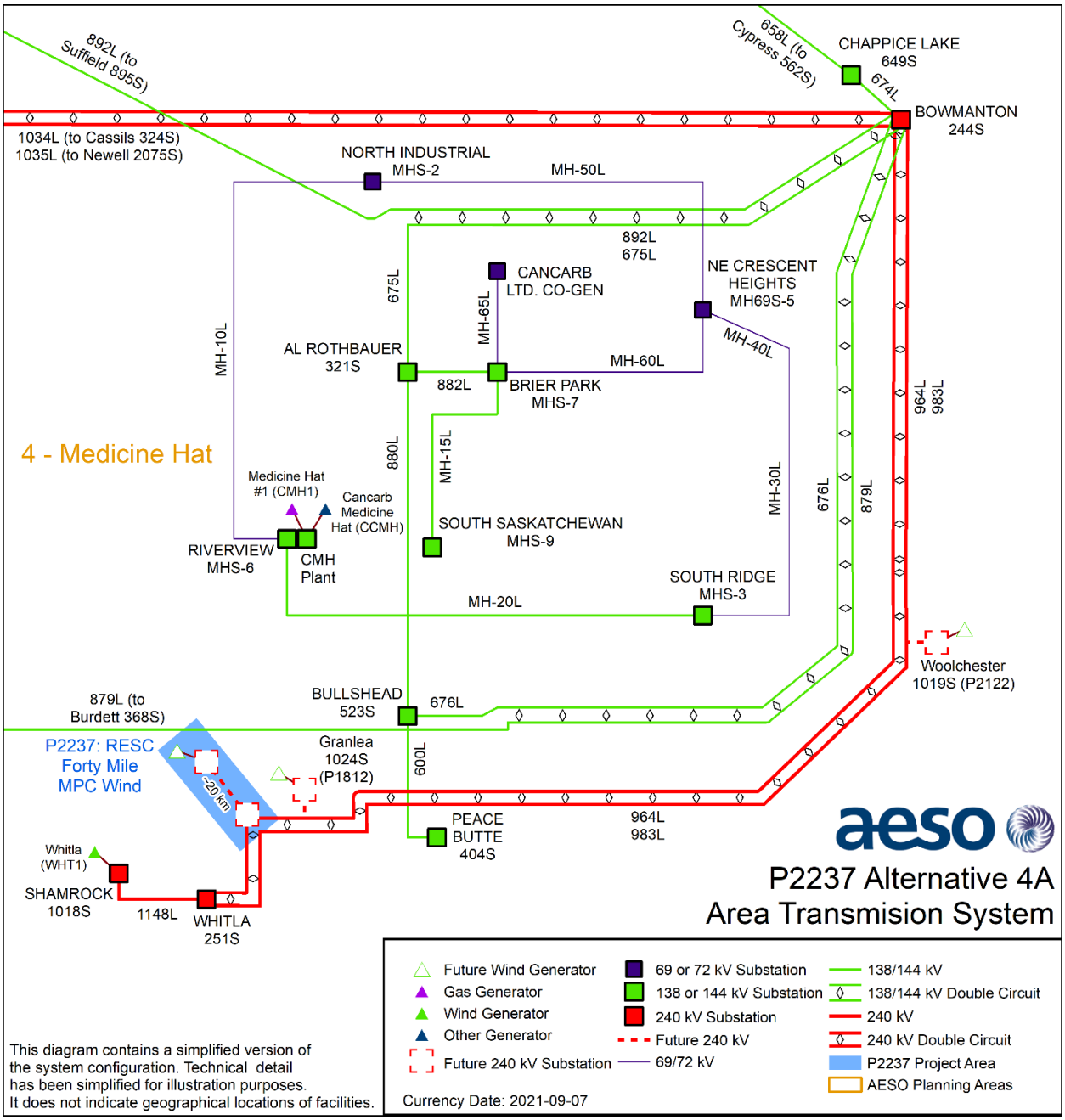
- Add a new 240 kV switching substation, including three 240 kV circuit breakers;
- Connect the 240 kV switching substation to the existing 240 kV transmission line 964L (between the Whitla 251S substation and the future Granlea T-tap[4]) using an in-and-out configuration;
- Add one 240 kV circuit, approximately 20 km in length,[5] to connect the Facility to the 240 kV switching substation; and
- Add or modify associated equipment as required for the above transmission developments.

The proposed connection configuration is shown in Figure 3-4.

[4] The future Granlea T-tap is proposed in the approved P1812 *Suncor Forty Mile Wind Power Project 964L Connection* posted on the AESO website at https://www.aeso.ca/grid/projects/suncor-forty-mile-wind-power-project-964l-connection/

[5] Exact line length to be determined by the Market Participant

Figure 3-4: Connection Alternative 4A



Alternative 4B – In-and-out connection to the 240 kV Transmission line 964L between Bowmanton 244S and Granlea T-tap

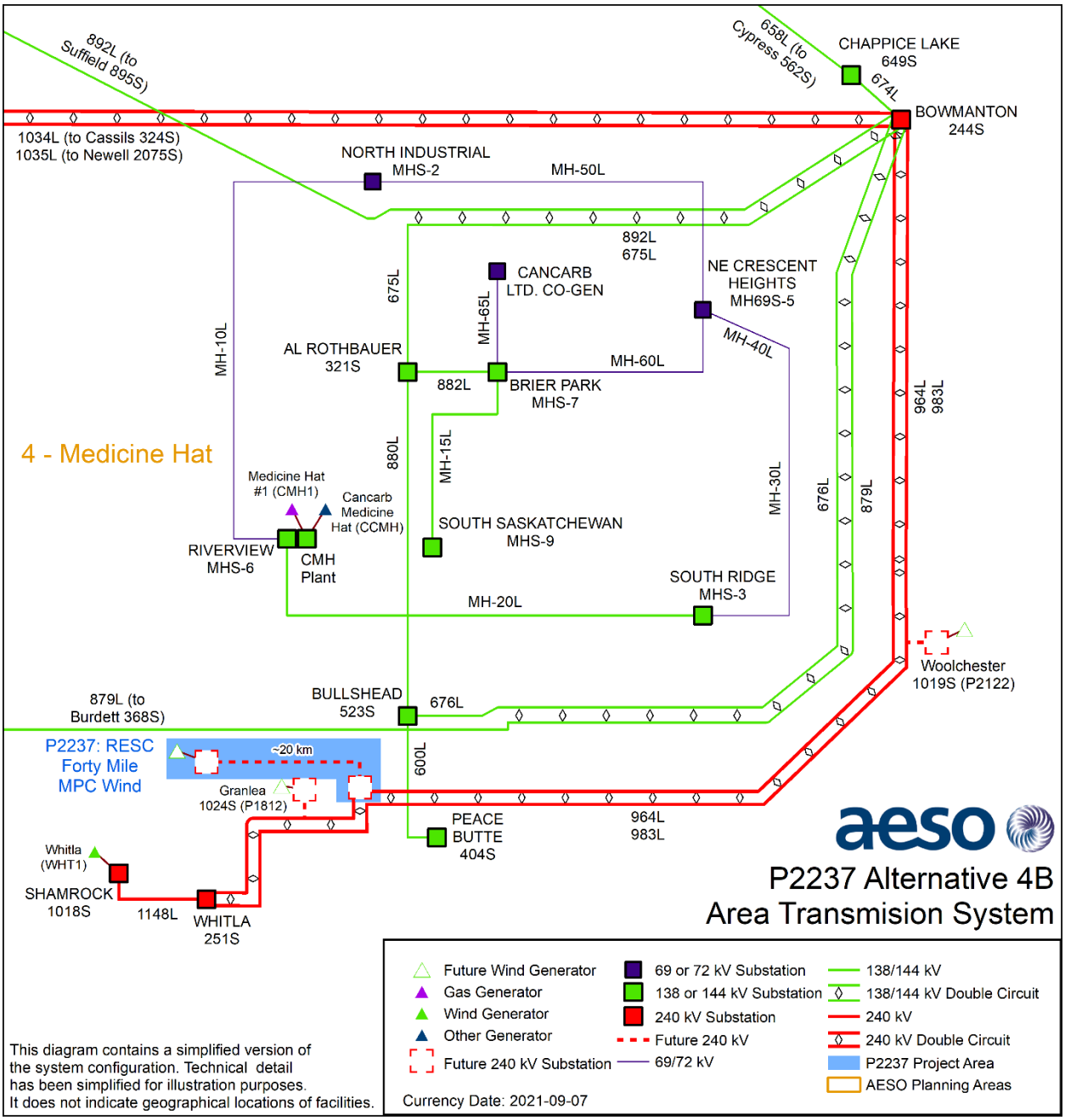
This alternative includes the following developments:

- Add a new 240 kV switching substation, including three 240 kV circuit breakers;
- Connect the switching substation to the existing 240 kV transmission line 964L (between the existing Bowmanton 244S and the future Granlea T-tap[6]) using an in-and-out configuration;
- Add one 240 kV circuit, approximately 20 km in length, to connect the Facility to the 240 kV switching substation; and
- Add or modify associated equipment as required for the above transmission developments.

The proposed connection configuration is shown in Figure 3-5

[6] The future Granlea T-tap is proposed in the approved P1812 *Suncor Forty Mile Wind Power Project 964L Connection* posted on the AESO website at https://www.aeso.ca/grid/projects/suncor-forty-mile-wind-power-project-964l-connection/

Figure 3-5: Connection Alternative 4B



3.3 Connection Alternatives Selected for Further Study

Alternative 4B is considered technically feasible and was selected for further study.

3.4 Connection Alternatives Not Selected for Further Study

Alternatives 2 and 3 were not selected for further study because the total capacity of the Project combined with other approved projects[7] connecting to either transmission lines 983L or 964L via T-tap would exceed the current Most Severe Single Contingency (MSSC) limit of 466 MW. Therefore, Alternatives 2 and 3 were ruled out.

Alternatives 1, 4A and 4B are expected to be similar in transmission costs, however Alternative 4B has added technical benefits for the AIES when compared to Alternatives 1 and 4A:

- Enables the T-tap connection capacity for future generation projects on the 964L section between the new switching substation and Bowmanton 244S.
- Improves the reliability of the Suncor Granlea Wind farm by connecting to a shorter span of the transmission line 964L and minimizes generation loss on the AIES.

Based on the technical reasons described above, Alternatives 1 and 4A were ruled out.

[7] P1812 Suncor Forty Mile Wind Power Project 964L Connection (MC: 200 MW)
P2347 Forty Mile Granlea Solar Phase 2 (MC: 220 MW)
P2232 ENGIE Buffalo Trail North Wind (MC: 220 MW)
P2122 Cypress Wind Power Project Connection (MC: 201.6 MW)

4 Assessment Approach

4.1 Standards, Criteria and Assumptions

A detailed description of the standards, criteria, and assumptions that were used for the connection assessment is provided in Attachment A (see Attachment A1).

4.2 Studies Performed

At the time of study, the scheduled ISD for the Project was June 16, 2022. Therefore, studies were performed using scenarios for 2022 Summer Peak (SP) and 2022 Summer Light (SL). While the Project has changed its ISD from June 16, 2022 to September 1, 2023, the use of 2022 SP and SL for engineering studies would not materially alter the connection study results or affect the conclusions and recommendations.

Short-circuit studies were performed using the 2022 SP and 2029 Winter Peak (WP) scenarios.

Table 4-1 lists the study scenarios. The engineering study was performed using a 300 MW maximum capacity for the Project. While the Project has reduced its capacity to 266 MW, the use of 300 MW project generation would not materially alter the connection study results or affect the conclusions and recommendations in this engineering report.

The engineering studies included projects: P2337 - *Dunmore Solar*, P2338 - *Capital Power Whitla Wind Phase 3*, P2347 - *Forty Mile Granlea Solar Phase 2* and P2137 - *Enerfin Winnifred MPC Wind* in the sensitivity studies to capture the increased generation assumption changes from the AESO's *2019 Long Term Outlook* (2019 LTO) to the AESO's *2021 Long Term Outlook*. Among the projects listed, P2237, P2338 and P2347 have met the AESO's project inclusion criteria.

Table 4-1: Connection Study Scenarios

Scenario No.	Year/Season	System Generation Dispatch Conditions	Scenario Name	Project Load (MW)	Project Generation (MW)
pre-Project					
1	2022 Summer Peak (SP)	High Wind, High Import	2022 SP Pre-Project	0	0
2	2022 Summer Light (SL)	High Wind, Zero Import	2022 SL Pre-Project	0	0
post-Project					
3	2022 SP	High Wind, High Import	2022 SP Post-Project	0	300
4	2022 SL	High Wind, Zero Import	2022 SL Post-Project	0	300
5	2029 WP	All generators in service	2029 WP Post-Project	0	300
pre-Project Sensitivity with P2137, P2337, P2338 and P2347					
6	2022 Summer Peak (SP)	High Wind, High Import	2022 SP Pre-Project	0	0
post-Project Sensitivity with P2137, P2337, P2338 and P2347					
7	2022 Summer Peak (SP)	High Wind, High Import	2022 SP Post-Project	0	266

The AESO Planning Region load forecasts used for the connection studies were based on the 2019 LTO. While the AESO has updated its regional load forecasts since the connection studies were performed, the use of the current load forecast would not materially alter the connection study results or affect the conclusions and recommendations.

4.2.1 Power Flow Studies

The purpose of the power flow studies is to identify and quantify any thermal and voltage criteria violations in the Study Area.

In addition, power flow studies are also used to identify point of delivery (POD) low voltage bus voltage deviations beyond the limits listed in Table 3-1 of Attachment A1.[8]

Power flow studies were performed for 2022 SP and 2022 SL pre-Project scenarios, and for 2022 SP and 2022 SL post-Project scenarios.

4.2.2 Transient Stability Studies

The purpose of the transient stability studies is to assess the post-Project stability of the transmission system after three-phase to ground faults are applied on select transmission lines in the Study Area.

Transient stability studies were performed for 2022 SP and 2022 SL post-Project scenarios. As transient stability violations were identified with certain contingencies in the post-Project scenarios, transient stability studies were performed for the identified contingencies for 2022 SP and 2022 SL pre-Project scenarios.

4.2.3 Short-Circuit Current Level Studies

The purpose of short-circuit current level studies is to determine the expected system short-circuit current levels in the vicinity of the Project.

Short circuit studies were performed for the 2022 SP pre-Project scenario and for 2022 SP and 2029 WP post-Project scenarios.

4.3 Mitigation Measure Development and Evaluation

As explained in Section 6 of Attachment A1, mitigation measures were developed to address system performance issues that were identified in the post-Project scenarios. Studies performed to assess the effectiveness of mitigation measures are briefly outlined below.

4.3.1 Post-Mitigation Studies

Power flow and transient stability studies were performed to assess the impact of the Project on the performance of the AIES following implementation of the AESO's proposed mitigation measures.

[8] The AESO's desired post-contingency voltage deviations for low voltage busses represent guidelines rather than criteria. A POD bus voltage deviation that exceeds the desired limits shown in Table 3-1 of Attachment A1 does not represent a Reliability Criteria violation. Mitigation measures would not be developed to specifically address POD bus voltage deviations that exceed the desired values in Table 3-1 of Attachment A1.

5 Interpretation of Results

5.1 Results Overview

This section provides an assessment of the impact of the Project on the performance of the AIES. The Reliability Criteria violations observed during the connection assessment studies, and the proposed mitigation measures are summarized in Table 5-1.

- Section 5.2 includes an overview of the pre-Project studies results.
- Section 5.3 includes an overview of the post-Project studies results.
- Section 5.4 includes a description of the proposed mitigation measures to address observed Reliability Criteria violations.
- Section 5.5 includes an overview of the post-mitigation studies results.

Detailed study results are provided in Attachment A.

Table 5-1: Summary of Reliability Criteria Violations, Project Impact and Mitigation Measures

Scenario	Type of Reliability Criteria Violation		Contingency (System Element Lost)	Details of Violation	Project Impact	Pre-Project Mitigation Measures	Post-Project Mitigation Measures
	Pre-Project	Post-Project					
2022 SP	Transient stability	Voltage stability and transient stability	1034L (Bowmanton 244S - Cassils 324S)	Voltage Collapse and Transient Instability	Materially increased violation	Existing RAS 164[a]	Modified existing RAS 164[b]
	Transient stability	Voltage stability and transient stability	1035L (Bowmanton 244S - Newell 2075S)	Voltage Collapse and Transient Instability	Materially increased violation	Existing RAS 164	Modified existing RAS 164
	None	Voltage stability and transient stability	983L (Whitla 251S – Bowmanton 244S)	Voltage Collapse and Transient Instability	New violation	None	Modified existing RAS 164
	None	Voltage stability and transient stability	964L (Bowmanton 244S - Murray Lake 326S)	Voltage Collapse and Transient Instability	New violation	None	Modified existing RAS 164
	Thermal - above normal rating	Thermal - above normal rating	1088L (Cassils 324S - Newell 2075S)	1087L (Cassils 324S - Newell 2075S)	No impact	Real Time Operation Practice	Real Time Operation Practice
2022 SL	Transient stability	Voltage stability and transient stability	1034L (Bowmanton 244S - Cassils 324S)	Voltage Collapse and Transient Instability	Materially increased violation	Existing RAS 164	Modified existing RAS 164
	Transient stability	Voltage stability and transient stability	1035L (Bowmanton 244S - Newell 2075S)	Voltage Collapse and Transient Instability	Materially increased violation	Existing RAS 164	Modified existing RAS 164
	None	Voltage stability and transient stability	983L (Whitla 251S – Bowmanton 244S)	Voltage Collapse and Transient Instability	New violation	None	Modified existing RAS 164
	None	Voltage stability and transient stability	964L (Bowmanton 244S - Murray Lake 326S)	Voltage Collapse and Transient Instability	New violation	None	Modified existing RAS 164
	Thermal - above normal rating	Thermal - above normal rating	1088L (Cassils 324S - Newell 2075S)	1087L (Cassils 324S - Newell 2075S)	No impact	Real Time Operation Practice	Real Time Operation Practice
2022 SP Sensitivity	None	Low Voltage Range Violation	Bowmanton 244S 240 kV Bus	System Normal (N-0 condition)	New violation	None	Local Generation Curtailment[c]
	Transient stability	Voltage stability and transient stability	1034L (Bowmanton 244S - Cassils 324S)	Voltage Collapse and Transient Instability	Materially increased violation	Existing RAS 164	Modified existing RAS 164
	Transient stability	Voltage stability and transient stability	1035L (Bowmanton 244S - Newell 2075S)	Voltage Collapse and Transient Instability	Materially increased violation	Existing RAS 164	Modified existing RAS 164
	Transient stability	Voltage stability and transient stability	983L (Whitla 251S – Bowmanton 244S)	Voltage Collapse and Transient Instability	Materially increased violation	Existing RAS 164	Modified existing RAS 164
	None	Voltage stability and transient stability	964L (Bowmanton 244S - Murray Lake 326S)	Voltage Collapse and Transient Instability	New violation	None	Modified existing RAS 164
	Thermal - above normal rating	Thermal - above normal rating	1088L (Cassils 324S - Newell 2075S)	1087L (Cassils 324S - Newell 2075S)	No impact	Real Time Operation Practice	Real Time Operation Practice

Notes:

a) RAS 164 is an existing RAS. Modifications to existing RAS 164 were proposed for the approved P1812 Suncor Forty Mile Wind Project in the *Suncor Forty Mile Wind Power Project 964L Connection NID.* This RAS is referred to herein as “Existing RAS 164”.

b) In this table, “Modified” refers to adding the Project to the logic of the respective RAS.

c) To mitigate the N-0 low voltage violation, Projects P2137 and P2347 were turned off in the sensitivity studies. As part of real time operations, the AESO may curtail the area generation including the Project in the pre-contingency condition to mitigate this low voltage violation.

5.2 Pre-Project Study Results

5.2.1 Category A Conditions

No Reliability Criteria violations were observed under the Category A conditions (i.e., all elements in service) for any of the pre-Project scenarios. The short-circuit fault levels were found to be within the typical capabilities of the nearby facilities.

5.2.2 Category B Conditions

The pre-Project power flow studies identified a number of thermal and transient stability violations under Category B conditions (i.e., loss of a single system element).

No voltage deviations were observed that were beyond the limits listed in Table 3-1 of Attachment A1 (hereafter referred to as point of delivery (POD) bus voltage deviations) under Category B conditions.

5.3 Post-Project Study Results

5.3.1 Category A Conditions

No Reliability Criteria violations were observed under Category A conditions for the post-Project Scenarios 3 and 4.

A low voltage range violation at Bowmanton 244S substation on the 240 kV bus was observed under Category A conditions for the post-Project Sensitivity Scenario 7.

Post-Project short-circuit fault levels were not significantly higher than pre-Project levels. The long-term short circuit levels were found to be within the designed capabilities of the nearby facilities.

5.3.2 Category B Conditions

Post-Project power flow studies and transient stability studies identified a number of system performance issues under Category B conditions, namely: thermal criteria violations, voltage collapse and transient stability violations.

No POD bus voltage deviations were observed under Category B conditions.

5.4 Mitigation Measures

This section discusses the AESO's proposed mitigation measures to address the system performance issues that were identified in the pre-Project and post-Project scenarios.

5.4.1 Pre-Project

Prior to connection of the Project, all of the observed thermal and transient stability criteria violations under Category B conditions can be managed with the existing RAS 164 and real-time operational practices, alone or in combination, as appropriate.

5.4.2 Post-Project

After connection of the Project, the low voltage range violations observed under Category A conditions in the post-project sensitivity scenario can be managed by curtailing the area generation including the Project until the system reinforcement in the *2022 AESO Long-term Plan (LTP)*[9] is in place. For the study purpose in this sensitivity study, P2137 and P2347 were selected to be turned off.

After connection of the Project, the thermal criteria violations on 1087L observed under Category B conditions can be mitigated with real-time operational practices. The voltage and transient stability criteria violations under the Category B contingencies of 1034L, 1035L, 983L and 964L can be mitigated by the modification of existing RAS 164 by including the Project in the RAS logic. With the modification of RAS 164, the generation curtailment by RAS 164 will exceed the AESO's Most Single Severe Contingency (MSCC) limit of 466 MW. As such, the AESO may need to curtail the area generation including the Project in the pre-contingency condition to avoid tripping more than 466 MW generation by RAS 164.

5.4.3 Post-Project Mitigation Study Results

Under Category B conditions, all of the observed Reliability Criteria violations requiring RAS were mitigated.

[9] The 2022 AESO Long-term Plan can be found on the AESO website.

6 Project Dependencies

The Project does not require the completion of any other AESO plans to expand or enhance the transmission system prior to connection

7 Conclusions and Recommendations

Based on the study results, Alternative 4B is technically viable. The connection assessment identified a number of pre-Project and post-Project system performance issues under Category A and certain Category B conditions.

These system performance issues can be mitigated through the use of modification of the existing RAS 164, and real-time operational practices including generation curtailment, alone or in combination, as appropriate. With implementation of these mitigation measures, connecting the project with the preferred alternative does not adversely affect the performance of the AIES.

The AESO recommends proceeding with the Project using Alternative 4B as the preferred alternative to respond to the Market Participant's request for system access service. Real-time operational practices and the RAS mentioned above are recommended to mitigate the identified system performance issues.

Alternative 4B involves adding one new 240 kV switching substation, including three 240 kV circuit breakers to connect to the existing 240 kV transmission line 964L using an in-and-out configuration and one 240 kV circuit to connect the Facility to the 240 kV switching substation. The conductor used for the 240 kV circuit should have a minimum capacity of 518 MVA to meet the Market Participant's requested and future STS contract capacity.

Attachment A:
Engineering Connection Assessment Results

Engineering Connection Assessment: Study Results

P2237 Forty Mile Wind Power Plant Connection

Renewable Energy Systems Canada

Date: April 15, 2022
Version: V2D0
Classification: Public

Role	Name	Date	Signature
Prepared	Yani Jazayeri, P. Eng.	Apr. 15, 2022	
Reviewed	James Howland, P. Eng.	April 29, 2022	
Approved	Yani Jazayeri, P. Eng.	Apr. 15, 2022	

PROFESSIONAL ENGINEER ALBERTA
POUYAN JAZAYERI

Apr. 15, 2022
Member # 74277

Contents

Tables

Attachments

1 Introduction

This report presents the results of the engineering studies that were completed by Hardline Engineering Ltd. (the Studies Consultant) to assess the impact of the Project (as defined in Attachment A1: AESO Engineering Connection Assessment Scope) on the performance of the Alberta interconnected electric system (AIES). The studies were performed in accordance with Attachment A1: AESO Engineering Connection Assessment: Study Scope, which was prepared by the AESO.

The power system network analysis tool that was used for the studies in this connection assessment was PSS/E version 33.

2 Pre-Project Study Results

This section describes the results of the pre-Project power flow studies.

2.1 Power Flow Studies

Power flow diagrams illustrating the pre-Project power flow studies results for Category A and Category B conditions are provided in Attachment A2.

2.1.1 Scenario 1: 2022 Summer Peak, High Wind, High Import, Pre-Project

Category A Conditions

No Reliability Criteria (as defined in Section 3.1 of Attachment A1) violations were observed under Category A conditions.

Category B Conditions

Thermal Criteria Violations

Thermal criteria violations were observed under certain Category B conditions as shown in Table 2-1.

Table 2-1: Thermal Criteria Violations under Category B Conditions for Scenario 1

Contingency (System Element Lost)	Violation Location Details	Thermal Ratings (MVA)		Pre-Project Results	
		Normal Rating	Emergency Rating	Power Flow[a] (MVA)	% Loading[b]
1088L	1087L (Cassils 324S - Newell 2075S)	547.0	656.0	631.9	115.5

Notes:

[a] Power flow (MVA) is current expressed as MVA (i.e., $S = \sqrt{3} \times V_{base} \times I_{actual}$)

[b] Reported as a percentage of the power flow (in MVA, i.e., $S = \sqrt{3} \times V_{base} \times I_{actual}$) relative to the transmission line's Normal Rating (also in MVA), as shown in Attachment A1.

Voltage Criteria Violations

No voltage criteria violations were observed under Category B conditions.

POD Bus Voltage Deviations

No voltage deviations beyond the limits listed in Table 3-1 of Attachment A1 (hereafter referred to as point of delivery (POD) bus voltage deviations) were observed.

2.1.2 Scenario 2: 2022 Summer Light, High Wind, Zero Import, Pre-Project

Category A Conditions

No Reliability Criteria (as defined in Section 3.1 of Attachment A1) violations were observed under Category A conditions.

Category B Conditions

Thermal Criteria Violations

Thermal criteria violations were observed under certain Category B conditions as shown in Table 2-2.

Table 2-2: Thermal Criteria Violations under Category B Conditions for Scenario 2

Contingency (System Element Lost)	Violation Location Details	Thermal Ratings (MVA)		Pre-Project Results	
		Normal Rating	Emergency Rating	Power Flow[a] (MVA)	% Loading[b]
1088L	1087L (Cassils 324S - Newell 2075S)	547.0	656.0	579.2	105.9

Notes:

[a] Power flow (MVA) is current expressed as MVA (i.e., $S = \sqrt{3} \times V_{base} \times I_{actual}$)

[b] Reported as a percentage of the power flow (in MVA, i.e., $S = \sqrt{3} \times V_{base} \times I_{actual}$) relative to the transmission line's Normal Rating (also in MVA), as shown in Attachment A1.

Voltage Criteria Violations

No voltage criteria violations were observed under Category B conditions.

POD Bus Voltage Deviations

No voltage deviations beyond the limits listed in Table 3-1 of Attachment A1 (hereafter referred to as point of delivery (POD) bus voltage deviations) were observed.

2.1.3 Scenario 6: 2022 Summer Peak, High Wind, High Import, Pre-Project, Sensitivity

The following sensitivity projects were studied:

AESO Project No.	AESO Project Name	AESO Planning Area No.	MC (MW)	Load (MW)	Scheduled ISD
P2137	Enerfin Winnifred MPC Wind	4	90	1	Feb 15, 2023
P2337	Dunmore Solar	4	216	0.5	April 1, 2023
P2338	Capital Power Whitla Wind Phase 3	4	54	0.75	Sept 15, 2021
P2347	Forty Mile Granlea Solar Phase 2	4	220	0.75	Nov 17, 2023

Category A Conditions

No Reliability Criteria (as defined in Section 3.1 of Attachment A1) violations were observed under Category A conditions. For the reasons stated in Section 3.1.3, P2137 and P2347 were turned off in the sensitivity studies.

Category B Conditions

Thermal Criteria Violations

Thermal criteria violations were observed under certain Category B conditions as shown in Table 2-3.

Table 2-3: Thermal Criteria Violations under Category B Conditions for Scenario 6

Contingency (System Element Lost)	Violation Location Details	Thermal Ratings (MVA)		Pre-Project Results	
		Normal Rating	Emergency Rating	Power Flow[a] (MVA)	% Loading[b]
1088L	1087L (Cassils 324S - Newell 2075S)	547.0	656.0	611.0	111.7

Notes:

[a] Power flow (MVA) is current expressed as MVA (i.e., $S = \sqrt{3} \times V_{base} \times I_{actual}$)

[b] Reported as a percentage of the power flow (in MVA, i.e., $S = \sqrt{3} \times V_{base} \times I_{actual}$) relative to the transmission line's Normal Rating (also in MVA), as shown in Attachment A1.

Voltage Criteria Violations

No voltage criteria violations were observed under Category B conditions.

POD Bus Voltage Deviations

No voltage deviations beyond the limits listed in Table 3-1 of Attachment A1 (hereafter referred to as point of delivery (POD) bus voltage deviations) were observed.

3 Post-Project Study Results

This section describes the results of the post-Project power flow studies and transient stability studies.

As described in Section 2 of Attachment A1, the post-Project studies were performed using Alternative 3.

3.1 Power Flow Studies

Power flow diagrams illustrating the post-Project power flow studies results for Category A and Category B conditions are included in *Attachment A3*.

3.1.1 Scenario 3: 2022 Summer Peak, High Wind, High Import, Post-Project

Category A Conditions

No Reliability Criteria violations were observed under Category A conditions.

Category B Conditions

Thermal criteria violations were observed under certain Category B conditions as shown in Table 3-1.

Table 3-1: Thermal Criteria Violations under Category B Conditions for Scenario 3

Contingency (System Element Lost)	Details of Violation (Violation Observed On)	Normal Rating (MVA)	Emergency Rating (MVA)	Pre-Project Results		Post-Project Results		% Loading Difference (Post-Pre)
				Observed Power Flow (MVA)	% Loading	Observed Power Flow (MVA)	% Loading	
1088L (Cassils 324S - Newell 2075S)	1087L (Cassils 324S - Newell 2075S)	547.0	656.0	631.9	115.5	635.4	116.2	0.6

Voltage Criteria Violations

Voltage collapse was observed under the contingency of loss of 1034L (Bowmanton 244S - Cassils 324S), 1035L (Bowmanton 244S - Newell 2075S), 983L (Bowmanton 244S - Whitla 251S), and 964L (Bowmanton 244S - Murray Lake 326S).

POD Bus Voltage Deviations

No POD bus voltage deviations were observed.

3.1.2 Scenario 4: 2022 Summer Light, High Wind, Zero Import, Post-Project

Category A Conditions

No Reliability Criteria violations were observed under Category A conditions.

Category B Conditions

Thermal criteria violations were observed under certain Category B conditions as shown in Table 3-2.

Table 3-2: Thermal Criteria Violations under Category B Conditions for Scenario 4

Contingency (System Element Lost)	Details of Violation (Violation Observed On)	Normal Rating (MVA)	Emergency Rating (MVA)	Pre-Project Results		Post-Project Results		% Loading Difference (Post-Pre)
				Observed Power Flow (MVA)	% Loading	Observed Power Flow (MVA)	% Loading	
1088L (Cassils 324S - Newell 2075S)	1087L (Cassils 324S - Newell 2075S)	547.0	656.0	579.2	105.9	580.3	106.1	0.2

Voltage Criteria Violations

Voltage collapse was observed under the contingency of loss of 1034L (Bowmanton 244S - Cassils 324S), 1035L (Bowmanton 244S - Newell 2075S), 983L (Bowmanton 244S - Whitla 251S), and 964L (Bowmanton 244S - Murray Lake 326S).

.

POD Bus Voltage Deviations

No POD bus voltage deviations were observed.

3.1.3 Scenario 7: 2022 Summer Peak, High Wind, High Import, Post-Project, Sensitivity

The list of sensitivity projects is presented in Section 2.1.3.**Category A Conditions**

The voltage at the 240kV bus in Bowmanton 244S substation falls below 234 kV, the “Normal minimum” voltage required by AESO transmission planning criteria if sensitivity projects P2347 or P2137 are dispatched, as shown in Table 3-3. To mitigate the N-0 low voltage violation, P2137 and P2347 were turned off in the sensitivity studies only for the study purpose. In real time operations, the AESO will follow Section 302.1 - *Real Time Transmission Constraint Management* of the ISO rules to curtail area-wide generation before system reinforcement is in place.

Table 3-3: Voltage Violations at Bowmanton 244S under Category A Conditions for Scenario 7

P2137 dispatch (MW)	P2347 dispatch (MW)	P2337 dispatch (MW)	P2338 dispatch (MW)	Voltage (kV)
0	110	108	54	231.3
90	0	108	54	232.0
0	0	108	54	236.6

Category B Conditions

Thermal Criteria Violations

Thermal criteria violations were observed under certain Category B conditions as shown in Table 3-4.

Table 3-4: Thermal Criteria Violations under Category B Conditions for Scenario 7

Contingency (System Element Lost)	Details of Violation (Violation Observed On)	Normal Rating (MVA)	Emergency Rating (MVA)	Pre-Project Results		Post-Project Results		% Loading Difference (Post-Pre)
				Observed Power Flow (MVA)	% Loading	Observed Power Flow (MVA)	% Loading	
1088L (Cassils 324S - Newell 2075S)	1087L (Cassils 324S - Newell 2075S)	547.0	656.0	611.0	111.7	619.2	113.2	1.5

Notes:
[a] *Power flow (MVA) is current expressed as MVA (i.e., $S = \sqrt{3} \times V_{base} \times I_{actual}$)*

[b] *Reported as a percentage of the power flow (in MVA, i.e., $S = \sqrt{3} \times V_{base} \times I_{actual}$) relative to the transmission line's Normal Rating (also in MVA), as shown in Attachment A1.*

Voltage Criteria Violations

Voltage collapse was observed under the contingency of loss of 1034L (Bowmanton 244S - Cassils 324S), 1035L (Bowmanton 244S - Newell 2075S), 983L (Bowmanton 244S - Whitla 251S), and 964L (Bowmanton 244S - Murray Lake 326S).

POD Bus Voltage Deviations

No voltage deviations beyond the limits listed in Table 3-1 of Attachment A1 (hereafter referred to as point of delivery (POD) bus voltage deviations) were observed.

3.2 Transient Stability Studies

Transient stability studies were completed for Scenarios 3, 4, and 7(2022 Summer Peak High Wind High Import Post-Project, 2022 Summer Light High Wind Zero Import Post-Project, and 2022 Summer Peak High Wind High Import Post-Project Sensitivity, respectively)

The results indicated instability concerns under loss of 964L, 983L, 1034L, and 1035L. Other contingencies did not indicate any transient stability concerns, and the system showed acceptable dynamic responses, as shown in Table 3-5 and

Table 3-6. The post-Project transient stability plots are provided in Attachment A4. The dynamic data and assumptions of all equipment proposed for the Facility are provided in Attachment A5.

Table 3-5: Transient Stability Study Results under Category B Conditions for Scenario 3 and 4

Studied Contingency	Fault Description and Location	Results
983L (Whitla 251S – Bowmanton 244S)	3-phase fault at Elkwater 264S	Unstable
	3-phase fault at Whitla 251S	Unstable
964L (Bowmanton 244S - Murray Lake 326S)	3-phase fault at Bowmanton 244S	Unstable
	3-phase fault at Whitla 251S	Unstable
964L (Whitla 251S - Murray Lake 326S)	3-phase fault at Whitla 251S	Stable
	3-phase fault at Murray Lake 326S	Stable
1034L (Cassils 324S – Bowmanton 244S)	3-phase fault at Cassils 324S	Unstable
	3-phase fault at Bowmanton 244S	Unstable
1035L (Newell A2075S – Bowmanton 244S)	3-phase fault at Newell A2075S	Unstable
	3-phase fault at Bowmanton 244S	Unstable
892L (Suffield 895S – Bowmanton 244S)	3-phase fault at Suffield 895S	Stable
	3-phase fault at Bowmanton 244S	Stable
676L (Bullshead 523S – Bowmanton 244S)	3-phase fault at Bullshead 523S	Stable
	3-phase fault at Bowmanton 244S	Stable
600L (Peace Butte 404S – Bullshead 523S)	3-phase fault at Peace Butte 404S	Stable
	3-phase fault at Bullshead 523S	Stable
880L (Al Rothbauer 321S – Bullshead 523S)	3-phase fault at Al Rothbauer 321S	Stable
	3-phase fault at Bullshead 523S	Stable
675L (Al Rothbauer 321S – Bowmanton 244S)	3-phase fault at Al Rothbauer 321S	Stable
	3-phase fault at Bowmanton 244S	Stable
879L (Burdett 368S – Bowmanton 244S)	3-phase fault at Burdett 368S	Stable
	3-phase fault at Bowmanton 244S	Stable

Table 3-6: Transient Stability Study Results under Category B Conditions for Scenario 7

Studied Contingency	Fault Description and Location	Results
983L (Bowmanton 264S - Whitla 251S)	3-phase fault at Bowmanton 244S	Unstable
	3-phase fault at Whitla 251S	Unstable
964L (Bowmanton 244S - Murray Lake 326S)	3-phase fault at Murray Lake 326S	Unstable
	3-phase fault at Bowmanton 244S	Unstable
964L (Whitla 251S - Murray Lake 326S)	3-phase fault at Whitla 251S	Stable
	3-phase fault at Murray Lake 326S	Stable
1034L (Cassils 324S - Bowmanton 244S)	3-phase fault at Cassils 324S	Unstable
	3-phase fault at Bowmanton 244S	Unstable
1035L (Newell A2075S - Bowmanton 244S)	3-phase fault at Newell A2075S	Unstable
	3-phase fault at Bowmanton 244S	Unstable
892L (Suffield 895S - Bowmanton 244S)	3-phase fault at Suffield 895S	Stable
	3-phase fault at Bowmanton 244S	Stable
676L (Bullshead 523S - Bowmanton 244S)	3-phase fault at Bullshead 5253S	Stable
	3-phase fault at Bowmanton 244S	Stable
600L (Peace Butte 404S - Bullshead 523S)	3-phase fault at Peace Butte 404S	Stable
	3-phase fault at Bullshead 5253S	Stable
880L (Al Rothbauer 321S - Bullshead 523S)	3-phase fault at Al Rothbauer 321S	Stable
	3-phase fault at Bullshead 5253S	Stable
675L (Al Rothbauer 321S - Bowmanton 244S)	3-phase fault at Al Rothbauer 321S	Stable
	3-phase fault at Bowmanton 244S	Stable
879L (Burdett 368S - Bowmanton 244S)	3-phase fault at Burdett 368S	Stable
	3-phase fault at Bowmanton 244S	Stable
658L/674L (Cypress 562S - Bowmanton 244S)	3-phase fault at Cypress 562S	Stable
	3-phase fault at Bowmanton 244S	Stable

Transient studies were performed for pre-project cases (Scenarios 1 and 2) and pre-project sensitivity case (Senario 6) for the loss of 964L, 983L, 1034L, and 1035L. The results are presented in Table 3-7 and Table 3-8.

Table 3-7: Transient Stability Study Results under Category B Conditions for Scenarios 1 and 2

Studied Contingency	Fault Description and Location	Results
983L (Bowmanton 264S - Whitla 251S)	3-phase fault at Bowmanton 244S	Stable
	3-phase fault at Whitla 251S	Stable
964L (Bowmanton 244S - Whitla 251S)	3-phase fault at Murray Lake 326S	Stable
	3-phase fault at Bowmanton 244S	Stable
1034L (Cassils 324S - Bowmanton 244S)	3-phase fault at Cassils 324S	Unstable
	3-phase fault at Bowmanton 244S	Unstable
1035L (Newell A2075S - Bowmanton 244S)	3-phase fault at Newell A2075S	Unstable
	3-phase fault at Bowmanton 244S	Unstable

Table 3-8: Transient Stability Study Results under Category B Conditions for Scenario 6

Studied Contingency	Fault Description and Location	Results
983L (Bowmanton 264S - Whitla 251S)	3-phase fault at Bowmanton 244S	Unstable
	3-phase fault at Whitla 251S	Unstable
964L (Bowmanton 244S - Whitla 251S)	3-phase fault at Murray Lake 326S	Stable
	3-phase fault at Bowmanton 244S	Stable
1034L (Cassils 324S - Bowmanton 244S)	3-phase fault at Cassils 324S	Unstable
	3-phase fault at Bowmanton 244S	Unstable
1035L (Newell A2075S - Bowmanton 244S)	3-phase fault at Newell A2075S	Unstable
	3-phase fault at Bowmanton 244S	Unstable

4 Short Circuit Studies

4.1 Pre-Project Results

Pre-Project short-circuit current levels are provided in Table 4-1[1].

Table 4-1: Pre-Project Short-Circuit Current Levels for Scenario 1

Substation Name and Number	Base Voltage (kV)	Pre-Fault Voltage (kV)	3-Φ Fault (kA)	Positive Sequence Thevenin Source Impedance (R1+jX1) (pu)	1-Φ Fault (kA)	Zero Sequence Thevenin Source Impedance (R0+jX0) (pu)
Bowmanton 244S	138	139.35	4.03	0.0431 + 0.1083j	2.60	0.0771 + 0.3009j
Bowmanton 244S	138	142.62	9.56	0.0049 + 0.0507j	9.34	0.0096 + 0.0578j
Bowmanton 244S	240	247.98	7.16	0.0045 + 0.0399j	7.48	0.0088 + 0.0401j
Whitla 251S	240	253.52	4.88	0.0051 + 0.059j	4.94	0.0116 + 0.0646j

4.2 Post-Project Results

4.2.1 Scenario 3: 2022 Summer Peak, High Wind, High Import, Post-Project

Post-Project short-circuit current levels for Scenario 3 are provided in Table 4-2.

Table 4-2: Post-Project Short-Circuit Current Levels for Scenario 3

Substation Name and Number	Base Voltage (kV)	Pre-Fault Voltage (kV)	3-Φ Fault (kA)	Positive Sequence Thevenin Source Impedance (R1+jX1) (pu)	1-Φ Fault (kA)	Zero Sequence Thevenin Source Impedance (R0+jX0) (pu)
Bowmanton 244S	138	137.90	4.00	0.0432 + 0.1083j	2.58	0.0771 + 0.3009j
Bowmanton 244S	138	138.88	9.53	0.0049 + 0.0501j	9.24	0.0096 + 0.0578j
Bowmanton 244S	240	239.99	7.18	0.0044 + 0.039j	7.44	0.0088 + 0.0401j
Whitla 251S	240	249.89	5.11	0.0047 + 0.0559j	5.04	0.0119 + 0.0653j
Murray Lake 326S	240	248	4.37	0.0067 + 0.0670j	4.32	0.0128 + 0.0686j
Forty Mile 516S	240	251.97	4.53	0.008 + 0.0633j	4.16	0.0217 + 0.0861j

[1] Short-circuit current studies were based on modeling information provided to the AESO by third parties. The authenticity of the modeling information has not been validated. Fault levels could change as a result of system developments, new customer connections, or additional generation in the area. It is recommended that these changes be monitored and fault levels reviewed to ensure that the fault levels are within equipment operating limits. The information provided in this study should not be used as the sole source of information for electrical equipment specifications or for the design of safety-grounding systems.

4.2.2 Scenario 5: 2029 Winter Peak, All generation, Post-Project

Post-Project short-circuit current levels for Scenario 5 are provided in Table 4-3.

Table 4-3: Post-Project Short-Circuit Current Levels for Scenario 5

Substation Name and Number	Base Voltage (kV)	Pre-Fault Voltage (kV)	3-Φ Fault (kA)	Positive Sequence Thevenin Source Impedance (R1+jX1) (pu)	1-Φ Fault (kA)	Zero Sequence Thevenin Source Impedance (R0+jX0) (pu)
Bowmanton 244S	138	140.10	3.69	0.0445 + 0.109j	2.35	0.08127 + j0.312j
Bowmanton 244S	138	140.10	7.5	0.0051 + 0.056j	7.91	0.0062 + 0.047j
Bowmanton 244S	240	249.04	6.98	0.0043 + 0.0357j	7.93	0.0049 + 0.0277j
Whitla 251S	240	240.21	3.97	0.0054 + 0.0606j	4.48	0.0072 + 0.0475j
Murray Lake 326S	240	248	3.47	0.00614+ 0.0705j	3.8	0.0084 + 0.05184j
Forty Mile 516S	240	241.33	3.52	0.0087 + 0.0682j	3.63	0.0171 + 0.0688j

5 Mitigation Measure Development and Evaluation

The Studies Consultant, in consultation with the AESO, developed mitigation measures to address the system performance issues that were identified in the post-Project scenarios. Existing remedial action schemes (RASs) are described in Section 1.2.2 of Attachment A1.

5.1 Pre-Project

Pre-Project mitigation measures are summarized in Table 5-1.

Table 5-1: Pre-Project Mitigation Measures

Mitigation Measure	Location of Observed Violation	Contingency
Planned RAS #164[a]	Bowmanton 244S 240kV bus	1034L (Bowmanton 244S - Cassils 324S)
	Bowmanton 244S 240kV bus	1035L (Bowmanton 244S - Newell 2075S)
	Bowmanton 244S 240kV bus	983L (Bowmanton 264S - Whitla 251S)
Real Time Operating Practices	1087L (Cassils 324S - Newell 2075S)	1088L (Cassils 324S - Newell 2075S)

Notes:

[a] Planned RAS #164 is a RAS proposed for the approved Project P1812.

5.2 Post-Project

Post-Project mitigation measures are summarized in Table 5-2.

Table 5-2: Post-Project Mitigation Measures

Mitigation Measure	Location of Observed Violation	Contingency
Modified Planned RAS #164[a]	Bowmanton 244S 240kV bus	1034L (Bowmanton 244S - Cassils 324S)
	Bowmanton 244S 240kV bus	1035L (Bowmanton 244S - Newell 2075S)
	Bowmanton 244S 240kV bus	983L (Bowmanton 244S - Whitla 251S)
	Bowmanton 244S 240kV bus	964L (Bowmanton 244S - Murray Lake 326S)
Curtailment of projects P2137, P2347[b]	Low voltage violations at 240 kV bus at Bowmanton 244S	System Normal condition (No Contingency)
Real Time Operating Practices	1087L (Cassils 324S - Newell 2075S)	1088L (Cassils 324S - Newell 2075S)

Notes:

[a] "Modify" refers to adding the Project to the logic of the planned or existing RAS. More than 466 MW (the current AIES MSSC) planned generation capacity, inclusive of the Project, will be added into the planned RAS 164. In the real-time operation before system reinforcement in place, the AESO may need to curtail the area generation including the Project in the pre-contingency condition to avoid tripping more than 466 MW generation by RAS.

[b] To mitigate the N-0 low voltage violation, P2137 and P2347 were turned off in the sensitivity studies only for the study purpose. In the real time operation before system reinforcement in place, the AESO may curtail the area generation including the Project in the pre-contingency condition to mitigate this low voltage violation.

5.3 Evaluation of Mitigation Measures

This section describes the results of the power flow and transient stability studies that were performed to assess the impact of the Project on the performance of the AIES following the implementation of proposed mitigation measures.

The post-mitigation measures studies were performed under Category B conditions for Scenarios 3, 4, and 7 and the RASs described in the previous section.

The post-mitigation power flow diagrams for selected Category B conditions are provided in Attachment A6. The post-mitigation transient stability diagrams for selected Category B conditions are provided in Attachment A7. Post-mitigation power flow and transient stability diagrams present only those post-Project contingencies that result in thermal criteria violations or instability that require RAS mitigation. Post-Project contingencies that result in thermal criteria violations that can be mitigated by real-time operational practices or TFO capital maintenance projects were not studied.

5.3.1 Scenario 3: 2022 Summer Peak, High Wind, High Import, Post-Project

Category B Conditions

Voltage criteria violations observed under certain Category B conditions in the post-Project studies were mitigated by RASs.

Transient Stability

The results did not indicate any transient stability concerns, and the system showed acceptable dynamic response to all Category B conditions studied with RASs implemented, as shown in Table 5-3. The post-Project transient stability plots are provided in Attachment A7.

Table 5-3: Transient Stability Study Results under Category B Conditions for Scenario 3 and 4

Studied Contingency	Fault Description and Location	Results	RAS Action	Loss of Generation (MW)
983L (Whitla 251S – Bowmanton 244S)	3-phase fault at Elkwater 264S	Stable	Trip P2237, P2122	467.6
	3-phase fault at Whitla 251S	Stable		
964L (Bowmanton 244S - Murray Lake 326S)	3-phase fault at Murray Lake 326S	Stable	Trip P2237	266
	3-phase fault at Bowmanton 244S	Stable		
1034L (Cassils 324S – Bowmanton 244S)	3-phase fault at Cassils 324S	Stable	Trip P1812, P1800-2, and P2237	563.2
	3-phase fault at Bowmanton 244S	Stable		
1035L (Newell A2075S – Bowmanton 244S)	3-phase fault at Newell A2075S	Stable		
	3-phase fault at Bowmanton 244S	Stable		

5.3.2 Scenario 4: 2022 Summer Light, High Wind, Zero Import, Post-Project

Category B Conditions

Voltage criteria violations observed under certain Category B conditions in the post-Project studies were mitigated by RASs.

Transient Stability

The results did not indicate any transient stability concerns, and the system showed acceptable dynamic response to all Category B conditions studied with RASs implemented, as shown in Table 5-3. The post-Project transient stability plots are provided in Attachment A7

5.3.3 Scenario 7: 2022 Summer Peak, High Wind, High Import, Post-Project, Sensitivity

Category A Conditions

The voltage at 240kV bus in Bowmanton 244S falls below 234 kV, the “Normal minimum” voltage required by AESO transmission planning criteria if sensitivity projects P2347 or P2317 are dispatched. To remove these violations, these two projects are turned off in the sensitivity studies.

Category B Conditions

Voltage criteria violations observed under certain Category B conditions in the post-Project studies were mitigated by RASs.

Transient Stability

The results did not indicate any transient stability concerns, and the system showed acceptable dynamic response to all Category B conditions studied with RASs implemented, as shown in Table 5-4. The post-Project transient stability plots are provided in Attachment A7.

Table 5-4: Transient Stability Study Results under Category B Conditions for Scenario 7

Studied Contingency	Fault Description and Location	Results	RAS Action	Loss of Generation (MW)
983L (Bowmanton 264S - Whitla 251S)	3-phase fault at Bowmanton 244S	Stable	Trip P2122, P1800-2, P2338, P2237	618.8
	3-phase fault at Whitla 251S	Stable		
964L (Bowmanton 244S - Murray Lake 326S)	3-phase fault at Murray Lake 326S	Stable	Trip P2237	266
	3-phase fault at Bowmanton 244S	Stable		
1034L (Cassils 324S - Bowmanton 244S)	3-phase fault at Cassils 324S	Stable	Trip P1812, P1800-2, P2338, P2337, and P2237	725.2
	3-phase fault at Bowmanton 244S	Stable		
	3-phase fault at Newell A2075S	Stable		

Studied Contingency	Fault Description and Location	Results	RAS Action	Loss of Generation (MW)
1035L (Newell A2075S - Bowmanton 244S)	3-phase fault at Bowmanton 244S	Stable		

Attachment A1
Engineering Connection Assessment: Study Scope

Engineering Connection Assessment: Study Scope

Forty Mile Wind Power Plant Connection

RES Forty Mile Wind LP

AESO Project Number: 2237

Date: April 26, 2022

Version: Final

Classification: Public

Company Name	Name and Credentials	Date	Signature
Hardline Engineering (Studies Consultant)	James Howland, P.Eng.	2022-04-27	
AESO	Jian Shang, P.Eng.	2022-04-28	
RES Forty Mile Wind LP (Market Participant)	Andrea Cosman	2022-04-28	

Contents

Tables

Figures

Attachments

1 Introduction

This Study Scope provides an overview of the engineering studies to be completed by Hardline Engineering (the Studies Consultant) to assess the impact of the Project (as defined in Section 1.1) on the performance of the Alberta interconnected electric system (AIES). Technical criteria, assumptions and methods for performing these engineering studies are provided in this document.

1.1 Project Overview

RES Forty Mile Wind LP has submitted a request for system access service to the Alberta Electric System Operator (AESO) to connect its proposed RESC Forty Mile MPC Wind (Facility) to the AIES.

The Facility is planned to be located in the AESO planning area of Medicine Hat (Area 4).

The Market Participant's request includes: a request for a new system access service in the area, with a Rate STS, *Supply Transmission Service*, contract capacity of 266 MW, and a Rate DTS, *Demand Transmission Service*, contract capacity of 2 MW, and a request for transmission development (collectively, the Project).

The scheduled in-service date (ISD) for the Project is September 1, 2023.

Load and generation components of the Project are listed in Table 1-1.

Table 1-1: Project Load and Generation Details

Project Component		Description
Load	Existing Rate DTS, *Demand Transmission Service,* contract capacity	No existing contract
	Requested Rate DTS	2 MW
	Type	Station Service
	Motors (number and size)	Not Applicable
	Power factor	Not Applicable
	Future load expansion plans	None
Generation	Generation type	Wind
	Existing Rate STS, *Supply Transmission Service,* contract capacity	No existing contract
	Requested Rate STS	266 MW
	Number and size of generating units	To be decided
	Maximum authorized real power (MARP)	266 MW
	Maximum capability (MC)	266 MW
	Reactive power capability	0.95 pf absorbing
		0.9 pf producing

Project Component		Description
	Future generation expansion plans	None

Note:

MARP and MC are defined in the AESO's *Consolidated Authoritative Document Glossary*, which can be found on the AESO's website.

1.2 Existing System Overview

1.2.1 Study Area

Geographically, the Project is located in the AESO planning area of Medicine Hat (Area 4) which is part of the AESO South Planning Region.

The Study Area consists of the AESO planning areas of Vauxhall (Area 52), Medicine Hat (Area 4), Empress (Area 48), and Brooks (Area 47).

The existing transmission system in the Study Area is shown in Figure 1-1.

1.2.2 Existing Constraints

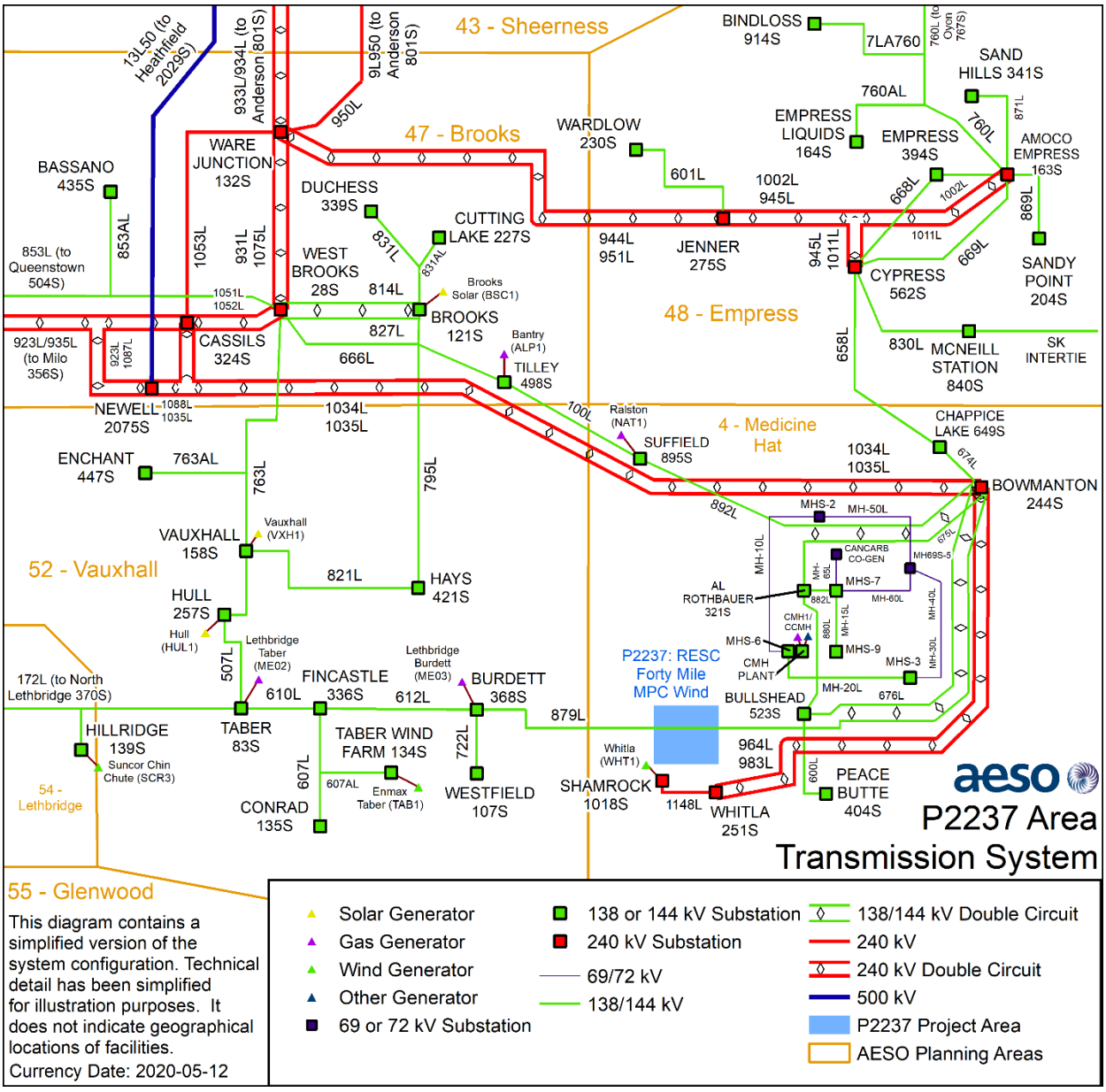
Existing constraints in the Study Area are managed in accordance with the procedures set out in Section 302.1 of the ISO rules, *Real Time Transmission Constraint Management* (TCM Rule).

There are a number of constraints in the Study Area that are mitigated by existing remedial action schemes (RASs) and/or other protection schemes.

The following existing RASs and/or other protection schemes are used to manage constraints in the area:

- RAS 27: 562S Cypress McNeil Power and Undervoltage Scheme
- RAS 28: 163S Amoco Empress Reverse Power and Undervoltage Scheme
- RAS 29: McNeil (840s) Under Voltage Runback Scheme
- RAS 33: Cypress (T562s) Reverse Power and Undervoltage Scheme
- RAS 141: Tilley 498S voltage instability mitigation
- RAS 140: 892L (Suffield 895S- Bowmanton 244S) overload mitigation scheme
- RAS 149: EATL HVDC
- RAS 150: WATL HVDC
- RAS 164: 1034L and 1035L Contingency Mitigation

Figure 1-1: Transmission System in the Study Area



2 Connection Alternatives to be Studied

The following alternatives will be studied:

Alternative 4B – In-and-out connection onto the existing 240 kV transmission line 964L between the existing Bowmanton 244S substation and future Granlea T-tap

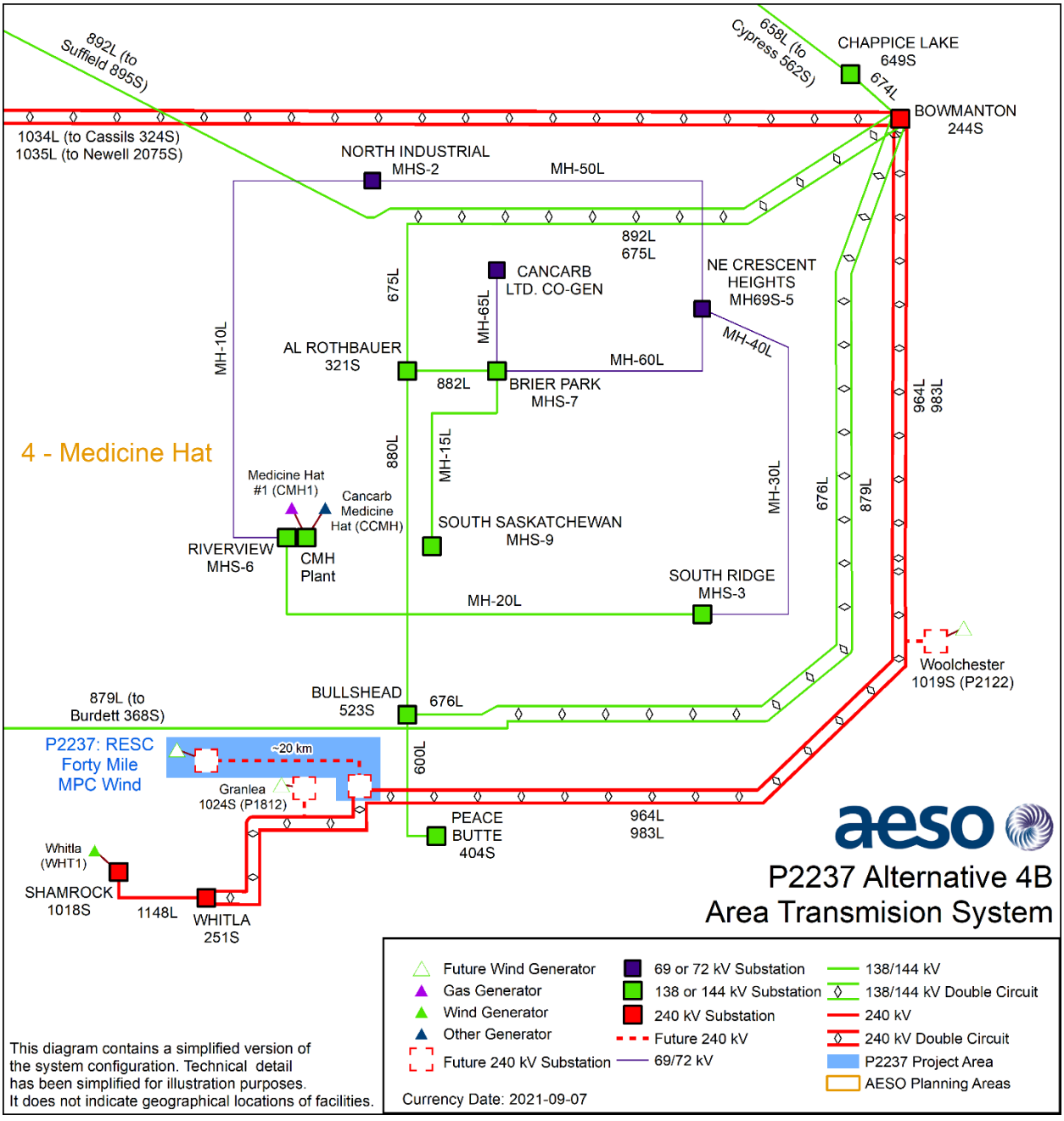
This alternative includes the following development:

- Add a new 240 kV switching substation with three 240 kV circuit breakers on the 240 kV transmission line 964L (between the existing Bowmanton 244S substation and future Granlea T-tap) using an in-and-out configuration;
- Add one 240 kV circuit, approximately ~20[1] km in length, to connect the Market Participant proposed facilities to the new 240 kV switching substation;
- Add or modify associated equipment as required for the above transmission developments.

The proposed connection configuration is shown in Figure 2-1.

[1] The actual line length shall be identified and determined in the Facility Application prepared by the market participant.

Figure 2-1: Connection Alternative 4B



3 Criteria, Standards and Requirements

3.1 AESO Reliability Criteria

The Transmission Planning (TPL) Standards, which are included in the Alberta Reliability Standards, and *Transmission Planning Criteria – Basis and Assumptions (see Attachment A),* (collectively, the Reliability Criteria) will be applied to evaluate system performance under Category A system conditions (i.e., all elements in-service) and following Category B contingencies (i.e., single element outage), prior to and following the studied alternatives. Below is a summary of Category A and Category B system conditions.

Category A, often referred to as the N-0 condition, represents a normal system with no contingencies and all facilities in service. Under this condition, the system must be able to supply all firm load and firm transfers to other areas. All equipment must operate within its applicable rating, voltages must be within their applicable range, and the system must be stable with no cascading outages.

Category B events, often referred to as an N-1 or N-G-1 with the most critical generator out of service, result in the loss of any single specified system element under specified fault conditions with normal clearing. These elements are a generator, a transmission circuit, a transformer, or a single pole of a DC transmission line. The acceptable impact on the system is the same as Category A. Planned or controlled interruptions of electric supply to radial customers or some local network customers, connected to or supplied by the faulted element or by the affected area, may occur in certain areas without impacting the overall reliability of the interconnected transmission systems. To prepare for the next contingency, system adjustments are permitted, including curtailments of contracted firm (non-recallable reserved) transmission service electric power transfers.

The TPL standards, TPL-001-AB-0 and TPL-002-AB1-0, have referenced Applicable Ratings when specifying the required system performance under Category A and Category B events. For the purpose of applying the TPL standards to the studies documented in this report, Applicable Ratings are defined as follows:

- Normal thermal rating of the line's loading limits for each season;
- The highest specified loading limits for transformers;
- For Category A conditions: Voltage range under normal operating condition per AESO Information Document #2010-007RS, *General Operating Practices – Voltage Control* (ID #2010-007RS). For the busses not listed in ID #2010-007RS, Table 2-1 in the *Transmission Planning Criteria – Basis and Assumptions* applies;
- For Category B conditions: The extreme voltage range values per Table 2-1 in the *Transmission Planning Criteria – Basis and Assumptions; and*
- Desired post-contingency voltage deviation limits for three defined post-event timeframes as provided in Table 3-1.

Table 3-1: Post-Contingency Voltage Deviation Guidelines for Low Voltage Busses

Parameter and reference point	Time Period		
	Post Transient (up to 30 sec)	Post Auto Control (30 sec to 5 min)	Post Manual Control (Steady State)
Voltage deviation from steady state at point of delivery (POD) low voltage bus.	±10%	±7%	±5%

3.2 ISO Rules and Information Documents

ID #2010-007RS will be used to establish system normal (i.e., pre-contingency) voltage profiles for the Study Area.

The TCM Rule will be followed to set up the study scenarios and assess the impact of the Project. In addition, due regard will be given to the AESO's *Connection Study Requirements*, the AESO's *Generation and Load Interconnection Standard*, Section 502.5 of the ISO rules *Generating Unit Technical Requirements*, and Section 502.6 of the ISO rules *Generating Unit Operating Requirements*.

3.3 Aggregated Generating Facility Requirements

The Facility should meet the technical requirements presented in Section 502.1 of the ISO rules, *Aggregated Generating Facilities Technical Requirements*.

4 Scenarios and Assumptions

4.1 Scenarios

The following section describes the scenarios to be studied and the assumptions to be used in the studies.

While the Project has reduced its capacity to 266 MW form the previously proposed 300 MW, the use of 300 MW project generation in the post-Project Scenario 3, 4 and 5 would not materially alter the connection study results or affect the conclusions and recommendations.

While the Project has changed its ISD from June 16, 2022 to September 1, 2023, the use of 2022 SP and SL for engineering studies would not materially alter the connection study results or affect the conclusions and recommendations.

Connection scenarios must be studied as outlined in Table 4-1.

Table 4-1: Connection Study Scenarios

Scenario No.	Year/Season	System Generation Dispatch Conditions	Scenario Name	Project Load (MW)	Project Generation (MW)
pre-Project					
1	2022 Summer Peak (SP)	High Wind, High Import	2022 SP Pre-Project	0	0
2	2022 Summer Light (SL)	High Wind, Zero Import	2022 SL Pre-Project	0	0
post-Project					
3	2022 SP	High Wind, High Import	2022 SP Post-Project	0	300
4	2022 SL	High Wind, Zero Import	2022 SL Post-Project	0	300
5	2029 WP	All generators in service	2029 WP Post-Project	0	300
pre-Project Sensitivity with P2137, P2337, P2338 and P2347[b]					
6	2022 Summer Peak (SP)	High Wind, High Import	2022 SP Pre-Project	0	0
post-Project Sensitivity with P2137, P2337, P2338 and P2347					
7	2022 Summer Peak (SP)	High Wind, High Import	2022 SP Post-Project	0	266

Note:

a. The 138 kV bus-tie breaker and switch at the Bowmanton 244S substation are assumed to be open for all of the above scenarios.
b. P2137 Enerfin Winnifred MPC Wind, P2337 Dunmore Solar, P2338 Capital Power Whitla Wind Phase 3, and P2347 Forty Mile Granlea Solar Phase 2 will be dispatched as per Table 4-7 and Table 4-8 first. If N-0 violation is observed in the post-Project Sensitivity scenario (Scenario #7), the above projects will be dispatched down or turned off to mitigate the N-0 violation.

4.2 Assumptions

4.2.1 System Project Assumptions

The pre-Project and post-Project connection assessment will not include any system transmission projects because there are no planned system transmission developments in the Study Area that are expected to be in service before the scheduled Project ISD.

4.2.2 Connection Project Assumptions

The pre-Project and post-Project sensitivity connection assessment will include the connection projects in the Table 4-2, other than the ones listed in Table 4-7 and Table 4-8.

Table 4-2: Connection Projects Included in the Sensitivity Studies

AESO Project No.	AESO Project Name	AESO Planning Area No.	Generation (MW)	Load (MW)	Scheduled ISD	AUC NID Decision No.
P2137	Enerfin Winnifred MPC Wind	4	90	1	Feb 15, 2023	-
P2337	Dunmore Solar	4	216	0.5	April 1, 2023	26485-D01-2021
P2338	Capital Power Whitla Wind Phase 3	4	54	0.75	Sept 15, 2021	-
P2347	Forty Mile Granlea Solar Phase 2	4	220	0.75	Nov 17, 2023	-

4.2.3 Load Assumptions

The load forecast to be used for the studies is shown in Table 4-3 and is based on the AESO's *2019 Long-term Outlook* (2019 LTO)[2] at the AESO South Planning Region peak. For the studies, when loads for the Alberta Internal Load (AIL) are modified to align with the load forecast in the 2019 LTO, the active power to reactive power ratio in the base case scenarios will be maintained.

Table 4-3: Forecast Load (at AESO South Planning Region Peak)

AESO Planning Area or Region Name	Forecast Peak Load by Year/Season (MW)	
	2022 SP	2022 SL
South Planning Region[a]	1,513	923

Note:
[a] The South Region comprises the following AESO planning areas: 4, 43 ,44 ,45 ,46 ,47, 48, 49, 52,53 ,54, and 55

[2] The 2019 LTO is available on the AESO website.

IDEV files contain non-motor loads in zones 34, 36, and 351. These loads are not accounted for in the forecasted peak loads shown above and should not be considered when scaling load. The AESO engineer will provide guidance to load scaling procedures as required.

4.2.4 Generation Assumptions

The generation assumptions for the studies will assume high wind dispatch conditions. Additional studies may be required in the event of changes to the AESO's corporate forecast.

The existing non-renewable and hydro generation dispatch conditions for the study scenarios are described in Table 4-4.

Table 4-4: Existing Non-Renewable and Hydro Generation Dispatch Conditions

Facility Name	Unit No.	Bus No.	Pmax (MW)	AESO Planning Area No.	Unit Net Generation[a] (MW) per Scenario	
					2022 SP	2022 SL
Lethbridge Taber	2	3272	8	52	7.4	0
Lethbridge Burdett	3	4269	7	52	6.6	0
Altagas Bantry	1	4275	7	47	5.1	0
Cancarb Medicine Hat (CCMH)	-	667	42	4	271[b]	152[b]
Medicine Hat #1 (CMH1)	-	683, 686, 687, 689, 712, 713, 1715	255	4		

Notes:
[a] "Unit Net Generation" refers to gross generating unit output (MW) less unit service load.
[b] With the CCMH & CMH1 dispatch level in the table, the City of Medicine Hat outflow to AIES will be approximately 27 MW in 2022 SP and 18 MW in 2022 SL.

Pre-Project dispatch levels for the existing, under-construction and contracted wind and solar generation facilities are shown in Table 4-5 to 4-9.

While the AESO has updated generation forecasts since the connection studies were performed, the use of the generation forecast in this section would not materially alter the connection study results or affect the conclusions and recommendations, given all the updated and added generation is out of the 240 kV transmission network the Project connects to.

Table 4-5: Dispatch Conditions for Existing Wind Generation Facilities

Facility Name and Code	AESO Planning Area No.	Bus No.	MC (MW)	Unit Net Generation[s] (MW)
				2022 SP/2022 SL
Ardenville Wind (ARD1)	53	4735, 4740	68	62.56

Facility Name and Code	AESO Planning Area No.	Bus No.	MC (MW)	Unit Net Generation[a] (MW)
				2022 SP/2022 SL
Blue Trail Wind (BTR1)	53	66328, 67328	66	60.72
Castle River #1 (CR1)	53	2234, 3234	39	35.88
Castle Rock Wind Farm (CRR1)	53	67221	77	70.84
Cowley Ridge (CRWD)	53	255, 265, 4264	20	18.4
Enmax Taber (TAB1)	52	15343, 16343	81	74.52
Kettles Hill (KHW1)	53	2402, 3402	63	57.96
McBride Lake Windfarm (AKE1)	53	2901, 3901, 4901	73	67.16
Soderglen Wind (GWW1)	53	12358, 13358	71	65.32
Summerview 1 (IEW1)	53	2338, 3338	66	60.72
Summerview 2 (IEW2)	53	4339, 5337	66	60.72
Suncor Chin Chute (SCR3)	54	2389	30	27.6
Suncor Magrath (SCR2)	53	11002	30	27.6
Suncor Wintering Hills (SCR4)	43	60789, 60791, 60793, 60846, 60848, 60850	88	80.96
Old Man River(OWF1)	53	61543	46	42.32
Blackspring Ridge(BSR1)	49	61736, 61737	300	276
Capital Power Whitla Wind Power Facility	4	60990	201.6	201.6
Castle Rock Ridge 2 (CRR2)	53	567221	30.6	28.15
Enel Riverview Wind Farm	53	69221	115	57.2
AESO South Planning Region Subtotal			**1,546.2**	**1,376.23**
Ghost Pine (NEP1)	42	2621 to 2625	82	75.44
Halkirk (HAL1)	42	66435, 67435	150	138
Fortis Bull Creek Phases 1 and 2(Bul1 & BUL2)	37	4222	29.5	27.14
AESO Central Planning Region Subtotal			**261.5**	**240.58**
Total			**1,807.7**	**1,616,81**

Note:
[a] "Unit Net Generation" refers to gross generating unit output (MW) less unit service load.

Table 4-6: Dispatch Conditions for Existing Solar Generation Facilities

Facility Name and Code	AESO Planning Area No.	Bus No.	MC (MW)	Unit Net Generation[a] (MW)	
				2022 SL	2022 SP
Brooks Solar (BSC1)	47	553257	15	12	15
AESO South Planning Region Subtotal			**15**	**12**	**15**
AESO Central Planning Region Subtotal			**0**	**0**	0
Total			**15**	**12**	15

Note:
[a] "Unit Net Generation" refers to gross generating unit output (MW) less unit service load.

Table 4-7: Dispatch Conditions for Planned Wind Generation Projects

AESO Project No. and Name	Bus No.	Planned ISD	Planning Area No.	AESO Stage	Pmax (MW)	Unit Net Generation[a] (MW)
						2022 SL/ 2022 SP Pre-Project
AESO South Planning Region						
P1892 Fortis Buffalo Atlee Cluster 3 WAGF (REP #2)	552260	18-Mar-19	47	5	17.3	15.92
P1853 Fortis Buffalo Atlee Cluster 1 WAGF (REP #2)	553260	01-Mar-19	47	5	18.3	16.84
P2199 Buffalo Atlee Wind Farm 2 (REP #2)	557261	30-Jun-21	47	2	13.8	12.7
P1719 Stirling WAGF Project (REP #2)	61630	20-Dec-19	54	4	113	103.96
P2122 EDF Cypress Wind (REP #2)	560003	01-Jun-21	4	2	201.6	201.6
P1533 Joss MPC WAGF (REP #3)	60798, 60799	28-Jun-19	47	5	122	112.2
P1698 Joss Jenner WAGF - Phase 2 (REP #3)	61798, 61799	01-May-19	47	5	71.4	65.69
P2041 TransAlta Windrise MPC Wind (REP #3)	567031	02-Nov-20	53	2	207	93.24
P1800-2 Capital Power Whitla Wind Power Facility		01-Dec-20	4	5	97.2	97.2

P1812 Suncor Forty Mile Granlea WAGF	61994, 62994	01-Jun-2020	4	5	200	200
P2137 Enerfin Winnifred MPC Wind (Sensitivity only)	-	Feb 15, 2023	4	4	90	90
P2338 Capital Power Whitla Wind Phase 3 (Sensitivity only)	-	Sept 15, 2021	4	6	54	54
AESO South Planning Region Subtotal					**1,263.2**	**919.35**
AESO Central Planning Region						
P1567 EDPR Sharp Hills Wind Farm (REP #1)	60831, 60832	01-May-19	42	4	248.4	228.53
Total Planned					**1,511.6**	**1,147.88**
Total Planned, Existing and Under Construction						**2,764.69**

Note:
[a] "Unit Net Generation" refers to gross generating unit output (MW) less unit service load.

Table 4-8: Dispatch Conditions for Planned Solar Generation Projects

AESO Project No. and Name	Bus No.	Planned ISD	Planning Area No.	AESO Stage	Pmax (MW)	Unit Net Generation[a] (MW) Pre-Project	
						2022SL	2022SP
AESO South Planning Region							
P1838 Fortis 895S Suffield DG PV	3270	01-Feb-2020	4	5	22	22	22
P1878 Fortis 257S Hull DER Solar	552402	15-Oct-2019	52	5	24.5	19.6	24.5
P1922 FortisAlberta Vauxhall Solar DER	554273	01-Nov-2019	52	5	22	17.6	22
P1879 Claresholm Solar Connection	60894	30-Jun-20	49	5	130	104	130
P2009 Greengate Travers MPC Solar	560026 561026 562026	01-Dec-20	49	5	400	320	400
P2337 Dunmore Solar (Sensitivity only)	-	April 1, 2023	4	4	216	-	108[b]

P2347 Forty Mile Granlea Solar Phase 2 (Sensitivity only)	-	Nov 17, 2023	4	5	220	-	110[b]
AESO South Planning Region Subtotal					**598.5**	**483.2**	**598.5**
AESO Central Planning Region							
P2097 FortisAlberta Innisfail 214S DER Solar	557120	Dec 15, 2019	39	5	22	13.6	22
Total Planned					**620.5**	**496.8**	**620.5**
Total Planned, Existing and Under Construction					**635.5**	**508.8**	**635.5**

Note:

[a] "Unit Net Generation" refers to gross generating unit output (MW) less unit service load.

[b] The generation output from P2337 an P2347 are dispatched based on 0.5 coincident factor, commonly used by the AESO for the solar farm in the summer peak high wind conditions.

The pre-project scenarios will represent the situations where the Project is not in service. The post-Project scenario renewable generation dispatch levels will be identical to the pre-Project scenario dispatch levels shown in tables above, with the following adjustments:

- Dispatch the Project to 266 MW
- Dispatch down the existing Blackspring Ridge (BSR1) and the planned P2041 TransAlta Windrise MPC Wind project by 266 MW

4.2.5 Intertie Flow Assumptions

The intertie flow assumptions for the Alberta-British Columbia (AB-BC), Alberta-Saskatchewan (AB-SK), and Alberta-Montana (MATL) interties are shown in Table 4-9.

For the 2029 WP Post-Project scenario, the intertie flows should be as per the published AESO base cases.

Table 4-9: Intertie Flows by Scenario

Scenario Name	Import (-) / Export (+) by Intertie		
	AB-BC	AB-SK	MATL
2022 SP	-794	-150	0
2022 SL	0	0	0

4.2.6 HVDC Power Order Assumptions

The Western Alberta Transmission Line (WATL) and the Eastern Alberta Transmission Line (EATL) are high-voltage direct current (HVDC) transmission lines. The HVDC power order assumptions for the studies will be set to minimize losses for the pre-Project and post-Project study scenarios.

Table 4-10: HVDC Power Order by Scenario

Scenario Number	Scenario Name	WATL (MW)*	EATL (MW)*
1	2022 SP Pre-Project	750 S → N	1000 S → N
2	2022 SL Pre-Project	425 S → N	1000 S → N
3	2022 SP Post-Project	750 S → N	1000 S → N
4	2022 SL Post-Project	425 S → N	1000 S → N

Notes:
N → S: HVDC flow direction is North to South
S → N: HVDC flow direction is South to North

For the 2029 WP Post-Project scenario, the HVDC flows should be as per the published AESO base cases.

The reactive power limits of the MVAr exchanges between the HVDC terminals (WATL and EATL) and the connected alternating current (AC) transmission systems are shown in Table 4-11. These limits must be maintained when performing the studies.

Table 4-11: HVDC to Adjacent AC System MVAr Exchange Limits

HVDC Facility	North Terminal Reactive Power Limit (MVAr)	South Terminal Reactive Power Limit (MVAr)
EATL	-85 to 75	-35 to 35
WATL	-75 to 75	-35 to 35

4.2.7 Transmission Facility Ratings

The legal owner of transmission facilities (TFO) provided the thermal ratings assumptions for the existing transmission lines in the Study Area. Table 4-12 shows the normal ratings and emergency ratings for the key transmission lines in the Study Area, which will be used to perform the engineering studies.

Table 4-12: Thermal Rating Assumptions for Key Transmission Lines in the Study Area

Line ID	Line Description	Voltage Class (kV)	Normal Rating (MVA)	Emergency Rating (MVA)
			Summer	Summer
964L	Bowmanton 244S - Whitla 251S	240	952	1047
983L	Whitla 251S - Elkwater 264S	240	952	1047
1074L	Bowmanton 244S - Elkwater 264S	240	952	1047
1034L	Bowmanton 244S - Cassils 324S	240	931	1024
1035L	Bowmanton 244S - Newell 2075S	240	952	1047
1087L	Cassils 324S - Newell 2075S	240	547	656

Line ID	Line Description	Voltage Class (kV)	Normal Rating (MVA)	Emergency Rating (MVA)
			Summer	Summer
676L	Bowmanton 244S - Bullshead 523S	138	369	406
675L	AI Rothbauer 321S - Bowmanton 244S	138	96	133
880L	Bullshead 523S - AI Rothbauer 321S	138	123	135
892L	Bowmanton 244S - Suffield 895S	138	67	74
666L	West Brooks 28S - Tilley 498S	138	120	133
100L	Tilley 498S - Suffield 895S	138	69	76
612L	Fincastle 336S - Burdett 368S	138	85	94
610L	Taber 83S - Fincastle 336S	138	85	94
879L	Bowmanton 244S - Burdett 368S	138	85	94
658L	Chappice Lake 649S - Cypress 562S	138	81	89
668L	Cypress 562S - Empress 394S	138	121	133
669L	Cypress 562S - Amoco Empress 163S	138	177	195
674L	Bowmanton 244S - Chappice Lake 649S	138	121	133
1088L	Cassils 324S - Newell 2075S	240	931	1024

The TFO provided the details of the substation transformers in the Study Area. The key transformers in the Study Area are shown in Table 4-10.

Table 4-13: Summary of Key Transformers in the Study Area

Substation Name and Number	Transformer ID	Transformer Voltages (kV)	Transformer Rating (MVA)
North Lethbridge 370S	T3	240/138 kV	193.6
	T5	240/138 kV	200
	T6	240/138 kV	200
Westbrooks 28S	T1	240/138 kV	400
	T2	240/138 kV	400
Bowmanton 244S	T1	240/138 kV	200
	T2	240/138 kV	200

The TFO provided the details of the shunt elements in the Study Area. The key shunt elements in the Study Area are shown in Table 4-14.

Table 4-14: Summary of Key Shunt Elements in the Study Area

Substation Name and Number	Voltage Class (kV)	Capacitors		Reactors	
		Number of Switched Shunt Blocks	Total at Nominal Voltage (MVAr)	Number of Switched Shunt Blocks	Total at Nominal Voltage (MVAr)
Taber 83S	138	1	24.46	-	-
		1	24.5		
Hays 421S	138	1	24.46	-	-
Picture Butte 120S	240	2	50	-	-
Burdett 368S	138	1	24.46	-	-
		1	24.5		
Tilley 498S	138	1	27.17	-	-
West Brooks 28S	240	-	-	1	50
Whitla 251S	240	-	-	2	75
McNeil 840S	138	2	24.8	-	-
Bullshead 523S	138	1	18.3	-	-

4.2.8 Protection Fault Clearing Times

The transient stability studies will be performed using the actual fault clearing times for the selected contingencies, as provided by the TFO and as shown in Table 4-15. Only those contingencies shown in Table 4-15 will be studied for transient stability studies.

Table 4-15: Protection Fault Clearing Times

Contingency (System Element Lost)	Fault Location	Clearing Times (Cycles)	
		Near End	Far End
983L (Elkwater 264S – Whitla 251S)	Elkwater 264S	5	6
983L (Elkwater 264S – Whitla 251S)	Whitla 251S	5	6
964L (Whitla 251S – Bowmanton 244S)	Whitla 251S	4	5
964L (Whitla 251S – Bowmanton 244S)	Bowmanton 244S	4	5
1034L (Cassils 324S – Bowmanton 244S)	Cassils 324S	4	5
1034L (Cassils 324S – Bowmanton 244S)	Bowmanton 244S	4	5
1035L (Newell A2075S – Bowmanton 244S)	Newell A2075S	4	5
1035L (Newell A2075S – Bowmanton 244S)	Bowmanton 244S	4	5
892L (Suffield 895S – Bowmanton 244S)	Suffield 895S	6	27
892L (Suffield 895S – Bowmanton 244S)	Bowmanton 244S	6	27
676L (Bullshead 523S – Bowmanton 244S)	Bullshead 523S	6	27
676L (Bullshead 523S – Bowmanton 244S)	Bowmanton 244S	6	27
600L (Peace Butte 404S – Bullshead 523S)	Peace Butte 404S	9	30
600L (Peace Butte 404S – Bullshead 523S)	Bullshead 523S	9	30
880L (AI Rothbauer 321S – Bullshead 523S)	AI Rothbauer 321S	7	7
880L (AI Rothbauer 321S – Bullshead 523S)	Bullshead 523S	7	7
675L (AI Rothbauer 321S – Bowmanton 244S)	AI Rothbauer 321S	6	8
675L (AI Rothbauer 321S – Bowmanton 244S)	Bowmanton 244S	6	8
879L (Burdett 368S – Bowmanton 244S)	Burdett 368S	6	27
879L (Burdett 368S – Bowmanton 244S)	Bowmanton 244S	6	27
658L/674L (Cypress 562S – Bowmanton 244S)	Cypress 562S	6	27
658L/674L (Cypress 562S – Bowmanton 244S)	Bowmanton 244S	6	27

4.2.9 Project Dynamic Data

Dynamic data for the Project will be based on the Stage 1 Project Data Update Package (PDUP-1).

4.2.10 Voltage Profile Assumption

ID #2010-007RS will be used to establish system normal (i.e., pre-contingency) voltage profiles for key area busses prior to commencing any studies. Table 2-1 of the *Transmission Planning Criteria – Basis and Assumptions* applies for the busses not included in ID #2010-007RS. These voltages will be used to set the voltage profile for the study base cases prior to the power flow studies.

5 Study Methodology

The studies to be performed for this connection assessment are identified in Table 5-1.

Table 5-1: Summary of the Studies to be Performed

Scenario No. and Name		Power Flow			Transient Stability			Short Circuit
		Category			Category			Category A
		A	B	C5	A	B	C5	
Pre-Project								
1	2022 SP	X	X					X
2	2022 SL	X	X					
Post-Project								
3	2022 SP	X	X			X		X
4	2022 SL	X	X			X		
5	2029 WP							X
Pre-Project Sensitivity								
6	2022 SP	X	X					
Post-Project Sensitivity								
7	2022 SP	X	X			X		

For the engineering studies, all transmission facilities 69kV and above within the Study Area and the transmission lines connecting to neighboring planning areas will be studied and monitored to assess the impact of the Project on the performance of the AIES, including any violations of the Reliability Criteria (as defined in Section 3.1).

5.1 Study Case Validation

The study will be conducted on the AIES system model using the AESO's planning base cases. The seasonal light/peak scenarios will be studied as required. The base cases will be modified by the AESO to include the corresponding load and generation forecast information. The resulting cases, or seed cases, along with the project IDEVs, will be provided by the AESO to the Studies Consultant. Manual adjustments may be required to ensure full alignment with the details outlined in this Study Scope, as described in the process outlined below. The AESO will provide guidance to the Studies Consultant with regard to the setup of the study cases should any questions arise.

The expected process for the creation of acceptable study cases is as follows:

1. The AESO provides seed cases and the appropriate incremental IDEVs to use and any other applicable information required to the Studies Consultant.

2. The Studies Consultant applies the identified IDEVs to the seed cases to create the study cases. The Consultant verifies and makes adjustments as required to ensure the study cases represent the assumptions outlined within the Study Scope.
3. Upon creating the study cases, all the study cases are forwarded to the AESO for approval.
4. The consultant proceeds with the required engineering studies only after the study cases are approved by the AESO.

5.2 Power Flow Studies

Power flow studies will be performed to identify thermal and voltage criteria violations as per the Reliability Criteria, and any deviations from the limits listed in Table 3-1.

For the Category B power flow studies, the transformer taps and switched shunt reactive compensating devices such as shunt capacitors and reactors will be locked and continuous shunt devices will be enabled.

Voltage deviations at point-of-delivery (POD) low voltage busses will also be assessed for both the pre-Project and post-Project networks by first locking all tap changers and area shunt reactive compensating devices to identify any post-transient voltage deviations above 10%. Second, tap changers will be allowed to move while shunt reactive compensating devices remained locked to determine if any voltage deviations above 7% would occur in the area. Third, all the taps and shunt reactive compensating devices will be allowed to adjust, and voltage deviations above 5% will be reported.

The scenarios to be studied are shown in Table 5-1.

5.2.1 Contingencies to be Studied

Power flow studies will be performed for the Category A and all Category B contingencies in the Study Area. The transmission elements in the study area and the ties to the adjacent areas are to be monitored.

5.3 Transient Stability Studies

The Genesee generating unit 3 in Wabamun (Area 40) will be used as the reference for the studies.

The report presenting the results of the transient stability studies must provide response plots for several variables, including rotor angle, and active and reactive power output for the proposed generation facility and generators listed below:

- One generator from City of Medicine Hat system
- One generator from Shepard Power Plant
- Capital Power Whitla Wind Power Facility
- P2122 Cypress Wind Power Project
- P1812 Suncor Forty Mile Granlea WAGF

The results report must also provide the response plots for following key 240 kV and 138 kV buses:

- Bowmanton 244S substation 240 kV bus
- Bowmanton 244S substation 138kV bus

- Whitla 251S substation 240kV bus

Other busses will be monitored and will be reported as determined by the results. The results report must also provide the key branch active and reactive power flow surrounding the Facility.

Transient stability studies will be performed for the post-Project scenarios as shown in Table 5-1. If any transient stability issues are observed, transient stability analysis will be performed for the corresponding pre-Project scenarios.

For the sensitivity studies, only the area critical 240 kV contingencies of 983L, 964L, 1034L and 1035L will be required. Further sensitivity studies, in consultation with the TFO, may be required if there are transient instability issues.

5.3.1 Contingencies to be Studied

Transient stability studies will be performed for the contingencies shown in Table 4-15.

5.4 Short-Circuit Current Level Studies

A maximum fault level must be provided for the substations in the vicinity of the Project assuming normal system operation with all transmission elements in service and generation dispatched. Three-phase faults and single line-to-ground faults will be simulated. Fault currents will be calculated in polar coordinates (kilo amperes) and positive and zero sequence impedances in rectangular coordinates (per-unit values).

Estimated maximum three-phase faults and single line-to-ground short-circuit current levels will be reported for the following substations:

- Bowmanton 244S substation, 240 kV and 138 kV busses
- Whitla 251S substation, 240 kV bus
- The proposed collection substation and switching substation of the Project, 240 kV bus (if applicable)

Further sensitivity studies, in consultation with the TFO, may be required if the primary short-circuit analysis indicates a potential to exceed or approach the existing fault rating of the transmission facilities.

The scenarios to be studied are as shown in Table 5-1.

6 Mitigation Measures

6.1 Development

Mitigation measures may be required if the post-Project study results identify system performance issues. Mitigation measures for the Project may involve modifying or adding real-time operational practices and/or remedial action schemes (RASs).

The Studies Consultant must notify the AESO of any system performance issues in a timely manner, following which the AESO Studies Engineer may instruct the Studies Consultant as follows:

- Develop tables showing the constraint effective factors[3] for generation or load based on thermal criteria violations that are observed.
- Collaborate with the AESO to propose changes, if any, to the connection alternatives that could remove the requirement for a RAS.
- Collaborate with the AESO to study modifications to existing and/or planned RASs, proposed by the AESO, to ensure the coordination of existing protection schemes with the addition of any proposed protection schemes.
- Collaborate with the AESO to identify and study new RASs, if any, that may be required to ensure system reliability is maintained after connecting the Project to the AIES.

The AESO Studies Engineer will work closely with the Studies Consultant and guide the development and/or modifications of the proposed mitigation measures to ensure system reliability, security and compliance with AESO ID #2018-018T, *Provision of System Access Service and the Connection Process*.

6.2 Evaluation

6.2.1 Post-Mitigation Studies

Studies to evaluate the effectiveness of mitigation measures, if required, will be performed in accordance with the technical criteria, assumptions, and methods provided in this Study Scope and in accordance with further instructions from the AESO.

6.2.2 Constraint Effective Factor Studies

Constraint effective factor analysis are used to determine the generator- and load- constraint effective factors and to identify the most effective generators or loads to manage the thermal criteria violations, if any, that are observed under Category B conditions.

[3] Constraint effective factor studies are performed to determine the generator- and load- constraint effective factors. Constraint effective factors are used to estimate the ability of generators and loads to manage transmission constraints. A generator's or load's constraint effective factor is defined as the change in power flow over a specific transmission line following a change in the generator's energy production or in the load's energy consumption. The greater the constraint effective factor, the more effective a generator or load can be in managing a thermal criteria violation on the specific transmission line.

7 Changes to Study Assumptions

This study will utilize the AESO's planning base cases, which include the AESO's corporate forecast (2019 LTO). Sensitivity studies or restudy may be required in the event of revisions to the AESO's corporate forecast or other study assumptions. Additional engineering studies may also be required to assess new connection alternatives, changes to project ISD, or delays in proposed system developments. Any additional or revised study requirements shall be captured in a signed Study Scope Amendment document.

Attachment A: Transmission Planning Criteria – Basis and Assumptions

Transmission Planning Criteria – Basis and Assumptions

Date: July 9, 2019

Version: V1.2

Alberta Electric System Operator

Calgary Place, 2500, 330-5th Avenue SW Calgary, AB T2P 0L4

Phone: 403-539-2450 | Fax: 403-539-2949

www.aeso.ca

@theaeso

1. Introduction

This document presents the reliability standards, criteria, and assumptions to be used as the basis for planning the Alberta Transmission System. The criteria, standards and assumptions identified in this document supersede those previously established.

2. Transmission Reliability Standards and Criteria[1]

The AESO applies the following Alberta Reliability Standards to ensure that the transmission system is planned to meet applicable performance requirements under a defined set of system conditions and contingencies. A brief description of each of these standards is given below:

1. **TPL-001-AB-0: System Performance Under Normal Conditions**

   Category A represents a normal system condition with all elements in service (N-0). All equipment must be within its applicable rating, voltages must be within their applicable ratings and the system must be stable with no cascading outages. Under Category A, electric supply to load cannot be interrupted and generating units cannot be removed from service.

2. **TPL-002-AB1-0: System Performance Following Loss of a Single BES Element**

   Category B events result in the loss of any single element (N-1) under specified fault conditions with normal clearing. The specified elements are a generating unit, a transmission circuit, a transformer or a single pole of a direct current transmission line. The acceptable impact on the system is the same as Category A with the exception that radial customers or some local network customers, including loads or generating units, are allowed to be disconnected from the system if they are connected through the faulted element. The loss of opportunity load or opportunity interchanges is allowed. No cascading can occur.

3. **TPL-003-AB-0: System Performance Following Loss of Two or More BES Elements**

   Category C events result in the loss of two or more bulk electric system elements (sequential, N-1-1 or concurrent, N-2) under specified fault conditions and include both normal and delayed fault clearing. All of the system limits for Category A and B events apply with the exception that planned and controlled loss of firm load, firm transfers and/or generation is acceptable provided there is no cascading.

4. **TPL-004-AB-0: System Performance Following Extreme BES Events**

   Category D represents a wide variety of extreme, rare and unpredictable events, which may result in the loss of load and generation in widespread areas. The system may not be able to reach a new stable steady state, which means a blackout is a possible outcome. The AESO needs to evaluate these events, at its discretion, for risks and consequences prior to creating mitigation plans.

5. **FAC-014-AB1-2: Establishing and Communicating System Operating Limits**

   The AESO is required to establish system operating limits where a contingency is not mitigated through construction of transmission facilities

[1] A complete description of the *Alberta Reliability Standards* can be found on the AESO's website: https://www.aeso.ca/rules-standards-and-tariff/alberta-reliability-standards/

2.1 Thermal Loading Criteria

The AESO Thermal Loading Criteria require that the continuous thermal rating of any transmission element is not exceeded under normal and post-contingency operating conditions. Thermal limits are assumed to be 100% of the respective normal summer and winter ratings. Emergency limits are not considered in the planning evaluations.

2.2 Voltage Range and Voltage Stability Criteria

The normal minimum and maximum voltage limits as specified in the following table are used to identify Category A system voltage violations, while the extreme minimum and maximum limits are used to identify Category B and C system violations. Table 2-1 presents the acceptable steady state and contingency state voltage ranges for the AIES. Table 2-2 provides voltage stability criteria used to test the system performance.

Table 2-1: Acceptable Range of Steady State Voltage (kV)

Nominal Voltage	Extreme Minimum	Normal Minimum	Normal Maximum	Extreme Maximum
500	475	500	525	550
240	216	234	252	264
260 (Northeast & Northwest)*	234	247	266	275
144	130	137	151	155
138	124	135	145	150
72	65	68.5	75.5	79
69	62	65.5	72.5	76

Table 2-2: Voltage Stability Criteria

Performance Level	Disturbance (1)(2)(3)(4) Initiated by: Fault of No Fault DC Disturbance	MW Margin (P-V method) (5)(6)(7)	MVAr Margin (V-Q method) (6)(7)
A	Any element such as: One Generator One Circuit One Transformer One Reactive Power Source One DC Monopole	≥5%	Worst Case Scenario(8)
B	Bus Section	≥5%	50% of Margin Requirement in Level A
C	Any combination of two elements such as: A Line and a Generator A Line and a Reactive Power Source Two Generators Two Circuits Two Transformers Two Reactive Power Sources DC Bipole	≥2.5%	50% of Margin Requirement in Level A
D	Any combination of three or more elements such as: Three or More Circuits on ROW Entire Substation Entire Plant Including Switchyard	> 0	> 0

2.3 Transient Stability Analysis Assumptions

Standard fault clearing times as shown in Table 2-3 are used for the new facilities or when the actual clearing times are not available for the existing facilities. Double line-to-ground faults are applied for the Category C5 events with normal clearing times. Single line-to-ground faults are applied for Category C6 to C9 events with delayed clearing times as depicted in Table 2-4 and Table 2-5.

Table 2-3: Fault Clearing Times

Nominal (kV)	Near End (Cycles)	Far End (Cycles)
500	4	5
240	5	6
144/138 with telecommunications	6	8
144/138 without telecommunications	6	30

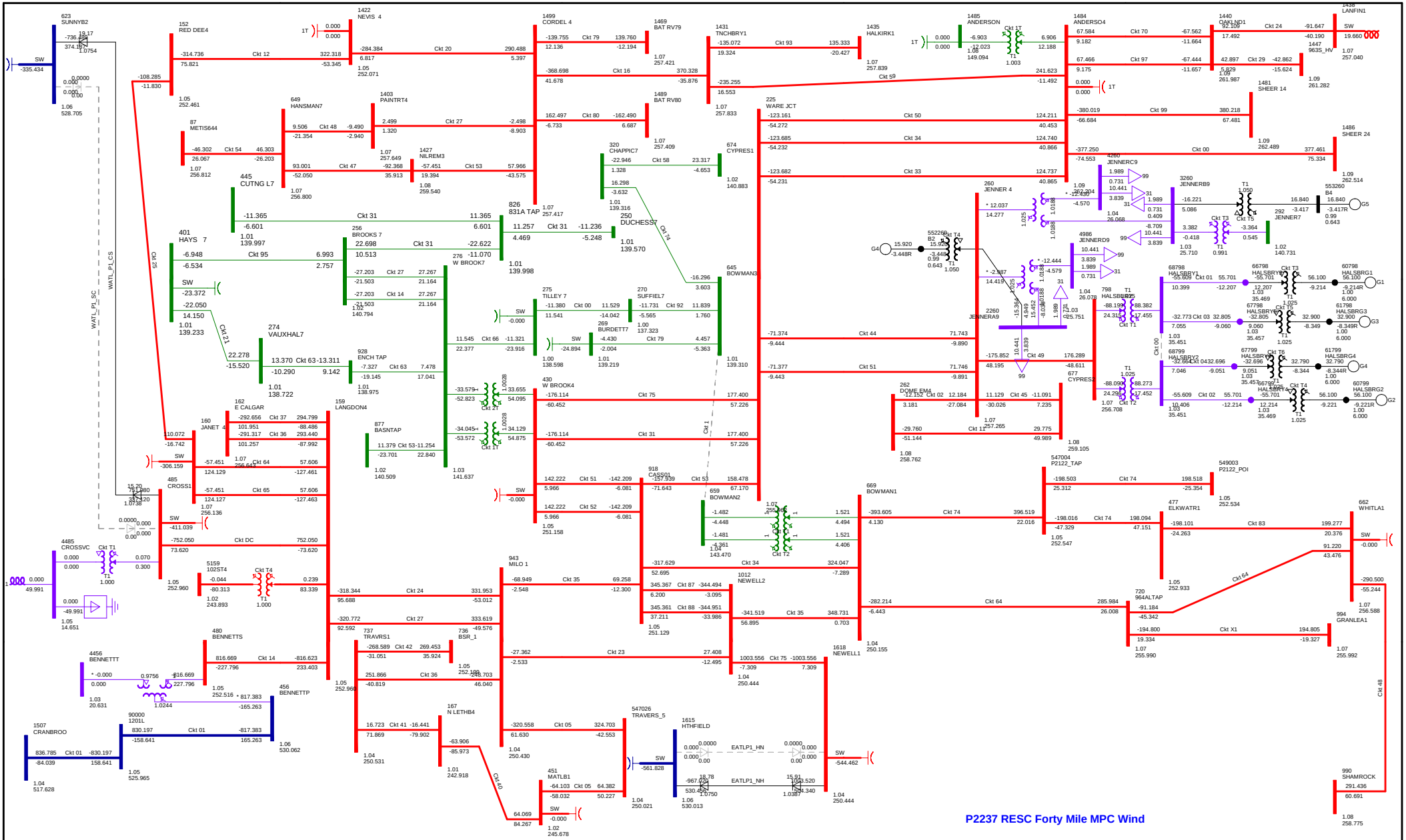
Table 2-4: Stuck Breaker Clearing Times for Lines

Voltage (kV)	Fault Clearing Times (Cycles)		
	Near End	Far End	2nd Ckt (C5 and C7 only)
138/144	15	24	24
240	12	6	14
500	9	5	11

Table 2-5: Stuck Breaker Clearing Times for Transformers

Voltage (kV)	Fault Location	Fault Clearing Times (Cycles)		
		High Side	Low Side	2nd Ckt (breaker fail)
240/138	240 kV side	12	6	14
	138 kV side	5	15	24
500/240	500 kV side	9	5	11
	240 kV side	4	12	14

Attachment A2
Pre-Project Power Flow Diagrams



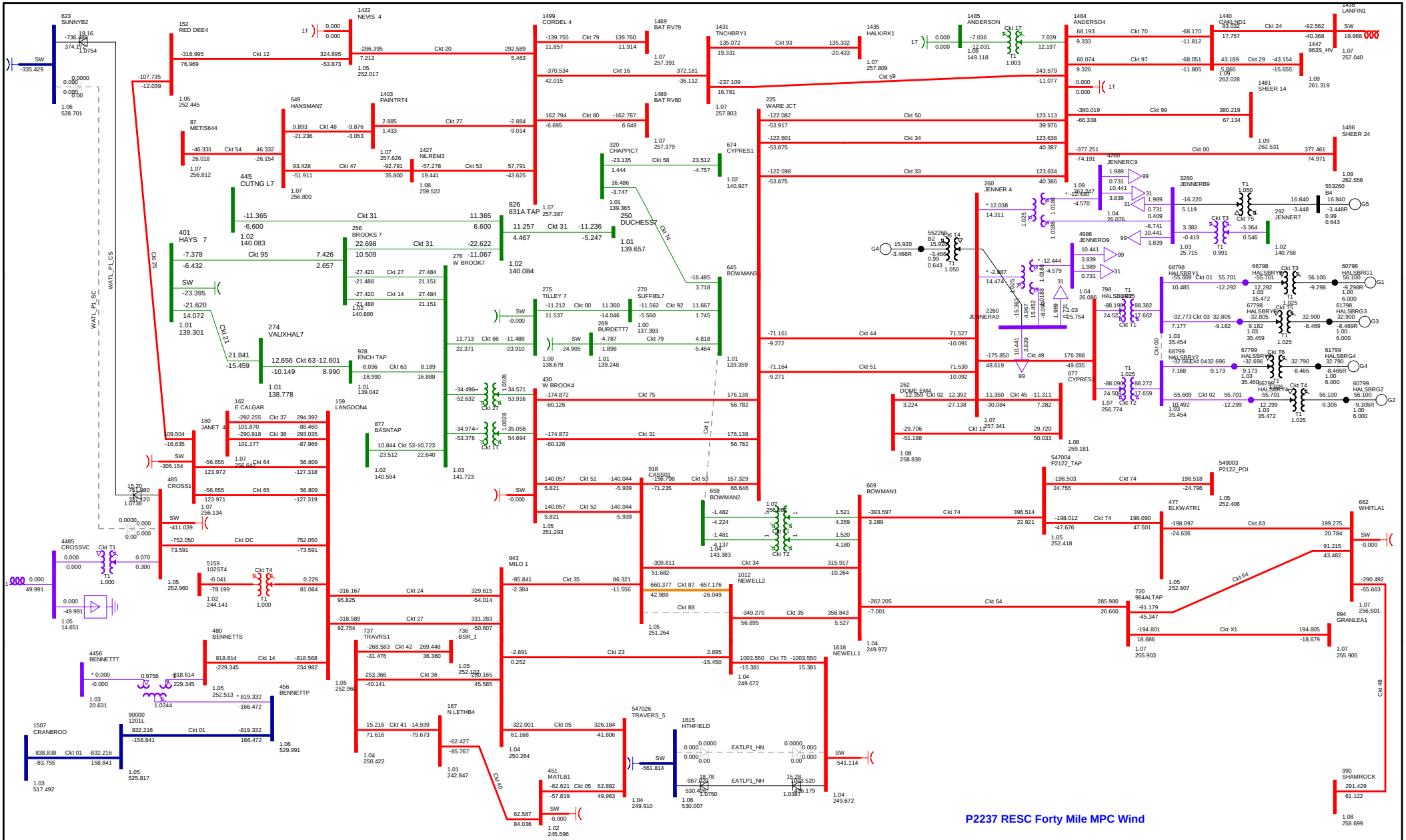
P2237 RESC Forty Mile MPC Wind

BC Import:-801.311 MW Sask Import:150.000 MW MATL Import:0.000 MW

MH Export: 17.383 MW

FIGURE A2-1-1-N-0: NORMAL OPERATION
2022 SUMMER PEAK - SCN 1 (PRE-CONNECTION)
PRINTED ON THURSDAY 14. APRIL 2022

Bus - Voltage (kV/pu)
Branch - MW/Mvar
Equipment - MW/Mvar
100.0 %Base A
1.100 kV 0.900 kV
kV: <=10.000 <=69.000 <=138.000 <=240.000 <=500.000 >500.000



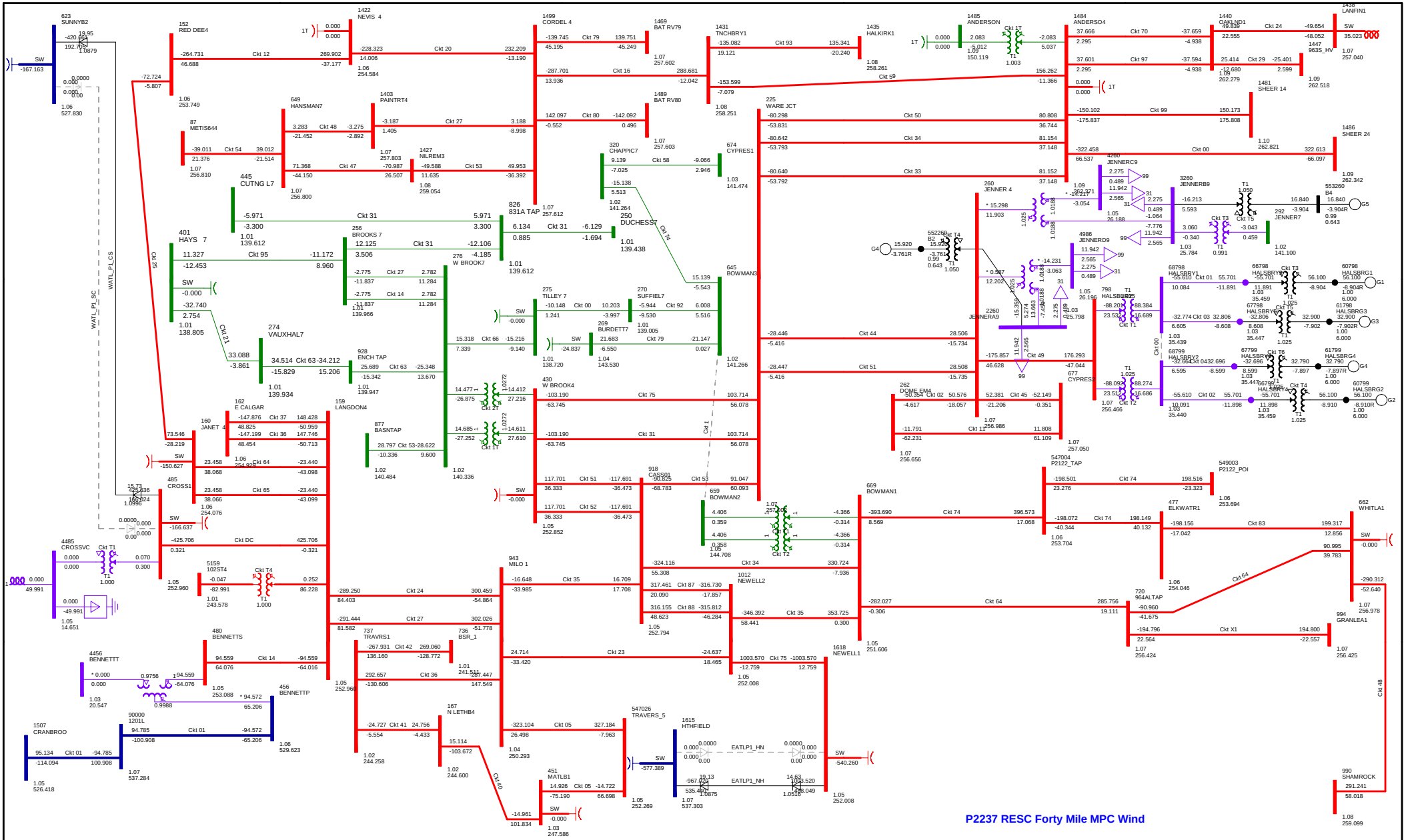
P2237 RESC Forty Mile MPC Wind

BC Import:-803.496 MW Sask Import:150.000 MW MATL Import:0.000 MW

MH Export: 17.382 MW

FIGURE A2-1-2 N-1: 1088L (CASSILS 324S – NEWELL 2075S)
2022 SUMMER PEAK - SCN 1 (PRE-CONNECTION)
PRINTED ON THURSDAY 14. APRIL 2022

Bus - Voltage (kV/pu)
Branch - MW/Mvar
Equipment - MW/Mvar
100.0 %Base A
1.100 kV 0.900 kV
kV: <=10.000 <=69.000 <=138.000 <=240.000 <=500.000 >500.000

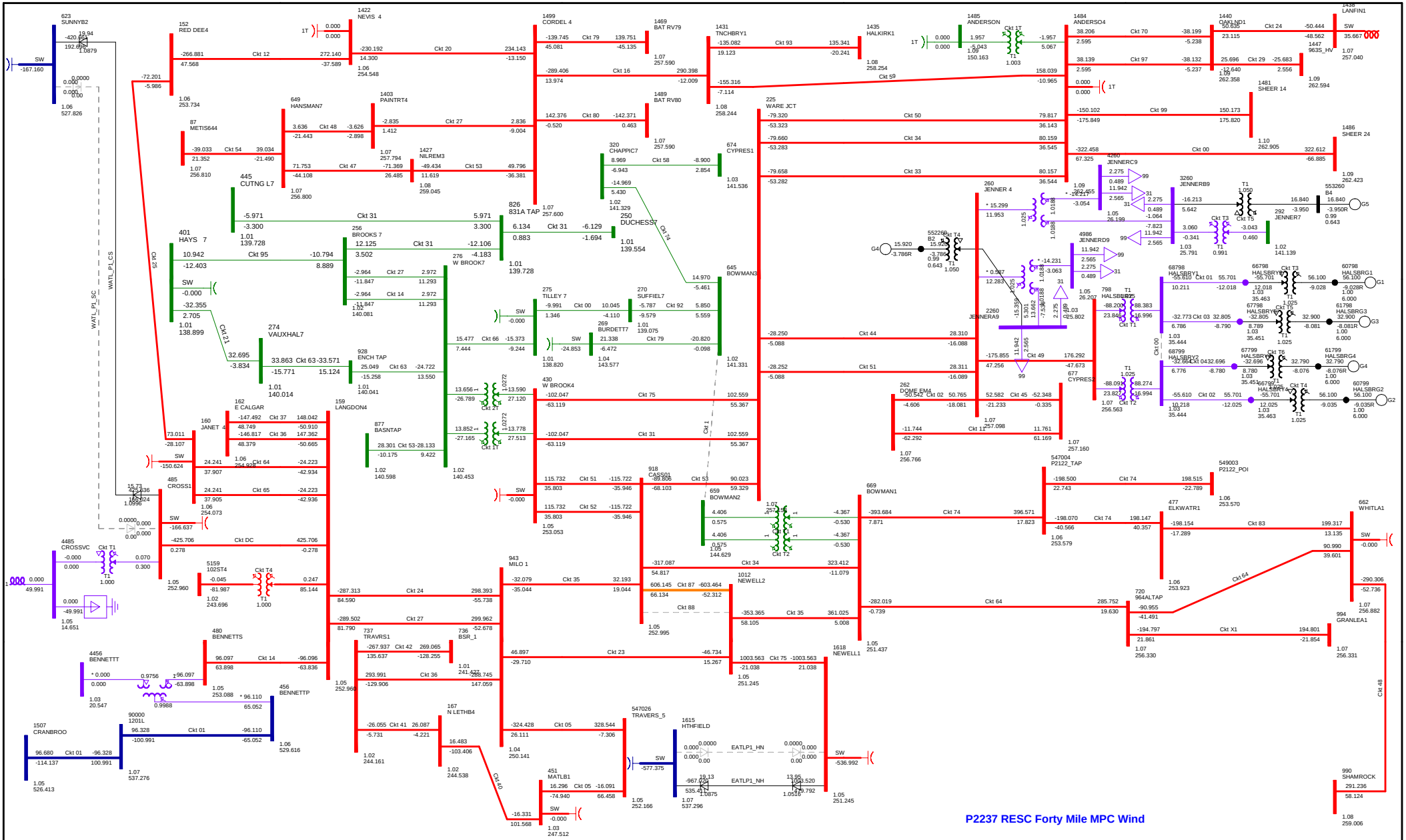


P2237 RESC Forty Mile MPC Wind

BC Import:0.956 MW Sask Import:-0.100 MW MATL Import:0.000 MW

MH Export: 16.516 MW

FIGURE A2-2-1-N-0: NORMAL OPERATION
2022 SUMMER LIGHT - SCN 1 (PRE-CONNECTION)
PRINTED ON THURSDAY 14. APRIL 2022

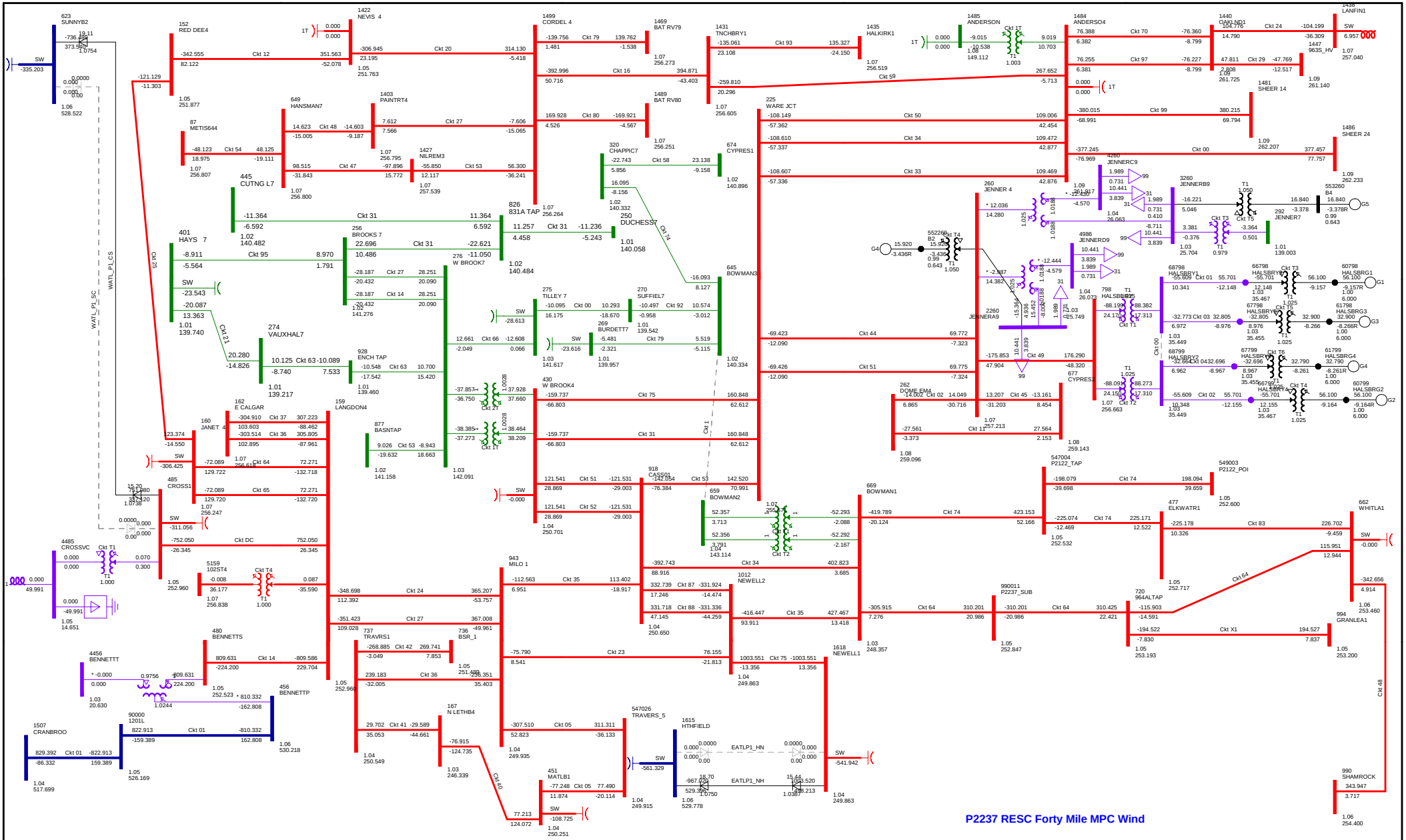


P2237 RESC Forty Mile MPC Wind

BC Import:-0.744 MW Sask Import:-0.100 MW MATL Import:0.000 MW

MH Export: 16.516 MW

FIGURE A2-2-2 N-1: 1088L (CASSILS 324S – NEWELL 2075S)
2022 SUMMER LIGHT - SCN 1 (PRE-CONNECTION)
PRINTED ON THURSDAY 14. APRIL 2022

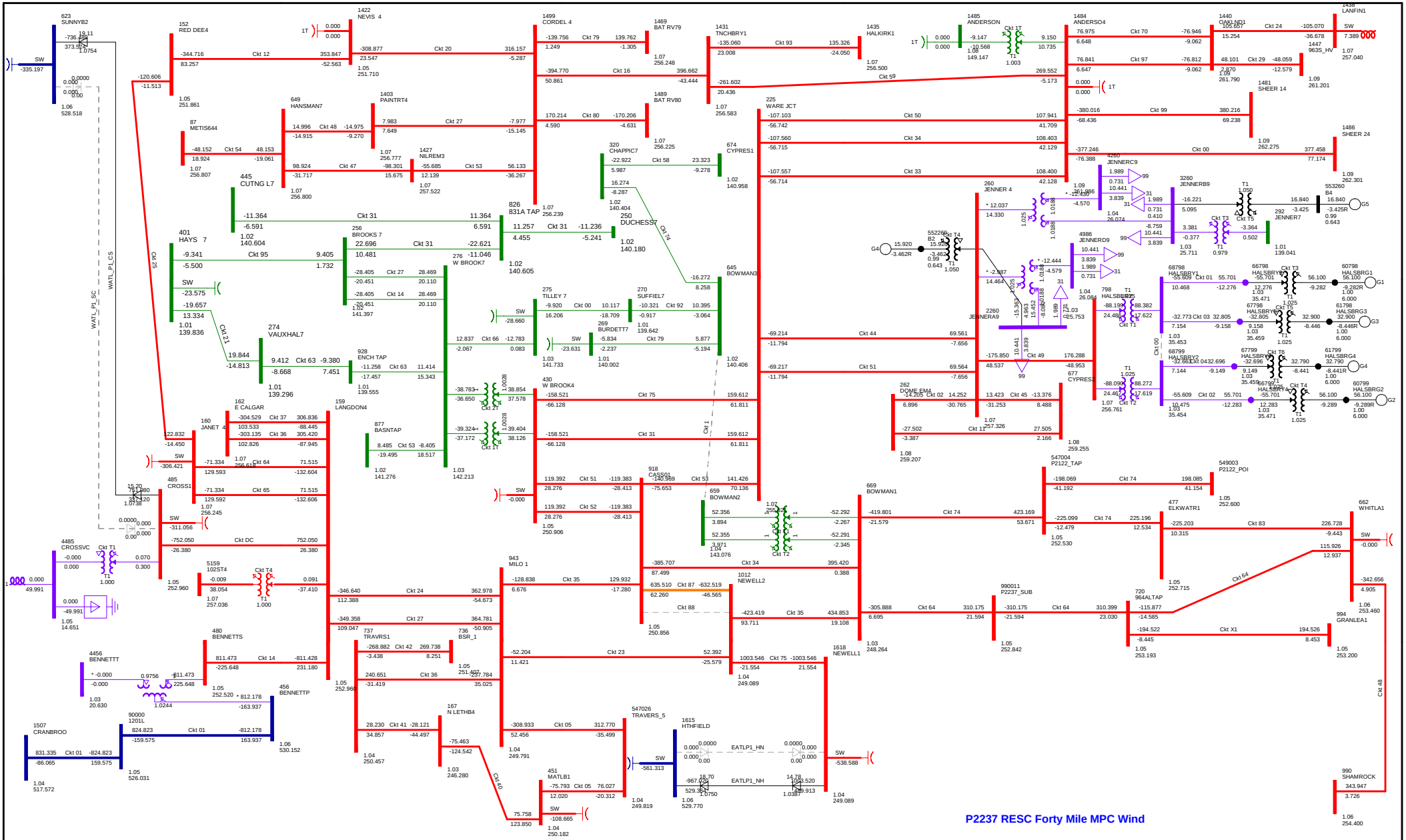


P2237 RESC Forty Mile MPC Wind

BC Import:-794.014 MW Sask Import:150.000 MW MATL Import:-0.000 MW

MH Export: 18.359 MW

FIGURE A2-3-1-N-0: NORMAL OPERATION
2022 SUMMER PEAK - SENSITIVITY 1 (PRE-CONNECTION)
PRINTED ON THURSDAY 14. APRIL 2022



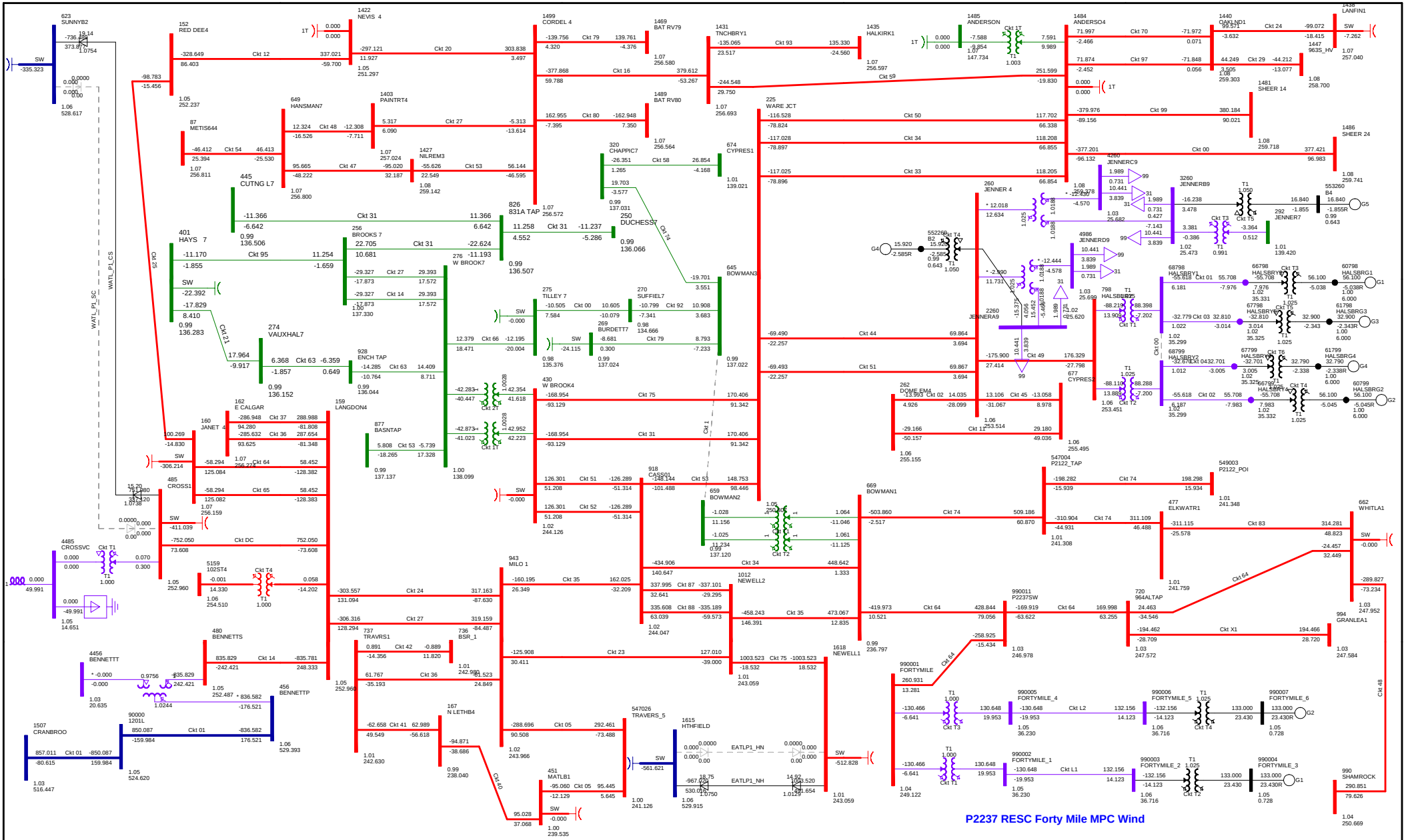
P2237 RESC Forty Mile MPC Wind

BC Import:-796.079 MW Sask Import:150.000 MW MATL Import:-0.000 MW

MH Export: 18.358 MW

FIGURE A2-3-2 N-1: 1088L (CASSILS 324S – NEWELL 2075S)
2022 SUMMER PEAK - SENSITIVITY 1 (PRE-CONNECTION)
PRINTED ON THURSDAY 14. APRIL 2022

Attachment A3
Post-Project Power Flow Diagrams

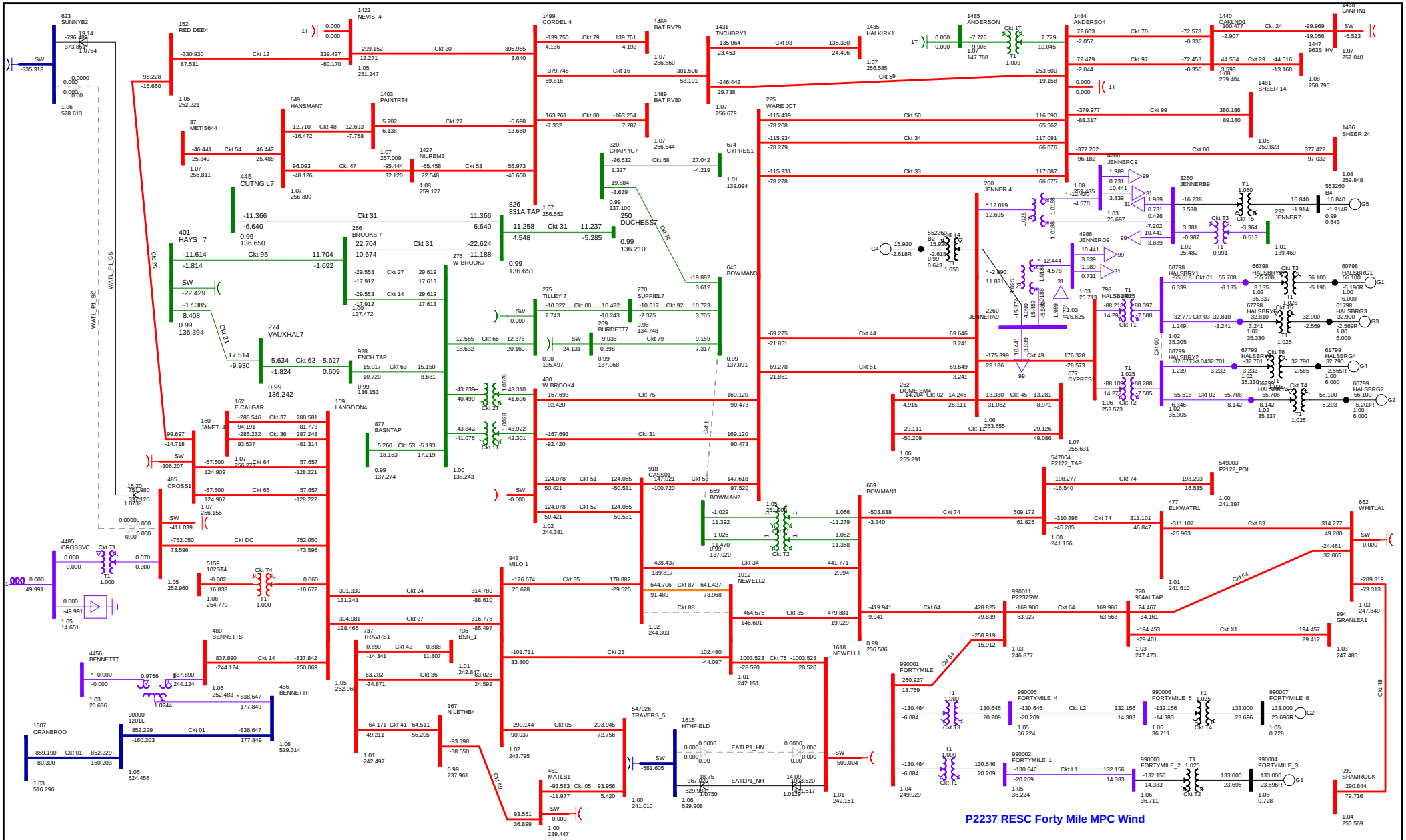


P2237 RESC Forty Mile MPC Wind

BC Import:-824.587 MW Sask Import:150.000 MW MATL Import:0.000 MW

MH Export: 18.269 MW

FIGURE A3-1-1-N-0: NORMAL OPERATION
2022 SUMMER PEAK - SCN 3 (POST-CONNECTION)
PRINTED ON THURSDAY 14. APRIL 2022

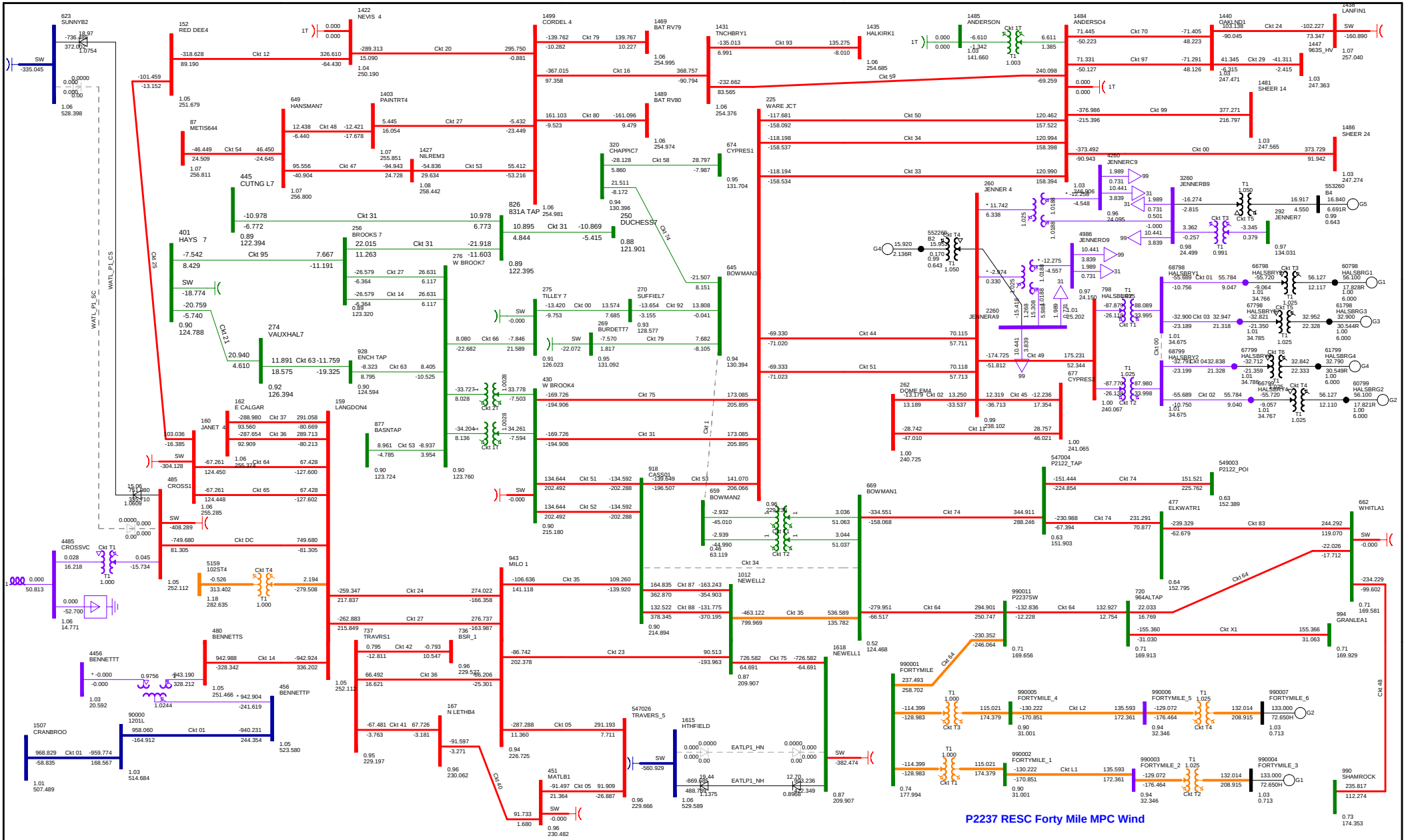


P2237 RESC Forty Mile MPC Wind

BC Import:-826.904 MW Sask Import:150.000 MW MATL Import:0.000 MW

MH Export: 18.266 MW

FIGURE A3-1-2 N-1: 1088L (CASSILS 324S – NEWELL 2075S)
2022 SUMMER PEAK - SCN 3 (POST-CONNECTION)
PRINTED ON THURSDAY 14. APRIL 2022

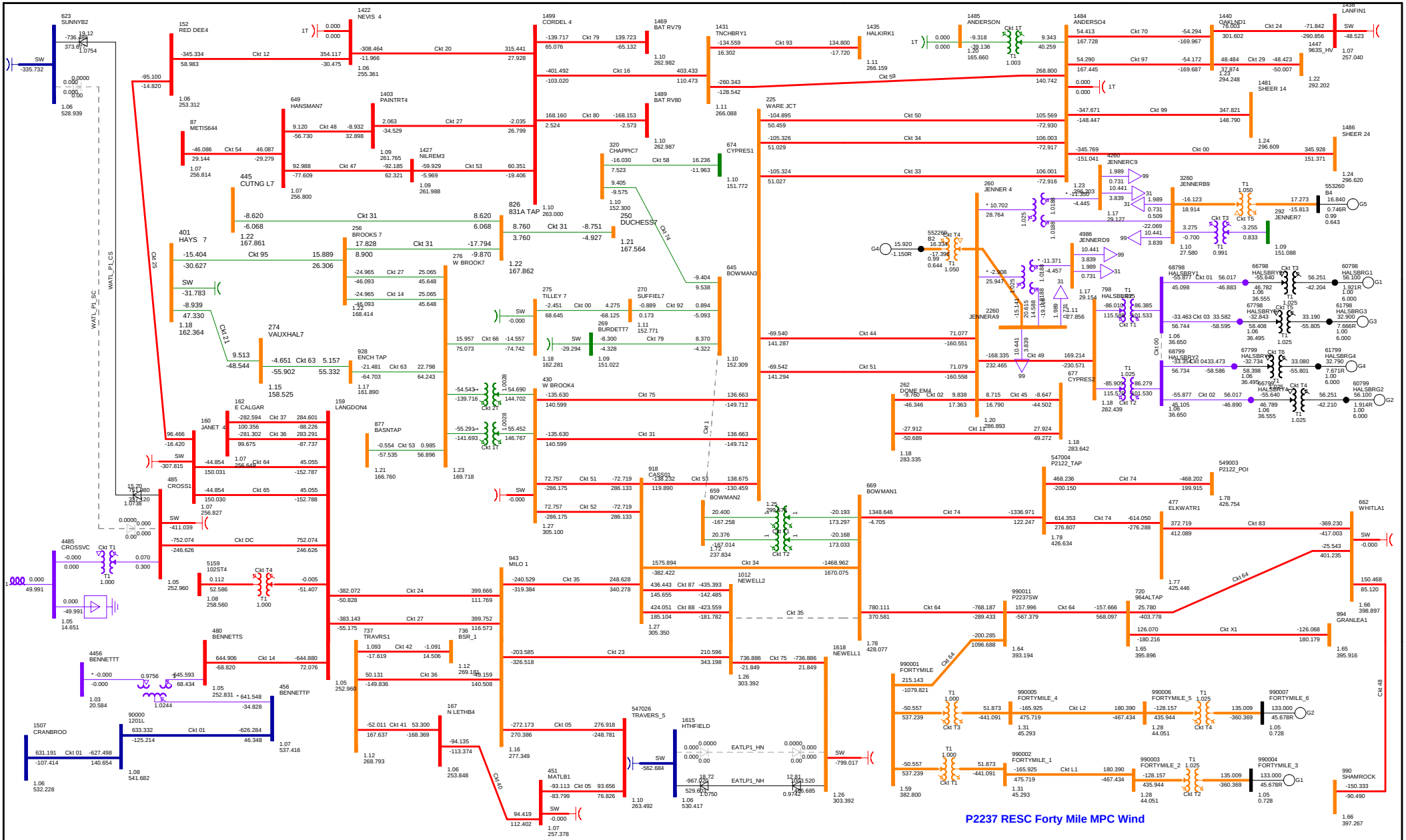


P2237 RESC Forty Mile MPC Wind

BC Import:-941.456 MW Sask Import:148.451 MW MATL Import:0.000 MW

MH Export: 2.920 MW

FIGURE A3-1-3 N-1: 1034L (BOWMANTON 244S TO CASSILS 324S)(BLOW UP)
2022 SUMMER PEAK - SCN 3 (POST-CONNECTION)
PRINTED ON THURSDAY 14. APRIL 2022



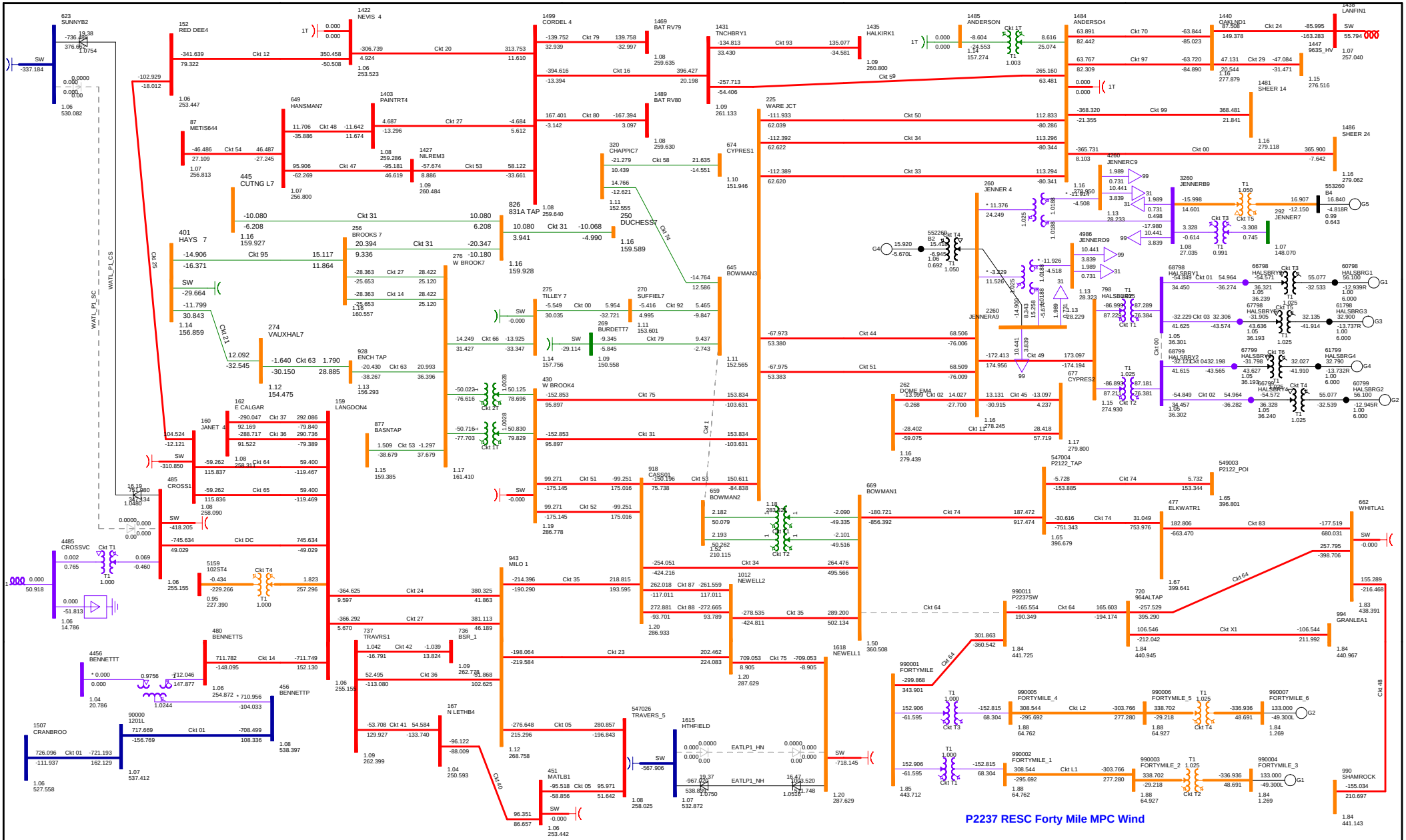
P2237 RESC Forty Mile MPC Wind

BC Import:-589.950 MW Sask Import:143.655 MW MATL Import:0.000 MW

MH Export: 82.911 MW

FIGURE A3-1-4 N-1: 1035L (BOWMANTON 244S TO NEWELL 2075S)(BLOW UP)
2022 SUMMER PEAK - SCN 3 (POST-CONNECTION)
PRINTED ON THURSDAY 14. APRIL 2022

Bus - Voltage (kV/pu)
Branch - MW/Mvar
Equipment - MW/Mvar
100.0 %Base A
1.100 kV 0.900 kV
kV: <=10.000 <=69.000 <=138.000 <=240.000 <=500.000 >500.000



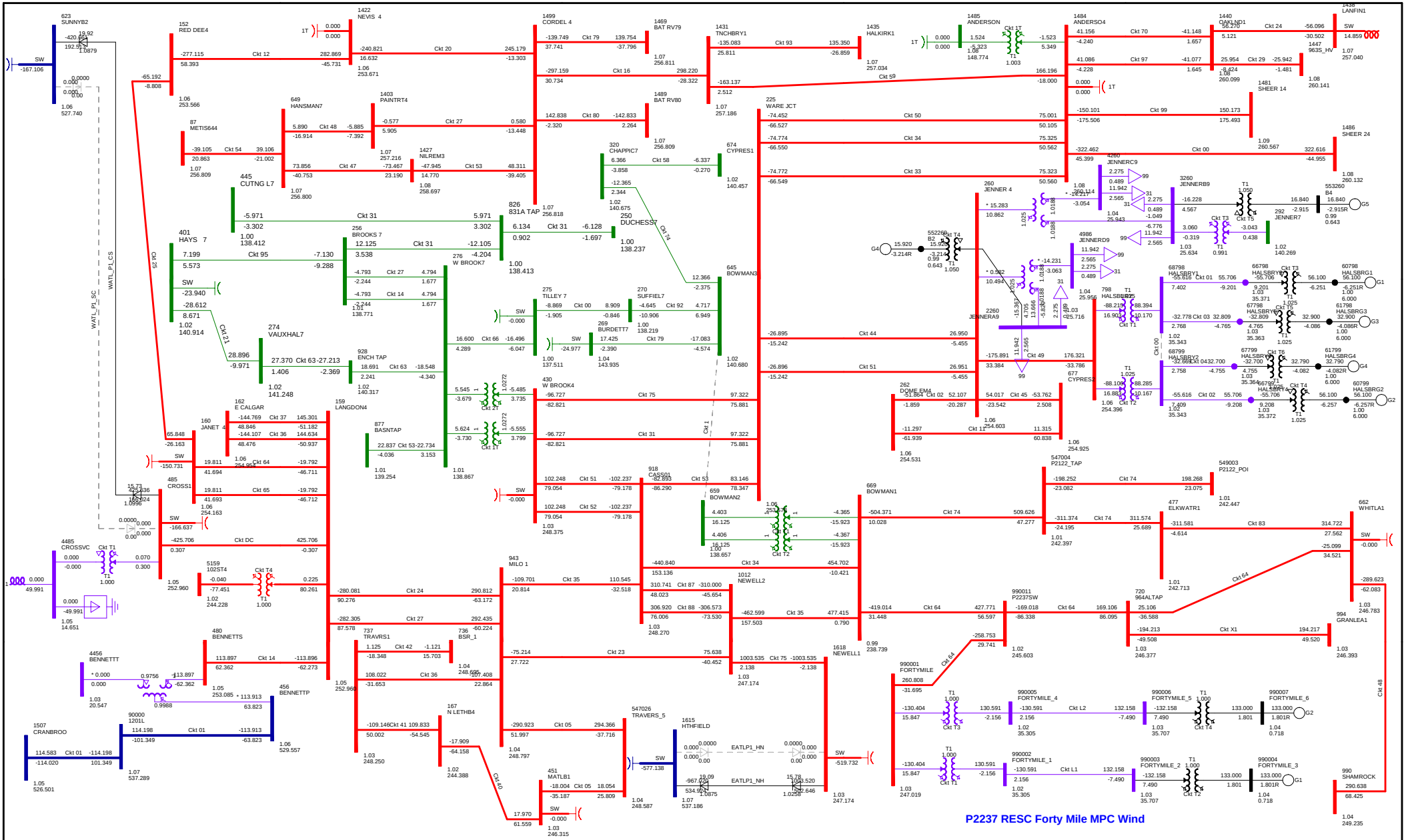
P2237 RESC Forty Mile MPC Wind

BC Import:-680.981 MW Sask Import:145.647 MW MATL Import:0.000 MW

MH Export: -15.533 MW

FIGURE A3-1-5 N-1: 964L (BOWMANTON 244S TO P2237 SUB)(BLOW UP)
2022 SUMMER PEAK - SCN 3 (POST-CONNECTION)
PRINTED ON THURSDAY 14. APRIL 2022

Bus - Voltage (kV/pu)
Branch - MW/Mvar
Equipment - MW/Mvar
100.0 %Base A
1.100 kV 0.900 kV
kV: <=10.000 <=69.000 <=138.000 <=240.000 <=500.000 >500.000

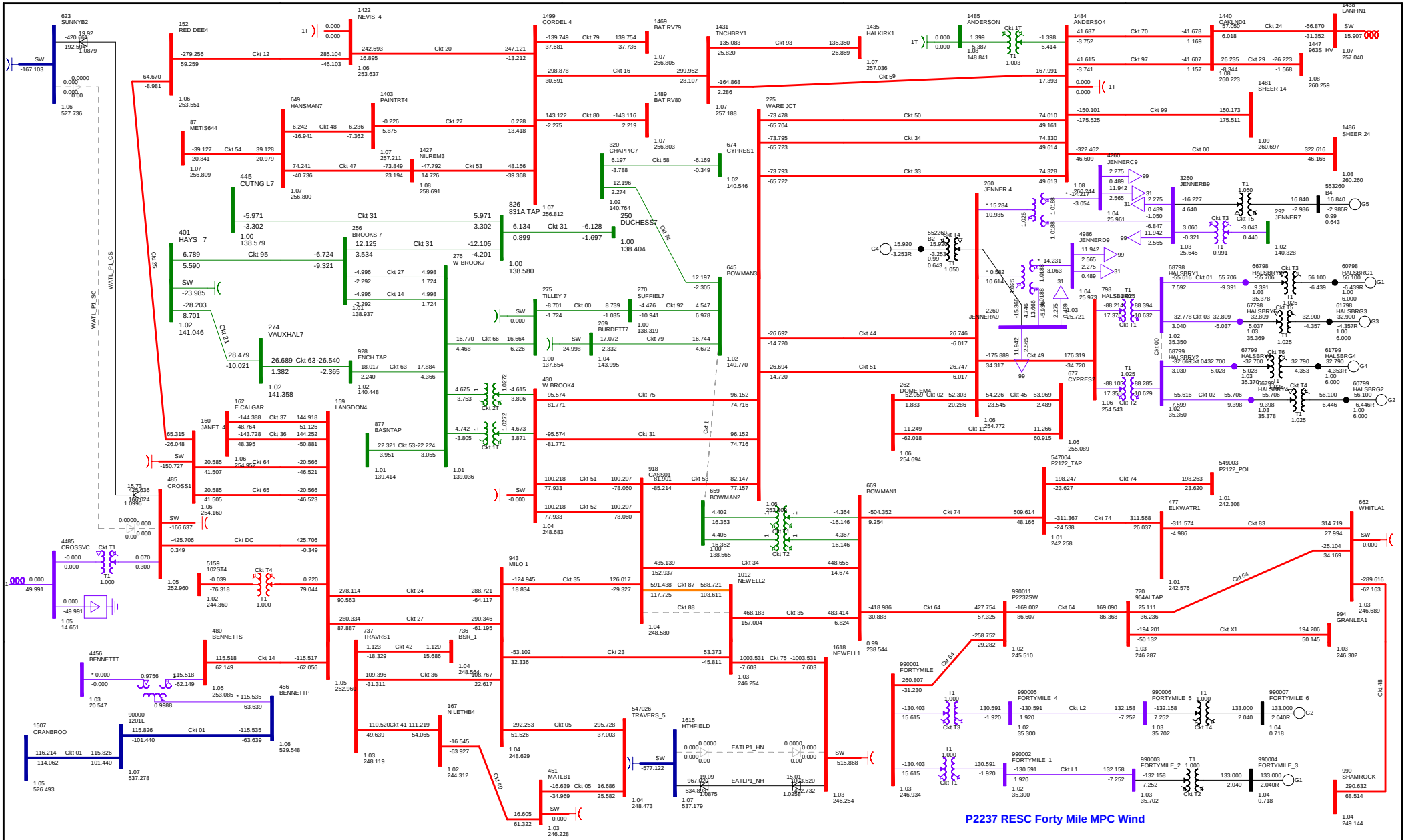


P2237 RESC Forty Mile MPC Wind

BC Import:-22.897 MW Sask Import:-0.100 MW MATL Import:0.000 MW

MH Export: 16.504 MW

FIGURE A3-2-1-N-0: NORMAL OPERATION
2022 SUMMER LIGHT - SCN 4 (POST-CONNECTION)
PRINTED ON THURSDAY 14. APRIL 2022

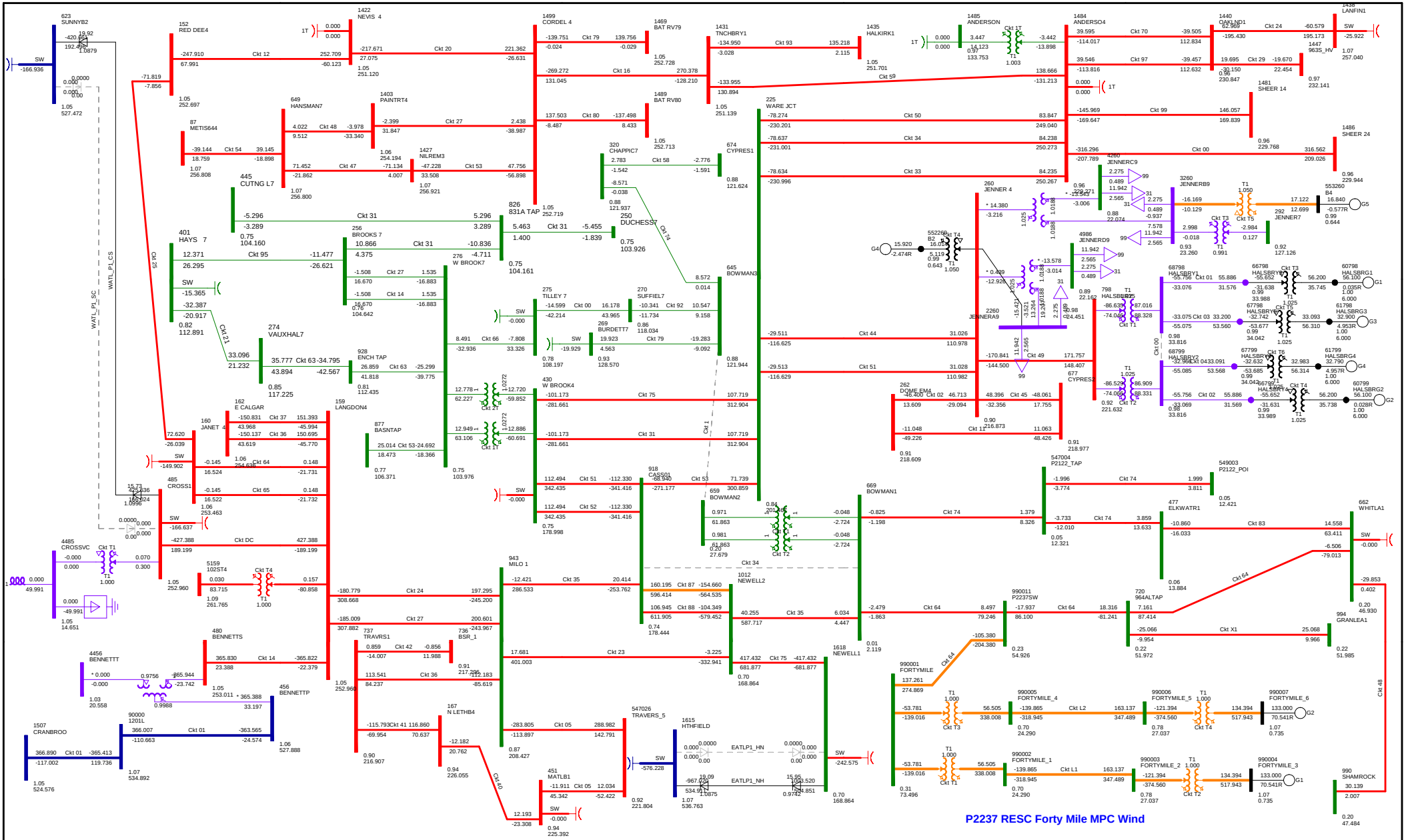


P2237 RESC Forty Mile MPC Wind

BC Import:-24.693 MW Sask Import:-0.100 MW MATL Import:0.000 MW

MH Export: 16.503 MW

FIGURE A3-2-2 N-1: 1088L (CASSILS 324S – NEWELL 2075S)
2022 SUMMER LIGHT - SCN 4 (POST-CONNECTION)
PRINTED ON THURSDAY 14. APRIL 2022

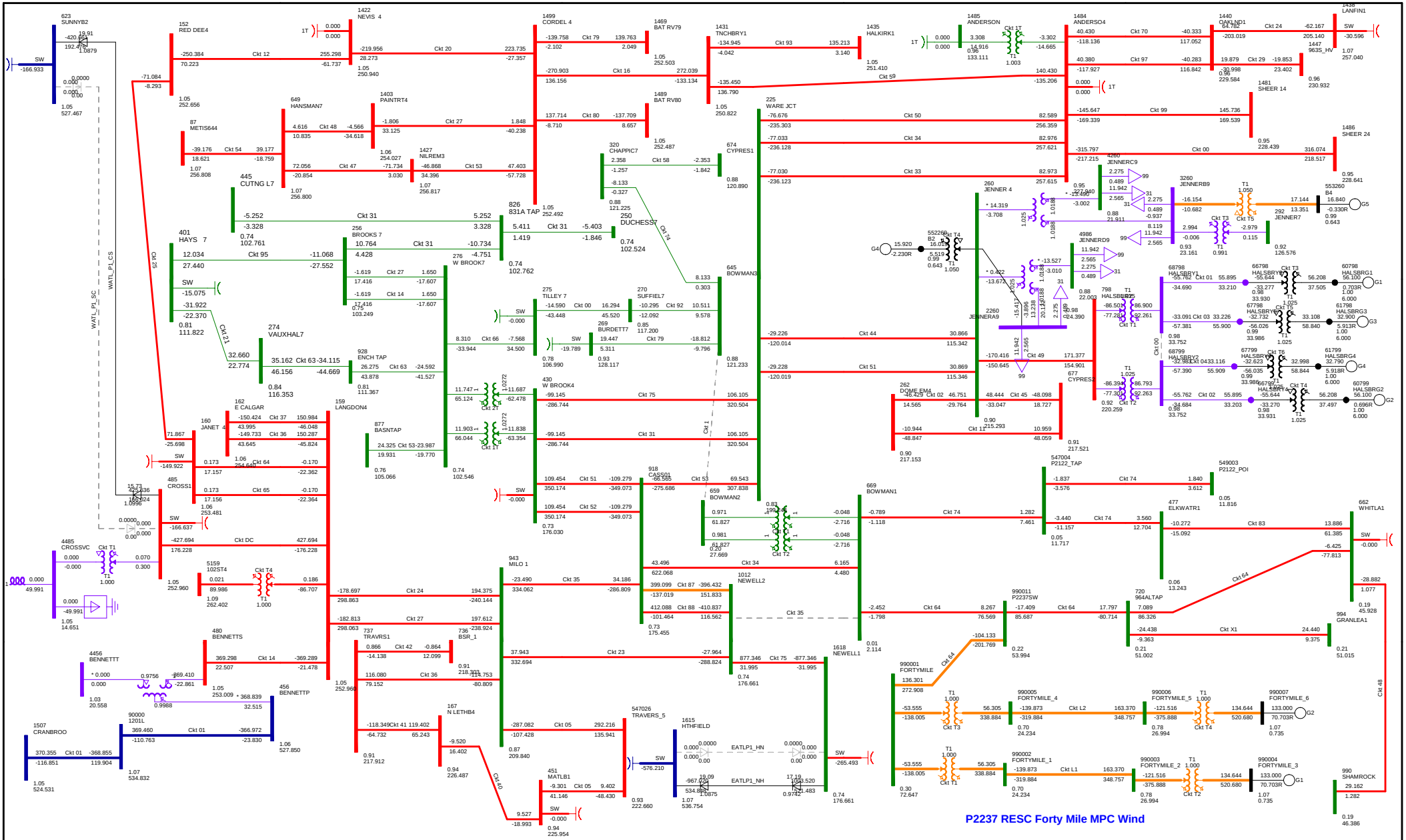


P2237 RESC Forty Mile MPC Wind

BC Import:-300.217 MW Sask Import:-0.096 MW MATL Import:-0.000 MW

MH Export: 35.015 MW

FIGURE A3-2-3 N-1: 1034L (BOWMANTON 244S TO CASSILS 324S)(BLOW UP)
2022 SUMMER LIGHT - SCN 4 (POST-CONNECTION)
PRINTED ON THURSDAY 14. APRIL 2022

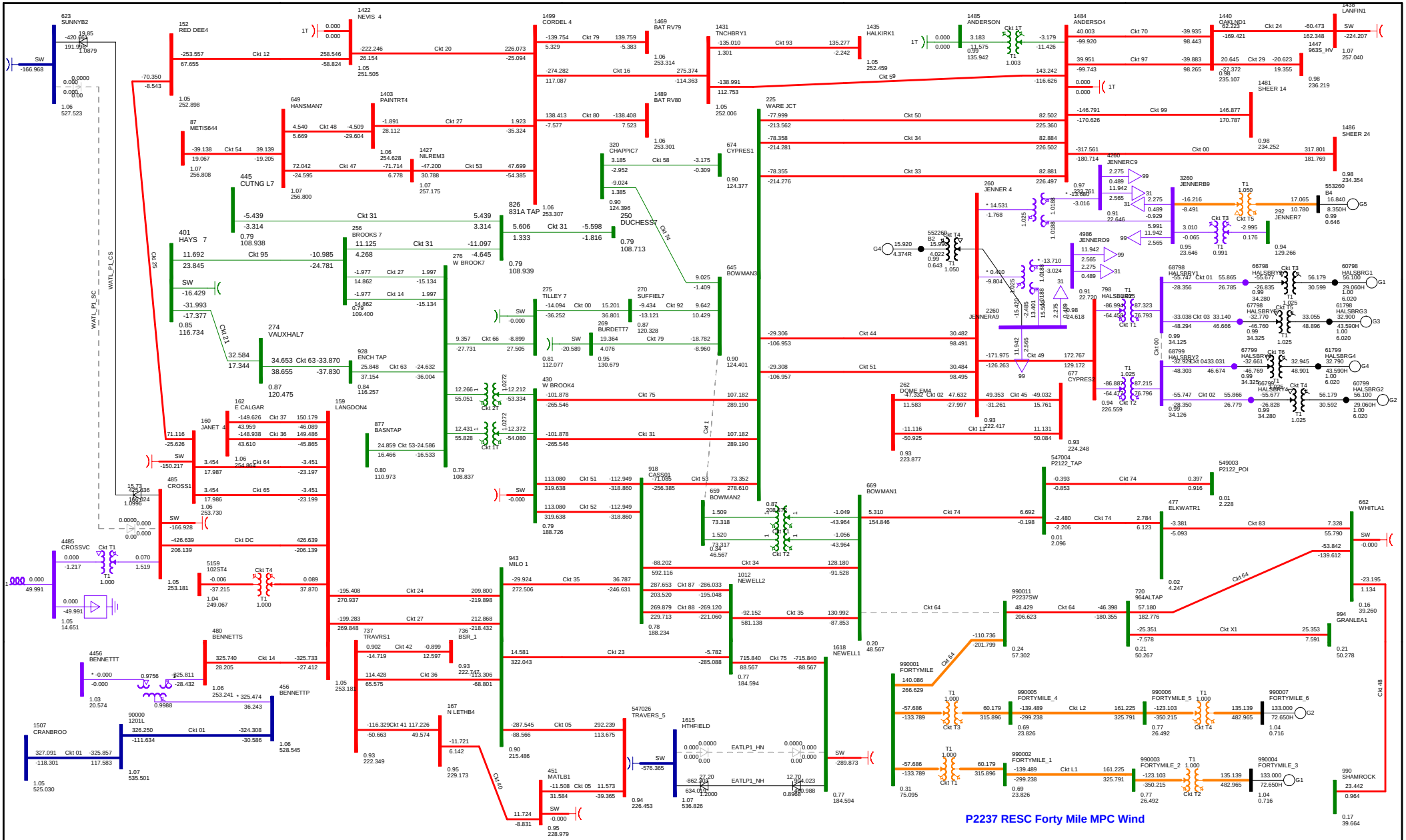


P2237 RESC Forty Mile MPC Wind

BC Import:-304.118 MW Sask Import:-0.096 MW MATL Import:0.000 MW

MH Export: 34.983 MW

FIGURE A3-2-4 N-1: 1035L (BOWMANTON 244S TO NEWELL 2075S)(BLOW UP)
2022 SUMMER LIGHT - SCN 4 (POST-CONNECTION)
PRINTED ON THURSDAY 14. APRIL 2022

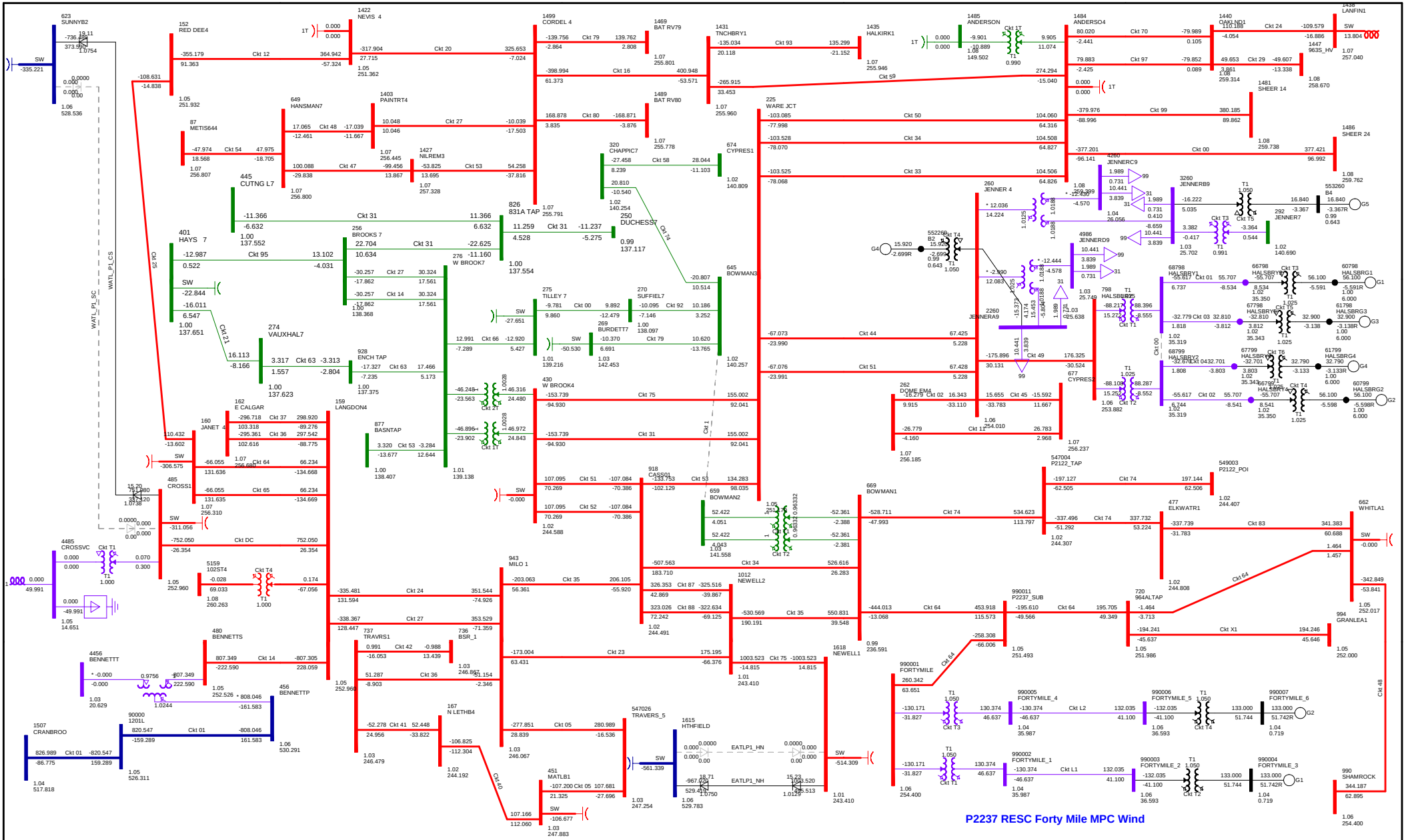


P2237 RESC Forty Mile MPC Wind

BC Import:-256.625 MW Sask Import:-0.097 MW MATL Import:0.000 MW

MH Export: 28.280 MW

FIGURE A3-2-5 N-1: 964L (BOWMANTON 244S TO P2237 SUB)(BLOW UP)
2022 SUMMER LIGHT - SCN 4 (POST-CONNECTION)
PRINTED ON THURSDAY 14. APRIL 2022

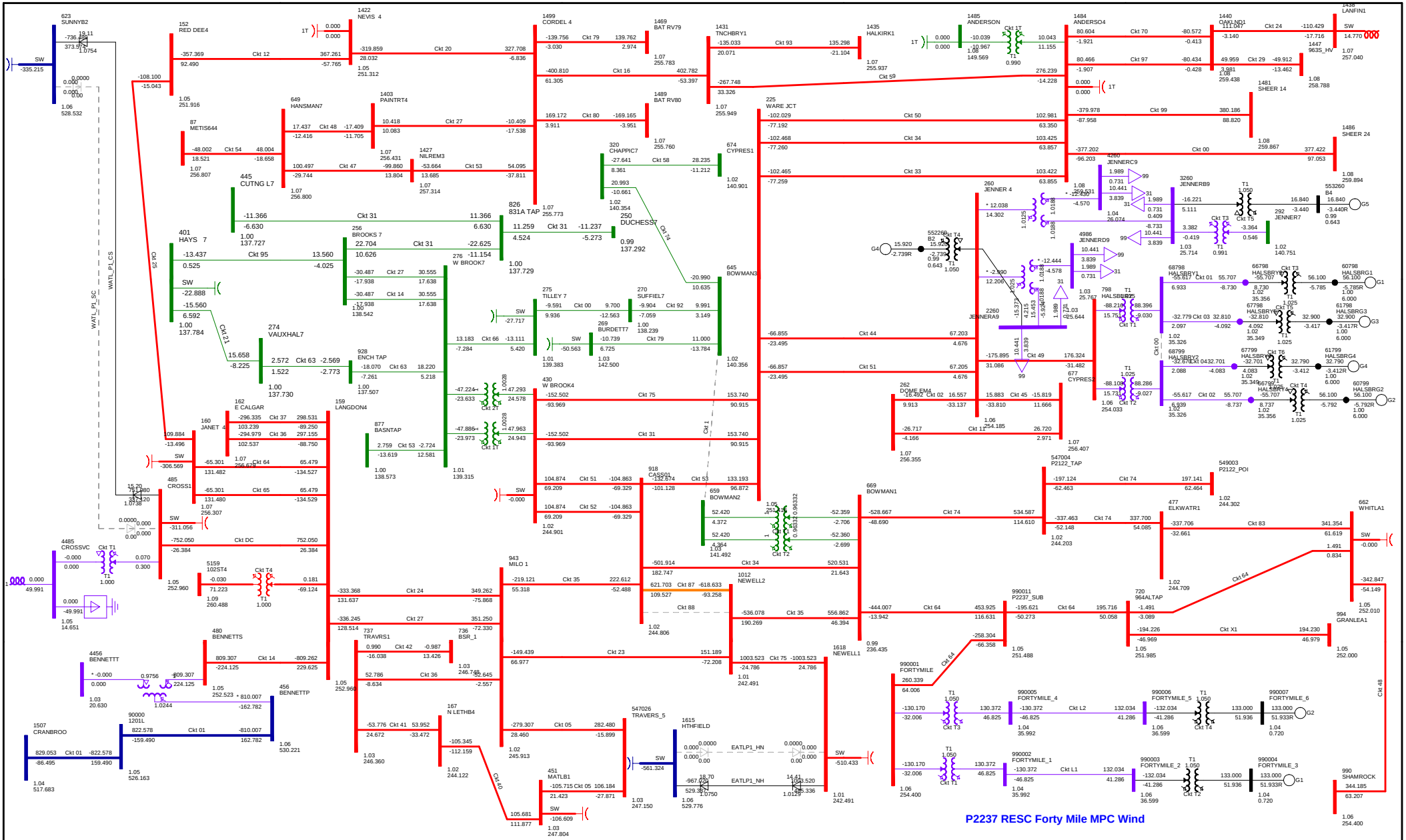


P2237 RESC Forty Mile MPC Wind

BC Import:-794.006 MW Sask Import:150.000 MW MATL Import:0.000 MW

MH Export: 18.350 MW

FIGURE A3-3-1-N-0: NORMAL OPERATION
2022 SUMMER PEAK - SENSITIVITY 1 (POST-CONNECTION)
PRINTED ON THURSDAY 14. APRIL 2022

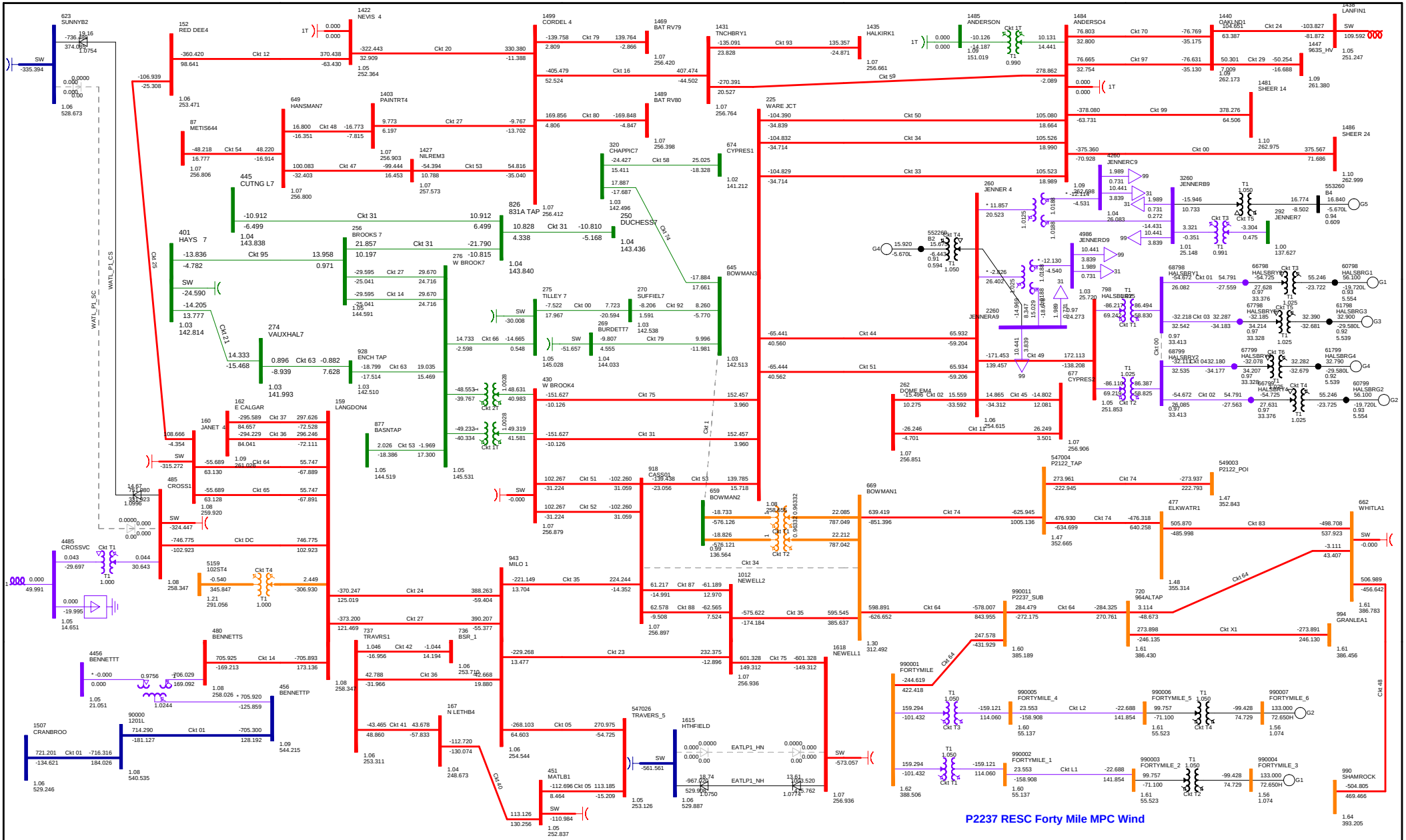


P2237 RESC Forty Mile MPC Wind

BC Import:-796.200 MW Sask Import:150.000 MW MATL Import:0.000 MW

MH Export: 18.349 MW

FIGURE A3-3-2 N-1: 1088L (CASSILS 324S – NEWELL 2075S)
2022 SUMMER PEAK - SENSITIVITY 1 (POST-CONNECTION)
PRINTED ON THURSDAY 14. APRIL 2022

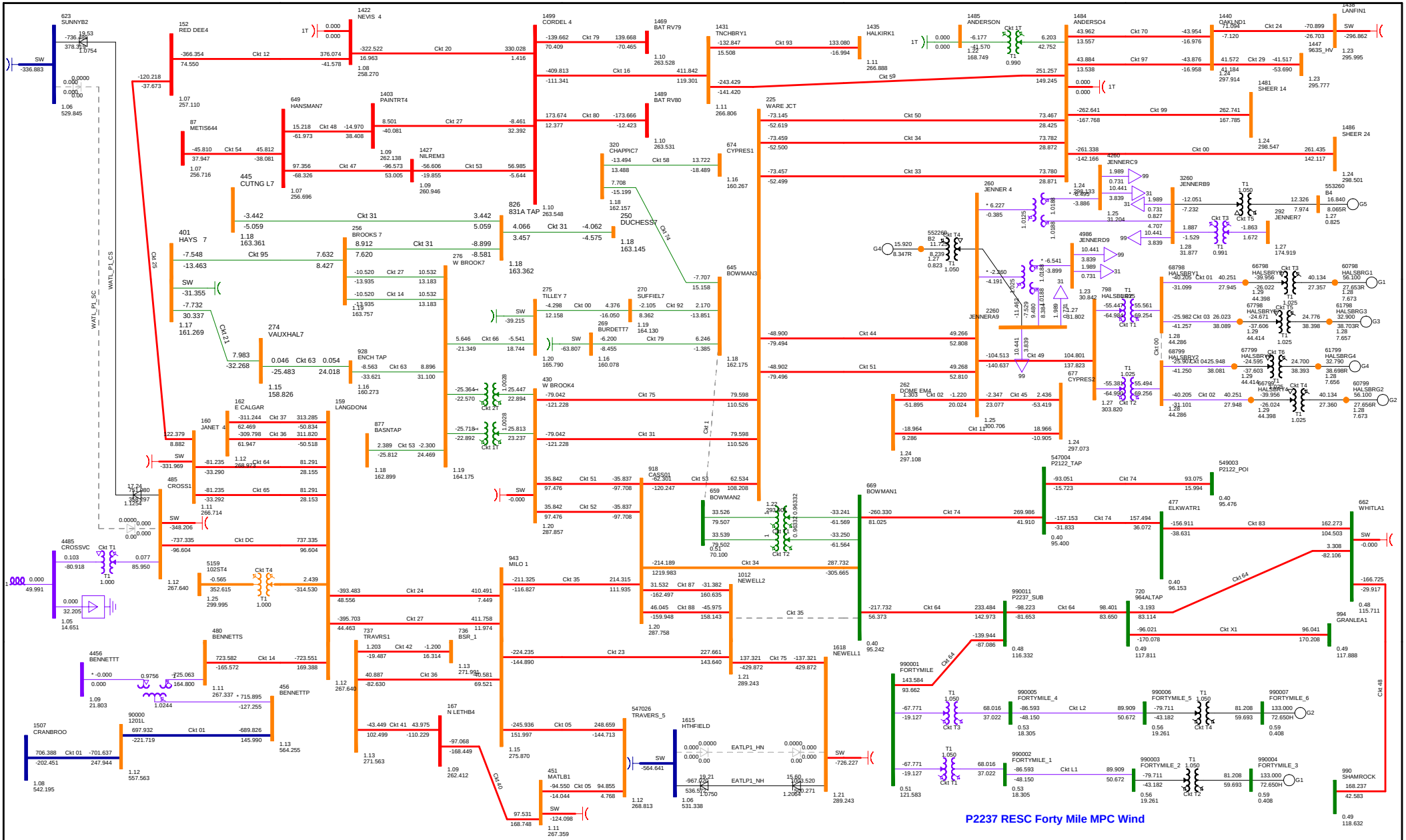


P2237 RESC Forty Mile MPC Wind

BC Import:-677.426 MW Sask Import:146.577 MW MATL Import:-0.000 MW

MH Export: -10.729 MW

FIGURE A3-3-3 N-1: 1034L (BOWMANTON 244S TO CASSILS 324S)(BLOW UP)
2022 SUMMER PEAK - SENSITIVITY 1 (POST-CONNECTION)
PRINTED ON THURSDAY 14. APRIL 2022

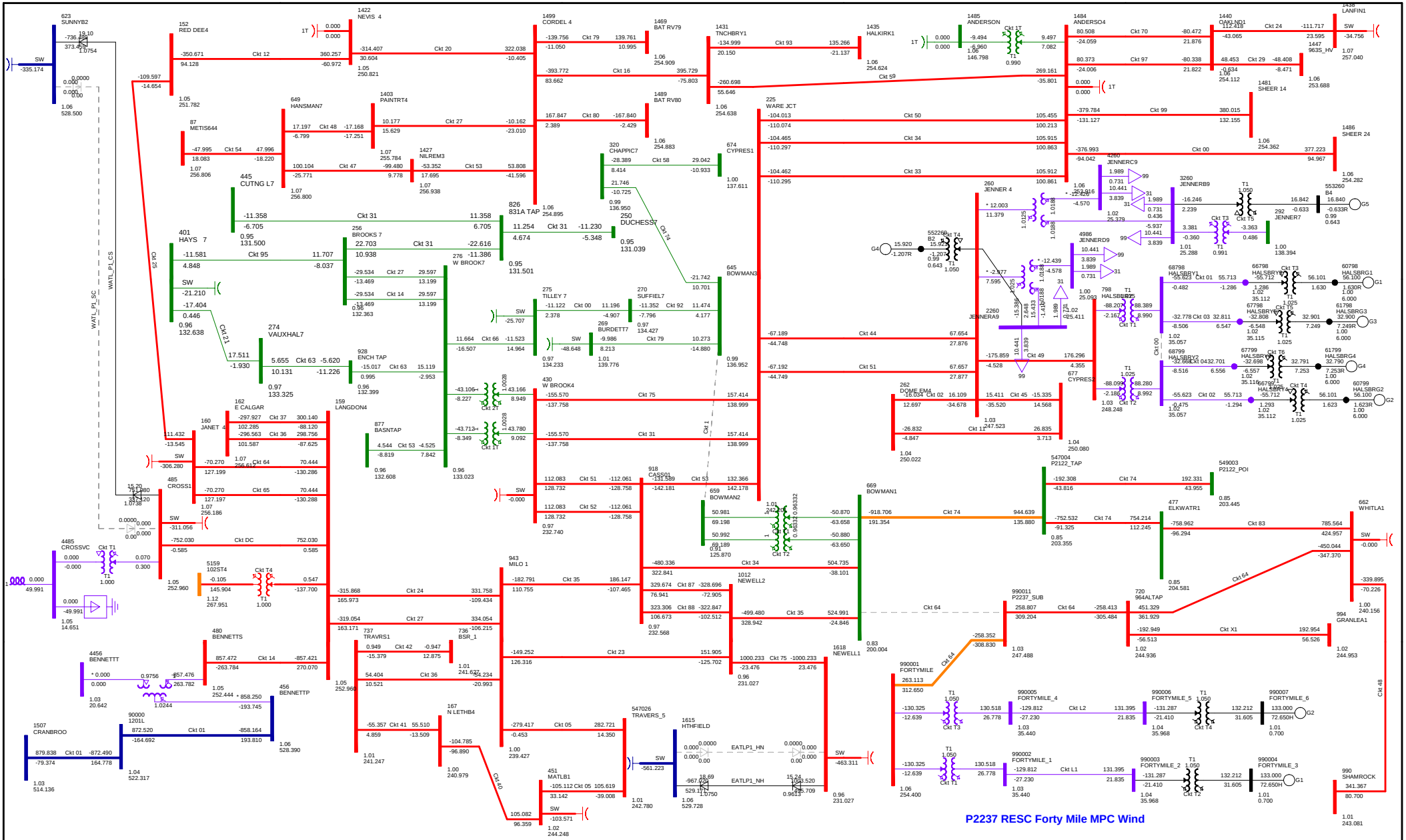


P2237 RESC Forty Mile MPC Wind

BC Import:-660.295 MW Sask Import:111.550 MW MATL Import:0.000 MW

MH Export: 15.057 MW

FIGURE A3-3-4 N-1: 1035L (BOWMANTON 244S TO NEWELL 2075S)(BLOW UP)
2022 SUMMER PEAK - SENSITIVITY 1 (POST-CONNECTION)
PRINTED ON THURSDAY 14. APRIL 2022



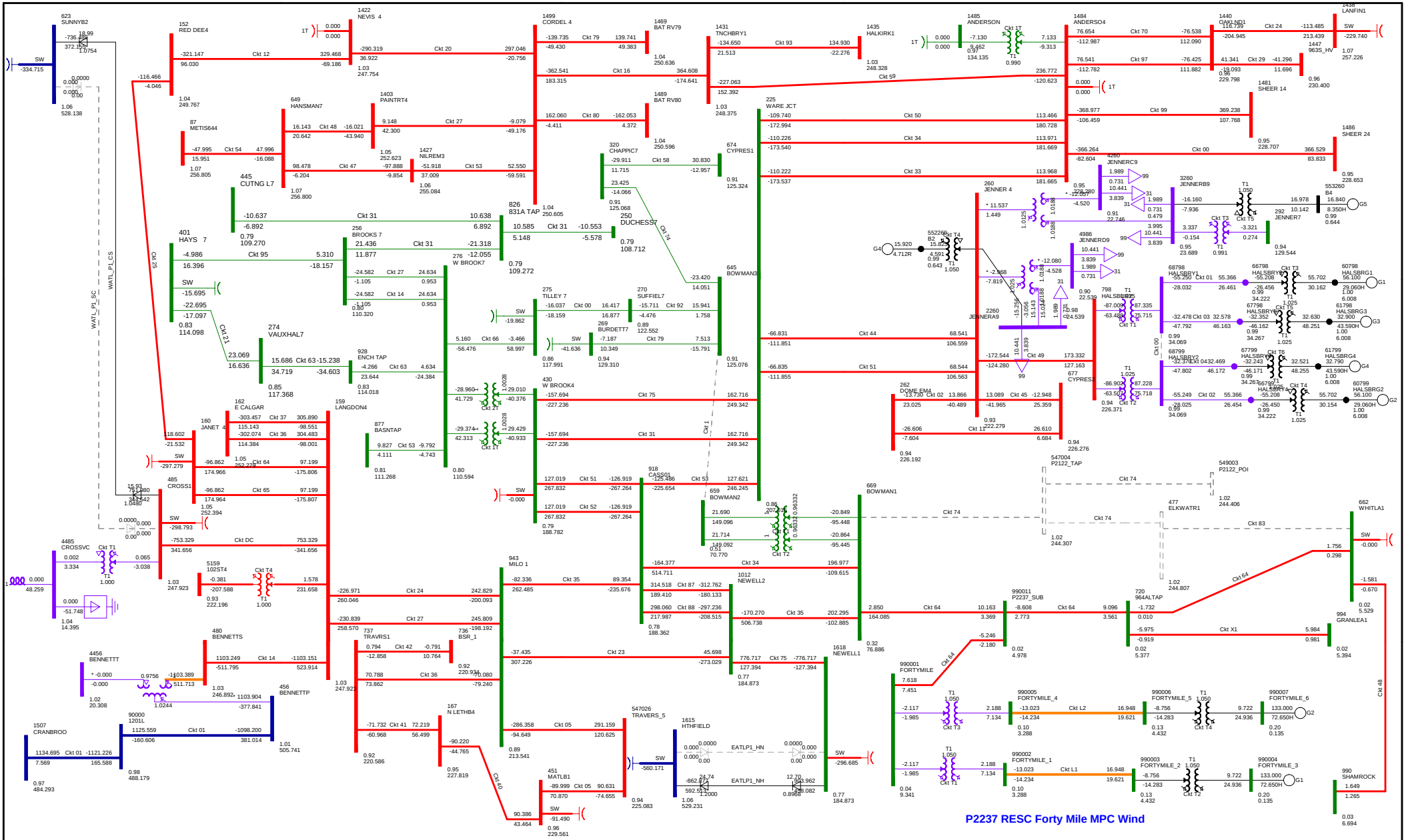
P2237 RESC Forty Mile MPC Wind

BC Import:-850.046 MW Sask Import:149.968 MW MATL Import:0.000 MW

MH Export: 17.949 MW

FIGURE A3-3-5 N-1: 964L (BOWMANTON 244S TO P2237 SUB)
2022 SUMMER PEAK - SENSITIVITY 1 (POST-CONNECTION)
PRINTED ON THURSDAY 14. APRIL 2022

Bus - Voltage (kV/pu)
Branch - MW/Mvar
Equipment - MW/Mvar
100.0 %Base A
1.100 kV 0.900 kV
kV: <=10.000 <=69.000 <=138.000 <=240.000 <=500.000 >500.000



P2237 RESC Forty Mile MPC Wind

BC Import:-1122.005 MW Sask Import:146.666 MW MATL Import:0.000 MW

MH Export: 21.880 MW

FIGURE A3-3-6 N-1: 983L (ELKWATER 264S TO WHITLA 251S)(BLOW UP)
2022 SUMMER PEAK - SENSITIVITY 1 (POST-CONNECTION)
PRINTED ON THURSDAY 14. APRIL 2022

Bus - Voltage (kV/pu)
Branch - MW/Mvar
Equipment - MW/Mvar
100.0%Rate A
1.100OV 0.900UV
kV: <=10.000 <=69.000 <=138.000 <=240.000 <=500.000 >500.000

Attachment A4
Post-Project Transient Stability Diagrams

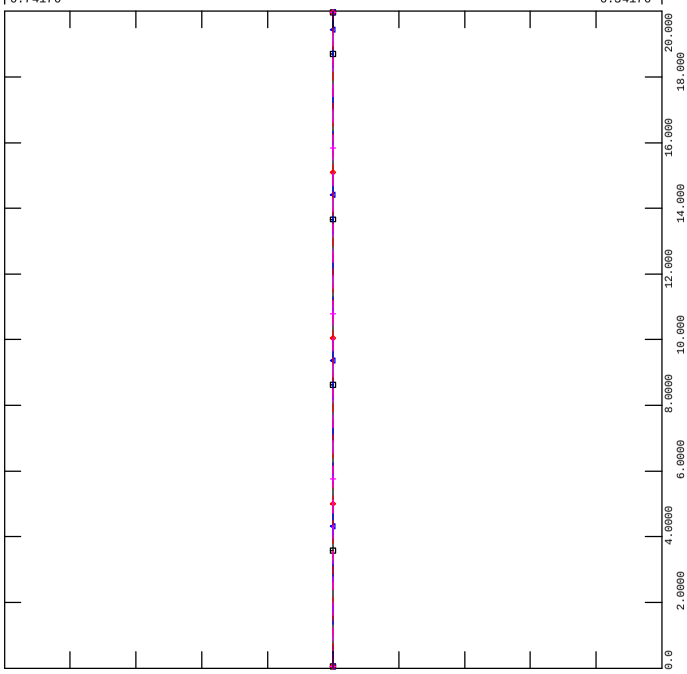
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN1_SP_PRE_NOFAULT

FILE: scn1_SP_Pre_nofault.out

THU, APR 14 2022 14:09

ACTIVE POWER

CHNL# 197: [POWR 61994[GRANLEA6 0.6900]G1]
1.2000 0.80000
CHNL# 194: [POWR 60990[SHAMROC5 0.6500]G1]
2.2160 1.8160
CHNL# 201: [POWR 773[SECST 20.000]1]
3.1790 2.7790
CHNL# 167: [POWR 667[CANCARB9 13.800]1]
0.74170 0.34170



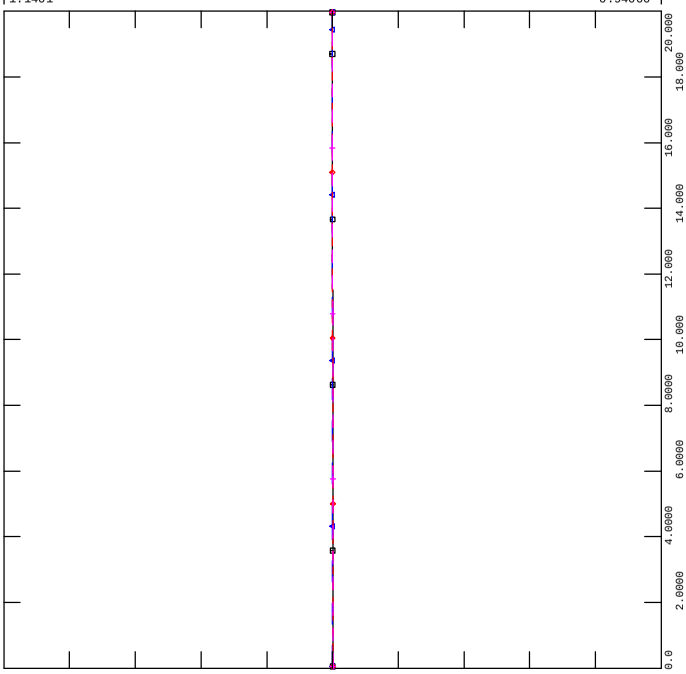
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN1_SP_PRE_NOFAULT

FILE: scn1_SP_Pre_nofault.out

THU, APR 14 2022 14:09

TERMINAL VOLTAGE

CHNL# 446: [ETRM 61994[GRANLEA6 0.6900]G1]
1.1402 0.94010
CHNL# 443: [ETRM 60990[SHAMROC5 0.6500]G1]
1.1915 0.99140
CHNL# 450: [ETRM 773[SECST 20.000]1]
1.1400 0.94000
CHNL# 416: [ETRM 667[CANCARB9 13.800]1]
1.1401 0.94000



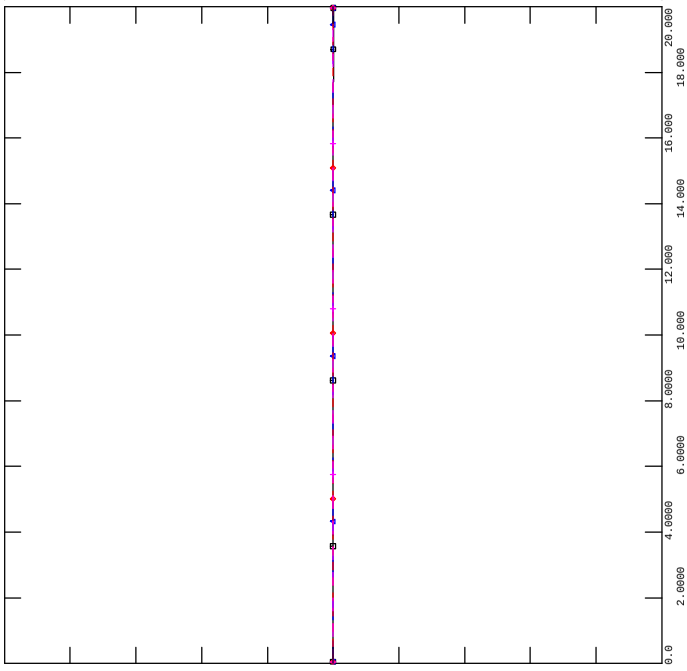
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN1_SP_PRE_NOFAULT

FILE: scn1_SP_Pre_nofault.out

THU, APR 14 2022 14:09

ROTOR ANGLE

CHNL# 37: [ANGL 775[SECCT2 21.000]3]
54.919 -45.09
CHNL# 36: [ANGL 774[SECCT1 21.000]2]
54.919 -45.09
CHNL# 35: [ANGL 773[SECST 20.000]1]
57.054 -42.95
CHNL# 1: [ANGL 667[CANCARB9 13.800]1]
96.075 -3.974



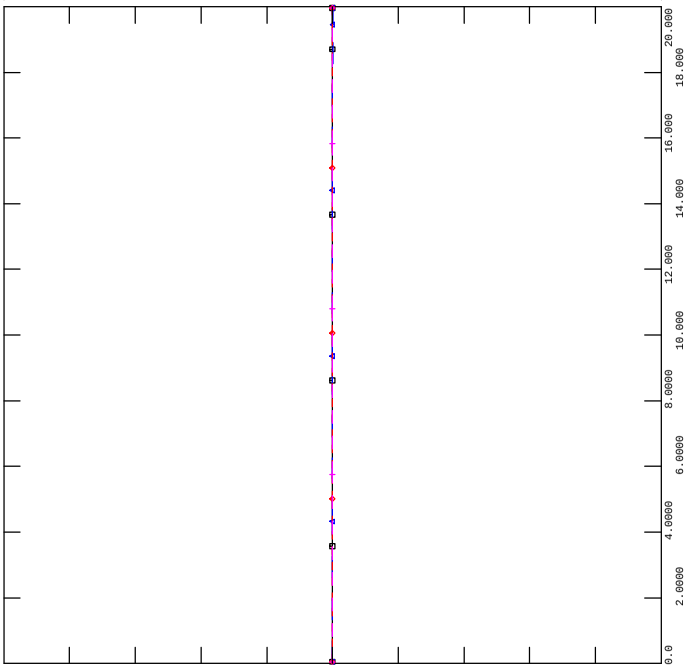
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN1_SP_PRE_NOFAULT

FILE: scn1_SP_Pre_nofault.out

THU, APR 14 2022 14:09

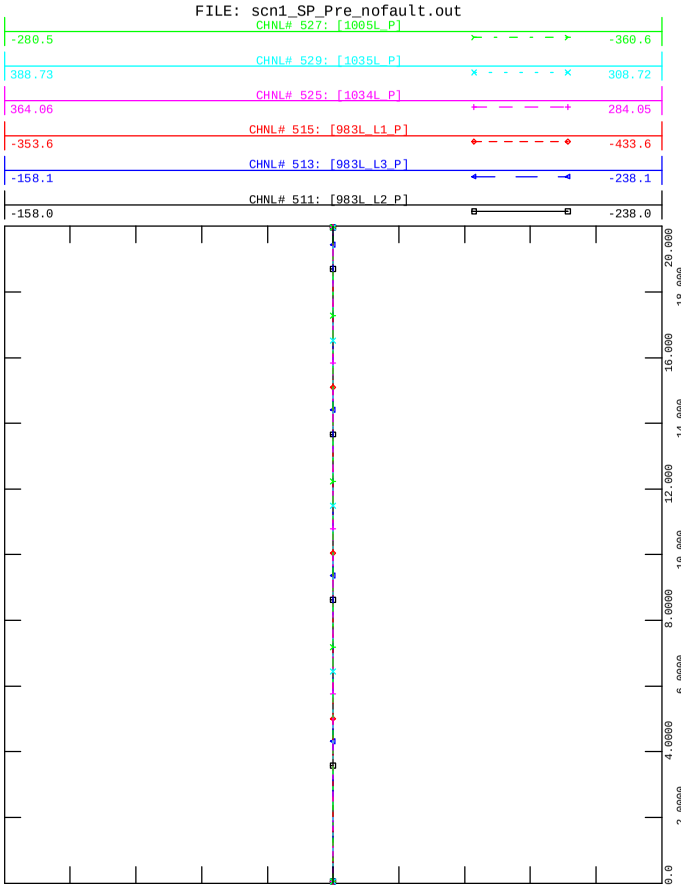
REACTIVE POWER

CHNL# 280: [VARS 61994[GRANLEA6 0.6900]G1]
0.57990 -0.4201
CHNL# 277: [VARS 60990[SHAMROC5 0.6500]G1]
1.3030 0.30300
CHNL# 284: [VARS 773[SECST 20.000]1]
1.1704 0.16980
CHNL# 250: [VARS 667[CANCARB9 13.800]1]
0.60930 -0.3908



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN1_SP_PRE_NOFAULT

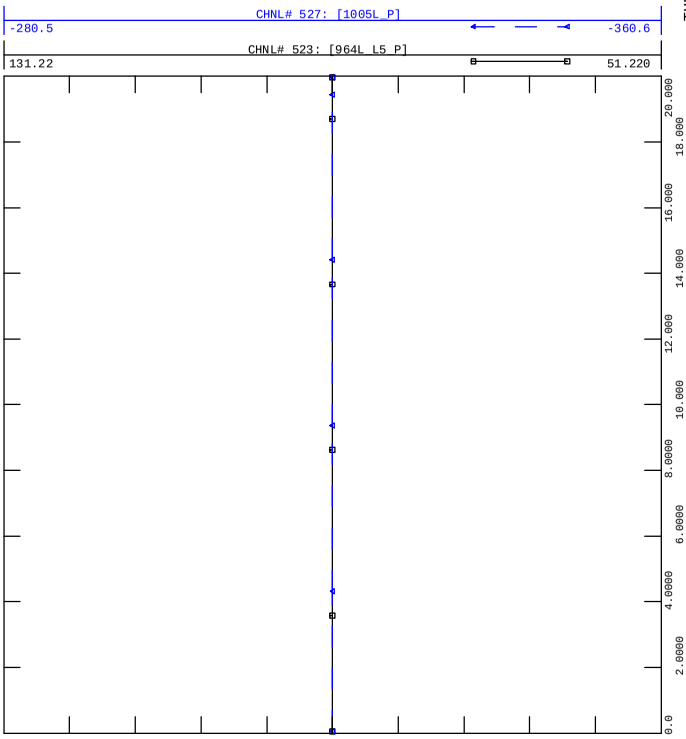
FILE: scn1_SP_Pre_nofault.out



THU, APR 14 2022 14:09 BRANCH P

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN1_SP_PRE_NOFAULT

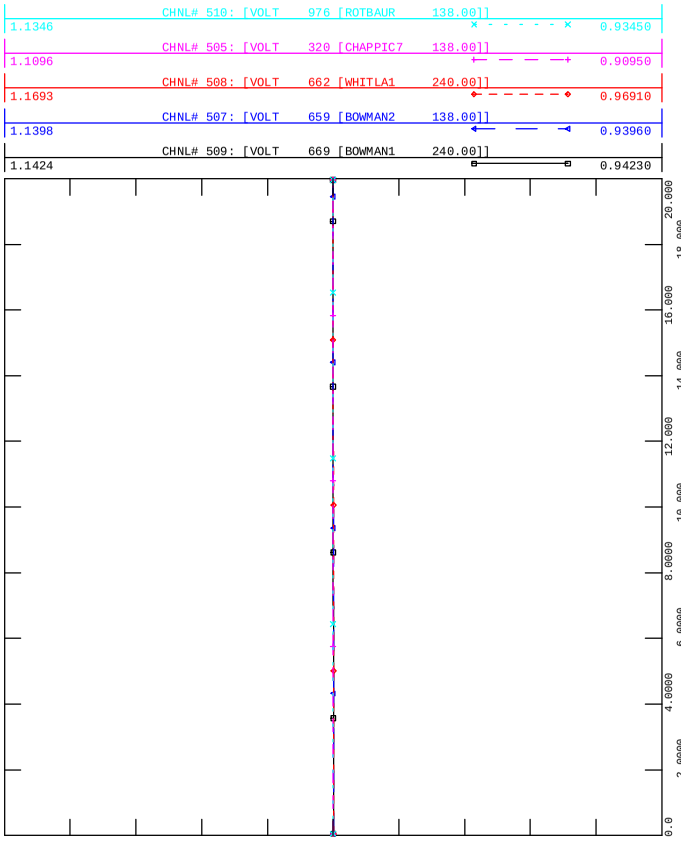
FILE: scn1_SP_Pre_nofault.out



THU, APR 14 2022 14:09 BRANCH P

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN1_SP_PRE_NOFAULT

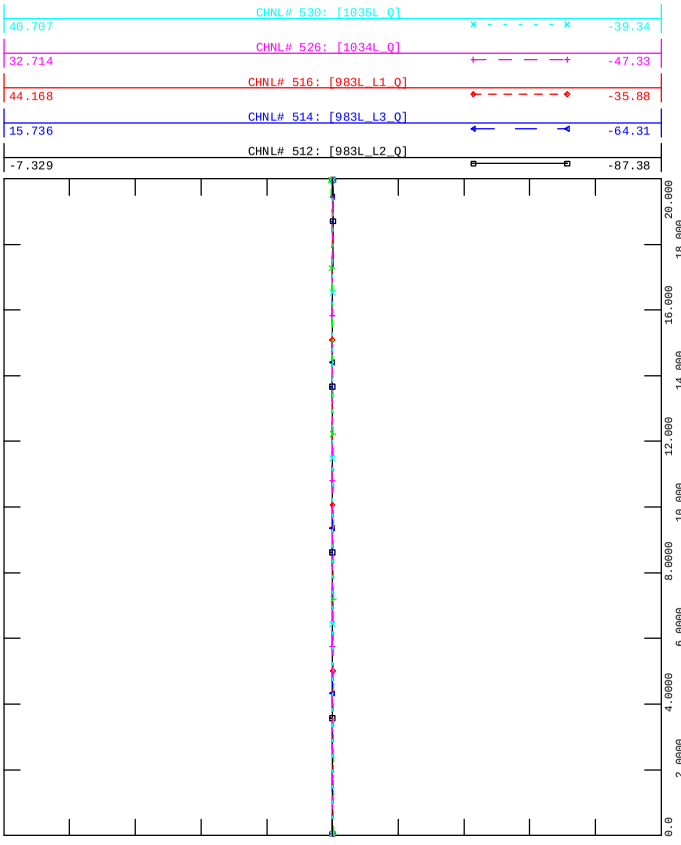
FILE: scn1_SP_Pre_nofault.out



THU, APR 14 2022 14:09 BUS VOLTAGE

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN1_SP_PRE_NOFAULT

FILE: scn1_SP_Pre_nofault.out



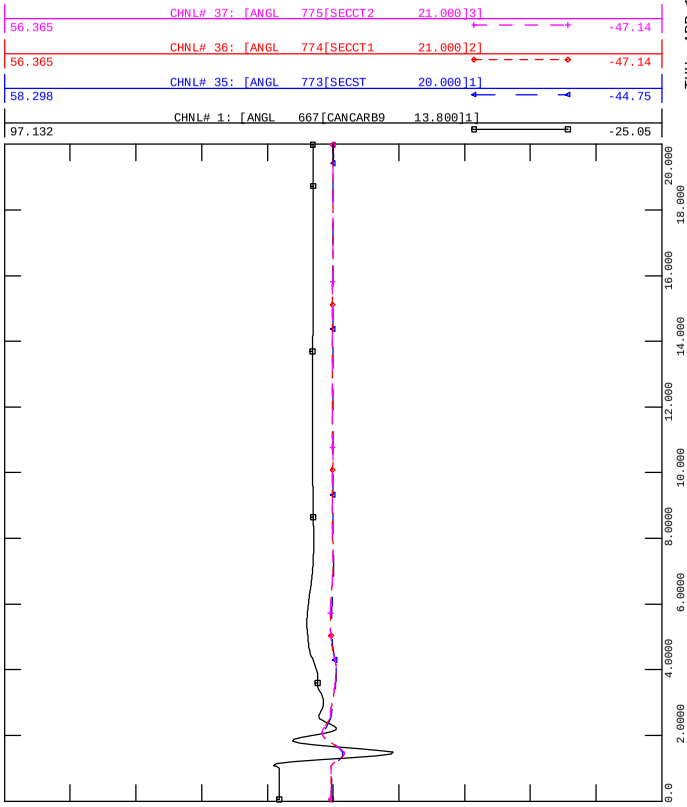
THU, APR 14 2022 14:09 BRANCH Q

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN1_SP_964L_BOWMANTON

FILE: scn1_SP_964L_Bowmanton.out

THU, APR 14 2022 14:09

ROTOR ANGLE

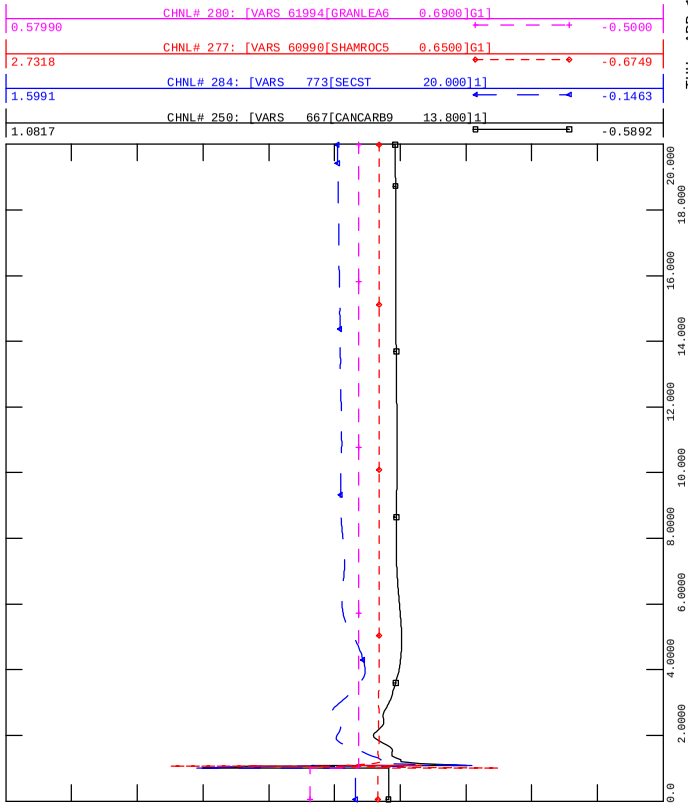


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN1_SP_964L_BOWMANTON

FILE: scn1_SP_964L_Bowmanton.out

THU, APR 14 2022 14:09

REACTIVE POWER

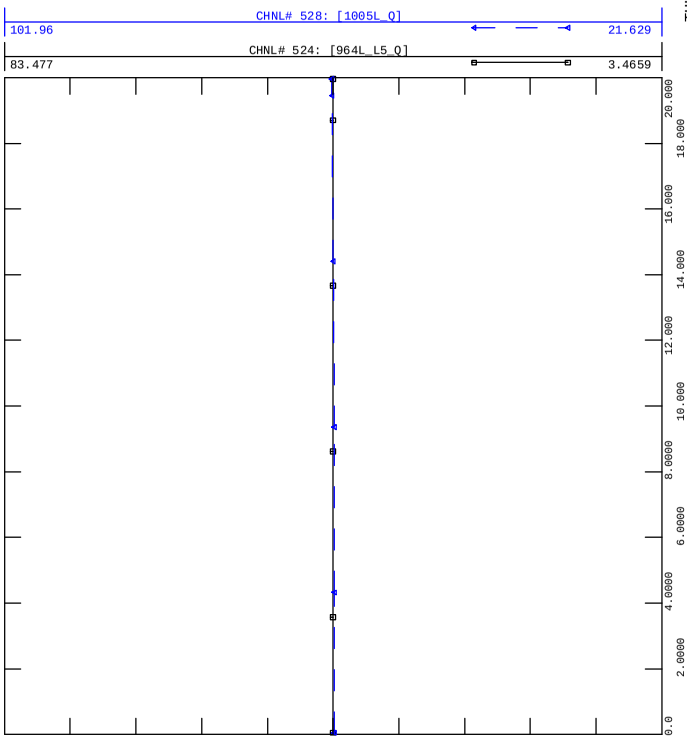


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN1_SP_PRE_NOFAULT

FILE: scn1_SP_Pre_nofault.out

THU, APR 14 2022 14:09

BRANCH Q

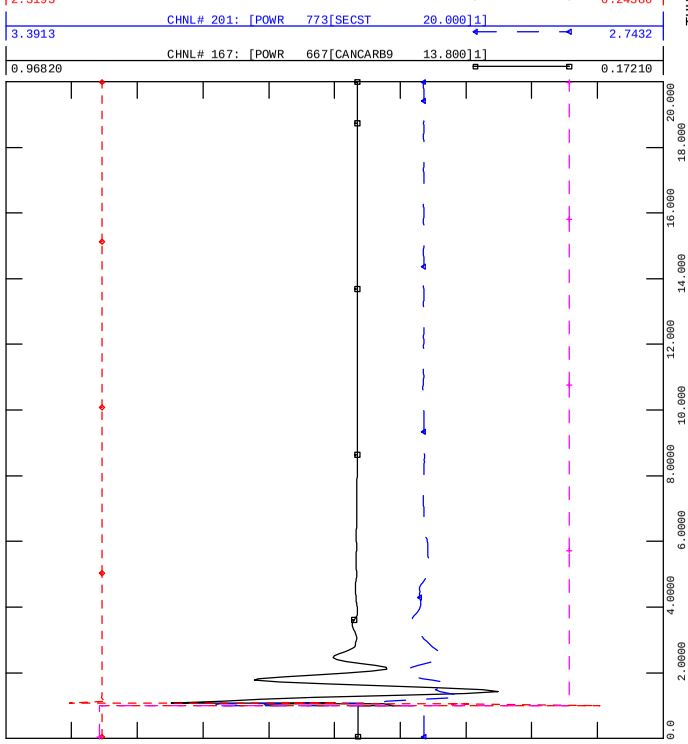


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN1_SP_964L_BOWMANTON

FILE: scn1_SP_964L_Bowmanton.out

THU, APR 14 2022 14:09

ACTIVE POWER



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN1_SP_964L_BOWMANTON

FILE: scn1_SP_964L_Bowmanton.out

THU, APR 14 2022 14:09

BUS VOLTAGE

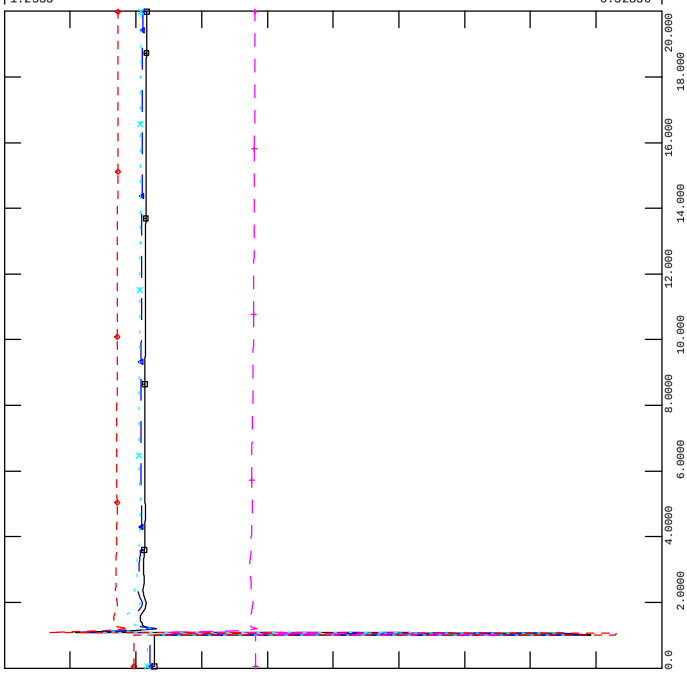
CHNL# 510: [VOLT 976 [ROTBAUR 138.00]]
1.1822 0.50250

CHNL# 505: [VOLT 320 [CHAPPIC7 138.00]]
1.1673 0.75440

CHNL# 508: [VOLT 662 [WHITLA1 240.00]]
1.3562 -0.0997

CHNL# 507: [VOLT 659 [BOWMAN2 138.00]]
1.2207 0.40260

CHNL# 509: [VOLT 669 [BOWMAN1 240.00]]
1.2533 0.32830



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN1_SP_964L_BOWMANTON

FILE: scn1_SP_964L_Bowmanton.out

THU, APR 14 2022 14:09

BRANCH Q

CHNL# 528: [1005L_Q]
123.58 -61.42

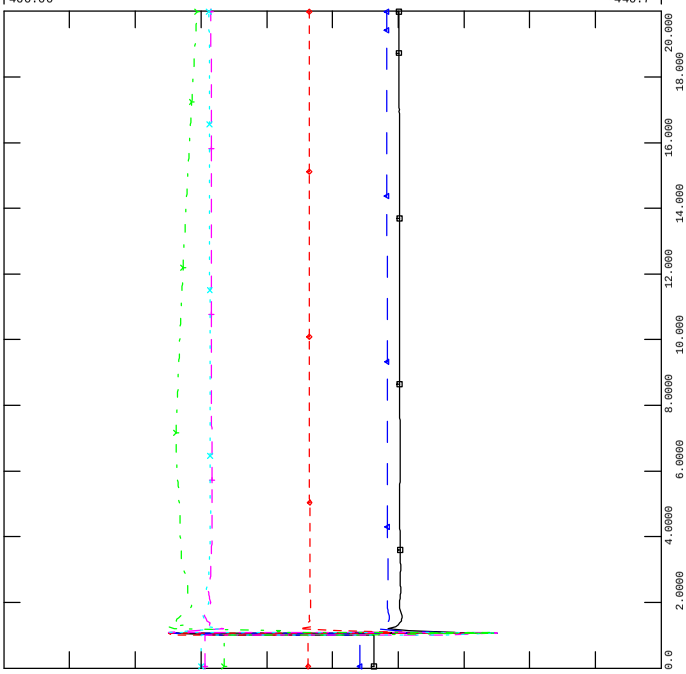
CHNL# 530: [1035L_Q]
162.16 -375.7

CHNL# 526: [1034L_Q]
153.57 -371.9

CHNL# 516: [983L_L1_Q]
545.74 -623.6

CHNL# 514: [983L_L3_Q]
434.87 -412.8

CHNL# 512: [983L_L2_Q]
460.00 -440.7



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN1_SP_964L_BOWMANTON

FILE: scn1_SP_964L_Bowmanton.out

THU, APR 14 2022 14:09

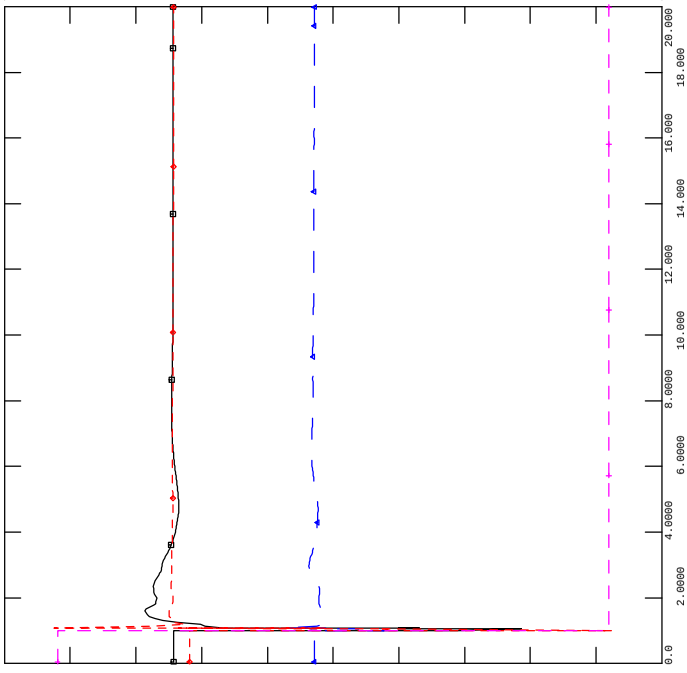
TERMINAL VOLTAGE

CHNL# 446: [ETRM 61994[GRANLEA6 0.6900]G1]
1.1401 -0.1000

CHNL# 443: [ETRM 60990[SHAMROC5 0.6500]G1]
1.4639 0.14020

CHNL# 450: [ETRM 773[SECST 20.000]1]
1.1516 0.91470

CHNL# 416: [ETRM 667[CANCARB9 13.800]1]
1.1604 0.69270



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN1_SP_964L_BOWMANTON

FILE: scn1_SP_964L_Bowmanton.out

THU, APR 14 2022 14:09

BRANCH P

CHNL# 527: [1005L_P]
-254.1 -427.1

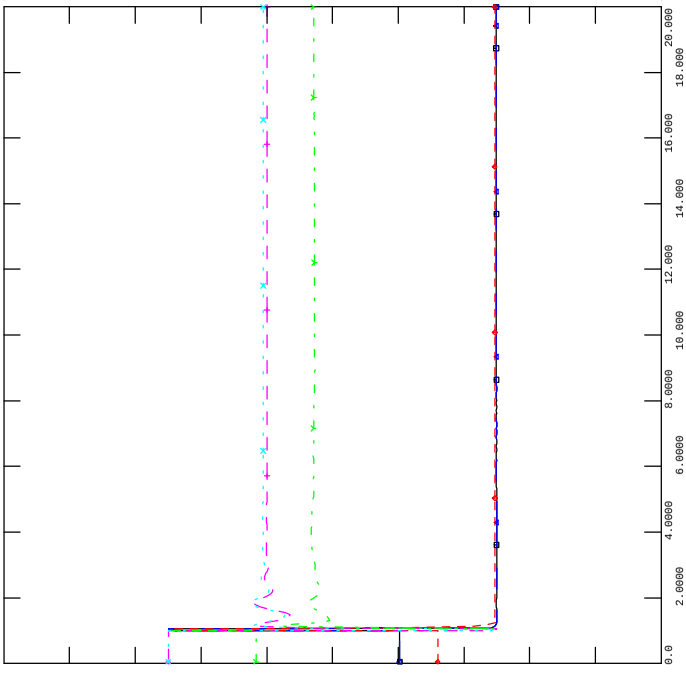
CHNL# 529: [1035L_P]
516.35 -154.1

CHNL# 525: [1034L_P]
484.66 -157.8

CHNL# 515: [983L_L1_P]
283.71 -742.8

CHNL# 513: [983L_L3_P]
170.68 -442.1

CHNL# 511: [983L_L2_P]
172.22 -442.4

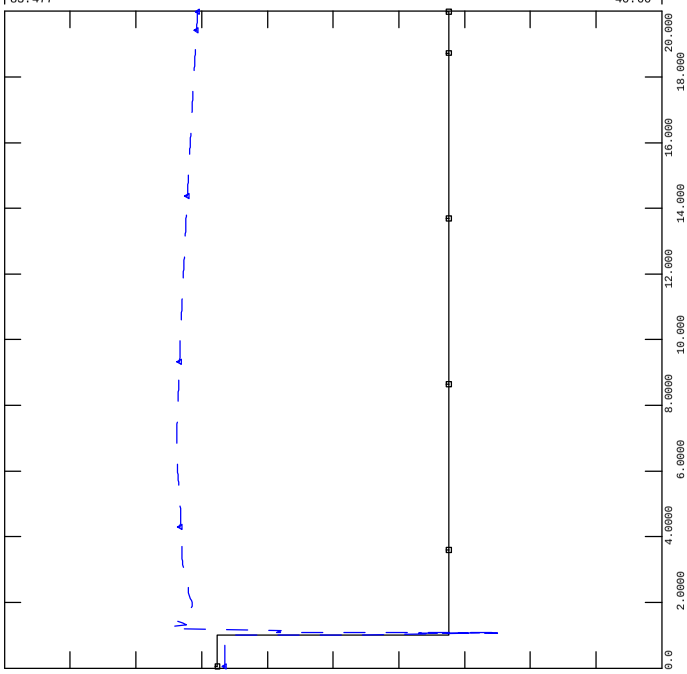


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN1_SP_964L_BOWMANTON

FILE: scn1_SP_964L_Bowmanton.out

THU, APR 14 2022 14:09 BRANCH Q

CHNL# 528: [1005L_Q] 123.58 -61.42
CHNL# 524: [964L_L5_Q] 83.477 -40.00

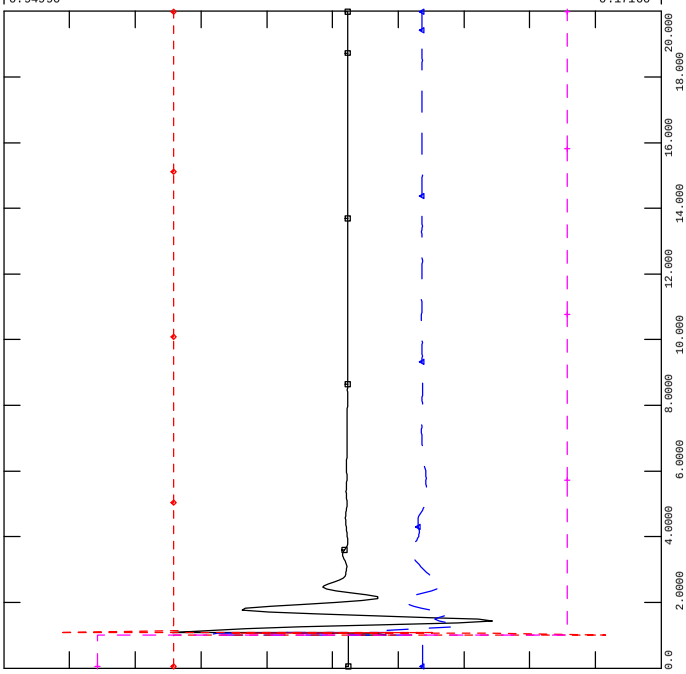


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN1_SP_964L_WHITLA

FILE: scn1_SP_964L_Whitla.out

THU, APR 14 2022 14:09 ACTIVE POWER

CHNL# 197: [POWR 61994[GRANLEA6 0.6900]G1] 1.2000 -0.2000
CHNL# 194: [POWR 60990[SHAMROC5 0.6500]G1] 2.6292 0.25360
CHNL# 201: [POWR 773[SECST 20.000]1] 3.3907 2.7440
CHNL# 167: [POWR 667[CANCARB9 13.800]1] 0.94990 0.17100

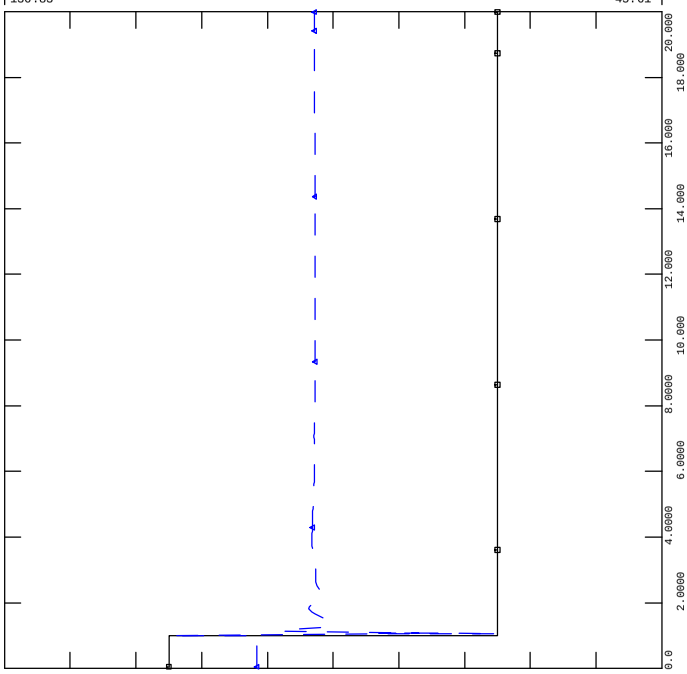


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN1_SP_964L_BOWMANTON

FILE: scn1_SP_964L_Bowmanton.out

THU, APR 14 2022 14:09 BRANCH P

CHNL# 527: [1005L_P] -254.1 -427.1
CHNL# 523: [964L_L5_P] 136.83 -45.61

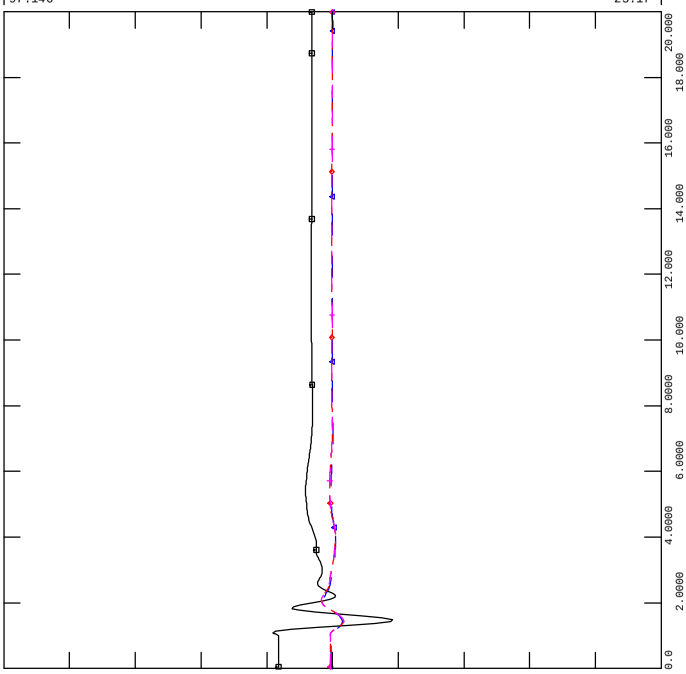


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN1_SP_964L_WHITLA

FILE: scn1_SP_964L_Whitla.out

THU, APR 14 2022 14:09 ROTOR ANGLE

CHNL# 37: [ANGL 775[SECCT2 21.000]3] 56.368 -47.14
CHNL# 36: [ANGL 774[SECCT1 21.000]2] 56.368 -47.14
CHNL# 35: [ANGL 773[SECST 20.000]1] 58.303 -44.75
CHNL# 1: [ANGL 667[CANCARB9 13.800]1] 97.146 -25.17



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN1_SP_964L_WHITLA

FILE: scn1_SP_964L_Whitla.out

THU, APR 14 2022 14:09

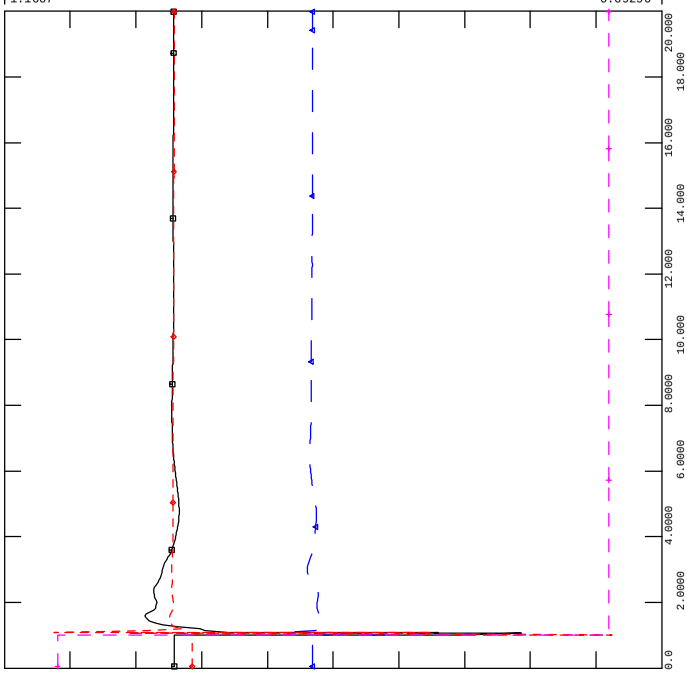
TERMINAL VOLTAGE

CHNL# 446: [ETRM 61994[GRANLEA6 0.6900]G1]
1.1401 -0.1000

CHNL# 443: [ETRM 60990[SHAMROC5 0.6500]G1]
1.4686 0.14560

CHNL# 450: [ETRM 773[SECST 20.000]1]
1.1512 0.91390

CHNL# 416: [ETRM 667[CANCARB9 13.800]1]
1.1607 0.69290



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN1_SP_964L_WHITLA

FILE: scn1_SP_964L_Whitla.out

THU, APR 14 2022 14:09

BRANCH P

CHNL# 527: [1005L P]
-256.0 -406.8

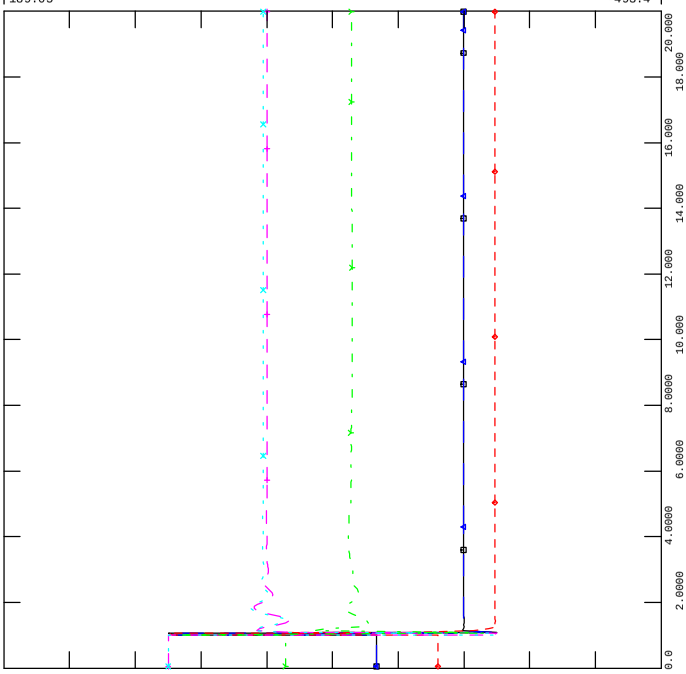
CHNL# 529: [1035L P]
516.40 -154.3

CHNL# 525: [1034L P]
484.67 -157.8

CHNL# 515: [983L_L1_P]
283.31 -742.2

CHNL# 513: [983L_L3_P]
187.52 -493.1

CHNL# 511: [983L_L2_P]
189.05 -493.4



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN1_SP_964L_WHITLA

FILE: scn1_SP_964L_Whitla.out

THU, APR 14 2022 14:09

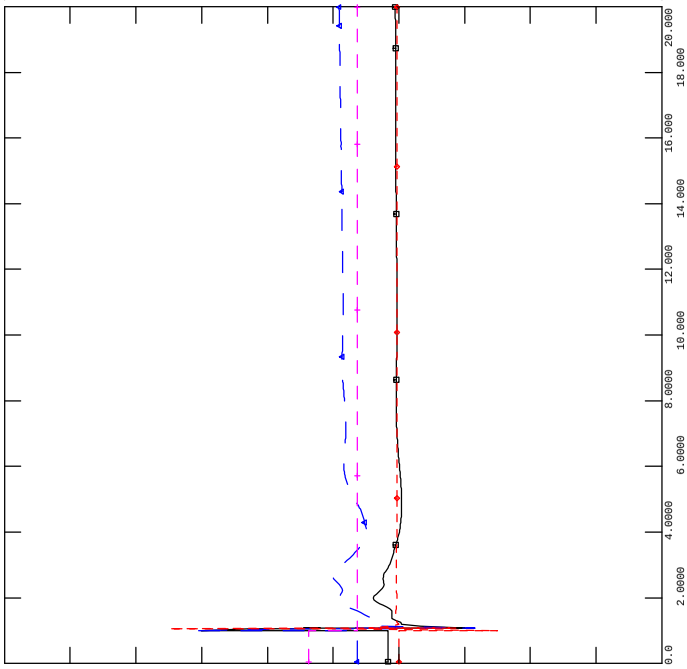
REACTIVE POWER

CHNL# 280: [VARS 61994[GRANLEA6 0.6900]G1]
0.57990 -0.5000

CHNL# 277: [VARS 60990[SHAMROC5 0.6500]G1]
3.2911 -0.8561

CHNL# 284: [VARS 773[SECST 20.000]1]
1.6142 -0.1453

CHNL# 250: [VARS 667[CANCARB9 13.800]1]
1.0842 -0.5865



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN1_SP_964L_WHITLA

FILE: scn1_SP_964L_Whitla.out

THU, APR 14 2022 14:09

BUS VOLTAGE

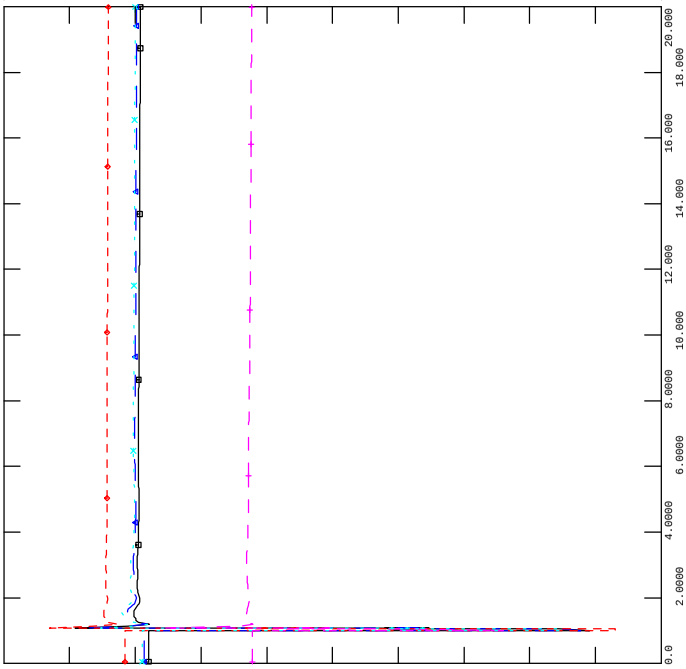
CHNL# 510: [VOLT 976 [ROTBAUR 138.00]]
1.1768 0.49980

CHNL# 505: [VOLT 320 [CHAPPIC7 138.00]]
1.1665 0.75100

CHNL# 508: [VOLT 662 [WHITLA1 240.00]]
1.3339 -0.0998

CHNL# 507: [VOLT 659 [BOWMAN2 138.00]]
1.2139 0.39940

CHNL# 509: [VOLT 669 [BOWMAN1 240.00]]
1.2450 0.32490

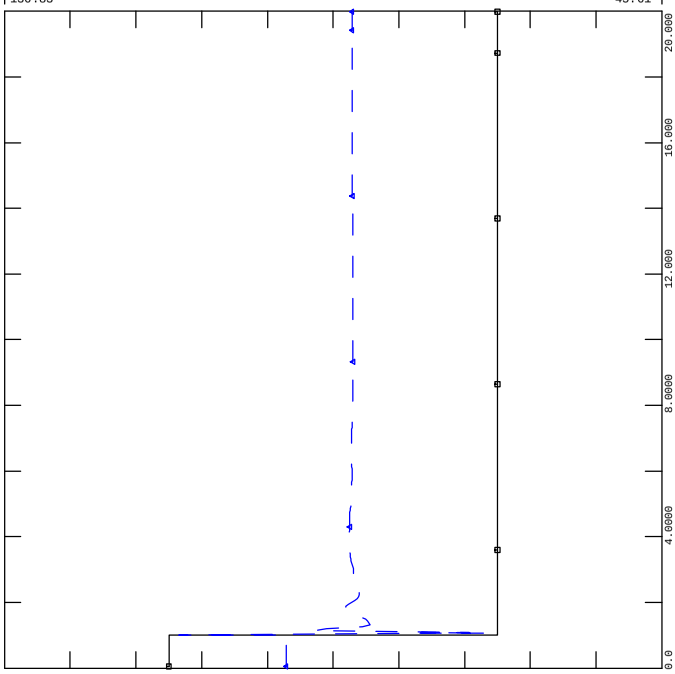


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN1_SP_964L_WHITLA

FILE: scn1_SP_964L_Whitla.out

THU, APR 14 2022 14:09 BRANCH P

CHNL# 527: [1005L_P]
-256.0 -406.8
CHNL# 523: [964L_L5_P]
136.83 -45.61

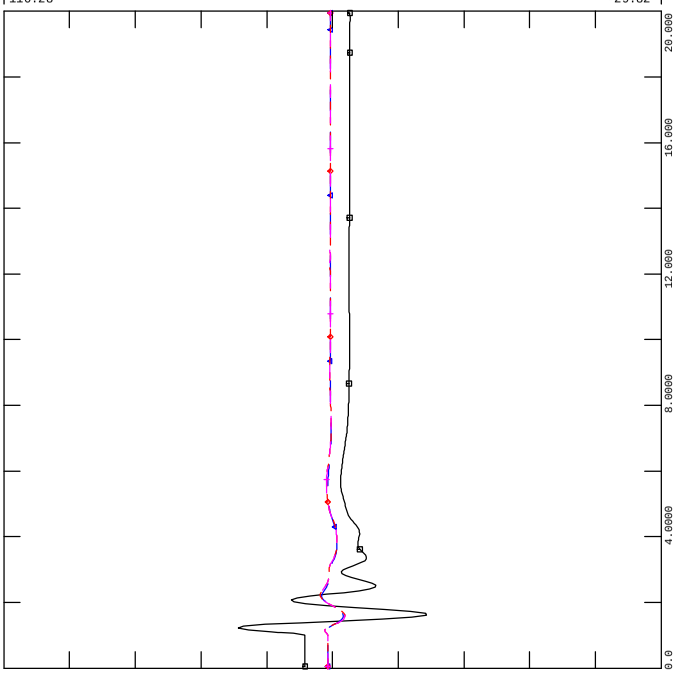


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN1_SP_983L_BOWMANTON

FILE: scn1_SP_983L_Bowmanton.out

THU, APR 14 2022 14:09 ROTOR ANGLE

CHNL# 37: [ANGL 775[SECCT2 21.000]3]
56.133 -47.75
CHNL# 36: [ANGL 774[SECCT1 21.000]2]
56.133 -47.75
CHNL# 35: [ANGL 773[SECST 20.000]1]
58.019 -45.38
CHNL# 1: [ANGL 667[CANCARB9 13.800]1]
110.28 -29.82

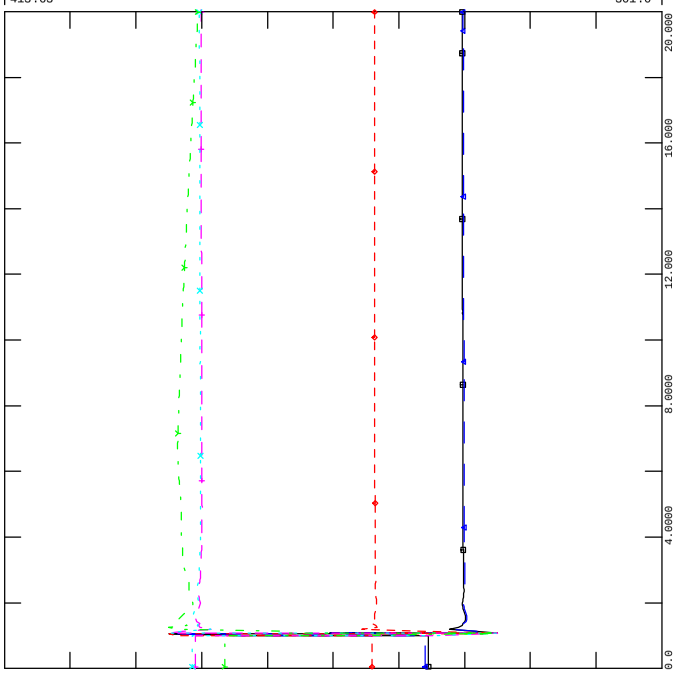


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN1_SP_964L_WHITLA

FILE: scn1_SP_964L_Whitla.out

THU, APR 14 2022 14:09 BRANCH Q

CHNL# 528: [1005L_Q]
124.98 -63.93
CHNL# 530: [1035L_Q]
153.10 -380.9
CHNL# 526: [1034L_Q]
144.37 -377.1
CHNL# 516: [983L_L1_Q]
457.28 -353.3
CHNL# 514: [983L_L3_Q]
381.85 -252.8
CHNL# 512: [983L_L2_Q]
413.63 -301.0

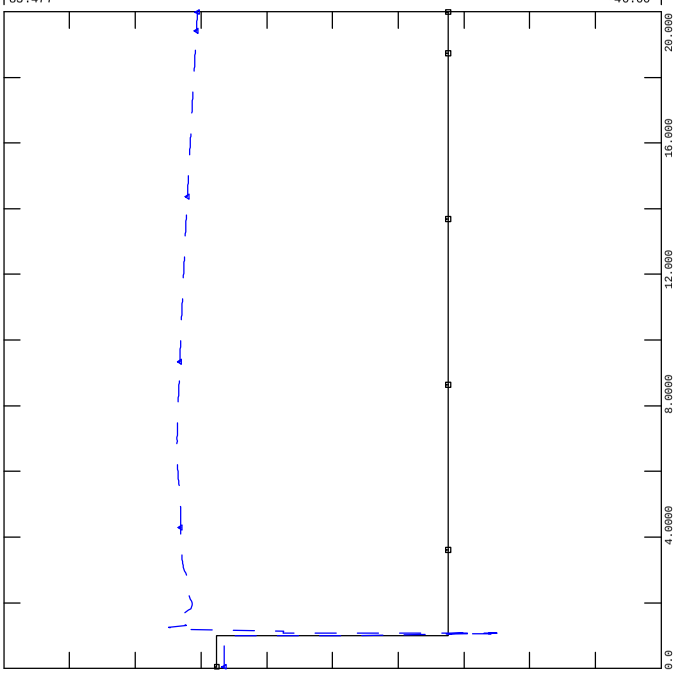


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN1_SP_964L_WHITLA

FILE: scn1_SP_964L_Whitla.out

THU, APR 14 2022 14:09 BRANCH Q

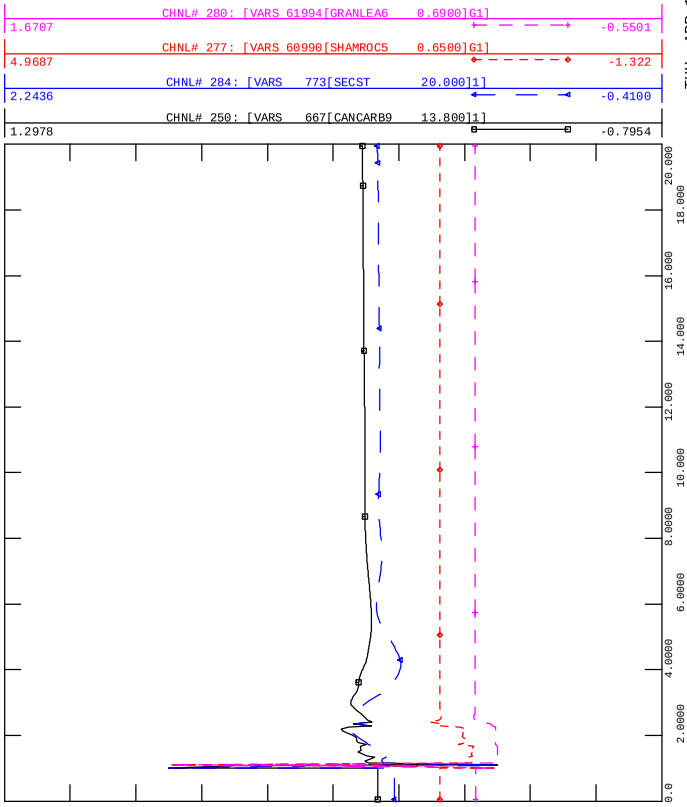
CHNL# 528: [1005L_Q]
124.98 -63.93
CHNL# 524: [964L_L5_Q]
83.477 -40.00



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN1_SP_983L_BOWMANTON

FILE: scn1_SP_983L_Bowmanton.out

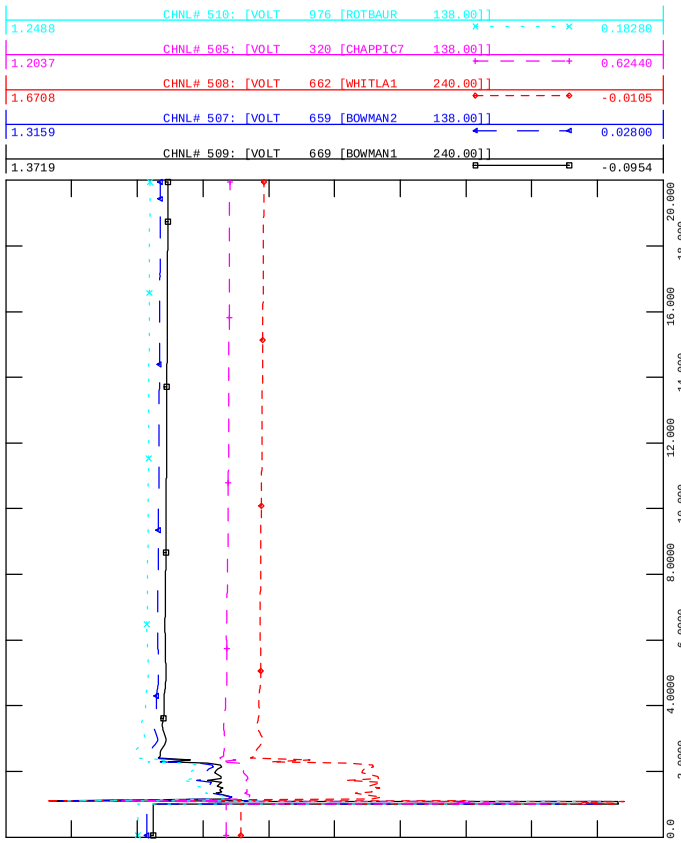
THU, APR 14 2022 14:09 REACTIVE POWER



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN1_SP_983L_BOWMANTON

FILE: scn1_SP_983L_Bowmanton.out

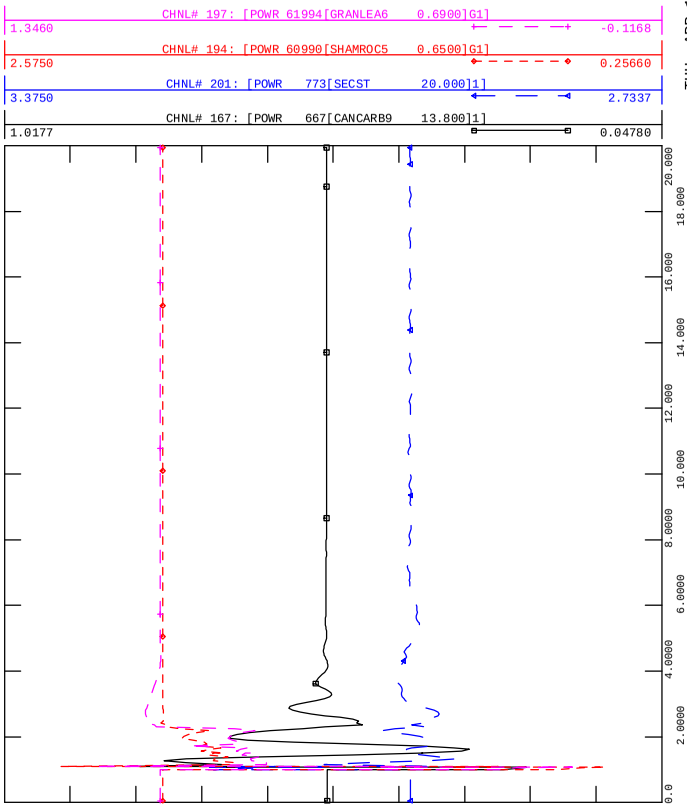
THU, APR 14 2022 14:09 BUS VOLTAGE



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN1_SP_983L_BOWMANTON

FILE: scn1_SP_983L_Bowmanton.out

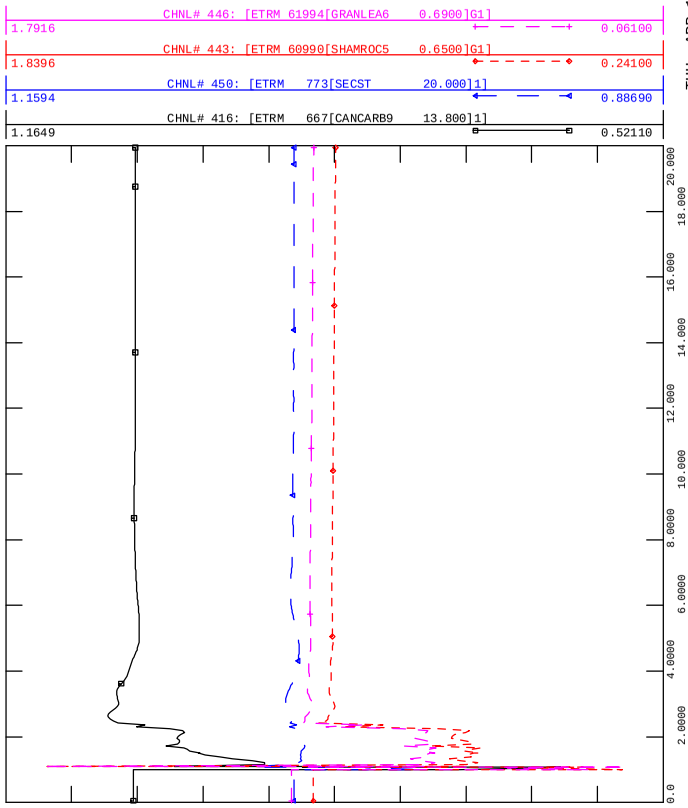
THU, APR 14 2022 14:09 ACTIVE POWER



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN1_SP_983L_BOWMANTON

FILE: scn1_SP_983L_Bowmanton.out

THU, APR 14 2022 14:09 TERMINAL VOLTAGE



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN1_SP_983L_BOWMANTON

FILE: scn1_SP_983L_Bowmanton.out

THU, APR 14 2022 14:09

BRANCH Q

CHNL# 528: [1005L Q]
153.67 -177.3

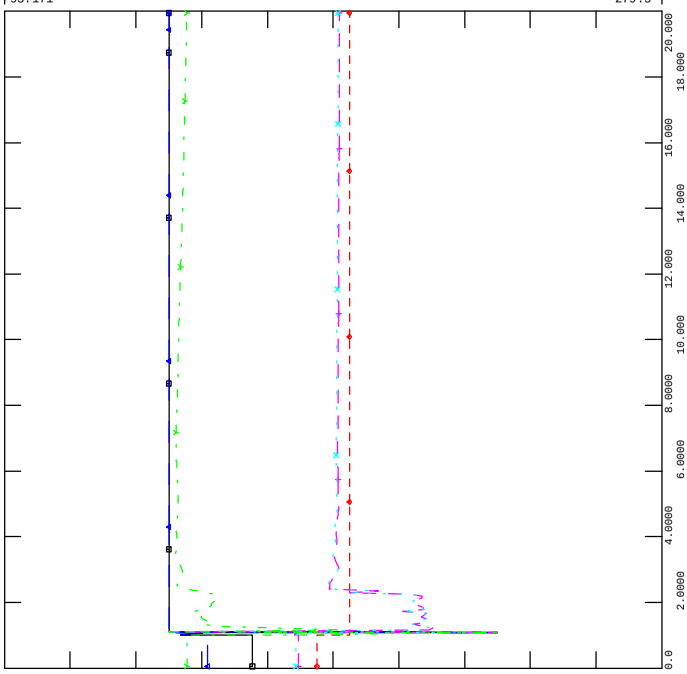
CHNL# 530: [1035L Q]
310.72 -389.2

CHNL# 526: [1034L Q]
300.17 -387.3

CHNL# 516: [983L L1 Q]
44.126 -40.00

CHNL# 514: [983L L3 Q]
102.74 -308.2

CHNL# 512: [983L L2 Q]
93.171 -279.5



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN1_SP_983L_BOWMANTON

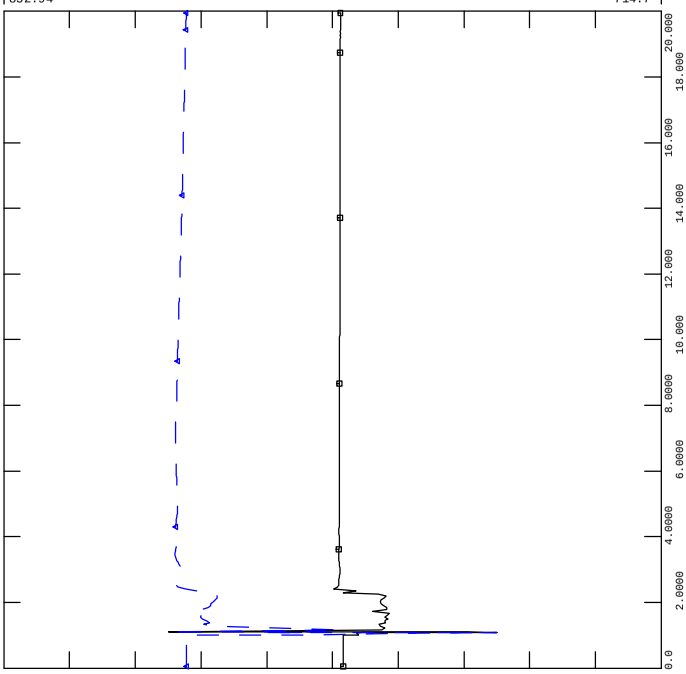
FILE: scn1_SP_983L_Bowmanton.out

THU, APR 14 2022 14:09

BRANCH Q

CHNL# 528: [1005L Q]
153.67 -177.3

CHNL# 524: [964L L5 Q]
852.94 -714.7



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN1_SP_983L_BOWMANTON

FILE: scn1_SP_983L_Bowmanton.out

THU, APR 14 2022 14:09

BRANCH P

CHNL# 527: [1005L P]
-174.4 -471.3

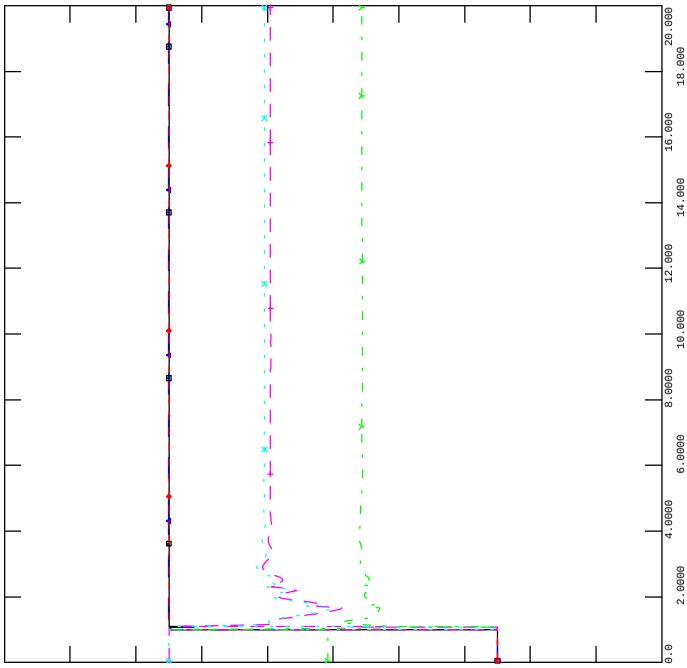
CHNL# 529: [1035L P]
523.14 -174.5

CHNL# 525: [1034L P]
486.16 -162.3

CHNL# 515: [983L L1 P]
196.80 -590.4

CHNL# 513: [983L L3 P]
99.051 -297.2

CHNL# 511: [983L L2 P]
99.009 -297.0



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN1_SP_983L_BOWMANTON

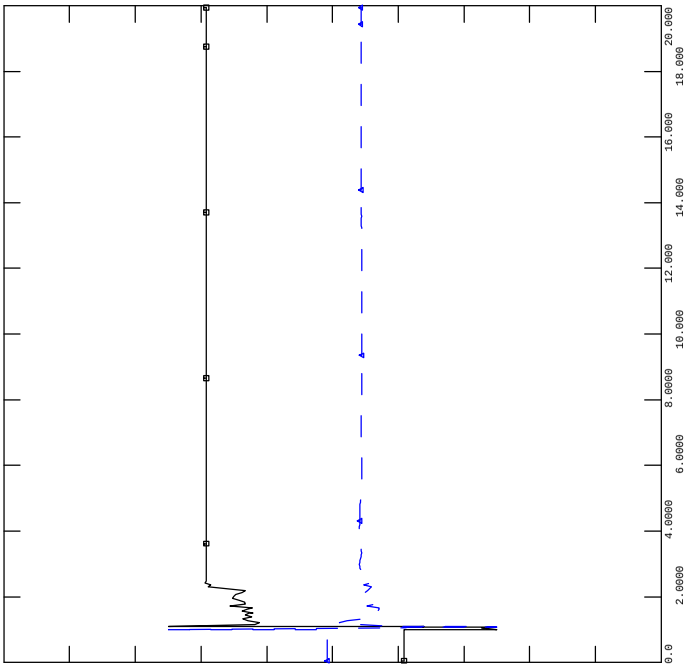
FILE: scn1_SP_983L_Bowmanton.out

THU, APR 14 2022 14:09

BRANCH P

CHNL# 527: [1005L P]
-174.4 -471.3

CHNL# 523: [964L L5 P]
492.88 -166.6



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN1_SP_983L_WHITLA

FILE: scn1_SP_983L_Whitla.out

THU, APR 14 2022 14:09

ACTIVE POWER

CHNL# 197: [POWR 61994[GRANLEA6 0.6900]G1] 1.2217 -0.0487
CHNL# 194: [POWR 60990[SHAMROC5 0.6500]G1] 2.2173 0.17730
CHNL# 201: [POWR 773[SECST 20.000]1] 3.3921 2.7455
CHNL# 167: [POWR 667[CANCARB9 13.800]1] 0.94650 0.24040

TIME (SECONDS)

0.0 2.0000 4.0000 6.0000 8.0000 10.000 12.000 14.000 16.000 18.000 20.000

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN1_SP_983L_WHITLA

FILE: scn1_SP_983L_Whitla.out

THU, APR 14 2022 14:09

TERMINAL VOLTAGE

CHNL# 446: [ETRM 61994[GRANLEA6 0.6900]G1] 1.5922 0.05730
CHNL# 443: [ETRM 60990[SHAMROC5 0.6500]G1] 1.6061 0.14650
CHNL# 450: [ETRM 773[SECST 20.000]1] 1.1505 0.91360
CHNL# 416: [ETRM 667[CANCARB9 13.800]1] 1.1530 0.67830

TIME (SECONDS)

0.0 2.0000 4.0000 6.0000 8.0000 10.000 12.000 14.000 16.000 18.000 20.000

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN1_SP_983L_WHITLA

FILE: scn1_SP_983L_Whitla.out

THU, APR 14 2022 14:09

ROTOR ANGLE

CHNL# 37: [ANGL 775[SECCT2 21.000]3] 56.465 -47.59
CHNL# 36: [ANGL 774[SECCT1 21.000]2] 56.465 -47.59
CHNL# 35: [ANGL 773[SECST 20.000]1] 58.349 -45.18
CHNL# 1: [ANGL 667[CANCARB9 13.800]1] 98.170 -21.31

TIME (SECONDS)

0.0 2.0000 4.0000 6.0000 8.0000 10.000 12.000 14.000 16.000 18.000 20.000

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN1_SP_983L_WHITLA

FILE: scn1_SP_983L_Whitla.out

THU, APR 14 2022 14:09

REACTIVE POWER

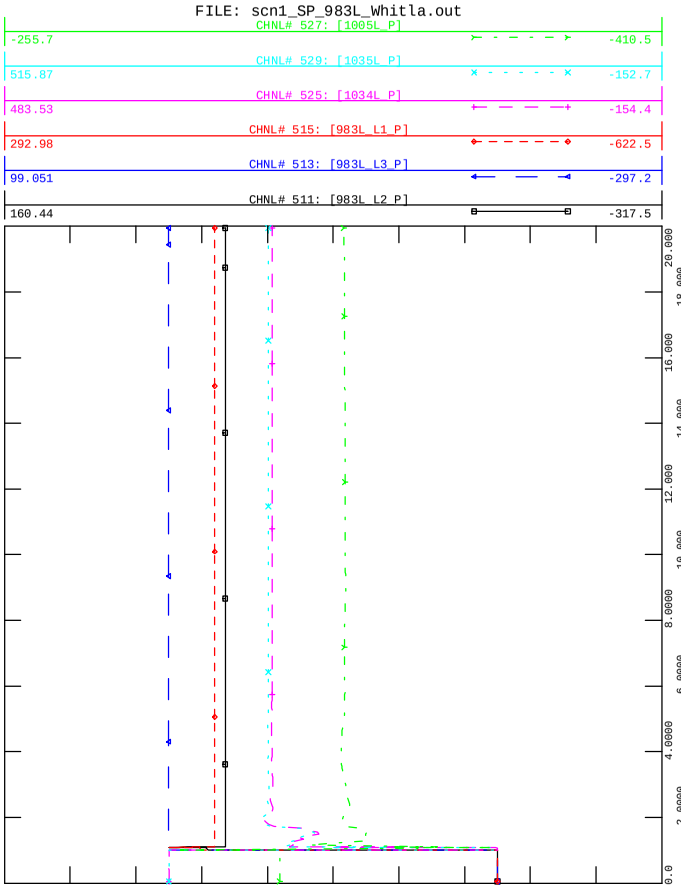
CHNL# 280: [VARS 61994[GRANLEA6 0.6900]G1] 2.4293 -0.7936
CHNL# 277: [VARS 60990[SHAMROC5 0.6500]G1] 4.9699 -1.415
CHNL# 284: [VARS 773[SECST 20.000]1] 1.6186 -0.1434
CHNL# 250: [VARS 667[CANCARB9 13.800]1] 1.0858 -0.5834

TIME (SECONDS)

0.0 2.0000 4.0000 6.0000 8.0000 10.000 12.000 14.000 16.000 18.000 20.000

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN1_SP_983L_WHITLA

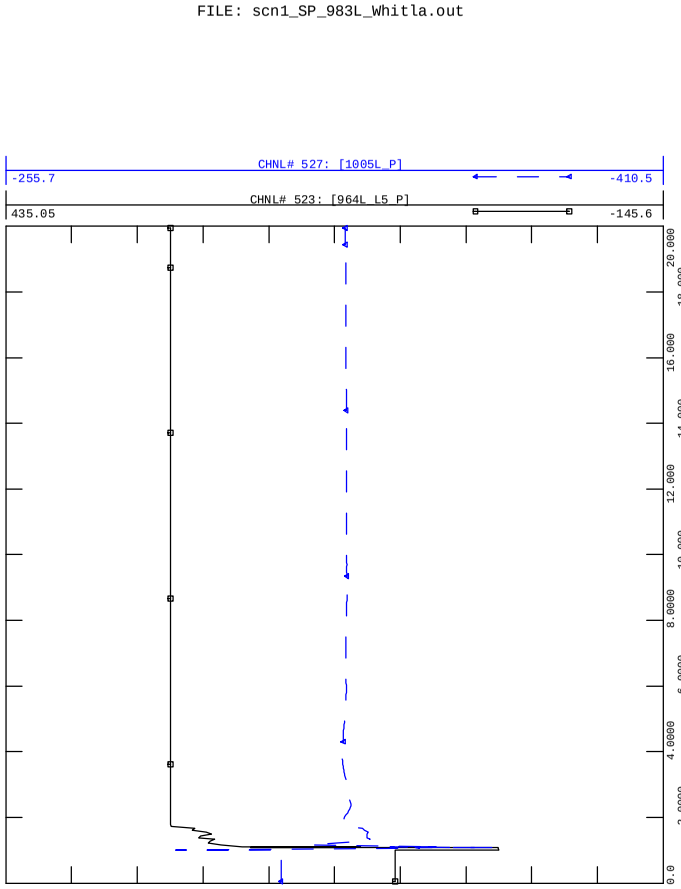
FILE: scn1_SP_983L_Whitla.out



THU, APR 14 2022 14:09 BRANCH P

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN1_SP_983L_WHITLA

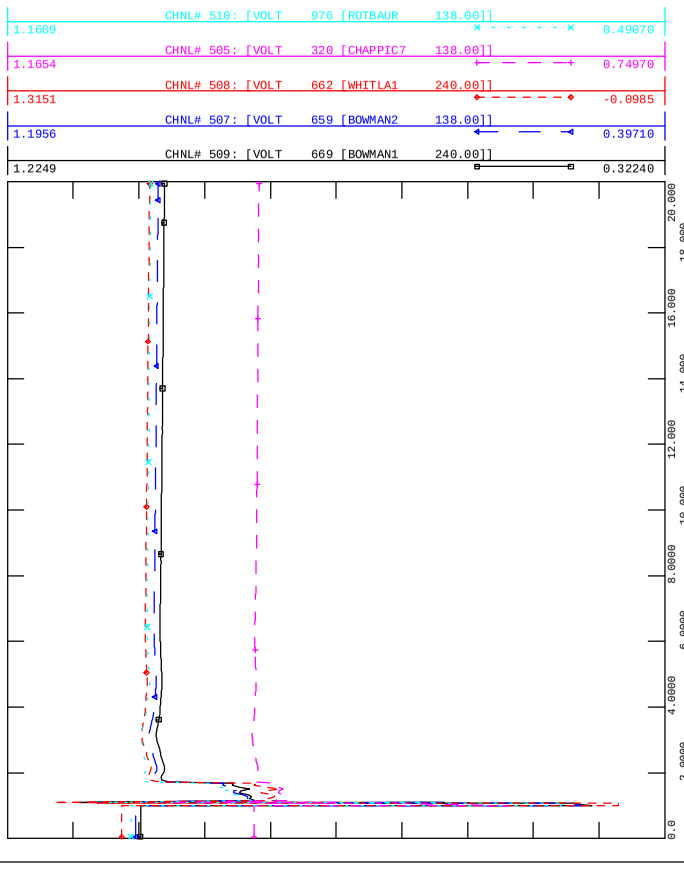
FILE: scn1_SP_983L_Whitla.out



THU, APR 14 2022 14:09 BRANCH P

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN1_SP_983L_WHITLA

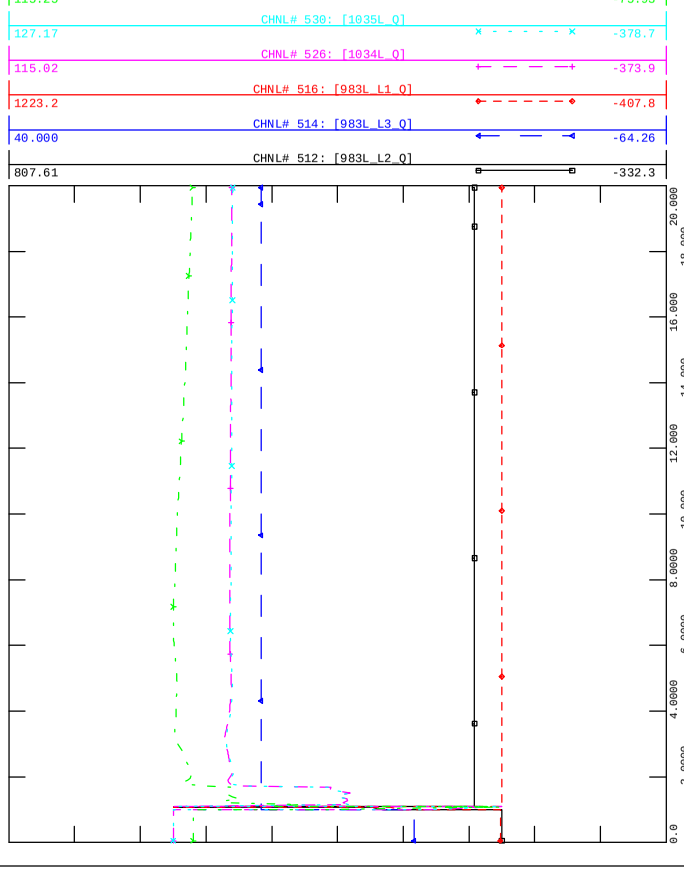
FILE: scn1_SP_983L_Whitla.out



THU, APR 14 2022 14:09 BUS VOLTAGE

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN1_SP_983L_WHITLA

FILE: scn1_SP_983L_Whitla.out



THU, APR 14 2022 14:09 BRANCH Q

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN1_SP_1034L_BOWMANTON

FILE: scn1_SP_1034L_Bowmanton.out

THU, APR 14 2022 14:09

ROTOR ANGLE

CHNL# 37: [ANGL 775[SECCT2 21.000]3]
56.576 -48.01

CHNL# 36: [ANGL 774[SECCT1 21.000]2]
56.576 -48.01

CHNL# 35: [ANGL 773[SECST 20.000]1]
58.429 -45.50

CHNL# 1: [ANGL 667[CANCARB9 13.800]1]
104.39 -24.21

1.0500 0.94500 0.84000 0.73500 0.63000 0.52500 0.42000 0.31500 0.21000 0.10500 0.0

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN1_SP_1034L_BOWMANTON

FILE: scn1_SP_1034L_Bowmanton.out

THU, APR 14 2022 14:09

REACTIVE POWER

CHNL# 280: [VARS 61994[GRANLEA6 0.6900]G1]
1.0328 -0.5000

CHNL# 277: [VARS 60990[SHAMROC5 0.6500]G1]
4.9975 -1.335

CHNL# 284: [VARS 773[SECST 20.000]1]
2.2461 -0.4006

CHNL# 250: [VARS 667[CANCARB9 13.800]1]
1.2737 -0.6333

1.0500 0.94500 0.84000 0.73500 0.63000 0.52500 0.42000 0.31500 0.21000 0.10500 0.0

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN1_SP_983L_WHITLA

FILE: scn1_SP_983L_Whitla.out

THU, APR 14 2022 14:09

BRANCH Q

CHNL# 528: [1005L Q]
115.25 -75.93

CHNL# 524: [964L L5 Q]
566.87 -264.0

20.000 18.000 16.000 14.000 12.000 10.000 8.0000 6.0000 4.0000 2.0000 0.0

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN1_SP_1034L_BOWMANTON

FILE: scn1_SP_1034L_Bowmanton.out

THU, APR 14 2022 14:09

ACTIVE POWER

CHNL# 197: [POWR 61994[GRANLEA6 0.6900]G1]
1.2000 -0.2000

CHNL# 194: [POWR 60990[SHAMROC5 0.6500]G1]
2.2179 0.19280

CHNL# 201: [POWR 773[SECST 20.000]1]
3.3715 2.7263

CHNL# 167: [POWR 667[CANCARB9 13.800]1]
0.98320 0.05130

1.0500 0.94500 0.84000 0.73500 0.63000 0.52500 0.42000 0.31500 0.21000 0.10500 0.0

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN1_SP_1034L_BOWMANTON

FILE: scn1_SP_1034L_Bowmanton.out

THU, APR 14 2022 14:09

BUS VOLTAGE

CHNL# 510: [VOLT 976 [ROTBAUR 138.00]]
1.1851 0.18670

CHNL# 505: [VOLT 320 [CHAPPIC7 138.00]]
1.1804 0.62320

CHNL# 508: [VOLT 662 [WHITLA1 240.00]]
1.3524 -0.0477

CHNL# 507: [VOLT 659 [BOWMAN2 138.00]]
1.2255 0.03010

CHNL# 509: [VOLT 669 [BOWMAN1 240.00]]
1.2630 -0.0951

1.0500 0.94500 0.84000 0.73500 0.63000 0.52500 0.42000 0.31500 0.21000 0.10500 0.0

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN1_SP_1034L_BOWMANTON

FILE: scn1_SP_1034L_Bowmanton.out

THU, APR 14 2022 14:09

BRANCH Q

CHNL# 528: [1005L Q]
153.98 -142.4

CHNL# 530: [1035L Q]
298.25 -108.4

CHNL# 526: [1034L Q]
40.000 -47.29

CHNL# 516: [983L_L1_Q]
86.173 -242.0

CHNL# 514: [983L_L3_Q]
90.622 -268.5

CHNL# 512: [983L_L2_Q]
107.45 -318.9

1.0500 0.94500 0.84000 0.73500 0.63000 0.52500 0.42000 0.31500 0.21000 0.10500 0.0

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN1_SP_1034L_BOWMANTON

FILE: scn1_SP_1034L_Bowmanton.out

THU, APR 14 2022 14:09

TERMINAL VOLTAGE

CHNL# 446: [ETRM 61994[GRANLEA6 0.6900]G1]
1.1401 -0.1000

CHNL# 443: [ETRM 60990[SHAMROC5 0.6500]G1]
1.6243 0.23760

CHNL# 450: [ETRM 773[SECST 20.000]1]
1.1564 0.88670

CHNL# 416: [ETRM 667[CANCARB9 13.800]1]
1.1798 0.53270

1.0500 0.94500 0.84000 0.73500 0.63000 0.52500 0.42000 0.31500 0.21000 0.10500 0.0

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN1_SP_1034L_BOWMANTON

FILE: scn1_SP_1034L_Bowmanton.out

THU, APR 14 2022 14:09

BRANCH P

CHNL# 527: [1005L P]
-169.6 -483.7

CHNL# 529: [1035L P]
653.56 -218.4

CHNL# 525: [1034L P]
486.07 -162.0

CHNL# 515: [983L_L1_P]
197.74 -590.7

CHNL# 513: [983L_L3_P]
98.879 -297.1

CHNL# 511: [983L_L2_P]
98.922 -297.0

1.0500 0.94500 0.84000 0.73500 0.63000 0.52500 0.42000 0.31500 0.21000 0.10500 0.0

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN1_SP_1034L_BOWMANTON

FILE: scn1_SP_1034L_Bowmanton.out

THU, APR 14 2022 14:09 BRANCH Q

CHNL# 528: [1005L Q]
153.98 -142.4
CHNL# 524: [964L L5 Q]
229.50 -78.95

TIME (SECONDS)
0.0 0.10500 0.21000 0.31500 0.42000 0.52500 0.63000 0.73500 0.84000 0.94500 1.0500

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN1_SP_1034L_CASSILS

FILE: scn1_SP_1034L_Cassils.out

THU, APR 14 2022 14:09 ACTIVE POWER

CHNL# 197: [POWR 61994[GRANLEA6 0.6900]G1]
1.2000 -0.2000
CHNL# 194: [POWR 60990[SHAMROC5 0.6500]G1]
2.2175 0.08760
CHNL# 201: [POWR 773[SECST 20.000]1]
3.5043 2.6167
CHNL# 167: [POWR 667[CANCARB9 13.800]1]
0.97930 0.02800

TIME (SECONDS)
0.0 0.10500 0.21000 0.31500 0.42000 0.52500 0.63000 0.73500 0.84000 0.94500 1.0500

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN1_SP_1034L_BOWMANTON

FILE: scn1_SP_1034L_Bowmanton.out

THU, APR 14 2022 14:09 BRANCH P

CHNL# 527: [1005L P]
-169.6 -483.7
CHNL# 523: [964L L5 P]
208.64 -81.16

TIME (SECONDS)
0.0 0.10500 0.21000 0.31500 0.42000 0.52500 0.63000 0.73500 0.84000 0.94500 1.0500

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN1_SP_1034L_CASSILS

FILE: scn1_SP_1034L_Cassils.out

THU, APR 14 2022 14:09 ROTOR ANGLE

CHNL# 37: [ANGL 775[SECCT2 21.000]3]
65.005 -52.14
CHNL# 36: [ANGL 774[SECCT1 21.000]2]
65.005 -52.14
CHNL# 35: [ANGL 773[SECST 20.000]1]
67.059 -49.29
CHNL# 1: [ANGL 667[CANCARB9 13.800]1]
126.05 -36.28

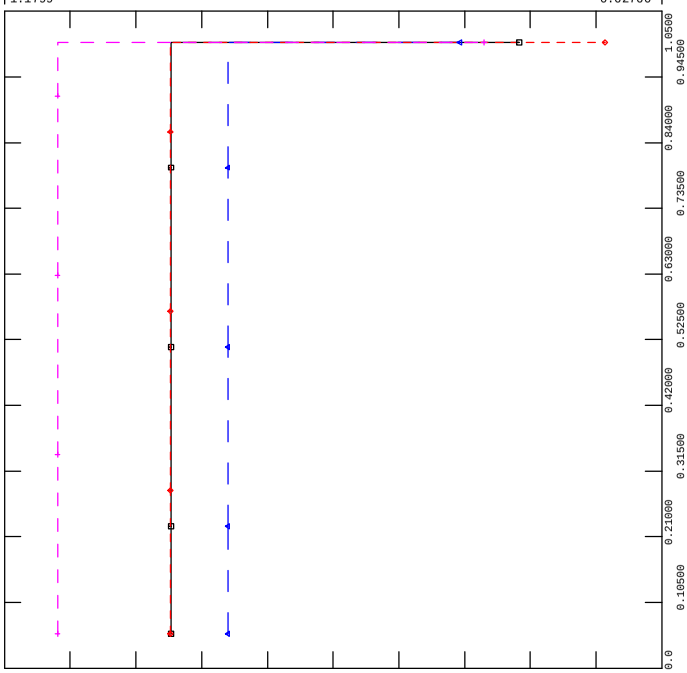
TIME (SECONDS)
0.0 0.10500 0.21000 0.31500 0.42000 0.52500 0.63000 0.73500 0.84000 0.94500 1.0500

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN1_SP_1034L_CASSILS

FILE: scn1_SP_1034L_Cassils.out

THU, APR 14 2022 14:09 TERMINAL VOLTAGE

CHNL# 446: [ETRM 61994[GRANLEA6 0.6900]G1]
1.1401 -0.1000
CHNL# 443: [ETRM 60990[SHAMROC5 0.6500]G1]
1.3829 0.22820
CHNL# 450: [ETRM 773[SECST 20.000]1]
1.1584 0.80980
CHNL# 416: [ETRM 667[CANCARB9 13.800]1]
1.1799 0.62760

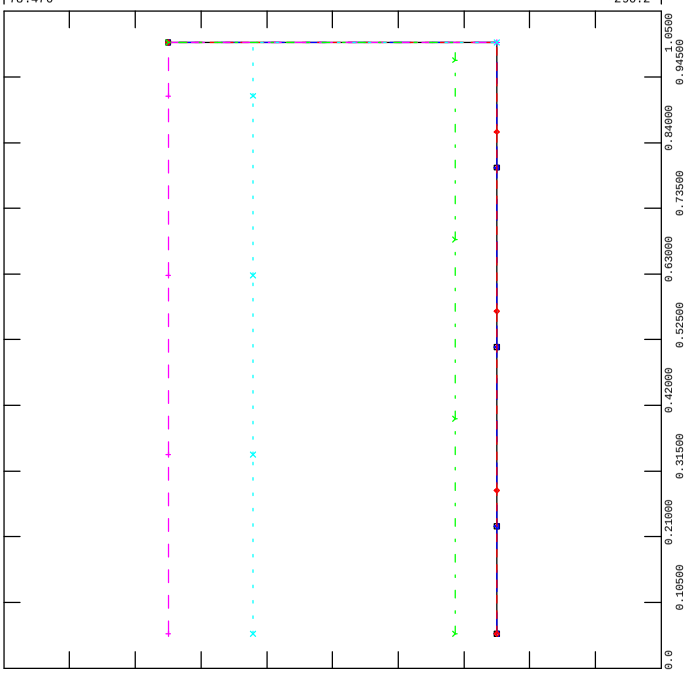


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN1_SP_1034L_CASSILS

FILE: scn1_SP_1034L_Cassils.out

THU, APR 14 2022 14:09 BRANCH P

CHNL# 527: [1005L P]
78.274 -503.0
CHNL# 529: [1035L P]
699.71 -226.8
CHNL# 525: [1034L P]
486.07 -162.0
CHNL# 515: [983L_L1_P]
177.27 -583.9
CHNL# 513: [983L_L3_P]
78.419 -290.3
CHNL# 511: [983L_L2_P]
78.470 -290.2

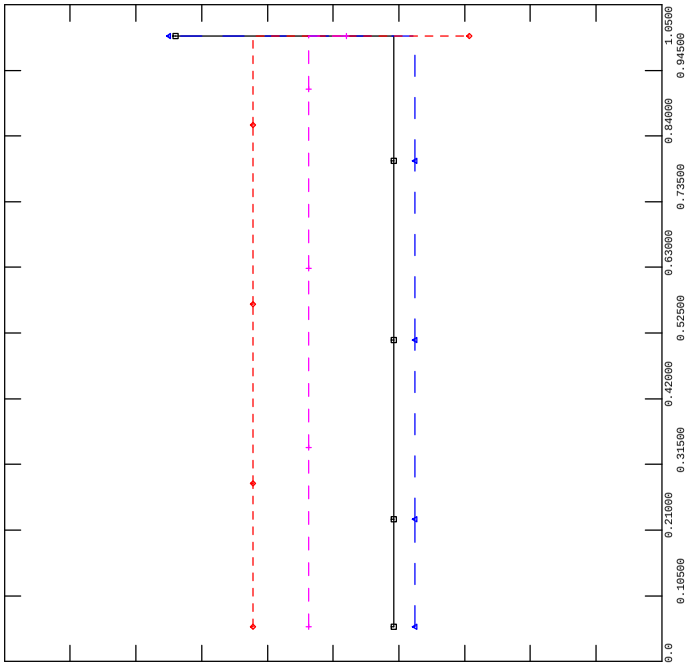


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN1_SP_1034L_CASSILS

FILE: scn1_SP_1034L_Cassils.out

THU, APR 14 2022 14:09 REACTIVE POWER

CHNL# 280: [VARS 61994[GRANLEA6 0.6900]G1]
0.57990 -0.5000
CHNL# 277: [VARS 60990[SHAMROC5 0.6500]G1]
1.4477 -0.2585
CHNL# 284: [VARS 773[SECST 20.000]1]
3.9373 -1.294
CHNL# 250: [VARS 667[CANCARB9 13.800]1]
1.2472 -0.6753

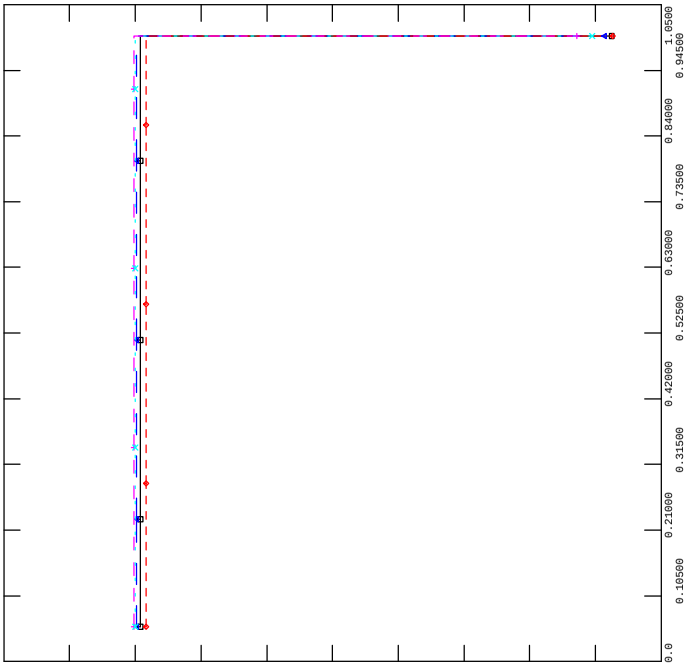


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN1_SP_1034L_CASSILS

FILE: scn1_SP_1034L_Cassils.out

THU, APR 14 2022 14:09 BUS VOLTAGE

CHNL# 510: [VOLT 976 [ROTBAUR 138.00]]
1.2247 0.27510
CHNL# 505: [VOLT 320 [CHAPPIC7 138.00]]
1.2092 0.19820
CHNL# 508: [VOLT 662 [WHITLA1 240.00]]
1.3619 0.01060
CHNL# 507: [VOLT 659 [BOWMAN2 138.00]]
1.2742 0.11440
CHNL# 509: [VOLT 669 [BOWMAN1 240.00]]
1.3171 -0.0087



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN1_SP_1034L_CASSILS

FILE: scn1_SP_1034L_Cassils.out

THU, APR 14 2022 14:09 BRANCH P

CHNL# 527: [1005L_P]
78.274 -503.0
CHNL# 523: [964L_L5_P]
202.30 -62.99

TIME (SECONDS)
0.0 0.10500 0.21000 0.31500 0.42000 0.52500 0.63000 0.73500 0.84000 0.94500 1.0500

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN1_SP_1035L_BOWMANTON

FILE: scn1_SP_1035L_Bowmanton.out

THU, APR 14 2022 14:09 ROTOR ANGLE

CHNL# 37: [ANGL 775[SECCT2 21.000]3]
65.087 -52.09
CHNL# 36: [ANGL 774[SECCT1 21.000]2]
65.087 -52.09
CHNL# 35: [ANGL 773[SECST 20.000]1]
67.149 -49.24
CHNL# 1: [ANGL 667[CANCARB9 13.800]1]
128.58 -36.14

TIME (SECONDS)
0.0 0.10500 0.21000 0.31500 0.42000 0.52500 0.63000 0.73500 0.84000 0.94500 1.0500

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN1_SP_1034L_CASSILS

FILE: scn1_SP_1034L_Cassils.out

THU, APR 14 2022 14:09 BRANCH Q

CHNL# 528: [1005L_Q]
227.91 -255.4
CHNL# 530: [1035L_Q]
323.29 -552.3
CHNL# 526: [1034L_Q]
40.000 -47.29
CHNL# 516: [983L_L1_Q]
105.08 -281.2
CHNL# 514: [983L_L3_Q]
75.581 -174.8
CHNL# 512: [983L_L2_Q]
89.767 -222.1

TIME (SECONDS)
0.0 0.10500 0.21000 0.31500 0.42000 0.52500 0.63000 0.73500 0.84000 0.94500 1.0500

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN1_SP_1034L_CASSILS

FILE: scn1_SP_1034L_Cassils.out

THU, APR 14 2022 14:09 BRANCH Q

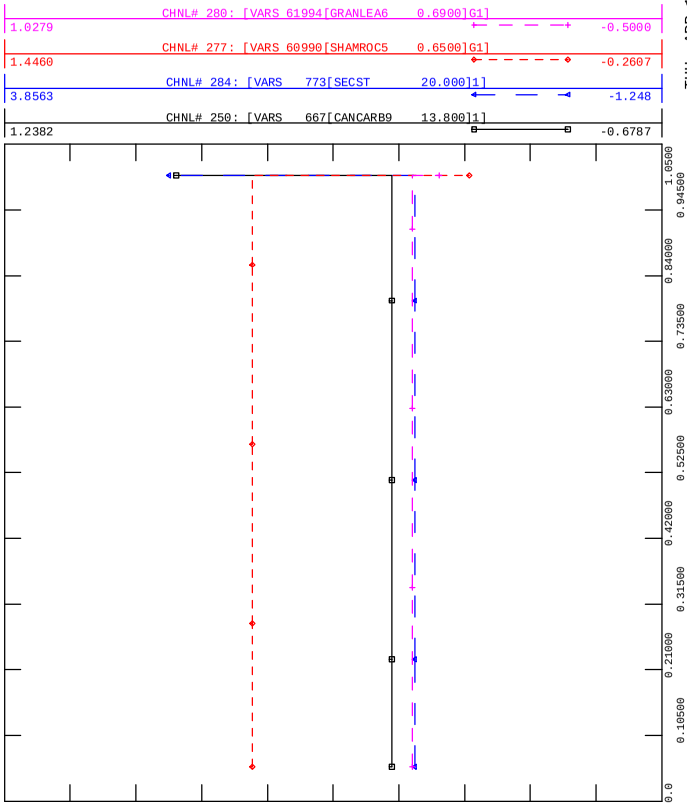
CHNL# 528: [1005L_Q]
227.91 -255.4
CHNL# 524: [964L_L5_Q]
107.91 -35.01

TIME (SECONDS)
0.0 0.10500 0.21000 0.31500 0.42000 0.52500 0.63000 0.73500 0.84000 0.94500 1.0500

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN1_SP_1035L_BOWMANTON

FILE: scn1_SP_1035L_Bowmanton.out

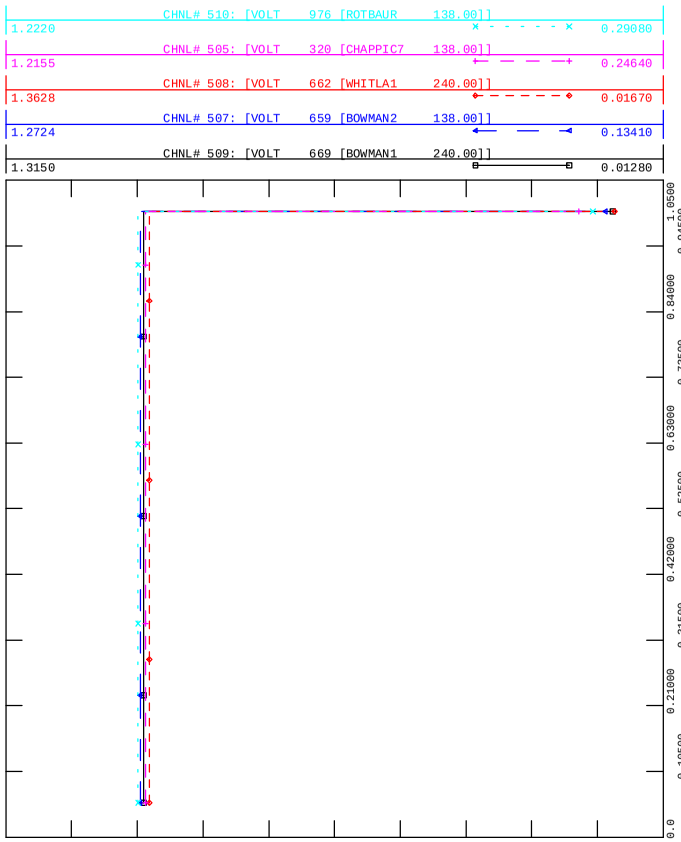
THU, APR 14 2022 14:09 REACTIVE POWER



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN1_SP_1035L_BOWMANTON

FILE: scn1_SP_1035L_Bowmanton.out

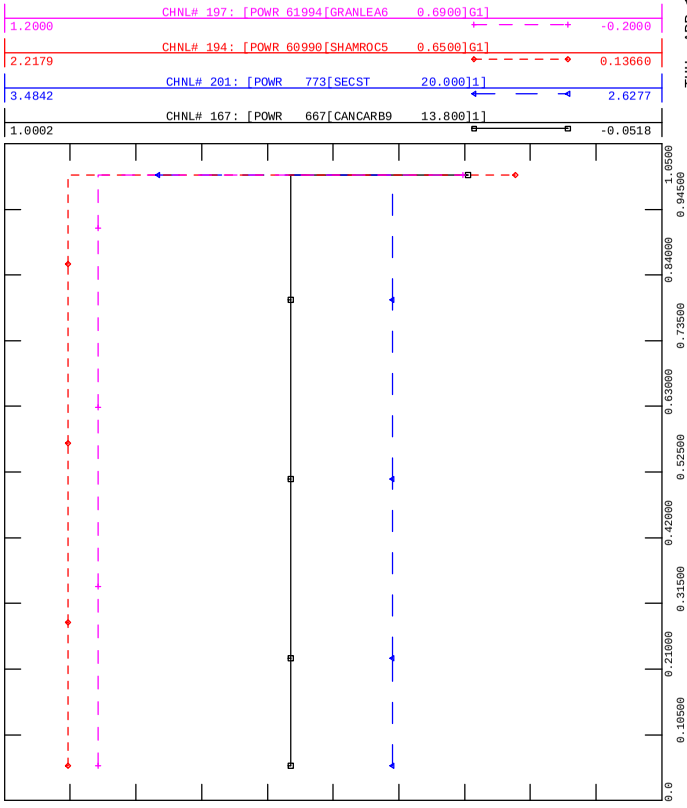
THU, APR 14 2022 14:09 BUS VOLTAGE



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN1_SP_1035L_BOWMANTON

FILE: scn1_SP_1035L_Bowmanton.out

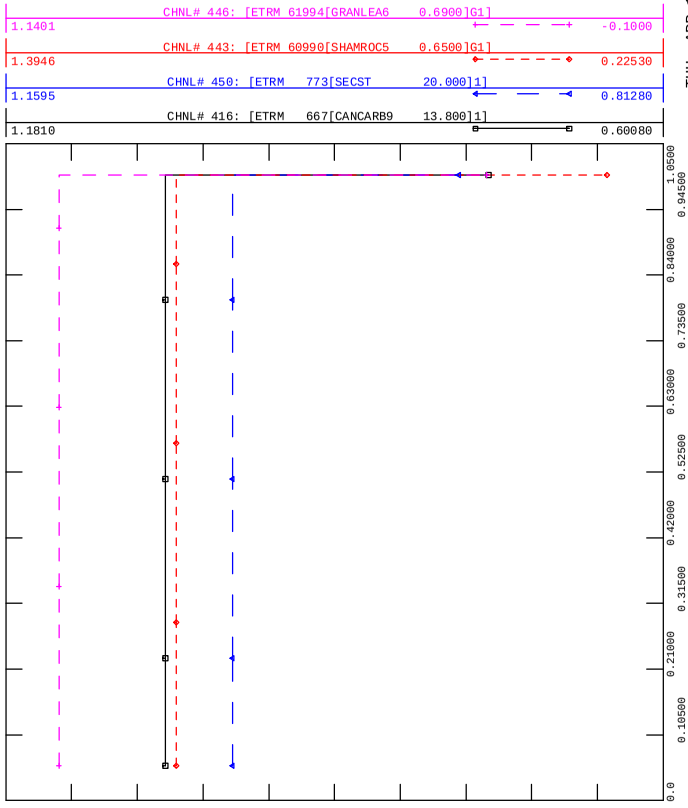
THU, APR 14 2022 14:09 ACTIVE POWER



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN1_SP_1035L_BOWMANTON

FILE: scn1_SP_1035L_Bowmanton.out

THU, APR 14 2022 14:09 TERMINAL VOLTAGE

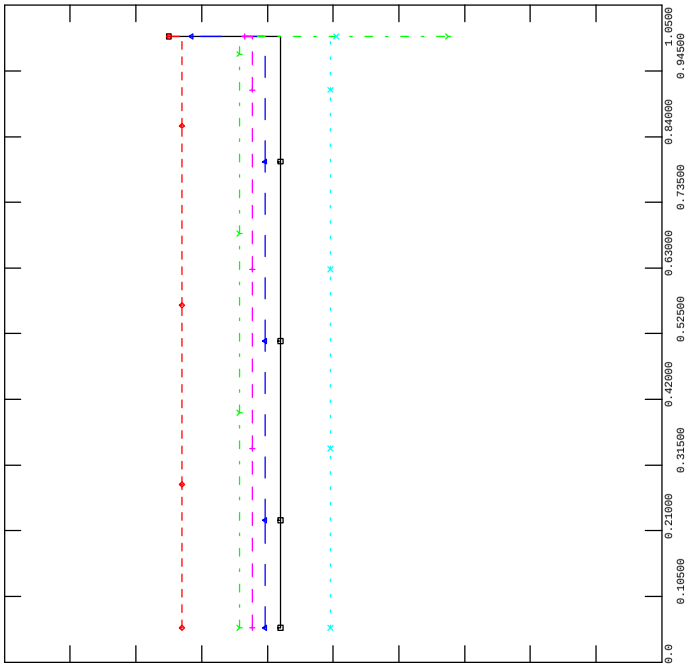


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN1_SP_1035L_BOWMANTON

FILE: scn1_SP_1035L_Bowmanton.out

THU, APR 14 2022 14:09 BRANCH Q

CHNL# 528: [1005L Q] 233.66 -247.4
CHNL# 530: [1035L Q] 40.707 -40.00
CHNL# 526: [1034L Q] 327.70 -560.2
CHNL# 516: [983L L1 Q] 94.837 -240.8
CHNL# 514: [983L L3 Q] 72.206 -171.3
CHNL# 512: [983L L2 Q] 78.597 -221.3

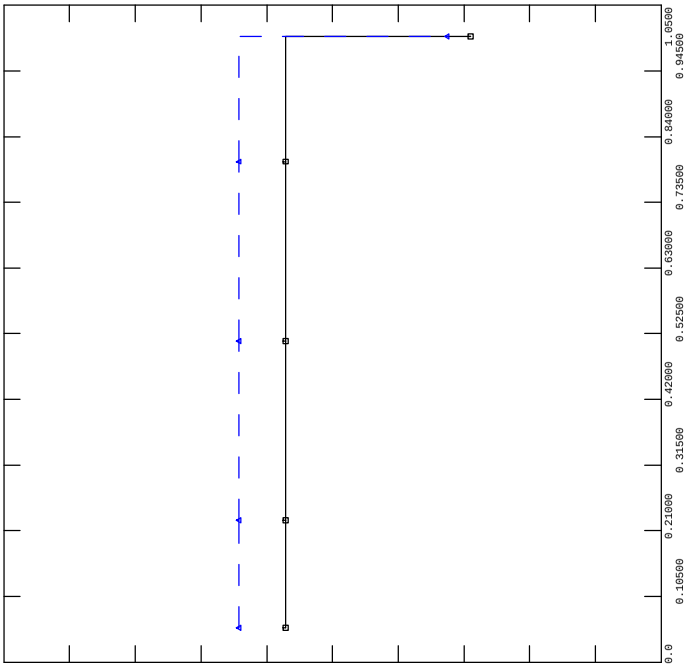


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN1_SP_1035L_BOWMANTON

FILE: scn1_SP_1035L_Bowmanton.out

THU, APR 14 2022 14:09 BRANCH Q

CHNL# 528: [1005L Q] 233.66 -247.4
CHNL# 524: [964L L5 Q] 102.61 -35.40

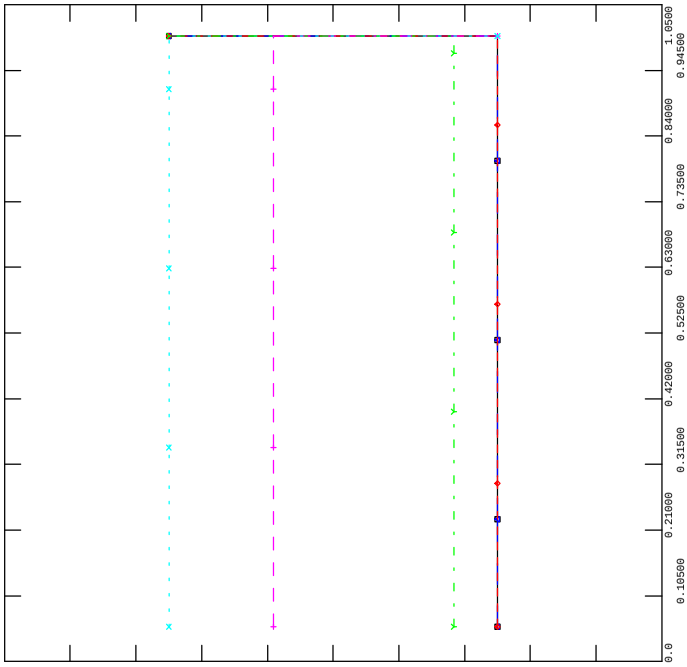


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN1_SP_1035L_BOWMANTON

FILE: scn1_SP_1035L_Bowmanton.out

THU, APR 14 2022 14:09 BRANCH P

CHNL# 527: [1005L P] 70.976 -501.4
CHNL# 529: [1035L P] 523.10 -174.4
CHNL# 525: [1034L P] 701.85 -222.1
CHNL# 515: [983L L1 P] 172.76 -582.4
CHNL# 513: [983L L3 P] 73.916 -288.8
CHNL# 511: [983L L2 P] 73.968 -288.7

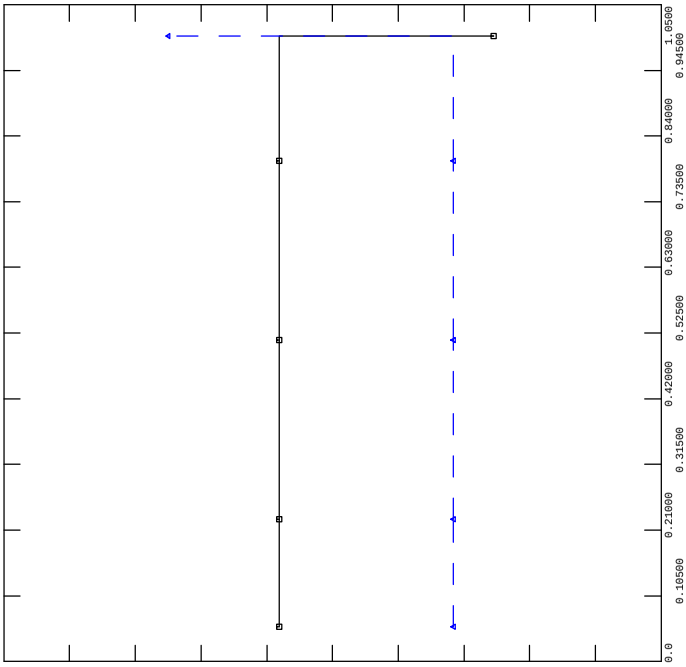


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN1_SP_1035L_BOWMANTON

FILE: scn1_SP_1035L_Bowmanton.out

THU, APR 14 2022 14:09 BRANCH P

CHNL# 527: [1005L P] 70.976 -501.4
CHNL# 523: [964L L5 P] 202.63 -63.58



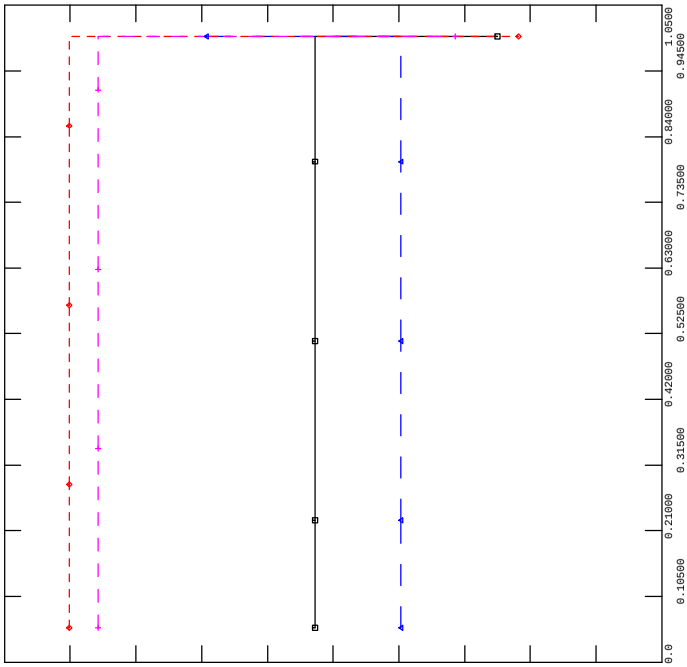
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN1_SP_1035L_NEWELL

FILE: scn1_SP_1035L_Newell.out

THU, APR 14 2022 14:09

ACTIVE POWER

CHNL# 197: [POWR 61994[GRANLEA6 0.6900]G1]
1.2000 -0.2000
CHNL# 194: [POWR 60990[SHAMROC5 0.6500]G1]
2.2177 0.17990
CHNL# 201: [POWR 773[SECST 20.000]1]
3.3713 2.7211
CHNL# 167: [POWR 667[CANCARB9 13.800]1]
0.98260 0.05010



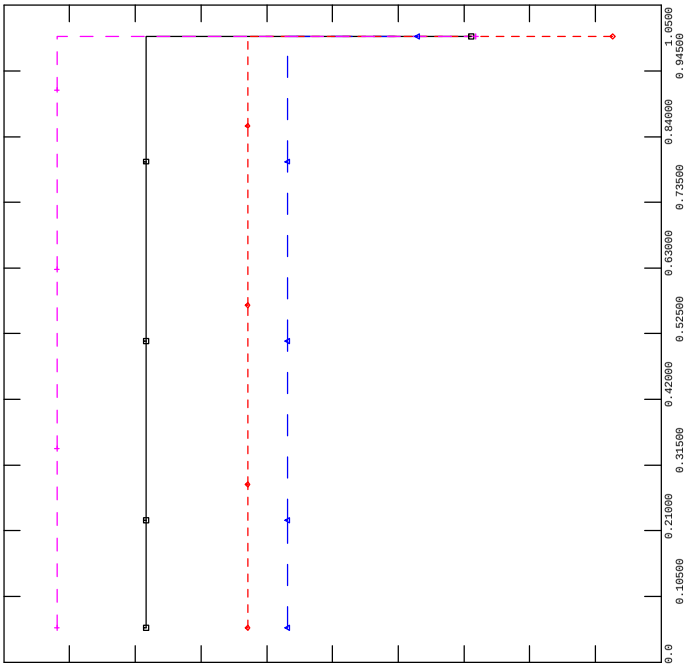
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN1_SP_1035L_NEWELL

FILE: scn1_SP_1035L_Newell.out

THU, APR 14 2022 14:09

TERMINAL VOLTAGE

CHNL# 446: [ETRM 61994[GRANLEA6 0.6900]G1]
1.1401 -0.1000
CHNL# 443: [ETRM 60990[SHAMROC5 0.6500]G1]
1.5944 0.23770
CHNL# 450: [ETRM 773[SECST 20.000]1]
1.1565 0.88670
CHNL# 416: [ETRM 667[CANCARB9 13.800]1]
1.1798 0.53380



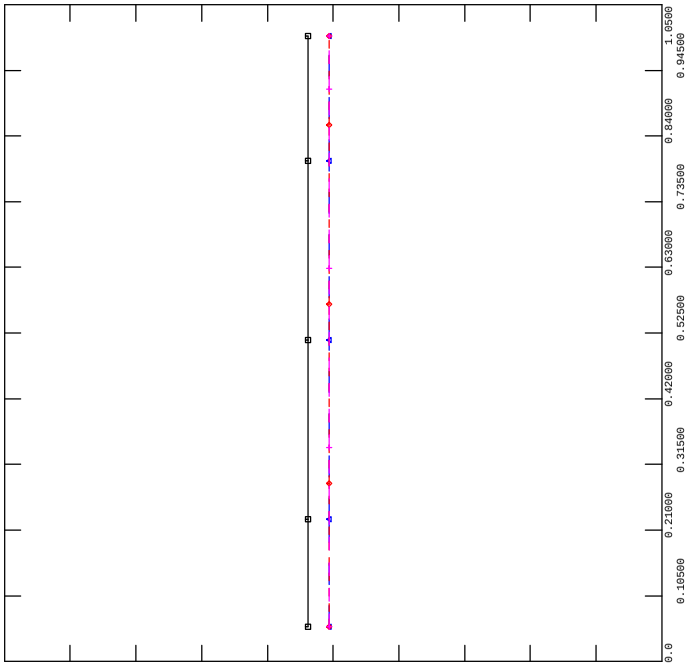
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN1_SP_1035L_NEWELL

FILE: scn1_SP_1035L_Newell.out

THU, APR 14 2022 14:09

ROTOR ANGLE

CHNL# 37: [ANGL 775[SECCT2 21.000]3]
56.511 -48.02
CHNL# 36: [ANGL 774[SECCT1 21.000]2]
56.511 -48.02
CHNL# 35: [ANGL 773[SECST 20.000]1]
58.367 -45.50
CHNL# 1: [ANGL 667[CANCARB9 13.800]1]
104.70 -22.28



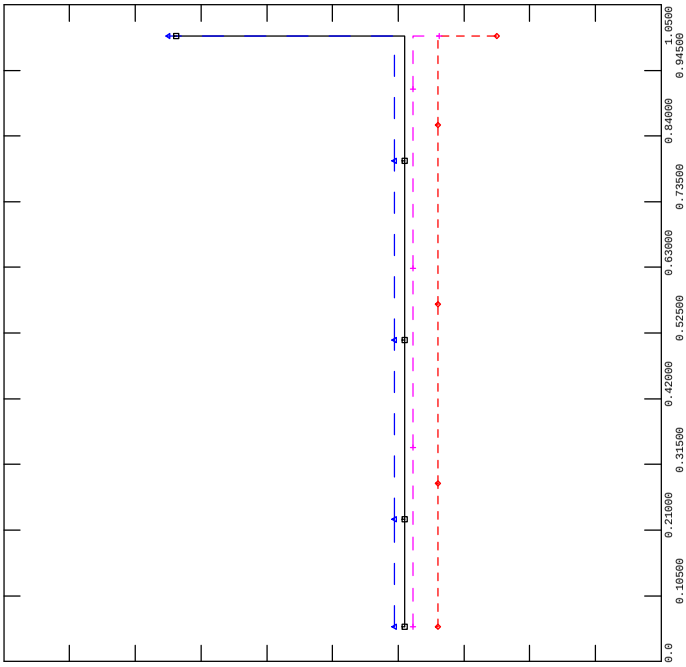
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN1_SP_1035L_NEWELL

FILE: scn1_SP_1035L_Newell.out

THU, APR 14 2022 14:09

REACTIVE POWER

CHNL# 280: [VARS 61994[GRANLEA6 0.6900]G1]
1.0366 -0.5000
CHNL# 277: [VARS 60990[SHAMROC5 0.6500]G1]
4.8970 -1.301
CHNL# 284: [VARS 773[SECST 20.000]1]
2.2491 -0.4084
CHNL# 250: [VARS 667[CANCARB9 13.800]1]
1.2737 -0.6362



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN1_SP_1035L_NEWELL

FILE: scn1_SP_1035L_Newell.out

CHNL# 527: [1005L_P]
-169.6 -483.8
CHNL# 529: [1035L_P]
523.10 -174.4
CHNL# 525: [1034L_P]
647.72 -216.9
CHNL# 515: [983L_L1_P]
197.70 -590.7
CHNL# 513: [983L_L3_P]
99.700 -297.4
CHNL# 511: [983L_L2_P]
99.694 -297.3

THU, APR 14 2022 14:09 BRANCH P

TIME (SECONDS)
0.0 0.10500 0.21000 0.31500 0.42000 0.52500 0.63000 0.73500 0.84000 0.94500 1.0500

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN1_SP_1035L_NEWELL

FILE: scn1_SP_1035L_Newell.out

CHNL# 527: [1005L_P]
-169.6 -483.8
CHNL# 523: [964L_L5_P]
205.17 -70.63

THU, APR 14 2022 14:09 BRANCH P

TIME (SECONDS)
0.0 0.10500 0.21000 0.31500 0.42000 0.52500 0.63000 0.73500 0.84000 0.94500 1.0500

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN1_SP_1035L_NEWELL

FILE: scn1_SP_1035L_Newell.out

CHNL# 510: [VOLT 976 [ROTBAUR 138.00]]
1.1853 0.18860
CHNL# 505: [VOLT 320 [CHAPPIC7 138.00]]
1.1811 0.62320
CHNL# 508: [VOLT 662 [WHITLA1 240.00]]
1.3563 0.01200
CHNL# 507: [VOLT 659 [BOWMAN2 138.00]]
1.2286 0.03040
CHNL# 509: [VOLT 669 [BOWMAN1 240.00]]
1.2667 -0.0949

THU, APR 14 2022 14:09 BUS VOLTAGE

TIME (SECONDS)
0.0 0.10500 0.21000 0.31500 0.42000 0.52500 0.63000 0.73500 0.84000 0.94500 1.0500

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN1_SP_1035L_NEWELL

FILE: scn1_SP_1035L_Newell.out

CHNL# 528: [1005L_Q]
152.31 -141.6
CHNL# 530: [1035L_Q]
40.707 -40.00
CHNL# 526: [1034L_Q]
307.39 -112.2
CHNL# 516: [983L_L1_Q]
88.624 -249.4
CHNL# 514: [983L_L3_Q]
81.928 -271.0
CHNL# 512: [983L_L2_Q]
98.519 -320.3

THU, APR 14 2022 14:09 BRANCH Q

TIME (SECONDS)
0.0 0.10500 0.21000 0.31500 0.42000 0.52500 0.63000 0.73500 0.84000 0.94500 1.0500

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN2_SL_PRE_NOFAULT

FILE: scn2_SL_Pre_nofault.out

THU, APR 14 2022 14:09

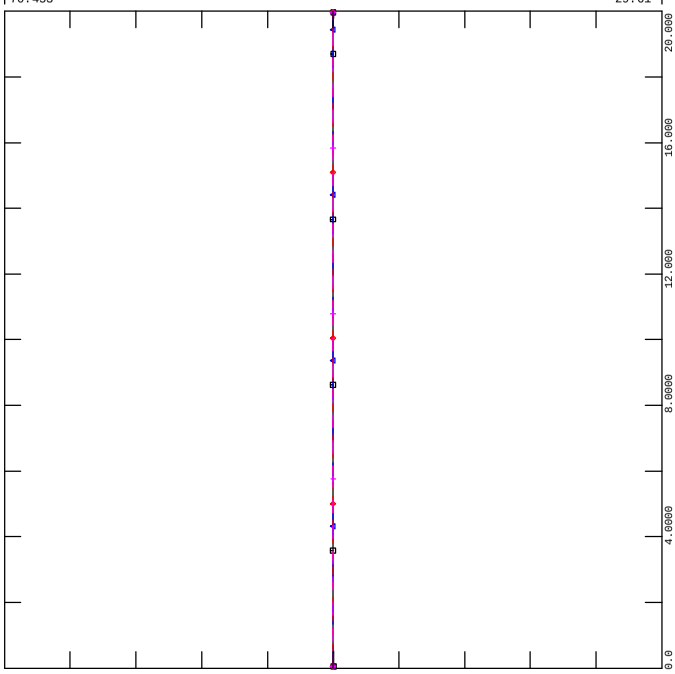
ROTOR ANGLE

CHNL# 35: [ANGL 775[SECCT2 21.000]3]
27.326 -72.70

CHNL# 34: [ANGL 774[SECCT1 21.000]2]
27.326 -72.70

CHNL# 33: [ANGL 773[SECST 20.000]1]
28.339 -71.68

CHNL# 1: [ANGL 667[CANCARB9 13.800]1]
70.453 -29.61



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN2_SL_PRE_NOFAULT

FILE: scn2_SL_Pre_nofault.out

THU, APR 14 2022 14:09

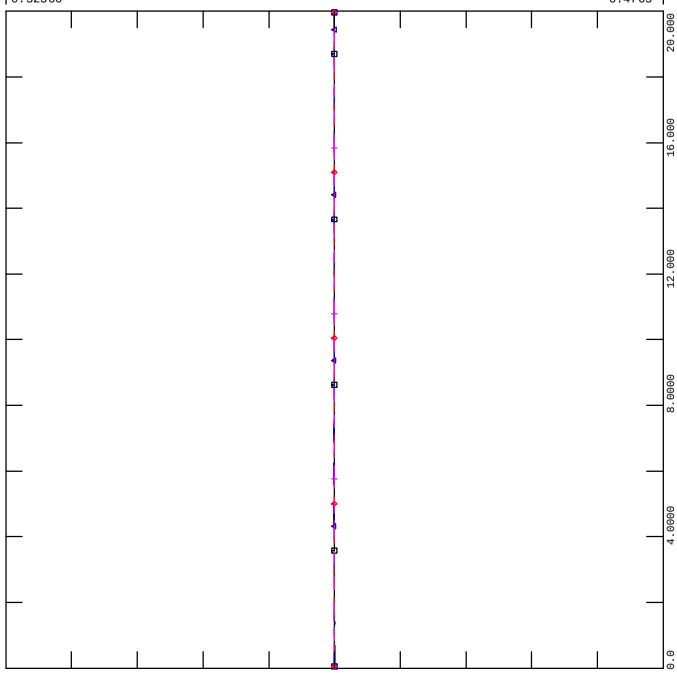
REACTIVE POWER

CHNL# 272: [VARS 61994[GRANLEA6 0.6900]G1]
0.56400 -0.4360

CHNL# 270: [VARS 60990[SHAMROC5 0.6500]G1]
1.4599 0.45990

CHNL# 276: [VARS 773[SECST 20.000]1]
0.50940 -0.4925

CHNL# 244: [VARS 667[CANCARB9 13.800]1]
0.52360 -0.4765



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN1_SP_1035L_NEWELL

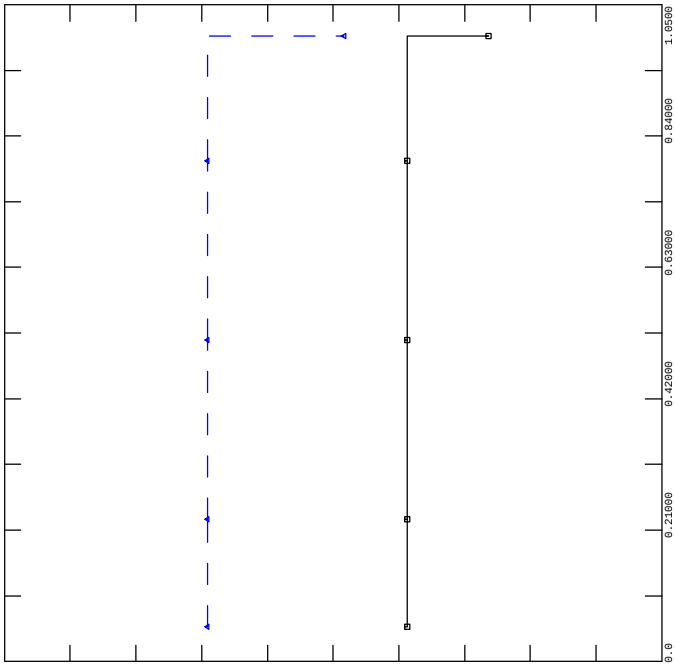
FILE: scn1_SP_1035L_Newell.out

THU, APR 14 2022 14:09

BRANCH Q

CHNL# 528: [1005L Q]
152.31 -141.6

CHNL# 524: [964L L5 Q]
229.01 -73.71



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN2_SL_PRE_NOFAULT

FILE: scn2_SL_Pre_nofault.out

THU, APR 14 2022 14:09

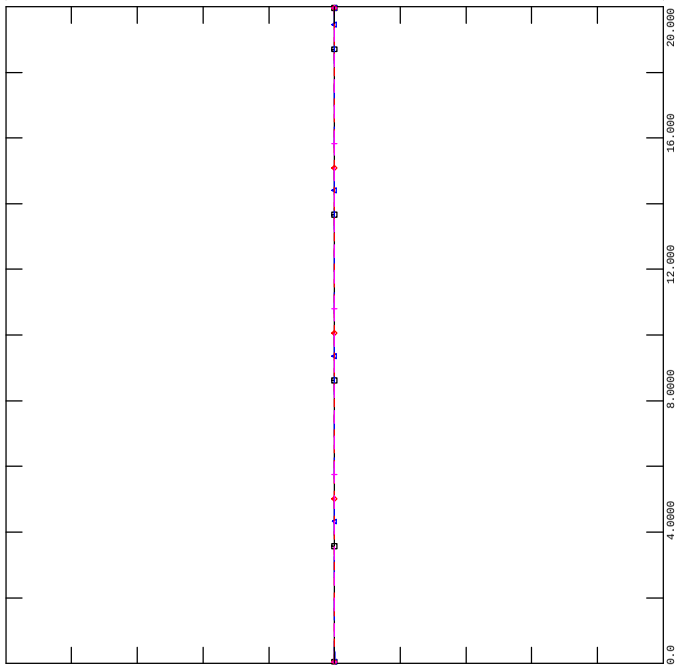
ACTIVE POWER

CHNL# 191: [POWR 61994[GRANLEA6 0.6900]G1]
1.2000 0.80000

CHNL# 189: [POWR 60990[SHAMROC5 0.6500]G1]
2.2160 1.8160

CHNL# 195: [POWR 773[SECST 20.000]1]
1.4201 1.0199

CHNL# 163: [POWR 667[CANCARB9 13.800]1]
0.50400 0.10390



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN2_SL_PRE_NOFAULT

FILE: scn2_SL_Pre_nofault.out

THU, APR 14 2022 14:09

BUS VOLTAGE

CHNL# 498: [VOLT 976 [ROTBAUR 138.00]]
1.1466 0.94650

CHNL# 493: [VOLT 320 [CHAPPIC7 138.00]]
1.1236 0.92350

CHNL# 496: [VOLT 662 [WHITLA1 240.00]]
1.1707 0.97060

CHNL# 495: [VOLT 659 [BOWMAN2 138.00]]
1.1486 0.94850

CHNL# 497: [VOLT 669 [BOWMAN1 240.00]]
1.1484 0.94820

TIME (SECONDS)

0.0 2.0000 4.0000 6.0000 8.0000 10.000 12.000 14.000 16.000 18.000 20.000

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN2_SL_PRE_NOFAULT

FILE: scn2_SL_Pre_nofault.out

THU, APR 14 2022 14:09

BRANCH Q

CHNL# 516: [1005L Q]
66.503 -13.63

CHNL# 518: [1035L Q]
40.342 -39.70

CHNL# 514: [1034L Q]
32.103 -47.93

CHNL# 504: [983L_L1_Q]
48.569 -31.47

CHNL# 502: [983L_L3_Q]
22.991 -57.05

CHNL# 500: [983L_L2_Q]
-0.3050 -80.35

TIME (SECONDS)

0.0 2.0000 4.0000 6.0000 8.0000 10.000 12.000 14.000 16.000 18.000 20.000

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN2_SL_PRE_NOFAULT

FILE: scn2_SL_Pre_nofault.out

THU, APR 14 2022 14:09

TERMINAL VOLTAGE

CHNL# 434: [ETRM 61994[GRANLEA6 0.6900]G1]
1.1382 0.93800

CHNL# 432: [ETRM 60990[SHAMROC5 0.6500]G1]
1.1972 0.99710

CHNL# 438: [ETRM 773[SECST 20.000]1]
1.1100 0.91000

CHNL# 406: [ETRM 667[CANCARB9 13.800]1]
1.1400 0.94000

TIME (SECONDS)

0.0 2.0000 4.0000 6.0000 8.0000 10.000 12.000 14.000 16.000 18.000 20.000

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN2_SL_PRE_NOFAULT

FILE: scn2_SL_Pre_nofault.out

THU, APR 14 2022 14:09

BRANCH P

CHNL# 515: [1005L_P]
-283.1 -363.1

CHNL# 517: [1035L_P]
393.73 313.71

CHNL# 513: [1034L_P]
370.72 290.69

CHNL# 503: [983L_L1_P]
-353.7 -433.7

CHNL# 501: [983L_L3_P]
-158.2 -238.2

CHNL# 499: [983L_L2_P]
-158.1 -238.1

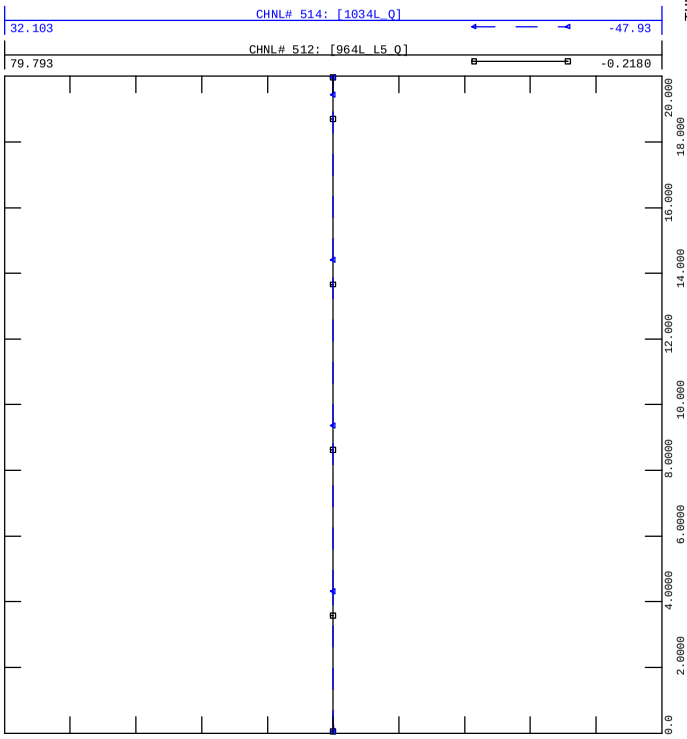
TIME (SECONDS)

0.0 2.0000 4.0000 6.0000 8.0000 10.000 12.000 14.000 16.000 18.000 20.000

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN2_SL_PRE_NOFAULT

FILE: scn2_SL_Pre_nofault.out

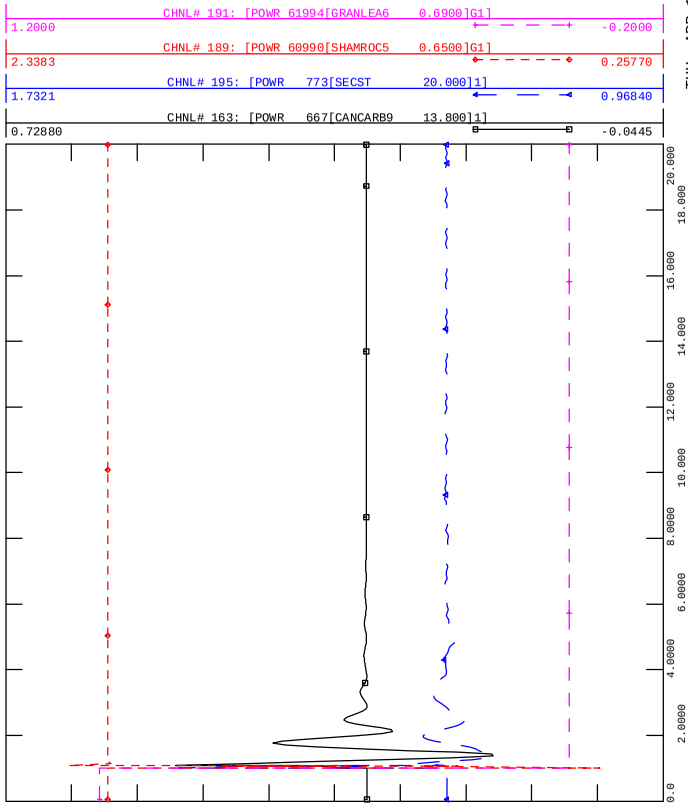
THU, APR 14 2022 14:09 BRANCH Q



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN2_SL_964L_BOWMANTON

FILE: scn2_SL_964L_Bowmanton.out

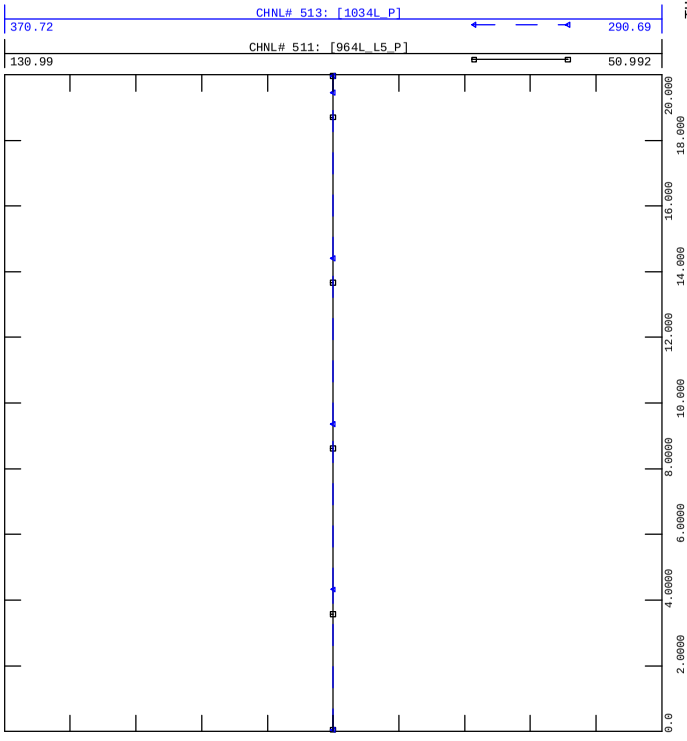
THU, APR 14 2022 14:09 ACTIVE POWER



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN2_SL_PRE_NOFAULT

FILE: scn2_SL_Pre_nofault.out

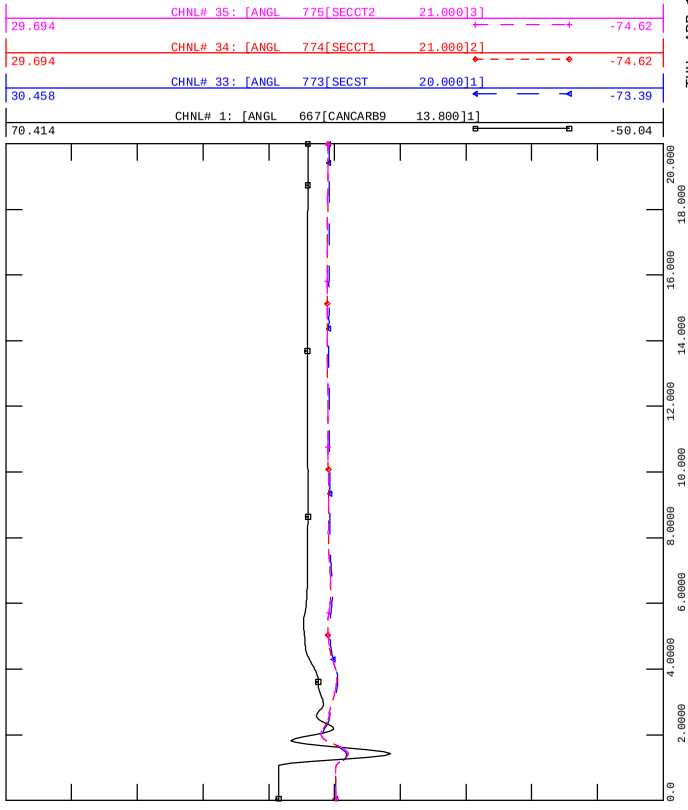
THU, APR 14 2022 14:09 BRANCH P



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN2_SL_964L_BOWMANTON

FILE: scn2_SL_964L_Bowmanton.out

THU, APR 14 2022 14:09 ROTOR ANGLE



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN2_SL_964L_BOWMANTON

FILE: scn2_SL_964L_Bowmanton.out

THU, APR 14 2022 14:09

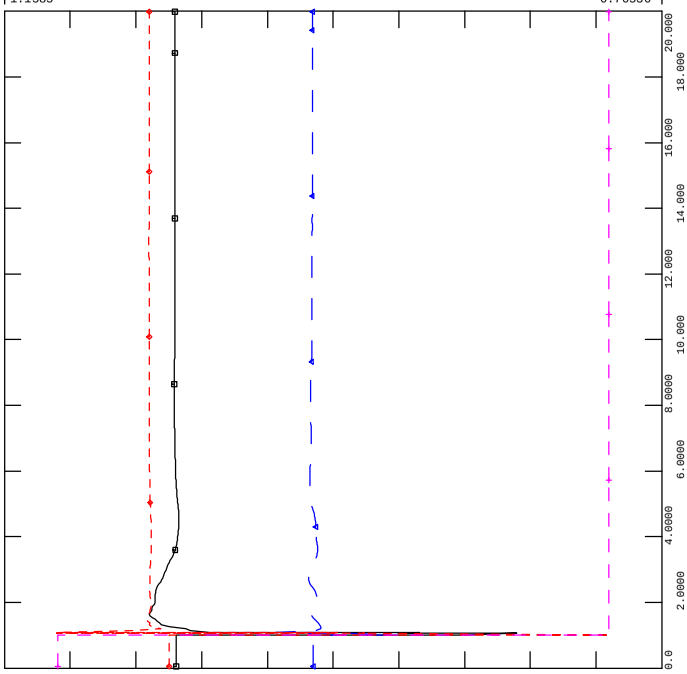
TERMINAL VOLTAGE

CHNL# 434: [ETRM 61994[GRANLEA6 0.6900]G1]
1.1382 -0.1000

CHNL# 432: [ETRM 60990[SHAMROC5 0.6500]G1]
1.4147 0.14910

CHNL# 438: [ETRM 773[SECST 20.000]1]
1.1236 0.88160

CHNL# 406: [ETRM 667[CANCARB9 13.800]1]
1.1585 0.70530



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN2_SL_964L_BOWMANTON

FILE: scn2_SL_964L_Bowmanton.out

THU, APR 14 2022 14:09

BRANCH P

CHNL# 515: [1005L_P]
-257.2 -406.1

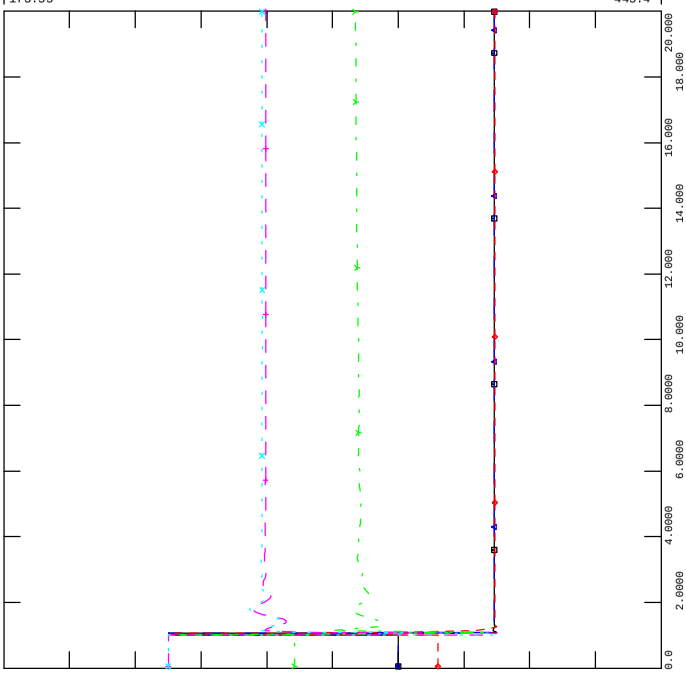
CHNL# 517: [1035L_P]
523.04 -154.2

CHNL# 513: [1034L_P]
493.53 -157.7

CHNL# 503: [983L_L1_P]
283.99 -741.8

CHNL# 501: [983L_L3_P]
171.97 -445.1

CHNL# 499: [983L_L2_P]
173.55 -445.4



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN2_SL_964L_BOWMANTON

FILE: scn2_SL_964L_Bowmanton.out

THU, APR 14 2022 14:09

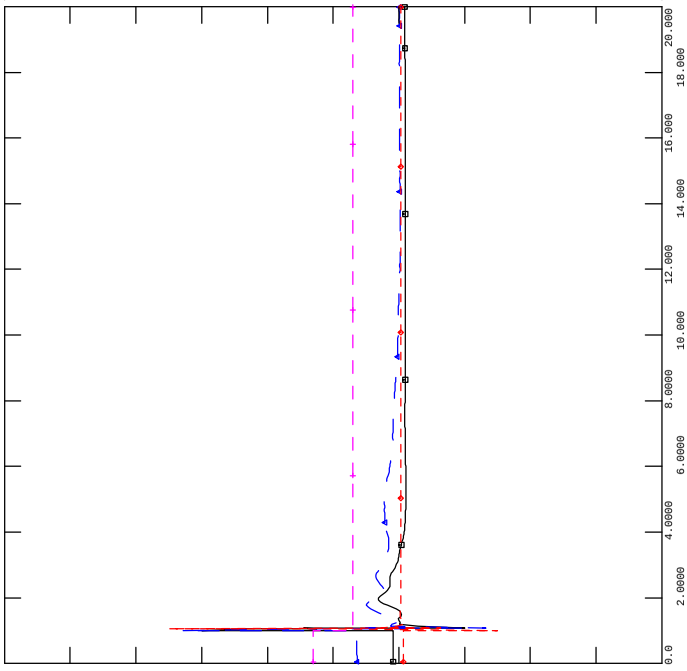
REACTIVE POWER

CHNL# 272: [VARS 61994[GRANLEA6 0.6900]G1]
0.56400 -0.5000

CHNL# 270: [VARS 60990[SHAMROC5 0.6500]G1]
4.0986 -1.076

CHNL# 276: [VARS 773[SECST 20.000]1]
1.0108 -0.8600

CHNL# 244: [VARS 667[CANCARB9 13.800]1]
1.0094 -0.6574



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN2_SL_964L_BOWMANTON

FILE: scn2_SL_964L_Bowmanton.out

THU, APR 14 2022 14:09

BUS VOLTAGE

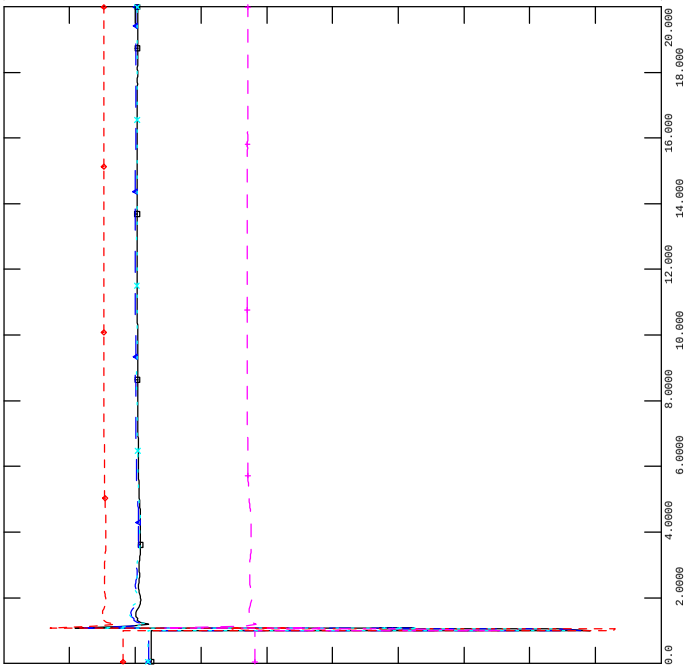
CHNL# 498: [VOLT 976 [ROTBAUR 138.00]]
1.1966 0.51400

CHNL# 493: [VOLT 320 [CHAPPIC7 138.00]]
1.1836 0.76490

CHNL# 496: [VOLT 662 [WHITLA1 240.00]]
1.3297 -0.0996

CHNL# 495: [VOLT 659 [BOWMAN2 138.00]]
1.2288 0.40930

CHNL# 497: [VOLT 669 [BOWMAN1 240.00]]
1.2555 0.33130



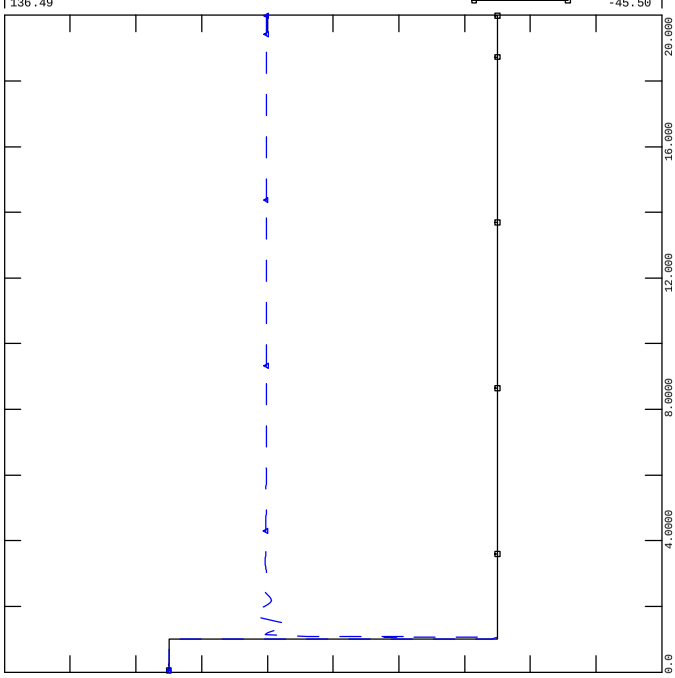
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN2_SL_964L_BOWMANTON

FILE: scn2_SL_964L_Bowmanton.out

THU, APR 14 2022 14:09 BRANCH P

CHNL# 513: [1034L_P]
493.53 -157.7
CHNL# 511: [964L_L5_P]
136.49 -45.50

TIME (SECONDS)



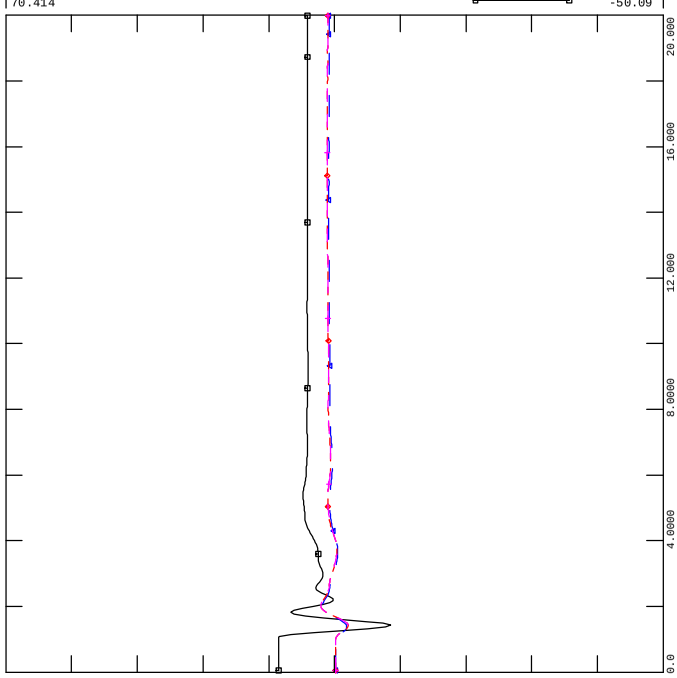
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN2_SL_964L_WHITLA

FILE: scn2_SL_964L_Whitla.out

THU, APR 14 2022 14:09 ROTOR ANGLE

CHNL# 35: [ANGL 775[SECCT2 21.000]3]
29.701 -74.63
CHNL# 34: [ANGL 774[SECCT1 21.000]2]
29.701 -74.63
CHNL# 33: [ANGL 773[SECST 20.000]1]
30.467 -73.40
CHNL# 1: [ANGL 667[CANCARB9 13.800]1]
70.414 -50.09

TIME (SECONDS)



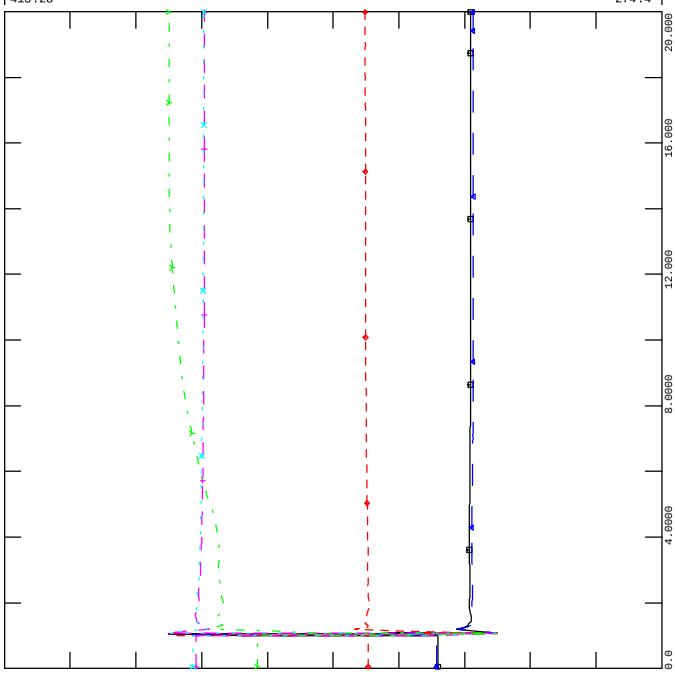
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN2_SL_964L_BOWMANTON

FILE: scn2_SL_964L_Bowmanton.out

THU, APR 14 2022 14:09 BRANCH Q

CHNL# 516: [1005L_Q]
107.91 -103.6
CHNL# 518: [1035L_Q]
155.18 -385.4
CHNL# 514: [1034L_Q]
145.84 -381.7
CHNL# 504: [983L_L1_Q]
469.71 -364.0
CHNL# 502: [983L_L3_Q]
380.68 -224.7
CHNL# 500: [983L_L2_Q]
413.28 -274.4

TIME (SECONDS)



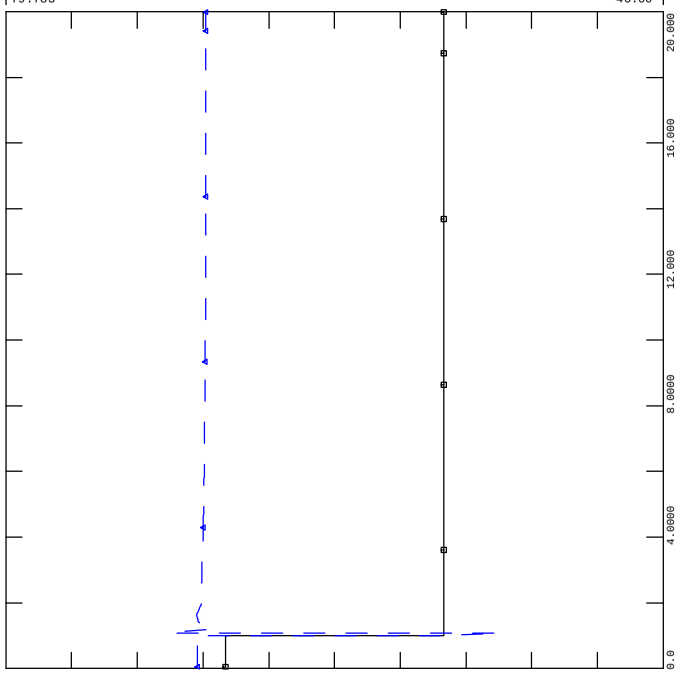
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN2_SL_964L_BOWMANTON

FILE: scn2_SL_964L_Bowmanton.out

THU, APR 14 2022 14:09 BRANCH Q

CHNL# 514: [1034L_Q]
145.84 -381.7
CHNL# 512: [964L_L5_Q]
79.783 -40.00

TIME (SECONDS)

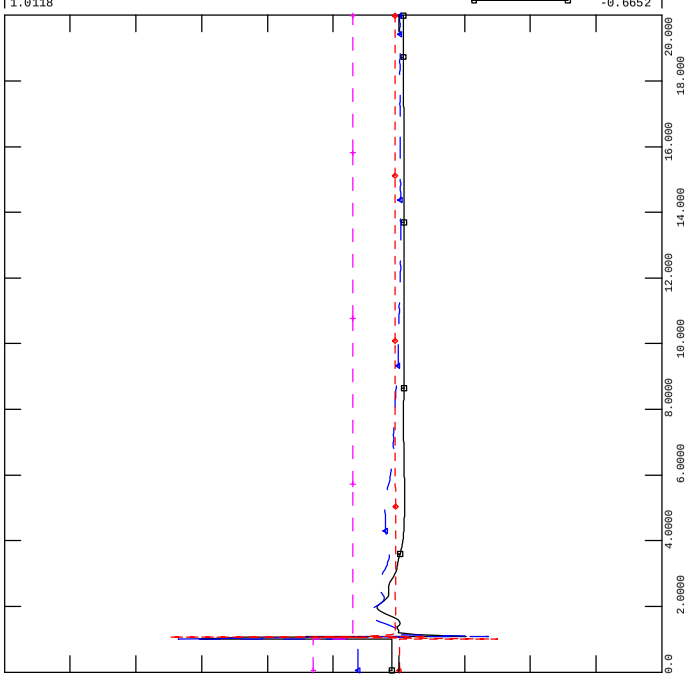


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN2_SL_964L_WHITLA

FILE: scn2_SL_964L_Whitla.out

THU, APR 14 2022 14:09 REACTIVE POWER

CHNL# 272: [VARS 61994[GRANLEA6 0.6900]G1] 0.56400 -0.5000
CHNL# 270: [VARS 60990[SHAMROC5 0.6500]G1] 3.9271 -1.014
CHNL# 276: [VARS 773[SECST 20.000]1] 1.0266 -0.8681
CHNL# 244: [VARS 667[CANCARB9 13.800]1] 1.0118 -0.6652

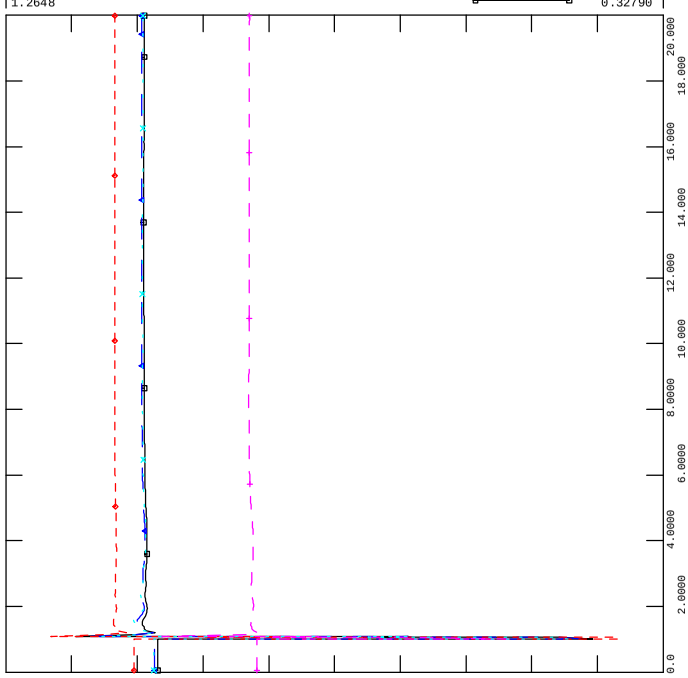


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN2_SL_964L_WHITLA

FILE: scn2_SL_964L_Whitla.out

THU, APR 14 2022 14:09 BUS VOLTAGE

CHNL# 498: [VOLT 976 [ROTBAUR 138.00]] 1.2024 0.51140
CHNL# 493: [VOLT 320 [CHAPPIC7 138.00]] 1.1855 0.76150
CHNL# 496: [VOLT 662 [WHITLA1 240.00]] 1.3537 -0.0998
CHNL# 495: [VOLT 659 [BOWMAN2 138.00]] 1.2364 0.40620
CHNL# 497: [VOLT 669 [BOWMAN1 240.00]] 1.2648 0.32790

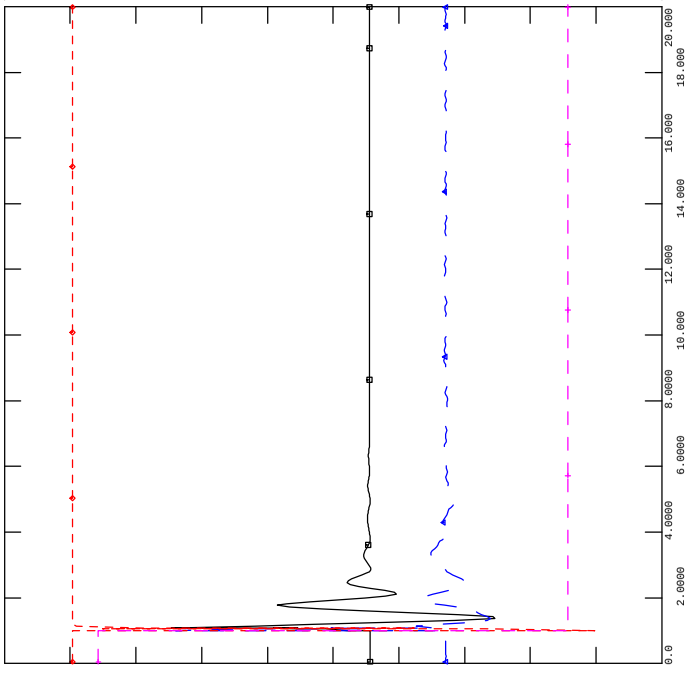


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN2_SL_964L_WHITLA

FILE: scn2_SL_964L_Whitla.out

THU, APR 14 2022 14:09 ACTIVE POWER

CHNL# 191: [POWR 61994[GRANLEA6 0.6900]G1] 1.2000 -0.2000
CHNL# 189: [POWR 60990[SHAMROC5 0.6500]G1] 2.2181 0.26410
CHNL# 195: [POWR 773[SECST 20.000]1] 1.7353 0.96780
CHNL# 163: [POWR 667[CANCARB9 13.800]1] 0.74290 -0.0457

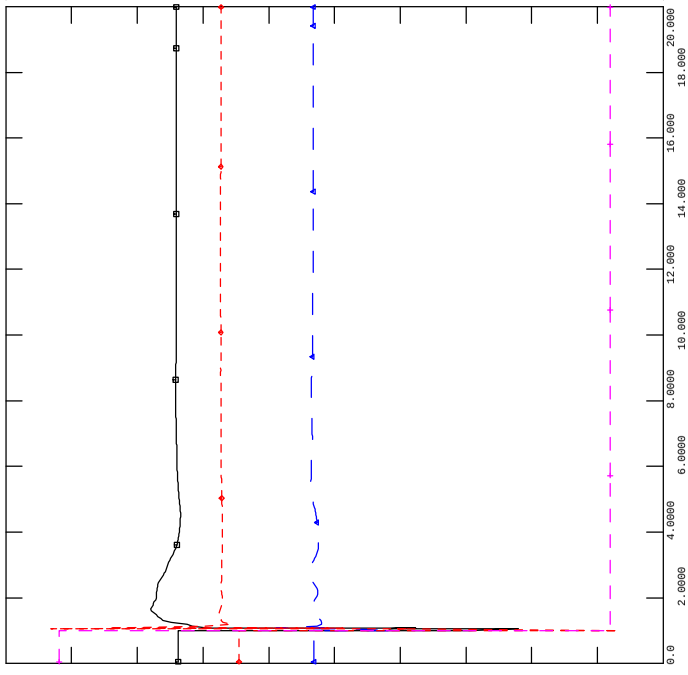


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN2_SL_964L_WHITLA

FILE: scn2_SL_964L_Whitla.out

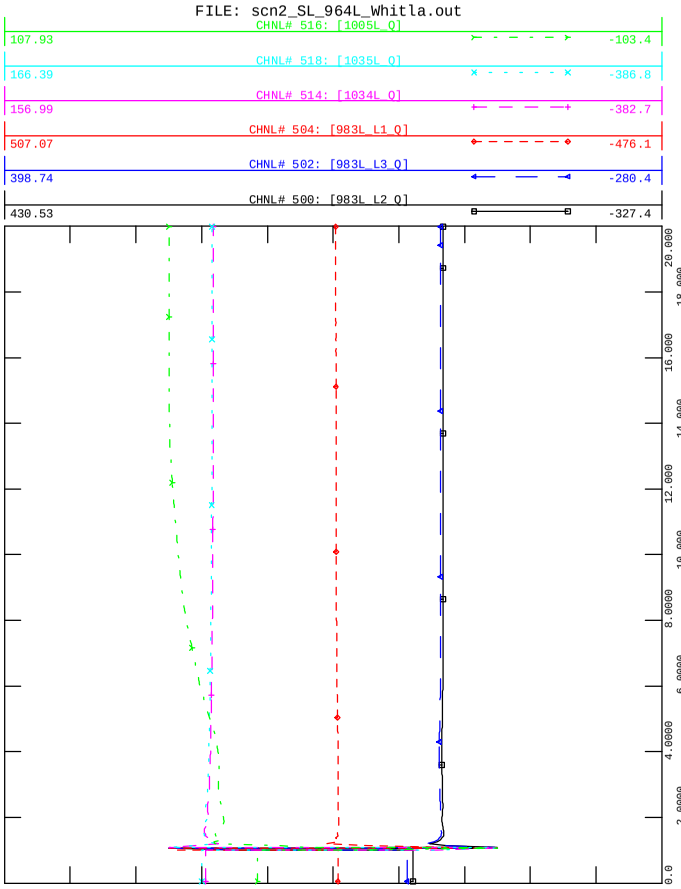
THU, APR 14 2022 14:09 TERMINAL VOLTAGE

CHNL# 434: [ETRM 61994[GRANLEA6 0.6900]G1] 1.1382 -0.1000
CHNL# 432: [ETRM 60990[SHAMROC5 0.6500]G1] 1.6168 0.15260
CHNL# 438: [ETRM 773[SECST 20.000]1] 1.1240 0.88080
CHNL# 406: [ETRM 667[CANCARB9 13.800]1] 1.1587 0.70520



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN2_SL_964L_WHITLA

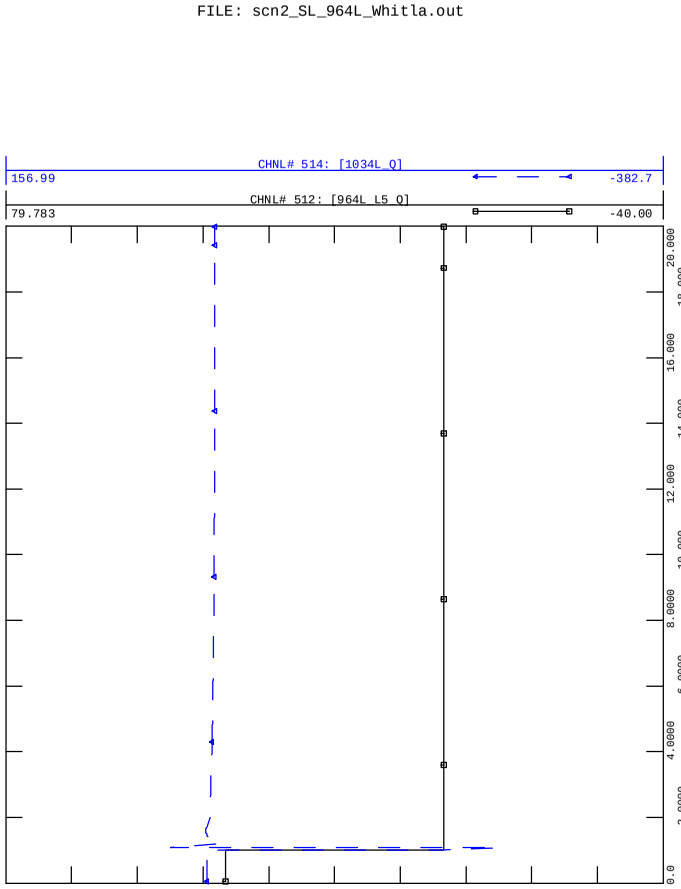
FILE: scn2_SL_964L_Whitla.out



THU, APR 14 2022 14:09 BRANCH Q

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN2_SL_964L_WHITLA

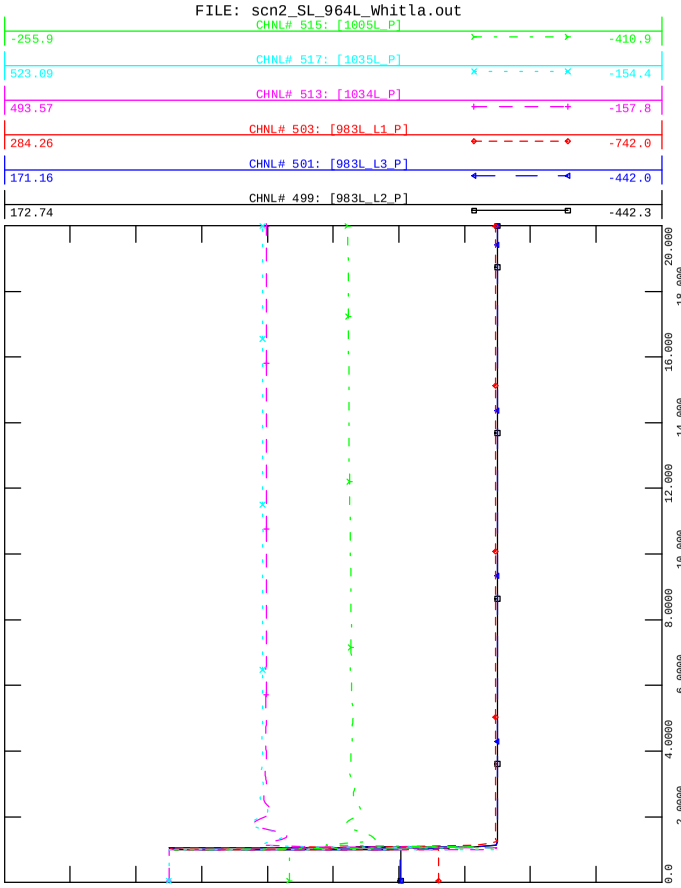
FILE: scn2_SL_964L_Whitla.out



THU, APR 14 2022 14:09 BRANCH Q

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN2_SL_964L_WHITLA

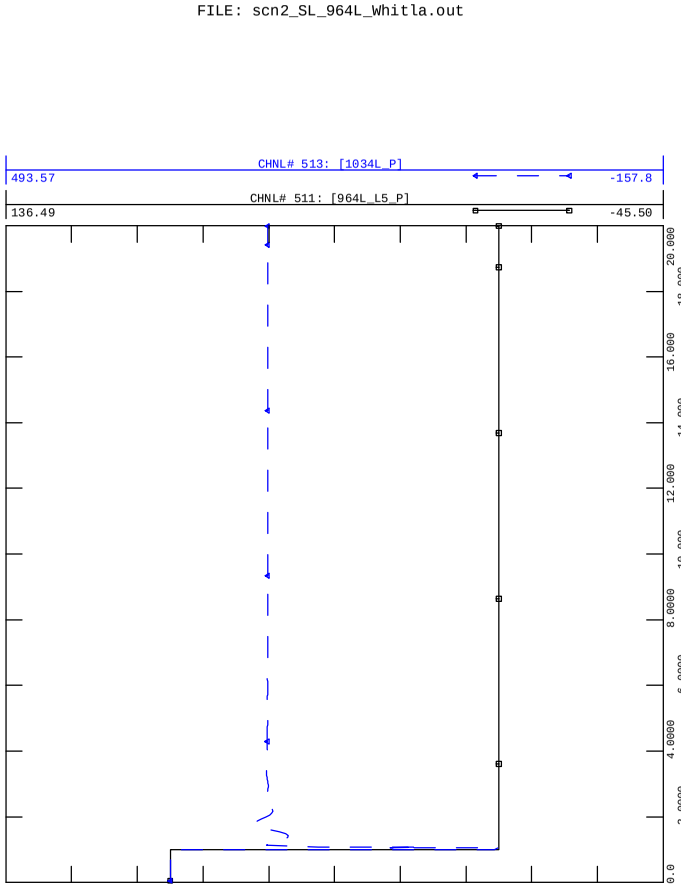
FILE: scn2_SL_964L_Whitla.out



THU, APR 14 2022 14:09 BRANCH P

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN2_SL_964L_WHITLA

FILE: scn2_SL_964L_Whitla.out



THU, APR 14 2022 14:09 BRANCH P

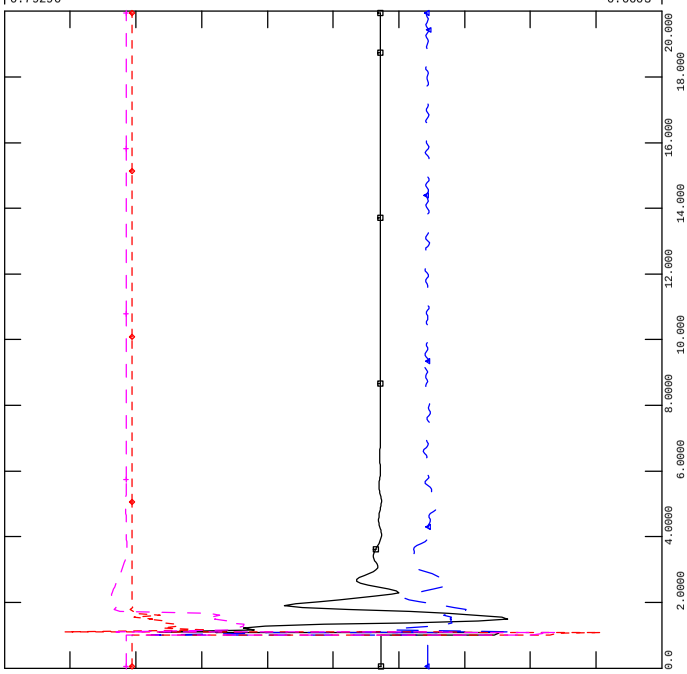
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN2_SL_983L_BOWMANTON

FILE: scn2_SL_983L_Bowmanton.out

THU, APR 14 2022 14:09

ACTIVE POWER

CHNL# 191: [POWR 61994[GRANLEA6 0.6900]G1]
1.2275 -0.0036
CHNL# 189: [POWR 60990[SHAMROC5 0.6500]G1]
2.4377 0.26520
CHNL# 195: [POWR 773[SECST 20.000]1]
1.7978 0.90000
CHNL# 163: [POWR 667[CANCARB9 13.800]1]
0.79290 -0.0603



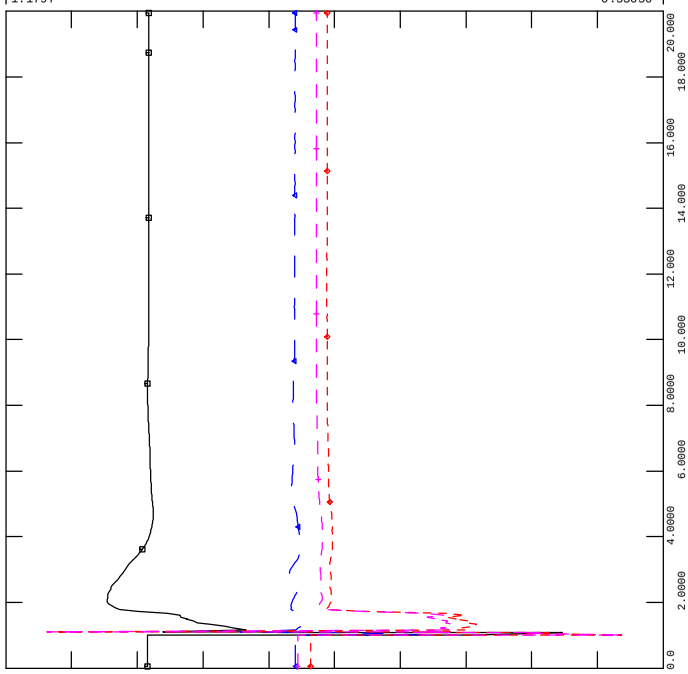
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN2_SL_983L_BOWMANTON

FILE: scn2_SL_983L_Bowmanton.out

THU, APR 14 2022 14:09

TERMINAL VOLTAGE

CHNL# 434: [ETRM 61994[GRANLEA6 0.6900]G1]
1.7468 0.14990
CHNL# 432: [ETRM 60990[SHAMROC5 0.6500]G1]
1.8323 0.24570
CHNL# 438: [ETRM 773[SECST 20.000]1]
1.1338 0.85290
CHNL# 406: [ETRM 667[CANCARB9 13.800]1]
1.1797 0.53050



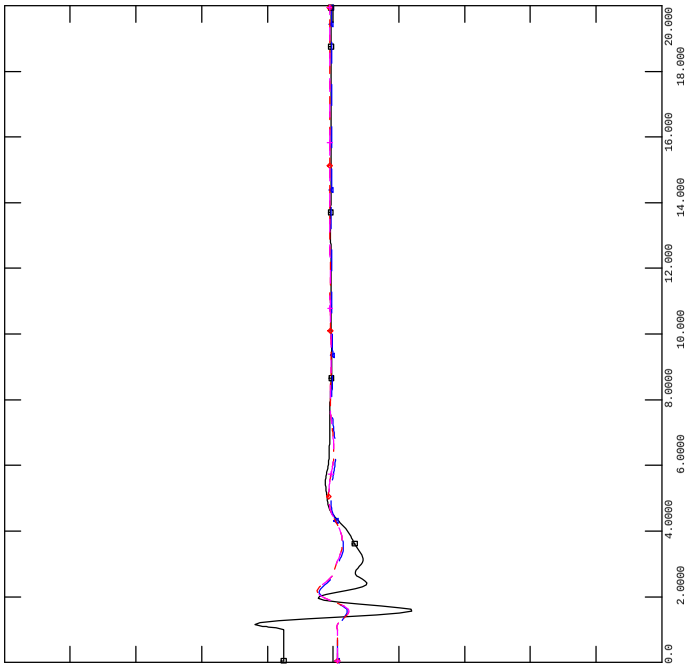
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN2_SL_983L_BOWMANTON

FILE: scn2_SL_983L_Bowmanton.out

THU, APR 14 2022 14:09

ROTOR ANGLE

CHNL# 35: [ANGL 775[SECCT2 21.000]3]
30.558 -74.58
CHNL# 34: [ANGL 774[SECCT1 21.000]2]
30.558 -74.58
CHNL# 33: [ANGL 773[SECST 20.000]1]
31.253 -73.22
CHNL# 1: [ANGL 667[CANCARB9 13.800]1]
76.236 -55.14



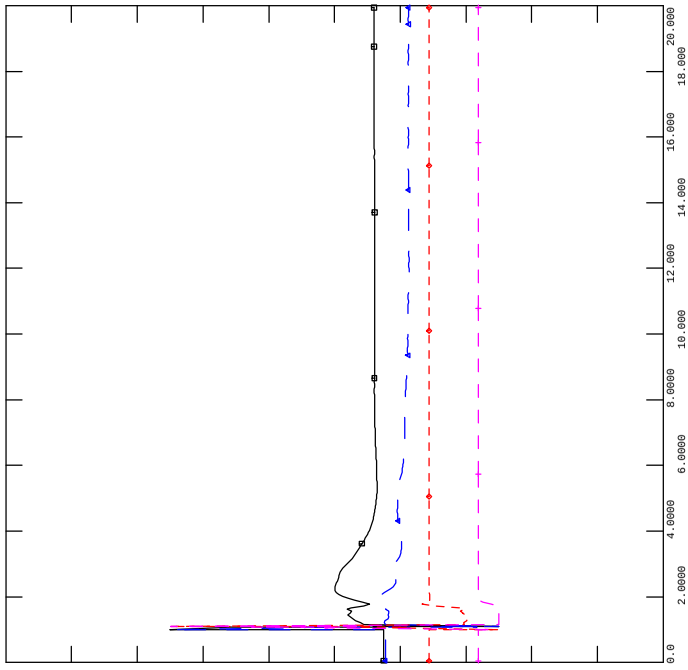
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN2_SL_983L_BOWMANTON

FILE: scn2_SL_983L_Bowmanton.out

THU, APR 14 2022 14:09

REACTIVE POWER

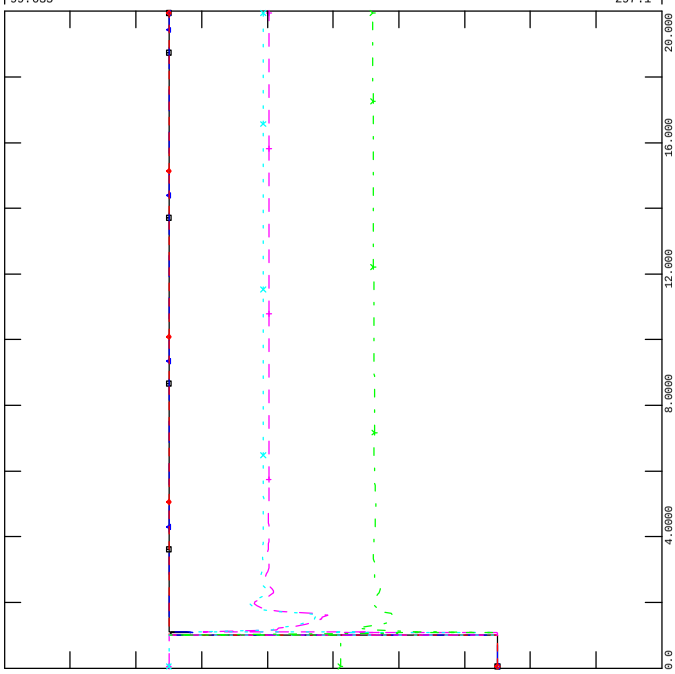
CHNL# 272: [VARS 61994[GRANLEA6 0.6900]G1]
1.5671 -0.5254
CHNL# 270: [VARS 60990[SHAMROC5 0.6500]G1]
4.9436 -1.245
CHNL# 276: [VARS 773[SECST 20.000]1]
1.7704 -1.283
CHNL# 244: [VARS 667[CANCARB9 13.800]1]
1.2368 -0.8761



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN2_SL_983L_BOWMANTON

FILE: scn2_SL_983L_Bowmanton.out

CHNL# 515: [1005L_P]
-178.5 -461.5
CHNL# 517: [1035L_P]
530.60 -176.9
CHNL# 513: [1034L_P]
496.14 -165.5
CHNL# 503: [983L_L1_P]
196.84 -590.5
CHNL# 501: [983L_L3_P]
99.077 -297.2
CHNL# 499: [983L_L2_P]
99.035 -297.1

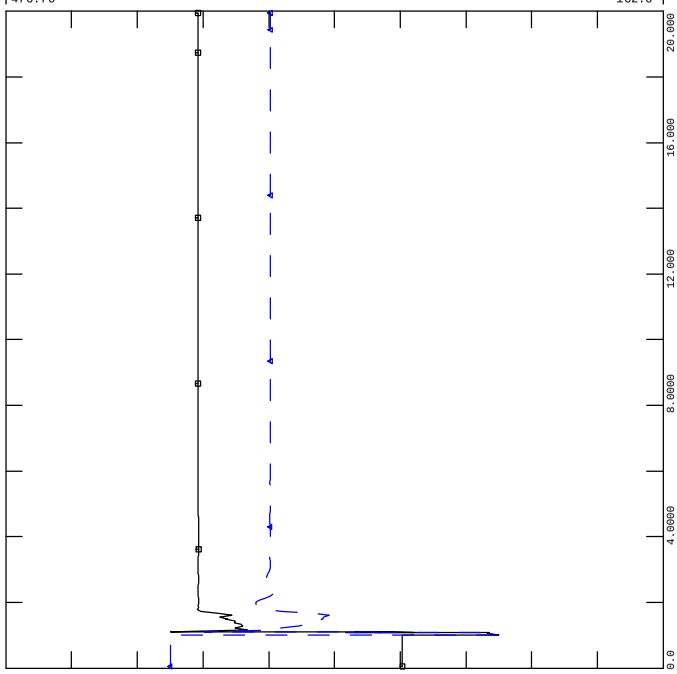


THU, APR 14 2022 14:09 BRANCH P

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN2_SL_983L_BOWMANTON

FILE: scn2_SL_983L_Bowmanton.out

CHNL# 513: [1034L_P]
496.14 -165.5
CHNL# 511: [964L_L5_P]
476.70 -162.6

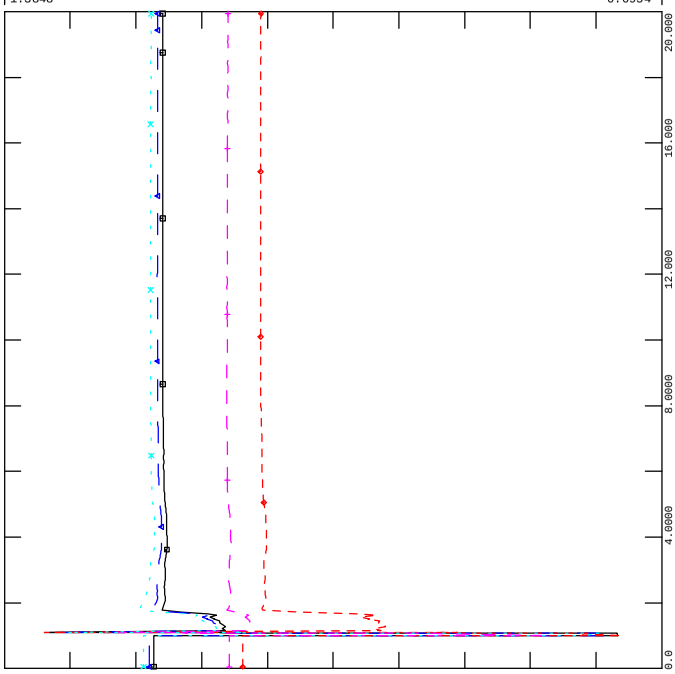


THU, APR 14 2022 14:09 BRANCH P

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN2_SL_983L_BOWMANTON

FILE: scn2_SL_983L_Bowmanton.out

CHNL# 498: [VOLT 976 [ROTBAUR 138.00]]
1.2748 0.19640
CHNL# 493: [VOLT 320 [CHAPPIC7 138.00]]
1.2266 0.63380
CHNL# 496: [VOLT 662 [WHITLA1 240.00]]
1.6715 0.01460
CHNL# 495: [VOLT 659 [BOWMAN2 138.00]]
1.3350 0.03470
CHNL# 497: [VOLT 669 [BOWMAN1 240.00]]
1.3848 -0.0954

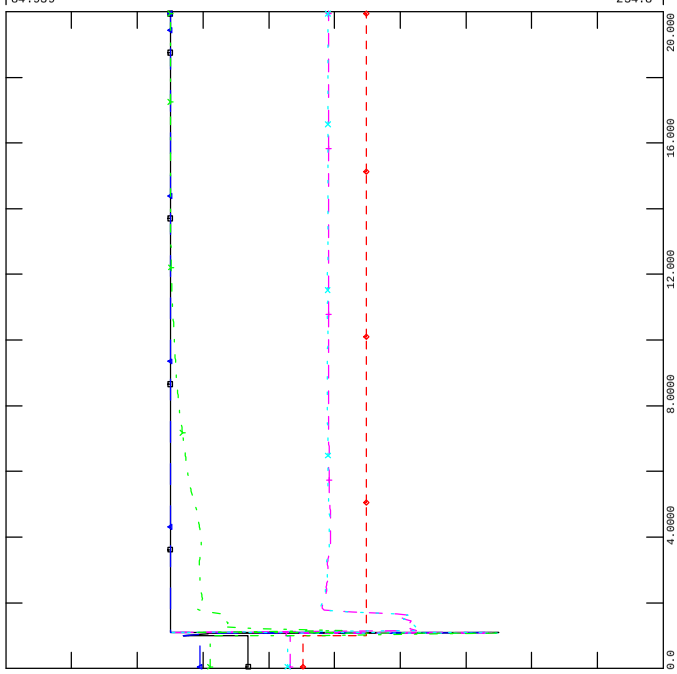


THU, APR 14 2022 14:09 BUS VOLTAGE

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN2_SL_983L_BOWMANTON

FILE: scn2_SL_983L_Bowmanton.out

CHNL# 516: [1005L_Q]
136.08 -216.2
CHNL# 518: [1035L_Q]
315.09 -419.4
CHNL# 514: [1034L_Q]
304.04 -417.5
CHNL# 504: [983L_L1_Q]
48.569 -40.00
CHNL# 502: [983L_L3_Q]
93.311 -279.9
CHNL# 500: [983L_L2_Q]
84.939 -254.8



THU, APR 14 2022 14:09 BRANCH Q

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN2_SL_983L_WHITLA

FILE: scn2_SL_983L_Whitla.out

THU, APR 14 2022 14:09

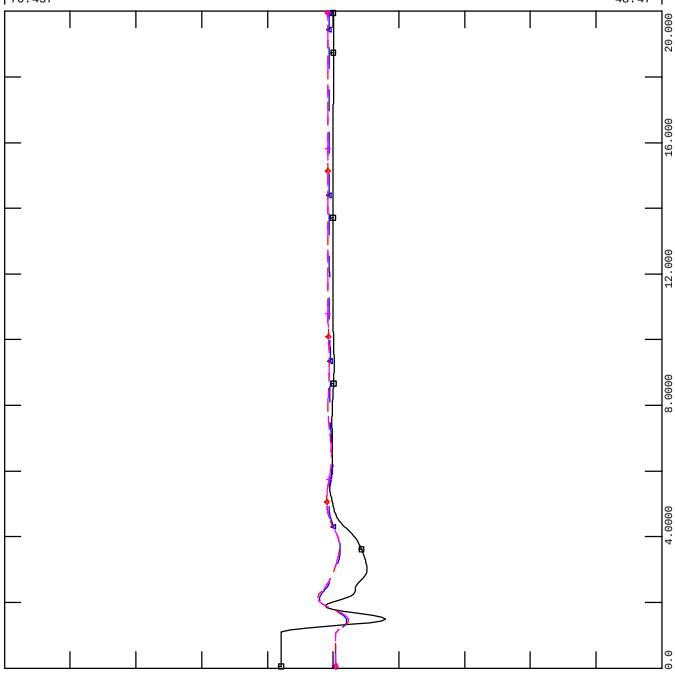
ROTOR ANGLE

CHNL# 35: [ANGL 775[SECCT2 21.000]3]
30.138 -74.75

CHNL# 34: [ANGL 774[SECCT1 21.000]2]
30.138 -74.75

CHNL# 33: [ANGL 773[SECST 20.000]1]
30.843 -73.45

CHNL# 1: [ANGL 667[CANCARB9 13.800]1]
70.457 -48.47



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN2_SL_983L_WHITLA

FILE: scn2_SL_983L_Whitla.out

THU, APR 14 2022 14:09

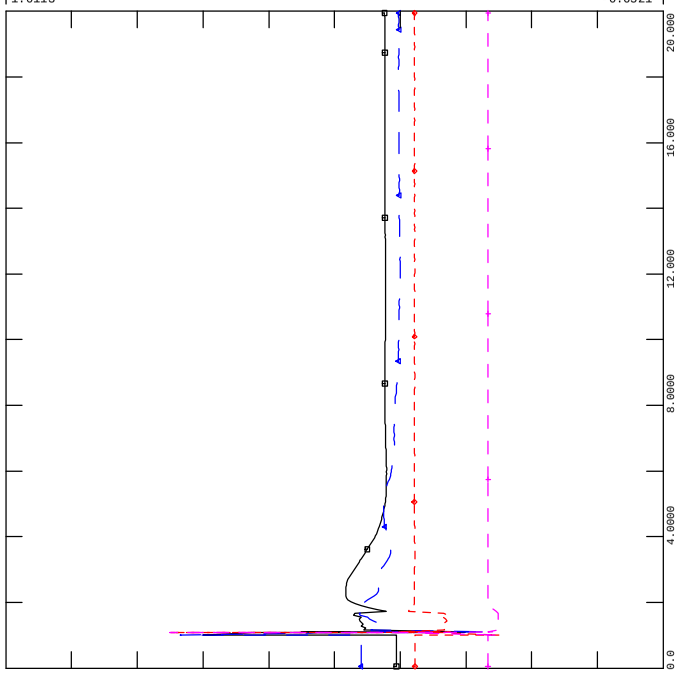
REACTIVE POWER

CHNL# 272: [VARS 61994[GRANLEA6 0.6900]G1]
2.3751 -0.7760

CHNL# 270: [VARS 60990[SHAMROC5 0.6500]G1]
4.5545 -1.224

CHNL# 276: [VARS 773[SECST 20.000]1]
1.0276 -0.8600

CHNL# 244: [VARS 667[CANCARB9 13.800]1]
1.0113 -0.6521



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN2_SL_983L_BOWMANTON

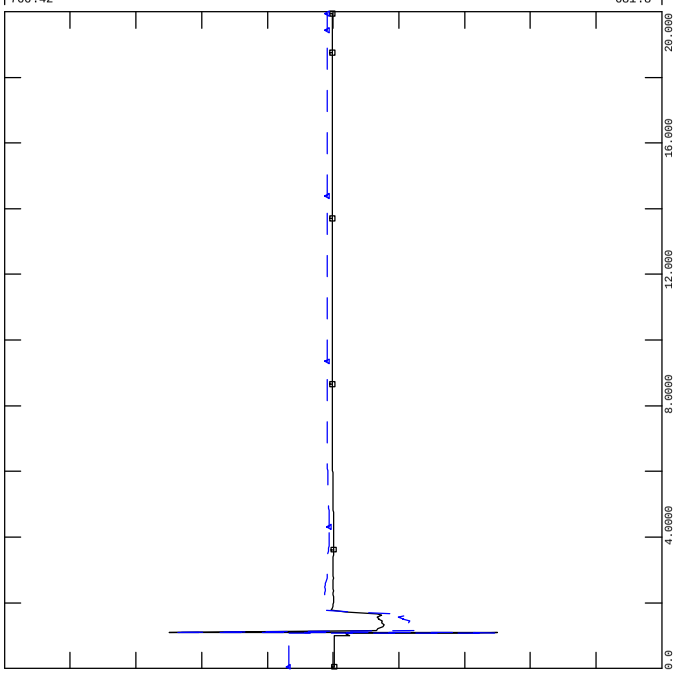
FILE: scn2_SL_983L_Bowmanton.out

THU, APR 14 2022 14:09

BRANCH Q

CHNL# 514: [1034L_Q]
304.04 -417.5

CHNL# 512: [964L_L5_Q]
766.42 -681.8



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN2_SL_983L_WHITLA

FILE: scn2_SL_983L_Whitla.out

THU, APR 14 2022 14:09

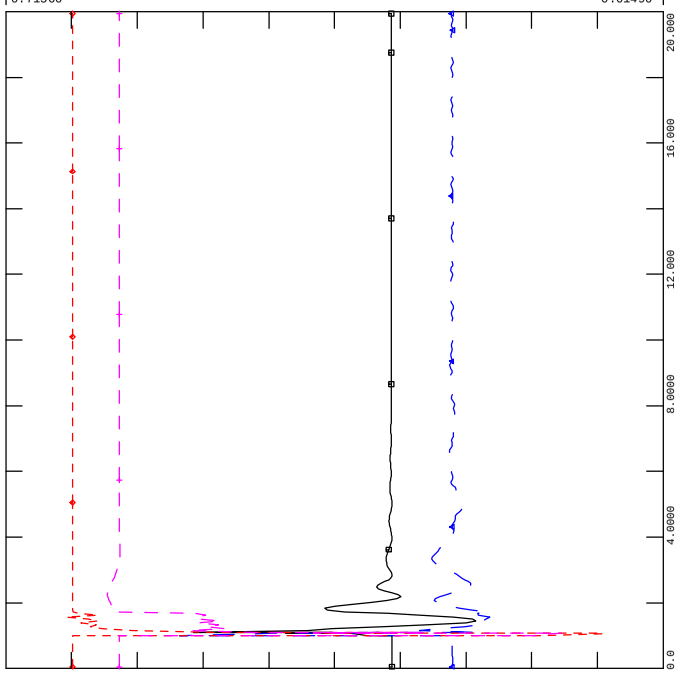
ACTIVE POWER

CHNL# 191: [POWR 61994[GRANLEA6 0.6900]G1]
1.2235 -0.0705

CHNL# 189: [POWR 60990[SHAMROC5 0.6500]G1]
2.2375 0.05650

CHNL# 195: [POWR 773[SECST 20.000]1]
1.7347 0.97690

CHNL# 163: [POWR 667[CANCARB9 13.800]1]
0.71560 0.01490



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN2_SL_983L_WHITLA

FILE: scn2_SL_983L_Whitla.out

THU, APR 14 2022 14:09

BUS VOLTAGE

CHNL# 498: [VOLT 976 [ROTBAUR 138.00]]
1.1831 0.50860

CHNL# 493: [VOLT 320 [CHAPPIC7 138.00]]
1.1822 0.76130

CHNL# 496: [VOLT 662 [WHITLA1 240.00]]
1.3197 -0.0979

CHNL# 495: [VOLT 659 [BOWMAN2 138.00]]
1.2130 0.40690

CHNL# 497: [VOLT 669 [BOWMAN1 240.00]]
1.2375 0.32860

TIME (SECONDS)

0.0 2.0000 4.0000 6.0000 8.0000 10.000 12.000 14.000 16.000 18.000 20.000

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN2_SL_983L_WHITLA

FILE: scn2_SL_983L_Whitla.out

THU, APR 14 2022 14:09

BRANCH Q

CHNL# 516: [1005L Q]
101.81 -113.2

CHNL# 518: [1035L Q]
128.73 -380.5

CHNL# 514: [1034L Q]
119.42 -377.1

CHNL# 504: [983L_L1_Q]
1347.3 -449.1

CHNL# 502: [983L_L3_Q]
40.000 -57.05

CHNL# 500: [983L_L2_Q]
883.04 -348.1

TIME (SECONDS)

0.0 2.0000 4.0000 6.0000 8.0000 10.000 12.000 14.000 16.000 18.000 20.000

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN2_SL_983L_WHITLA

FILE: scn2_SL_983L_Whitla.out

THU, APR 14 2022 14:09

TERMINAL VOLTAGE

CHNL# 434: [ETRM 61994[GRANLEA6 0.6900]G1]
1.5173 0.09130

CHNL# 432: [ETRM 60990[SHAMROC5 0.6500]G1]
1.4884 0.15230

CHNL# 438: [ETRM 773[SECST 20.000]1]
1.1225 0.88070

CHNL# 406: [ETRM 667[CANCARB9 13.800]1]
1.1652 0.69190

TIME (SECONDS)

0.0 2.0000 4.0000 6.0000 8.0000 10.000 12.000 14.000 16.000 18.000 20.000

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN2_SL_983L_WHITLA

FILE: scn2_SL_983L_Whitla.out

THU, APR 14 2022 14:09

BRANCH P

CHNL# 515: [1005L P]
-255.8 -413.9

CHNL# 517: [1035L P]
521.18 -148.6

CHNL# 513: [1034L P]
491.42 -151.4

CHNL# 503: [983L_L1_P]
302.93 -625.9

CHNL# 501: [983L_L3_P]
99.077 -297.2

CHNL# 499: [983L_L2_P]
166.79 -319.7

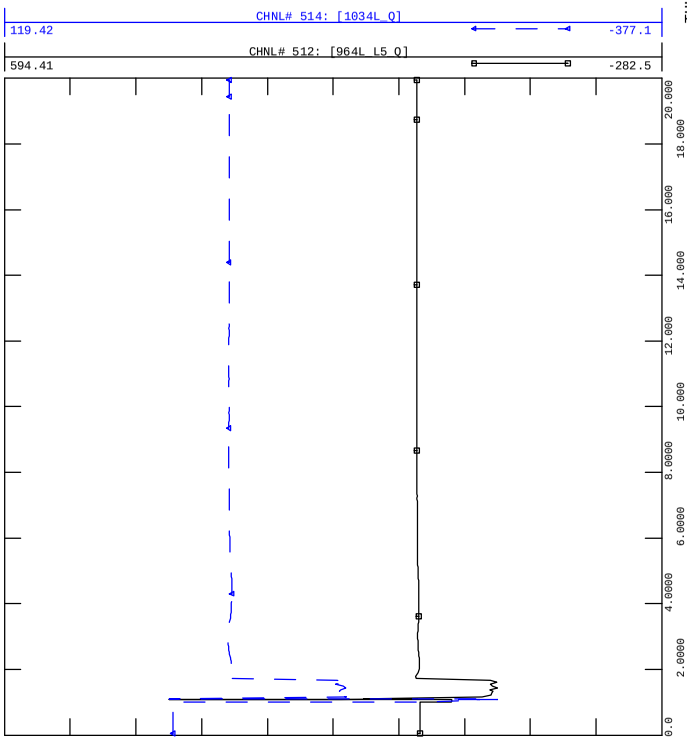
TIME (SECONDS)

0.0 2.0000 4.0000 6.0000 8.0000 10.000 12.000 14.000 16.000 18.000 20.000

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN2_SL_983L_WHITLA

FILE: scn2_SL_983L_Whitla.out

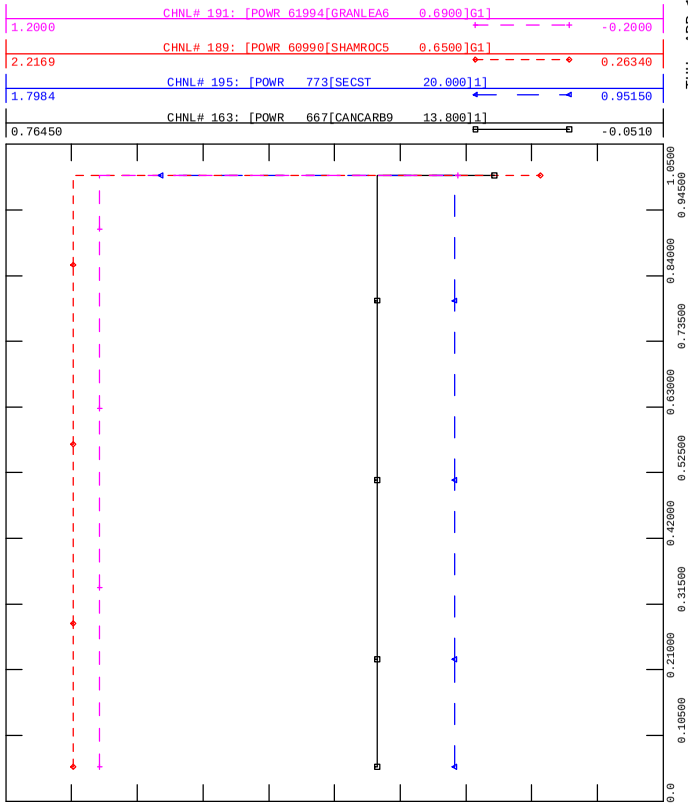
THU, APR 14 2022 14:09 BRANCH Q



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN2_SL_1034L_BOWMANTON

FILE: scn2_SL_1034L_Bowmanton.out

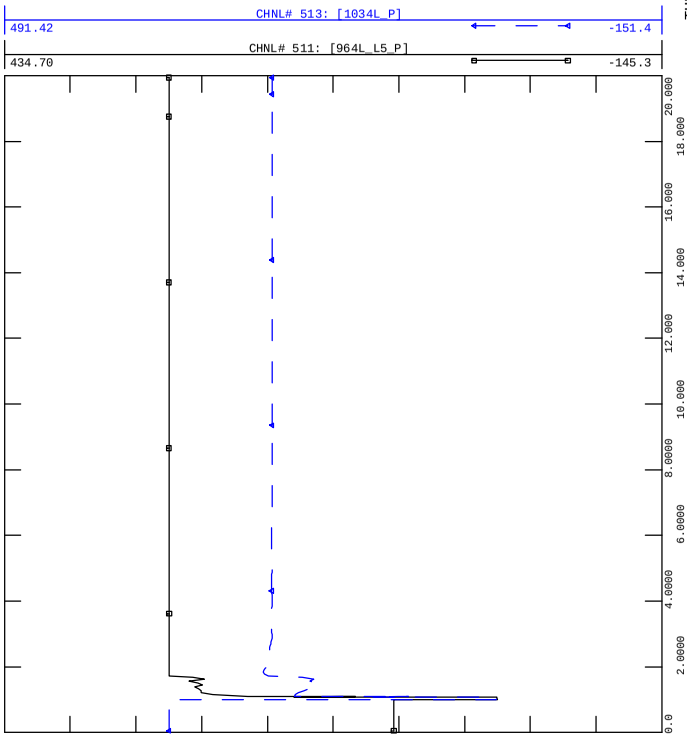
THU, APR 14 2022 14:09 ACTIVE POWER



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN2_SL_983L_WHITLA

FILE: scn2_SL_983L_Whitla.out

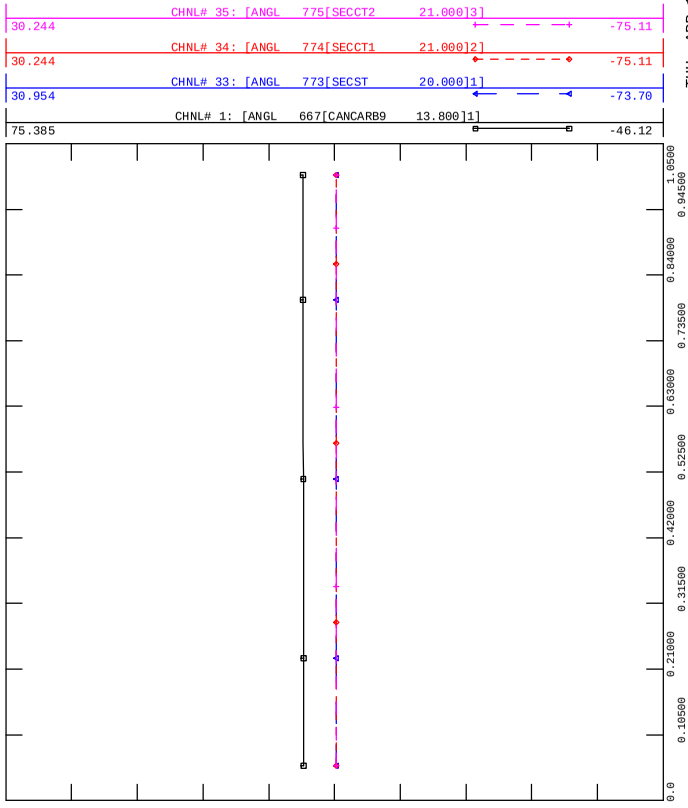
THU, APR 14 2022 14:09 BRANCH P



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN2_SL_1034L_BOWMANTON

FILE: scn2_SL_1034L_Bowmanton.out

THU, APR 14 2022 14:09 ROTOR ANGLE



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN2_SL_1034L_BOWMANTON

FILE: scn2_SL_1034L_Bowmanton.out

THU, APR 14 2022 14:09

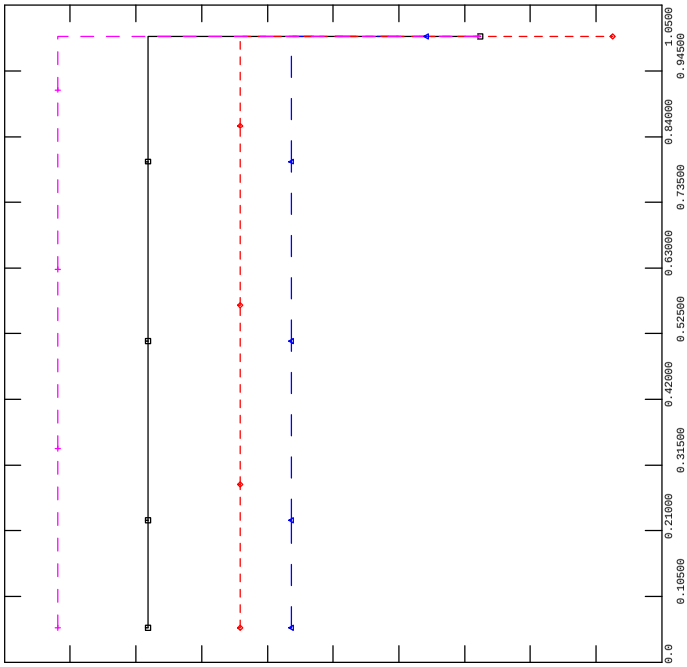
TERMINAL VOLTAGE

CHNL# 434: [ETRM 61994[GRANLEA6 0.6900]G1]
1.1382 -0.1000

CHNL# 432: [ETRM 60990[SHAMROC5 0.6500]G1]
1.5746 0.24220

CHNL# 438: [ETRM 773[SECST 20.000]1]
1.1319 0.85260

CHNL# 406: [ETRM 667[CANCARB9 13.800]1]
1.1788 0.54260



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN2_SL_1034L_BOWMANTON

FILE: scn2_SL_1034L_Bowmanton.out

THU, APR 14 2022 14:09

BRANCH P

CHNL# 515: [1005L_P]
-174.0 -473.2

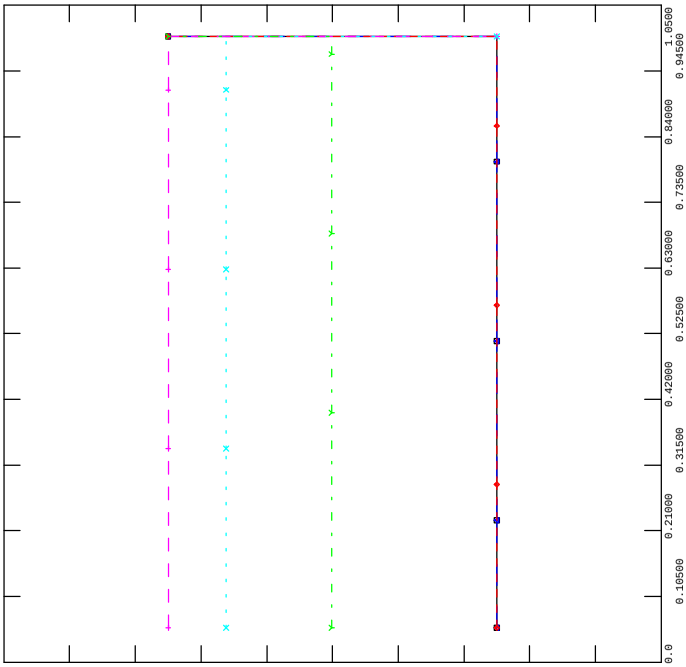
CHNL# 517: [1035L_P]
643.82 -214.9

CHNL# 513: [1034L_P]
496.08 -165.4

CHNL# 503: [983L_L1_P]
197.62 -590.8

CHNL# 501: [983L_L3_P]
98.653 -297.1

CHNL# 499: [983L_L2_P]
98.696 -297.0



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN2_SL_1034L_BOWMANTON

FILE: scn2_SL_1034L_Bowmanton.out

THU, APR 14 2022 14:09

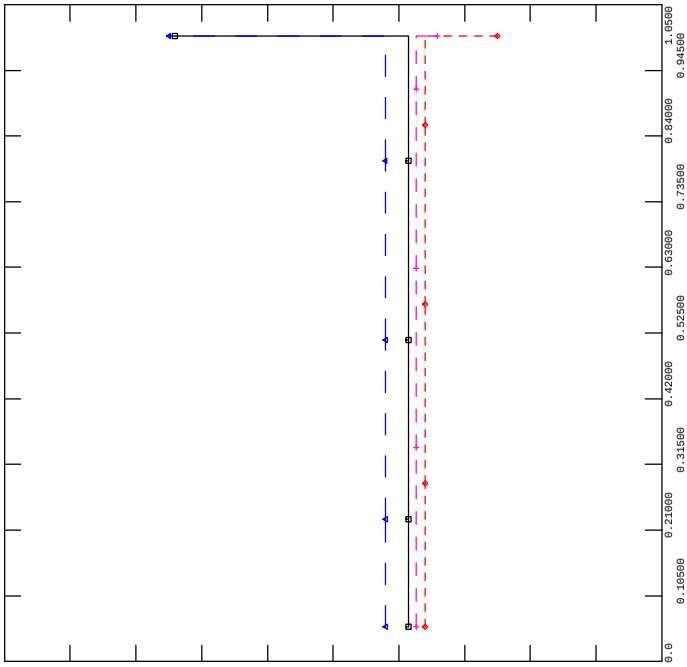
REACTIVE POWER

CHNL# 272: [VARS 61994[GRANLEA6 0.6900]G1]
1.0097 -0.5000

CHNL# 270: [VARS 60990[SHAMROC5 0.6500]G1]
4.8048 -1.202

CHNL# 276: [VARS 773[SECST 20.000]1]
1.7731 -1.273

CHNL# 244: [VARS 667[CANCARB9 13.800]1]
1.2077 -0.7197



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN2_SL_1034L_BOWMANTON

FILE: scn2_SL_1034L_Bowmanton.out

THU, APR 14 2022 14:09

BUS VOLTAGE

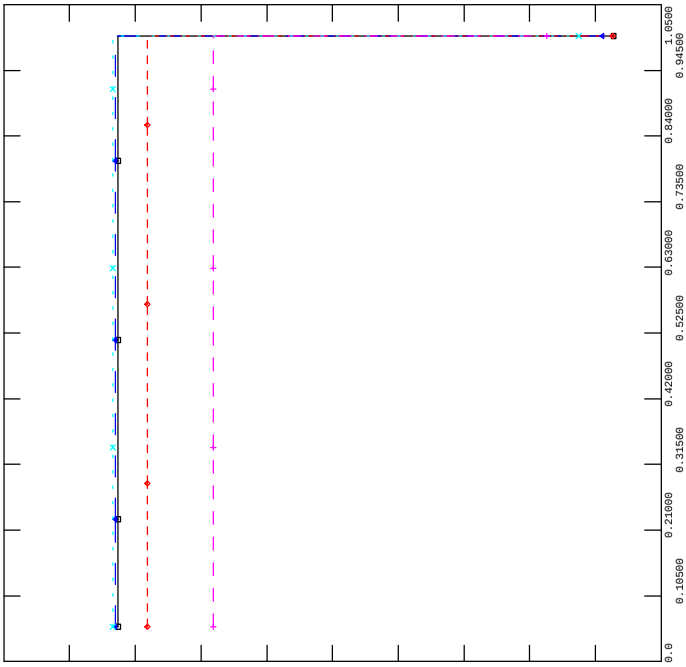
CHNL# 498: [VOLT 976 [ROTBAUR 138.00]]
1.2139 0.20410

CHNL# 493: [VOLT 320 [CHAPPIC7 138.00]]
1.2062 0.63250

CHNL# 496: [VOLT 662 [WHITLA1 240.00]]
1.3674 0.01060

CHNL# 495: [VOLT 659 [BOWMAN2 138.00]]
1.2537 0.04190

CHNL# 497: [VOLT 669 [BOWMAN1 240.00]]
1.2876 -0.0928



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN2_SL_1034L_BOWMANTON

FILE: scn2_SL_1034L_Bowmanton.out

THU, APR 14 2022 14:09 BRANCH P

CHNL# 513: [1034L_P]
496.08 -165.4
CHNL# 511: [964L_L5_P]
205.44 -72.11

TIME (SECONDS)
0.0 0.10500 0.21000 0.31500 0.42000 0.52500 0.63000 0.73500 0.84000 0.94500 1.0500

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN2_SL_1034L_CASSILS

FILE: scn2_SL_1034L_Cassils.out

THU, APR 14 2022 14:09 ROTOR ANGLE

CHNL# 35: [ANGL 775[SECCT2 21.000]3]
36.612 -77.63
CHNL# 34: [ANGL 774[SECCT1 21.000]2]
36.612 -77.63
CHNL# 33: [ANGL 773[SECST 20.000]1]
37.697 -76.15
CHNL# 1: [ANGL 667[CANCARB9 13.800]1]
95.962 -56.30

TIME (SECONDS)
0.0 0.10500 0.21000 0.31500 0.42000 0.52500 0.63000 0.73500 0.84000 0.94500 1.0500

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN2_SL_1034L_BOWMANTON

FILE: scn2_SL_1034L_Bowmanton.out

THU, APR 14 2022 14:09 BRANCH Q

CHNL# 516: [1005L_Q]
140.88 -195.1
CHNL# 518: [1035L_Q]
316.01 -117.1
CHNL# 514: [1034L_Q]
40.000 -47.93
CHNL# 504: [983L_L1_Q]
101.22 -269.4
CHNL# 502: [983L_L3_Q]
72.849 -245.3
CHNL# 500: [983L_L2_Q]
88.664 -290.0

TIME (SECONDS)
0.0 0.10500 0.21000 0.31500 0.42000 0.52500 0.63000 0.73500 0.84000 0.94500 1.0500

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN2_SL_1034L_BOWMANTON

FILE: scn2_SL_1034L_Bowmanton.out

THU, APR 14 2022 14:09 BRANCH Q

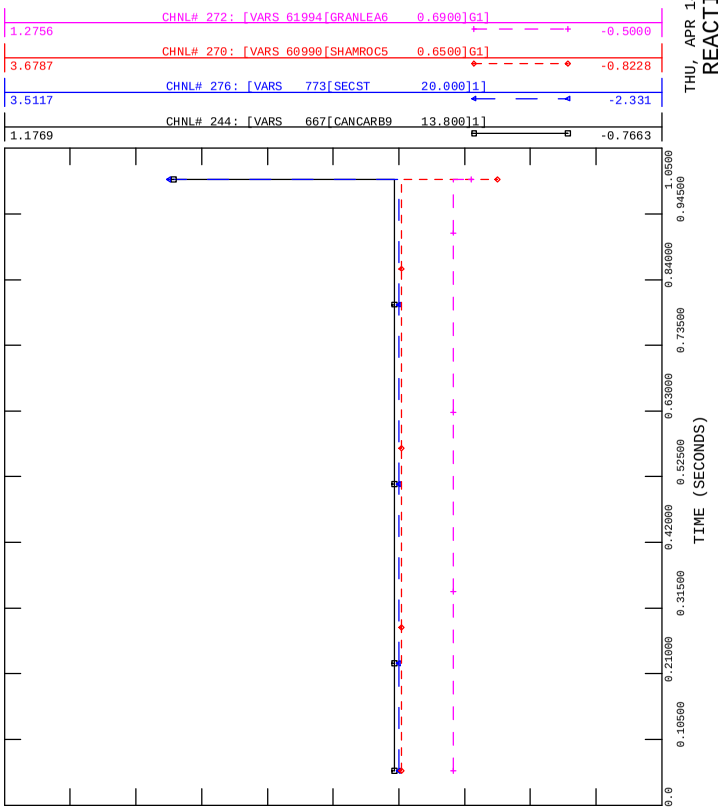
CHNL# 514: [1034L_Q]
40.000 -47.93
CHNL# 512: [964L_L5_Q]
202.97 -59.40

TIME (SECONDS)
0.0 0.10500 0.21000 0.31500 0.42000 0.52500 0.63000 0.73500 0.84000 0.94500 1.0500

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN2_SL_1034L_CASSILS

FILE: scn2_SL_1034L_Cassils.out

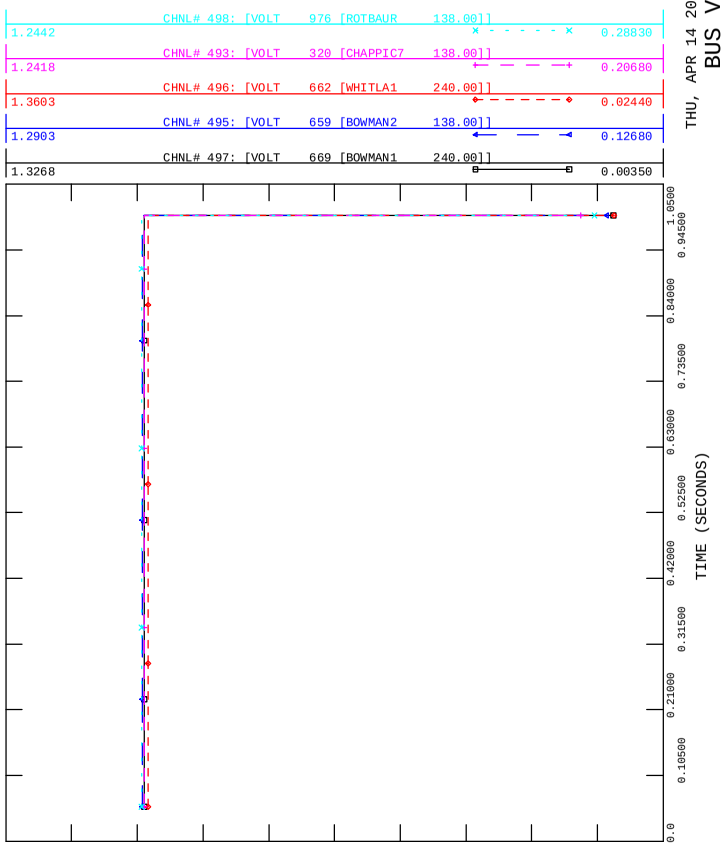
THU, APR 14 2022 14:09 REACTIVE POWER



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN2_SL_1034L_CASSILS

FILE: scn2_SL_1034L_Cassils.out

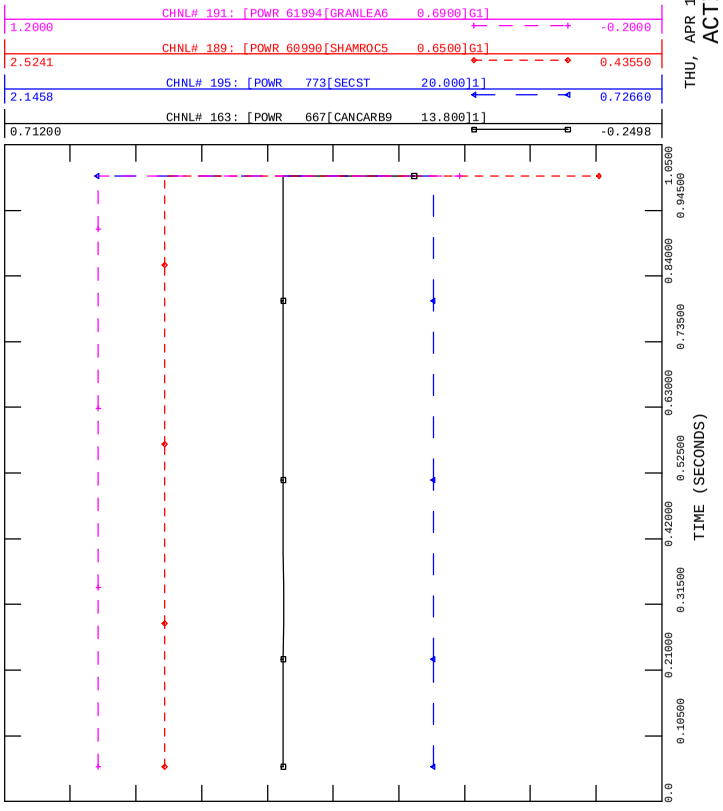
THU, APR 14 2022 14:09 BUS VOLTAGE



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN2_SL_1034L_CASSILS

FILE: scn2_SL_1034L_Cassils.out

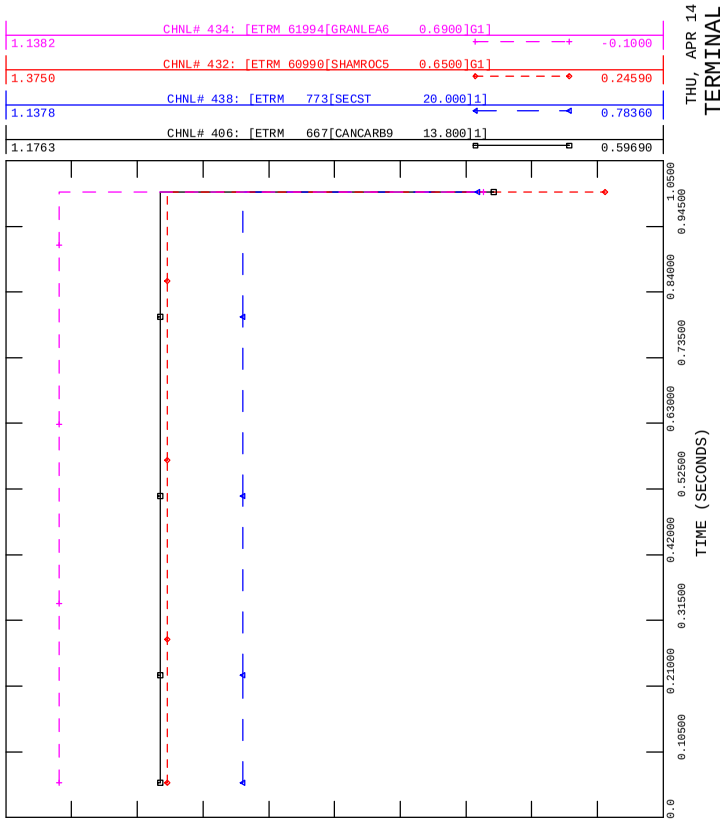
THU, APR 14 2022 14:09 ACTIVE POWER



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN2_SL_1034L_CASSILS

FILE: scn2_SL_1034L_Cassils.out

THU, APR 14 2022 14:09 TERMINAL VOLTAGE



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN2_SL_1034L_CASSILS

FILE: scn2_SL_1034L_Cassils.out

THU, APR 14 2022 14:09

BRANCH Q

CHNL# 516: [1005L Q]
204.62 -260.3

CHNL# 518: [1035L Q]
336.71 -606.5

CHNL# 514: [1034L Q]
40.000 -47.93

CHNL# 504: [983L L1 Q]
127.09 -347.0

CHNL# 502: [983L L3 Q]
46.794 -133.6

CHNL# 500: [983L L2 Q]
61.514 -181.1

TIME (SECONDS)

1.0500
0.94500
0.84000
0.73500
0.63000
0.52500
0.42000
0.31500
0.21000
0.10500
0.0

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN2_SL_1034L_CASSILS

FILE: scn2_SL_1034L_Cassils.out

THU, APR 14 2022 14:09

BRANCH Q

CHNL# 514: [1034L Q]
40.000 -47.93

CHNL# 512: [964L L5 Q]
169.38 -48.14

TIME (SECONDS)

1.0500
0.94500
0.84000
0.73500
0.63000
0.52500
0.42000
0.31500
0.21000
0.10500
0.0

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN2_SL_1034L_CASSILS

FILE: scn2_SL_1034L_Cassils.out

THU, APR 14 2022 14:09

BRANCH P

CHNL# 515: [1005L P]
77.962 -505.1

CHNL# 517: [1035L P]
693.08 -223.4

CHNL# 513: [1034L P]
496.08 -165.4

CHNL# 503: [983L L1 P]
173.20 -582.6

CHNL# 501: [983L L3 P]
74.242 -289.0

CHNL# 499: [983L L2 P]
74.293 -288.9

TIME (SECONDS)

1.0500
0.94500
0.84000
0.73500
0.63000
0.52500
0.42000
0.31500
0.21000
0.10500
0.0

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN2_SL_1034L_CASSILS

FILE: scn2_SL_1034L_Cassils.out

THU, APR 14 2022 14:09

BRANCH P

CHNL# 513: [1034L P]
496.08 -165.4

CHNL# 511: [964L L5 P]
202.14 -62.56

TIME (SECONDS)

1.0500
0.94500
0.84000
0.73500
0.63000
0.52500
0.42000
0.31500
0.21000
0.10500
0.0

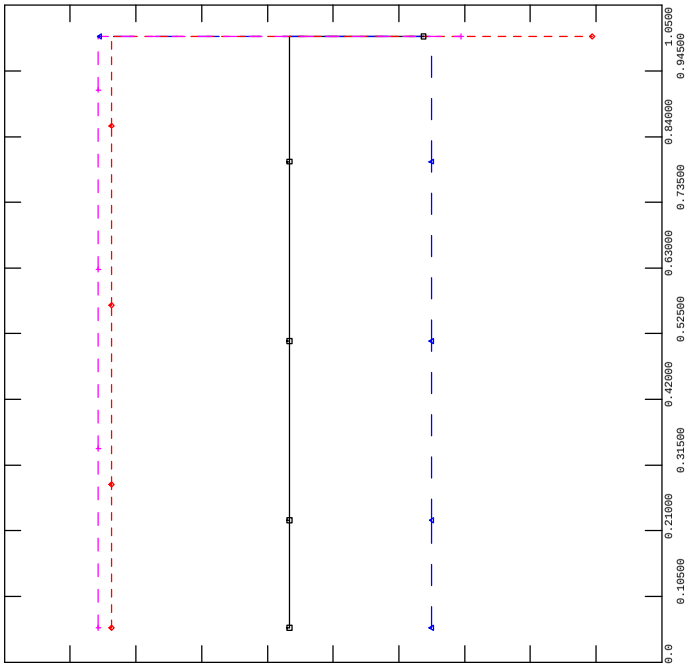
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN2_SL_1035L_BOWMANTON

FILE: scn2_SL_1035L_Bowmanton.out

THU, APR 14 2022 14:09

ACTIVE POWER

CHNL# 191: [POWR 61994[GRANLEA6 0.6900]G1]
1.2000 -0.2000
CHNL# 189: [POWR 60990[SHAMROC5 0.6500]G1]
2.3243 0.43210
CHNL# 195: [POWR 773[SECST 20.000]1]
2.1173 0.73680
CHNL# 163: [POWR 667[CANCARB9 13.800]1]
0.71010 -0.2264



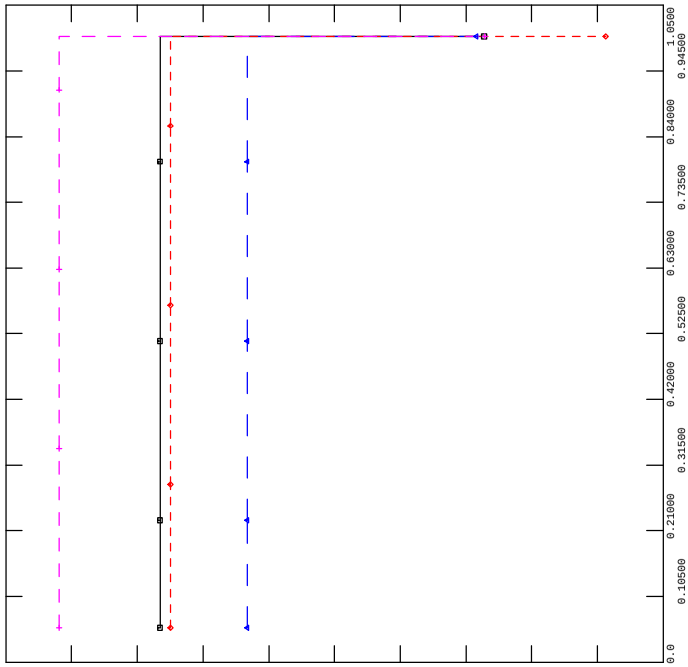
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN2_SL_1035L_BOWMANTON

FILE: scn2_SL_1035L_Bowmanton.out

THU, APR 14 2022 14:09

TERMINAL VOLTAGE

CHNL# 434: [ETRM 61994[GRANLEA6 0.6900]G1]
1.1382 -0.1000
CHNL# 432: [ETRM 60990[SHAMROC5 0.6500]G1]
1.3830 0.24400
CHNL# 438: [ETRM 773[SECST 20.000]1]
1.1391 0.78730
CHNL# 406: [ETRM 667[CANCARB9 13.800]1]
1.1763 0.59490



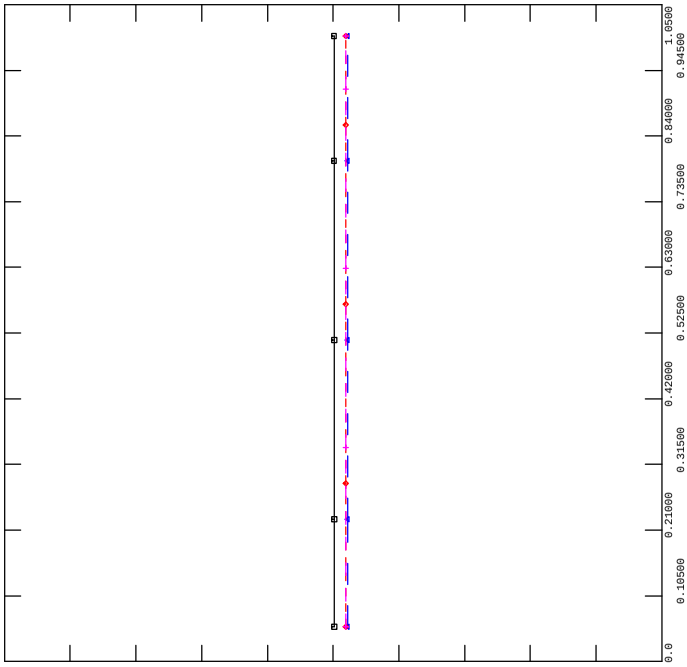
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN2_SL_1035L_BOWMANTON

FILE: scn2_SL_1035L_Bowmanton.out

THU, APR 14 2022 14:09

ROTOR ANGLE

CHNL# 35: [ANGL 775[SECCT2 21.000]3]
36.685 -77.60
CHNL# 34: [ANGL 774[SECCT1 21.000]2]
36.685 -77.60
CHNL# 33: [ANGL 773[SECST 20.000]1]
37.751 -76.11
CHNL# 1: [ANGL 667[CANCARB9 13.800]1]
96.366 -55.18



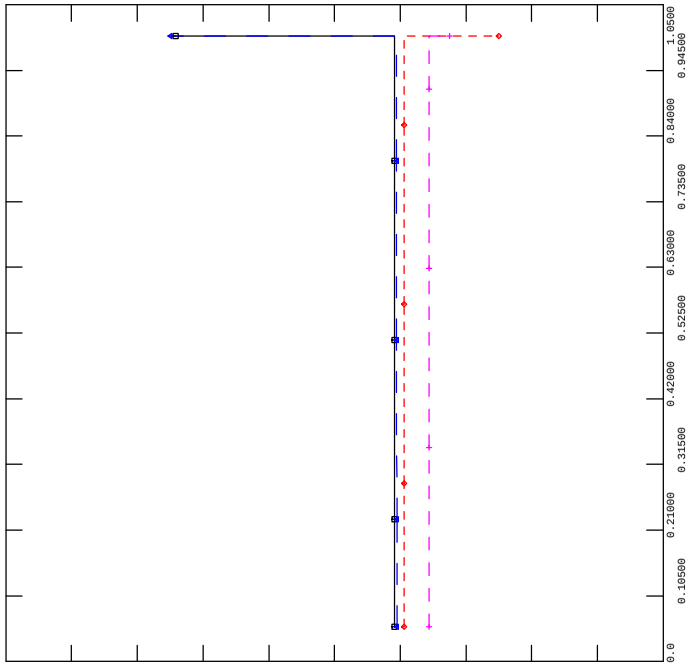
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN2_SL_1035L_BOWMANTON

FILE: scn2_SL_1035L_Bowmanton.out

THU, APR 14 2022 14:09

REACTIVE POWER

CHNL# 272: [VARS 61994[GRANLEA6 0.6900]G1]
1.0820 -0.5000
CHNL# 270: [VARS 60990[SHAMROC5 0.6500]G1]
3.7193 -0.8385
CHNL# 276: [VARS 773[SECST 20.000]1]
3.4458 -2.336
CHNL# 244: [VARS 667[CANCARB9 13.800]1]
1.1676 -0.7668

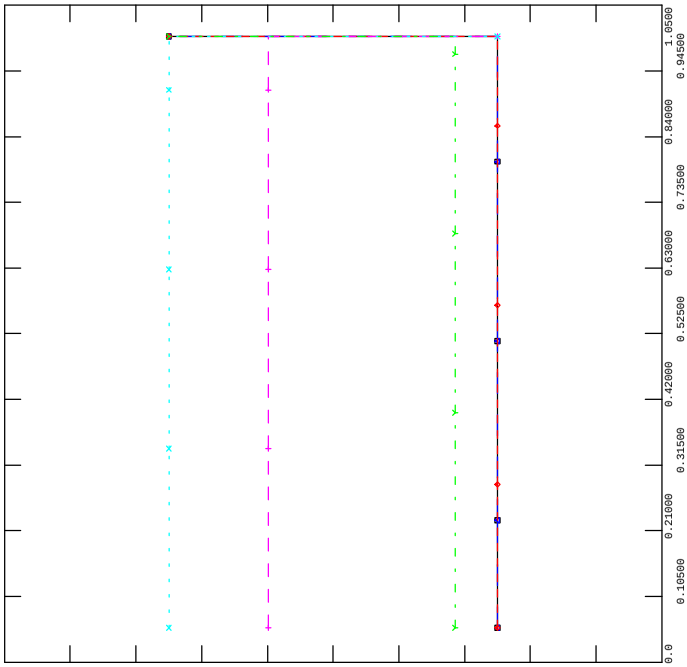


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN2_SL_1035L_BOWMANTON

FILE: scn2_SL_1035L_Bowmanton.out

THU, APR 14 2022 14:09 BRANCH P

CHNL# 515: [1005L_P] 70.062 -503.1
CHNL# 517: [1035L_P] 530.58 -176.9
CHNL# 513: [1034L_P] 698.73 -218.8
CHNL# 503: [983L_L1_P] 168.92 -581.2
CHNL# 501: [983L_L3_P] 69.987 -287.5
CHNL# 499: [983L_L2_P] 70.041 -287.4

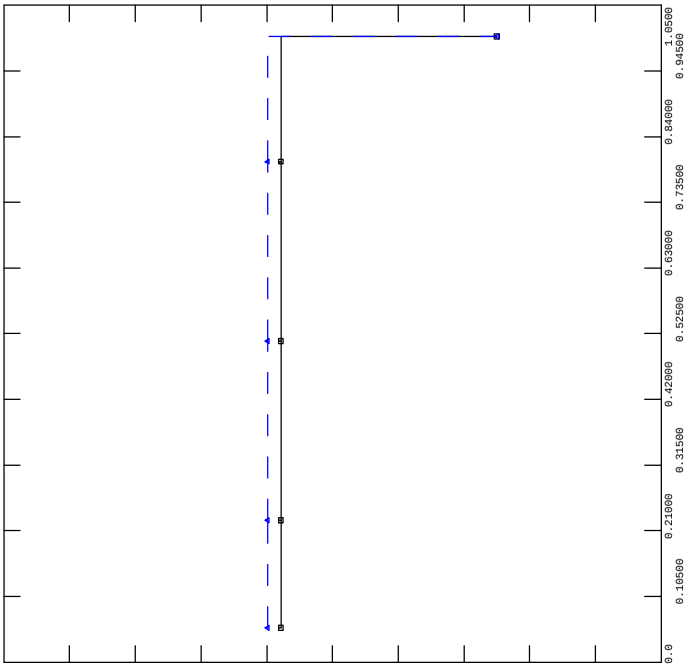


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN2_SL_1035L_BOWMANTON

FILE: scn2_SL_1035L_Bowmanton.out

THU, APR 14 2022 14:09 BRANCH P

CHNL# 513: [1034L_P] 698.73 -218.8
CHNL# 511: [964L_L5_P] 201.70 -61.04

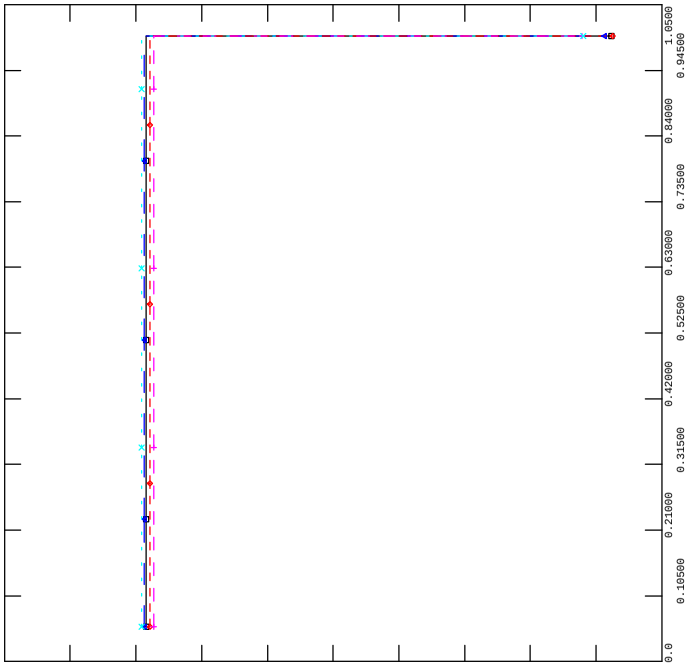


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN2_SL_1035L_BOWMANTON

FILE: scn2_SL_1035L_Bowmanton.out

THU, APR 14 2022 14:09 BUS VOLTAGE

CHNL# 498: [VOLT 976 [ROTBAUR 138.00]] 1.2465 0.28950
CHNL# 493: [VOLT 320 [CHAPPIC7 138.00]] 1.2487 0.25940
CHNL# 496: [VOLT 662 [WHITLA1 240.00]] 1.3658 0.03080
CHNL# 495: [VOLT 659 [BOWMAN2 138.00]] 1.2929 0.14590
CHNL# 497: [VOLT 669 [BOWMAN1 240.00]] 1.3297 0.02360

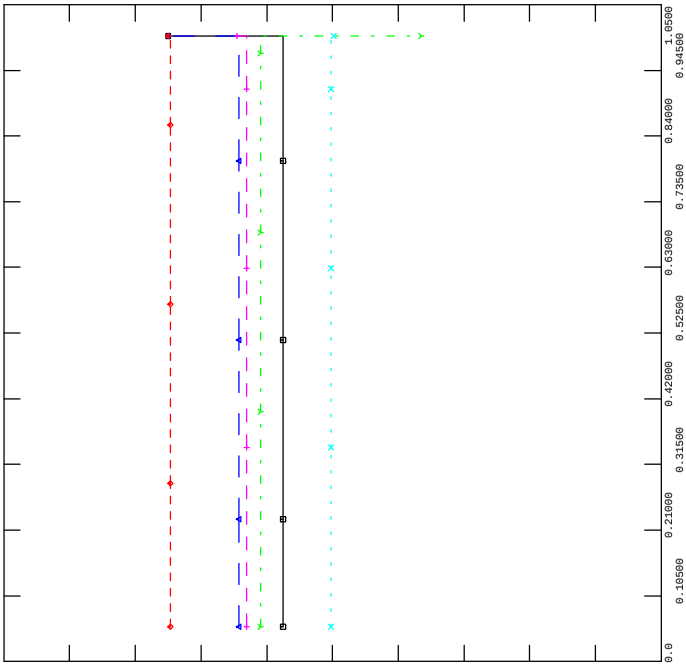


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN2_SL_1035L_BOWMANTON

FILE: scn2_SL_1035L_Bowmanton.out

THU, APR 14 2022 14:09 BRANCH Q

CHNL# 516: [1005L_Q] 215.56 -268.2
CHNL# 518: [1035L_Q] 40.312 -40.00
CHNL# 514: [1034L_Q] 340.09 -603.3
CHNL# 504: [983L_L1_Q] 130.46 -350.5
CHNL# 502: [983L_L3_Q] 48.338 -134.4
CHNL# 500: [983L_L2_Q] 65.615 -184.0



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN2_SL_1035L_NEWELL

FILE: scn2_SL_1035L_Newell.out

THU, APR 14 2022 14:09

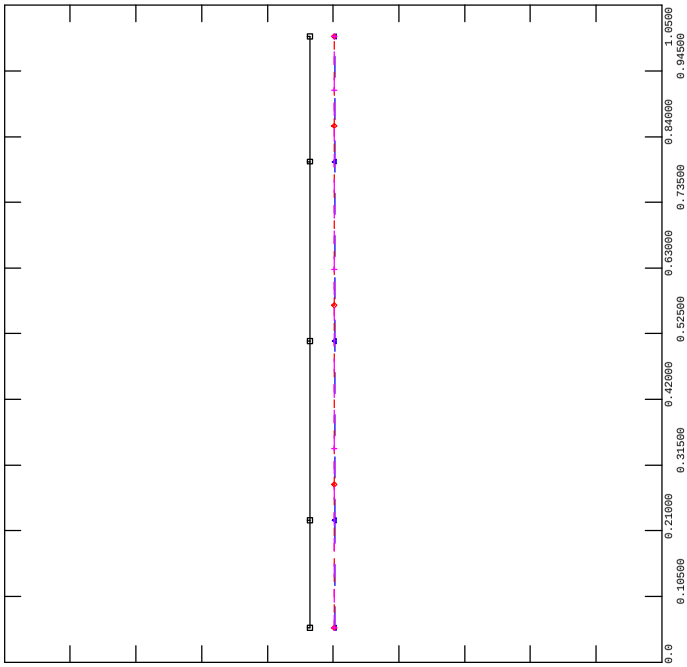
ROTOR ANGLE

CHNL# 35: [ANGL 775[SECCT2 21.000]3]
30.177 -75.12

CHNL# 34: [ANGL 774[SECCT1 21.000]2]
30.177 -75.12

CHNL# 33: [ANGL 773[SECST 20.000]1]
30.895 -73.71

CHNL# 1: [ANGL 667[CANCARB9 13.800]1]
76.559 -44.29



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN2_SL_1035L_NEWELL

FILE: scn2_SL_1035L_Newell.out

THU, APR 14 2022 14:09

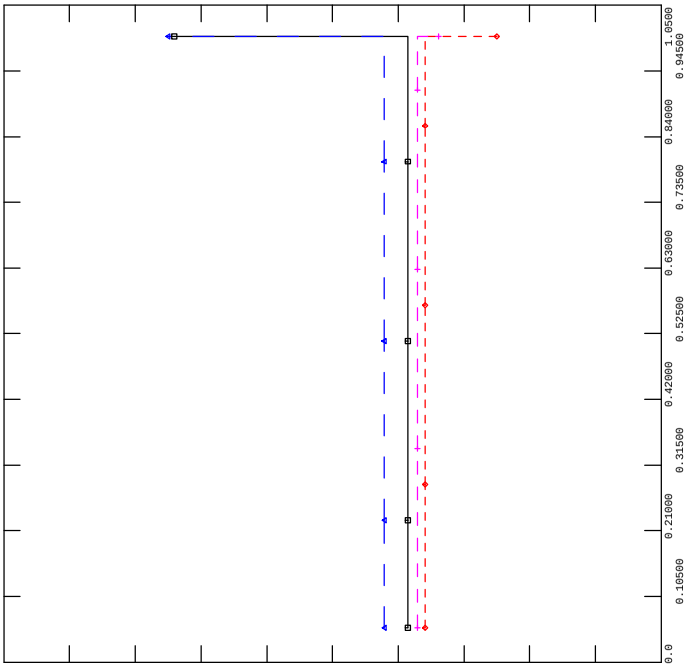
REACTIVE POWER

CHNL# 272: [VARS 61994[GRANLEA6 0.6900]G1]
1.0206 -0.5000

CHNL# 270: [VARS 60990[SHAMROC5 0.6500]G1]
4.8492 -1.217

CHNL# 276: [VARS 773[SECST 20.000]1]
1.7749 -1.277

CHNL# 244: [VARS 667[CANCARB9 13.800]1]
1.2077 -0.7194



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN2_SL_1035L_BOWMANTON

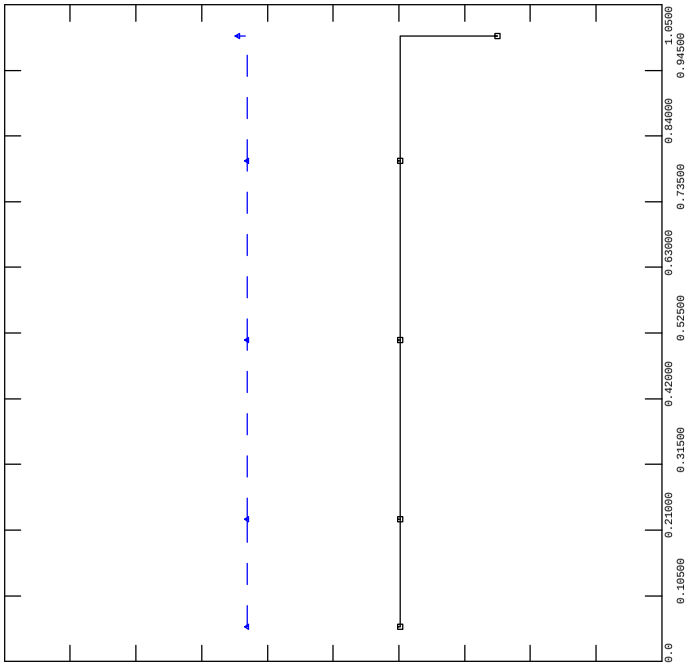
FILE: scn2_SL_1035L_Bowmanton.out

THU, APR 14 2022 14:09

BRANCH Q

CHNL# 514: [1034L_Q]
340.09 -603.3

CHNL# 512: [964L_L5_Q]
177.42 -51.20



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN2_SL_1035L_NEWELL

FILE: scn2_SL_1035L_Newell.out

THU, APR 14 2022 14:09

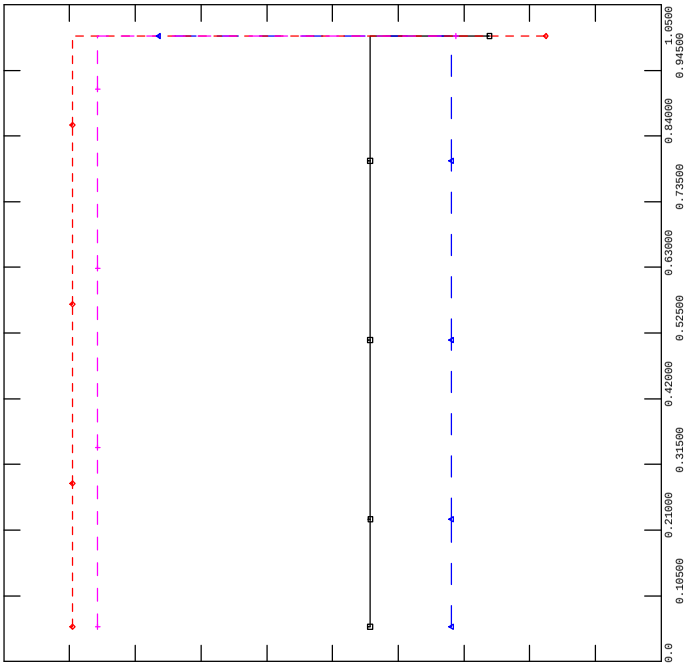
ACTIVE POWER

CHNL# 191: [POWR 61994[GRANLEA6 0.6900]G1]
1.2000 -0.2000

CHNL# 189: [POWR 60990[SHAMROC5 0.6500]G1]
2.2170 0.29060

CHNL# 195: [POWR 773[SECST 20.000]1]
1.7982 0.94880

CHNL# 163: [POWR 667[CANCARB9 13.800]1]
0.75180 -0.0514



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN2_SL_1035L_NEWELL

FILE: scn2_SL_1035L_Newell.out

THU, APR 14 2022 14:09

BUS VOLTAGE

CHNL# 498: [VOLT 976 [ROTBAUR 138.00]]
1.2137 0.20240

CHNL# 493: [VOLT 320 [CHAPPIC7 138.00]]
1.2066 0.63260

CHNL# 496: [VOLT 662 [WHITLA1 240.00]]
1.3670 0.01060

CHNL# 495: [VOLT 659 [BOWMAN2 138.00]]
1.2530 0.03980

CHNL# 497: [VOLT 669 [BOWMAN1 240.00]]
1.2862 -0.0929

1.0500 0.94500 0.84000 0.73500 0.63000 0.52500 0.42000 0.31500 0.21000 0.10500 0.0

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN2_SL_1035L_NEWELL

FILE: scn2_SL_1035L_Newell.out

THU, APR 14 2022 14:09

BRANCH Q

CHNL# 516: [1005L Q]
139.51 -194.7

CHNL# 518: [1035L Q]
40.312 -40.00

CHNL# 514: [1034L Q]
319.91 -117.2

CHNL# 504: [983L_L1_Q]
99.517 -264.3

CHNL# 502: [983L_L3_Q]
73.313 -246.7

CHNL# 500: [983L_L2_Q]
89.566 -292.7

1.0500 0.94500 0.84000 0.73500 0.63000 0.52500 0.42000 0.31500 0.21000 0.10500 0.0

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN2_SL_1035L_NEWELL

FILE: scn2_SL_1035L_Newell.out

THU, APR 14 2022 14:09

TERMINAL VOLTAGE

CHNL# 434: [ETRM 61994[GRANLEA6 0.6900]G1]
1.1382 -0.1000

CHNL# 432: [ETRM 60990[SHAMROC5 0.6500]G1]
1.5878 0.24230

CHNL# 438: [ETRM 773[SECST 20.000]1]
1.1319 0.85260

CHNL# 406: [ETRM 667[CANCARB9 13.800]1]
1.1791 0.54180

1.0500 0.94500 0.84000 0.73500 0.63000 0.52500 0.42000 0.31500 0.21000 0.10500 0.0

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN2_SL_1035L_NEWELL

FILE: scn2_SL_1035L_Newell.out

THU, APR 14 2022 14:09

BRANCH P

CHNL# 515: [1005L P]
-175.5 -468.5

CHNL# 517: [1035L P]
530.58 -176.9

CHNL# 513: [1034L P]
640.68 -213.8

CHNL# 503: [983L_L1_P]
197.57 -590.8

CHNL# 501: [983L_L3_P]
98.607 -297.1

CHNL# 499: [983L_L2_P]
98.649 -297.0

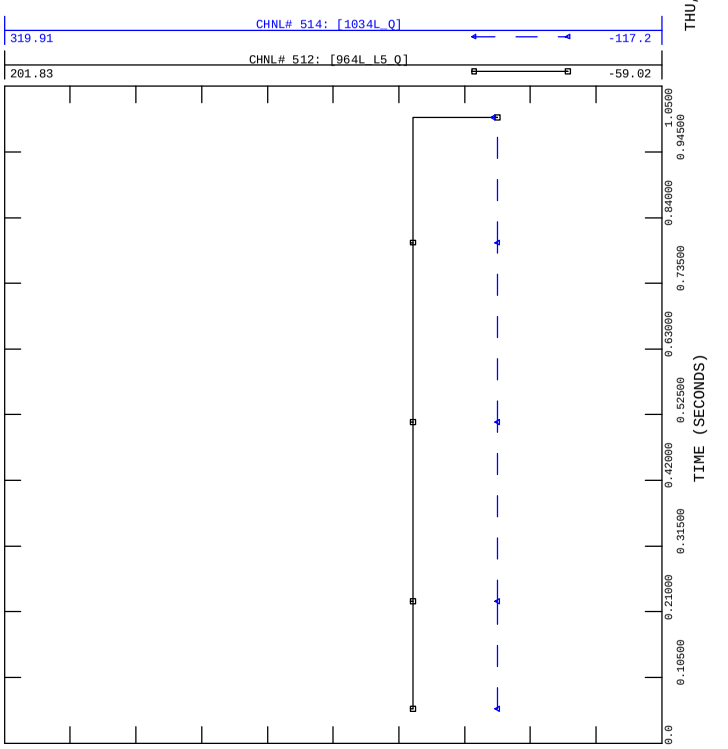
1.0500 0.94500 0.84000 0.73500 0.63000 0.52500 0.42000 0.31500 0.21000 0.10500 0.0

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN2_SL_1035L_NEWELL

FILE: scn2_SL_1035L_Newell.out

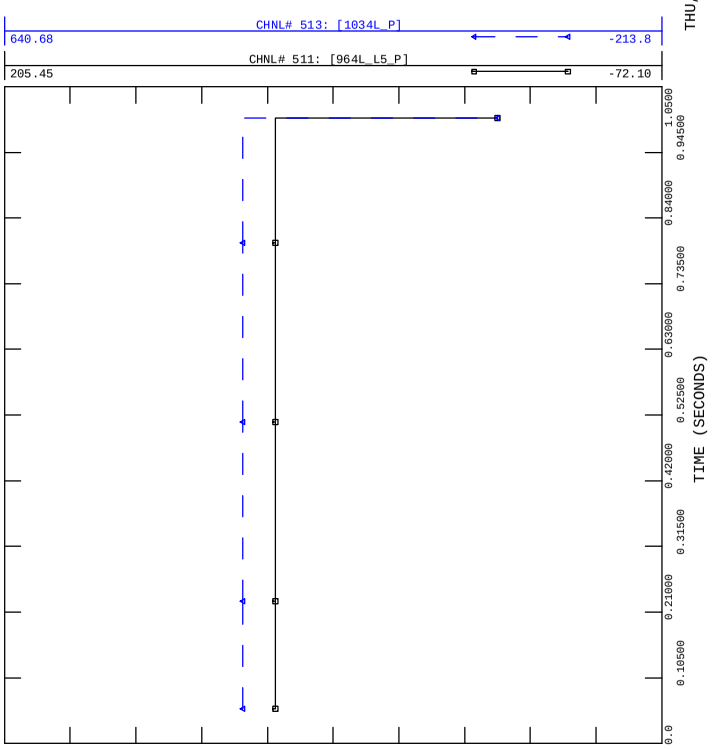
THU, APR 14 2022 14:09
BRANCH Q

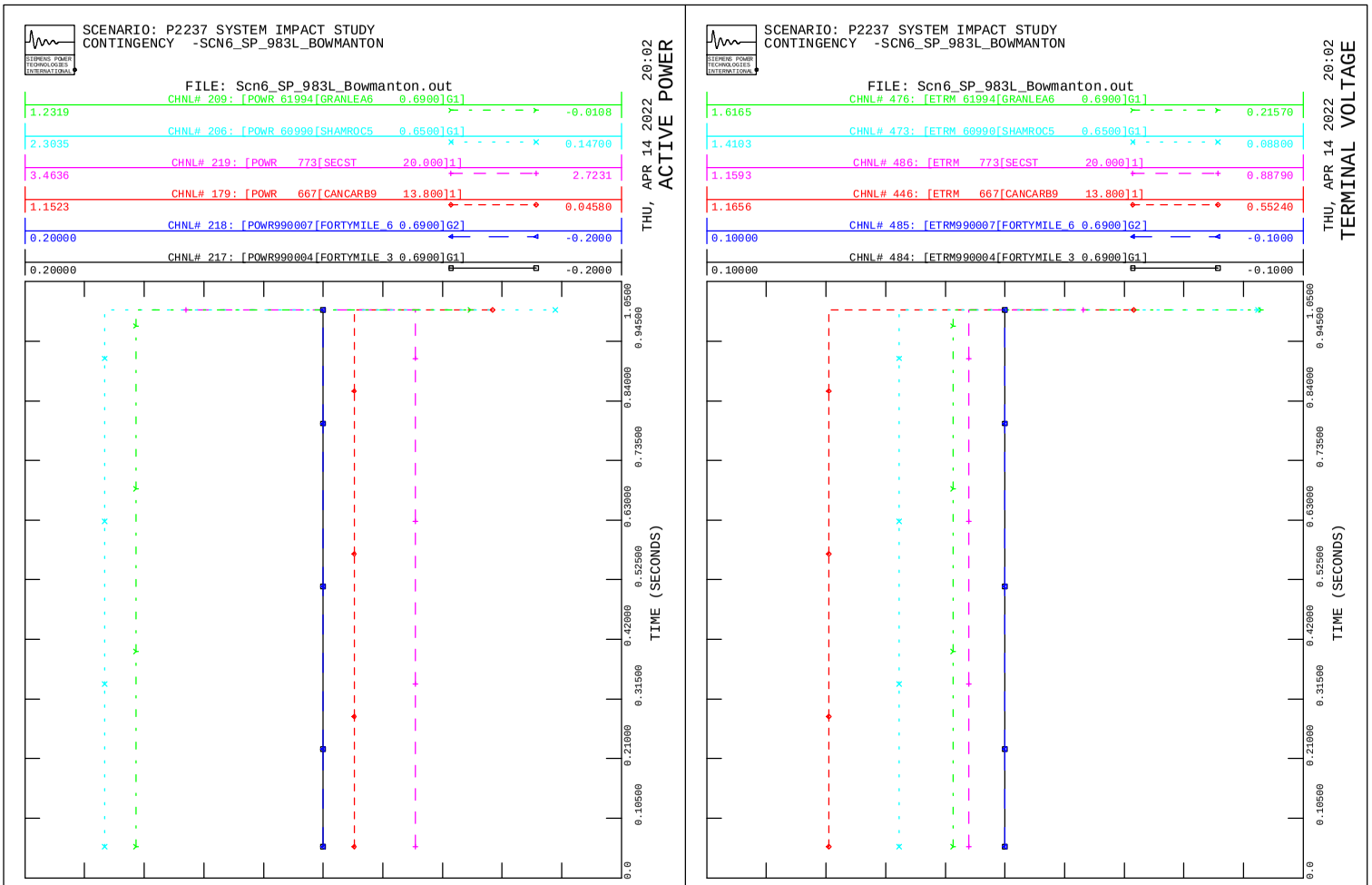


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN2_SL_1035L_NEWELL

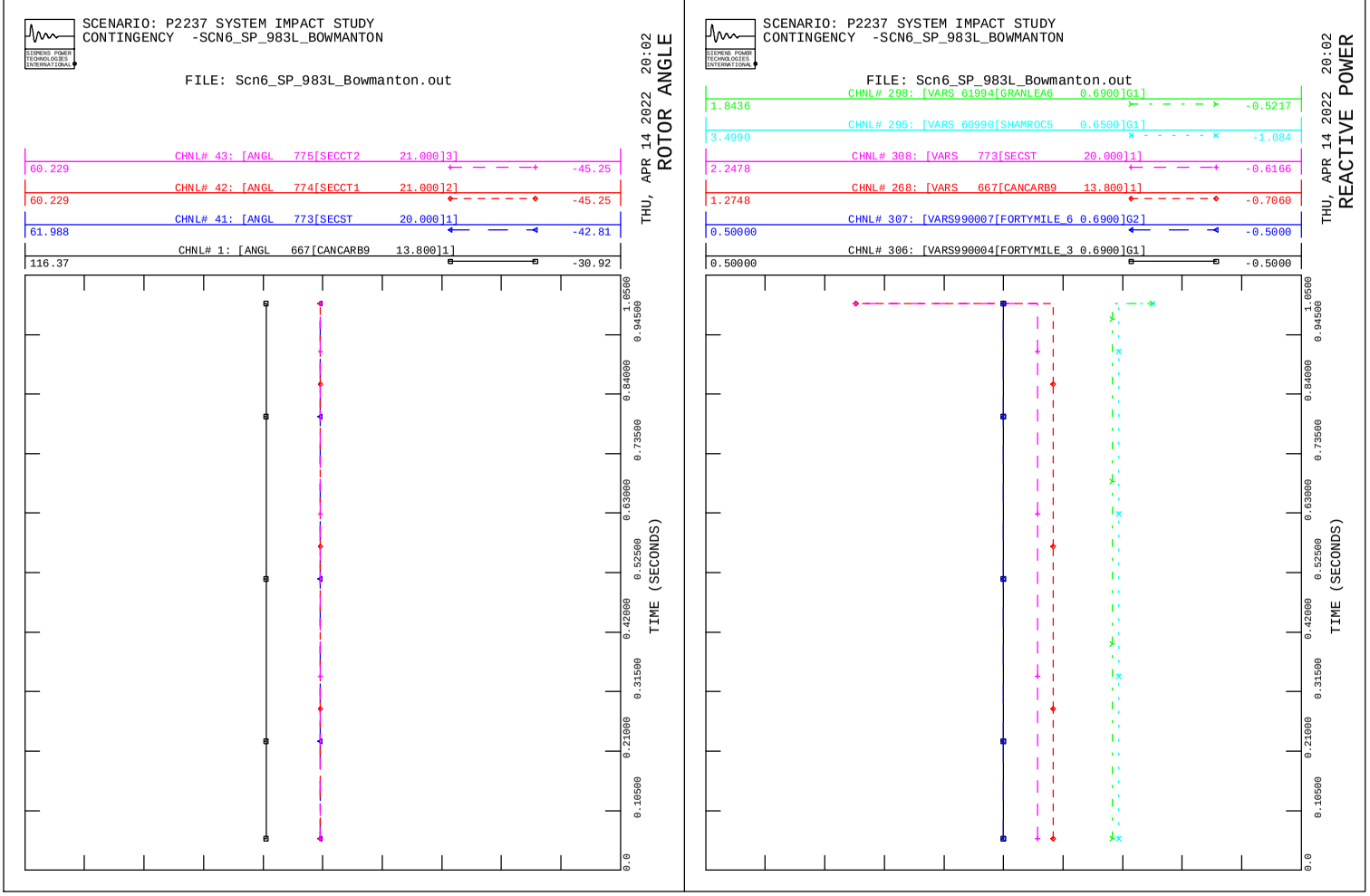
FILE: scn2_SL_1035L_Newell.out

THU, APR 14 2022 14:09
BRANCH P




SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN6_SP_983L_BOWMANTON
FILE: Scn6_SP_983L_Bowmanton.out
THU, APR 14 2022 20:02
ACTIVE POWER
CHNL# 209: [POWR 61994[GRANLEA6 0.6900]G1]
1.2319
-0.0108
CHNL# 206: [POWR 60990[SHAMROC5 0.6500]G1]
2.3035
0.14700
CHNL# 219: [POWR 773[SECST 20.000]1]
3.4636
2.7231
CHNL# 179: [POWR 667[CANCARB9 13.800]1]
1.1523
0.04580
CHNL# 218: [POWR990007[FORTYMILE_6 0.6900]G2]
0.20000
-0.2000
CHNL# 217: [POWR990004[FORTYMILE_3 0.6900]G1]
0.20000
-0.2000
1.0500
0.94500
0.84000
0.73500
0.63000
0.52500
0.42000
0.31500
0.21000
0.10500
0.0
TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN6_SP_983L_BOWMANTON
FILE: Scn6_SP_983L_Bowmanton.out
THU, APR 14 2022 20:02
TERMINAL VOLTAGE
CHNL# 476: [ETRM 61994[GRANLEA6 0.6900]G1]
1.6165
0.21570
CHNL# 473: [ETRM 60990[SHAMROC5 0.6500]G1]
1.4103
0.08800
CHNL# 486: [ETRM 773[SECST 20.000]1]
1.1593
0.88790
CHNL# 446: [ETRM 667[CANCARB9 13.800]1]
1.1656
0.55240
CHNL# 485: [ETRM990007[FORTYMILE_6 0.6900]G2]
0.10000
-0.1000
CHNL# 484: [ETRM990004[FORTYMILE_3 0.6900]G1]
0.10000
-0.1000
1.0500
0.94500
0.84000
0.73500
0.63000
0.52500
0.42000
0.31500
0.21000
0.10500
0.0
TIME (SECONDS)


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN6_SP_983L_BOWMANTON
FILE: Scn6_SP_983L_Bowmanton.out
THU, APR 14 2022 20:02
ROTOR ANGLE
CHNL# 43: [ANGL 775[SECCT2 21.000]3]
60.229
-45.25
CHNL# 42: [ANGL 774[SECCT1 21.000]2]
60.229
-45.25
CHNL# 41: [ANGL 773[SECST 20.000]1]
61.988
-42.81
CHNL# 1: [ANGL 667[CANCARB9 13.800]1]
116.37
-30.92
1.0500
0.94500
0.84000
0.73500
0.63000
0.52500
0.42000
0.31500
0.21000
0.10500
0.0
TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN6_SP_983L_BOWMANTON
FILE: Scn6_SP_983L_Bowmanton.out
THU, APR 14 2022 20:02
REACTIVE POWER
CHNL# 298: [VARS 61994[GRANLEA6 0.6900]G1]
1.8436
-0.5217
CHNL# 295: [VARS 60990[SHAMROC5 0.6500]G1]
3.4990
-1.084
CHNL# 308: [VARS 773[SECST 20.000]1]
2.2478
-0.6166
CHNL# 268: [VARS 667[CANCARB9 13.800]1]
1.2748
-0.7060
CHNL# 307: [VARS990007[FORTYMILE_6 0.6900]G2]
0.50000
-0.5000
CHNL# 306: [VARS990004[FORTYMILE_3 0.6900]G1]
0.50000
-0.5000
1.0500
0.94500
0.84000
0.73500
0.63000
0.52500
0.42000
0.31500
0.21000
0.10500
0.0
TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN6_SP_983L_BOWMANTON

FILE: Scn6_SP_983L_Bowmanton.out

THU, APR 14 2022 20:02 BRANCH P

CHNL# 575: [1035L_P]
641.23 -213.8
CHNL# 569: [1034L_P]
604.32 -201.7
CHNL# 561: [983L_L1_P]
209.89 -629.7
CHNL# 559: [983L_L3_P]
112.59 -337.8
CHNL# 557: [983L_L2_P]
112.54 -337.6
CHNL# 555: [964L_L2_P]
601.72 -199.6

TIME (SECONDS)
0.0 0.10500 0.21000 0.31500 0.42000 0.52500 0.63000 0.73500 0.84000 0.94500 1.0500

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN6_SP_983L_BOWMANTON

FILE: Scn6_SP_983L_Bowmanton.out

THU, APR 14 2022 20:02 BRANCH P

CHNL# 567: [964L_L5_P]
310.99 -122.1
CHNL# 571: [964L_L4_P]
197.20 -588.0
CHNL# 573: [1005L_P]
-148.2 -501.8

TIME (SECONDS)
0.0 0.10500 0.21000 0.31500 0.42000 0.52500 0.63000 0.73500 0.84000 0.94500 1.0500

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN6_SP_983L_BOWMANTON

FILE: Scn6_SP_983L_Bowmanton.out

THU, APR 14 2022 20:02 BUS VOLTAGE

CHNL# 554: [VOLT 976 [ROTBAUR 138.00]]
1.2195 0.23160
CHNL# 549: [VOLT 320 [CHAPPIC7 138.00]]
1.2042 0.63260
CHNL# 552: [VOLT 662 [WHITLA1 240.00]]
1.4998 -0.0283
CHNL# 551: [VOLT 659 [BOWMAN2 138.00]]
1.2818 0.05490
CHNL# 553: [VOLT 669 [BOWMAN1 240.00]]
1.3151 -0.0948

TIME (SECONDS)
0.0 0.10500 0.21000 0.31500 0.42000 0.52500 0.63000 0.73500 0.84000 0.94500 1.0500

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN6_SP_983L_BOWMANTON

FILE: Scn6_SP_983L_Bowmanton.out

THU, APR 14 2022 20:02 BRANCH Q

CHNL# 576: [1035L_Q]
194.39 -305.2
CHNL# 570: [1034L_Q]
185.06 -305.0
CHNL# 562: [983L_L1_Q]
40.000 -60.12
CHNL# 560: [983L_L3_Q]
118.35 -313.7
CHNL# 558: [983L_L2_Q]
92.510 -277.5
CHNL# 556: [964L_L2_Q]
576.93 -538.1

TIME (SECONDS)
0.0 0.10500 0.21000 0.31500 0.42000 0.52500 0.63000 0.73500 0.84000 0.94500 1.0500

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN6_SP_983L_WHITLA

FILE: Scn6_SP_983L_Whitla.out

THU, APR 14 2022 20:02

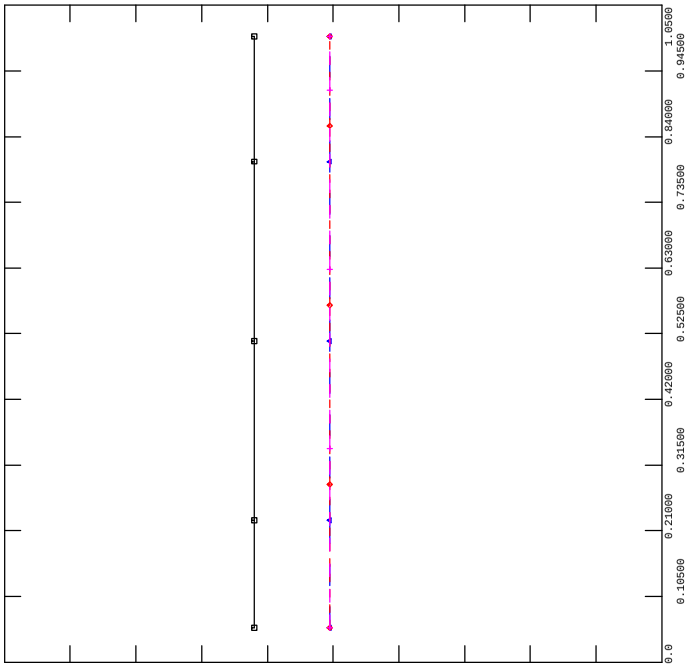
ROTOR ANGLE

CHNL# 43: [ANGL 775[SECCT2 21.000]3]
59.980 -45.38

CHNL# 42: [ANGL 774[SECCT1 21.000]2]
59.980 -45.38

CHNL# 41: [ANGL 773[SECST 20.000]1]
61.778 -42.91

CHNL# 1: [ANGL 667[CANCARB9 13.800]1]
107.64 -26.20



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN6_SP_983L_WHITLA

FILE: Scn6_SP_983L_Whitla.out

THU, APR 14 2022 20:02

REACTIVE POWER

CHNL# 298: [VARS 61994[GRANLEA6 0.6900]G1]
2.2900 -0.6888

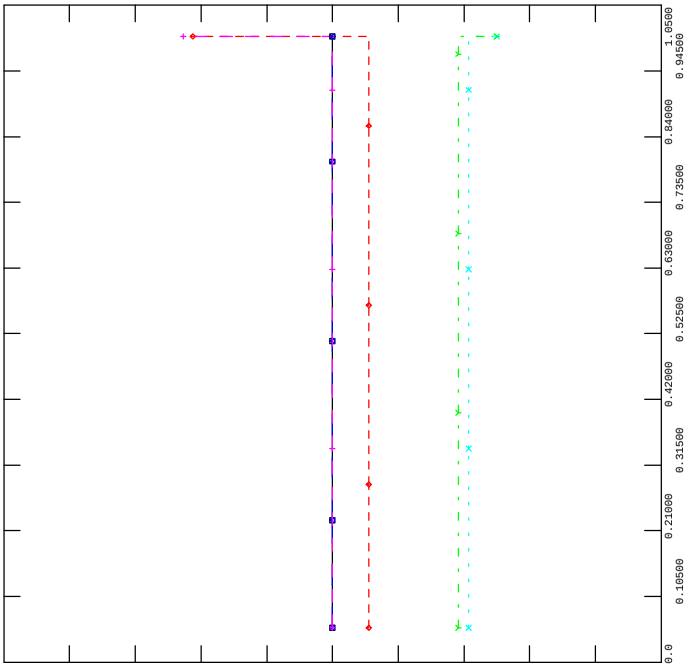
CHNL# 295: [VARS 60990[SHAMROC5 0.6500]G1]
4.5324 -1.425

CHNL# 308: [VARS 773[SECST 20.000]1]
1.5665 -0.2635

CHNL# 268: [VARS 667[CANCARB9 13.800]1]
1.0863 -0.6544

CHNL# 307: [VARS990007[FORTYMILE_6 0.6900]G2]
0.50000 -0.5000

CHNL# 306: [VARS990004[FORTYMILE_3 0.6900]G1]
0.50000 -0.5000



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN6_SP_983L_BOWMANTON

FILE: Scn6_SP_983L_Bowmanton.out

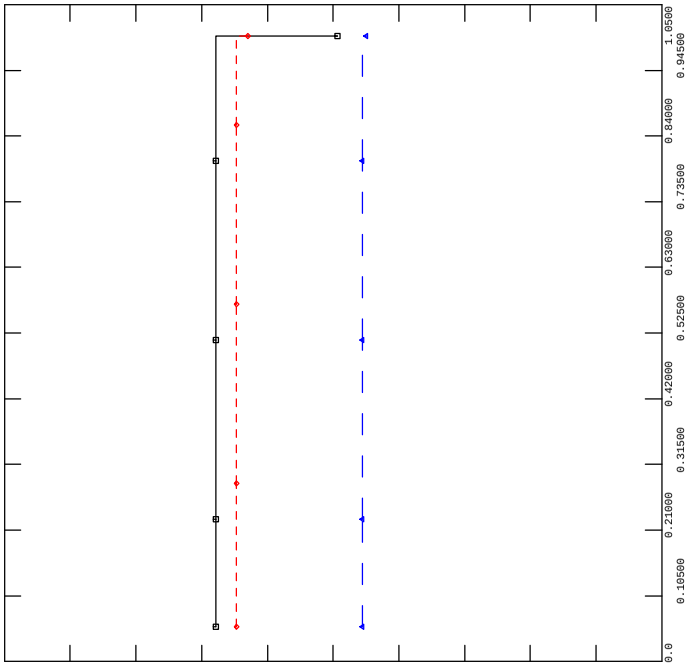
THU, APR 14 2022 20:02

BRANCH Q

CHNL# 568: [964L_L5_Q]
359.21 -621.3

CHNL# 572: [964L_L4_Q]
744.16 -609.5

CHNL# 574: [1005L_Q]
155.69 -164.6



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN6_SP_983L_WHITLA

FILE: Scn6_SP_983L_Whitla.out

THU, APR 14 2022 20:02

ACTIVE POWER

CHNL# 209: [POWR 61994[GRANLEA6 0.6900]G1]
1.2146 -0.0526

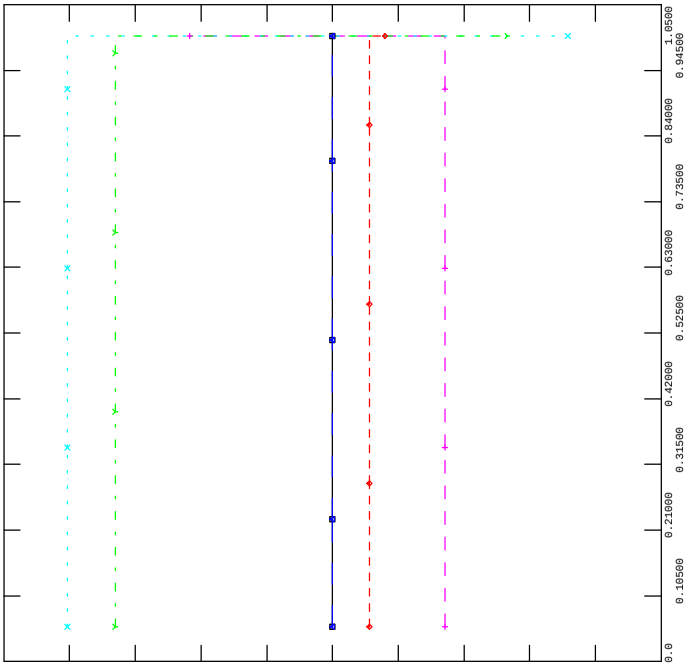
CHNL# 206: [POWR 60990[SHAMROC5 0.6500]G1]
2.2219 0.10010

CHNL# 219: [POWR 773[SECST 20.000]1]
3.4534 2.7465

CHNL# 179: [POWR 667[CANCARB9 13.800]1]
1.0757 0.11610

CHNL# 218: [POWR990007[FORTYMILE_6 0.6900]G2]
0.20000 -0.2000

CHNL# 217: [POWR990004[FORTYMILE_3 0.6900]G1]
0.20000 -0.2000



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN6_SP_983L_WHITLA

FILE: Scn6_SP_983L_Whitla.out

THU, APR 14 2022 20:02

BUS VOLTAGE

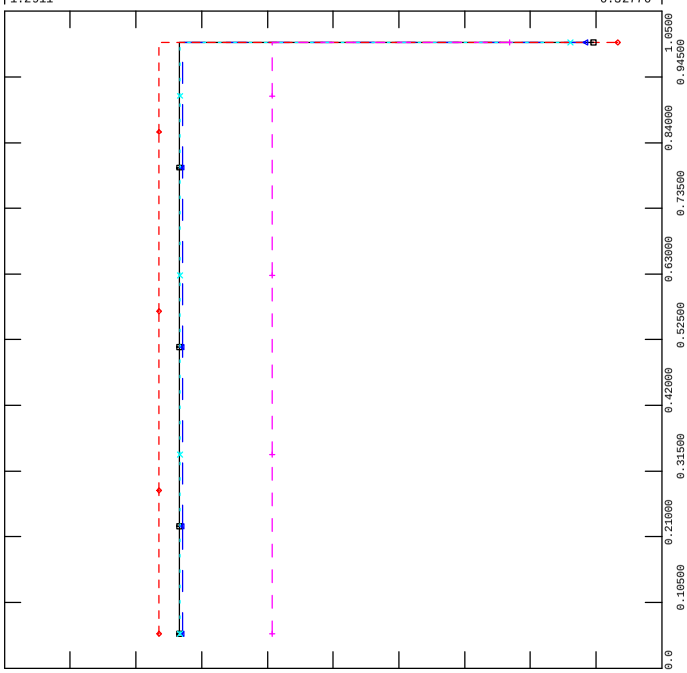
CHNL# 554: [VOLT 976 [ROTBAUR 138.00]]
1.2236 0.50390

CHNL# 549: [VOLT 320 [CHAPPIC7 138.00]]
1.1924 0.76140

CHNL# 552: [VOLT 662 [WHITLA1 240.00]]
1.4114 -0.0982

CHNL# 551: [VOLT 659 [BOWMAN2 138.00]]
1.2717 0.40510

CHNL# 553: [VOLT 669 [BOWMAN1 240.00]]
1.2911 0.32770



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN6_SP_983L_WHITLA

FILE: Scn6_SP_983L_Whitla.out

THU, APR 14 2022 20:02

BRANCH Q

CHNL# 576: [1035L Q]
204.24 -401.0

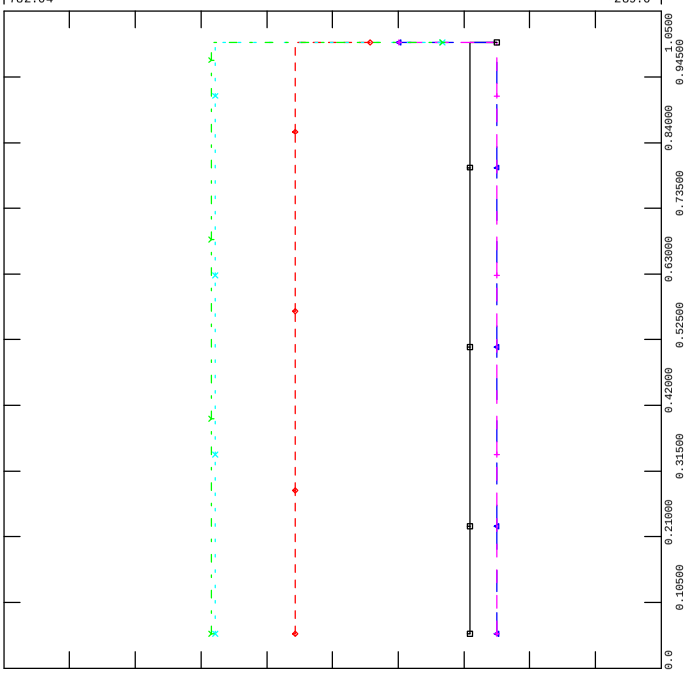
CHNL# 570: [1034L Q]
193.95 -397.2

CHNL# 562: [983L_L1 Q]
1349.2 -476.6

CHNL# 560: [983L_L3 Q]
50.328 -40.00

CHNL# 558: [983L_L2 Q]
861.08 -303.7

CHNL# 556: [964L_L2 Q]
782.04 -289.6



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN6_SP_983L_WHITLA

FILE: Scn6_SP_983L_Whitla.out

THU, APR 14 2022 20:02

TERMINAL VOLTAGE

CHNL# 476: [ETRM 61994[GRANLEA6 0.6900]G1]
1.4797 0.15340

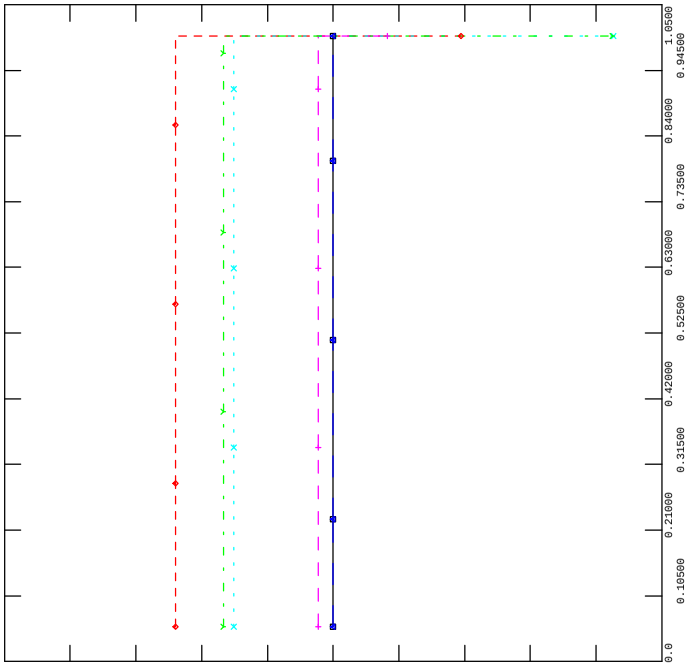
CHNL# 473: [ETRM 60990[SHAMROC5 0.6500]G1]
1.4585 0.09630

CHNL# 486: [ETRM 773[SECST 20.000]1]
1.1543 0.91500

CHNL# 446: [ETRM 667[CANCARB9 13.800]1]
1.1615 0.69520

CHNL# 485: [ETRM990007[FORTYMILE_6 0.6900]G2]
0.10000 -0.1000

CHNL# 484: [ETRM990004[FORTYMILE_3 0.6900]G1]
0.10000 -0.1000



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN6_SP_983L_WHITLA

FILE: Scn6_SP_983L_Whitla.out

THU, APR 14 2022 20:02

BRANCH P

CHNL# 575: [1035L P]
625.88 -167.8

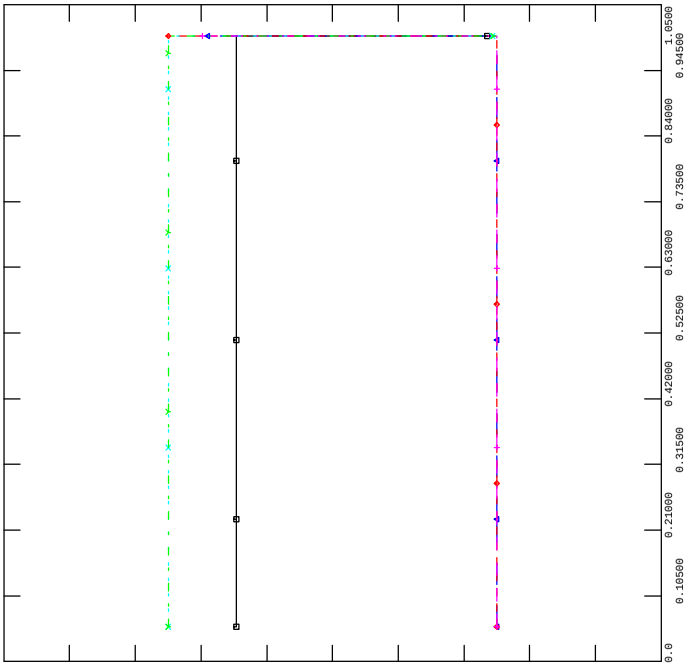
CHNL# 569: [1034L P]
594.29 -171.6

CHNL# 561: [983L_L1 P]
315.86 -665.0

CHNL# 559: [983L_L3 P]
112.59 -337.8

CHNL# 557: [983L_L2 P]
180.20 -360.2

CHNL# 555: [964L_L2 P]
594.17 -208.0

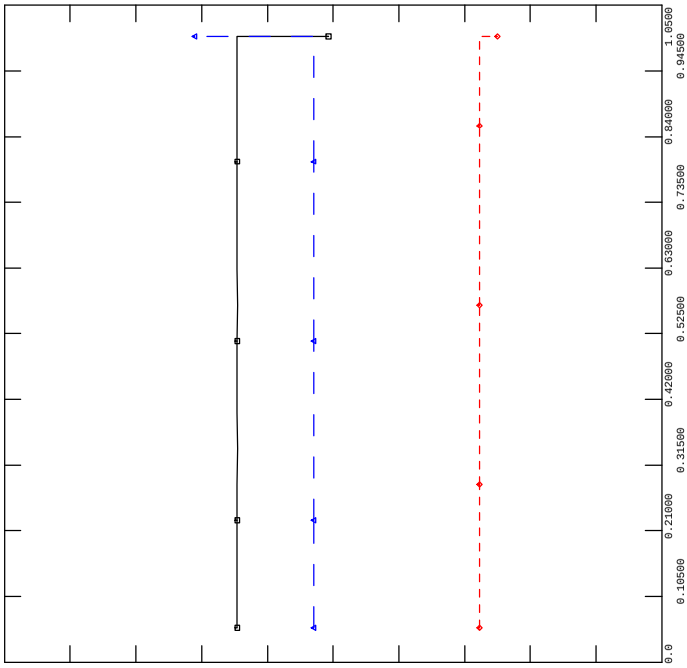


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN6_SP_983L_WHITLA

FILE: Scn6_SP_983L_Whitla.out

THU, APR 14 2022 20:02 BRANCH Q

CHNL# 568: [964L_L5_Q] 417.43 -142.1
CHNL# 572: [964L_L4_Q] 632.55 -696.7
CHNL# 574: [1005L_Q] 124.66 -78.16

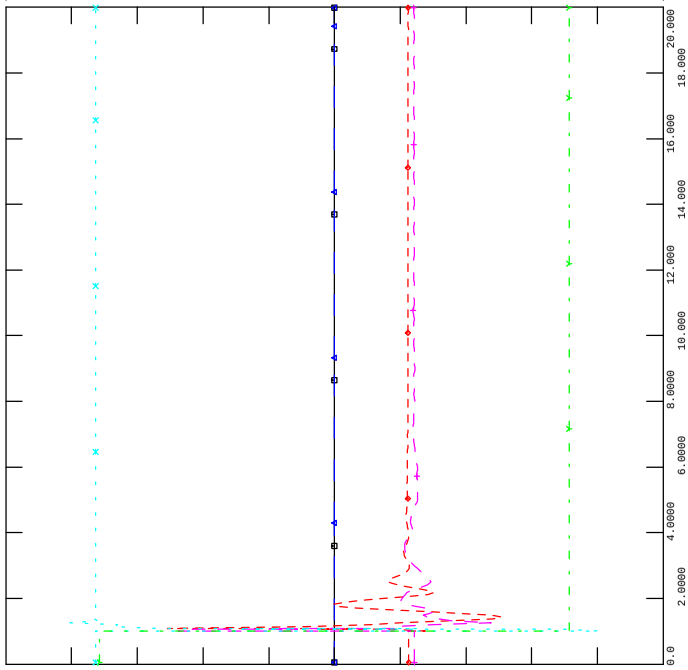


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN6_SP_964L_BOWMANTON

FILE: Scn6_SP_964L_Bowmanton.out

THU, APR 14 2022 20:02 ACTIVE POWER

CHNL# 209: [POWR 61994[GRANLEA6 0.6900]G1] 1.2000 -0.2000
CHNL# 206: [POWR 60990[SHAMROC5 0.6500]G1] 2.2970 0.24110
CHNL# 219: [POWR 773[SECST 20.000]1] 3.4531 2.6901
CHNL# 179: [POWR 667[CANCARB9 13.800]1] 1.0400 0.22720
CHNL# 218: [POWR990007[FORTYMILE_6 0.6900]G2] 0.20000 -0.2000
CHNL# 217: [POWR990004[FORTYMILE 3 0.6900]G1] 0.20000 -0.2000

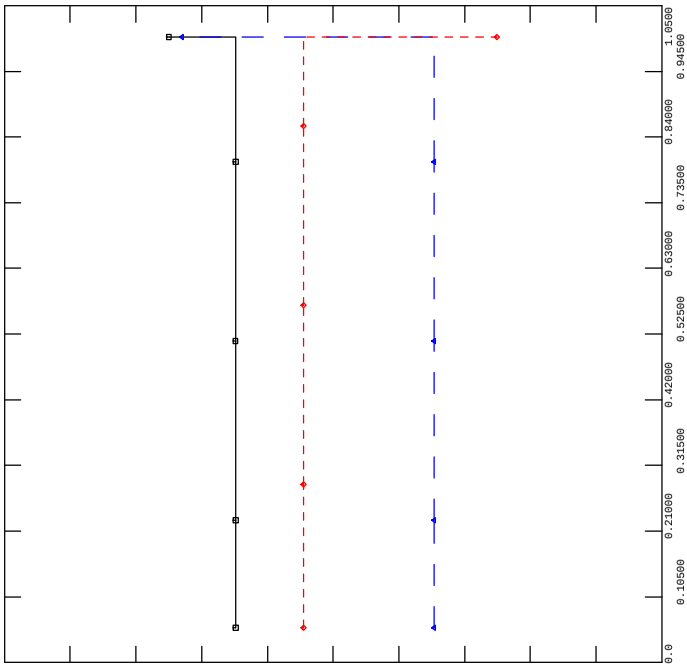


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN6_SP_983L_WHITLA

FILE: Scn6_SP_983L_Whitla.out

THU, APR 14 2022 20:02 BRANCH P

CHNL# 567: [964L_L5_P] 295.26 -99.03
CHNL# 571: [964L_L4_P] 237.77 -594.5
CHNL# 573: [1005L_P] -248.8 -415.9

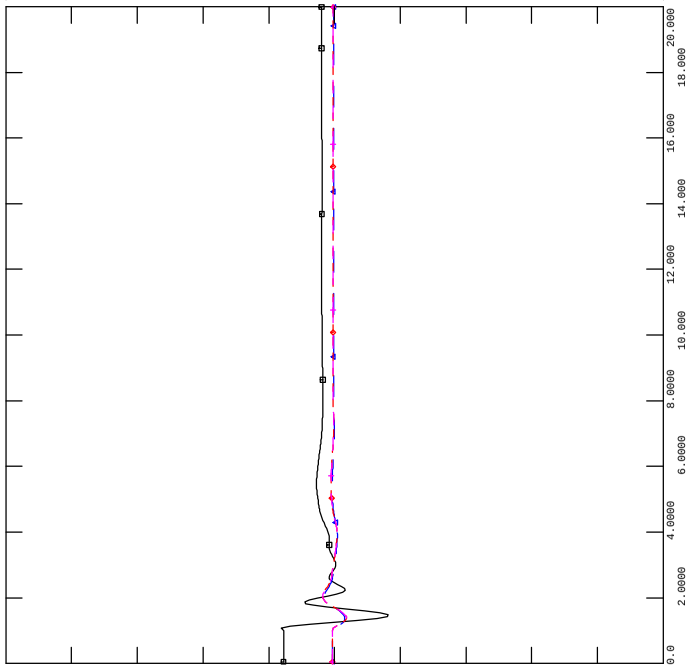


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN6_SP_964L_BOWMANTON

FILE: Scn6_SP_964L_Bowmanton.out

THU, APR 14 2022 20:02 ROTOR ANGLE

CHNL# 43: [ANGL 775[SECCT2 21.000]3] 59.440 -44.30
CHNL# 42: [ANGL 774[SECCT1 21.000]2] 59.440 -44.30
CHNL# 41: [ANGL 773[SECST 20.000]1] 61.334 -41.91
CHNL# 1: [ANGL 667[CANCARB9 13.800]1] 107.21 -12.26



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN6_SP_964L_BOWMANTON

FILE: Scn6_SP_964L_Bowmanton.out

THU, APR 14 2022 20:02

TERMINAL VOLTAGE

CHNL# 476: [ETRM 61994[GRANLEA6 0.6900]G1] 1.1384 -0.1000
CHNL# 473: [ETRM 60990[SHAMROC5 0.6500]G1] 1.5690 0.11520
CHNL# 486: [ETRM 773[SECST 20.000]1] 1.1542 0.91630
CHNL# 446: [ETRM 667[CANCARB9 13.800]1] 1.1582 0.71170
CHNL# 485: [ETRM990007[FORTYMILE_6 0.6900]G2] 0.10000 -0.1000
CHNL# 484: [ETRM990004[FORTYMILE_3 0.6900]G1] 0.10000 -0.1000

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN6_SP_964L_BOWMANTON

FILE: Scn6_SP_964L_Bowmanton.out

THU, APR 14 2022 20:02

BRANCH P

CHNL# 575: [1035L P] 623.74 -161.4
CHNL# 569: [1034L P] 592.49 -166.2
CHNL# 561: [983L_L1_P] 325.73 -871.2
CHNL# 559: [983L_L3_P] 205.28 -538.2
CHNL# 557: [983L_L2_P] 206.97 -538.5
CHNL# 555: [964L_L2_P] 468.08 -162.6

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN6_SP_964L_BOWMANTON

FILE: Scn6_SP_964L_Bowmanton.out

THU, APR 14 2022 20:02

REACTIVE POWER

CHNL# 298: [VARS 61994[GRANLEA6 0.6900]G1] 0.72900 -0.5000
CHNL# 295: [VARS 60990[SHAMROC5 0.6500]G1] 3.8414 -1.186
CHNL# 308: [VARS 773[SECST 20.000]1] 1.5438 -0.2377
CHNL# 268: [VARS 667[CANCARB9 13.800]1] 1.0804 -0.6349
CHNL# 307: [VARS990007[FORTYMILE_6 0.6900]G2] 0.50000 -0.5000
CHNL# 306: [VARS990004[FORTYMILE_3 0.6900]G1] 0.50000 -0.5000

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN6_SP_964L_BOWMANTON

FILE: Scn6_SP_964L_Bowmanton.out

THU, APR 14 2022 20:02

BUS VOLTAGE

CHNL# 554: [VOLT 976 [ROTBAUR 138.00]] 1.2233 0.51030
CHNL# 549: [VOLT 320 [CHAPPIC7 138.00]] 1.1883 0.76710
CHNL# 552: [VOLT 662 [WHITLA1 240.00]] 1.3782 -0.0996
CHNL# 551: [VOLT 659 [BOWMAN2 138.00]] 1.2687 0.41310
CHNL# 553: [VOLT 669 [BOWMAN1 240.00]] 1.2870 0.33790

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN6_SP_964L_BOWMANTON

FILE: Scn6_SP_964L_Bowmanton.out

THU, APR 14 2022 20:02 BRANCH P

CHNL# 567: [964L_L5_P] 173.93 -57.98
CHNL# 571: [964L_L4_P] 255.53 -493.1
CHNL# 573: [1005L_P] -252.6 -408.9

TIME (SECONDS) 0.0 2.0000 4.0000 6.0000 8.0000 10.000 12.000 14.000 16.000 18.000 20.000

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN6_SP_964L_WHITLA

FILE: Scn6_SP_964L_Whitla.out

THU, APR 14 2022 20:02 ROTOR ANGLE

CHNL# 43: [ANGL 775[SECCT2 21.000]3] 59.657 -44.03
CHNL# 42: [ANGL 774[SECCT1 21.000]2] 59.657 -44.03
CHNL# 41: [ANGL 773[SECST 20.000]1] 61.527 -41.59
CHNL# 1: [ANGL 667[CANCARB9 13.800]1] 112.72 -16.50

TIME (SECONDS) 0.0 2.0000 4.0000 6.0000 8.0000 10.000 12.000 14.000 16.000 18.000 20.000

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN6_SP_964L_BOWMANTON

FILE: Scn6_SP_964L_Bowmanton.out

THU, APR 14 2022 20:02 BRANCH Q

CHNL# 576: [1035L_Q] 205.12 -392.9
CHNL# 570: [1034L_Q] 194.00 -388.1
CHNL# 562: [983L_L1_Q] 576.82 -661.7
CHNL# 560: [983L_L3_Q] 486.70 -455.3
CHNL# 558: [983L_L2_Q] 513.76 -483.7
CHNL# 556: [964L_L2_Q] 65.298 -106.2

TIME (SECONDS) 0.0 2.0000 4.0000 6.0000 8.0000 10.000 12.000 14.000 16.000 18.000 20.000

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN6_SP_964L_BOWMANTON

FILE: Scn6_SP_964L_Bowmanton.out

THU, APR 14 2022 20:02 BRANCH Q

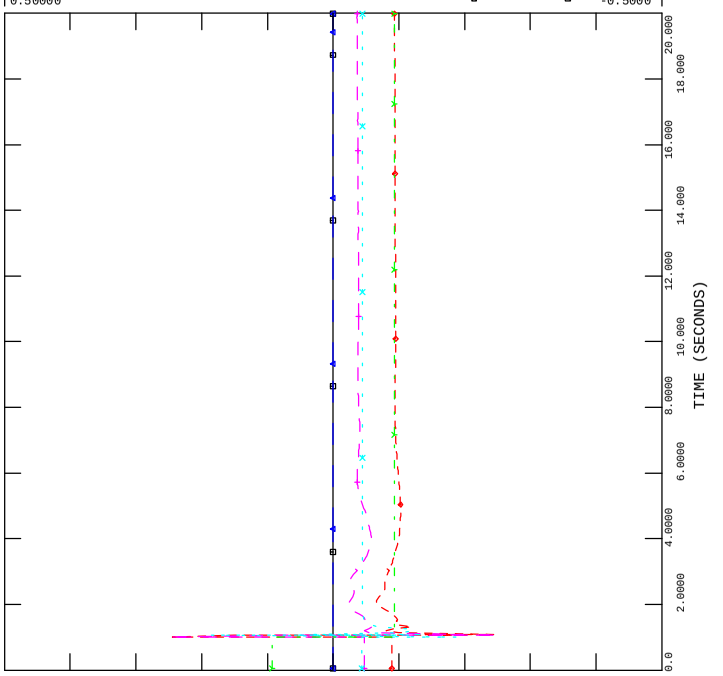
CHNL# 568: [964L_L5_Q] 52.945 -40.00
CHNL# 572: [964L_L4_Q] 1316.3 -438.8
CHNL# 574: [1005L_Q] 310.98 -158.3

TIME (SECONDS) 0.0 2.0000 4.0000 6.0000 8.0000 10.000 12.000 14.000 16.000 18.000 20.000

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN6_SP_964L_WHITLA

FILE: Scn6_SP_964L_Whitla.out

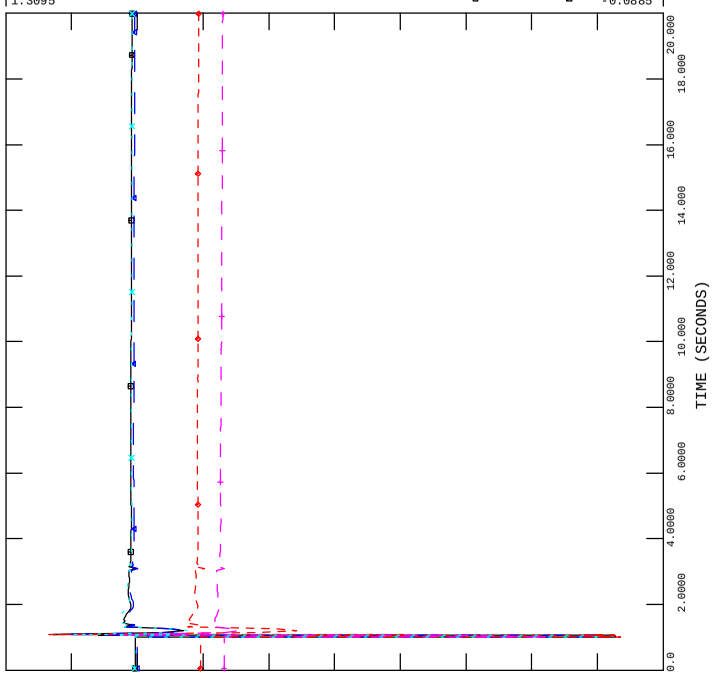
THU, APR 14 2022 20:02 REACTIVE POWER



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN6_SP_964L_WHITLA

FILE: Scn6_SP_964L_Whitla.out

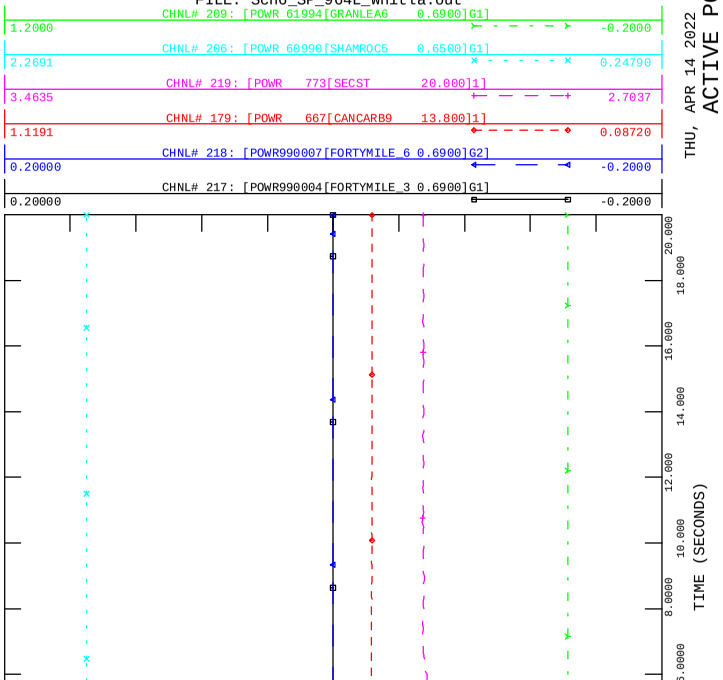
THU, APR 14 2022 20:02 BUS VOLTAGE



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN6_SP_964L_WHITLA

FILE: Scn6_SP_964L_Whitla.out

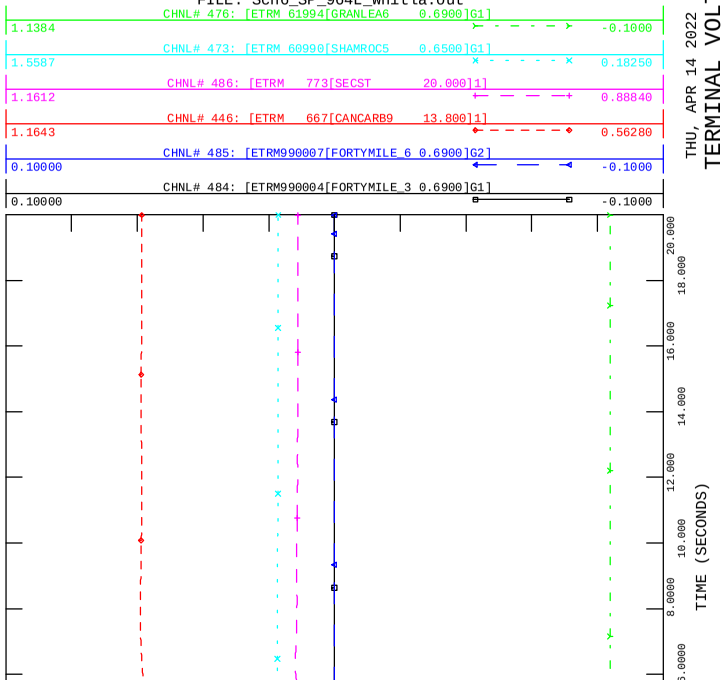
THU, APR 14 2022 20:02 ACTIVE POWER



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN6_SP_964L_WHITLA

FILE: Scn6_SP_964L_Whitla.out

THU, APR 14 2022 20:02 TERMINAL VOLTAGE

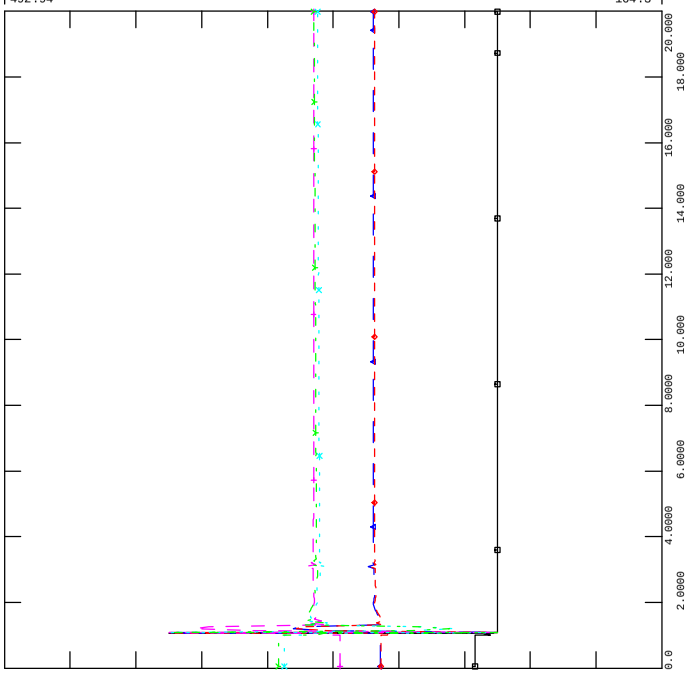


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN6_SP_964L_WHITLA

FILE: Scn6_SP_964L_Whitla.out

THU, APR 14 2022 20:02 BRANCH Q

CHNL# 576: [1035L_Q] 171.32 -207.8
CHNL# 570: [1034L_Q] 161.80 -209.4
CHNL# 562: [983L_L1_Q] 498.48 -517.6
CHNL# 560: [983L_L3_Q] 724.13 -522.8
CHNL# 558: [983L_L2_Q] 722.04 -563.3
CHNL# 556: [964L_L2_Q] 492.94 -164.3

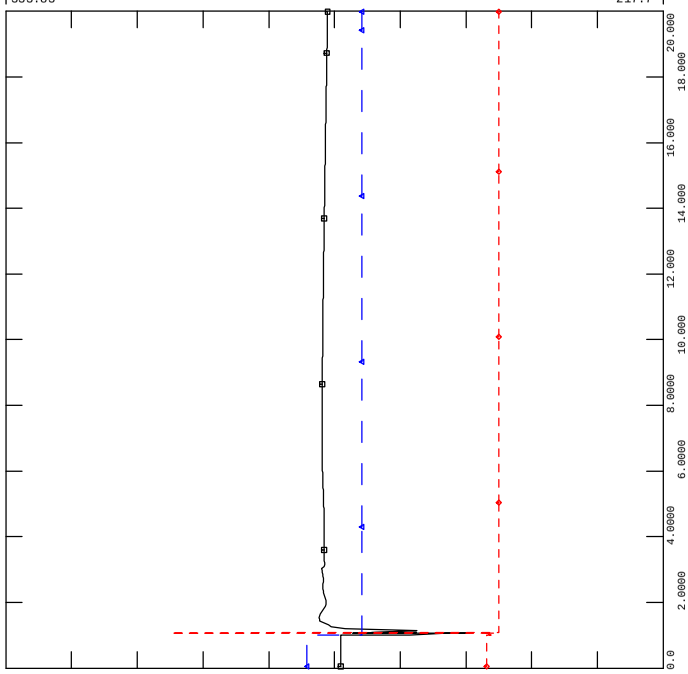


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN6_SP_964L_WHITLA

FILE: Scn6_SP_964L_Whitla.out

THU, APR 14 2022 20:02 BRANCH Q

CHNL# 568: [964L_L5_Q] 519.56 -173.2
CHNL# 572: [964L_L4_Q] 47.279 -40.00
CHNL# 574: [1005L_Q] 333.83 -217.7

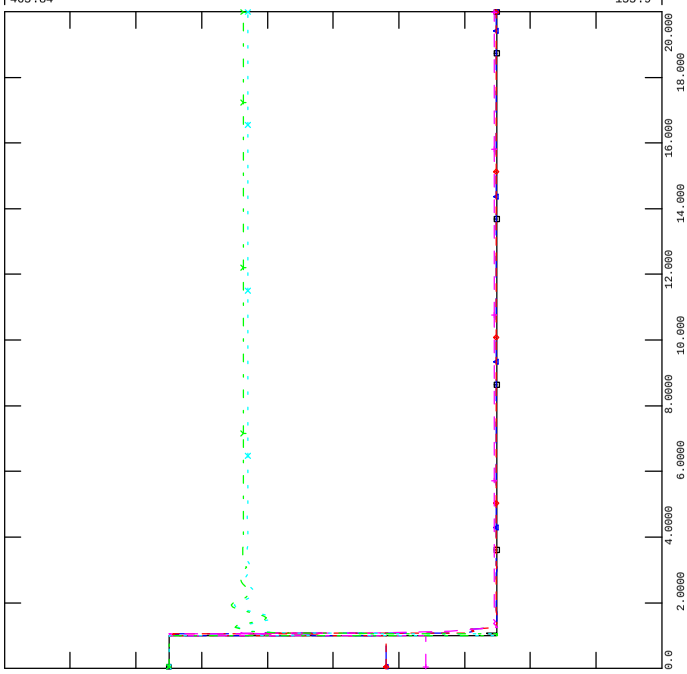


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN6_SP_964L_WHITLA

FILE: Scn6_SP_964L_Whitla.out

THU, APR 14 2022 20:02 BRANCH P

CHNL# 575: [1035L_P] 641.03 -213.3
CHNL# 569: [1034L_P] 604.23 -201.4
CHNL# 561: [983L_L1_P] 270.08 -806.8
CHNL# 559: [983L_L3_P] 169.89 -510.8
CHNL# 557: [983L_L2_P] 169.78 -510.3
CHNL# 555: [964L_L2_P] 465.84 -155.9

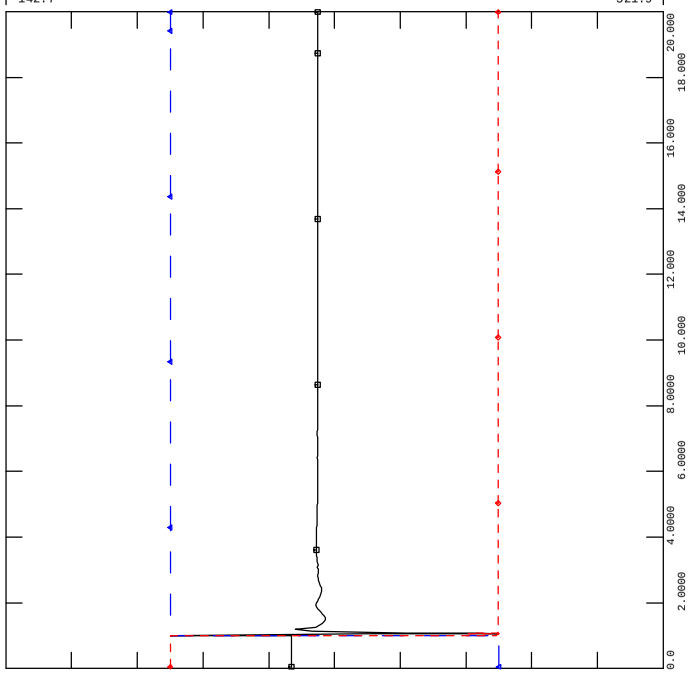


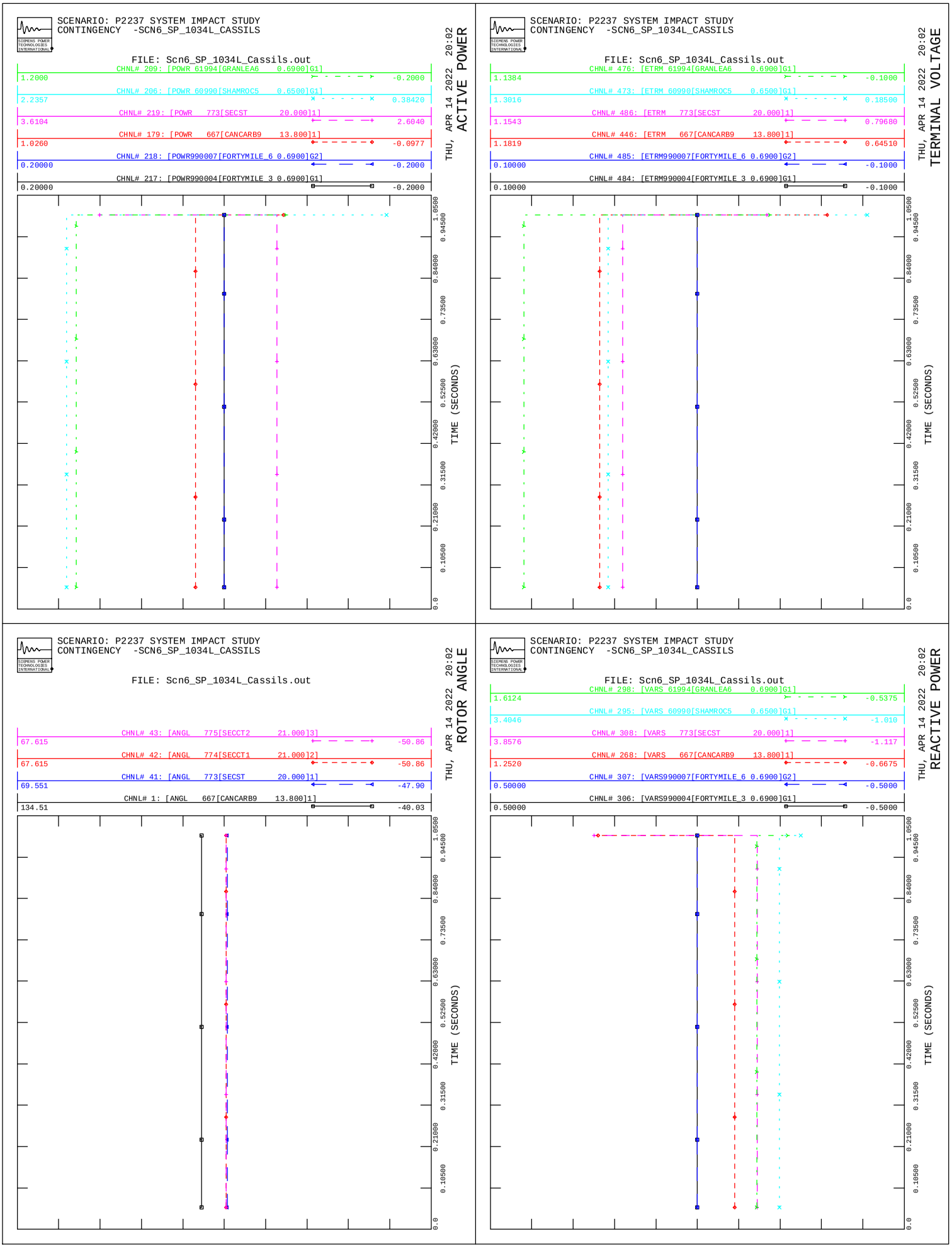
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN6_SP_964L_WHITLA

FILE: Scn6_SP_964L_Whitla.out

THU, APR 14 2022 20:02 BRANCH P

CHNL# 567: [964L_L5_P] 174.10 -58.49
CHNL# 571: [964L_L4_P] 152.96 -458.9
CHNL# 573: [1005L_P] -142.7 -521.9




SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN6_SP_1034L_CASSILS
FILE: Scn6_SP_1034L_Cassils.out
CHNL# 209: [POWR 61994[GRANLEA6 0.6900]G1]
1.2000
-0.2000
CHNL# 206: [POWR 60990[SHAMROC5 0.6500]G1]
2.2357
0.38420
CHNL# 219: [POWR 773[SECST 20.000]1]
3.6104
2.6040
CHNL# 179: [POWR 667[CANCARB9 13.800]1]
1.0260
-0.0977
CHNL# 218: [POWR990007[FORTYMILE_6 0.6900]G2]
0.20000
-0.2000
CHNL# 217: [POWR990004[FORTYMILE_3 0.6900]G1]
0.20000
-0.2000
THU, APR 14 2022 20:02
ACTIVE POWER
TIME (SECONDS)
0.0
0.10500
0.21000
0.31500
0.42000
0.52500
0.63000
0.73500
0.84000
0.94500
1.0500
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN6_SP_1034L_CASSILS
FILE: Scn6_SP_1034L_Cassils.out
CHNL# 476: [ETRM 61994[GRANLEA6 0.6900]G1]
1.1384
-0.1000
CHNL# 473: [ETRM 60990[SHAMROC5 0.6500]G1]
1.3016
0.18500
CHNL# 486: [ETRM 773[SECST 20.000]1]
1.1543
0.79680
CHNL# 446: [ETRM 667[CANCARB9 13.800]1]
1.1819
0.64510
CHNL# 485: [ETRM990007[FORTYMILE_6 0.6900]G2]
0.10000
-0.1000
CHNL# 484: [ETRM990004[FORTYMILE_3 0.6900]G1]
0.10000
-0.1000
THU, APR 14 2022 20:02
TERMINAL VOLTAGE
TIME (SECONDS)
0.0
0.10500
0.21000
0.31500
0.42000
0.52500
0.63000
0.73500
0.84000
0.94500
1.0500
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN6_SP_1034L_CASSILS
FILE: Scn6_SP_1034L_Cassils.out
CHNL# 43: [ANGL 775[SECCT2 21.000]3]
67.615
-50.86
CHNL# 42: [ANGL 774[SECCT1 21.000]2]
67.615
-50.86
CHNL# 41: [ANGL 773[SECST 20.000]1]
69.551
-47.90
CHNL# 1: [ANGL 667[CANCARB9 13.800]1]
134.51
-40.03
THU, APR 14 2022 20:02
ROTOR ANGLE
TIME (SECONDS)
0.0
0.10500
0.21000
0.31500
0.42000
0.52500
0.63000
0.73500
0.84000
0.94500
1.0500
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN6_SP_1034L_CASSILS
FILE: Scn6_SP_1034L_Cassils.out
CHNL# 298: [VARS 61994[GRANLEA6 0.6900]G1]
1.6124
-0.5375
CHNL# 295: [VARS 60990[SHAMROC5 0.6500]G1]
3.4046
-1.010
CHNL# 308: [VARS 773[SECST 20.000]1]
3.8576
-1.117
CHNL# 268: [VARS 667[CANCARB9 13.800]1]
1.2520
-0.6675
CHNL# 307: [VARS990007[FORTYMILE_6 0.6900]G2]
0.50000
-0.5000
CHNL# 306: [VARS990004[FORTYMILE_3 0.6900]G1]
0.50000
-0.5000
THU, APR 14 2022 20:02
REACTIVE POWER
TIME (SECONDS)
0.0
0.10500
0.21000
0.31500
0.42000
0.52500
0.63000
0.73500
0.84000
0.94500
1.0500

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN6_SP_1034L_CASSILS

FILE: Scn6_SP_1034L_Cassils.out

CHNL# 575: [1035L_P]
726.01 -240.2
CHNL# 569: [1034L_P]
604.22 -201.4
CHNL# 561: [983L_L1_P]
210.48 -629.9
CHNL# 559: [983L_L3_P]
113.64 -338.1
CHNL# 557: [983L_L2_P]
113.73 -338.0
CHNL# 555: [964L_L2_P]
465.94 -156.1

THU, APR 14 2022 20:02 BRANCH P

TIME (SECONDS)
0.0 0.10500 0.21000 0.31500 0.42000 0.52500 0.63000 0.73500 0.84000 0.94500 1.0500

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN6_SP_1034L_CASSILS

FILE: Scn6_SP_1034L_Cassils.out

CHNL# 567: [964L_L5_P]
207.57 -74.78
CHNL# 571: [964L_L4_P]
157.21 -460.3
CHNL# 573: [1005L_P]
96.109 -512.4

THU, APR 14 2022 20:02 BRANCH P

TIME (SECONDS)
0.0 0.10500 0.21000 0.31500 0.42000 0.52500 0.63000 0.73500 0.84000 0.94500 1.0500

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN6_SP_1034L_CASSILS

FILE: Scn6_SP_1034L_Cassils.out

CHNL# 554: [VOLT 976 [ROTBAUR 138.00]]
1.2259 0.27250
CHNL# 549: [VOLT 320 [CHAPPIC7 138.00]]
1.2245 0.19460
CHNL# 552: [VOLT 662 [WHITLA1 240.00]]
1.3815 -0.0225
CHNL# 551: [VOLT 659 [BOWMAN2 138.00]]
1.2866 0.10550
CHNL# 553: [VOLT 669 [BOWMAN1 240.00]]
1.3391 -0.0361

THU, APR 14 2022 20:02 BUS VOLTAGE

TIME (SECONDS)
0.0 0.10500 0.21000 0.31500 0.42000 0.52500 0.63000 0.73500 0.84000 0.94500 1.0500

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN6_SP_1034L_CASSILS

FILE: Scn6_SP_1034L_Cassils.out

CHNL# 576: [1035L_Q]
507.90 -642.7
CHNL# 570: [1034L_Q]
43.685 -40.00
CHNL# 562: [983L_L1_Q]
146.80 -398.5
CHNL# 560: [983L_L3_Q]
88.360 -223.8
CHNL# 558: [983L_L2_Q]
82.450 -229.9
CHNL# 556: [964L_L2_Q]
337.42 -93.01

THU, APR 14 2022 20:02 BRANCH Q

TIME (SECONDS)
0.0 0.10500 0.21000 0.31500 0.42000 0.52500 0.63000 0.73500 0.84000 0.94500 1.0500

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN6_SP_1034L_BOWMANTON

FILE: Scn6_SP_1034L_Bowmanton.out

THU, APR 14 2022 20:02

ROTOR ANGLE

CHNL# 43: [ANGL 775[SECCT2 21.000]3]
60.273 -46.28

CHNL# 42: [ANGL 774[SECCT1 21.000]2]
60.273 -46.28

CHNL# 41: [ANGL 773[SECST 20.000]1]
61.972 -43.71

CHNL# 1: [ANGL 667[CANCARB9 13.800]1]
113.23 -29.95

1.0500 0.94500 0.84000 0.73500 0.63000 0.52500 0.42000 0.31500 0.21000 0.10500 0.0

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN6_SP_1034L_BOWMANTON

FILE: Scn6_SP_1034L_Bowmanton.out

THU, APR 14 2022 20:02

REACTIVE POWER

CHNL# 298: [VARS 61994[GRANLEA6 0.6900]G1]
1.0468 -0.5000

CHNL# 295: [VARS 60990[SHAMROC5 0.6500]G1]
4.4875 -1.389

CHNL# 308: [VARS 773[SECST 20.000]1]
2.2364 -0.5691

CHNL# 268: [VARS 667[CANCARB9 13.800]1]
1.2733 -0.6222

CHNL# 307: [VARS990007[FORTYMILE_6 0.6900]G2]
0.50000 -0.5000

CHNL# 306: [VARS990004[FORTYMILE_3 0.6900]G1]
0.50000 -0.5000

1.0500 0.94500 0.84000 0.73500 0.63000 0.52500 0.42000 0.31500 0.21000 0.10500 0.0

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN6_SP_1034L_CASSILS

FILE: Scn6_SP_1034L_Cassils.out

THU, APR 14 2022 20:02

BRANCH Q

CHNL# 568: [964L_L5_Q]
205.64 -65.41

CHNL# 572: [964L_L4_Q]
93.480 -228.7

CHNL# 574: [1005L_Q]
182.87 -199.8

1.0500 0.94500 0.84000 0.73500 0.63000 0.52500 0.42000 0.31500 0.21000 0.10500 0.0

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN6_SP_1034L_BOWMANTON

FILE: Scn6_SP_1034L_Bowmanton.out

THU, APR 14 2022 20:02

ACTIVE POWER

CHNL# 209: [POWR 61994[GRANLEA6 0.6900]G1]
1.2000 -0.2000

CHNL# 206: [POWR 60990[SHAMROC5 0.6500]G1]
2.2273 0.23740

CHNL# 219: [POWR 773[SECST 20.000]1]
3.4636 2.7351

CHNL# 179: [POWR 667[CANCARB9 13.800]1]
1.0921 0.07870

CHNL# 218: [POWR990007[FORTYMILE_6 0.6900]G2]
0.20000 -0.2000

CHNL# 217: [POWR990004[FORTYMILE_3 0.6900]G1]
0.20000 -0.2000

1.0500 0.94500 0.84000 0.73500 0.63000 0.52500 0.42000 0.31500 0.21000 0.10500 0.0

TIME (SECONDS)

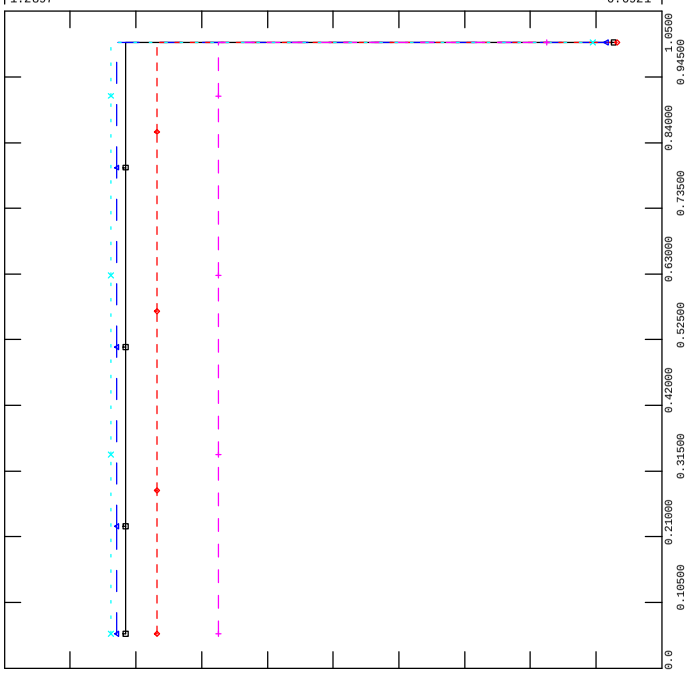
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN6_SP_1034L_BOWMANTON

FILE: Scn6_SP_1034L_Bowmanton.out

THU, APR 14 2022 20:02

BUS VOLTAGE

CHNL# 554: [VOLT 976 [ROTBAUR 138.00]]
1.1852 0.23440
CHNL# 549: [VOLT 320 [CHAPPIC7 138.00]]
1.2026 0.63150
CHNL# 552: [VOLT 662 [WHITLA1 240.00]]
1.3977 -0.0771
CHNL# 551: [VOLT 659 [BOWMAN2 138.00]]
1.2391 0.05830
CHNL# 553: [VOLT 669 [BOWMAN1 240.00]]
1.2897 -0.0921



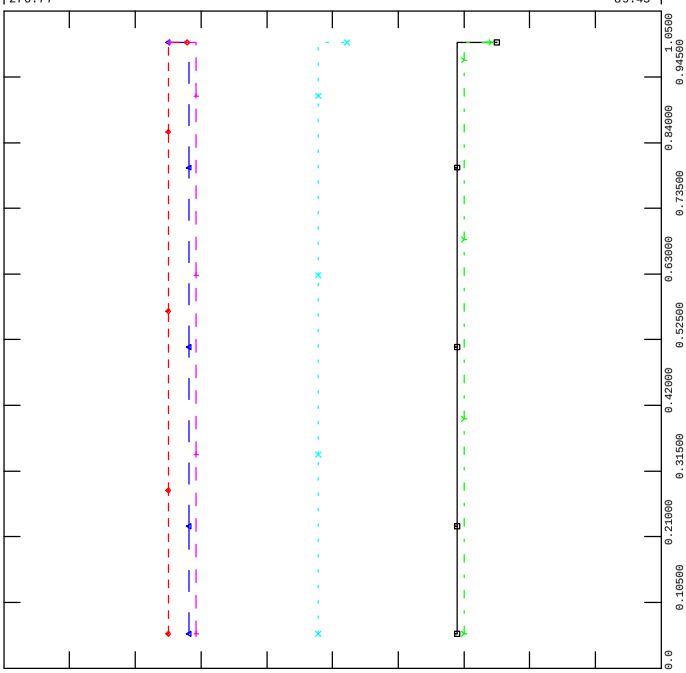
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN6_SP_1034L_BOWMANTON

FILE: Scn6_SP_1034L_Bowmanton.out

THU, APR 14 2022 20:02

BRANCH Q

CHNL# 576: [1035L Q]
359.10 -134.3
CHNL# 570: [1034L Q]
43.685 -40.00
CHNL# 562: [983L_L1_Q]
123.59 -367.2
CHNL# 560: [983L_L3_Q]
98.224 -253.4
CHNL# 558: [983L_L2_Q]
100.91 -301.2
CHNL# 556: [964L_L2_Q]
270.77 -89.45



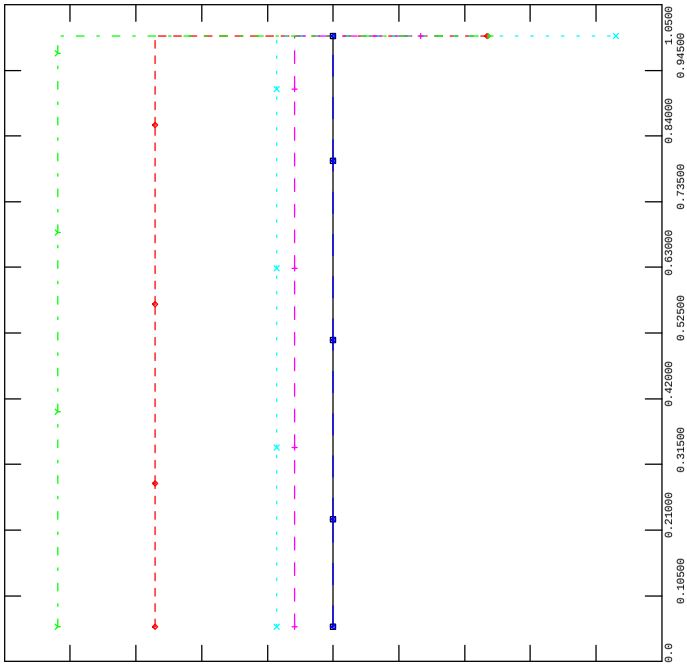
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN6_SP_1034L_BOWMANTON

FILE: Scn6_SP_1034L_Bowmanton.out

THU, APR 14 2022 20:02

TERMINAL VOLTAGE

CHNL# 476: [ETRM 61994[GRANLEA6 0.6900]G1]
1.1384 -0.1000
CHNL# 473: [ETRM 60990[SHAMROC5 0.6500]G1]
1.5770 0.14390
CHNL# 486: [ETRM 773[SECST 20.000]1]
1.1604 0.88770
CHNL# 446: [ETRM 667[CANCARB9 13.800]1]
1.1813 0.56330
CHNL# 485: [ETRM990007[FORTYMILE_6 0.6900]G2]
0.10000 -0.1000
CHNL# 484: [ETRM990004[FORTYMILE_3 0.6900]G1]
0.10000 -0.1000



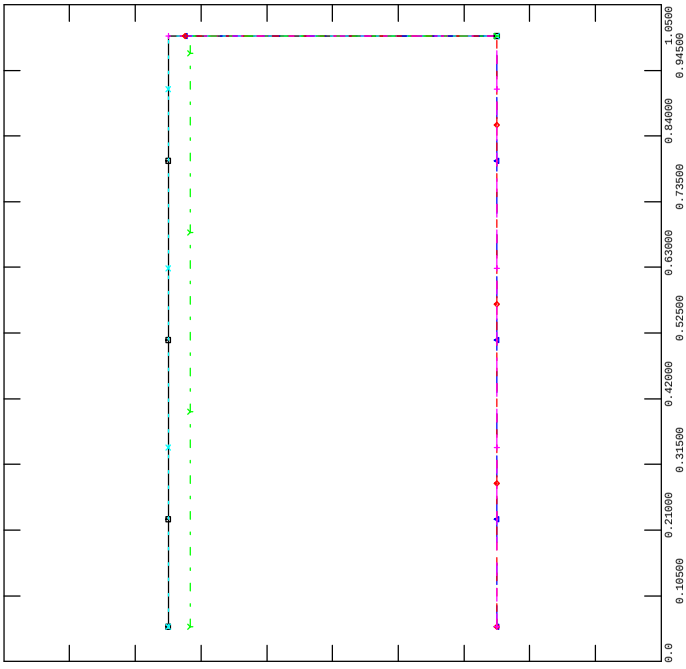
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN6_SP_1034L_BOWMANTON

FILE: Scn6_SP_1034L_Bowmanton.out

THU, APR 14 2022 20:02

BRANCH P

CHNL# 575: [1035L_P]
687.01 -227.6
CHNL# 569: [1034L_P]
604.22 -201.4
CHNL# 561: [983L_L1_P]
209.48 -629.5
CHNL# 559: [983L_L3_P]
130.28 -343.7
CHNL# 557: [983L_L2_P]
130.39 -343.6
CHNL# 555: [964L_L2_P]
465.59 -155.1



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN6_SP_1034L_BOWMANTON

FILE: Scn6_SP_1034L_Bowmanton.out

THU, APR 14 2022 20:02

BRANCH Q

CHNL# 568: [964L L5 Q]
247.22 -77.92

CHNL# 572: [964L L4 Q]
112.60 -308.7

CHNL# 574: [1005L Q]
155.46 -147.2

1.0500 0.94500 0.84000 0.73500 0.63000 0.52500 0.42000 0.31500 0.21000 0.10500 0.0

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN6_SP_1035L_NEWELL

FILE: Scn6_SP_1035L_Newell.out

THU, APR 14 2022 20:02

ACTIVE POWER

CHNL# 209: [POWR 61994[GRANLEA6 0.6900]G1]
1.2000 -0.2000

CHNL# 206: [POWR 60990[SHAMROC5 0.6500]G1]
2.2205 0.24200

CHNL# 219: [POWR 773[SECST 20.000]1]
3.4635 2.7304

CHNL# 179: [POWR 667[CANCARB9 13.800]1]
1.0839 0.07850

CHNL# 218: [POWR990007[FORTYMILE_6 0.6900]G2]
0.20000 -0.2000

CHNL# 217: [POWR990004[FORTYMILE 3 0.6900]G1]
0.20000 -0.2000

1.0500 0.94500 0.84000 0.73500 0.63000 0.52500 0.42000 0.31500 0.21000 0.10500 0.0

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN6_SP_1034L_BOWMANTON

FILE: Scn6_SP_1034L_Bowmanton.out

THU, APR 14 2022 20:02

BRANCH P

CHNL# 567: [964L L5 P]
206.41 -75.04

CHNL# 571: [964L L4 P]
152.94 -458.9

CHNL# 573: [1005L P]
-142.5 -516.7

1.0500 0.94500 0.84000 0.73500 0.63000 0.52500 0.42000 0.31500 0.21000 0.10500 0.0

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN6_SP_1035L_NEWELL

FILE: Scn6_SP_1035L_Newell.out

THU, APR 14 2022 20:02

ROTOR ANGLE

CHNL# 43: [ANGL 775[SECCT2 21.000]3]
60.203 -46.31

CHNL# 42: [ANGL 774[SECCT1 21.000]2]
60.203 -46.31

CHNL# 41: [ANGL 773[SECST 20.000]1]
61.907 -43.72

CHNL# 1: [ANGL 667[CANCARB9 13.800]1]
113.38 -28.07

1.0500 0.94500 0.84000 0.73500 0.63000 0.52500 0.42000 0.31500 0.21000 0.10500 0.0

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN6_SP_1035L_NEWELL

FILE: Scn6_SP_1035L_Newell.out

THU, APR 14 2022 20:02

TERMINAL VOLTAGE

CHNL# 476: [ETRM 61994[GRANLEA6 0.6900]G1] 1.1384 -0.1000
CHNL# 473: [ETRM 60990[SHAMROC5 0.6500]G1] 1.5721 0.14390
CHNL# 486: [ETRM 773[SECST 20.000]1] 1.1605 0.88770
CHNL# 446: [ETRM 667[CANCARB9 13.800]1] 1.1817 0.56330
CHNL# 485: [ETRM990007[FORTYMILE_6 0.6900]G2] 0.10000 -0.1000
CHNL# 484: [ETRM990004[FORTYMILE_3 0.6900]G1] 0.10000 -0.1000

1.0500 0.94500 0.84000 0.73500 0.63000 0.52500 0.42000 0.31500 0.21000 0.10500 0.0

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN6_SP_1035L_NEWELL

FILE: Scn6_SP_1035L_Newell.out

THU, APR 14 2022 20:02

BRANCH P

CHNL# 575: [1035L P] 641.19 -213.7
CHNL# 569: [1034L P] 681.70 -225.9
CHNL# 561: [983L_L1_P] 209.48 -629.5
CHNL# 559: [983L_L3_P] 130.21 -343.6
CHNL# 557: [983L_L2_P] 130.32 -343.5
CHNL# 555: [964L_L2_P] 465.58 -155.1

1.0500 0.94500 0.84000 0.73500 0.63000 0.52500 0.42000 0.31500 0.21000 0.10500 0.0

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN6_SP_1035L_NEWELL

FILE: Scn6_SP_1035L_Newell.out

THU, APR 14 2022 20:02

REACTIVE POWER

CHNL# 298: [VARS 61994[GRANLEA6 0.6900]G1] 1.0498 -0.5000
CHNL# 295: [VARS 60990[SHAMROC5 0.6500]G1] 4.4677 -1.383
CHNL# 308: [VARS 773[SECST 20.000]1] 2.2392 -0.5760
CHNL# 268: [VARS 667[CANCARB9 13.800]1] 1.2733 -0.6260
CHNL# 307: [VARS990007[FORTYMILE_6 0.6900]G2] 0.50000 -0.5000
CHNL# 306: [VARS990004[FORTYMILE_3 0.6900]G1] 0.50000 -0.5000

1.0500 0.94500 0.84000 0.73500 0.63000 0.52500 0.42000 0.31500 0.21000 0.10500 0.0

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN6_SP_1035L_NEWELL

FILE: Scn6_SP_1035L_Newell.out

THU, APR 14 2022 20:02

BUS VOLTAGE

CHNL# 554: [VOLT 976 [ROTBAUR 138.00]] 1.1859 0.23440
CHNL# 549: [VOLT 320 [CHAPPIC7 138.00]] 1.2033 0.63150
CHNL# 552: [VOLT 662 [WHITLA1 240.00]] 1.3925 -0.0770
CHNL# 551: [VOLT 659 [BOWMAN2 138.00]] 1.2420 0.05830
CHNL# 553: [VOLT 669 [BOWMAN1 240.00]] 1.2922 -0.0922

1.0500 0.94500 0.84000 0.73500 0.63000 0.52500 0.42000 0.31500 0.21000 0.10500 0.0

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN6_SP_1035L_NEWELL

FILE: Scn6_SP_1035L_Newell.out

THU, APR 14 2022 20:02 BRANCH P

CHNL# 567: [964L_L5_P]
206.43 -75.10
CHNL# 571: [964L_L4_P]
152.93 -458.9
CHNL# 573: [1005L_P]
-144.7 -509.9

TIME (SECONDS)
0.0 0.10500 0.21000 0.31500 0.42000 0.52500 0.63000 0.73500 0.84000 0.94500 1.0500

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN6_SP_1035L_BOWMANTON

FILE: Scn6_SP_1035L_Bowmanton.out

THU, APR 14 2022 20:02 ROTOR ANGLE

CHNL# 43: [ANGL 775[SECCT2 21.000]3]
67.655 -50.75
CHNL# 42: [ANGL 774[SECCT1 21.000]2]
67.655 -50.75
CHNL# 41: [ANGL 773[SECST 20.000]1]
69.585 -47.81
CHNL# 1: [ANGL 667[CANCARB9 13.800]1]
136.77 -39.86

TIME (SECONDS)
0.0 0.10500 0.21000 0.31500 0.42000 0.52500 0.63000 0.73500 0.84000 0.94500 1.0500

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN6_SP_1035L_NEWELL

FILE: Scn6_SP_1035L_Newell.out

THU, APR 14 2022 20:02 BRANCH Q

CHNL# 576: [1035L_Q]
53.418 -40.00
CHNL# 570: [1034L_Q]
357.46 -133.5
CHNL# 562: [983L_L1_Q]
119.92 -356.2
CHNL# 560: [983L_L3_Q]
98.343 -253.7
CHNL# 558: [983L_L2_Q]
100.87 -301.0
CHNL# 556: [964L_L2_Q]
267.03 -88.20

TIME (SECONDS)
0.0 0.10500 0.21000 0.31500 0.42000 0.52500 0.63000 0.73500 0.84000 0.94500 1.0500

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN6_SP_1035L_NEWELL

FILE: Scn6_SP_1035L_Newell.out

THU, APR 14 2022 20:02 BRANCH Q

CHNL# 568: [964L_L5_Q]
243.64 -76.75
CHNL# 572: [964L_L4_Q]
111.36 -305.0
CHNL# 574: [1005L_Q]
173.82 -161.2

TIME (SECONDS)
0.0 0.10500 0.21000 0.31500 0.42000 0.52500 0.63000 0.73500 0.84000 0.94500 1.0500

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN6_SP_1035L_BOWMANTON

FILE: Scn6_SP_1035L_Bowmanton.out

THU, APR 14 2022 20:02

REACTIVE POWER

CHNL# 298: [VARS 61994[GRANLEA6 0.6900]G1]
1.0586 -0.5000

CHNL# 295: [VARS 60990[SHAMROC5 0.6500]G1]
1.8342 -0.4926

CHNL# 308: [VARS 773[SECST 20.000]1]
3.7895 -1.111

CHNL# 268: [VARS 667[CANCARB9 13.800]1]
1.2444 -0.6644

CHNL# 307: [VARS990007[FORTYMILE_6 0.6900]G2]
0.50000 -0.5000

CHNL# 306: [VARS990004[FORTYMILE_3 0.6900]G1]
0.50000 -0.5000

TIME (SECONDS)

1.0500 0.94500 0.84000 0.73500 0.63000 0.52500 0.42000 0.31500 0.21000 0.10500 0.0

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN6_SP_1035L_BOWMANTON

FILE: Scn6_SP_1035L_Bowmanton.out

THU, APR 14 2022 20:02

BUS VOLTAGE

CHNL# 554: [VOLT 976 [ROTBAUR 138.00]]
1.2210 0.28590

CHNL# 549: [VOLT 320 [CHAPPIC7 138.00]]
1.2292 0.24210

CHNL# 552: [VOLT 662 [WHITLA1 240.00]]
1.3789 -0.0415

CHNL# 551: [VOLT 659 [BOWMAN2 138.00]]
1.2803 0.12240

CHNL# 553: [VOLT 669 [BOWMAN1 240.00]]
1.3342 -0.0168

TIME (SECONDS)

1.0500 0.94500 0.84000 0.73500 0.63000 0.52500 0.42000 0.31500 0.21000 0.10500 0.0

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN6_SP_1035L_BOWMANTON

FILE: Scn6_SP_1035L_Bowmanton.out

THU, APR 14 2022 20:02

ACTIVE POWER

CHNL# 209: [POWR 61994[GRANLEA6 0.6900]G1]
1.2000 -0.2000

CHNL# 206: [POWR 60990[SHAMROC5 0.6500]G1]
2.2199 0.31950

CHNL# 219: [POWR 773[SECST 20.000]1]
3.5898 2.6179

CHNL# 179: [POWR 667[CANCARB9 13.800]1]
1.0453 -0.1258

CHNL# 218: [POWR990007[FORTYMILE_6 0.6900]G2]
0.20000 -0.2000

CHNL# 217: [POWR990004[FORTYMILE_3 0.6900]G1]
0.20000 -0.2000

TIME (SECONDS)

1.0500 0.94500 0.84000 0.73500 0.63000 0.52500 0.42000 0.31500 0.21000 0.10500 0.0

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN6_SP_1035L_BOWMANTON

FILE: Scn6_SP_1035L_Bowmanton.out

THU, APR 14 2022 20:02

TERMINAL VOLTAGE

CHNL# 476: [ETRM 61994[GRANLEA6 0.6900]G1]
1.1384 -0.1000

CHNL# 473: [ETRM 60990[SHAMROC5 0.6500]G1]
1.2995 0.17200

CHNL# 486: [ETRM 773[SECST 20.000]1]
1.1552 0.80140

CHNL# 446: [ETRM 667[CANCARB9 13.800]1]
1.1833 0.62730

CHNL# 485: [ETRM990007[FORTYMILE_6 0.6900]G2]
0.10000 -0.1000

CHNL# 484: [ETRM990004[FORTYMILE_3 0.6900]G1]
0.10000 -0.1000

TIME (SECONDS)

1.0500 0.94500 0.84000 0.73500 0.63000 0.52500 0.42000 0.31500 0.21000 0.10500 0.0

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN6_SP_1035L_BOWMANTON

FILE: Scn6_SP_1035L_Bowmanton.out

THU, APR 14 2022 20:02 BRANCH Q

CHNL# 576: [1035L Q]
53.418 -40.00

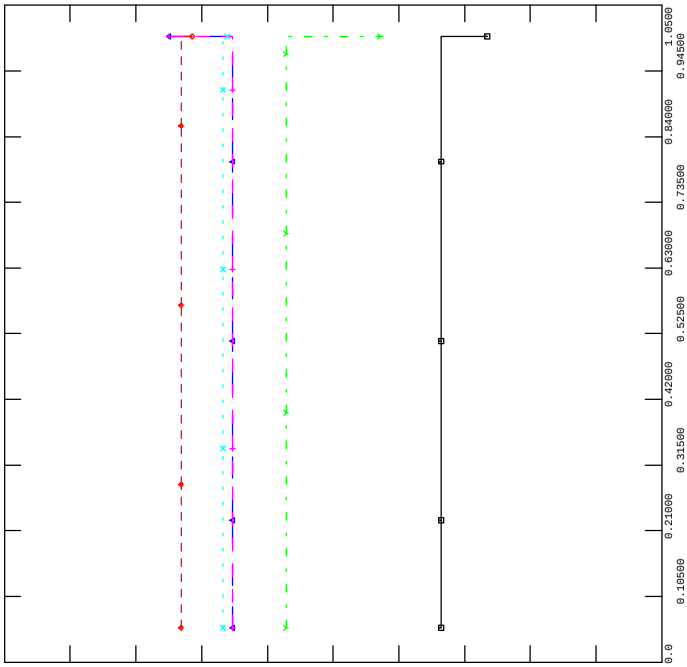
CHNL# 570: [1034L Q]
274.54 -540.7

CHNL# 562: [983L L1 Q]
100.59 -247.2

CHNL# 560: [983L L3 Q]
53.232 -106.5

CHNL# 558: [983L L2 Q]
63.706 -156.0

CHNL# 556: [964L L2 Q]
122.59 -28.13



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN6_SP_1035L_BOWMANTON

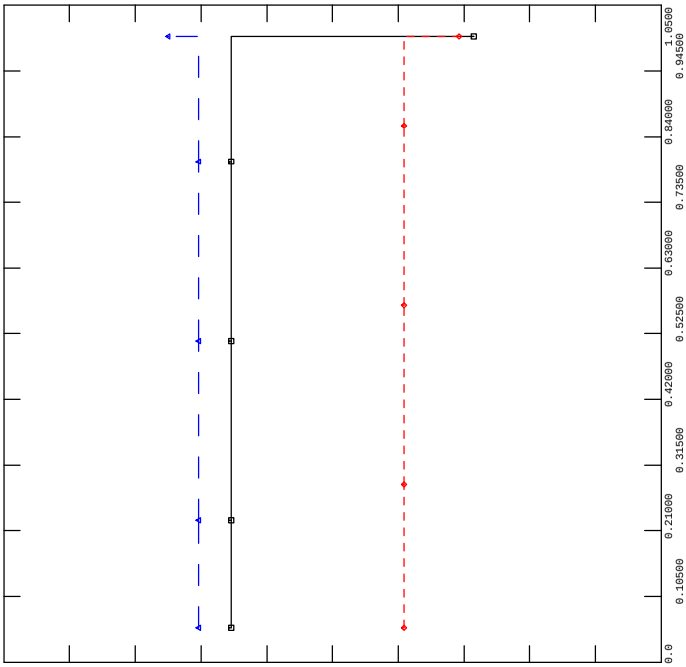
FILE: Scn6_SP_1035L_Bowmanton.out

THU, APR 14 2022 20:02 BRANCH Q

CHNL# 568: [964L L5 Q]
92.116 -37.91

CHNL# 572: [964L L4 Q]
70.957 -143.8

CHNL# 574: [1005L Q]
187.18 -201.5



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN6_SP_1035L_BOWMANTON

FILE: Scn6_SP_1035L_Bowmanton.out

THU, APR 14 2022 20:02 BRANCH P

CHNL# 575: [1035L P]
641.19 -213.7

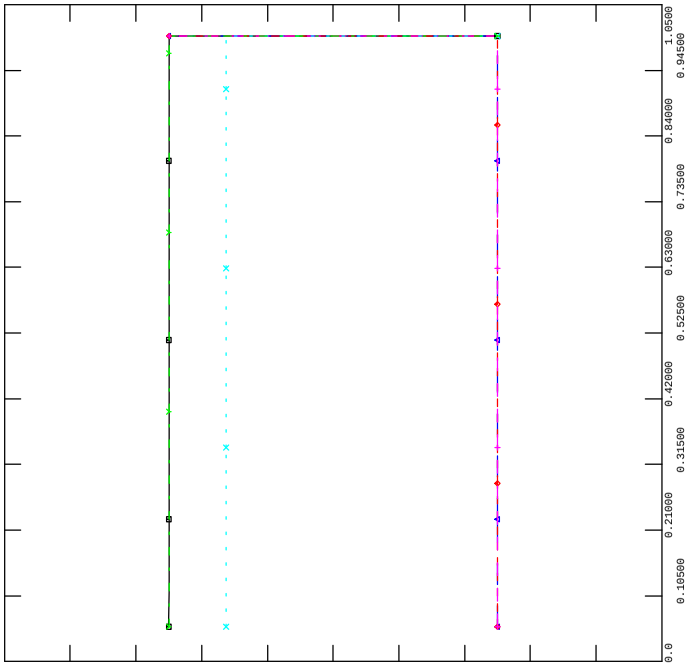
CHNL# 569: [1034L P]
729.87 -239.6

CHNL# 561: [983L L1 P]
208.38 -629.2

CHNL# 559: [983L L3 P]
112.28 -337.7

CHNL# 557: [983L L2 P]
112.37 -337.6

CHNL# 555: [964L L2 P]
465.37 -154.4



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN6_SP_1035L_BOWMANTON

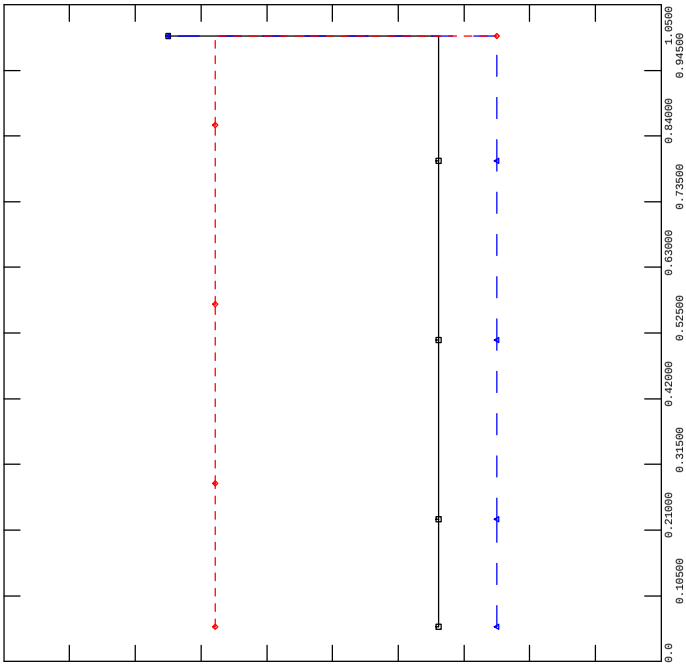
FILE: Scn6_SP_1035L_Bowmanton.out

THU, APR 14 2022 20:02 BRANCH P

CHNL# 567: [964L L5 P]
205.11 -72.07

CHNL# 571: [964L L4 P]
155.55 -459.7

CHNL# 573: [1005L P]
89.456 -510.7



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_POST_NOFAULT

FILE: scn3_SP_Post_nofault.out

THU, APR 14 2022 14:27

ACTIVE POWER

CHNL# 201: [POWR 61994[GRANLEA6 0.6900]G1]
1.2000 0.80000
CHNL# 198: [POWR 60990[SHAMROC5 0.6500]G1]
2.2160 1.8160
CHNL# 207: [POWR 773[SECST 20.000]1]
3.1790 2.7790
CHNL# 171: [POWR 667[CANCARB9 13.800]1]
0.74170 0.34170
CHNL# 206: [POWR990007[FORTYMILE_6 0.6900]G2]
1.7000 1.3000
CHNL# 205: [POWR990004[FORTYMILE_3 0.6900]G1]
1.7000 1.3000

0.0 2.0000 4.0000 6.0000 8.0000 10.000 12.000 14.000 16.000 18.000 20.000

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_POST_NOFAULT

FILE: scn3_SP_Post_nofault.out

THU, APR 14 2022 14:27

TERMINAL VOLTAGE

CHNL# 456: [ETRM 61994[GRANLEA6 0.6900]G1]
1.1710 0.97100
CHNL# 453: [ETRM 60990[SHAMROC5 0.6500]G1]
1.1731 0.97310
CHNL# 462: [ETRM 773[SECST 20.000]1]
1.1400 0.94000
CHNL# 426: [ETRM 667[CANCARB9 13.800]1]
1.1400 0.94000
CHNL# 461: [ETRM990007[FORTYMILE_6 0.6900]G2]
1.1550 0.95500
CHNL# 460: [ETRM990004[FORTYMILE_3 0.6900]G1]
1.1550 0.95500

0.0 2.0000 4.0000 6.0000 8.0000 10.000 12.000 14.000 16.000 18.000 20.000

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_POST_NOFAULT

FILE: scn3_SP_Post_nofault.out

THU, APR 14 2022 14:27

ROTOR ANGLE

CHNL# 39: [ANGL 775[SECCT2 21.000]3]
53.586 -46.42
CHNL# 38: [ANGL 774[SECCT1 21.000]2]
53.586 -46.42
CHNL# 37: [ANGL 773[SECST 20.000]1]
55.716 -44.29
CHNL# 1: [ANGL 667[CANCARB9 13.800]1]
99.352 -0.6909

0.0 2.0000 4.0000 6.0000 8.0000 10.000 12.000 14.000 16.000 18.000 20.000

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_POST_NOFAULT

FILE: scn3_SP_Post_nofault.out

THU, APR 14 2022 14:27

REACTIVE POWER

CHNL# 286: [VARS 61994[GRANLEA6 0.6900]G1]
0.90390 -0.0961
CHNL# 283: [VARS 60990[SHAMROC5 0.6500]G1]
1.4598 0.45980
CHNL# 292: [VARS 773[SECST 20.000]1]
1.1647 0.16430
CHNL# 256: [VARS 667[CANCARB9 13.800]1]
0.72810 -0.2720
CHNL# 291: [VARS990007[FORTYMILE_6 0.6900]G2]
0.79660 -0.2034
CHNL# 290: [VARS990004[FORTYMILE_3 0.6900]G1]
0.79660 -0.2034

0.0 2.0000 4.0000 6.0000 8.0000 10.000 12.000 14.000 16.000 18.000 20.000

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_POST_NOFAULT

FILE: scn3_SP_Post_nofault.out

THU, APR 14 2022 14:27 BRANCH P

CHNL# 551: [1035L_P]
527.96 447.95
CHNL# 545: [1034L_P]
503.69 423.67
CHNL# 537: [983L_L1_P]
-477.4 -557.4
CHNL# 535: [983L_L3_P]
-285.1 -365.1
CHNL# 533: [983L_L2_P]
-284.9 -364.9
CHNL# 531: [964L_L2_P]
195.31 115.31

TIME (SECONDS)
0.0 2.0000 4.0000 6.0000 8.0000 10.000 12.000 14.000 16.000 18.000 20.000

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_POST_NOFAULT

FILE: scn3_SP_Post_nofault.out

THU, APR 14 2022 14:27 BRANCH P

CHNL# 543: [964L_L5_P]
1.0333 -78.97
CHNL# 547: [964L_L4_P]
-396.4 -476.4
CHNL# 549: [1005L_P]
-246.3 -326.3

TIME (SECONDS)
0.0 2.0000 4.0000 6.0000 8.0000 10.000 12.000 14.000 16.000 18.000 20.000

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_POST_NOFAULT

FILE: scn3_SP_Post_nofault.out

THU, APR 14 2022 14:27 BUS VOLTAGE

CHNL# 530: [VOLT 976 [ROTBAUR 138.00]]
1.0949 0.89490
CHNL# 525: [VOLT 320 [CHAPPIC7 138.00]]
1.0912 0.89120
CHNL# 528: [VOLT 662 [WHITLA1 240.00]]
1.1257 0.92570
CHNL# 527: [VOLT 659 [BOWMAN2 138.00]]
1.0856 0.88560
CHNL# 529: [VOLT 669 [BOWMAN1 240.00]]
1.0770 0.87700

TIME (SECONDS)
0.0 2.0000 4.0000 6.0000 8.0000 10.000 12.000 14.000 16.000 18.000 20.000

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_POST_NOFAULT

FILE: scn3_SP_Post_nofault.out

THU, APR 14 2022 14:27 BRANCH Q

CHNL# 552: [1035L_Q]
53.267 -26.75
CHNL# 546: [1034L_Q]
41.510 -38.50
CHNL# 538: [983L_L1_Q]
37.187 -42.82
CHNL# 536: [983L_L3_Q]
16.065 -63.94
CHNL# 534: [983L_L2_Q]
-2.638 -82.64
CHNL# 532: [964L_L2_Q]
113.54 33.531

TIME (SECONDS)
0.0 2.0000 4.0000 6.0000 8.0000 10.000 12.000 14.000 16.000 18.000 20.000

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_964LY_BOWMANTON

FILE: scn3_SP_964LY_Bowmanton.out

THU, APR 14 2022 14:27

ROTOR ANGLE

CHNL# 39: [ANGL 775[SECCT2 21.000]3]
55.896 -48.77

CHNL# 38: [ANGL 774[SECCT1 21.000]2]
55.896 -48.77

CHNL# 37: [ANGL 773[SECST 20.000]1]
57.694 -46.32

CHNL# 1: [ANGL 667[CANCARB9 13.800]1]
104.92 -34.44

TIME (SECONDS)

0.0 0.10500 0.21000 0.31500 0.42000 0.52500 0.63000 0.73500 0.84000 0.94500 1.0500

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_964LY_BOWMANTON

FILE: scn3_SP_964LY_Bowmanton.out

THU, APR 14 2022 14:27

REACTIVE POWER

CHNL# 286: [VARS 61994[GRANLEA6 0.6900]G1]
1.5354 -0.4621

CHNL# 283: [VARS 60990[SHAMROC5 0.6500]G1]
3.2371 -0.7135

CHNL# 292: [VARS 773[SECST 20.000]1]
2.1869 -0.6220

CHNL# 256: [VARS 667[CANCARB9 13.800]1]
1.3240 -0.5576

CHNL# 291: [VARS990007[FORTYMILE_6 0.6900]G2]
0.73430 -0.5000

CHNL# 290: [VARS990004[FORTYMILE_3 0.6900]G1]
0.73430 -0.5000

TIME (SECONDS)

0.0 0.10500 0.21000 0.31500 0.42000 0.52500 0.63000 0.73500 0.84000 0.94500 1.0500

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_POST_NOFAULT

FILE: scn3_SP_Post_nofault.out

THU, APR 14 2022 14:27

BRANCH Q

CHNL# 544: [964L_L5_Q]
70.564 -9.440

CHNL# 548: [964L_L4_Q]
55.290 -24.71

CHNL# 550: [1005L_Q]
127.19 47.139

TIME (SECONDS)

0.0 2.0000 4.0000 6.0000 8.0000 10.000 12.000 14.000 16.000 18.000 20.000

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_964LY_BOWMANTON

FILE: scn3_SP_964LY_Bowmanton.out

THU, APR 14 2022 14:27

ACTIVE POWER

CHNL# 201: [POWR 61994[GRANLEA6 0.6900]G1]
1.2048 -0.0870

CHNL# 198: [POWR 60990[SHAMROC5 0.6500]G1]
2.2257 0.35750

CHNL# 207: [POWR 773[SECST 20.000]1]
3.5085 2.7139

CHNL# 171: [POWR 667[CANCARB9 13.800]1]
1.1272 0.05390

CHNL# 206: [POWR990007[FORTYMILE_6 0.6900]G2]
1.5300 -0.2000

CHNL# 205: [POWR990004[FORTYMILE_3 0.6900]G1]
1.5300 -0.2000

TIME (SECONDS)

0.0 0.10500 0.21000 0.31500 0.42000 0.52500 0.63000 0.73500 0.84000 0.94500 1.0500

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_964LY_BOWMANTON

FILE: scn3_SP_964LY_Bowmanton.out

THU, APR 14 2022 14:27

BUS VOLTAGE

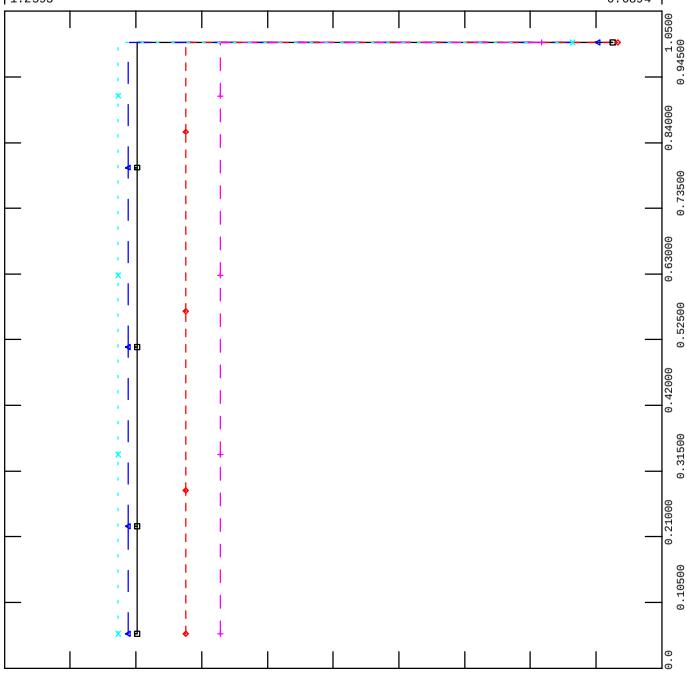
CHNL# 530: [VOLT 976 [ROTBAUR 138.00]]
1.1688 0.19780

CHNL# 525: [VOLT 320 [CHAPPIC7 138.00]]
1.1726 0.62600

CHNL# 528: [VOLT 662 [WHITLA1 240.00]]
1.4456 -0.0487

CHNL# 527: [VOLT 659 [BOWMAN2 138.00]]
1.2157 0.03730

CHNL# 529: [VOLT 669 [BOWMAN1 240.00]]
1.2593 -0.0894



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_964LY_BOWMANTON

FILE: scn3_SP_964LY_Bowmanton.out

THU, APR 14 2022 14:27

BRANCH Q

CHNL# 552: [1035L Q]
163.25 -293.9

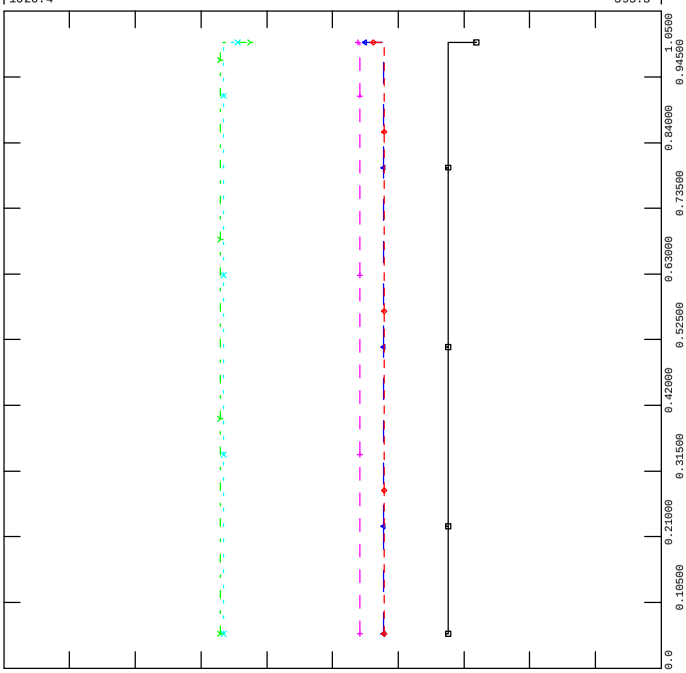
CHNL# 546: [1034L Q]
149.04 -292.7

CHNL# 538: [983L_L1_Q]
630.99 -539.6

CHNL# 536: [983L_L3_Q]
844.62 -660.4

CHNL# 534: [983L_L2_Q]
852.75 -702.1

CHNL# 532: [964L_L2_Q]
1020.4 -395.3



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_964LY_BOWMANTON

FILE: scn3_SP_964LY_Bowmanton.out

THU, APR 14 2022 14:27

TERMINAL VOLTAGE

CHNL# 456: [ETRM 61994[GRANLEA6 0.6900]G1]
1.4778 0.02020

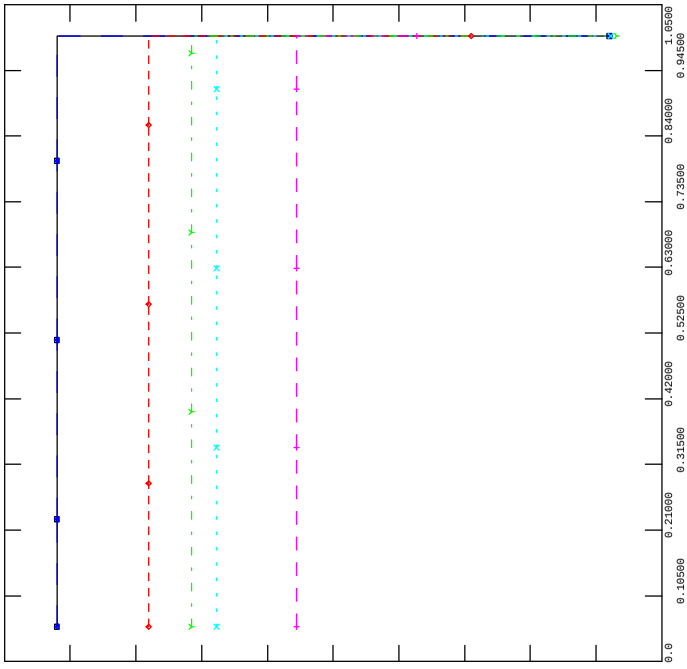
CHNL# 453: [ETRM 60990[SHAMROC5 0.6500]G1]
1.4937 0.20840

CHNL# 462: [ETRM 773[SECST 20.000]1]
1.1592 0.89070

CHNL# 426: [ETRM 667[CANCARB9 13.800]1]
1.1749 0.56100

CHNL# 461: [ETRM990007[FORTYMILE_6 0.6900]G2]
1.1550 -0.1000

CHNL# 460: [ETRM990004[FORTYMILE_3 0.6900]G1]
1.1550 -0.1000



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_964LY_BOWMANTON

FILE: scn3_SP_964LY_Bowmanton.out

THU, APR 14 2022 14:27

BRANCH P

CHNL# 551: [1035L P]
709.27 -235.5

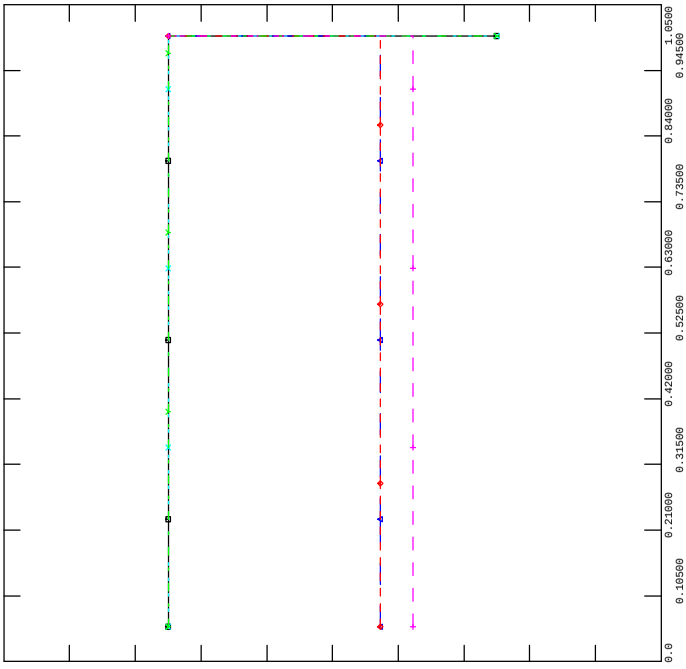
CHNL# 545: [1034L P]
672.76 -223.7

CHNL# 537: [983L_L1_P]
337.60 -1014.

CHNL# 535: [983L_L3_P]
239.28 -721.7

CHNL# 533: [983L_L2_P]
239.06 -721.0

CHNL# 531: [964L_L2_P]
254.99 -84.97



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_964LY_BOWMANTON

FILE: scn3_SP_964LY_Bowmanton.out

THU, APR 14 2022 14:27

BRANCH Q

CHNL# 544: [964L L5 Q]
898.71 -470.6

CHNL# 548: [964L L4 Q]
50.525 -40.00

CHNL# 550: [1005L Q]
181.98 -64.54

TIME (SECONDS)

0.0 0.10500 0.21000 0.31500 0.42000 0.52500 0.63000 0.73500 0.84000 0.94500 1.0500

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_964LY_MURRAY_LAKE

FILE: scn3_SP_964LY_Murray_Lake.out

THU, APR 14 2022 14:27

ACTIVE POWER

CHNL# 201: [POWR 61994[GRANLEA6 0.6900]G1]
1.2023 -0.0713

CHNL# 198: [POWR 60990[SHAMROC5 0.6500]G1]
2.7526 0.23000

CHNL# 207: [POWR 773[SECST 20.000]1]
3.5092 2.7308

CHNL# 171: [POWR 667[CANCARB9 13.800]1]
1.0551 0.10240

CHNL# 206: [POWR990007[FORTYMILE_6 0.6900]G2]
1.5300 -0.2000

CHNL# 205: [POWR990004[FORTYMILE 3 0.6900]G1]
1.5300 -0.2000

TIME (SECONDS)

0.0 0.10500 0.21000 0.31500 0.42000 0.52500 0.63000 0.73500 0.84000 0.94500 1.0500

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_964LY_BOWMANTON

FILE: scn3_SP_964LY_Bowmanton.out

THU, APR 14 2022 14:27

BRANCH P

CHNL# 543: [964L L5 P]
105.11 -296.4

CHNL# 547: [964L L4 P]
209.99 -630.0

CHNL# 549: [1005L P]
-124.8 -526.1

TIME (SECONDS)

0.0 0.10500 0.21000 0.31500 0.42000 0.52500 0.63000 0.73500 0.84000 0.94500 1.0500

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_964LY_MURRAY_LAKE

FILE: scn3_SP_964LY_Murray_Lake.out

THU, APR 14 2022 14:27

ROTOR ANGLE

CHNL# 39: [ANGL 775[SECCT2 21.000]3]
55.801 -49.09

CHNL# 38: [ANGL 774[SECCT1 21.000]2]
55.801 -49.09

CHNL# 37: [ANGL 773[SECST 20.000]1]
57.625 -46.65

CHNL# 1: [ANGL 667[CANCARB9 13.800]1]
98.811 -32.20

TIME (SECONDS)

0.0 0.10500 0.21000 0.31500 0.42000 0.52500 0.63000 0.73500 0.84000 0.94500 1.0500

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_964LY_MURRAY_LAKE

FILE: scn3_SP_964LY_Murray_Lake.out

THU, APR 14 2022 14:27

TERMINAL VOLTAGE

CHNL# 456: [ETRM 61994[GRANLEA6 0.6900]G1] 1.5603 0.14190
CHNL# 453: [ETRM 60990[SHAMROC5 0.6500]G1] 1.7515 0.13020
CHNL# 462: [ETRM 773[SECST 20.000]1] 1.1544 0.91700
CHNL# 426: [ETRM 667[CANCARB9 13.800]1] 1.1732 0.70030
CHNL# 461: [ETRM990007[FORTYMILE_6 0.6900]G2] 1.1550 -0.1000
CHNL# 460: [ETRM990004[FORTYMILE_3 0.6900]G1] 1.1550 -0.1000

TIME (SECONDS)

1.0500 0.94500 0.84000 0.73500 0.63000 0.52500 0.42000 0.31500 0.21000 0.10500 0.0

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_964LY_MURRAY_LAKE

FILE: scn3_SP_964LY_Murray_Lake.out

THU, APR 14 2022 14:27

BRANCH P

CHNL# 551: [1035L_P] 694.57 -191.4
CHNL# 545: [1034L_P] 662.98 -194.4
CHNL# 537: [983L_L1_P] 359.04 -1014.
CHNL# 535: [983L_L3_P] 259.43 -727.1
CHNL# 533: [983L_L2_P] 260.13 -726.7
CHNL# 531: [964L_L2_P] 255.00 -84.99

TIME (SECONDS)

1.0500 0.94500 0.84000 0.73500 0.63000 0.52500 0.42000 0.31500 0.21000 0.10500 0.0

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_964LY_MURRAY_LAKE

FILE: scn3_SP_964LY_Murray_Lake.out

THU, APR 14 2022 14:27

REACTIVE POWER

CHNL# 286: [VARS 61994[GRANLEA6 0.6900]G1] 2.4152 -0.7034
CHNL# 283: [VARS 60990[SHAMROC5 0.6500]G1] 5.3420 -1.508
CHNL# 292: [VARS 773[SECST 20.000]1] 1.5308 -0.2642
CHNL# 256: [VARS 667[CANCARB9 13.800]1] 1.1476 -0.5301
CHNL# 291: [VARS990007[FORTYMILE_6 0.6900]G2] 0.73430 -0.5000
CHNL# 290: [VARS990004[FORTYMILE_3 0.6900]G1] 0.73430 -0.5000

TIME (SECONDS)

1.0500 0.94500 0.84000 0.73500 0.63000 0.52500 0.42000 0.31500 0.21000 0.10500 0.0

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_964LY_MURRAY_LAKE

FILE: scn3_SP_964LY_Murray_Lake.out

THU, APR 14 2022 14:27

BUS VOLTAGE

CHNL# 530: [VOLT 976 [ROTBAUR 138.00]] 1.1830 0.48810
CHNL# 525: [VOLT 320 [CHAPPIC7 138.00]] 1.1701 0.75010
CHNL# 528: [VOLT 662 [WHITLA1 240.00]] 1.4188 -0.0657
CHNL# 527: [VOLT 659 [BOWMAN2 138.00]] 1.2214 0.38680
CHNL# 529: [VOLT 669 [BOWMAN1 240.00]] 1.2552 0.31680

TIME (SECONDS)

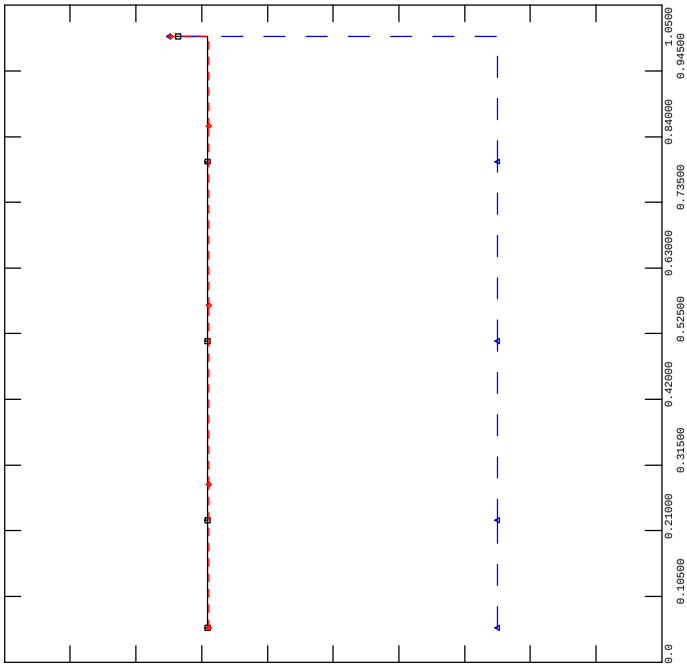
1.0500 0.94500 0.84000 0.73500 0.63000 0.52500 0.42000 0.31500 0.21000 0.10500 0.0

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_964LY_MURRAY_LAKE

FILE: scn3_SP_964LY_Murray_Lake.out

THU, APR 14 2022 14:27 BRANCH P

CHNL# 543: [964L_L5_P]
96.977 -293.2
CHNL# 547: [964L_L4_P]
209.99 -630.0
CHNL# 549: [1005L_P]
-241.8 -393.5

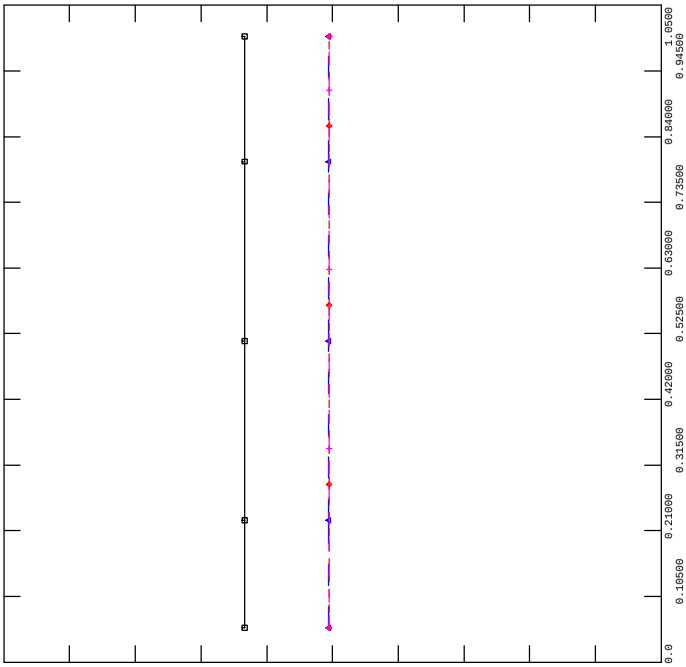


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_983L_BOWMANTON

FILE: scn3_SP_983L_Bowmanton.out

THU, APR 14 2022 14:27 ROTOR ANGLE

CHNL# 39: [ANGL 775[SECCT2 21.000]3]
56.723 -50.53
CHNL# 38: [ANGL 774[SECCT1 21.000]2]
56.723 -50.53
CHNL# 37: [ANGL 773[SECST 20.000]1]
58.396 -48.06
CHNL# 1: [ANGL 667[CANCARB9 13.800]1]
108.50 -54.79

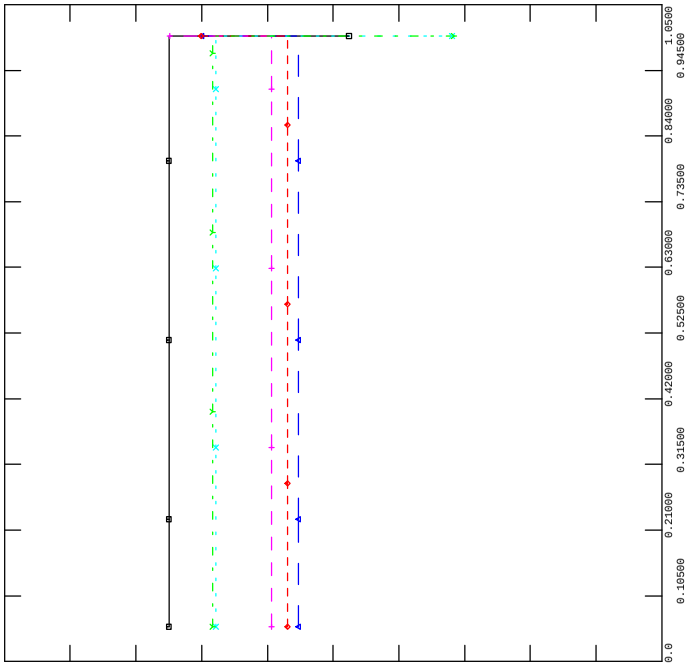


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_964LY_MURRAY_LAKE

FILE: scn3_SP_964LY_Murray_Lake.out

THU, APR 14 2022 14:27 BRANCH Q

CHNL# 552: [1035L_Q]
192.32 -374.8
CHNL# 546: [1034L_Q]
177.86 -371.8
CHNL# 538: [983L_L1_Q]
542.88 -801.0
CHNL# 536: [983L_L3_Q]
545.64 -780.7
CHNL# 534: [983L_L2_Q]
562.84 -796.3
CHNL# 532: [964L_L2_Q]
114.38 -90.11

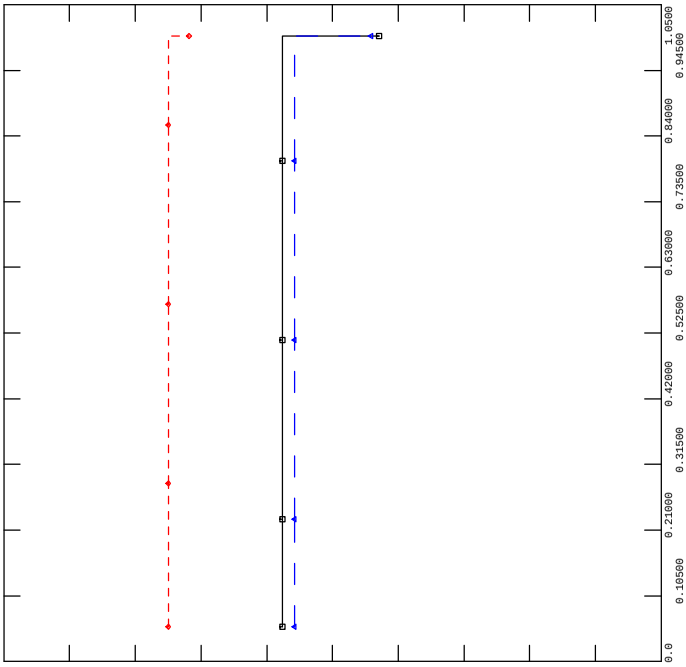


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_964LY_MURRAY_LAKE

FILE: scn3_SP_964LY_Murray_Lake.out

THU, APR 14 2022 14:27 BRANCH Q

CHNL# 544: [964L_L5_Q]
194.88 -454.8
CHNL# 548: [964L_L4_Q]
50.525 -40.00
CHNL# 550: [1005L_Q]
173.36 -21.98



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_983L_BOWMANTON

FILE: scn3_SP_983L_Bowmanton.out

THU, APR 14 2022 14:27

REACTIVE POWER

CHNL# 286: [VARS 61994[GRANLEA6 0.6900]G1] 2.2250 -0.6934
CHNL# 283: [VARS 60990[SHAMROC5 0.6500]G1] 5.1030 -1.331
CHNL# 292: [VARS 773[SECST 20.000]1] 2.1982 -0.6306
CHNL# 256: [VARS 667[CANCARB9 13.800]1] 1.3455 -0.7319
CHNL# 291: [VARS990007[FORTYMILE_6 0.6900]G2] 0.73430 -0.5000
CHNL# 290: [VARS990004[FORTYMILE_3 0.6900]G1] 0.73430 -0.5000

TIME (SECONDS)

0.0 0.10500 0.21000 0.31500 0.42000 0.52500 0.63000 0.73500 0.84000 0.94500 1.0500

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_983L_BOWMANTON

FILE: scn3_SP_983L_Bowmanton.out

THU, APR 14 2022 14:27

BUS VOLTAGE

CHNL# 530: [VOLT 976 [ROTBAUR 138.00]] 1.2571 0.19160
CHNL# 525: [VOLT 320 [CHAPPIC7 138.00]] 1.2103 0.62410
CHNL# 528: [VOLT 662 [WHITLA1 240.00]] 1.7504 -0.0457
CHNL# 527: [VOLT 659 [BOWMAN2 138.00]] 1.3317 0.03210
CHNL# 529: [VOLT 669 [BOWMAN1 240.00]] 1.3977 -0.0953

TIME (SECONDS)

0.0 0.10500 0.21000 0.31500 0.42000 0.52500 0.63000 0.73500 0.84000 0.94500 1.0500

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_983L_BOWMANTON

FILE: scn3_SP_983L_Bowmanton.out

THU, APR 14 2022 14:27

ACTIVE POWER

CHNL# 201: [POWR 61994[GRANLEA6 0.6900]G1] 1.3373 -0.0921
CHNL# 198: [POWR 60990[SHAMROC5 0.6500]G1] 2.5998 0.23300
CHNL# 207: [POWR 773[SECST 20.000]1] 3.5092 2.7178
CHNL# 171: [POWR 667[CANCARB9 13.800]1] 1.2042 -0.1351
CHNL# 206: [POWR990007[FORTYMILE_6 0.6900]G2] 1.5300 -0.2000
CHNL# 205: [POWR990004[FORTYMILE_3 0.6900]G1] 1.5300 -0.2000

TIME (SECONDS)

0.0 0.10500 0.21000 0.31500 0.42000 0.52500 0.63000 0.73500 0.84000 0.94500 1.0500

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_983L_BOWMANTON

FILE: scn3_SP_983L_Bowmanton.out

THU, APR 14 2022 14:27

TERMINAL VOLTAGE

CHNL# 456: [ETRM 61994[GRANLEA6 0.6900]G1] 1.8752 0.01470
CHNL# 453: [ETRM 60990[SHAMROC5 0.6500]G1] 1.9128 0.21180
CHNL# 462: [ETRM 773[SECST 20.000]1] 1.1636 0.89040
CHNL# 426: [ETRM 667[CANCARB9 13.800]1] 1.1990 0.54960
CHNL# 461: [ETRM990007[FORTYMILE_6 0.6900]G2] 1.1550 -0.1000
CHNL# 460: [ETRM990004[FORTYMILE_3 0.6900]G1] 1.1550 -0.1000

TIME (SECONDS)

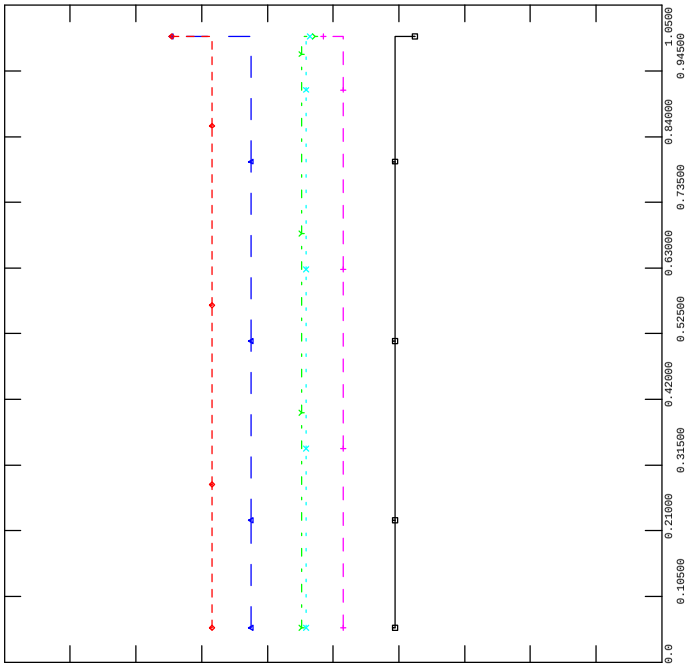
0.0 0.10500 0.21000 0.31500 0.42000 0.52500 0.63000 0.73500 0.84000 0.94500 1.0500

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_983L_BOWMANTON

FILE: scn3_SP_983L_Bowmanton.out

THU, APR 14 2022 14:27 BRANCH Q

CHNL# 552: [1035L_Q] 371.14 -421.3
CHNL# 546: [1034L_Q] 357.79 -419.4
CHNL# 538: [983L_L1_Q] 40.000 -42.52
CHNL# 536: [983L_L3_Q] 97.925 -293.8
CHNL# 534: [983L_L2_Q] 89.581 -268.7
CHNL# 532: [964L_L2_Q] 1262.7 -755.7

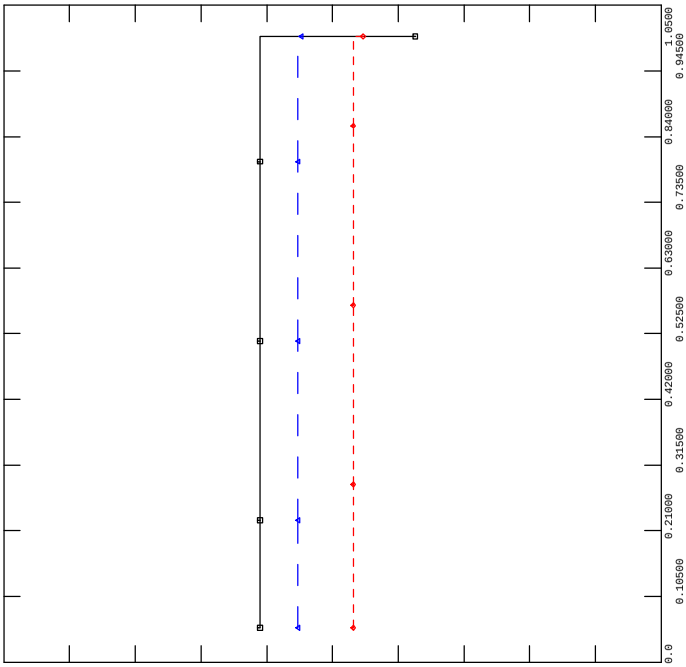


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_983L_BOWMANTON

FILE: scn3_SP_983L_Bowmanton.out

THU, APR 14 2022 14:27 BRANCH Q

CHNL# 544: [964L_L5_Q] 904.12 -736.3
CHNL# 548: [964L_L4_Q] 940.76 -1138.
CHNL# 550: [1005L_Q] 213.97 -102.5

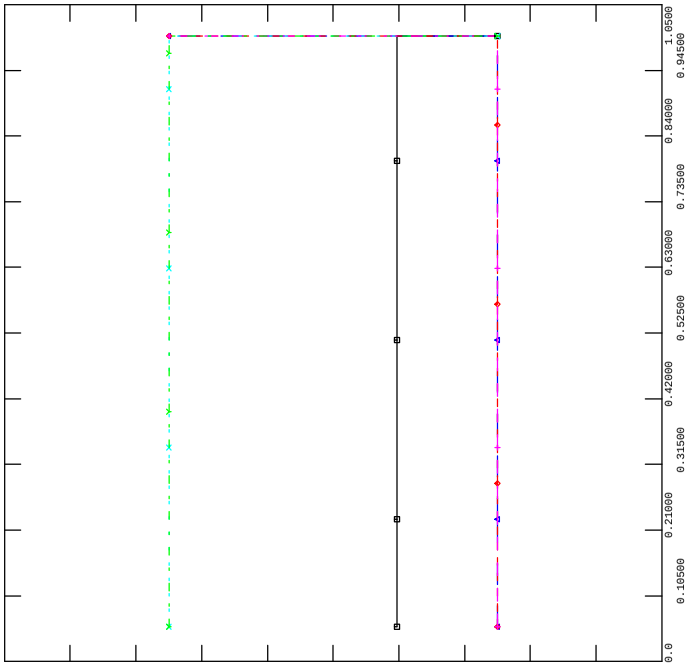


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_983L_BOWMANTON

FILE: scn3_SP_983L_Bowmanton.out

THU, APR 14 2022 14:27 BRANCH P

CHNL# 551: [1035L_P] 709.50 -236.2
CHNL# 545: [1034L_P] 672.91 -224.2
CHNL# 537: [983L_L1_P] 251.93 -755.8
CHNL# 535: [983L_L3_P] 155.56 -466.7
CHNL# 533: [983L_L2_P] 155.45 -466.4
CHNL# 531: [964L_L2_P] 833.09 -277.4

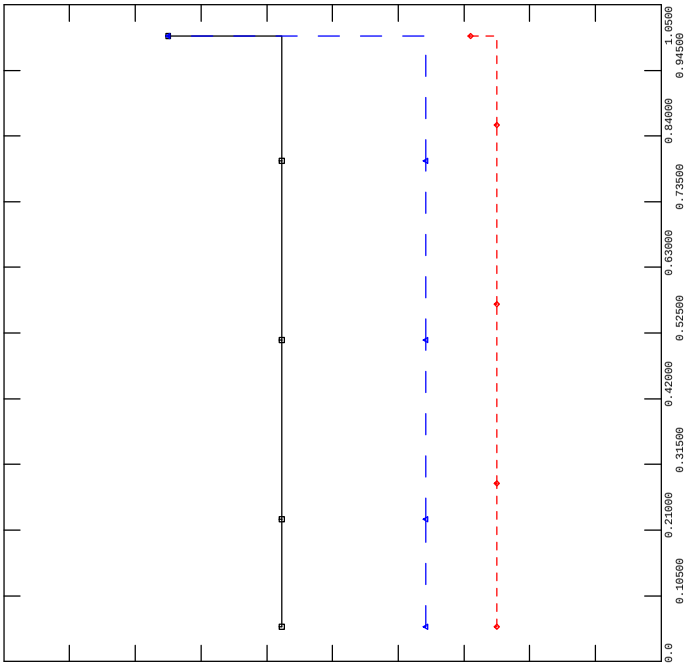


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_983L_BOWMANTON

FILE: scn3_SP_983L_Bowmanton.out

THU, APR 14 2022 14:27 BRANCH P

CHNL# 543: [964L_L5_P] 514.76 -204.2
CHNL# 547: [964L_L4_P] 268.04 -803.9
CHNL# 549: [1005L_P] -131.0 -503.7



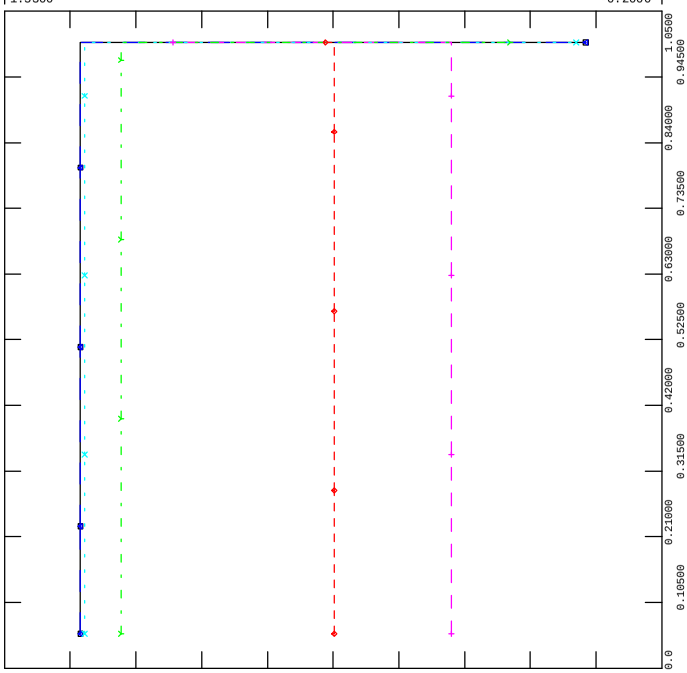
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_983L_WHITLA

FILE: scn3_SP_983L_Whitla.out

THU, APR 14 2022 14:27

ACTIVE POWER

CHNL# 201: [POWR 61994[GRANLEA6 0.6900]G1]
1.2272 -0.0534
CHNL# 198: [POWR 60990[SHAMROC5 0.6500]G1]
2.2670 0.20630
CHNL# 207: [POWR 773[SECST 20.000]1]
3.5089 2.7295
CHNL# 171: [POWR 667[CANCARB9 13.800]1]
1.1105 -0.0227
CHNL# 206: [POWR990007[FORTYMILE_6 0.6900]G2]
1.5300 -0.2000
CHNL# 205: [POWR990004[FORTYMILE_3 0.6900]G1]
1.5300 -0.2000



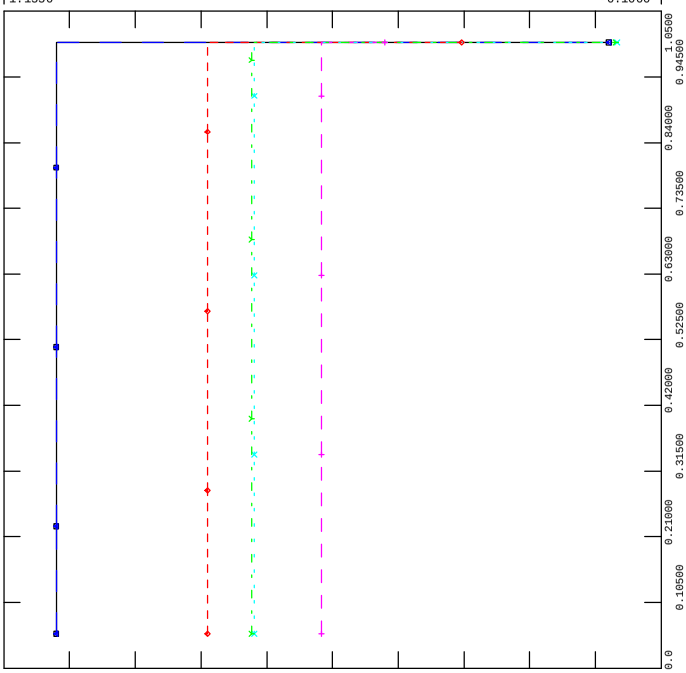
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_983L_WHITLA

FILE: scn3_SP_983L_Whitla.out

THU, APR 14 2022 14:27

TERMINAL VOLTAGE

CHNL# 456: [ETRM 61994[GRANLEA6 0.6900]G1]
1.6109 0.15700
CHNL# 453: [ETRM 60990[SHAMROC5 0.6500]G1]
1.6487 0.15470
CHNL# 462: [ETRM 773[SECST 20.000]1]
1.1549 0.91700
CHNL# 426: [ETRM 667[CANCARB9 13.800]1]
1.1989 0.68570
CHNL# 461: [ETRM990007[FORTYMILE_6 0.6900]G2]
1.1550 -0.1000
CHNL# 460: [ETRM990004[FORTYMILE_3 0.6900]G1]
1.1550 -0.1000



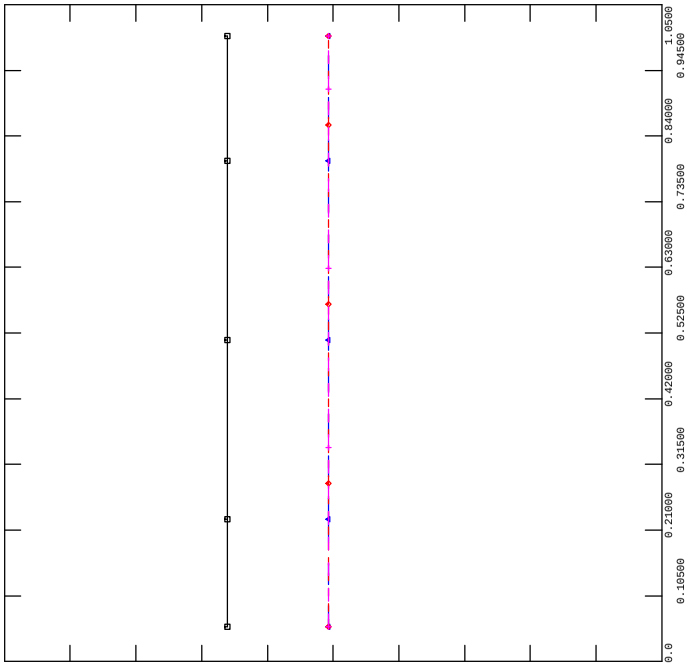
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_983L_WHITLA

FILE: scn3_SP_983L_Whitla.out

THU, APR 14 2022 14:27

ROTOR ANGLE

CHNL# 39: [ANGL 775[SECCT2 21.000]3]
56.460 -50.69
CHNL# 38: [ANGL 774[SECCT1 21.000]2]
56.460 -50.69
CHNL# 37: [ANGL 773[SECST 20.000]1]
58.179 -48.16
CHNL# 1: [ANGL 667[CANCARB9 13.800]1]
98.976 -49.27



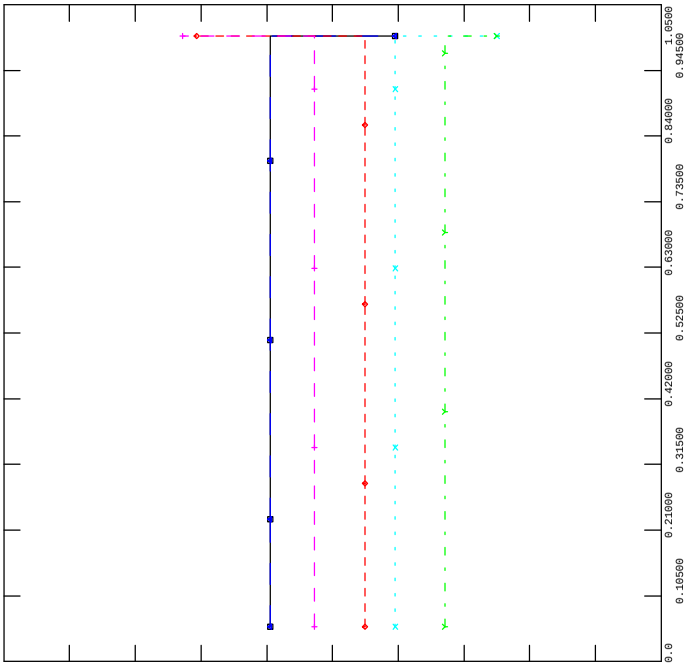
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_983L_WHITLA

FILE: scn3_SP_983L_Whitla.out

THU, APR 14 2022 14:27

REACTIVE POWER

CHNL# 286: [VARS 61994[GRANLEA6 0.6900]G1]
2.4977 -0.7245
CHNL# 283: [VARS 60990[SHAMROC5 0.6500]G1]
3.7880 -0.9607
CHNL# 292: [VARS 773[SECST 20.000]1]
1.5306 -0.3090
CHNL# 256: [VARS 667[CANCARB9 13.800]1]
1.1457 -0.5572
CHNL# 291: [VARS990007[FORTYMILE_6 0.6900]G2]
0.73430 -0.5000
CHNL# 290: [VARS990004[FORTYMILE_3 0.6900]G1]
0.73430 -0.5000



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_983L_WHITLA

FILE: scn3_SP_983L_Whitla.out

THU, APR 14 2022 14:27 BRANCH P

CHNL# 551: [1035L_P]
696.76 -198.0

CHNL# 545: [1034L_P]
665.49 -201.9

CHNL# 537: [983L_L1_P]
351.64 -789.0

CHNL# 535: [983L_L3_P]
155.56 -466.7

CHNL# 533: [983L_L2_P]
219.14 -487.6

CHNL# 531: [964L_L2_P]
753.42 -261.0

1.0500 0.94500 0.84000 0.73500 0.63000 0.52500 0.42000 0.31500 0.21000 0.10500 0.0

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_983L_WHITLA

FILE: scn3_SP_983L_Whitla.out

THU, APR 14 2022 14:27 BRANCH P

CHNL# 543: [964L_L5_P]
460.71 -186.2

CHNL# 547: [964L_L4_P]
285.22 -747.5

CHNL# 549: [1005L_P]
-241.9 -398.2

1.0500 0.94500 0.84000 0.73500 0.63000 0.52500 0.42000 0.31500 0.21000 0.10500 0.0

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_983L_WHITLA

FILE: scn3_SP_983L_Whitla.out

THU, APR 14 2022 14:27 BUS VOLTAGE

CHNL# 530: [VOLT 976 [ROTBAUR 138.00]]
1.1997 0.47920

CHNL# 525: [VOLT 320 [CHAPPIC7 138.00]]
1.1769 0.75090

CHNL# 528: [VOLT 662 [WHITLA1 240.00]]
1.4481 -0.0990

CHNL# 527: [VOLT 659 [BOWMAN2 138.00]]
1.2335 0.38960

CHNL# 529: [VOLT 669 [BOWMAN1 240.00]]
1.2732 0.31970

1.0500 0.94500 0.84000 0.73500 0.63000 0.52500 0.42000 0.31500 0.21000 0.10500 0.0

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_983L_WHITLA

FILE: scn3_SP_983L_Whitla.out

THU, APR 14 2022 14:27 BRANCH Q

CHNL# 552: [1035L_Q]
219.80 -393.2

CHNL# 546: [1034L_Q]
208.50 -390.5

CHNL# 538: [983L_L1_Q]
1268.4 -426.2

CHNL# 536: [983L_L3_Q]
40.000 -65.58

CHNL# 534: [983L_L2_Q]
834.54 -338.1

CHNL# 532: [964L_L2_Q]
912.00 -332.1

1.0500 0.94500 0.84000 0.73500 0.63000 0.52500 0.42000 0.31500 0.21000 0.10500 0.0

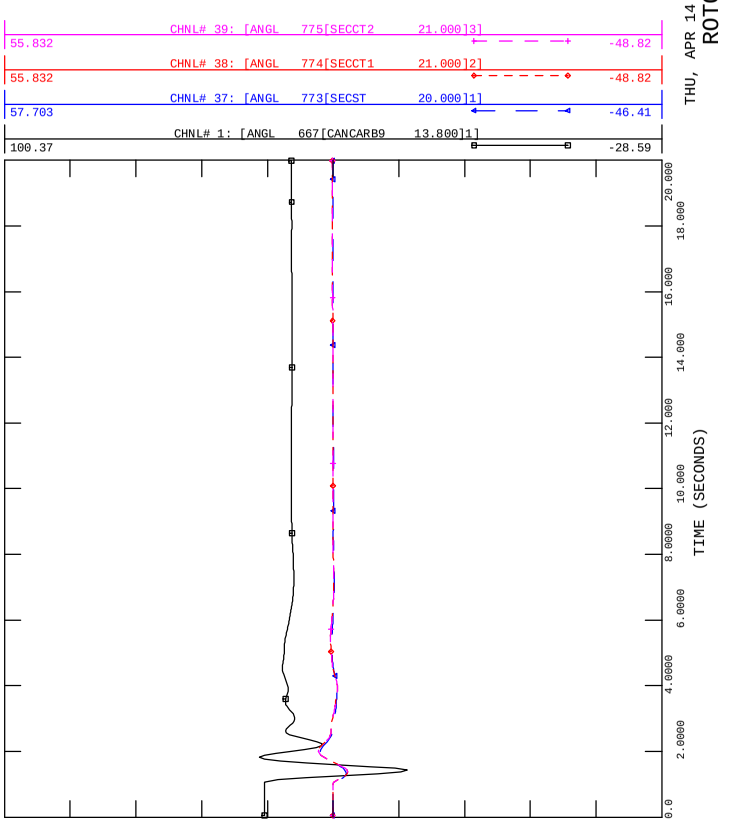
TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_964LX_MURRAY_LAKE

FILE: scn3_SP_964LX_Murray_Lake.out

THU, APR 14 2022 14:27

ROTOR ANGLE

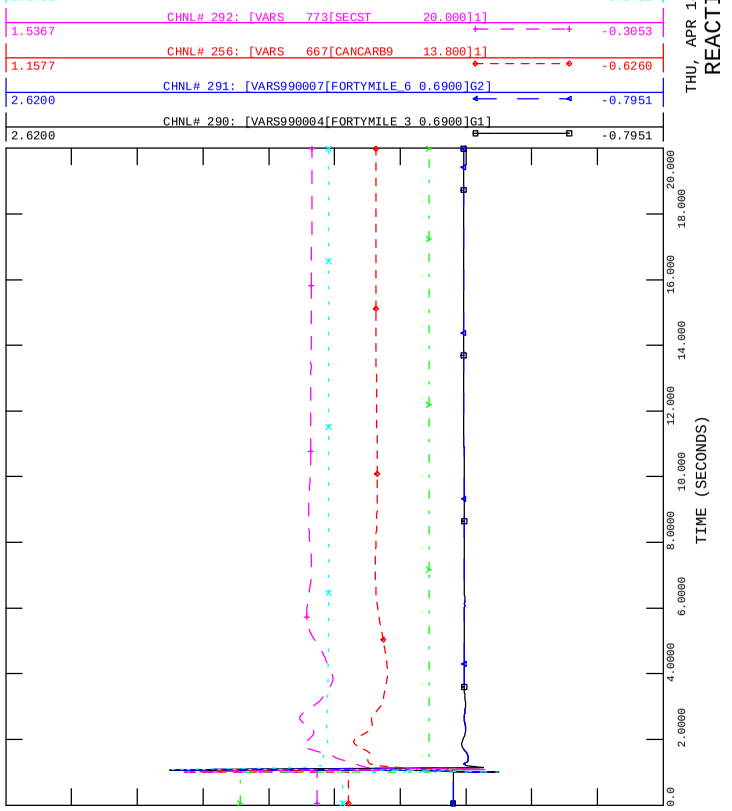


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_964LX_MURRAY_LAKE

FILE: scn3_SP_964LX_Murray_Lake.out

THU, APR 14 2022 14:27

REACTIVE POWER

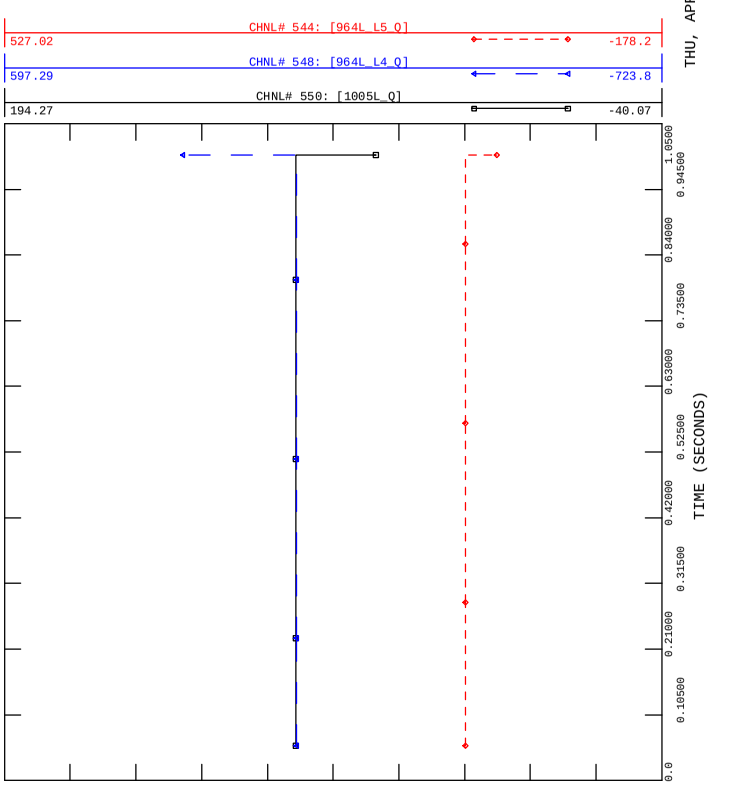


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_983L_WHITLA

FILE: scn3_SP_983L_Whitla.out

THU, APR 14 2022 14:27

BRANCH Q

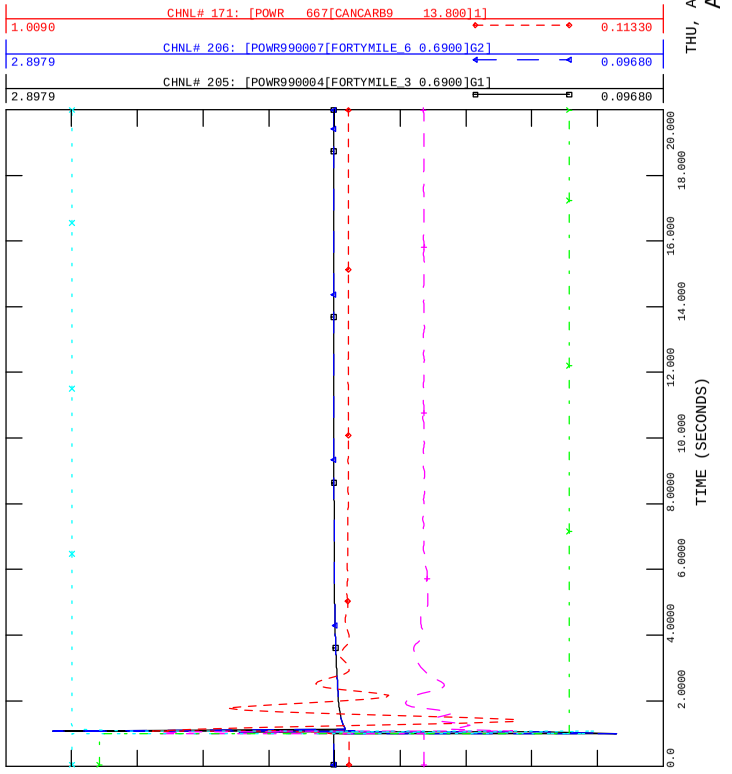


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_964LX_MURRAY_LAKE

FILE: scn3_SP_964LX_Murray_Lake.out

THU, APR 14 2022 14:27

ACTIVE POWER



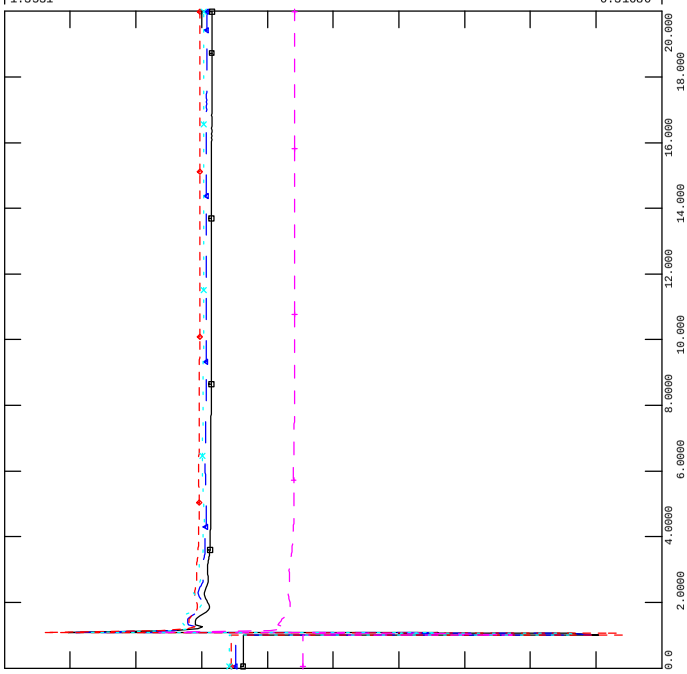
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_964LX_MURRAY_LAKE

FILE: scn3_SP_964LX_Murray_Lake.out

THU, APR 14 2022 14:27

BUS VOLTAGE

CHNL# 530: [VOLT 976 [ROTBAUR 138.00]]
1.2584 0.48730
CHNL# 525: [VOLT 320 [CHAPPIC7 138.00]]
1.1907 0.75110
CHNL# 528: [VOLT 662 [WHITLA1 240.00]]
1.6028 -0.0722
CHNL# 527: [VOLT 659 [BOWMAN2 138.00]]
1.3106 0.38600
CHNL# 529: [VOLT 669 [BOWMAN1 240.00]]
1.3531 0.31680



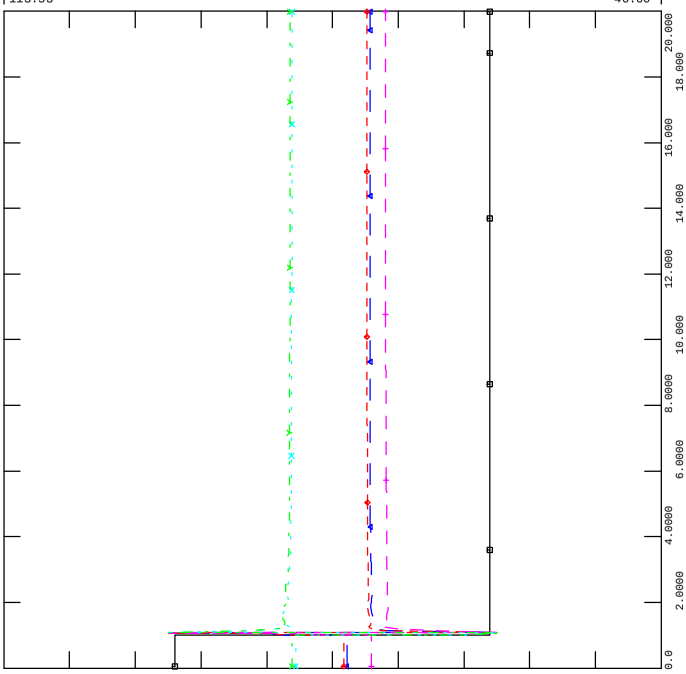
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_964LX_MURRAY_LAKE

FILE: scn3_SP_964LX_Murray_Lake.out

THU, APR 14 2022 14:27

BRANCH Q

CHNL# 552: [1035L Q]
361.21 -432.2
CHNL# 546: [1034L Q]
343.52 -427.2
CHNL# 538: [983L_L1_Q]
1015.9 -806.4
CHNL# 536: [983L_L3_Q]
985.25 -967.3
CHNL# 534: [983L_L2_Q]
1033.2 -1028.
CHNL# 532: [964L_L2_Q]
113.53 -40.00



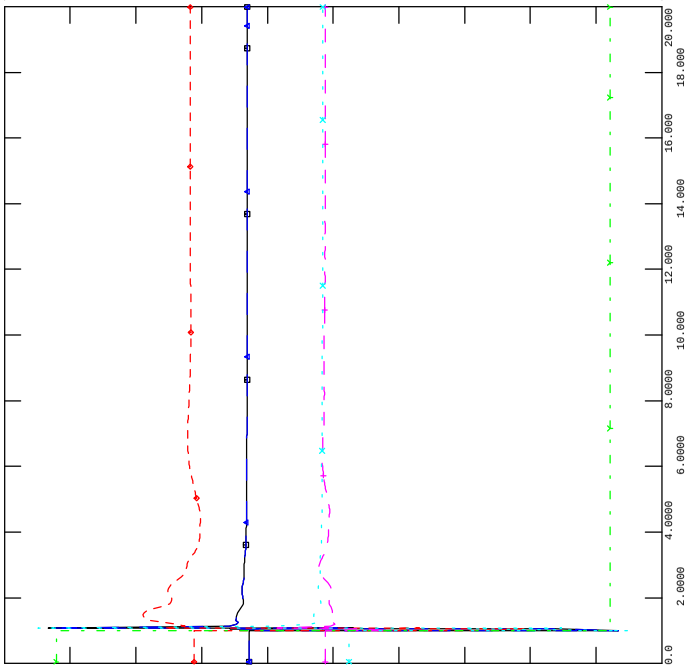
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_964LX_MURRAY_LAKE

FILE: scn3_SP_964LX_Murray_Lake.out

THU, APR 14 2022 14:27

TERMINAL VOLTAGE

CHNL# 456: [ETRM 61994[GRANLEA6 0.6900]G1]
1.1710 -0.1000
CHNL# 453: [ETRM 60990[SHAMROC5 0.6500]G1]
2.1062 0.13450
CHNL# 462: [ETRM 773[SECST 20.000]1]
1.1577 0.91660
CHNL# 426: [ETRM 667[CANCARB9 13.800]1]
1.1768 0.70280
CHNL# 461: [ETRM990007[FORTYMILE_6 0.6900]G2]
1.6166 0.10870
CHNL# 460: [ETRM990004[FORTYMILE_3 0.6900]G1]
1.6166 0.10870



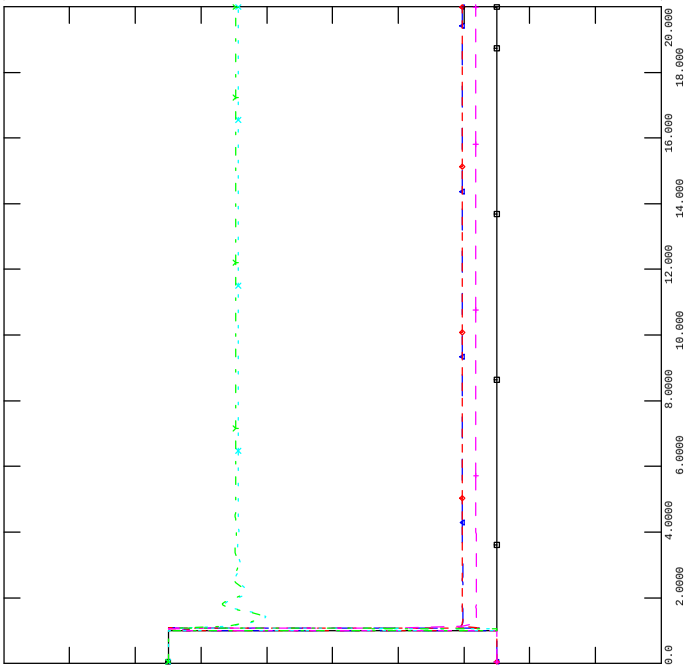
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_964LX_MURRAY_LAKE

FILE: scn3_SP_964LX_Murray_Lake.out

THU, APR 14 2022 14:27

BRANCH P

CHNL# 551: [1035L_P]
715.72 -195.3
CHNL# 545: [1034L_P]
685.02 -200.4
CHNL# 537: [983L_L1_P]
321.00 -796.9
CHNL# 535: [983L_L3_P]
204.34 -501.6
CHNL# 533: [983L_L2_P]
207.01 -502.2
CHNL# 531: [964L_L2_P]
232.96 -77.65

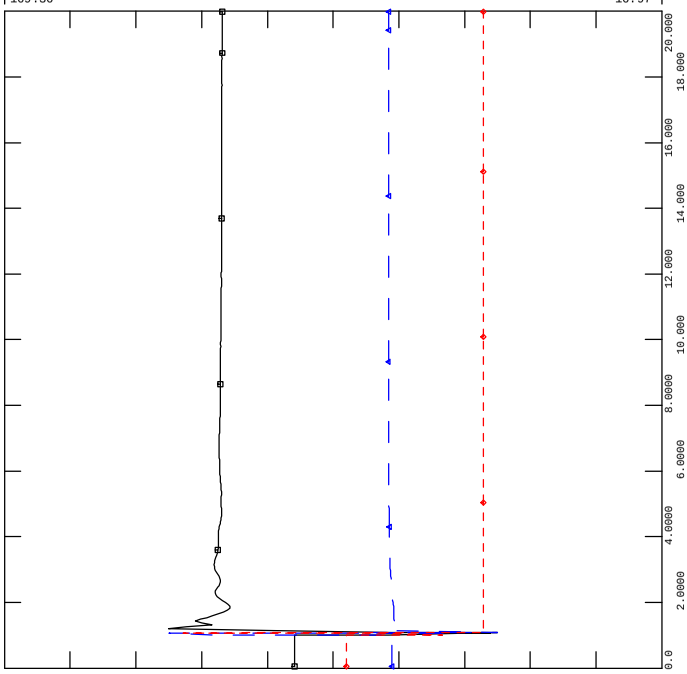


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_964LX_MURRAY_LAKE

FILE: scn3_SP_964LX_Murray_Lake.out

THU, APR 14 2022 14:27 BRANCH Q

CHNL# 544: [964L_L5_Q] 107.17 -40.00
CHNL# 548: [964L_L4_Q] 570.57 -371.5
CHNL# 550: [1005L_Q] 169.36 -16.97

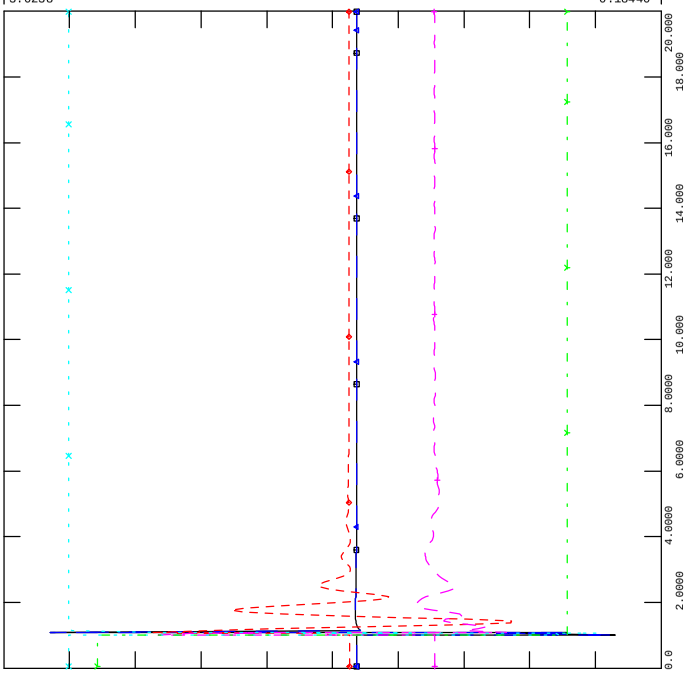


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_964LX_WHITLA

FILE: scn3_SP_964LX_Whitla.out

THU, APR 14 2022 14:27 ACTIVE POWER

CHNL# 201: [POWR 61994[GRANLEA6 0.6900]G1] 1.2000 -0.2000
CHNL# 198: [POWR 60990[SHAMROC5 0.6500]G1] 2.2178 0.16560
CHNL# 207: [POWR 773[SECST 20.000]1] 3.5362 2.6863
CHNL# 171: [POWR 667[CANCARB9 13.800]1] 1.0044 0.12510
CHNL# 206: [POWR990007[FORTYMILE_6 0.6900]G2] 3.0238 0.18440
CHNL# 205: [POWR990004[FORTYMILE 3 0.6900]G1] 3.0238 0.18440

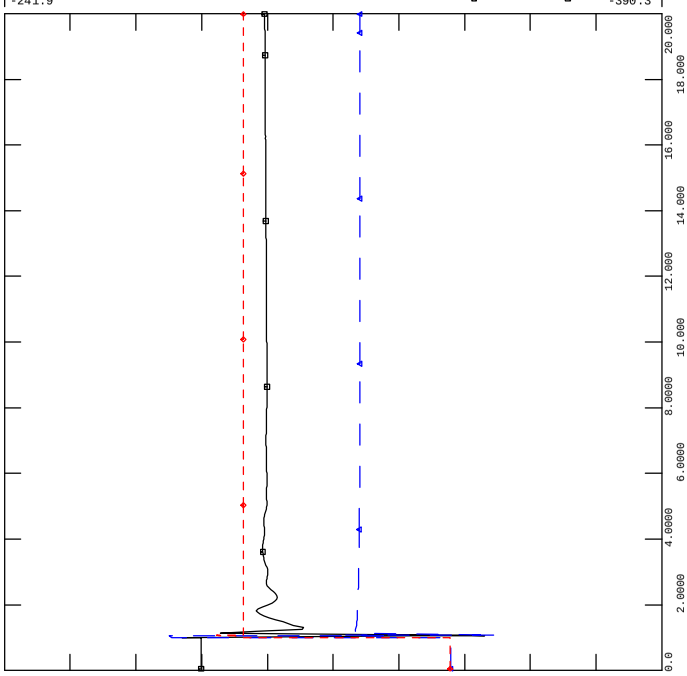


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_964LX_MURRAY_LAKE

FILE: scn3_SP_964LX_Murray_Lake.out

THU, APR 14 2022 14:27 BRANCH P

CHNL# 543: [964L_L5_P] 45.118 -78.97
CHNL# 547: [964L_L4_P] 295.09 -782.2
CHNL# 549: [1005L_P] -241.9 -390.3

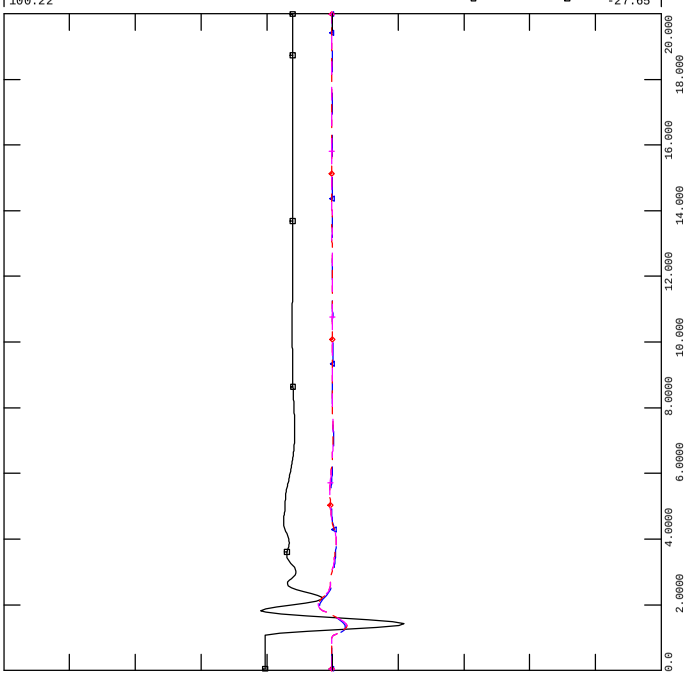


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_964LX_WHITLA

FILE: scn3_SP_964LX_Whitla.out

THU, APR 14 2022 14:27 ROTOR ANGLE

CHNL# 39: [ANGL 775[SECCT2 21.000]3] 55.785 -48.80
CHNL# 38: [ANGL 774[SECCT1 21.000]2] 55.785 -48.80
CHNL# 37: [ANGL 773[SECST 20.000]1] 57.659 -46.42
CHNL# 1: [ANGL 667[CANCARB9 13.800]1] 100.22 -27.65



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_964LX_WHITLA

FILE: scn3_SP_964LX_Whitla.out

THU, APR 14 2022 14:27

TERMINAL VOLTAGE

CHNL# 456: [ETRM 61994[GRANLEA6 0.6900]G1]
1.1710 -0.1000
CHNL# 453: [ETRM 60990[SHAMROC5 0.6500]G1]
1.5634 0.15790
CHNL# 462: [ETRM 773[SECST 20.000]1]
1.1564 0.91660
CHNL# 426: [ETRM 667[CANCARB9 13.800]1]
1.1766 0.70140
CHNL# 461: [ETRM990007[FORTYMILE_6 0.6900]G2]
1.7582 0.17040
CHNL# 460: [ETRM990004[FORTYMILE_3 0.6900]G1]
1.7582 0.17040

TIME (SECONDS)
0.0 2.0000 4.0000 6.0000 8.0000 10.000 12.000 14.000 16.000 18.000 20.000

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_964LX_WHITLA

FILE: scn3_SP_964LX_Whitla.out

THU, APR 14 2022 14:27

BRANCH P

CHNL# 551: [1035L_P]
714.12 -190.5
CHNL# 545: [1034L_P]
683.40 -195.5
CHNL# 537: [983L_L1_P]
297.95 -789.2
CHNL# 535: [983L_L3_P]
188.88 -496.5
CHNL# 533: [983L_L2_P]
190.38 -496.7
CHNL# 531: [964L_L2_P]
237.20 -90.37

TIME (SECONDS)
0.0 2.0000 4.0000 6.0000 8.0000 10.000 12.000 14.000 16.000 18.000 20.000

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_964LX_WHITLA

FILE: scn3_SP_964LX_Whitla.out

THU, APR 14 2022 14:27

REACTIVE POWER

CHNL# 286: [VARS 61994[GRANLEA6 0.6900]G1]
0.90390 -0.5000
CHNL# 283: [VARS 60990[SHAMROC5 0.6500]G1]
4.8018 -1.293
CHNL# 292: [VARS 773[SECST 20.000]1]
1.5357 -0.2784
CHNL# 256: [VARS 667[CANCARB9 13.800]1]
1.1518 -0.5954
CHNL# 291: [VARS990007[FORTYMILE_6 0.6900]G2]
3.9553 -1.217
CHNL# 290: [VARS990004[FORTYMILE_3 0.6900]G1]
3.9553 -1.217

TIME (SECONDS)
0.0 2.0000 4.0000 6.0000 8.0000 10.000 12.000 14.000 16.000 18.000 20.000

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_964LX_WHITLA

FILE: scn3_SP_964LX_Whitla.out

THU, APR 14 2022 14:27

BUS VOLTAGE

CHNL# 530: [VOLT 976 [ROTBAUR 138.00]]
1.2393 0.49460
CHNL# 525: [VOLT 320 [CHAPPIC7 138.00]]
1.1825 0.75350
CHNL# 528: [VOLT 662 [WHITLA1 240.00]]
1.4290 -0.0998
CHNL# 527: [VOLT 659 [BOWMAN2 138.00]]
1.2864 0.39470
CHNL# 529: [VOLT 669 [BOWMAN1 240.00]]
1.3251 0.32600

TIME (SECONDS)
0.0 2.0000 4.0000 6.0000 8.0000 10.000 12.000 14.000 16.000 18.000 20.000

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_964LX_WHITLA

FILE: scn3_SP_964LX_Whitla.out

THU, APR 14 2022 14:27

BRANCH P

CHNL# 543: [964L_L5_P]
40.000 -78.97

CHNL# 547: [964L_L4_P]
347.11 -820.8

CHNL# 549: [1005L_P]
-241.5 -403.7

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_1034L_BOWMANTON

FILE: scn3_SP_1034L_Bowmanton.out

THU, APR 14 2022 14:27

ROTOR ANGLE

CHNL# 39: [ANGL 775[SECCT2 21.000]3]
56.496 -51.53

CHNL# 38: [ANGL 774[SECCT1 21.000]2]
56.496 -51.53

CHNL# 37: [ANGL 773[SECST 20.000]1]
58.157 -48.90

CHNL# 1: [ANGL 667[CANCARB9 13.800]1]
104.77 -48.60

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_964LX_WHITLA

FILE: scn3_SP_964LX_Whitla.out

THU, APR 14 2022 14:27

BRANCH Q

CHNL# 552: [1035L_Q]
319.51 -417.7

CHNL# 546: [1034L_Q]
302.18 -412.3

CHNL# 538: [983L_L1_Q]
589.54 -833.1

CHNL# 536: [983L_L3_Q]
504.68 -625.3

CHNL# 534: [983L_L2_Q]
530.76 -656.1

CHNL# 532: [964L_L2_Q]
165.63 -202.8

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_964LX_WHITLA

FILE: scn3_SP_964LX_Whitla.out

THU, APR 14 2022 14:27

BRANCH Q

CHNL# 544: [964L_L5_Q]
70.561 -40.00

CHNL# 548: [964L_L4_Q]
1472.2 -883.9

CHNL# 550: [1005L_Q]
165.81 -13.53

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_1034L_BOWMANTON

FILE: scn3_SP_1034L_Bowmanton.out

THU, APR 14 2022 14:27

REACTIVE POWER

CHNL# 286: [VARS 61994[GRANLEA6 0.6900]G1] 1.2458 -0.5000
CHNL# 283: [VARS 60990[SHAMROC5 0.6500]G1] 5.0252 -1.346
CHNL# 292: [VARS 773[SECST 20.000]1] 2.1828 -0.5698
CHNL# 256: [VARS 667[CANCARB9 13.800]1] 1.3246 -0.5627
CHNL# 291: [VARS990007[FORTYMILE_6 0.6900]G2] 1.7520 -0.5840
CHNL# 290: [VARS990004[FORTYMILE_3 0.6900]G1] 1.7520 -0.5840

TIME (SECONDS)

0.0 0.10500 0.21000 0.31500 0.42000 0.52500 0.63000 0.73500 0.84000 0.94500 1.0500

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_1034L_BOWMANTON

FILE: scn3_SP_1034L_Bowmanton.out

THU, APR 14 2022 14:27

BUS VOLTAGE

CHNL# 530: [VOLT 976 [ROTBAUR 138.00]] 1.2320 0.19440
CHNL# 525: [VOLT 320 [CHAPPIC7 138.00]] 1.1803 0.62310
CHNL# 528: [VOLT 662 [WHITLA1 240.00]] 1.3663 -0.0210
CHNL# 527: [VOLT 659 [BOWMAN2 138.00]] 1.2517 0.03320
CHNL# 529: [VOLT 669 [BOWMAN1 240.00]] 1.2641 -0.0942

TIME (SECONDS)

0.0 0.10500 0.21000 0.31500 0.42000 0.52500 0.63000 0.73500 0.84000 0.94500 1.0500

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_1034L_BOWMANTON

FILE: scn3_SP_1034L_Bowmanton.out

THU, APR 14 2022 14:27

ACTIVE POWER

CHNL# 201: [POWR 61994[GRANLEA6 0.6900]G1] 1.2000 -0.2000
CHNL# 198: [POWR 60990[SHAMROC5 0.6500]G1] 2.2179 0.31910
CHNL# 207: [POWR 773[SECST 20.000]1] 3.5078 2.7274
CHNL# 171: [POWR 667[CANCARB9 13.800]1] 1.1217 -0.0208
CHNL# 206: [POWR990007[FORTYMILE_6 0.6900]G2] 1.5721 -0.2000
CHNL# 205: [POWR990004[FORTYMILE_3 0.6900]G1] 1.5721 -0.2000

TIME (SECONDS)

0.0 0.10500 0.21000 0.31500 0.42000 0.52500 0.63000 0.73500 0.84000 0.94500 1.0500

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_1034L_BOWMANTON

FILE: scn3_SP_1034L_Bowmanton.out

THU, APR 14 2022 14:27

TERMINAL VOLTAGE

CHNL# 456: [ETRM 61994[GRANLEA6 0.6900]G1] 1.1632 -0.1000
CHNL# 453: [ETRM 60990[SHAMROC5 0.6500]G1] 1.6420 0.17790
CHNL# 462: [ETRM 773[SECST 20.000]1] 1.1601 0.89020
CHNL# 426: [ETRM 667[CANCARB9 13.800]1] 1.2183 0.55970
CHNL# 461: [ETRM990007[FORTYMILE_6 0.6900]G2] 1.1550 -0.1000
CHNL# 460: [ETRM990004[FORTYMILE_3 0.6900]G1] 1.1550 -0.1000

TIME (SECONDS)

0.0 0.10500 0.21000 0.31500 0.42000 0.52500 0.63000 0.73500 0.84000 0.94500 1.0500

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_1034L_BOWMANTON

FILE: scn3_SP_1034L_Bowmanton.out

THU, APR 14 2022 14:27

BRANCH Q

CHNL# 552: [1035L Q]
350.71 -126.9

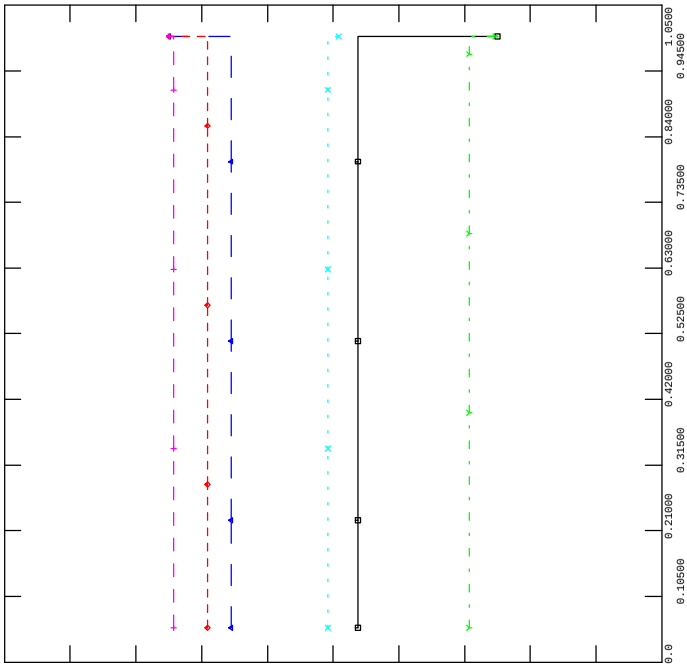
CHNL# 546: [1034L Q]
41.331 -40.00

CHNL# 538: [983L L1 Q]
100.60 -300.2

CHNL# 536: [983L L3 Q]
90.577 -285.7

CHNL# 534: [983L L2 Q]
106.94 -333.9

CHNL# 532: [964L L2 Q]
243.47 -91.97



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_1034L_BOWMANTON

FILE: scn3_SP_1034L_Bowmanton.out

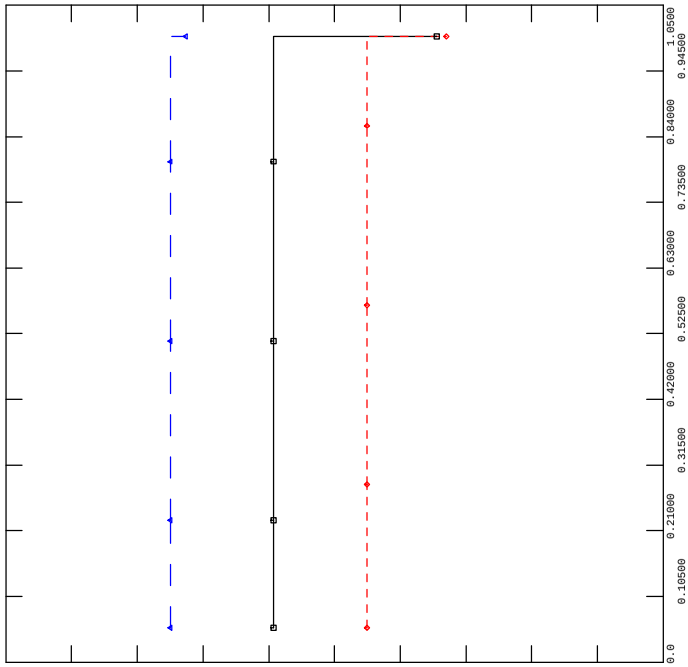
THU, APR 14 2022 14:27

BRANCH Q

CHNL# 544: [964L L5 Q]
230.44 -129.8

CHNL# 548: [964L L4 Q]
121.23 -321.6

CHNL# 550: [1005L Q]
214.09 -89.17



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_1034L_BOWMANTON

FILE: scn3_SP_1034L_Bowmanton.out

THU, APR 14 2022 14:27

BRANCH P

CHNL# 551: [1035L P]
750.62 -255.7

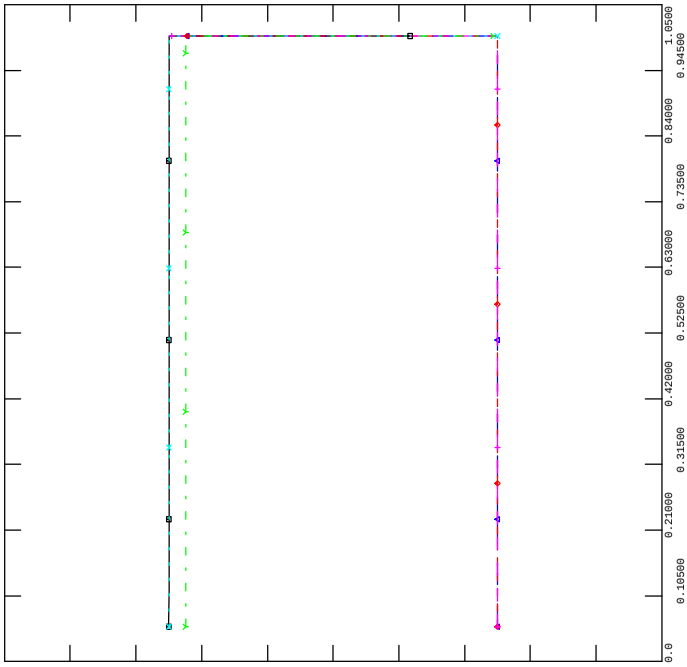
CHNL# 545: [1034L P]
672.97 -224.3

CHNL# 537: [983L L1 P]
256.82 -757.4

CHNL# 535: [983L L3 P]
180.80 -475.1

CHNL# 533: [983L L2 P]
181.24 -475.0

CHNL# 531: [964L L2 P]
279.04 -157.1



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_1034L_BOWMANTON

FILE: scn3_SP_1034L_Bowmanton.out

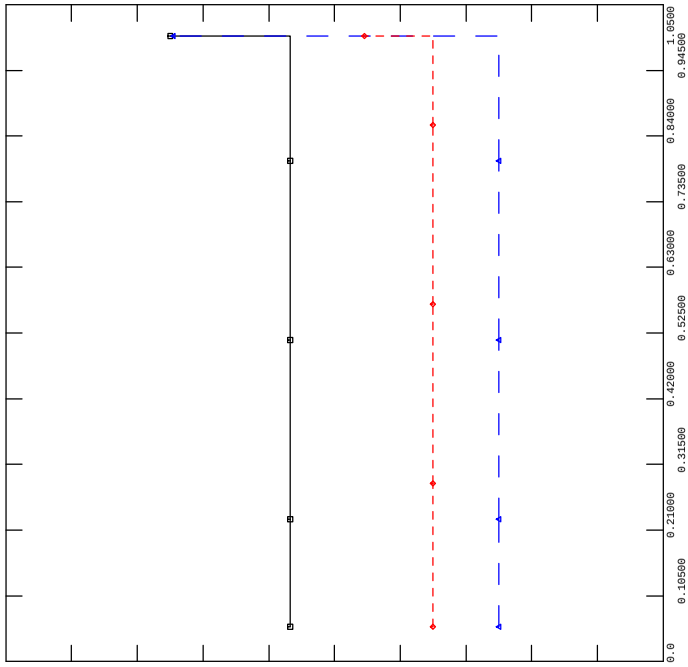
THU, APR 14 2022 14:27

BRANCH P

CHNL# 543: [964L L5 P]
237.22 -165.4

CHNL# 547: [964L L4 P]
214.41 -631.4

CHNL# 549: [1005L P]
-134.5 -491.0



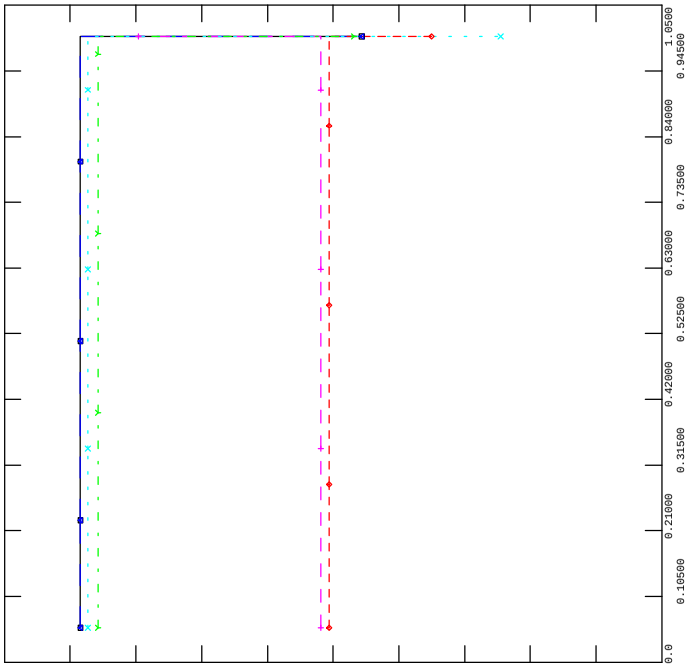
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_1034L_CASSILS

FILE: scn3_SP_1034L_Cassils.out

THU, APR 14 2022 14:27

ACTIVE POWER

CHNL# 201: [POWR 61994[GRANLEA6 0.6900]G1]
1.2000 -0.2000
CHNL# 198: [POWR 60990[SHAMROC5 0.6500]G1]
2.2596 0.33450
CHNL# 207: [POWR 773[SECST 20.000]1]
3.7327 2.1668
CHNL# 171: [POWR 667[CANCARB9 13.800]1]
1.1486 -0.0799
CHNL# 206: [POWR990007[FORTYMILE_6 0.6900]G2]
1.5300 -0.2000
CHNL# 205: [POWR990004[FORTYMILE_3 0.6900]G1]
1.5300 -0.2000



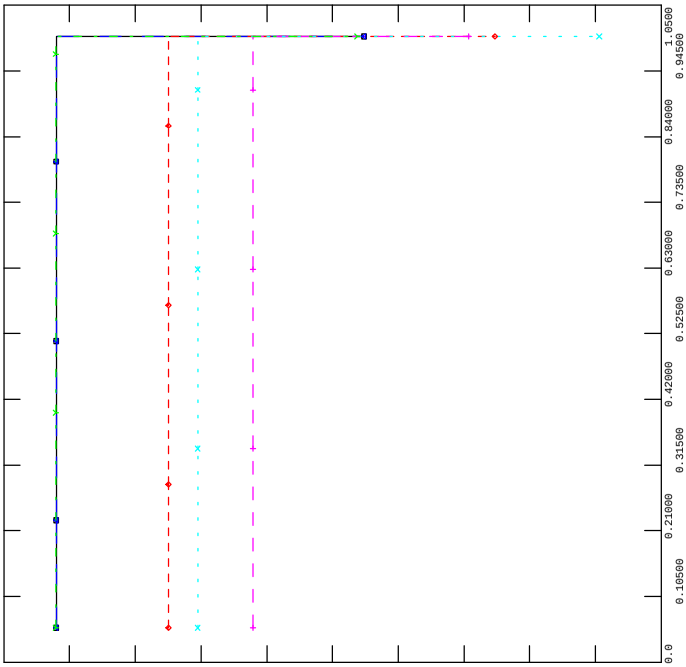
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_1034L_CASSILS

FILE: scn3_SP_1034L_Cassils.out

THU, APR 14 2022 14:27

TERMINAL VOLTAGE

CHNL# 456: [ETRM 61994[GRANLEA6 0.6900]G1]
1.1632 -0.1000
CHNL# 453: [ETRM 60990[SHAMROC5 0.6500]G1]
1.3921 0.33170
CHNL# 462: [ETRM 773[SECST 20.000]1]
1.1828 0.80630
CHNL# 426: [ETRM 667[CANCARB9 13.800]1]
1.2002 0.56120
CHNL# 461: [ETRM990007[FORTYMILE_6 0.6900]G2]
1.1550 -0.1000
CHNL# 460: [ETRM990004[FORTYMILE_3 0.6900]G1]
1.1550 -0.1000



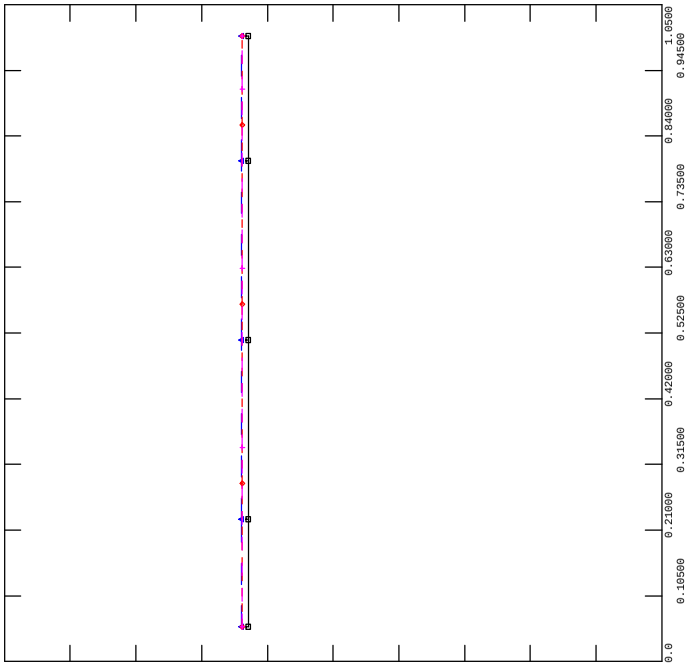
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_1034L_CASSILS

FILE: scn3_SP_1034L_Cassils.out

THU, APR 14 2022 14:27

ROTOR ANGLE

CHNL# 39: [ANGL 775[SECCT2 21.000]3]
62.022 -99.23
CHNL# 38: [ANGL 774[SECCT1 21.000]2]
62.022 -99.23
CHNL# 37: [ANGL 773[SECST 20.000]1]
63.941 -97.39
CHNL# 1: [ANGL 667[CANCARB9 13.800]1]
118.72 -70.24



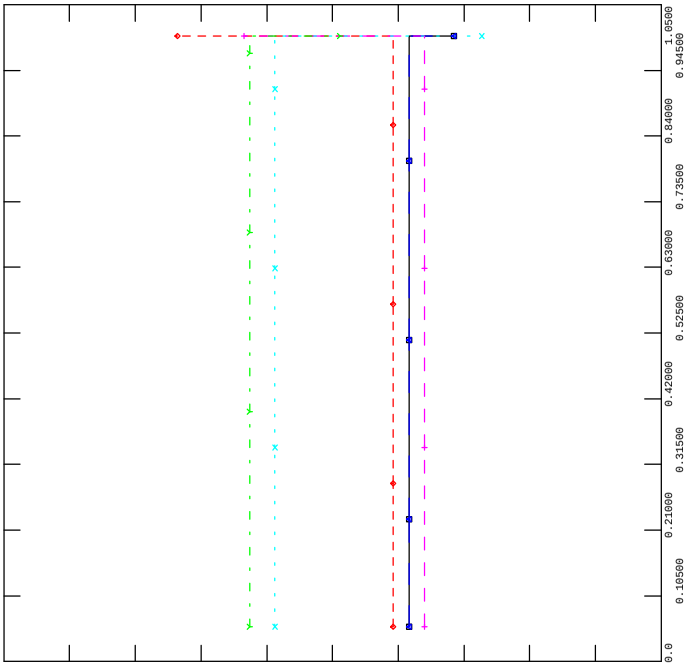
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_1034L_CASSILS

FILE: scn3_SP_1034L_Cassils.out

THU, APR 14 2022 14:27

REACTIVE POWER

CHNL# 286: [VARS 61994[GRANLEA6 0.6900]G1]
0.83520 -0.5000
CHNL# 283: [VARS 60990[SHAMROC5 0.6500]G1]
1.7155 -0.1162
CHNL# 292: [VARS 773[SECST 20.000]1]
5.1946 -1.889
CHNL# 256: [VARS 667[CANCARB9 13.800]1]
1.3323 -0.5630
CHNL# 291: [VARS990007[FORTYMILE_6 0.6900]G2]
1.4155 -0.5000
CHNL# 290: [VARS990004[FORTYMILE_3 0.6900]G1]
1.4155 -0.5000



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_1034L_CASSILS

FILE: scn3_SP_1034L_Cassils.out

THU, APR 14 2022 14:27 BRANCH P

CHNL# 551: [1035L_P]
711.79 -243.1
CHNL# 545: [1034L_P]
672.97 -224.3
CHNL# 537: [983L_L1_P]
278.72 -764.7
CHNL# 535: [983L_L3_P]
172.11 -472.2
CHNL# 533: [983L_L2_P]
172.27 -472.0
CHNL# 531: [964L_L2_P]
293.90 -201.7

TIME (SECONDS)
0.0 0.10500 0.21000 0.31500 0.42000 0.52500 0.63000 0.73500 0.84000 0.94500 1.0500

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_1034L_CASSILS

FILE: scn3_SP_1034L_Cassils.out

THU, APR 14 2022 14:27 BRANCH P

CHNL# 543: [964L_L5_P]
249.11 -202.1
CHNL# 547: [964L_L4_P]
237.36 -639.1
CHNL# 549: [1005L_P]
107.28 -526.8

TIME (SECONDS)
0.0 0.10500 0.21000 0.31500 0.42000 0.52500 0.63000 0.73500 0.84000 0.94500 1.0500

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_1034L_CASSILS

FILE: scn3_SP_1034L_Cassils.out

THU, APR 14 2022 14:27 BUS VOLTAGE

CHNL# 530: [VOLT 976 [ROTBAUR 138.00]]
1.2114 0.15910
CHNL# 525: [VOLT 320 [CHAPPIC7 138.00]]
1.2063 0.19150
CHNL# 528: [VOLT 662 [WHITLA1 240.00]]
1.3333 0.15730
CHNL# 527: [VOLT 659 [BOWMAN2 138.00]]
1.2434 0.00640
CHNL# 529: [VOLT 669 [BOWMAN1 240.00]]
1.2670 -0.0228

TIME (SECONDS)
0.0 0.10500 0.21000 0.31500 0.42000 0.52500 0.63000 0.73500 0.84000 0.94500 1.0500

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_1034L_CASSILS

FILE: scn3_SP_1034L_Cassils.out

THU, APR 14 2022 14:27 BRANCH Q

CHNL# 552: [1035L_Q]
473.77 -603.4
CHNL# 546: [1034L_Q]
41.331 -40.00
CHNL# 538: [983L_L1_Q]
303.12 -397.2
CHNL# 536: [983L_L3_Q]
40.969 -214.9
CHNL# 534: [983L_L2_Q]
35.691 -253.1
CHNL# 532: [964L_L2_Q]
116.53 -44.91

TIME (SECONDS)
0.0 0.10500 0.21000 0.31500 0.42000 0.52500 0.63000 0.73500 0.84000 0.94500 1.0500

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_1035L_BOWMANTON

FILE: scn3_SP_1035L_Bowmanton.out

THU, APR 14 2022 14:27

ROTOR ANGLE

CHNL# 39: [ANGL 775[SECCT2 21.000]3]
62.017 -100.1

CHNL# 38: [ANGL 774[SECCT1 21.000]2]
62.017 -100.1

CHNL# 37: [ANGL 773[SECST 20.000]1]
63.923 -98.32

CHNL# 1: [ANGL 667[CANCARB9 13.800]1]
120.04 -68.98

1.0500 0.94500 0.84000 0.73500 0.63000 0.52500 0.42000 0.31500 0.21000 0.10500 0.0

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_1035L_BOWMANTON

FILE: scn3_SP_1035L_Bowmanton.out

THU, APR 14 2022 14:27

REACTIVE POWER

CHNL# 286: [VARS 61994[GRANLEA6 0.6900]G1]
0.83520 -0.5000

CHNL# 283: [VARS 60990[SHAMROC5 0.6500]G1]
1.6600 -0.3244

CHNL# 292: [VARS 773[SECST 20.000]1]
5.2027 -1.884

CHNL# 256: [VARS 667[CANCARB9 13.800]1]
1.2624 -0.5641

CHNL# 291: [VARS990007[FORTYMILE_6 0.6900]G2]
1.2046 -0.5000

CHNL# 290: [VARS990004[FORTYMILE 3 0.6900]G1]
1.2046 -0.5000

1.0500 0.94500 0.84000 0.73500 0.63000 0.52500 0.42000 0.31500 0.21000 0.10500 0.0

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_1034L_CASSILS

FILE: scn3_SP_1034L_Cassils.out

THU, APR 14 2022 14:27

BRANCH Q

CHNL# 544: [964L L5 Q]
127.81 -107.2

CHNL# 548: [964L L4 Q]
76.162 -186.4

CHNL# 550: [1005L Q]
262.60 -216.0

1.0500 0.94500 0.84000 0.73500 0.63000 0.52500 0.42000 0.31500 0.21000 0.10500 0.0

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_1035L_BOWMANTON

FILE: scn3_SP_1035L_Bowmanton.out

THU, APR 14 2022 14:27

ACTIVE POWER

CHNL# 201: [POWR 61994[GRANLEA6 0.6900]G1]
1.2000 -0.2000

CHNL# 198: [POWR 60990[SHAMROC5 0.6500]G1]
2.2539 0.09130

CHNL# 207: [POWR 773[SECST 20.000]1]
3.7338 2.1593

CHNL# 171: [POWR 667[CANCARB9 13.800]1]
1.1635 -0.0263

CHNL# 206: [POWR990007[FORTYMILE_6 0.6900]G2]
1.5300 -0.2000

CHNL# 205: [POWR990004[FORTYMILE_3 0.6900]G1]
1.5300 -0.2000

1.0500 0.94500 0.84000 0.73500 0.63000 0.52500 0.42000 0.31500 0.21000 0.10500 0.0

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_1035L_BOWMANTON

FILE: scn3_SP_1035L_Bowmanton.out

THU, APR 14 2022 14:27

BUS VOLTAGE

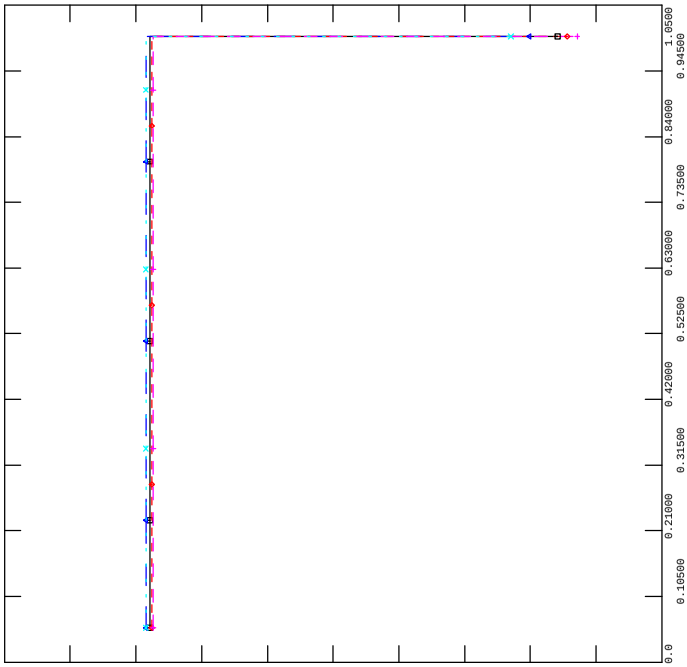
CHNL# 530: [VOLT 976 [ROTBAUR 138.00]]
1.2153 0.21750

CHNL# 525: [VOLT 320 [CHAPPIC7 138.00]]
1.2124 0.24310

CHNL# 528: [VOLT 662 [WHITLA1 240.00]]
1.3369 -0.0196

CHNL# 527: [VOLT 659 [BOWMAN2 138.00]]
1.2477 0.06610

CHNL# 529: [VOLT 669 [BOWMAN1 240.00]]
1.2714 -0.0131



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_1035L_BOWMANTON

FILE: scn3_SP_1035L_Bowmanton.out

THU, APR 14 2022 14:27

BRANCH Q

CHNL# 552: [1035L Q]
52.833 -40.00

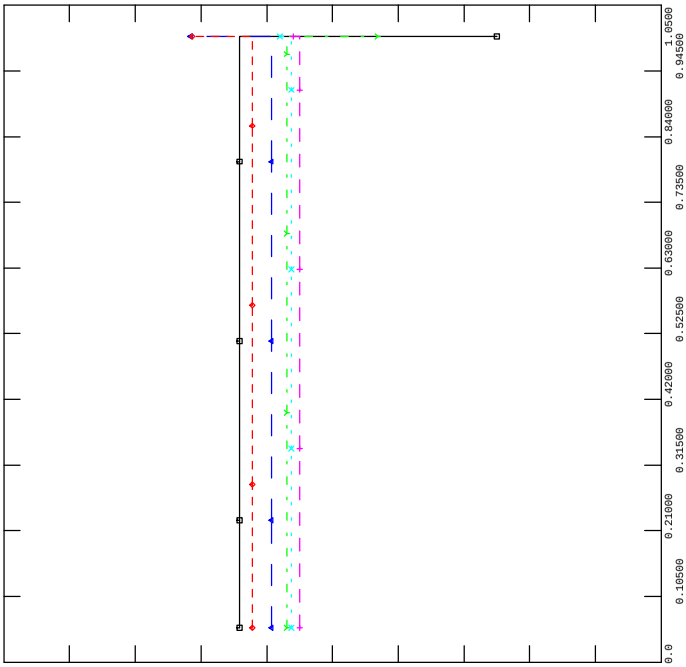
CHNL# 546: [1034L Q]
463.59 -592.5

CHNL# 538: [983L_L1_Q]
348.53 -431.0

CHNL# 536: [983L_L3_Q]
101.68 -234.8

CHNL# 534: [983L_L2_Q]
117.78 -281.9

CHNL# 532: [964L_L2_Q]
147.02 -86.63



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_1035L_BOWMANTON

FILE: scn3_SP_1035L_Bowmanton.out

THU, APR 14 2022 14:27

TERMINAL VOLTAGE

CHNL# 456: [ETRM 61994[GRANLEA6 0.6900]G1]
1.1632 -0.1000

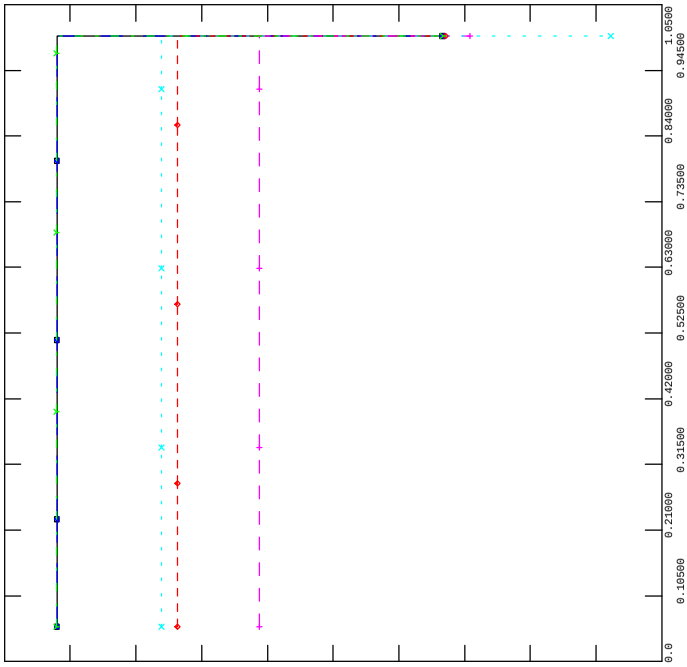
CHNL# 453: [ETRM 60990[SHAMROC5 0.6500]G1]
1.3871 0.09750

CHNL# 462: [ETRM 773[SECST 20.000]1]
1.1846 0.81180

CHNL# 426: [ETRM 667[CANCARB9 13.800]1]
1.2010 0.58930

CHNL# 461: [ETRM990007[FORTYMILE_6 0.6900]G2]
1.1550 -0.1000

CHNL# 460: [ETRM990004[FORTYMILE_3 0.6900]G1]
1.1550 -0.1000



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_1035L_BOWMANTON

FILE: scn3_SP_1035L_Bowmanton.out

THU, APR 14 2022 14:27

BRANCH P

CHNL# 551: [1035L_P]
709.61 -236.5

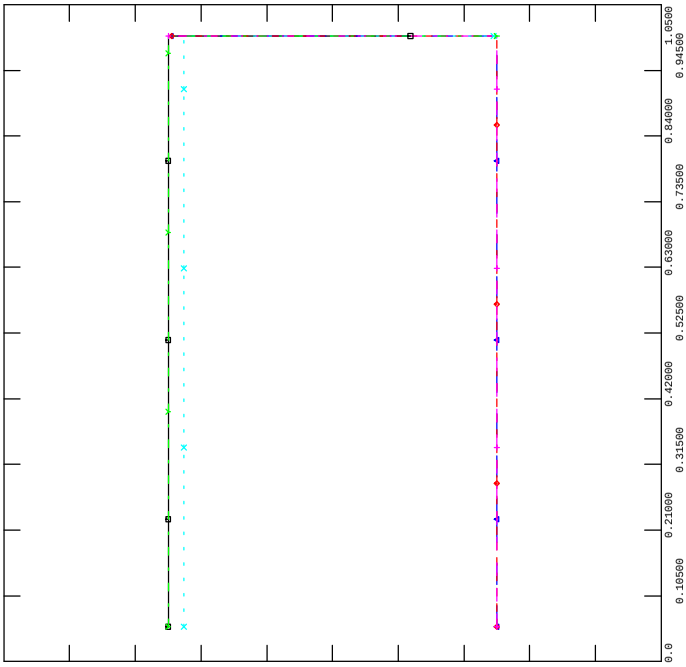
CHNL# 545: [1034L_P]
701.30 -222.2

CHNL# 537: [983L_L1_P]
227.63 -747.7

CHNL# 535: [983L_L3_P]
148.47 -464.3

CHNL# 533: [983L_L2_P]
148.11 -463.9

CHNL# 531: [964L_L2_P]
280.14 -160.4



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_1035L_BOWMANTON

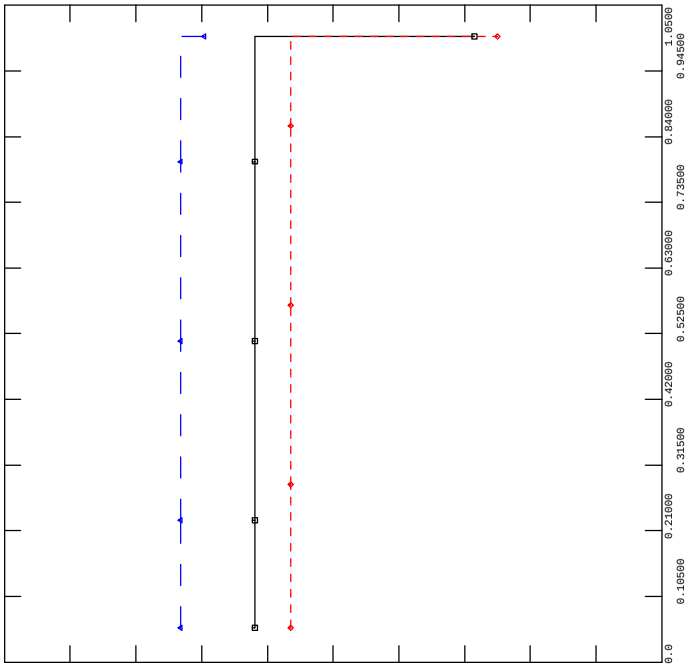
FILE: scn3_SP_1035L_Bowmanton.out

THU, APR 14 2022 14:27

BRANCH Q

CHNL# 544: [964L L5 Q]
141.78 -109.2
CHNL# 548: [964L_L4_Q]
83.253 -188.4
CHNL# 550: [1005L Q]
284.18 -224.1

TIME (SECONDS)



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_1035L_NEWELL

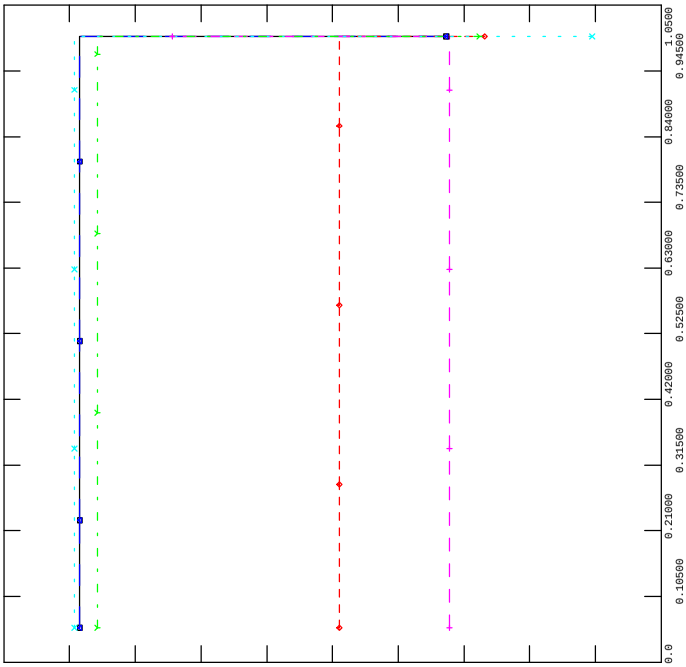
FILE: scn3_SP_1035L_Newell.out

THU, APR 14 2022 14:27

ACTIVE POWER

CHNL# 201: [POWR 61994[GRANLEA6 0.6900]G1]
1.2000 -0.2000
CHNL# 198: [POWR 60990[SHAMROC5 0.6500]G1]
2.2196 0.31920
CHNL# 207: [POWR 773[SECST 20.000]1]
3.5077 2.7281
CHNL# 171: [POWR 667[CANCARB9 13.800]1]
1.1152 -0.0092
CHNL# 206: [POWR990007[FORTYMILE_6 0.6900]G2]
1.5300 -0.2000
CHNL# 205: [POWR990004[FORTYMILE 3 0.6900]G1]
1.5300 -0.2000

TIME (SECONDS)



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_1035L_BOWMANTON

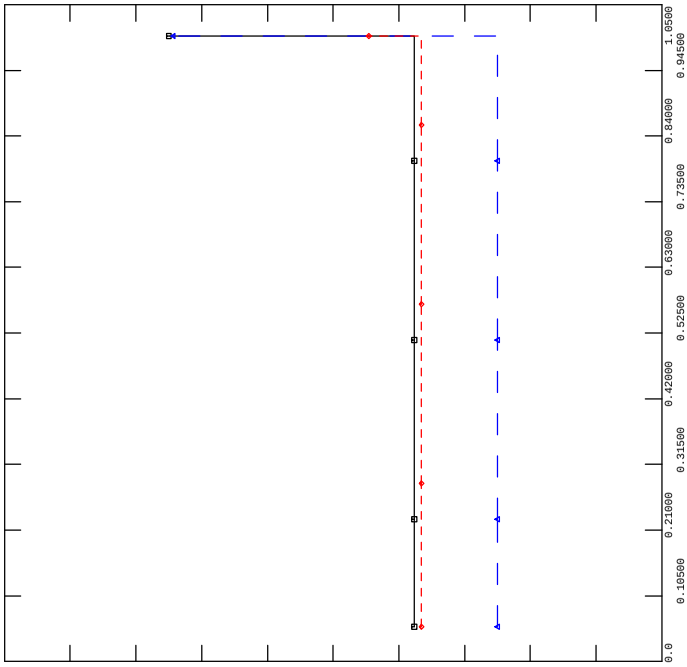
FILE: scn3_SP_1035L_Bowmanton.out

THU, APR 14 2022 14:27

BRANCH P

CHNL# 543: [964L L5 P]
240.74 -177.2
CHNL# 547: [964L_L4_P]
200.27 -626.7
CHNL# 549: [1005L_P]
102.47 -524.7

TIME (SECONDS)



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_1035L_NEWELL

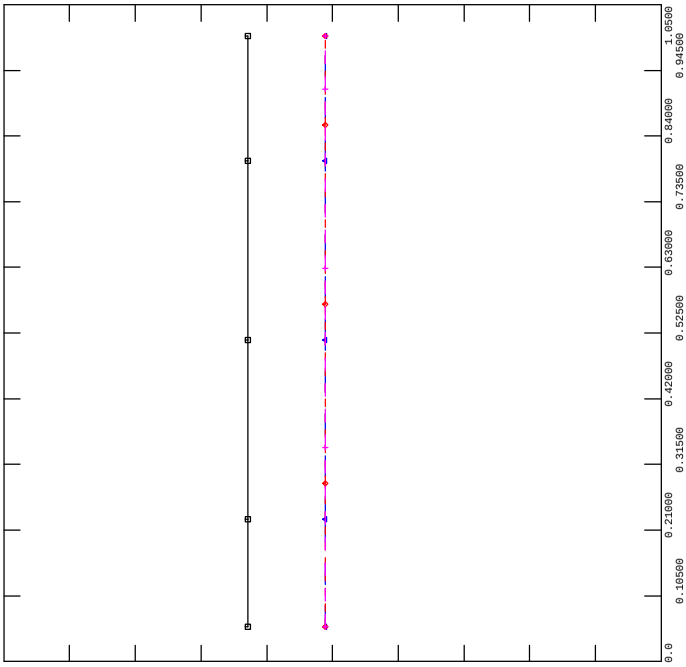
FILE: scn3_SP_1035L_Newell.out

THU, APR 14 2022 14:27

ROTOR ANGLE

CHNL# 39: [ANGL 775[SECCT2 21.000]3]
56.426 -51.55
CHNL# 38: [ANGL 774[SECCT1 21.000]2]
56.426 -51.55
CHNL# 37: [ANGL 773[SECST 20.000]1]
58.082 -48.91
CHNL# 1: [ANGL 667[CANCARB9 13.800]1]
104.91 -46.73

TIME (SECONDS)



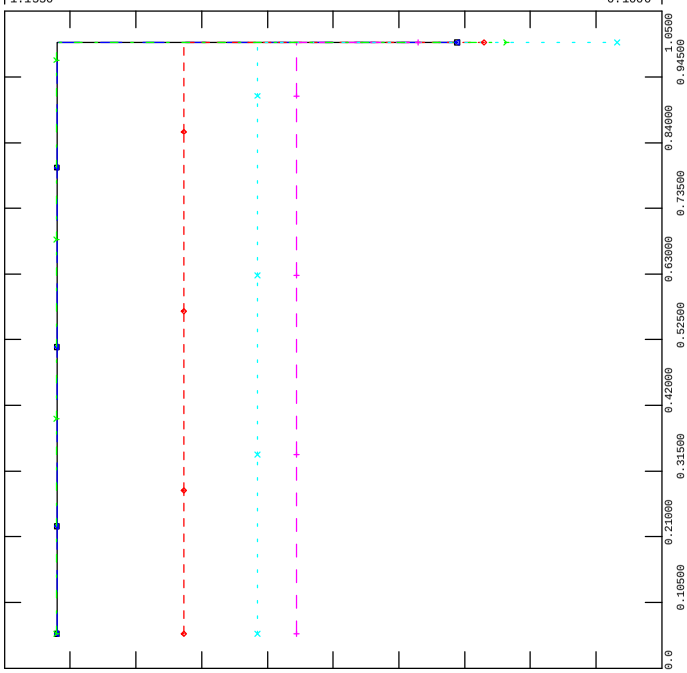
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_1035L_NEWELL

FILE: scn3_SP_1035L_Newell.out

THU, APR 14 2022 14:27

TERMINAL VOLTAGE

CHNL# 456: [ETRM 61994[GRANLEA6 0.6900]G1] 1.1632 -0.1000
CHNL# 453: [ETRM 60990[SHAMROC5 0.6500]G1] 1.6437 0.17800
CHNL# 462: [ETRM 773[SECST 20.000]1] 1.1600 0.89010
CHNL# 426: [ETRM 667[CANCARB9 13.800]1] 1.2197 0.56030
CHNL# 461: [ETRM990007[FORTYMILE_6 0.6900]G2] 1.1550 -0.1000
CHNL# 460: [ETRM990004[FORTYMILE_3 0.6900]G1] 1.1550 -0.1000



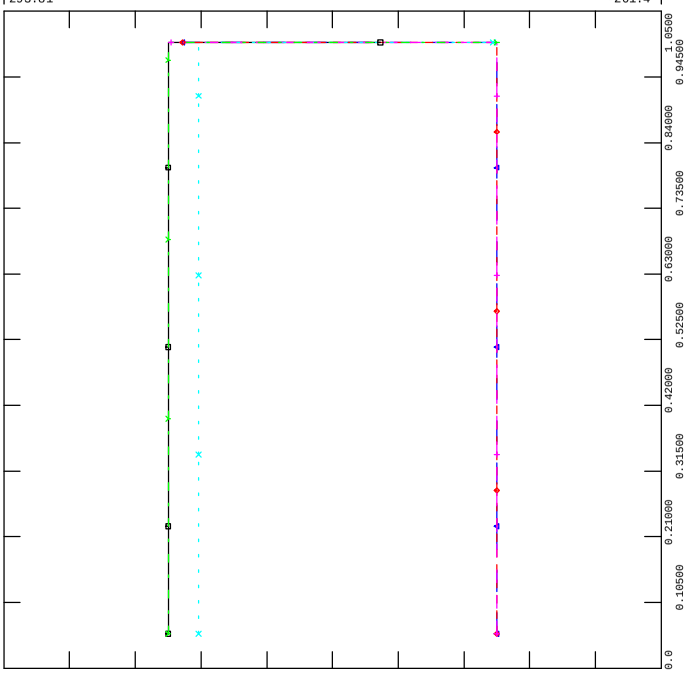
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_1035L_NEWELL

FILE: scn3_SP_1035L_Newell.out

THU, APR 14 2022 14:27

BRANCH P

CHNL# 551: [1035L P] 709.61 -236.5
CHNL# 545: [1034L P] 743.60 -253.0
CHNL# 537: [983L_L1_P] 256.48 -757.3
CHNL# 535: [983L_L3_P] 175.04 -473.2
CHNL# 533: [983L_L2_P] 175.35 -473.0
CHNL# 531: [964L_L2_P] 293.81 -201.4



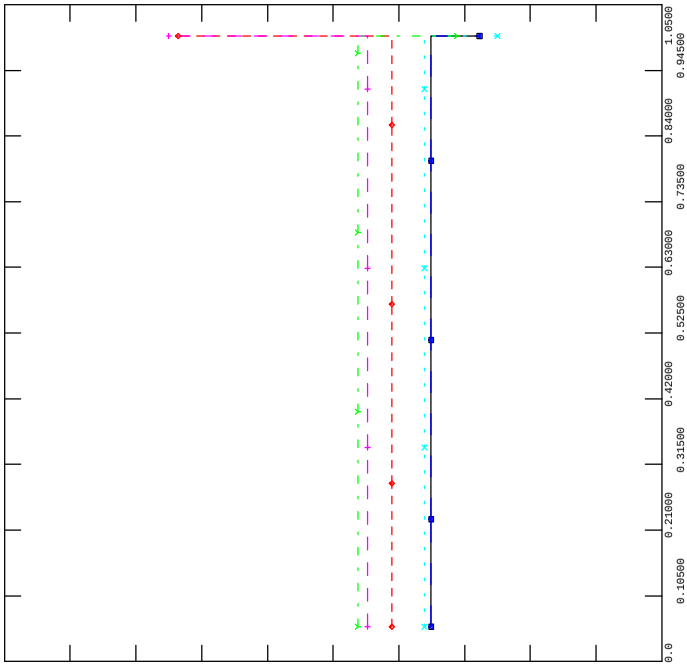
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_1035L_NEWELL

FILE: scn3_SP_1035L_Newell.out

THU, APR 14 2022 14:27

REACTIVE POWER

CHNL# 286: [VARS 61994[GRANLEA6 0.6900]G1] 1.3051 -0.5000
CHNL# 283: [VARS 60990[SHAMROC5 0.6500]G1] 5.0631 -1.358
CHNL# 292: [VARS 773[SECST 20.000]1] 2.1853 -0.5761
CHNL# 256: [VARS 667[CANCARB9 13.800]1] 1.3247 -0.5673
CHNL# 291: [VARS990007[FORTYMILE_6 0.6900]G2] 1.7412 -0.5804
CHNL# 290: [VARS990004[FORTYMILE_3 0.6900]G1] 1.7412 -0.5804



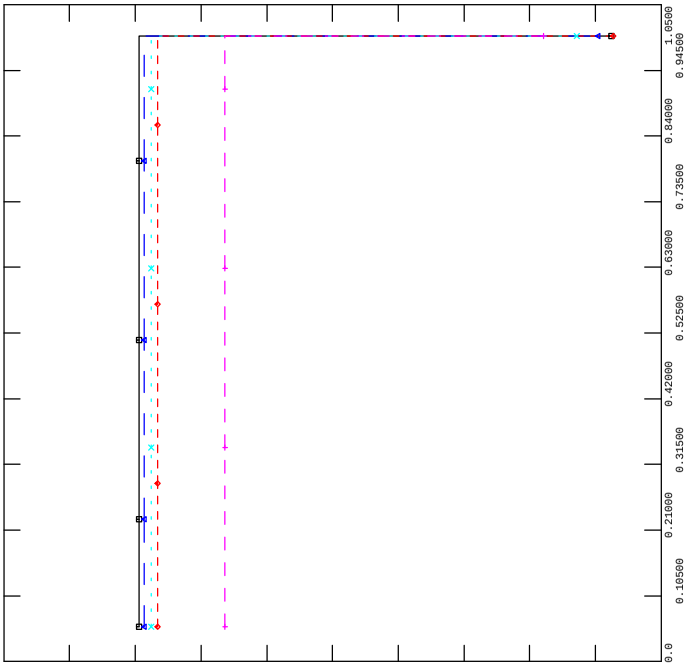
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_1035L_NEWELL

FILE: scn3_SP_1035L_Newell.out

THU, APR 14 2022 14:27

BUS VOLTAGE

CHNL# 530: [VOLT 976 [ROTBAUR 138.00]] 1.2339 0.19580
CHNL# 525: [VOLT 320 [CHAPPIC7 138.00]] 1.1806 0.62320
CHNL# 528: [VOLT 662 [WHITLA1 240.00]] 1.3555 -0.0208
CHNL# 527: [VOLT 659 [BOWMAN2 138.00]] 1.2544 0.03330
CHNL# 529: [VOLT 669 [BOWMAN1 240.00]] 1.2673 -0.0946



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_1035L_NEWELL

FILE: scn3_SP_1035L_Newell.out

THU, APR 14 2022 14:27 BRANCH P

CHNL# 543: [964L_L5_P]
237.45 -166.1
CHNL# 547: [964L_L4_P]
214.14 -631.4
CHNL# 549: [1005L_P]
-136.7 -484.1

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_600L_BULLSHEAD

FILE: scn3_SP_600L_Bullshead.out

THU, APR 14 2022 14:27 ROTOR ANGLE

CHNL# 39: [ANGL 775[SECCT2 21.000]3]
55.124 -47.71
CHNL# 38: [ANGL 774[SECCT1 21.000]2]
55.124 -47.71
CHNL# 37: [ANGL 773[SECST 20.000]1]
57.087 -45.52
CHNL# 1: [ANGL 667[CANCARB9 13.800]1]
135.52 -23.64

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_1035L_NEWELL

FILE: scn3_SP_1035L_Newell.out

THU, APR 14 2022 14:27 BRANCH Q

CHNL# 552: [1035L_Q]
52.833 -40.00
CHNL# 546: [1034L_Q]
317.99 -115.9
CHNL# 538: [983L_L1_Q]
87.106 -259.8
CHNL# 536: [983L_L3_Q]
95.121 -299.4
CHNL# 534: [983L_L2_Q]
111.31 -347.1
CHNL# 532: [964L_L2_Q]
232.48 -88.32

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_1035L_NEWELL

FILE: scn3_SP_1035L_Newell.out

THU, APR 14 2022 14:27 BRANCH Q

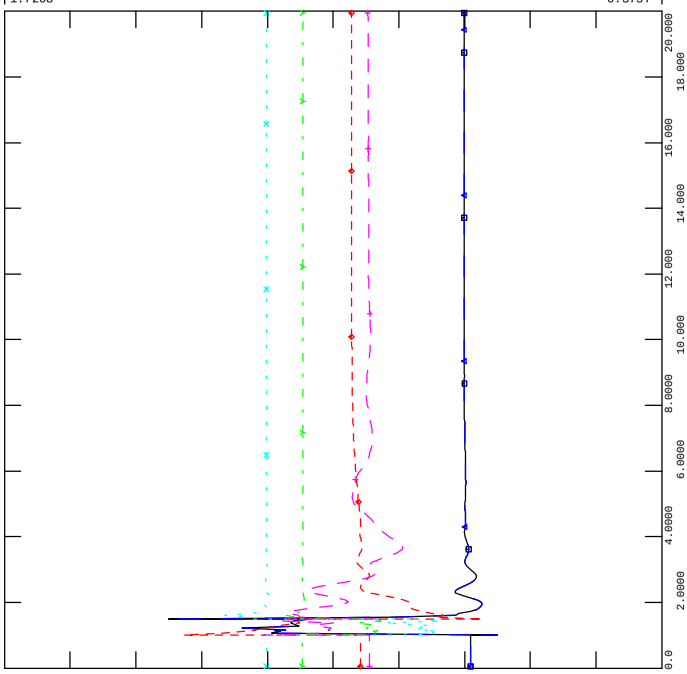
CHNL# 544: [964L_L5_Q]
219.10 -126.3
CHNL# 548: [964L_L4_Q]
118.44 -313.2
CHNL# 550: [1005L_Q]
213.99 -92.88

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_600L_BULLSHEAD

FILE: scn3_SP_600L_Bullshead.out

CHNL# 286: [VARS 61994[GRANLEA6 0.6900]G1]
0.86570 -0.3044
CHNL# 283: [VARS 60990[SHAMROC5 0.6500]G1]
1.5549 0.06150
CHNL# 292: [VARS 773[SECST 20.000]1]
1.3653 0.09720
CHNL# 256: [VARS 667[CANCARB9 13.800]1]
1.2021 -0.6301
CHNL# 291: [VARS990007[FORTYMILE_6 0.6900]G2]
1.7208 -0.3757
CHNL# 290: [VARS990004[FORTYMILE_3 0.6900]G1]
1.7208 -0.3757

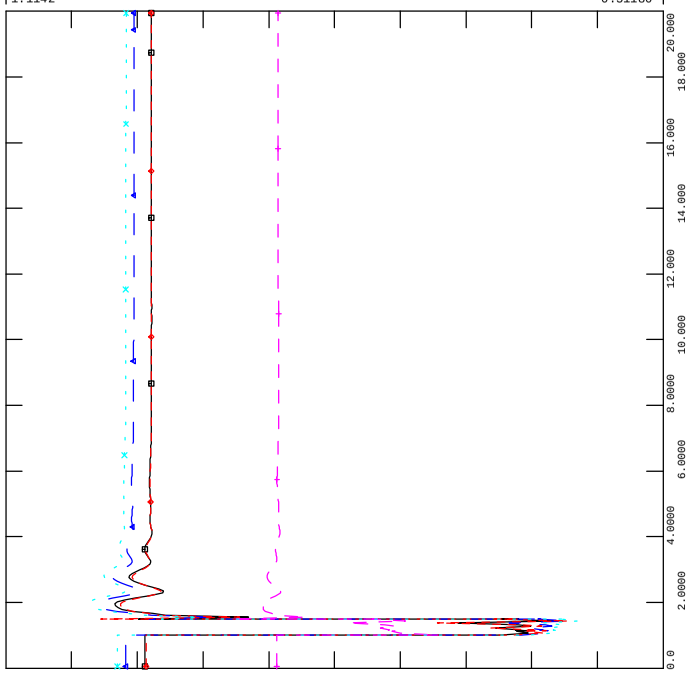


THU, APR 14 2022 14:27
REACTIVE POWER

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_600L_BULLSHEAD

FILE: scn3_SP_600L_Bullshead.out

CHNL# 530: [VOLT 976 [ROTBAUR 138.00]]
1.1312 0.36250
CHNL# 525: [VOLT 320 [CHAPPIC7 138.00]]
1.1135 0.82100
CHNL# 528: [VOLT 662 [WHITLA1 240.00]]
1.1811 0.48920
CHNL# 527: [VOLT 659 [BOWMAN2 138.00]]
1.1217 0.41940
CHNL# 529: [VOLT 669 [BOWMAN1 240.00]]
1.1142 0.51180

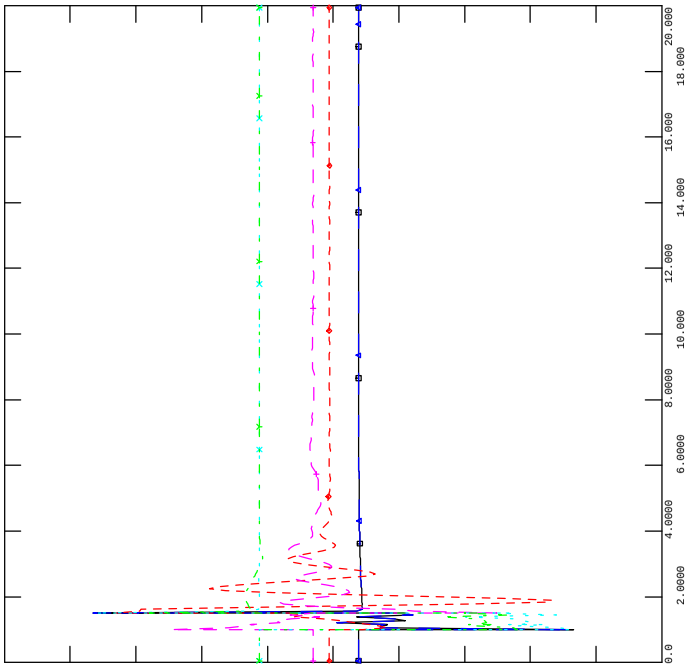


THU, APR 14 2022 14:27
BUS VOLTAGE

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_600L_BULLSHEAD

FILE: scn3_SP_600L_Bullshead.out

CHNL# 201: [POWR 61994[GRANLEA6 0.6900]G1]
1.3521 0.44360
CHNL# 198: [POWR 60990[SHAMROC5 0.6500]G1]
2.5833 1.1191
CHNL# 207: [POWR 773[SECST 20.000]1]
3.3527 2.5566
CHNL# 171: [POWR 667[CANCARB9 13.800]1]
1.1326 -0.0628
CHNL# 206: [POWR990007[FORTYMILE_6 0.6900]G2]
2.1326 0.64270
CHNL# 205: [POWR990004[FORTYMILE_3 0.6900]G1]
2.1326 0.64270

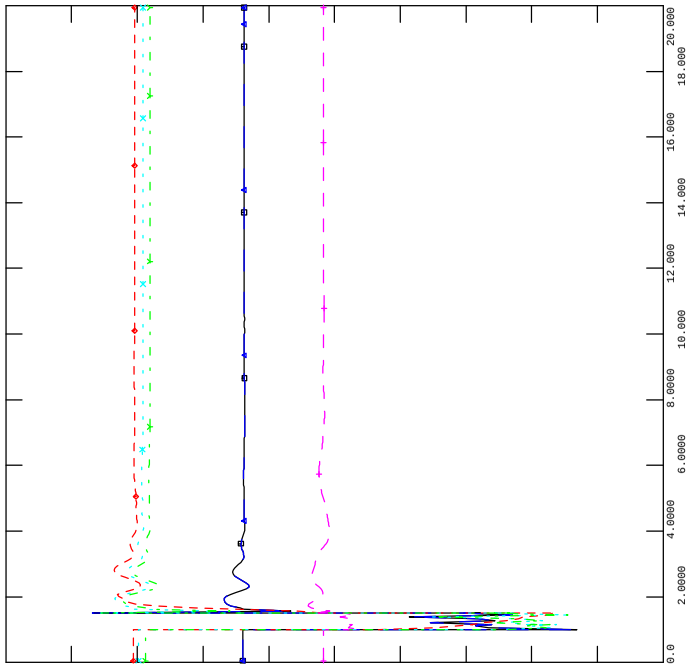


THU, APR 14 2022 14:27
ACTIVE POWER

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_600L_BULLSHEAD

FILE: scn3_SP_600L_Bullshead.out

CHNL# 456: [ETRM 61994[GRANLEA6 0.6900]G1]
1.2102 0.51820
CHNL# 453: [ETRM 60990[SHAMROC5 0.6500]G1]
1.2196 0.52630
CHNL# 462: [ETRM 773[SECST 20.000]1]
1.1451 0.92750
CHNL# 426: [ETRM 667[CANCARB9 13.800]1]
1.1579 0.55050
CHNL# 461: [ETRM990007[FORTYMILE_6 0.6900]G2]
1.3291 0.56850
CHNL# 460: [ETRM990004[FORTYMILE_3 0.6900]G1]
1.3291 0.56850



THU, APR 14 2022 14:27
TERMINAL VOLTAGE

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_600L_BULLSHEAD

FILE: scn3_SP_600L_Bullshead.out

THU, APR 14 2022 14:27 BRANCH Q

CHNL# 552: [1035L_Q]
155.87 -293.5

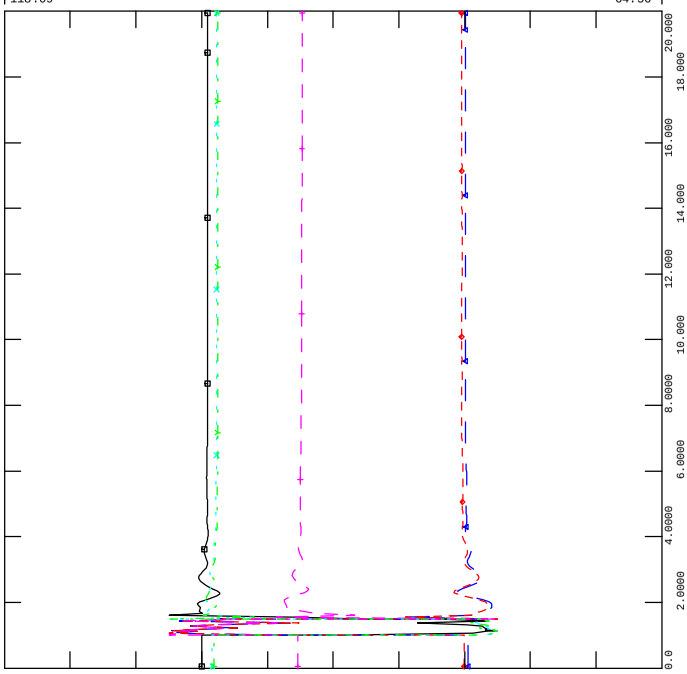
CHNL# 546: [1034L_Q]
138.14 -294.6

CHNL# 538: [983L_L1_Q]
160.21 -204.7

CHNL# 536: [983L_L3_Q]
134.70 -94.58

CHNL# 534: [983L_L2_Q]
138.82 -121.8

CHNL# 532: [964L_L2_Q]
118.09 -64.56



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_600L_BULLSHEAD

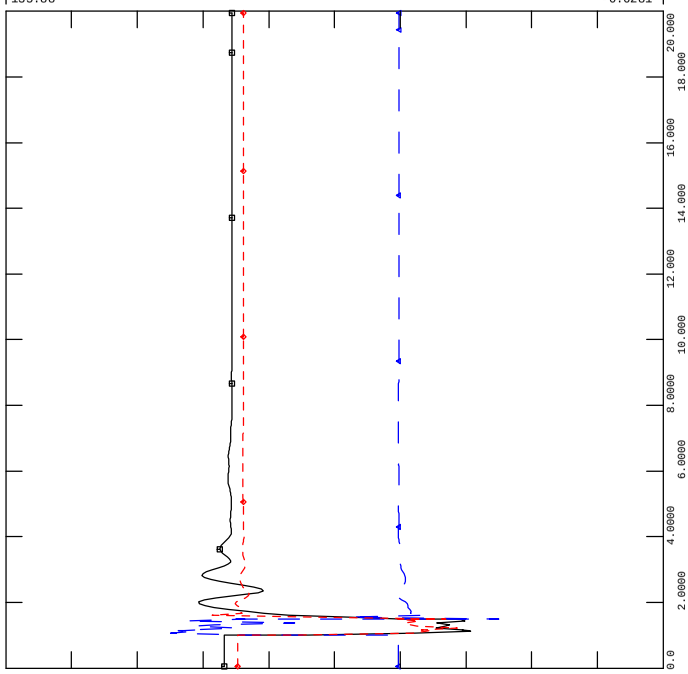
FILE: scn3_SP_600L_Bullshead.out

THU, APR 14 2022 14:27 BRANCH Q

CHNL# 544: [964L_L5_Q]
77.523 -50.15

CHNL# 548: [964L_L4_Q]
199.07 -116.8

CHNL# 550: [1005L_Q]
135.88 -0.6281



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_600L_BULLSHEAD

FILE: scn3_SP_600L_Bullshead.out

THU, APR 14 2022 14:27 BRANCH P

CHNL# 551: [1035L_P]
762.21 82.198

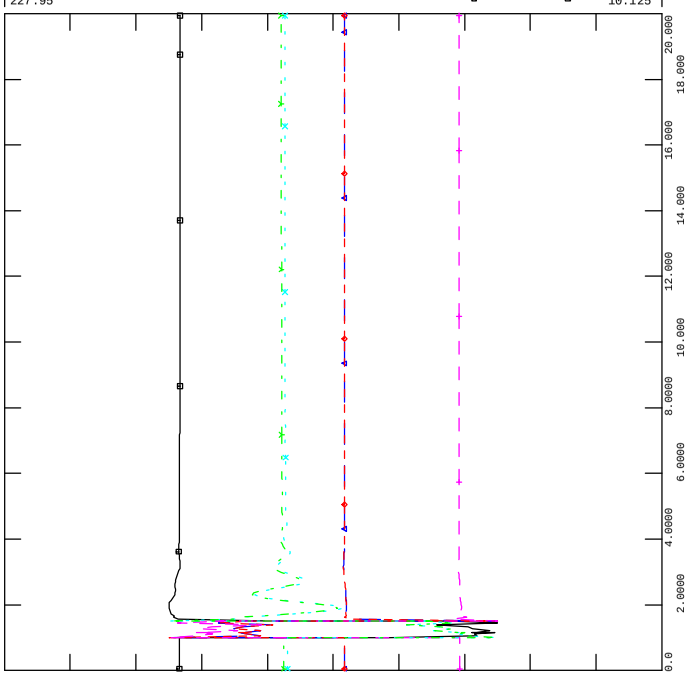
CHNL# 545: [1034L_P]
735.59 69.720

CHNL# 537: [983L_L1_P]
-168.0 -653.3

CHNL# 535: [983L_L3_P]
-96.88 -510.9

CHNL# 533: [983L_L2_P]
-96.74 -510.5

CHNL# 531: [964L_L2_P]
227.95 10.125



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_600L_BULLSHEAD

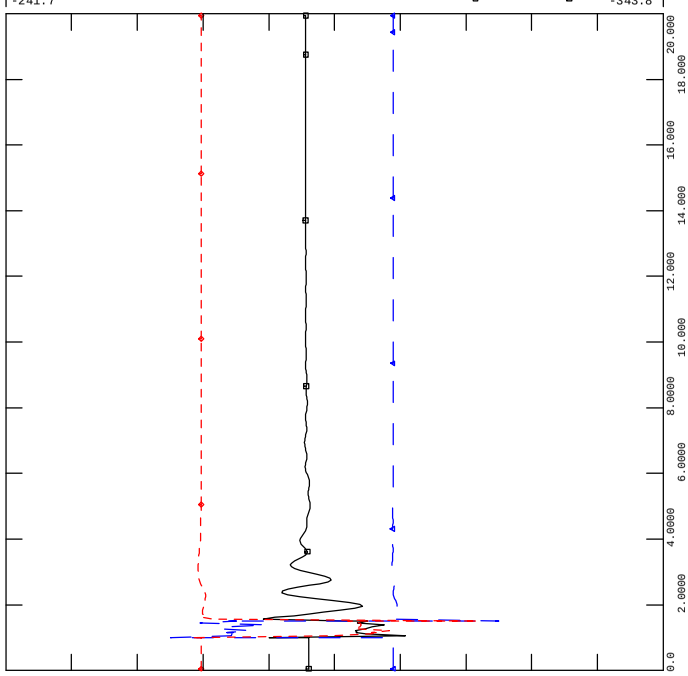
FILE: scn3_SP_600L_Bullshead.out

THU, APR 14 2022 14:27 BRANCH P

CHNL# 543: [964L_L5_P]
17.616 -124.1

CHNL# 547: [964L_L4_P]
-130.6 -621.5

CHNL# 549: [1005L_P]
-241.7 -343.8



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_600L_PEACE_BUTTE

FILE: scn3_SP_600L_Peace_Butte.out

THU, APR 14 2022 14:27

ACTIVE POWER

CHNL# 201: [POWR 61994[GRANLEA6 0.6900]G1]
1.2171 0.20790

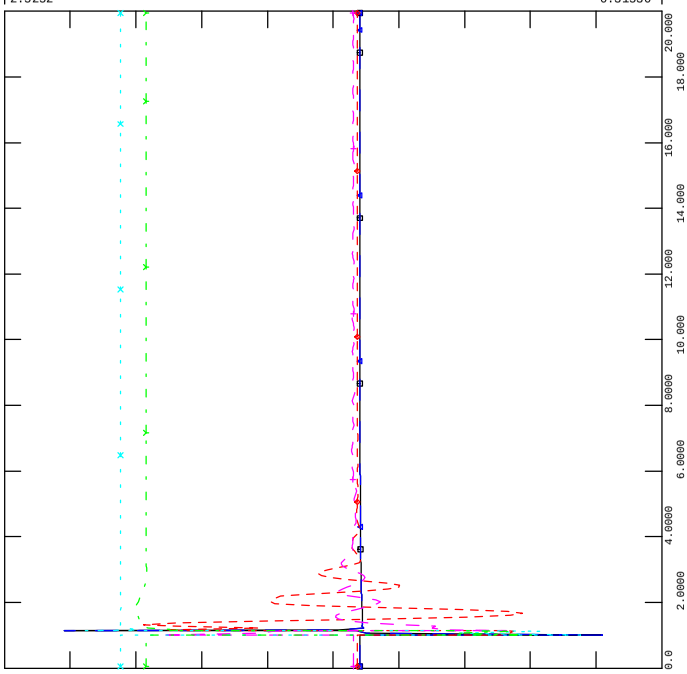
CHNL# 198: [POWR 60990[SHAMROC5 0.6500]G1]
2.3031 0.67900

CHNL# 207: [POWR 773[SECST 20.000]1]
3.4277 2.5819

CHNL# 171: [POWR 667[CANCARB9 13.800]1]
1.0486 0.10430

CHNL# 206: [POWR990007[FORTYMILE_6 0.6900]G2]
2.5252 0.31530

CHNL# 205: [POWR990004[FORTYMILE_3 0.6900]G1]
2.5252 0.31530



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_600L_PEACE_BUTTE

FILE: scn3_SP_600L_Peace_Butte.out

THU, APR 14 2022 14:27

TERMINAL VOLTAGE

CHNL# 456: [ETRM 61994[GRANLEA6 0.6900]G1]
1.3803 0.33370

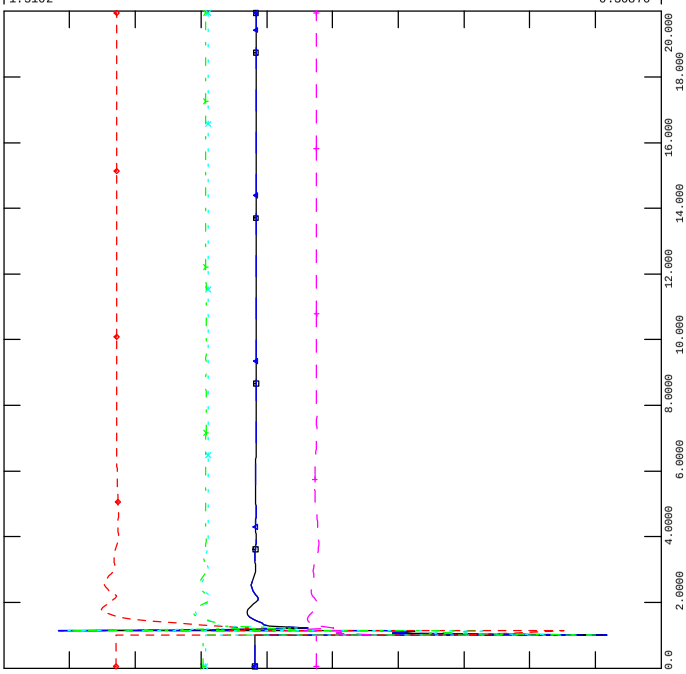
CHNL# 453: [ETRM 60990[SHAMROC5 0.6500]G1]
1.3928 0.37070

CHNL# 462: [ETRM 773[SECST 20.000]1]
1.1504 0.91810

CHNL# 426: [ETRM 667[CANCARB9 13.800]1]
1.1553 0.47880

CHNL# 461: [ETRM990007[FORTYMILE_6 0.6900]G2]
1.5162 0.30870

CHNL# 460: [ETRM990004[FORTYMILE_3 0.6900]G1]
1.5162 0.30870



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_600L_PEACE_BUTTE

FILE: scn3_SP_600L_Peace_Butte.out

THU, APR 14 2022 14:27

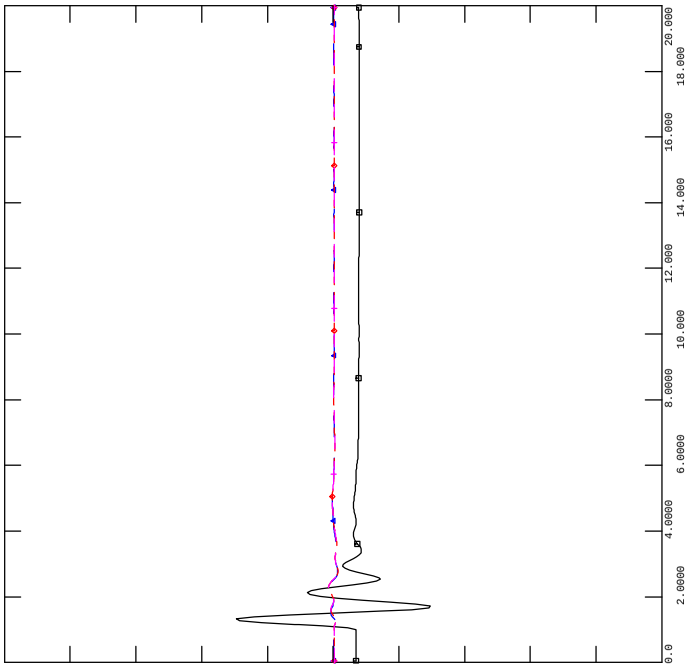
ROTOR ANGLE

CHNL# 39: [ANGL 775[SECCT2 21.000]3]
54.535 -46.96

CHNL# 38: [ANGL 774[SECCT1 21.000]2]
54.535 -46.96

CHNL# 37: [ANGL 773[SECST 20.000]1]
56.577 -44.79

CHNL# 1: [ANGL 667[CANCARB9 13.800]1]
124.55 -17.27



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_600L_PEACE_BUTTE

FILE: scn3_SP_600L_Peace_Butte.out

THU, APR 14 2022 14:27

REACTIVE POWER

CHNL# 286: [VARS 61994[GRANLEA6 0.6900]G1]
0.90590 -0.3633

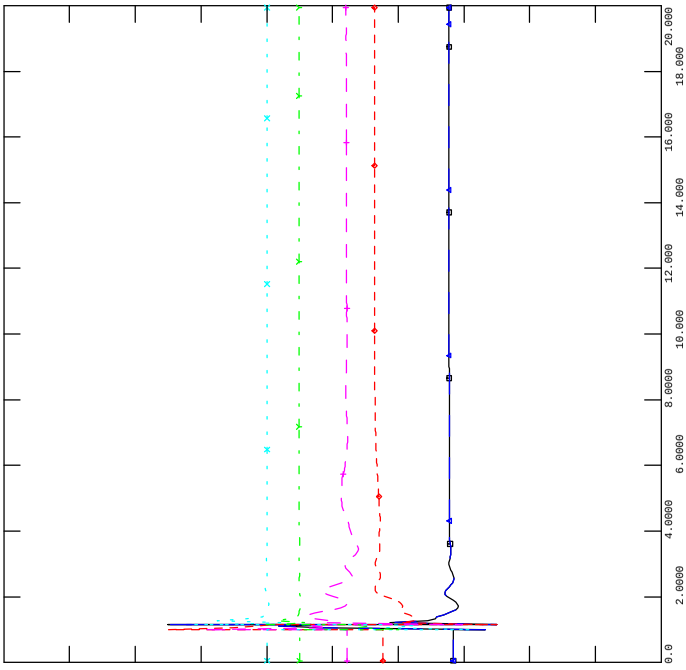
CHNL# 283: [VARS 60990[SHAMROC5 0.6500]G1]
1.6541 -0.0815

CHNL# 292: [VARS 773[SECST 20.000]1]
1.5234 -0.1276

CHNL# 256: [VARS 667[CANCARB9 13.800]1]
1.3627 -0.6357

CHNL# 291: [VARS990007[FORTYMILE_6 0.6900]G2]
2.2674 -0.7047

CHNL# 290: [VARS990004[FORTYMILE_3 0.6900]G1]
2.2674 -0.7047



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_600L_PEACE_BUTTE

FILE: scn3_SP_600L_Peace_Butte.out

THU, APR 14 2022 14:27

BRANCH P

CHNL# 551: [1035L_P]
768.15 -79.44

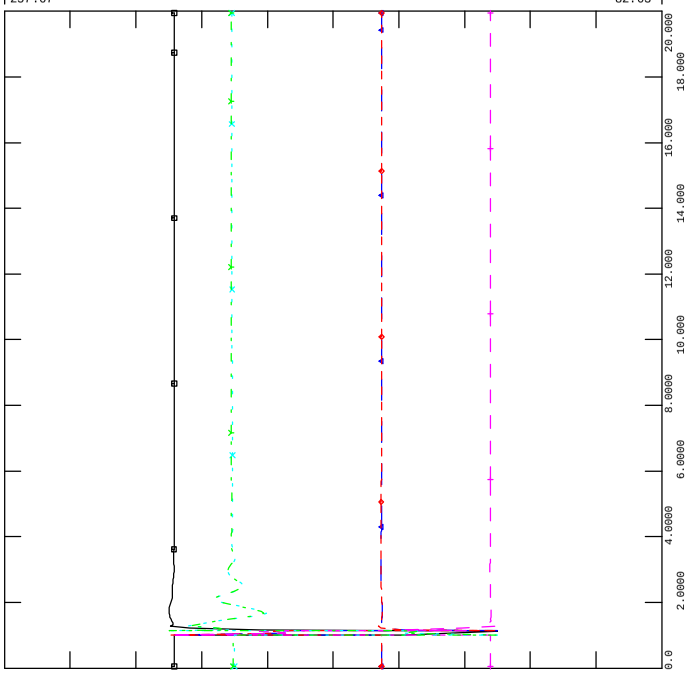
CHNL# 545: [1034L_P]
734.40 -82.68

CHNL# 537: [983L_L1_P]
48.663 -698.8

CHNL# 535: [983L_L3_P]
22.570 -559.5

CHNL# 533: [983L_L2_P]
22.742 -559.1

CHNL# 531: [964L_L2_P]
257.67 -82.03



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_600L_PEACE_BUTTE

FILE: scn3_SP_600L_Peace_Butte.out

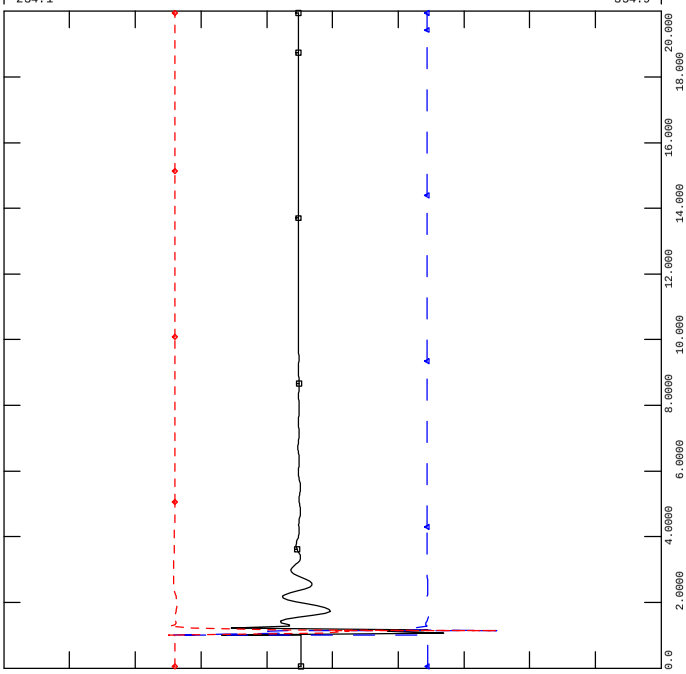
THU, APR 14 2022 14:27

BRANCH P

CHNL# 543: [964L_L5_P]
32.380 -186.2

CHNL# 547: [964L_L4_P]
41.256 -674.3

CHNL# 549: [1005L_P]
-234.1 -354.9



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_600L_PEACE_BUTTE

FILE: scn3_SP_600L_Peace_Butte.out

THU, APR 14 2022 14:27

BUS VOLTAGE

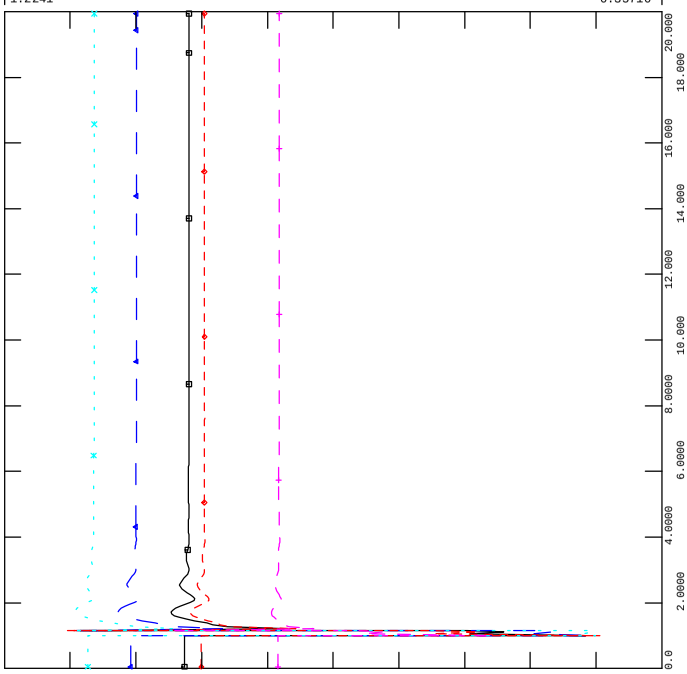
CHNL# 530: [VOLT 976 [ROTBAUR 138.00]]
1.1256 0.13930

CHNL# 525: [VOLT 320 [CHAPPIC7 138.00]]
1.1569 0.76290

CHNL# 528: [VOLT 662 [WHITLA1 240.00]]
1.3509 0.29030

CHNL# 527: [VOLT 659 [BOWMAN2 138.00]]
1.1777 0.21770

CHNL# 529: [VOLT 669 [BOWMAN1 240.00]]
1.2241 0.35710



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_600L_PEACE_BUTTE

FILE: scn3_SP_600L_Peace_Butte.out

THU, APR 14 2022 14:27

BRANCH Q

CHNL# 552: [1035L_Q]
226.01 -343.0

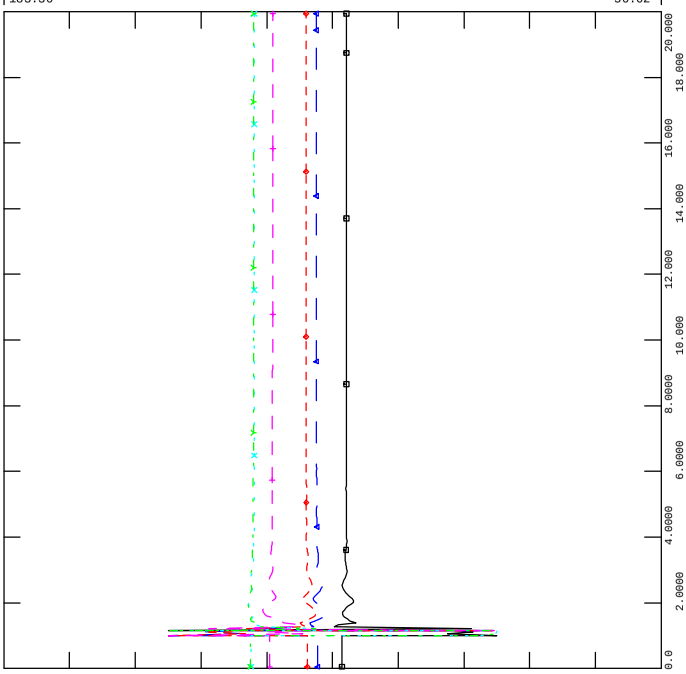
CHNL# 546: [1034L_Q]
208.78 -342.9

CHNL# 538: [983L_L1_Q]
199.22 -300.1

CHNL# 536: [983L_L3_Q]
169.49 -253.3

CHNL# 534: [983L_L2_Q]
180.99 -292.2

CHNL# 532: [964L_L2_Q]
183.30 -50.02

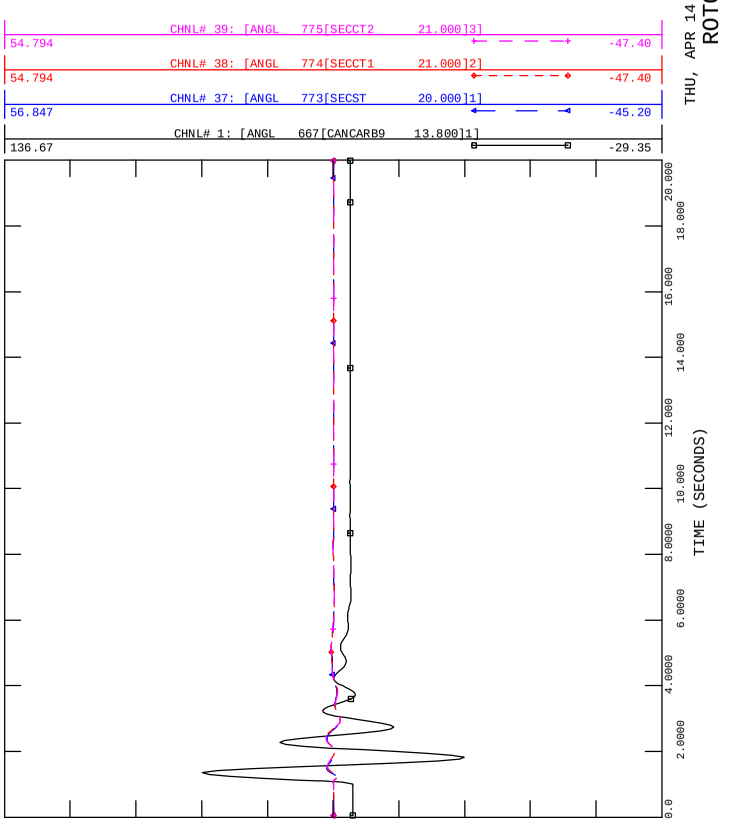


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_675L_AL_ROTHBAUER

FILE: scn3_SP_675L_Al_Rothbauer.out

THU, APR 14 2022 14:27

ROTOR ANGLE

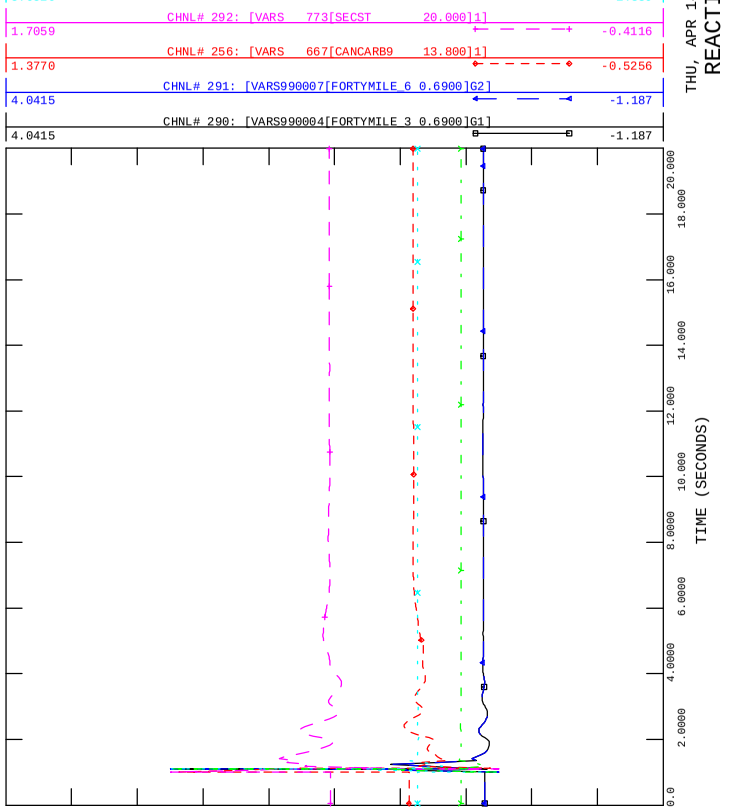


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_675L_AL_ROTHBAUER

FILE: scn3_SP_675L_Al_Rothbauer.out

THU, APR 14 2022 14:27

REACTIVE POWER

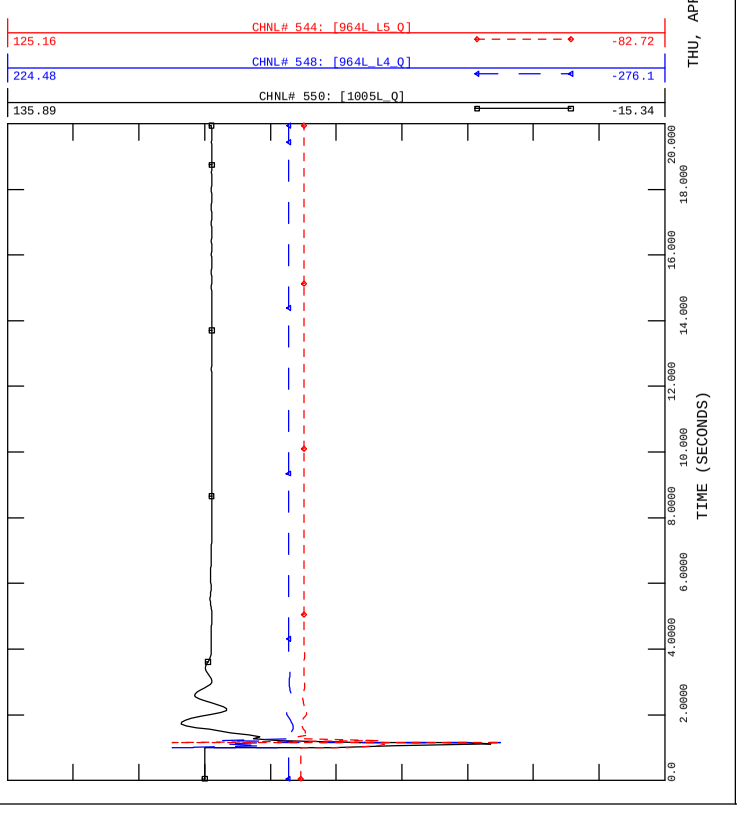


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_600L_PEACE_BUTTE

FILE: scn3_SP_600L_Peace_Butte.out

THU, APR 14 2022 14:27

BRANCH Q

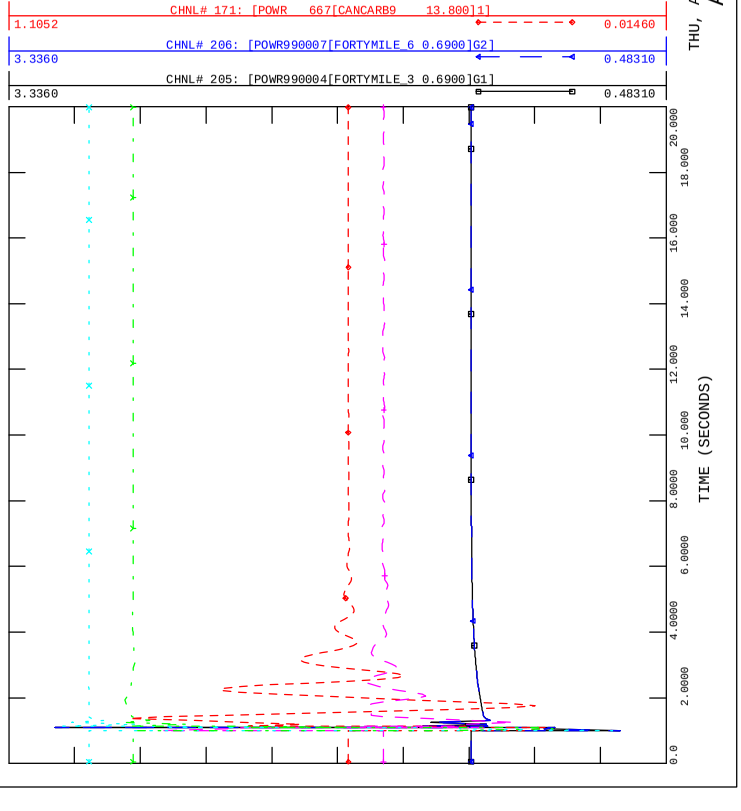


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_675L_AL_ROTHBAUER

FILE: scn3_SP_675L_Al_Rothbauer.out

THU, APR 14 2022 14:27

ACTIVE POWER



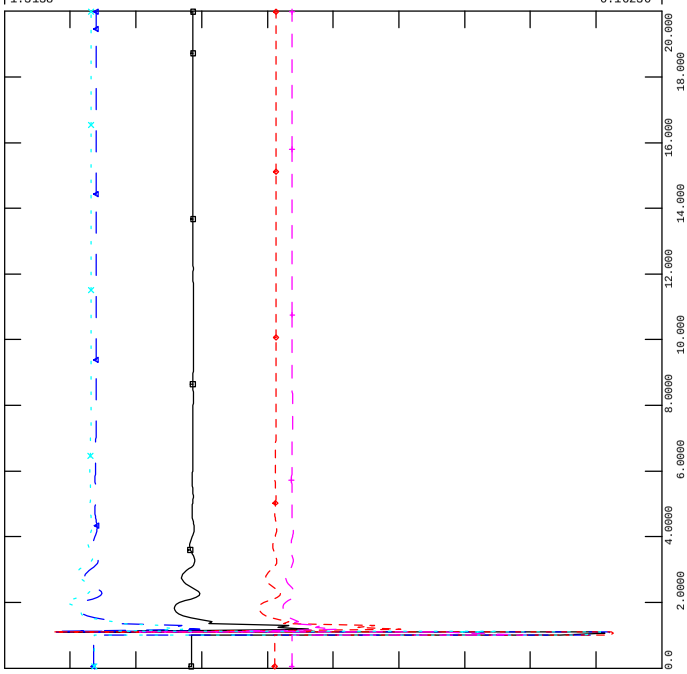
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_675L_AL_ROTHBAUER

FILE: scn3_SP_675L_Al_Rothbauer.out

THU, APR 14 2022 14:27

BUS VOLTAGE

CHNL# 530: [VOLT 976 [ROTBAUR 138.00]]
1.1463 0.08100
CHNL# 525: [VOLT 320 [CHAPPIC7 138.00]]
1.2052 0.71950
CHNL# 528: [VOLT 662 [WHITLA1 240.00]]
1.5867 0.23910
CHNL# 527: [VOLT 659 [BOWMAN2 138.00]]
1.1638 -0.0948
CHNL# 529: [VOLT 669 [BOWMAN1 240.00]]
1.3138 0.16230



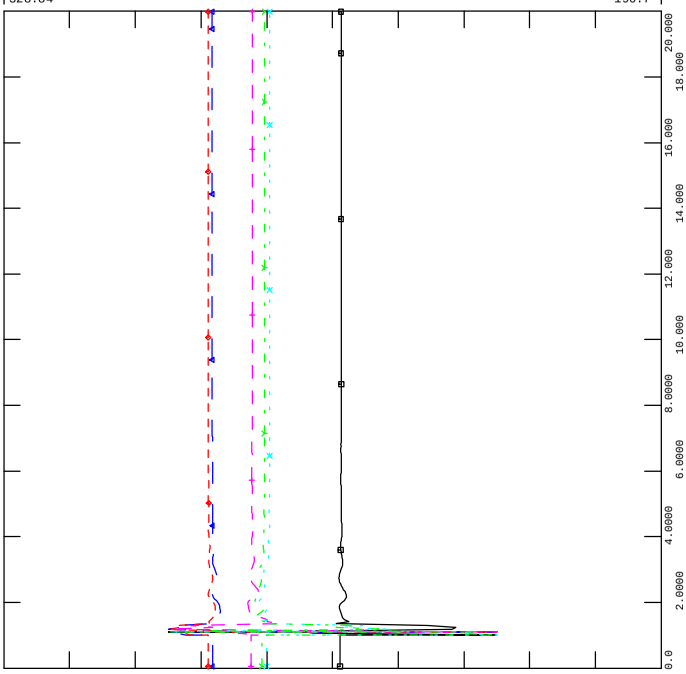
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_675L_AL_ROTHBAUER

FILE: scn3_SP_675L_Al_Rothbauer.out

THU, APR 14 2022 14:27

BRANCH Q

CHNL# 552: [1035L Q]
215.41 -301.2
CHNL# 546: [1034L Q]
200.62 -297.9
CHNL# 538: [983L_L1_Q]
282.13 -474.5
CHNL# 536: [983L_L3_Q]
333.61 -820.7
CHNL# 534: [983L_L2_Q]
333.68 -858.8
CHNL# 532: [964L_L2_Q]
328.84 -190.7



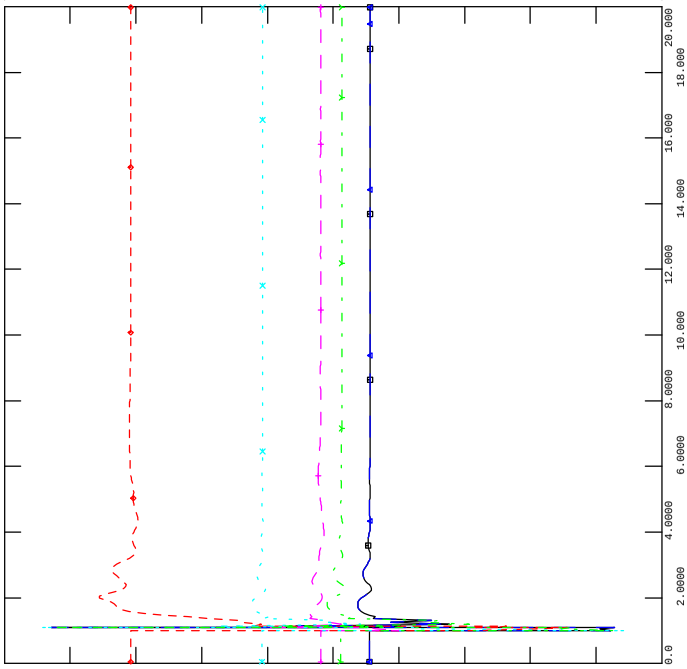
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_675L_AL_ROTHBAUER

FILE: scn3_SP_675L_Al_Rothbauer.out

THU, APR 14 2022 14:27

TERMINAL VOLTAGE

CHNL# 456: [ETRM 61994[GRANLEA6 0.6900]G1]
1.7774 0.37980
CHNL# 453: [ETRM 60990[SHAMROC5 0.6500]G1]
1.8139 -0.0620
CHNL# 462: [ETRM 773[SECST 20.000]1]
1.1612 0.90910
CHNL# 426: [ETRM 667[CANCARB9 13.800]1]
1.1733 0.48060
CHNL# 461: [ETRM990007[FORTYMILE_6 0.6900]G2]
1.8318 0.43340
CHNL# 460: [ETRM990004[FORTYMILE_3 0.6900]G1]
1.8318 0.43340



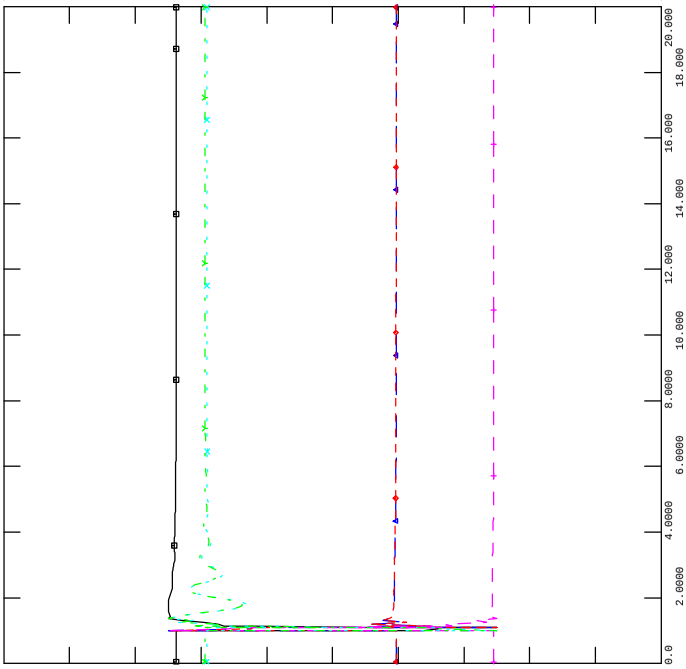
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_675L_AL_ROTHBAUER

FILE: scn3_SP_675L_Al_Rothbauer.out

THU, APR 14 2022 14:27

BRANCH P

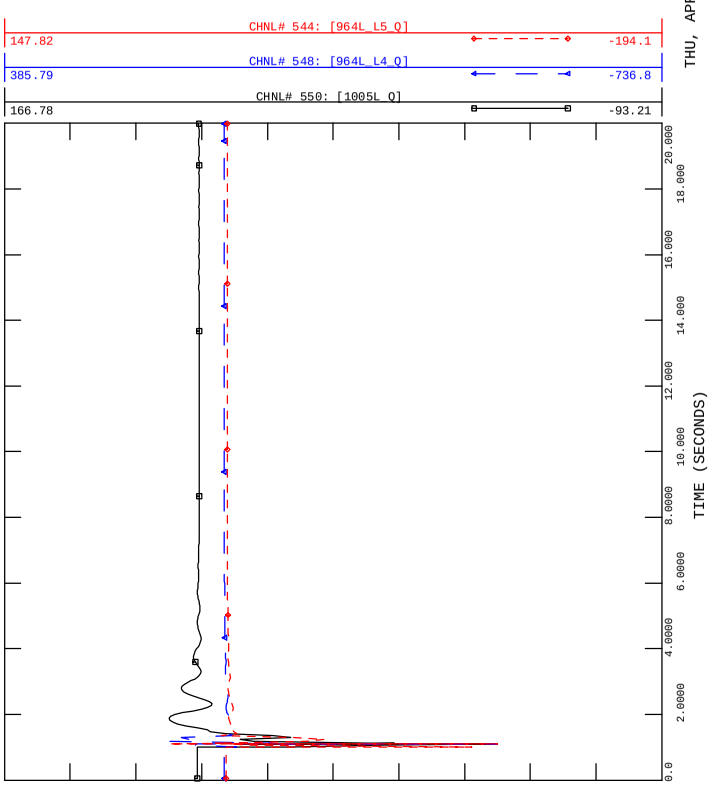
CHNL# 551: [1035L_P]
776.77 -217.4
CHNL# 545: [1034L_P]
745.74 -217.5
CHNL# 537: [983L_L1_P]
212.09 -748.5
CHNL# 535: [983L_L3_P]
183.77 -645.8
CHNL# 533: [983L_L2_P]
183.46 -644.8
CHNL# 531: [964L_L2_P]
297.06 -187.8



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_675L_AL_ROTHBAUER

FILE: scn3_SP_675L_Al_Rothbauer.out

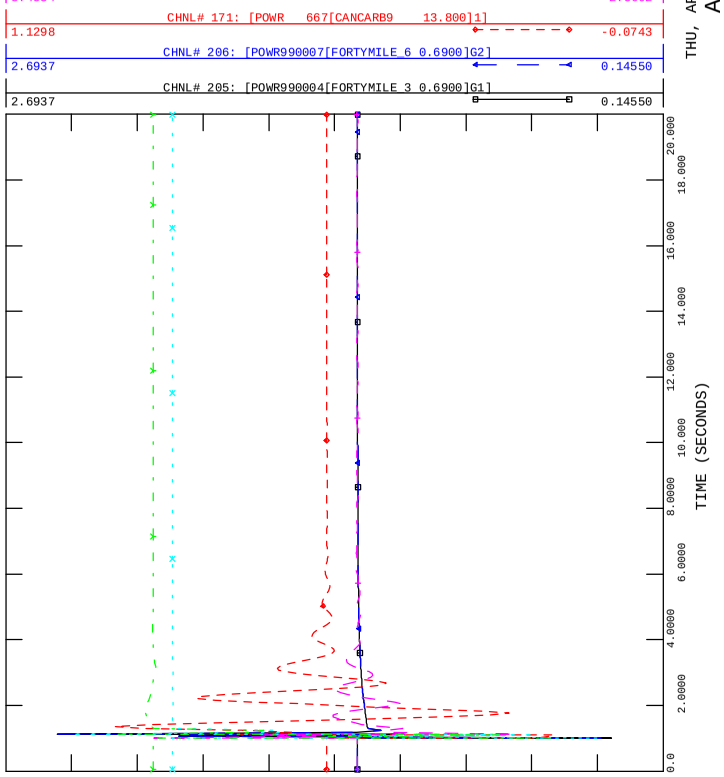
THU, APR 14 2022 14:27 BRANCH Q



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_675L_BOWMANTON

FILE: scn3_SP_675L_Bowmanton.out

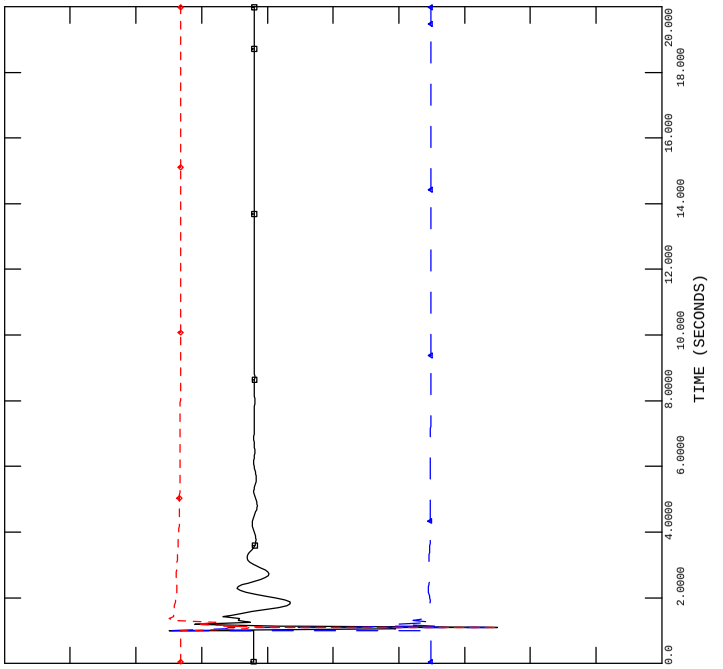
THU, APR 14 2022 14:27 ACTIVE POWER



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_675L_AL_ROTHBAUER

FILE: scn3_SP_675L_Al_Rothbauer.out

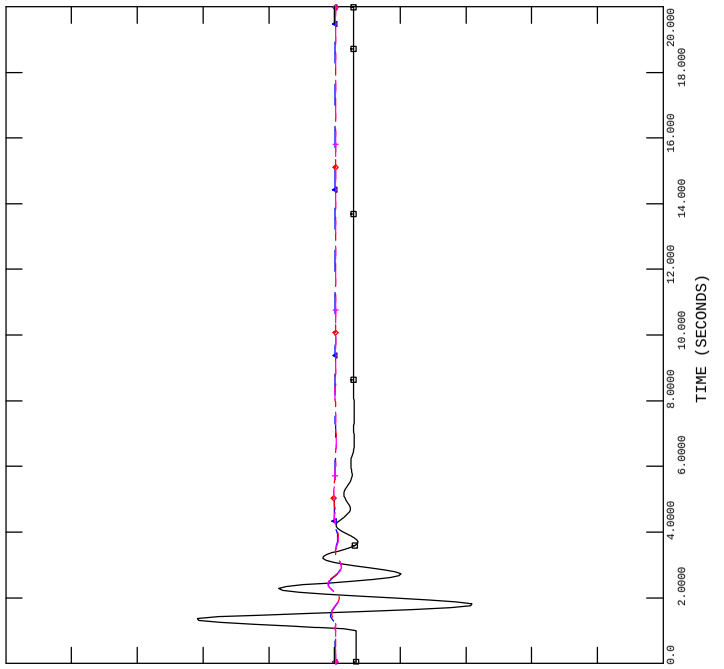
THU, APR 14 2022 14:27 BRANCH P



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_675L_BOWMANTON

FILE: scn3_SP_675L_Bowmanton.out

THU, APR 14 2022 14:27 ROTOR ANGLE



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_675L_BOWMANTON

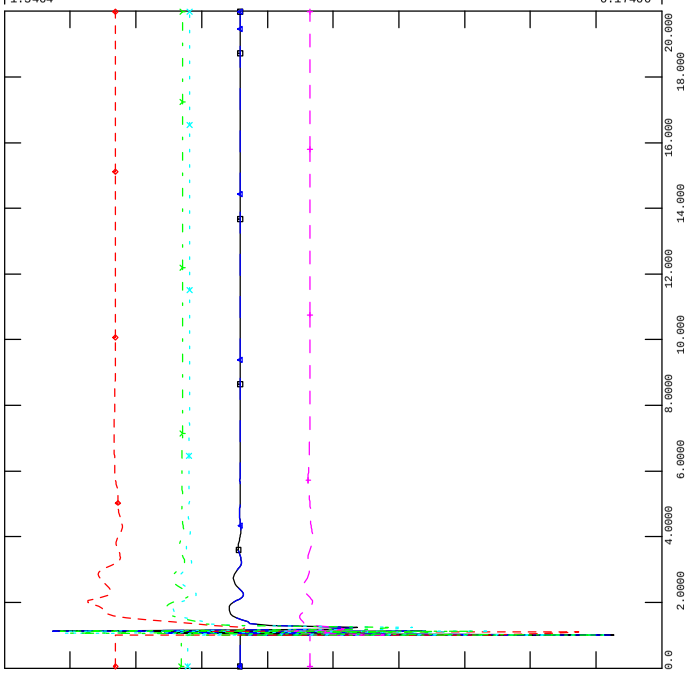
FILE: scn3_SP_675L_Bowmanton.out

THU, APR 14 2022 14:27

TERMINAL VOLTAGE

CHNL# 456: [ETRM 61994[GRANLEA6 0.6900]G1] 1.3781 0.20570
CHNL# 453: [ETRM 60990[SHAMROC5 0.6500]G1] 1.3948 0.26490
CHNL# 462: [ETRM 773[SECST 20.000]1] 1.1500 0.91320
CHNL# 426: [ETRM 667[CANCARB9 13.800]1] 1.1733 0.38530
CHNL# 461: [ETRM990007[FORTYMILE_6 0.6900]G2] 1.5464 0.17400
CHNL# 460: [ETRM990004[FORTYMILE_3 0.6900]G1] 1.5464 0.17400

TIME (SECONDS)



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_675L_BOWMANTON

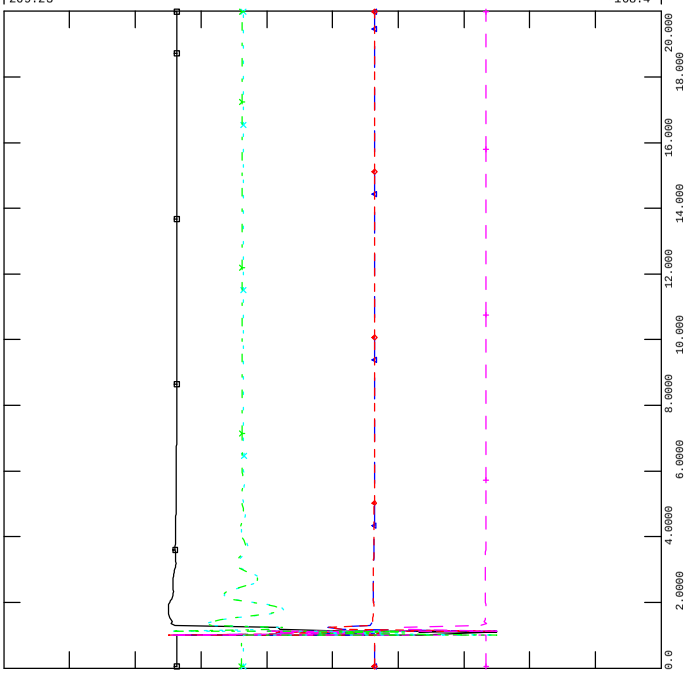
FILE: scn3_SP_675L_Bowmanton.out

THU, APR 14 2022 14:27

BRANCH P

CHNL# 551: [1035L_P] 843.11 -180.0
CHNL# 545: [1034L_P] 808.14 -179.5
CHNL# 537: [983L_L1_P] 144.63 -739.1
CHNL# 535: [983L_L3_P] 112.26 -638.5
CHNL# 533: [983L_L2_P] 112.41 -638.1
CHNL# 531: [964L_L2_P] 269.23 -108.4

TIME (SECONDS)



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_675L_BOWMANTON

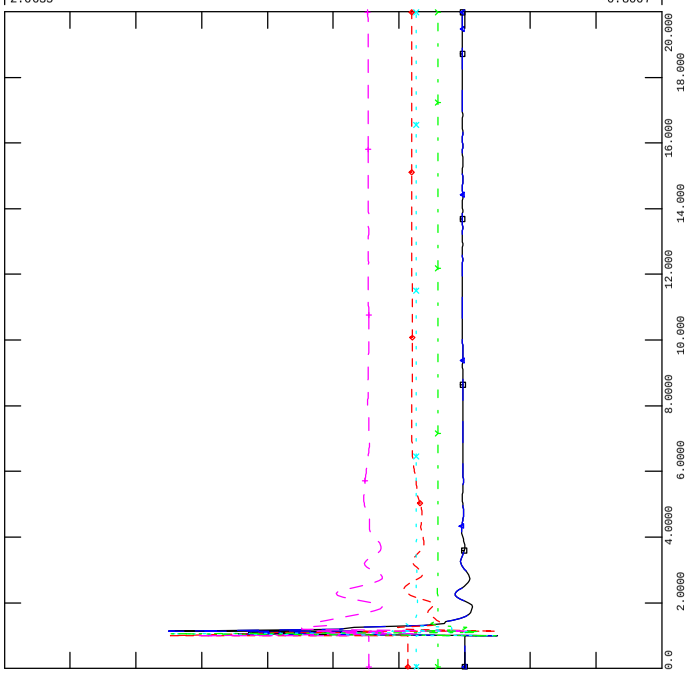
FILE: scn3_SP_675L_Bowmanton.out

THU, APR 14 2022 14:27

REACTIVE POWER

CHNL# 286: [VARS 61994[GRANLEA6 0.6900]G1] 2.0661 -0.5602
CHNL# 283: [VARS 60990[SHAMROC5 0.6500]G1] 4.1884 -0.9635
CHNL# 292: [VARS 773[SECST 20.000]1] 1.6066 -0.0984
CHNL# 256: [VARS 667[CANCARB9 13.800]1] 1.4267 -0.5561
CHNL# 291: [VARS990007[FORTYMILE_6 0.6900]G2] 2.6635 -0.8067
CHNL# 290: [VARS990004[FORTYMILE_3 0.6900]G1] 2.6635 -0.8067

TIME (SECONDS)



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_675L_BOWMANTON

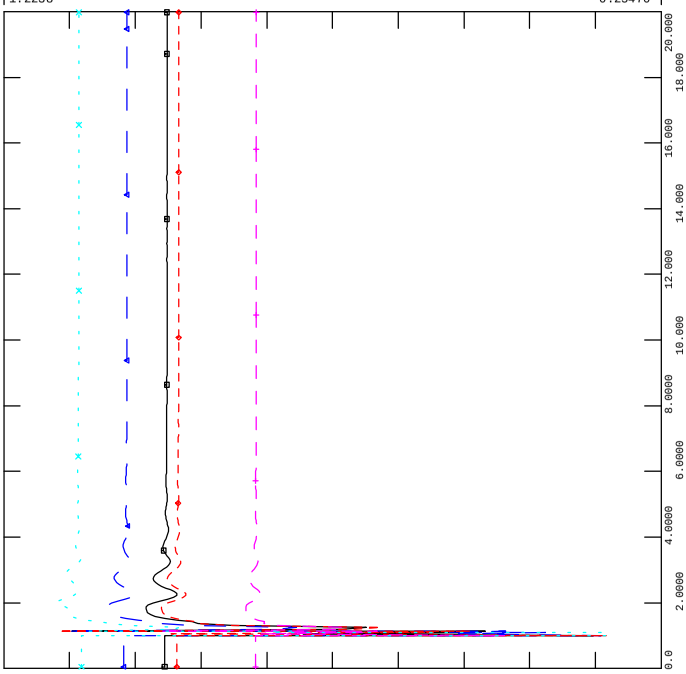
FILE: scn3_SP_675L_Bowmanton.out

THU, APR 14 2022 14:27

BUS VOLTAGE

CHNL# 530: [VOLT 976 [ROTBAUR 138.00]] 1.1473 -0.0958
CHNL# 525: [VOLT 320 [CHAPPIC7 138.00]] 1.1544 0.73290
CHNL# 528: [VOLT 662 [WHITLA1 240.00]] 1.3495 0.14800
CHNL# 527: [VOLT 659 [BOWMAN2 138.00]] 1.1936 0.09750
CHNL# 529: [VOLT 669 [BOWMAN1 240.00]] 1.2238 0.25470

TIME (SECONDS)



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_675L_BOWMANTON

FILE: scn3_SP_675L_Bowmanton.out

THU, APR 14 2022 14:27 BRANCH P

CHNL# 543: [964L_L5_P]
45.059 -197.4
CHNL# 547: [964L_L4_P]
149.93 -767.9
CHNL# 549: [1005L_P]
-228.0 -377.1

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_676L_BOWMANTON

FILE: scn3_SP_676L_Bowmanton.out

THU, APR 14 2022 14:27 ROTOR ANGLE

CHNL# 39: [ANGL 775[SECCT2 21.000]3]
55.450 -47.89
CHNL# 38: [ANGL 774[SECCT1 21.000]2]
55.450 -47.89
CHNL# 37: [ANGL 773[SECST 20.000]1]
57.378 -45.67
CHNL# 1: [ANGL 667[CANCARB9 13.800]1]
158.16 -38.92

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_675L_BOWMANTON

FILE: scn3_SP_675L_Bowmanton.out

THU, APR 14 2022 14:27 BRANCH Q

CHNL# 552: [1035L_Q]
249.23 -353.8
CHNL# 546: [1034L_Q]
230.68 -352.7
CHNL# 538: [983L_L1_Q]
323.06 -517.6
CHNL# 536: [983L_L3_Q]
228.96 -405.3
CHNL# 534: [983L_L2_Q]
228.01 -421.5
CHNL# 532: [964L_L2_Q]
390.65 -180.8

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_675L_BOWMANTON

FILE: scn3_SP_675L_Bowmanton.out

THU, APR 14 2022 14:27 BRANCH Q

CHNL# 544: [964L_L5_Q]
72.449 -86.75
CHNL# 548: [964L_L4_Q]
325.11 -430.6
CHNL# 550: [1005L_Q]
145.01 -29.07

TIME (SECONDS)

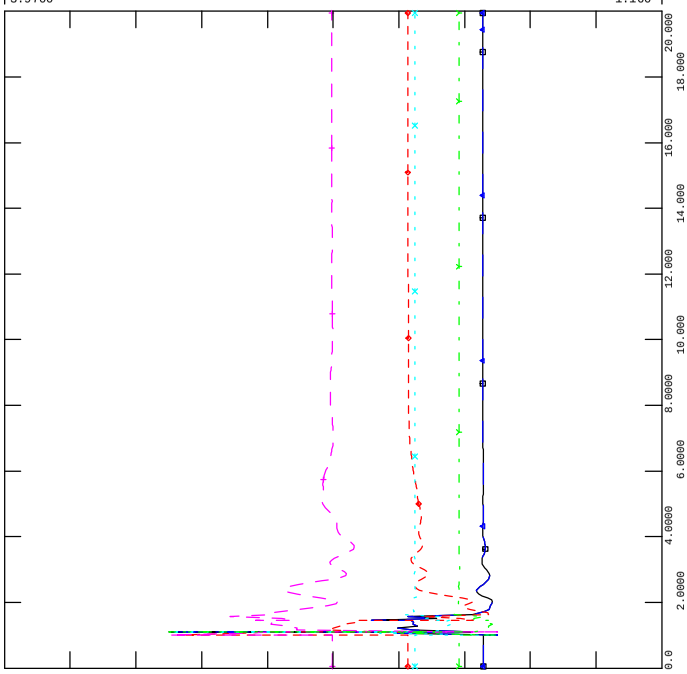
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_676L_BOWMANTON

FILE: scn3_SP_676L_Bowmanton.out

THU, APR 14 2022 14:27 REACTIVE POWER

CHNL# 286: [VARS 61994[GRANLEA6 0.6900]G1]
2.4857 -0.6232
CHNL# 283: [VARS 60990[SHAMROC5 0.6500]G1]
5.5256 -1.791
CHNL# 292: [VARS 773[SECST 20.000]1]
1.6796 -0.3621
CHNL# 256: [VARS 667[CANCARB9 13.800]1]
1.3743 -0.5228
CHNL# 291: [VARS990007[FORTYMILE_6 0.6900]G2]
3.9700 -1.160
CHNL# 290: [VARS990004[FORTYMILE_3 0.6900]G1]
3.9700 -1.160

TIME (SECONDS)
0.0 2.0000 4.0000 6.0000 8.0000 10.000 12.000 14.000 16.000 18.000 20.000



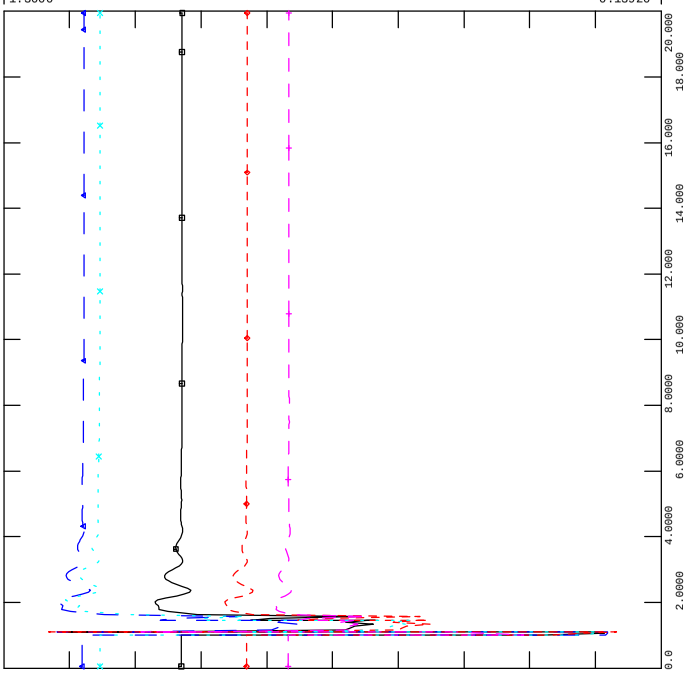
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_676L_BOWMANTON

FILE: scn3_SP_676L_Bowmanton.out

THU, APR 14 2022 14:27 BUS VOLTAGE

CHNL# 530: [VOLT 976 [ROTBAUR 138.00]]
1.1574 0.08650
CHNL# 525: [VOLT 320 [CHAPPIC7 138.00]]
1.2001 0.72160
CHNL# 528: [VOLT 662 [WHITLA1 240.00]]
1.5752 0.10780
CHNL# 527: [VOLT 659 [BOWMAN2 138.00]]
1.1405 -0.0892
CHNL# 529: [VOLT 669 [BOWMAN1 240.00]]
1.3000 0.13920

TIME (SECONDS)
0.0 2.0000 4.0000 6.0000 8.0000 10.000 12.000 14.000 16.000 18.000 20.000



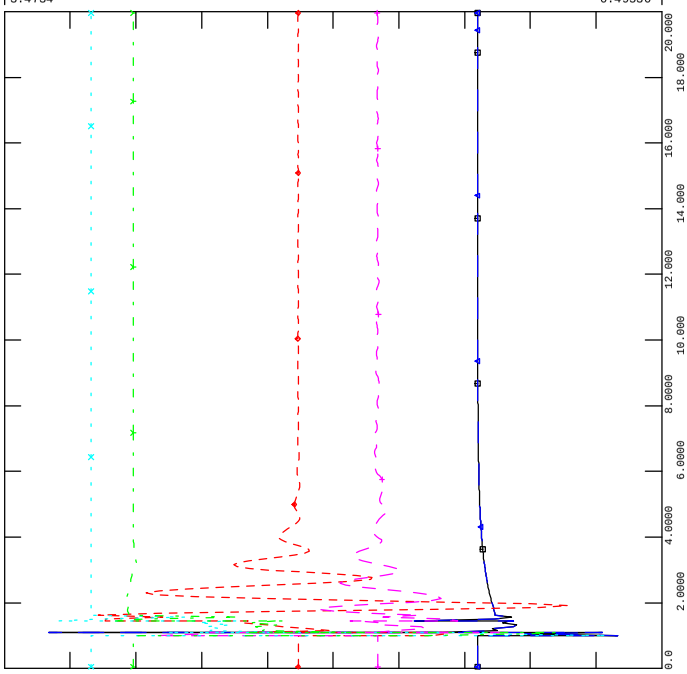
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_676L_BOWMANTON

FILE: scn3_SP_676L_Bowmanton.out

THU, APR 14 2022 14:27 ACTIVE POWER

CHNL# 201: [POWR 61994[GRANLEA6 0.6900]G1]
1.2420 0.00690
CHNL# 198: [POWR 60990[SHAMROC5 0.6500]G1]
2.3399 -0.1202
CHNL# 207: [POWR 773[SECST 20.000]1]
3.4710 2.6039
CHNL# 171: [POWR 667[CANCARB9 13.800]1]
1.1675 -0.2335
CHNL# 206: [POWR990007[FORTYMILE_6 0.6900]G2]
3.4734 0.49530
CHNL# 205: [POWR990004[FORTYMILE_3 0.6900]G1]
3.4734 0.49530

TIME (SECONDS)
0.0 2.0000 4.0000 6.0000 8.0000 10.000 12.000 14.000 16.000 18.000 20.000



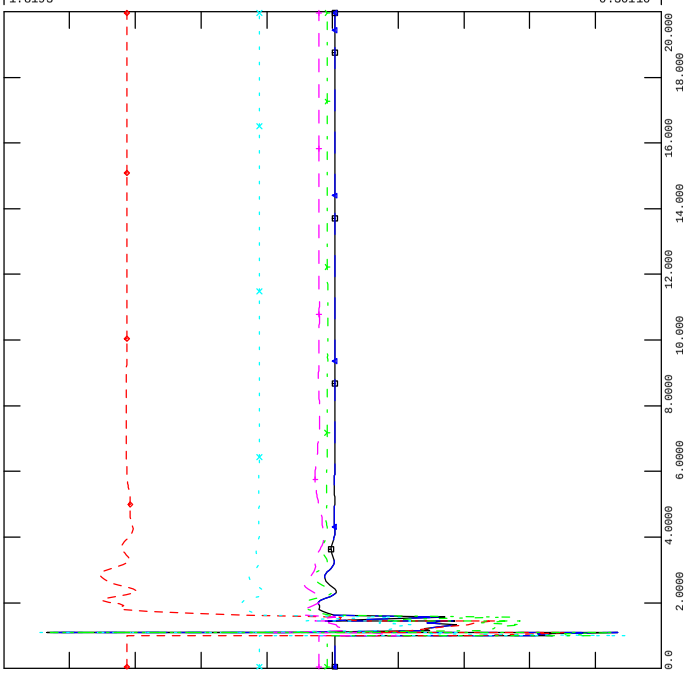
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_676L_BOWMANTON

FILE: scn3_SP_676L_Bowmanton.out

THU, APR 14 2022 14:27 TERMINAL VOLTAGE

CHNL# 456: [ETRM 61994[GRANLEA6 0.6900]G1]
1.7638 0.33840
CHNL# 453: [ETRM 60990[SHAMROC5 0.6500]G1]
1.8014 -0.0573
CHNL# 462: [ETRM 773[SECST 20.000]1]
1.1600 0.90950
CHNL# 426: [ETRM 667[CANCARB9 13.800]1]
1.1680 0.48340
CHNL# 461: [ETRM990007[FORTYMILE_6 0.6900]G2]
1.8193 0.30110
CHNL# 460: [ETRM990004[FORTYMILE_3 0.6900]G1]
1.8193 0.30110

TIME (SECONDS)
0.0 2.0000 4.0000 6.0000 8.0000 10.000 12.000 14.000 16.000 18.000 20.000



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_676L_BOWMANTON

FILE: scn3_SP_676L_Bowmanton.out

THU, APR 14 2022 14:27

BRANCH Q

CHNL# 552: [1035L_Q] 221.40 -305.8
CHNL# 546: [1034L_Q] 205.22 -302.1
CHNL# 538: [983L_L1_Q] 337.78 -557.9
CHNL# 536: [983L_L3_Q] 362.91 -786.4
CHNL# 534: [983L_L2_Q] 370.12 -827.3
CHNL# 532: [964L_L2_Q] 360.44 -203.9

TIME (SECONDS)

0.0 2.0000 4.0000 6.0000 8.0000 10.000 12.000 14.000 16.000 18.000 20.000

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_676L_BOWMANTON

FILE: scn3_SP_676L_Bowmanton.out

THU, APR 14 2022 14:27

BRANCH Q

CHNL# 544: [964L_L5_Q] 131.50 -175.5
CHNL# 548: [964L_L4_Q] 429.32 -737.7
CHNL# 550: [1005L_Q] 169.62 -88.63

TIME (SECONDS)

0.0 2.0000 4.0000 6.0000 8.0000 10.000 12.000 14.000 16.000 18.000 20.000

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_676L_BOWMANTON

FILE: scn3_SP_676L_Bowmanton.out

THU, APR 14 2022 14:27

BRANCH P

CHNL# 551: [1035L_P] 813.18 -228.8
CHNL# 545: [1034L_P] 785.44 -230.3
CHNL# 537: [983L_L1_P] 213.00 -752.6
CHNL# 535: [983L_L3_P] 190.25 -665.3
CHNL# 533: [983L_L2_P] 189.95 -664.3
CHNL# 531: [964L_L2_P] 308.90 -207.2

TIME (SECONDS)

0.0 2.0000 4.0000 6.0000 8.0000 10.000 12.000 14.000 16.000 18.000 20.000

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_676L_BOWMANTON

FILE: scn3_SP_676L_Bowmanton.out

THU, APR 14 2022 14:27

BRANCH P

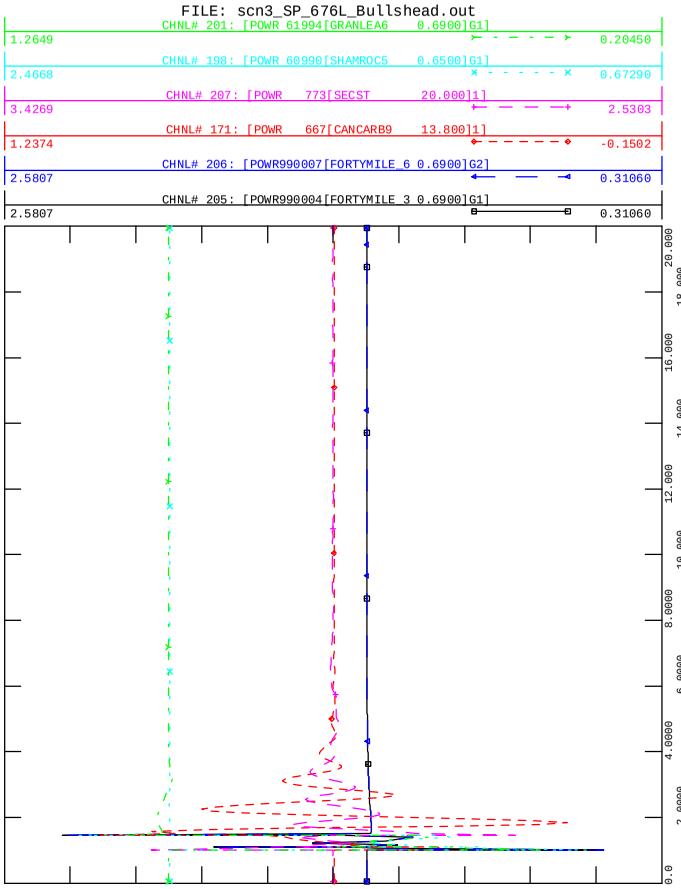
CHNL# 543: [964L_L5_P] 89.280 -332.8
CHNL# 547: [964L_L4_P] 218.07 -783.0
CHNL# 549: [1005L_P] -226.1 -389.8

TIME (SECONDS)

0.0 2.0000 4.0000 6.0000 8.0000 10.000 12.000 14.000 16.000 18.000 20.000

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_676L_BULLSHEAD

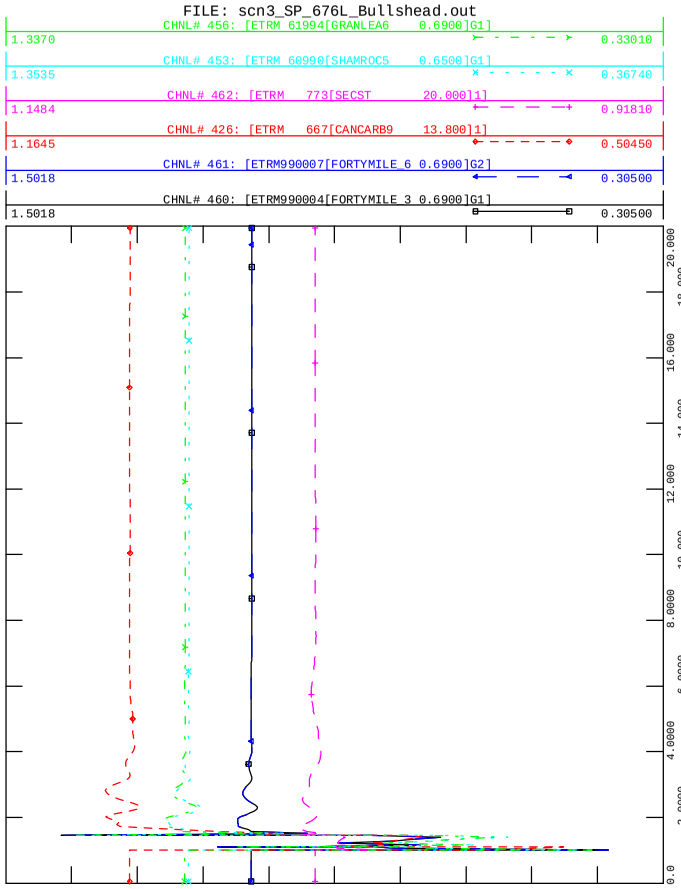
FILE: scn3_SP_676L_Bullshead.out



THU, APR 14 2022 14:27
ACTIVE POWER

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_676L_BULLSHEAD

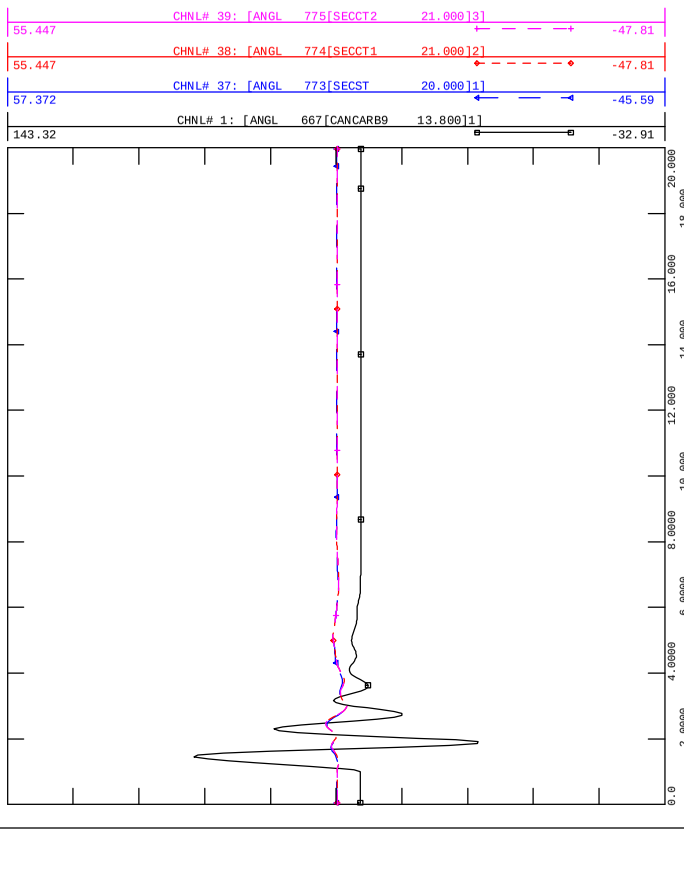
FILE: scn3_SP_676L_Bullshead.out



THU, APR 14 2022 14:27
TERMINAL VOLTAGE

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_676L_BULLSHEAD

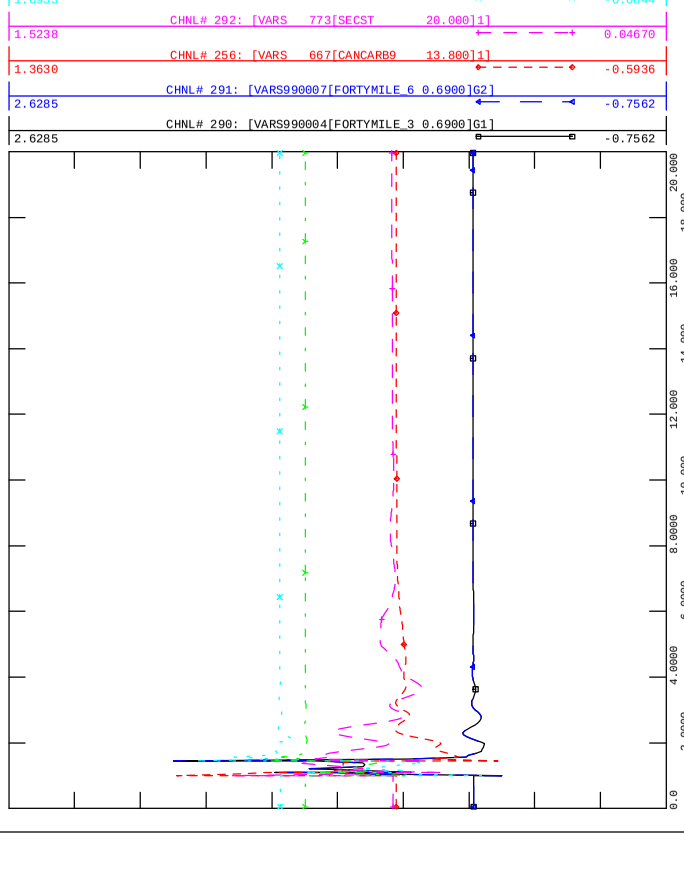
FILE: scn3_SP_676L_Bullshead.out



THU, APR 14 2022 14:27
ROTOR ANGLE

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_676L_BULLSHEAD

FILE: scn3_SP_676L_Bullshead.out



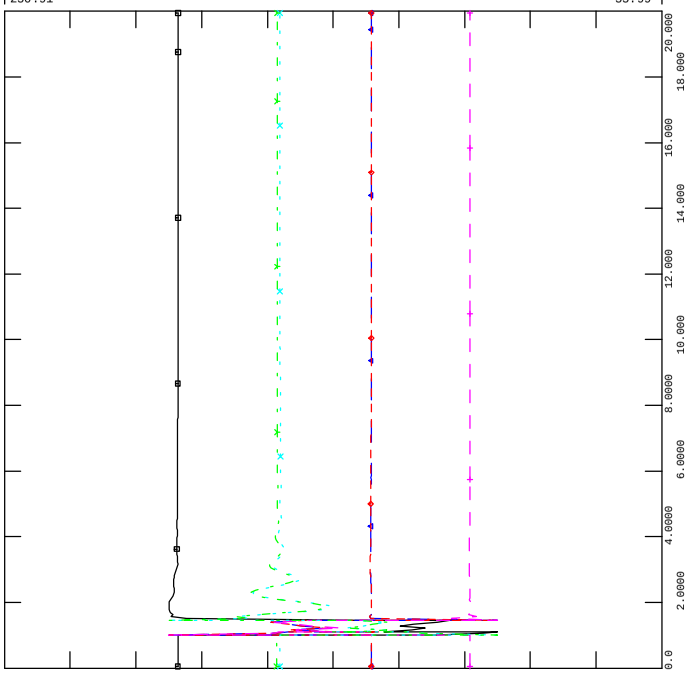
THU, APR 14 2022 14:27
REACTIVE POWER

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_676L_BULLSHEAD

FILE: scn3_SP_676L_Bullshead.out

THU, APR 14 2022 14:27 BRANCH P

CHNL# 551: [1035L_P] 895.18 -123.3
CHNL# 545: [1034L_P] 863.99 -127.3
CHNL# 537: [983L_L1_P] 64.272 -738.2
CHNL# 535: [983L_L3_P] 32.119 -583.3
CHNL# 533: [983L_L2_P] 32.274 -582.9
CHNL# 531: [964L_L2_P] 250.91 -55.99

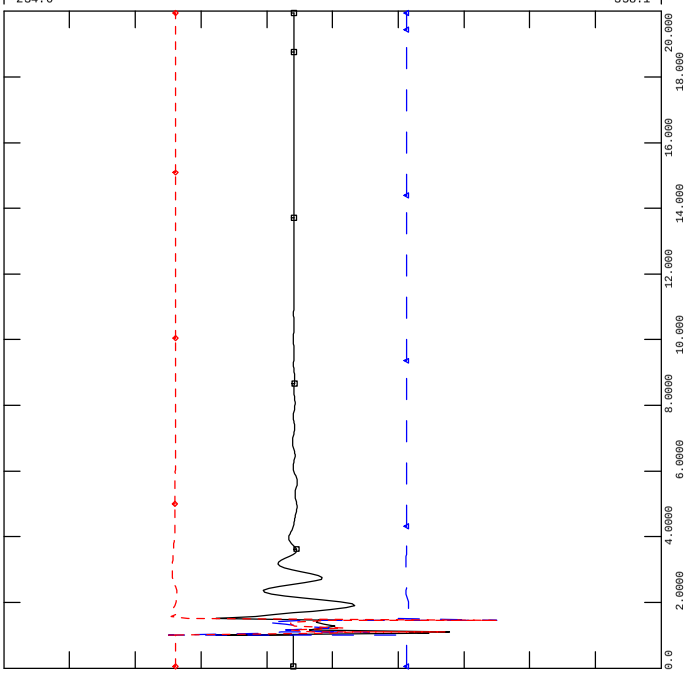


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_676L_BULLSHEAD

FILE: scn3_SP_676L_Bullshead.out

THU, APR 14 2022 14:27 BRANCH P

CHNL# 543: [964L_L5_P] 29.173 -176.2
CHNL# 547: [964L_L4_P] 59.491 -722.7
CHNL# 549: [1005L_P] -234.0 -358.1

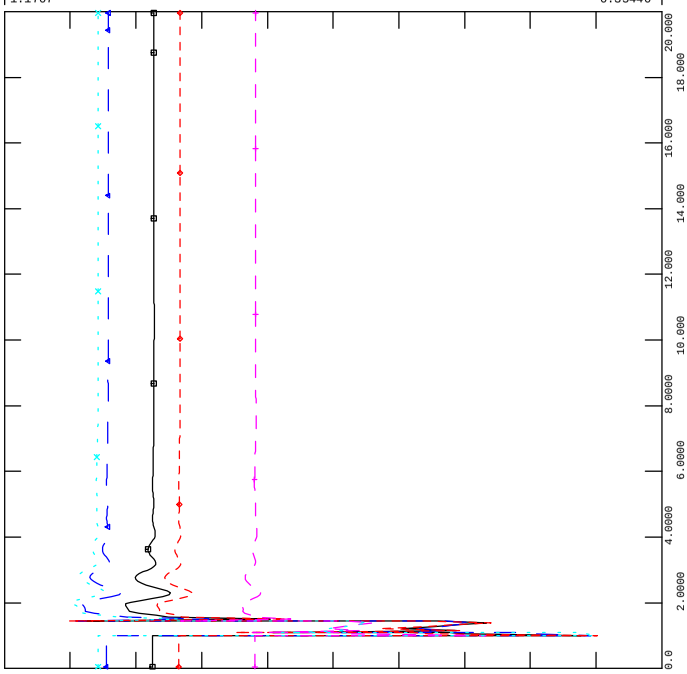


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_676L_BULLSHEAD

FILE: scn3_SP_676L_Bullshead.out

THU, APR 14 2022 14:27 BUS VOLTAGE

CHNL# 530: [VOLT 976 [ROTBAUR 138.00]] 1.1443 0.13860
CHNL# 525: [VOLT 320 [CHAPPIC7 138.00]] 1.1352 0.76220
CHNL# 528: [VOLT 662 [WHITLA1 240.00]] 1.3028 0.28660
CHNL# 527: [VOLT 659 [BOWMAN2 138.00]] 1.1364 0.21470
CHNL# 529: [VOLT 669 [BOWMAN1 240.00]] 1.1707 0.35440

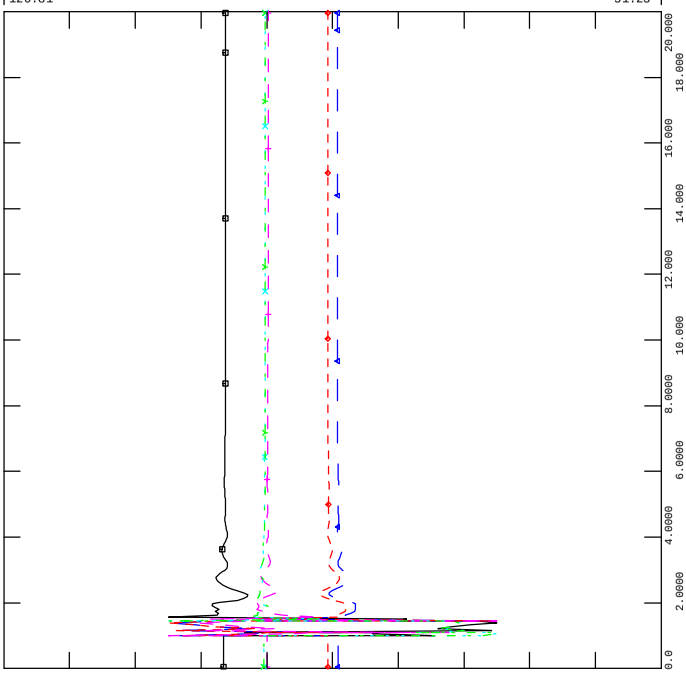


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_676L_BULLSHEAD

FILE: scn3_SP_676L_Bullshead.out

THU, APR 14 2022 14:27 BRANCH Q

CHNL# 552: [1035L_Q] 251.29 -351.5
CHNL# 546: [1034L_Q] 231.31 -350.6
CHNL# 538: [983L_L1_Q] 202.18 -308.6
CHNL# 536: [983L_L3_Q] 171.09 -227.6
CHNL# 534: [983L_L2_Q] 178.89 -261.6
CHNL# 532: [964L_L2_Q] 120.81 -51.23



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_879L_BOWMANTON

FILE: scn3_SP_879L_Bowmanton.out

THU, APR 14 2022 14:27

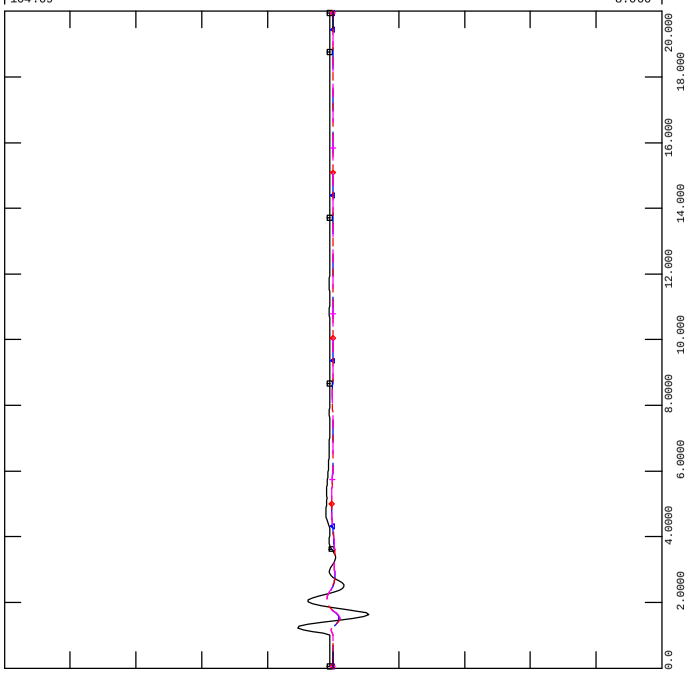
ROTOR ANGLE

CHNL# 39: [ANGL 775[SECCT2 21.000]3]
54.598 -47.43

CHNL# 38: [ANGL 774[SECCT1 21.000]2]
54.598 -47.43

CHNL# 37: [ANGL 773[SECST 20.000]1]
56.620 -45.20

CHNL# 1: [ANGL 667[CANCARB9 13.800]1]
104.09 -8.000



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_879L_BOWMANTON

FILE: scn3_SP_879L_Bowmanton.out

THU, APR 14 2022 14:27

REACTIVE POWER

CHNL# 286: [VARS 61994[GRANLEA6 0.6900]G1]
0.87790 -0.2127

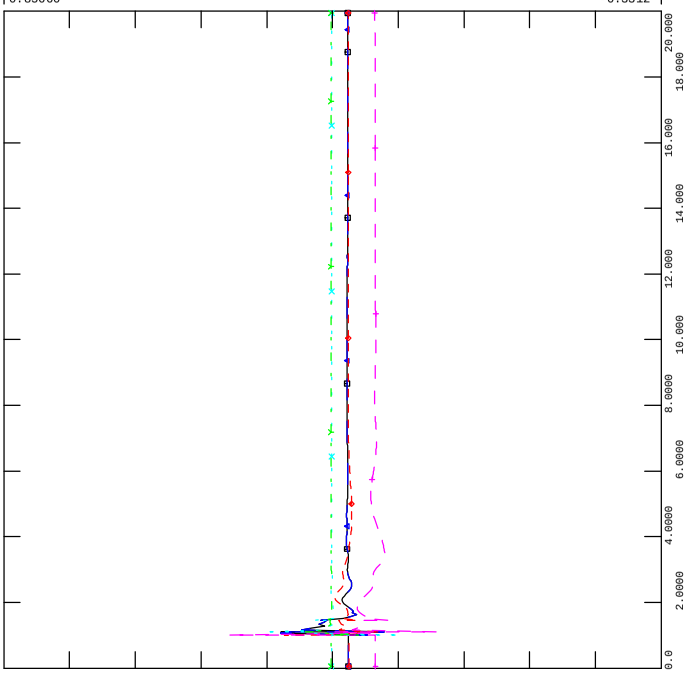
CHNL# 283: [VARS 60990[SHAMROC5 0.6500]G1]
1.5892 0.32610

CHNL# 292: [VARS 773[SECST 20.000]1]
1.4885 0.02500

CHNL# 256: [VARS 667[CANCARB9 13.800]1]
0.82490 -0.3463

CHNL# 291: [VARS990007[FORTYMILE_6 0.6900]G2]
0.85660 -0.3312

CHNL# 290: [VARS990004[FORTYMILE 3 0.6900]G1]
0.85660 -0.3312



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_676L_BULLSHEAD

FILE: scn3_SP_676L_Bullshead.out

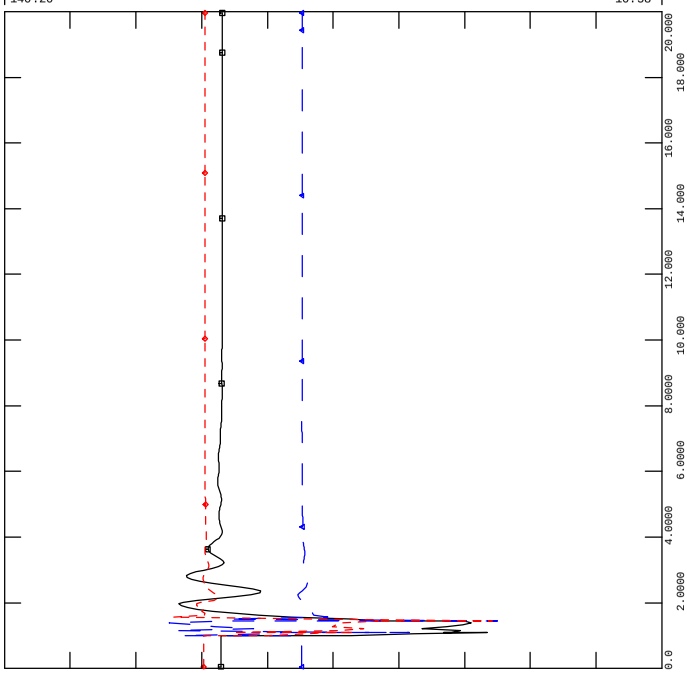
THU, APR 14 2022 14:27

BRANCH Q

CHNL# 544: [964L_L5_Q]
79.578 -75.75

CHNL# 548: [964L_L4_Q]
227.18 -251.7

CHNL# 550: [1005L_Q]
140.20 -10.58



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_879L_BOWMANTON

FILE: scn3_SP_879L_Bowmanton.out

THU, APR 14 2022 14:27

ACTIVE POWER

CHNL# 201: [POWR 61994[GRANLEA6 0.6900]G1]
1.2720 0.65720

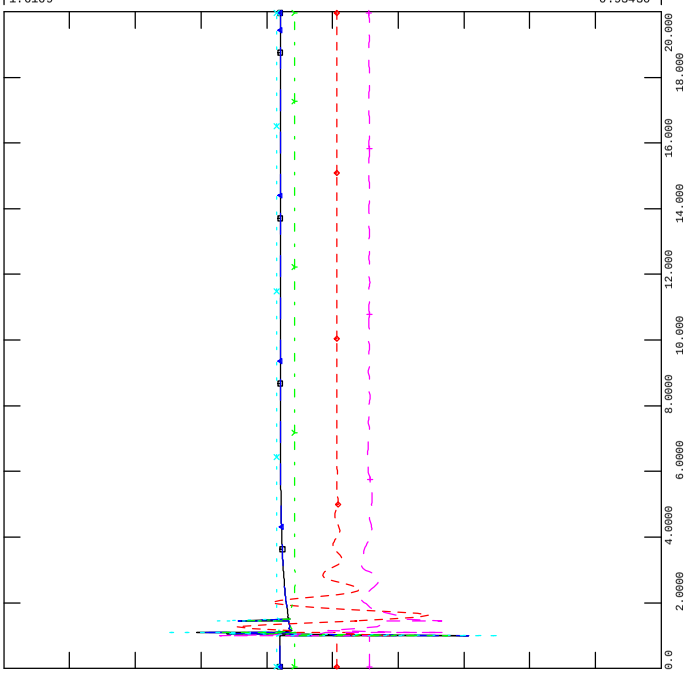
CHNL# 198: [POWR 60990[SHAMROC5 0.6500]G1]
2.3573 1.5351

CHNL# 207: [POWR 773[SECST 20.000]1]
3.3172 2.7086

CHNL# 171: [POWR 667[CANCARB9 13.800]1]
0.82790 0.26300

CHNL# 206: [POWR990007[FORTYMILE_6 0.6900]G2]
1.6169 0.93430

CHNL# 205: [POWR990004[FORTYMILE_3 0.6900]G1]
1.6169 0.93430



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_879L_BOWMANTON

FILE: scn3_SP_879L_Bowmanton.out

THU, APR 14 2022 14:27

BUS VOLTAGE

CHNL# 530: [VOLT 976 [ROTBAUR 138.00]]
1.1212 0.81030

CHNL# 525: [VOLT 320 [CHAPPIC7 138.00]]
1.0981 0.52110

CHNL# 528: [VOLT 662 [WHITLA1 240.00]]
1.1805 0.77850

CHNL# 527: [VOLT 659 [BOWMAN2 138.00]]
1.1212 0.77990

CHNL# 529: [VOLT 669 [BOWMAN1 240.00]]
1.1206 0.75420

0.0 2.0000 4.0000 6.0000 8.0000 10.000 12.000 14.000 16.000 18.000 20.000

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_879L_BOWMANTON

FILE: scn3_SP_879L_Bowmanton.out

THU, APR 14 2022 14:27

BRANCH Q

CHNL# 552: [1035L Q]
75.426 -44.38

CHNL# 546: [1034L Q]
66.751 -52.42

CHNL# 538: [983L_L1_Q]
82.006 -85.02

CHNL# 536: [983L_L3_Q]
41.630 -78.16

CHNL# 534: [983L_L2_Q]
28.072 -99.55

CHNL# 532: [964L_L2_Q]
129.78 4.8319

0.0 2.0000 4.0000 6.0000 8.0000 10.000 12.000 14.000 16.000 18.000 20.000

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_879L_BOWMANTON

FILE: scn3_SP_879L_Bowmanton.out

THU, APR 14 2022 14:27

TERMINAL VOLTAGE

CHNL# 456: [ETRM 61994[GRANLEA6 0.6900]G1]
1.2148 0.81140

CHNL# 453: [ETRM 60990[SHAMROC5 0.6500]G1]
1.2361 0.82910

CHNL# 462: [ETRM 773[SECST 20.000]1]
1.1463 0.92100

CHNL# 426: [ETRM 667[CANCARB9 13.800]1]
1.1502 0.90020

CHNL# 461: [ETRM990007[FORTYMILE_6 0.6900]G2]
1.2029 0.79980

CHNL# 460: [ETRM990004[FORTYMILE_3 0.6900]G1]
1.2029 0.79980

0.0 2.0000 4.0000 6.0000 8.0000 10.000 12.000 14.000 16.000 18.000 20.000

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_879L_BOWMANTON

FILE: scn3_SP_879L_Bowmanton.out

THU, APR 14 2022 14:27

BRANCH P

CHNL# 551: [1035L P]
566.03 344.96

CHNL# 545: [1034L P]
538.98 326.99

CHNL# 537: [983L_L1_P]
-373.8 -596.6

CHNL# 535: [983L_L3_P]
-224.9 -372.4

CHNL# 533: [983L_L2_P]
-224.7 -372.2

CHNL# 531: [964L_L2_P]
222.76 105.68

0.0 2.0000 4.0000 6.0000 8.0000 10.000 12.000 14.000 16.000 18.000 20.000

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_879L_BOWMANTON

FILE: scn3_SP_879L_Bowmanton.out

THU, APR 14 2022 14:27 BRANCH Q

CHNL# 544: [964L_L5_Q] 87.603 -15.36
CHNL# 548: [964L_L4_Q] 87.066 -54.39
CHNL# 550: [1005L_Q] 175.91 -34.05

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_879L_BURDETT

FILE: scn3_SP_879L_Burdett.out

THU, APR 14 2022 14:27 ACTIVE POWER

CHNL# 201: [POWR 61994[GRANLEA6 0.6900]G1] 1.3553 0.59760
CHNL# 198: [POWR 60990[SHAMROC5 0.6500]G1] 2.5098 1.3945
CHNL# 207: [POWR 773[SECST 20.000]1] 3.3179 2.6929
CHNL# 171: [POWR 667[CANCARB9 13.800]1] 0.84550 0.22750
CHNL# 206: [POWR990007[FORTYMILE_6 0.6900]G2] 1.8992 0.86040
CHNL# 205: [POWR990004[FORTYMILE 3 0.6900]G1] 1.8992 0.86040

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_879L_BOWMANTON

FILE: scn3_SP_879L_Bowmanton.out

THU, APR 14 2022 14:27 BRANCH P

CHNL# 543: [964L_L5_P] 19.778 -70.08
CHNL# 547: [964L_L4_P] -310.7 -494.7
CHNL# 549: [1005L_P] -203.8 -358.9

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_879L_BURDETT

FILE: scn3_SP_879L_Burdett.out

THU, APR 14 2022 14:27 ROTOR ANGLE

CHNL# 39: [ANGL 775[SECCT2 21.000]3] 54.402 -47.24
CHNL# 38: [ANGL 774[SECCT1 21.000]2] 54.402 -47.24
CHNL# 37: [ANGL 773[SECST 20.000]1] 56.453 -45.00
CHNL# 1: [ANGL 667[CANCARB9 13.800]1] 105.22 -8.049

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_879L_BURDETT

FILE: scn3_SP_879L_Burdett.out

THU, APR 14 2022 14:27

TERMINAL VOLTAGE

CHNL# 456: [ETRM 61994[GRANLEA6 0.6900]G1]
1.2392 — 0.56700

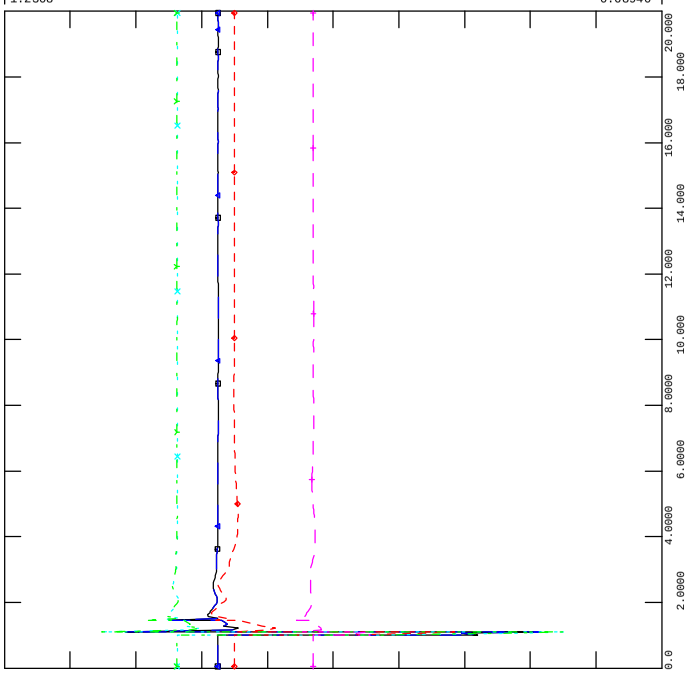
CHNL# 453: [ETRM 60990[SHAMROC5 0.6500]G1]
1.2602 — 0.57230

CHNL# 462: [ETRM 773[SECST 20.000]1]
1.1459 — 0.92050

CHNL# 426: [ETRM 667[CANCARB9 13.800]1]
1.1510 — 0.83370

CHNL# 461: [ETRM990007[FORTYMILE_6 0.6900]G2]
1.2308 — 0.68940

CHNL# 460: [ETRM990004[FORTYMILE_3 0.6900]G1]
1.2308 — 0.68940



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_879L_BURDETT

FILE: scn3_SP_879L_Burdett.out

THU, APR 14 2022 14:27

BRANCH P

CHNL# 551: [1035L_P]
619.50 — 262.13

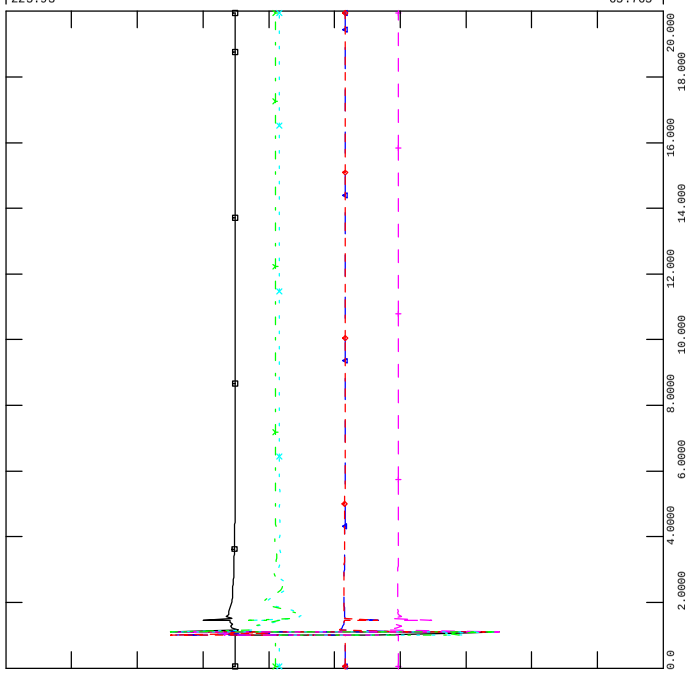
CHNL# 545: [1034L_P]
589.68 — 250.61

CHNL# 537: [983L_L1_P]
-273.5 — -659.1

CHNL# 535: [983L_L3_P]
-187.5 — -427.1

CHNL# 533: [983L_L2_P]
-187.3 — -426.7

CHNL# 531: [964L_L2_P]
225.93 — 65.765



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_879L_BURDETT

FILE: scn3_SP_879L_Burdett.out

THU, APR 14 2022 14:27

REACTIVE POWER

CHNL# 286: [VARS 61994[GRANLEA6 0.6900]G1]
0.89110 — -0.2716

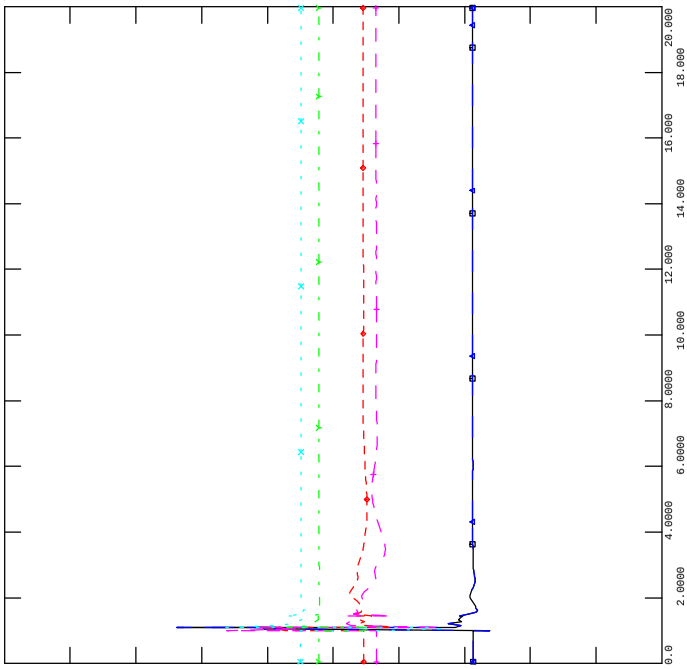
CHNL# 283: [VARS 60990[SHAMROC5 0.6500]G1]
1.6275 — 0.14450

CHNL# 292: [VARS 773[SECST 20.000]1]
1.4980 — 0.01840

CHNL# 256: [VARS 667[CANCARB9 13.800]1]
0.91800 — -0.3771

CHNL# 291: [VARS990007[FORTYMILE_6 0.6900]G2]
1.5944 — -0.3132

CHNL# 290: [VARS990004[FORTYMILE_3 0.6900]G1]
1.5944 — -0.3132



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_879L_BURDETT

FILE: scn3_SP_879L_Burdett.out

THU, APR 14 2022 14:27

BUS VOLTAGE

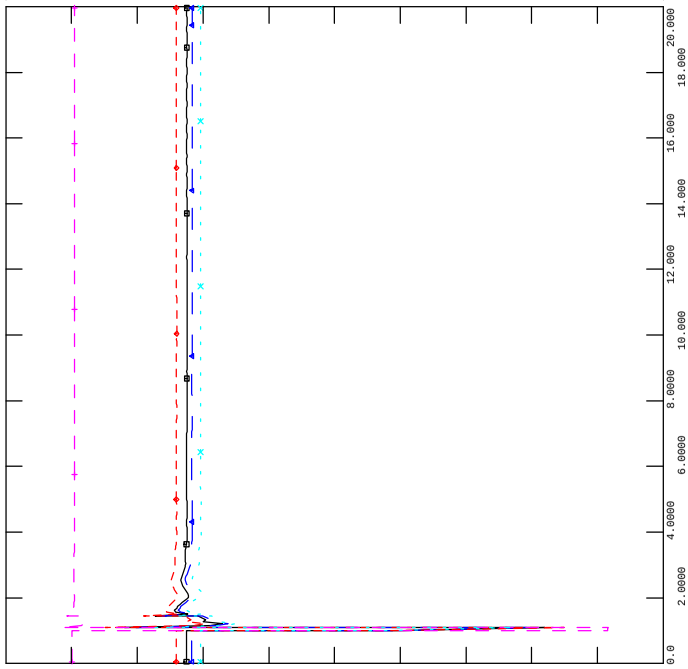
CHNL# 530: [VOLT 976 [ROTBAUR 138.00]]
1.1318 — 0.68900

CHNL# 525: [VOLT 320 [CHAPPIC7 138.00]]
1.1127 — -0.0755

CHNL# 528: [VOLT 662 [WHITLA1 240.00]]
1.2047 — 0.54250

CHNL# 527: [VOLT 659 [BOWMAN2 138.00]]
1.1364 — 0.63110

CHNL# 529: [VOLT 669 [BOWMAN1 240.00]]
1.1393 — 0.58360



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_879L_BURDETT

FILE: scn3_SP_879L_Burdett.out

THU, APR 14 2022 14:27 BRANCH P

CHNL# 543: [964L_L5_P]
21.351 -91.89
CHNL# 547: [964L_L4_P]
-244.5 -560.1
CHNL# 549: [1005L_P]
-214.0 -343.1

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_880L_AL_ROTHBAUER

FILE: scn3_SP_880L_Al_Rothbauer.out

THU, APR 14 2022 14:27 ROTOR ANGLE

CHNL# 39: [ANGL 775[SECCT2 21.000]3]
54.413 -46.80
CHNL# 38: [ANGL 774[SECCT1 21.000]2]
54.413 -46.80
CHNL# 37: [ANGL 773[SECST 20.000]1]
56.465 -44.64
CHNL# 1: [ANGL 667[CANCARB9 13.800]1]
117.77 -14.51

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_879L_BURDETT

FILE: scn3_SP_879L_Burdett.out

THU, APR 14 2022 14:27 BRANCH Q

CHNL# 552: [1035L_Q]
96.367 -139.4
CHNL# 546: [1034L_Q]
81.368 -142.8
CHNL# 538: [983L_L1_Q]
214.29 -143.2
CHNL# 536: [983L_L3_Q]
139.79 -101.6
CHNL# 534: [983L_L2_Q]
140.53 -131.5
CHNL# 532: [964L_L2_Q]
147.80 -103.5

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_879L_BURDETT

FILE: scn3_SP_879L_Burdett.out

THU, APR 14 2022 14:27 BRANCH Q

CHNL# 544: [964L_L5_Q]
82.904 -62.60
CHNL# 548: [964L_L4_Q]
229.33 -101.8
CHNL# 550: [1005L_Q]
140.48 -12.02

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_880L_AL_ROTHBAUER

FILE: scn3_SP_880L_Al_Rothbauer.out

THU, APR 14 2022 14:27

REACTIVE POWER

CHNL# 286: [VARS 61994[GRANLEA6 0.6900]G1]
0.90540 -0.3650

CHNL# 283: [VARS 60990[SHAMROC5 0.6500]G1]
1.6541 -0.0862

CHNL# 292: [VARS 773[SECST 20.000]1]
1.5240 -0.1320

CHNL# 256: [VARS 667[CANCARB9 13.800]1]
1.3650 -0.6056

CHNL# 291: [VARS990007[FORTYMILE_6 0.6900]G2]
1.7953 -0.4791

CHNL# 290: [VARS990004[FORTYMILE_3 0.6900]G1]
1.7953 -0.4791

TIME (SECONDS)

0.0 2.0000 4.0000 6.0000 8.0000 10.000 12.000 14.000 16.000 18.000 20.000

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_880L_AL_ROTHBAUER

FILE: scn3_SP_880L_Al_Rothbauer.out

THU, APR 14 2022 14:27

BUS VOLTAGE

CHNL# 530: [VOLT 976 [ROTBAUR 138.00]]
1.1262 0.13350

CHNL# 525: [VOLT 320 [CHAPPIC7 138.00]]
1.1570 0.76190

CHNL# 528: [VOLT 662 [WHITLA1 240.00]]
1.3235 0.28460

CHNL# 527: [VOLT 659 [BOWMAN2 138.00]]
1.1875 0.21310

CHNL# 529: [VOLT 669 [BOWMAN1 240.00]]
1.2229 0.35320

TIME (SECONDS)

0.0 2.0000 4.0000 6.0000 8.0000 10.000 12.000 14.000 16.000 18.000 20.000

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_880L_AL_ROTHBAUER

FILE: scn3_SP_880L_Al_Rothbauer.out

THU, APR 14 2022 14:27

ACTIVE POWER

CHNL# 201: [POWR 61994[GRANLEA6 0.6900]G1]
1.2164 0.20260

CHNL# 198: [POWR 60990[SHAMROC5 0.6500]G1]
2.3834 0.66930

CHNL# 207: [POWR 773[SECST 20.000]1]
3.4274 2.6357

CHNL# 171: [POWR 667[CANCARB9 13.800]1]
0.98390 0.11730

CHNL# 206: [POWR990007[FORTYMILE_6 0.6900]G2]
2.0472 0.30800

CHNL# 205: [POWR990004[FORTYMILE_3 0.6900]G1]
2.0472 0.30800

TIME (SECONDS)

0.0 2.0000 4.0000 6.0000 8.0000 10.000 12.000 14.000 16.000 18.000 20.000

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_880L_AL_ROTHBAUER

FILE: scn3_SP_880L_Al_Rothbauer.out

THU, APR 14 2022 14:27

TERMINAL VOLTAGE

CHNL# 456: [ETRM 61994[GRANLEA6 0.6900]G1]
1.3530 0.32810

CHNL# 453: [ETRM 60990[SHAMROC5 0.6500]G1]
1.3677 0.36550

CHNL# 462: [ETRM 773[SECST 20.000]1]
1.1511 0.91810

CHNL# 426: [ETRM 667[CANCARB9 13.800]1]
1.1615 0.49190

CHNL# 461: [ETRM990007[FORTYMILE_6 0.6900]G2]
1.4057 0.30290

CHNL# 460: [ETRM990004[FORTYMILE_3 0.6900]G1]
1.4057 0.30290

TIME (SECONDS)

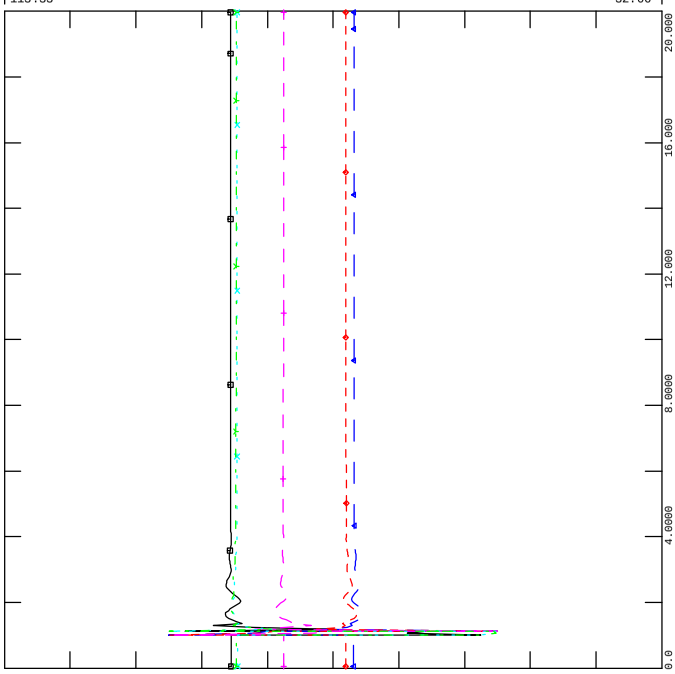
0.0 2.0000 4.0000 6.0000 8.0000 10.000 12.000 14.000 16.000 18.000 20.000

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_880L_AL_ROTHBAUER

FILE: scn3_SP_880L_Al_Rothbauer.out

THU, APR 14 2022 14:27 BRANCH Q

CHNL# 552: [1035L Q] 202.49 -335.5
CHNL# 546: [1034L Q] 186.41 -336.0
CHNL# 538: [983L L1 Q] 185.09 -256.7
CHNL# 536: [983L L3 Q] 147.78 -186.2
CHNL# 534: [983L L2 Q] 159.47 -225.3
CHNL# 532: [964L L2 Q] 113.33 -32.06

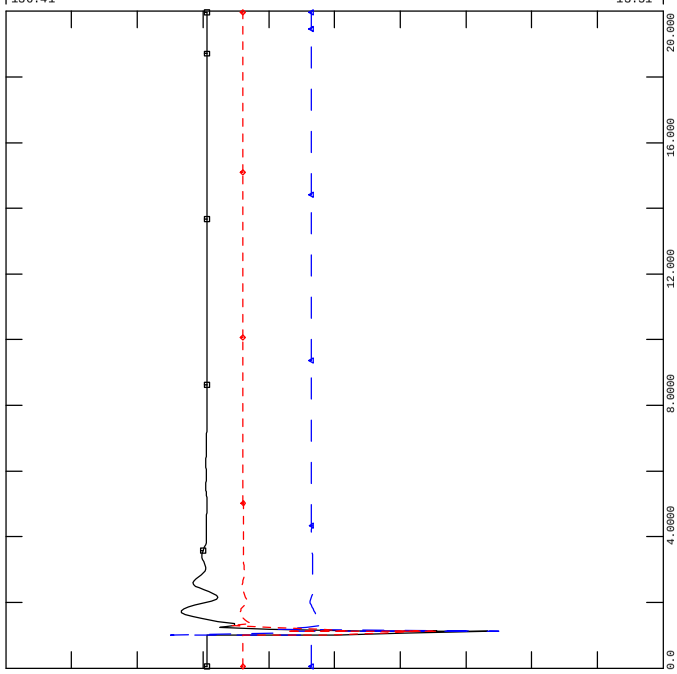


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_880L_AL_ROTHBAUER

FILE: scn3_SP_880L_Al_Rothbauer.out

THU, APR 14 2022 14:27 BRANCH Q

CHNL# 544: [964L L5 Q] 74.547 -42.10
CHNL# 548: [964L L4 Q] 203.46 -211.7
CHNL# 550: [1005L Q] 136.41 -13.51

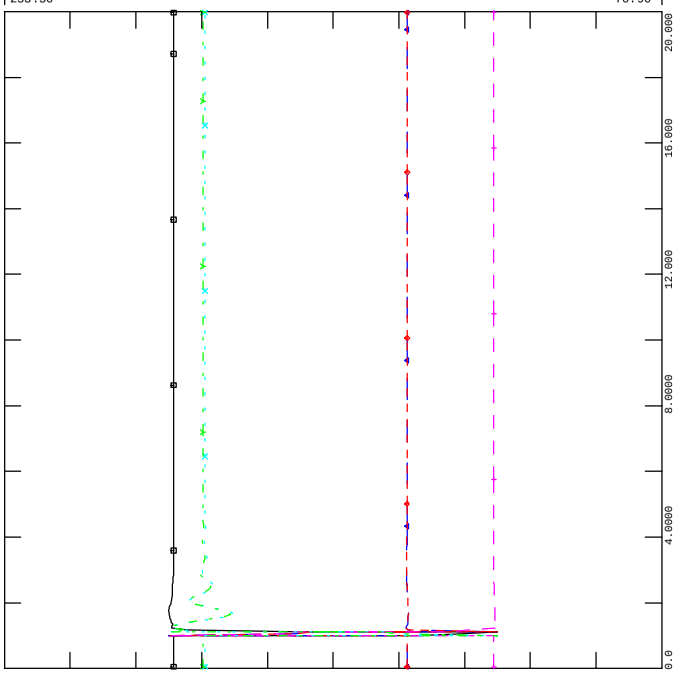


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_880L_AL_ROTHBAUER

FILE: scn3_SP_880L_Al_Rothbauer.out

THU, APR 14 2022 14:27 BRANCH P

CHNL# 551: [1035L P] 704.10 -61.26
CHNL# 545: [1034L P] 674.27 -65.67
CHNL# 537: [983L L1 P] 50.950 -694.3
CHNL# 535: [983L L3 P] 10.052 -514.5
CHNL# 533: [983L L2 P] 10.251 -514.2
CHNL# 531: [964L L2 P] 253.50 -70.90

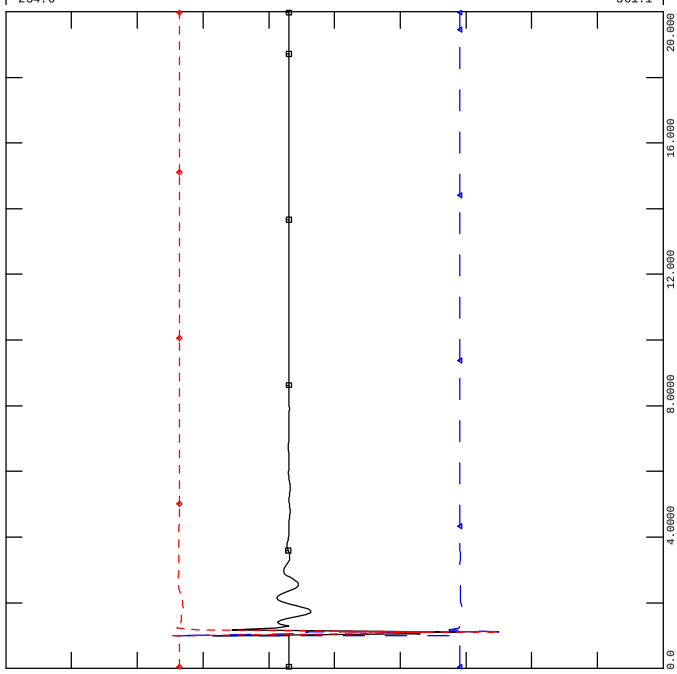


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_880L_AL_ROTHBAUER

FILE: scn3_SP_880L_Al_Rothbauer.out

THU, APR 14 2022 14:27 BRANCH P

CHNL# 543: [964L L5 P] 20.209 -148.9
CHNL# 547: [964L L4 P] 26.249 -619.6
CHNL# 549: [1005L P] -234.0 -361.1



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_880L_BULLSHEAD

FILE: scn3_SP_880L_Bullshead.out

THU, APR 14 2022 14:27

ACTIVE POWER

CHNL# 201: [POWR 61994[GRANLEA6 0.6900]G1]
1.2195 0.09030

CHNL# 198: [POWR 60990[SHAMROC5 0.6500]G1]
2.2538 0.48620

CHNL# 207: [POWR 773[SECST 20.000]1]
3.4527 2.6519

CHNL# 171: [POWR 667[CANCARB9 13.800]1]
1.1584 -0.0763

CHNL# 206: [POWR990007[FORTYMILE_6 0.6900]G2]
2.6134 0.14940

CHNL# 205: [POWR990004[FORTYMILE_3 0.6900]G1]
2.6134 0.14940

TIME (SECONDS)

0.0 2.0000 4.0000 6.0000 8.0000 10.000 12.000 14.000 16.000 18.000 20.000

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_880L_BULLSHEAD

FILE: scn3_SP_880L_Bullshead.out

THU, APR 14 2022 14:27

TERMINAL VOLTAGE

CHNL# 456: [ETRM 61994[GRANLEA6 0.6900]G1]
1.3575 0.20860

CHNL# 453: [ETRM 60990[SHAMROC5 0.6500]G1]
1.3776 0.26740

CHNL# 462: [ETRM 773[SECST 20.000]1]
1.1526 0.91340

CHNL# 426: [ETRM 667[CANCARB9 13.800]1]
1.1611 0.37680

CHNL# 461: [ETRM990007[FORTYMILE_6 0.6900]G2]
1.4378 0.17720

CHNL# 460: [ETRM990004[FORTYMILE_3 0.6900]G1]
1.4378 0.17720

TIME (SECONDS)

0.0 2.0000 4.0000 6.0000 8.0000 10.000 12.000 14.000 16.000 18.000 20.000

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_880L_BULLSHEAD

FILE: scn3_SP_880L_Bullshead.out

THU, APR 14 2022 14:27

ROTOR ANGLE

CHNL# 39: [ANGL 775[SECCT2 21.000]3]
54.982 -47.18

CHNL# 38: [ANGL 774[SECCT1 21.000]2]
54.982 -47.18

CHNL# 37: [ANGL 773[SECST 20.000]1]
56.964 -44.98

CHNL# 1: [ANGL 667[CANCARB9 13.800]1]
140.98 -29.53

TIME (SECONDS)

0.0 2.0000 4.0000 6.0000 8.0000 10.000 12.000 14.000 16.000 18.000 20.000

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_880L_BULLSHEAD

FILE: scn3_SP_880L_Bullshead.out

THU, APR 14 2022 14:27

REACTIVE POWER

CHNL# 286: [VARS 61994[GRANLEA6 0.6900]G1]
0.89610 -0.4027

CHNL# 283: [VARS 60990[SHAMROC5 0.6500]G1]
1.6518 -0.1733

CHNL# 292: [VARS 773[SECST 20.000]1]
1.6039 -0.1663

CHNL# 256: [VARS 667[CANCARB9 13.800]1]
1.4480 -0.6370

CHNL# 291: [VARS990007[FORTYMILE_6 0.6900]G2]
2.8644 -0.8727

CHNL# 290: [VARS990004[FORTYMILE_3 0.6900]G1]
2.8644 -0.8727

TIME (SECONDS)

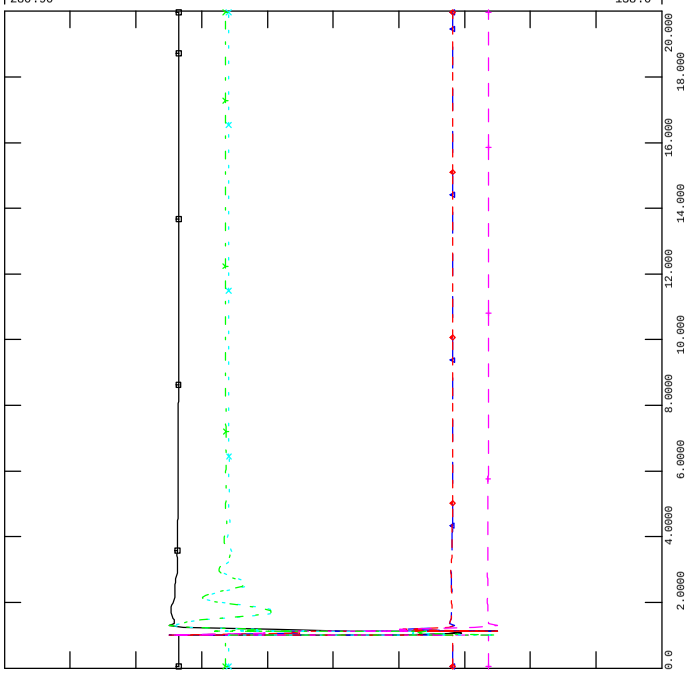
0.0 2.0000 4.0000 6.0000 8.0000 10.000 12.000 14.000 16.000 18.000 20.000

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_880L_BULLSHEAD

FILE: scn3_SP_880L_Bullshead.out

THU, APR 14 2022 14:27 BRANCH P

CHNL# 551: [1035L_P]
795.03 -162.5
CHNL# 545: [1034L_P]
765.15 -163.8
CHNL# 537: [983L_L1_P]
141.74 -735.5
CHNL# 535: [983L_L3_P]
59.016 -483.8
CHNL# 533: [983L_L2_P]
59.200 -483.4
CHNL# 531: [964L_L2_P]
280.90 -138.0

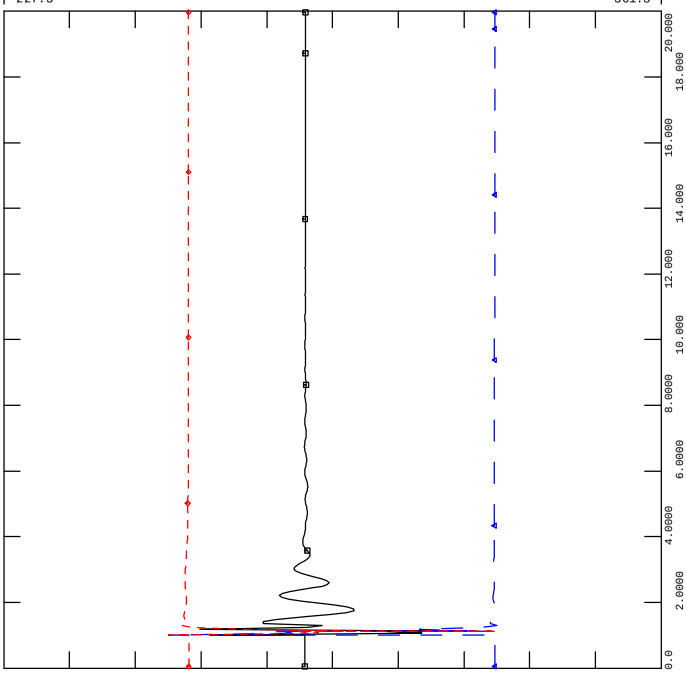


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_880L_BULLSHEAD

FILE: scn3_SP_880L_Bullshead.out

THU, APR 14 2022 14:27 BRANCH P

CHNL# 543: [964L_L5_P]
53.638 -224.1
CHNL# 547: [964L_L4_P]
89.820 -593.1
CHNL# 549: [1005L_P]
-227.3 -361.3

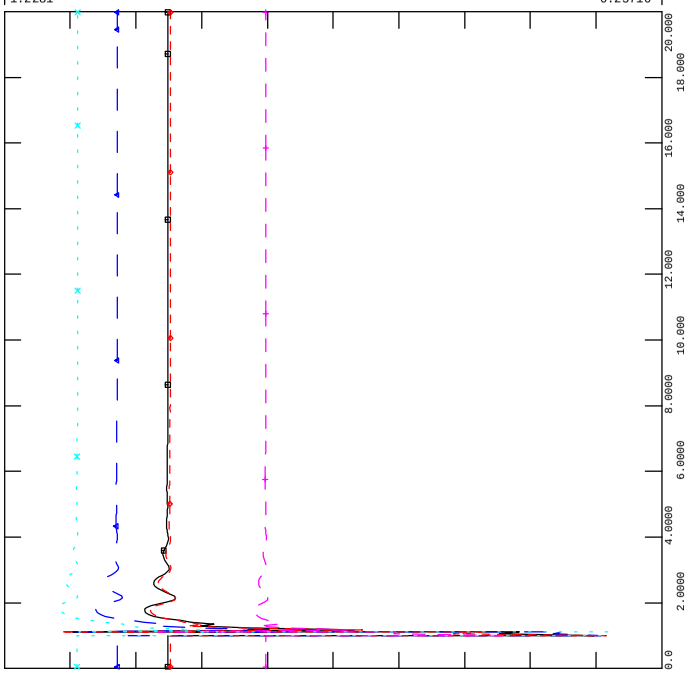


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_880L_BULLSHEAD

FILE: scn3_SP_880L_Bullshead.out

THU, APR 14 2022 14:27 BUS VOLTAGE

CHNL# 530: [VOLT 976 [ROTBAUR 138.00]]
1.1367 -0.0965
CHNL# 525: [VOLT 320 [CHAPPIC7 138.00]]
1.1637 0.73370
CHNL# 528: [VOLT 662 [WHITLA1 240.00]]
1.3303 0.15170
CHNL# 527: [VOLT 659 [BOWMAN2 138.00]]
1.1788 0.10000
CHNL# 529: [VOLT 669 [BOWMAN1 240.00]]
1.2281 0.25710

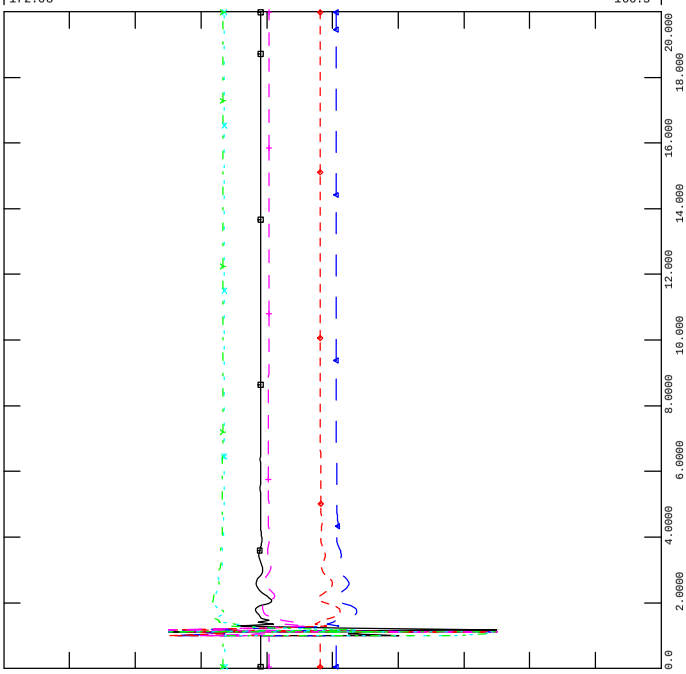


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_880L_BULLSHEAD

FILE: scn3_SP_880L_Bullshead.out

THU, APR 14 2022 14:27 BRANCH Q

CHNL# 552: [1035L_Q]
188.73 -339.0
CHNL# 546: [1034L_Q]
173.11 -338.4
CHNL# 538: [983L_L1_Q]
288.96 -434.0
CHNL# 536: [983L_L3_Q]
162.82 -228.8
CHNL# 534: [983L_L2_Q]
173.90 -259.0
CHNL# 532: [964L_L2_Q]
172.08 -106.5



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_892L_BOWMANTON

FILE: scn3_SP_892L_Bowmanton.out

THU, APR 14 2022 14:27

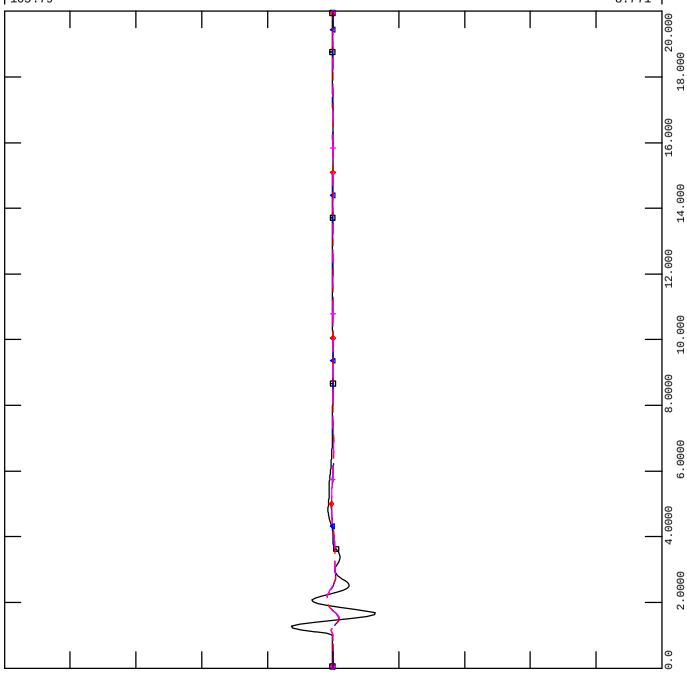
ROTOR ANGLE

CHNL# 39: [ANGL 775[SECCT2 21.000]3]
54.579 -47.36

CHNL# 38: [ANGL 774[SECCT1 21.000]2]
54.579 -47.36

CHNL# 37: [ANGL 773[SECST 20.000]1]
56.616 -45.10

CHNL# 1: [ANGL 667[CANCARB9 13.800]1]
105.79 -8.771



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_892L_BOWMANTON

FILE: scn3_SP_892L_Bowmanton.out

THU, APR 14 2022 14:27

REACTIVE POWER

CHNL# 286: [VARS 61994[GRANLEA6 0.6900]G1]
0.87280 -0.2581

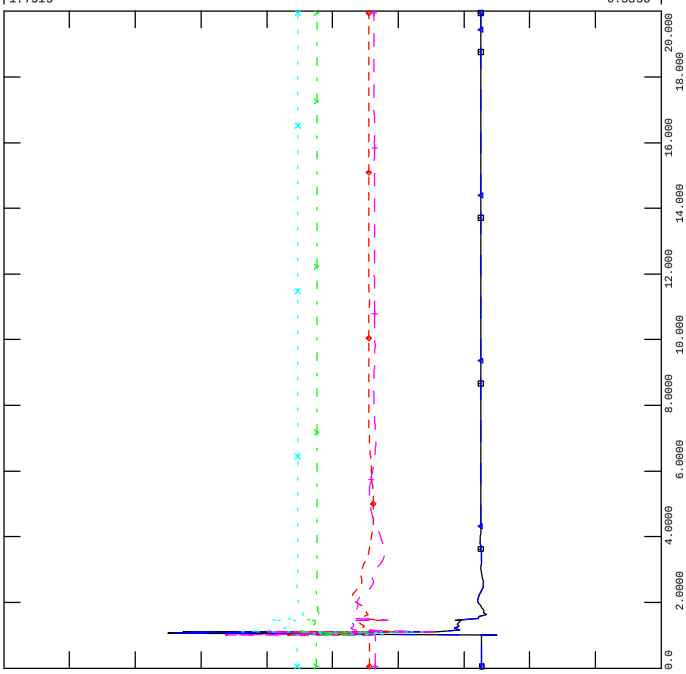
CHNL# 283: [VARS 60990[SHAMROC5 0.6500]G1]
1.5787 0.19190

CHNL# 292: [VARS 773[SECST 20.000]1]
1.4998 0.01450

CHNL# 256: [VARS 667[CANCARB9 13.800]1]
0.90160 -0.3405

CHNL# 291: [VARS990007[FORTYMILE_6 0.6900]G2]
1.7515 -0.3356

CHNL# 290: [VARS990004[FORTYMILE 3 0.6900]G1]
1.7515 -0.3356



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_880L_BULLSHEAD

FILE: scn3_SP_880L_Bullshead.out

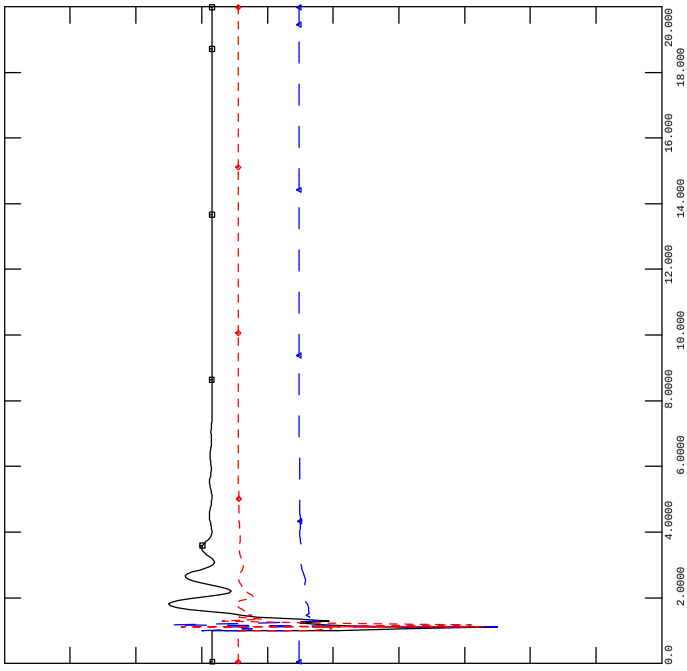
THU, APR 14 2022 14:27

BRANCH Q

CHNL# 544: [964L_L5_Q]
85.336 -63.26

CHNL# 548: [964L_L4_Q]
274.40 -314.0

CHNL# 550: [1005L_Q]
148.08 -34.01



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_892L_BOWMANTON

FILE: scn3_SP_892L_Bowmanton.out

THU, APR 14 2022 14:27

ACTIVE POWER

CHNL# 201: [POWR 61994[GRANLEA6 0.6900]G1]
1.3372 0.60070

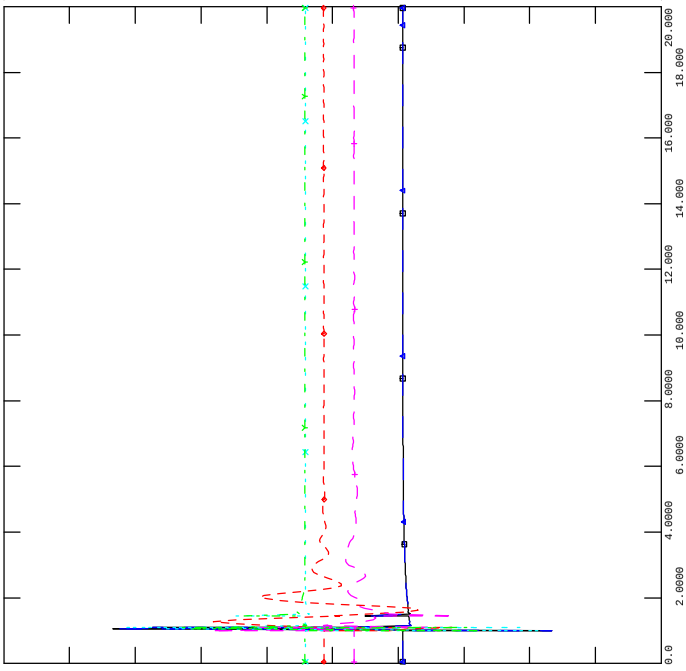
CHNL# 198: [POWR 60990[SHAMROC5 0.6500]G1]
2.5190 1.4234

CHNL# 207: [POWR 773[SECST 20.000]1]
3.3175 2.6821

CHNL# 171: [POWR 667[CANCARB9 13.800]1]
0.84710 0.21950

CHNL# 206: [POWR990007[FORTYMILE_6 0.6900]G2]
2.0605 0.85690

CHNL# 205: [POWR990004[FORTYMILE_3 0.6900]G1]
2.0605 0.85690



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_892L_BOWMANTON

FILE: scn3_SP_892L_Bowmanton.out

THU, APR 14 2022 14:27

BUS VOLTAGE

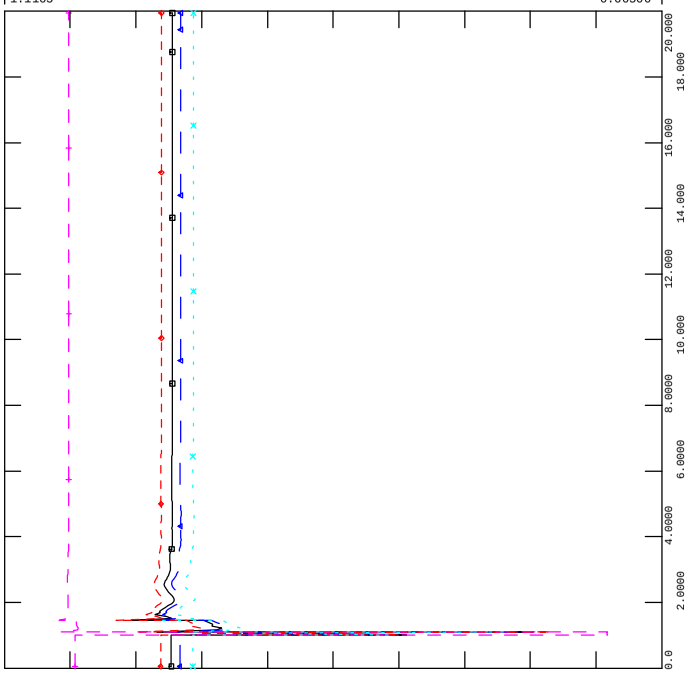
CHNL# 530: [VOLT 976 [ROTBAUR 138.00]]
1.1199 0.70380

CHNL# 525: [VOLT 320 [CHAPPIC7 138.00]]
1.1222 -0.0838

CHNL# 528: [VOLT 662 [WHITLA1 240.00]]
1.1733 0.58290

CHNL# 527: [VOLT 659 [BOWMAN2 138.00]]
1.1188 0.64960

CHNL# 529: [VOLT 669 [BOWMAN1 240.00]]
1.1165 0.60500



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_892L_BOWMANTON

FILE: scn3_SP_892L_Bowmanton.out

THU, APR 14 2022 14:28

BRANCH Q

CHNL# 552: [1035L_Q]
91.122 -121.3

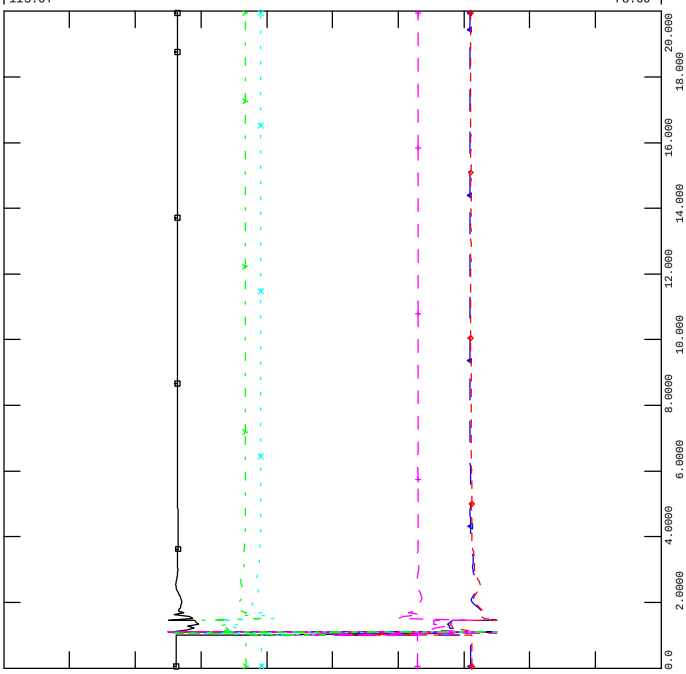
CHNL# 546: [1034L_Q]
84.735 -128.0

CHNL# 538: [983L_L1_Q]
189.31 -115.6

CHNL# 536: [983L_L3_Q]
108.20 -79.82

CHNL# 534: [983L_L2_Q]
109.51 -108.1

CHNL# 532: [964L_L2_Q]
113.67 -78.66



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_892L_BOWMANTON

FILE: scn3_SP_892L_Bowmanton.out

THU, APR 14 2022 14:27

TERMINAL VOLTAGE

CHNL# 456: [ETRM 61994[GRANLEA6 0.6900]G1]
1.2038 0.61180

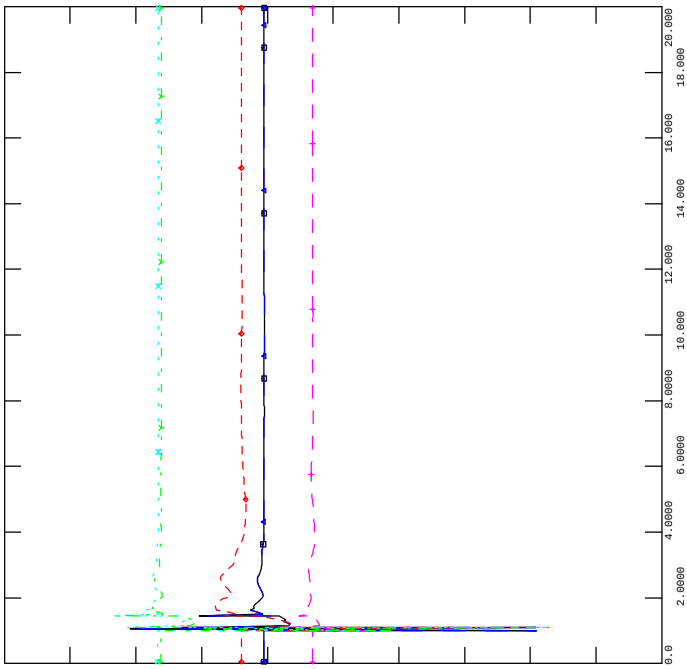
CHNL# 453: [ETRM 60990[SHAMROC5 0.6500]G1]
1.2203 0.61600

CHNL# 462: [ETRM 773[SECST 20.000]1]
1.1455 0.92040

CHNL# 426: [ETRM 667[CANCARB9 13.800]1]
1.1525 0.84060

CHNL# 461: [ETRM990007[FORTYMILE_6 0.6900]G2]
1.2613 0.73840

CHNL# 460: [ETRM990004[FORTYMILE_3 0.6900]G1]
1.2613 0.73840



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_892L_BOWMANTON

FILE: scn3_SP_892L_Bowmanton.out

THU, APR 14 2022 14:28

BRANCH P

CHNL# 551: [1035L_P]
604.07 294.54

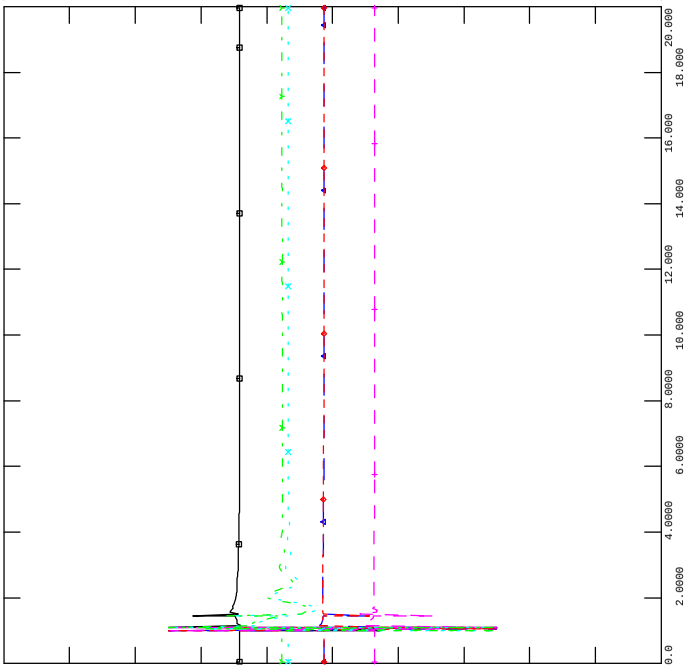
CHNL# 545: [1034L_P]
578.69 278.01

CHNL# 537: [983L_L1_P]
-315.9 -649.2

CHNL# 535: [983L_L3_P]
-178.3 -451.2

CHNL# 533: [983L_L2_P]
-178.2 -450.8

CHNL# 531: [964L_L2_P]
227.28 67.646

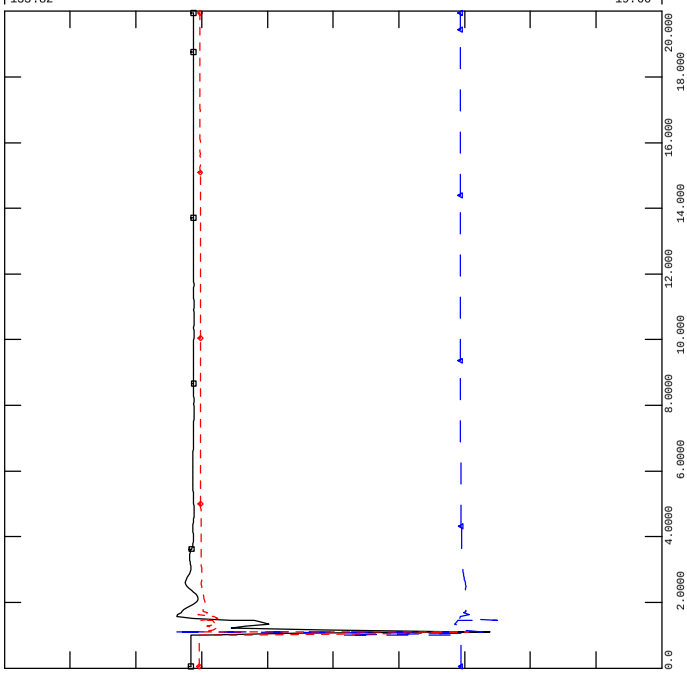


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_892L_BOWMANTON

FILE: scn3_SP_892L_Bowmanton.out

THU, APR 14 2022 14:28 BRANCH Q

CHNL# 544: [964L_L5_Q]
72.794 -63.31
CHNL# 548: [964L_L4_Q]
198.81 -72.49
CHNL# 550: [1005L_Q]
133.82 -19.00

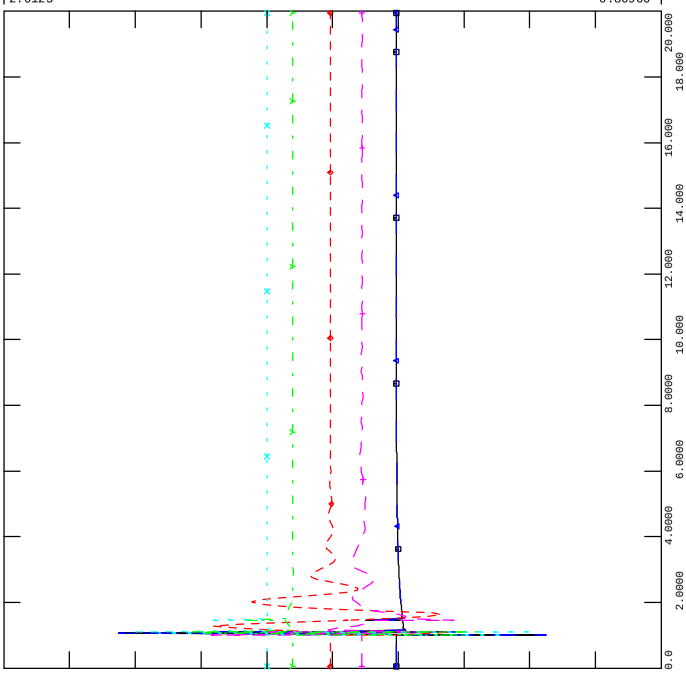


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_892L_SUFFIELD

FILE: scn3_SP_892L_Suffield.out

THU, APR 14 2022 14:28 ACTIVE POWER

CHNL# 201: [POWR 61994[GRANLEA6 0.6900]G1]
1.3154 0.59790
CHNL# 198: [POWR 60990[SHAMROC5 0.6500]G1]
2.4298 1.3972
CHNL# 207: [POWR 773[SECST 20.000]1]
3.3245 2.6904
CHNL# 171: [POWR 667[CANCARB9 13.800]1]
0.85380 0.22540
CHNL# 206: [POWR990007[FORTYMILE_6 0.6900]G2]
2.0125 0.86960
CHNL# 205: [POWR990004[FORTYMILE 3 0.6900]G1]
2.0125 0.86960

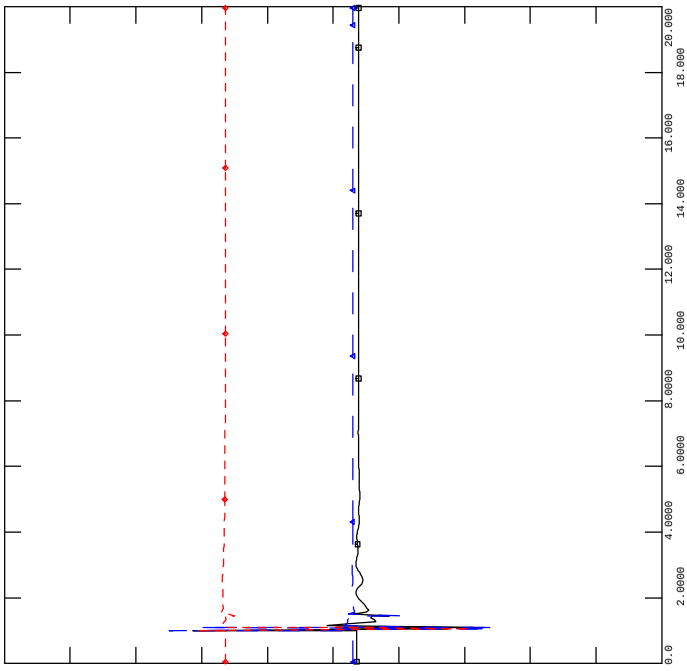


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_892L_BOWMANTON

FILE: scn3_SP_892L_Bowmanton.out

THU, APR 14 2022 14:28 BRANCH P

CHNL# 543: [964L_L5_P]
21.425 -115.2
CHNL# 547: [964L_L4_P]
-252.8 -568.1
CHNL# 549: [1005L_P]
-214.0 -353.5

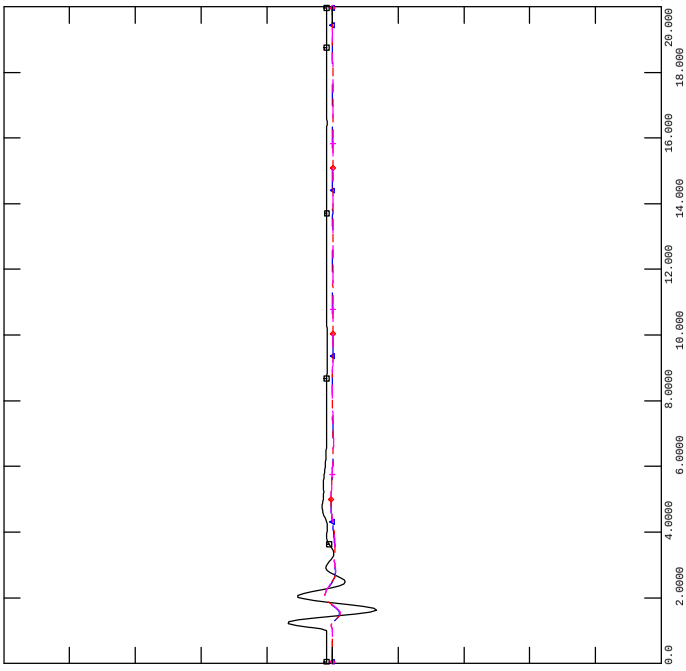


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_892L_SUFFIELD

FILE: scn3_SP_892L_Suffield.out

THU, APR 14 2022 14:28 ROTOR ANGLE

CHNL# 39: [ANGL 775[SECCT2 21.000]3]
54.872 -47.52
CHNL# 38: [ANGL 774[SECCT1 21.000]2]
54.872 -47.52
CHNL# 37: [ANGL 773[SECST 20.000]1]
56.867 -45.29
CHNL# 1: [ANGL 667[CANCARB9 13.800]1]
105.35 -10.14



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_892L_SUFFIELD

FILE: scn3_SP_892L_Suffield.out

THU, APR 14 2022 14:28

TERMINAL VOLTAGE

CHNL# 456: [ETRM 61994[GRANLEA6 0.6900]G1] 1.2104 0.56850
CHNL# 453: [ETRM 60990[SHAMROC5 0.6500]G1] 1.2314 0.57470
CHNL# 462: [ETRM 773[SECST 20.000]1] 1.1445 0.92070
CHNL# 426: [ETRM 667[CANCARB9 13.800]1] 1.1529 0.83440
CHNL# 461: [ETRM990007[FORTYMILE_6 0.6900]G2] 1.2135 0.68860
CHNL# 460: [ETRM990004[FORTYMILE_3 0.6900]G1] 1.2135 0.68860

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_892L_SUFFIELD

FILE: scn3_SP_892L_Suffield.out

THU, APR 14 2022 14:28

BRANCH P

CHNL# 551: [1035L_P] 611.72 263.97
CHNL# 545: [1034L_P] 582.27 252.14
CHNL# 537: [983L_L1_P] -276.2 -650.8
CHNL# 535: [983L_L3_P] -187.9 -434.6
CHNL# 533: [983L_L2_P] -187.7 -434.2
CHNL# 531: [964L_L2_P] 225.06 66.632

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_892L_SUFFIELD

FILE: scn3_SP_892L_Suffield.out

THU, APR 14 2022 14:28

REACTIVE POWER

CHNL# 286: [VARS 61994[GRANLEA6 0.6900]G1] 0.88260 -0.2706
CHNL# 283: [VARS 60990[SHAMROC5 0.6500]G1] 1.6072 0.15750
CHNL# 292: [VARS 773[SECST 20.000]1] 1.4933 0.04380
CHNL# 256: [VARS 667[CANCARB9 13.800]1] 0.91800 -0.3518
CHNL# 291: [VARS990007[FORTYMILE_6 0.6900]G2] 1.6751 -0.3116
CHNL# 290: [VARS990004[FORTYMILE_3 0.6900]G1] 1.6751 -0.3116

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_892L_SUFFIELD

FILE: scn3_SP_892L_Suffield.out

THU, APR 14 2022 14:28

BUS VOLTAGE

CHNL# 530: [VOLT 976 [ROTBAUR 138.00]] 1.1206 0.68970
CHNL# 525: [VOLT 320 [CHAPPIC7 138.00]] 1.1203 0.38800
CHNL# 528: [VOLT 662 [WHITLA1 240.00]] 1.1750 0.54340
CHNL# 527: [VOLT 659 [BOWMAN2 138.00]] 1.1197 0.63180
CHNL# 529: [VOLT 669 [BOWMAN1 240.00]] 1.1176 0.58440

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_892L_SUFFIELD

FILE: scn3_SP_892L_Suffield.out

THU, APR 14 2022 14:28 BRANCH P

CHNL# 543: [964L_L5_P]
21.151 -114.2
CHNL# 547: [964L_L4_P]
-250.0 -544.1
CHNL# 549: [1005L_P]
-218.7 -346.0

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_POST_NOFAULT

FILE: scn4_SL_Post_nofault.out

THU, APR 14 2022 14:28 ROTOR ANGLE

CHNL# 37: [ANGL 775[SECCT2 21.000]3]
26.001 -74.02
CHNL# 36: [ANGL 774[SECCT1 21.000]2]
26.001 -74.02
CHNL# 35: [ANGL 773[SECST 20.000]1]
27.006 -73.01
CHNL# 1: [ANGL 667[CANCARB9 13.800]1]
73.345 -26.72

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_892L_SUFFIELD

FILE: scn3_SP_892L_Suffield.out

THU, APR 14 2022 14:28 BRANCH Q

CHNL# 552: [1035L_Q]
88.491 -136.4
CHNL# 546: [1034L_Q]
74.874 -140.2
CHNL# 538: [983L_L1_Q]
207.50 -123.9
CHNL# 536: [983L_L3_Q]
134.14 -92.34
CHNL# 534: [983L_L2_Q]
136.77 -120.9
CHNL# 532: [964L_L2_Q]
125.99 -89.61

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_892L_SUFFIELD

FILE: scn3_SP_892L_Suffield.out

THU, APR 14 2022 14:28 BRANCH Q

CHNL# 544: [964L_L5_Q]
74.790 -61.79
CHNL# 548: [964L_L4_Q]
223.96 -86.92
CHNL# 550: [1005L_Q]
135.75 -17.37

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_POST_NOFAULT

FILE: scn4_SL_Post_nofault.out

THU, APR 14 2022 14:28

REACTIVE POWER

CHNL# 278: [VARS 61994[GRANLEA6 0.6900]G1]
0.98400 -0.0160

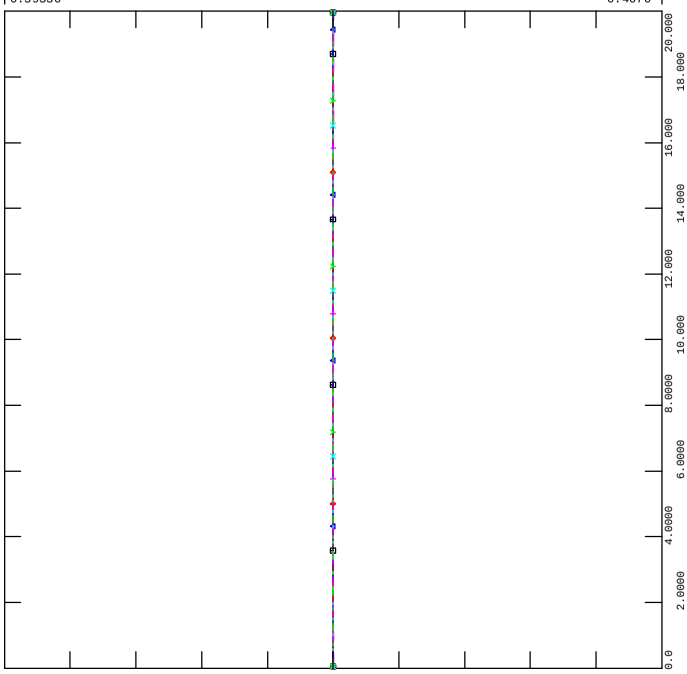
CHNL# 276: [VARS 60990[SHAMROC5 0.6500]G1]
1.4598 0.45980

CHNL# 284: [VARS 773[SECST 20.000]1]
0.50080 -0.5009

CHNL# 250: [VARS 667[CANCARB9 13.800]1]
0.61770 -0.3823

CHNL# 283: [VARS990007[FORTYMILE_6 0.6900]G2]
0.59330 -0.4070

CHNL# 282: [VARS990004[FORTYMILE_3 0.6900]G1]
0.59330 -0.4070



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_POST_NOFAULT

FILE: scn4_SL_Post_nofault.out

THU, APR 14 2022 14:28

BUS VOLTAGE

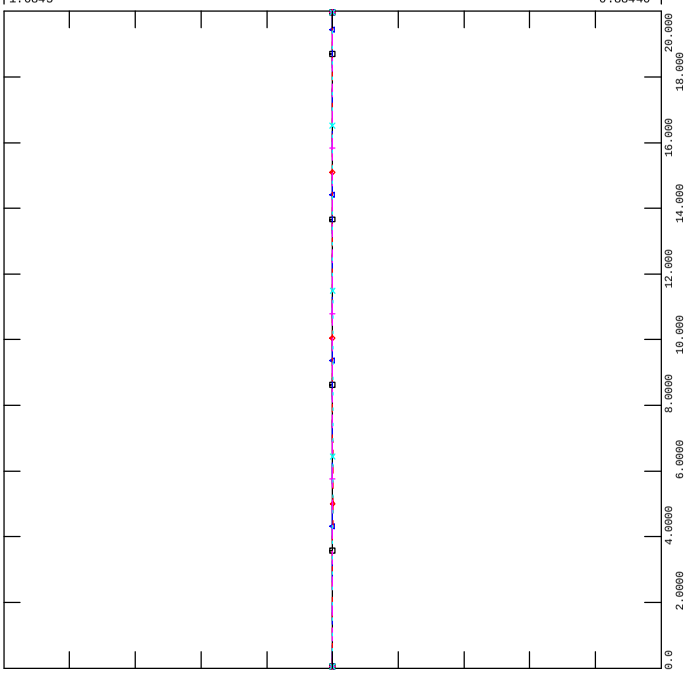
CHNL# 518: [VOLT 976 [ROTBAUR 138.00]]
1.1105 0.91040

CHNL# 513: [VOLT 320 [CHAPPIC7 138.00]]
1.1177 0.91770

CHNL# 516: [VOLT 662 [WHITLA1 240.00]]
1.1189 0.91880

CHNL# 515: [VOLT 659 [BOWMAN2 138.00]]
1.0970 0.89690

CHNL# 517: [VOLT 669 [BOWMAN1 240.00]]
1.0845 0.88440



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_POST_NOFAULT

FILE: scn4_SL_Post_nofault.out

THU, APR 14 2022 14:28

ACTIVE POWER

CHNL# 195: [POWR 61994[GRANLEA6 0.6900]G1]
1.2000 0.80000

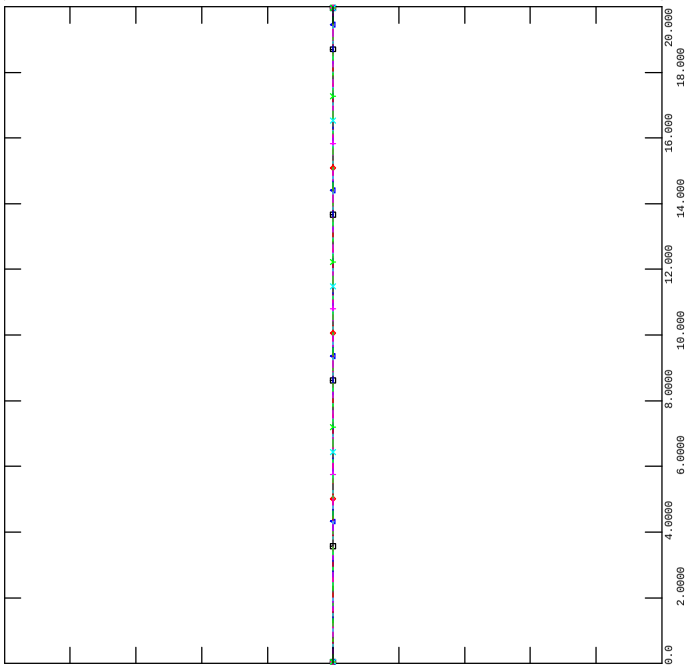
CHNL# 193: [POWR 60990[SHAMROC5 0.6500]G1]
2.2160 1.8160

CHNL# 201: [POWR 773[SECST 20.000]1]
1.4200 1.0199

CHNL# 167: [POWR 667[CANCARB9 13.800]1]
0.50400 0.10390

CHNL# 200: [POWR990007[FORTYMILE_6 0.6900]G2]
1.7000 1.3000

CHNL# 199: [POWR990004[FORTYMILE_3 0.6900]G1]
1.7000 1.3000



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_POST_NOFAULT

FILE: scn4_SL_Post_nofault.out

THU, APR 14 2022 14:28

TERMINAL VOLTAGE

CHNL# 444: [ETRM 61994[GRANLEA6 0.6900]G1]
1.1811 0.98110

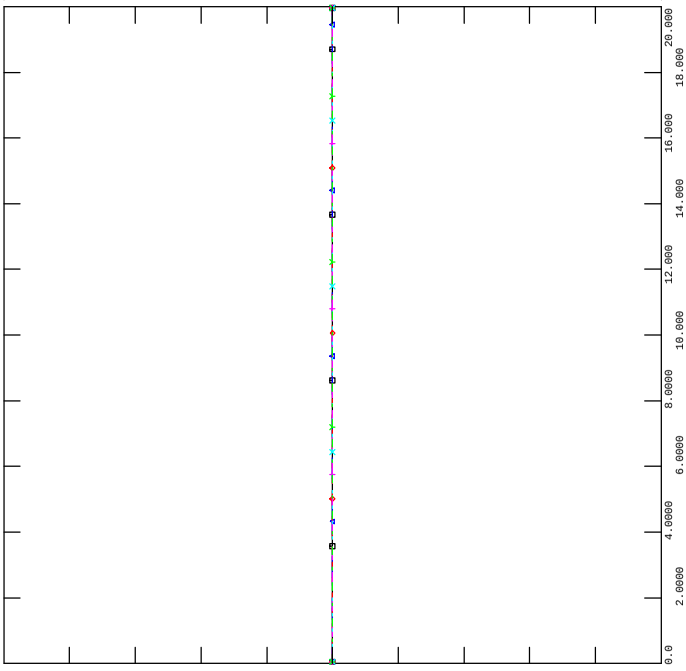
CHNL# 442: [ETRM 60990[SHAMROC5 0.6500]G1]
1.1531 0.95310

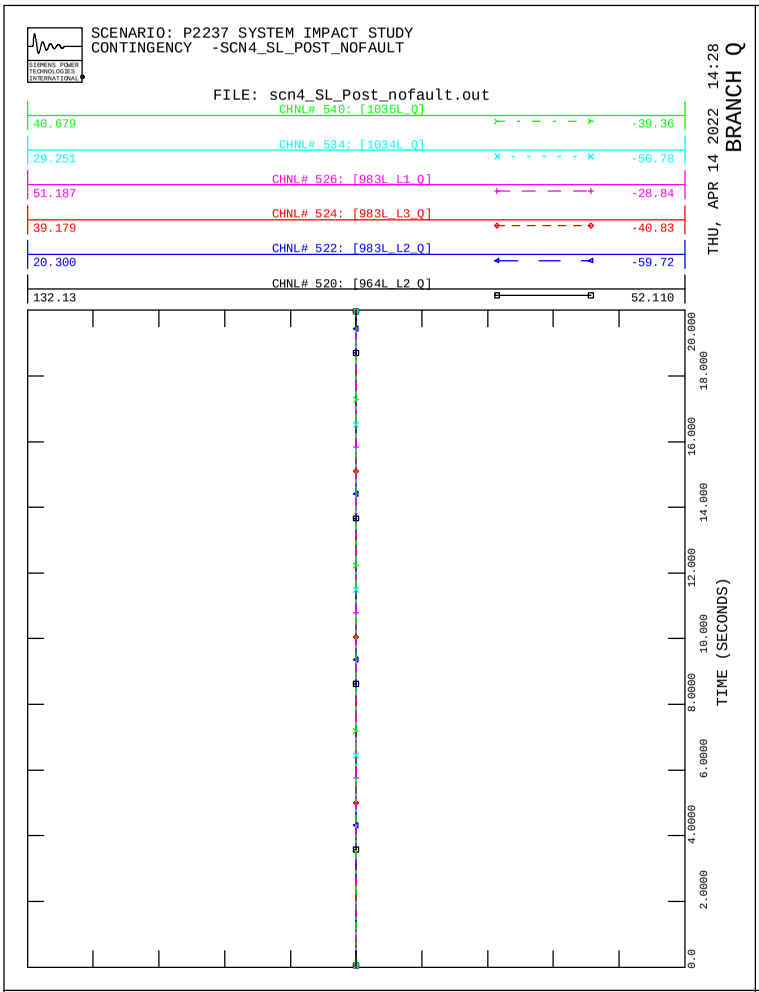
CHNL# 450: [ETRM 773[SECST 20.000]1]
1.1100 0.91000

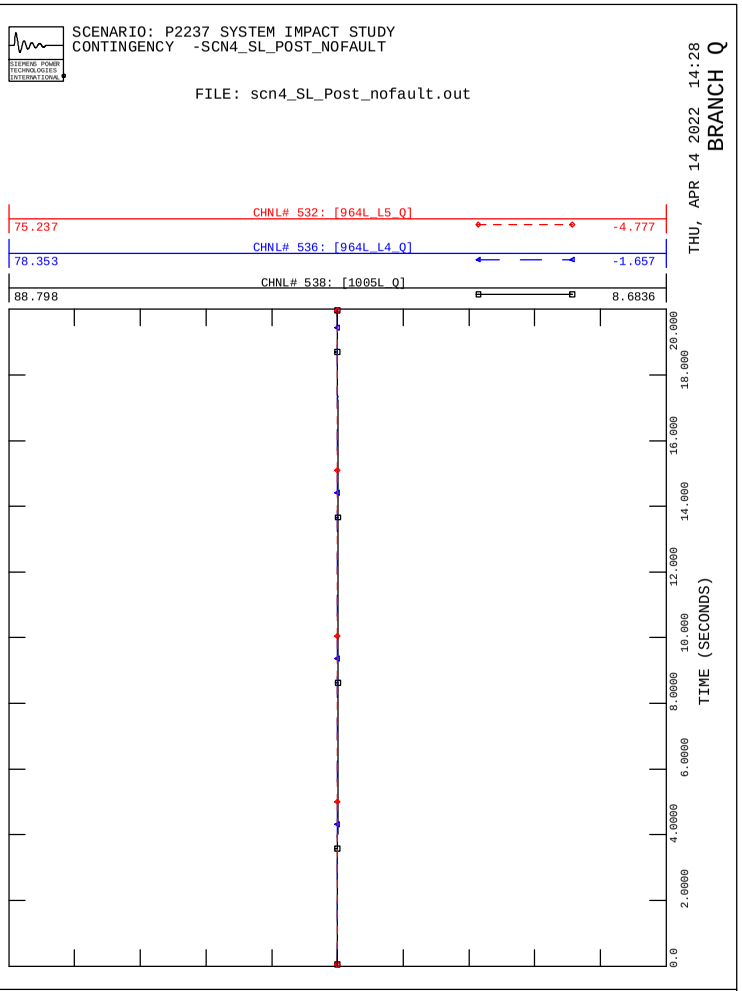
CHNL# 416: [ETRM 667[CANCARB9 13.800]1]
1.1400 0.94000

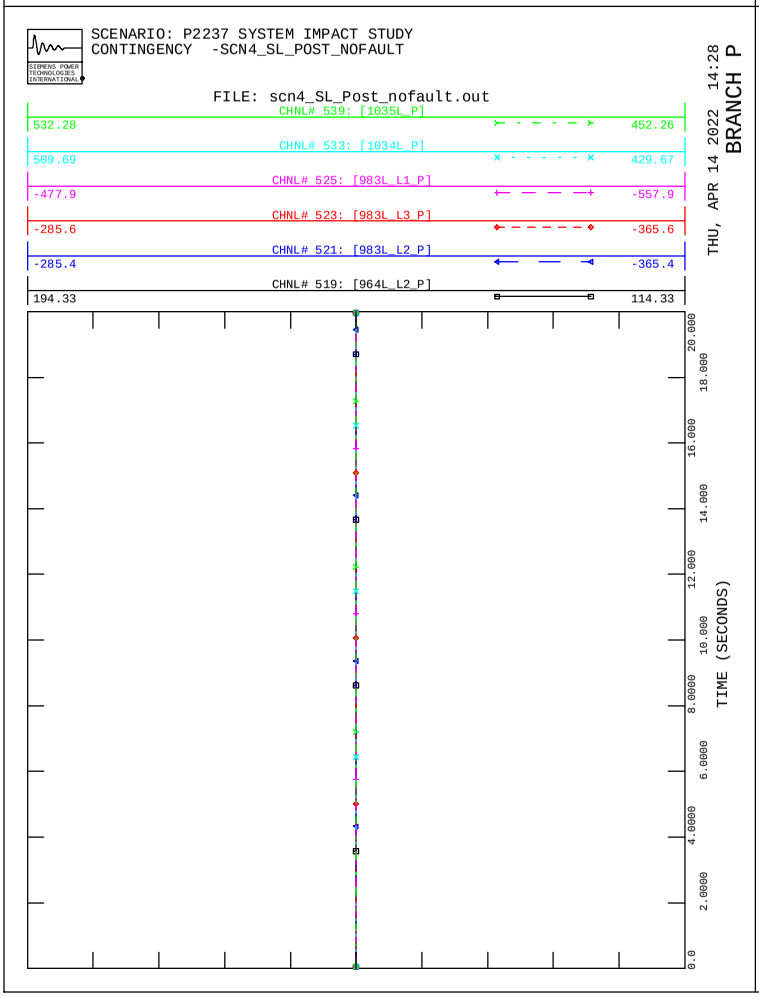
CHNL# 449: [ETRM990007[FORTYMILE_6 0.6900]G2]
1.1400 0.94000

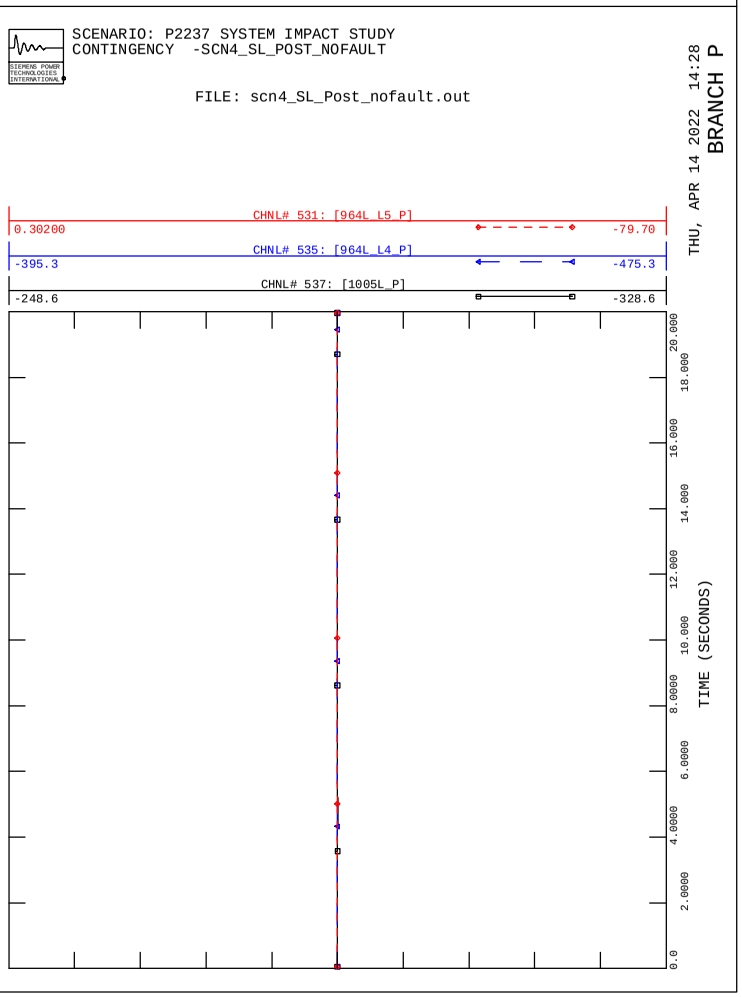
CHNL# 448: [ETRM990004[FORTYMILE_3 0.6900]G1]
1.1400 0.94000




SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_POST_NOFAULT
FILE: scn4_SL_Post_nofault.out
CHNL# 540: [1035L_Q]
40.679
-39.36
CHNL# 534: [1034L_Q]
29.251
-50.78
CHNL# 526: [983L_L1_Q]
51.187
-28.84
CHNL# 524: [983L_L3_Q]
39.179
-40.83
CHNL# 522: [983L_L2_Q]
20.300
-59.72
CHNL# 520: [964L_L2_Q]
132.13
52.110
THU, APR 14 2022 14:28
BRANCH Q
TIME (SECONDS)
0.0
2.0000
4.0000
6.0000
8.0000
10.000
12.000
14.000
16.000
18.000
20.000


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_POST_NOFAULT
FILE: scn4_SL_Post_nofault.out
CHNL# 532: [964L_L5_Q]
75.237
-4.777
CHNL# 536: [964L_L4_Q]
78.353
-1.657
CHNL# 538: [1005L_Q]
88.798
8.6836
THU, APR 14 2022 14:28
BRANCH Q
TIME (SECONDS)
0.0
2.0000
4.0000
6.0000
8.0000
10.000
12.000
14.000
16.000
18.000
20.000


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_POST_NOFAULT
FILE: scn4_SL_Post_nofault.out
CHNL# 539: [1035L_P]
532.28
452.26
CHNL# 533: [1034L_P]
509.69
429.67
CHNL# 525: [983L_L1_P]
-477.9
-557.9
CHNL# 523: [983L_L3_P]
-285.6
-365.6
CHNL# 521: [983L_L2_P]
-285.4
-365.4
CHNL# 519: [964L_L2_P]
194.33
114.33
THU, APR 14 2022 14:28
BRANCH P
TIME (SECONDS)
0.0
2.0000
4.0000
6.0000
8.0000
10.000
12.000
14.000
16.000
18.000
20.000


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_POST_NOFAULT
FILE: scn4_SL_Post_nofault.out
CHNL# 531: [964L_L5_P]
0.30200
-79.70
CHNL# 535: [964L_L4_P]
-395.3
-475.3
CHNL# 537: [1005L_P]
-248.6
-328.6
THU, APR 14 2022 14:28
BRANCH P
TIME (SECONDS)
0.0
2.0000
4.0000
6.0000
8.0000
10.000
12.000
14.000
16.000
18.000
20.000

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_964LY_BOWMANTON

FILE: scn4_SL_964LY_Bowmanton.out

THU, APR 14 2022 14:28

ACTIVE POWER

CHNL# 195: [POWR 61994[GRANLEA6 0.6900]G1]
1.2670 0.01240

CHNL# 193: [POWR 60990[SHAMROC5 0.6500]G1]
2.2388 0.20290

CHNL# 201: [POWR 773[SECST 20.000]1]
1.9235 0.96520

CHNL# 167: [POWR 667[CANCARB9 13.800]1]
0.89600 -0.2033

CHNL# 200: [POWR990007[FORTYMILE_6 0.6900]G2]
1.5300 -0.2000

CHNL# 199: [POWR990004[FORTYMILE_3 0.6900]G1]
1.5300 -0.2000

1.0500 0.94500 0.84000 0.73500 0.63000 0.52500 0.42000 0.31500 0.21000 0.10500 0.0

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_964LY_BOWMANTON

FILE: scn4_SL_964LY_Bowmanton.out

THU, APR 14 2022 14:28

TERMINAL VOLTAGE

CHNL# 444: [ETRM 61994[GRANLEA6 0.6900]G1]
1.7855 0.13830

CHNL# 442: [ETRM 60990[SHAMROC5 0.6500]G1]
1.7256 0.17600

CHNL# 450: [ETRM 773[SECST 20.000]1]
1.1323 0.85700

CHNL# 416: [ETRM 667[CANCARB9 13.800]1]
1.1969 0.56840

CHNL# 449: [ETRM990007[FORTYMILE_6 0.6900]G2]
1.1400 -0.1000

CHNL# 448: [ETRM990004[FORTYMILE_3 0.6900]G1]
1.1400 -0.1000

1.0500 0.94500 0.84000 0.73500 0.63000 0.52500 0.42000 0.31500 0.21000 0.10500 0.0

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_964LY_BOWMANTON

FILE: scn4_SL_964LY_Bowmanton.out

THU, APR 14 2022 14:28

ROTOR ANGLE

CHNL# 37: [ANGL 775[SECCT2 21.000]3]
29.831 -76.03

CHNL# 36: [ANGL 774[SECCT1 21.000]2]
29.831 -76.03

CHNL# 35: [ANGL 773[SECST 20.000]1]
30.445 -74.80

CHNL# 1: [ANGL 667[CANCARB9 13.800]1]
74.626 -61.28

1.0500 0.94500 0.84000 0.73500 0.63000 0.52500 0.42000 0.31500 0.21000 0.10500 0.0

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_964LY_BOWMANTON

FILE: scn4_SL_964LY_Bowmanton.out

THU, APR 14 2022 14:28

REACTIVE POWER

CHNL# 278: [VARS 61994[GRANLEA6 0.6900]G1]
2.2318 -0.6121

CHNL# 276: [VARS 60990[SHAMROC5 0.6500]G1]
4.0480 -1.016

CHNL# 284: [VARS 773[SECST 20.000]1]
1.6868 -1.405

CHNL# 250: [VARS 667[CANCARB9 13.800]1]
1.2498 -0.6941

CHNL# 283: [VARS990007[FORTYMILE_6 0.6900]G2]
0.51810 -0.5000

CHNL# 282: [VARS990004[FORTYMILE_3 0.6900]G1]
0.51810 -0.5000

1.0500 0.94500 0.84000 0.73500 0.63000 0.52500 0.42000 0.31500 0.21000 0.10500 0.0

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_964LY_BOWMANTON

FILE: scn4_SL_964LY_Bowmanton.out

THU, APR 14 2022 14:28 BRANCH P

CHNL# 539: [1035L_P]
715.68 -237.4
CHNL# 533: [1034L_P]
681.73 -226.4
CHNL# 525: [983L_L1_P]
335.35 -1009.
CHNL# 523: [983L_L3_P]
240.76 -725.5
CHNL# 521: [983L_L2_P]
240.40 -724.4
CHNL# 519: [964L_L2_P]
253.65 -84.52

1.0500 0.94500 0.84000 0.73500 0.63000 0.52500 0.42000 0.31500 0.21000 0.10500 0.0
TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_964LY_BOWMANTON

FILE: scn4_SL_964LY_Bowmanton.out

THU, APR 14 2022 14:28 BRANCH P

CHNL# 531: [964L_L5_P]
110.85 -311.6
CHNL# 535: [964L_L4_P]
209.50 -628.5
CHNL# 537: [1005L_P]
-147.9 -487.7

1.0500 0.94500 0.84000 0.73500 0.63000 0.52500 0.42000 0.31500 0.21000 0.10500 0.0
TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_964LY_BOWMANTON

FILE: scn4_SL_964LY_Bowmanton.out

THU, APR 14 2022 14:28 BUS VOLTAGE

CHNL# 518: [VOLT 976 [ROTBAUR 138.00]]
1.2326 0.21280
CHNL# 513: [VOLT 320 [CHAPPIC7 138.00]]
1.2144 0.64690
CHNL# 516: [VOLT 662 [WHITLA1 240.00]]
1.6044 -0.0707
CHNL# 515: [VOLT 659 [BOWMAN2 138.00]]
1.2778 0.04510
CHNL# 517: [VOLT 669 [BOWMAN1 240.00]]
1.3185 -0.0886

1.0500 0.94500 0.84000 0.73500 0.63000 0.52500 0.42000 0.31500 0.21000 0.10500 0.0
TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_964LY_BOWMANTON

FILE: scn4_SL_964LY_Bowmanton.out

THU, APR 14 2022 14:28 BRANCH Q

CHNL# 540: [1035L_Q]
215.64 -336.7
CHNL# 534: [1034L_Q]
202.62 -335.9
CHNL# 526: [983L_L1_Q]
700.91 -648.1
CHNL# 524: [983L_L3_Q]
1071.3 -1114.
CHNL# 522: [983L_L2_Q]
1081.0 -1154.
CHNL# 520: [964L_L2_Q]
880.73 -358.8

1.0500 0.94500 0.84000 0.73500 0.63000 0.52500 0.42000 0.31500 0.21000 0.10500 0.0
TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_964LY_MURRAY_LAKE

FILE: scn4_SL_964LY_Murray_Lake.out

THU, APR 14 2022 14:28

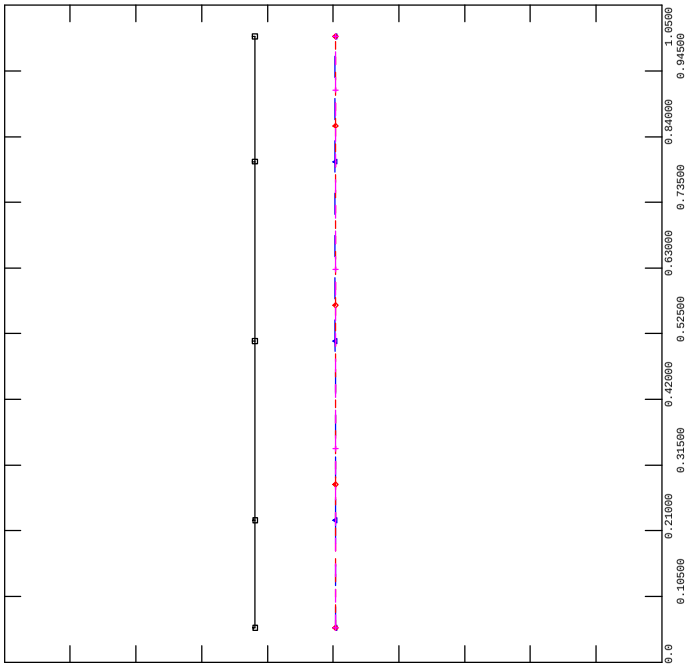
ROTOR ANGLE

CHNL# 37: [ANGL 775[SECCT2 21.000]3]
29.591 -76.66

CHNL# 36: [ANGL 774[SECCT1 21.000]2]
29.591 -76.66

CHNL# 35: [ANGL 773[SECST 20.000]1]
30.235 -75.43

CHNL# 1: [ANGL 667[CANCARB9 13.800]1]
71.974 -59.19



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_964LY_MURRAY_LAKE

FILE: scn4_SL_964LY_Murray_Lake.out

THU, APR 14 2022 14:28

REACTIVE POWER

CHNL# 278: [VARS 61994[GRANLEA6 0.6900]G1]
2.4248 -0.6687

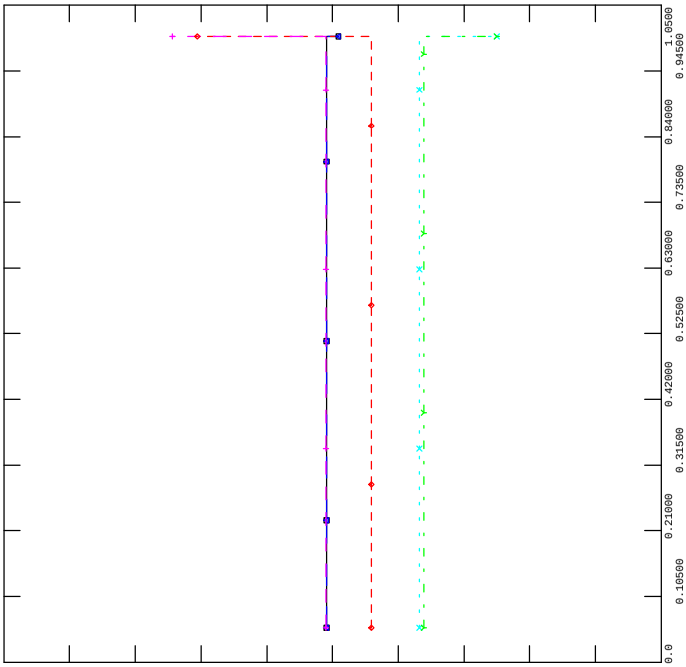
CHNL# 276: [VARS 60990[SHAMROC5 0.6500]G1]
4.9713 -1.378

CHNL# 284: [VARS 773[SECST 20.000]1]
0.95150 -0.9996

CHNL# 250: [VARS 667[CANCARB9 13.800]1]
1.0625 -0.6356

CHNL# 283: [VARS990007[FORTYMILE_6 0.6900]G2]
0.51810 -0.5000

CHNL# 282: [VARS990004[FORTYMILE_3 0.6900]G1]
0.51810 -0.5000



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_964LY_BOWMANTON

FILE: scn4_SL_964LY_Bowmanton.out

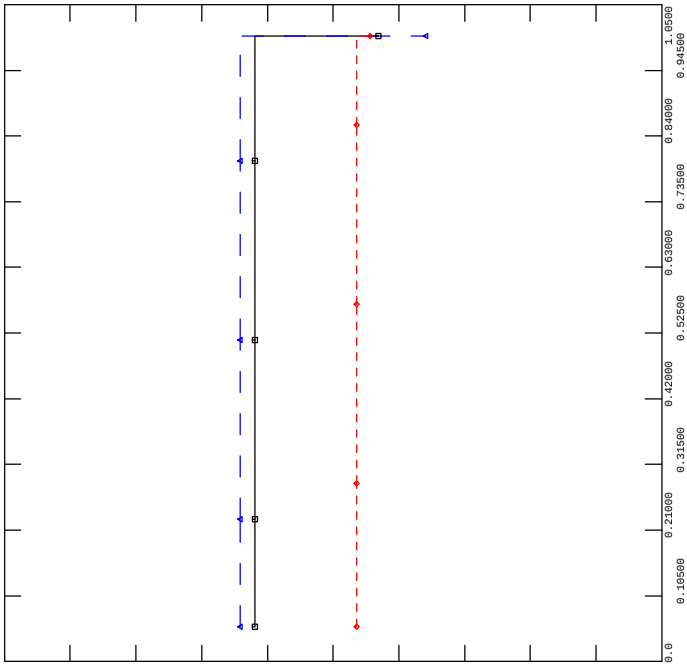
THU, APR 14 2022 14:28

BRANCH Q

CHNL# 532: [964L_L5_Q]
902.04 -716.7

CHNL# 536: [964L_L4_Q]
71.453 -40.00

CHNL# 538: [1005L_Q]
169.51 -139.2



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_964LY_MURRAY_LAKE

FILE: scn4_SL_964LY_Murray_Lake.out

THU, APR 14 2022 14:28

ACTIVE POWER

CHNL# 195: [POWR 61994[GRANLEA6 0.6900]G1]
1.2014 -0.0730

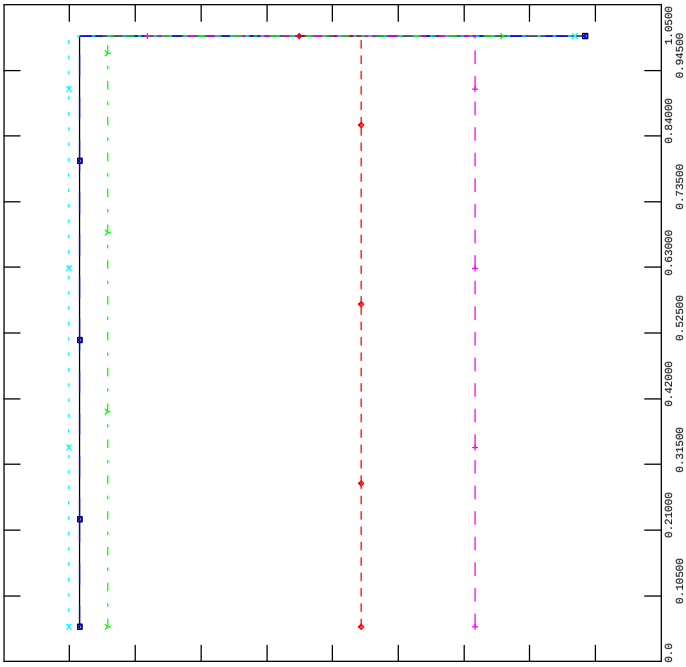
CHNL# 193: [POWR 60990[SHAMROC5 0.6500]G1]
2.2190 0.17010

CHNL# 201: [POWR 773[SECST 20.000]1]
1.8768 0.96090

CHNL# 167: [POWR 667[CANCARB9 13.800]1]
0.83480 -0.1425

CHNL# 200: [POWR990007[FORTYMILE_6 0.6900]G2]
1.5300 -0.2000

CHNL# 199: [POWR990004[FORTYMILE_3 0.6900]G1]
1.5300 -0.2000



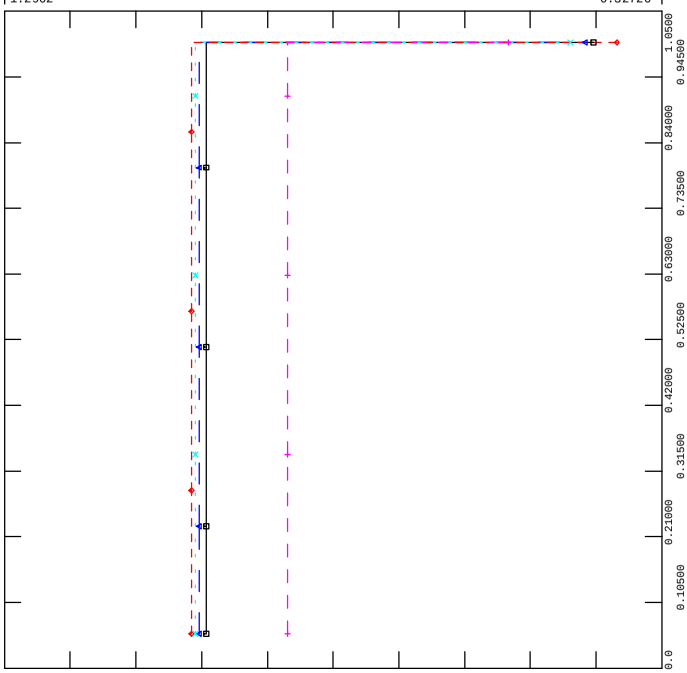
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_964LY_MURRAY_LAKE

FILE: scn4_SL_964LY_Murray_Lake.out

THU, APR 14 2022 14:28

BUS VOLTAGE

CHNL# 518: [VOLT 976 [ROTBAUR 138.00]] 1.2233 0.50660
CHNL# 513: [VOLT 320 [CHAPPIC7 138.00]] 1.2035 0.77550
CHNL# 516: [VOLT 662 [WHITLA1 240.00]] 1.4635 -0.0681
CHNL# 515: [VOLT 659 [BOWMAN2 138.00]] 1.2591 0.40070
CHNL# 517: [VOLT 669 [BOWMAN1 240.00]] 1.2902 0.32720



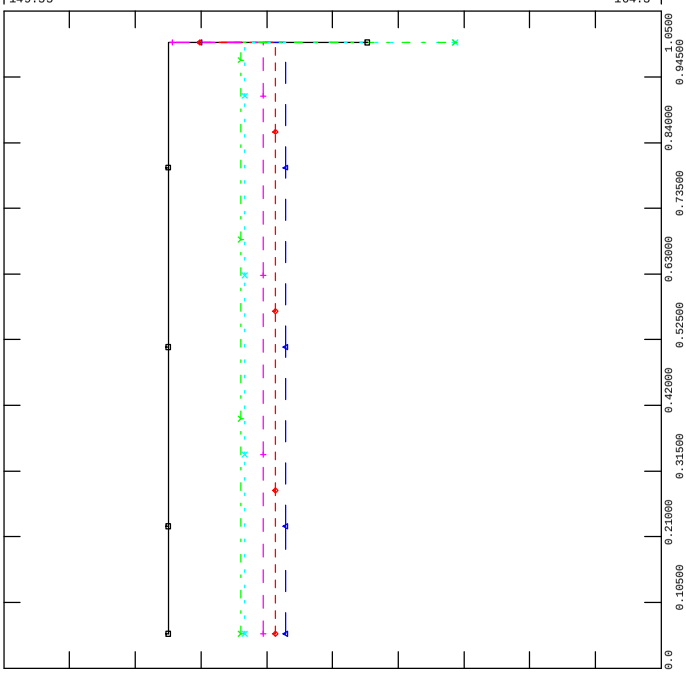
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_964LY_MURRAY_LAKE

FILE: scn4_SL_964LY_Murray_Lake.out

THU, APR 14 2022 14:28

BRANCH Q

CHNL# 540: [1035L_Q] 226.97 -399.9
CHNL# 534: [1034L_Q] 211.05 -394.0
CHNL# 526: [983L_L1_Q] 590.31 -879.8
CHNL# 524: [983L_L3_Q] 573.57 -826.2
CHNL# 522: [983L_L2_Q] 593.32 -846.6
CHNL# 520: [964L_L2_Q] 149.55 -104.3



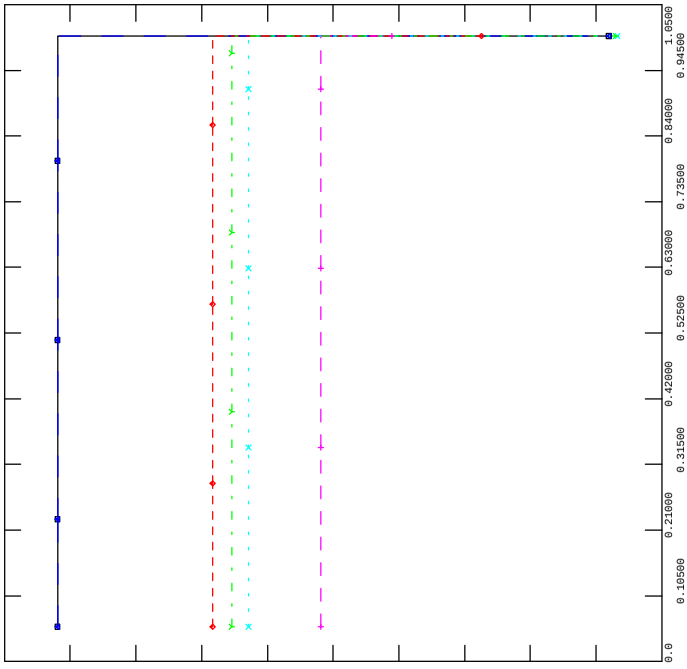
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_964LY_MURRAY_LAKE

FILE: scn4_SL_964LY_Murray_Lake.out

THU, APR 14 2022 14:28

TERMINAL VOLTAGE

CHNL# 444: [ETRM 61994[GRANLEA6 0.6900]G1] 1.5745 0.15230
CHNL# 442: [ETRM 60990[SHAMROC5 0.6500]G1] 1.6107 0.13110
CHNL# 450: [ETRM 773[SECST 20.000]1] 1.1272 0.88350
CHNL# 416: [ETRM 667[CANCARB9 13.800]1] 1.1896 0.71660
CHNL# 449: [ETRM990007[FORTYMILE_6 0.6900]G2] 1.1400 -0.1000
CHNL# 448: [ETRM990004[FORTYMILE_3 0.6900]G1] 1.1400 -0.1000



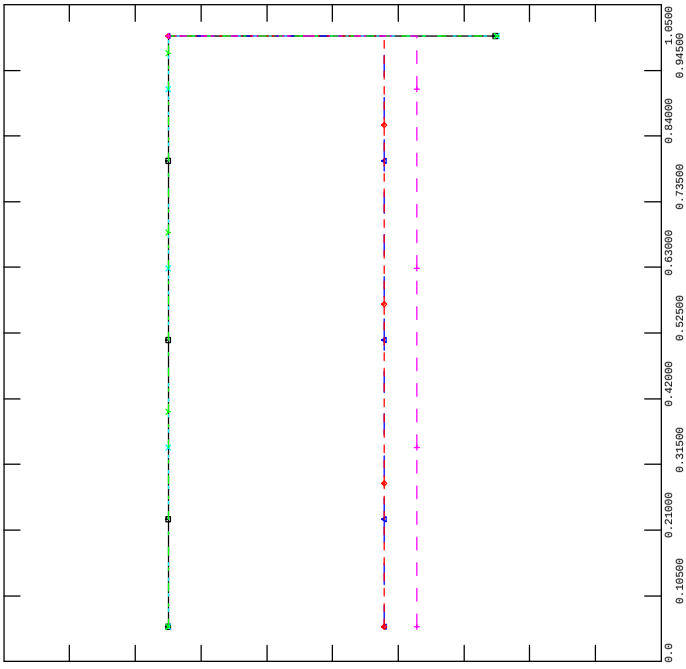
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_964LY_MURRAY_LAKE

FILE: scn4_SL_964LY_Murray_Lake.out

THU, APR 14 2022 14:28

BRANCH P

CHNL# 539: [1035L_P] 699.61 -189.2
CHNL# 533: [1034L_P] 670.35 -192.3
CHNL# 525: [983L_L1_P] 360.16 -1015.
CHNL# 523: [983L_L3_P] 261.18 -728.7
CHNL# 521: [983L_L2_P] 261.95 -728.4
CHNL# 519: [964L_L2_P] 253.65 -84.54

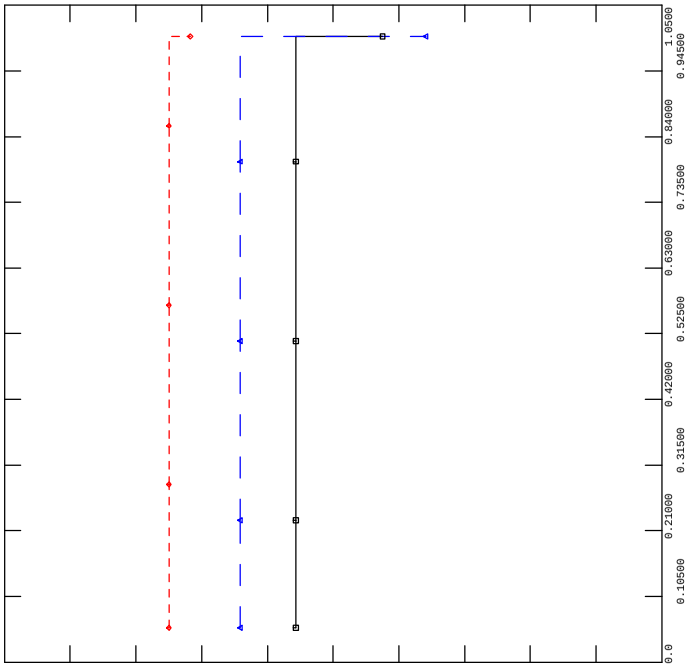


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_964LY_MURRAY_LAKE

FILE: scn4_SL_964LY_Murray_Lake.out

THU, APR 14 2022 14:28 BRANCH Q

CHNL# 532: [964L_L5_Q] 200.05 -462.1
CHNL# 536: [964L_L4_Q] 71.453 -40.00
CHNL# 538: [1005L_Q] 138.77 -57.04

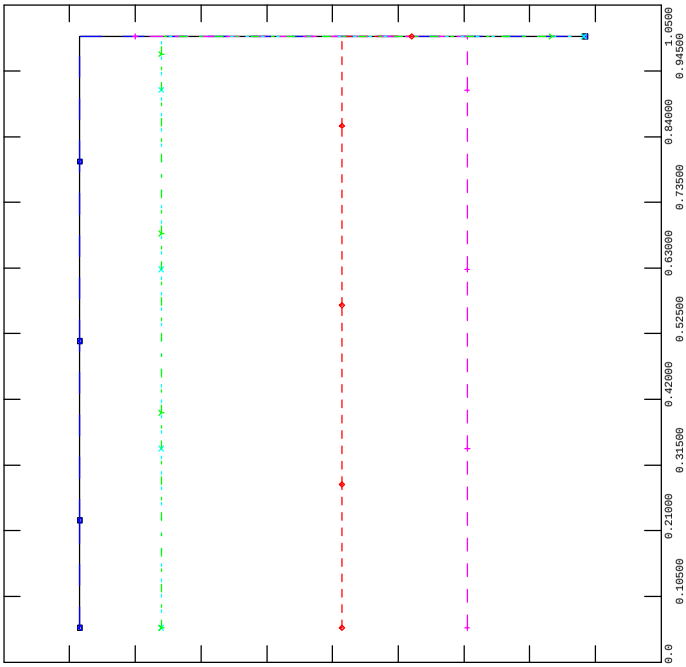


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_983L_BOWMANTON

FILE: scn4_SL_983L_Bowmanton.out

THU, APR 14 2022 14:28 ACTIVE POWER

CHNL# 195: [POWR 61994[GRANLEA6 0.6900]G1] 1.3180 -0.0064
CHNL# 193: [POWR 60990[SHAMROC5 0.6500]G1] 2.5679 0.26150
CHNL# 201: [POWR 773[SECST 20.000]1] 1.9256 0.92420
CHNL# 167: [POWR 667[CANCARB9 13.800]1] 0.98120 -0.3354
CHNL# 200: [POWR990007[FORTYMILE_6 0.6900]G2] 1.5300 -0.2000
CHNL# 199: [POWR990004[FORTYMILE 3 0.6900]G1] 1.5300 -0.2000

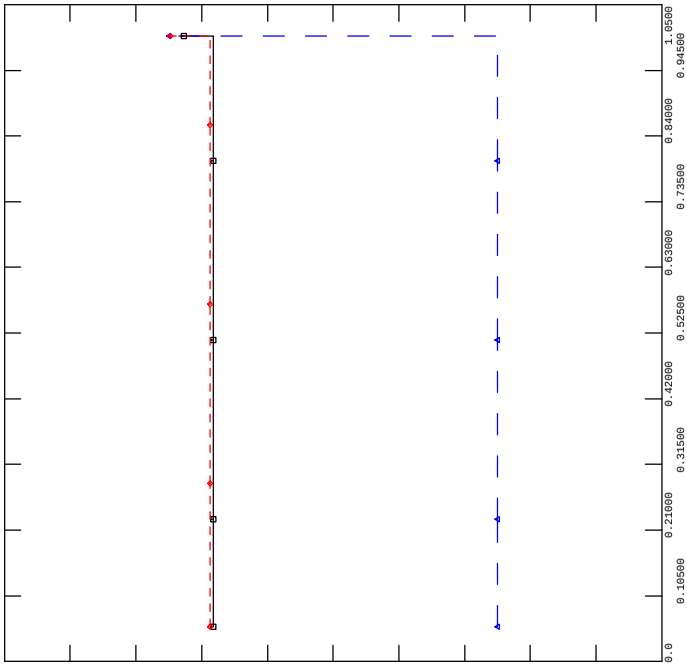


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_964LY_MURRAY_LAKE

FILE: scn4_SL_964LY_Murray_Lake.out

THU, APR 14 2022 14:28 BRANCH P

CHNL# 531: [964L_L5_P] 97.127 -293.1
CHNL# 535: [964L_L4_P] 209.50 -628.5
CHNL# 537: [1005L_P] -244.4 -390.9

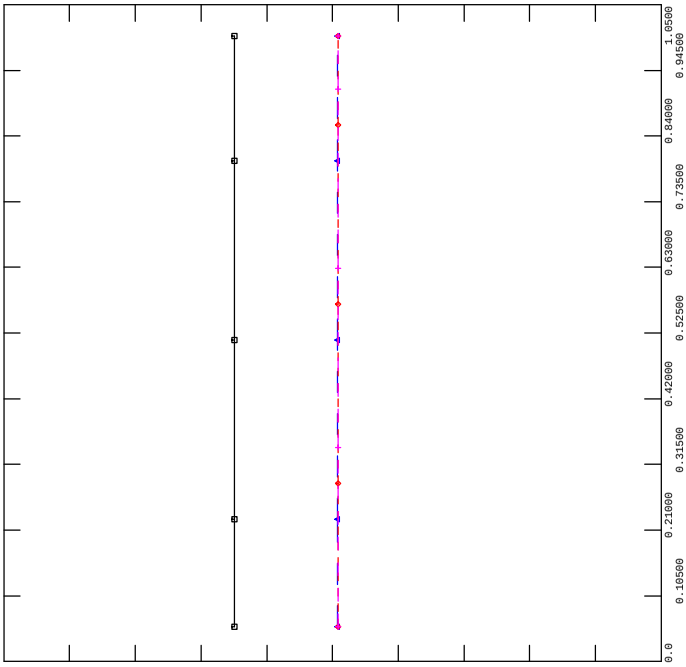


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_983L_BOWMANTON

FILE: scn4_SL_983L_Bowmanton.out

THU, APR 14 2022 14:28 ROTOR ANGLE

CHNL# 37: [ANGL 775[SECCT2 21.000]3] 31.345 -77.44
CHNL# 36: [ANGL 774[SECCT1 21.000]2] 31.345 -77.44
CHNL# 35: [ANGL 773[SECST 20.000]1] 31.798 -75.97
CHNL# 1: [ANGL 667[CANCARB9 13.800]1] 75.987 -78.17



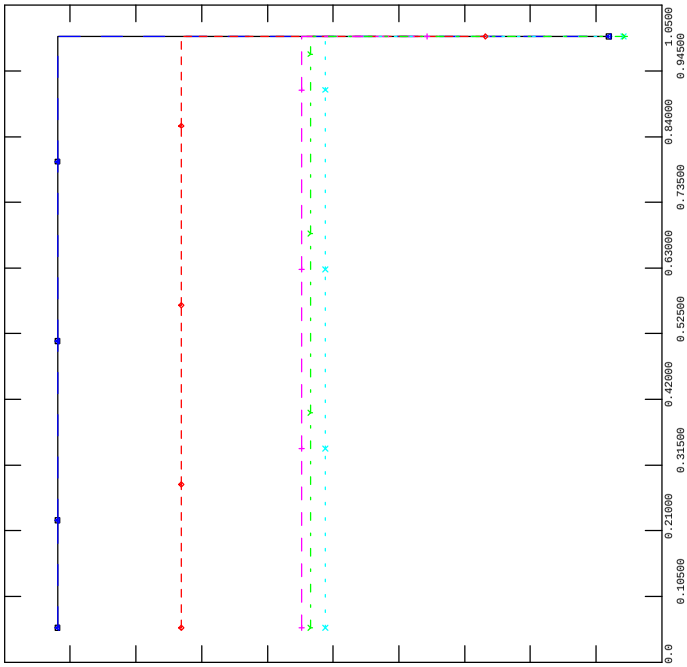
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_983L_BOWMANTON

FILE: scn4_SL_983L_Bowmanton.out

THU, APR 14 2022 14:28

TERMINAL VOLTAGE

CHNL# 444: [ETRM 61994[GRANLEA6 0.6900]G1] 1.9095 0.13170
CHNL# 442: [ETRM 60990[SHAMROC5 0.6500]G1] 1.9015 0.18040
CHNL# 450: [ETRM 773[SECST 20.000]1] 1.1365 0.85660
CHNL# 416: [ETRM 667[CANCARB9 13.800]1] 1.2171 0.55770
CHNL# 449: [ETRM990007[FORTYMILE_6 0.6900]G2] 1.1400 -0.1000
CHNL# 448: [ETRM990004[FORTYMILE_3 0.6900]G1] 1.1400 -0.1000



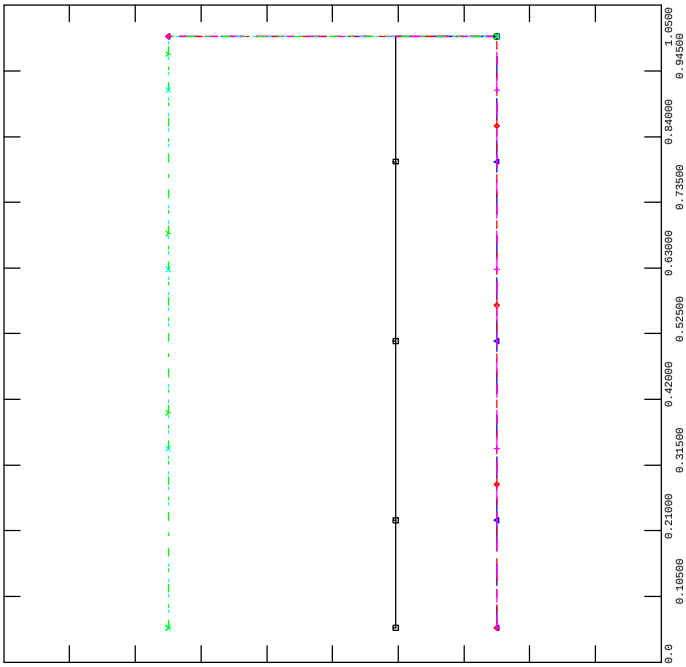
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_983L_BOWMANTON

FILE: scn4_SL_983L_Bowmanton.out

THU, APR 14 2022 14:28

BRANCH P

CHNL# 539: [1035L_P] 716.07 -238.6
CHNL# 533: [1034L_P] 682.05 -227.4
CHNL# 525: [983L_L1_P] 252.18 -756.6
CHNL# 523: [983L_L3_P] 155.79 -467.4
CHNL# 521: [983L_L2_P] 155.69 -467.1
CHNL# 519: [964L_L2_P] 825.21 -274.8



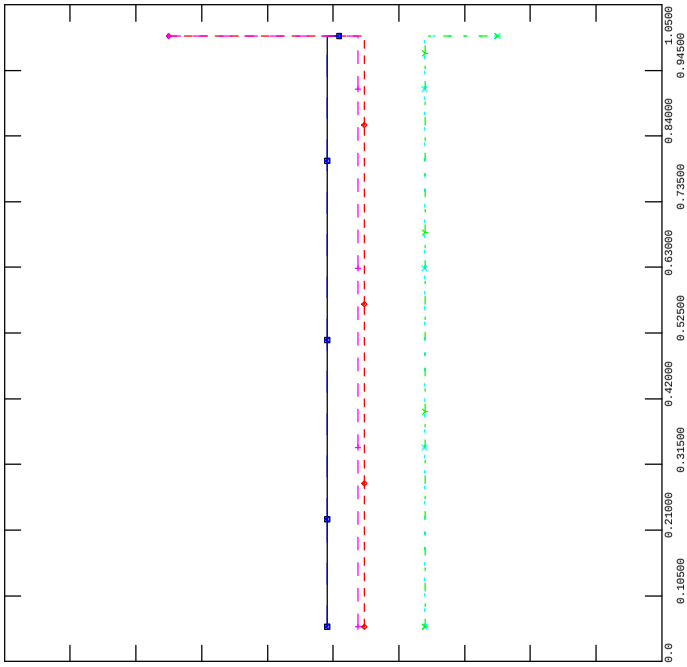
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_983L_BOWMANTON

FILE: scn4_SL_983L_Bowmanton.out

THU, APR 14 2022 14:28

REACTIVE POWER

CHNL# 278: [VARS 61994[GRANLEA6 0.6900]G1] 2.5066 -0.7073
CHNL# 276: [VARS 60990[SHAMROC5 0.6500]G1] 5.0153 -1.334
CHNL# 284: [VARS 773[SECST 20.000]1] 1.7250 -1.491
CHNL# 250: [VARS 667[CANCARB9 13.800]1] 1.2888 -0.8578
CHNL# 283: [VARS990007[FORTYMILE_6 0.6900]G2] 0.51810 -0.5000
CHNL# 282: [VARS990004[FORTYMILE_3 0.6900]G1] 0.51810 -0.5000



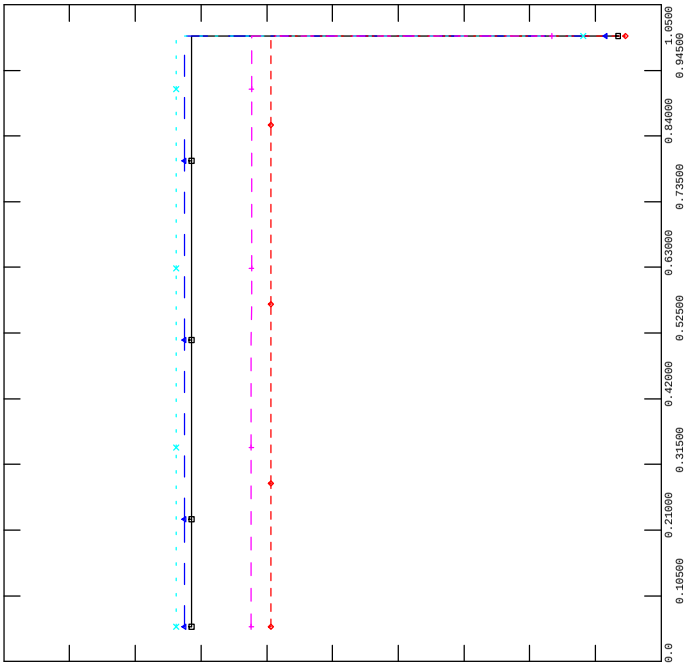
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_983L_BOWMANTON

FILE: scn4_SL_983L_Bowmanton.out

THU, APR 14 2022 14:28

BUS VOLTAGE

CHNL# 518: [VOLT 976 [ROTBAUR 138.00]] 1.3026 0.20480
CHNL# 513: [VOLT 320 [CHAPPIC7 138.00]] 1.2456 0.64480
CHNL# 516: [VOLT 662 [WHITLA1 240.00]] 1.7803 -0.0700
CHNL# 515: [VOLT 659 [BOWMAN2 138.00]] 1.3709 0.03790
CHNL# 517: [VOLT 669 [BOWMAN1 240.00]] 1.4305 -0.0952



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_983L_BOWMANTON

FILE: scn4_SL_983L_Bowmanton.out

THU, APR 14 2022 14:28 BRANCH P

CHNL# 531: [964L_L5_P]
514.06 -204.8
CHNL# 535: [964L_L4_P]
266.43 -797.6
CHNL# 537: [1005L_P]
-150.8 -474.7

TIME (SECONDS)
0.0 0.10500 0.21000 0.31500 0.42000 0.52500 0.63000 0.73500 0.84000 0.94500 1.0500

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_983L_WHITLA

FILE: scn4_SL_983L_Whitla.out

THU, APR 14 2022 14:28 ROTOR ANGLE

CHNL# 37: [ANGL 775[SECCT2 21.000]3]
30.947 -78.07
CHNL# 36: [ANGL 774[SECCT1 21.000]2]
30.947 -78.07
CHNL# 35: [ANGL 773[SECST 20.000]1]
31.396 -76.68
CHNL# 1: [ANGL 667[CANCARB9 13.800]1]
71.974 -73.67

TIME (SECONDS)
0.0 0.10500 0.21000 0.31500 0.42000 0.52500 0.63000 0.73500 0.84000 0.94500 1.0500

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_983L_BOWMANTON

FILE: scn4_SL_983L_Bowmanton.out

THU, APR 14 2022 14:28 BRANCH Q

CHNL# 540: [1035L_Q]
385.38 -411.5
CHNL# 534: [1034L_Q]
370.91 -411.7
CHNL# 526: [983L_L1_Q]
50.033 -40.00
CHNL# 524: [983L_L3_Q]
115.11 -345.3
CHNL# 522: [983L_L2_Q]
104.57 -313.7
CHNL# 520: [964L_L2_Q]
1255.8 -775.1

TIME (SECONDS)
0.0 0.10500 0.21000 0.31500 0.42000 0.52500 0.63000 0.73500 0.84000 0.94500 1.0500

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_983L_BOWMANTON

FILE: scn4_SL_983L_Bowmanton.out

THU, APR 14 2022 14:28 BRANCH Q

CHNL# 532: [964L_L5_Q]
856.78 -793.6
CHNL# 536: [964L_L4_Q]
921.81 -1139.
CHNL# 538: [1005L_Q]
194.83 -173.4

TIME (SECONDS)
0.0 0.10500 0.21000 0.31500 0.42000 0.52500 0.63000 0.73500 0.84000 0.94500 1.0500

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_983L_WHITLA

FILE: scn4_SL_983L_Whitla.out

THU, APR 14 2022 14:28 REACTIVE POWER

CHNL# 278: [VARS 61994[GRANLEA6 0.6900]G1] 2.2860 -0.6121
CHNL# 276: [VARS 60990[SHAMROC5 0.6500]G1] 5.2945 -1.455
CHNL# 284: [VARS 773[SECST 20.000]1] 0.94840 -1.043
CHNL# 250: [VARS 667[CANCARB9 13.800]1] 1.0606 -0.6532
CHNL# 283: [VARS990007[FORTYMILE_6 0.6900]G2] 0.51810 -0.5000
CHNL# 282: [VARS990004[FORTYMILE_3 0.6900]G1] 0.51810 -0.5000

TIME (SECONDS)
0.0 0.10500 0.21000 0.31500 0.42000 0.52500 0.63000 0.73500 0.84000 0.94500 1.0500

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_983L_WHITLA

FILE: scn4_SL_983L_Whitla.out

THU, APR 14 2022 14:28 BUS VOLTAGE

CHNL# 518: [VOLT 976 [ROTBAUR 138.00]] 1.2303 0.50480
CHNL# 513: [VOLT 320 [CHAPPIC7 138.00]] 1.2076 0.77640
CHNL# 516: [VOLT 662 [WHITLA1 240.00]] 1.4630 -0.0980
CHNL# 515: [VOLT 659 [BOWMAN2 138.00]] 1.2647 0.40330
CHNL# 517: [VOLT 669 [BOWMAN1 240.00]] 1.2985 0.33000

TIME (SECONDS)
0.0 0.10500 0.21000 0.31500 0.42000 0.52500 0.63000 0.73500 0.84000 0.94500 1.0500

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_983L_WHITLA

FILE: scn4_SL_983L_Whitla.out

THU, APR 14 2022 14:28 ACTIVE POWER

CHNL# 195: [POWR 61994[GRANLEA6 0.6900]G1] 1.2133 -0.0788
CHNL# 193: [POWR 60990[SHAMROC5 0.6500]G1] 2.2460 -0.0416
CHNL# 201: [POWR 773[SECST 20.000]1] 1.8747 0.94020
CHNL# 167: [POWR 667[CANCARB9 13.800]1] 0.86620 -0.2154
CHNL# 200: [POWR990007[FORTYMILE_6 0.6900]G2] 1.5300 -0.2000
CHNL# 199: [POWR990004[FORTYMILE_3 0.6900]G1] 1.5300 -0.2000

TIME (SECONDS)
0.0 0.10500 0.21000 0.31500 0.42000 0.52500 0.63000 0.73500 0.84000 0.94500 1.0500

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_983L_WHITLA

FILE: scn4_SL_983L_Whitla.out

THU, APR 14 2022 14:28 TERMINAL VOLTAGE

CHNL# 444: [ETRM 61994[GRANLEA6 0.6900]G1] 1.5047 0.17100
CHNL# 442: [ETRM 60990[SHAMROC5 0.6500]G1] 1.7104 0.08130
CHNL# 450: [ETRM 773[SECST 20.000]1] 1.1270 0.88370
CHNL# 416: [ETRM 667[CANCARB9 13.800]1] 1.2069 0.70590
CHNL# 449: [ETRM990007[FORTYMILE_6 0.6900]G2] 1.1400 -0.1000
CHNL# 448: [ETRM990004[FORTYMILE_3 0.6900]G1] 1.1400 -0.1000

TIME (SECONDS)
0.0 0.10500 0.21000 0.31500 0.42000 0.52500 0.63000 0.73500 0.84000 0.94500 1.0500

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_983L_WHITLA

FILE: scn4_SL_983L_Whitla.out

THU, APR 14 2022 14:28 BRANCH Q

CHNL# 540: [1035L Q] 236.18 -404.5
CHNL# 534: [1034L Q] 224.09 -402.3
CHNL# 526: [983L L1 Q] 1347.0 -449.0
CHNL# 524: [983L L3 Q] 40.000 -44.61
CHNL# 522: [983L L2 Q] 875.89 -324.2
CHNL# 520: [964L L2 Q] 969.17 -356.0

TIME (SECONDS)
0.0 0.10500 0.21000 0.31500 0.42000 0.52500 0.63000 0.73500 0.84000 0.94500 1.0500

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_983L_WHITLA

FILE: scn4_SL_983L_Whitla.out

THU, APR 14 2022 14:28 BRANCH Q

CHNL# 532: [964L L5 Q] 577.70 -195.7
CHNL# 536: [964L L4 Q] 636.49 -776.9
CHNL# 538: [1005L Q] 157.58 -74.42

TIME (SECONDS)
0.0 0.10500 0.21000 0.31500 0.42000 0.52500 0.63000 0.73500 0.84000 0.94500 1.0500

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_983L_WHITLA

FILE: scn4_SL_983L_Whitla.out

THU, APR 14 2022 14:28 BRANCH P

CHNL# 539: [1035L P] 701.04 -193.5
CHNL# 533: [1034L P] 672.09 -197.5
CHNL# 525: [983L L1 P] 358.12 -791.9
CHNL# 523: [983L L3 P] 155.79 -467.4
CHNL# 521: [983L L2 P] 223.35 -489.6
CHNL# 519: [964L L2 P] 742.06 -250.1

TIME (SECONDS)
0.0 0.10500 0.21000 0.31500 0.42000 0.52500 0.63000 0.73500 0.84000 0.94500 1.0500

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_983L_WHITLA

FILE: scn4_SL_983L_Whitla.out

THU, APR 14 2022 14:28 BRANCH P

CHNL# 531: [964L L5 P] 456.61 -185.7
CHNL# 535: [964L L4 P] 276.40 -737.4
CHNL# 537: [1005L P] -244.6 -393.3

TIME (SECONDS)
0.0 0.10500 0.21000 0.31500 0.42000 0.52500 0.63000 0.73500 0.84000 0.94500 1.0500

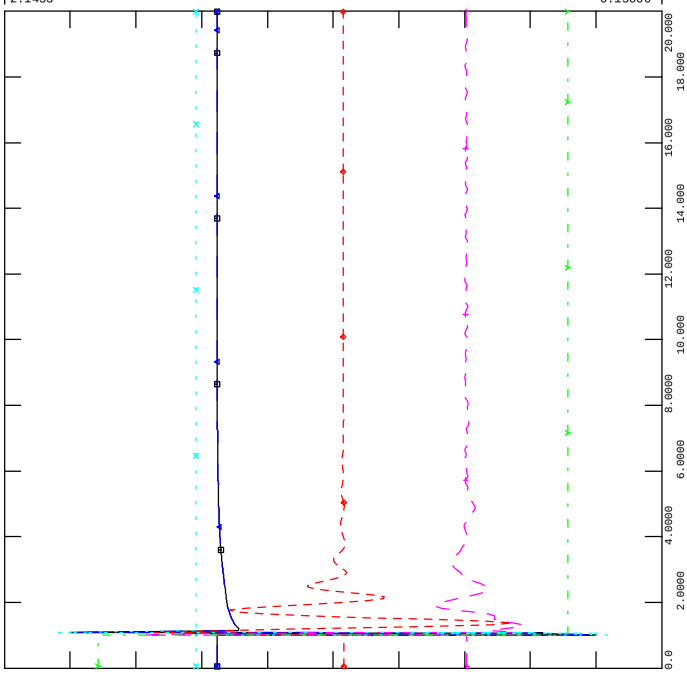
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_964LX_MURRAY_LAKE

FILE: scn4_SL_964LX_Murray_Lake.out

THU, APR 14 2022 14:28

ACTIVE POWER

CHNL# 195: [POWR 61994[GRANLEA6 0.6900]G1]
1.2000 -0.2000
CHNL# 193: [POWR 60990[SHAMROC5 0.6500]G1]
2.7421 0.25340
CHNL# 201: [POWR 773[SECST 20.000]1]
1.8869 0.93790
CHNL# 167: [POWR 667[CANCARB9 13.800]1]
0.75910 -0.1221
CHNL# 200: [POWR990007[FORTYMILE_6 0.6900]G2]
2.1453 0.15000
CHNL# 199: [POWR990004[FORTYMILE_3 0.6900]G1]
2.1453 0.15000



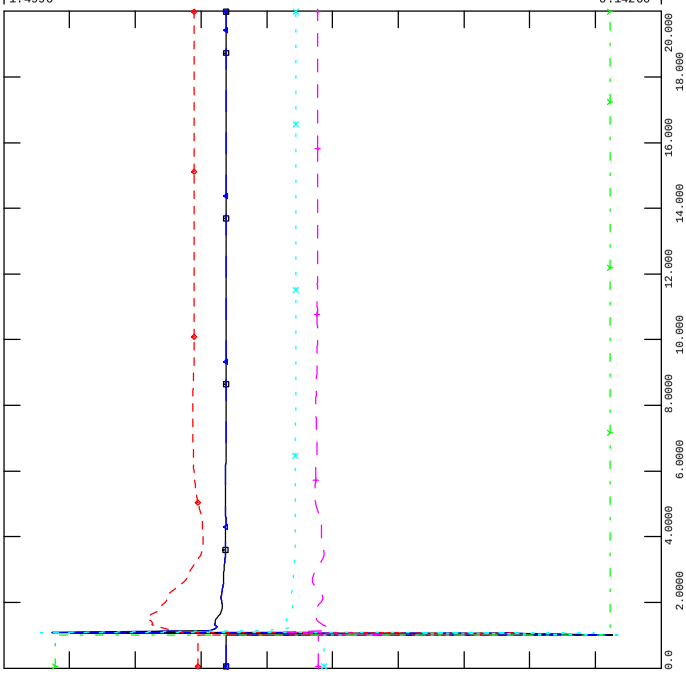
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_964LX_MURRAY_LAKE

FILE: scn4_SL_964LX_Murray_Lake.out

THU, APR 14 2022 14:28

TERMINAL VOLTAGE

CHNL# 444: [ETRM 61994[GRANLEA6 0.6900]G1]
1.1811 -0.1000
CHNL# 442: [ETRM 60990[SHAMROC5 0.6500]G1]
1.9230 0.13680
CHNL# 450: [ETRM 773[SECST 20.000]1]
1.1249 0.88460
CHNL# 416: [ETRM 667[CANCARB9 13.800]1]
1.1754 0.71700
CHNL# 449: [ETRM990007[FORTYMILE_6 0.6900]G2]
1.4990 0.14260
CHNL# 448: [ETRM990004[FORTYMILE_3 0.6900]G1]
1.4990 0.14260



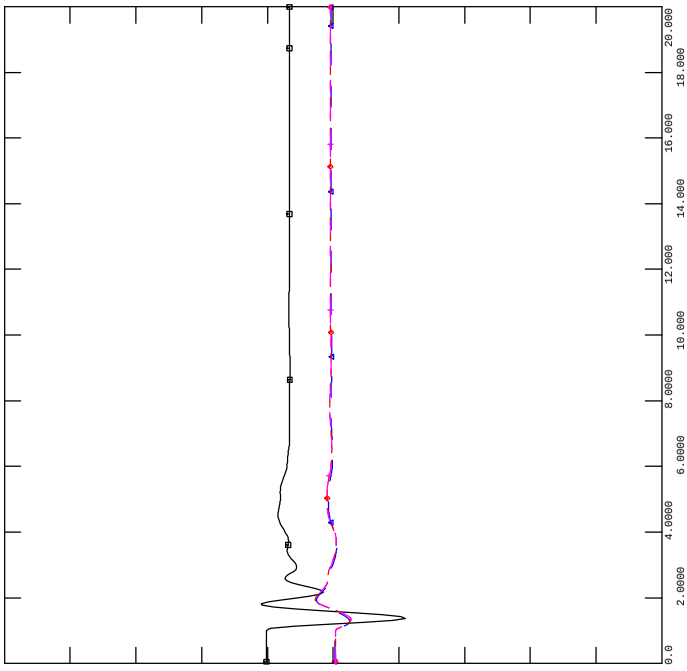
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_964LX_MURRAY_LAKE

FILE: scn4_SL_964LX_Murray_Lake.out

THU, APR 14 2022 14:28

ROTOR ANGLE

CHNL# 37: [ANGL 775[SECCT2 21.000]3]
29.238 -76.50
CHNL# 36: [ANGL 774[SECCT1 21.000]2]
29.238 -76.50
CHNL# 35: [ANGL 773[SECST 20.000]1]
29.943 -75.37
CHNL# 1: [ANGL 667[CANCARB9 13.800]1]
74.305 -53.82



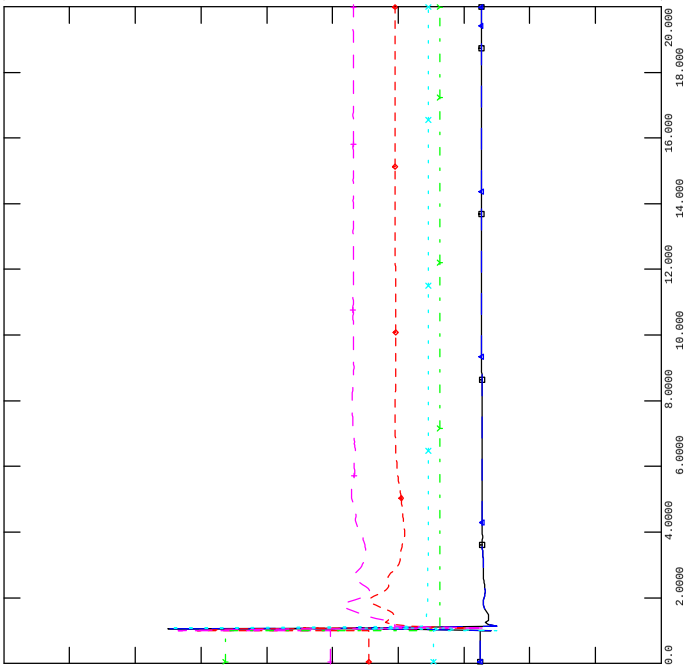
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_964LX_MURRAY_LAKE

FILE: scn4_SL_964LX_Murray_Lake.out

THU, APR 14 2022 14:28

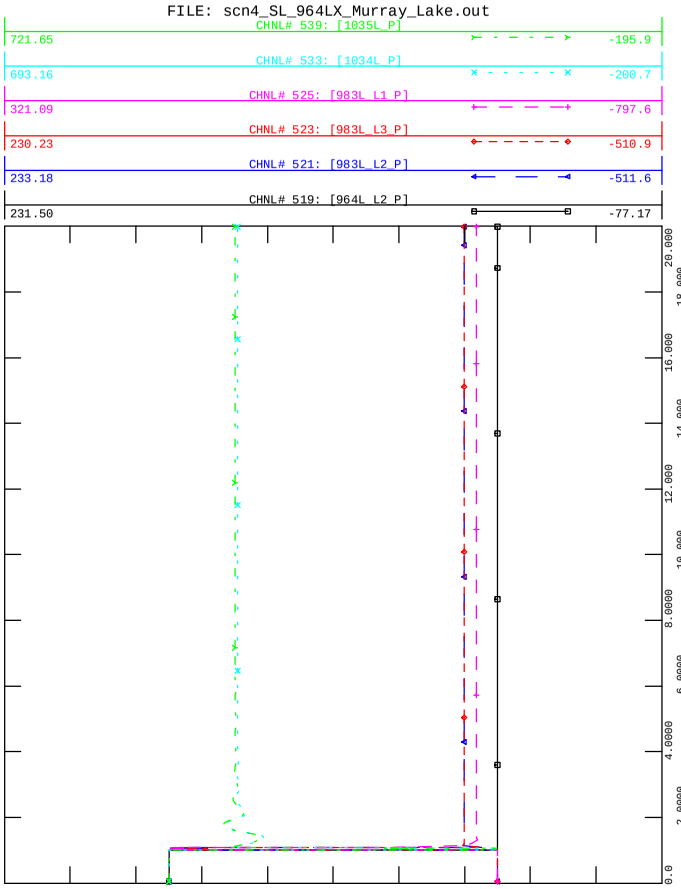
REACTIVE POWER

CHNL# 278: [VARS 61994[GRANLEA6 0.6900]G1]
0.98400 -0.5000
CHNL# 276: [VARS 60990[SHAMROC5 0.6500]G1]
6.0173 -1.718
CHNL# 284: [VARS 773[SECST 20.000]1]
0.93470 -0.9490
CHNL# 250: [VARS 667[CANCARB9 13.800]1]
1.0615 -0.6382
CHNL# 283: [VARS990007[FORTYMILE_6 0.6900]G2]
3.2864 -1.120
CHNL# 282: [VARS990004[FORTYMILE_3 0.6900]G1]
3.2864 -1.120



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_964LX_MURRAY_LAKE

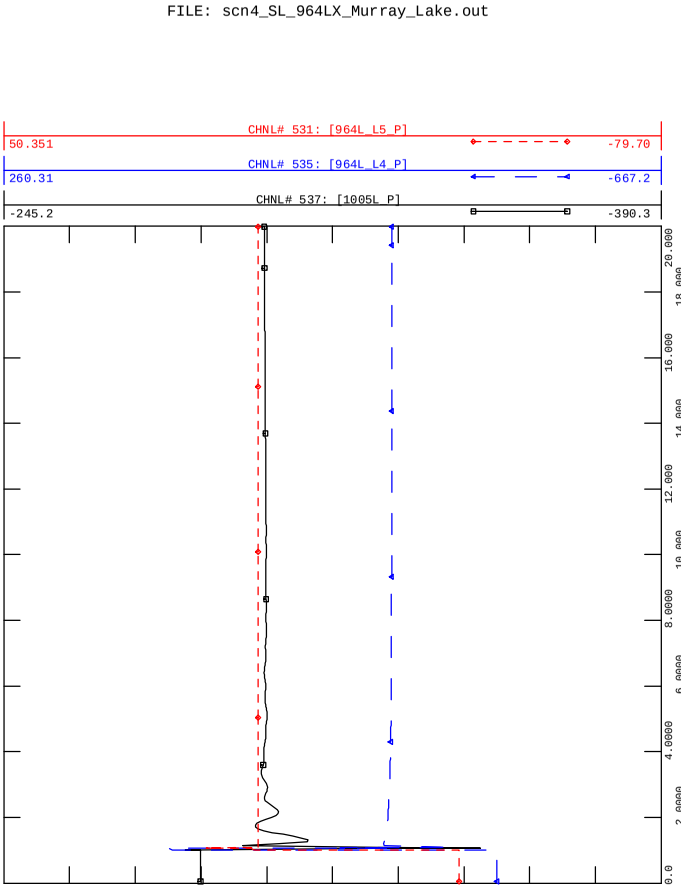
FILE: scn4_SL_964LX_Murray_Lake.out



THU, APR 14 2022 14:28 BRANCH P

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_964LX_MURRAY_LAKE

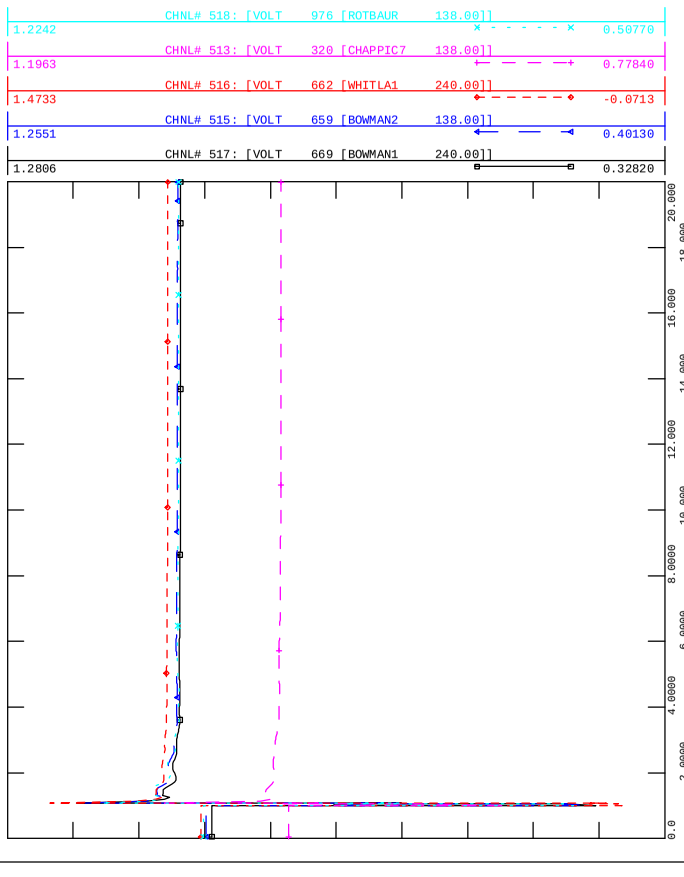
FILE: scn4_SL_964LX_Murray_Lake.out



THU, APR 14 2022 14:28 BRANCH P

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_964LX_MURRAY_LAKE

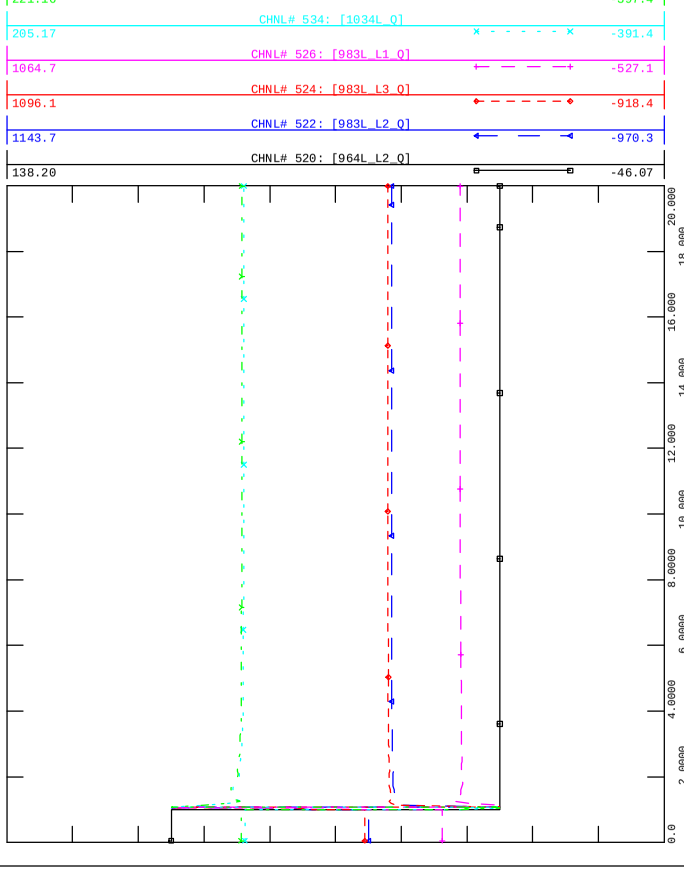
FILE: scn4_SL_964LX_Murray_Lake.out



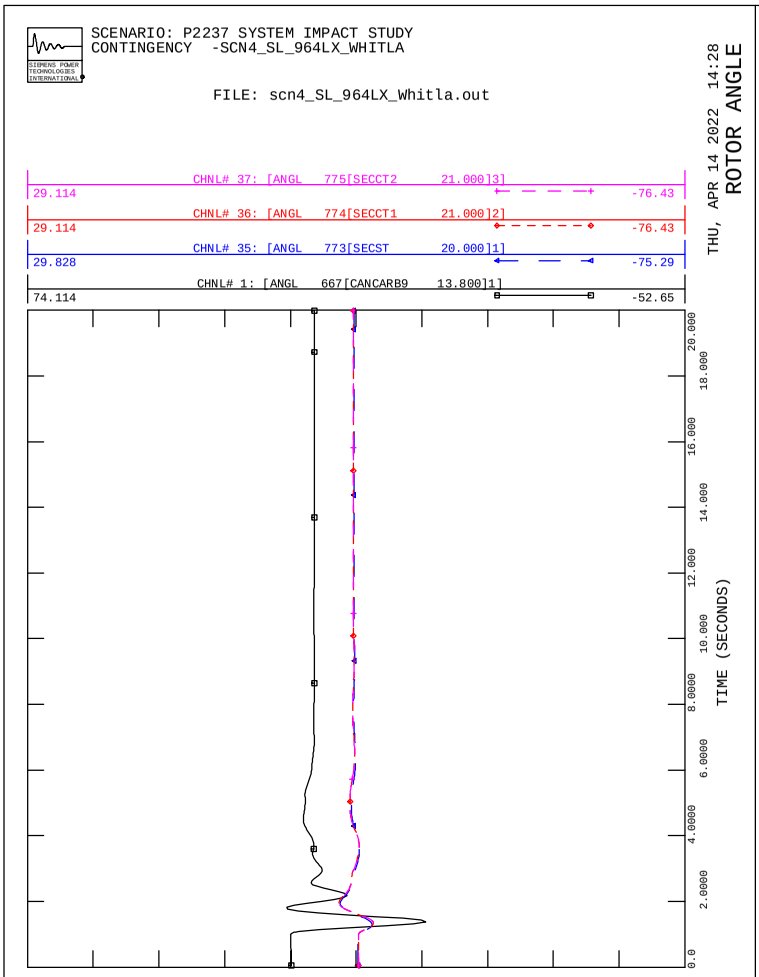
THU, APR 14 2022 14:28 BUS VOLTAGE

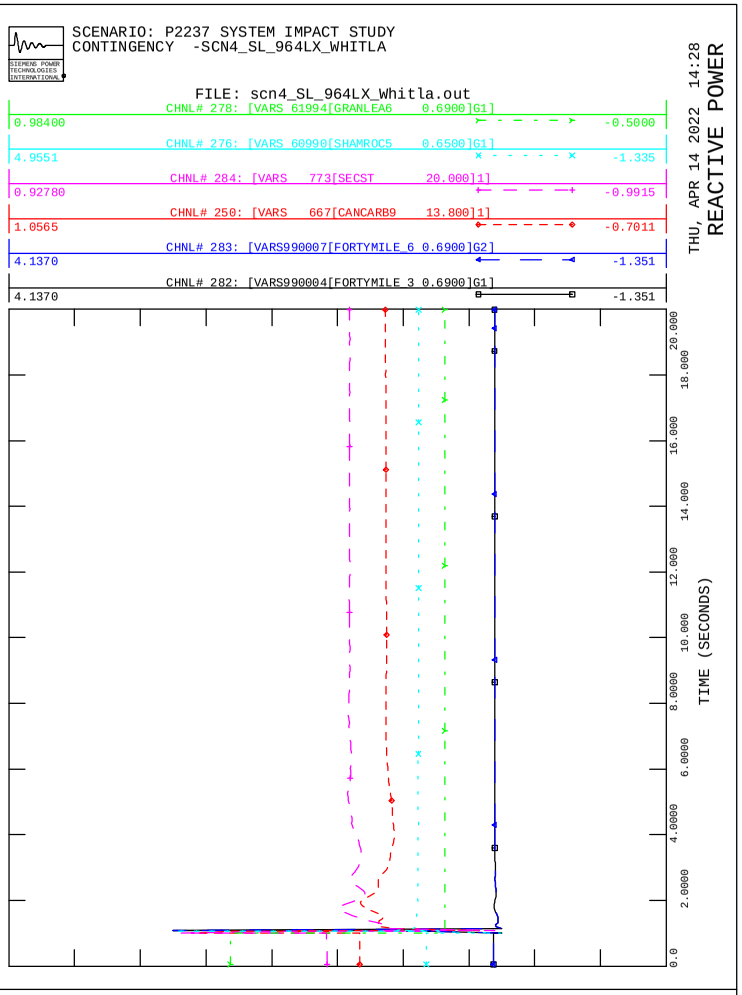
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_964LX_MURRAY_LAKE

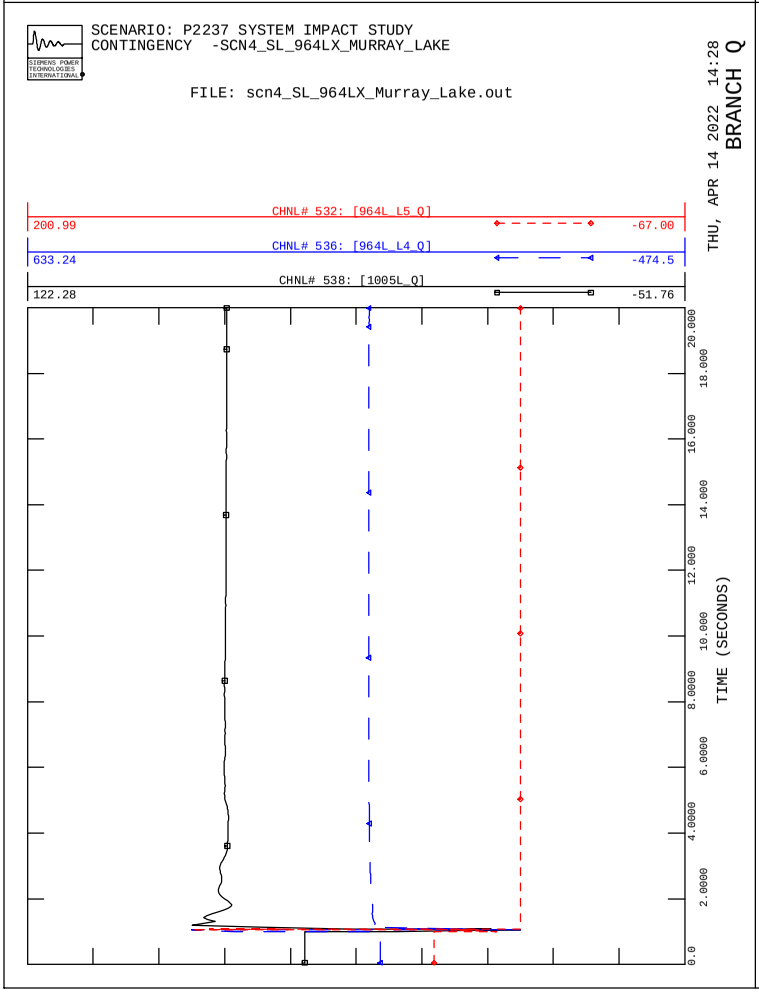
FILE: scn4_SL_964LX_Murray_Lake.out

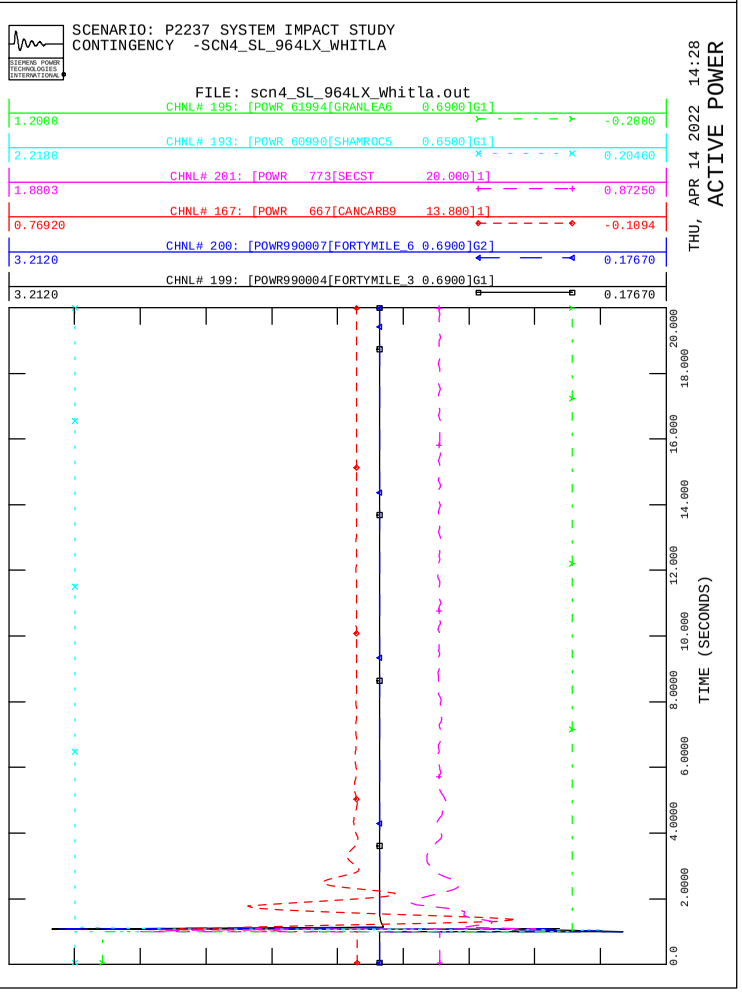


THU, APR 14 2022 14:28 BRANCH Q


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_964LX_WHITLA
FILE: scn4_SL_964LX_Whitla.out
THU, APR 14 2022 14:28
ROTOR ANGLE
CHNL# 37: [ANGL 775[SECCT2 21.000]3]
29.114
-76.43
CHNL# 36: [ANGL 774[SECCT1 21.000]2]
29.114
-76.43
CHNL# 35: [ANGL 773[SECST 20.000]1]
29.828
-75.29
CHNL# 1: [ANGL 667[CANCARB9 13.800]1]
74.114
-52.65
TIME (SECONDS)
0.0
2.0000
4.0000
6.0000
8.0000
10.000
12.000
14.000
16.000
18.000
20.000


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_964LX_WHITLA
FILE: scn4_SL_964LX_Whitla.out
THU, APR 14 2022 14:28
REACTIVE POWER
CHNL# 278: [VARS 61994[GRANLEA6 0.6900]G1]
0.98400
-0.5000
CHNL# 276: [VARS 60990[SHAMROC5 0.6500]G1]
4.9551
-1.335
CHNL# 284: [VARS 773[SECST 20.000]1]
0.92780
-0.9915
CHNL# 250: [VARS 667[CANCARB9 13.800]1]
1.0565
-0.7011
CHNL# 283: [VARS990007[FORTYMILE_6 0.6900]G2]
4.1370
-1.351
CHNL# 282: [VARS990004[FORTYMILE 3 0.6900]G1]
4.1370
-1.351
TIME (SECONDS)
0.0
2.0000
4.0000
6.0000
8.0000
10.000
12.000
14.000
16.000
18.000
20.000


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_964LX_MURRAY_LAKE
FILE: scn4_SL_964LX_Murray_Lake.out
THU, APR 14 2022 14:28
BRANCH Q
CHNL# 532: [964L_L5_Q]
200.99
-67.00
CHNL# 536: [964L_L4_Q]
633.24
-474.5
CHNL# 538: [1005L_Q]
122.28
-51.76
TIME (SECONDS)
0.0
2.0000
4.0000
6.0000
8.0000
10.000
12.000
14.000
16.000
18.000
20.000


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_964LX_WHITLA
FILE: scn4_SL_964LX_Whitla.out
THU, APR 14 2022 14:28
ACTIVE POWER
CHNL# 195: [POWR 61994[GRANLEA6 0.6900]G1]
1.2000
-0.2000
CHNL# 193: [POWR 60990[SHAMROC5 0.6500]G1]
2.2180
0.20460
CHNL# 201: [POWR 773[SECST 20.000]1]
1.8803
0.87250
CHNL# 167: [POWR 667[CANCARB9 13.800]1]
0.76920
-0.1094
CHNL# 200: [POWR990007[FORTYMILE_6 0.6900]G2]
3.2120
0.17670
CHNL# 199: [POWR990004[FORTYMILE_3 0.6900]G1]
3.2120
0.17670
TIME (SECONDS)
0.0
2.0000
4.0000
6.0000
8.0000
10.000
12.000
14.000
16.000
18.000
20.000

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_964LX_WHITLA

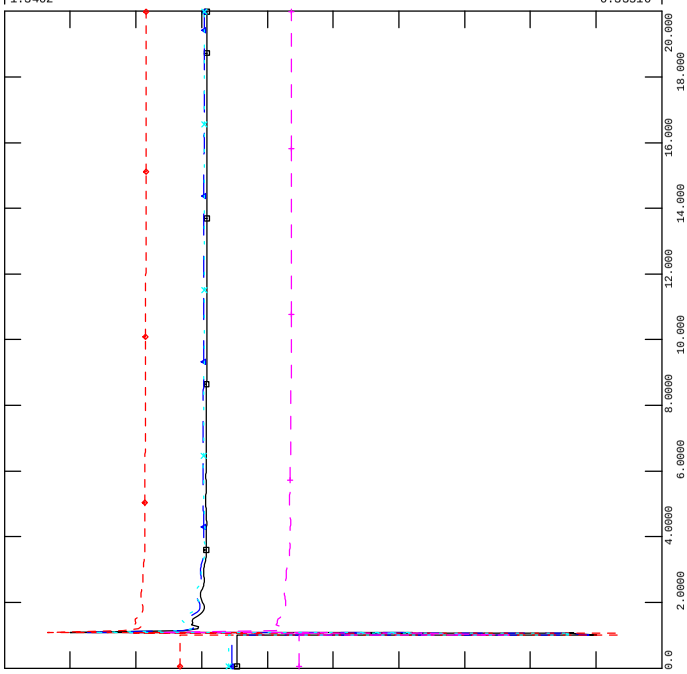
FILE: scn4_SL_964LX_Whitla.out

THU, APR 14 2022 14:28

BUS VOLTAGE

CHNL# 518: [VOLT 976 [ROTBAUR 138.00]]
1.2675 0.51350
CHNL# 513: [VOLT 320 [CHAPPIC7 138.00]]
1.2103 0.78050
CHNL# 516: [VOLT 662 [WHITLA1 240.00]]
1.4272 -0.0998
CHNL# 515: [VOLT 659 [BOWMAN2 138.00]]
1.3080 0.40810
CHNL# 517: [VOLT 669 [BOWMAN1 240.00]]
1.3402 0.33510

TIME (SECONDS)



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_964LX_WHITLA

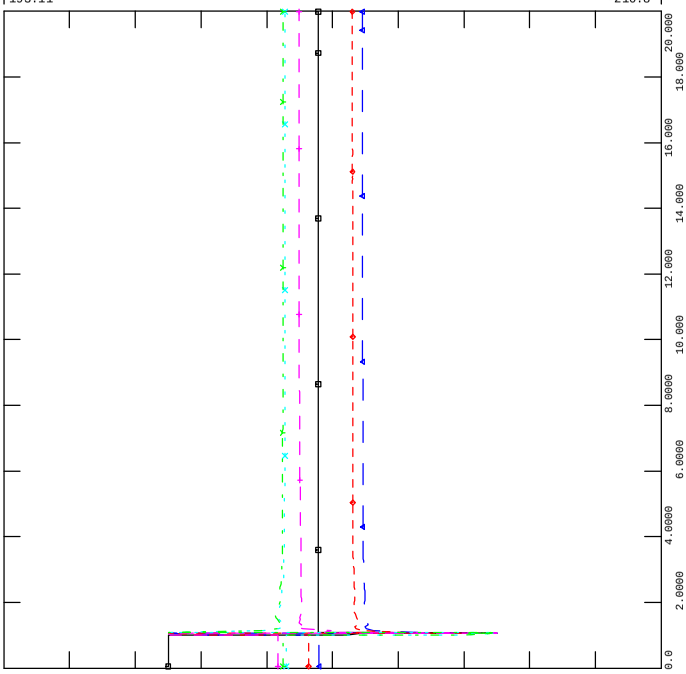
FILE: scn4_SL_964LX_Whitla.out

THU, APR 14 2022 14:28

BRANCH Q

CHNL# 540: [1035L Q]
319.31 -431.3
CHNL# 534: [1034L Q]
301.46 -424.9
CHNL# 526: [983L_L1_Q]
600.73 -814.1
CHNL# 524: [983L_L3_Q]
511.75 -593.6
CHNL# 522: [983L_L2_Q]
538.71 -625.4
CHNL# 520: [964L_L2_Q]
193.11 -210.8

TIME (SECONDS)



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_964LX_WHITLA

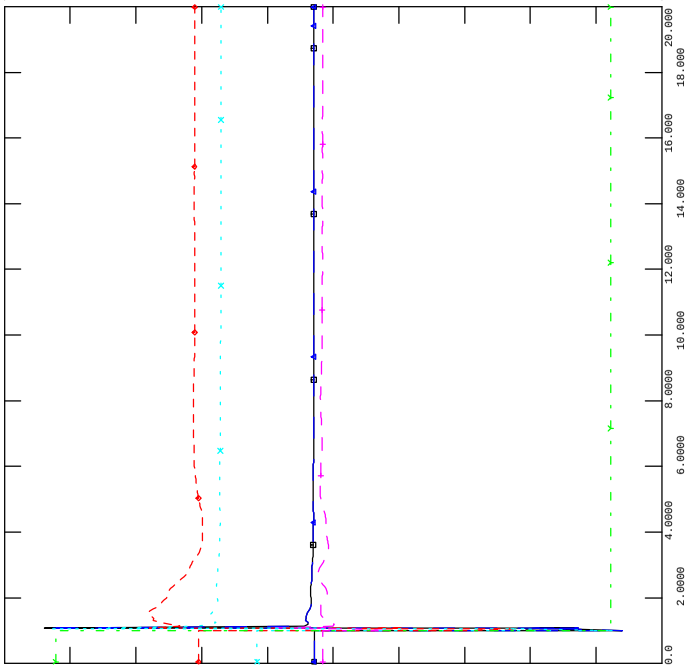
FILE: scn4_SL_964LX_Whitla.out

THU, APR 14 2022 14:28

TERMINAL VOLTAGE

CHNL# 444: [ETRM 61994[GRANLEA6 0.6900]G1]
1.1811 -0.1000
CHNL# 442: [ETRM 60990[SHAMROC5 0.6500]G1]
1.6101 0.16080
CHNL# 450: [ETRM 773[SECST 20.000]1]
1.1275 0.88500
CHNL# 416: [ETRM 667[CANCARB9 13.800]1]
1.1749 0.71790
CHNL# 449: [ETRM990007[FORTYMILE_6 0.6900]G2]
1.8224 0.16120
CHNL# 448: [ETRM990004[FORTYMILE_3 0.6900]G1]
1.8224 0.16120

TIME (SECONDS)



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_964LX_WHITLA

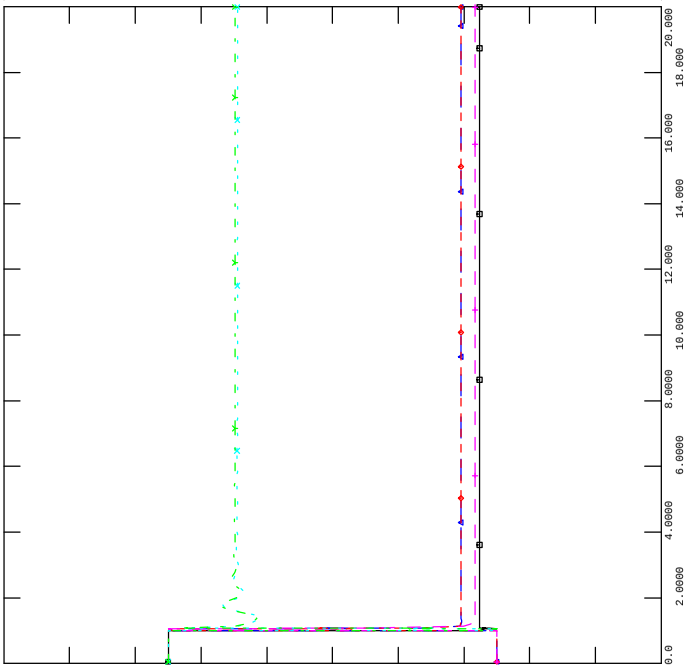
FILE: scn4_SL_964LX_Whitla.out

THU, APR 14 2022 14:28

BRANCH P

CHNL# 539: [1035L_P]
719.98 -190.9
CHNL# 533: [1034L_P]
691.50 -195.7
CHNL# 525: [983L_L1_P]
295.48 -789.1
CHNL# 523: [983L_L3_P]
190.21 -497.6
CHNL# 521: [983L_L2_P]
191.80 -497.8
CHNL# 519: [964L_L2_P]
235.74 -89.89

TIME (SECONDS)



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_964LX_WHITLA

FILE: scn4_SL_964LX_Whitla.out

THU, APR 14 2022 14:28 BRANCH Q

CHNL# 532: [964L L5 Q] 75.237 -40.00
CHNL# 536: [964L L4 Q] 1509.5 -891.6
CHNL# 538: [1005L Q] 119.38 -50.57

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_1034L_BOWMANTON

FILE: scn4_SL_1034L_Bowmanton.out

THU, APR 14 2022 14:28 ACTIVE POWER

CHNL# 195: [POWR 61994[GRANLEA6 0.6900]G1] 1.2000 -0.2000
CHNL# 193: [POWR 60990[SHAMROC5 0.6500]G1] 2.2263 0.26260
CHNL# 201: [POWR 773[SECST 20.000]1] 1.9251 0.94310
CHNL# 167: [POWR 667[CANCARB9 13.800]1] 0.89680 -0.2178
CHNL# 200: [POWR990007[FORTYMILE_6 0.6900]G2] 1.6411 -0.2000
CHNL# 199: [POWR990004[FORTYMILE 3 0.6900]G1] 1.6411 -0.2000

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_964LX_WHITLA

FILE: scn4_SL_964LX_Whitla.out

THU, APR 14 2022 14:28 BRANCH P

CHNL# 531: [964L L5 P] 40.000 -79.70
CHNL# 535: [964L L4 P] 374.79 -876.9
CHNL# 537: [1005L P] -245.3 -395.9

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_1034L_BOWMANTON

FILE: scn4_SL_1034L_Bowmanton.out

THU, APR 14 2022 14:28 ROTOR ANGLE

CHNL# 37: [ANGL 775[SECCT2 21.000]3] 31.407 -78.51
CHNL# 36: [ANGL 774[SECCT1 21.000]2] 31.407 -78.51
CHNL# 35: [ANGL 773[SECST 20.000]1] 31.794 -77.02
CHNL# 1: [ANGL 667[CANCARB9 13.800]1] 81.916 -70.66

TIME (SECONDS)

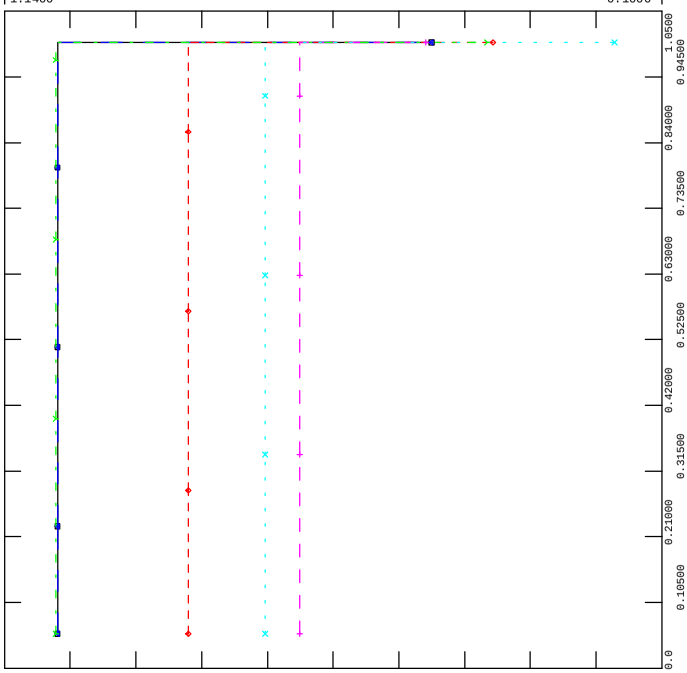
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_1034L_BOWMANTON

FILE: scn4_SL_1034L_Bowmanton.out

THU, APR 14 2022 14:28

TERMINAL VOLTAGE

CHNL# 444: [ETRM 61994[GRANLEA6 0.6900]G1] 1.1825 -0.1000
CHNL# 442: [ETRM 60990[SHAMROC5 0.6500]G1] 1.6145 0.21840
CHNL# 450: [ETRM 773[SECST 20.000]1] 1.1351 0.85630
CHNL# 416: [ETRM 667[CANCARB9 13.800]1] 1.2239 0.56730
CHNL# 449: [ETRM990007[FORTYMILE_6 0.6900]G2] 1.1400 -0.1000
CHNL# 448: [ETRM990004[FORTYMILE_3 0.6900]G1] 1.1400 -0.1000



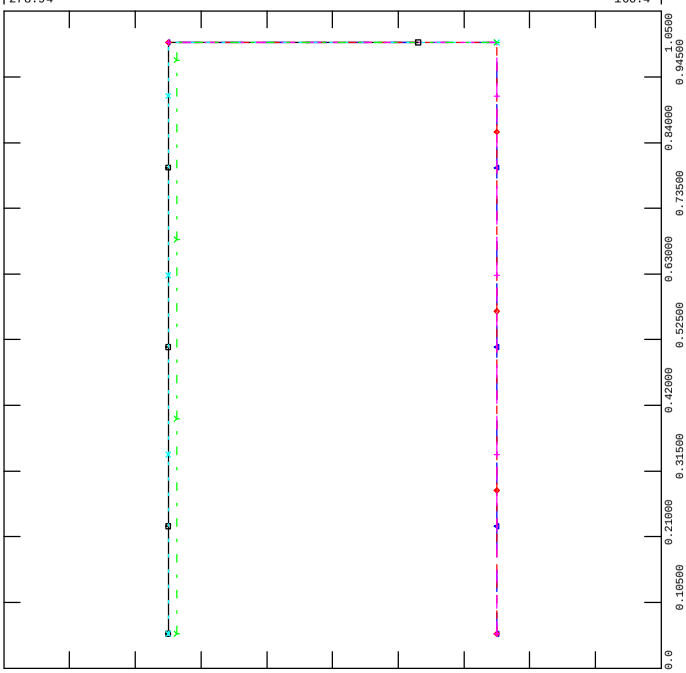
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_1034L_BOWMANTON

FILE: scn4_SL_1034L_Bowmanton.out

THU, APR 14 2022 14:28

BRANCH P

CHNL# 539: [1035L_P] 734.04 -241.1
CHNL# 533: [1034L_P] 682.04 -227.3
CHNL# 525: [983L_L1_P] 250.08 -755.8
CHNL# 523: [983L_L3_P] 151.22 -465.8
CHNL# 521: [983L_L2_P] 151.18 -465.6
CHNL# 519: [964L_L2_P] 278.94 -160.4



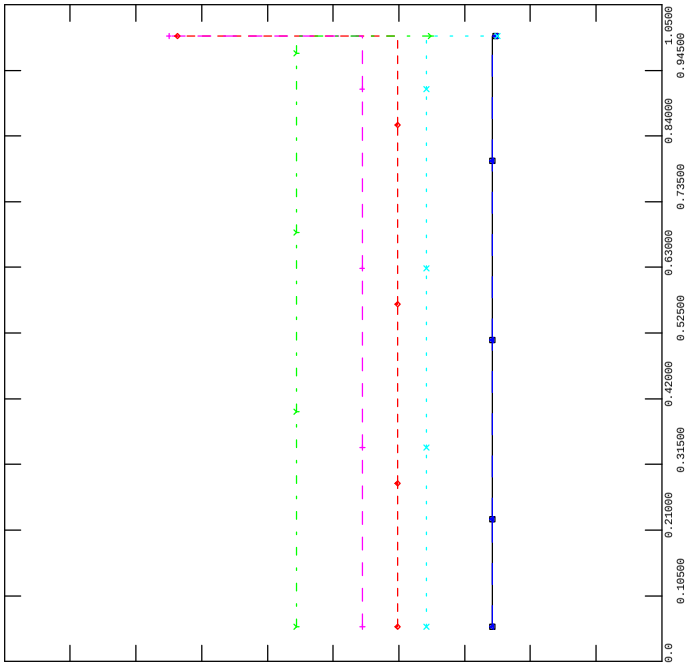
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_1034L_BOWMANTON

FILE: scn4_SL_1034L_Bowmanton.out

THU, APR 14 2022 14:28

REACTIVE POWER

CHNL# 278: [VARS 61994[GRANLEA6 0.6900]G1] 1.2089 -0.5000
CHNL# 276: [VARS 60990[SHAMROC5 0.6500]G1] 4.9447 -1.264
CHNL# 284: [VARS 773[SECST 20.000]1] 1.7161 -1.446
CHNL# 250: [VARS 667[CANCARB9 13.800]1] 1.2508 -0.6504
CHNL# 283: [VARS990007[FORTYMILE_6 0.6900]G2] 1.6483 -0.5494
CHNL# 282: [VARS990004[FORTYMILE_3 0.6900]G1] 1.6483 -0.5494



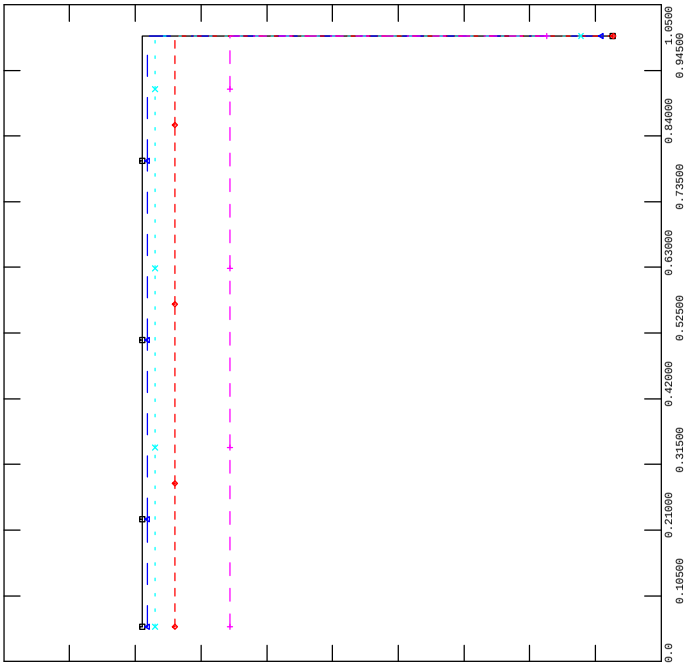
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_1034L_BOWMANTON

FILE: scn4_SL_1034L_Bowmanton.out

THU, APR 14 2022 14:28

BUS VOLTAGE

CHNL# 518: [VOLT 976 [ROTBAUR 138.00]] 1.2555 0.20970
CHNL# 513: [VOLT 320 [CHAPPIC7 138.00]] 1.2166 0.64350
CHNL# 516: [VOLT 662 [WHITLA1 240.00]] 1.3864 0.01130
CHNL# 515: [VOLT 659 [BOWMAN2 138.00]] 1.2736 0.04220
CHNL# 517: [VOLT 669 [BOWMAN1 240.00]] 1.2846 -0.0935



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_1034L_BOWMANTON

FILE: scn4_SL_1034L_Bowmanton.out

THU, APR 14 2022 14:28 BRANCH P

CHNL# 531: [964L_L5_P]
220.44 -112.2
CHNL# 535: [964L_L4_P]
207.39 -627.8
CHNL# 537: [1005L_P]
-148.6 -478.4

TIME (SECONDS)
0.0 0.10500 0.21000 0.31500 0.42000 0.52500 0.63000 0.73500 0.84000 0.94500 1.0500

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_1034L_CASSILS

FILE: scn4_SL_1034L_Cassils.out

THU, APR 14 2022 14:28 ROTOR ANGLE

CHNL# 37: [ANGL 775[SECCT2 21.000]3]
34.535 -82.57
CHNL# 36: [ANGL 774[SECCT1 21.000]2]
34.535 -82.57
CHNL# 35: [ANGL 773[SECST 20.000]1]
34.559 -80.93
CHNL# 1: [ANGL 667[CANCARB9 13.800]1]
87.712 -88.74

TIME (SECONDS)
0.0 0.10500 0.21000 0.31500 0.42000 0.52500 0.63000 0.73500 0.84000 0.94500 1.0500

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_1034L_BOWMANTON

FILE: scn4_SL_1034L_Bowmanton.out

THU, APR 14 2022 14:28 BRANCH Q

CHNL# 540: [1035L_Q]
344.58 -123.8
CHNL# 534: [1034L_Q]
40.000 -50.42
CHNL# 526: [983L_L1_Q]
111.72 -295.0
CHNL# 524: [983L_L3_Q]
82.617 -266.3
CHNL# 522: [983L_L2_Q]
96.576 -314.6
CHNL# 520: [964L_L2_Q]
206.39 -80.05

TIME (SECONDS)
0.0 0.10500 0.21000 0.31500 0.42000 0.52500 0.63000 0.73500 0.84000 0.94500 1.0500

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_1034L_BOWMANTON

FILE: scn4_SL_1034L_Bowmanton.out

THU, APR 14 2022 14:28 BRANCH Q

CHNL# 532: [964L_L5_Q]
199.53 -118.8
CHNL# 536: [964L_L4_Q]
144.21 -306.8
CHNL# 538: [1005L_Q]
213.48 -160.0

TIME (SECONDS)
0.0 0.10500 0.21000 0.31500 0.42000 0.52500 0.63000 0.73500 0.84000 0.94500 1.0500

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_1034L_CASSILS

FILE: scn4_SL_1034L_Cassils.out

THU, APR 14 2022 14:28 REACTIVE POWER

CHNL# 278: [VARS 61994[GRANLEA6 0.6900]G1]
0.99810 -0.5000
CHNL# 276: [VARS 60990[SHAMROC5 0.6500]G1]
1.8921 -0.2346
CHNL# 284: [VARS 773[SECST 20.000]1]
3.5797 -2.540
CHNL# 250: [VARS 667[CANCARB9 13.800]1]
1.2156 -0.6810
CHNL# 283: [VARS990007[FORTYMILE_6 0.6900]G2]
0.85670 -0.5000
CHNL# 282: [VARS990004[FORTYMILE_3 0.6900]G1]
0.85670 -0.5000

1.0500 0.94500 0.84000 0.73500 0.63000 0.52500 0.42000 0.31500 0.21000 0.10500 0.0
TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_1034L_CASSILS

FILE: scn4_SL_1034L_Cassils.out

THU, APR 14 2022 14:28 BUS VOLTAGE

CHNL# 518: [VOLT 976 [ROTBAUR 138.00]]
1.2284 0.18820
CHNL# 513: [VOLT 320 [CHAPPIC7 138.00]]
1.2592 0.20330
CHNL# 516: [VOLT 662 [WHITLA1 240.00]]
1.3472 0.07320
CHNL# 515: [VOLT 659 [BOWMAN2 138.00]]
1.2695 0.02980
CHNL# 517: [VOLT 669 [BOWMAN1 240.00]]
1.3066 0.00240

1.0500 0.94500 0.84000 0.73500 0.63000 0.52500 0.42000 0.31500 0.21000 0.10500 0.0
TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_1034L_CASSILS

FILE: scn4_SL_1034L_Cassils.out

THU, APR 14 2022 14:28 ACTIVE POWER

CHNL# 195: [POWR 61994[GRANLEA6 0.6900]G1]
1.2000 -0.2000
CHNL# 193: [POWR 60990[SHAMROC5 0.6500]G1]
2.2189 0.37440
CHNL# 201: [POWR 773[SECST 20.000]1]
2.2490 0.79880
CHNL# 167: [POWR 667[CANCARB9 13.800]1]
0.86660 -0.1881
CHNL# 200: [POWR990007[FORTYMILE_6 0.6900]G2]
1.5300 -0.2000
CHNL# 199: [POWR990004[FORTYMILE_3 0.6900]G1]
1.5300 -0.2000

1.0500 0.94500 0.84000 0.73500 0.63000 0.52500 0.42000 0.31500 0.21000 0.10500 0.0
TIME (SECONDS)

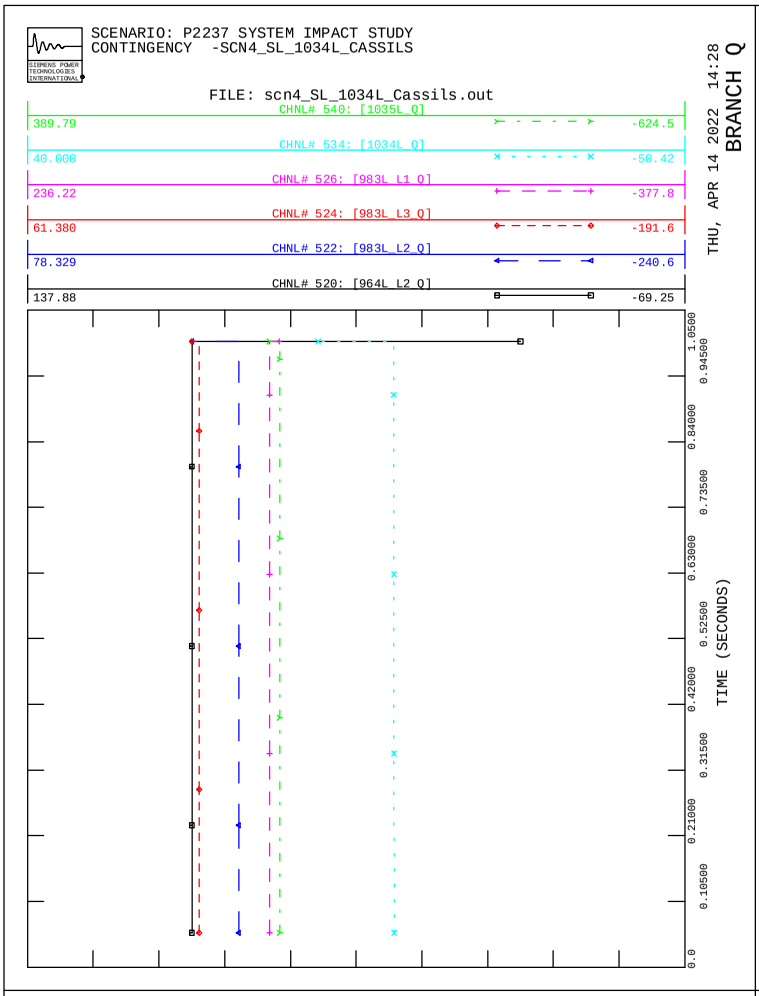
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_1034L_CASSILS

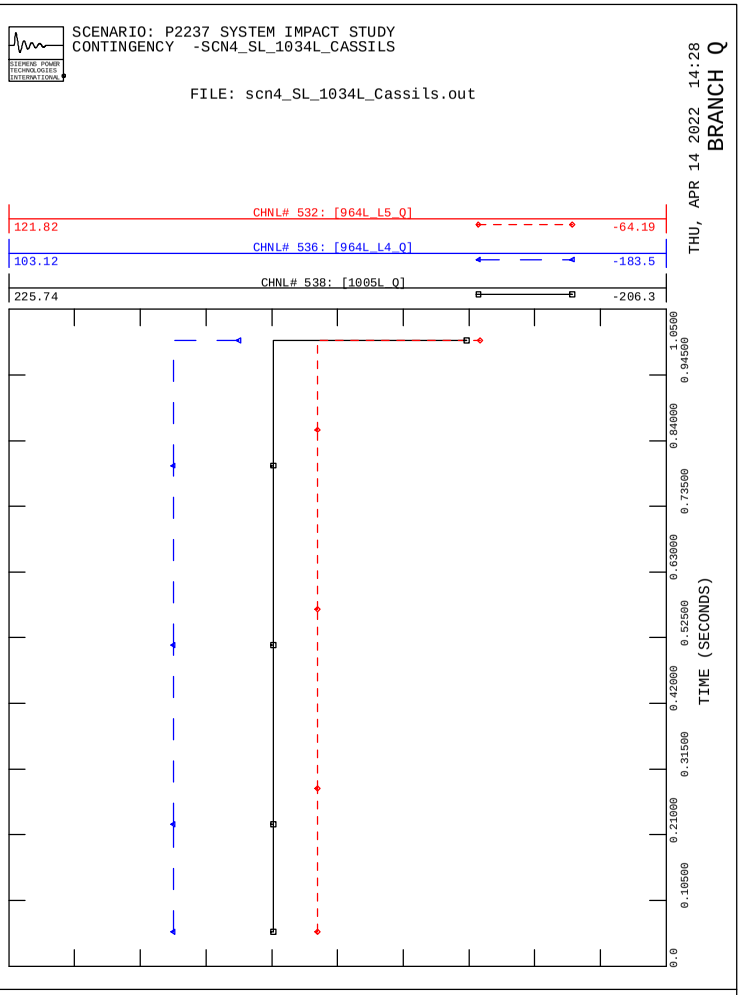
FILE: scn4_SL_1034L_Cassils.out

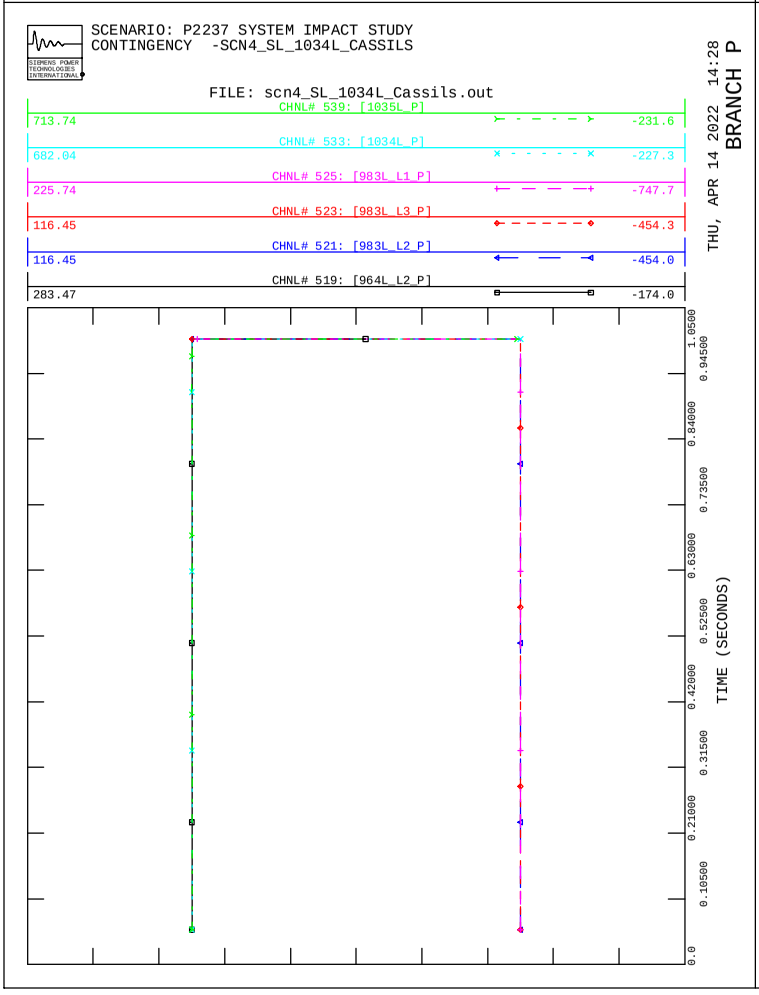
THU, APR 14 2022 14:28 TERMINAL VOLTAGE

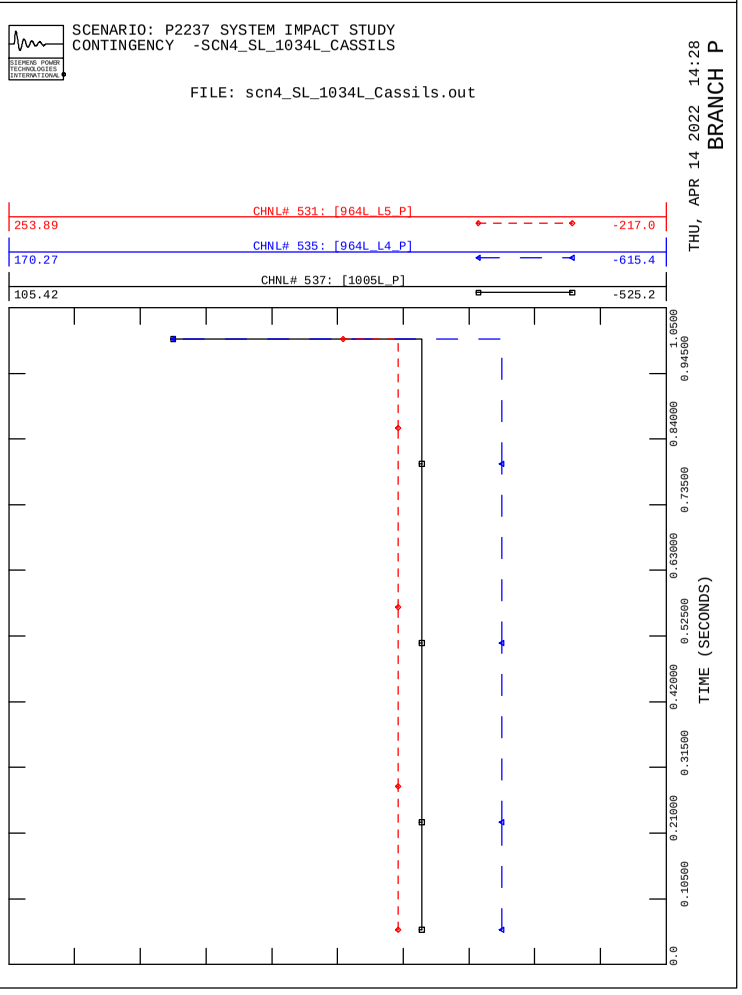
CHNL# 444: [ETRM 61994[GRANLEA6 0.6900]G1]
1.1825 -0.1000
CHNL# 442: [ETRM 60990[SHAMROC5 0.6500]G1]
1.4132 0.22850
CHNL# 450: [ETRM 773[SECST 20.000]1]
1.1439 0.78200
CHNL# 416: [ETRM 667[CANCARB9 13.800]1]
1.2116 0.56520
CHNL# 449: [ETRM990007[FORTYMILE_6 0.6900]G2]
1.1400 -0.1000
CHNL# 448: [ETRM990004[FORTYMILE_3 0.6900]G1]
1.1400 -0.1000

1.0500 0.94500 0.84000 0.73500 0.63000 0.52500 0.42000 0.31500 0.21000 0.10500 0.0
TIME (SECONDS)


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_1034L_CASSILS
FILE: scn4_SL_1034L_Cassils.out
CHNL# 540: [1035L_Q]
389.79
-624.5
CHNL# 534: [1034L_Q]
40.000
-50.42
CHNL# 526: [983L_L1_Q]
236.22
-377.8
CHNL# 524: [983L_L3_Q]
61.380
-191.6
CHNL# 522: [983L_L2_Q]
78.329
-240.6
CHNL# 520: [964L_L2_Q]
137.88
-69.25
1.0500
0.94500
0.84000
0.73500
0.63000
0.52500
0.42000
0.31500
0.21000
0.10500
0.0
TIME (SECONDS)
THU, APR 14 2022 14:28
BRANCH Q


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_1034L_CASSILS
FILE: scn4_SL_1034L_Cassils.out
CHNL# 532: [964L_L5_Q]
121.82
-64.19
CHNL# 536: [964L_L4_Q]
103.12
-183.5
CHNL# 538: [1005L_Q]
225.74
-206.3
1.0500
0.94500
0.84000
0.73500
0.63000
0.52500
0.42000
0.31500
0.21000
0.10500
0.0
TIME (SECONDS)
THU, APR 14 2022 14:28
BRANCH Q


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_1034L_CASSILS
FILE: scn4_SL_1034L_Cassils.out
CHNL# 539: [1035L_P]
713.74
-231.6
CHNL# 533: [1034L_P]
682.04
-227.3
CHNL# 525: [983L_L1_P]
225.74
-747.7
CHNL# 523: [983L_L3_P]
116.45
-454.3
CHNL# 521: [983L_L2_P]
116.45
-454.0
CHNL# 519: [964L_L2_P]
283.47
-174.0
1.0500
0.94500
0.84000
0.73500
0.63000
0.52500
0.42000
0.31500
0.21000
0.10500
0.0
TIME (SECONDS)
THU, APR 14 2022 14:28
BRANCH P


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_1034L_CASSILS
FILE: scn4_SL_1034L_Cassils.out
CHNL# 531: [964L_L5_P]
253.89
-217.0
CHNL# 535: [964L_L4_P]
170.27
-615.4
CHNL# 537: [1005L_P]
105.42
-525.2
1.0500
0.94500
0.84000
0.73500
0.63000
0.52500
0.42000
0.31500
0.21000
0.10500
0.0
TIME (SECONDS)
THU, APR 14 2022 14:28
BRANCH P

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_1035L_BOWMANTON

FILE: scn4_SL_1035L_Bowmanton.out

THU, APR 14 2022 14:28

ACTIVE POWER

CHNL# 195: [POWR 61994[GRANLEA6 0.6900]G1]
1.2000 -0.2000

CHNL# 193: [POWR 60990[SHAMROC5 0.6500]G1]
2.2940 0.13930

CHNL# 201: [POWR 773[SECST 20.000]1]
2.2188 0.80960

CHNL# 167: [POWR 667[CANCARB9 13.800]1]
0.83280 -0.1907

CHNL# 200: [POWR990007[FORTYMILE_6 0.6900]G2]
1.5300 -0.2000

CHNL# 199: [POWR990004[FORTYMILE_3 0.6900]G1]
1.5300 -0.2000

1.0500 0.94500 0.84000 0.73500 0.63000 0.52500 0.42000 0.31500 0.21000 0.10500 0.0

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_1035L_BOWMANTON

FILE: scn4_SL_1035L_Bowmanton.out

THU, APR 14 2022 14:28

TERMINAL VOLTAGE

CHNL# 444: [ETRM 61994[GRANLEA6 0.6900]G1]
1.1825 -0.1000

CHNL# 442: [ETRM 60990[SHAMROC5 0.6500]G1]
1.3782 0.19150

CHNL# 450: [ETRM 773[SECST 20.000]1]
1.1447 0.78610

CHNL# 416: [ETRM 667[CANCARB9 13.800]1]
1.2110 0.56610

CHNL# 449: [ETRM990007[FORTYMILE_6 0.6900]G2]
1.1400 -0.1000

CHNL# 448: [ETRM990004[FORTYMILE_3 0.6900]G1]
1.1400 -0.1000

1.0500 0.94500 0.84000 0.73500 0.63000 0.52500 0.42000 0.31500 0.21000 0.10500 0.0

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_1035L_BOWMANTON

FILE: scn4_SL_1035L_Bowmanton.out

THU, APR 14 2022 14:28

ROTOR ANGLE

CHNL# 37: [ANGL 775[SECCT2 21.000]3]
34.358 -82.37

CHNL# 36: [ANGL 774[SECCT1 21.000]2]
34.358 -82.37

CHNL# 35: [ANGL 773[SECST 20.000]1]
34.463 -80.69

CHNL# 1: [ANGL 667[CANCARB9 13.800]1]
86.163 -85.89

1.0500 0.94500 0.84000 0.73500 0.63000 0.52500 0.42000 0.31500 0.21000 0.10500 0.0

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_1035L_BOWMANTON

FILE: scn4_SL_1035L_Bowmanton.out

THU, APR 14 2022 14:28

REACTIVE POWER

CHNL# 278: [VARS 61994[GRANLEA6 0.6900]G1]
0.94920 -0.5000

CHNL# 276: [VARS 60990[SHAMROC5 0.6500]G1]
1.7748 -0.2400

CHNL# 284: [VARS 773[SECST 20.000]1]
3.4945 -2.506

CHNL# 250: [VARS 667[CANCARB9 13.800]1]
1.2037 -0.6733

CHNL# 283: [VARS990007[FORTYMILE_6 0.6900]G2]
1.1461 -0.5000

CHNL# 282: [VARS990004[FORTYMILE_3 0.6900]G1]
1.1461 -0.5000

1.0500 0.94500 0.84000 0.73500 0.63000 0.52500 0.42000 0.31500 0.21000 0.10500 0.0

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_1035L_BOWMANTON

FILE: scn4_SL_1035L_Bowmanton.out

THU, APR 14 2022 14:28 BRANCH P

CHNL# 539: [1035L_P]
716.12 -238.7
CHNL# 533: [1034L_P]
678.68 -217.3
CHNL# 525: [983L_L1_P]
231.80 -749.8
CHNL# 523: [983L_L3_P]
120.55 -455.6
CHNL# 521: [983L_L2_P]
120.54 -455.3
CHNL# 519: [964L_L2_P]
271.47 -138.0

1.0500 0.94500 0.84000 0.73500 0.63000 0.52500 0.42000 0.31500 0.21000 0.10500 0.0
TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_1035L_BOWMANTON

FILE: scn4_SL_1035L_Bowmanton.out

THU, APR 14 2022 14:28 BRANCH P

CHNL# 531: [964L_L5_P]
233.55 -149.8
CHNL# 535: [964L_L4_P]
177.01 -617.7
CHNL# 537: [1005L_P]
97.962 -521.8

1.0500 0.94500 0.84000 0.73500 0.63000 0.52500 0.42000 0.31500 0.21000 0.10500 0.0
TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_1035L_BOWMANTON

FILE: scn4_SL_1035L_Bowmanton.out

THU, APR 14 2022 14:28 BUS VOLTAGE

CHNL# 518: [VOLT 976 [ROTBAUR 138.00]]
1.2387 0.18870
CHNL# 513: [VOLT 320 [CHAPPIC7 138.00]]
1.2629 0.25220
CHNL# 516: [VOLT 662 [WHITLA1 240.00]]
1.3501 0.05050
CHNL# 515: [VOLT 659 [BOWMAN2 138.00]]
1.2698 0.02580
CHNL# 517: [VOLT 669 [BOWMAN1 240.00]]
1.2951 -0.0339

1.0500 0.94500 0.84000 0.73500 0.63000 0.52500 0.42000 0.31500 0.21000 0.10500 0.0
TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_1035L_BOWMANTON

FILE: scn4_SL_1035L_Bowmanton.out

THU, APR 14 2022 14:28 BRANCH Q

CHNL# 540: [1035L_Q]
40.798 -40.00
CHNL# 534: [1034L_Q]
412.23 -666.6
CHNL# 526: [983L_L1_Q]
253.75 -357.7
CHNL# 524: [983L_L3_Q]
96.316 -214.5
CHNL# 522: [983L_L2_Q]
92.427 -254.0
CHNL# 520: [964L_L2_Q]
141.56 -80.30

1.0500 0.94500 0.84000 0.73500 0.63000 0.52500 0.42000 0.31500 0.21000 0.10500 0.0
TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_1035L_NEWELL

FILE: scn4_SL_1035L_Newell.out

THU, APR 14 2022 14:28

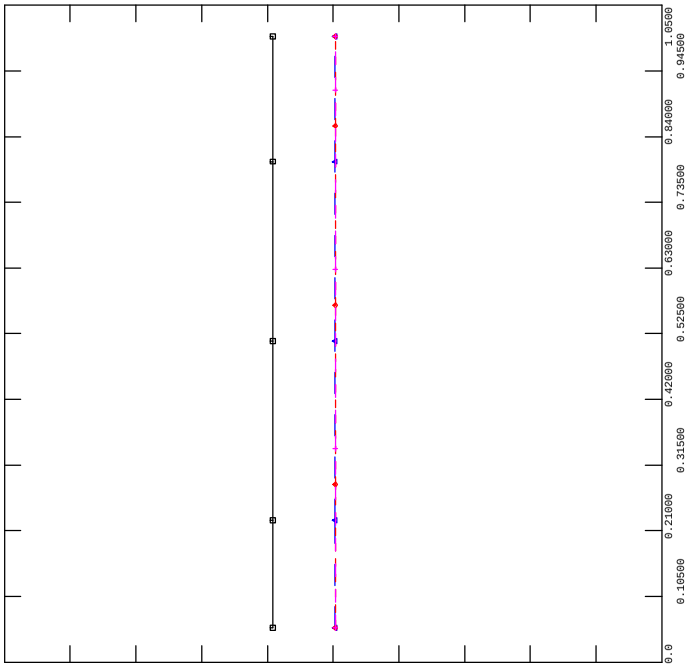
ROTOR ANGLE

CHNL# 37: [ANGL 775[SECCT2 21.000]3]
31.366 -78.53

CHNL# 36: [ANGL 774[SECCT1 21.000]2]
31.366 -78.53

CHNL# 35: [ANGL 773[SECST 20.000]1]
31.784 -77.04

CHNL# 1: [ANGL 667[CANCARB9 13.800]1]
84.846 -69.25



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_1035L_NEWELL

FILE: scn4_SL_1035L_Newell.out

THU, APR 14 2022 14:28

REACTIVE POWER

CHNL# 278: [VARS 61994[GRANLEA6 0.6900]G1]
1.2321 -0.5000

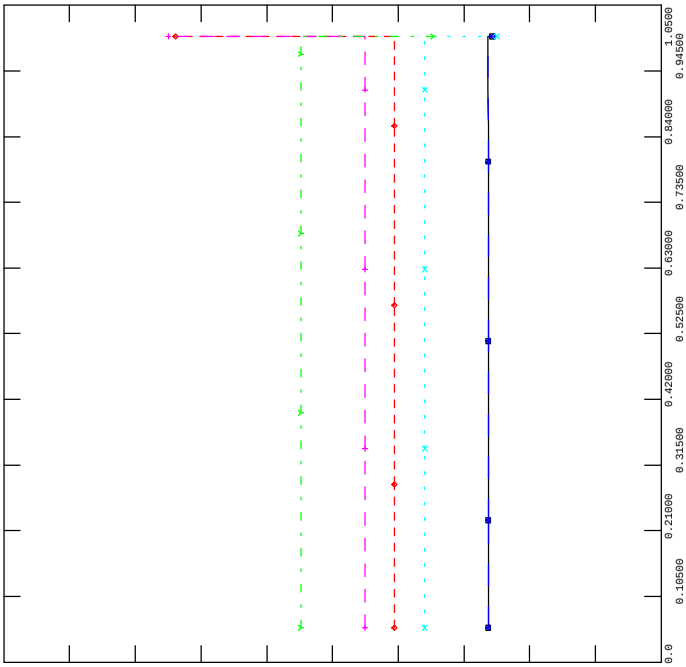
CHNL# 276: [VARS 60990[SHAMROC5 0.6500]G1]
4.8833 -1.244

CHNL# 284: [VARS 773[SECST 20.000]1]
1.7024 -1.403

CHNL# 250: [VARS 667[CANCARB9 13.800]1]
1.2508 -0.6640

CHNL# 283: [VARS990007[FORTYMILE_6 0.6900]G2]
1.4678 -0.5000

CHNL# 282: [VARS990004[FORTYMILE_3 0.6900]G1]
1.4678 -0.5000



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_1035L_BOWMANTON

FILE: scn4_SL_1035L_Bowmanton.out

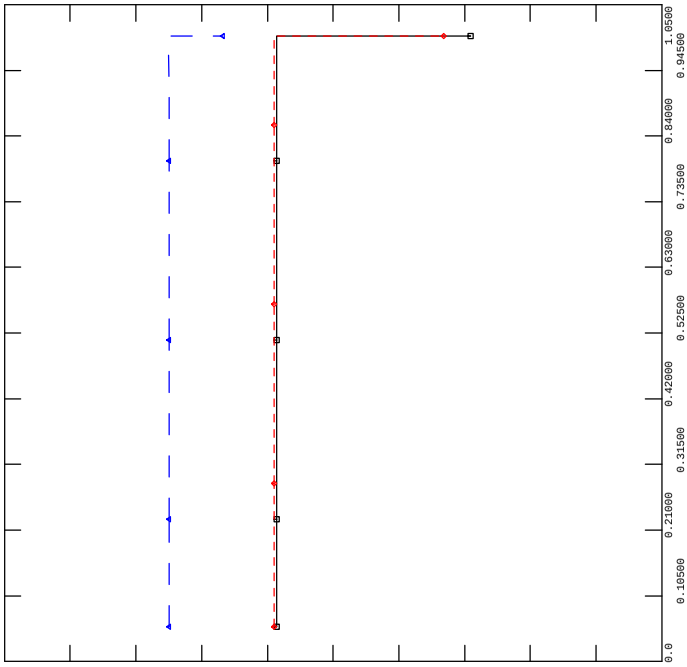
THU, APR 14 2022 14:28

BRANCH Q

CHNL# 532: [964L_L5_Q]
108.42 -71.63

CHNL# 536: [964L_L4_Q]
101.76 -179.5

CHNL# 538: [1005L_Q]
234.92 -207.3



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_1035L_NEWELL

FILE: scn4_SL_1035L_Newell.out

THU, APR 14 2022 14:28

ACTIVE POWER

CHNL# 195: [POWR 61994[GRANLEA6 0.6900]G1]
1.2000 -0.2000

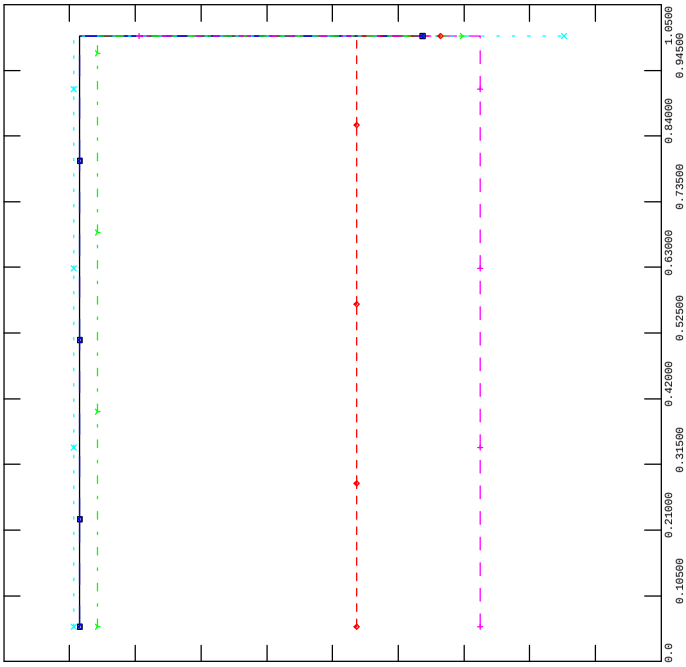
CHNL# 193: [POWR 60990[SHAMROC5 0.6500]G1]
2.2175 0.32420

CHNL# 201: [POWR 773[SECST 20.000]1]
1.9251 0.95160

CHNL# 167: [POWR 667[CANCARB9 13.800]1]
0.89860 -0.2086

CHNL# 200: [POWR990007[FORTYMILE_6 0.6900]G2]
1.5300 -0.2000

CHNL# 199: [POWR990004[FORTYMILE_3 0.6900]G1]
1.5300 -0.2000



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_1035L_NEWELL

FILE: scn4_SL_1035L_Newell.out

THU, APR 14 2022 14:28

BUS VOLTAGE

CHNL# 518: [VOLT 976 [ROTBAUR 138.00]]
1.2609 0.20490

CHNL# 513: [VOLT 320 [CHAPPIC7 138.00]]
1.2121 0.64360

CHNL# 516: [VOLT 662 [WHITLA1 240.00]]
1.3821 0.01140

CHNL# 515: [VOLT 659 [BOWMAN2 138.00]]
1.2806 0.03620

CHNL# 517: [VOLT 669 [BOWMAN1 240.00]]
1.2927 -0.0975

1.0500 0.94500 0.84000 0.73500 0.63000 0.52500 0.42000 0.31500 0.21000 0.10500 0.0

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_1035L_NEWELL

FILE: scn4_SL_1035L_Newell.out

THU, APR 14 2022 14:28

BRANCH Q

CHNL# 540: [1035L Q]
40.798 -40.00

CHNL# 534: [1034L Q]
331.66 -124.5

CHNL# 526: [983L_L1_Q]
145.94 -295.8

CHNL# 524: [983L_L3_Q]
83.576 -269.2

CHNL# 522: [983L_L2_Q]
96.716 -315.1

CHNL# 520: [964L_L2_Q]
216.03 -83.28

1.0500 0.94500 0.84000 0.73500 0.63000 0.52500 0.42000 0.31500 0.21000 0.10500 0.0

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_1035L_NEWELL

FILE: scn4_SL_1035L_Newell.out

THU, APR 14 2022 14:28

TERMINAL VOLTAGE

CHNL# 444: [ETRM 61994[GRANLEA6 0.6900]G1]
1.1825 -0.1000

CHNL# 442: [ETRM 60990[SHAMROC5 0.6500]G1]
1.5962 0.21850

CHNL# 450: [ETRM 773[SECST 20.000]1]
1.1333 0.85630

CHNL# 416: [ETRM 667[CANCARB9 13.800]1]
1.2282 0.56490

CHNL# 449: [ETRM990007[FORTYMILE_6 0.6900]G2]
1.1400 -0.1000

CHNL# 448: [ETRM990004[FORTYMILE_3 0.6900]G1]
1.1400 -0.1000

1.0500 0.94500 0.84000 0.73500 0.63000 0.52500 0.42000 0.31500 0.21000 0.10500 0.0

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_1035L_NEWELL

FILE: scn4_SL_1035L_Newell.out

THU, APR 14 2022 14:28

BRANCH P

CHNL# 539: [1035L P]
716.12 -238.7

CHNL# 533: [1034L P]
723.46 -238.4

CHNL# 525: [983L_L1_P]
250.07 -755.8

CHNL# 523: [983L_L3_P]
151.21 -465.8

CHNL# 521: [983L_L2_P]
151.17 -465.6

CHNL# 519: [964L_L2_P]
294.48 -207.0

1.0500 0.94500 0.84000 0.73500 0.63000 0.52500 0.42000 0.31500 0.21000 0.10500 0.0

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_1035L_NEWELL

FILE: scn4_SL_1035L_Newell.out

THU, APR 14 2022 14:28 BRANCH Q

CHNL# 532: [964L L5 Q] 208.60 -119.0
CHNL# 536: [964L L4 Q] 144.41 -307.4
CHNL# 538: [1005L Q] 215.92 -159.0

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_600L_BULLSHEAD

FILE: scn4_SL_600L_Bullshead.out

THU, APR 14 2022 14:28 ACTIVE POWER

CHNL# 195: [POWR 61994[GRANLEA6 0.6900]G1] 1.5457 0.45570
CHNL# 193: [POWR 60990[SHAMROC5 0.6500]G1] 2.6668 1.1215
CHNL# 201: [POWR 773[SECST 20.000]1] 1.6335 0.74200
CHNL# 167: [POWR 667[CANCARB9 13.800]1] 0.62470 -0.0439
CHNL# 200: [POWR990007[FORTYMILE_6 0.6900]G2] 2.2181 0.62850
CHNL# 199: [POWR990004[FORTYMILE 3 0.6900]G1] 2.2181 0.62850

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_1035L_NEWELL

FILE: scn4_SL_1035L_Newell.out

THU, APR 14 2022 14:28 BRANCH P

CHNL# 531: [964L L5 P] 241.64 -178.6
CHNL# 535: [964L L4 P] 207.51 -627.8
CHNL# 537: [1005L P] -149.7 -474.7

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_600L_BULLSHEAD

FILE: scn4_SL_600L_Bullshead.out

THU, APR 14 2022 14:28 ROTOR ANGLE

CHNL# 37: [ANGL 775[SECCT2 21.000]3] 29.843 -75.53
CHNL# 36: [ANGL 774[SECCT1 21.000]2] 29.843 -75.53
CHNL# 35: [ANGL 773[SECST 20.000]1] 30.474 -74.48
CHNL# 1: [ANGL 667[CANCARB9 13.800]1] 76.804 -42.47

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_600L_BULLSHEAD

FILE: scn4_SL_600L_Bullshead.out

THU, APR 14 2022 14:28

TERMINAL VOLTAGE

CHNL# 444: [ETRM 61994[GRANLEA6 0.6900]G1]
1.3082 0.57670

CHNL# 442: [ETRM 60990[SHAMROC5 0.6500]G1]
1.2807 0.55990

CHNL# 450: [ETRM 773[SECST 20.000]1]
1.1188 0.89760

CHNL# 416: [ETRM 667[CANCARB9 13.800]1]
1.1894 0.64180

CHNL# 449: [ETRM990007[FORTYMILE_6 0.6900]G2]
1.3905 0.54790

CHNL# 448: [ETRM990004[FORTYMILE_3 0.6900]G1]
1.3905 0.54790

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_600L_BULLSHEAD

FILE: scn4_SL_600L_Bullshead.out

THU, APR 14 2022 14:28

BRANCH P

CHNL# 539: [1035L_P]
708.07 104.02

CHNL# 533: [1034L_P]
681.62 92.674

CHNL# 525: [983L_L1_P]
-145.7 -740.1

CHNL# 523: [983L_L3_P]
-82.35 -555.8

CHNL# 521: [983L_L2_P]
-82.21 -555.4

CHNL# 519: [964L_L2_P]
223.48 17.519

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_600L_BULLSHEAD

FILE: scn4_SL_600L_Bullshead.out

THU, APR 14 2022 14:28

REACTIVE POWER

CHNL# 278: [VARS 61994[GRANLEA6 0.6900]G1]
1.0058 -0.2167

CHNL# 276: [VARS 60990[SHAMROC5 0.6500]G1]
1.5765 0.10160

CHNL# 284: [VARS 773[SECST 20.000]1]
0.71520 -0.6901

CHNL# 250: [VARS 667[CANCARB9 13.800]1]
1.1222 -0.6947

CHNL# 283: [VARS990007[FORTYMILE_6 0.6900]G2]
1.3946 -0.5774

CHNL# 282: [VARS990004[FORTYMILE_3 0.6900]G1]
1.3946 -0.5774

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_600L_BULLSHEAD

FILE: scn4_SL_600L_Bullshead.out

THU, APR 14 2022 14:28

BUS VOLTAGE

CHNL# 518: [VOLT 976 [ROTBAUR 138.00]]
1.1651 0.41380

CHNL# 513: [VOLT 320 [CHAPPIC7 138.00]]
1.1628 0.84910

CHNL# 516: [VOLT 662 [WHITLA1 240.00]]
1.2583 0.52900

CHNL# 515: [VOLT 659 [BOWMAN2 138.00]]
1.1766 0.46900

CHNL# 517: [VOLT 669 [BOWMAN1 240.00]]
1.1833 0.55970

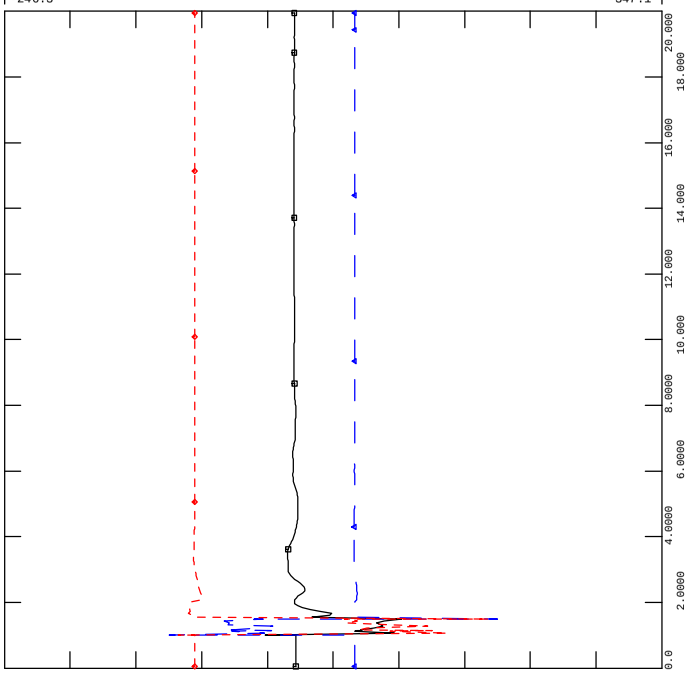
TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_600L_BULLSHEAD

FILE: scn4_SL_600L_Bullshead.out

THU, APR 14 2022 14:28 BRANCH P

CHNL# 531: [964L_L5_P]
18.860 -132.8
CHNL# 535: [964L_L4_P]
-107.9 -692.3
CHNL# 537: [1005L_P]
-246.3 -347.1

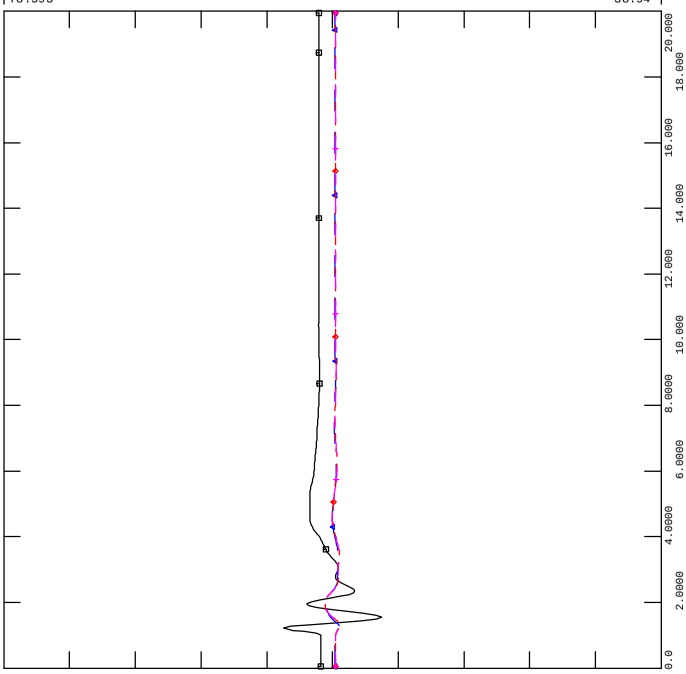


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_600L_PEACE_BUTTE

FILE: scn4_SL_600L_Peace_Butte.out

THU, APR 14 2022 14:28 ROTOR ANGLE

CHNL# 37: [ANGL 775[SECCT2 21.000]3]
27.682 -74.61
CHNL# 36: [ANGL 774[SECCT1 21.000]2]
27.682 -74.61
CHNL# 35: [ANGL 773[SECST 20.000]1]
28.553 -73.64
CHNL# 1: [ANGL 667[CANCARB9 13.800]1]
78.593 -38.94

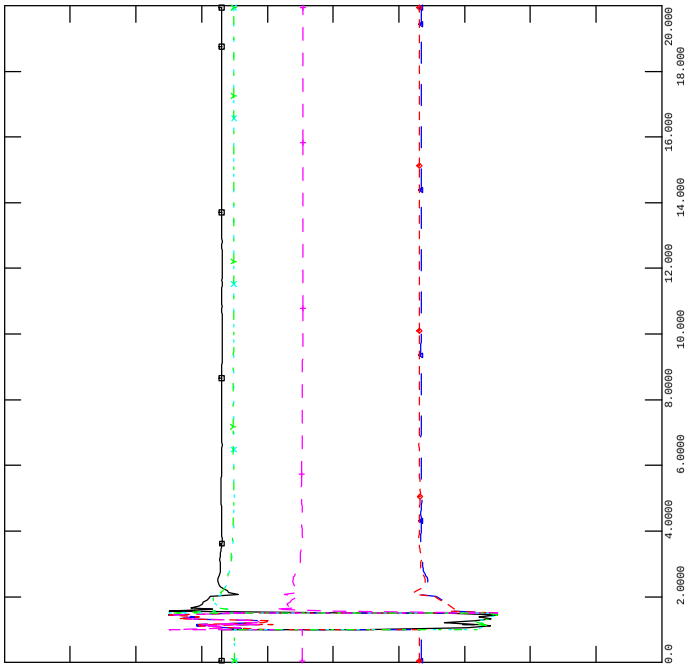


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_600L_BULLSHEAD

FILE: scn4_SL_600L_Bullshead.out

THU, APR 14 2022 14:28 BRANCH Q

CHNL# 540: [1035L_Q]
173.06 -320.0
CHNL# 534: [1034L_Q]
156.83 -320.9
CHNL# 526: [983L_L1_Q]
158.84 -169.5
CHNL# 524: [983L_L3_Q]
143.95 -91.45
CHNL# 522: [983L_L2_Q]
148.40 -123.9
CHNL# 520: [964L_L2_Q]
155.12 -53.78

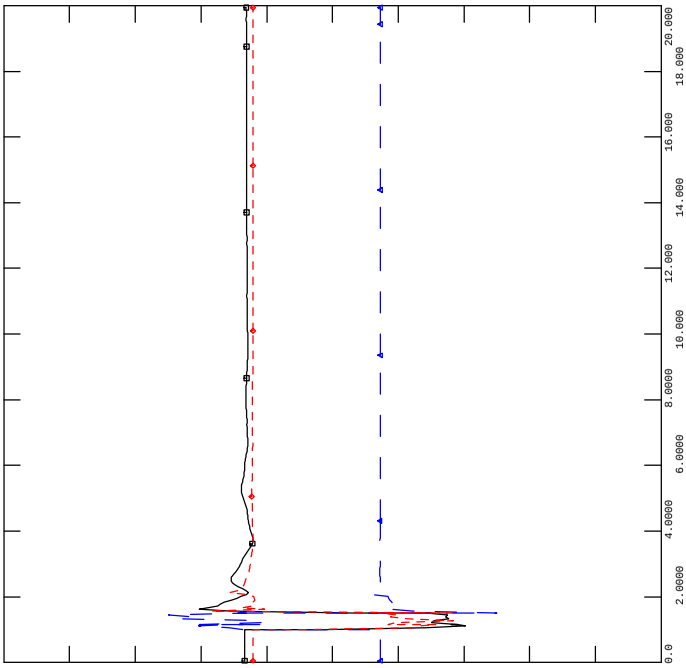


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_600L_BULLSHEAD

FILE: scn4_SL_600L_Bullshead.out

THU, APR 14 2022 14:28 BRANCH Q

CHNL# 532: [964L_L5_Q]
82.776 -44.42
CHNL# 536: [964L_L4_Q]
206.72 -99.30
CHNL# 538: [1005L_Q]
101.26 -33.14



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_600L_PEACE_BUTTE

FILE: scn4_SL_600L_Peace_Butte.out

THU, APR 14 2022 14:28

REACTIVE POWER

CHNL# 278: [VARS 61994[GRANLEA6 0.6900]G1]
1.0459 -0.3133

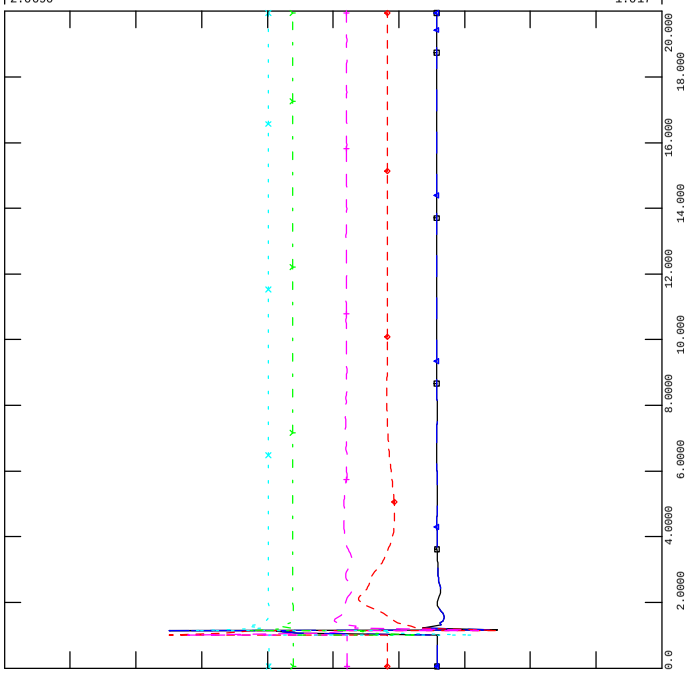
CHNL# 276: [VARS 60990[SHAMROC5 0.6500]G1]
1.6640 -0.0880

CHNL# 284: [VARS 773[SECST 20.000]1]
0.92980 -0.8632

CHNL# 250: [VARS 667[CANCARB9 13.800]1]
1.3062 -0.7423

CHNL# 283: [VARS990007[FORTYMILE_6 0.6900]G2]
2.0090 -1.017

CHNL# 282: [VARS990004[FORTYMILE_3 0.6900]G1]
2.0090 -1.017



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_600L_PEACE_BUTTE

FILE: scn4_SL_600L_Peace_Butte.out

THU, APR 14 2022 14:28

BUS VOLTAGE

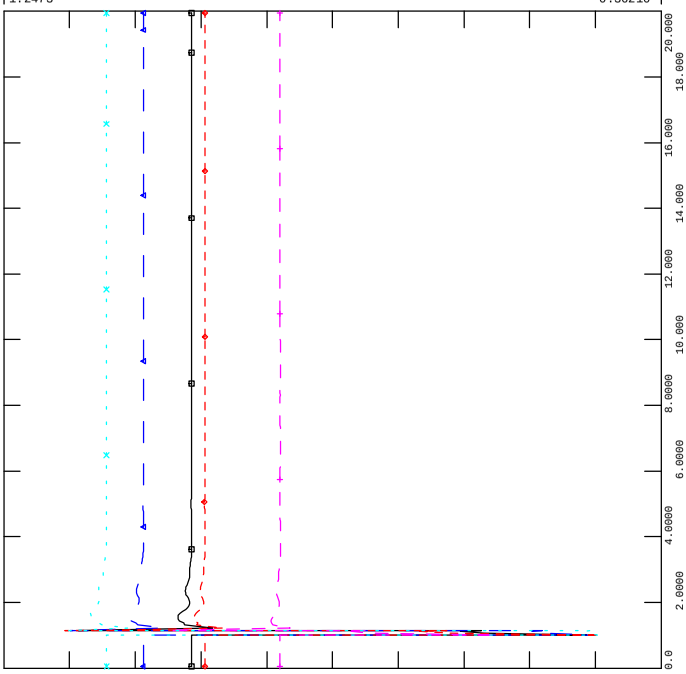
CHNL# 518: [VOLT 976 [ROTBAUR 138.00]]
1.1766 0.14460

CHNL# 513: [VOLT 320 [CHAPPIC7 138.00]]
1.1877 0.78690

CHNL# 516: [VOLT 662 [WHITLA1 240.00]]
1.3565 0.28280

CHNL# 515: [VOLT 659 [BOWMAN2 138.00]]
1.2158 0.22200

CHNL# 517: [VOLT 669 [BOWMAN1 240.00]]
1.2473 0.36210



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_600L_PEACE_BUTTE

FILE: scn4_SL_600L_Peace_Butte.out

THU, APR 14 2022 14:28

ACTIVE POWER

CHNL# 195: [POWR 61994[GRANLEA6 0.6900]G1]
1.2823 0.21570

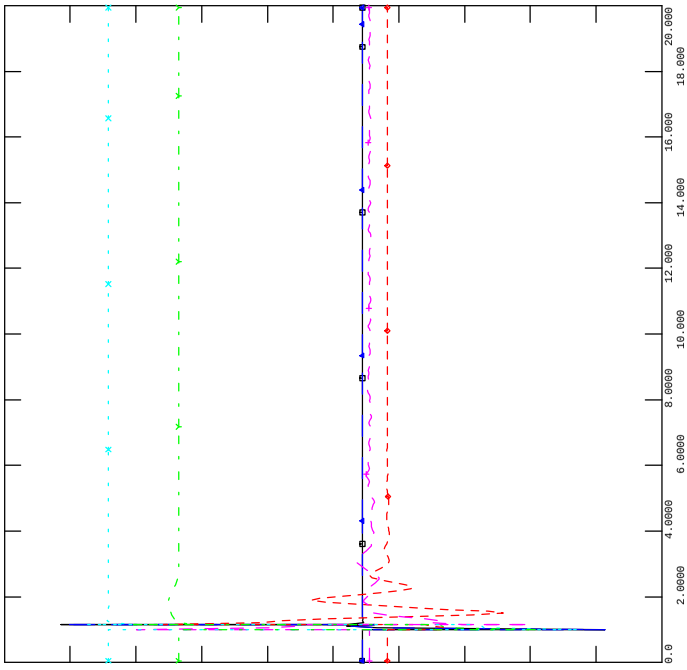
CHNL# 193: [POWR 60990[SHAMROC5 0.6500]G1]
2.2700 0.66530

CHNL# 201: [POWR 773[SECST 20.000]1]
1.7727 0.77710

CHNL# 167: [POWR 667[CANCARB9 13.800]1]
0.78610 -0.0420

CHNL# 200: [POWR990007[FORTYMILE_6 0.6900]G2]
2.5936 0.27100

CHNL# 199: [POWR990004[FORTYMILE_3 0.6900]G1]
2.5936 0.27100



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_600L_PEACE_BUTTE

FILE: scn4_SL_600L_Peace_Butte.out

THU, APR 14 2022 14:28

TERMINAL VOLTAGE

CHNL# 444: [ETRM 61994[GRANLEA6 0.6900]G1]
1.4090 0.35000

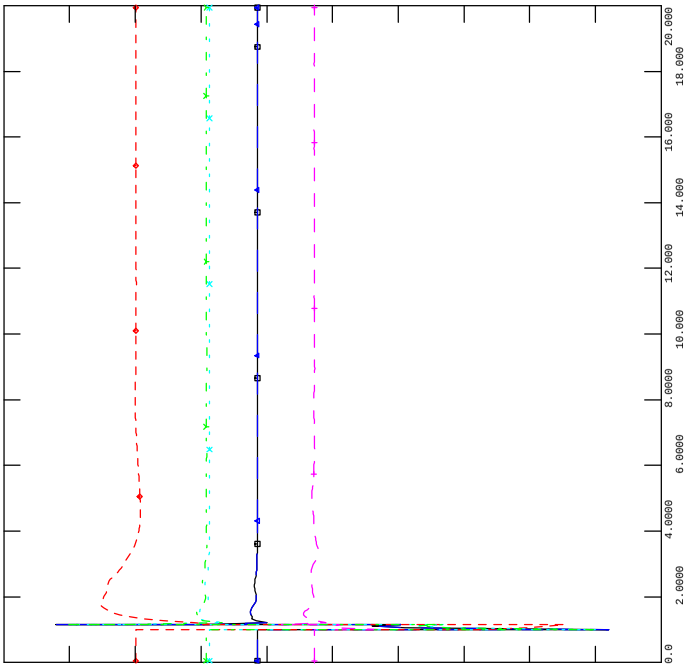
CHNL# 442: [ETRM 60990[SHAMROC5 0.6500]G1]
1.3825 0.35550

CHNL# 450: [ETRM 773[SECST 20.000]1]
1.1215 0.88530

CHNL# 416: [ETRM 667[CANCARB9 13.800]1]
1.1762 0.49930

CHNL# 449: [ETRM990007[FORTYMILE_6 0.6900]G2]
1.5242 0.26830

CHNL# 448: [ETRM990004[FORTYMILE_3 0.6900]G1]
1.5242 0.26830



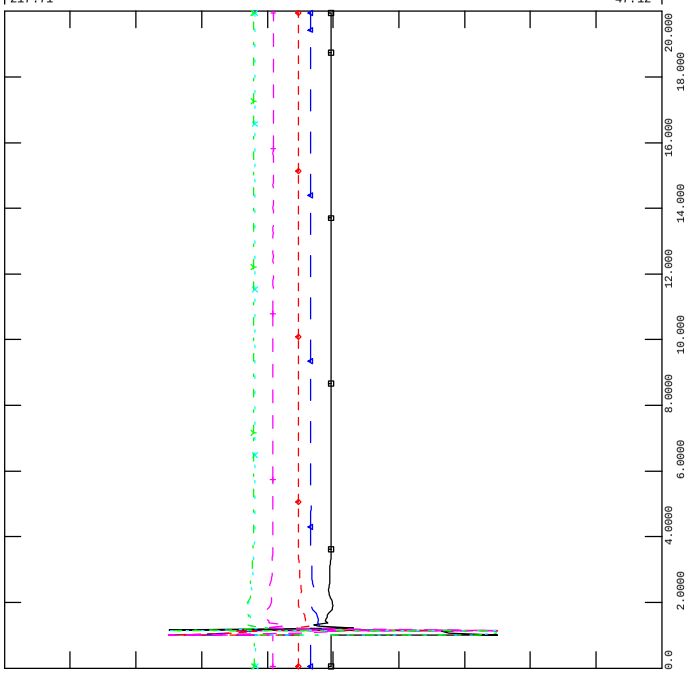
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_600L_PEACE_BUTTE

FILE: scn4_SL_600L_Peace_Butte.out

THU, APR 14 2022 14:28

BRANCH Q

CHNL# 540: [1035L Q] 221.60 -359.8
CHNL# 534: [1034L Q] 205.12 -359.4
CHNL# 526: [983L L1 Q] 190.01 -250.9
CHNL# 524: [983L L3 Q] 169.03 -219.6
CHNL# 522: [983L L2 Q] 180.85 -259.5
CHNL# 520: [964L L2 Q] 217.71 -47.12



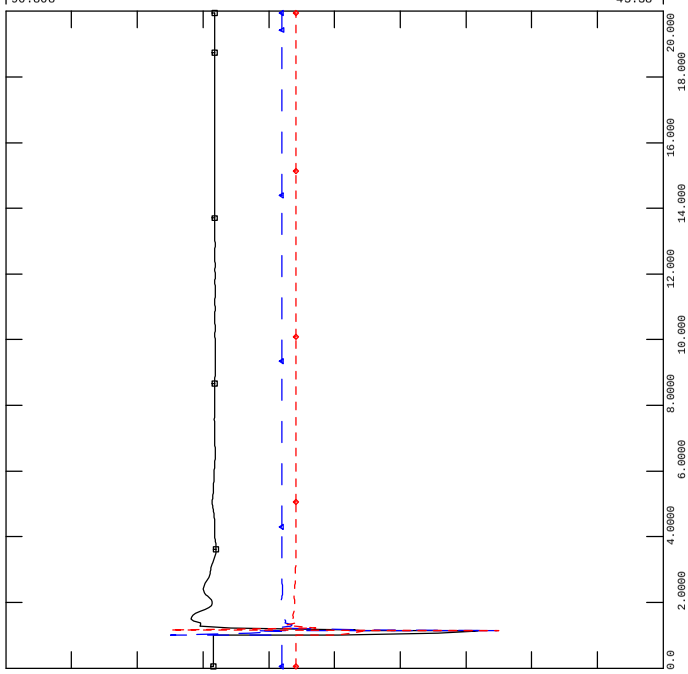
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_600L_PEACE_BUTTE

FILE: scn4_SL_600L_Peace_Butte.out

THU, APR 14 2022 14:28

BRANCH Q

CHNL# 532: [964L L5 Q] 130.79 -87.34
CHNL# 536: [964L L4 Q] 220.77 -230.6
CHNL# 538: [1005L Q] 96.868 -45.38



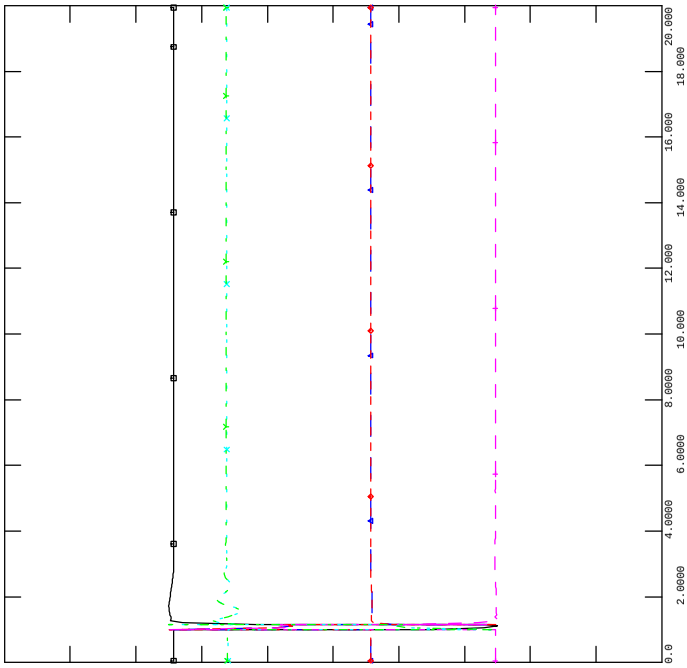
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_600L_PEACE_BUTTE

FILE: scn4_SL_600L_Peace_Butte.out

THU, APR 14 2022 14:28

BRANCH P

CHNL# 539: [1035L P] 764.18 -82.45
CHNL# 533: [1034L P] 732.85 -85.59
CHNL# 525: [983L L1 P] 48.708 -692.2
CHNL# 523: [983L L3 P] 36.787 -588.3
CHNL# 521: [983L L2 P] 36.958 -588.0
CHNL# 519: [964L L2 P] 245.09 -50.20



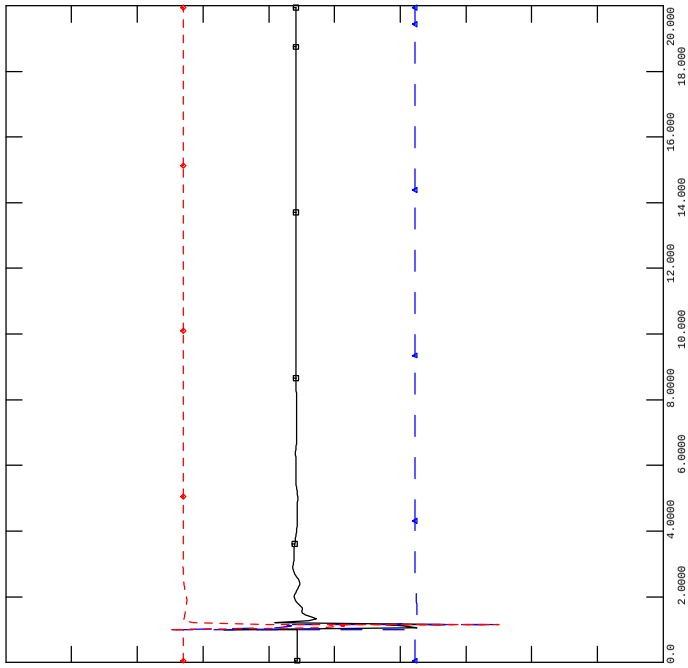
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_600L_PEACE_BUTTE

FILE: scn4_SL_600L_Peace_Butte.out

THU, APR 14 2022 14:28

BRANCH P

CHNL# 531: [964L L5 P] 43.250 -209.7
CHNL# 535: [964L L4 P] 58.928 -709.0
CHNL# 537: [1005L P] -237.4 -358.1



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_675L_AL_ROTHBAUER

FILE: scn4_SL_675L_Al_Rothbauer.out

THU, APR 14 2022 14:28

ACTIVE POWER

CHNL# 195: [POWR 61994[GRANLEA6 0.6900]G1]
1.2466 -0.0611

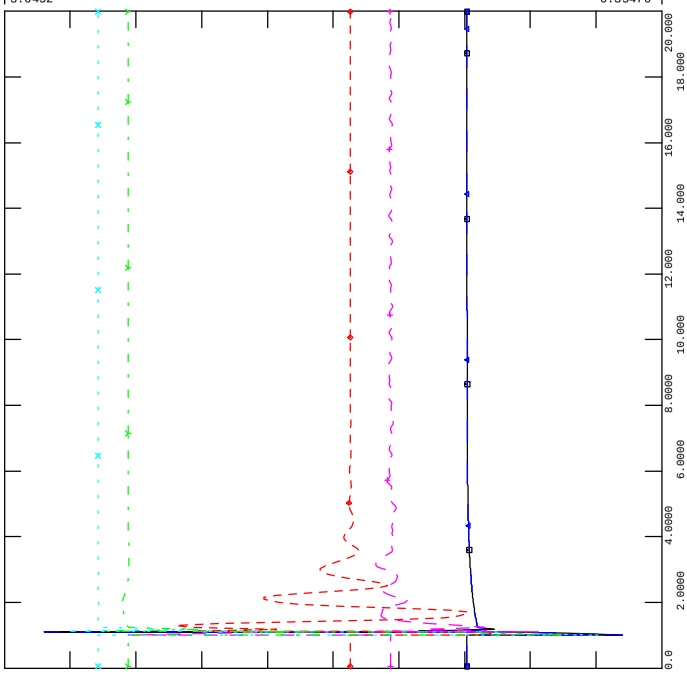
CHNL# 193: [POWR 60990[SHAMROC5 0.6500]G1]
2.3244 0.16540

CHNL# 201: [POWR 773[SECST 20.000]1]
1.8443 0.78150

CHNL# 167: [POWR 667[CANCARB9 13.800]1]
0.70820 -0.0602

CHNL# 200: [POWR990007[FORTYMILE_6 0.6900]G2]
3.6452 0.35470

CHNL# 199: [POWR990004[FORTYMILE_3 0.6900]G1]
3.6452 0.35470



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_675L_AL_ROTHBAUER

FILE: scn4_SL_675L_Al_Rothbauer.out

THU, APR 14 2022 14:28

TERMINAL VOLTAGE

CHNL# 444: [ETRM 61994[GRANLEA6 0.6900]G1]
1.7907 0.05030

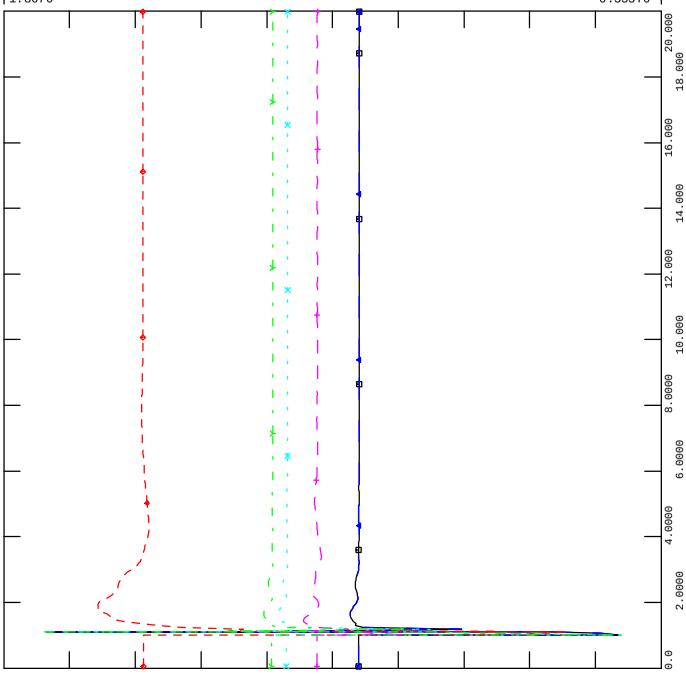
CHNL# 442: [ETRM 60990[SHAMROC5 0.6500]G1]
1.7898 0.09230

CHNL# 450: [ETRM 773[SECST 20.000]1]
1.1326 0.87540

CHNL# 416: [ETRM 667[CANCARB9 13.800]1]
1.1885 0.48920

CHNL# 449: [ETRM990007[FORTYMILE_6 0.6900]G2]
1.8670 0.33370

CHNL# 448: [ETRM990004[FORTYMILE_3 0.6900]G1]
1.8670 0.33370



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_675L_AL_ROTHBAUER

FILE: scn4_SL_675L_Al_Rothbauer.out

THU, APR 14 2022 14:28

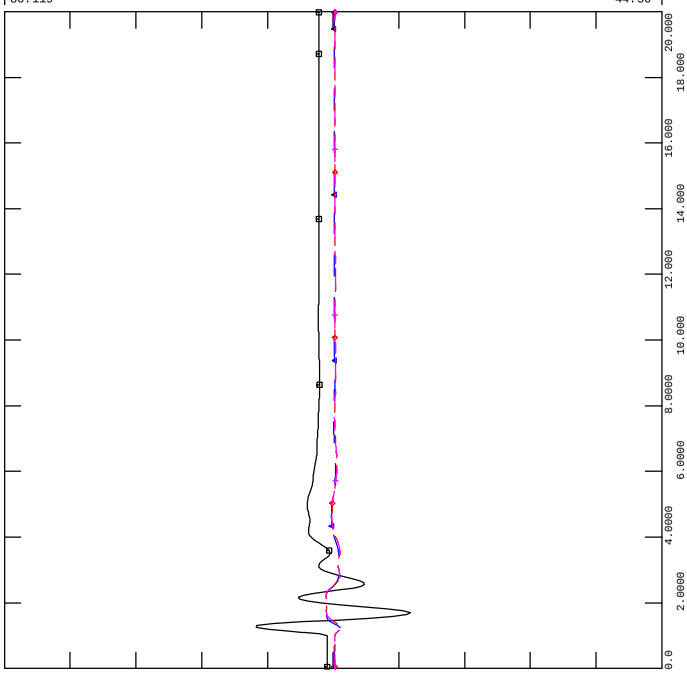
ROTOR ANGLE

CHNL# 37: [ANGL 775[SECCT2 21.000]3]
27.443 -74.73

CHNL# 36: [ANGL 774[SECCT1 21.000]2]
27.443 -74.73

CHNL# 35: [ANGL 773[SECST 20.000]1]
28.372 -73.93

CHNL# 1: [ANGL 667[CANCARB9 13.800]1]
86.119 -44.50



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_675L_AL_ROTHBAUER

FILE: scn4_SL_675L_Al_Rothbauer.out

THU, APR 14 2022 14:28

REACTIVE POWER

CHNL# 278: [VARS 61994[GRANLEA6 0.6900]G1]
2.8092 -0.8532

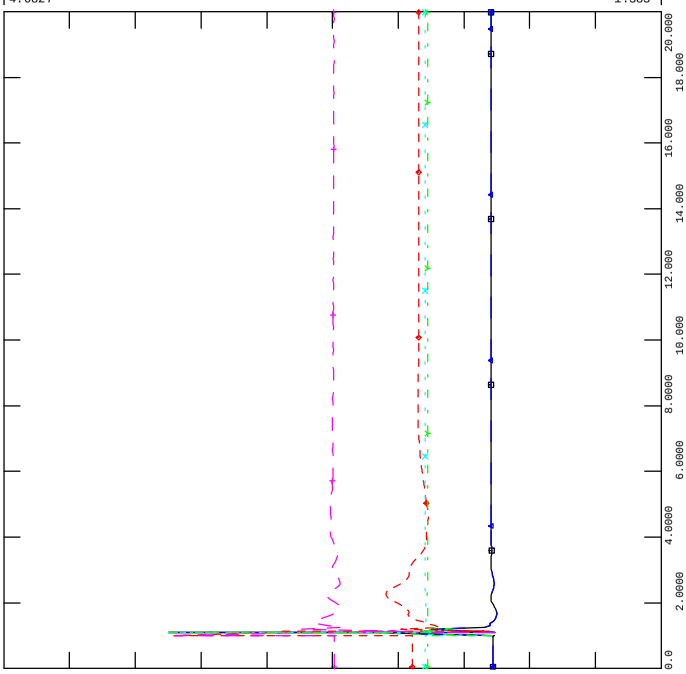
CHNL# 276: [VARS 60990[SHAMROC5 0.6500]G1]
5.5907 -1.632

CHNL# 284: [VARS 773[SECST 20.000]1]
1.2005 -1.195

CHNL# 250: [VARS 667[CANCARB9 13.800]1]
1.3071 -0.6143

CHNL# 283: [VARS990007[FORTYMILE_6 0.6900]G2]
4.0827 -1.383

CHNL# 282: [VARS990004[FORTYMILE_3 0.6900]G1]
4.0827 -1.383



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_675L_AL_ROTHBAUER

FILE: scn4_SL_675L_Al_Rothbauer.out

THU, APR 14 2022 14:28 BRANCH P

CHNL# 539: [1035L_P]
743.29 -191.9
CHNL# 533: [1034L_P]
714.16 -190.4
CHNL# 525: [983L_L1_P]
197.00 -746.1
CHNL# 523: [983L_L3_P]
174.02 -668.9
CHNL# 521: [983L_L2_P]
173.82 -667.9
CHNL# 519: [964L_L2_P]
310.77 -230.5

TIME (SECONDS)
0.0 2.0000 4.0000 6.0000 8.0000 10.000 12.000 14.000 16.000 18.000 20.000

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_675L_AL_ROTHBAUER

FILE: scn4_SL_675L_Al_Rothbauer.out

THU, APR 14 2022 14:28 BRANCH P

CHNL# 531: [964L_L5_P]
111.94 -358.1
CHNL# 535: [964L_L4_P]
210.31 -802.1
CHNL# 537: [1005L_P]
-226.2 -389.4

TIME (SECONDS)
0.0 2.0000 4.0000 6.0000 8.0000 10.000 12.000 14.000 16.000 18.000 20.000

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_675L_AL_ROTHBAUER

FILE: scn4_SL_675L_Al_Rothbauer.out

THU, APR 14 2022 14:28 BUS VOLTAGE

CHNL# 518: [VOLT 976 [ROTBAUR 138.00]]
1.1593 0.09050
CHNL# 513: [VOLT 320 [CHAPPIC7 138.00]]
1.2317 0.73140
CHNL# 516: [VOLT 662 [WHITLA1 240.00]]
1.5830 0.10750
CHNL# 515: [VOLT 659 [BOWMAN2 138.00]]
1.1782 -0.0948
CHNL# 517: [VOLT 669 [BOWMAN1 240.00]]
1.3190 0.16070

TIME (SECONDS)
0.0 2.0000 4.0000 6.0000 8.0000 10.000 12.000 14.000 16.000 18.000 20.000

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_675L_AL_ROTHBAUER

FILE: scn4_SL_675L_Al_Rothbauer.out

THU, APR 14 2022 14:28 BRANCH Q

CHNL# 540: [1035L_Q]
191.85 -283.4
CHNL# 534: [1034L_Q]
177.45 -282.0
CHNL# 526: [983L_L1_Q]
351.82 -476.9
CHNL# 524: [983L_L3_Q]
394.37 -819.2
CHNL# 522: [983L_L2_Q]
398.35 -858.7
CHNL# 520: [964L_L2_Q]
342.74 -195.1

TIME (SECONDS)
0.0 2.0000 4.0000 6.0000 8.0000 10.000 12.000 14.000 16.000 18.000 20.000

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_675L_BOWMANTON

FILE: scn4_SL_675L_Bowmanton.out

THU, APR 14 2022 14:28

ROTOR ANGLE

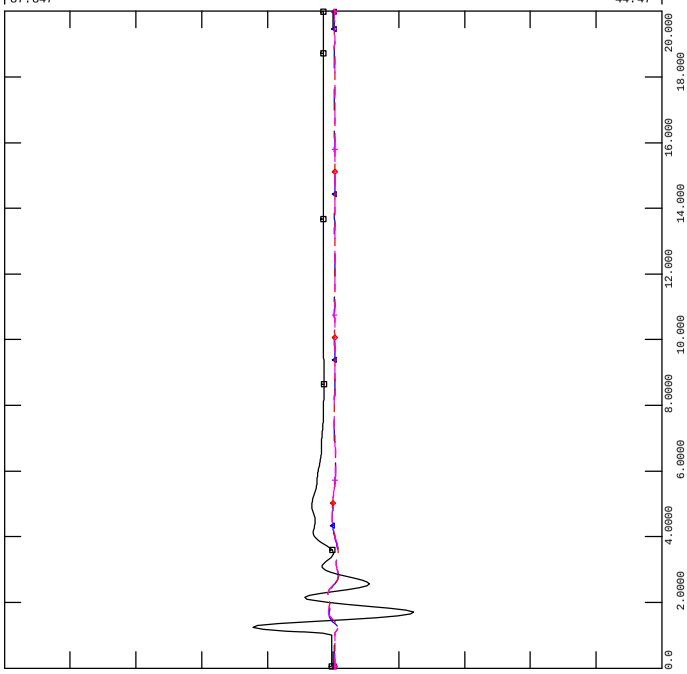
CHNL# 37: [ANGL 775[SECCT2 21.000]3]
27.126 -74.53

CHNL# 36: [ANGL 774[SECCT1 21.000]2]
27.126 -74.53

CHNL# 35: [ANGL 773[SECST 20.000]1]
28.077 -73.52

CHNL# 1: [ANGL 667[CANCARB9 13.800]1]
87.847 -44.47

TIME (SECONDS)



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_675L_BOWMANTON

FILE: scn4_SL_675L_Bowmanton.out

THU, APR 14 2022 14:28

REACTIVE POWER

CHNL# 278: [VARS 61994[GRANLEA6 0.6900]G1]
1.0525 -0.3717

CHNL# 276: [VARS 60990[SHAMROC5 0.6500]G1]
1.6820 -0.1911

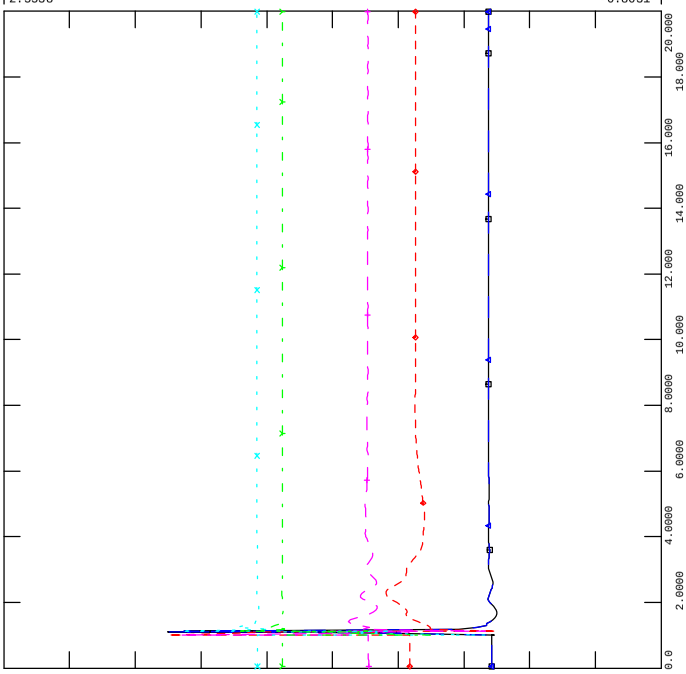
CHNL# 284: [VARS 773[SECST 20.000]1]
1.0302 -0.8351

CHNL# 250: [VARS 667[CANCARB9 13.800]1]
1.3707 -0.6661

CHNL# 283: [VARS990007[FORTYMILE_6 0.6900]G2]
2.5538 -0.8631

CHNL# 282: [VARS990004[FORTYMILE 3 0.6900]G1]
2.5538 -0.8631

TIME (SECONDS)



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_675L_AL_ROTHBAUER

FILE: scn4_SL_675L_Al_Rothbauer.out

THU, APR 14 2022 14:28

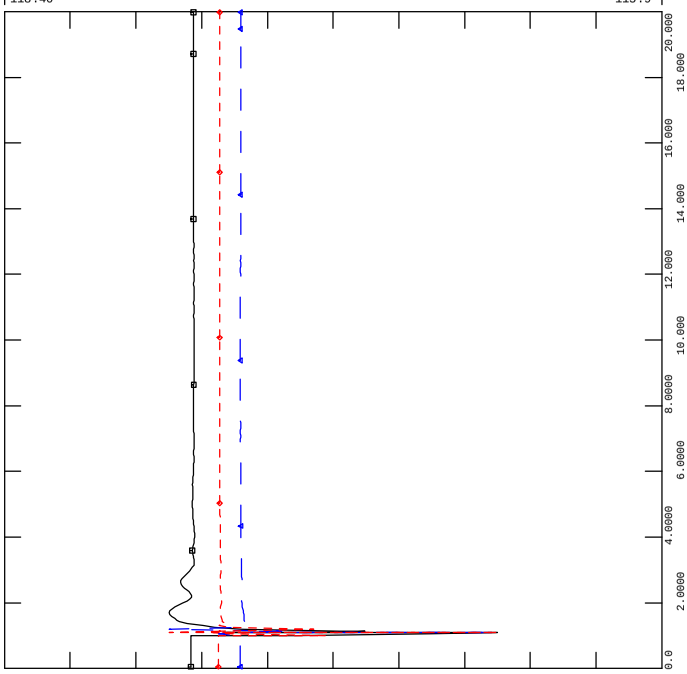
BRANCH Q

CHNL# 532: [964L_L5_Q]
153.76 -213.0

CHNL# 536: [964L_L4_Q]
460.79 -736.4

CHNL# 538: [1005L_Q]
118.40 -115.9

TIME (SECONDS)



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_675L_BOWMANTON

FILE: scn4_SL_675L_Bowmanton.out

THU, APR 14 2022 14:28

ACTIVE POWER

CHNL# 195: [POWR 61994[GRANLEA6 0.6900]G1]
1.2675 0.08560

CHNL# 193: [POWR 60990[SHAMROC5 0.6500]G1]
2.2412 0.44880

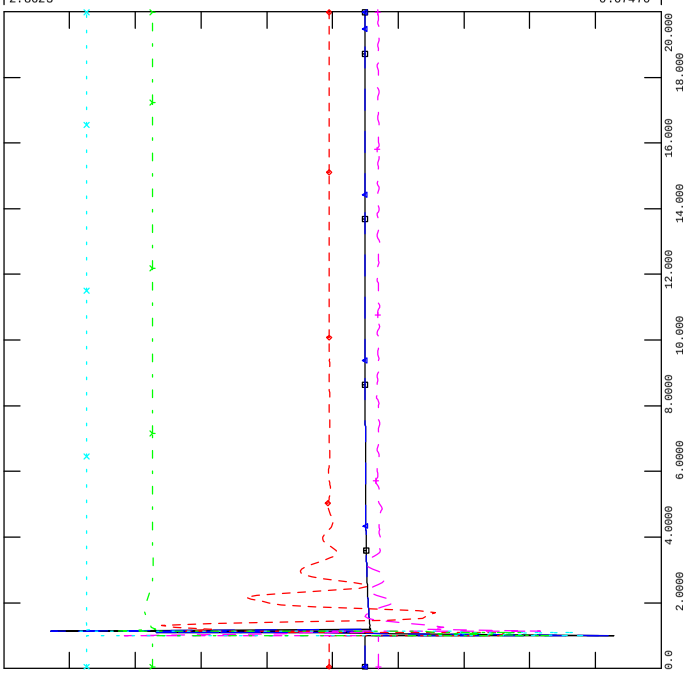
CHNL# 201: [POWR 773[SECST 20.000]1]
1.8406 0.75090

CHNL# 167: [POWR 667[CANCARB9 13.800]1]
0.71720 -0.1172

CHNL# 200: [POWR990007[FORTYMILE_6 0.6900]G2]
2.8623 0.07470

CHNL# 199: [POWR990004[FORTYMILE_3 0.6900]G1]
2.8623 0.07470

TIME (SECONDS)



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_675L_BOWMANTON

FILE: scn4_SL_675L_Bowmanton.out

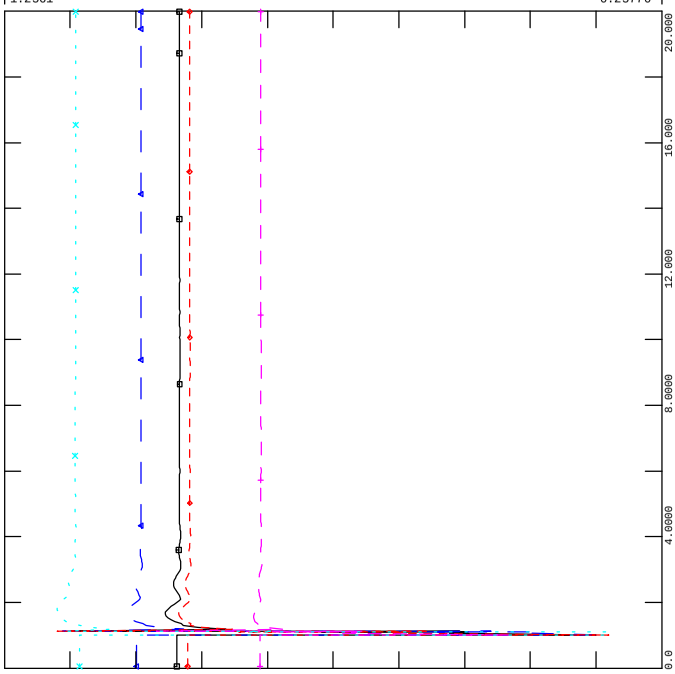
THU, APR 14 2022 14:28

BUS VOLTAGE

CHNL# 518: [VOLT 976 [ROTBAUR 138.00]]
1.1582 -0.0956
CHNL# 513: [VOLT 320 [CHAPPIC7 138.00]]
1.1874 0.75550
CHNL# 516: [VOLT 662 [WHITLA1 240.00]]
1.3749 0.13170
CHNL# 515: [VOLT 659 [BOWMAN2 138.00]]
1.2326 0.09930
CHNL# 517: [VOLT 669 [BOWMAN1 240.00]]
1.2561 0.25770

TIME (SECONDS)

0.0 2.0000 4.0000 6.0000 8.0000 10.000 12.000 14.000 16.000 18.000 20.000



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_675L_BOWMANTON

FILE: scn4_SL_675L_Bowmanton.out

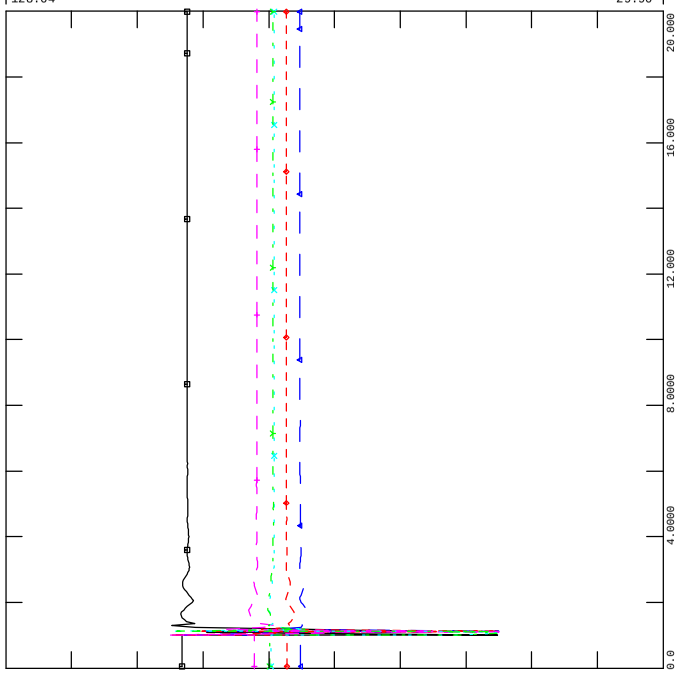
THU, APR 14 2022 14:28

BRANCH Q

CHNL# 540: [1035L Q]
255.39 -379.0
CHNL# 534: [1034L Q]
237.55 -377.7
CHNL# 526: [983L_L1_Q]
211.42 -321.1
CHNL# 524: [983L_L3_Q]
180.22 -252.3
CHNL# 522: [983L_L2_Q]
195.16 -293.8
CHNL# 520: [964L_L2_Q]
128.64 -29.90

TIME (SECONDS)

0.0 2.0000 4.0000 6.0000 8.0000 10.000 12.000 14.000 16.000 18.000 20.000



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_675L_BOWMANTON

FILE: scn4_SL_675L_Bowmanton.out

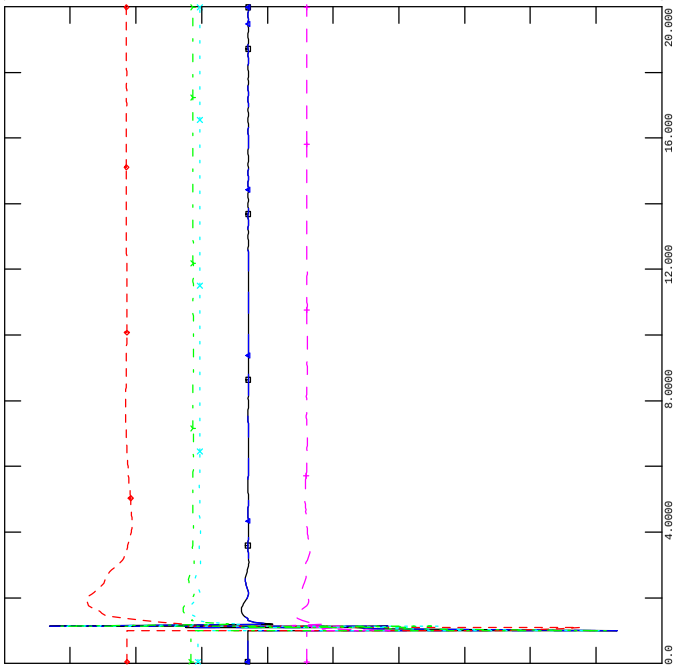
THU, APR 14 2022 14:28

TERMINAL VOLTAGE

CHNL# 444: [ETRM 61994[GRANLEA6 0.6900]G1]
1.4290 0.20920
CHNL# 442: [ETRM 60990[SHAMROC5 0.6500]G1]
1.4024 0.24150
CHNL# 450: [ETRM 773[SECST 20.000]1]
1.1212 0.87940
CHNL# 416: [ETRM 667[CANCARB9 13.800]1]
1.1896 0.38830
CHNL# 449: [ETRM990007[FORTYMILE_6 0.6900]G2]
1.5828 0.11480
CHNL# 448: [ETRM990004[FORTYMILE_3 0.6900]G1]
1.5828 0.11480

TIME (SECONDS)

0.0 2.0000 4.0000 6.0000 8.0000 10.000 12.000 14.000 16.000 18.000 20.000



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_675L_BOWMANTON

FILE: scn4_SL_675L_Bowmanton.out

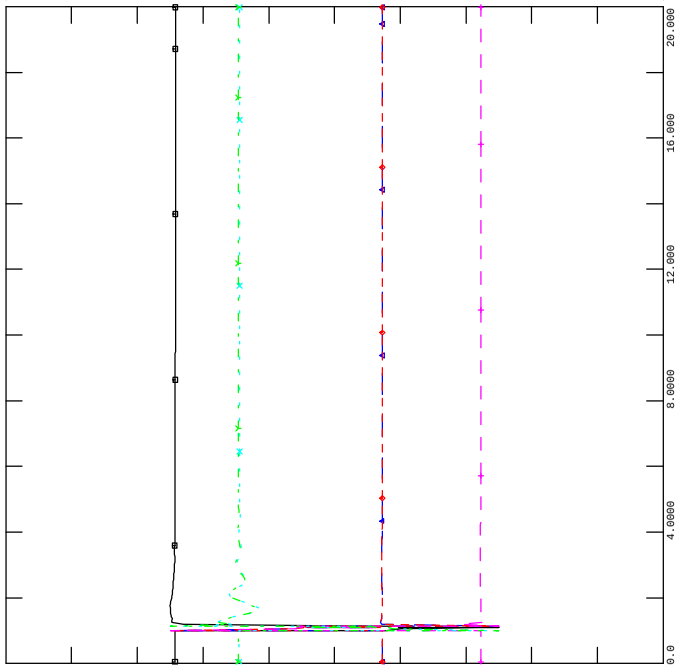
THU, APR 14 2022 14:28

BRANCH P

CHNL# 539: [1035L_P]
842.78 -191.1
CHNL# 533: [1034L_P]
810.18 -190.8
CHNL# 525: [983L_L1_P]
160.49 -759.7
CHNL# 523: [983L_L3_P]
121.29 -634.7
CHNL# 521: [983L_L2_P]
121.44 -634.3
CHNL# 519: [964L_L2_P]
279.61 -149.5

TIME (SECONDS)

0.0 2.0000 4.0000 6.0000 8.0000 10.000 12.000 14.000 16.000 18.000 20.000

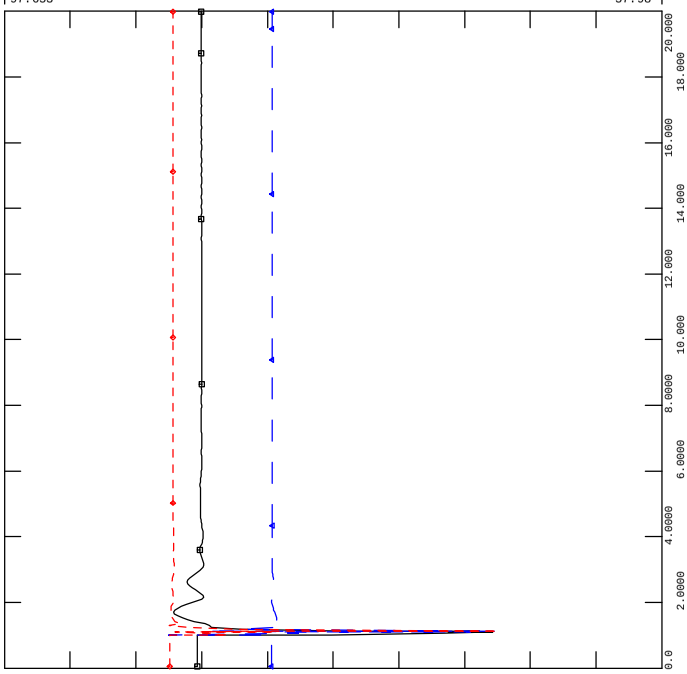


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_675L_BOWMANTON

FILE: scn4_SL_675L_Bowmanton.out

THU, APR 14 2022 14:28 BRANCH Q

CHNL# 532: [964L_L5_Q] 79.115 -98.18
CHNL# 536: [964L_L4_Q] 222.80 -248.6
CHNL# 538: [1005L_Q] 97.653 -57.98

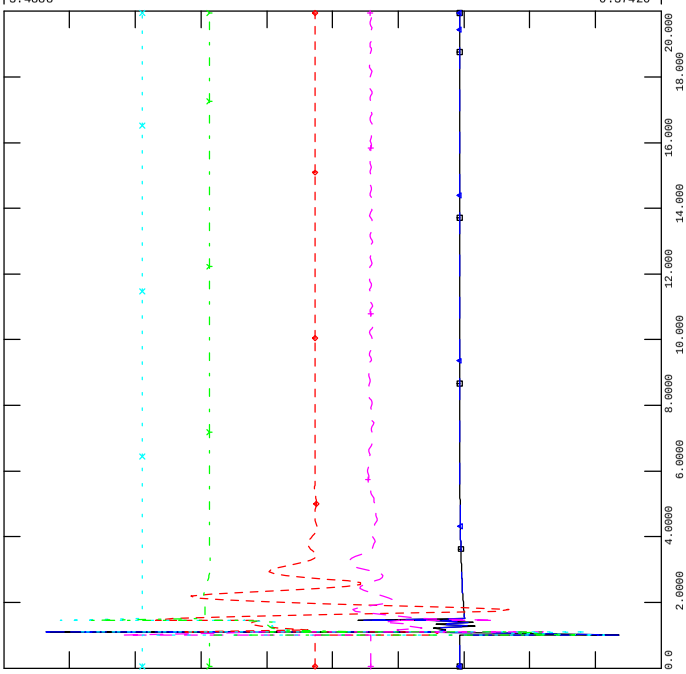


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_676L_BOWMANTON

FILE: scn4_SL_676L_Bowmanton.out

THU, APR 14 2022 14:28 ACTIVE POWER

CHNL# 195: [POWR 61994[GRANLEA6 0.6900]G1] 1.4750 -0.0430
CHNL# 193: [POWR 60990[SHAMROC5 0.6500]G1] 2.5054 0.18420
CHNL# 201: [POWR 773[SECST 20.000]1] 1.8391 0.73010
CHNL# 167: [POWR 667[CANCARB9 13.800]1] 0.71300 -0.1510
CHNL# 200: [POWR990007[FORTYMILE_6 0.6900]G2] 3.4888 0.37420
CHNL# 199: [POWR990004[FORTYMILE 3 0.6900]G1] 3.4888 0.37420

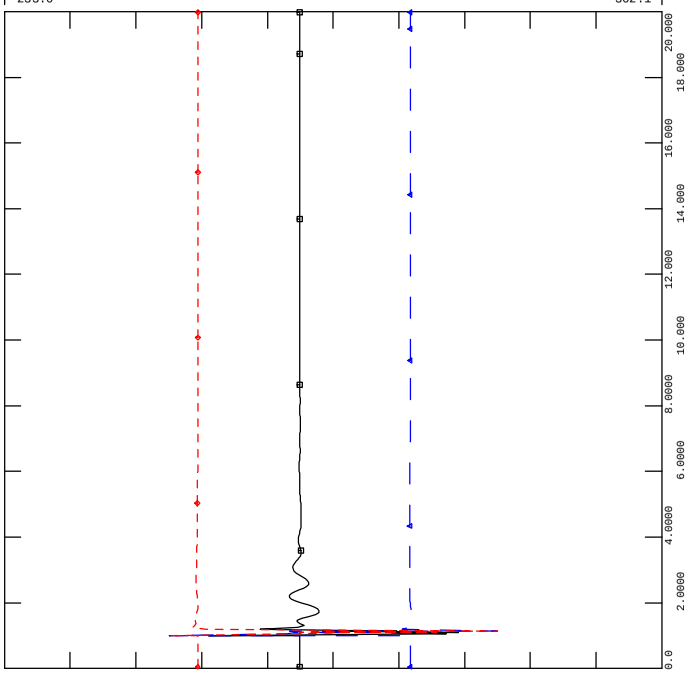


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_675L_BOWMANTON

FILE: scn4_SL_675L_Bowmanton.out

THU, APR 14 2022 14:28 BRANCH P

CHNL# 531: [964L_L5_P] 64.744 -241.0
CHNL# 535: [964L_L4_P] 167.67 -782.7
CHNL# 537: [1005L_P] -233.0 -362.1

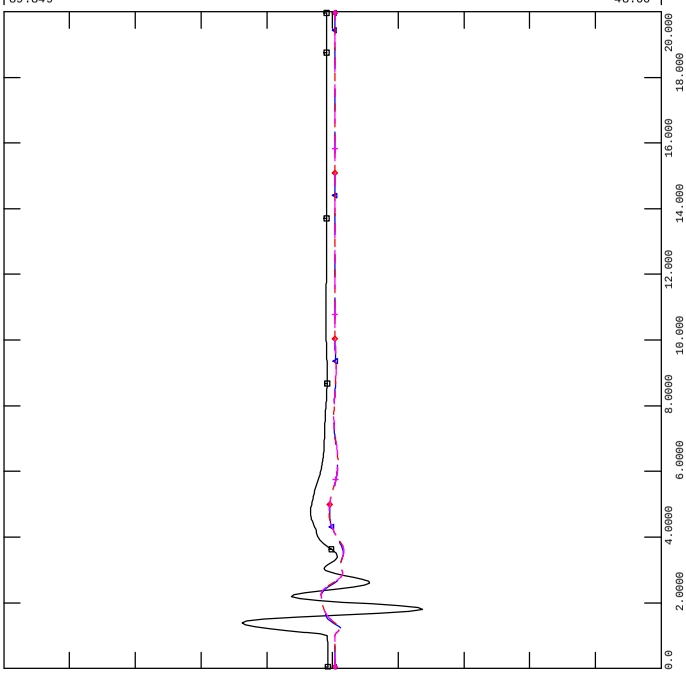


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_676L_BOWMANTON

FILE: scn4_SL_676L_Bowmanton.out

THU, APR 14 2022 14:28 ROTOR ANGLE

CHNL# 37: [ANGL 775[SECCT2 21.000]3] 28.236 -75.37
CHNL# 36: [ANGL 774[SECCT1 21.000]2] 28.236 -75.37
CHNL# 35: [ANGL 773[SECST 20.000]1] 29.124 -74.27
CHNL# 1: [ANGL 667[CANCARB9 13.800]1] 89.849 -48.00



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_676L_BOWMANTON

FILE: scn4_SL_676L_Bowmanton.out

THU, APR 14 2022 14:28

TERMINAL VOLTAGE

CHNL# 444: [ETRM 61994[GRANLEA6 0.6900]G1]
1.7933 0.07000

CHNL# 442: [ETRM 60990[SHAMROC5 0.6500]G1]
1.7950 0.10220

CHNL# 450: [ETRM 773[SECST 20.000]1]
1.1312 0.87580

CHNL# 416: [ETRM 667[CANCARB9 13.800]1]
1.1918 0.49310

CHNL# 449: [ETRM990007[FORTYMILE_6 0.6900]G2]
1.8534 0.34900

CHNL# 448: [ETRM990004[FORTYMILE_3 0.6900]G1]
1.8534 0.34900

TIME (SECONDS)
0.0 2.0000 4.0000 6.0000 8.0000 10.000 12.000 14.000 16.000 18.000 20.000

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_676L_BOWMANTON

FILE: scn4_SL_676L_Bowmanton.out

THU, APR 14 2022 14:28

BRANCH P

CHNL# 539: [1035L_P]
851.29 -222.0

CHNL# 533: [1034L_P]
822.01 -220.6

CHNL# 525: [983L_L1_P]
220.10 -831.5

CHNL# 523: [983L_L3_P]
183.28 -713.3

CHNL# 521: [983L_L2_P]
183.09 -712.4

CHNL# 519: [964L_L2_P]
280.44 -149.3

TIME (SECONDS)
0.0 2.0000 4.0000 6.0000 8.0000 10.000 12.000 14.000 16.000 18.000 20.000

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_676L_BOWMANTON

FILE: scn4_SL_676L_Bowmanton.out

THU, APR 14 2022 14:28

REACTIVE POWER

CHNL# 278: [VARS 61994[GRANLEA6 0.6900]G1]
2.8095 -0.8425

CHNL# 276: [VARS 60990[SHAMROC5 0.6500]G1]
5.6036 -1.624

CHNL# 284: [VARS 773[SECST 20.000]1]
1.1759 -1.153

CHNL# 250: [VARS 667[CANCARB9 13.800]1]
1.3045 -0.5970

CHNL# 283: [VARS990007[FORTYMILE_6 0.6900]G2]
3.8769 -1.341

CHNL# 282: [VARS990004[FORTYMILE_3 0.6900]G1]
3.8769 -1.341

TIME (SECONDS)
0.0 2.0000 4.0000 6.0000 8.0000 10.000 12.000 14.000 16.000 18.000 20.000

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_676L_BOWMANTON

FILE: scn4_SL_676L_Bowmanton.out

THU, APR 14 2022 14:28

BUS VOLTAGE

CHNL# 518: [VOLT 976 [ROTBAUR 138.00]]
1.1636 0.09850

CHNL# 513: [VOLT 320 [CHAPPIC7 138.00]]
1.2277 0.73370

CHNL# 516: [VOLT 662 [WHITLA1 240.00]]
1.5768 0.12110

CHNL# 515: [VOLT 659 [BOWMAN2 138.00]]
1.1546 -0.0883

CHNL# 517: [VOLT 669 [BOWMAN1 240.00]]
1.3089 0.16180

TIME (SECONDS)
0.0 2.0000 4.0000 6.0000 8.0000 10.000 12.000 14.000 16.000 18.000 20.000

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_676L_BOWMANTON

FILE: scn4_SL_676L_Bowmanton.out

THU, APR 14 2022 14:28 BRANCH P

CHNL# 531: [964L_L5_P]
137.16 -318.9
CHNL# 535: [964L_L4_P]
215.84 -836.0
CHNL# 537: [1005L_P]
-227.3 -384.5

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_676L_BULLSHEAD

FILE: scn4_SL_676L_Bullshead.out

THU, APR 14 2022 14:28 ROTOR ANGLE

CHNL# 37: [ANGL 775[SECCT2 21.000]3]
28.621 -75.37
CHNL# 36: [ANGL 774[SECCT1 21.000]2]
28.621 -75.37
CHNL# 35: [ANGL 773[SECST 20.000]1]
29.449 -74.29
CHNL# 1: [ANGL 667[CANCARB9 13.800]1]
83.711 -46.60

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_676L_BOWMANTON

FILE: scn4_SL_676L_Bowmanton.out

THU, APR 14 2022 14:28 BRANCH Q

CHNL# 540: [1035L_Q]
232.69 -381.3
CHNL# 534: [1034L_Q]
216.50 -377.5
CHNL# 526: [983L_L1_Q]
286.24 -522.6
CHNL# 524: [983L_L3_Q]
357.22 -757.9
CHNL# 522: [983L_L2_Q]
362.31 -798.2
CHNL# 520: [964L_L2_Q]
422.00 -360.1

TIME (SECONDS)

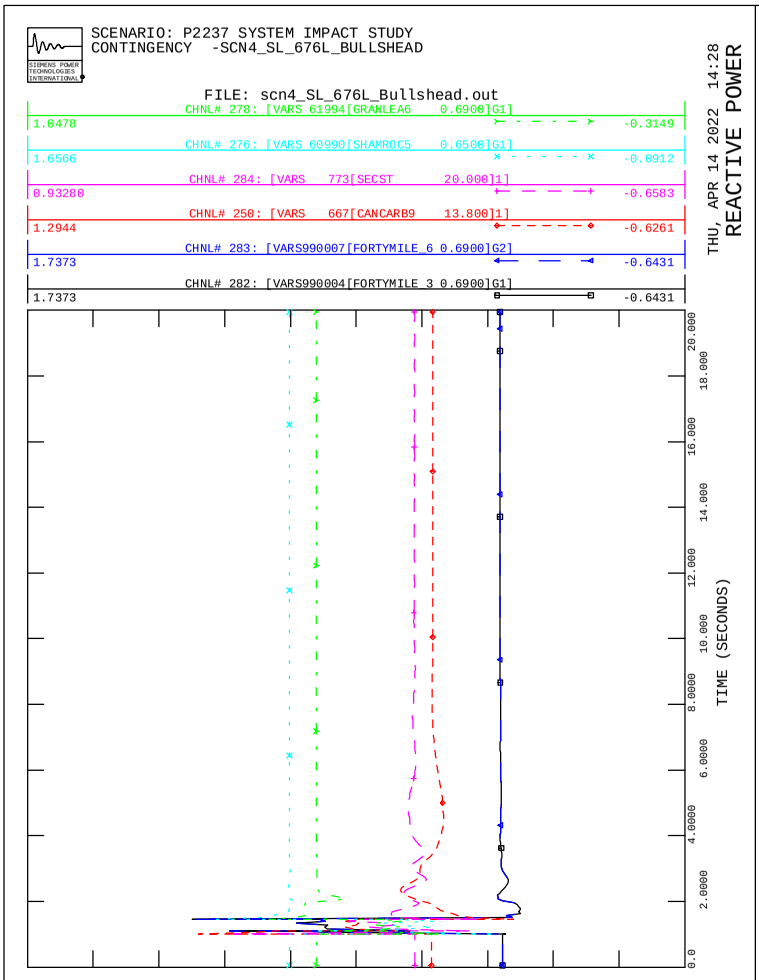
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_676L_BOWMANTON

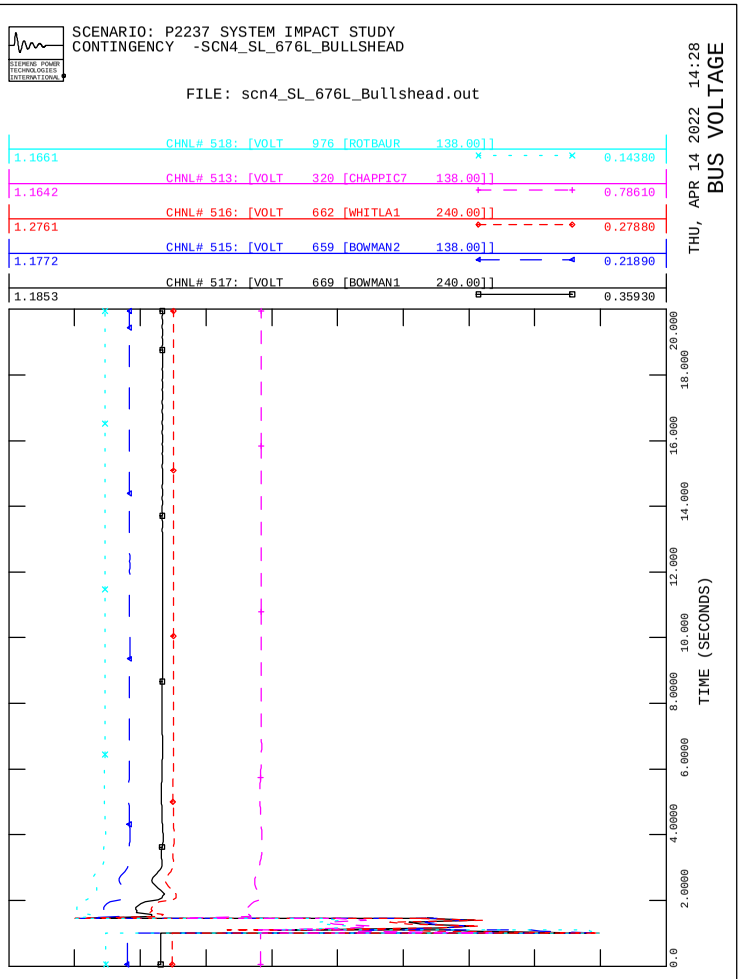
FILE: scn4_SL_676L_Bowmanton.out

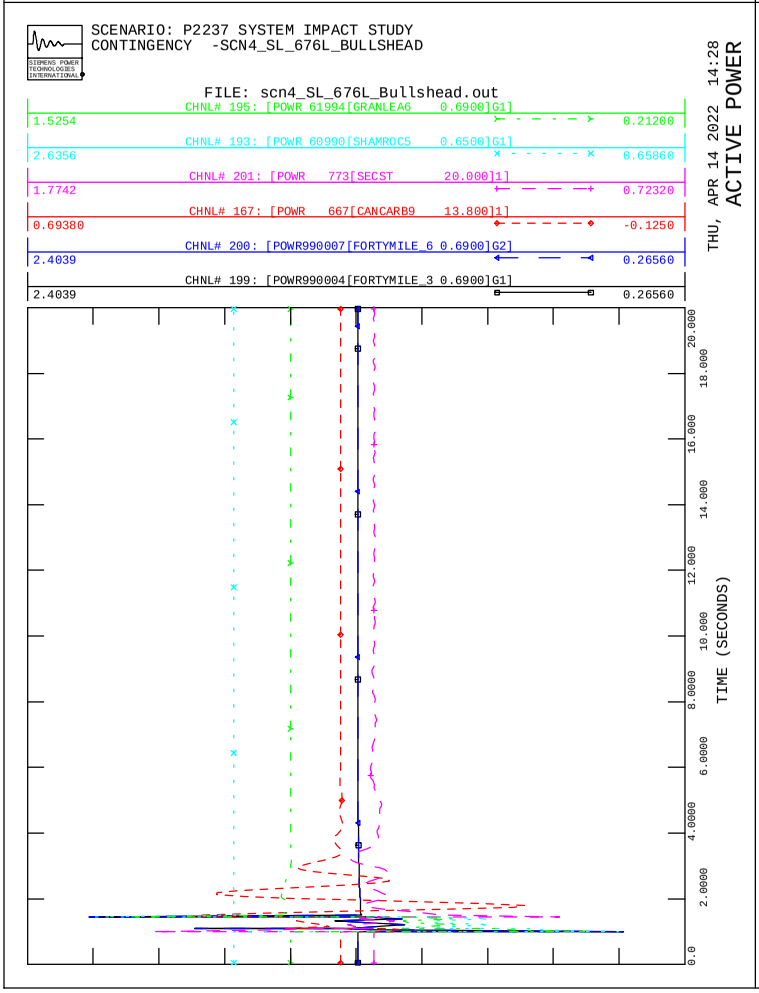
THU, APR 14 2022 14:28 BRANCH Q

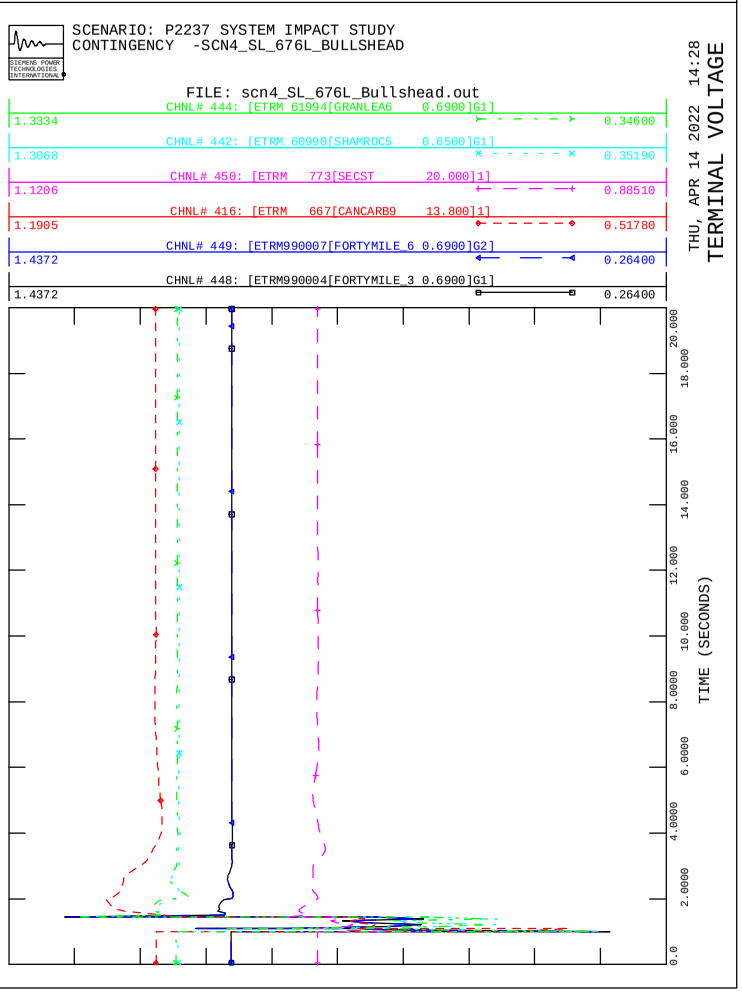
CHNL# 532: [964L_L5_Q]
145.02 -206.3
CHNL# 536: [964L_L4_Q]
406.73 -702.0
CHNL# 538: [1005L_Q]
116.09 -106.1

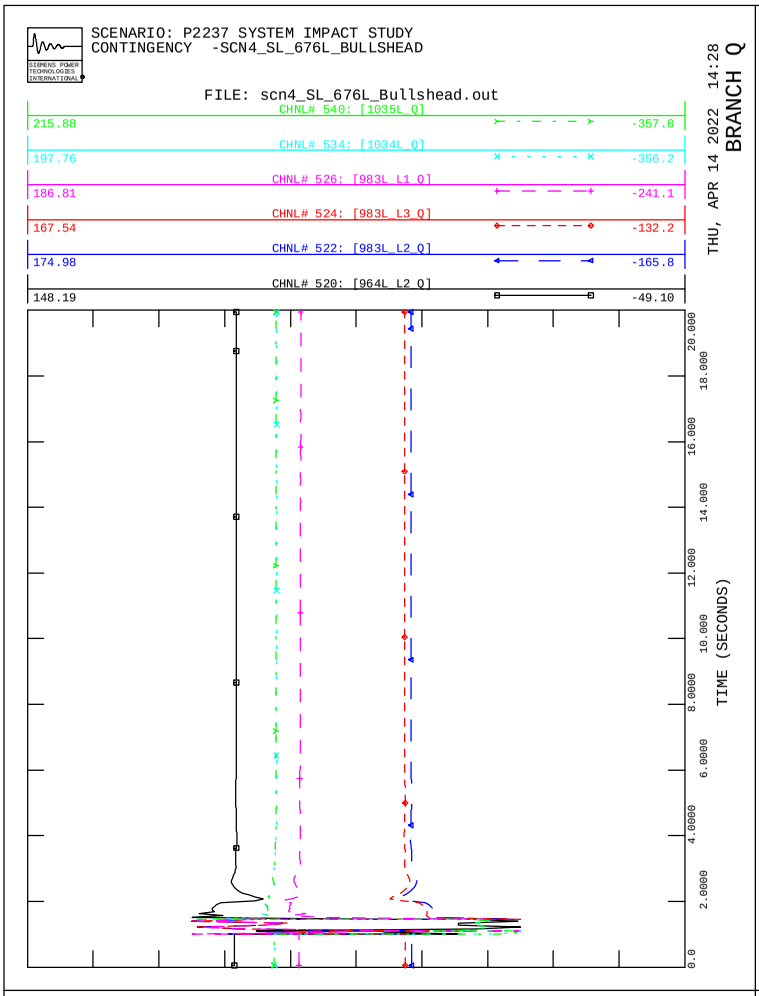
TIME (SECONDS)

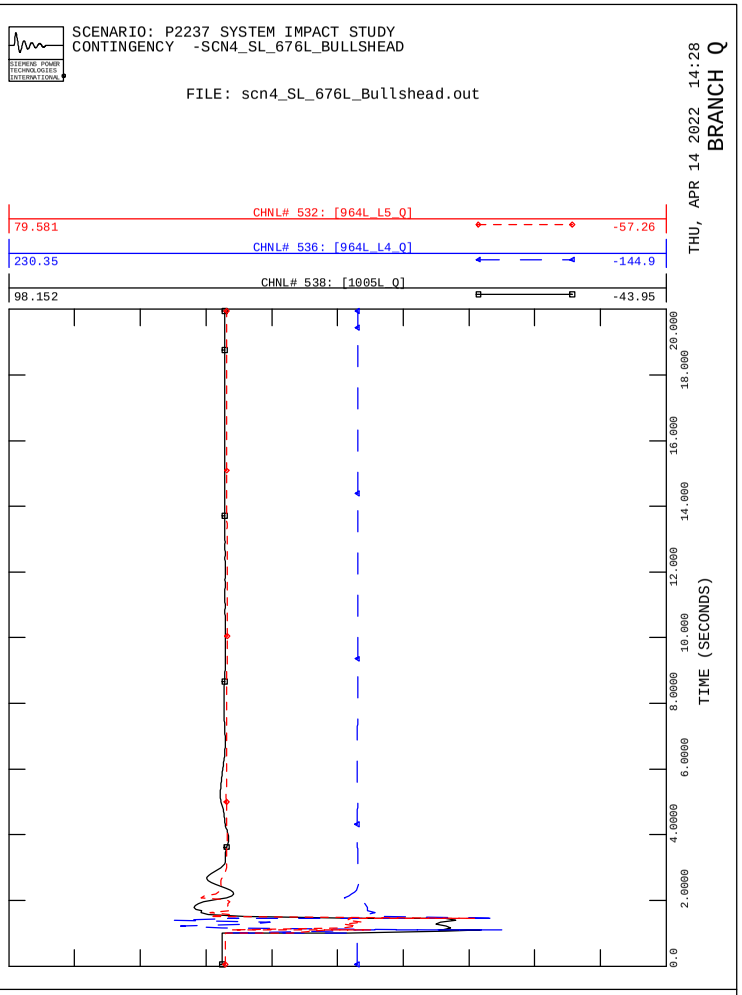

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_676L_BULLSHEAD
FILE: scn4_SL_676L_Bullshead.out
CHNL# 278: [VARS 61994[GRANLEA6 0.6900]G1]
1.0478
-0.3149
CHNL# 276: [VARS 60990[SHAMROC5 0.6500]G1]
1.6566
-0.0912
CHNL# 284: [VARS 773[SECST 20.000]1]
0.93280
-0.6583
CHNL# 250: [VARS 667[CANCARB9 13.800]1]
1.2944
-0.6261
CHNL# 283: [VARS990007[FORTYMILE_6 0.6900]G2]
1.7373
-0.6431
CHNL# 282: [VARS990004[FORTYMILE_3 0.6900]G1]
1.7373
-0.6431
THU, APR 14 2022 14:28
REACTIVE POWER
TIME (SECONDS)
0.0
2.0000
4.0000
6.0000
8.0000
10.000
12.000
14.000
16.000
18.000
20.000

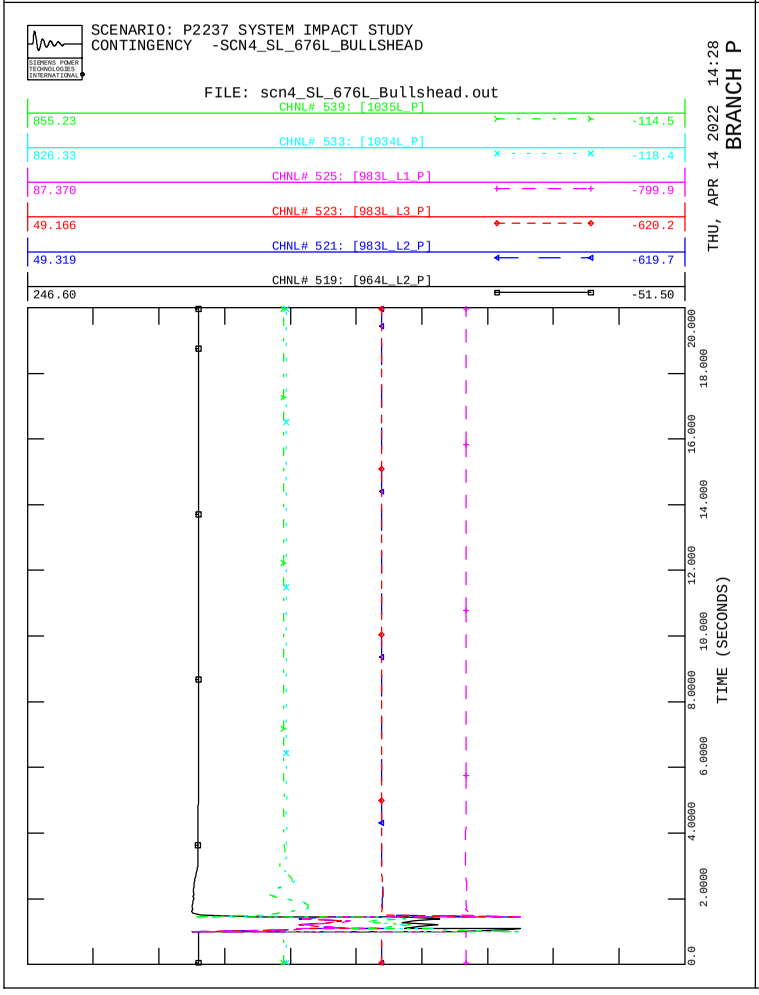

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_676L_BULLSHEAD
FILE: scn4_SL_676L_Bullshead.out
CHNL# 518: [VOLT 976 [ROTBAUR 138.00]]
1.1661
0.14380
CHNL# 513: [VOLT 320 [CHAPPIC7 138.00]]
1.1642
0.78610
CHNL# 516: [VOLT 662 [WHITLA1 240.00]]
1.2761
0.27880
CHNL# 515: [VOLT 659 [BOWMAN2 138.00]]
1.1772
0.21890
CHNL# 517: [VOLT 669 [BOWMAN1 240.00]]
1.1853
0.35930
THU, APR 14 2022 14:28
BUS VOLTAGE
TIME (SECONDS)
0.0
2.0000
4.0000
6.0000
8.0000
10.000
12.000
14.000
16.000
18.000
20.000

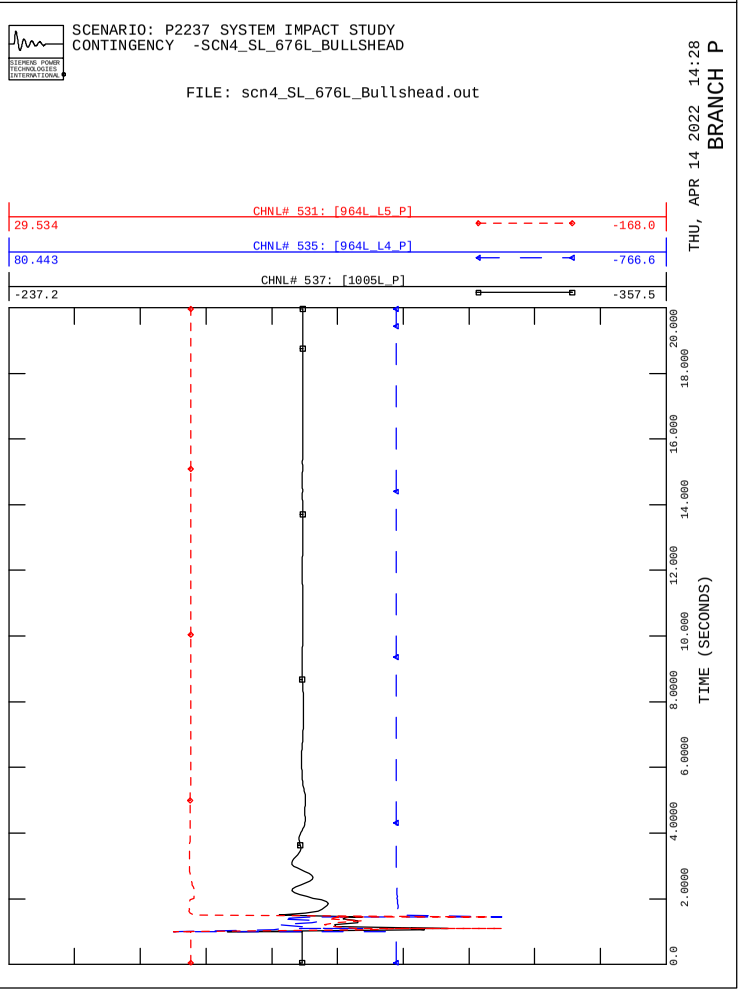

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_676L_BULLSHEAD
FILE: scn4_SL_676L_Bullshead.out
CHNL# 195: [POWR 61994[GRANLEA6 0.6900]G1]
1.5254
0.21200
CHNL# 193: [POWR 60990[SHAMROC5 0.6500]G1]
2.6356
0.65860
CHNL# 201: [POWR 773[SECST 20.000]1]
1.7742
0.72320
CHNL# 167: [POWR 667[CANCARB9 13.800]1]
0.69380
-0.1250
CHNL# 200: [POWR990007[FORTYMILE_6 0.6900]G2]
2.4039
0.26560
CHNL# 199: [POWR990004[FORTYMILE_3 0.6900]G1]
2.4039
0.26560
THU, APR 14 2022 14:28
ACTIVE POWER
TIME (SECONDS)
0.0
2.0000
4.0000
6.0000
8.0000
10.000
12.000
14.000
16.000
18.000
20.000


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_676L_BULLSHEAD
FILE: scn4_SL_676L_Bullshead.out
CHNL# 444: [ETRM 61994[GRANLEA6 0.6900]G1]
1.3334
0.34600
CHNL# 442: [ETRM 60990[SHAMROC5 0.6500]G1]
1.3068
0.35190
CHNL# 450: [ETRM 773[SECST 20.000]1]
1.1206
0.88510
CHNL# 416: [ETRM 667[CANCARB9 13.800]1]
1.1905
0.51780
CHNL# 449: [ETRM990007[FORTYMILE_6 0.6900]G2]
1.4372
0.26400
CHNL# 448: [ETRM990004[FORTYMILE_3 0.6900]G1]
1.4372
0.26400
THU, APR 14 2022 14:28
TERMINAL VOLTAGE
TIME (SECONDS)
0.0
2.0000
4.0000
6.0000
8.0000
10.000
12.000
14.000
16.000
18.000
20.000


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_676L_BULLSHEAD
FILE: scn4_SL_676L_Bullshead.out
CHNL# 540: [1035L_Q]
215.88
-357.0
CHNL# 534: [1034L_Q]
197.76
-356.2
CHNL# 526: [983L_L1_Q]
186.81
-241.1
CHNL# 524: [983L_L3_Q]
167.54
-132.2
CHNL# 522: [983L_L2_Q]
174.98
-165.8
CHNL# 520: [964L_L2_Q]
148.19
-49.10
BRANCH Q
THU, APR 14 2022 14:28
TIME (SECONDS)
0.0
2.0000
4.0000
6.0000
8.0000
10.000
12.000
14.000
16.000
18.000
20.000


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_676L_BULLSHEAD
FILE: scn4_SL_676L_Bullshead.out
CHNL# 532: [964L_L5_Q]
79.581
-57.26
CHNL# 536: [964L_L4_Q]
230.35
-144.9
CHNL# 538: [1005L_Q]
98.152
-43.95
BRANCH Q
THU, APR 14 2022 14:28
TIME (SECONDS)
0.0
2.0000
4.0000
6.0000
8.0000
10.000
12.000
14.000
16.000
18.000
20.000


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_676L_BULLSHEAD
FILE: scn4_SL_676L_Bullshead.out
CHNL# 539: [1035L_P]
855.23
-114.5
CHNL# 533: [1034L_P]
826.33
-118.4
CHNL# 525: [983L_L1_P]
87.370
-799.9
CHNL# 523: [983L_L3_P]
49.166
-620.2
CHNL# 521: [983L_L2_P]
49.319
-619.7
CHNL# 519: [964L_L2_P]
246.60
-51.50
BRANCH P
THU, APR 14 2022 14:28
TIME (SECONDS)
0.0
2.0000
4.0000
6.0000
8.0000
10.000
12.000
14.000
16.000
18.000
20.000


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_676L_BULLSHEAD
FILE: scn4_SL_676L_Bullshead.out
CHNL# 531: [964L_L5_P]
29.534
-168.0
CHNL# 535: [964L_L4_P]
80.443
-766.6
CHNL# 537: [1005L_P]
-237.2
-357.5
BRANCH P
THU, APR 14 2022 14:28
TIME (SECONDS)
0.0
2.0000
4.0000
6.0000
8.0000
10.000
12.000
14.000
16.000
18.000
20.000

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_879L_BOWMANTON

FILE: scn4_SL_879L_Bowmanton.out

THU, APR 14 2022 14:28

ACTIVE POWER

CHNL# 195: [POWR 61994[GRANLEA6 0.6900]G1]
1.2767 0.65500

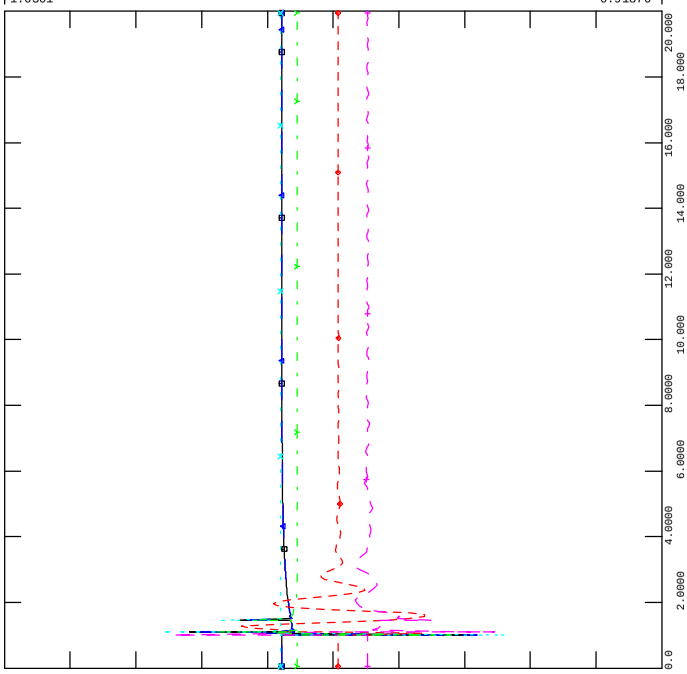
CHNL# 193: [POWR 60990[SHAMROC5 0.6500]G1]
2.3722 1.5240

CHNL# 201: [POWR 773[SECST 20.000]1]
1.6530 0.86910

CHNL# 167: [POWR 667[CANCARB9 13.800]1]
0.58560 0.03110

CHNL# 200: [POWR990007[FORTYMILE_6 0.6900]G2]
1.6301 0.91870

CHNL# 199: [POWR990004[FORTYMILE_3 0.6900]G1]
1.6301 0.91870



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_879L_BOWMANTON

FILE: scn4_SL_879L_Bowmanton.out

THU, APR 14 2022 14:28

TERMINAL VOLTAGE

CHNL# 444: [ETRM 61994[GRANLEA6 0.6900]G1]
1.2461 0.75310

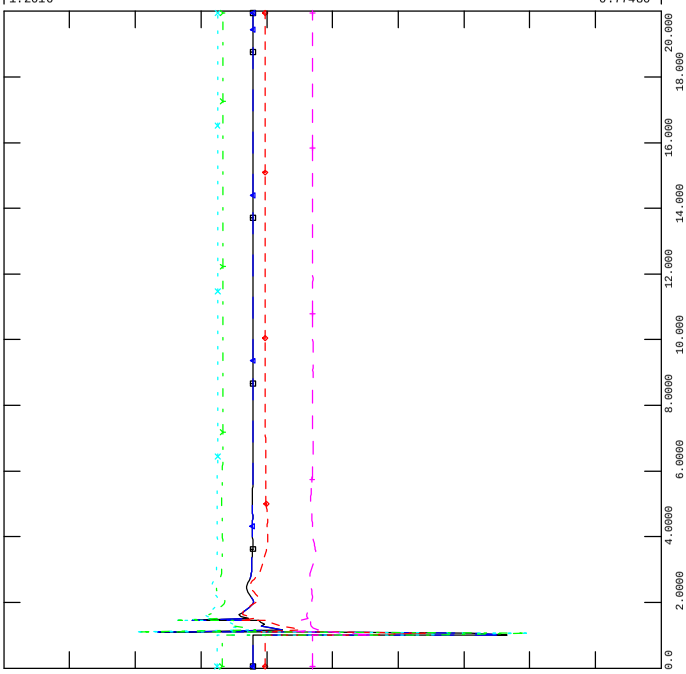
CHNL# 442: [ETRM 60990[SHAMROC5 0.6500]G1]
1.2268 0.71560

CHNL# 450: [ETRM 773[SECST 20.000]1]
1.1177 0.88840

CHNL# 416: [ETRM 667[CANCARB9 13.800]1]
1.1507 0.87230

CHNL# 449: [ETRM990007[FORTYMILE_6 0.6900]G2]
1.2016 0.77480

CHNL# 448: [ETRM990004[FORTYMILE_3 0.6900]G1]
1.2016 0.77480



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_879L_BOWMANTON

FILE: scn4_SL_879L_Bowmanton.out

THU, APR 14 2022 14:28

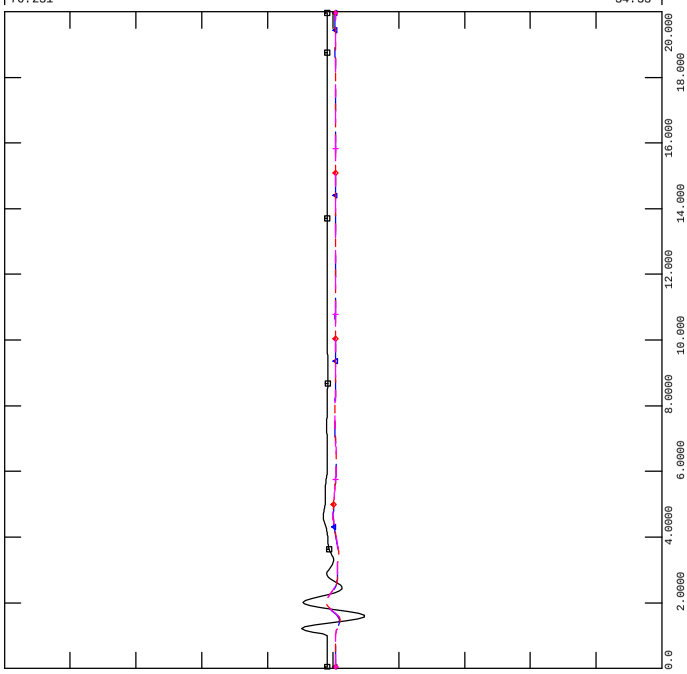
ROTOR ANGLE

CHNL# 37: [ANGL 775[SECCT2 21.000]3]
27.509 -74.68

CHNL# 36: [ANGL 774[SECCT1 21.000]2]
27.509 -74.68

CHNL# 35: [ANGL 773[SECST 20.000]1]
28.364 -73.55

CHNL# 1: [ANGL 667[CANCARB9 13.800]1]
76.231 -34.33



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_879L_BOWMANTON

FILE: scn4_SL_879L_Bowmanton.out

THU, APR 14 2022 14:28

REACTIVE POWER

CHNL# 278: [VARS 61994[GRANLEA6 0.6900]G1]
1.0171 -0.1341

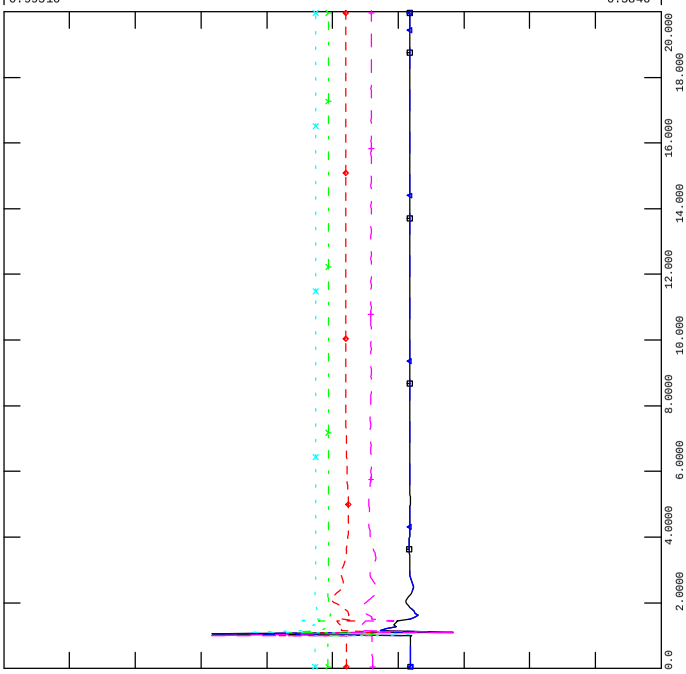
CHNL# 276: [VARS 60990[SHAMROC5 0.6500]G1]
1.5976 0.25130

CHNL# 284: [VARS 773[SECST 20.000]1]
0.88320 -0.7002

CHNL# 250: [VARS 667[CANCARB9 13.800]1]
0.73600 -0.4581

CHNL# 283: [VARS990007[FORTYMILE_6 0.6900]G2]
0.99510 -0.5846

CHNL# 282: [VARS990004[FORTYMILE_3 0.6900]G1]
0.99510 -0.5846



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_879L_BOWMANTON

FILE: scn4_SL_879L_Bowmanton.out

THU, APR 14 2022 14:28 BRANCH P

CHNL# 539: [1035L_P]
582.75 342.84
CHNL# 533: [1034L_P]
557.64 326.24
CHNL# 525: [983L_L1_P]
-365.2 -612.5
CHNL# 523: [983L_L3_P]
-223.1 -374.4
CHNL# 521: [983L_L2_P]
-222.9 -374.1
CHNL# 519: [964L_L2_P]
223.62 105.04

TIME (SECONDS)
0.0 2.0000 4.0000 6.0000 8.0000 10.000 12.000 14.000 16.000 18.000 20.000

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_879L_BOWMANTON

FILE: scn4_SL_879L_Bowmanton.out

THU, APR 14 2022 14:28 BRANCH P

CHNL# 531: [964L_L5_P]
19.833 -79.94
CHNL# 535: [964L_L4_P]
-303.0 -502.3
CHNL# 537: [1005L_P]
-201.6 -364.2

TIME (SECONDS)
0.0 2.0000 4.0000 6.0000 8.0000 10.000 12.000 14.000 16.000 18.000 20.000

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_879L_BOWMANTON

FILE: scn4_SL_879L_Bowmanton.out

THU, APR 14 2022 14:28 BUS VOLTAGE

CHNL# 518: [VOLT 976 [ROTBAUR 138.00]]
1.1416 0.78920
CHNL# 513: [VOLT 320 [CHAPPIC7 138.00]]
1.1194 0.52880
CHNL# 516: [VOLT 662 [WHITLA1 240.00]]
1.1856 0.70230
CHNL# 515: [VOLT 659 [BOWMAN2 138.00]]
1.1396 0.75130
CHNL# 517: [VOLT 669 [BOWMAN1 240.00]]
1.1371 0.71890

TIME (SECONDS)
0.0 2.0000 4.0000 6.0000 8.0000 10.000 12.000 14.000 16.000 18.000 20.000

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_879L_BOWMANTON

FILE: scn4_SL_879L_Bowmanton.out

THU, APR 14 2022 14:28 BRANCH Q

CHNL# 540: [1035L_Q]
68.682 -104.5
CHNL# 534: [1034L_Q]
55.689 -108.8
CHNL# 526: [983L_L1_Q]
145.48 -95.99
CHNL# 524: [983L_L3_Q]
125.36 -66.53
CHNL# 522: [983L_L2_Q]
121.23 -94.60
CHNL# 520: [964L_L2_Q]
180.74 -61.68

TIME (SECONDS)
0.0 2.0000 4.0000 6.0000 8.0000 10.000 12.000 14.000 16.000 18.000 20.000

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_879L_BURDETT

FILE: scn4_SL_879L_Burdett.out

THU, APR 14 2022 14:28

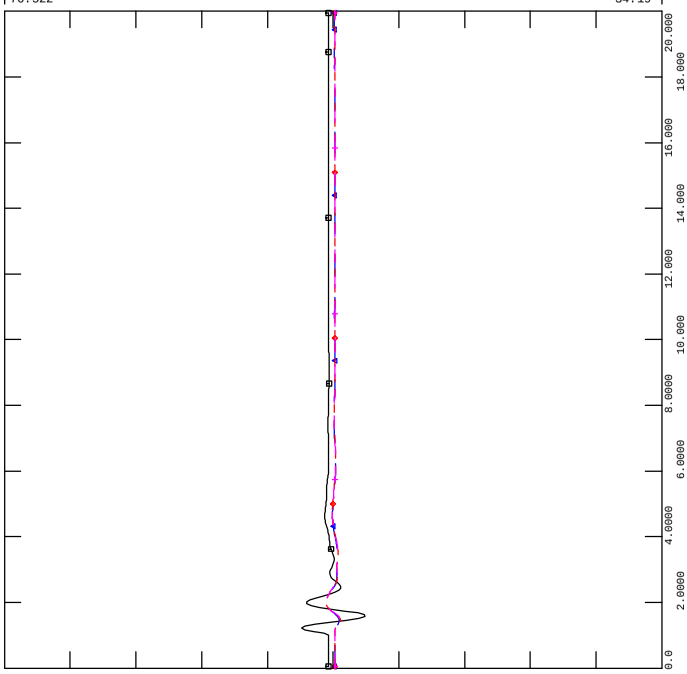
ROTOR ANGLE

CHNL# 37: [ANGL 775[SECCT2 21.000]3]
27.439 -74.80

CHNL# 36: [ANGL 774[SECCT1 21.000]2]
27.439 -74.80

CHNL# 35: [ANGL 773[SECST 20.000]1]
28.288 -73.67

CHNL# 1: [ANGL 667[CANCARB9 13.800]1]
76.522 -34.19



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_879L_BURDETT

FILE: scn4_SL_879L_Burdett.out

THU, APR 14 2022 14:28

REACTIVE POWER

CHNL# 278: [VARS 61994[GRANLEA6 0.6900]G1]
1.0301 -0.1676

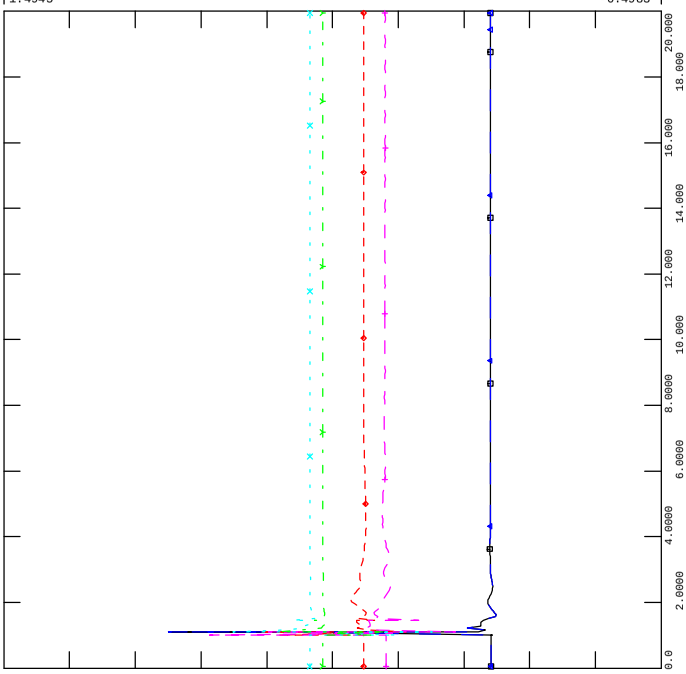
CHNL# 276: [VARS 60990[SHAMROC5 0.6500]G1]
1.6265 0.19340

CHNL# 284: [VARS 773[SECST 20.000]1]
0.92410 -0.6726

CHNL# 250: [VARS 667[CANCARB9 13.800]1]
0.81860 -0.4682

CHNL# 283: [VARS990007[FORTYMILE_6 0.6900]G2]
1.4945 -0.4983

CHNL# 282: [VARS990004[FORTYMILE 3 0.6900]G1]
1.4945 -0.4983



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_879L_BOWMANTON

FILE: scn4_SL_879L_Bowmanton.out

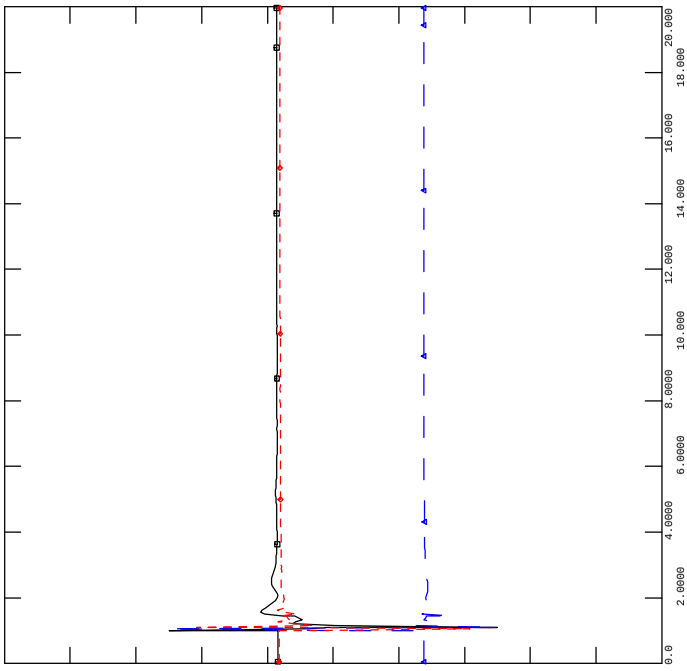
THU, APR 14 2022 14:28

BRANCH Q

CHNL# 532: [964L_L5_Q]
91.731 -45.04

CHNL# 536: [964L_L4_Q]
192.03 -59.57

CHNL# 538: [1005L_Q]
145.43 -79.28



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_879L_BURDETT

FILE: scn4_SL_879L_Burdett.out

THU, APR 14 2022 14:28

ACTIVE POWER

CHNL# 195: [POWR 61994[GRANLEA6 0.6900]G1]
1.4543 0.59960

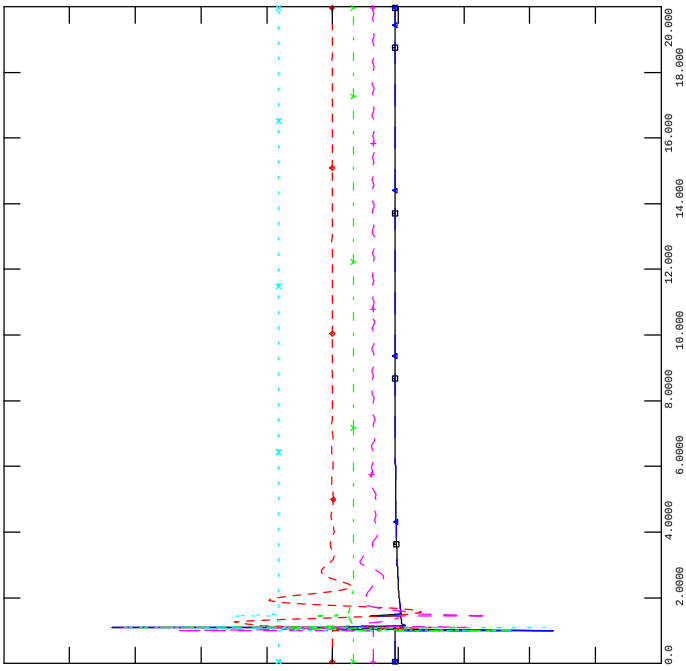
CHNL# 193: [POWR 60990[SHAMROC5 0.6500]G1]
2.4867 1.3599

CHNL# 201: [POWR 773[SECST 20.000]1]
1.6471 0.88700

CHNL# 167: [POWR 667[CANCARB9 13.800]1]
0.58860 0.01860

CHNL# 200: [POWR990007[FORTYMILE_6 0.6900]G2]
2.0531 0.83800

CHNL# 199: [POWR990004[FORTYMILE_3 0.6900]G1]
2.0531 0.83800



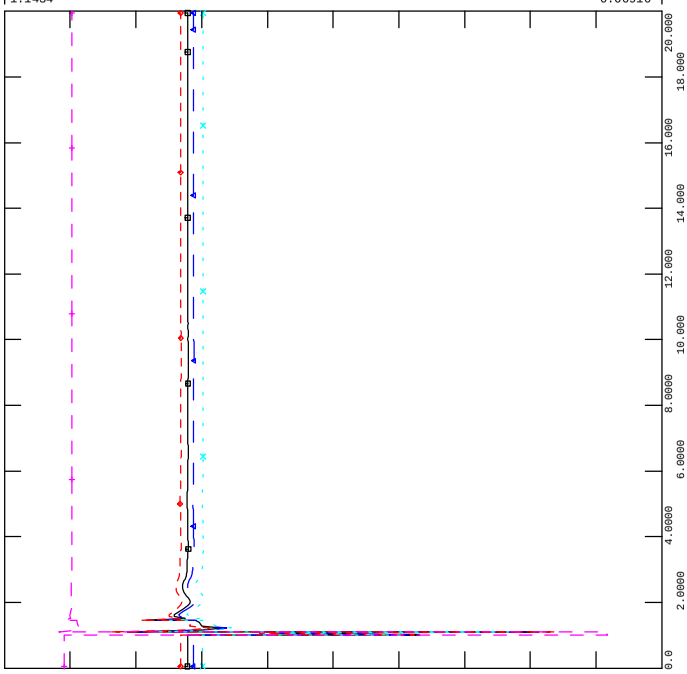
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_879L_BURDETT

FILE: scn4_SL_879L_Burdett.out

THU, APR 14 2022 14:28

BUS VOLTAGE

CHNL# 518: [VOLT 976 [ROTBAUR 138.00]]
1.1444 0.71550
CHNL# 513: [VOLT 320 [CHAPPIC7 138.00]]
1.1284 -0.0753
CHNL# 516: [VOLT 662 [WHITLA1 240.00]]
1.1943 0.57390
CHNL# 515: [VOLT 659 [BOWMAN2 138.00]]
1.1446 0.65740
CHNL# 517: [VOLT 669 [BOWMAN1 240.00]]
1.1434 0.60910



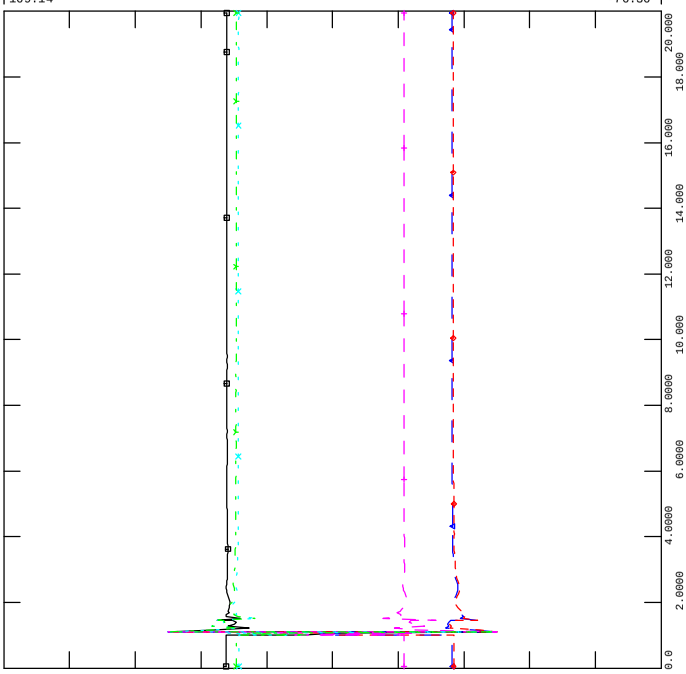
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_879L_BURDETT

FILE: scn4_SL_879L_Burdett.out

THU, APR 14 2022 14:28

BRANCH Q

CHNL# 540: [1035L Q]
71.110 -127.6
CHNL# 534: [1034L Q]
56.770 -131.0
CHNL# 526: [983L_L1_Q]
204.31 -114.9
CHNL# 524: [983L_L3_Q]
121.17 -62.67
CHNL# 522: [983L_L2_Q]
123.28 -92.89
CHNL# 520: [964L_L2_Q]
169.14 -76.36



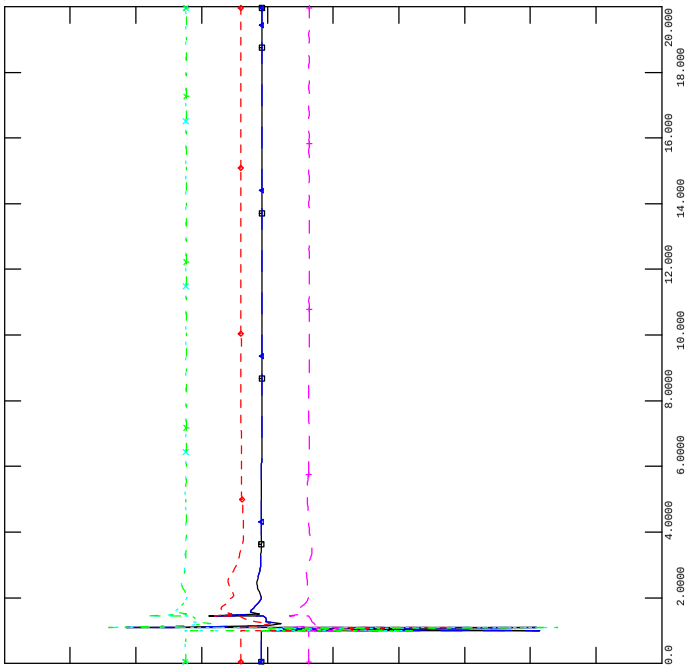
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_879L_BURDETT

FILE: scn4_SL_879L_Burdett.out

THU, APR 14 2022 14:28

TERMINAL VOLTAGE

CHNL# 444: [ETRM 61994[GRANLEA6 0.6900]G1]
1.2563 0.62670
CHNL# 442: [ETRM 60990[SHAMROC5 0.6500]G1]
1.2356 0.60110
CHNL# 450: [ETRM 773[SECST 20.000]1]
1.1168 0.88620
CHNL# 416: [ETRM 667[CANCARB9 13.800]1]
1.1525 0.83980
CHNL# 449: [ETRM990007[FORTYMILE_6 0.6900]G2]
1.2509 0.71160
CHNL# 448: [ETRM990004[FORTYMILE_3 0.6900]G1]
1.2509 0.71160



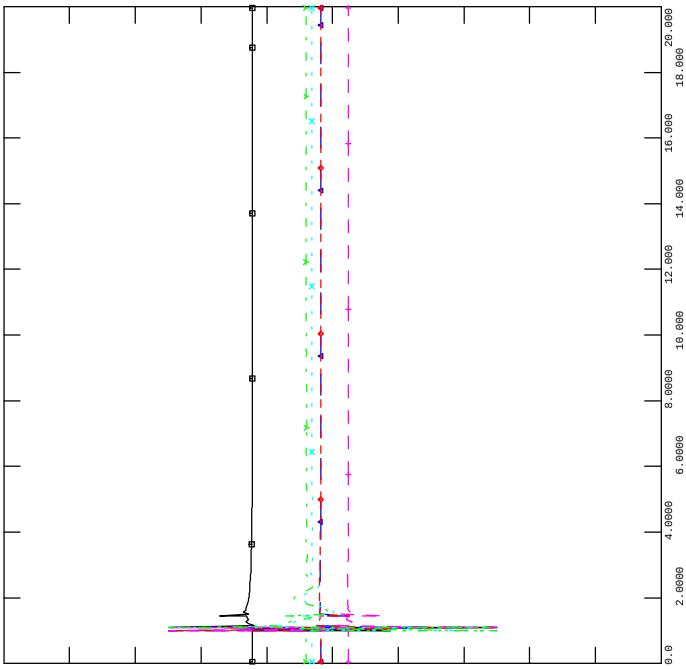
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_879L_BURDETT

FILE: scn4_SL_879L_Burdett.out

THU, APR 14 2022 14:28

BRANCH P

CHNL# 539: [1035L P]
643.22 282.84
CHNL# 533: [1034L P]
619.79 267.44
CHNL# 525: [983L_L1_P]
-300.3 -689.4
CHNL# 523: [983L_L3_P]
-172.4 -461.0
CHNL# 521: [983L_L2_P]
-172.3 -460.5
CHNL# 519: [964L_L2_P]
228.98 70.689



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_879L_BURDETT

FILE: scn4_SL_879L_Burdett.out

THU, APR 14 2022 14:28 BRANCH Q

CHNL# 532: [964L_L5_Q] 82.709 -58.65
CHNL# 536: [964L_L4_Q] 217.63 -62.75
CHNL# 538: [1005L_Q] 100.75 -41.43

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_880L_AL_ROTHBAUER

FILE: scn4_SL_880L_Al_Rothbauer.out

THU, APR 14 2022 14:28 ACTIVE POWER

CHNL# 195: [POWR 61994[GRANLEA6 0.6900]G1] 1.3106 0.21010
CHNL# 193: [POWR 60990[SHAMROC5 0.6500]G1] 2.3201 0.65480
CHNL# 201: [POWR 773[SECST 20.000]1] 1.7756 0.83700
CHNL# 167: [POWR 667[CANCARB9 13.800]1] 0.69700 -0.0014
CHNL# 200: [POWR990007[FORTYMILE_6 0.6900]G2] 2.0997 0.26260
CHNL# 199: [POWR990004[FORTYMILE 3 0.6900]G1] 2.0997 0.26260

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_879L_BURDETT

FILE: scn4_SL_879L_Burdett.out

THU, APR 14 2022 14:28 BRANCH P

CHNL# 531: [964L_L5_P] 21.682 -111.1
CHNL# 535: [964L_L4_P] -235.5 -603.5
CHNL# 537: [1005L_P] -214.8 -346.9

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_880L_AL_ROTHBAUER

FILE: scn4_SL_880L_Al_Rothbauer.out

THU, APR 14 2022 14:28 ROTOR ANGLE

CHNL# 37: [ANGL 775[SECCT2 21.000]3] 27.391 -74.54
CHNL# 36: [ANGL 774[SECCT1 21.000]2] 27.391 -74.54
CHNL# 35: [ANGL 773[SECST 20.000]1] 28.281 -73.56
CHNL# 1: [ANGL 667[CANCARB9 13.800]1] 76.855 -37.14

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_880L_AL_ROTHBAUER

FILE: scn4_SL_880L_Al_Rothbauer.out

THU, APR 14 2022 14:28

TERMINAL VOLTAGE

CHNL# 444: [ETRM 61994[GRANLEA6 0.6900]G1] 1.3746 0.34390
CHNL# 442: [ETRM 60990[SHAMROC5 0.6500]G1] 1.3509 0.34990
CHNL# 450: [ETRM 773[SECST 20.000]1] 1.1217 0.88500
CHNL# 416: [ETRM 667[CANCARB9 13.800]1] 1.1729 0.50650
CHNL# 449: [ETRM990007[FORTYMILE_6 0.6900]G2] 1.4071 0.26170
CHNL# 448: [ETRM990004[FORTYMILE_3 0.6900]G1] 1.4071 0.26170

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_880L_AL_ROTHBAUER

FILE: scn4_SL_880L_Al_Rothbauer.out

THU, APR 14 2022 14:28

BRANCH P

CHNL# 539: [1035L P] 708.46 -67.32
CHNL# 533: [1034L P] 676.89 -70.27
CHNL# 525: [983L_L1_P] 53.738 -694.8
CHNL# 523: [983L_L3_P] 22.312 -536.8
CHNL# 521: [983L_L2_P] 22.511 -536.5
CHNL# 519: [964L L2 P] 246.19 -54.31

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_880L_AL_ROTHBAUER

FILE: scn4_SL_880L_Al_Rothbauer.out

THU, APR 14 2022 14:28

REACTIVE POWER

CHNL# 278: [VARS 61994[GRANLEA6 0.6900]G1] 1.0423 -0.3158
CHNL# 276: [VARS 60990[SHAMROC5 0.6500]G1] 1.6576 -0.0930
CHNL# 284: [VARS 773[SECST 20.000]1] 0.93390 -0.8474
CHNL# 250: [VARS 667[CANCARB9 13.800]1] 1.2966 -0.6793
CHNL# 283: [VARS990007[FORTYMILE_6 0.6900]G2] 1.4643 -0.5079
CHNL# 282: [VARS990004[FORTYMILE_3 0.6900]G1] 1.4643 -0.5079

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_880L_AL_ROTHBAUER

FILE: scn4_SL_880L_Al_Rothbauer.out

THU, APR 14 2022 14:28

BUS VOLTAGE

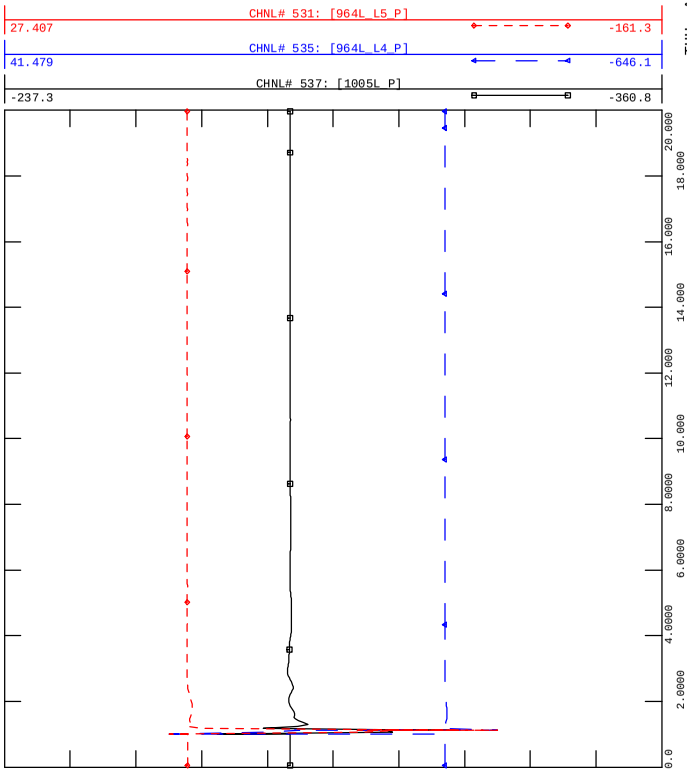
CHNL# 518: [VOLT 976 [ROTBAUR 138.00]] 1.1554 0.13860
CHNL# 513: [VOLT 320 [CHAPPIC7 138.00]] 1.1849 0.78570
CHNL# 516: [VOLT 662 [WHITLA1 240.00]] 1.3214 0.27670
CHNL# 515: [VOLT 659 [BOWMAN2 138.00]] 1.2098 0.21730
CHNL# 517: [VOLT 669 [BOWMAN1 240.00]] 1.2358 0.35800

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_880L_AL_ROTHBAUER

FILE: scn4_SL_880L_Al_Rothbauer.out

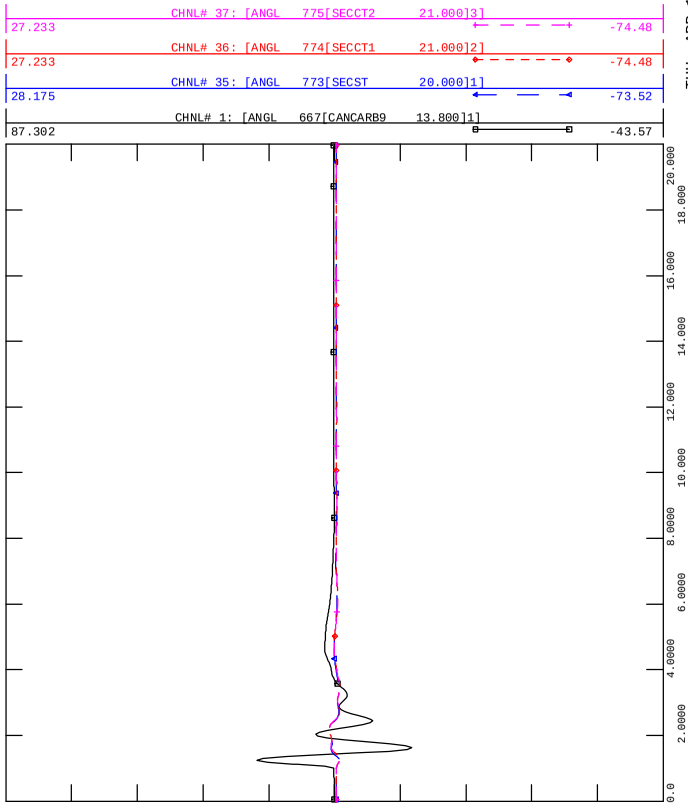
THU, APR 14 2022 14:28 BRANCH P



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_880L_BULLSHEAD

FILE: scn4_SL_880L_Bullshead.out

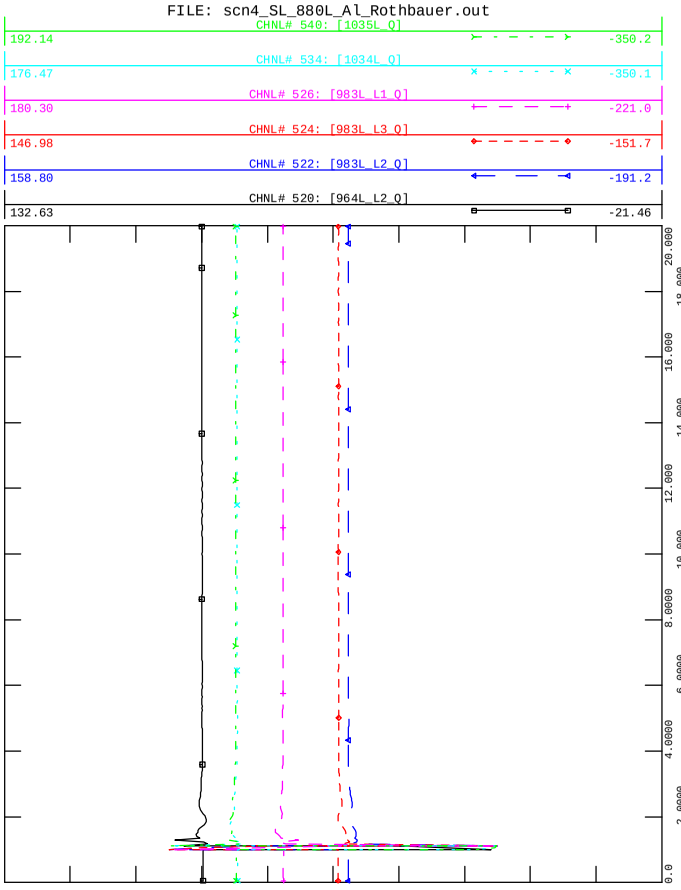
THU, APR 14 2022 14:28 ROTOR ANGLE



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_880L_AL_ROTHBAUER

FILE: scn4_SL_880L_Al_Rothbauer.out

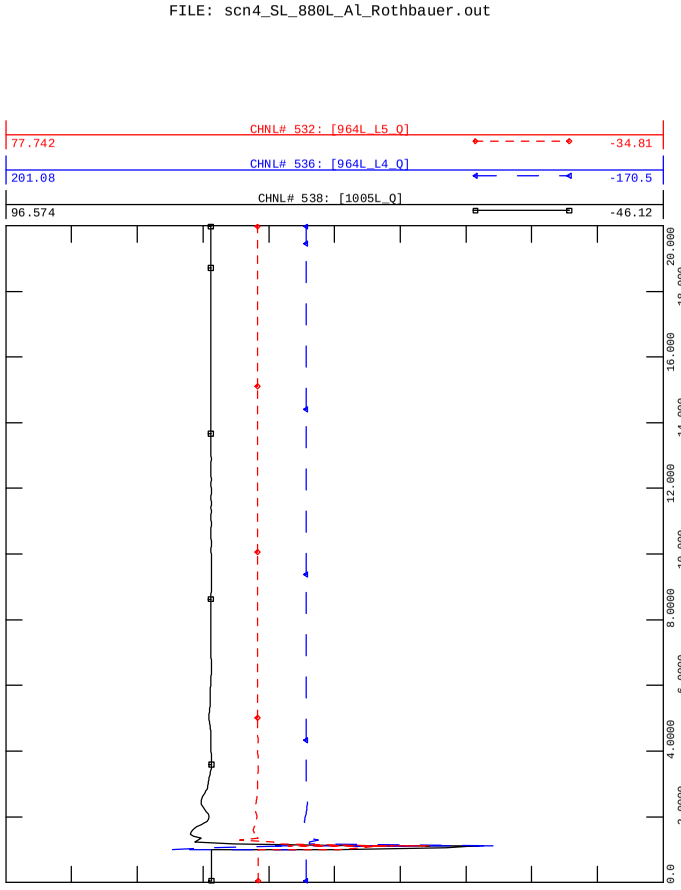
THU, APR 14 2022 14:28 BRANCH Q



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_880L_AL_ROTHBAUER

FILE: scn4_SL_880L_Al_Rothbauer.out

THU, APR 14 2022 14:28 BRANCH Q



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_880L_BULLSHEAD

FILE: scn4_SL_880L_Bullshead.out

THU, APR 14 2022 14:28

REACTIVE POWER

CHNL# 278: [VARS 61994[GRANLEA6 0.6900]G1]
1.0363 -0.3704

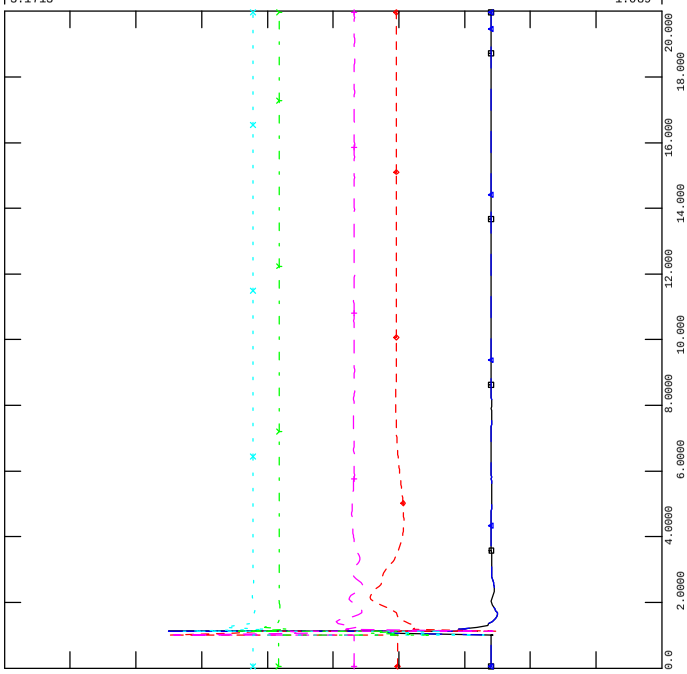
CHNL# 276: [VARS 60990[SHAMROC5 0.6500]G1]
1.6580 -0.1887

CHNL# 284: [VARS 773[SECST 20.000]1]
1.0297 -0.9136

CHNL# 250: [VARS 667[CANCARB9 13.800]1]
1.3988 -0.7499

CHNL# 283: [VARS990007[FORTYMILE_6 0.6900]G2]
3.1713 -1.089

CHNL# 282: [VARS990004[FORTYMILE_3 0.6900]G1]
3.1713 -1.089



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_880L_BULLSHEAD

FILE: scn4_SL_880L_Bullshead.out

THU, APR 14 2022 14:28

BUS VOLTAGE

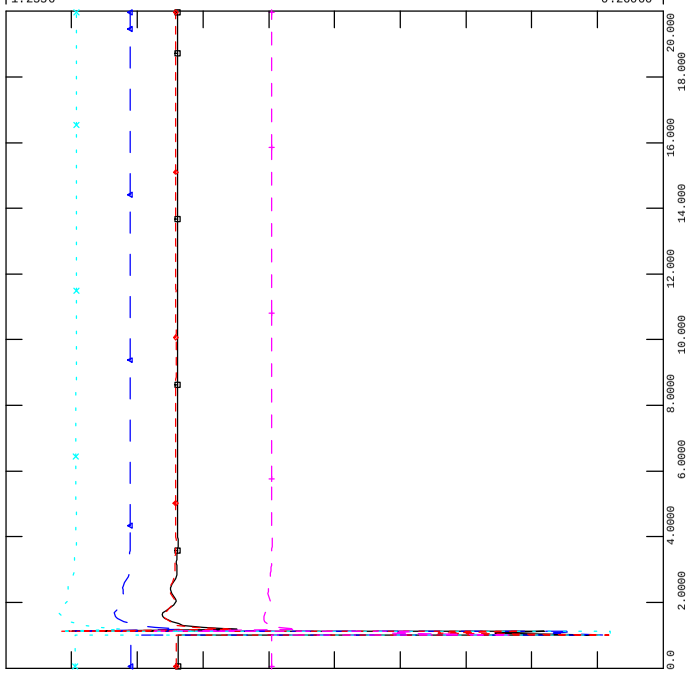
CHNL# 518: [VOLT 976 [ROTBAUR 138.00]]
1.1463 -0.0964

CHNL# 513: [VOLT 320 [CHAPPIC7 138.00]]
1.1981 0.75610

CHNL# 516: [VOLT 662 [WHITLA1 240.00]]
1.3404 0.13540

CHNL# 515: [VOLT 659 [BOWMAN2 138.00]]
1.2166 0.10170

CHNL# 517: [VOLT 669 [BOWMAN1 240.00]]
1.2556 0.26000



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_880L_BULLSHEAD

FILE: scn4_SL_880L_Bullshead.out

THU, APR 14 2022 14:28

ACTIVE POWER

CHNL# 195: [POWR 61994[GRANLEA6 0.6900]G1]
1.2153 0.05540

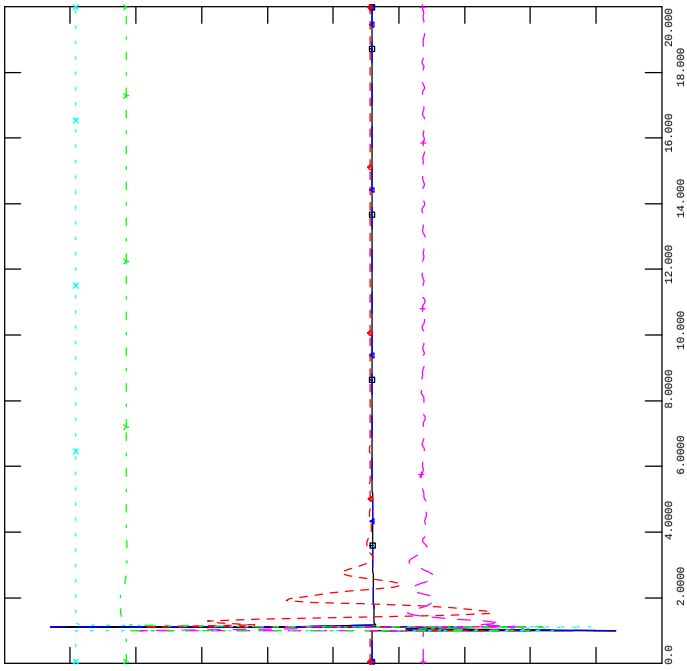
CHNL# 193: [POWR 60990[SHAMROC5 0.6500]G1]
2.2188 0.34350

CHNL# 201: [POWR 773[SECST 20.000]1]
1.8415 0.86610

CHNL# 167: [POWR 667[CANCARB9 13.800]1]
0.82950 -0.1158

CHNL# 200: [POWR990007[FORTYMILE_6 0.6900]G2]
2.9176 0.07910

CHNL# 199: [POWR990004[FORTYMILE_3 0.6900]G1]
2.9176 0.07910



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_880L_BULLSHEAD

FILE: scn4_SL_880L_Bullshead.out

THU, APR 14 2022 14:28

TERMINAL VOLTAGE

CHNL# 444: [ETRM 61994[GRANLEA6 0.6900]G1]
1.3896 0.21240

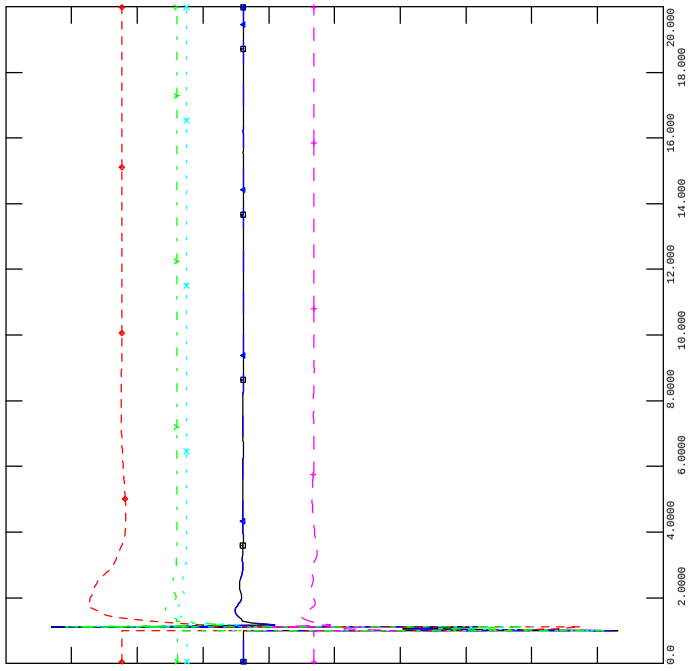
CHNL# 442: [ETRM 60990[SHAMROC5 0.6500]G1]
1.3716 0.24410

CHNL# 450: [ETRM 773[SECST 20.000]1]
1.1251 0.87940

CHNL# 416: [ETRM 667[CANCARB9 13.800]1]
1.1808 0.38130

CHNL# 449: [ETRM990007[FORTYMILE_6 0.6900]G2]
1.5609 0.11830

CHNL# 448: [ETRM990004[FORTYMILE_3 0.6900]G1]
1.5609 0.11830



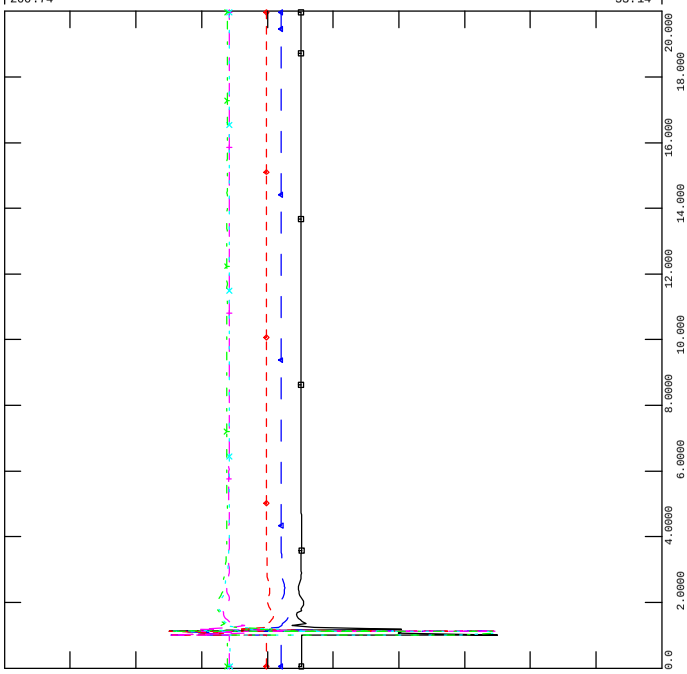
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_880L_BULLSHEAD

FILE: scn4_SL_880L_Bullshead.out

THU, APR 14 2022 14:28

BRANCH Q

CHNL# 540: [1035L_Q] 175.60 -339.5
CHNL# 534: [1034L_Q] 160.61 -338.2
CHNL# 526: [983L_L1_Q] 263.51 -477.5
CHNL# 524: [983L_L3_Q] 209.09 -327.6
CHNL# 522: [983L_L2_Q] 220.36 -361.2
CHNL# 520: [964L_L2_Q] 200.74 -53.14



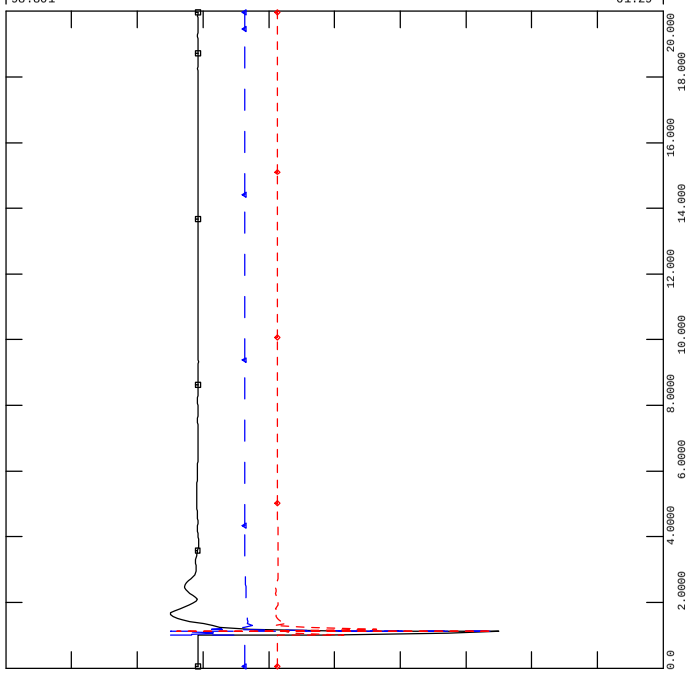
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_880L_BULLSHEAD

FILE: scn4_SL_880L_Bullshead.out

THU, APR 14 2022 14:28

BRANCH Q

CHNL# 532: [964L_L5_Q] 98.120 -55.75
CHNL# 536: [964L_L4_Q] 268.04 -383.5
CHNL# 538: [1005L_Q] 98.801 -61.29



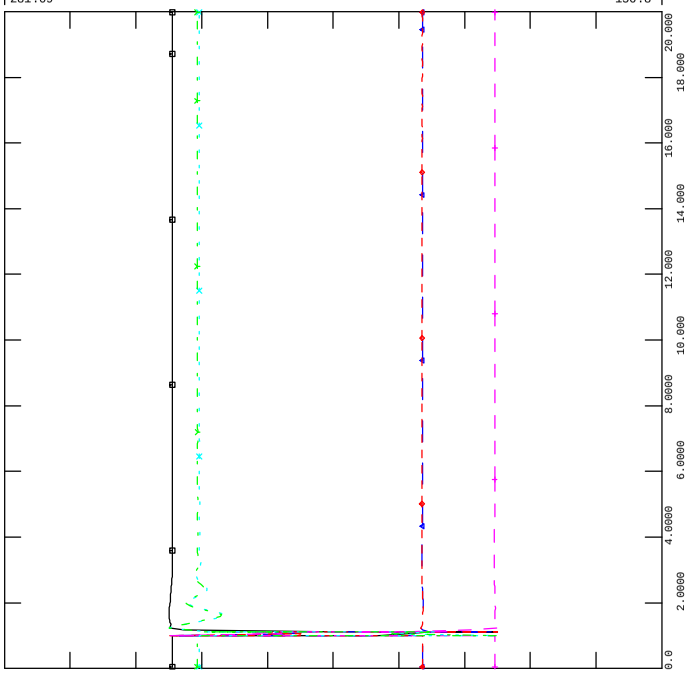
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_880L_BULLSHEAD

FILE: scn4_SL_880L_Bullshead.out

THU, APR 14 2022 14:28

BRANCH P

CHNL# 539: [1035L_P] 740.61 -155.5
CHNL# 533: [1034L_P] 712.50 -156.8
CHNL# 525: [983L_L1_P] 147.79 -726.9
CHNL# 523: [983L_L3_P] 88.280 -540.9
CHNL# 521: [983L_L2_P] 88.438 -540.5
CHNL# 519: [964L_L2_P] 281.09 -156.8



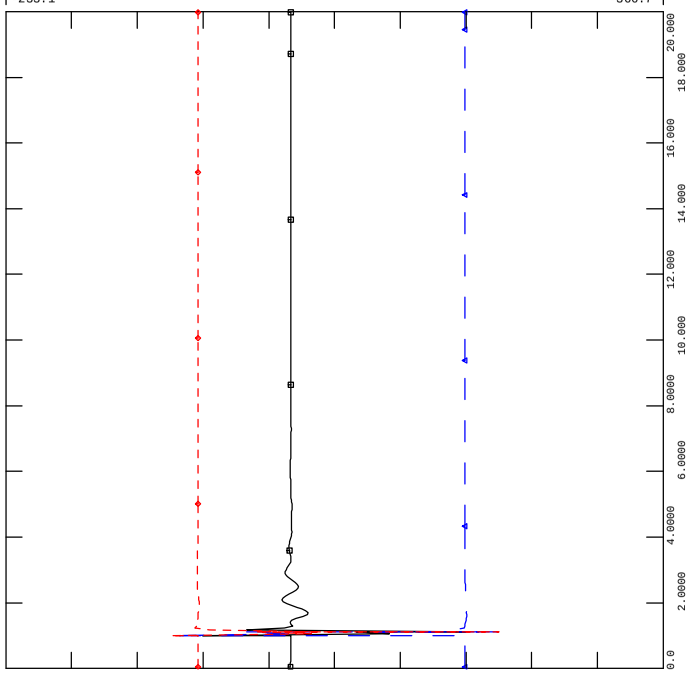
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_880L_BULLSHEAD

FILE: scn4_SL_880L_Bullshead.out

THU, APR 14 2022 14:28

BRANCH P

CHNL# 531: [964L_L5_P] 65.178 -243.5
CHNL# 535: [964L_L4_P] 122.31 -652.5
CHNL# 537: [1005L_P] -233.1 -366.7



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_892L_BOWMANTON

FILE: scn4_SL_892L_Bowmanton.out

THU, APR 14 2022 14:28

ACTIVE POWER

CHNL# 195: [POWR 61994[GRANLEA6 0.6900]G1]
1.3219 0.59690

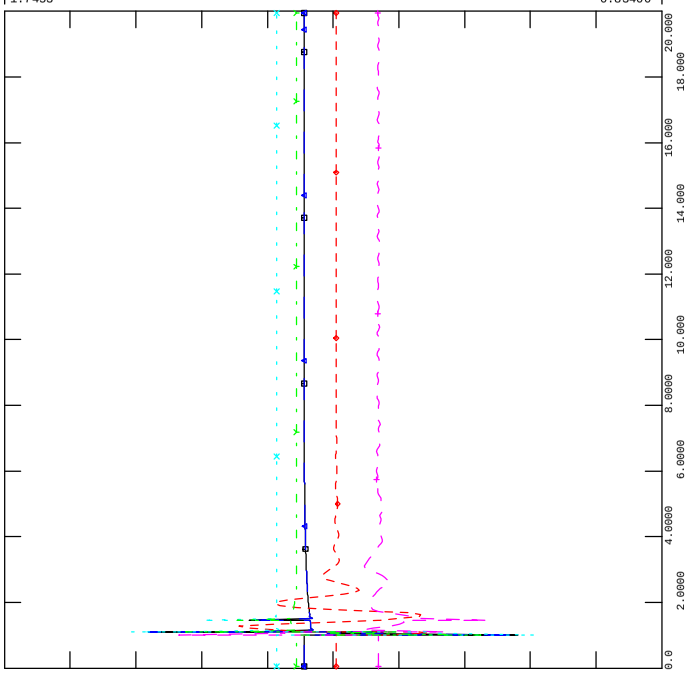
CHNL# 193: [POWR 60990[SHAMROC5 0.6500]G1]
2.4462 1.4063

CHNL# 201: [POWR 773[SECST 20.000]1]
1.6487 0.89480

CHNL# 167: [POWR 667[CANCARB9 13.800]1]
0.58680 0.02630

CHNL# 200: [POWR990007[FORTYMILE_6 0.6900]G2]
1.7453 0.83400

CHNL# 199: [POWR990004[FORTYMILE_3 0.6900]G1]
1.7453 0.83400



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_892L_BOWMANTON

FILE: scn4_SL_892L_Bowmanton.out

THU, APR 14 2022 14:28

TERMINAL VOLTAGE

CHNL# 444: [ETRM 61994[GRANLEA6 0.6900]G1]
1.2268 0.66430

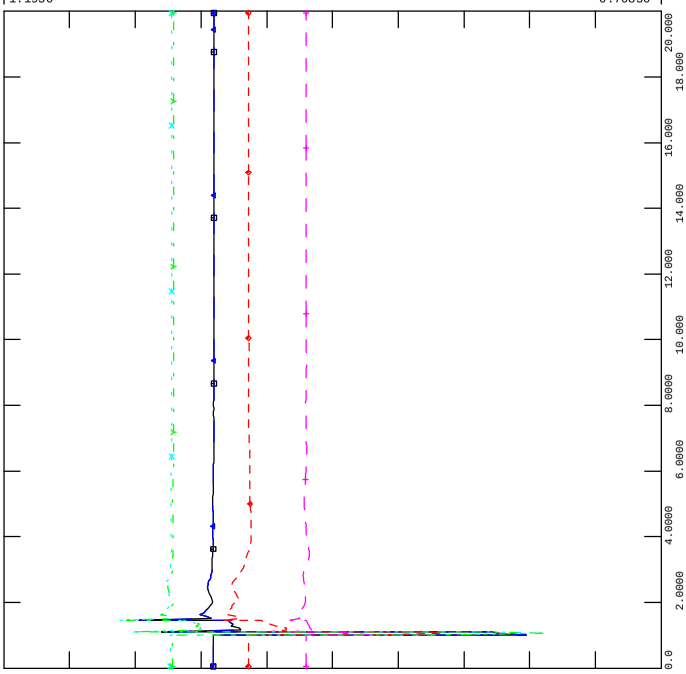
CHNL# 442: [ETRM 60990[SHAMROC5 0.6500]G1]
1.2046 0.63890

CHNL# 450: [ETRM 773[SECST 20.000]1]
1.1155 0.88600

CHNL# 416: [ETRM 667[CANCARB9 13.800]1]
1.1517 0.85170

CHNL# 449: [ETRM990007[FORTYMILE_6 0.6900]G2]
1.1950 0.70850

CHNL# 448: [ETRM990004[FORTYMILE_3 0.6900]G1]
1.1950 0.70850



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_892L_BOWMANTON

FILE: scn4_SL_892L_Bowmanton.out

THU, APR 14 2022 14:28

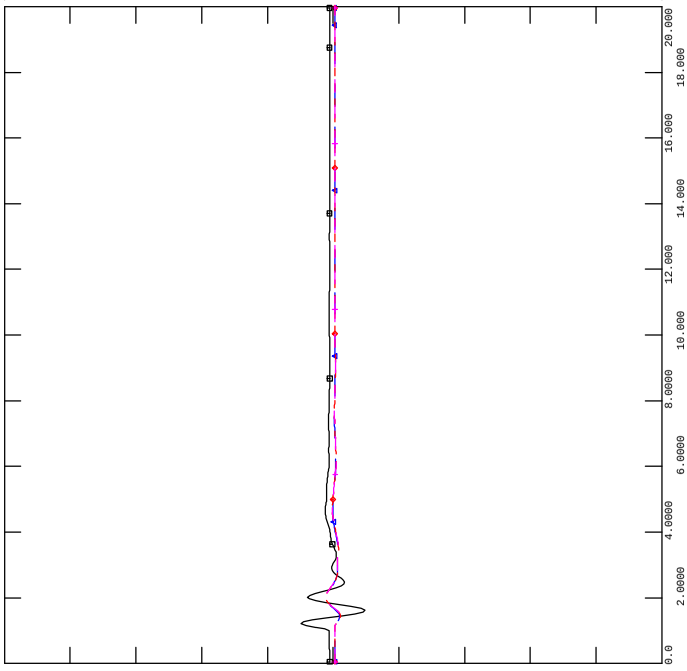
ROTOR ANGLE

CHNL# 37: [ANGL 775[SECCT2 21.000]3]
27.490 -74.82

CHNL# 36: [ANGL 774[SECCT1 21.000]2]
27.490 -74.82

CHNL# 35: [ANGL 773[SECST 20.000]1]
28.337 -73.67

CHNL# 1: [ANGL 667[CANCARB9 13.800]1]
76.721 -34.06



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_892L_BOWMANTON

FILE: scn4_SL_892L_Bowmanton.out

THU, APR 14 2022 14:28

REACTIVE POWER

CHNL# 278: [VARS 61994[GRANLEA6 0.6900]G1]
1.0112 -0.1779

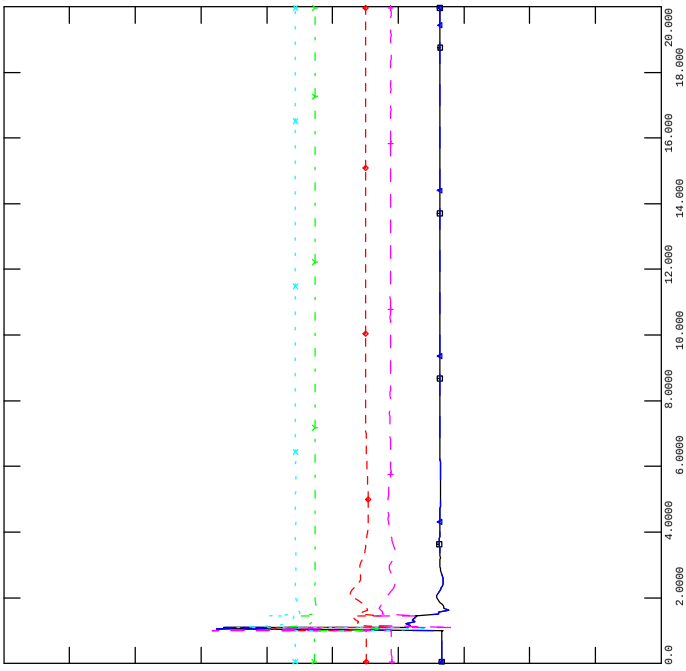
CHNL# 276: [VARS 60990[SHAMROC5 0.6500]G1]
1.5849 0.17380

CHNL# 284: [VARS 773[SECST 20.000]1]
0.92790 -0.6531

CHNL# 250: [VARS 667[CANCARB9 13.800]1]
0.78470 -0.4325

CHNL# 283: [VARS990007[FORTYMILE_6 0.6900]G2]
1.0470 -0.4986

CHNL# 282: [VARS990004[FORTYMILE_3 0.6900]G1]
1.0470 -0.4986



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_892L_BOWMANTON

FILE: scn4_SL_892L_Bowmanton.out

THU, APR 14 2022 14:28 BRANCH P

CHNL# 539: [1035L_P]
592.34 297.88
CHNL# 533: [1034L_P]
566.40 283.42
CHNL# 525: [983L_L1_P]
-321.3 -620.6
CHNL# 523: [983L_L3_P]
-188.6 -408.8
CHNL# 521: [983L_L2_P]
-188.4 -408.5
CHNL# 519: [964L_L2_P]
223.48 90.888

TIME (SECONDS)
0.0 2.0000 4.0000 6.0000 8.0000 10.000 12.000 14.000 16.000 18.000 20.000

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_892L_BOWMANTON

FILE: scn4_SL_892L_Bowmanton.out

THU, APR 14 2022 14:28 BRANCH P

CHNL# 531: [964L_L5_P]
21.774 -92.06
CHNL# 535: [964L_L4_P]
-257.1 -533.4
CHNL# 537: [1005L_P]
-214.8 -348.1

TIME (SECONDS)
0.0 2.0000 4.0000 6.0000 8.0000 10.000 12.000 14.000 16.000 18.000 20.000

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_892L_BOWMANTON

FILE: scn4_SL_892L_Bowmanton.out

THU, APR 14 2022 14:28 BUS VOLTAGE

CHNL# 518: [VOLT 976 [ROTBAUR 138.00]]
1.1383 0.74550
CHNL# 513: [VOLT 320 [CHAPPIC7 138.00]]
1.1510 -0.0836
CHNL# 516: [VOLT 662 [WHITLA1 240.00]]
1.1720 0.62130
CHNL# 515: [VOLT 659 [BOWMAN2 138.00]]
1.1342 0.69680
CHNL# 517: [VOLT 669 [BOWMAN1 240.00]]
1.1287 0.65590

TIME (SECONDS)
0.0 2.0000 4.0000 6.0000 8.0000 10.000 12.000 14.000 16.000 18.000 20.000

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_892L_BOWMANTON

FILE: scn4_SL_892L_Bowmanton.out

THU, APR 14 2022 14:28 BRANCH Q

CHNL# 540: [1035L_Q]
61.150 -118.6
CHNL# 534: [1034L_Q]
48.447 -121.6
CHNL# 526: [983L_L1_Q]
165.40 -80.37
CHNL# 524: [983L_L3_Q]
141.95 -62.90
CHNL# 522: [983L_L2_Q]
141.33 -91.07
CHNL# 520: [964L_L2_Q]
147.92 -63.84

TIME (SECONDS)
0.0 2.0000 4.0000 6.0000 8.0000 10.000 12.000 14.000 16.000 18.000 20.000

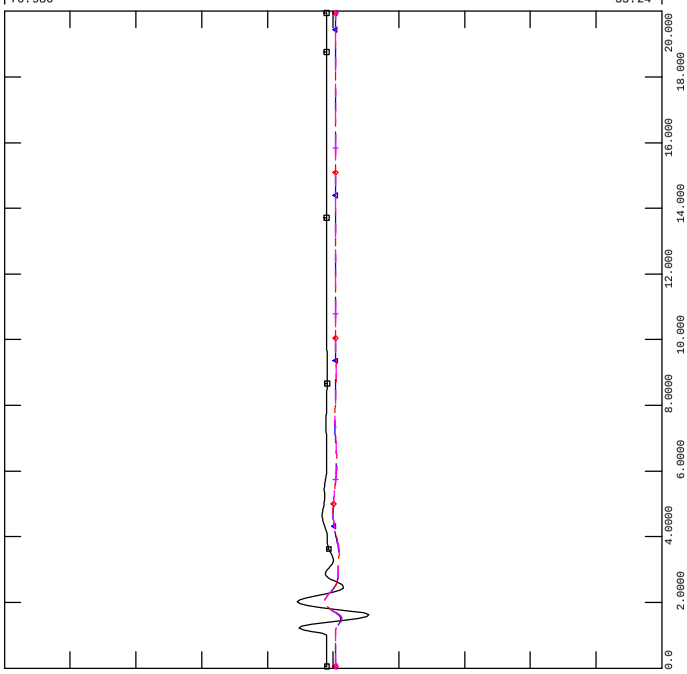
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_892L_SUFFIELD

FILE: scn4_SL_892L_Suffield.out

THU, APR 14 2022 14:28 ROTOR ANGLE

CHNL# 37: [ANGL 775[SECCT2 21.000]3]
27.798 -74.92
CHNL# 36: [ANGL 774[SECCT1 21.000]2]
27.798 -74.92
CHNL# 35: [ANGL 773[SECST 20.000]1]
28.617 -73.78
CHNL# 1: [ANGL 667[CANCARB9 13.800]1]
76.986 -35.24

TIME (SECONDS)



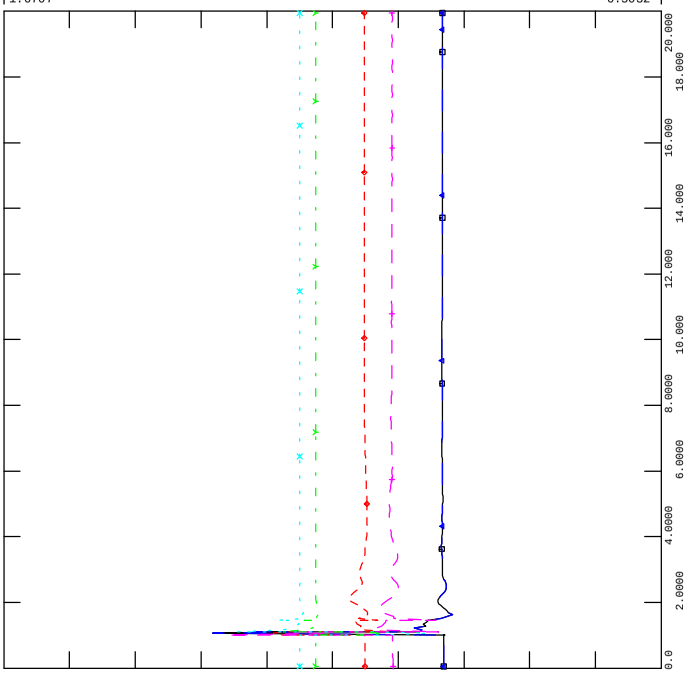
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_892L_SUFFIELD

FILE: scn4_SL_892L_Suffield.out

THU, APR 14 2022 14:28 REACTIVE POWER

CHNL# 278: [VARS 61994[GRANLEA6 0.6900]G1]
1.0131 -0.1760
CHNL# 276: [VARS 60990[SHAMROC5 0.6500]G1]
1.5953 0.18260
CHNL# 284: [VARS 773[SECST 20.000]1]
0.86940 -0.6074
CHNL# 250: [VARS 667[CANCARB9 13.800]1]
0.78450 -0.4355
CHNL# 283: [VARS990007[FORTYMILE_6 0.6900]G2]
1.0707 -0.5032
CHNL# 282: [VARS990004[FORTYMILE 3 0.6900]G1]
1.0707 -0.5032

TIME (SECONDS)



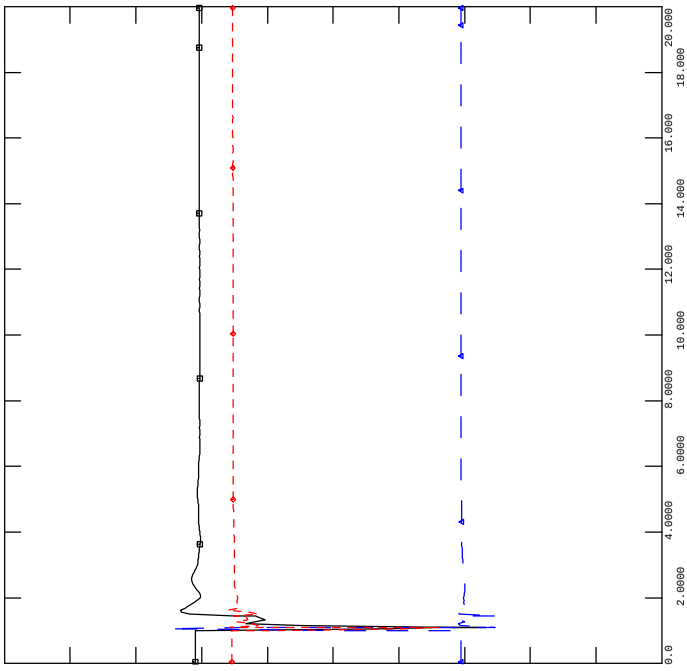
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_892L_BOWMANTON

FILE: scn4_SL_892L_Bowmanton.out

THU, APR 14 2022 14:28 BRANCH Q

CHNL# 532: [964L_L5_Q]
75.280 -42.67
CHNL# 536: [964L_L4_Q]
214.02 -48.87
CHNL# 538: [1005L_Q]
95.307 -53.94

TIME (SECONDS)



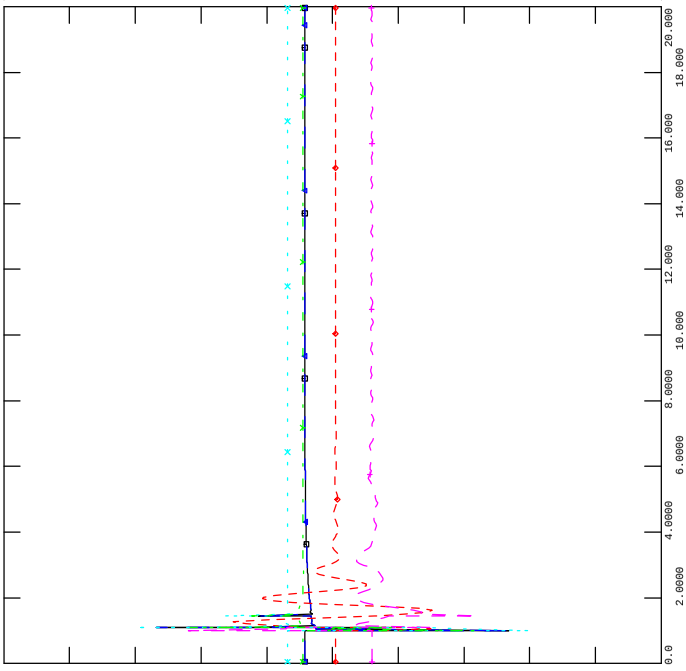
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_892L_SUFFIELD

FILE: scn4_SL_892L_Suffield.out

THU, APR 14 2022 14:28 ACTIVE POWER

CHNL# 195: [POWR 61994[GRANLEA6 0.6900]G1]
1.3208 0.61600
CHNL# 193: [POWR 60990[SHAMROC5 0.6500]G1]
2.4490 1.4451
CHNL# 201: [POWR 773[SECST 20.000]1]
1.6187 0.90640
CHNL# 167: [POWR 667[CANCARB9 13.800]1]
0.59370 0.01950
CHNL# 200: [POWR990007[FORTYMILE_6 0.6900]G2]
1.7251 0.86190
CHNL# 199: [POWR990004[FORTYMILE_3 0.6900]G1]
1.7251 0.86190

TIME (SECONDS)



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_892L_SUFFIELD

FILE: scn4_SL_892L_Suffield.out

THU, APR 14 2022 14:28

BUS VOLTAGE

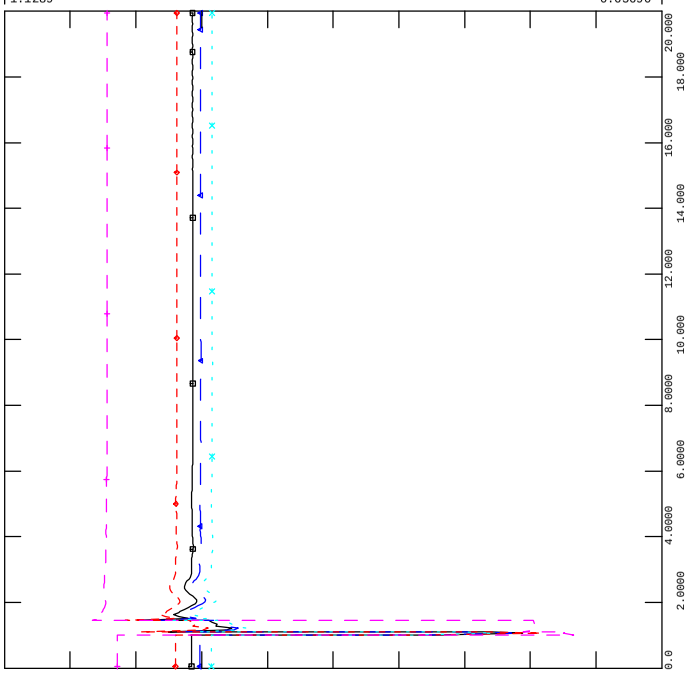
CHNL# 518: [VOLT 976 [ROTBAUR 138.00]]
1.1384 0.74630

CHNL# 513: [VOLT 320 [CHAPPIC7 138.00]]
1.1477 0.40050

CHNL# 516: [VOLT 662 [WHITLA1 240.00]]
1.1703 0.62530

CHNL# 515: [VOLT 659 [BOWMAN2 138.00]]
1.1343 0.69780

CHNL# 517: [VOLT 669 [BOWMAN1 240.00]]
1.1289 0.65690



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_892L_SUFFIELD

FILE: scn4_SL_892L_Suffield.out

THU, APR 14 2022 14:28

BRANCH Q

CHNL# 540: [1035L Q]
63.243 -118.0

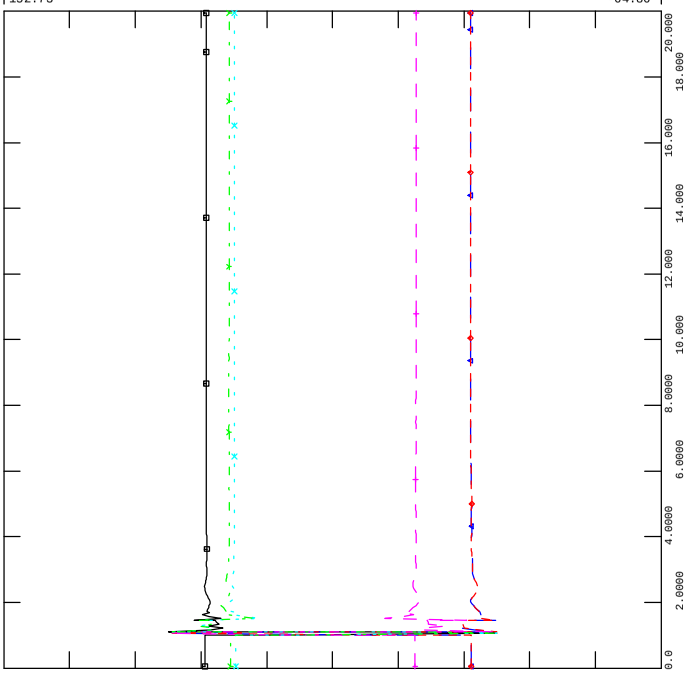
CHNL# 534: [1034L Q]
49.788 -120.7

CHNL# 526: [983L_L1 Q]
167.08 -83.91

CHNL# 524: [983L_L3 Q]
135.99 -61.84

CHNL# 522: [983L_L2 Q]
134.87 -88.85

CHNL# 520: [964L L2 Q]
152.73 -64.86



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_892L_SUFFIELD

FILE: scn4_SL_892L_Suffield.out

THU, APR 14 2022 14:28

TERMINAL VOLTAGE

CHNL# 444: [ETRM 61994[GRANLEA6 0.6900]G1]
1.2240 0.66830

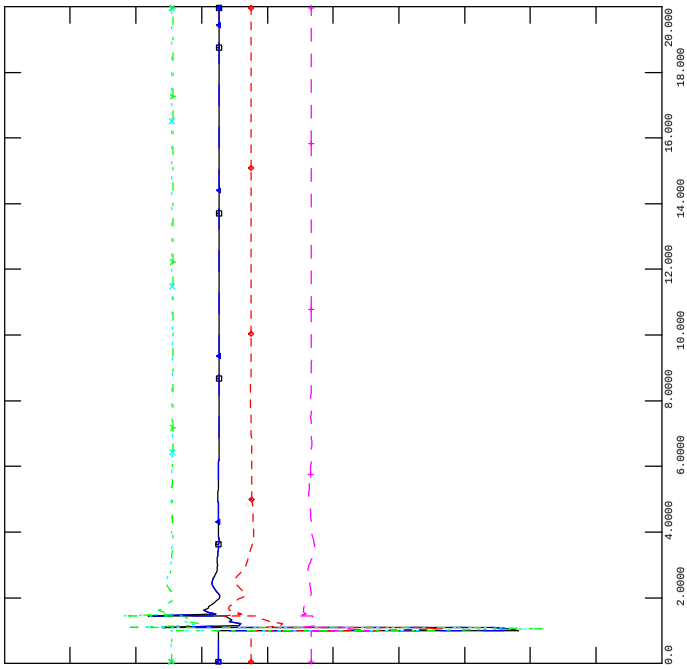
CHNL# 442: [ETRM 60990[SHAMROC5 0.6500]G1]
1.2022 0.64550

CHNL# 450: [ETRM 773[SECST 20.000]1]
1.1155 0.88930

CHNL# 416: [ETRM 667[CANCARB9 13.800]1]
1.1524 0.85250

CHNL# 449: [ETRM990007[FORTYMILE_6 0.6900]G2]
1.1894 0.73030

CHNL# 448: [ETRM990004[FORTYMILE_3 0.6900]G1]
1.1894 0.73030



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_892L_SUFFIELD

FILE: scn4_SL_892L_Suffield.out

THU, APR 14 2022 14:28

BRANCH P

CHNL# 539: [1035L P]
586.15 312.78

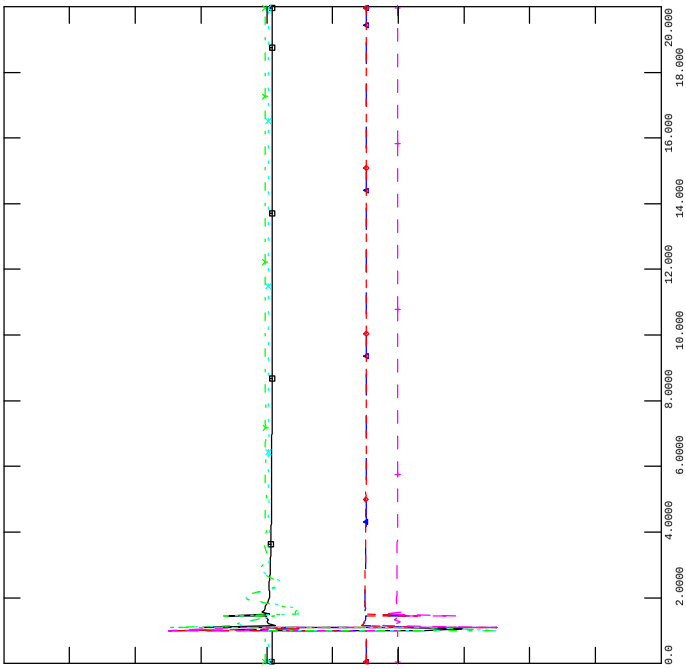
CHNL# 533: [1034L P]
560.45 297.47

CHNL# 525: [983L_L1 P]
-336.1 -616.9

CHNL# 523: [983L_L3 P]
-199.0 -403.2

CHNL# 521: [983L_L2 P]
-198.9 -402.9

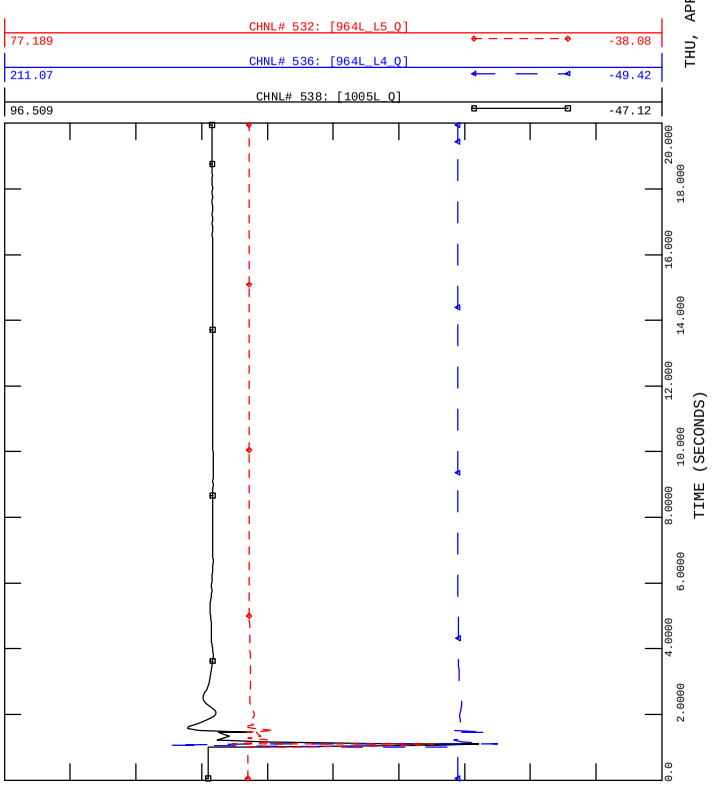
CHNL# 519: [964L_L2 P]
223.10 90.666



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_892L_SUFFIELD

FILE: scn4_SL_892L_Suffield.out

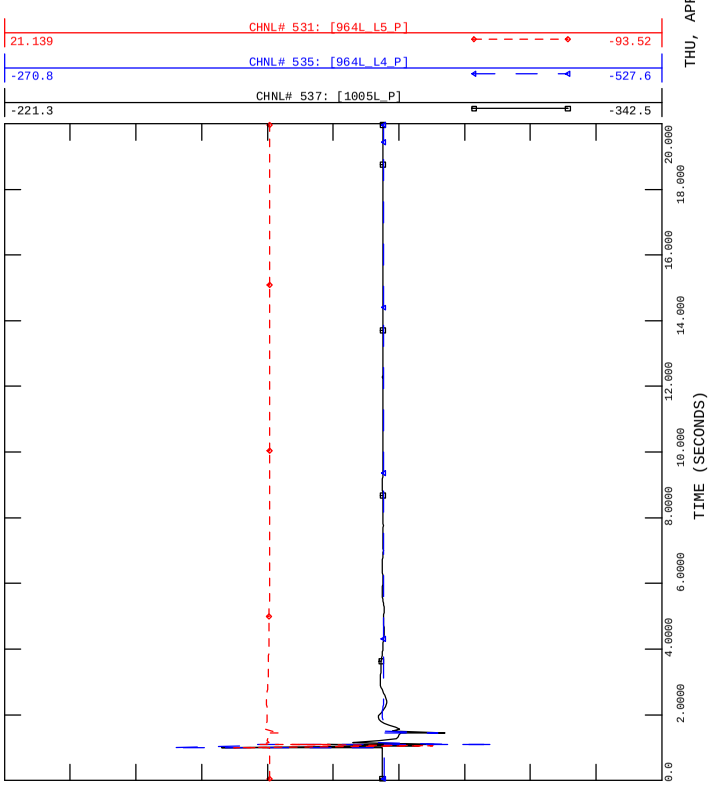
THU, APR 14 2022 14:28
BRANCH Q



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_892L_SUFFIELD

FILE: scn4_SL_892L_Suffield.out

THU, APR 14 2022 14:28
BRANCH P



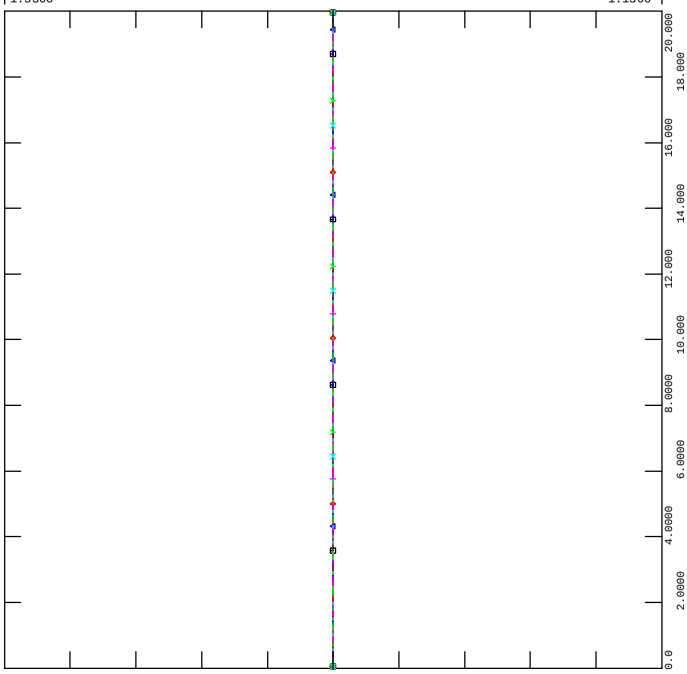
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_NOFAULT

FILE: Scn7_SP_nofault.out

THU, APR 14 2022 19:43

ACTIVE POWER

CHNL# 209: [POWR 61994[GRANLEA6 0.6900]G1] 1.2000 0.80000
CHNL# 206: [POWR 60990[SHAMROC5 0.6500]G1] 2.2160 1.8160
CHNL# 219: [POWR 773[SECST 20.000]1] 3.1791 2.7790
CHNL# 179: [POWR 667[CANCARB9 13.800]1] 0.74170 0.34170
CHNL# 218: [POWR990007[FORTYMILE_6 0.6900]G2] 1.5300 1.1300
CHNL# 217: [POWR990004[FORTYMILE_3 0.6900]G1] 1.5300 1.1300



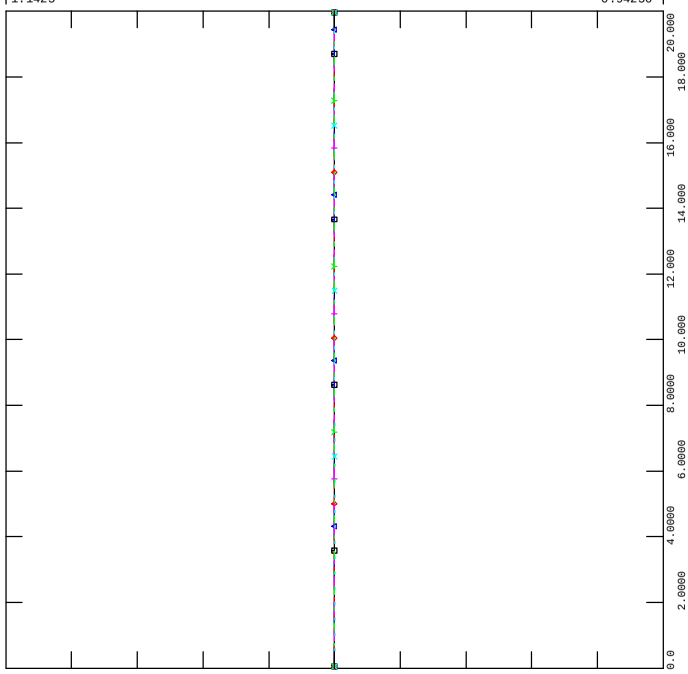
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_NOFAULT

FILE: Scn7_SP_nofault.out

THU, APR 14 2022 19:43

TERMINAL VOLTAGE

CHNL# 476: [ETRM 61994[GRANLEA6 0.6900]G1] 1.1769 0.97680
CHNL# 473: [ETRM 60990[SHAMROC5 0.6500]G1] 1.1486 0.94860
CHNL# 486: [ETRM 773[SECST 20.000]1] 1.1400 0.94000
CHNL# 446: [ETRM 667[CANCARB9 13.800]1] 1.1400 0.94000
CHNL# 485: [ETRM990007[FORTYMILE_6 0.6900]G2] 1.1425 0.94250
CHNL# 484: [ETRM990004[FORTYMILE_3 0.6900]G1] 1.1425 0.94250



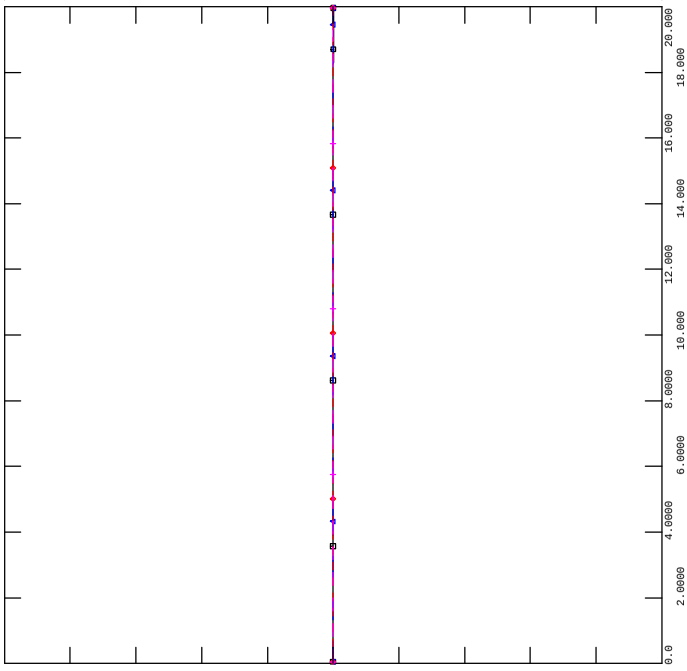
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_NOFAULT

FILE: Scn7_SP_nofault.out

THU, APR 14 2022 19:43

ROTOR ANGLE

CHNL# 43: [ANGL 775[SECCT2 21.000]3] 56.145 -43.86
CHNL# 42: [ANGL 774[SECCT1 21.000]2] 56.145 -43.86
CHNL# 41: [ANGL 773[SECST 20.000]1] 58.257 -41.75
CHNL# 1: [ANGL 667[CANCARB9 13.800]1] 113.27 13.231



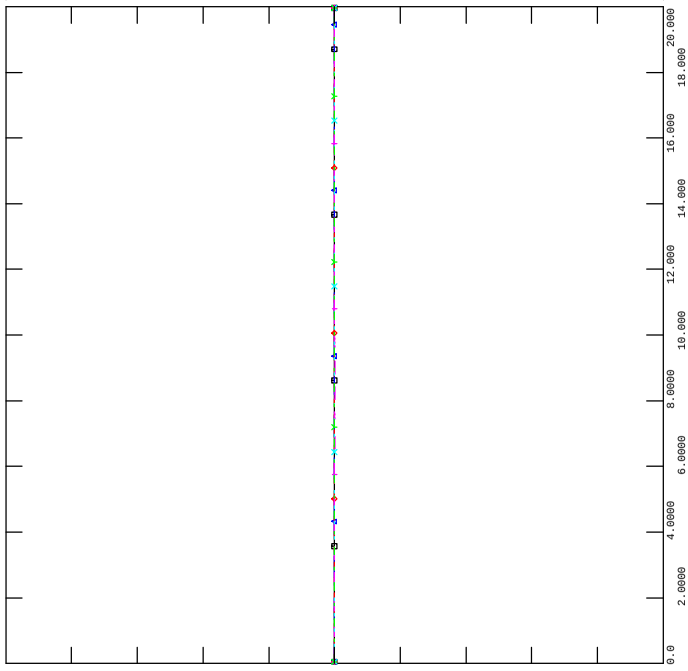
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_NOFAULT

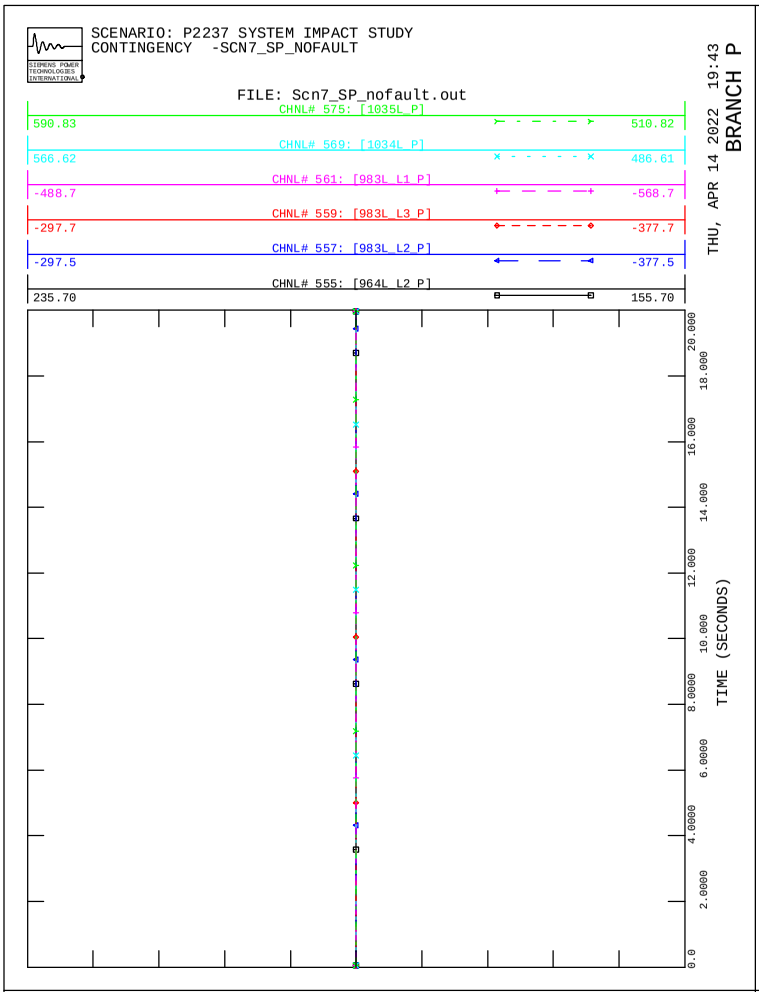
FILE: Scn7_SP_nofault.out

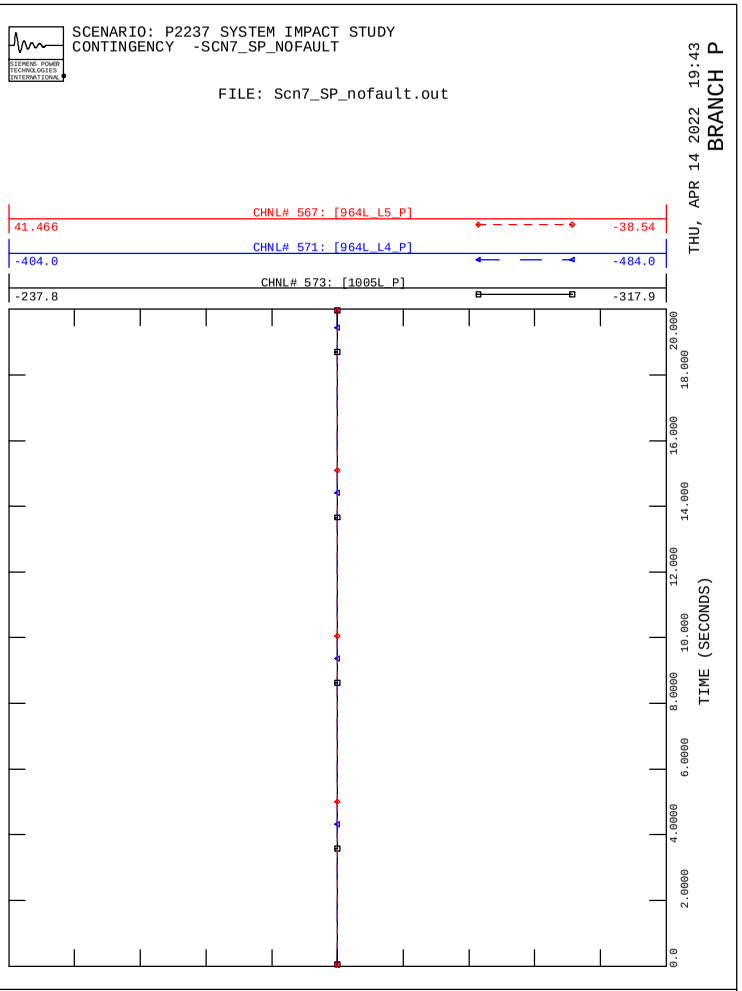
THU, APR 14 2022 19:43

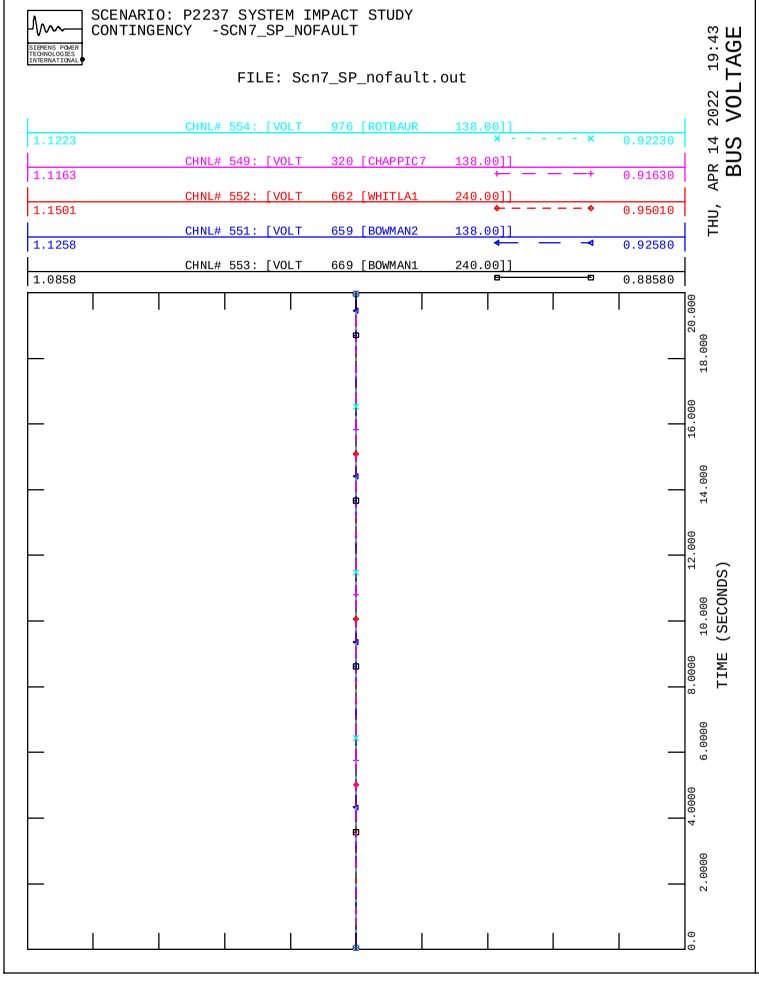
REACTIVE POWER

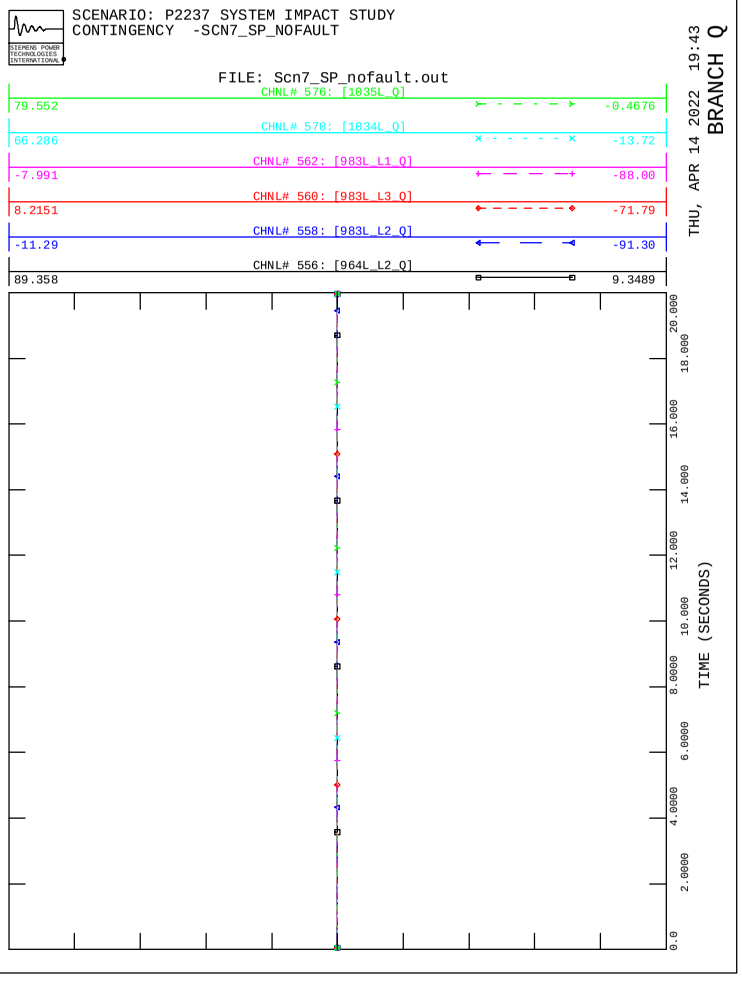
CHNL# 298: [VARS 61994[GRANLEA6 0.6900]G1] 0.92890 -0.0711
CHNL# 295: [VARS 60990[SHAMROC5 0.6500]G1] 1.2417 0.24170
CHNL# 308: [VARS 773[SECST 20.000]1] 1.1455 0.14510
CHNL# 268: [VARS 667[CANCARB9 13.800]1] 0.64600 -0.3541
CHNL# 307: [VARS990007[FORTYMILE_6 0.6900]G2] 1.0174 0.01730
CHNL# 306: [VARS990004[FORTYMILE_3 0.6900]G1] 1.0174 0.01730




SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_NOFAULT
FILE: Scn7_SP_nofault.out
CHNL# 575: [1035L_P]
590.83
510.82
CHNL# 569: [1034L_P]
566.62
486.61
CHNL# 561: [983L_L1_P]
-488.7
-568.7
CHNL# 559: [983L_L3_P]
-297.7
-377.7
CHNL# 557: [983L_L2_P]
-297.5
-377.5
CHNL# 555: [964L_L2_P]
235.70
155.70
THU, APR 14 2022 19:43
BRANCH P
TIME (SECONDS)
0.0
2.0000
4.0000
6.0000
8.0000
10.000
12.000
14.000
16.000
18.000
20.000


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_NOFAULT
FILE: Scn7_SP_nofault.out
CHNL# 567: [964L_L5_P]
41.466
-38.54
CHNL# 571: [964L_L4_P]
-404.0
-484.0
CHNL# 573: [1005L_P]
-237.8
-317.9
THU, APR 14 2022 19:43
BRANCH P
TIME (SECONDS)
0.0
2.0000
4.0000
6.0000
8.0000
10.000
12.000
14.000
16.000
18.000
20.000


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_NOFAULT
FILE: Scn7_SP_nofault.out
CHNL# 554: [VOLT 976 [ROTBAUR 138.00]]
1.1223
0.92230
CHNL# 549: [VOLT 320 [CHAPPIC7 138.00]]
1.1163
0.91630
CHNL# 552: [VOLT 662 [WHITLA1 240.00]]
1.1501
0.95010
CHNL# 551: [VOLT 659 [BOWMAN2 138.00]]
1.1258
0.92580
CHNL# 553: [VOLT 669 [BOWMAN1 240.00]]
1.0858
0.88580
THU, APR 14 2022 19:43
BUS VOLTAGE
TIME (SECONDS)
0.0
2.0000
4.0000
6.0000
8.0000
10.000
12.000
14.000
16.000
18.000
20.000


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_NOFAULT
FILE: Scn7_SP_nofault.out
CHNL# 576: [1035L_Q]
79.552
-0.4676
CHNL# 570: [1034L_Q]
66.286
-13.72
CHNL# 562: [983L_L1_Q]
-7.991
-88.00
CHNL# 560: [983L_L3_Q]
8.2151
-71.79
CHNL# 558: [983L_L2_Q]
-11.29
-91.30
CHNL# 556: [964L_L2_Q]
89.358
9.3489
THU, APR 14 2022 19:43
BRANCH Q
TIME (SECONDS)
0.0
2.0000
4.0000
6.0000
8.0000
10.000
12.000
14.000
16.000
18.000
20.000

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_01_983L_BOWMANTON

FILE: Scn7_SP_01_983L_Bowmanton.out

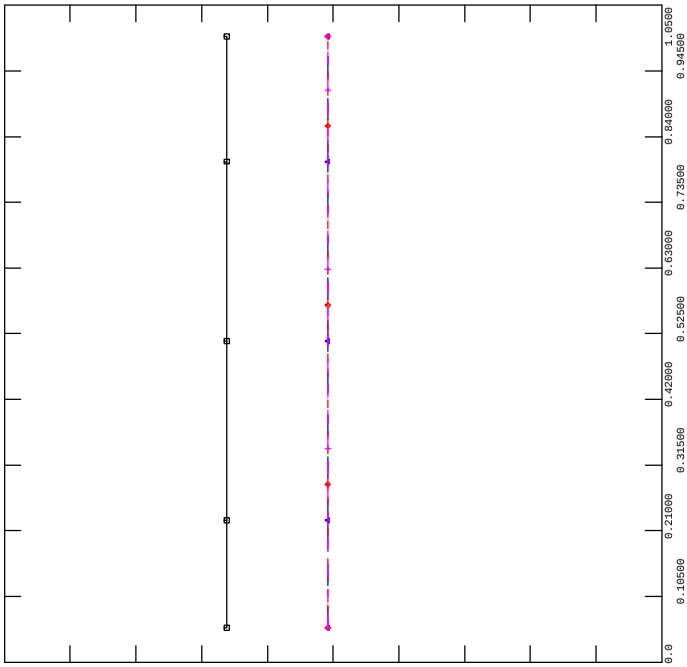
THU, APR 14 2022 19:43 ROTOR ANGLE

CHNL# 43: [ANGL 775[SECCT2 21.000]3]
59.663 -49.07

CHNL# 42: [ANGL 774[SECCT1 21.000]2]
59.663 -49.07

CHNL# 41: [ANGL 773[SECST 20.000]1]
61.216 -46.53

CHNL# 1: [ANGL 667[CANCARB9 13.800]1]
121.49 -50.78



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_01_983L_BOWMANTON

FILE: Scn7_SP_01_983L_Bowmanton.out

THU, APR 14 2022 19:43 REACTIVE POWER

CHNL# 298: [VARS 61994[GRANLEA6 0.6900]G1]
2.2201 -0.6188

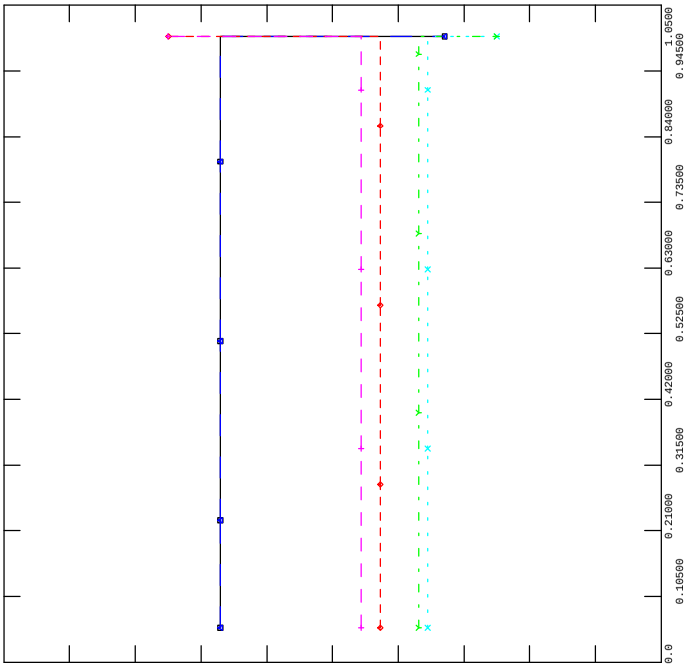
CHNL# 295: [VARS 60990[SHAMROC5 0.6500]G1]
4.2870 -1.210

CHNL# 308: [VARS 773[SECST 20.000]1]
2.1460 -0.6143

CHNL# 268: [VARS 667[CANCARB9 13.800]1]
1.2892 -0.7071

CHNL# 307: [VARS990007[FORTYMILE_6 0.6900]G2]
1.0174 -0.5000

CHNL# 306: [VARS990004[FORTYMILE_3 0.6900]G1]
1.0174 -0.5000



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_NOFAULT

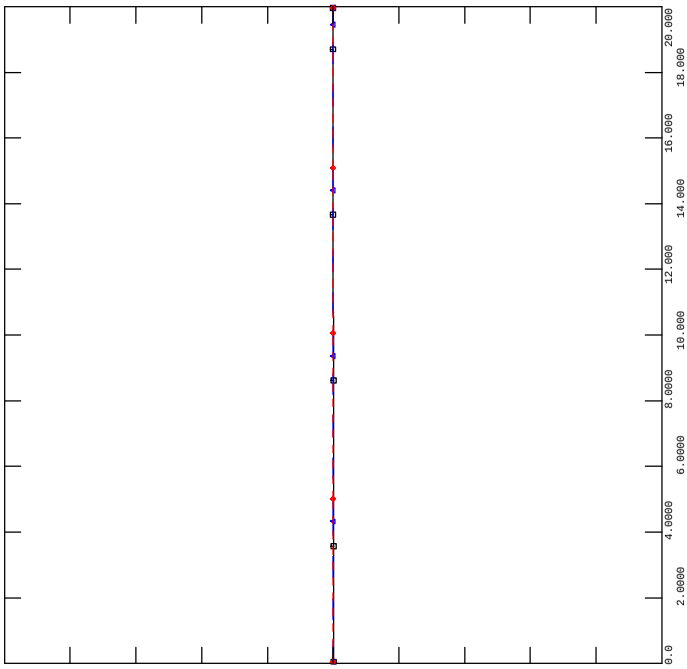
FILE: Scn7_SP_nofault.out

THU, APR 14 2022 19:43 BRANCH Q

CHNL# 568: [964L_L5_Q]
41.464 -38.54

CHNL# 572: [964L_L4_Q]
26.931 -53.07

CHNL# 574: [1005L_Q]
68.902 -11.16



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_01_983L_BOWMANTON

FILE: Scn7_SP_01_983L_Bowmanton.out

THU, APR 14 2022 19:43 ACTIVE POWER

CHNL# 209: [POWR 61994[GRANLEA6 0.6900]G1]
1.2221 -0.0104

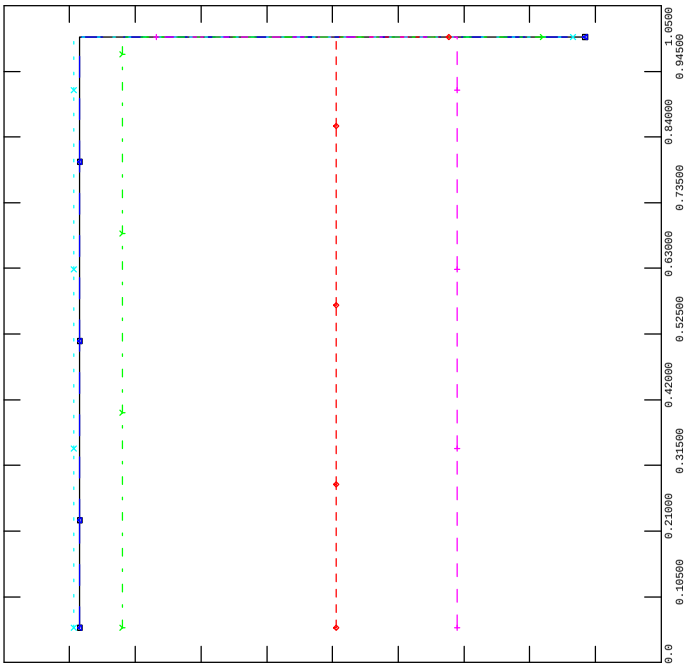
CHNL# 206: [POWR 60990[SHAMROC5 0.6500]G1]
2.2349 0.16960

CHNL# 219: [POWR 773[SECST 20.000]1]
3.5726 2.7114

CHNL# 179: [POWR 667[CANCARB9 13.800]1]
1.2891 -0.1897

CHNL# 218: [POWR990007[FORTYMILE_6 0.6900]G2]
1.5300 -0.2000

CHNL# 217: [POWR990004[FORTYMILE_3 0.6900]G1]
1.5300 -0.2000



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_01_983L_BOWMANTON

FILE: Scn7_SP_01_983L_Bowmanton.out

THU, APR 14 2022 19:43

BUS VOLTAGE

CHNL# 554: [VOLT 976 [ROTBAUR 138.00]]
1.2303 0.23010
CHNL# 549: [VOLT 320 [CHAPPIC7 138.00]]
1.2237 0.64620
CHNL# 552: [VOLT 662 [WHITLA1 240.00]]
1.6349 -0.0903
CHNL# 551: [VOLT 659 [BOWMAN2 138.00]]
1.3144 0.05290
CHNL# 553: [VOLT 669 [BOWMAN1 240.00]]
1.3348 -0.0950

1.0500 0.94500 0.84000 0.73500 0.63000 0.52500 0.42000 0.31500 0.21000 0.10500 0.0

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_01_983L_BOWMANTON

FILE: Scn7_SP_01_983L_Bowmanton.out

THU, APR 14 2022 19:43

BRANCH Q

CHNL# 576: [1035L Q]
249.72 -357.3
CHNL# 570: [1034L Q]
237.47 -356.1
CHNL# 562: [983L_L1 Q]
40.000 -88.00
CHNL# 560: [983L_L3 Q]
88.328 -265.0
CHNL# 558: [983L_L2 Q]
80.426 -241.3
CHNL# 556: [964L_L2 Q]
941.70 -669.2

1.0500 0.94500 0.84000 0.73500 0.63000 0.52500 0.42000 0.31500 0.21000 0.10500 0.0

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_01_983L_BOWMANTON

FILE: Scn7_SP_01_983L_Bowmanton.out

THU, APR 14 2022 19:43

TERMINAL VOLTAGE

CHNL# 476: [ETRM 61994[GRANLEA6 0.6900]G1]
1.7511 0.12830
CHNL# 473: [ETRM 60990[SHAMROC5 0.6500]G1]
1.7384 0.13250
CHNL# 486: [ETRM 773[SECST 20.000]1]
1.1610 0.89090
CHNL# 446: [ETRM 667[CANCARB9 13.800]1]
1.1796 0.56060
CHNL# 485: [ETRM990007[FORTYMILE_6 0.6900]G2]
1.1425 -0.1000
CHNL# 484: [ETRM990004[FORTYMILE_3 0.6900]G1]
1.1425 -0.1000

1.0500 0.94500 0.84000 0.73500 0.63000 0.52500 0.42000 0.31500 0.21000 0.10500 0.0

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_01_983L_BOWMANTON

FILE: Scn7_SP_01_983L_Bowmanton.out

THU, APR 14 2022 19:43

BRANCH P

CHNL# 575: [1035L P]
826.02 -274.8
CHNL# 569: [1034L P]
789.76 -262.8
CHNL# 561: [983L_L1 P]
264.35 -793.1
CHNL# 559: [983L_L3 P]
168.87 -506.6
CHNL# 557: [983L_L2 P]
168.75 -506.2
CHNL# 555: [964L_L2 P]
591.96 -197.2

1.0500 0.94500 0.84000 0.73500 0.63000 0.52500 0.42000 0.31500 0.21000 0.10500 0.0

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_01_983L_BOWMANTON

FILE: Scn7_SP_01_983L_Bowmanton.out

THU, APR 14 2022 19:43 BRANCH Q

CHNL# 568: [964L L5 Q] 587.80 -655.5
CHNL# 572: [964L_L4_Q] 916.34 -942.9
CHNL# 574: [1005L Q] 157.92 -173.2

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_02_983L_WHITLA

FILE: Scn7_SP_02_983L_Whitla.out

THU, APR 14 2022 19:43 ACTIVE POWER

CHNL# 209: [POWR 61994[GRANLEA6 0.6900]G1] 1.2217 -0.0520
CHNL# 206: [POWR 60990[SHAMROC5 0.6500]G1] 2.2665 0.10240
CHNL# 219: [POWR 773[SECST 20.000]1] 3.6043 2.7216
CHNL# 179: [POWR 667[CANCARB9 13.800]1] 1.1981 -0.0868
CHNL# 218: [POWR990007[FORTYMILE_6 0.6900]G2] 1.5300 -0.2000
CHNL# 217: [POWR990004[FORTYMILE 3 0.6900]G1] 1.5300 -0.2000

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_01_983L_BOWMANTON

FILE: Scn7_SP_01_983L_Bowmanton.out

THU, APR 14 2022 19:43 BRANCH P

CHNL# 567: [964L L5 P] 299.10 -107.4
CHNL# 571: [964L_L4_P] 221.85 -666.0
CHNL# 573: [1005L P] -160.6 -462.7

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_02_983L_WHITLA

FILE: Scn7_SP_02_983L_Whitla.out

THU, APR 14 2022 19:43 ROTOR ANGLE

CHNL# 43: [ANGL 775[SECCT2 21.000]3] 59.361 -49.39
CHNL# 42: [ANGL 774[SECCT1 21.000]2] 59.361 -49.39
CHNL# 41: [ANGL 773[SECST 20.000]1] 60.972 -46.77
CHNL# 1: [ANGL 667[CANCARB9 13.800]1] 113.27 -45.88

TIME (SECONDS)

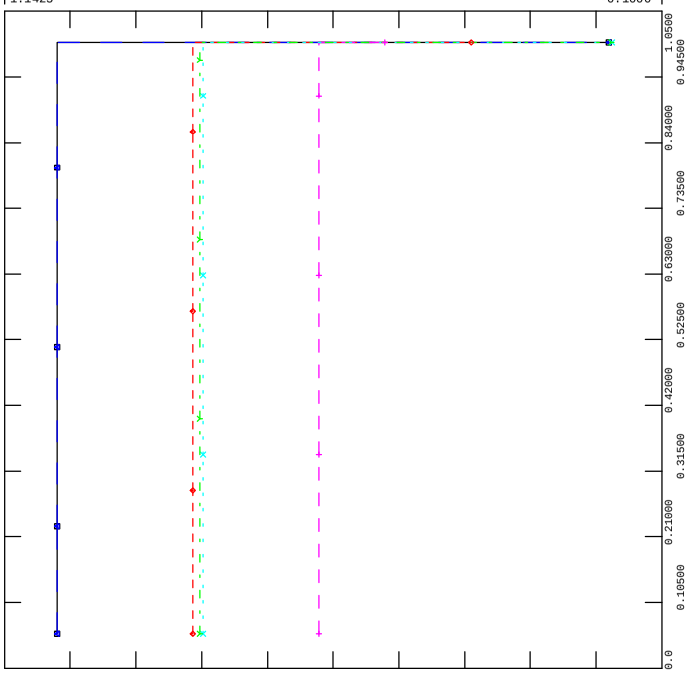
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_02_983L_WHITLA

FILE: Scn7_SP_02_983L_Whitla.out

THU, APR 14 2022 19:43

TERMINAL VOLTAGE

CHNL# 476: [ETRM 61994[GRANLEA6 0.6900]G1] 1.4632 0.16500
CHNL# 473: [ETRM 60990[SHAMROC5 0.6500]G1] 1.4488 0.12530
CHNL# 486: [ETRM 773[SECST 20.000]1] 1.1534 0.91610
CHNL# 446: [ETRM 667[CANCARB9 13.800]1] 1.1816 0.68750
CHNL# 485: [ETRM990007[FORTYMILE_6 0.6900]G2] 1.1425 -0.1000
CHNL# 484: [ETRM990004[FORTYMILE_3 0.6900]G1] 1.1425 -0.1000



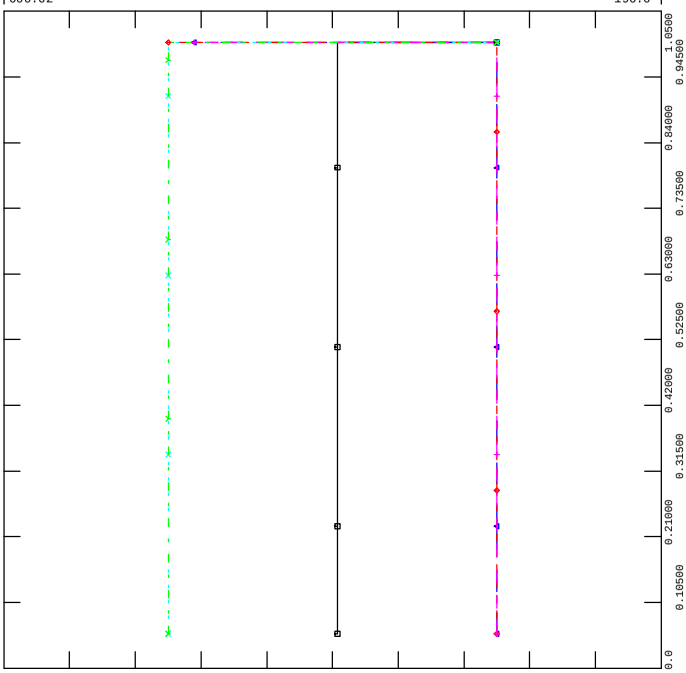
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_02_983L_WHITLA

FILE: Scn7_SP_02_983L_Whitla.out

THU, APR 14 2022 19:43

BRANCH P

CHNL# 575: [1035L_P] 801.66 -201.7
CHNL# 569: [1034L_P] 770.55 -205.2
CHNL# 561: [983L_L1_P] 363.94 -826.3
CHNL# 559: [983L_L3_P] 168.87 -506.6
CHNL# 557: [983L_L2_P] 232.32 -527.4
CHNL# 555: [964L_L2_P] 600.62 -196.6



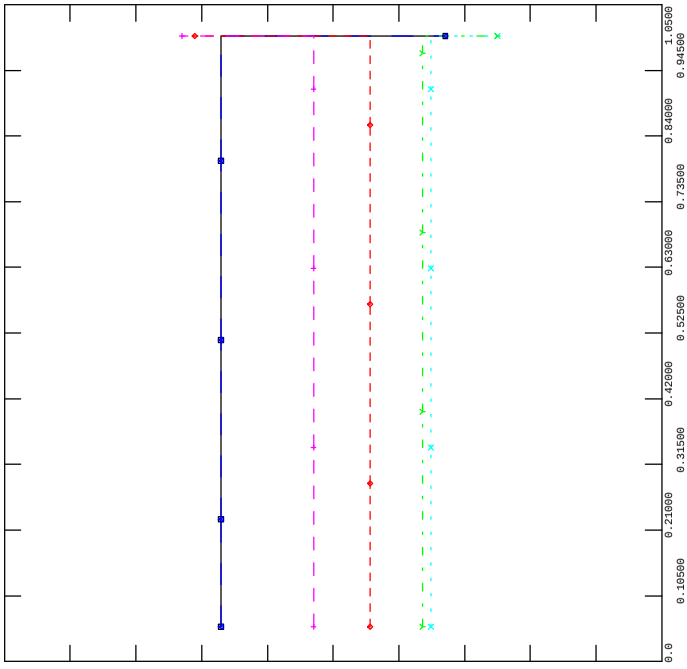
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_02_983L_WHITLA

FILE: Scn7_SP_02_983L_Whitla.out

THU, APR 14 2022 19:43

REACTIVE POWER

CHNL# 298: [VARS 61994[GRANLEA6 0.6900]G1] 2.2374 -0.6051
CHNL# 295: [VARS 60990[SHAMROC5 0.6500]G1] 4.4521 -1.272
CHNL# 308: [VARS 773[SECST 20.000]1] 1.5144 -0.3348
CHNL# 268: [VARS 667[CANCARB9 13.800]1] 1.1066 -0.6198
CHNL# 307: [VARS990007[FORTYMILE_6 0.6900]G2] 1.0174 -0.5000
CHNL# 306: [VARS990004[FORTYMILE_3 0.6900]G1] 1.0174 -0.5000



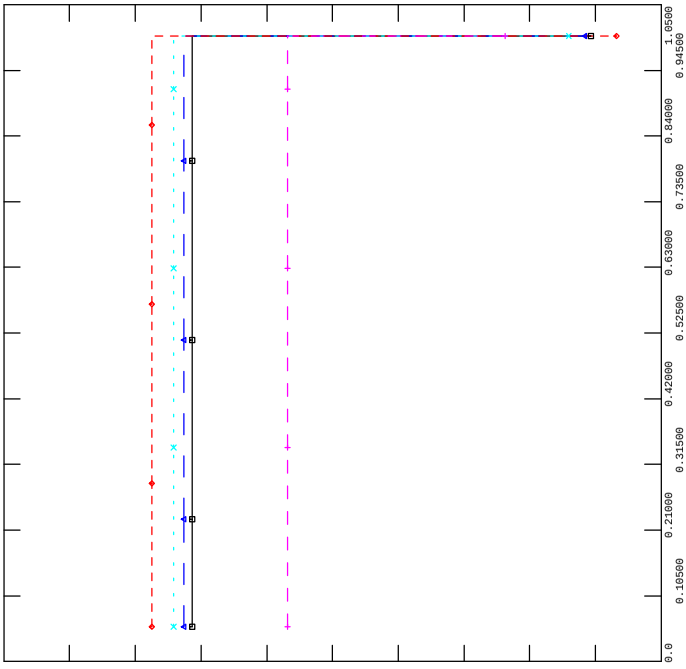
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_02_983L_WHITLA

FILE: Scn7_SP_02_983L_Whitla.out

THU, APR 14 2022 19:43

BUS VOLTAGE

CHNL# 554: [VOLT 976 [ROTBAUR 138.00]] 1.2061 0.49520
CHNL# 549: [VOLT 320 [CHAPPIC7 138.00]] 1.1977 0.77730
CHNL# 552: [VOLT 662 [WHITLA1 240.00]] 1.3842 -0.0988
CHNL# 551: [VOLT 659 [BOWMAN2 138.00]] 1.2614 0.40140
CHNL# 553: [VOLT 669 [BOWMAN1 240.00]] 1.2529 0.32050



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_02_983L_WHITLA

FILE: Scn7_SP_02_983L_Whitla.out

THU, APR 14 2022 19:43 BRANCH P

CHNL# 567: [964L_L5_P]
303.40 -101.7
CHNL# 571: [964L_L4_P]
249.87 -675.3
CHNL# 573: [1005L_P]
-237.8 -391.7

TIME (SECONDS)
0.0 0.10500 0.21000 0.31500 0.42000 0.52500 0.63000 0.73500 0.84000 0.94500 1.0500

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_03_964L_Y_P2237

FILE: Scn7_SP_03_964L_Y_P2237.out

THU, APR 14 2022 19:43 ROTOR ANGLE

CHNL# 43: [ANGL 775[SECCT2 21.000]3]
58.593 -47.06
CHNL# 42: [ANGL 774[SECCT1 21.000]2]
58.593 -47.06
CHNL# 41: [ANGL 773[SECST 20.000]1]
60.402 -44.60
CHNL# 1: [ANGL 667[CANCARB9 13.800]1]
113.27 -18.34

TIME (SECONDS)
0.0 0.10500 0.21000 0.31500 0.42000 0.52500 0.63000 0.73500 0.84000 0.94500 1.0500

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_02_983L_WHITLA

FILE: Scn7_SP_02_983L_Whitla.out

THU, APR 14 2022 19:43 BRANCH Q

CHNL# 576: [1035L_Q]
179.26 -379.6
CHNL# 570: [1034L_Q]
160.04 -375.0
CHNL# 562: [983L_L1_Q]
1289.0 -493.7
CHNL# 560: [983L_L3_Q]
40.000 -71.79
CHNL# 558: [983L_L2_Q]
835.38 -346.9
CHNL# 556: [964L_L2_Q]
721.99 -270.1

TIME (SECONDS)
0.0 0.10500 0.21000 0.31500 0.42000 0.52500 0.63000 0.73500 0.84000 0.94500 1.0500

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_02_983L_WHITLA

FILE: Scn7_SP_02_983L_Whitla.out

THU, APR 14 2022 19:43 BRANCH Q

CHNL# 568: [964L_L5_Q]
365.04 -124.1
CHNL# 572: [964L_L4_Q]
608.53 -666.7
CHNL# 574: [1005L_Q]
127.76 -82.06

TIME (SECONDS)
0.0 0.10500 0.21000 0.31500 0.42000 0.52500 0.63000 0.73500 0.84000 0.94500 1.0500

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_03_964L_Y_P2237

FILE: Scn7_SP_03_964L_Y_P2237.out

THU, APR 14 2022 19:43

REACTIVE POWER

CHNL# 298: [VARS 61994[GRANLEA6 0.6900]G1]
2.4565 -0.6890

CHNL# 295: [VARS 60990[SHAMROC5 0.6500]G1]
5.7402 -1.709

CHNL# 308: [VARS 773[SECST 20.000]1]
1.5124 -0.3190

CHNL# 268: [VARS 667[CANCARB9 13.800]1]
1.1050 -0.6451

CHNL# 307: [VARS990007[FORTYMILE_6 0.6900]G2]
1.0174 -0.5000

CHNL# 306: [VARS990004[FORTYMILE_3 0.6900]G1]
1.0174 -0.5000

1.0500 0.94500 0.84000 0.73500 0.63000 0.52500 0.42000 0.31500 0.21000 0.10500 0.0

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_03_964L_Y_P2237

FILE: Scn7_SP_03_964L_Y_P2237.out

THU, APR 14 2022 19:43

BUS VOLTAGE

CHNL# 554: [VOLT 976 [ROTBAUR 138.00]]
1.2376 0.49700

CHNL# 549: [VOLT 320 [CHAPPIC7 138.00]]
1.2050 0.77820

CHNL# 552: [VOLT 662 [WHITLA1 240.00]]
1.4941 -0.0638

CHNL# 551: [VOLT 659 [BOWMAN2 138.00]]
1.2973 0.40390

CHNL# 553: [VOLT 669 [BOWMAN1 240.00]]
1.2960 0.32370

1.0500 0.94500 0.84000 0.73500 0.63000 0.52500 0.42000 0.31500 0.21000 0.10500 0.0

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_03_964L_Y_P2237

FILE: Scn7_SP_03_964L_Y_P2237.out

THU, APR 14 2022 19:43

ACTIVE POWER

CHNL# 209: [POWR 61994[GRANLEA6 0.6900]G1]
1.2000 -0.0755

CHNL# 206: [POWR 60990[SHAMROC5 0.6500]G1]
2.2223 0.21720

CHNL# 219: [POWR 773[SECST 20.000]1]
3.6065 2.7031

CHNL# 179: [POWR 667[CANCARB9 13.800]1]
1.1416 0.11410

CHNL# 218: [POWR990007[FORTYMILE_6 0.6900]G2]
1.5300 -0.2000

CHNL# 217: [POWR990004[FORTYMILE_3 0.6900]G1]
1.5300 -0.2000

1.0500 0.94500 0.84000 0.73500 0.63000 0.52500 0.42000 0.31500 0.21000 0.10500 0.0

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_03_964L_Y_P2237

FILE: Scn7_SP_03_964L_Y_P2237.out

THU, APR 14 2022 19:43

TERMINAL VOLTAGE

CHNL# 476: [ETRM 61994[GRANLEA6 0.6900]G1]
1.5912 0.14460

CHNL# 473: [ETRM 60990[SHAMROC5 0.6500]G1]
1.9160 0.11700

CHNL# 486: [ETRM 773[SECST 20.000]1]
1.1554 0.91620

CHNL# 446: [ETRM 667[CANCARB9 13.800]1]
1.1667 0.70440

CHNL# 485: [ETRM990007[FORTYMILE_6 0.6900]G2]
1.1425 -0.1000

CHNL# 484: [ETRM990004[FORTYMILE_3 0.6900]G1]
1.1425 -0.1000

1.0500 0.94500 0.84000 0.73500 0.63000 0.52500 0.42000 0.31500 0.21000 0.10500 0.0

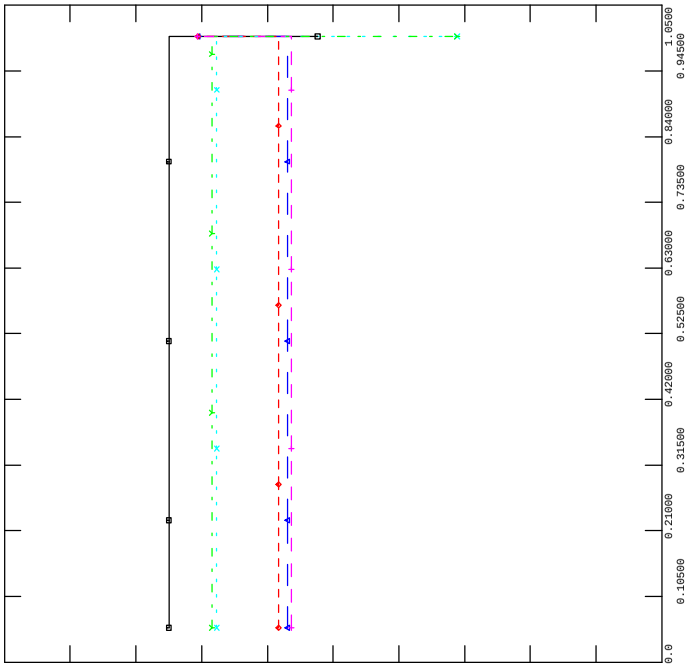
TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_03_964L_Y_P2237

FILE: Scn7_SP_03_964L_Y_P2237.out

THU, APR 14 2022 19:43 BRANCH Q

CHNL# 576: [1035L Q] 243.33 -402.2
CHNL# 570: [1034L Q] 228.18 -396.9
CHNL# 562: [983L L1 Q] 704.99 -1020.
CHNL# 560: [983L L3 Q] 630.27 -958.6
CHNL# 558: [983L L2 Q] 649.70 -978.2
CHNL# 556: [964L L2 Q] 94.759 -86.87

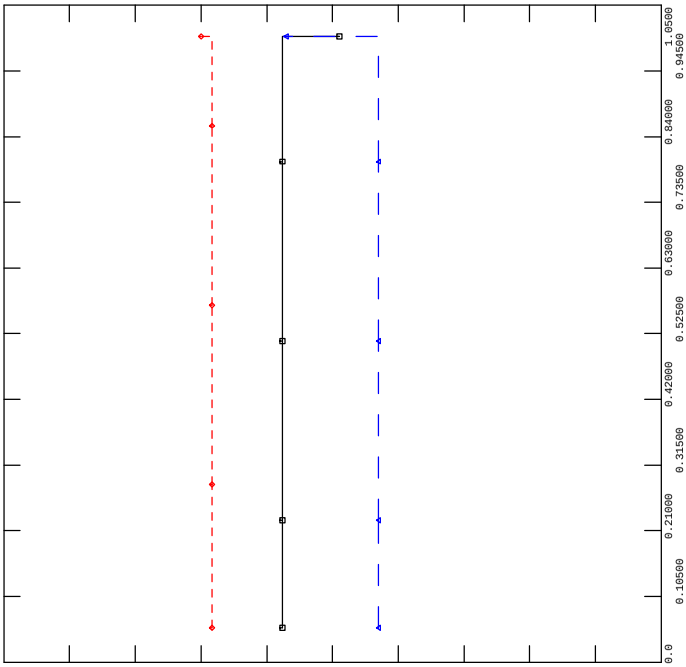


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_03_964L_Y_P2237

FILE: Scn7_SP_03_964L_Y_P2237.out

THU, APR 14 2022 19:43 BRANCH Q

CHNL# 568: [964L L5 Q] 231.20 -494.7
CHNL# 572: [964L L4 Q] 40.000 -53.07
CHNL# 574: [1005L Q] 95.948 -62.33

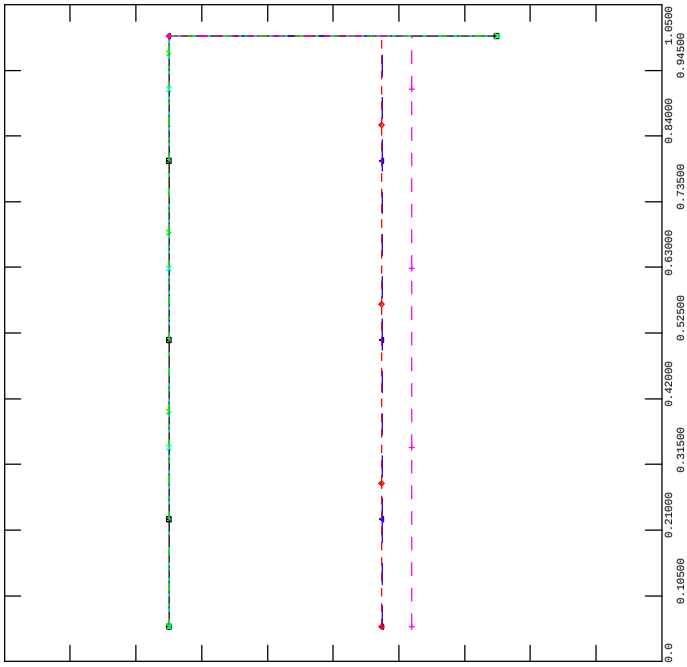


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_03_964L_Y_P2237

FILE: Scn7_SP_03_964L_Y_P2237.out

THU, APR 14 2022 19:43 BRANCH P

CHNL# 575: [1035L P] 801.87 -202.3
CHNL# 569: [1034L P] 770.80 -206.0
CHNL# 561: [983L L1 P] 380.66 -1088.
CHNL# 559: [983L L3 P] 289.90 -803.8
CHNL# 557: [983L L2 P] 290.65 -803.3
CHNL# 555: [964L L2 P] 293.55 -97.84

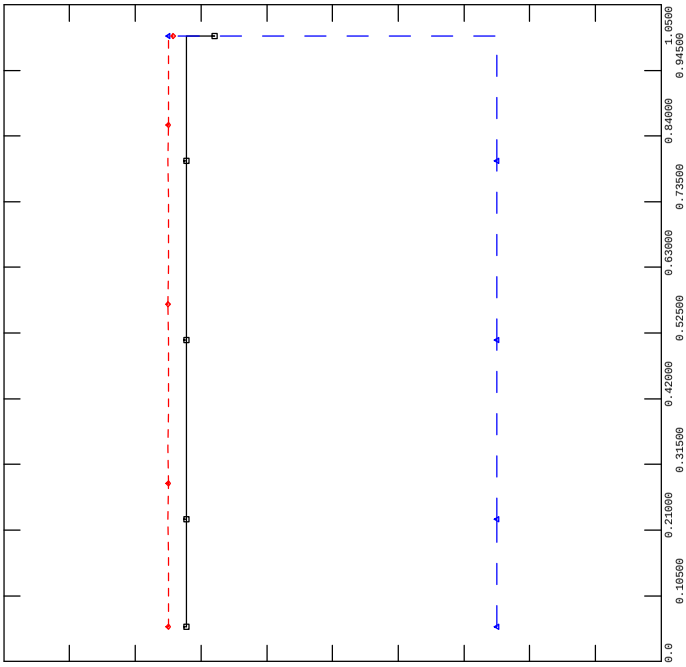


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_03_964L_Y_P2237

FILE: Scn7_SP_03_964L_Y_P2237.out

THU, APR 14 2022 19:43 BRANCH P

CHNL# 567: [964L L5 P] 99.378 -292.3
CHNL# 571: [964L L4 P] 222.00 -666.0
CHNL# 573: [1005L P] -237.8 -381.8



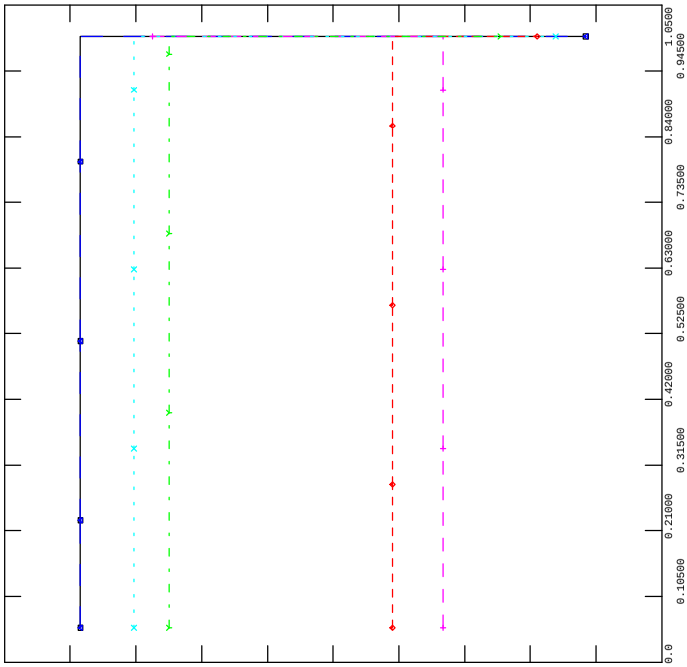
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_04_964L_Y_BOWMANTON

FILE: Scn7_SP_04_964L_Y_Bowmanton.out

THU, APR 14 2022 19:43

ACTIVE POWER

CHNL# 209: [POWR 61994[GRANLEA6 0.6900]G1] 1.3331 0.00500
CHNL# 206: [POWR 60990[SHAMROC5 0.6500]G1] 2.4324 0.31880
CHNL# 219: [POWR 773[SECST 20.000]1] 3.5723 2.6827
CHNL# 179: [POWR 667[CANCARB9 13.800]1] 1.2099 0.07790
CHNL# 218: [POWR990007[FORTYMILE_6 0.6900]G2] 1.5300 -0.2000
CHNL# 217: [POWR990004[FORTYMILE_3 0.6900]G1] 1.5300 -0.2000



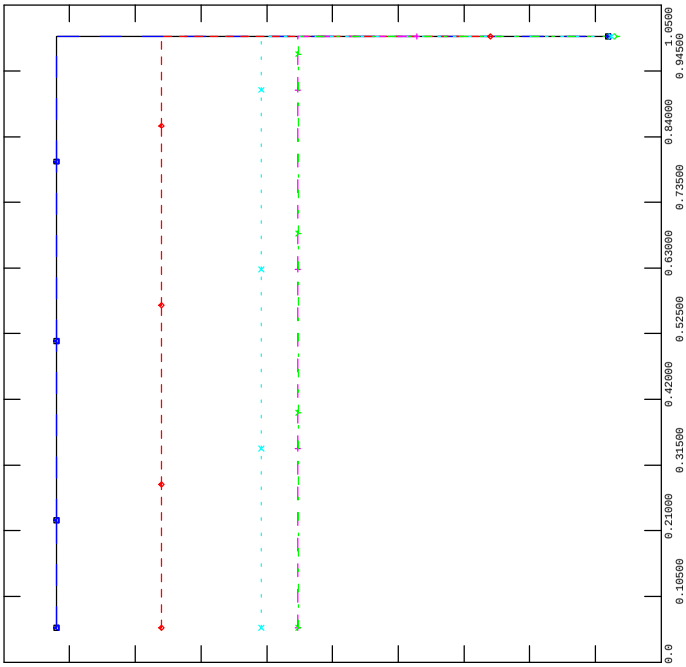
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_04_964L_Y_BOWMANTON

FILE: Scn7_SP_04_964L_Y_Bowmanton.out

THU, APR 14 2022 19:43

TERMINAL VOLTAGE

CHNL# 476: [ETRM 61994[GRANLEA6 0.6900]G1] 1.7434 0.25680
CHNL# 473: [ETRM 60990[SHAMROC5 0.6500]G1] 1.5678 0.24340
CHNL# 486: [ETRM 773[SECST 20.000]1] 1.1602 0.89130
CHNL# 446: [ETRM 667[CANCARB9 13.800]1] 1.1878 0.57040
CHNL# 485: [ETRM990007[FORTYMILE_6 0.6900]G2] 1.1425 -0.1000
CHNL# 484: [ETRM990004[FORTYMILE_3 0.6900]G1] 1.1425 -0.1000



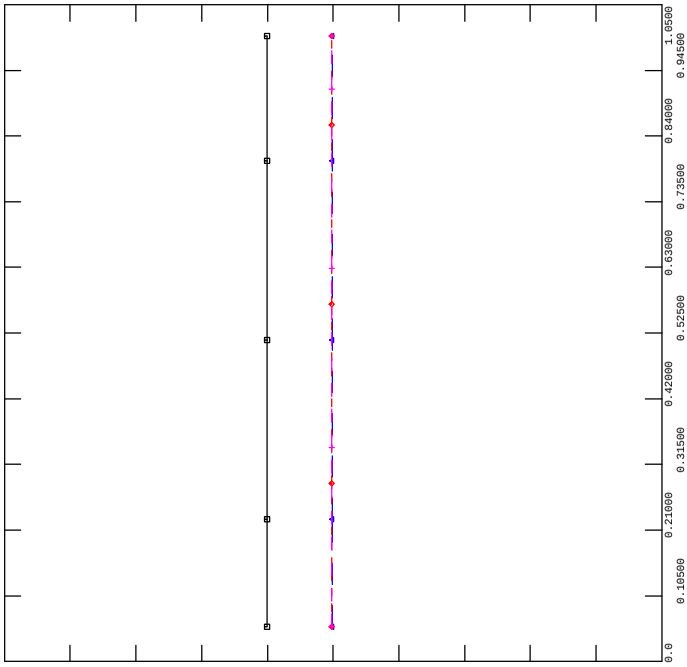
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_04_964L_Y_BOWMANTON

FILE: Scn7_SP_04_964L_Y_Bowmanton.out

THU, APR 14 2022 19:43

ROTOR ANGLE

CHNL# 43: [ANGL 775[SECCT2 21.000]3] 58.460 -46.56
CHNL# 42: [ANGL 774[SECCT1 21.000]2] 58.460 -46.56
CHNL# 41: [ANGL 773[SECST 20.000]1] 60.235 -44.07
CHNL# 1: [ANGL 667[CANCARB9 13.800]1] 118.33 -19.40



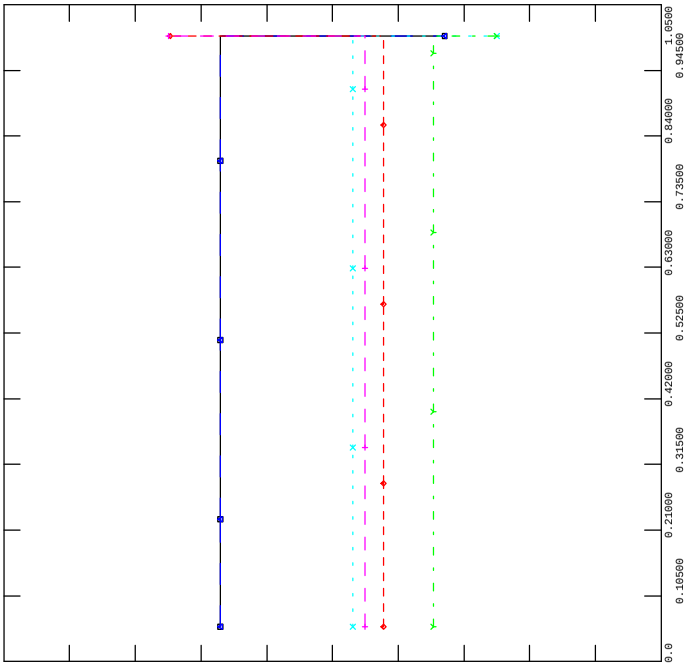
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_04_964L_Y_BOWMANTON

FILE: Scn7_SP_04_964L_Y_Bowmanton.out

THU, APR 14 2022 19:43

REACTIVE POWER

CHNL# 298: [VARS 61994[GRANLEA6 0.6900]G1] 2.3796 -0.6037
CHNL# 295: [VARS 60990[SHAMROC5 0.6500]G1] 1.9527 -0.3270
CHNL# 308: [VARS 773[SECST 20.000]1] 2.1209 -0.5636
CHNL# 268: [VARS 667[CANCARB9 13.800]1] 1.2873 -0.6893
CHNL# 307: [VARS990007[FORTYMILE_6 0.6900]G2] 1.0174 -0.5000
CHNL# 306: [VARS990004[FORTYMILE_3 0.6900]G1] 1.0174 -0.5000



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_04_964L_Y_BOWMANTON

FILE: Scn7_SP_04_964L_Y_Bowmanton.out

THU, APR 14 2022 19:43 BRANCH P

CHNL# 575: [1035L_P]
825.93 -274.5
CHNL# 569: [1034L_P]
789.73 -262.8
CHNL# 561: [983L_L1_P]
380.18 -1138.
CHNL# 559: [983L_L3_P]
311.27 -897.6
CHNL# 557: [983L_L2_P]
311.20 -896.8
CHNL# 555: [964L_L2_P]
293.55 -97.84

TIME (SECONDS)
0.0 0.10500 0.21000 0.31500 0.42000 0.52500 0.63000 0.73500 0.84000 0.94500 1.0500

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_04_964L_Y_BOWMANTON

FILE: Scn7_SP_04_964L_Y_Bowmanton.out

THU, APR 14 2022 19:43 BRANCH P

CHNL# 567: [964L_L5_P]
115.17 -333.2
CHNL# 571: [964L_L4_P]
222.00 -666.0
CHNL# 573: [1005L_P]
-155.2 -482.6

TIME (SECONDS)
0.0 0.10500 0.21000 0.31500 0.42000 0.52500 0.63000 0.73500 0.84000 0.94500 1.0500

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_04_964L_Y_BOWMANTON

FILE: Scn7_SP_04_964L_Y_Bowmanton.out

THU, APR 14 2022 19:43 BUS VOLTAGE

CHNL# 554: [VOLT 976 [ROTBAUR 138.00]]
1.2340 0.23350
CHNL# 549: [VOLT 320 [CHAPPIC7 138.00]]
1.2166 0.64800
CHNL# 552: [VOLT 662 [WHITLA1 240.00]]
1.5927 0.03520
CHNL# 551: [VOLT 659 [BOWMAN2 138.00]]
1.3077 0.05710
CHNL# 553: [VOLT 669 [BOWMAN1 240.00]]
1.3218 -0.0890

TIME (SECONDS)
0.0 0.10500 0.21000 0.31500 0.42000 0.52500 0.63000 0.73500 0.84000 0.94500 1.0500

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_04_964L_Y_BOWMANTON

FILE: Scn7_SP_04_964L_Y_Bowmanton.out

THU, APR 14 2022 19:43 BRANCH Q

CHNL# 576: [1035L_Q]
251.06 -354.8
CHNL# 570: [1034L_Q]
237.66 -353.8
CHNL# 562: [983L_L1_Q]
914.98 -900.4
CHNL# 560: [983L_L3_Q]
1027.1 -925.4
CHNL# 558: [983L_L2_Q]
1049.0 -973.6
CHNL# 556: [964L_L2_Q]
764.50 -315.5

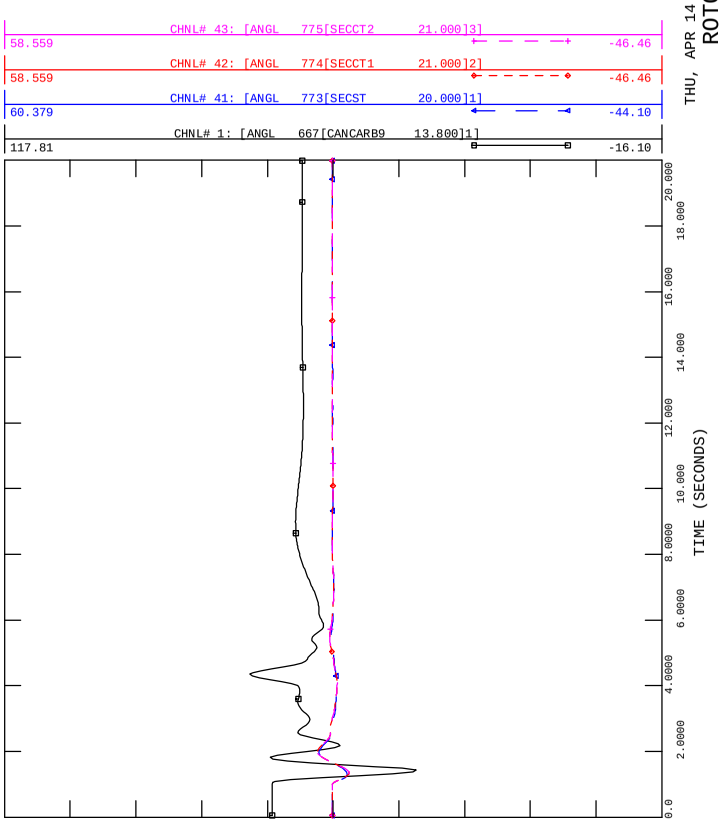
TIME (SECONDS)
0.0 0.10500 0.21000 0.31500 0.42000 0.52500 0.63000 0.73500 0.84000 0.94500 1.0500

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_03_964L_X_WHITLA

FILE: Scn7_SP_03_964L_X_Whitla.out

THU, APR 14 2022 19:43

ROTOR ANGLE

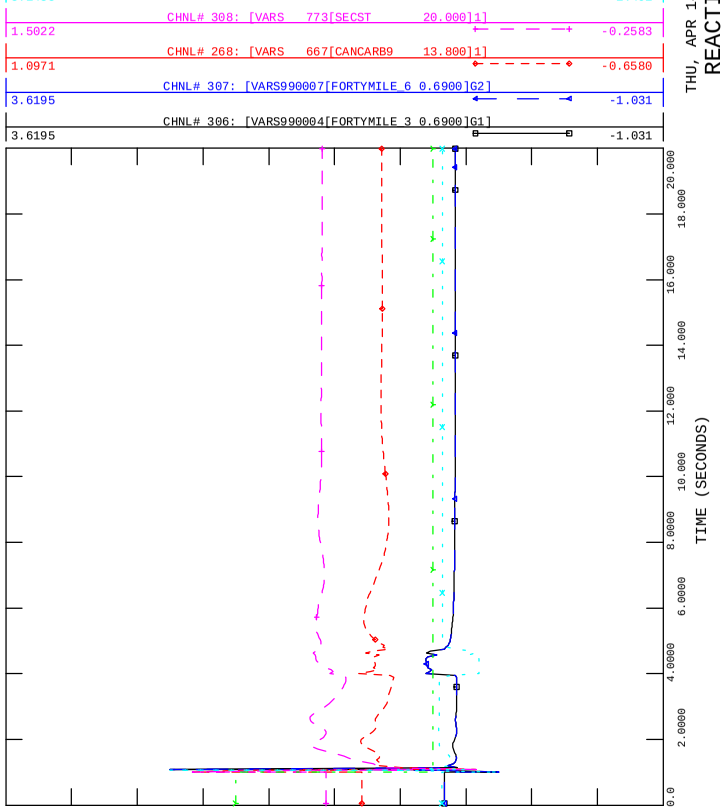


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_03_964L_X_WHITLA

FILE: Scn7_SP_03_964L_X_Whitla.out

THU, APR 14 2022 19:43

REACTIVE POWER

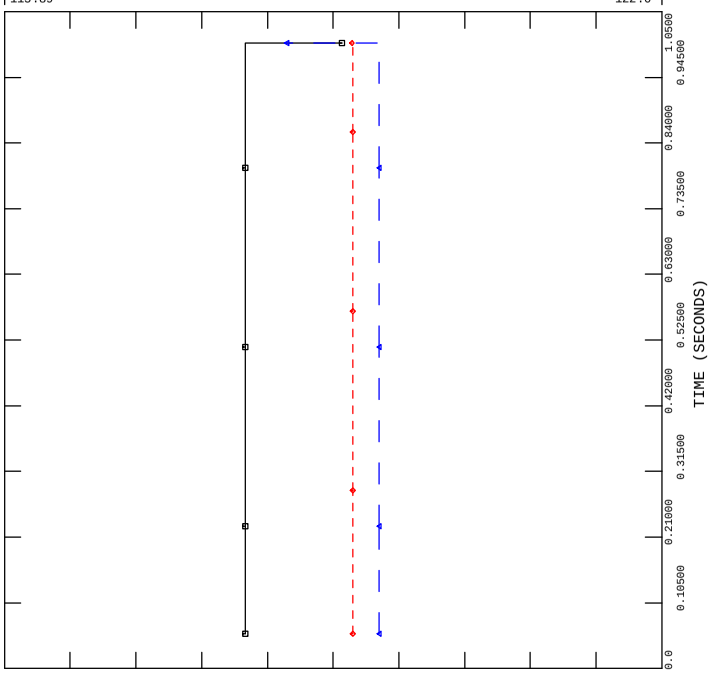


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_04_964L_Y_BOWMANTON

FILE: Scn7_SP_04_964L_Y_Bowmanton.out

THU, APR 14 2022 19:43

BRANCH Q

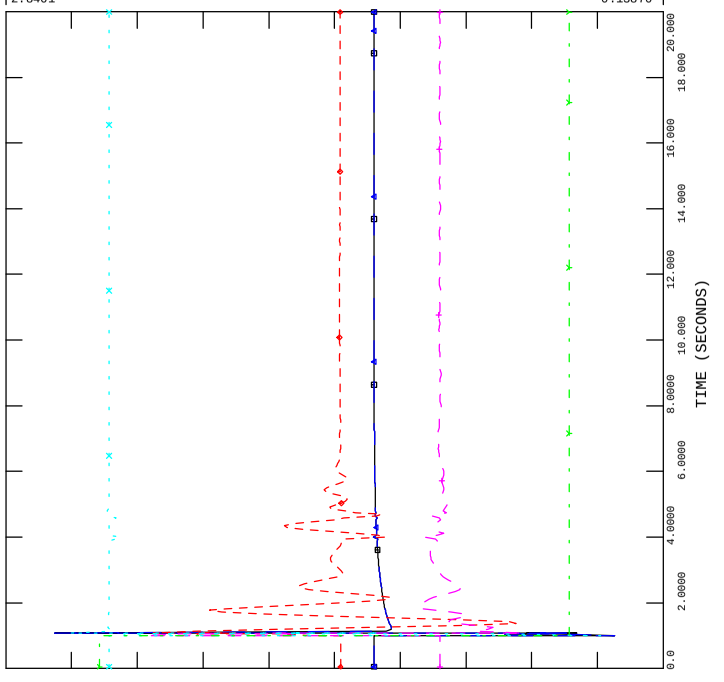


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_03_964L_X_WHITLA

FILE: Scn7_SP_03_964L_X_Whitla.out

THU, APR 14 2022 19:43

ACTIVE POWER



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_03_964L_X_WHITLA

FILE: Scn7_SP_03_964L_X_Whitla.out

THU, APR 14 2022 19:43

BUS VOLTAGE

CHNL# 554: [VOLT 976 [ROTBAUR 138.00]]
1.2471 0.50650
CHNL# 549: [VOLT 320 [CHAPPIC7 138.00]]
1.1996 0.78200
CHNL# 552: [VOLT 662 [WHITLA1 240.00]]
1.3988 -0.0998
CHNL# 551: [VOLT 659 [BOWMAN2 138.00]]
1.3048 0.41540
CHNL# 553: [VOLT 669 [BOWMAN1 240.00]]
1.3052 0.33570

TIME (SECONDS)

0.0 2.0000 4.0000 6.0000 8.0000 10.000 12.000 14.000 16.000 18.000 20.000

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_03_964L_X_WHITLA

FILE: Scn7_SP_03_964L_X_Whitla.out

THU, APR 14 2022 19:43

BRANCH Q

CHNL# 576: [1035L Q]
327.09 -432.5
CHNL# 570: [1034L Q]
307.07 -425.4
CHNL# 562: [983L_L1_Q]
587.72 -701.8
CHNL# 560: [983L_L3_Q]
506.44 -521.8
CHNL# 558: [983L_L2_Q]
532.76 -547.8
CHNL# 556: [964L_L2_Q]
117.22 -154.3

TIME (SECONDS)

0.0 2.0000 4.0000 6.0000 8.0000 10.000 12.000 14.000 16.000 18.000 20.000

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_03_964L_X_WHITLA

FILE: Scn7_SP_03_964L_X_Whitla.out

THU, APR 14 2022 19:43

TERMINAL VOLTAGE

CHNL# 476: [ETRM 61994[GRANLEA6 0.6900]G1]
1.1768 -0.1000
CHNL# 473: [ETRM 60990[SHAMROC5 0.6500]G1]
1.6557 0.13660
CHNL# 486: [ETRM 773[SECST 20.000]1]
1.1533 0.91680
CHNL# 446: [ETRM 667[CANCARB9 13.800]1]
1.1742 0.70360
CHNL# 485: [ETRM990007[FORTYMILE_6 0.6900]G2]
1.6303 0.16550
CHNL# 484: [ETRM990004[FORTYMILE_3 0.6900]G1]
1.6303 0.16550

TIME (SECONDS)

0.0 2.0000 4.0000 6.0000 8.0000 10.000 12.000 14.000 16.000 18.000 20.000

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_03_964L_X_WHITLA

FILE: Scn7_SP_03_964L_X_Whitla.out

THU, APR 14 2022 19:43

BRANCH P

CHNL# 575: [1035L P]
802.52 -204.2
CHNL# 569: [1034L P]
772.17 -210.1
CHNL# 561: [983L_L1_P]
315.14 -819.9
CHNL# 559: [983L_L3_P]
217.92 -575.2
CHNL# 557: [983L_L2_P]
219.63 -575.5
CHNL# 555: [964L_L2_P]
296.90 -107.9

TIME (SECONDS)

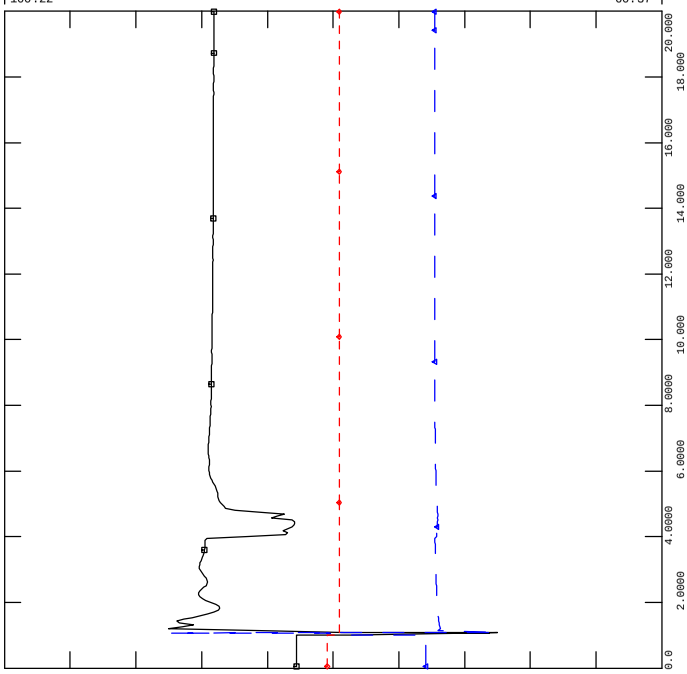
0.0 2.0000 4.0000 6.0000 8.0000 10.000 12.000 14.000 16.000 18.000 20.000

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_03_964L_X_WHITLA

FILE: Scn7_SP_03_964L_X_Whitla.out

THU, APR 14 2022 19:43 BRANCH Q

CHNL# 568: [964L_L5_Q]
41.459 -40.00
CHNL# 572: [964L_L4_Q]
1423.9 -817.2
CHNL# 574: [1005L_Q]
100.22 -60.37

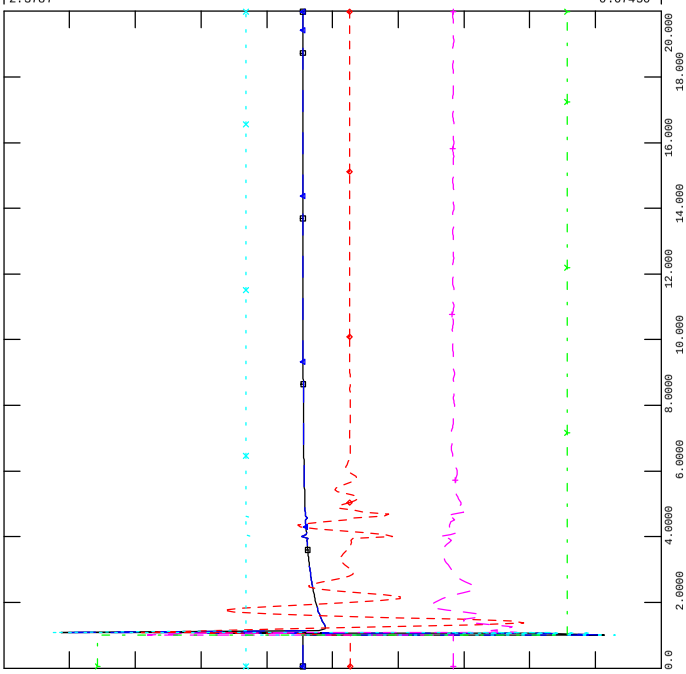


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_04_964L_X_P2237

FILE: Scn7_SP_04_964L_X_P2237.out

THU, APR 14 2022 19:43 ACTIVE POWER

CHNL# 209: [POWR 61994[GRANLEA6 0.6900]G1]
1.2000 -0.2000
CHNL# 206: [POWR 60990[SHAMROC5 0.6500]G1]
3.0677 0.21420
CHNL# 219: [POWR 773[SECST 20.000]1]
3.6047 2.6899
CHNL# 179: [POWR 667[CANCARB9 13.800]1]
1.0445 0.09050
CHNL# 218: [POWR990007[FORTYMILE_6 0.6900]G2]
2.3787 0.07450
CHNL# 217: [POWR990004[FORTYMILE 3 0.6900]G1]
2.3787 0.07450

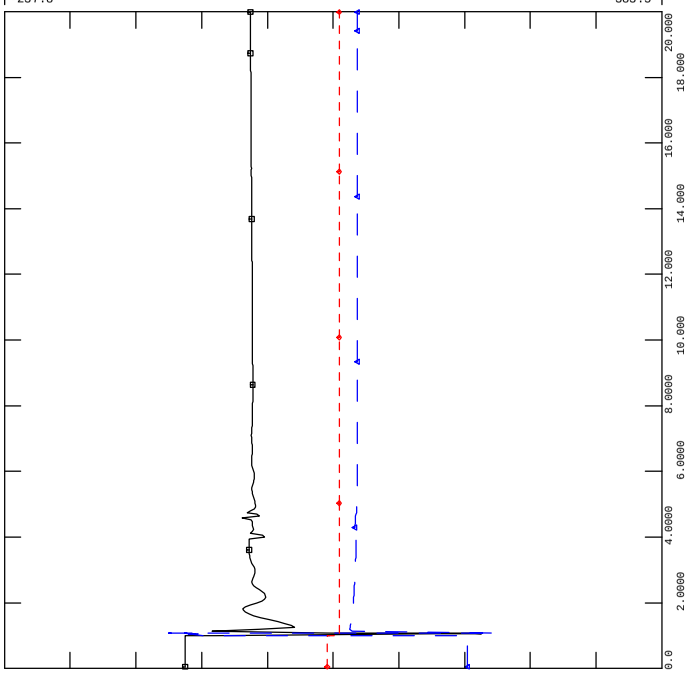


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_03_964L_X_WHITLA

FILE: Scn7_SP_03_964L_X_Whitla.out

THU, APR 14 2022 19:43 BRANCH P

CHNL# 567: [964L_L5_P]
41.465 -40.00
CHNL# 571: [964L_L4_P]
349.78 -777.6
CHNL# 573: [1005L_P]
-237.8 -383.5

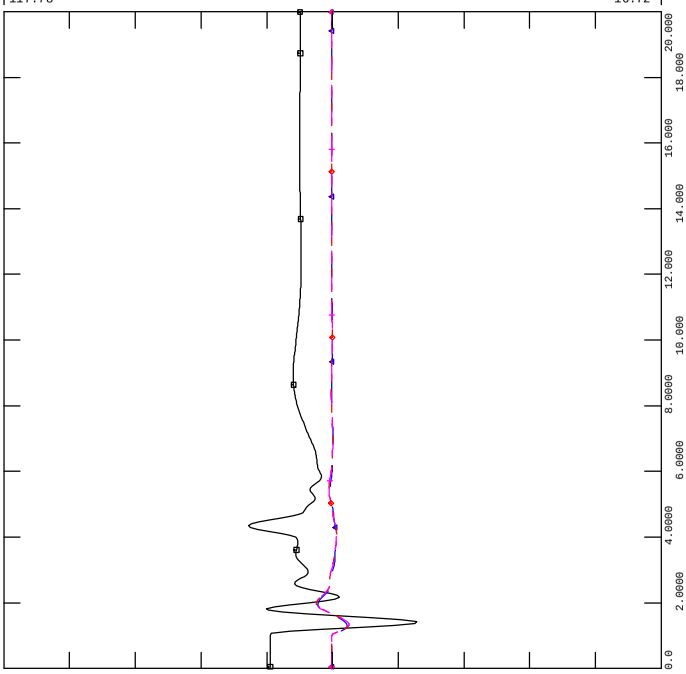


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_04_964L_X_P2237

FILE: Scn7_SP_04_964L_X_P2237.out

THU, APR 14 2022 19:43 ROTOR ANGLE

CHNL# 43: [ANGL 775[SECCT2 21.000]3]
58.629 -46.58
CHNL# 42: [ANGL 774[SECCT1 21.000]2]
58.629 -46.58
CHNL# 41: [ANGL 773[SECST 20.000]1]
60.454 -44.22
CHNL# 1: [ANGL 667[CANCARB9 13.800]1]
117.78 -16.72



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_04_964L_X_P2237

FILE: Scn7_SP_04_964L_X_P2237.out

THU, APR 14 2022 19:43

TERMINAL VOLTAGE

CHNL# 476: [ETRM 61994[GRANLEA6 0.6900]G1] 1.1768 -0.1000
CHNL# 473: [ETRM 60990[SHAMROC5 0.6500]G1] 2.2183 0.11540
CHNL# 486: [ETRM 773[SECST 20.000]1] 1.1547 0.91620
CHNL# 446: [ETRM 667[CANCARB9 13.800]1] 1.1741 0.70210
CHNL# 485: [ETRM990007[FORTYMILE_6 0.6900]G2] 1.5066 0.11520
CHNL# 484: [ETRM990004[FORTYMILE_3 0.6900]G1] 1.5066 0.11520

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_04_964L_X_P2237

FILE: Scn7_SP_04_964L_X_P2237.out

THU, APR 14 2022 19:43

BRANCH P

CHNL# 575: [1035L_P] 802.12 -203.1
CHNL# 569: [1034L_P] 771.80 -209.0
CHNL# 561: [983L_L1_P] 366.16 -839.7
CHNL# 559: [983L_L3_P] 247.33 -583.4
CHNL# 557: [983L_L2_P] 250.37 -583.9
CHNL# 555: [964L_L2_P] 293.55 -97.85

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_04_964L_X_P2237

FILE: Scn7_SP_04_964L_X_P2237.out

THU, APR 14 2022 19:43

REACTIVE POWER

CHNL# 298: [VARS 61994[GRANLEA6 0.6900]G1] 0.92890 -0.5000
CHNL# 295: [VARS 60990[SHAMROC5 0.6500]G1] 6.2431 -1.878
CHNL# 308: [VARS 773[SECST 20.000]1] 1.5121 -0.2872
CHNL# 268: [VARS 667[CANCARB9 13.800]1] 1.1055 -0.6655
CHNL# 307: [VARS990007[FORTYMILE_6 0.6900]G2] 2.6830 -0.7519
CHNL# 306: [VARS990004[FORTYMILE_3 0.6900]G1] 2.6830 -0.7519

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_04_964L_X_P2237

FILE: Scn7_SP_04_964L_X_P2237.out

THU, APR 14 2022 19:43

BUS VOLTAGE

CHNL# 554: [VOLT 976 [ROTBAUR 138.00]] 1.2516 0.49640
CHNL# 549: [VOLT 320 [CHAPPIC7 138.00]] 1.2066 0.77820
CHNL# 552: [VOLT 662 [WHITLA1 240.00]] 1.5577 -0.0727
CHNL# 551: [VOLT 659 [BOWMAN2 138.00]] 1.3157 0.40300
CHNL# 553: [VOLT 669 [BOWMAN1 240.00]] 1.3281 0.32260

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_04_964L_X_P2237

FILE: Scn7_SP_04_964L_X_P2237.out

THU, APR 14 2022 19:43 BRANCH P

CHNL# 567: [964L_L5_P]
48.743 -40.00
CHNL# 571: [964L_L4_P]
263.53 -679.9
CHNL# 573: [1005L_P]
-237.8 -385.7

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_05_1034L_CASSILS

FILE: Scn7_SP_05_1034L_Cassils.out

THU, APR 14 2022 19:43 ROTOR ANGLE

CHNL# 43: [ANGL 775[SECCT2 21.000]3]
64.121 -54.52
CHNL# 42: [ANGL 774[SECCT1 21.000]2]
64.121 -54.52
CHNL# 41: [ANGL 773[SECST 20.000]1]
66.038 -51.48
CHNL# 1: [ANGL 667[CANCARB9 13.800]1]
131.14 -46.85

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_04_964L_X_P2237

FILE: Scn7_SP_04_964L_X_P2237.out

THU, APR 14 2022 19:43 BRANCH Q

CHNL# 576: [1035L_Q]
340.12 -435.0
CHNL# 570: [1034L_Q]
320.72 -428.0
CHNL# 562: [983L_L1_Q]
1103.6 -870.0
CHNL# 560: [983L_L3_Q]
1008.9 -849.7
CHNL# 558: [983L_L2_Q]
1058.0 -910.2
CHNL# 556: [964L_L2_Q]
89.351 -40.00

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_04_964L_X_P2237

FILE: Scn7_SP_04_964L_X_P2237.out

THU, APR 14 2022 19:43 BRANCH Q

CHNL# 568: [964L_L5_Q]
167.83 -55.94
CHNL# 572: [964L_L4_Q]
615.96 -409.2
CHNL# 574: [1005L_Q]
100.43 -58.87

TIME (SECONDS)

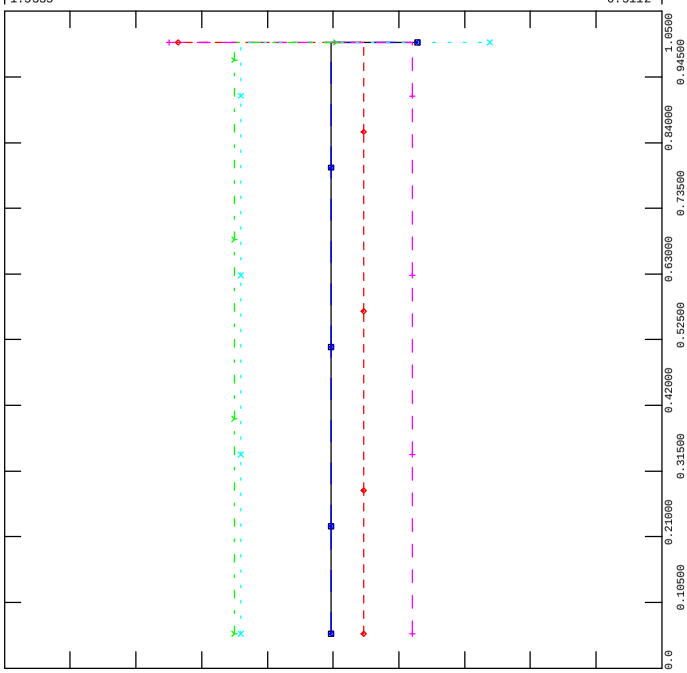
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_05_1034L_CASSILS

FILE: Scn7_SP_05_1034L_Cassils.out

THU, APR 14 2022 19:43

REACTIVE POWER

CHNL# 298: [VARS 61994[GRANLEA6 0.6900]G1] 0.92890 -0.5000
CHNL# 295: [VARS 60990[SHAMROC5 0.6500]G1] 1.4282 -0.4804
CHNL# 308: [VARS 773[SECST 20.000]1] 3.9214 -1.362
CHNL# 268: [VARS 667[CANCARB9 13.800]1] 1.1824 -0.7138
CHNL# 307: [VARS990007[FORTYMILE_6 0.6900]G2] 1.5335 -0.5112
CHNL# 306: [VARS990004[FORTYMILE_3 0.6900]G1] 1.5335 -0.5112



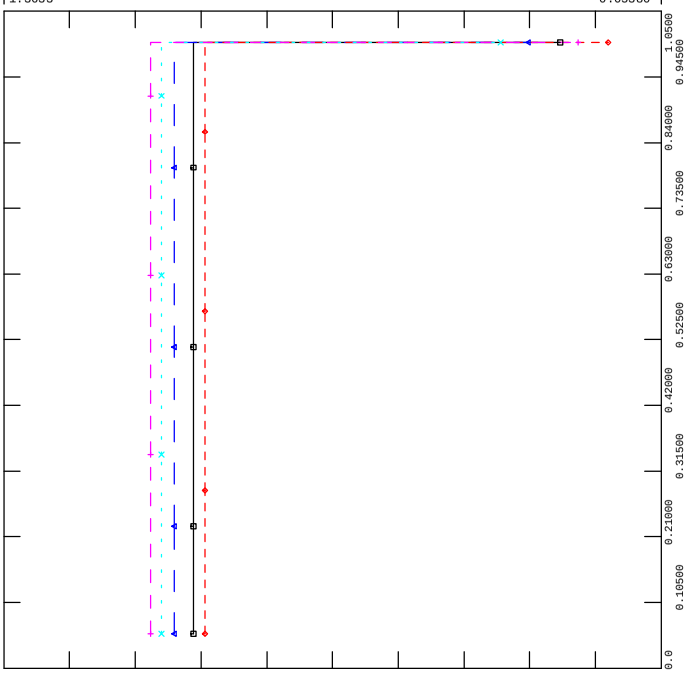
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_05_1034L_CASSILS

FILE: Scn7_SP_05_1034L_Cassils.out

THU, APR 14 2022 19:43

BUS VOLTAGE

CHNL# 554: [VOLT 976 [ROTBAUR 138.00]] 1.2619 0.26280
CHNL# 549: [VOLT 320 [CHAPPIC7 138.00]] 1.2510 0.20120
CHNL# 552: [VOLT 662 [WHITLA1 240.00]] 1.4284 0.19190
CHNL# 551: [VOLT 659 [BOWMAN2 138.00]] 1.3379 0.13390
CHNL# 553: [VOLT 669 [BOWMAN1 240.00]] 1.3633 0.05380



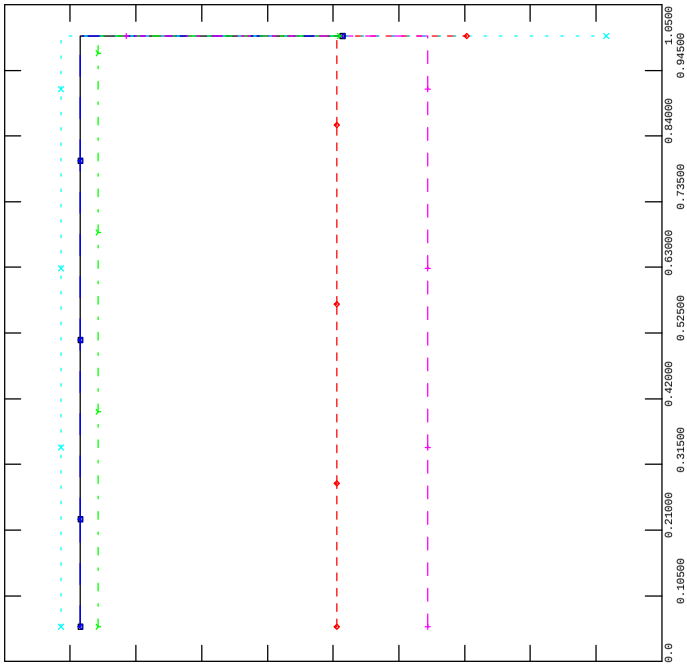
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_05_1034L_CASSILS

FILE: Scn7_SP_05_1034L_Cassils.out

THU, APR 14 2022 19:43

ACTIVE POWER

CHNL# 209: [POWR 61994[GRANLEA6 0.6900]G1] 1.2000 -0.2000
CHNL# 206: [POWR 60990[SHAMROC5 0.6500]G1] 2.2204 -0.1467
CHNL# 219: [POWR 773[SECST 20.000]1] 3.6745 2.5935
CHNL# 179: [POWR 667[CANCARB9 13.800]1] 1.1874 -0.0893
CHNL# 218: [POWR990007[FORTYMILE_6 0.6900]G2] 1.5300 -0.2000
CHNL# 217: [POWR990004[FORTYMILE_3 0.6900]G1] 1.5300 -0.2000



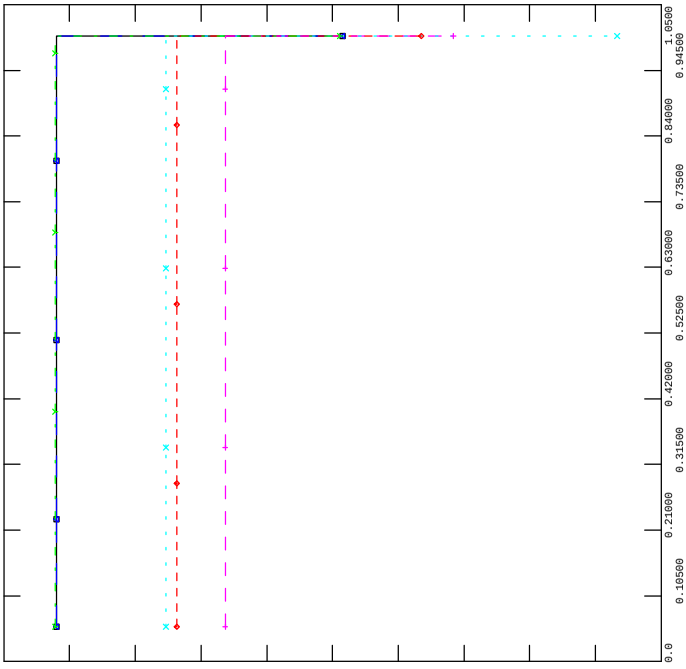
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_05_1034L_CASSILS

FILE: Scn7_SP_05_1034L_Cassils.out

THU, APR 14 2022 19:43

TERMINAL VOLTAGE

CHNL# 476: [ETRM 61994[GRANLEA6 0.6900]G1] 1.1768 -0.1000
CHNL# 473: [ETRM 60990[SHAMROC5 0.6500]G1] 1.4146 -0.0723
CHNL# 486: [ETRM 773[SECST 20.000]1] 1.1612 0.80120
CHNL# 446: [ETRM 667[CANCARB9 13.800]1] 1.2013 0.58860
CHNL# 485: [ETRM990007[FORTYMILE_6 0.6900]G2] 1.1425 -0.1000
CHNL# 484: [ETRM990004[FORTYMILE_3 0.6900]G1] 1.1425 -0.1000

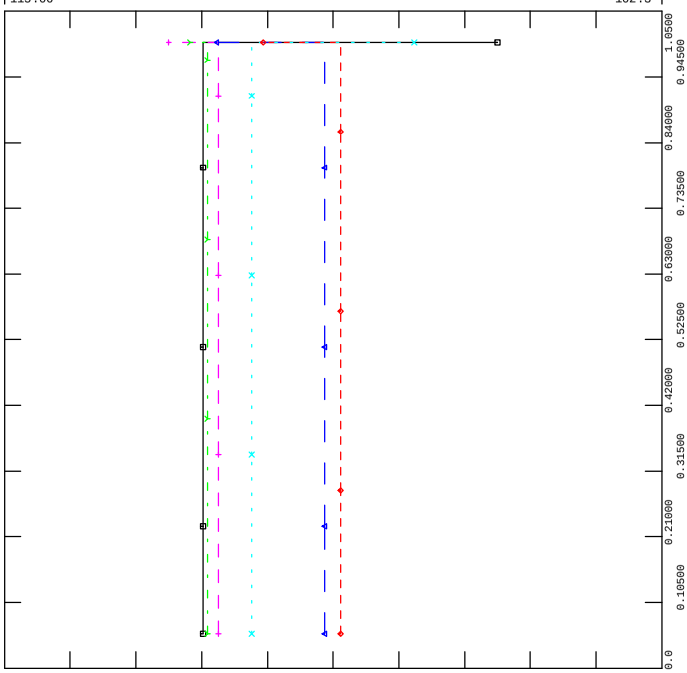


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_05_1034L_CASSILS

FILE: Scn7_SP_05_1034L_Cassils.out

THU, APR 14 2022 19:43 BRANCH Q

CHNL# 576: [1035L Q] 315.45 -578.1
CHNL# 570: [1034L Q] 66.286 -40.00
CHNL# 562: [983L L1 Q] 63.644 -279.1
CHNL# 560: [983L L3 Q] 78.321 -137.1
CHNL# 558: [983L L2 Q] 76.977 -186.4
CHNL# 556: [964L L2 Q] 115.06 -102.3

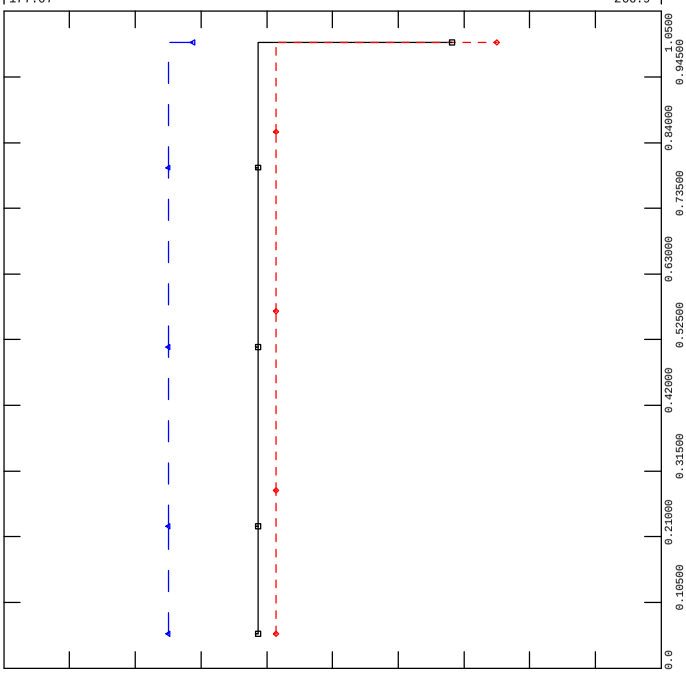


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_05_1034L_CASSILS

FILE: Scn7_SP_05_1034L_Cassils.out

THU, APR 14 2022 19:43 BRANCH Q

CHNL# 568: [964L L5 Q] 125.30 -173.5
CHNL# 572: [964L L4 Q] 46.557 -192.0
CHNL# 574: [1005L Q] 177.67 -206.9

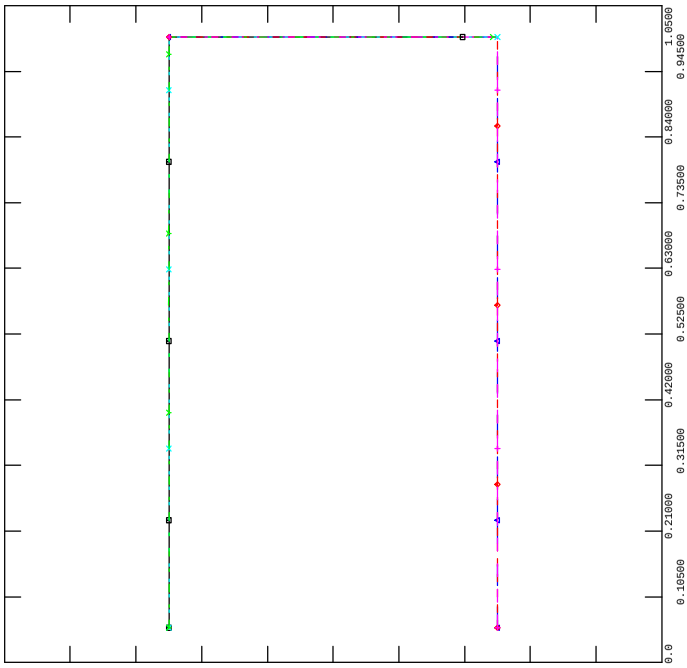


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_05_1034L_CASSILS

FILE: Scn7_SP_05_1034L_Cassils.out

THU, APR 14 2022 19:43 BRANCH P

CHNL# 575: [1035L P] 821.32 -260.7
CHNL# 569: [1034L P] 789.92 -263.3
CHNL# 561: [983L L1 P] 222.65 -779.2
CHNL# 559: [983L L3 P] 156.90 -502.6
CHNL# 557: [983L L2 P] 156.78 -502.2
CHNL# 555: [964L L2 P] 306.90 -137.9

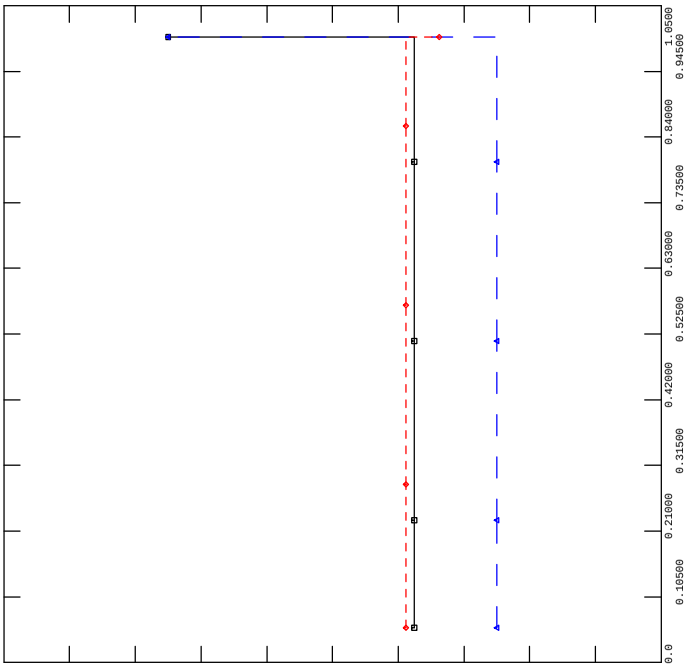


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_05_1034L_CASSILS

FILE: Scn7_SP_05_1034L_Cassils.out

THU, APR 14 2022 19:43 BRANCH P

CHNL# 567: [964L L5 P] 229.83 -143.6
CHNL# 571: [964L L4 P] 192.40 -656.1
CHNL# 573: [1005L P] 94.539 -502.3

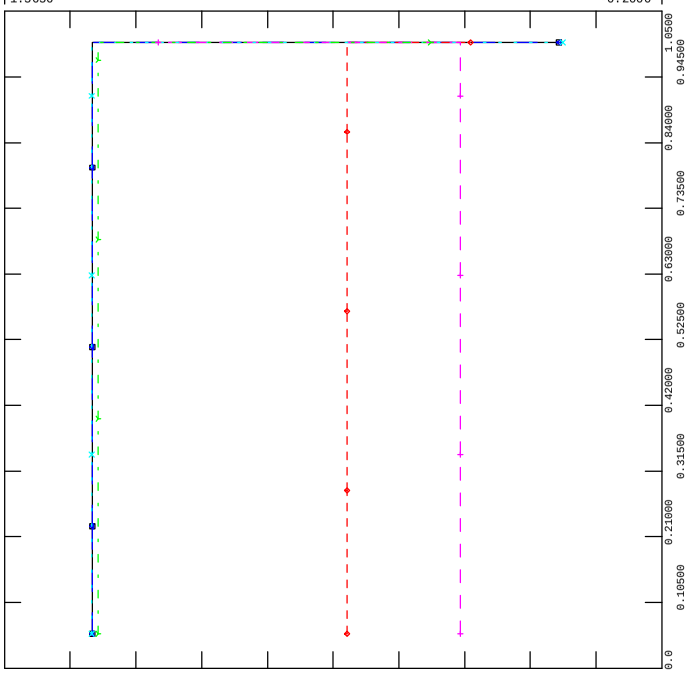


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_06_1034L_BOWMANTON

FILE: Scn7_SP_06_1034L_Bowmanton.out

THU, APR 14 2022 19:43 ACTIVE POWER

CHNL# 209: [POWR 61994[GRANLEA6 0.6900]G1]
1.2000 -0.2000
CHNL# 206: [POWR 60990[SHAMROC5 0.6500]G1]
2.2716 0.34040
CHNL# 219: [POWR 773[SECST 20.000]1]
3.5725 2.7168
CHNL# 179: [POWR 667[CANCARB9 13.800]1]
1.2405 -0.1003
CHNL# 218: [POWR990007[FORTYMILE_6 0.6900]G2]
1.5656 -0.2000
CHNL# 217: [POWR990004[FORTYMILE_3 0.6900]G1]
1.5656 -0.2000

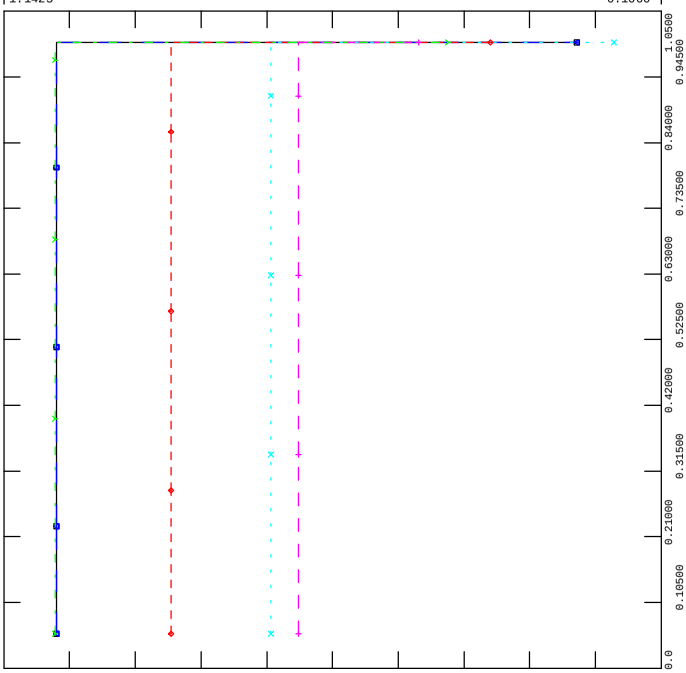


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_06_1034L_BOWMANTON

FILE: Scn7_SP_06_1034L_Bowmanton.out

THU, APR 14 2022 19:43 TERMINAL VOLTAGE

CHNL# 476: [ETRM 61994[GRANLEA6 0.6900]G1]
1.1768 -0.1000
CHNL# 473: [ETRM 60990[SHAMROC5 0.6500]G1]
1.6099 0.22860
CHNL# 486: [ETRM 773[SECST 20.000]1]
1.1614 0.89060
CHNL# 446: [ETRM 667[CANCARB9 13.800]1]
1.2025 0.56430
CHNL# 485: [ETRM990007[FORTYMILE_6 0.6900]G2]
1.1425 -0.1000
CHNL# 484: [ETRM990004[FORTYMILE_3 0.6900]G1]
1.1425 -0.1000

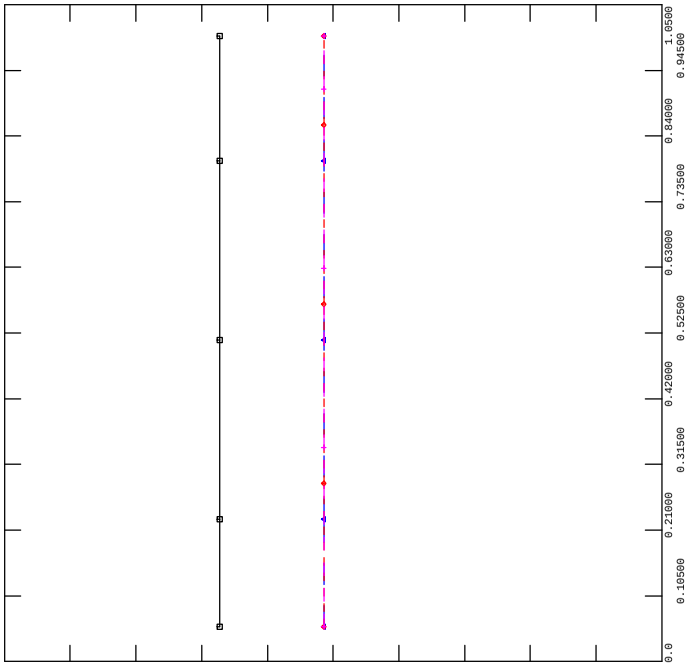


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_06_1034L_BOWMANTON

FILE: Scn7_SP_06_1034L_Bowmanton.out

THU, APR 14 2022 19:43 ROTOR ANGLE

CHNL# 43: [ANGL 775[SECCT2 21.000]3]
59.404 -50.27
CHNL# 42: [ANGL 774[SECCT1 21.000]2]
59.404 -50.27
CHNL# 41: [ANGL 773[SECST 20.000]1]
60.960 -47.55
CHNL# 1: [ANGL 667[CANCARB9 13.800]1]
118.03 -49.05

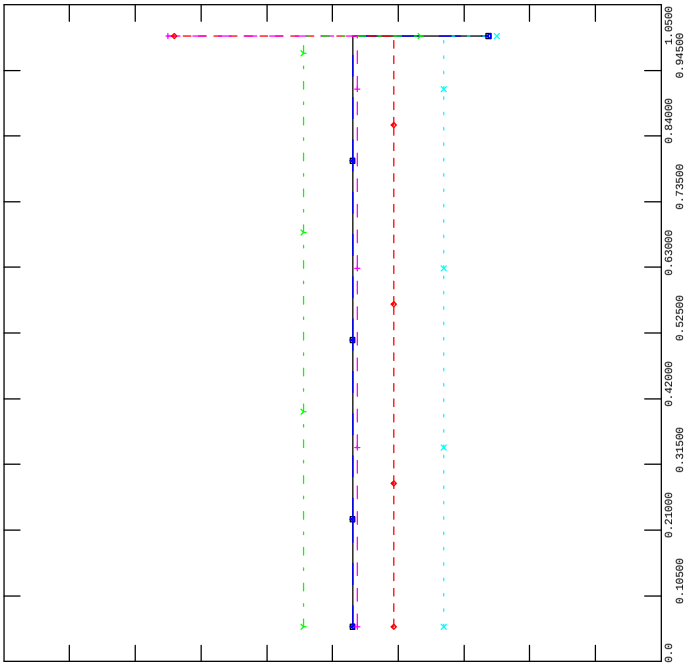


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_06_1034L_BOWMANTON

FILE: Scn7_SP_06_1034L_Bowmanton.out

THU, APR 14 2022 19:43 REACTIVE POWER

CHNL# 298: [VARS 61994[GRANLEA6 0.6900]G1]
1.2076 -0.5000
CHNL# 295: [VARS 60990[SHAMROC5 0.6500]G1]
4.9557 -1.342
CHNL# 308: [VARS 773[SECST 20.000]1]
2.1698 -0.6663
CHNL# 268: [VARS 667[CANCARB9 13.800]1]
1.2884 -0.6378
CHNL# 307: [VARS990007[FORTYMILE_6 0.6900]G2]
1.7672 -0.5891
CHNL# 306: [VARS990004[FORTYMILE_3 0.6900]G1]
1.7672 -0.5891



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_06_1034L_BOWMANTON

FILE: Scn7_SP_06_1034L_Bowmanton.out

THU, APR 14 2022 19:43 BRANCH P

CHNL# 575: [1035L_P]
826.83 -277.2

CHNL# 569: [1034L_P]
789.92 -263.3

CHNL# 561: [983L_L1_P]
266.22 -793.7

CHNL# 559: [983L_L3_P]
165.01 -505.3

CHNL# 557: [983L_L2_P]
164.97 -505.0

CHNL# 555: [964L_L2_P]
330.33 -208.2

1.0500 0.94500 0.84000 0.73500 0.63000 0.52500 0.42000 0.31500 0.21000 0.10500 0.0

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_06_1034L_BOWMANTON

FILE: Scn7_SP_06_1034L_Bowmanton.out

THU, APR 14 2022 19:43 BRANCH P

CHNL# 567: [964L_L5_P]
244.96 -177.8

CHNL# 571: [964L_L4_P]
224.01 -666.7

CHNL# 573: [1005L_P]
-151.0 -487.9

1.0500 0.94500 0.84000 0.73500 0.63000 0.52500 0.42000 0.31500 0.21000 0.10500 0.0

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_06_1034L_BOWMANTON

FILE: Scn7_SP_06_1034L_Bowmanton.out

THU, APR 14 2022 19:43 BUS VOLTAGE

CHNL# 554: [VOLT 976 [ROTBAUR 138.00]]
1.2217 0.23180

CHNL# 549: [VOLT 320 [CHAPPIC7 138.00]]
1.2162 0.64480

CHNL# 552: [VOLT 662 [WHITLA1 240.00]]
1.3963 -0.0043

CHNL# 551: [VOLT 659 [BOWMAN2 138.00]]
1.2791 0.05500

CHNL# 553: [VOLT 669 [BOWMAN1 240.00]]
1.2990 -0.0973

1.0500 0.94500 0.84000 0.73500 0.63000 0.52500 0.42000 0.31500 0.21000 0.10500 0.0

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_06_1034L_BOWMANTON

FILE: Scn7_SP_06_1034L_Bowmanton.out

THU, APR 14 2022 19:43 BRANCH Q

CHNL# 576: [1035L_Q]
392.25 -138.3

CHNL# 570: [1034L_Q]
66.286 -40.00

CHNL# 562: [983L_L1_Q]
160.21 -476.9

CHNL# 560: [983L_L3_Q]
70.567 -227.1

CHNL# 558: [983L_L2_Q]
89.194 -280.1

CHNL# 556: [964L_L2_Q]
251.41 -58.13

1.0500 0.94500 0.84000 0.73500 0.63000 0.52500 0.42000 0.31500 0.21000 0.10500 0.0

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_07_1035L_NEWELL

FILE: Scn7_SP_07_1035L_Newell.out

THU, APR 14 2022 19:43

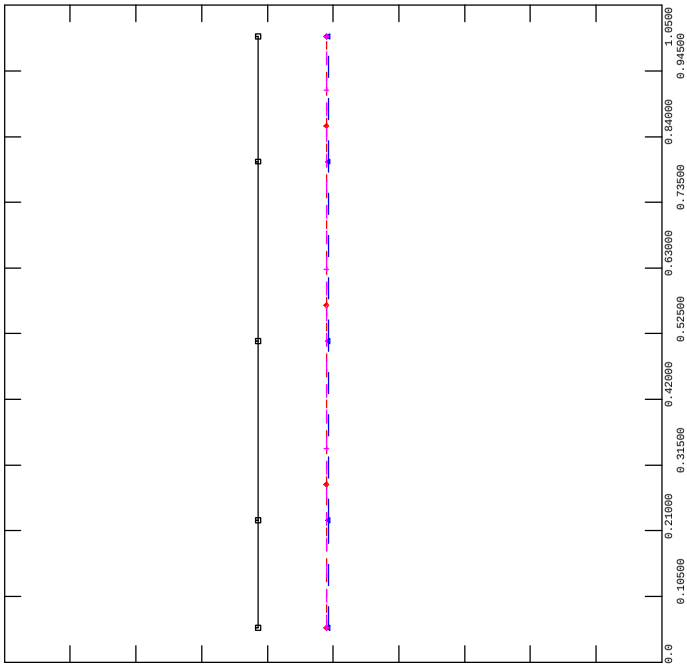
ROTOR ANGLE

CHNL# 43: [ANGL 775[SECCT2 21.000]3]
64.131 -54.32

CHNL# 42: [ANGL 774[SECCT1 21.000]2]
64.131 -54.32

CHNL# 41: [ANGL 773[SECST 20.000]1]
66.040 -51.29

CHNL# 1: [ANGL 667[CANCARB9 13.800]1]
131.14 -44.81



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_07_1035L_NEWELL

FILE: Scn7_SP_07_1035L_Newell.out

THU, APR 14 2022 19:43

REACTIVE POWER

CHNL# 298: [VARS 61994[GRANLEA6 0.6900]G1]
0.92890 -0.5000

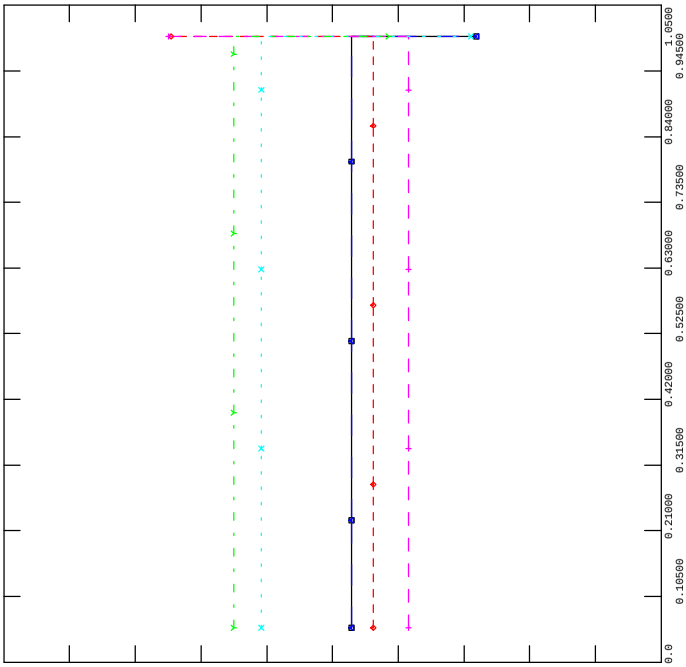
CHNL# 295: [VARS 60990[SHAMROC5 0.6500]G1]
1.4175 -0.3097

CHNL# 308: [VARS 773[SECST 20.000]1]
3.8563 -1.358

CHNL# 268: [VARS 667[CANCARB9 13.800]1]
1.2493 -0.7132

CHNL# 307: [VARS990007[FORTYMILE_6 0.6900]G2]
1.7544 -0.5848

CHNL# 306: [VARS990004[FORTYMILE_3 0.6900]G1]
1.7544 -0.5848



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_06_1034L_BOWMANTON

FILE: Scn7_SP_06_1034L_Bowmanton.out

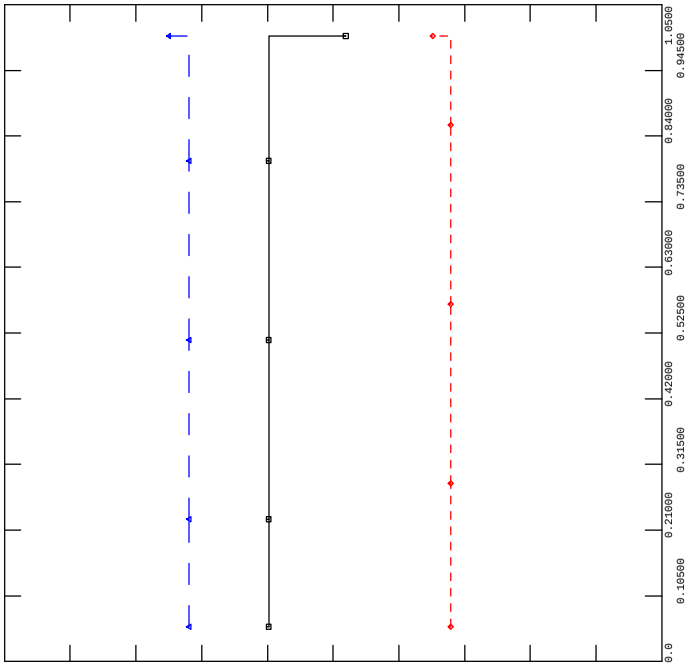
THU, APR 14 2022 19:43

BRANCH Q

CHNL# 568: [964L L5 Q]
251.77 -116.8

CHNL# 572: [964L L4 Q]
114.07 -338.7

CHNL# 574: [1005L Q]
154.27 -157.8



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_07_1035L_NEWELL

FILE: Scn7_SP_07_1035L_Newell.out

THU, APR 14 2022 19:43

ACTIVE POWER

CHNL# 209: [POWR 61994[GRANLEA6 0.6900]G1]
1.2000 -0.2000

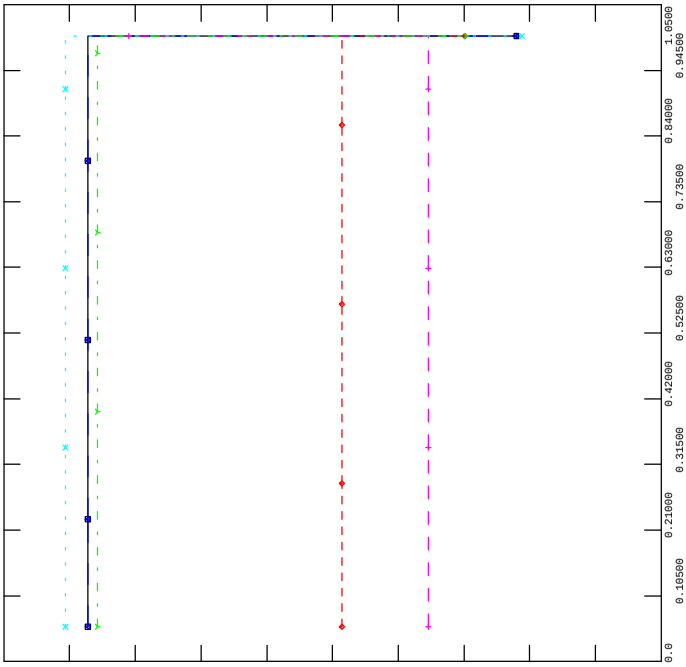
CHNL# 206: [POWR 60990[SHAMROC5 0.6500]G1]
2.2189 0.06060

CHNL# 219: [POWR 773[SECST 20.000]1]
3.6580 2.6059

CHNL# 179: [POWR 667[CANCARB9 13.800]1]
1.1863 -0.0661

CHNL# 218: [POWR990007[FORTYMILE_6 0.6900]G2]
1.5547 -0.2000

CHNL# 217: [POWR990004[FORTYMILE_3 0.6900]G1]
1.5547 -0.2000



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_07_1035L_NEWELL

FILE: Scn7_SP_07_1035L_Newell.out

THU, APR 14 2022 19:43

BUS VOLTAGE

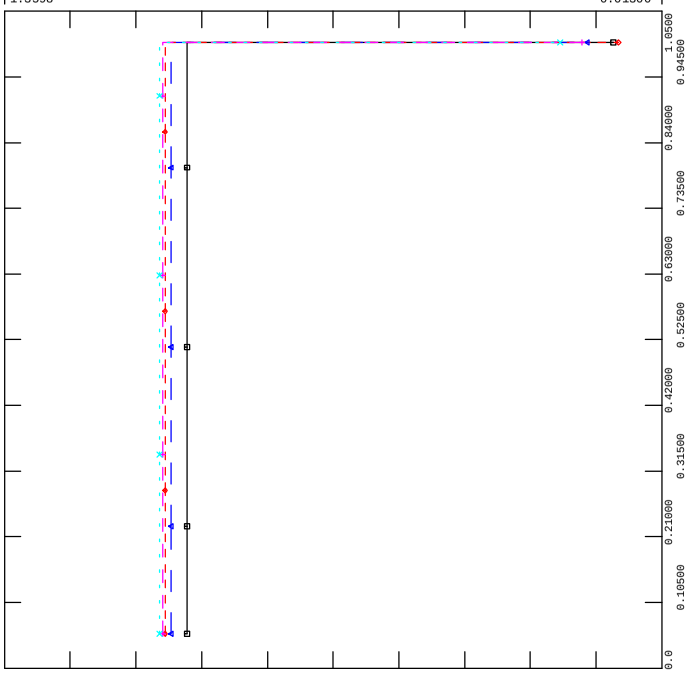
CHNL# 554: [VOLT 976 [ROTBAUR 138.00]]
1.2615 0.24840

CHNL# 549: [VOLT 320 [CHAPPIC7 138.00]]
1.2585 0.25390

CHNL# 552: [VOLT 662 [WHITLA1 240.00]]
1.4206 -0.0966

CHNL# 551: [VOLT 659 [BOWMAN2 138.00]]
1.3366 0.10990

CHNL# 553: [VOLT 669 [BOWMAN1 240.00]]
1.3598 0.01300



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_07_1035L_NEWELL

FILE: Scn7_SP_07_1035L_Newell.out

THU, APR 14 2022 19:43

BRANCH Q

CHNL# 576: [1035L Q]
79.552 -40.00

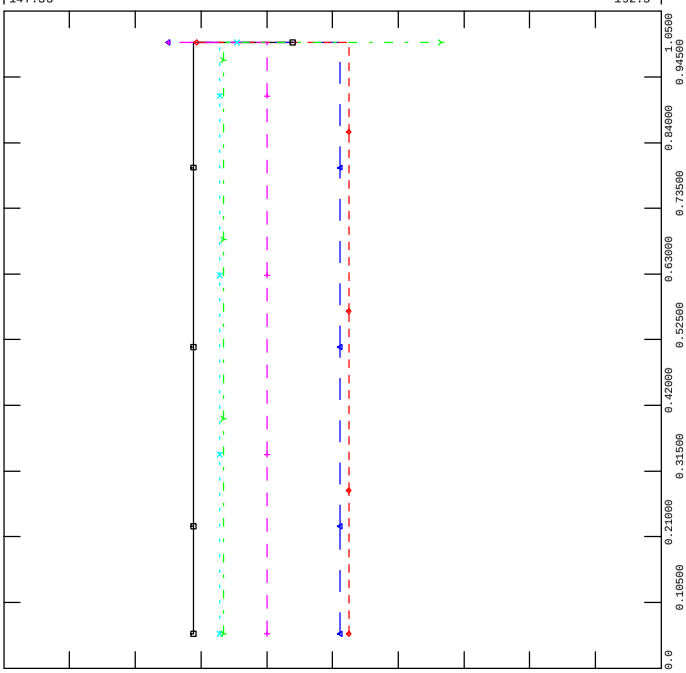
CHNL# 570: [1034L Q]
328.18 -590.7

CHNL# 562: [983L_L1 Q]
120.74 -301.0

CHNL# 560: [983L_L3 Q]
70.218 -124.2

CHNL# 558: [983L_L2 Q]
76.108 -173.1

CHNL# 556: [964L_L2 Q]
147.33 -192.5



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_07_1035L_NEWELL

FILE: Scn7_SP_07_1035L_Newell.out

THU, APR 14 2022 19:43

TERMINAL VOLTAGE

CHNL# 476: [ETRM 61994[GRANLEA6 0.6900]G1]
1.1768 -0.1000

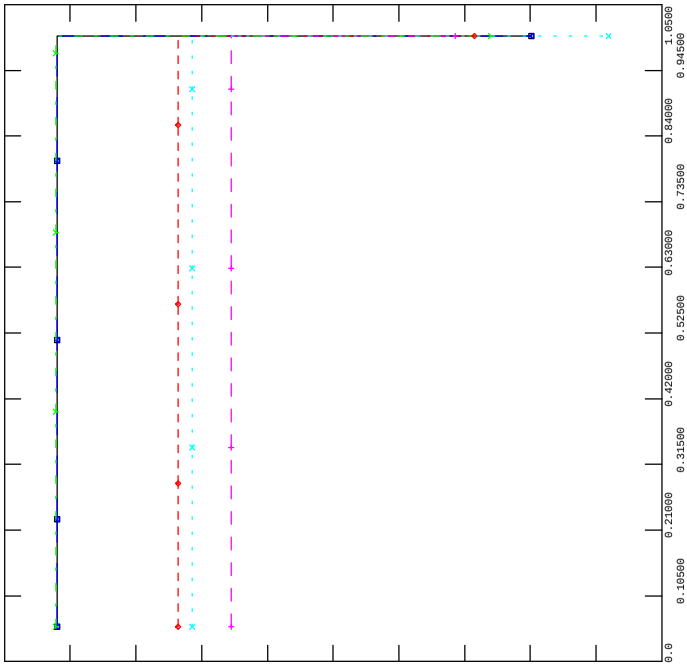
CHNL# 473: [ETRM 60990[SHAMROC5 0.6500]G1]
1.4007 0.16910

CHNL# 486: [ETRM 773[SECST 20.000]1]
1.1627 0.80710

CHNL# 446: [ETRM 667[CANCARB9 13.800]1]
1.2028 0.58720

CHNL# 485: [ETRM990007[FORTYMILE_6 0.6900]G2]
1.1425 -0.1000

CHNL# 484: [ETRM990004[FORTYMILE_3 0.6900]G1]
1.1425 -0.1000



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_07_1035L_NEWELL

FILE: Scn7_SP_07_1035L_Newell.out

THU, APR 14 2022 19:43

BRANCH P

CHNL# 575: [1035L P]
826.24 -275.4

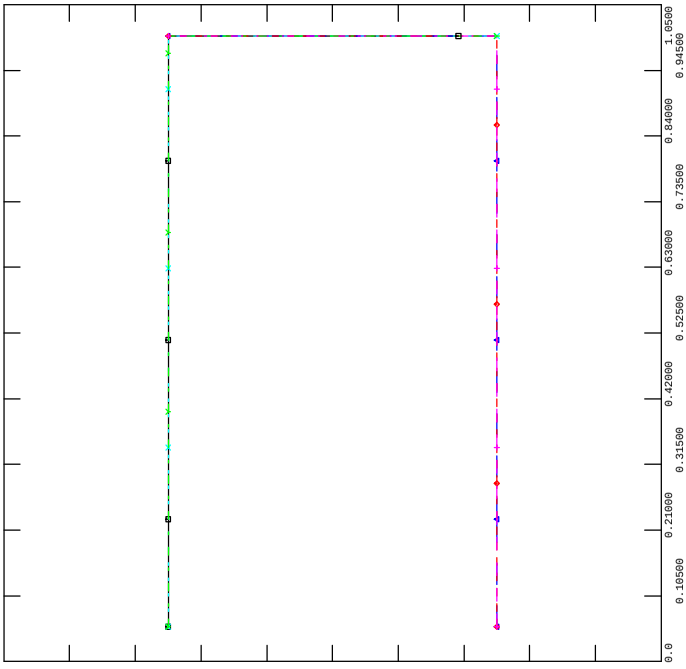
CHNL# 569: [1034L P]
786.49 -253.0

CHNL# 561: [983L_L1 P]
255.89 -790.2

CHNL# 559: [983L_L3 P]
169.51 -506.8

CHNL# 557: [983L_L2 P]
169.49 -506.5

CHNL# 555: [964L_L2 P]
306.68 -137.2

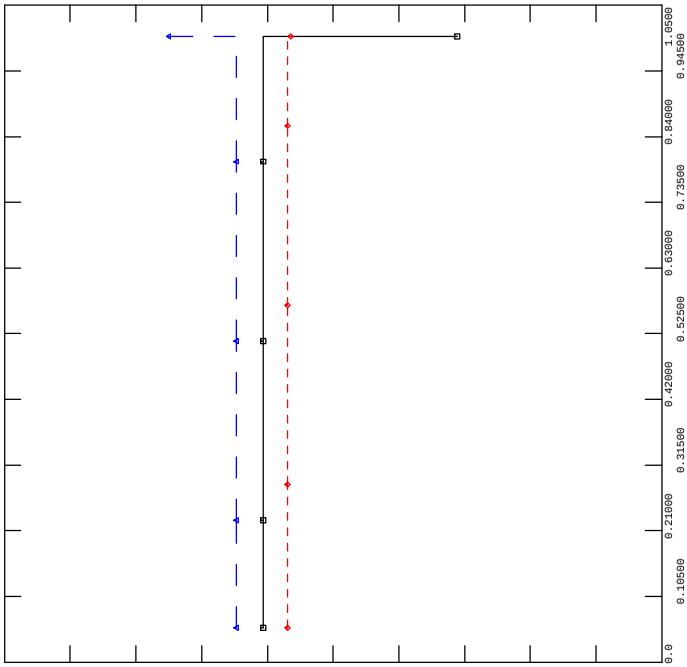


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_07_1035L_NEWELL

FILE: Scn7_SP_07_1035L_Newell.out

THU, APR 14 2022 19:43 BRANCH Q

CHNL# 568: [964L L5 Q] 120.14 -155.3
CHNL# 572: [964L_L4_Q] 89.924 -201.8
CHNL# 574: [1005L Q] 184.13 -210.0

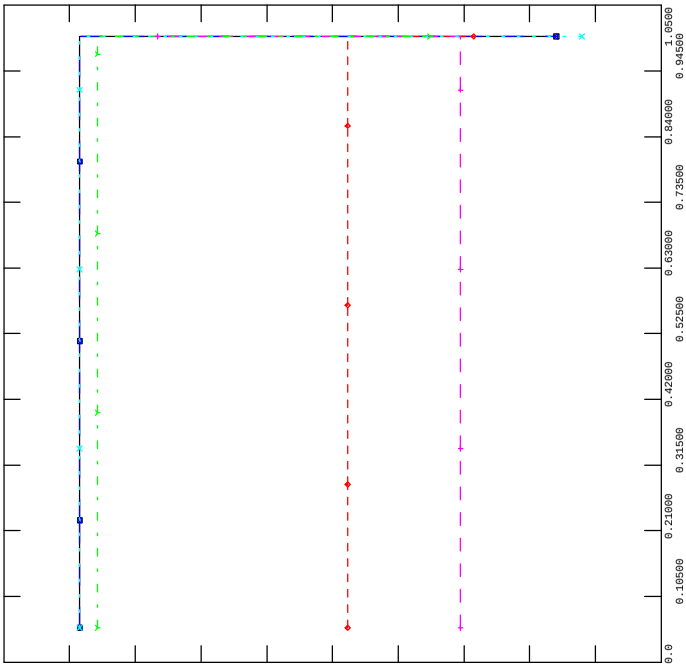


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_08_1035L_BOWMANTON

FILE: Scn7_SP_08_1035L_Bowmanton.out

THU, APR 14 2022 19:43 ACTIVE POWER

CHNL# 209: [POWR 61994[GRANLEA6 0.6900]G1] 1.2000 -0.2000
CHNL# 206: [POWR 60990[SHAMROC5 0.6500]G1] 2.2252 0.41240
CHNL# 219: [POWR 773[SECST 20.000]1] 3.5724 2.7184
CHNL# 179: [POWR 667[CANCARB9 13.800]1] 1.2319 -0.0869
CHNL# 218: [POWR990007[FORTYMILE_6 0.6900]G2] 1.5300 -0.2000
CHNL# 217: [POWR990004[FORTYMILE 3 0.6900]G1] 1.5300 -0.2000

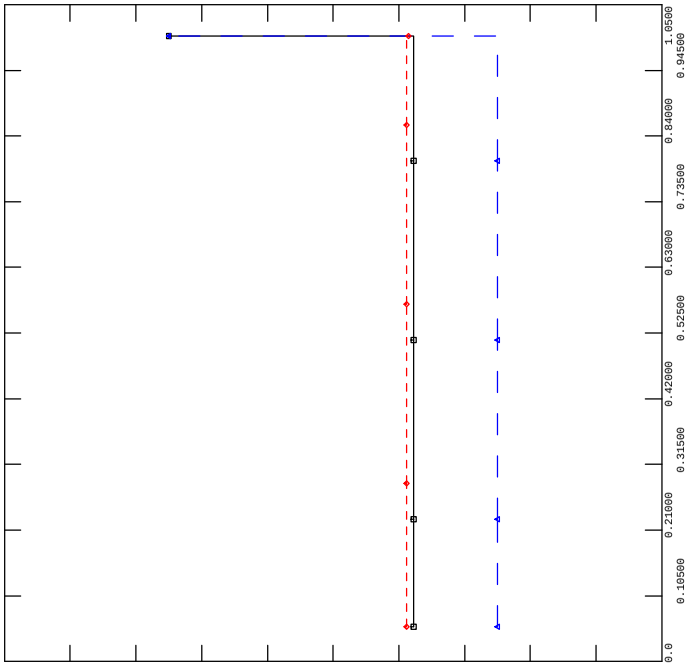


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_07_1035L_NEWELL

FILE: Scn7_SP_07_1035L_Newell.out

THU, APR 14 2022 19:43 BRANCH P

CHNL# 567: [964L L5 P] 229.77 -143.3
CHNL# 571: [964L_L4_P] 223.76 -666.6
CHNL# 573: [1005L P] 87.800 -499.8

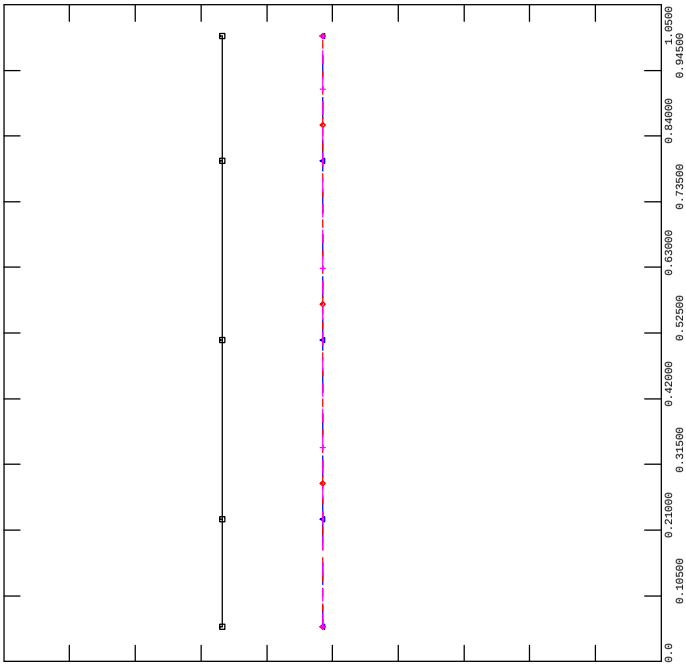


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_08_1035L_BOWMANTON

FILE: Scn7_SP_08_1035L_Bowmanton.out

THU, APR 14 2022 19:43 ROTOR ANGLE

CHNL# 43: [ANGL 775[SECCT2 21.000]3] 59.329 -50.29
CHNL# 42: [ANGL 774[SECCT1 21.000]2] 59.329 -50.29
CHNL# 41: [ANGL 773[SECST 20.000]1] 60.880 -47.56
CHNL# 1: [ANGL 667[CANCARB9 13.800]1] 118.18 -47.05



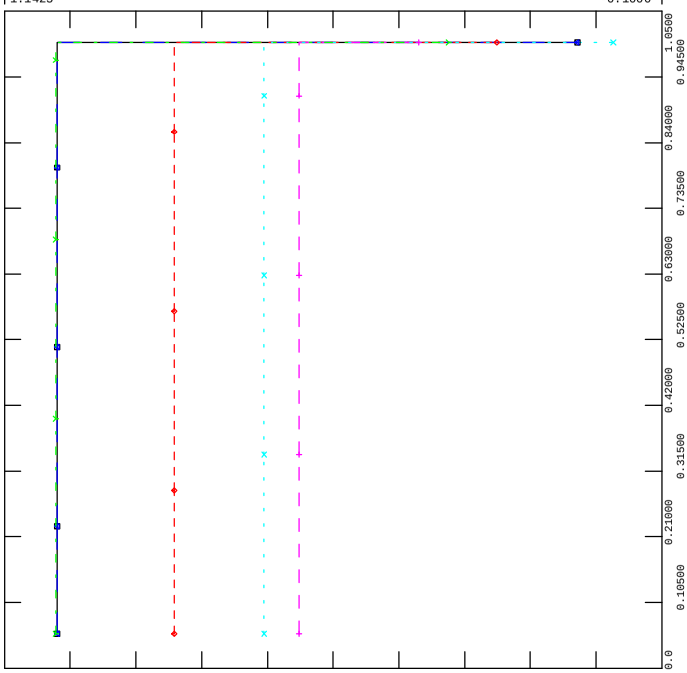
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_08_1035L_BOWMANTON

FILE: Scn7_SP_08_1035L_Bowmanton.out

THU, APR 14 2022 19:43

TERMINAL VOLTAGE

CHNL# 476: [ETRM 61994[GRANLEA6 0.6900]G1] 1.1768 -0.1000
CHNL# 473: [ETRM 60990[SHAMROC5 0.6500]G1] 1.5840 0.22850
CHNL# 486: [ETRM 773[SECST 20.000]1] 1.1612 0.89060
CHNL# 446: [ETRM 667[CANCARB9 13.800]1] 1.2034 0.57150
CHNL# 485: [ETRM990007[FORTYMILE_6 0.6900]G2] 1.1425 -0.1000
CHNL# 484: [ETRM990004[FORTYMILE_3 0.6900]G1] 1.1425 -0.1000



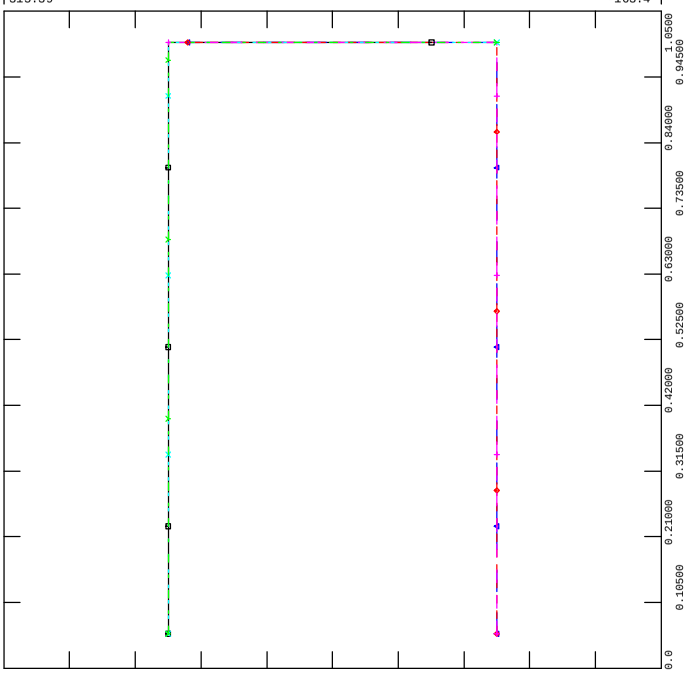
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_08_1035L_BOWMANTON

FILE: Scn7_SP_08_1035L_Bowmanton.out

THU, APR 14 2022 19:43

BRANCH P

CHNL# 575: [1035L_P] 826.24 -275.4
CHNL# 569: [1034L_P] 789.54 -262.2
CHNL# 561: [983L_L1_P] 264.50 -793.1
CHNL# 559: [983L_L3_P] 196.89 -515.9
CHNL# 557: [983L_L2_P] 197.52 -515.8
CHNL# 555: [964L_L2_P] 315.39 -163.4



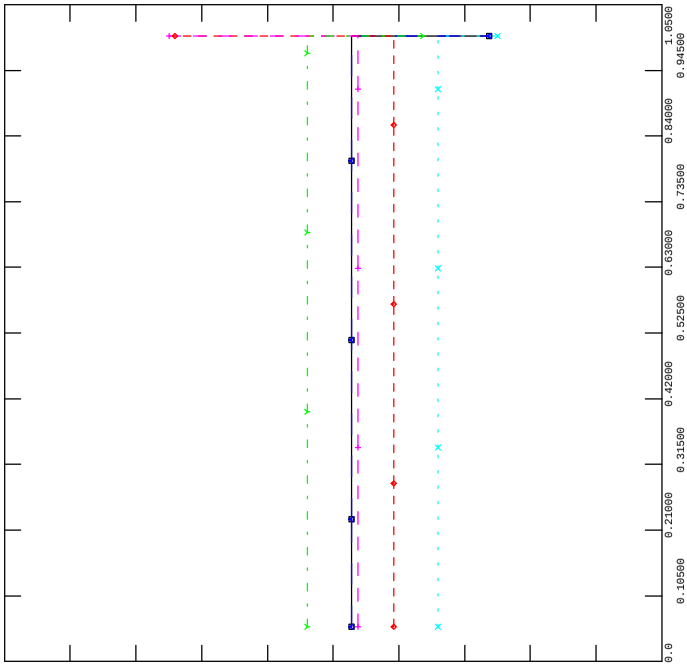
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_08_1035L_BOWMANTON

FILE: Scn7_SP_08_1035L_Bowmanton.out

THU, APR 14 2022 19:43

REACTIVE POWER

CHNL# 298: [VARS 61994[GRANLEA6 0.6900]G1] 1.2234 -0.5000
CHNL# 295: [VARS 60990[SHAMROC5 0.6500]G1] 4.4397 -1.170
CHNL# 308: [VARS 773[SECST 20.000]1] 2.1702 -0.6662
CHNL# 268: [VARS 667[CANCARB9 13.800]1] 1.2884 -0.6417
CHNL# 307: [VARS990007[FORTYMILE_6 0.6900]G2] 1.7507 -0.5836
CHNL# 306: [VARS990004[FORTYMILE_3 0.6900]G1] 1.7507 -0.5836



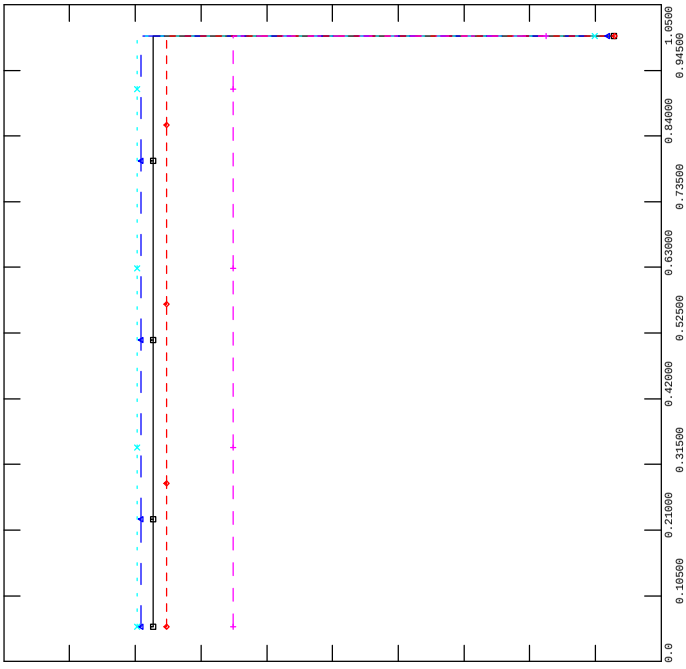
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_08_1035L_BOWMANTON

FILE: Scn7_SP_08_1035L_Bowmanton.out

THU, APR 14 2022 19:43

BUS VOLTAGE

CHNL# 554: [VOLT 976 [ROTBAUR 138.00]] 1.2229 0.23180
CHNL# 549: [VOLT 320 [CHAPPIC7 138.00]] 1.2155 0.64480
CHNL# 552: [VOLT 662 [WHITLA1 240.00]] 1.3968 -0.0043
CHNL# 551: [VOLT 659 [BOWMAN2 138.00]] 1.2818 0.05500
CHNL# 553: [VOLT 669 [BOWMAN1 240.00]] 1.3027 -0.0929

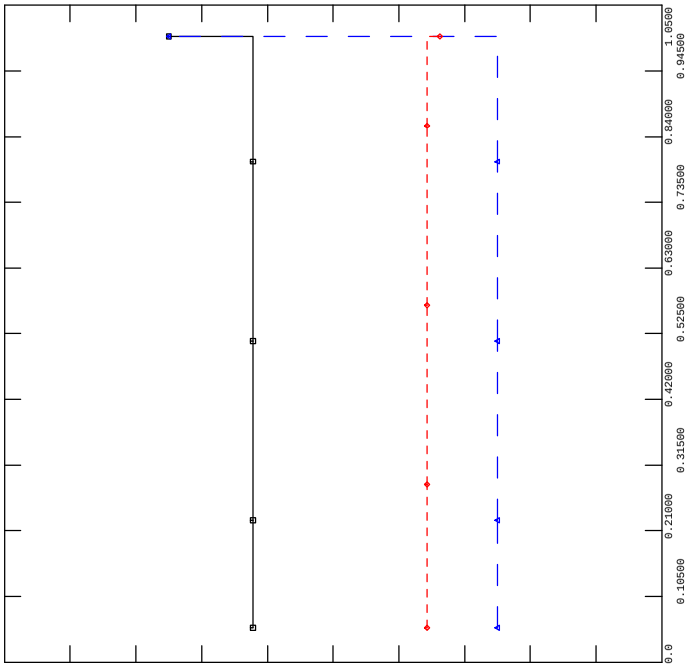


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_08_1035L_BOWMANTON

FILE: Scn7_SP_08_1035L_Bowmanton.out

THU, APR 14 2022 19:43 BRANCH P

CHNL# 567: [964L_L5_P]
222.41 -121.5
CHNL# 571: [964L_L4_P]
222.84 -666.3
CHNL# 573: [1005L_P]
-152.0 -484.7

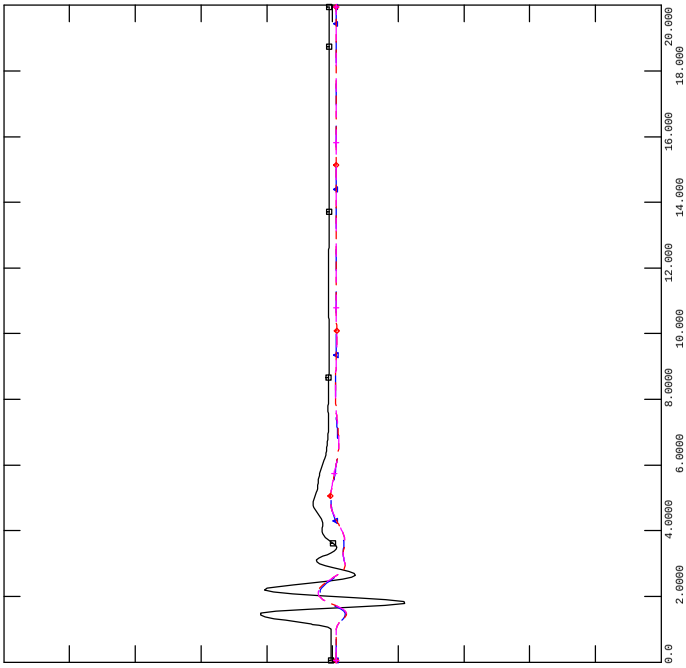


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_600L_BULLSHEAD

FILE: scn7_SP_600L_Bullshead.out

THU, APR 14 2022 19:43 ROTOR ANGLE

CHNL# 43: [ANGL 775[SECCT2 21.000]3]
58.954 -45.49
CHNL# 42: [ANGL 774[SECCT1 21.000]2]
58.954 -45.49
CHNL# 41: [ANGL 773[SECST 20.000]1]
60.790 -43.14
CHNL# 1: [ANGL 667[CANCARB9 13.800]1]
127.00 -1.134

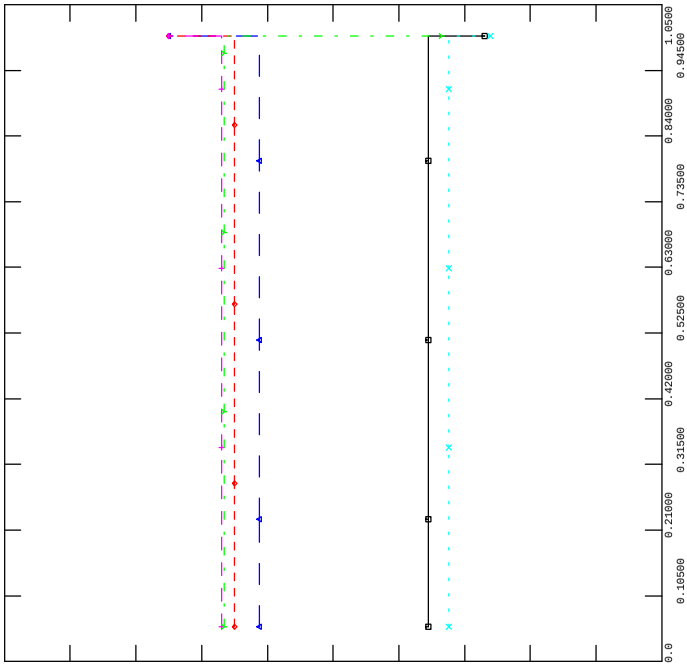


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_08_1035L_BOWMANTON

FILE: Scn7_SP_08_1035L_Bowmanton.out

THU, APR 14 2022 19:43 BRANCH Q

CHNL# 576: [1035L_Q]
79.552 -40.00
CHNL# 570: [1034L_Q]
368.04 -137.7
CHNL# 562: [983L_L1_Q]
153.90 -458.0
CHNL# 560: [983L_L3_Q]
65.878 -213.0
CHNL# 558: [983L_L2_Q]
84.318 -265.4
CHNL# 556: [964L_L2_Q]
232.32 -51.52

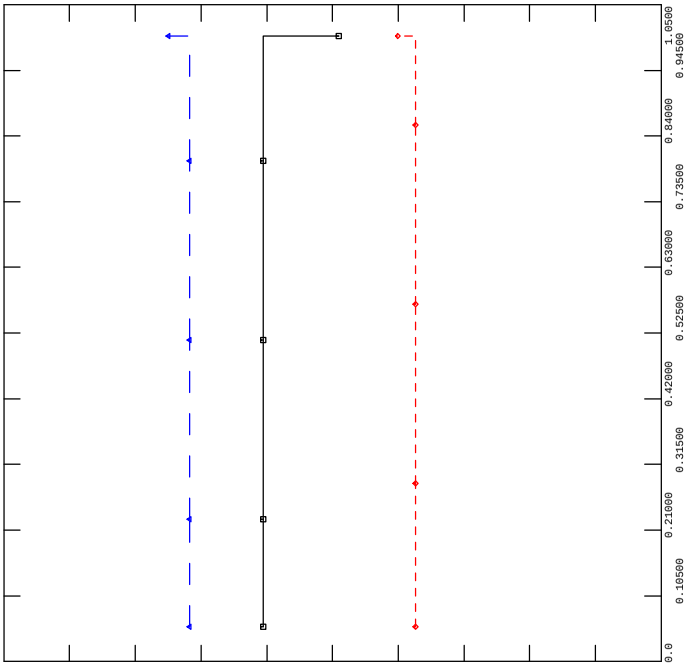


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_08_1035L_BOWMANTON

FILE: Scn7_SP_08_1035L_Bowmanton.out

THU, APR 14 2022 19:43 BRANCH Q

CHNL# 568: [964L_L5_Q]
243.73 -143.3
CHNL# 572: [964L_L4_Q]
108.42 -321.7
CHNL# 574: [1005L_Q]
155.16 -164.9

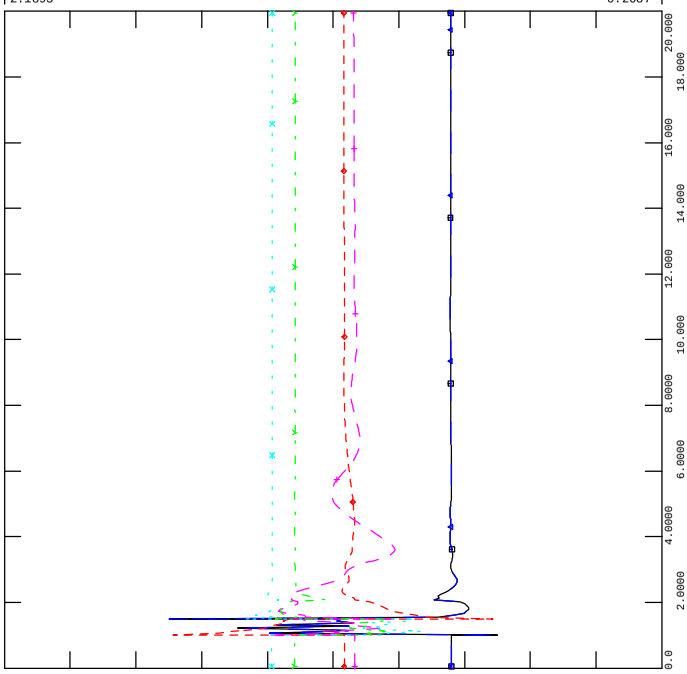


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_600L_BULLSHEAD

FILE: scn7_SP_600L_Bullshead.out

THU, APR 14 2022 19:43 REACTIVE POWER

CHNL# 298: [VARS 61994[GRANLEA6 0.6900]G1]
0.96430 -0.2483
CHNL# 295: [VARS 60990[SHAMROC5 0.6500]G1]
1.3001 -0.0738
CHNL# 308: [VARS 773[SECST 20.000]1]
1.3063 0.06510
CHNL# 268: [VARS 667[CANCARB9 13.800]1]
1.1523 -0.7950
CHNL# 307: [VARS990007[FORTYMILE_6 0.6900]G2]
2.1893 -0.2687
CHNL# 306: [VARS990004[FORTYMILE_3 0.6900]G1]
2.1893 -0.2687

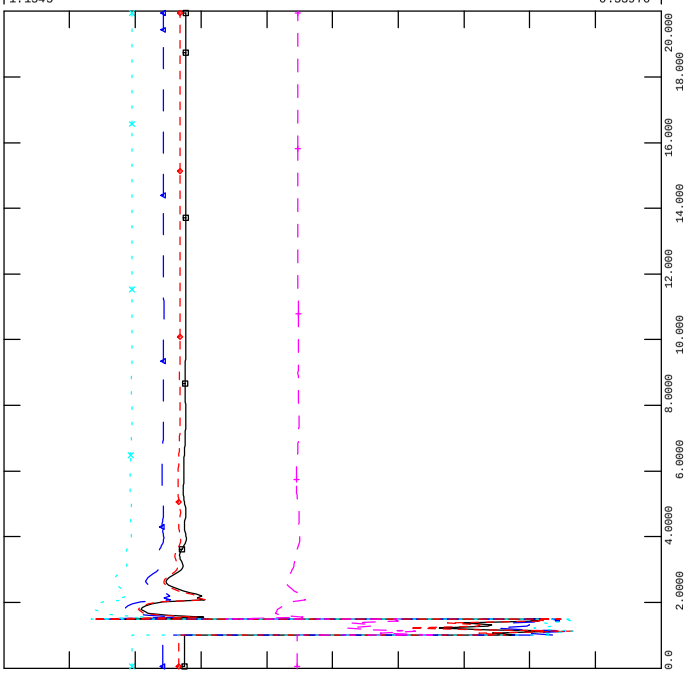


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_600L_BULLSHEAD

FILE: scn7_SP_600L_Bullshead.out

THU, APR 14 2022 19:43 BUS VOLTAGE

CHNL# 554: [VOLT 976 [ROTBAUR 138.00]]
1.1688 0.41750
CHNL# 549: [VOLT 320 [CHAPPIC7 138.00]]
1.1483 0.85270
CHNL# 552: [VOLT 662 [WHITLA1 240.00]]
1.2474 0.50600
CHNL# 551: [VOLT 659 [BOWMAN2 138.00]]
1.1977 0.48740
CHNL# 553: [VOLT 669 [BOWMAN1 240.00]]
1.1545 0.53970

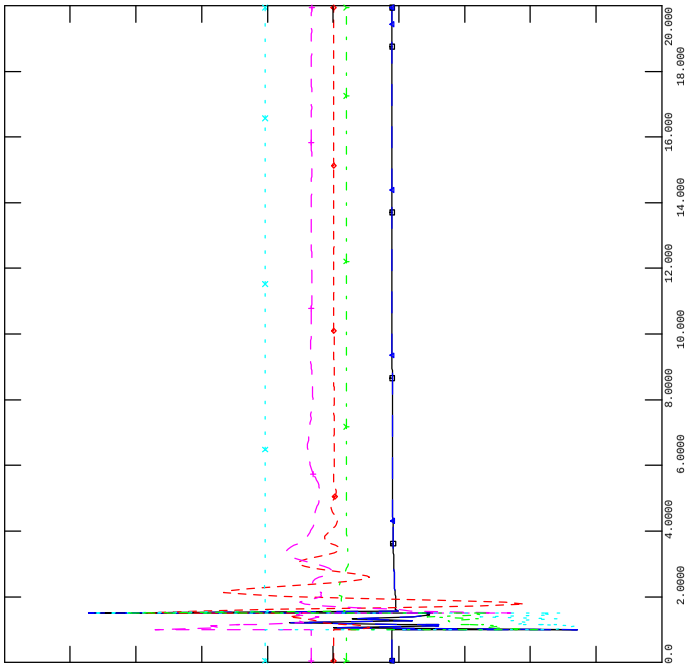


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_600L_BULLSHEAD

FILE: scn7_SP_600L_Bullshead.out

THU, APR 14 2022 19:43 ACTIVE POWER

CHNL# 209: [POWR 61994[GRANLEA6 0.6900]G1]
1.5746 0.47050
CHNL# 206: [POWR 60990[SHAMROC5 0.6500]G1]
2.6240 1.0898
CHNL# 219: [POWR 773[SECST 20.000]1]
3.3863 2.5141
CHNL# 179: [POWR 667[CANCARB9 13.800]1]
1.0213 0.06420
CHNL# 218: [POWR990007[FORTYMILE_6 0.6900]G2]
2.2515 0.68880
CHNL# 217: [POWR990004[FORTYMILE_3 0.6900]G1]
2.2515 0.68880

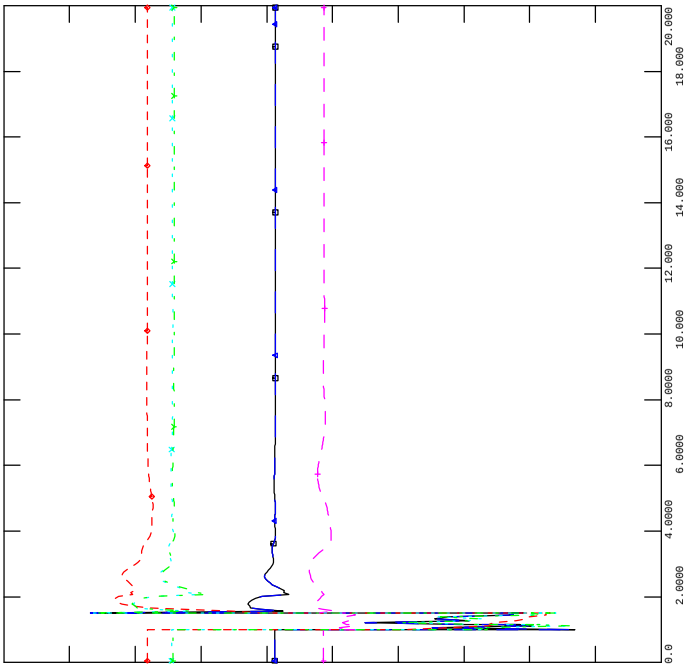


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_600L_BULLSHEAD

FILE: scn7_SP_600L_Bullshead.out

THU, APR 14 2022 19:43 TERMINAL VOLTAGE

CHNL# 476: [ETRM 61994[GRANLEA6 0.6900]G1]
1.2657 0.53190
CHNL# 473: [ETRM 60990[SHAMROC5 0.6500]G1]
1.2347 0.50440
CHNL# 486: [ETRM 773[SECST 20.000]1]
1.1447 0.92950
CHNL# 446: [ETRM 667[CANCARB9 13.800]1]
1.1686 0.57930
CHNL# 485: [ETRM990007[FORTYMILE_6 0.6900]G2]
1.3554 0.59670
CHNL# 484: [ETRM990004[FORTYMILE_3 0.6900]G1]
1.3554 0.59670

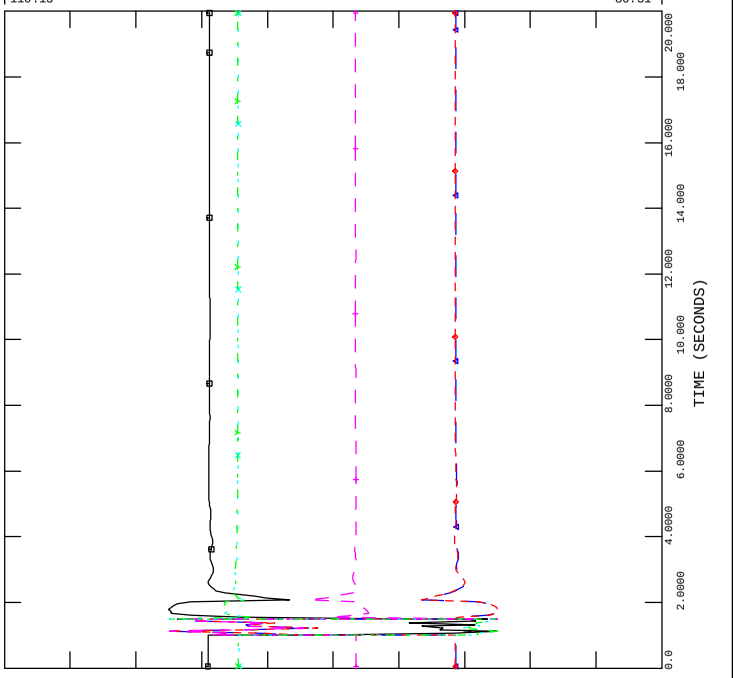


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_600L_BULLSHEAD

FILE: scn7_SP_600L_Bullshead.out

THU, APR 14 2022 19:43 BRANCH Q

CHNL# 576: [1035L Q] 237.23 -318.4
CHNL# 570: [1034L Q] 217.63 -319.3
CHNL# 562: [983L L1 Q] 168.61 -236.1
CHNL# 560: [983L L3 Q] 170.52 -124.4
CHNL# 558: [983L L2 Q] 176.11 -154.9
CHNL# 556: [964L L2 Q] 110.13 -86.31

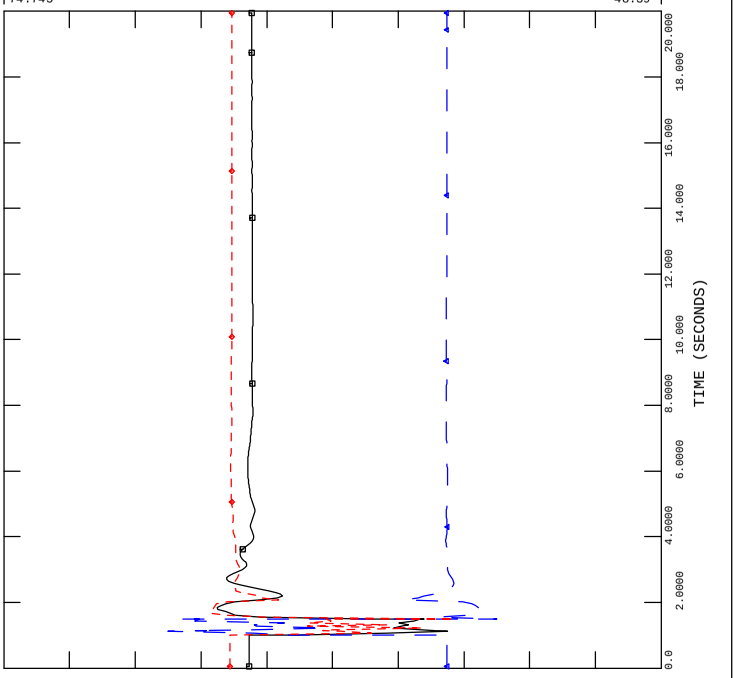


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_600L_BULLSHEAD

FILE: scn7_SP_600L_Bullshead.out

THU, APR 14 2022 19:43 BRANCH Q

CHNL# 568: [964L L5 Q] 45.069 -81.84
CHNL# 572: [964L L4 Q] 219.52 -125.5
CHNL# 574: [1005L Q] 74.745 -48.39

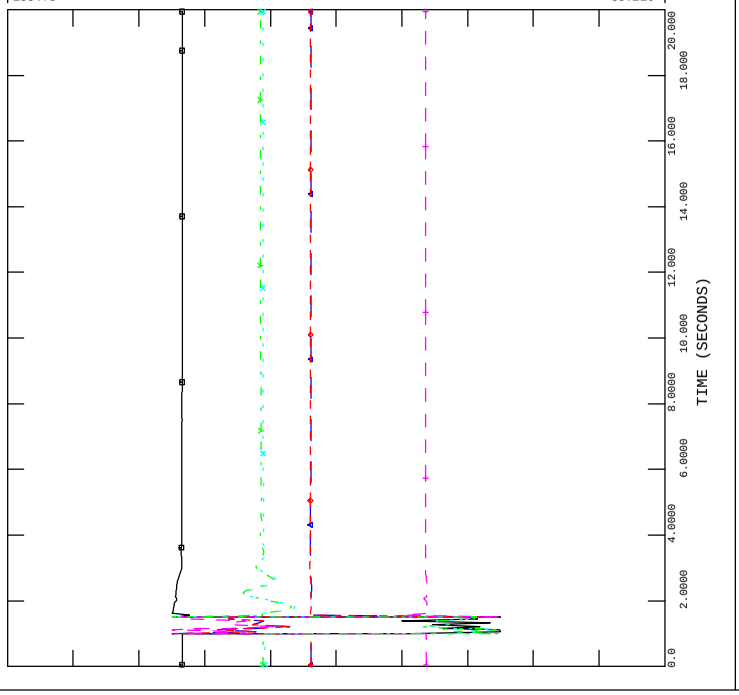


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_600L_BULLSHEAD

FILE: scn7_SP_600L_Bullshead.out

THU, APR 14 2022 19:43 BRANCH P

CHNL# 575: [1035L P] 825.35 118.62
CHNL# 569: [1034L P] 798.03 105.56
CHNL# 561: [983L L1 P] -173.5 -731.6
CHNL# 559: [983L L3 P] -94.00 -622.4
CHNL# 557: [983L L2 P] -93.85 -621.9
CHNL# 555: [964L L2 P] 253.75 35.226

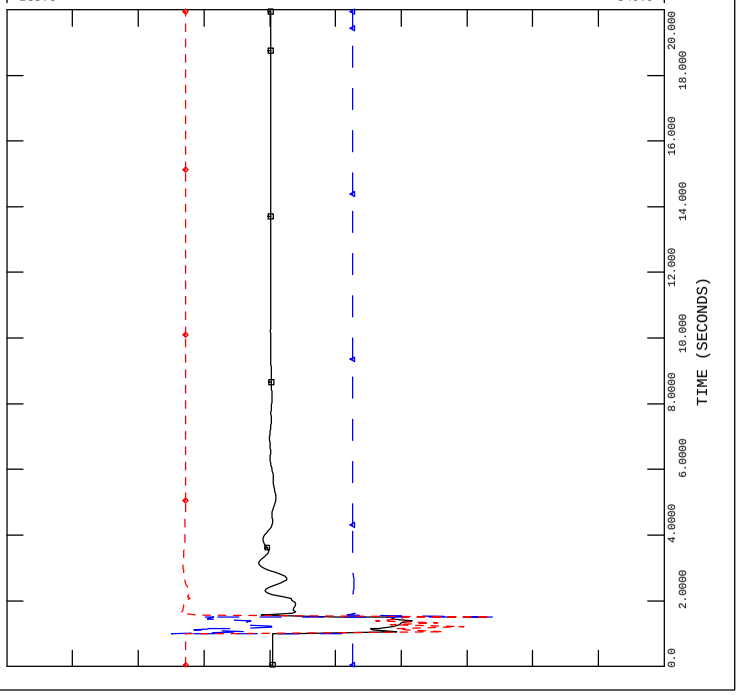


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_600L_BULLSHEAD

FILE: scn7_SP_600L_Bullshead.out

THU, APR 14 2022 19:43 BRANCH P

CHNL# 567: [964L L5 P] 42.599 -108.4
CHNL# 571: [964L L4 P] -133.8 -723.2
CHNL# 573: [1005L P] -235.6 -340.0



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_600L_PEACE_BUTTE

FILE: scn7_SP_600L_Peace_Butte.out

THU, APR 14 2022 19:43 ACTIVE POWER

CHNL# 209: [POWR 61994[GRANLEA6 0.6900]G1]
1.2339 0.23740
CHNL# 206: [POWR 60990[SHAMROC5 0.6500]G1]
2.2176 0.67440
CHNL# 219: [POWR 773[SECST 20.000]1]
3.5045 2.5633
CHNL# 179: [POWR 667[CANCARB9 13.800]1]
1.1463 0.10320
CHNL# 218: [POWR990007[FORTYMILE_6 0.6900]G2]
2.5759 0.37510
CHNL# 217: [POWR990004[FORTYMILE_3 0.6900]G1]
2.5759 0.37510

TIME (SECONDS)
0.0 2.0000 4.0000 6.0000 8.0000 10.000 12.000 14.000 16.000 18.000 20.000

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_600L_PEACE_BUTTE

FILE: scn7_SP_600L_Peace_Butte.out

THU, APR 14 2022 19:43 TERMINAL VOLTAGE

CHNL# 476: [ETRM 61994[GRANLEA6 0.6900]G1]
1.4392 0.37100
CHNL# 473: [ETRM 60990[SHAMROC5 0.6500]G1]
1.4118 0.35480
CHNL# 486: [ETRM 773[SECST 20.000]1]
1.1507 0.91790
CHNL# 446: [ETRM 667[CANCARB9 13.800]1]
1.1693 0.45890
CHNL# 485: [ETRM990007[FORTYMILE_6 0.6900]G2]
1.5208 0.35080
CHNL# 484: [ETRM990004[FORTYMILE_3 0.6900]G1]
1.5208 0.35080

TIME (SECONDS)
0.0 2.0000 4.0000 6.0000 8.0000 10.000 12.000 14.000 16.000 18.000 20.000

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_600L_PEACE_BUTTE

FILE: scn7_SP_600L_Peace_Butte.out

THU, APR 14 2022 19:43 ROTOR ANGLE

CHNL# 43: [ANGL 775[SECCT2 21.000]3]
57.336 -44.88
CHNL# 42: [ANGL 774[SECCT1 21.000]2]
57.336 -44.88
CHNL# 41: [ANGL 773[SECST 20.000]1]
59.336 -42.78
CHNL# 1: [ANGL 667[CANCARB9 13.800]1]
134.81 -3.904

TIME (SECONDS)
0.0 2.0000 4.0000 6.0000 8.0000 10.000 12.000 14.000 16.000 18.000 20.000

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_600L_PEACE_BUTTE

FILE: scn7_SP_600L_Peace_Butte.out

THU, APR 14 2022 19:43 REACTIVE POWER

CHNL# 298: [VARS 61994[GRANLEA6 0.6900]G1]
1.0356 -0.3124
CHNL# 295: [VARS 60990[SHAMROC5 0.6500]G1]
1.4304 -0.1783
CHNL# 308: [VARS 773[SECST 20.000]1]
1.4993 -0.2175
CHNL# 268: [VARS 667[CANCARB9 13.800]1]
1.3809 -0.8355
CHNL# 307: [VARS990007[FORTYMILE_6 0.6900]G2]
2.6134 -0.5728
CHNL# 306: [VARS990004[FORTYMILE_3 0.6900]G1]
2.6134 -0.5728

TIME (SECONDS)
0.0 2.0000 4.0000 6.0000 8.0000 10.000 12.000 14.000 16.000 18.000 20.000

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_600L_PEACE_BUTTE

FILE: scn7_SP_600L_Peace_Butte.out

THU, APR 14 2022 19:43

BRANCH P

CHNL# 575: [1035L_P]
843.37 -71.35

CHNL# 569: [1034L_P]
808.73 -74.62

CHNL# 561: [983L_L1_P]
18.140 -712.7

CHNL# 559: [983L_L3_P]
13.528 -601.1

CHNL# 557: [983L_L2_P]
13.739 -600.7

CHNL# 555: [964L_L2_P]
279.24 -40.29

TIME (SECONDS)

0.0 2.0000 4.0000 6.0000 8.0000 10.000 12.000 14.000 16.000 18.000 20.000

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_600L_PEACE_BUTTE

FILE: scn7_SP_600L_Peace_Butte.out

THU, APR 14 2022 19:43

BRANCH P

CHNL# 567: [964L_L5_P]
67.569 -185.3

CHNL# 571: [964L_L4_P]
27.632 -710.8

CHNL# 573: [1005L_P]
-227.6 -346.6

TIME (SECONDS)

0.0 2.0000 4.0000 6.0000 8.0000 10.000 12.000 14.000 16.000 18.000 20.000

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_600L_PEACE_BUTTE

FILE: scn7_SP_600L_Peace_Butte.out

THU, APR 14 2022 19:43

BUS VOLTAGE

CHNL# 554: [VOLT 976 [ROTBAUR 138.00]]
1.1942 0.14240

CHNL# 549: [VOLT 320 [CHAPPIC7 138.00]]
1.1929 0.78960

CHNL# 552: [VOLT 662 [WHITLA1 240.00]]
1.4229 0.31360

CHNL# 551: [VOLT 659 [BOWMAN2 138.00]]
1.2695 0.23370

CHNL# 553: [VOLT 669 [BOWMAN1 240.00]]
1.2756 0.36100

TIME (SECONDS)

0.0 2.0000 4.0000 6.0000 8.0000 10.000 12.000 14.000 16.000 18.000 20.000

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_600L_PEACE_BUTTE

FILE: scn7_SP_600L_Peace_Butte.out

THU, APR 14 2022 19:43

BRANCH Q

CHNL# 576: [1035L_Q]
303.90 -368.9

CHNL# 570: [1034L_Q]
285.02 -368.5

CHNL# 562: [983L_L1_Q]
266.26 -441.5

CHNL# 560: [983L_L3_Q]
175.91 -275.6

CHNL# 558: [983L_L2_Q]
189.32 -319.8

CHNL# 556: [964L_L2_Q]
216.52 -131.2

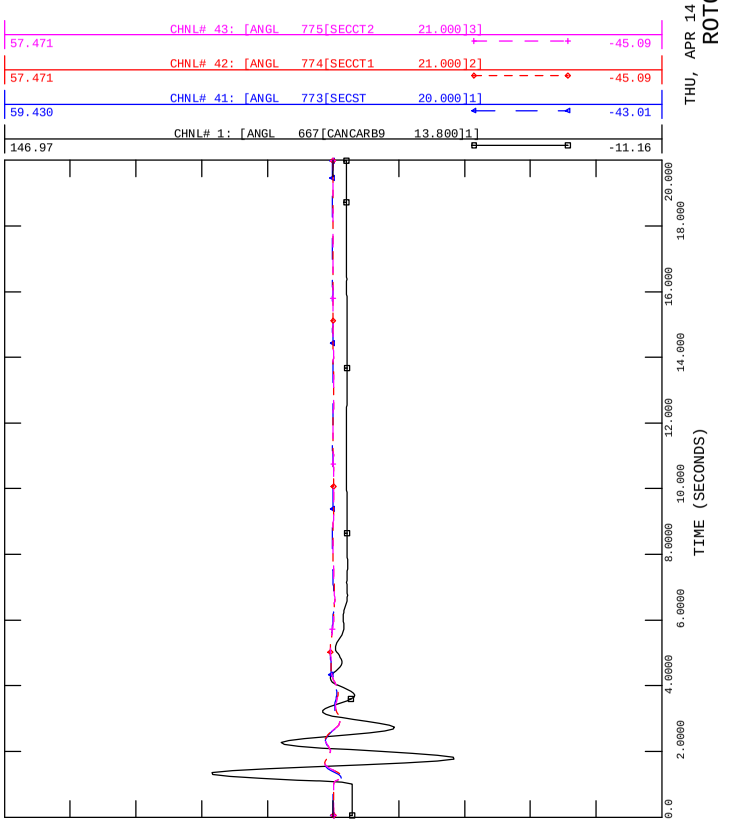
TIME (SECONDS)

0.0 2.0000 4.0000 6.0000 8.0000 10.000 12.000 14.000 16.000 18.000 20.000

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_675L_AL_ROTHBAUER

FILE: scn7_SP_675L_Al_Rothbauer.out

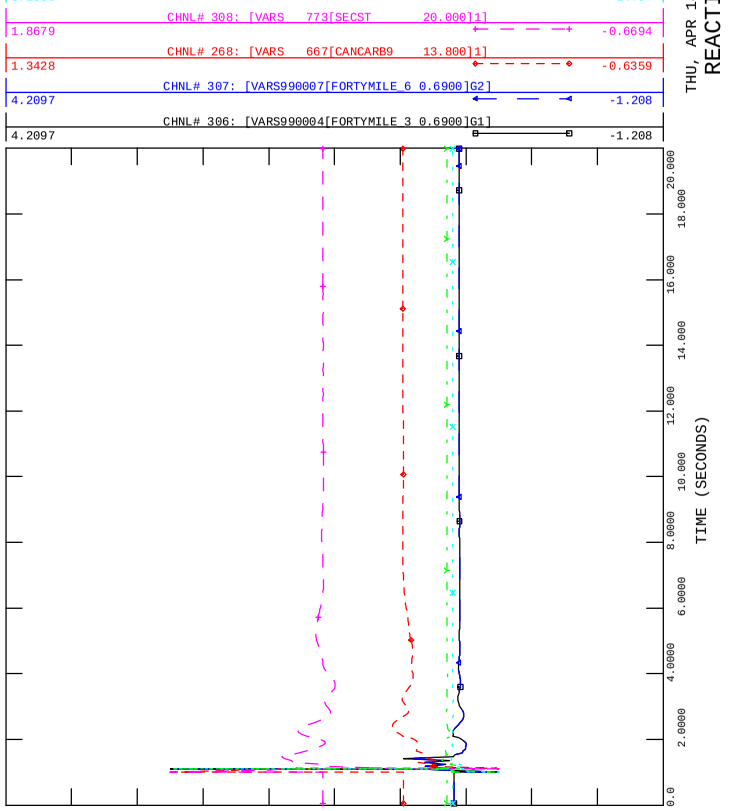
THU, APR 14 2022 19:43 ROTOR ANGLE



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_675L_AL_ROTHBAUER

FILE: scn7_SP_675L_Al_Rothbauer.out

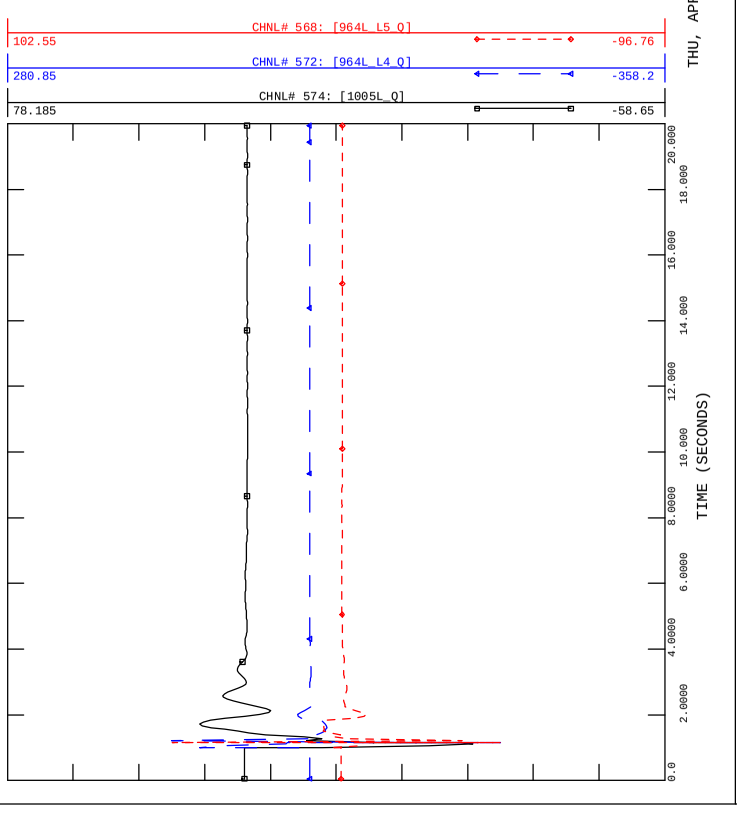
THU, APR 14 2022 19:43 REACTIVE POWER



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_600L_PEACE_BUTTE

FILE: scn7_SP_600L_Peace_Butte.out

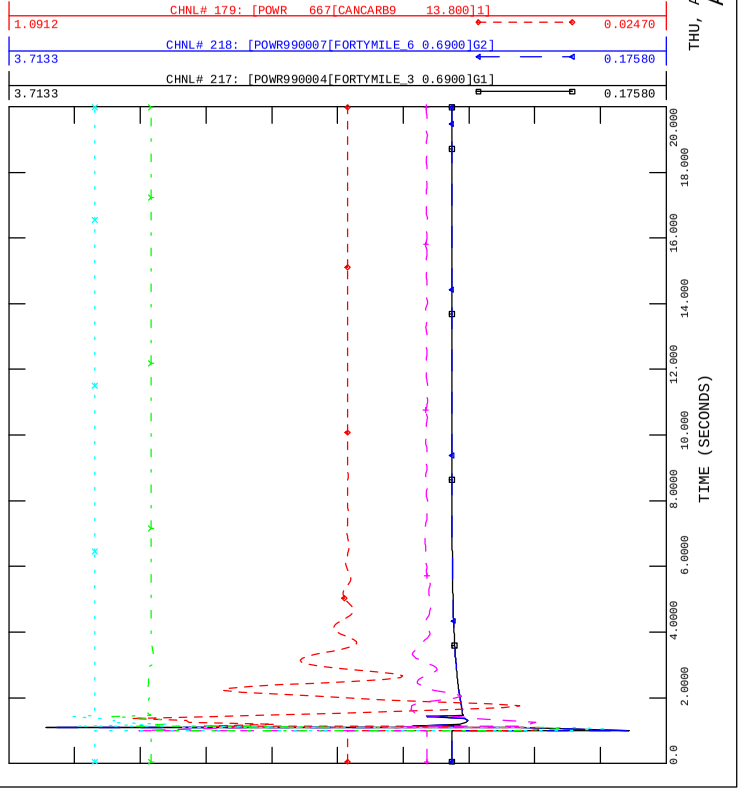
THU, APR 14 2022 19:43 BRANCH Q



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_675L_AL_ROTHBAUER

FILE: scn7_SP_675L_Al_Rothbauer.out

THU, APR 14 2022 19:43 ACTIVE POWER



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_675L_AL_ROTHBAUER

FILE: scn7_SP_675L_Al_Rothbauer.out

THU, APR 14 2022 19:43

BUS VOLTAGE

CHNL# 554: [VOLT 976 [ROTBAUR 138.00]] 1.1566 0.09260
CHNL# 549: [VOLT 320 [CHAPPIC7 138.00]] 1.2629 0.70390
CHNL# 552: [VOLT 662 [WHITLA1 240.00]] 1.7717 0.01630
CHNL# 551: [VOLT 659 [BOWMAN2 138.00]] 1.3583 -0.0957
CHNL# 553: [VOLT 669 [BOWMAN1 240.00]] 1.4574 0.10460

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_675L_AL_ROTHBAUER

FILE: scn7_SP_675L_Al_Rothbauer.out

THU, APR 14 2022 19:43

BRANCH Q

CHNL# 576: [1035L_Q] 422.67 -340.7
CHNL# 570: [1034L_Q] 405.05 -335.5
CHNL# 562: [983L_L1_Q] 339.12 -830.2
CHNL# 560: [983L_L3_Q] 377.72 -921.0
CHNL# 558: [983L_L2_Q] 403.55 -983.4
CHNL# 556: [964L_L2_Q] 504.39 -168.5

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_675L_AL_ROTHBAUER

FILE: scn7_SP_675L_Al_Rothbauer.out

THU, APR 14 2022 19:43

TERMINAL VOLTAGE

CHNL# 476: [ETRM 61994[GRANLEA6 0.6900]G1] 1.9315 0.21510
CHNL# 473: [ETRM 60990[SHAMROC5 0.6500]G1] 1.9542 0.16600
CHNL# 486: [ETRM 773[SECST 20.000]1] 1.1656 0.90340
CHNL# 446: [ETRM 667[CANCARB9 13.800]1] 1.1728 0.46880
CHNL# 485: [ETRM990007[FORTYMILE_6 0.6900]G2] 1.8834 0.19450
CHNL# 484: [ETRM990004[FORTYMILE_3 0.6900]G1] 1.8834 0.19450

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_675L_AL_ROTHBAUER

FILE: scn7_SP_675L_Al_Rothbauer.out

THU, APR 14 2022 19:43

BRANCH P

CHNL# 575: [1035L_P] 920.71 -351.8
CHNL# 569: [1034L_P] 889.89 -348.0
CHNL# 561: [983L_L1_P] 310.98 -825.9
CHNL# 559: [983L_L3_P] 316.42 -795.5
CHNL# 557: [983L_L2_P] 316.46 -794.7
CHNL# 555: [964L_L2_P] 335.79 -196.0

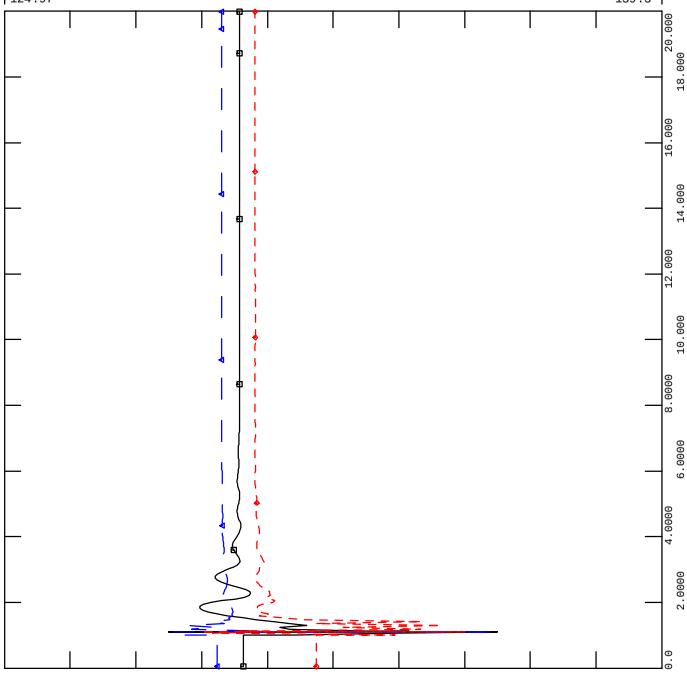
TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_675L_AL_ROTHBAUER

FILE: scn7_SP_675L_Al_Rothbauer.out

THU, APR 14 2022 19:43 BRANCH Q

CHNL# 568: [964L_L5_Q]
65.051 -69.01
CHNL# 572: [964L_L4_Q]
423.43 -924.8
CHNL# 574: [1005L_Q]
124.97 -139.3

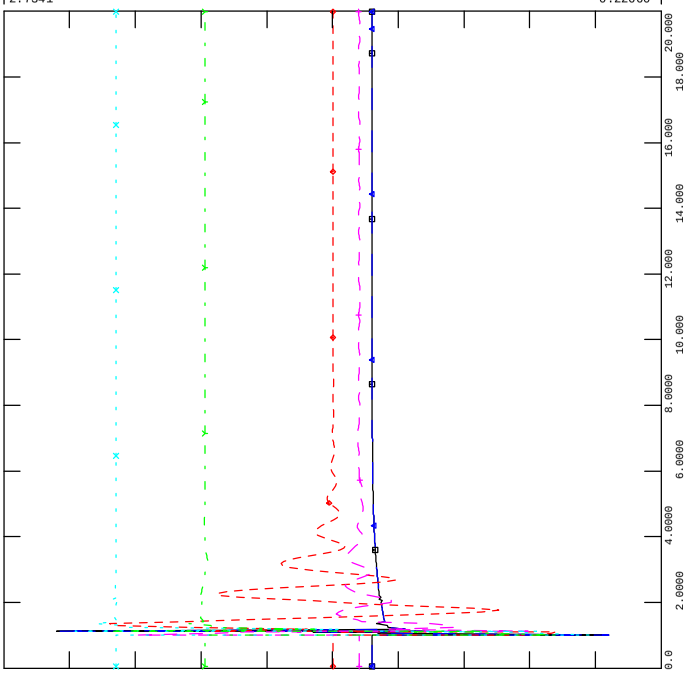


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_675L_BOWMANTON

FILE: scn7_SP_675L_Bowmanton.out

THU, APR 14 2022 19:43 ACTIVE POWER

CHNL# 209: [POWR 61994[GRANLEA6 0.6900]G1]
1.3838 0.12830
CHNL# 206: [POWR 60990[SHAMROC5 0.6500]G1]
2.3308 0.48390
CHNL# 219: [POWR 773[SECST 20.000]1]
3.5141 2.5242
CHNL# 179: [POWR 667[CANCARB9 13.800]1]
1.1644 -0.0790
CHNL# 218: [POWR990007[FORTYMILE_6 0.6900]G2]
2.7341 0.22660
CHNL# 217: [POWR990004[FORTYMILE 3 0.6900]G1]
2.7341 0.22660

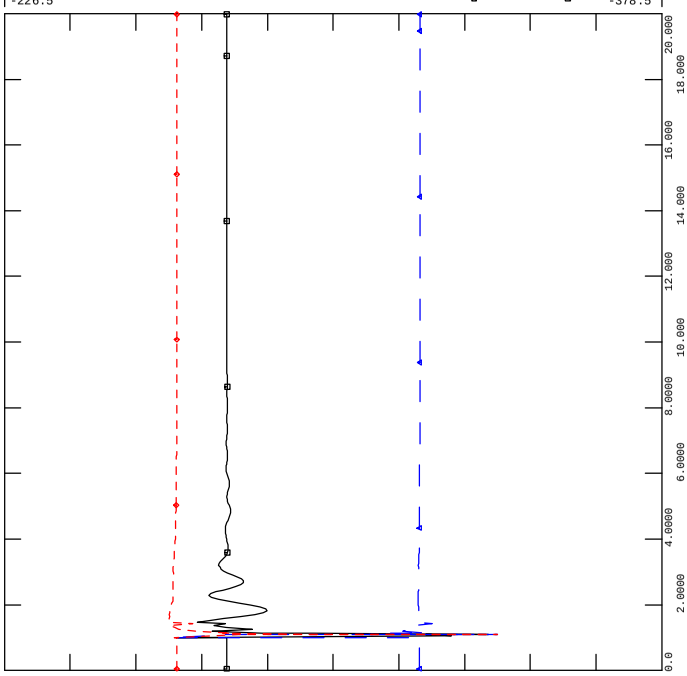


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_675L_AL_ROTHBAUER

FILE: scn7_SP_675L_Al_Rothbauer.out

THU, APR 14 2022 19:43 BRANCH P

CHNL# 567: [964L_L5_P]
121.92 -337.4
CHNL# 571: [964L_L4_P]
363.08 -915.3
CHNL# 573: [1005L_P]
-226.5 -378.5

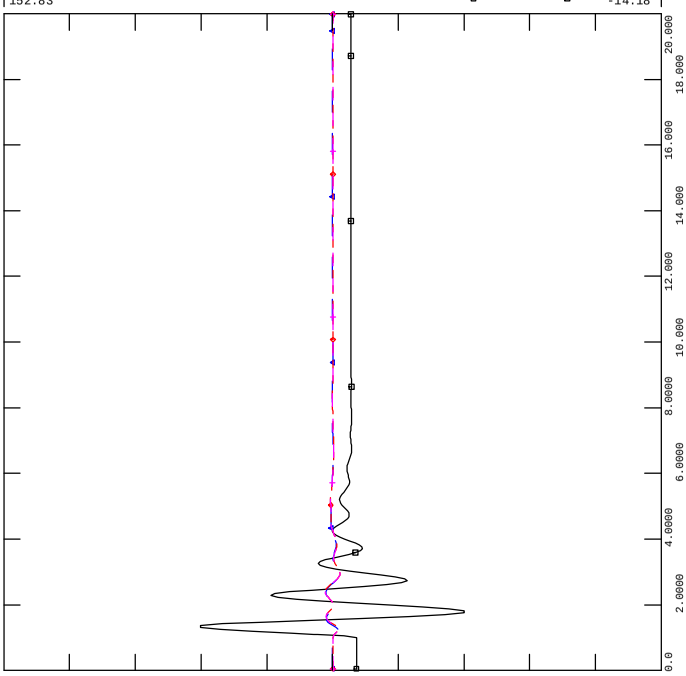


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_675L_BOWMANTON

FILE: scn7_SP_675L_Bowmanton.out

THU, APR 14 2022 19:43 ROTOR ANGLE

CHNL# 43: [ANGL 775[SECCT2 21.000]3]
57.379 -44.97
CHNL# 42: [ANGL 774[SECCT1 21.000]2]
57.379 -44.97
CHNL# 41: [ANGL 773[SECST 20.000]1]
59.337 -42.79
CHNL# 1: [ANGL 667[CANCARB9 13.800]1]
152.83 -14.18



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_675L_BOWMANTON

FILE: scn7_SP_675L_Bowmanton.out

THU, APR 14 2022 19:43

TERMINAL VOLTAGE

CHNL# 476: [ETRM 61994[GRANLEA6 0.6900]G1] 1.4412 0.25350
CHNL# 473: [ETRM 60990[SHAMROC5 0.6500]G1] 1.4113 0.25570
CHNL# 486: [ETRM 773[SECST 20.000]1] 1.1495 0.91590
CHNL# 446: [ETRM 667[CANCARB9 13.800]1] 1.1730 0.36880
CHNL# 485: [ETRM990007[FORTYMILE_6 0.6900]G2] 1.5589 0.23440
CHNL# 484: [ETRM990004[FORTYMILE_3 0.6900]G1] 1.5589 0.23440

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_675L_BOWMANTON

FILE: scn7_SP_675L_Bowmanton.out

THU, APR 14 2022 19:43

BRANCH P

CHNL# 575: [1035L_P] 951.61 -187.2
CHNL# 569: [1034L_P] 915.92 -187.0
CHNL# 561: [983L_L1_P] 129.13 -789.8
CHNL# 559: [983L_L3_P] 108.11 -702.5
CHNL# 557: [983L_L2_P] 108.29 -702.1
CHNL# 555: [964L_L2_P] 300.50 -78.15

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_675L_BOWMANTON

FILE: scn7_SP_675L_Bowmanton.out

THU, APR 14 2022 19:43

REACTIVE POWER

CHNL# 298: [VARS 61994[GRANLEA6 0.6900]G1] 1.0329 -0.3592
CHNL# 295: [VARS 60990[SHAMROC5 0.6500]G1] 1.4225 -0.2484
CHNL# 308: [VARS 773[SECST 20.000]1] 1.5334 -0.1795
CHNL# 268: [VARS 667[CANCARB9 13.800]1] 1.4153 -0.6754
CHNL# 307: [VARS990007[FORTYMILE_6 0.6900]G2] 3.1508 -0.8290
CHNL# 306: [VARS990004[FORTYMILE_3 0.6900]G1] 3.1508 -0.8290

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_675L_BOWMANTON

FILE: scn7_SP_675L_Bowmanton.out

THU, APR 14 2022 19:43

BUS VOLTAGE

CHNL# 554: [VOLT 976 [ROTBAUR 138.00]] 1.1580 -0.0955
CHNL# 549: [VOLT 320 [CHAPPIC7 138.00]] 1.1884 0.76370
CHNL# 552: [VOLT 662 [WHITLA1 240.00]] 1.4236 0.18170
CHNL# 551: [VOLT 659 [BOWMAN2 138.00]] 1.2915 0.11510
CHNL# 553: [VOLT 669 [BOWMAN1 240.00]] 1.2765 0.26510

TIME (SECONDS)

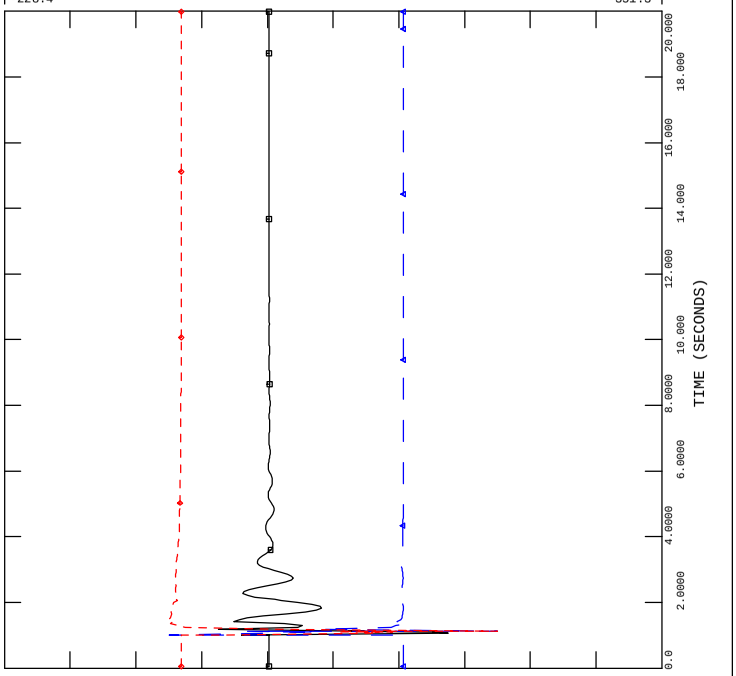
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_675L_BOWMANTON

FILE: scn7_SP_675L_Bowmanton.out

THU, APR 14 2022 19:43 BRANCH P

CHNL# 567: [964L_L5_P]
70.112 -185.3
CHNL# 571: [964L_L4_P]
141.36 -823.4
CHNL# 573: [1005L_P]
-228.4 -351.3

TIME (SECONDS)



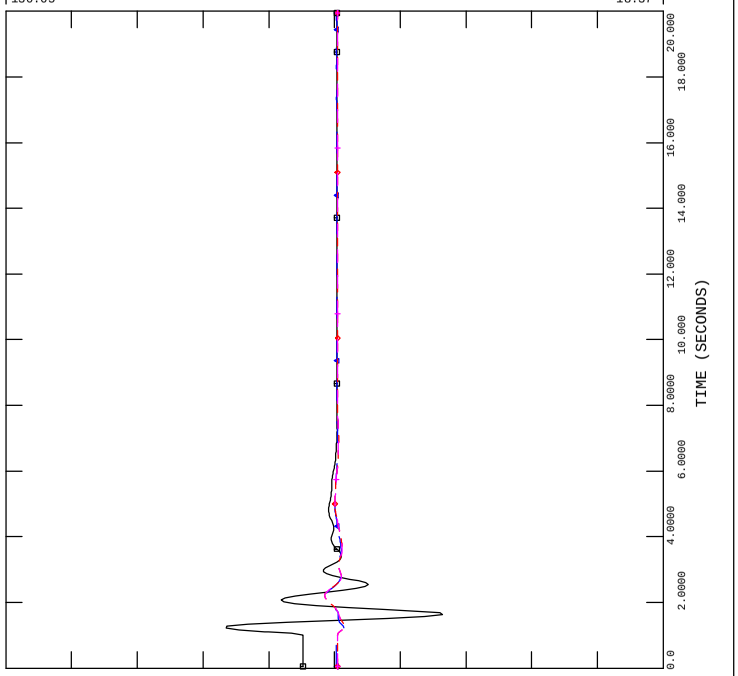
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_676L_BOWMANTON

FILE: scn7_SP_676L_Bowmanton.out

THU, APR 14 2022 19:43 ROTOR ANGLE

CHNL# 43: [ANGL 775[SECCT2 21.000]3]
58.162 -44.95
CHNL# 42: [ANGL 774[SECCT1 21.000]2]
58.162 -44.95
CHNL# 41: [ANGL 773[SECST 20.000]1]
60.049 -42.90
CHNL# 1: [ANGL 667[CANCARB9 13.800]1]
130.65 -18.37

TIME (SECONDS)



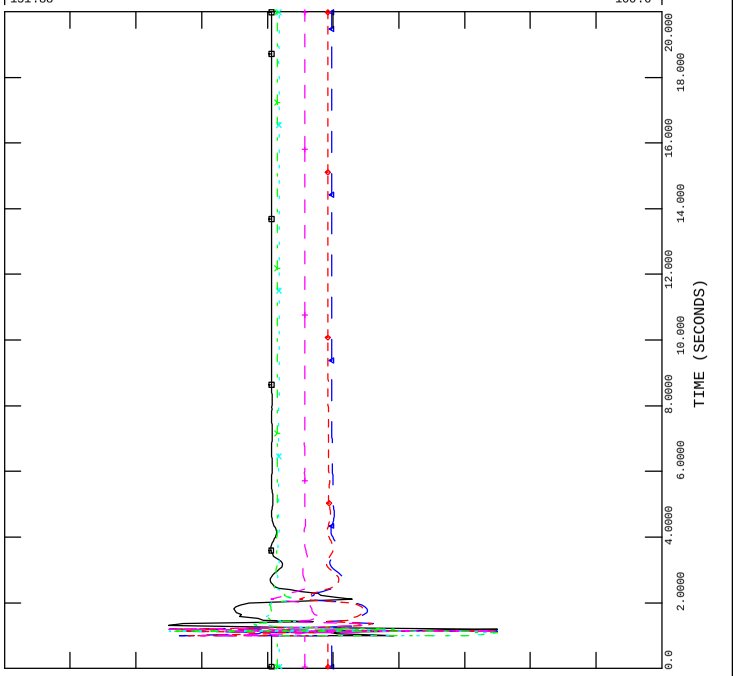
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_675L_BOWMANTON

FILE: scn7_SP_675L_Bowmanton.out

THU, APR 14 2022 19:43 BRANCH Q

CHNL# 576: [1035L_Q]
351.69 -400.0
CHNL# 570: [1034L_Q]
330.73 -398.1
CHNL# 562: [983L_L1_Q]
271.73 -427.9
CHNL# 560: [983L_L3_Q]
196.92 -267.6
CHNL# 558: [983L_L2_Q]
204.44 -309.0
CHNL# 556: [964L_L2_Q]
151.88 -100.6

TIME (SECONDS)



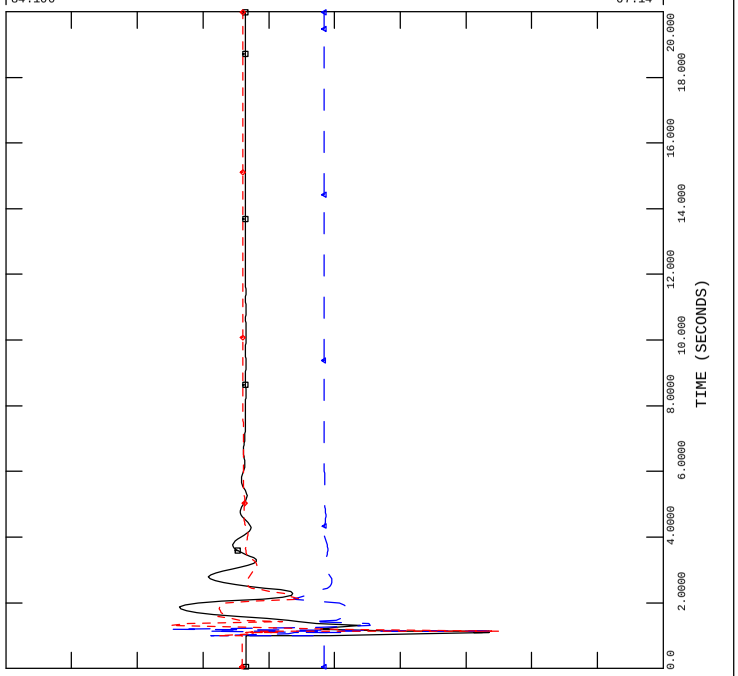
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_675L_BOWMANTON

FILE: scn7_SP_675L_Bowmanton.out

THU, APR 14 2022 19:43 BRANCH Q

CHNL# 568: [964L_L5_Q]
65.772 -113.0
CHNL# 572: [964L_L4_Q]
294.15 -340.4
CHNL# 574: [1005L_Q]
84.100 -67.14

TIME (SECONDS)



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_676L_BOWMANTON

FILE: scn7_SP_676L_Bowmanton.out

THU, APR 14 2022 19:43

REACTIVE POWER

CHNL# 298: [VARS 61994[GRANLEA6 0.6900]G1] 3.0175 -0.8382
CHNL# 295: [VARS 60990[SHAMROC5 0.6500]G1] 6.1150 -1.787
CHNL# 308: [VARS 773[SECST 20.000]1] 1.8498 -0.6136
CHNL# 268: [VARS 667[CANCARB9 13.800]1] 1.4445 -0.9651
CHNL# 307: [VARS990007[FORTYMILE_6 0.6900]G2] 4.2413 -1.218
CHNL# 306: [VARS990004[FORTYMILE_3 0.6900]G1] 4.2413 -1.218

TIME (SECONDS)

0.0 2.0000 4.0000 6.0000 8.0000 10.000 12.000 14.000 16.000 18.000 20.000

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_676L_BOWMANTON

FILE: scn7_SP_676L_Bowmanton.out

THU, APR 14 2022 19:43

BUS VOLTAGE

CHNL# 554: [VOLT 976 [ROTBAUR 138.00]] 1.2847 0.09510
CHNL# 549: [VOLT 320 [CHAPPIC7 138.00]] 1.2610 0.70380
CHNL# 552: [VOLT 662 [WHITLA1 240.00]] 1.7777 0.01680
CHNL# 551: [VOLT 659 [BOWMAN2 138.00]] 1.4387 -0.0964
CHNL# 553: [VOLT 669 [BOWMAN1 240.00]] 1.4801 0.10430

TIME (SECONDS)

0.0 2.0000 4.0000 6.0000 8.0000 10.000 12.000 14.000 16.000 18.000 20.000

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_676L_BOWMANTON

FILE: scn7_SP_676L_Bowmanton.out

THU, APR 14 2022 19:43

ACTIVE POWER

CHNL# 209: [POWR 61994[GRANLEA6 0.6900]G1] 1.2136 -0.0256
CHNL# 206: [POWR 60990[SHAMROC5 0.6500]G1] 2.2255 0.18150
CHNL# 219: [POWR 773[SECST 20.000]1] 3.6206 2.5460
CHNL# 179: [POWR 667[CANCARB9 13.800]1] 1.1701 0.02620
CHNL# 218: [POWR990007[FORTYMILE_6 0.6900]G2] 3.7407 0.17650
CHNL# 217: [POWR990004[FORTYMILE_3 0.6900]G1] 3.7407 0.17650

TIME (SECONDS)

0.0 2.0000 4.0000 6.0000 8.0000 10.000 12.000 14.000 16.000 18.000 20.000

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_676L_BOWMANTON

FILE: scn7_SP_676L_Bowmanton.out

THU, APR 14 2022 19:43

TERMINAL VOLTAGE

CHNL# 476: [ETRM 61994[GRANLEA6 0.6900]G1] 1.9335 0.21570
CHNL# 473: [ETRM 60990[SHAMROC5 0.6500]G1] 1.9480 0.16630
CHNL# 486: [ETRM 773[SECST 20.000]1] 1.1645 0.90340
CHNL# 446: [ETRM 667[CANCARB9 13.800]1] 1.1751 0.47010
CHNL# 485: [ETRM990007[FORTYMILE_6 0.6900]G2] 1.8925 0.19510
CHNL# 484: [ETRM990004[FORTYMILE_3 0.6900]G1] 1.8925 0.19510

TIME (SECONDS)

0.0 2.0000 4.0000 6.0000 8.0000 10.000 12.000 14.000 16.000 18.000 20.000

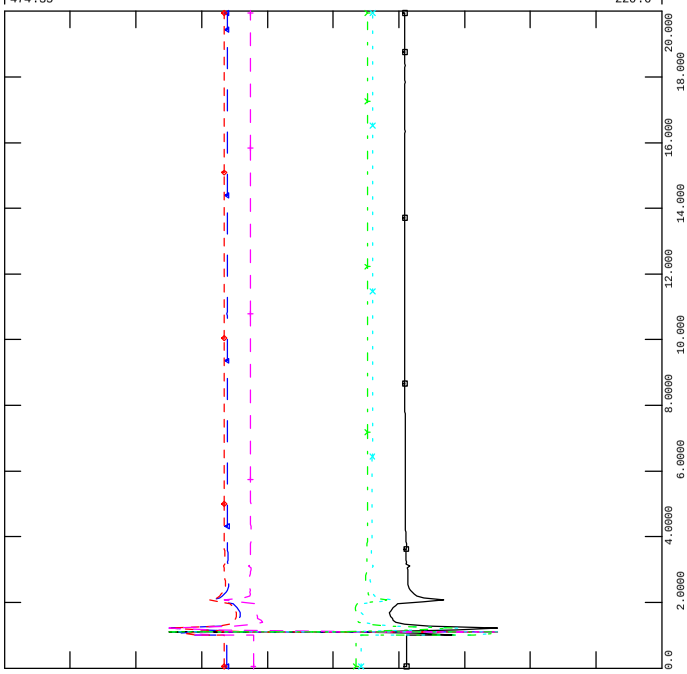
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_676L_BOWMANTON

FILE: scn7_SP_676L_Bowmanton.out

THU, APR 14 2022 19:43

BRANCH Q

CHNL# 576: [1035L_Q] 515.80 -375.0
CHNL# 570: [1034L_Q] 495.25 -368.8
CHNL# 562: [983L_L1_Q] 340.71 -686.2
CHNL# 560: [983L_L3_Q] 447.46 -987.8
CHNL# 558: [983L_L2_Q] 455.44 -1043.
CHNL# 556: [964L_L2_Q] 474.35 -220.6



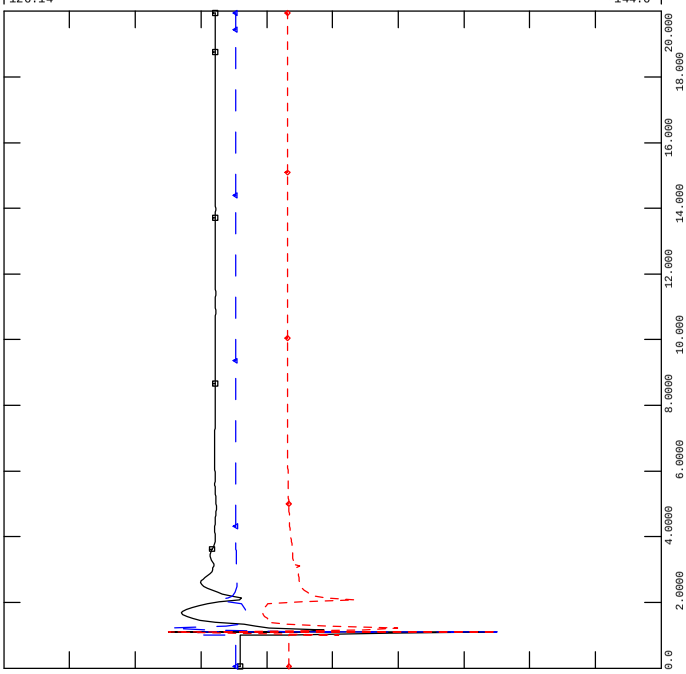
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_676L_BOWMANTON

FILE: scn7_SP_676L_Bowmanton.out

THU, APR 14 2022 19:43

BRANCH Q

CHNL# 568: [964L_L5_Q] 94.408 -119.8
CHNL# 572: [964L_L4_Q] 487.52 -930.5
CHNL# 574: [1005L_Q] 126.14 -144.6



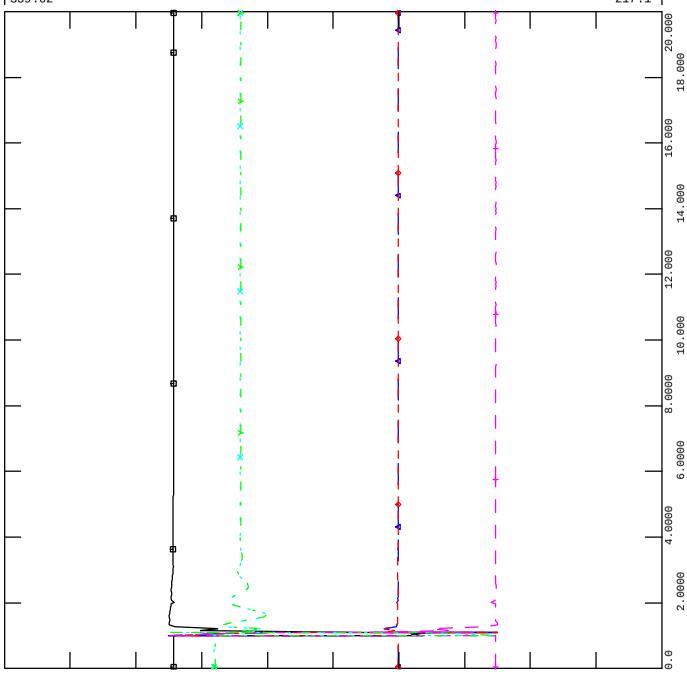
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_676L_BOWMANTON

FILE: scn7_SP_676L_Bowmanton.out

THU, APR 14 2022 19:43

BRANCH P

CHNL# 575: [1035L_P] 987.45 -374.0
CHNL# 569: [1034L_P] 943.70 -365.8
CHNL# 561: [983L_L1_P] 306.30 -811.5
CHNL# 559: [983L_L3_P] 308.20 -770.5
CHNL# 557: [983L_L2_P] 308.21 -769.5
CHNL# 555: [964L_L2_P] 339.02 -217.1



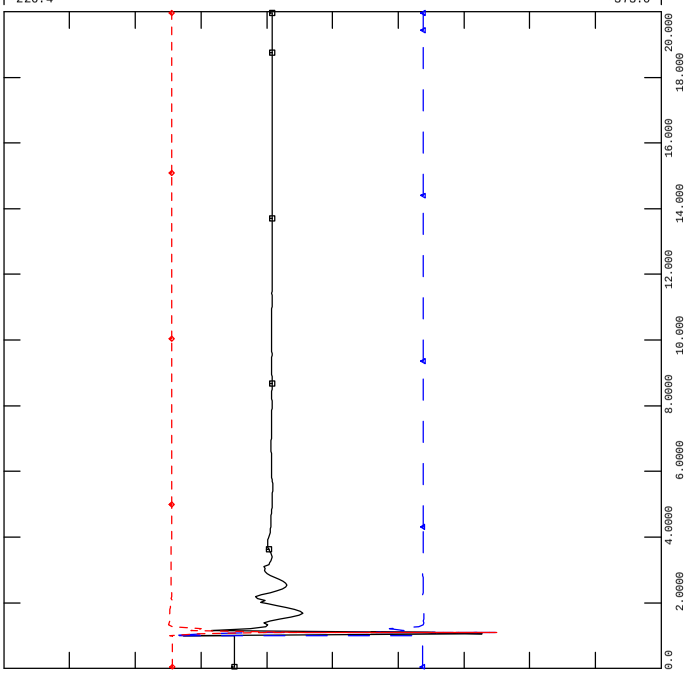
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_676L_BOWMANTON

FILE: scn7_SP_676L_Bowmanton.out

THU, APR 14 2022 19:43

BRANCH P

CHNL# 567: [964L_L5_P] 125.96 -360.1
CHNL# 571: [964L_L4_P] 358.37 -900.8
CHNL# 573: [1005L_P] -226.4 -373.0



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_676L_BULLSHEAD

FILE: scn7_SP_676L_Bullshead.out

THU, APR 14 2022 19:43

ACTIVE POWER

CHNL# 209: [POWR 61994[GRANLEA6 0.6900]G1]
1.2617 0.23350

CHNL# 206: [POWR 60990[SHAMROC5 0.6500]G1]
2.2196 0.66680

CHNL# 219: [POWR 773[SECST 20.000]1]
3.5059 2.6063

CHNL# 179: [POWR 667[CANCARB9 13.800]1]
1.0382 0.11030

CHNL# 218: [POWR990007[FORTYMILE_6 0.6900]G2]
2.7578 0.36980

CHNL# 217: [POWR990004[FORTYMILE_3 0.6900]G1]
2.7578 0.36980

TIME (SECONDS)

0.0 2.0000 4.0000 6.0000 8.0000 10.000 12.000 14.000 16.000 18.000 20.000

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_676L_BULLSHEAD

FILE: scn7_SP_676L_Bullshead.out

THU, APR 14 2022 19:43

TERMINAL VOLTAGE

CHNL# 476: [ETRM 61994[GRANLEA6 0.6900]G1]
1.4567 0.36680

CHNL# 473: [ETRM 60990[SHAMROC5 0.6500]G1]
1.4283 0.35090

CHNL# 486: [ETRM 773[SECST 20.000]1]
1.1529 0.91770

CHNL# 446: [ETRM 667[CANCARB9 13.800]1]
1.1708 0.48700

CHNL# 485: [ETRM990007[FORTYMILE_6 0.6900]G2]
1.5672 0.34660

CHNL# 484: [ETRM990004[FORTYMILE_3 0.6900]G1]
1.5672 0.34660

TIME (SECONDS)

0.0 2.0000 4.0000 6.0000 8.0000 10.000 12.000 14.000 16.000 18.000 20.000

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_676L_BULLSHEAD

FILE: scn7_SP_676L_Bullshead.out

THU, APR 14 2022 19:43

ROTOR ANGLE

CHNL# 43: [ANGL 775[SECCT2 21.000]3]
57.536 -44.93

CHNL# 42: [ANGL 774[SECCT1 21.000]2]
57.536 -44.93

CHNL# 41: [ANGL 773[SECST 20.000]1]
59.481 -42.69

CHNL# 1: [ANGL 667[CANCARB9 13.800]1]
123.96 -13.00

TIME (SECONDS)

0.0 2.0000 4.0000 6.0000 8.0000 10.000 12.000 14.000 16.000 18.000 20.000

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_676L_BULLSHEAD

FILE: scn7_SP_676L_Bullshead.out

THU, APR 14 2022 19:43

REACTIVE POWER

CHNL# 298: [VARS 61994[GRANLEA6 0.6900]G1]
1.0427 -0.3141

CHNL# 295: [VARS 60990[SHAMROC5 0.6500]G1]
1.4424 -0.1811

CHNL# 308: [VARS 773[SECST 20.000]1]
1.5025 -0.2058

CHNL# 268: [VARS 667[CANCARB9 13.800]1]
1.3420 -0.7148

CHNL# 307: [VARS990007[FORTYMILE_6 0.6900]G2]
3.1071 -0.7402

CHNL# 306: [VARS990004[FORTYMILE_3 0.6900]G1]
3.1071 -0.7402

TIME (SECONDS)

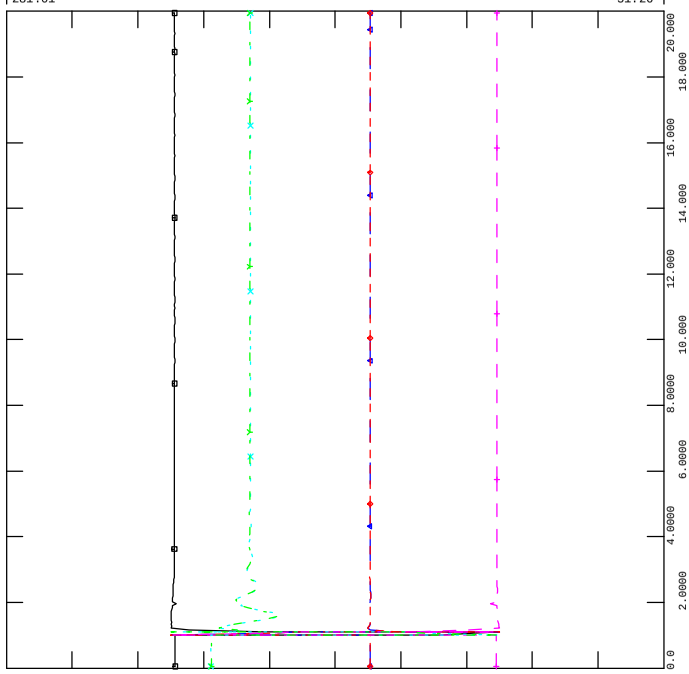
0.0 2.0000 4.0000 6.0000 8.0000 10.000 12.000 14.000 16.000 18.000 20.000

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_676L_BULLSHEAD

FILE: scn7_SP_676L_Bullshead.out

THU, APR 14 2022 19:43 BRANCH P

CHNL# 575: [1035L_P] 832.14 -69.89
CHNL# 569: [1034L_P] 796.72 -72.78
CHNL# 561: [983L_L1_P] 22.788 -717.2
CHNL# 559: [983L_L3_P] 25.795 -631.7
CHNL# 557: [983L_L2_P] 25.993 -631.3
CHNL# 555: [964L_L2_P] 281.01 -51.26

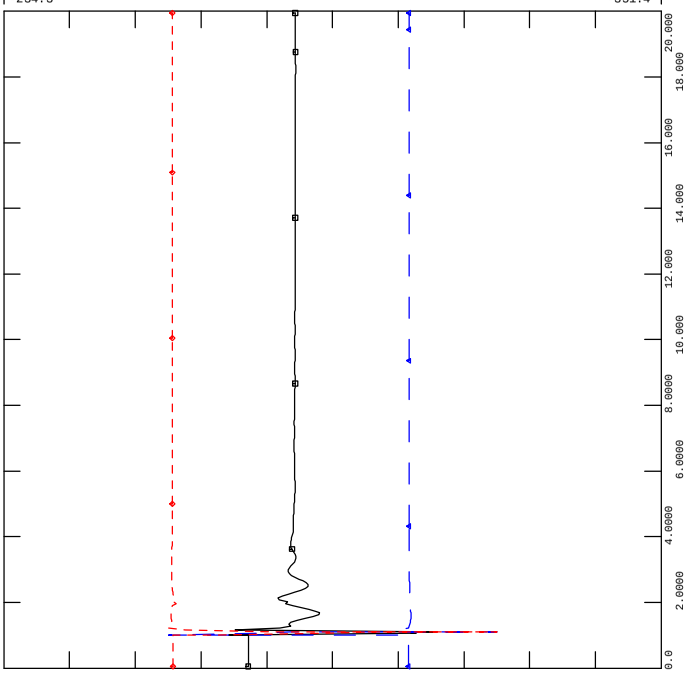


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_676L_BULLSHEAD

FILE: scn7_SP_676L_Bullshead.out

THU, APR 14 2022 19:43 BRANCH P

CHNL# 567: [964L_L5_P] 72.834 -204.9
CHNL# 571: [964L_L4_P] 42.879 -748.4
CHNL# 573: [1005L_P] -234.3 -351.4

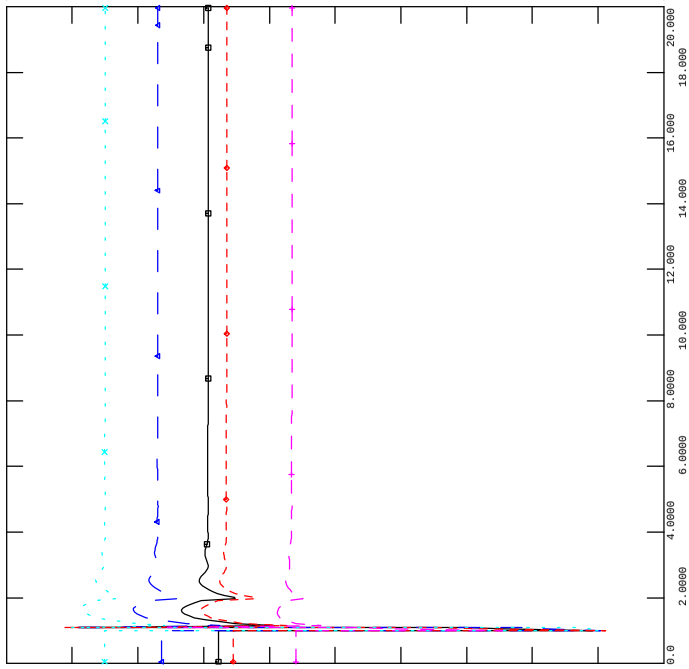


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_676L_BULLSHEAD

FILE: scn7_SP_676L_Bullshead.out

THU, APR 14 2022 19:43 BUS VOLTAGE

CHNL# 554: [VOLT 976 [ROTBAUR 138.00]] 1.1766 0.14010
CHNL# 549: [VOLT 320 [CHAPPIC7 138.00]] 1.1957 0.78850
CHNL# 552: [VOLT 662 [WHITLA1 240.00]] 1.4408 0.30900
CHNL# 551: [VOLT 659 [BOWMAN2 138.00]] 1.2720 0.22980
CHNL# 553: [VOLT 669 [BOWMAN1 240.00]] 1.2845 0.35760

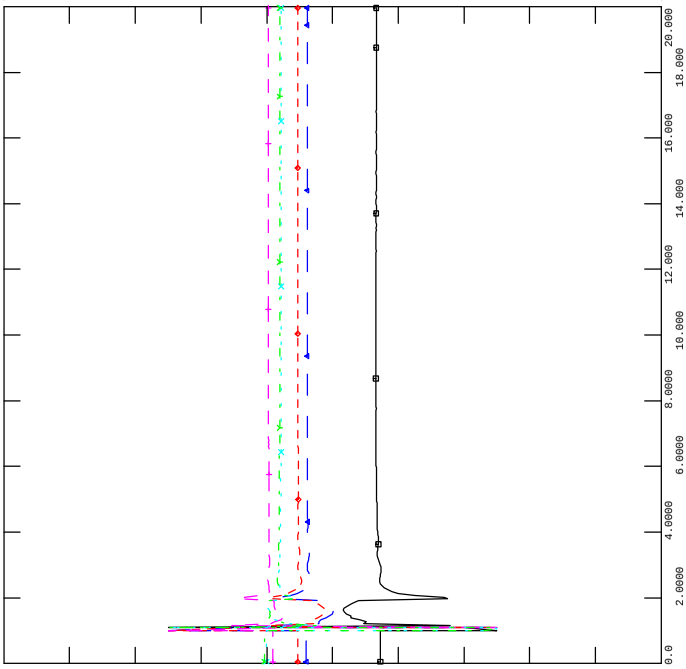


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_676L_BULLSHEAD

FILE: scn7_SP_676L_Bullshead.out

THU, APR 14 2022 19:43 BRANCH Q

CHNL# 576: [1035L_Q] 306.79 -368.0
CHNL# 570: [1034L_Q] 287.98 -367.6
CHNL# 562: [983L_L1_Q] 229.31 -447.9
CHNL# 560: [983L_L3_Q] 184.11 -298.8
CHNL# 558: [983L_L2_Q] 197.80 -343.6
CHNL# 556: [964L_L2_Q] 196.09 -60.17



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_879L_BOWMANTON

FILE: scn7_SP_879L_Bowmanton.out

THU, APR 14 2022 19:43

ROTOR ANGLE

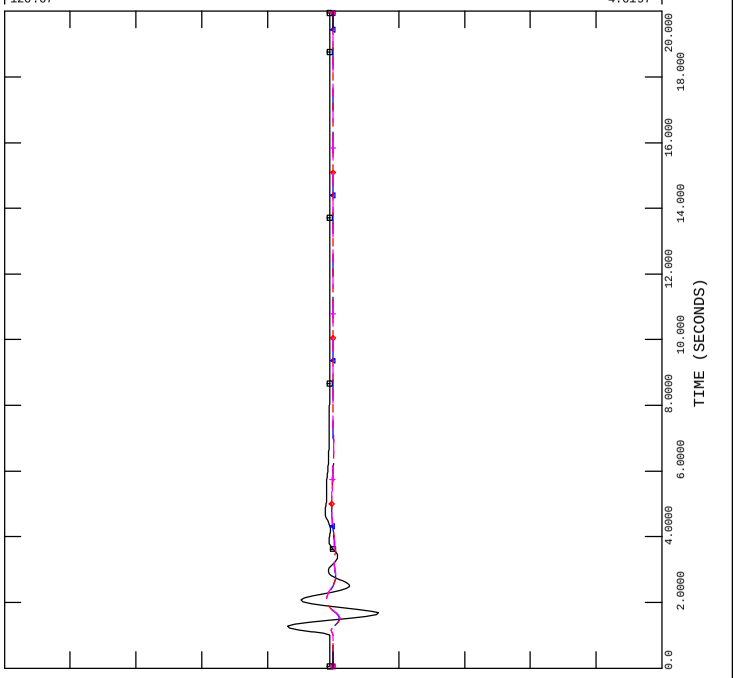
CHNL# 43: [ANGL 775[SECCT2 21.000]3]
57.143 -44.93

CHNL# 42: [ANGL 774[SECCT1 21.000]2]
57.143 -44.93

CHNL# 41: [ANGL 773[SECST 20.000]1]
59.153 -42.71

CHNL# 1: [ANGL 667[CANCARB9 13.800]1]
120.67 4.6197

TIME (SECONDS)



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_879L_BOWMANTON

FILE: scn7_SP_879L_Bowmanton.out

THU, APR 14 2022 19:43

REACTIVE POWER

CHNL# 298: [VARS 61994[GRANLEA6 0.6900]G1]
1.0084 -0.1560

CHNL# 295: [VARS 60990[SHAMROC5 0.6500]G1]
1.3769 0.08560

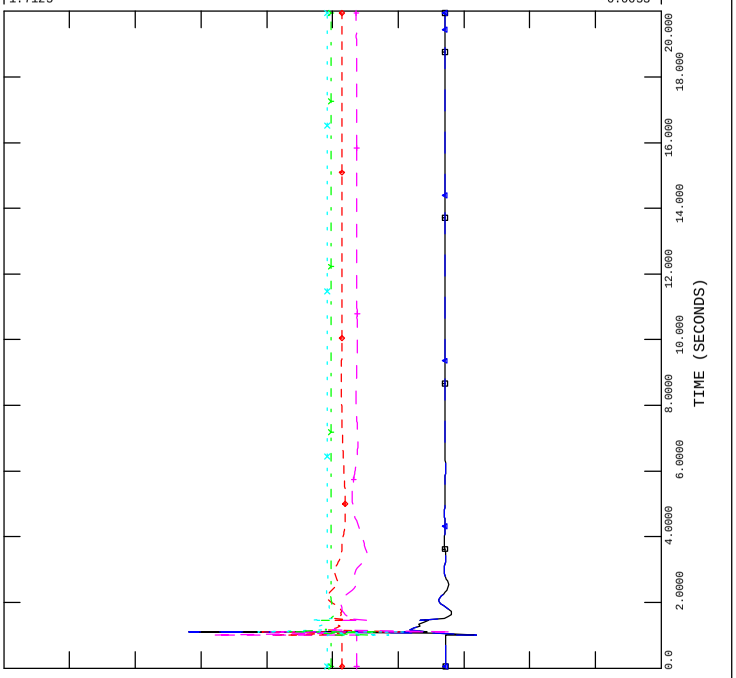
CHNL# 308: [VARS 773[SECST 20.000]1]
1.4925 -0.0856

CHNL# 268: [VARS 667[CANCARB9 13.800]1]
0.80170 -0.4722

CHNL# 307: [VARS990007[FORTYMILE_6 0.6900]G2]
1.7125 -0.0653

CHNL# 306: [VARS990004[FORTYMILE_3 0.6900]G1]
1.7125 -0.0653

TIME (SECONDS)



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_676L_BULLSHEAD

FILE: scn7_SP_676L_Bullshead.out

THU, APR 14 2022 19:43

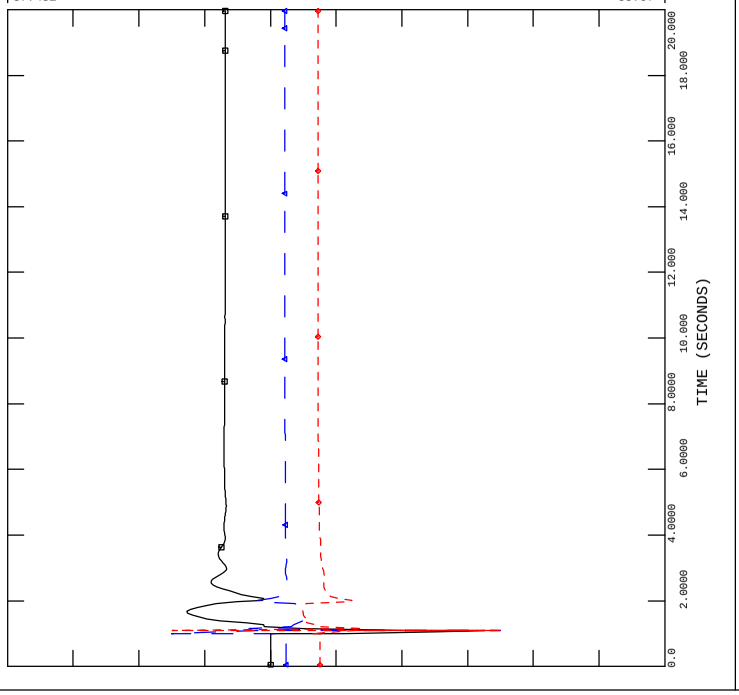
BRANCH Q

CHNL# 568: [964L_L5_Q]
114.99 -123.9

CHNL# 572: [964L_L4_Q]
248.09 -368.2

CHNL# 574: [1005L_Q]
87.481 -58.97

TIME (SECONDS)



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_879L_BOWMANTON

FILE: scn7_SP_879L_Bowmanton.out

THU, APR 14 2022 19:43

ACTIVE POWER

CHNL# 209: [POWR 61994[GRANLEA6 0.6900]G1]
1.4116 0.64120

CHNL# 206: [POWR 60990[SHAMROC5 0.6500]G1]
2.4082 1.4395

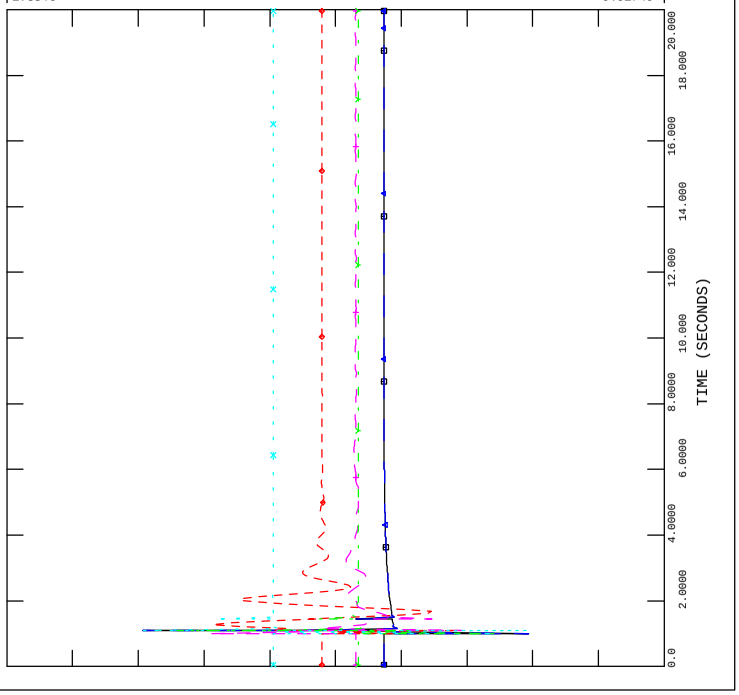
CHNL# 219: [POWR 773[SECST 20.000]1]
3.3230 2.6748

CHNL# 179: [POWR 667[CANCARB9 13.800]1]
0.84830 0.20890

CHNL# 218: [POWR990007[FORTYMILE_6 0.6900]G2]
1.8846 0.91740

CHNL# 217: [POWR990004[FORTYMILE_3 0.6900]G1]
1.8846 0.91740

TIME (SECONDS)



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_879L_BOWMANTON

FILE: scn7_SP_879L_Bowmanton.out

THU, APR 14 2022 19:43

BUS VOLTAGE

CHNL# 554: [VOLT 976 [ROTBAUR 138.00]]
1.1764 0.76570

CHNL# 549: [VOLT 320 [CHAPPIC7 138.00]]
1.1163 0.52520

CHNL# 552: [VOLT 662 [WHITLA1 240.00]]
1.2404 0.66000

CHNL# 551: [VOLT 659 [BOWMAN2 138.00]]
1.1942 0.72790

CHNL# 553: [VOLT 669 [BOWMAN1 240.00]]
1.1559 0.65580

TIME (SECONDS)

0.0 2.0000 4.0000 6.0000 8.0000 10.000 12.000 14.000 16.000 18.000 20.000

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_879L_BOWMANTON

FILE: scn7_SP_879L_Bowmanton.out

THU, APR 14 2022 19:43

BRANCH Q

CHNL# 576: [1035L Q]
136.67 -89.22

CHNL# 570: [1034L Q]
121.81 -96.03

CHNL# 562: [983L_L1_Q]
164.57 -201.1

CHNL# 560: [983L_L3_Q]
103.66 -102.8

CHNL# 558: [983L_L2_Q]
103.39 -133.5

CHNL# 556: [964L_L2_Q]
125.84 -77.33

TIME (SECONDS)

0.0 2.0000 4.0000 6.0000 8.0000 10.000 12.000 14.000 16.000 18.000 20.000

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_879L_BOWMANTON

FILE: scn7_SP_879L_Bowmanton.out

THU, APR 14 2022 19:43

TERMINAL VOLTAGE

CHNL# 476: [ETRM 61994[GRANLEA6 0.6900]G1]
1.2700 0.69400

CHNL# 473: [ETRM 60990[SHAMROC5 0.6500]G1]
1.2421 0.66570

CHNL# 486: [ETRM 773[SECST 20.000]1]
1.1502 0.91990

CHNL# 446: [ETRM 667[CANCARB9 13.800]1]
1.1524 0.86040

CHNL# 485: [ETRM990007[FORTYMILE_6 0.6900]G2]
1.2262 0.76870

CHNL# 484: [ETRM990004[FORTYMILE_3 0.6900]G1]
1.2262 0.76870

TIME (SECONDS)

0.0 2.0000 4.0000 6.0000 8.0000 10.000 12.000 14.000 16.000 18.000 20.000

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_879L_BOWMANTON

FILE: scn7_SP_879L_Bowmanton.out

THU, APR 14 2022 19:43

BRANCH P

CHNL# 575: [1035L_P]
699.84 373.54

CHNL# 569: [1034L_P]
671.02 357.12

CHNL# 561: [983L_L1_P]
-374.5 -645.6

CHNL# 559: [983L_L3_P]
-221.3 -461.9

CHNL# 557: [983L_L2_P]
-221.2 -461.4

CHNL# 555: [964L_L2_P]
255.39 110.50

TIME (SECONDS)

0.0 2.0000 4.0000 6.0000 8.0000 10.000 12.000 14.000 16.000 18.000 20.000

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_879L_BOWMANTON

FILE: scn7_SP_879L_Bowmanton.out

THU, APR 14 2022 19:43 BRANCH Q

CHNL# 568: [964L_L5_Q] 52.398 -72.87
CHNL# 572: [964L_L4_Q] 186.42 -128.6
CHNL# 574: [1005L_Q] 130.50 -108.9

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_879L_BURDETT

FILE: scn7_SP_879L_Burdett.out

THU, APR 14 2022 19:43 ACTIVE POWER

CHNL# 209: [POWR 61994[GRANLEA6 0.6900]G1] 1.2842 0.58620
CHNL# 206: [POWR 60990[SHAMROC5 0.6500]G1] 2.3911 1.2909
CHNL# 219: [POWR 773[SECST 20.000]1] 3.3293 2.6897
CHNL# 179: [POWR 667[CANCARB9 13.800]1] 0.86080 0.21100
CHNL# 218: [POWR990007[FORTYMILE_6 0.6900]G2] 1.6376 0.84380
CHNL# 217: [POWR990004[FORTYMILE 3 0.6900]G1] 1.6376 0.84380

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_879L_BOWMANTON

FILE: scn7_SP_879L_Bowmanton.out

THU, APR 14 2022 19:43 BRANCH P

CHNL# 567: [964L_L5_P] 43.251 -72.10
CHNL# 571: [964L_L4_P] -299.7 -578.1
CHNL# 573: [1005L_P] -193.0 -351.3

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_879L_BURDETT

FILE: scn7_SP_879L_Burdett.out

THU, APR 14 2022 19:43 ROTOR ANGLE

CHNL# 43: [ANGL 775[SECCT2 21.000]3] 56.954 -44.73
CHNL# 42: [ANGL 774[SECCT1 21.000]2] 56.954 -44.73
CHNL# 41: [ANGL 773[SECST 20.000]1] 58.975 -42.50
CHNL# 1: [ANGL 667[CANCARB9 13.800]1] 121.54 5.2767

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_879L_BURDETT

FILE: scn7_SP_879L_Burdett.out

THU, APR 14 2022 19:43

TERMINAL VOLTAGE

CHNL# 476: [ETRM 61994[GRANLEA6 0.6900]G1]
1.2607 0.57290

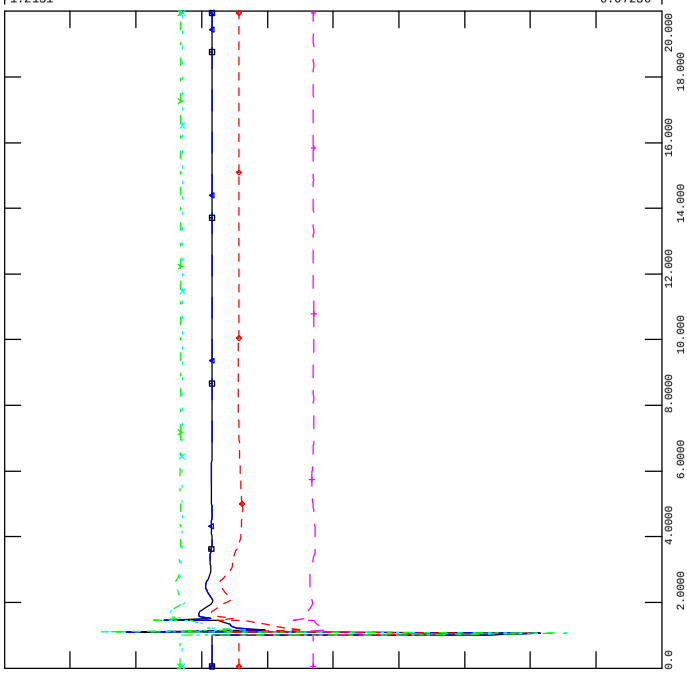
CHNL# 473: [ETRM 60990[SHAMROC5 0.6500]G1]
1.2351 0.54350

CHNL# 486: [ETRM 773[SECST 20.000]1]
1.1469 0.91940

CHNL# 446: [ETRM 667[CANCARB9 13.800]1]
1.1530 0.83580

CHNL# 485: [ETRM990007[FORTYMILE_6 0.6900]G2]
1.2131 0.67230

CHNL# 484: [ETRM990004[FORTYMILE_3 0.6900]G1]
1.2131 0.67230



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_879L_BURDETT

FILE: scn7_SP_879L_Burdett.out

THU, APR 14 2022 19:43

BRANCH P

CHNL# 575: [1035L_P]
705.94 296.92

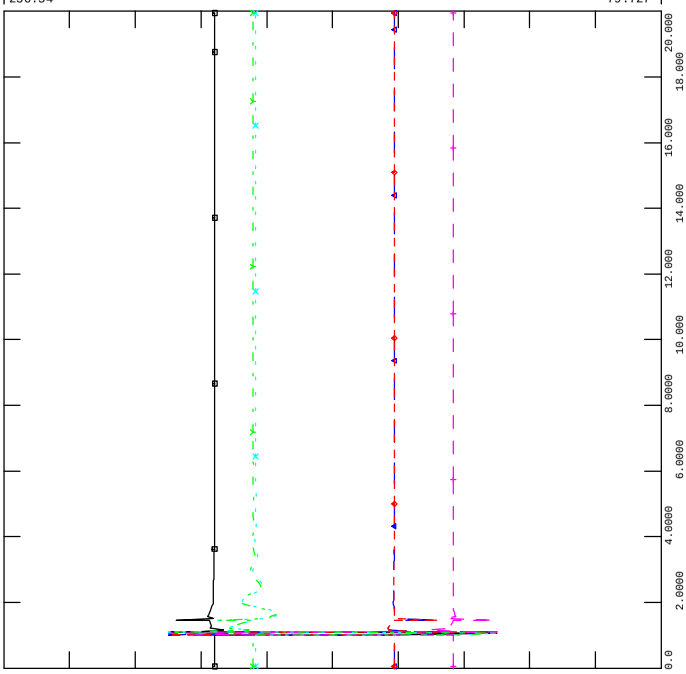
CHNL# 569: [1034L_P]
676.72 284.47

CHNL# 561: [983L_L1_P]
-271.1 -647.8

CHNL# 559: [983L_L3_P]
-208.3 -426.1

CHNL# 557: [983L_L2_P]
-208.1 -425.8

CHNL# 555: [964L_L2_P]
250.54 79.727



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_879L_BURDETT

FILE: scn7_SP_879L_Burdett.out

THU, APR 14 2022 19:43

REACTIVE POWER

CHNL# 298: [VARS 61994[GRANLEA6 0.6900]G1]
0.98910 -0.2314

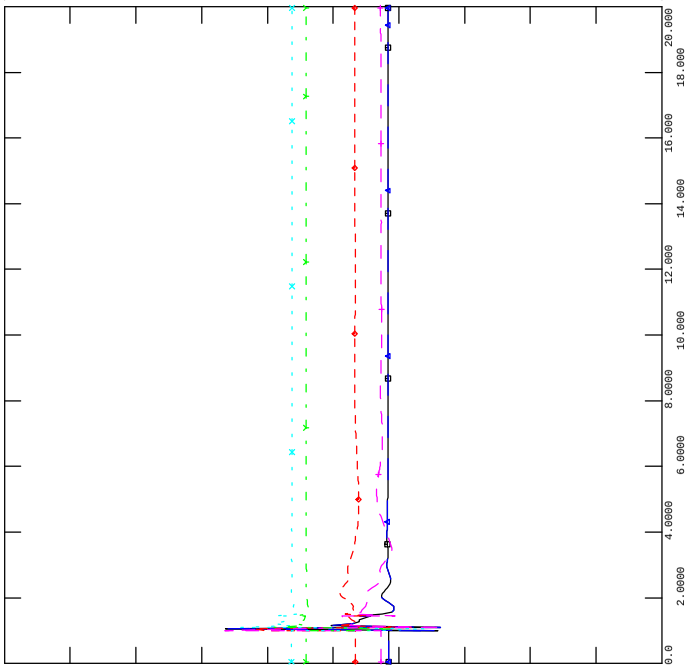
CHNL# 295: [VARS 60990[SHAMROC5 0.6500]G1]
1.3510 -0.0439

CHNL# 308: [VARS 773[SECST 20.000]1]
1.5004 0.00770

CHNL# 268: [VARS 667[CANCARB9 13.800]1]
0.84830 -0.4675

CHNL# 307: [VARS990007[FORTYMILE_6 0.6900]G2]
1.3872 -0.1003

CHNL# 306: [VARS990004[FORTYMILE_3 0.6900]G1]
1.3872 -0.1003



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_879L_BURDETT

FILE: scn7_SP_879L_Burdett.out

THU, APR 14 2022 19:43

BUS VOLTAGE

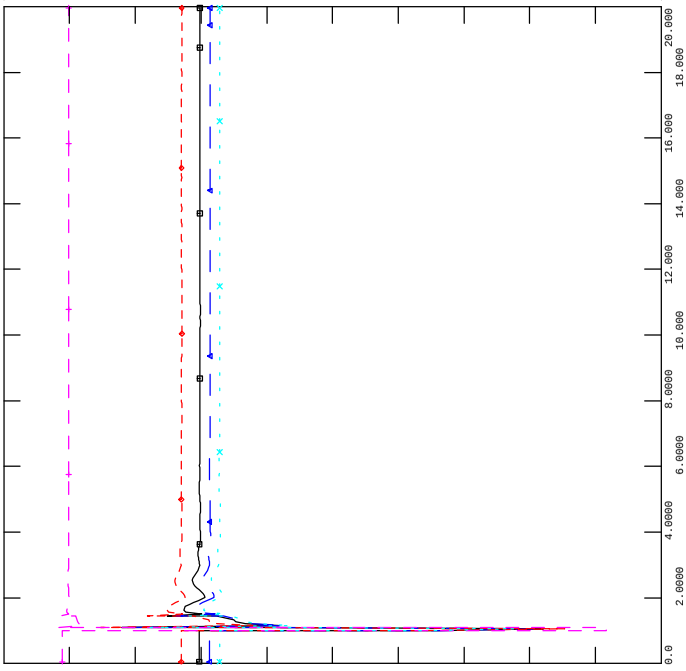
CHNL# 554: [VOLT 976 [ROTBAUR 138.00]]
1.1705 0.71860

CHNL# 549: [VOLT 320 [CHAPPIC7 138.00]]
1.1233 -0.0752

CHNL# 552: [VOLT 662 [WHITLA1 240.00]]
1.2335 0.55320

CHNL# 551: [VOLT 659 [BOWMAN2 138.00]]
1.1875 0.67070

CHNL# 553: [VOLT 669 [BOWMAN1 240.00]]
1.1518 0.59400



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_879L_BURDETT

FILE: scn7_SP_879L_Burdett.out

THU, APR 14 2022 19:43 BRANCH P

CHNL# 567: [964L_L5_P]
42.942 -78.45
CHNL# 571: [964L_L4_P]
-264.7 -547.4
CHNL# 573: [1005L_P]
-204.5 -331.5

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_880L_AL_ROTHBAUER

FILE: scn7_SP_880L_Al_Rothbauer.out

THU, APR 14 2022 19:43 ROTOR ANGLE

CHNL# 43: [ANGL 775[SECCT2 21.000]3]
57.107 -44.70
CHNL# 42: [ANGL 774[SECCT1 21.000]2]
57.107 -44.70
CHNL# 41: [ANGL 773[SECST 20.000]1]
59.125 -42.63
CHNL# 1: [ANGL 667[CANCARB9 13.800]1]
129.39 -1.118

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_879L_BURDETT

FILE: scn7_SP_879L_Burdett.out

THU, APR 14 2022 19:43 BRANCH Q

CHNL# 576: [1035L_Q]
145.65 -127.6
CHNL# 570: [1034L_Q]
127.98 -131.0
CHNL# 562: [983L_L1_Q]
188.58 -207.2
CHNL# 560: [983L_L3_Q]
184.28 -133.5
CHNL# 558: [983L_L2_Q]
188.58 -165.8
CHNL# 556: [964L_L2_Q]
155.07 -115.2

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_879L_BURDETT

FILE: scn7_SP_879L_Burdett.out

THU, APR 14 2022 19:43 BRANCH Q

CHNL# 568: [964L_L5_Q]
62.175 -63.20
CHNL# 572: [964L_L4_Q]
251.19 -155.9
CHNL# 574: [1005L_Q]
76.490 -66.29

TIME (SECONDS)

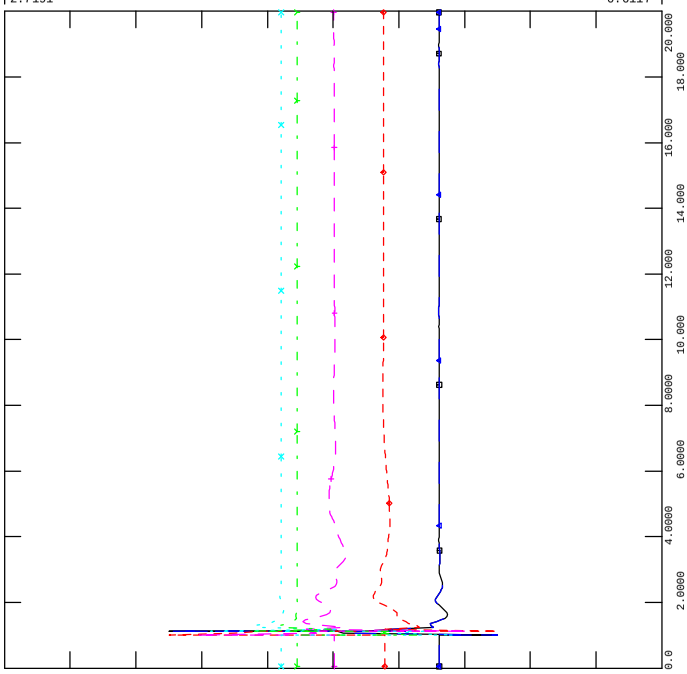
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_880L_AL_ROTHBAUER

FILE: scn7_SP_880L_Al_Rothbauer.out

THU, APR 14 2022 19:43 REACTIVE POWER

CHNL# 298: [VARS 61994[GRANLEA6 0.6900]G1]
1.0253 -0.3146
CHNL# 295: [VARS 60990[SHAMROC5 0.6500]G1]
1.4132 -0.1820
CHNL# 308: [VARS 773[SECST 20.000]1]
1.5031 -0.2059
CHNL# 268: [VARS 667[CANCARB9 13.800]1]
1.3487 -0.7288
CHNL# 307: [VARS990007[FORTYMILE_6 0.6900]G2]
2.7191 -0.6117
CHNL# 306: [VARS990004[FORTYMILE_3 0.6900]G1]
2.7191 -0.6117

TIME (SECONDS)



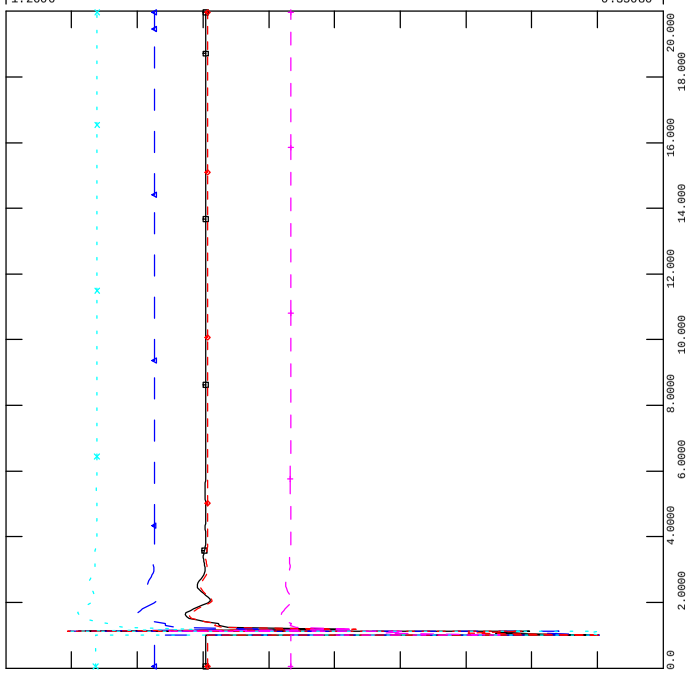
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_880L_AL_ROTHBAUER

FILE: scn7_SP_880L_Al_Rothbauer.out

THU, APR 14 2022 19:43 BUS VOLTAGE

CHNL# 554: [VOLT 976 [ROTBAUR 138.00]]
1.1628 0.13630
CHNL# 549: [VOLT 320 [CHAPPIC7 138.00]]
1.1905 0.78830
CHNL# 552: [VOLT 662 [WHITLA1 240.00]]
1.3790 0.30770
CHNL# 551: [VOLT 659 [BOWMAN2 138.00]]
1.2590 0.22870
CHNL# 553: [VOLT 669 [BOWMAN1 240.00]]
1.2606 0.35680

TIME (SECONDS)



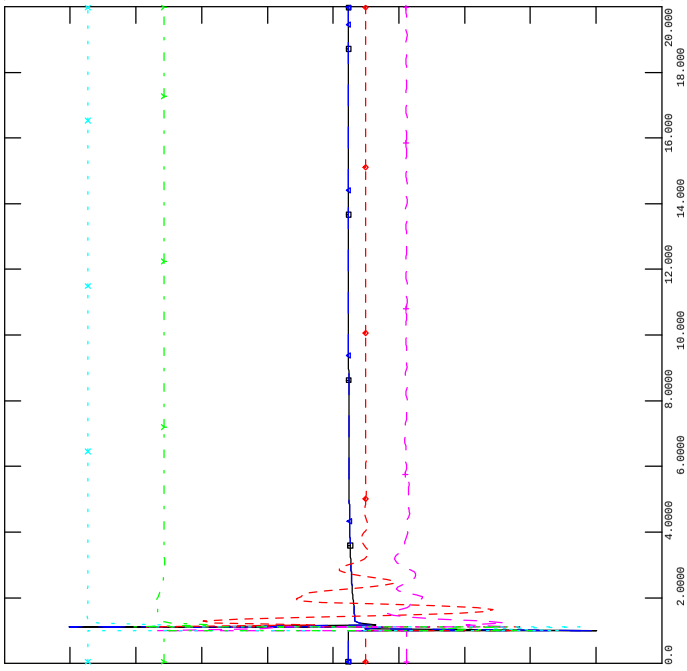
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_880L_AL_ROTHBAUER

FILE: scn7_SP_880L_Al_Rothbauer.out

THU, APR 14 2022 19:43 ACTIVE POWER

CHNL# 209: [POWR 61994[GRANLEA6 0.6900]G1]
1.2460 0.23220
CHNL# 206: [POWR 60990[SHAMROC5 0.6500]G1]
2.2185 0.61820
CHNL# 219: [POWR 773[SECST 20.000]1]
3.5068 2.6435
CHNL# 179: [POWR 667[CANCARB9 13.800]1]
1.0511 0.12390
CHNL# 218: [POWR990007[FORTYMILE_6 0.6900]G2]
2.3866 0.36810
CHNL# 217: [POWR990004[FORTYMILE_3 0.6900]G1]
2.3866 0.36810

TIME (SECONDS)



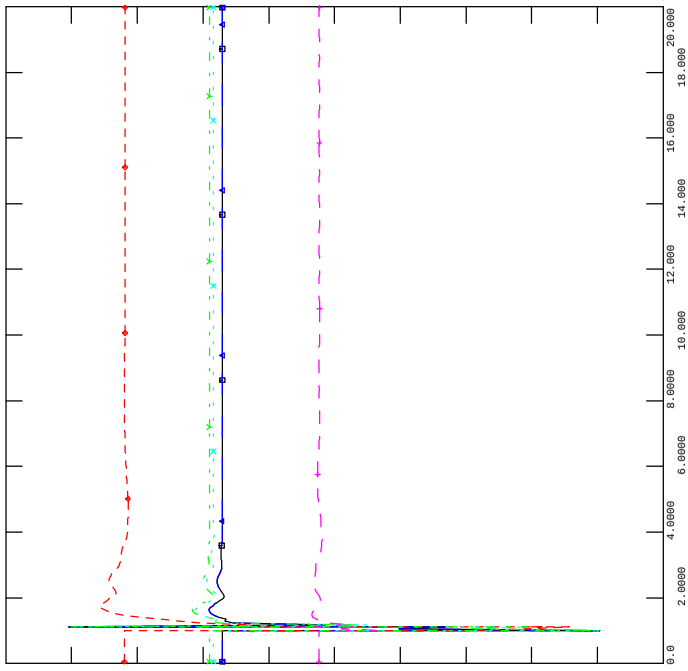
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_880L_AL_ROTHBAUER

FILE: scn7_SP_880L_Al_Rothbauer.out

THU, APR 14 2022 19:43 TERMINAL VOLTAGE

CHNL# 476: [ETRM 61994[GRANLEA6 0.6900]G1]
1.3964 0.36540
CHNL# 473: [ETRM 60990[SHAMROC5 0.6500]G1]
1.3713 0.34950
CHNL# 486: [ETRM 773[SECST 20.000]1]
1.1514 0.91770
CHNL# 446: [ETRM 667[CANCARB9 13.800]1]
1.1662 0.46820
CHNL# 485: [ETRM990007[FORTYMILE_6 0.6900]G2]
1.3847 0.34530
CHNL# 484: [ETRM990004[FORTYMILE_3 0.6900]G1]
1.3847 0.34530

TIME (SECONDS)



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_880L_AL_ROTHBAUER

FILE: scn7_SP_880L_Al_Rothbauer.out

THU, APR 14 2022 19:43 BRANCH Q

CHNL# 576: [1035L Q]
256.91 -357.0

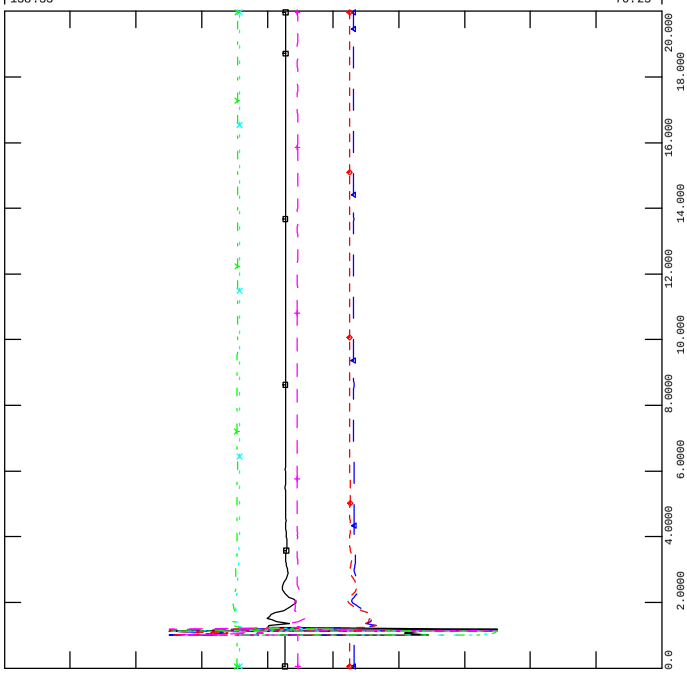
CHNL# 570: [1034L Q]
239.29 -356.5

CHNL# 562: [983L L1 Q]
216.67 -376.9

CHNL# 560: [983L L3 Q]
152.39 -198.2

CHNL# 558: [983L L2 Q]
163.85 -240.9

CHNL# 556: [964L L2 Q]
138.33 -70.25



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_880L_AL_ROTHBAUER

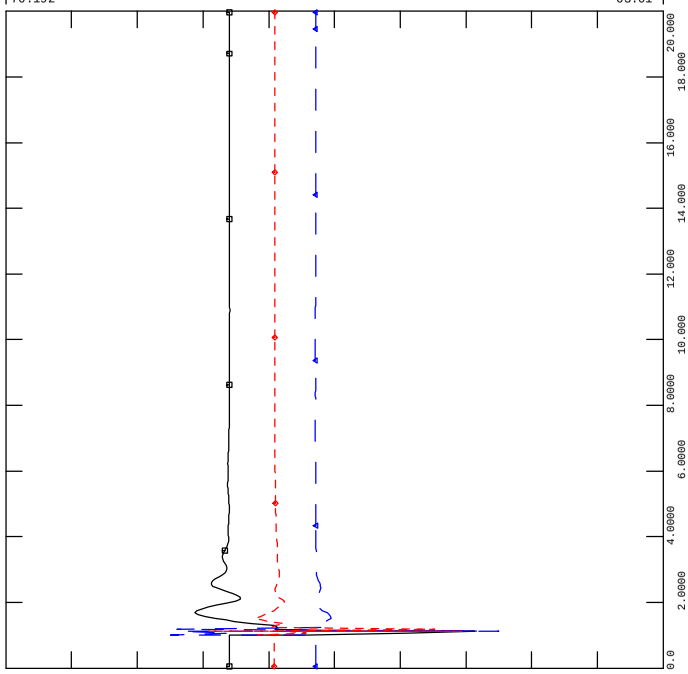
FILE: scn7_SP_880L_Al_Rothbauer.out

THU, APR 14 2022 19:43 BRANCH Q

CHNL# 568: [964L L5 Q]
54.662 -75.68

CHNL# 572: [964L L4 Q]
215.45 -269.5

CHNL# 574: [1005L Q]
76.192 -63.01



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_880L_AL_ROTHBAUER

FILE: scn7_SP_880L_Al_Rothbauer.out

THU, APR 14 2022 19:43 BRANCH P

CHNL# 575: [1035L P]
799.97 -60.39

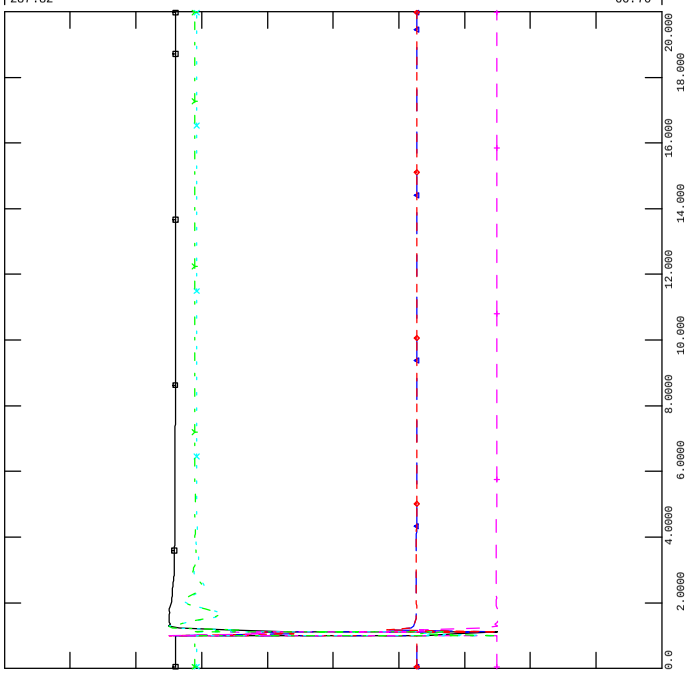
CHNL# 569: [1034L P]
770.88 -65.37

CHNL# 561: [983L L1 P]
22.572 -713.8

CHNL# 559: [983L L3 P]
-5.823 -535.0

CHNL# 557: [983L L2 P]
-5.578 -534.7

CHNL# 555: [964L L2 P]
287.82 -66.70



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_880L_AL_ROTHBAUER

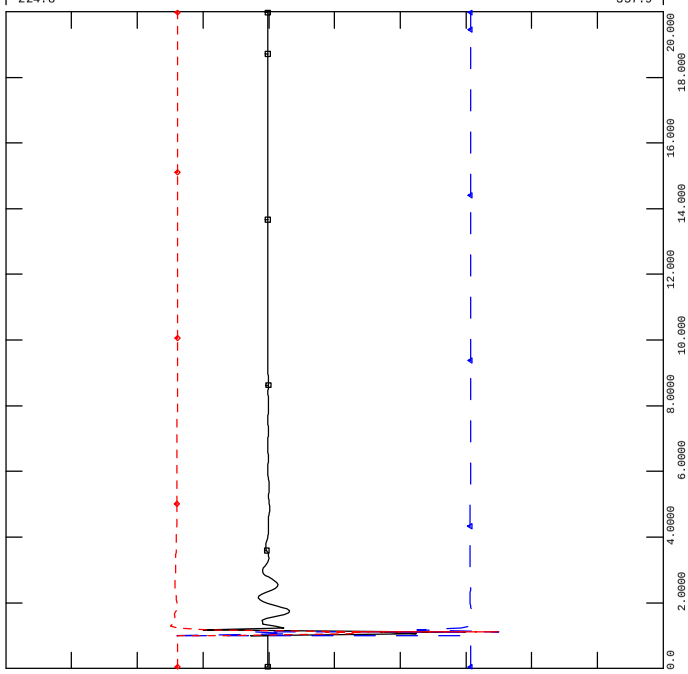
FILE: scn7_SP_880L_Al_Rothbauer.out

THU, APR 14 2022 19:43 BRANCH P

CHNL# 567: [964L L5 P]
67.028 -184.3

CHNL# 571: [964L L4 P]
4.2018 -630.0

CHNL# 573: [1005L P]
-224.8 -357.9



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_880L_BULLSHEAD

FILE: scn7_SP_880L_Bullshead.out

CHNL# 209: [POWR 61994[GRANLEA6 0.6900]G1]
1.2496 0.13100

CHNL# 206: [POWR 60990[SHAMROC5 0.6500]G1]
2.2194 0.41680

CHNL# 219: [POWR 773[SECST 20.000]1]
3.5132 2.6459

CHNL# 179: [POWR 667[CANCARB9 13.800]1]
1.1403 -0.0815

CHNL# 218: [POWR990007[FORTYMILE_6 0.6900]G2]
2.4316 0.23030

CHNL# 217: [POWR990004[FORTYMILE_3 0.6900]G1]
2.4316 0.23030

THU, APR 14 2022 19:43
ACTIVE POWER

TIME (SECONDS)
0.0 2.0000 4.0000 6.0000 8.0000 10.000 12.000 14.000 16.000 18.000 20.000

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_880L_BULLSHEAD

FILE: scn7_SP_880L_Bullshead.out

CHNL# 476: [ETRM 61994[GRANLEA6 0.6900]G1]
1.4033 0.25650

CHNL# 473: [ETRM 60990[SHAMROC5 0.6500]G1]
1.3792 0.25830

CHNL# 486: [ETRM 773[SECST 20.000]1]
1.1517 0.91600

CHNL# 446: [ETRM 667[CANCARB9 13.800]1]
1.1688 0.35970

CHNL# 485: [ETRM990007[FORTYMILE_6 0.6900]G2]
1.3804 0.23730

CHNL# 484: [ETRM990004[FORTYMILE_3 0.6900]G1]
1.3804 0.23730

THU, APR 14 2022 19:43
TERMINAL VOLTAGE

TIME (SECONDS)
0.0 2.0000 4.0000 6.0000 8.0000 10.000 12.000 14.000 16.000 18.000 20.000

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_880L_BULLSHEAD

FILE: scn7_SP_880L_Bullshead.out

CHNL# 43: [ANGL 775[SECCT2 21.000]3]
57.645 -44.86

CHNL# 42: [ANGL 774[SECCT1 21.000]2]
57.645 -44.86

CHNL# 41: [ANGL 773[SECST 20.000]1]
59.588 -42.68

CHNL# 1: [ANGL 667[CANCARB9 13.800]1]
152.92 -16.26

THU, APR 14 2022 19:43
ROTOR ANGLE

TIME (SECONDS)
0.0 2.0000 4.0000 6.0000 8.0000 10.000 12.000 14.000 16.000 18.000 20.000

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_880L_BULLSHEAD

FILE: scn7_SP_880L_Bullshead.out

CHNL# 298: [VARS 61994[GRANLEA6 0.6900]G1]
1.0182 -0.3580

CHNL# 295: [VARS 60990[SHAMROC5 0.6500]G1]
1.4001 -0.2466

CHNL# 308: [VARS 773[SECST 20.000]1]
1.5309 -0.2247

CHNL# 268: [VARS 667[CANCARB9 13.800]1]
1.4414 -0.7536

CHNL# 307: [VARS990007[FORTYMILE_6 0.6900]G2]
2.7892 -0.7065

CHNL# 306: [VARS990004[FORTYMILE_3 0.6900]G1]
2.7892 -0.7065

THU, APR 14 2022 19:43
REACTIVE POWER

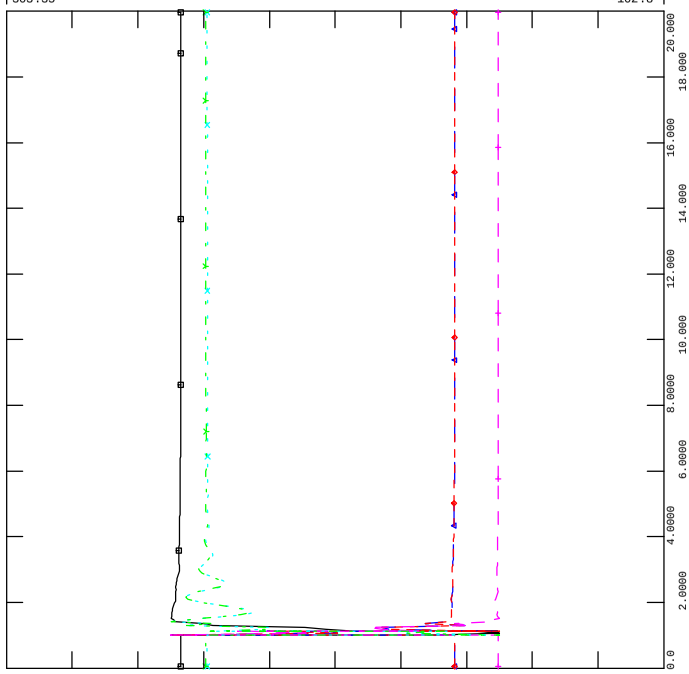
TIME (SECONDS)
0.0 2.0000 4.0000 6.0000 8.0000 10.000 12.000 14.000 16.000 18.000 20.000

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_880L_BULLSHEAD

FILE: scn7_SP_880L_Bullshead.out

THU, APR 14 2022 19:43 BRANCH P

CHNL# 575: [1035L_P] 857.58 -154.1
CHNL# 569: [1034L_P] 826.62 -155.6
CHNL# 561: [983L_L1_P] 111.84 -744.2
CHNL# 559: [983L_L3_P] 44.328 -516.1
CHNL# 557: [983L_L2_P] 44.549 -515.8
CHNL# 555: [964L_L2_P] 303.35 -102.8

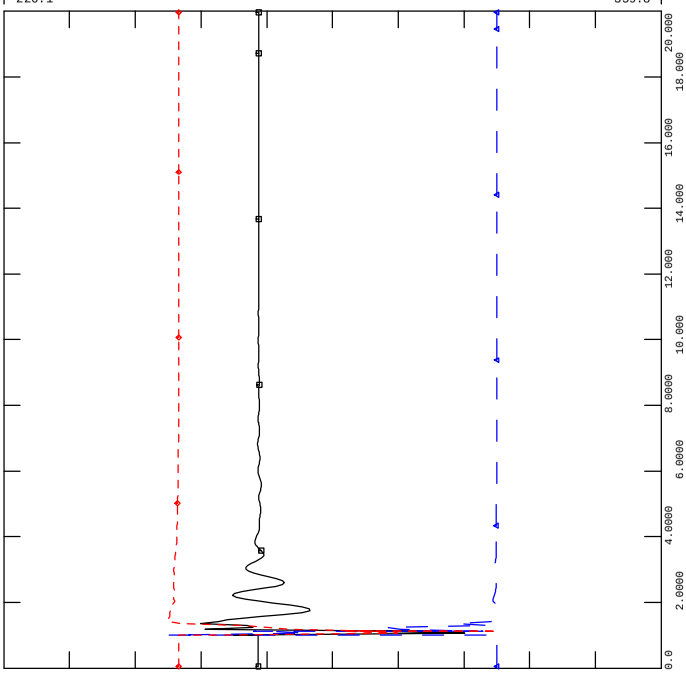


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_880L_BULLSHEAD

FILE: scn7_SP_880L_Bullshead.out

THU, APR 14 2022 19:43 BRANCH P

CHNL# 567: [964L_L5_P] 74.490 -200.0
CHNL# 571: [964L_L4_P] 70.069 -615.4
CHNL# 573: [1005L_P] -226.1 -359.8

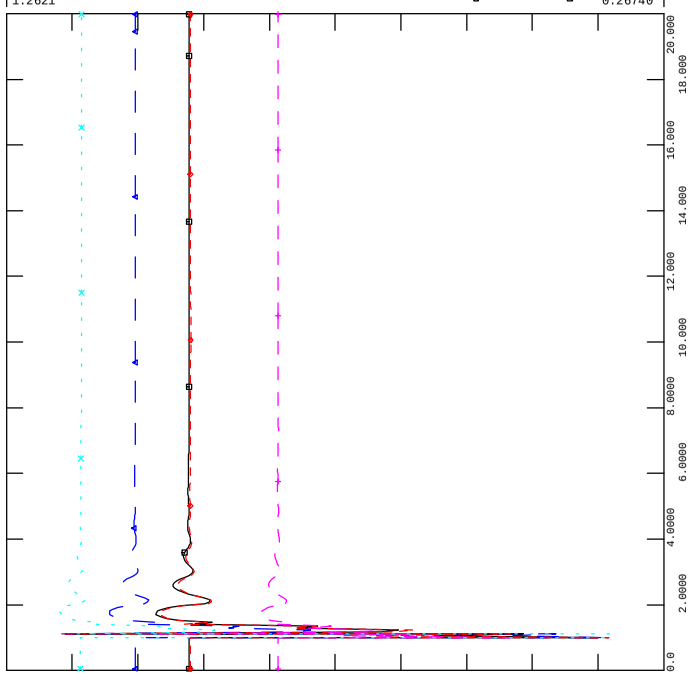


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_880L_BULLSHEAD

FILE: scn7_SP_880L_Bullshead.out

THU, APR 14 2022 19:43 BUS VOLTAGE

CHNL# 554: [VOLT 976 [ROTBAUR 138.00]] 1.1641 -0.0964
CHNL# 549: [VOLT 320 [CHAPPIC7 138.00]] 1.1936 0.76440
CHNL# 552: [VOLT 662 [WHITLA1 240.00]] 1.3865 0.18520
CHNL# 551: [VOLT 659 [BOWMAN2 138.00]] 1.2471 0.11770
CHNL# 553: [VOLT 669 [BOWMAN1 240.00]] 1.2621 0.26740

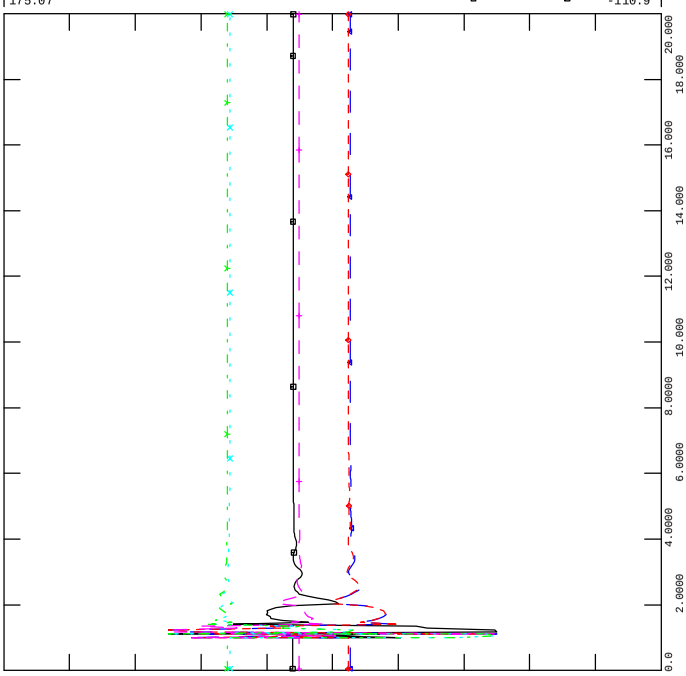


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_880L_BULLSHEAD

FILE: scn7_SP_880L_Bullshead.out

THU, APR 14 2022 19:43 BRANCH Q

CHNL# 576: [1035L_Q] 251.52 -371.7
CHNL# 570: [1034L_Q] 234.12 -370.5
CHNL# 562: [983L_L1_Q] 255.70 -419.8
CHNL# 560: [983L_L3_Q] 188.36 -231.5
CHNL# 558: [983L_L2_Q] 196.76 -274.1
CHNL# 556: [964L_L2_Q] 175.07 -110.9

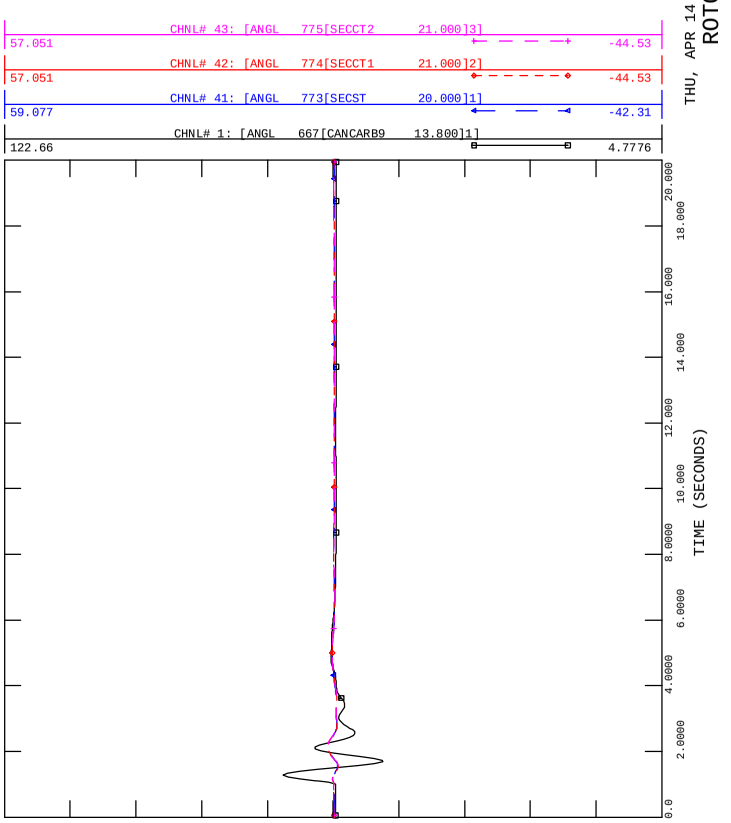


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_892L_BOWMANTON

FILE: scn7_SP_892L_Bowmanton.out

THU, APR 14 2022 19:43

ROTOR ANGLE

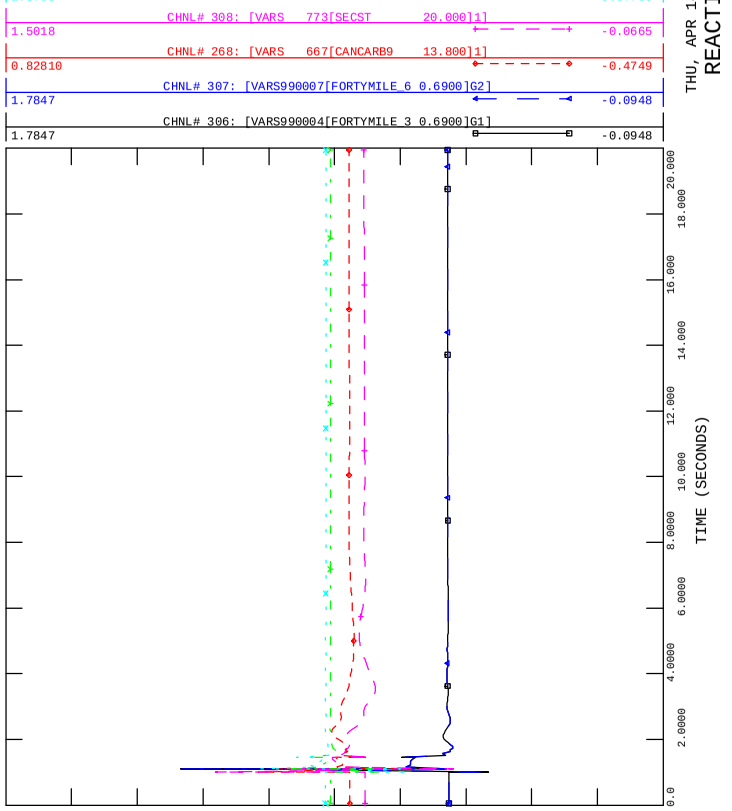


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_892L_BOWMANTON

FILE: scn7_SP_892L_Bowmanton.out

THU, APR 14 2022 19:43

REACTIVE POWER

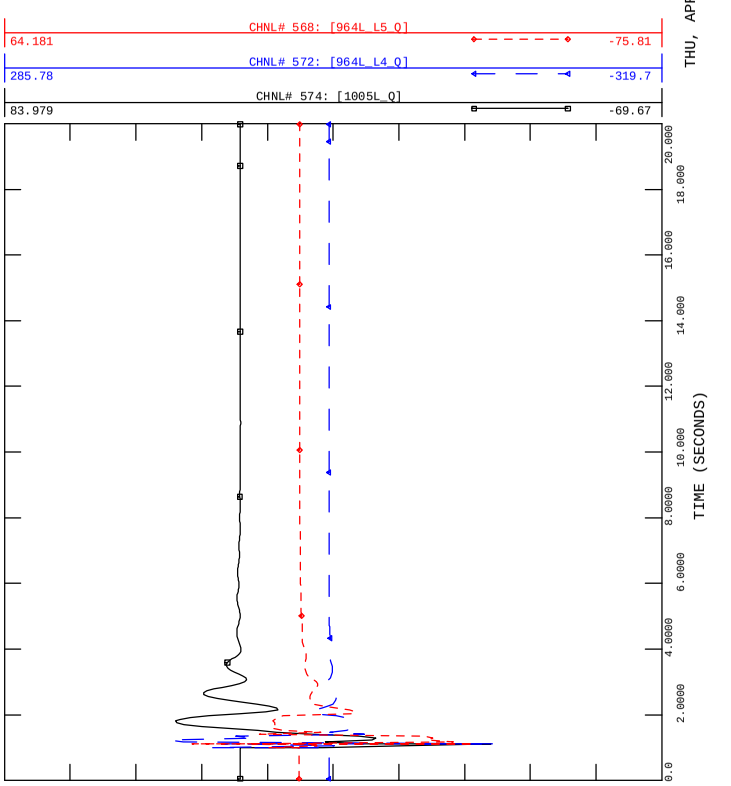


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_880L_BULLSHEAD

FILE: scn7_SP_880L_Bullshead.out

THU, APR 14 2022 19:43

BRANCH Q

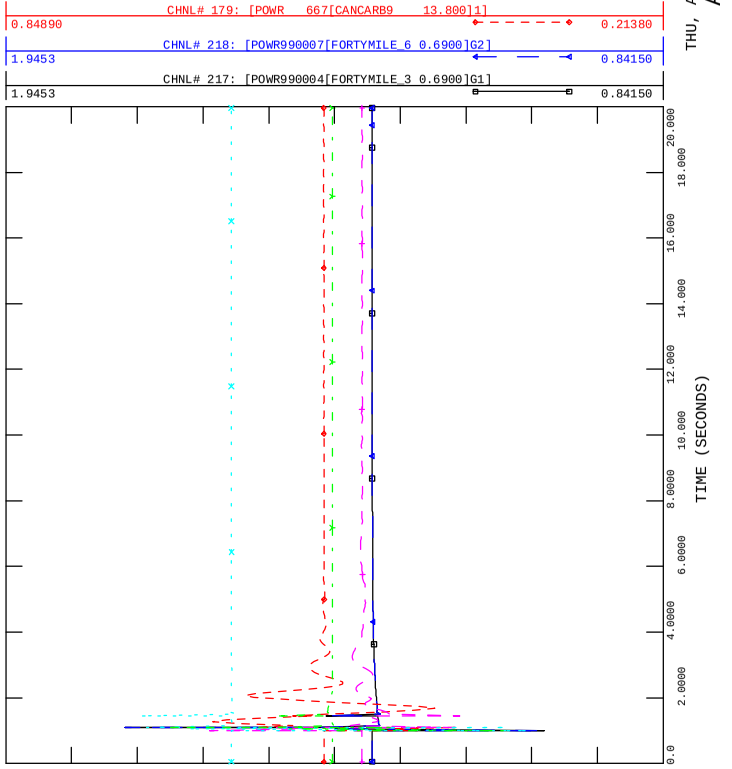


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_892L_BOWMANTON

FILE: scn7_SP_892L_Bowmanton.out

THU, APR 14 2022 19:43

ACTIVE POWER



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_892L_BOWMANTON

FILE: scn7_SP_892L_Bowmanton.out

THU, APR 14 2022 19:43

BUS VOLTAGE

CHNL# 554: [VOLT 976 [ROTBAUR 138.00]]
1.1730 0.76710

CHNL# 549: [VOLT 320 [CHAPPIC7 138.00]]
1.1547 -0.0837

CHNL# 552: [VOLT 662 [WHITLA1 240.00]]
1.2390 0.67630

CHNL# 551: [VOLT 659 [BOWMAN2 138.00]]
1.1908 0.73010

CHNL# 553: [VOLT 669 [BOWMAN1 240.00]]
1.1533 0.65880

TIME (SECONDS)

0.0 2.0000 4.0000 6.0000 8.0000 10.000 12.000 14.000 16.000 18.000 20.000

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_892L_BOWMANTON

FILE: scn7_SP_892L_Bowmanton.out

THU, APR 14 2022 19:43

BRANCH Q

CHNL# 576: [1035L Q]
133.78 -65.95

CHNL# 570: [1034L Q]
119.32 -72.05

CHNL# 562: [983L_L1 Q]
140.76 -201.6

CHNL# 560: [983L_L3 Q]
83.673 -98.74

CHNL# 558: [983L_L2 Q]
82.686 -129.3

CHNL# 556: [964L_L2 Q]
132.18 -71.74

TIME (SECONDS)

0.0 2.0000 4.0000 6.0000 8.0000 10.000 12.000 14.000 16.000 18.000 20.000

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_892L_BOWMANTON

FILE: scn7_SP_892L_Bowmanton.out

THU, APR 14 2022 19:43

TERMINAL VOLTAGE

CHNL# 476: [ETRM 61994[GRANLEA6 0.6900]G1]
1.2686 0.71330

CHNL# 473: [ETRM 60990[SHAMROC5 0.6500]G1]
1.2412 0.68220

CHNL# 486: [ETRM 773[SECST 20.000]1]
1.1485 0.91930

CHNL# 446: [ETRM 667[CANCARB9 13.800]1]
1.1539 0.85870

CHNL# 485: [ETRM990007[FORTYMILE_6 0.6900]G2]
1.2304 0.71640

CHNL# 484: [ETRM990004[FORTYMILE_3 0.6900]G1]
1.2304 0.71640

TIME (SECONDS)

0.0 2.0000 4.0000 6.0000 8.0000 10.000 12.000 14.000 16.000 18.000 20.000

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_892L_BOWMANTON

FILE: scn7_SP_892L_Bowmanton.out

THU, APR 14 2022 19:43

BRANCH P

CHNL# 575: [1035L P]
713.21 323.09

CHNL# 569: [1034L P]
686.33 307.99

CHNL# 561: [983L_L1 P]
-319.9 -673.5

CHNL# 559: [983L_L3 P]
-189.8 -479.7

CHNL# 557: [983L_L2 P]
-189.6 -479.3

CHNL# 555: [964L_L2 P]
250.75 106.09

TIME (SECONDS)

0.0 2.0000 4.0000 6.0000 8.0000 10.000 12.000 14.000 16.000 18.000 20.000

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_892L_BOWMANTON

FILE: scn7_SP_892L_Bowmanton.out

THU, APR 14 2022 19:43 BRANCH Q

CHNL# 568: [964L_L5_Q] 56.609 -73.38
CHNL# 572: [964L_L4_Q] 161.41 -126.5
CHNL# 574: [1005L_Q] 74.627 -81.00

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_892L_SUFFIELD

FILE: scn7_SP_892L_Suffield.out

THU, APR 14 2022 19:43 ACTIVE POWER

CHNL# 209: [POWR 61994[GRANLEA6 0.6900]G1] 1.2918 0.59200
CHNL# 206: [POWR 60990[SHAMROC5 0.6500]G1] 2.3871 1.2599
CHNL# 219: [POWR 773[SECST 20.000]1] 3.3298 2.6847
CHNL# 179: [POWR 667[CANCARB9 13.800]1] 0.86400 0.20200
CHNL# 218: [POWR990007[FORTYMILE_6 0.6900]G2] 1.6905 0.85160
CHNL# 217: [POWR990004[FORTYMILE 3 0.6900]G1] 1.6905 0.85160

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_892L_BOWMANTON

FILE: scn7_SP_892L_Bowmanton.out

THU, APR 14 2022 19:43 BRANCH P

CHNL# 567: [964L_L5_P] 42.822 -76.80
CHNL# 571: [964L_L4_P] -254.6 -603.8
CHNL# 573: [1005L_P] -204.5 -345.2

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_892L_SUFFIELD

FILE: scn7_SP_892L_Suffield.out

THU, APR 14 2022 19:43 ROTOR ANGLE

CHNL# 43: [ANGL 775[SECCT2 21.000]3] 57.389 -45.03
CHNL# 42: [ANGL 774[SECCT1 21.000]2] 57.389 -45.03
CHNL# 41: [ANGL 773[SECST 20.000]1] 59.366 -42.81
CHNL# 1: [ANGL 667[CANCARB9 13.800]1] 121.60 3.3588

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_892L_SUFFIELD

FILE: scn7_SP_892L_Suffield.out

THU, APR 14 2022 19:43

TERMINAL VOLTAGE

CHNL# 476: [ETRM 61994[GRANLEA6 0.6900]G1] 1.2163 0.57670
CHNL# 473: [ETRM 60990[SHAMROC5 0.6500]G1] 1.1883 0.54640
CHNL# 486: [ETRM 773[SECST 20.000]1] 1.1451 0.92020
CHNL# 446: [ETRM 667[CANCARB9 13.800]1] 1.1536 0.83630
CHNL# 485: [ETRM990007[FORTYMILE_6 0.6900]G2] 1.1880 0.68750
CHNL# 484: [ETRM990004[FORTYMILE_3 0.6900]G1] 1.1880 0.68750

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_892L_SUFFIELD

FILE: scn7_SP_892L_Suffield.out

THU, APR 14 2022 19:43

BRANCH P

CHNL# 575: [1035L_P] 685.66 306.22
CHNL# 569: [1034L_P] 656.83 293.62
CHNL# 561: [983L_L1_P] -277.5 -649.2
CHNL# 559: [983L_L3_P] -209.6 -429.0
CHNL# 557: [983L_L2_P] -209.4 -428.7
CHNL# 555: [964L_L2_P] 252.77 71.518

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_892L_SUFFIELD

FILE: scn7_SP_892L_Suffield.out

THU, APR 14 2022 19:43

REACTIVE POWER

CHNL# 298: [VARS 61994[GRANLEA6 0.6900]G1] 0.98250 -0.2298
CHNL# 295: [VARS 60990[SHAMROC5 0.6500]G1] 1.3242 -0.0418
CHNL# 308: [VARS 773[SECST 20.000]1] 1.4858 0.05140
CHNL# 268: [VARS 667[CANCARB9 13.800]1] 0.85060 -0.4180
CHNL# 307: [VARS990007[FORTYMILE_6 0.6900]G2] 1.4714 -0.0909
CHNL# 306: [VARS990004[FORTYMILE_3 0.6900]G1] 1.4714 -0.0909

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_892L_SUFFIELD

FILE: scn7_SP_892L_Suffield.out

THU, APR 14 2022 19:43

BUS VOLTAGE

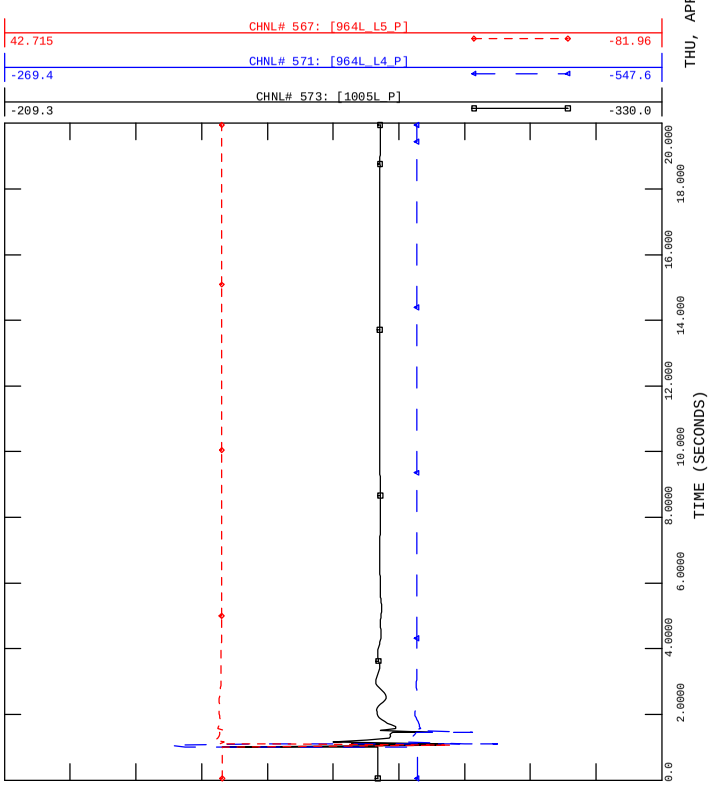
CHNL# 554: [VOLT 976 [ROTBAUR 138.00]] 1.1454 0.71790
CHNL# 549: [VOLT 320 [CHAPPIC7 138.00]] 1.1438 0.39370
CHNL# 552: [VOLT 662 [WHITLA1 240.00]] 1.1900 0.55640
CHNL# 551: [VOLT 659 [BOWMAN2 138.00]] 1.1549 0.66970
CHNL# 553: [VOLT 669 [BOWMAN1 240.00]] 1.1163 0.59260

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_892L_SUFFIELD

FILE: scn7_SP_892L_Suffield.out

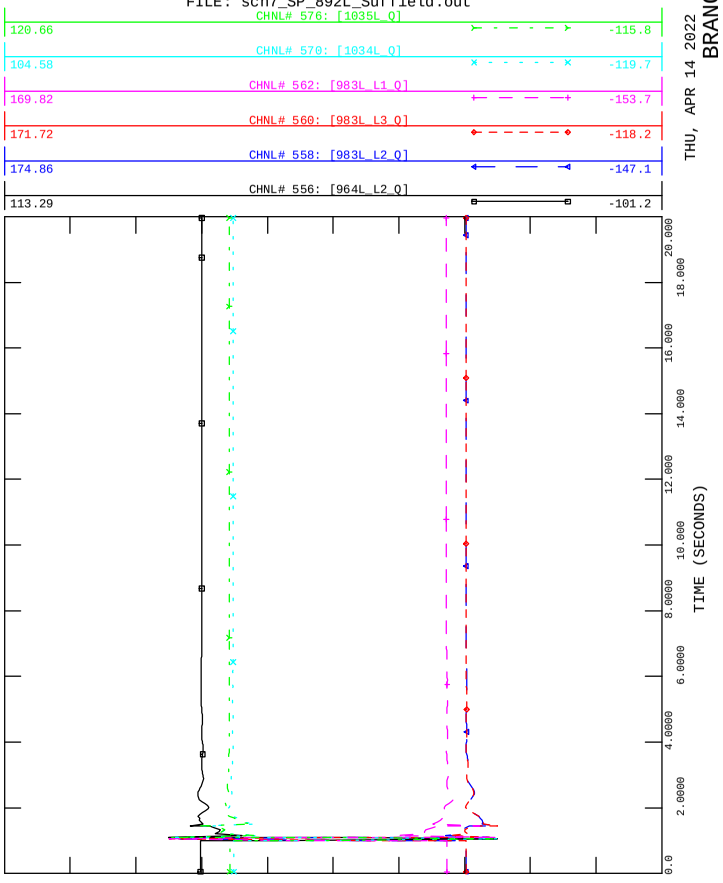
THU, APR 14 2022 19:43 BRANCH P



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_892L_SUFFIELD

FILE: scn7_SP_892L_Suffield.out

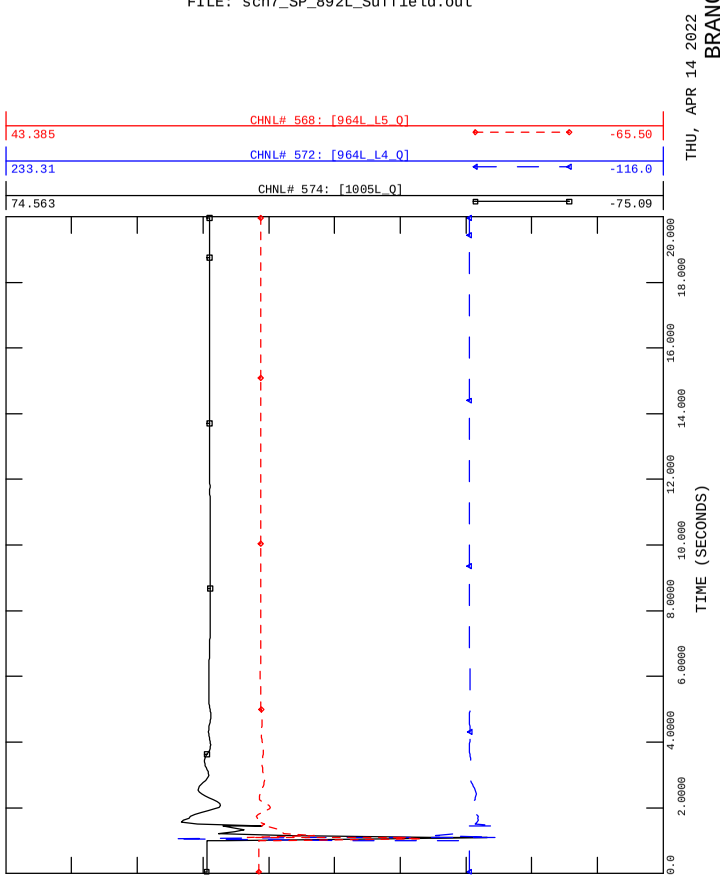
THU, APR 14 2022 19:43 BRANCH Q



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_892L_SUFFIELD

FILE: scn7_SP_892L_Suffield.out

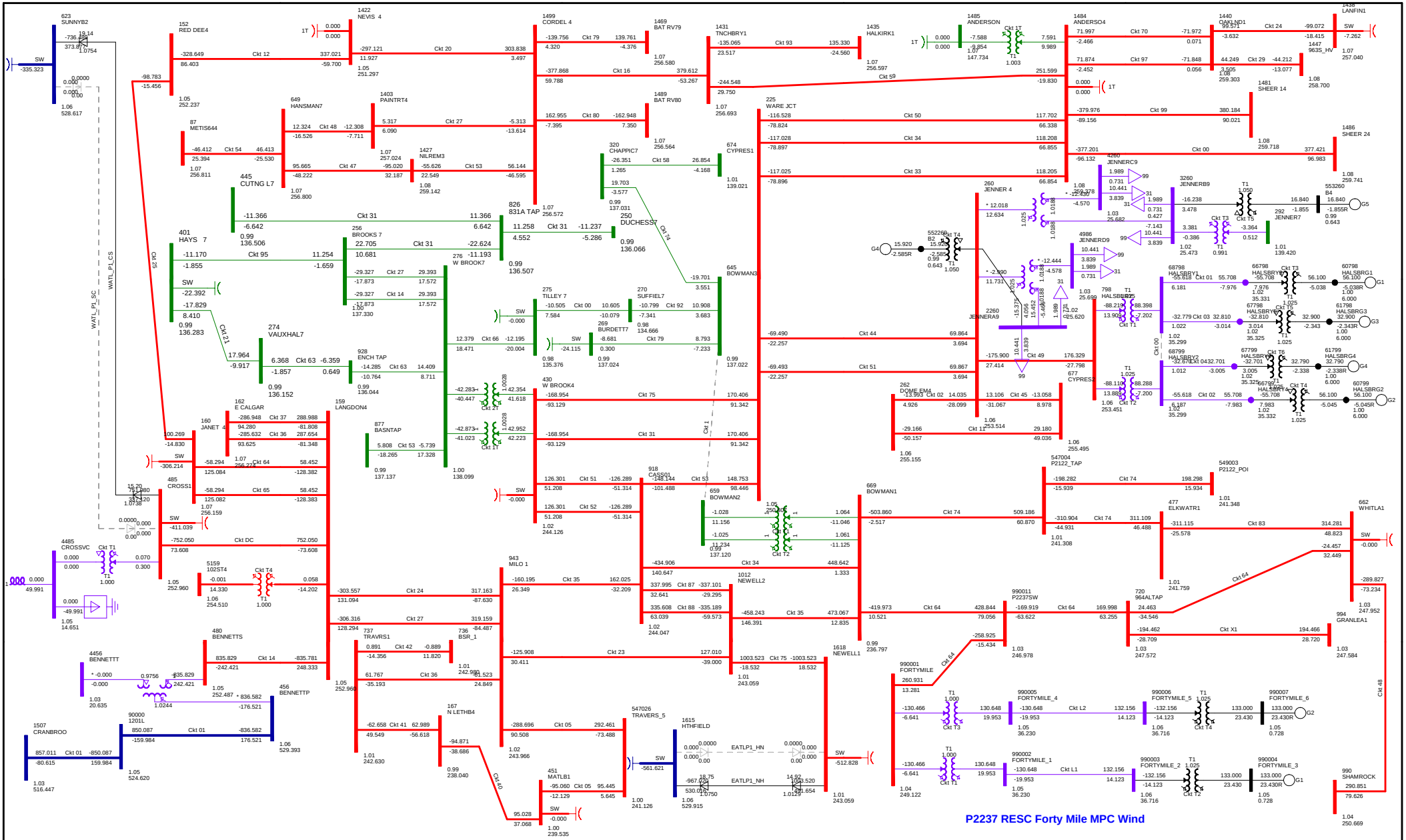
THU, APR 14 2022 19:43 BRANCH Q



Attachment A5
Dynamic Data and Assumptions

```
@ Stage 3 Project Data Update Package
@ ====================================
@! Project 2237 RESC 40 Mile Wind
@!
@!
@!
@
60608 'USRMDL' G1 'REGCAU1' 101 1 1 14 3 4 1 0.0036 10 0.2 0.1 0.9 0 0.001 0 -999999 0.005 0 10000000 -10000000 1 / G1 -
Generator/Converter
60608 'USRMDL' G1 'REECAU1' 102 0 6 45 6 9 0 0 0 1 1 0 0.9 1.12 0.001 9999 9999 0 9999 -9999 1 0 9999 9999 0.001 0.5328 -0.3935 1.5
0.7 9999 9999 2 0 1 9999 0.3767 -0.3767 1 0 1.5 0.001 0.75 0.9444 0.85 0.5667 1 0.5667 1.195 0.4496 0.1 0 0.2 0.9 0.85 1.318 1.7
1.318 / G1 - Electrical Control
60608 'USRMDL' G1 'WTDTAU1' 103 0 0 5 4 3 6.06089 37.1395 0.851785 1.428 1 / G1 - Drive Train
60608 'USRMDL' G1 'REPCAU1' 107 0 7 27 7 9 0 0 0 0 0 1 1 0.04 0 0.726 0 0.02 0.9 0 0 0.15152 1 -1 0 0 0.2 -0.2 0 0.6 0.1 -0.005 0
0.6667 -0.6667 1 0.1 0.02 25 0 / G1 - Plant Control
61608 'USRMDL' G2 'REGCAU1' 101 1 1 14 3 4 1 0.0036 10 0.2 0.1 0.9 0 0.001 0 -999999 0.005 0 10000000 -10000000 1 / G2 -
Generator/Converter
61608 'USRMDL' G2 'REECAU1' 102 0 6 45 6 9 0 0 0 1 1 0 0.9 1.12 0.001 9999 9999 0 9999 -9999 1 0 9999 9999 0.001 0.5328 -0.3935 1.5
0.7 9999 9999 2 0 1 9999 0.3767 -0.3767 1 0 1.5 0.001 0.75 0.9444 0.85 0.5667 1 0.5667 1.195 0.4496 0.1 0 0.2 0.9 0.85 1.318 1.7
1.318 / G2 - Electrical Control
61608 'USRMDL' G2 'WTDTAU1' 103 0 0 5 4 3 6.06089 37.1395 0.851785 1.428 1 / G2 - Drive Train
61608 'USRMDL' G2 'REPCAU1' 107 0 7 27 7 9 0 0 0 0 0 1 1 0.04 0 0.726 0 0.02 0.9 0 0 0.15152 1 -1 0 0 0.2 -0.2 0 0.6 0.1 -0.005 0
0.6667 -0.6667 1 0.1 0.02 25 0 / G1 - Plant Control
/
```

Attachment A6
Post-Mitigation Power Flow Diagrams



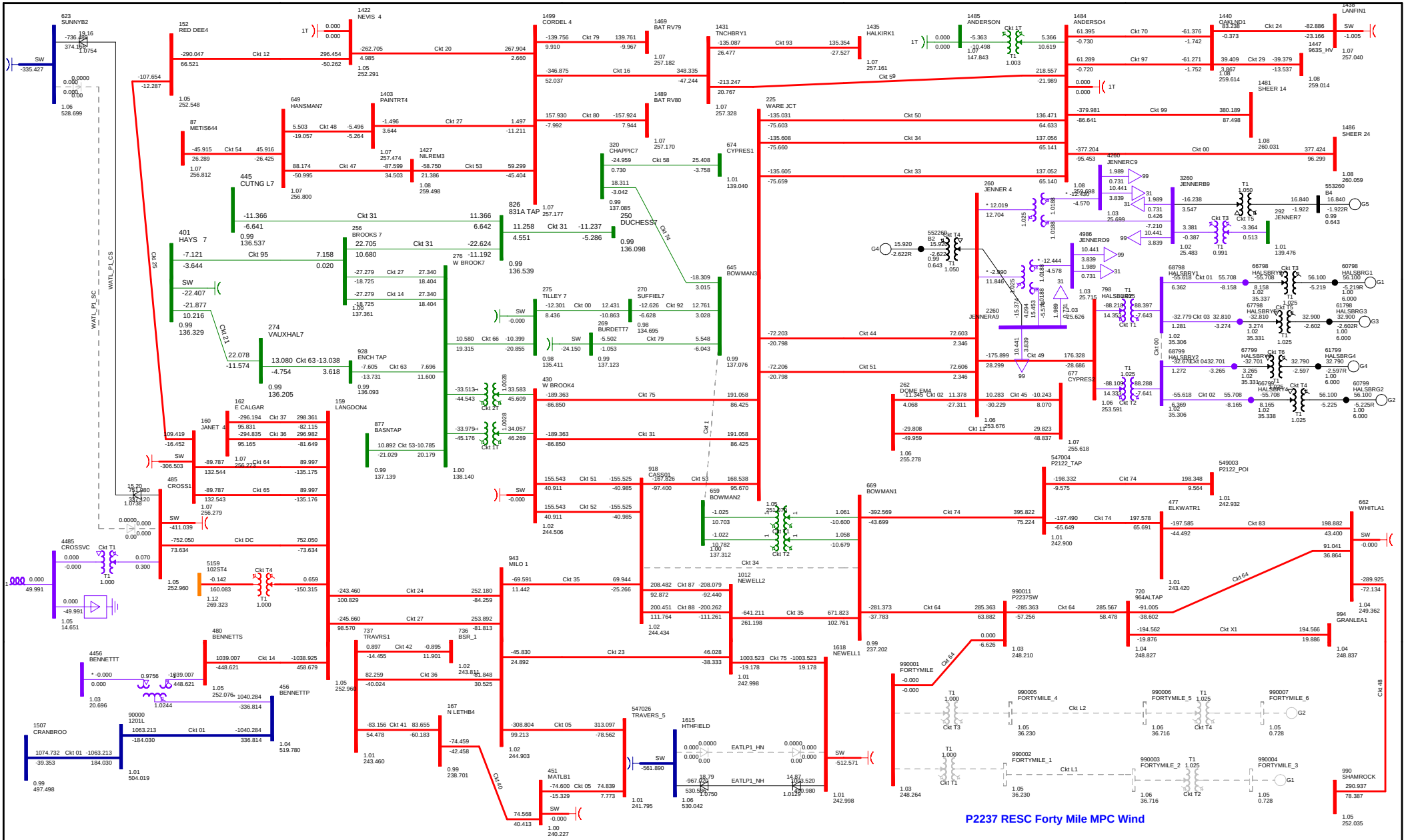
P2237 RESC Forty Mile MPC Wind

BC Import:-824.587 MW Sask Import:150.000 MW MATL Import:0.000 MW

MH Export: 18.269 MW

FIGURE A6-1-1-N-0: NORMAL OPERATION
2022 SUMMER PEAK - SCN 3 (POST-CONNECTION)
PRINTED ON THURSDAY 14. APRIL 2022

Bus - Voltage (kV/pu)
Branch - MW/Mvar
Equipment - MW/Mvar
100.0 %Base A
1.100 kV 0.900 kV
kV: <=10.000 <=69.000 <=138.000 <=240.000 <=500.000 >500.000

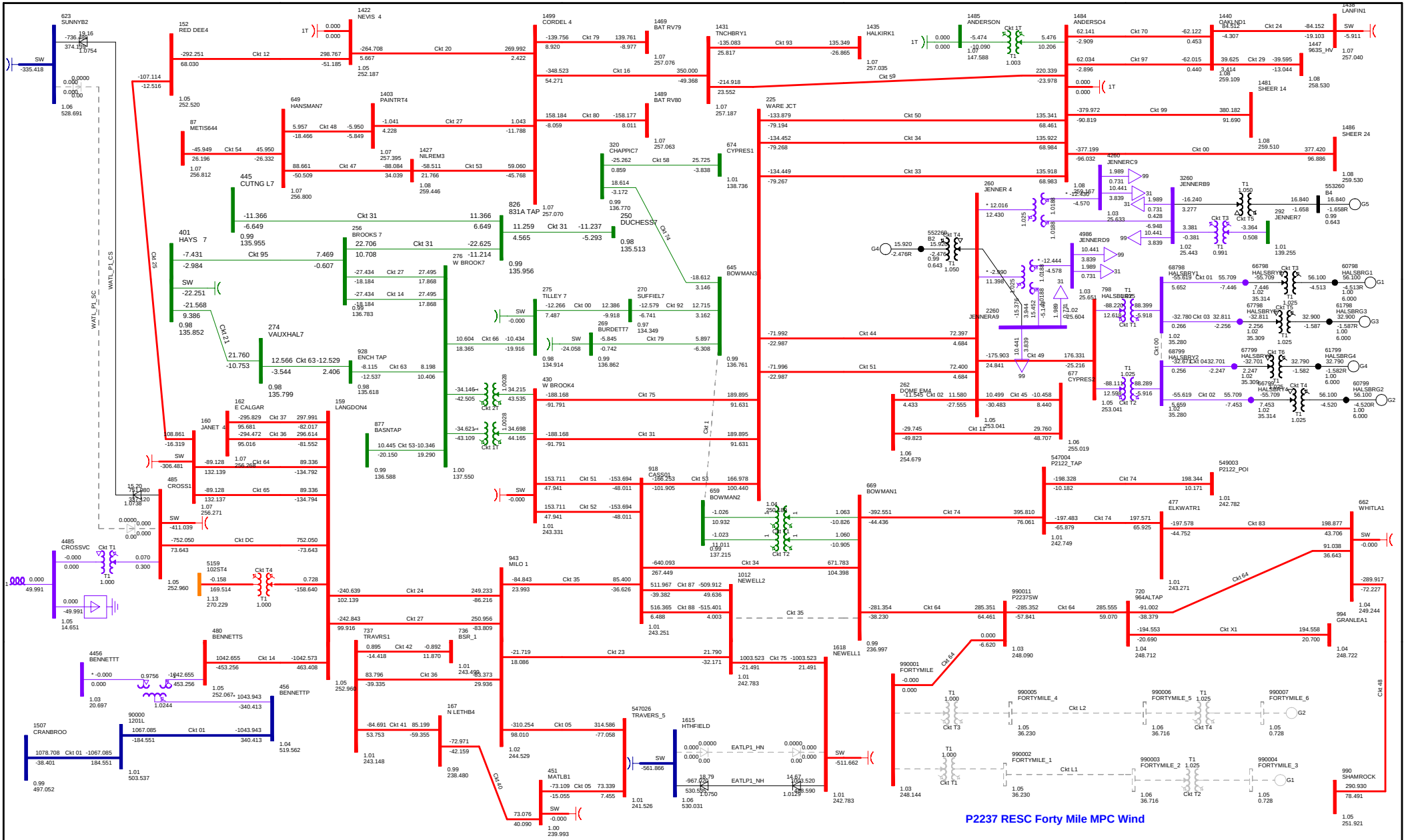


P2237 RESC Forty Mile MPC Wind

BC Import:-1055.816 MW Sask Import:150.000 MW MATL Import:0.000 MW

MH Export: 18.274 MW

FIGURE A6-1-2 N-1: 1034L (BOWMANTON 244S TO CASSILS 324S)
2022 SUMMER PEAK - SCN 3 (POST-CONNECTION)
PRINTED ON THURSDAY 14. APRIL 2022

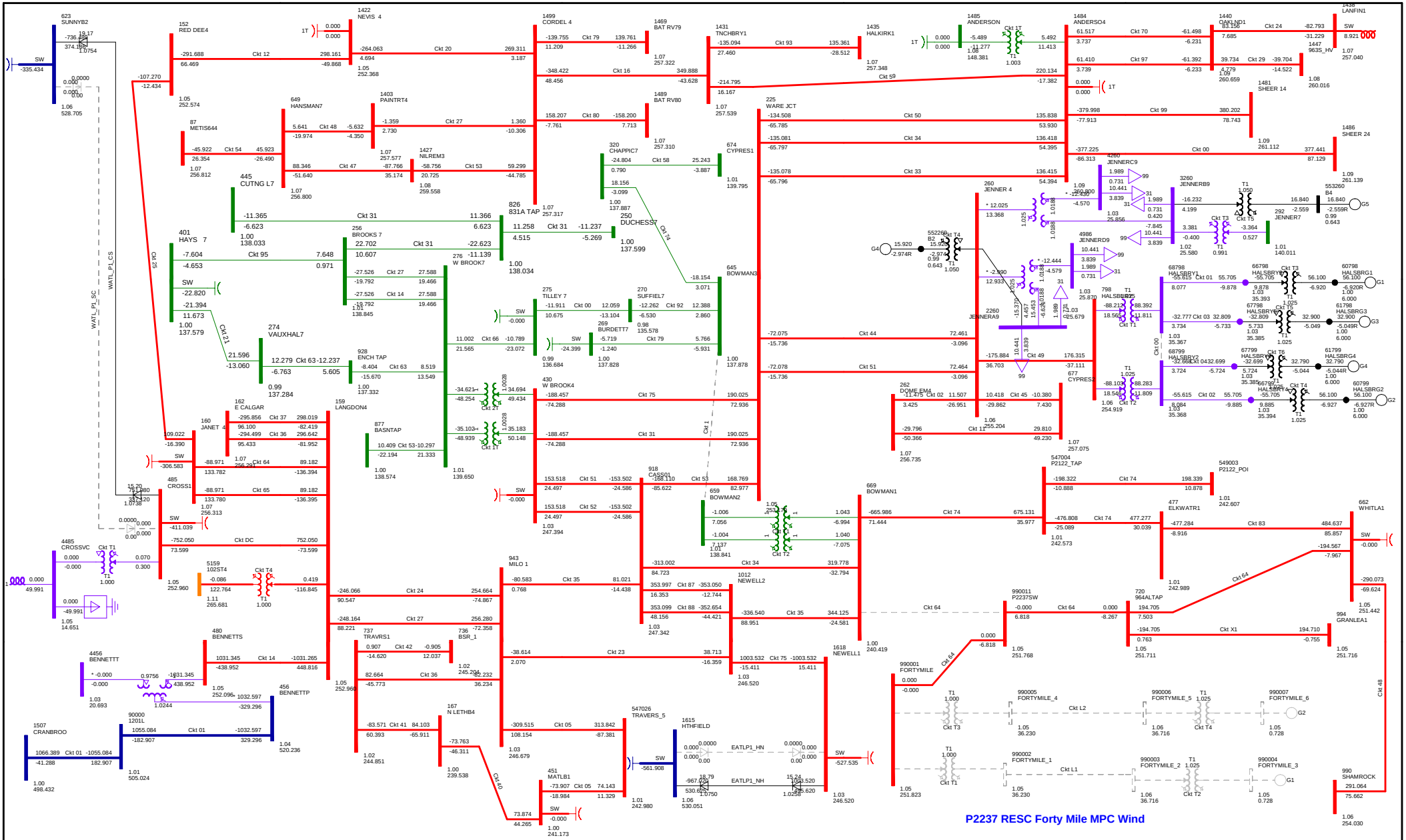


P2237 RESC Forty Mile MPC Wind

BC Import:-1059.944 MW Sask Import:150.000 MW MATL Import:0.000 MW

MH Export: 18.271 MW

FIGURE A6-1-3 N-1: 1035L (BOWMANTON 244S TO NEWELL 2075S)
2022 SUMMER PEAK - SCN 3 (POST-CONNECTION)
PRINTED ON THURSDAY 14. APRIL 2022

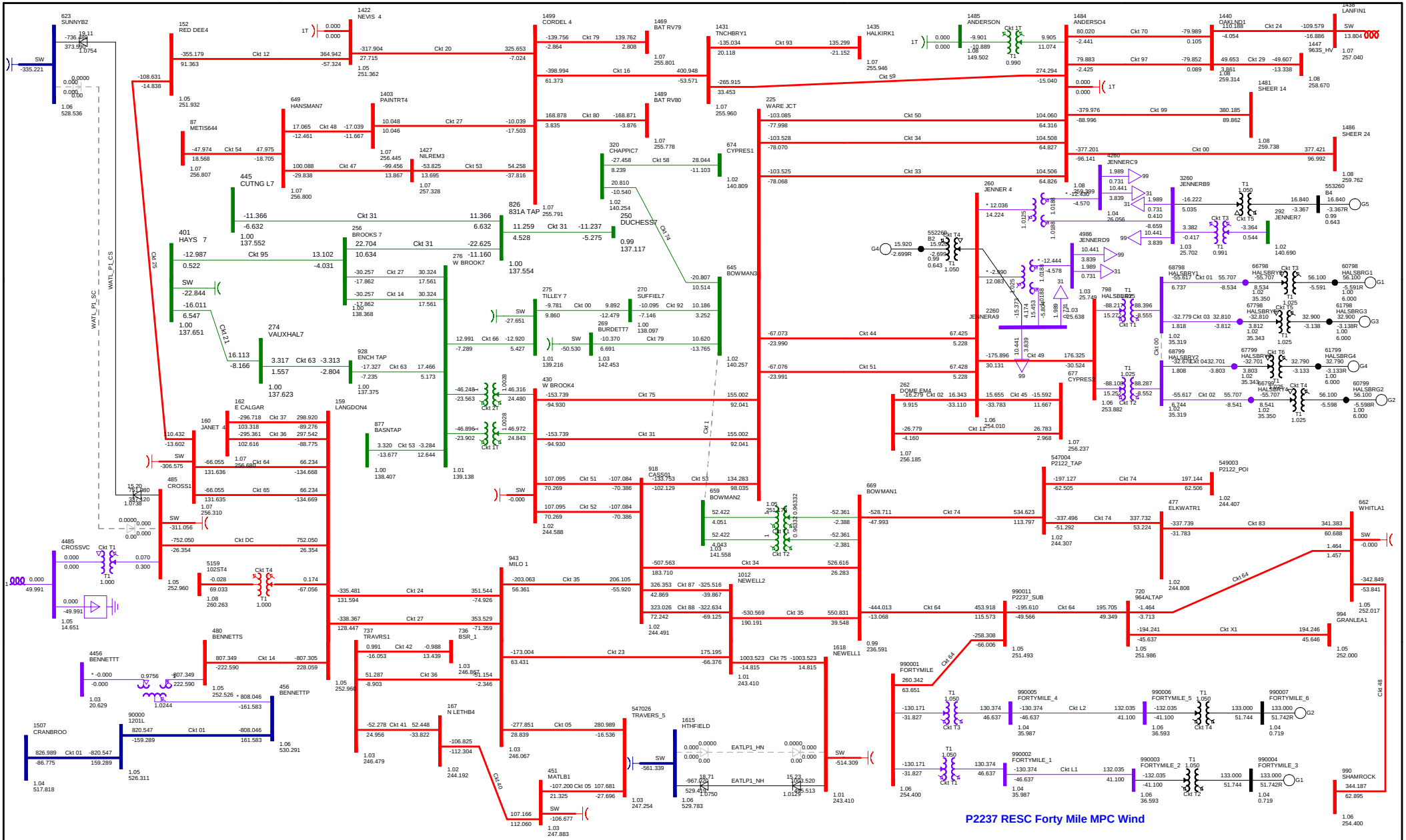


P2237 RESC Forty Mile MPC Wind

BC Import:-1047.222 MW Sask Import:150.000 MW MATL Import:0.000 MW

MH Export: 18.309 MW

FIGURE A6-1-4 N-1: 964L (BOWMANTON 244S TO P2237 SUB)
2022 SUMMER PEAK - SCN 3 (POST-CONNECTION)
PRINTED ON THURSDAY 14. APRIL 2022

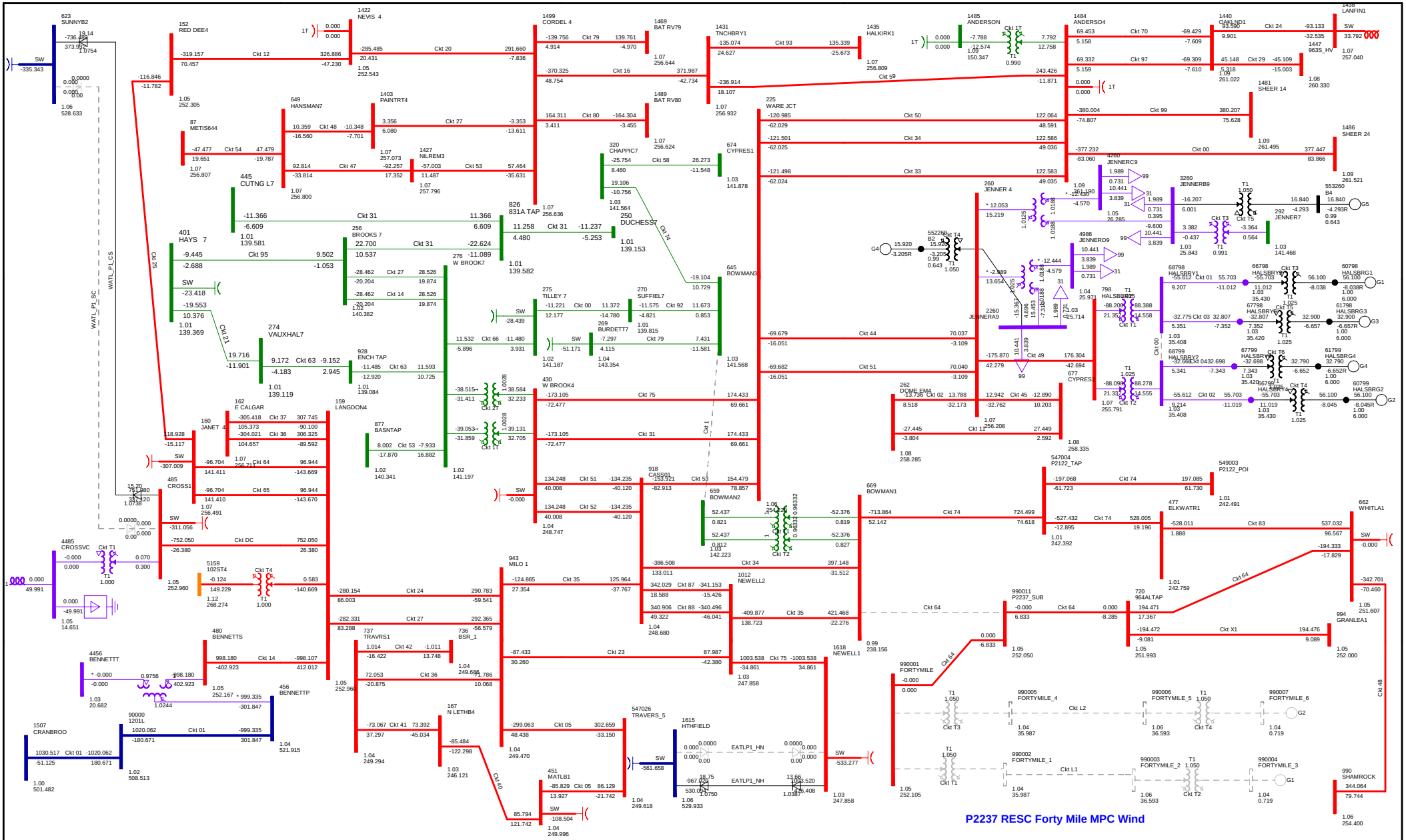


P2237 RESC Forty Mile MPC Wind

BC Import:-794.006 MW Sask Import:150.000 MW MATL Import:0.000 MW

MH Export: 18.350 MW

FIGURE A6-3-1-N-0: NORMAL OPERATION
2022 SUMMER PEAK - SENSITIVITY 1 (POST-CONNECTION)
PRINTED ON THURSDAY 14. APRIL 2022

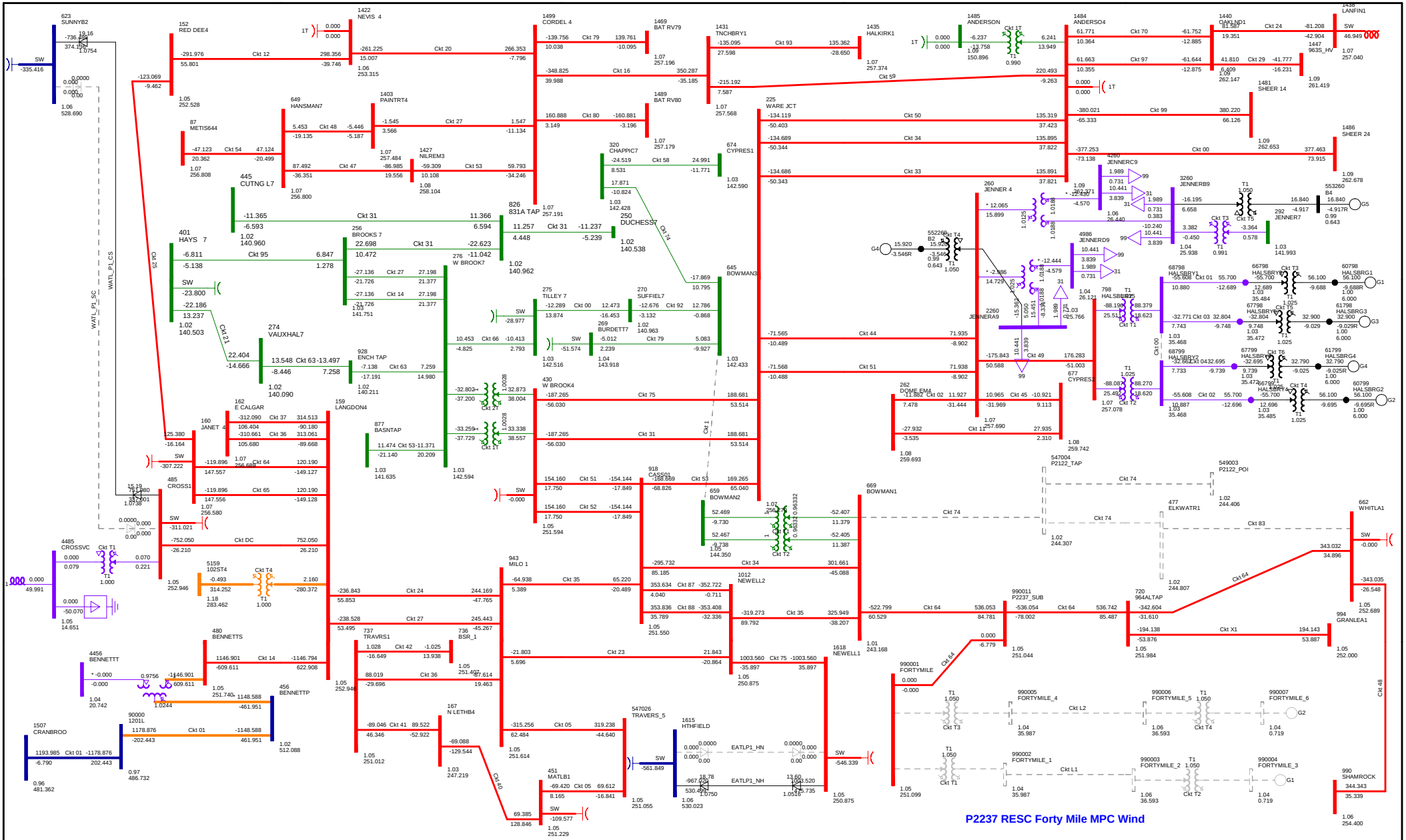


P2237 RESC Forty Mile MPC Wind

BC Import:-1010.484 MW Sask Import:150.000 MW MATL Import:0.000 MW

MH Export: 18.358 MW

FIGURE A6-3-2 N-1: 964L (BOWMANTON 244S TO P2237 SUB)
2022 SUMMER PEAK - SENSITIVITY 1 (POST-CONNECTION)
PRINTED ON THURSDAY 14. APRIL 2022

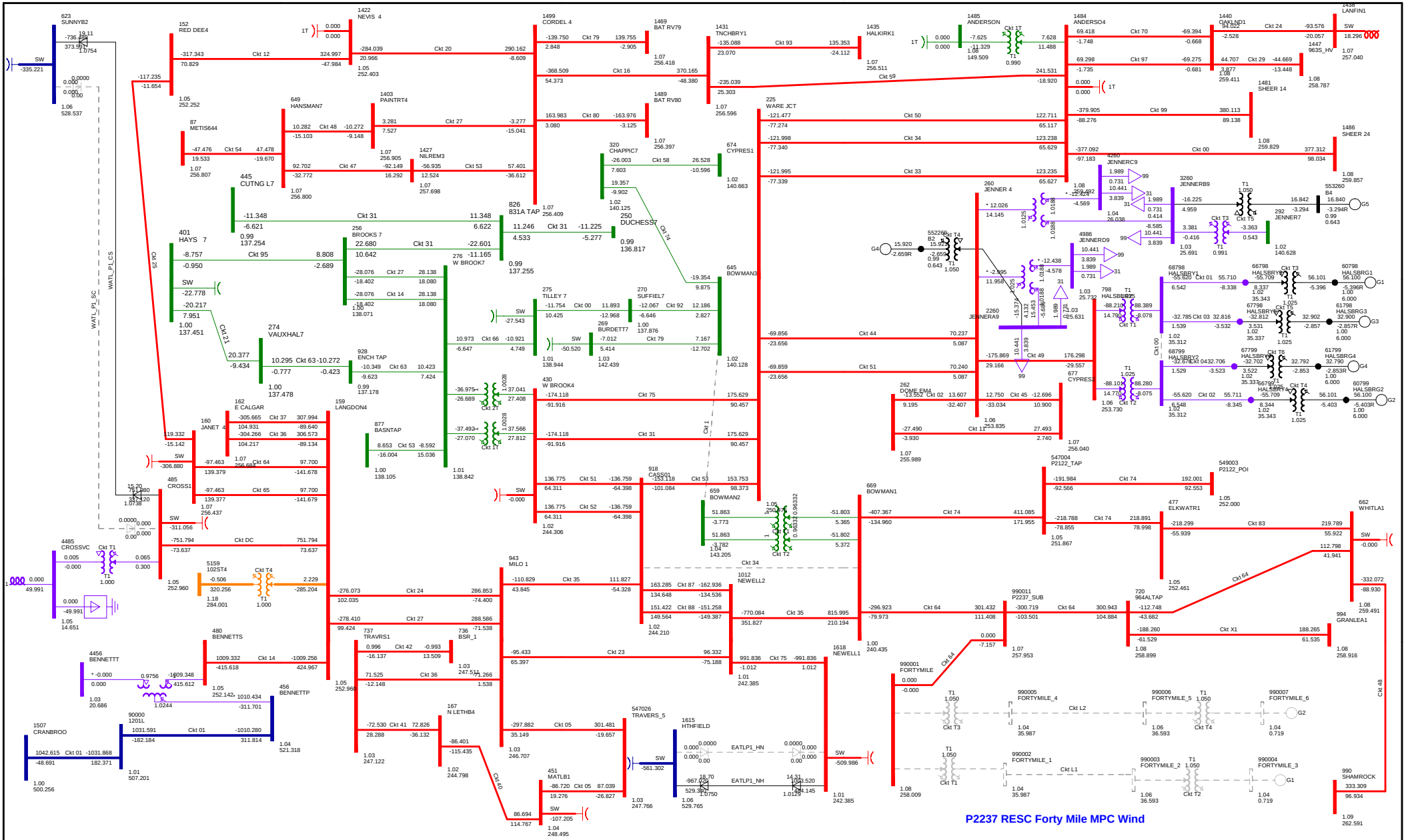


P2237 RESC Forty Mile MPC Wind

BC Import:-1180.154 MW Sask Import:150.000 MW MATL Import:-0.000 MW

MH Export: 18.377 MW

FIGURE A6-3-3 N-1: 983L (ELKWATER 264S TO WHITLA 251S)
2022 SUMMER PEAK - SENSITIVITY 1 (POST-CONNECTION)
PRINTED ON THURSDAY 14. APRIL 2022

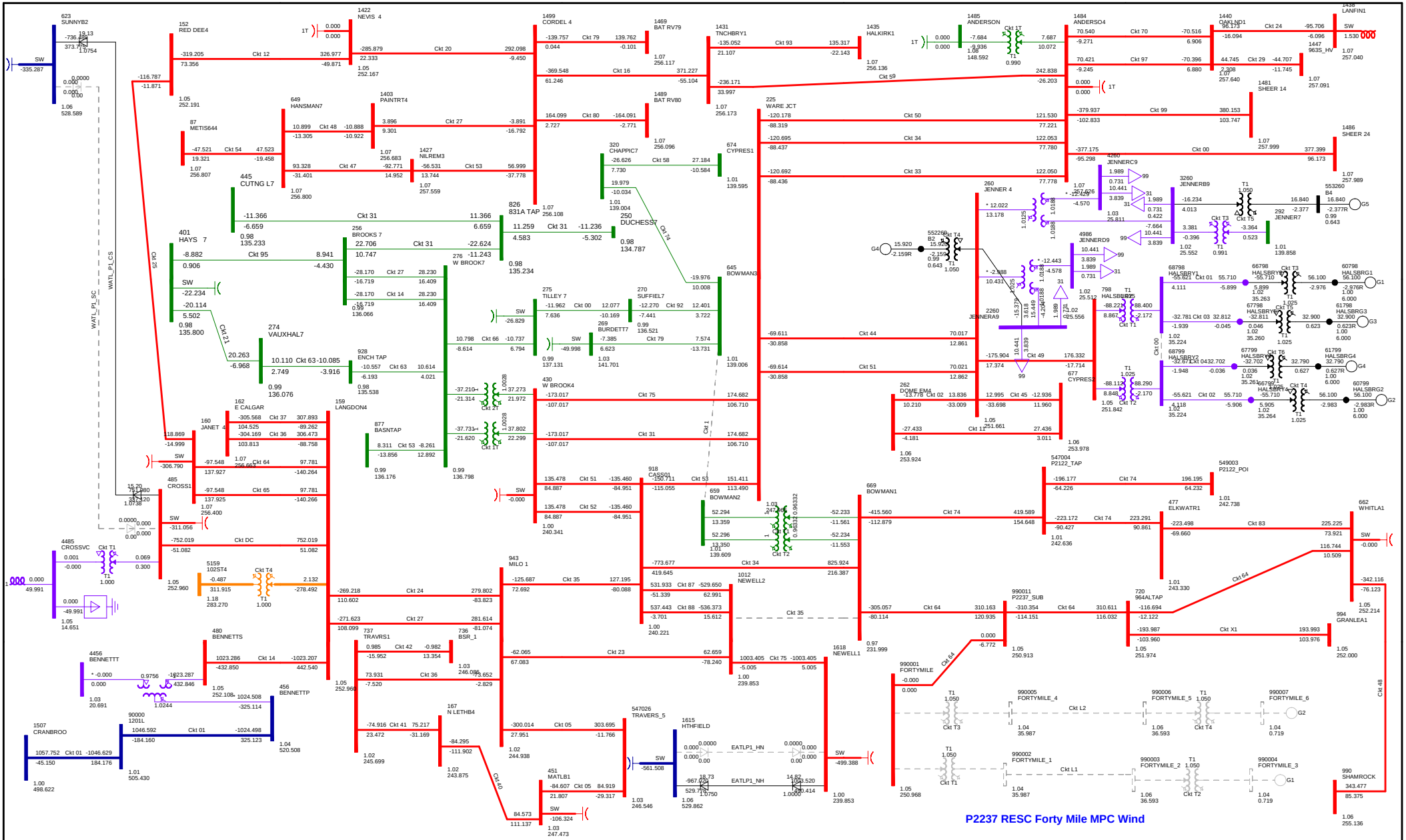


P2237 RESC Forty Mile MPC Wind

BC Import:-1022.687 MW Sask Import:149.949 MW MATL Import:0.000 MW

MH Export: 18.662 MW

FIGURE A6-3-4 N-1: 1034L (BOWMANTON 244S TO CASSILS 324S)
2022 SUMMER PEAK - SENSITIVITY 1 (POST-CONNECTION)
PRINTED ON THURSDAY 14. APRIL 2022



P2237 RESC Forty Mile MPC Wind

BC Import:-1038.600 MW Sask Import:149.995 MW MATL Import:-0.000 MW

MH Export: 18.354 MW

FIGURE A6-3-5 N-1: 1035L (BOWMANTON 244S TO NEWELL 2075S)
2022 SUMMER PEAK - SENSITIVITY 1 (POST-CONNECTION)
PRINTED ON THURSDAY 14. APRIL 2022

Attachment A7
Post-Mitigation Transient Stability Diagrams

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_964LY_BOWMANTON

FILE: scn3_SP_964LY_Bowmanton.out

THU, APR 14 2022 19:12 ACTIVE POWER

CHNL# 201: [POWR 61994[GRANLEA6 0.6900]G1]
1.4986 -0.0870
CHNL# 198: [POWR 60990[SHAMROC5 0.6500]G1]
2.4104 0.23570
CHNL# 207: [POWR 773[SECST 20.000]1]
3.5089 2.7142
CHNL# 171: [POWR 667[CANCARB9 13.800]1]
1.0951 0.06850
CHNL# 206: [POWR990007[FORTYMILE_6 0.6900]G2]
1.5300 -0.2000
CHNL# 205: [POWR990004[FORTYMILE_3 0.6900]G1]
1.5300 -0.2000

TIME (SECONDS)
0.0 2.0000 4.0000 6.0000 8.0000 10.000 12.000 14.000 16.000 18.000 20.000

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_964LY_BOWMANTON

FILE: scn3_SP_964LY_Bowmanton.out

THU, APR 14 2022 19:12 TERMINAL VOLTAGE

CHNL# 456: [ETRM 61994[GRANLEA6 0.6900]G1]
1.7900 0.02020
CHNL# 453: [ETRM 60990[SHAMROC5 0.6500]G1]
1.7736 0.20840
CHNL# 462: [ETRM 773[SECST 20.000]1]
1.1578 0.89000
CHNL# 426: [ETRM 667[CANCARB9 13.800]1]
1.1697 0.56140
CHNL# 461: [ETRM990007[FORTYMILE_6 0.6900]G2]
1.1550 -0.1000
CHNL# 460: [ETRM990004[FORTYMILE_3 0.6900]G1]
1.1550 -0.1000

TIME (SECONDS)
0.0 2.0000 4.0000 6.0000 8.0000 10.000 12.000 14.000 16.000 18.000 20.000

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_964LY_BOWMANTON

FILE: scn3_SP_964LY_Bowmanton.out

THU, APR 14 2022 19:12 ROTOR ANGLE

CHNL# 39: [ANGL 775[SECCT2 21.000]3]
55.802 -48.77
CHNL# 38: [ANGL 774[SECCT1 21.000]2]
55.802 -48.77
CHNL# 37: [ANGL 773[SECST 20.000]1]
57.610 -46.29
CHNL# 1: [ANGL 667[CANCARB9 13.800]1]
105.07 -32.74

TIME (SECONDS)
0.0 2.0000 4.0000 6.0000 8.0000 10.000 12.000 14.000 16.000 18.000 20.000

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_964LY_BOWMANTON

FILE: scn3_SP_964LY_Bowmanton.out

THU, APR 14 2022 19:12 REACTIVE POWER

CHNL# 286: [VARS 61994[GRANLEA6 0.6900]G1]
2.1217 -0.6567
CHNL# 283: [VARS 60990[SHAMROC5 0.6500]G1]
4.3256 -1.076
CHNL# 292: [VARS 773[SECST 20.000]1]
2.1496 -0.4622
CHNL# 256: [VARS 667[CANCARB9 13.800]1]
1.3241 -0.5998
CHNL# 291: [VARS990007[FORTYMILE_6 0.6900]G2]
0.73430 -0.5000
CHNL# 290: [VARS990004[FORTYMILE_3 0.6900]G1]
0.73430 -0.5000

TIME (SECONDS)
0.0 2.0000 4.0000 6.0000 8.0000 10.000 12.000 14.000 16.000 18.000 20.000

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_964LY_BOWMANTON

FILE: scn3_SP_964LY_Bowmanton.out

THU, APR 14 2022 19:12 BRANCH P

CHNL# 551: [1035L_P]
709.27 -235.5
CHNL# 545: [1034L_P]
672.76 -223.7
CHNL# 537: [983L_L1_P]
339.20 -1019.
CHNL# 535: [983L_L3_P]
286.38 -827.9
CHNL# 533: [983L_L2_P]
286.02 -826.7
CHNL# 531: [964L_L2_P]
254.99 -84.98

TIME (SECONDS)
0.0 2.0000 4.0000 6.0000 8.0000 10.000 12.000 14.000 16.000 18.000 20.000

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_964LY_BOWMANTON

FILE: scn3_SP_964LY_Bowmanton.out

THU, APR 14 2022 19:12 BRANCH P

CHNL# 543: [964L_L5_P]
132.97 -380.0
CHNL# 547: [964L_L4_P]
209.99 -630.0
CHNL# 549: [1005L_P]
-125.1 -517.2

TIME (SECONDS)
0.0 2.0000 4.0000 6.0000 8.0000 10.000 12.000 14.000 16.000 18.000 20.000

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_964LY_BOWMANTON

FILE: scn3_SP_964LY_Bowmanton.out

THU, APR 14 2022 19:12 BUS VOLTAGE

CHNL# 530: [VOLT 976 [ROTBAUR 138.00]]
1.1996 0.19850
CHNL# 525: [VOLT 320 [CHAPPIC7 138.00]]
1.1809 0.62300
CHNL# 528: [VOLT 662 [WHITLA1 240.00]]
1.6050 -0.0487
CHNL# 527: [VOLT 659 [BOWMAN2 138.00]]
1.2498 0.03810
CHNL# 529: [VOLT 669 [BOWMAN1 240.00]]
1.2946 -0.0891

TIME (SECONDS)
0.0 2.0000 4.0000 6.0000 8.0000 10.000 12.000 14.000 16.000 18.000 20.000

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_964LY_BOWMANTON

FILE: scn3_SP_964LY_Bowmanton.out

THU, APR 14 2022 19:12 BRANCH Q

CHNL# 552: [1035L_Q]
220.91 -346.4
CHNL# 546: [1034L_Q]
208.55 -344.3
CHNL# 538: [983L_L1_Q]
725.56 -676.1
CHNL# 536: [983L_L3_Q]
1046.4 -1113.
CHNL# 534: [983L_L2_Q]
1061.3 -1152.
CHNL# 532: [964L_L2_Q]
771.64 -325.5

TIME (SECONDS)
0.0 2.0000 4.0000 6.0000 8.0000 10.000 12.000 14.000 16.000 18.000 20.000

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_964LY_MURRAY_LAKE

FILE: scn3_SP_964LY_Murray_Lake.out

THU, APR 14 2022 19:12

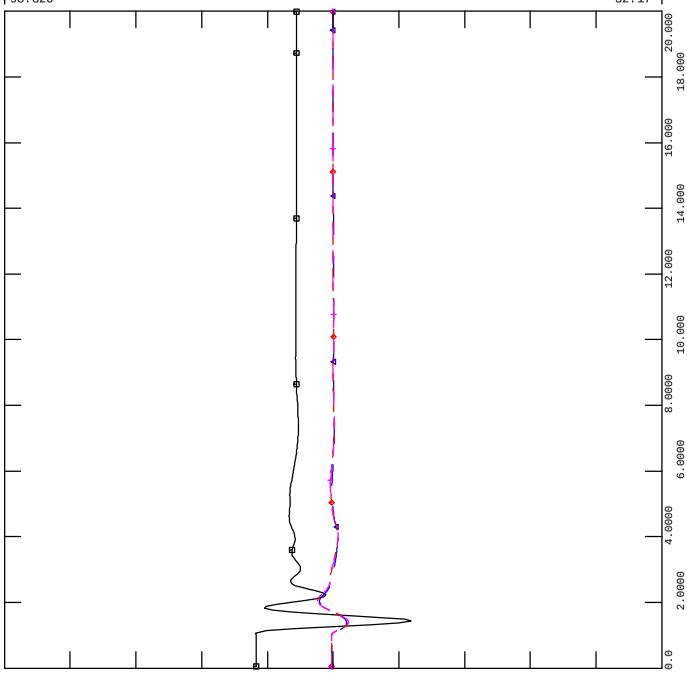
ROTOR ANGLE

CHNL# 39: [ANGL 775[SECCT2 21.000]3]
55.833 -49.05

CHNL# 38: [ANGL 774[SECCT1 21.000]2]
55.833 -49.05

CHNL# 37: [ANGL 773[SECST 20.000]1]
57.657 -46.62

CHNL# 1: [ANGL 667[CANCARB9 13.800]1]
98.826 -32.17



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_964LY_MURRAY_LAKE

FILE: scn3_SP_964LY_Murray_Lake.out

THU, APR 14 2022 19:12

REACTIVE POWER

CHNL# 286: [VARS 61994[GRANLEA6 0.6900]G1]
2.3785 -0.6912

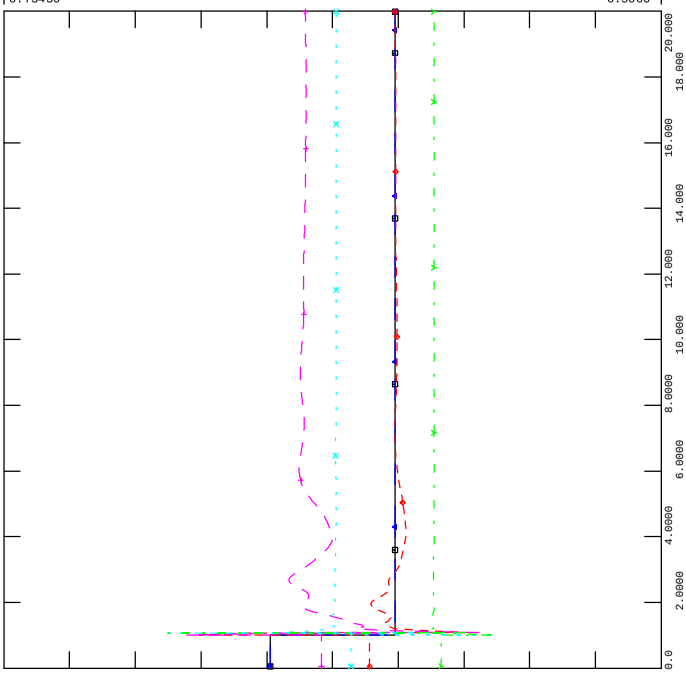
CHNL# 283: [VARS 60990[SHAMROC5 0.6500]G1]
2.7505 -0.6439

CHNL# 292: [VARS 773[SECST 20.000]1]
1.5306 -0.2703

CHNL# 256: [VARS 667[CANCARB9 13.800]1]
1.1477 -0.5361

CHNL# 291: [VARS990007[FORTYMILE_6 0.6900]G2]
0.73430 -0.5000

CHNL# 290: [VARS990004[FORTYMILE 3 0.6900]G1]
0.73430 -0.5000



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_964LY_BOWMANTON

FILE: scn3_SP_964LY_Bowmanton.out

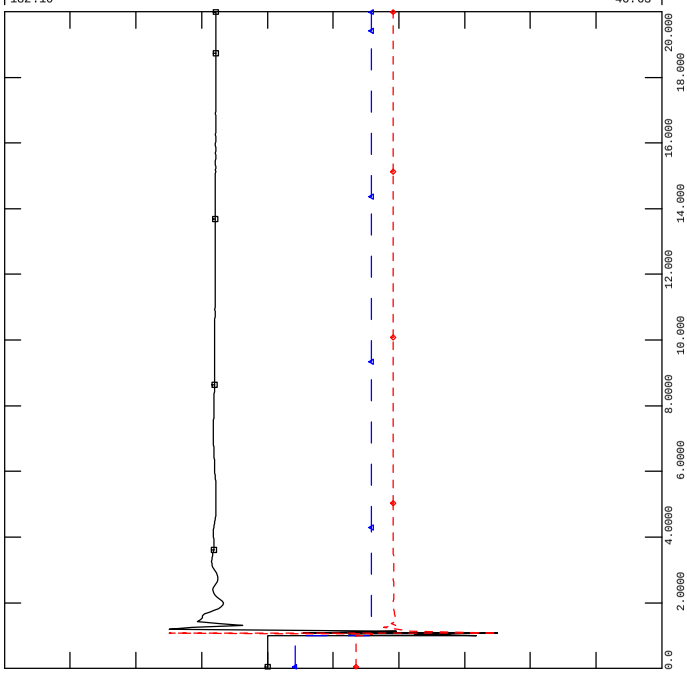
THU, APR 14 2022 19:12

BRANCH Q

CHNL# 544: [964L_L5_Q]
823.43 -656.8

CHNL# 548: [964L_L4_Q]
50.524 -40.00

CHNL# 550: [1005L_Q]
182.10 -46.63



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_964LY_MURRAY_LAKE

FILE: scn3_SP_964LY_Murray_Lake.out

THU, APR 14 2022 19:12

ACTIVE POWER

CHNL# 201: [POWR 61994[GRANLEA6 0.6900]G1]
1.2024 -0.0804

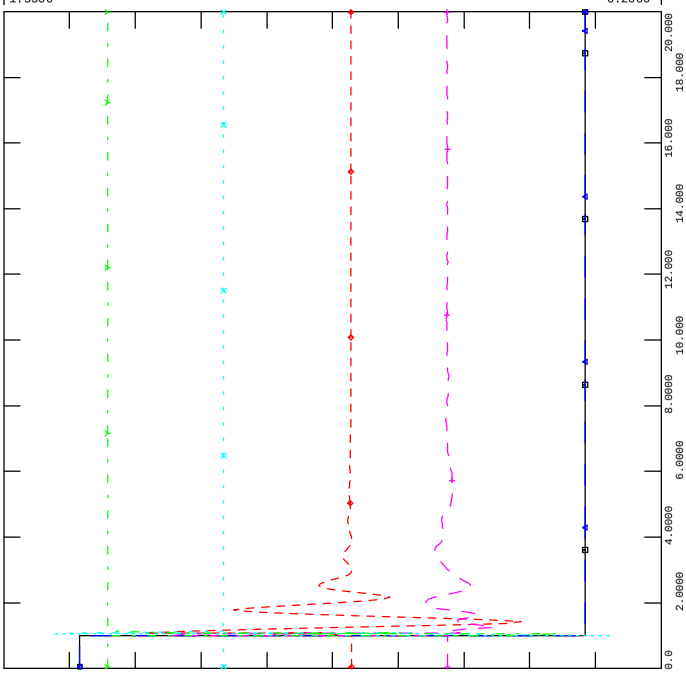
CHNL# 198: [POWR 60990[SHAMROC5 0.6500]G1]
2.9112 0.23000

CHNL# 207: [POWR 773[SECST 20.000]1]
3.5079 2.7244

CHNL# 171: [POWR 667[CANCARB9 13.800]1]
1.0375 0.10080

CHNL# 206: [POWR990007[FORTYMILE_6 0.6900]G2]
1.5300 -0.2000

CHNL# 205: [POWR990004[FORTYMILE_3 0.6900]G1]
1.5300 -0.2000

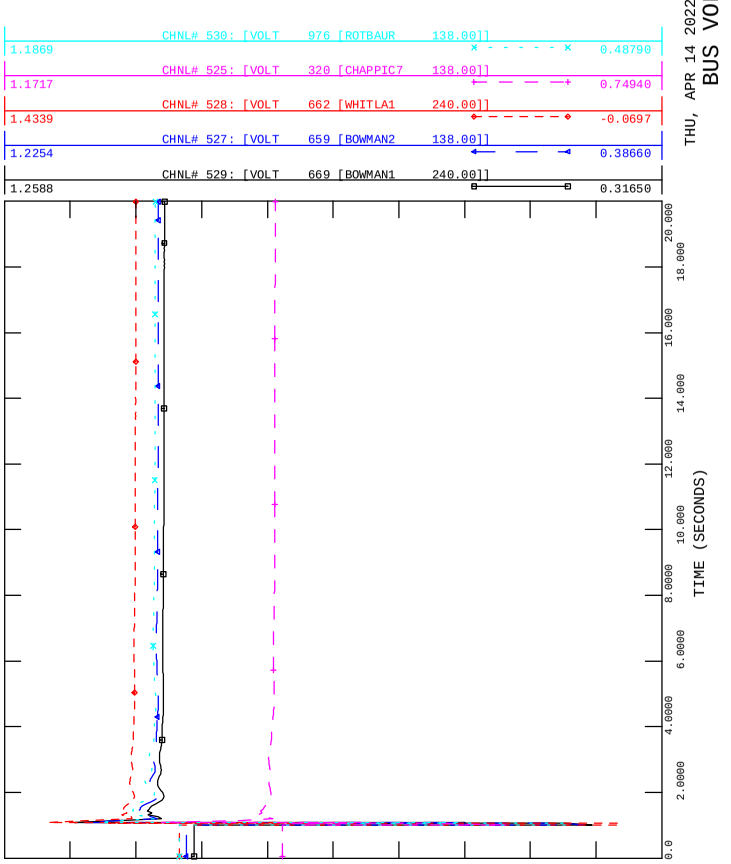


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_964LY_MURRAY_LAKE

FILE: scn3_SP_964LY_Murray_Lake.out

THU, APR 14 2022 19:12

BUS VOLTAGE

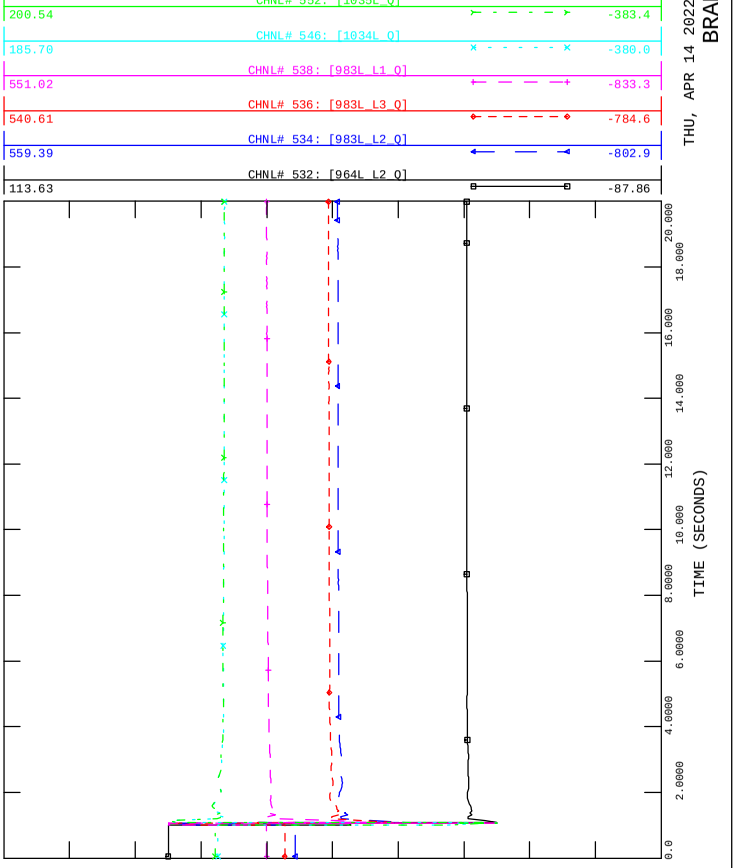


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_964LY_MURRAY_LAKE

FILE: scn3_SP_964LY_Murray_Lake.out

THU, APR 14 2022 19:12

BRANCH Q

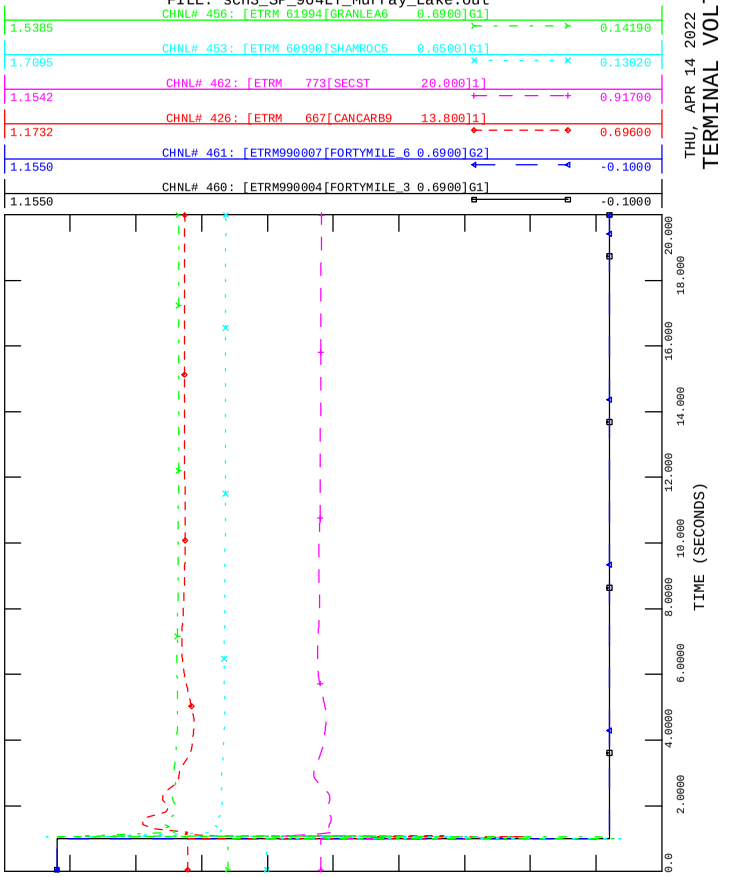


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_964LY_MURRAY_LAKE

FILE: scn3_SP_964LY_Murray_Lake.out

THU, APR 14 2022 19:12

TERMINAL VOLTAGE

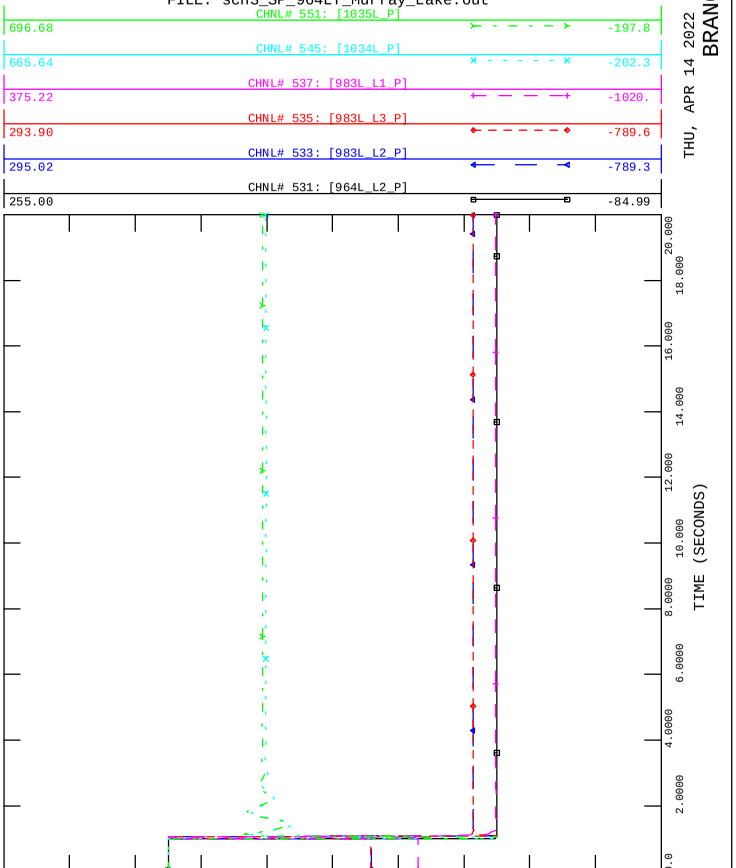


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_964LY_MURRAY_LAKE

FILE: scn3_SP_964LY_Murray_Lake.out

THU, APR 14 2022 19:12

BRANCH P

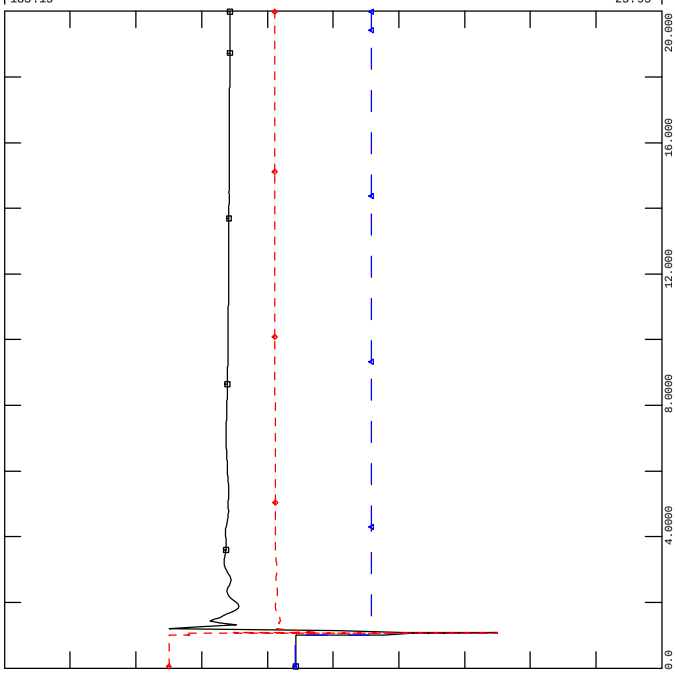


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_964LY_MURRAY_LAKE

FILE: scn3_SP_964LY_Murray_Lake.out

THU, APR 14 2022 19:12 BRANCH Q

CHNL# 544: [964L_L5_Q] 196.57 -459.9
CHNL# 548: [964L_L4_Q] 50.524 -40.00
CHNL# 550: [1005L_Q] 183.15 -25.95

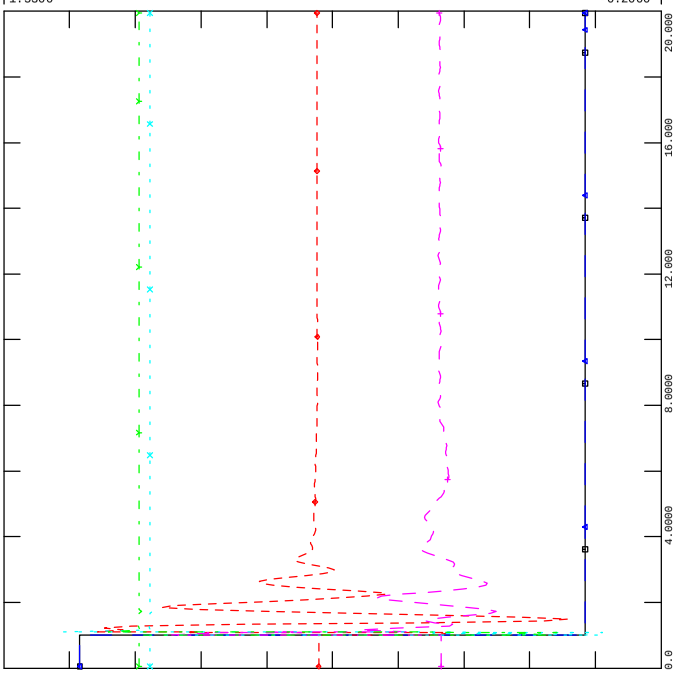


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_983L_BOWMANTON

FILE: scn3_SP_983L_Bowmanton.out

THU, APR 14 2022 19:12 ACTIVE POWER

CHNL# 201: [POWR 61994[GRANLEA6 0.6900]G1] 1.2593 0.00010
CHNL# 198: [POWR 60990[SHAMROC5 0.6500]G1] 2.5106 0.28570
CHNL# 207: [POWR 773[SECST 20.000]1] 3.5095 2.7116
CHNL# 171: [POWR 667[CANCARB9 13.800]1] 1.2150 -0.1912
CHNL# 206: [POWR990007[FORTYMILE_6 0.6900]G2] 1.5300 -0.2000
CHNL# 205: [POWR990004[FORTYMILE 3 0.6900]G1] 1.5300 -0.2000

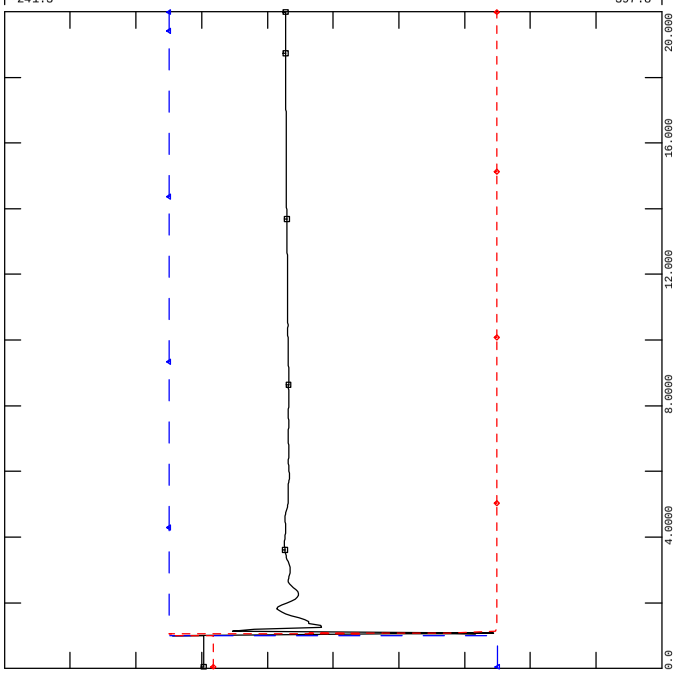


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_964LY_MURRAY_LAKE

FILE: scn3_SP_964LY_Murray_Lake.out

THU, APR 14 2022 19:12 BRANCH P

CHNL# 543: [964L_L5_P] 101.41 -294.7
CHNL# 547: [964L_L4_P] 209.99 -630.0
CHNL# 549: [1005L_P] -241.3 -397.8

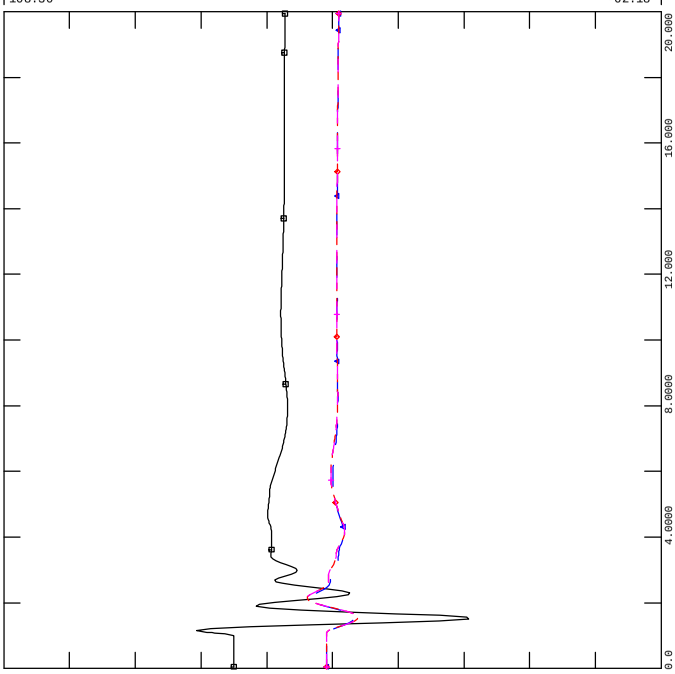


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_983L_BOWMANTON

FILE: scn3_SP_983L_Bowmanton.out

THU, APR 14 2022 19:12 ROTOR ANGLE

CHNL# 39: [ANGL 775[SECCT2 21.000]3] 56.912 -51.48
CHNL# 38: [ANGL 774[SECCT1 21.000]2] 56.912 -51.48
CHNL# 37: [ANGL 773[SECST 20.000]1] 58.524 -48.92
CHNL# 1: [ANGL 667[CANCARB9 13.800]1] 108.30 -62.18



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_983L_BOWMANTON

FILE: scn3_SP_983L_Bowmanton.out

THU, APR 14 2022 19:12

TERMINAL VOLTAGE

CHNL# 456: [ETRM 61994[GRANLEA6 0.6900]G1] 1.8036 0.13160
CHNL# 453: [ETRM 60990[SHAMROC5 0.6500]G1] 1.8555 0.16680
CHNL# 462: [ETRM 773[SECST 20.000]1] 1.1621 0.88960
CHNL# 426: [ETRM 667[CANCARB9 13.800]1] 1.2029 0.54940
CHNL# 461: [ETRM990007[FORTYMILE_6 0.6900]G2] 1.1550 -0.1000
CHNL# 460: [ETRM990004[FORTYMILE_3 0.6900]G1] 1.1550 -0.1000

TIME (SECONDS)

0.0 2.0000 4.0000 6.0000 8.0000 10.000 12.000 14.000 16.000 18.000 20.000

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_983L_BOWMANTON

FILE: scn3_SP_983L_Bowmanton.out

THU, APR 14 2022 19:12

BRANCH P

CHNL# 551: [1035L_P] 709.45 -236.1
CHNL# 545: [1034L_P] 672.86 -224.0
CHNL# 537: [983L_L1_P] 251.93 -755.8
CHNL# 535: [983L_L3_P] 155.56 -466.7
CHNL# 533: [983L_L2_P] 155.45 -466.4
CHNL# 531: [964L_L2_P] 644.22 -214.2

TIME (SECONDS)

0.0 2.0000 4.0000 6.0000 8.0000 10.000 12.000 14.000 16.000 18.000 20.000

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_983L_BOWMANTON

FILE: scn3_SP_983L_Bowmanton.out

THU, APR 14 2022 19:12

REACTIVE POWER

CHNL# 286: [VARS 61994[GRANLEA6 0.6900]G1] 2.0056 -0.5712
CHNL# 283: [VARS 60990[SHAMROC5 0.6500]G1] 4.6713 -1.241
CHNL# 292: [VARS 773[SECST 20.000]1] 4.2080 -2.612
CHNL# 256: [VARS 667[CANCARB9 13.800]1] 1.3261 -0.6716
CHNL# 291: [VARS990007[FORTYMILE_6 0.6900]G2] 0.73430 -0.5000
CHNL# 290: [VARS990004[FORTYMILE_3 0.6900]G1] 0.73430 -0.5000

TIME (SECONDS)

0.0 2.0000 4.0000 6.0000 8.0000 10.000 12.000 14.000 16.000 18.000 20.000

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_983L_BOWMANTON

FILE: scn3_SP_983L_Bowmanton.out

THU, APR 14 2022 19:12

BUS VOLTAGE

CHNL# 530: [VOLT 976 [ROTBAUR 138.00]] 1.2295 0.19100
CHNL# 525: [VOLT 320 [CHAPPIC7 138.00]] 1.2021 0.62110
CHNL# 528: [VOLT 662 [WHITLA1 240.00]] 1.6812 -0.0662
CHNL# 527: [VOLT 659 [BOWMAN2 138.00]] 1.2999 0.03130
CHNL# 529: [VOLT 669 [BOWMAN1 240.00]] 1.3634 -0.0953

TIME (SECONDS)

0.0 2.0000 4.0000 6.0000 8.0000 10.000 12.000 14.000 16.000 18.000 20.000

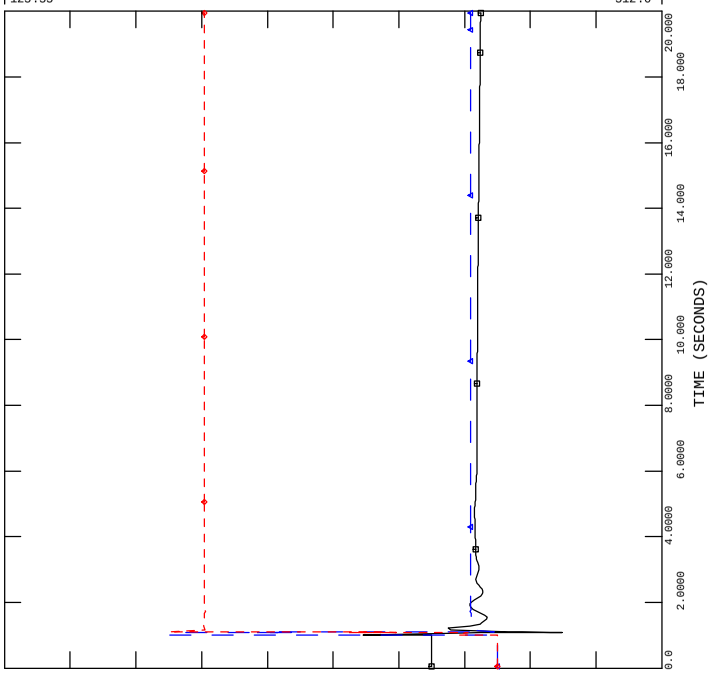
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_983L_BOWMANTON

FILE: scn3_SP_983L_Bowmanton.out

THU, APR 14 2022 19:12 BRANCH P

CHNL# 543: [964L_L5_P]
348.14 -148.7
CHNL# 547: [964L_L4_P]
209.67 -629.9
CHNL# 549: [1005L_P]
125.55 -512.0

TIME (SECONDS)



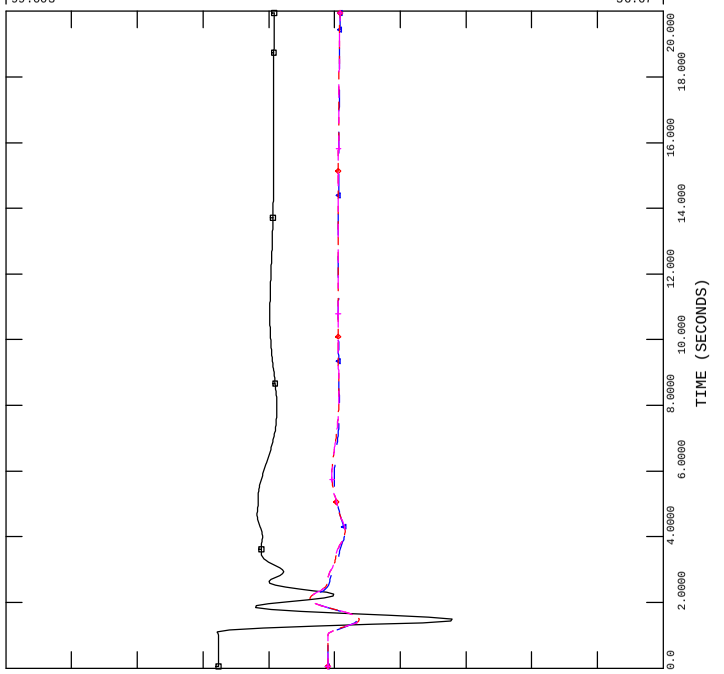
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_983L_WHITLA

FILE: scn3_SP_983L_Whitla.out

THU, APR 14 2022 19:12 ROTOR ANGLE

CHNL# 39: [ANGL 775[SECCT2 21.000]3]
56.633 -51.52
CHNL# 38: [ANGL 774[SECCT1 21.000]2]
56.633 -51.52
CHNL# 37: [ANGL 773[SECST 20.000]1]
58.303 -48.91
CHNL# 1: [ANGL 667[CANCARB9 13.800]1]
99.003 -56.67

TIME (SECONDS)



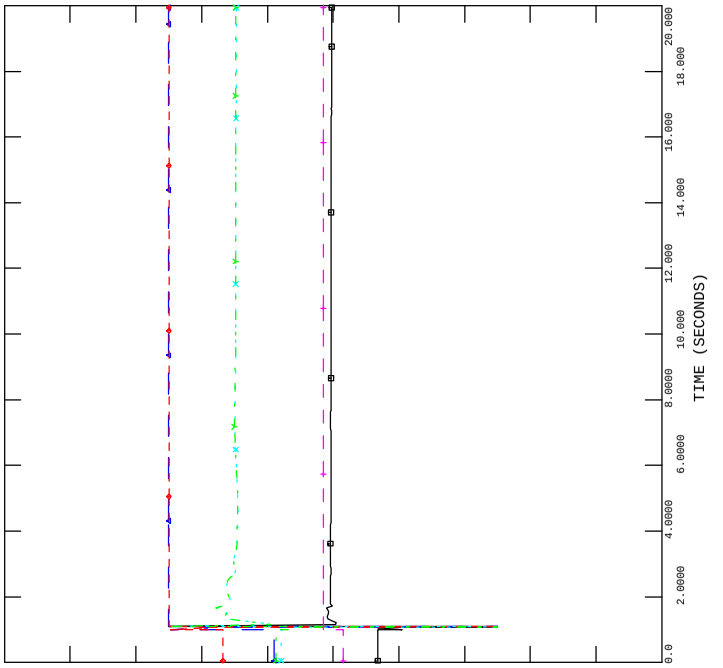
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_983L_BOWMANTON

FILE: scn3_SP_983L_Bowmanton.out

THU, APR 14 2022 19:12 BRANCH Q

CHNL# 552: [1035L_Q]
311.08 -410.8
CHNL# 546: [1034L_Q]
299.59 -408.9
CHNL# 538: [983L_L1_Q]
40.000 -42.52
CHNL# 536: [983L_L3_Q]
77.509 -232.5
CHNL# 534: [983L_L2_Q]
70.169 -210.5
CHNL# 532: [964L_L2_Q]
1005.9 -653.3

TIME (SECONDS)



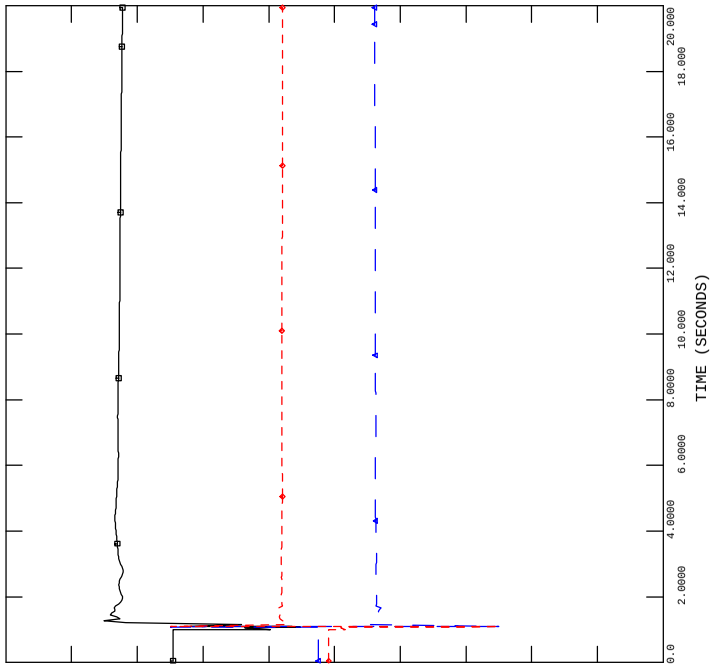
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_983L_BOWMANTON

FILE: scn3_SP_983L_Bowmanton.out

THU, APR 14 2022 19:12 BRANCH Q

CHNL# 544: [964L_L5_Q]
677.09 -634.7
CHNL# 548: [964L_L4_Q]
926.61 -1001.
CHNL# 550: [1005L_Q]
216.95 -280.3

TIME (SECONDS)



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_983L_WHITLA

FILE: scn3_SP_983L_Whitla.out

THU, APR 14 2022 19:12

REACTIVE POWER

CHNL# 286: [VARS 61994[GRANLEA6 0.6900]G1] 2.2494 -0.6416
CHNL# 283: [VARS 60990[SHAMROC5 0.6500]G1] 4.7291 -1.282
CHNL# 292: [VARS 773[SECST 20.000]1] 5.5306 -2.318
CHNL# 256: [VARS 667[CANCARB9 13.800]1] 1.1458 -0.5504
CHNL# 291: [VARS990007[FORTYMILE_6 0.6900]G2] 0.73430 -0.5000
CHNL# 290: [VARS990004[FORTYMILE_3 0.6900]G1] 0.73430 -0.5000

TIME (SECONDS)

0.0 2.0000 4.0000 6.0000 8.0000 10.000 12.000 14.000 16.000 18.000 20.000

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_983L_WHITLA

FILE: scn3_SP_983L_Whitla.out

THU, APR 14 2022 19:12

BUS VOLTAGE

CHNL# 530: [VOLT 976 [ROTBAUR 138.00]] 1.2076 0.47650
CHNL# 525: [VOLT 320 [CHAPPIC7 138.00]] 1.1759 0.75030
CHNL# 528: [VOLT 662 [WHITLA1 240.00]] 1.4301 -0.0985
CHNL# 527: [VOLT 659 [BOWMAN2 138.00]] 1.2291 0.38940
CHNL# 529: [VOLT 669 [BOWMAN1 240.00]] 1.2702 0.31950

TIME (SECONDS)

0.0 2.0000 4.0000 6.0000 8.0000 10.000 12.000 14.000 16.000 18.000 20.000

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_983L_WHITLA

FILE: scn3_SP_983L_Whitla.out

THU, APR 14 2022 19:12

ACTIVE POWER

CHNL# 201: [POWR 61994[GRANLEA6 0.6900]G1] 1.2007 -0.0730
CHNL# 198: [POWR 60990[SHAMROC5 0.6500]G1] 2.2175 0.15110
CHNL# 207: [POWR 773[SECST 20.000]1] 3.5079 2.7253
CHNL# 171: [POWR 667[CANCARB9 13.800]1] 1.1368 -0.0799
CHNL# 206: [POWR990007[FORTYMILE_6 0.6900]G2] 1.5300 -0.2000
CHNL# 205: [POWR990004[FORTYMILE_3 0.6900]G1] 1.5300 -0.2000

TIME (SECONDS)

0.0 2.0000 4.0000 6.0000 8.0000 10.000 12.000 14.000 16.000 18.000 20.000

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_983L_WHITLA

FILE: scn3_SP_983L_Whitla.out

THU, APR 14 2022 19:12

TERMINAL VOLTAGE

CHNL# 456: [ETRM 61994[GRANLEA6 0.6900]G1] 1.4631 0.15730
CHNL# 453: [ETRM 60990[SHAMROC5 0.6500]G1] 1.5403 0.14830
CHNL# 462: [ETRM 773[SECST 20.000]1] 1.1549 0.91700
CHNL# 426: [ETRM 667[CANCARB9 13.800]1] 1.2017 0.68360
CHNL# 461: [ETRM990007[FORTYMILE_6 0.6900]G2] 1.1550 -0.1000
CHNL# 460: [ETRM990004[FORTYMILE_3 0.6900]G1] 1.1550 -0.1000

TIME (SECONDS)

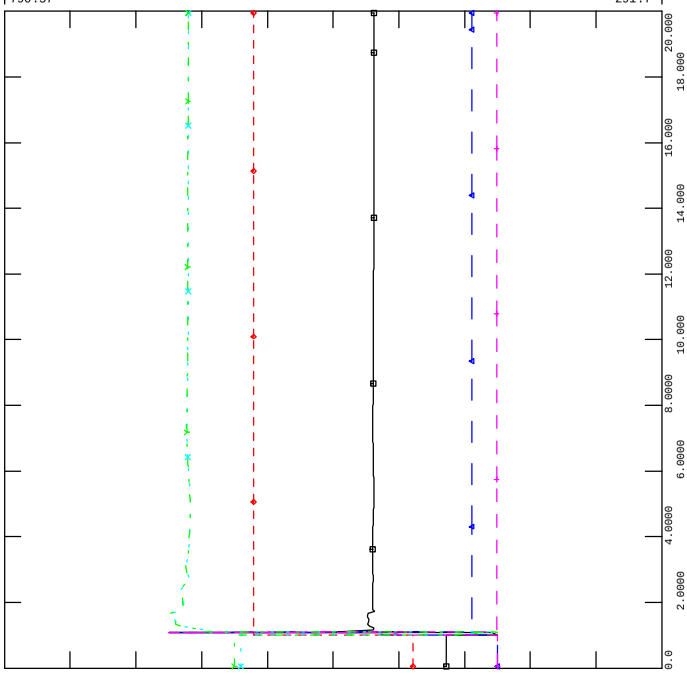
0.0 2.0000 4.0000 6.0000 8.0000 10.000 12.000 14.000 16.000 18.000 20.000

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_983L_WHITLA

FILE: scn3_SP_983L_Whitla.out

THU, APR 14 2022 19:12 BRANCH Q

CHNL# 552: [1035L Q] 234.34 -398.3
CHNL# 546: [1034L Q] 223.83 -395.3
CHNL# 538: [983L L1 Q] 1240.4 -416.8
CHNL# 536: [983L L3 Q] 40.000 -65.58
CHNL# 534: [983L L2 Q] 817.44 -332.4
CHNL# 532: [964L L2 Q] 790.57 -291.7

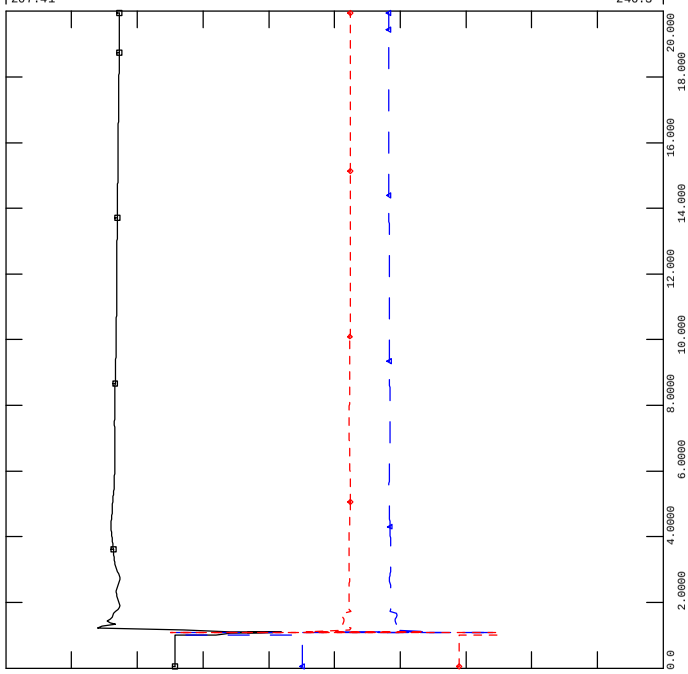


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_983L_WHITLA

FILE: scn3_SP_983L_Whitla.out

THU, APR 14 2022 19:12 BRANCH Q

CHNL# 544: [964L L5 Q] 421.49 -142.5
CHNL# 548: [964L L4 Q] 586.50 -689.8
CHNL# 550: [1005L Q] 207.41 -246.3

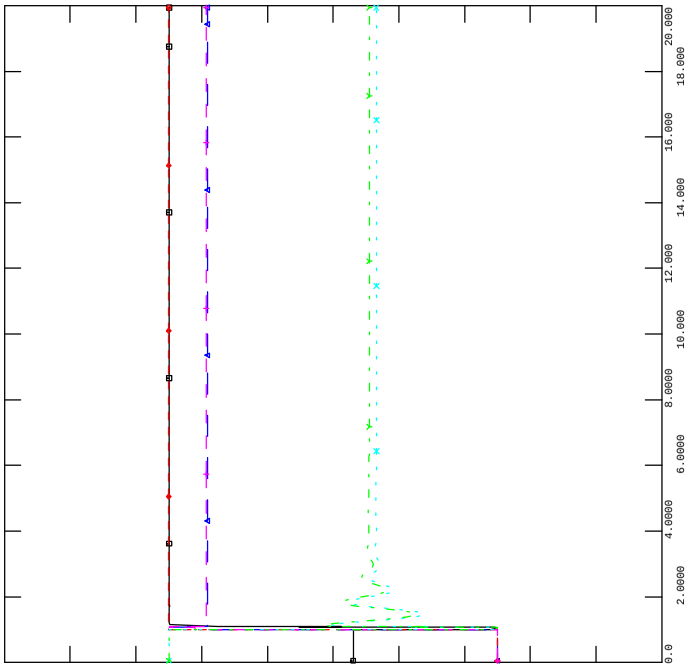


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_983L_WHITLA

FILE: scn3_SP_983L_Whitla.out

THU, APR 14 2022 19:12 BRANCH P

CHNL# 551: [1035L P] 696.27 -196.5
CHNL# 545: [1034L P] 664.94 -200.2
CHNL# 537: [983L L1 P] 349.28 -788.2
CHNL# 535: [983L L3 P] 155.56 -466.7
CHNL# 533: [983L L2 P] 217.63 -487.1
CHNL# 531: [964L L2 P] 592.39 -204.0

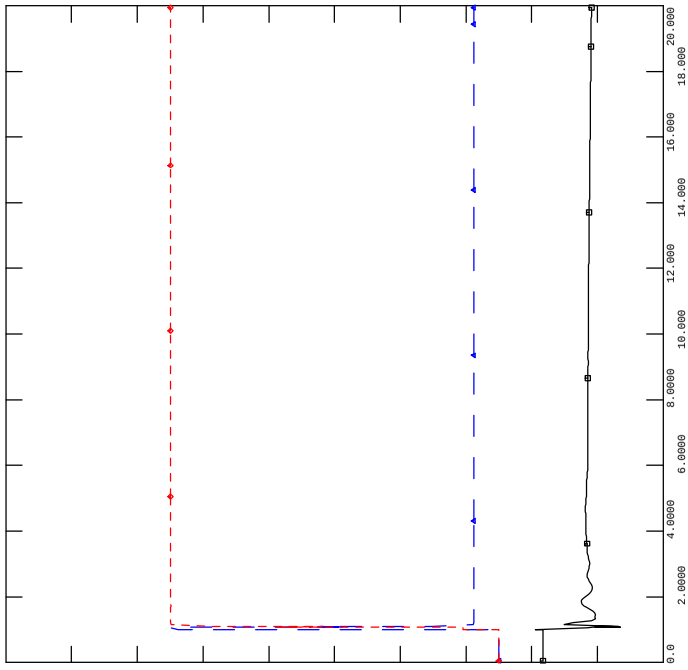


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_983L_WHITLA

FILE: scn3_SP_983L_Whitla.out

THU, APR 14 2022 19:12 BRANCH P

CHNL# 543: [964L L5 P] 308.29 -135.4
CHNL# 547: [964L L4 P] 246.44 -642.1
CHNL# 549: [1005L P] 239.49 -406.8

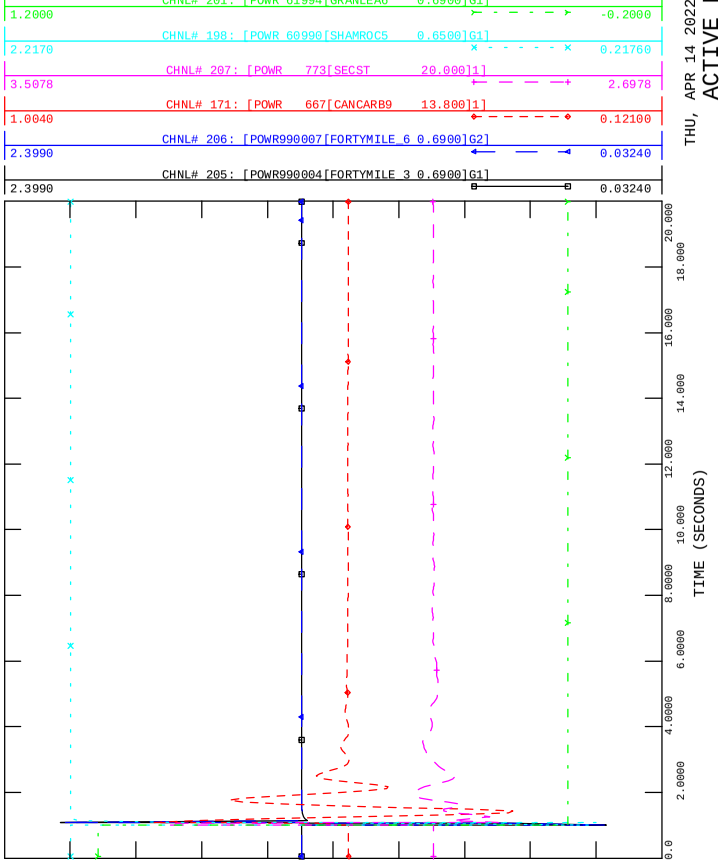


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_964LX_MURRAY_LAKE

FILE: scn3_SP_964LX_Murray_Lake.out

THU, APR 14 2022 19:12

ACTIVE POWER

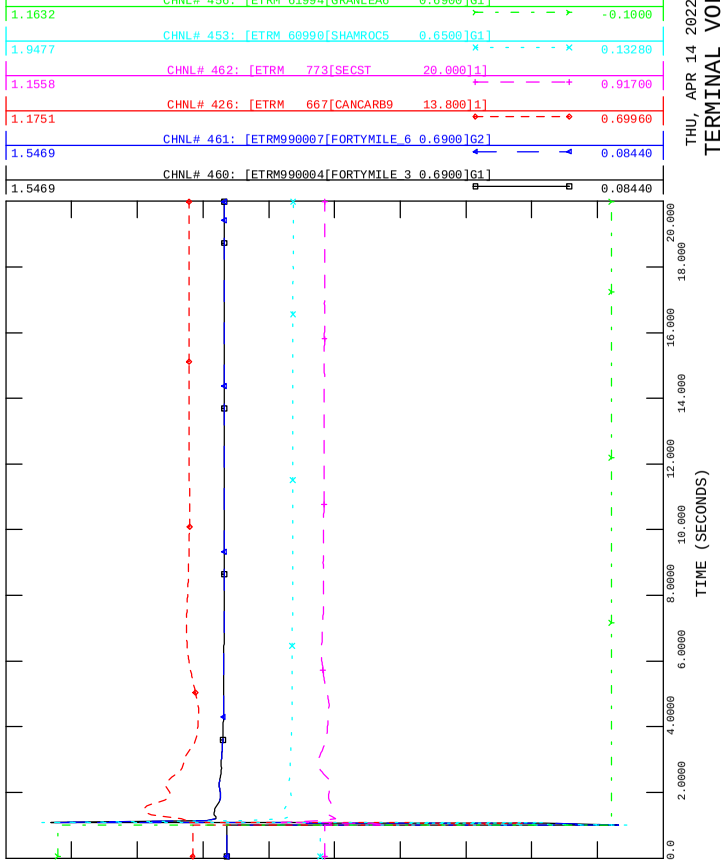


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_964LX_MURRAY_LAKE

FILE: scn3_SP_964LX_Murray_Lake.out

THU, APR 14 2022 19:12

TERMINAL VOLTAGE

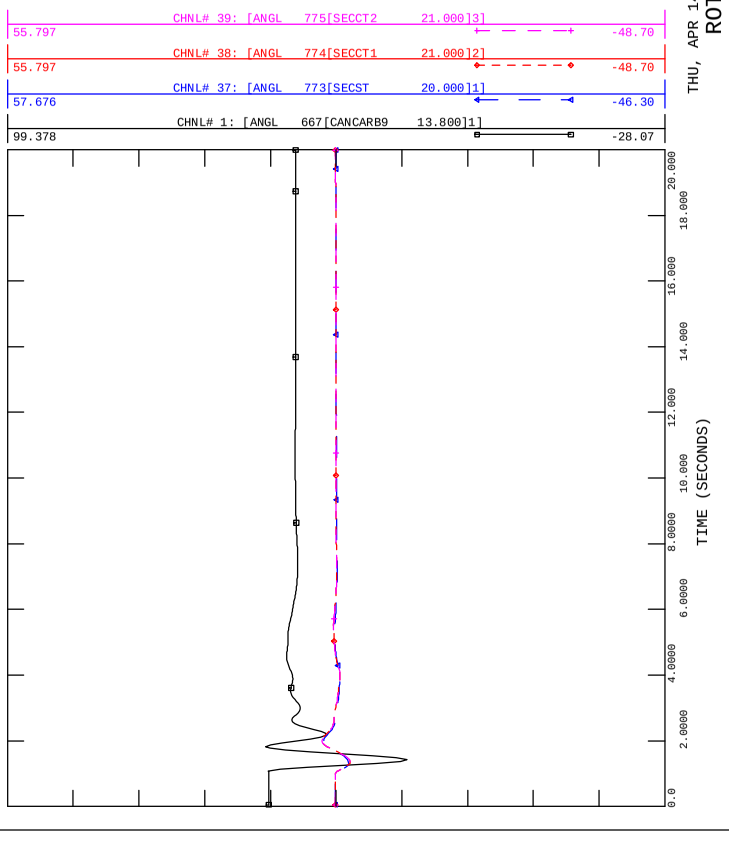


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_964LX_MURRAY_LAKE

FILE: scn3_SP_964LX_Murray_Lake.out

THU, APR 14 2022 19:12

ROTOR ANGLE

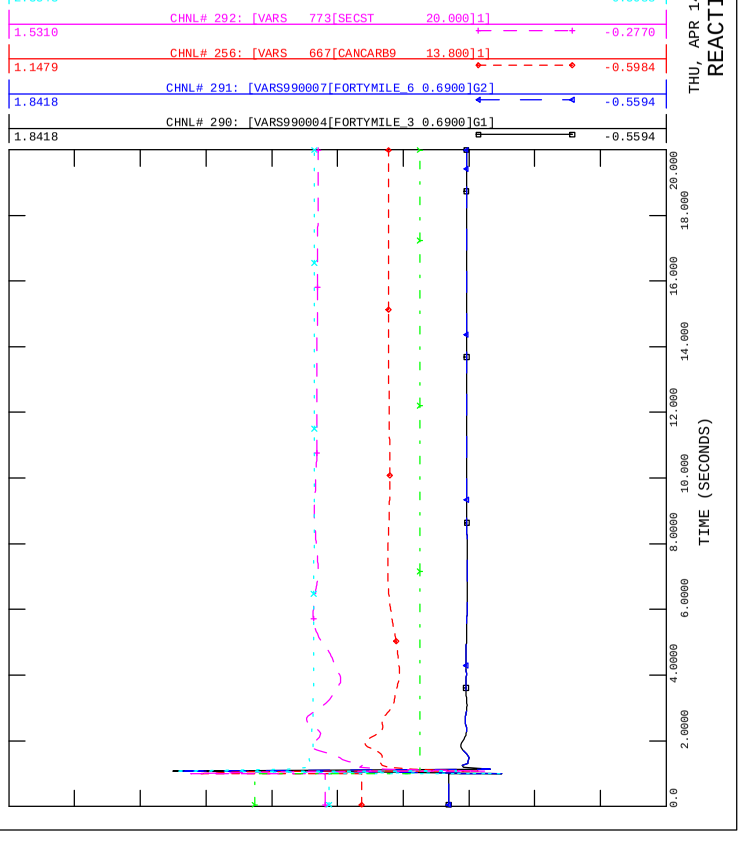


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_964LX_MURRAY_LAKE

FILE: scn3_SP_964LX_Murray_Lake.out

THU, APR 14 2022 19:12

REACTIVE POWER



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_964LX_MURRAY_LAKE

FILE: scn3_SP_964LX_Murray_Lake.out

THU, APR 14 2022 19:12

BRANCH P

CHNL# 551: [1035L_P]
697.45 -200.1

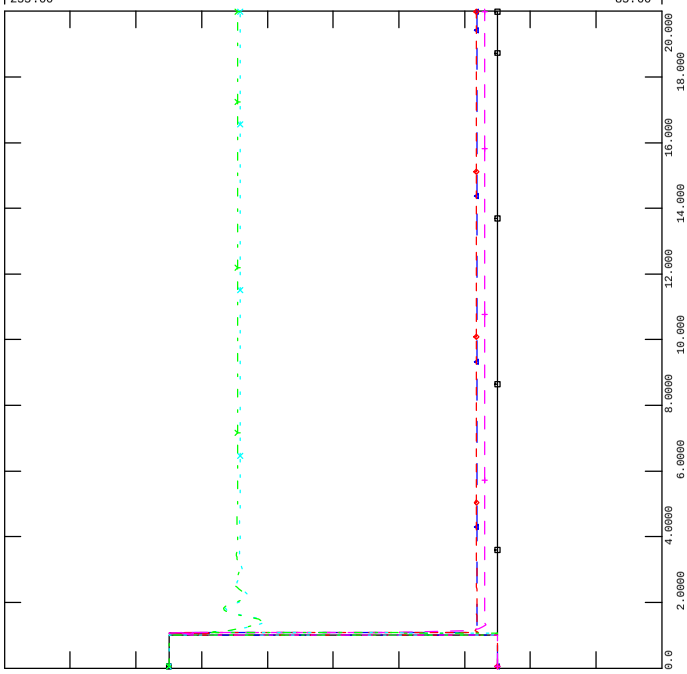
CHNL# 545: [1034L_P]
666.47 -204.8

CHNL# 537: [983L_L1_P]
331.08 -782.2

CHNL# 535: [983L_L3_P]
230.03 -491.5

CHNL# 533: [983L_L2_P]
232.75 -492.1

CHNL# 531: [964L_L2_P]
255.00 -85.00



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_964LX_MURRAY_LAKE

FILE: scn3_SP_964LX_Murray_Lake.out

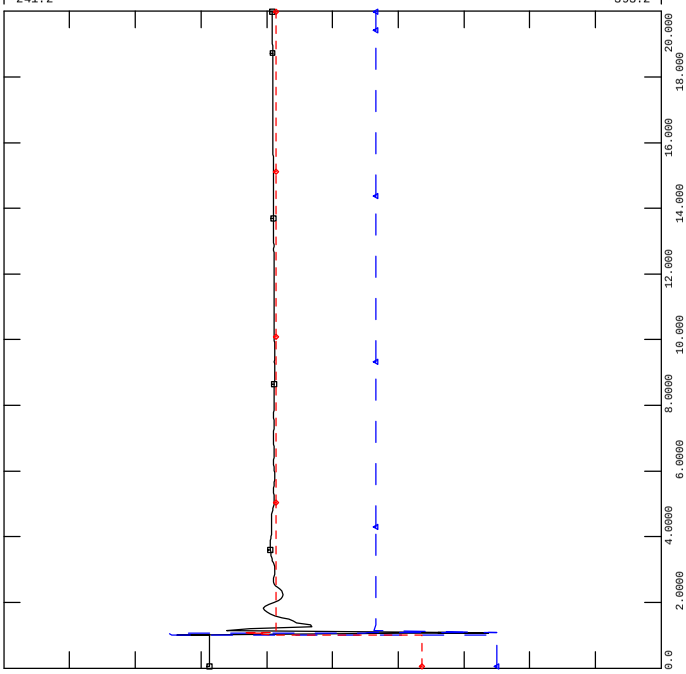
THU, APR 14 2022 19:12

BRANCH P

CHNL# 543: [964L_L5_P]
45.516 -64.46

CHNL# 547: [964L_L4_P]
248.45 -642.8

CHNL# 549: [1005L_P]
-241.2 -393.2



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_964LX_MURRAY_LAKE

FILE: scn3_SP_964LX_Murray_Lake.out

THU, APR 14 2022 19:12

BUS VOLTAGE

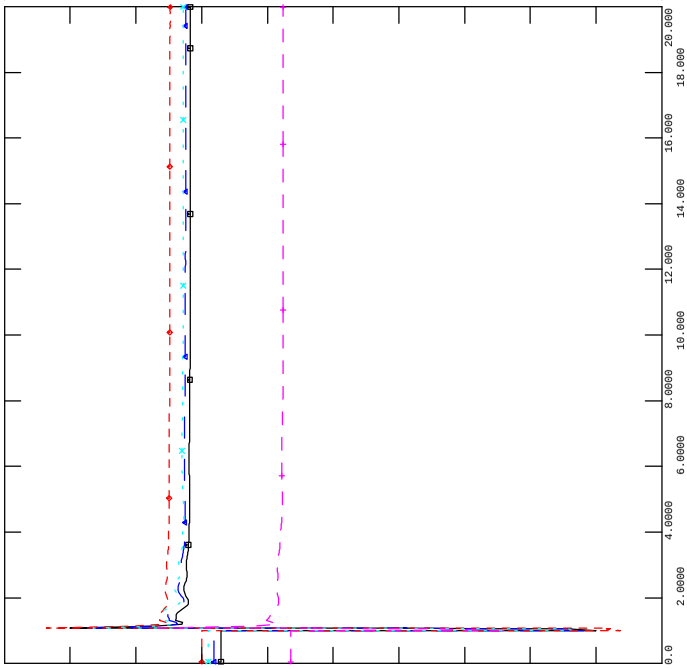
CHNL# 530: [VOLT 976 [ROTBAUR 138.00]]
1.2312 0.48770

CHNL# 525: [VOLT 320 [CHAPPIC7 138.00]]
1.1811 0.74930

CHNL# 528: [VOLT 662 [WHITLA1 240.00]]
1.5063 -0.0723

CHNL# 527: [VOLT 659 [BOWMAN2 138.00]]
1.2779 0.38620

CHNL# 529: [VOLT 669 [BOWMAN1 240.00]]
1.3164 0.31610



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_964LX_MURRAY_LAKE

FILE: scn3_SP_964LX_Murray_Lake.out

THU, APR 14 2022 19:12

BRANCH Q

CHNL# 552: [1035L_Q]
298.99 -424.0

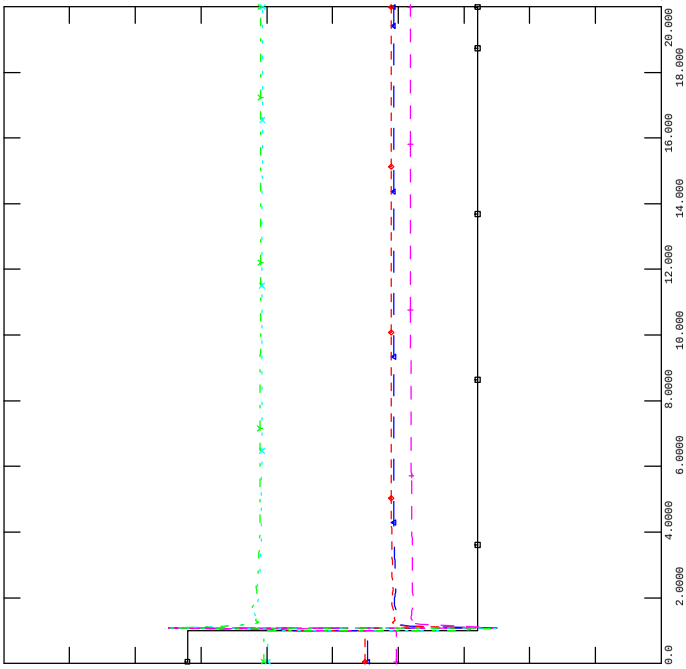
CHNL# 546: [1034L_Q]
282.78 -418.9

CHNL# 538: [983L_L1_Q]
905.47 -615.4

CHNL# 536: [983L_L3_Q]
871.42 -762.3

CHNL# 534: [983L_L2_Q]
916.21 -819.7

CHNL# 532: [964L_L2_Q]
103.25 -40.00



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_964LX_WHITLA

FILE: scn3_SP_964LX_Whitla.out

THU, APR 14 2022 19:12

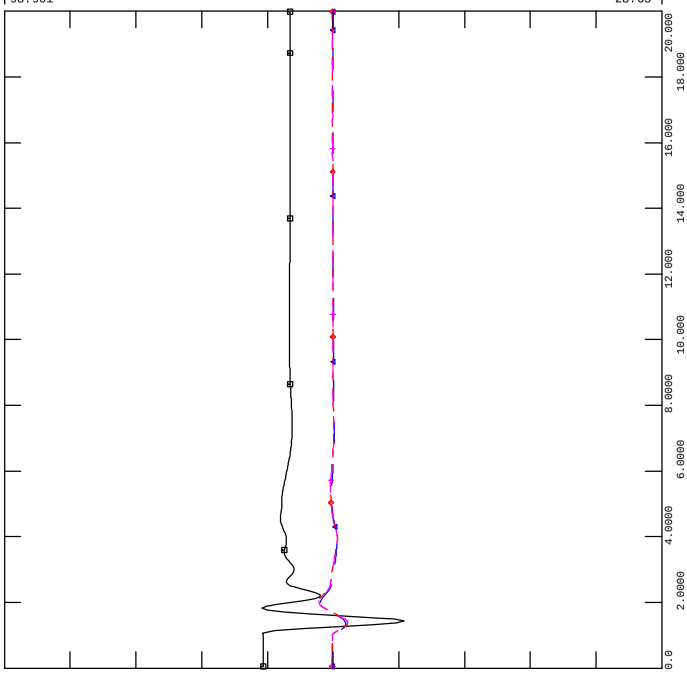
ROTOR ANGLE

CHNL# 39: [ANGL 775[SECCT2 21.000]3]
55.812 -48.73

CHNL# 38: [ANGL 774[SECCT1 21.000]2]
55.812 -48.73

CHNL# 37: [ANGL 773[SECST 20.000]1]
57.692 -46.32

CHNL# 1: [ANGL 667[CANCARB9 13.800]1]
98.901 -28.65



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_964LX_WHITLA

FILE: scn3_SP_964LX_Whitla.out

THU, APR 14 2022 19:12

REACTIVE POWER

CHNL# 286: [VARS 61994[GRANLEA6 0.6900]G1]
0.83520 -0.5000

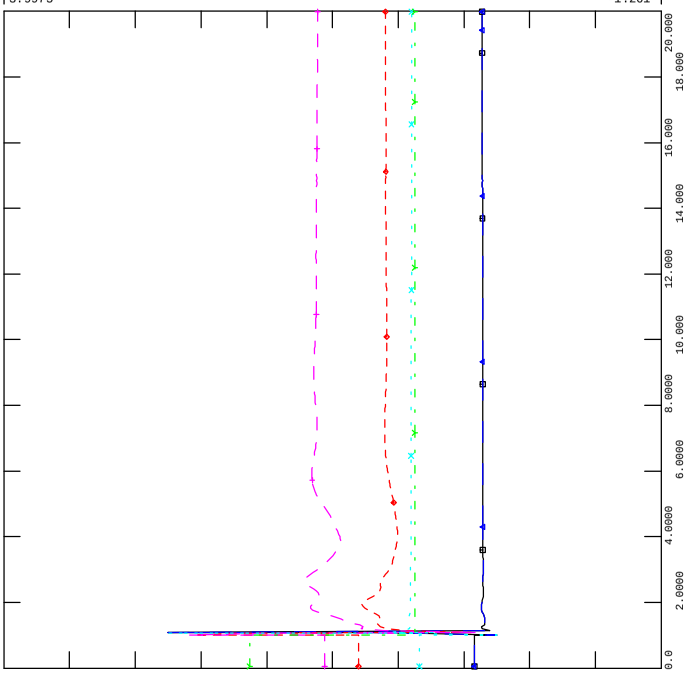
CHNL# 283: [VARS 60990[SHAMROC5 0.6500]G1]
4.8920 -1.327

CHNL# 292: [VARS 773[SECST 20.000]1]
1.5285 -0.2493

CHNL# 256: [VARS 667[CANCARB9 13.800]1]
1.1419 -0.5852

CHNL# 291: [VARS990007[FORTYMILE_6 0.6900]G2]
3.9975 -1.261

CHNL# 290: [VARS990004[FORTYMILE 3 0.6900]G1]
3.9975 -1.261



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_964LX_MURRAY_LAKE

FILE: scn3_SP_964LX_Murray_Lake.out

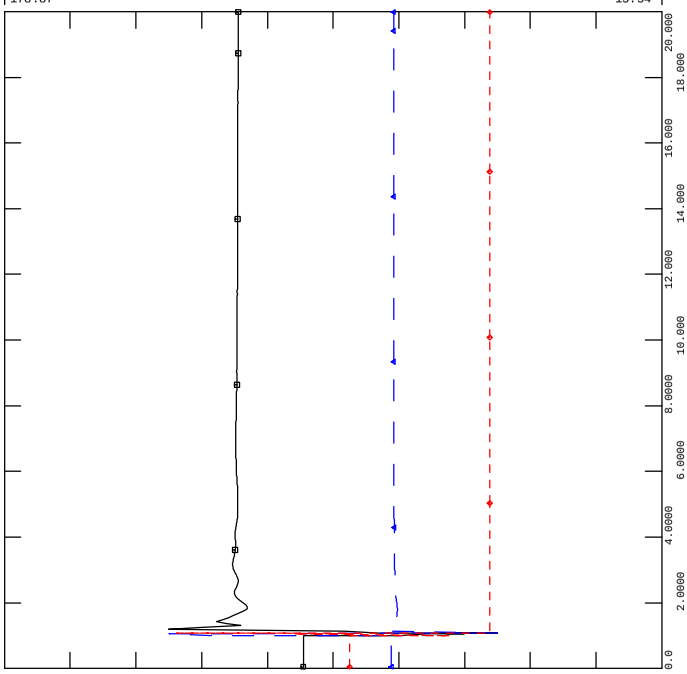
THU, APR 14 2022 19:12

BRANCH Q

CHNL# 544: [964L L5 Q]
112.58 -40.00

CHNL# 548: [964L L4 Q]
570.06 -380.4

CHNL# 550: [1005L Q]
178.87 -15.54



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_964LX_WHITLA

FILE: scn3_SP_964LX_Whitla.out

THU, APR 14 2022 19:12

ACTIVE POWER

CHNL# 201: [POWR 61994[GRANLEA6 0.6900]G1]
1.2000 -0.2000

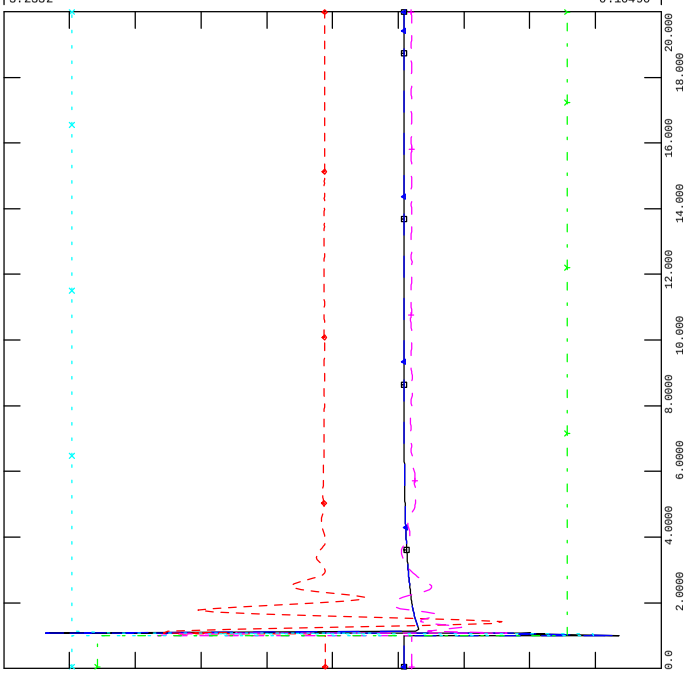
CHNL# 198: [POWR 60990[SHAMROC5 0.6500]G1]
2.2174 0.27830

CHNL# 207: [POWR 773[SECST 20.000]1]
3.5084 2.6551

CHNL# 171: [POWR 667[CANCARB9 13.800]1]
0.94460 0.12000

CHNL# 206: [POWR990007[FORTYMILE_6 0.6900]G2]
3.2332 0.10490

CHNL# 205: [POWR990004[FORTYMILE_3 0.6900]G1]
3.2332 0.10490



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_964LX_WHITLA

FILE: scn3_SP_964LX_Whitla.out

THU, APR 14 2022 19:12

BUS VOLTAGE

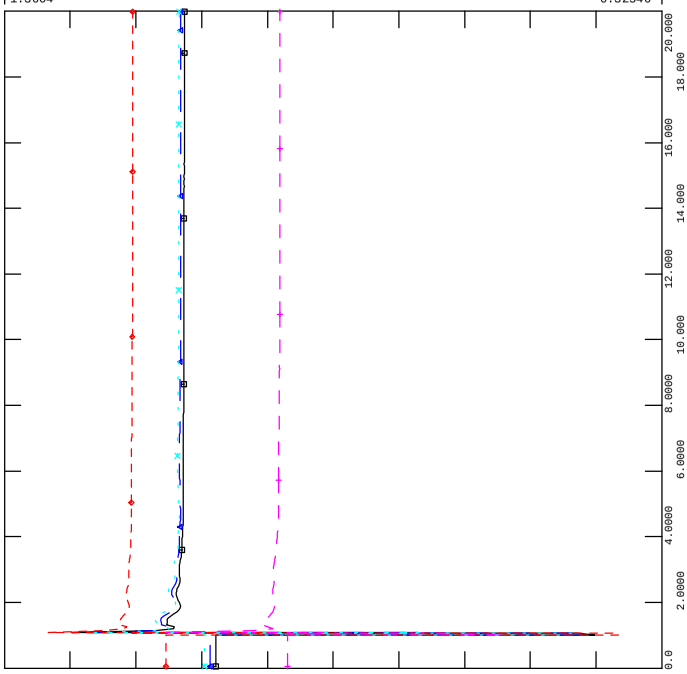
CHNL# 530: [VOLT 976 [ROTBAUR 138.00]]
1.2236 0.49090

CHNL# 525: [VOLT 320 [CHAPPIC7 138.00]]
1.1753 0.75210

CHNL# 528: [VOLT 662 [WHITLA1 240.00]]
1.4025 -0.0998

CHNL# 527: [VOLT 659 [BOWMAN2 138.00]]
1.2662 0.39500

CHNL# 529: [VOLT 669 [BOWMAN1 240.00]]
1.3004 0.32540



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_964LX_WHITLA

FILE: scn3_SP_964LX_Whitla.out

THU, APR 14 2022 19:12

BRANCH Q

CHNL# 552: [1035L Q]
292.04 -409.8

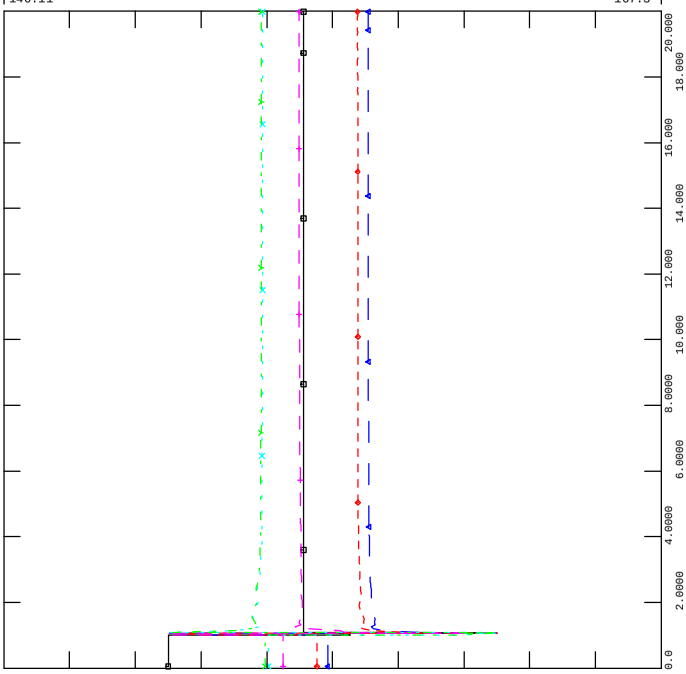
CHNL# 546: [1034L Q]
274.69 -404.5

CHNL# 538: [983L_L1_Q]
574.48 -784.6

CHNL# 536: [983L_L3_Q]
483.93 -586.5

CHNL# 534: [983L_L2_Q]
508.73 -615.4

CHNL# 532: [964L_L2_Q]
140.11 -167.3



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_964LX_WHITLA

FILE: scn3_SP_964LX_Whitla.out

THU, APR 14 2022 19:12

TERMINAL VOLTAGE

CHNL# 456: [ETRM 61994[GRANLEA6 0.6900]G1]
1.1632 -0.1000

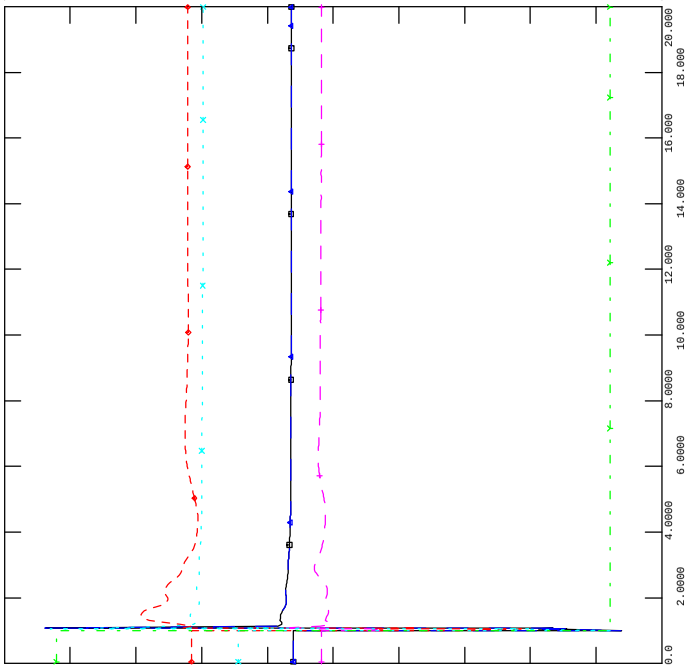
CHNL# 453: [ETRM 60990[SHAMROC5 0.6500]G1]
1.5898 0.15610

CHNL# 462: [ETRM 773[SECST 20.000]1]
1.1544 0.91710

CHNL# 426: [ETRM 667[CANCARB9 13.800]1]
1.1765 0.69610

CHNL# 461: [ETRM990007[FORTYMILE_6 0.6900]G2]
1.7711 0.14180

CHNL# 460: [ETRM990004[FORTYMILE_3 0.6900]G1]
1.7711 0.14180



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_964LX_WHITLA

FILE: scn3_SP_964LX_Whitla.out

THU, APR 14 2022 19:12

BRANCH P

CHNL# 551: [1035L P]
697.51 -200.3

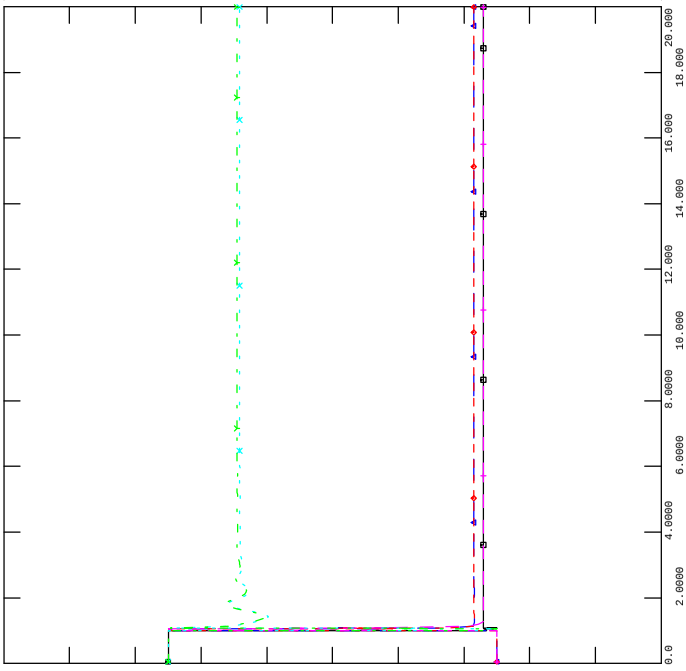
CHNL# 545: [1034L P]
666.48 -204.9

CHNL# 537: [983L_L1_P]
289.88 -768.4

CHNL# 535: [983L_L3_P]
180.71 -475.1

CHNL# 533: [983L_L2_P]
182.16 -475.3

CHNL# 531: [964L_L2_P]
258.67 -96.00



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_964LX_WHITLA

FILE: scn3_SP_964LX_Whitla.out

THU, APR 14 2022 19:12 BRANCH Q

CHNL# 544: [964L L5 Q]
72.449 -40.00
CHNL# 548: [964L L4 Q]
1415.5 -772.0
CHNL# 550: [1005L Q]
178.51 -16.21

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_1034L_BOWMANTON

FILE: scn3_SP_1034L_Bowmanton.out

THU, APR 14 2022 19:12 ACTIVE POWER

CHNL# 201: [POWR 61994[GRANLEA6 0.6900]G1]
1.2003 -0.2000
CHNL# 198: [POWR 60990[SHAMROC5 0.6500]G1]
2.2246 0.21360
CHNL# 207: [POWR 773[SECST 20.000]1]
3.5102 2.7264
CHNL# 171: [POWR 667[CANCARB9 13.800]1]
1.2184 -0.0429
CHNL# 206: [POWR990007[FORTYMILE_6 0.6900]G2]
1.5305 -0.2000
CHNL# 205: [POWR990004[FORTYMILE 3 0.6900]G1]
1.5305 -0.2000

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_964LX_WHITLA

FILE: scn3_SP_964LX_Whitla.out

THU, APR 14 2022 19:12 BRANCH P

CHNL# 543: [964L L5 P]
40.000 -64.46
CHNL# 547: [964L L4 P]
342.17 -871.3
CHNL# 549: [1005L P]
-240.9 -403.6

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_1034L_BOWMANTON

FILE: scn3_SP_1034L_Bowmanton.out

THU, APR 14 2022 19:12 ROTOR ANGLE

CHNL# 39: [ANGL 775[SECCT2 21.000]3]
56.712 -51.60
CHNL# 38: [ANGL 774[SECCT1 21.000]2]
56.712 -51.60
CHNL# 37: [ANGL 773[SECST 20.000]1]
58.353 -48.95
CHNL# 1: [ANGL 667[CANCARB9 13.800]1]
108.21 -51.33

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_1034L_BOWMANTON

FILE: scn3_SP_1034L_Bowmanton.out

THU, APR 14 2022 19:12

TERMINAL VOLTAGE

CHNL# 456: [ETRM 61994[GRANLEA6 0.6900]G1]
1.1636 -0.1000

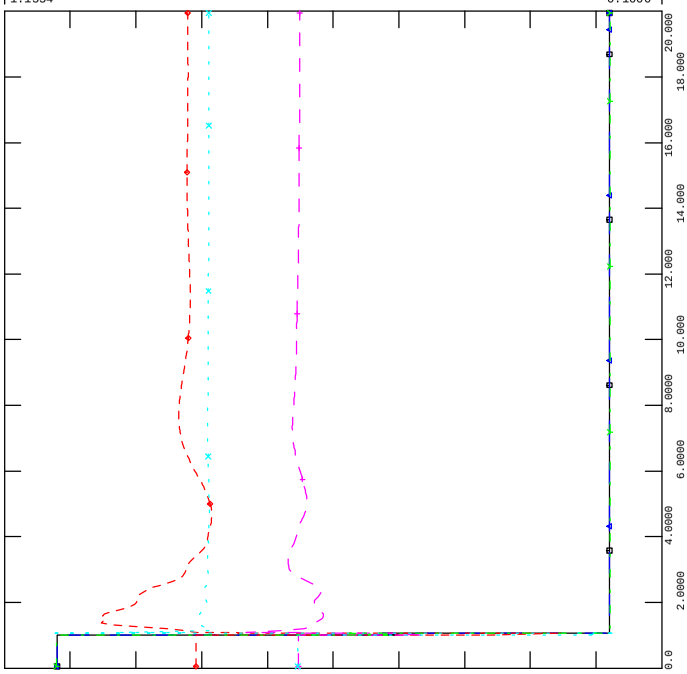
CHNL# 453: [ETRM 60990[SHAMROC5 0.6500]G1]
1.7409 0.25870

CHNL# 462: [ETRM 773[SECST 20.000]1]
1.1618 0.88930

CHNL# 426: [ETRM 667[CANCARB9 13.800]1]
1.2374 0.56040

CHNL# 461: [ETRM990007[FORTYMILE_6 0.6900]G2]
1.1554 -0.1000

CHNL# 460: [ETRM990004[FORTYMILE_3 0.6900]G1]
1.1554 -0.1000



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_1034L_BOWMANTON

FILE: scn3_SP_1034L_Bowmanton.out

THU, APR 14 2022 19:12

BRANCH P

CHNL# 551: [1035L P]
735.77 -246.1

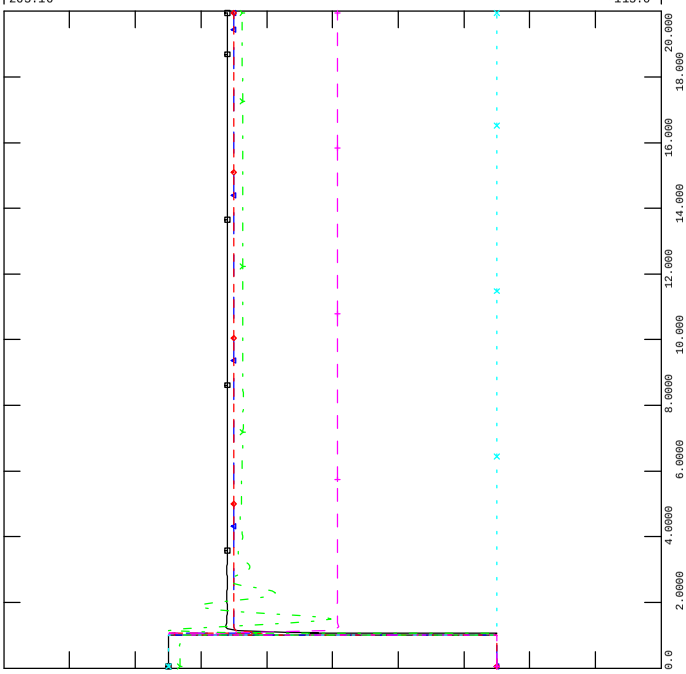
CHNL# 545: [1034L P]
673.17 -224.4

CHNL# 537: [983L_L1_P]
253.24 -756.5

CHNL# 535: [983L_L3_P]
157.89 -467.6

CHNL# 533: [983L_L2_P]
157.80 -467.2

CHNL# 531: [964L_L2_P]
265.16 -115.0



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_1034L_BOWMANTON

FILE: scn3_SP_1034L_Bowmanton.out

THU, APR 14 2022 19:12

REACTIVE POWER

CHNL# 286: [VARS 61994[GRANLEA6 0.6900]G1]
1.0604 -0.5000

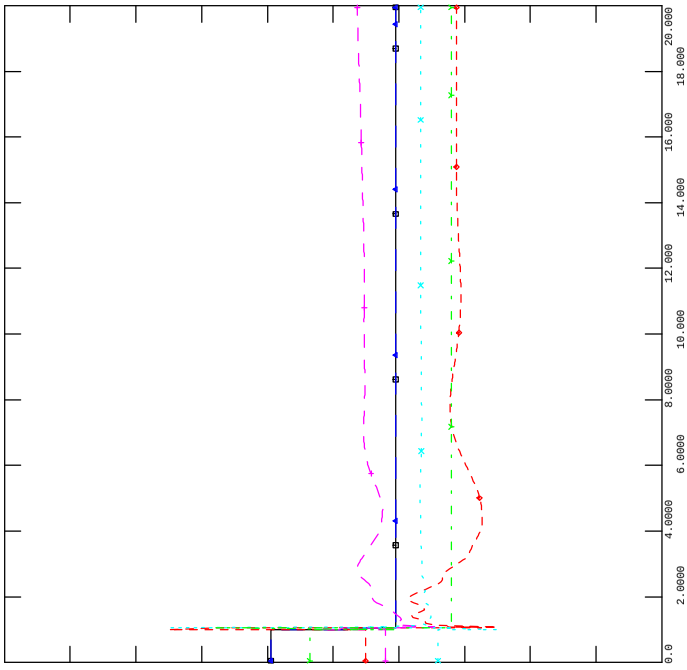
CHNL# 283: [VARS 60990[SHAMROC5 0.6500]G1]
5.3346 -1.302

CHNL# 292: [VARS 773[SECST 20.000]1]
5.2277 -2.649

CHNL# 256: [VARS 667[CANCARB9 13.800]1]
1.3403 -0.7162

CHNL# 291: [VARS990007[FORTYMILE_6 0.6900]G2]
0.73440 -0.5000

CHNL# 290: [VARS990004[FORTYMILE_3 0.6900]G1]
0.73440 -0.5000



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_1034L_BOWMANTON

FILE: scn3_SP_1034L_Bowmanton.out

THU, APR 14 2022 19:12

BUS VOLTAGE

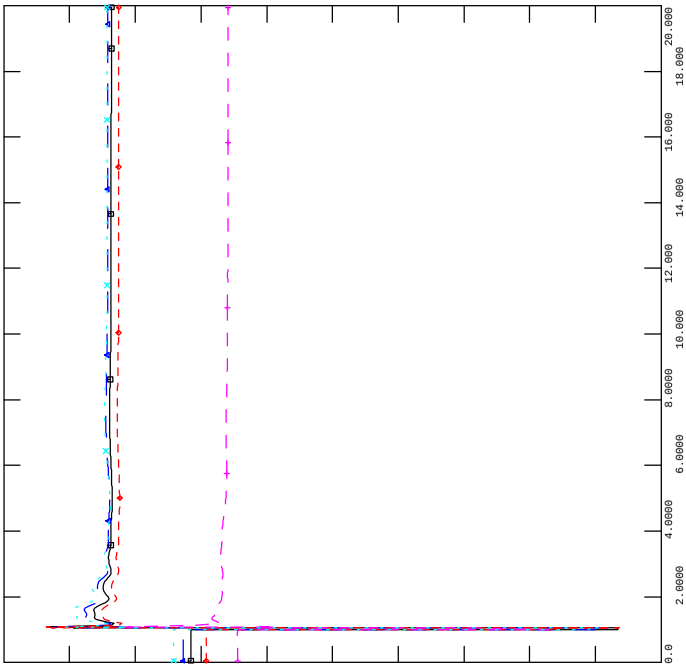
CHNL# 530: [VOLT 976 [ROTBAUR 138.00]]
1.2808 0.19670

CHNL# 525: [VOLT 320 [CHAPPIC7 138.00]]
1.1988 0.61940

CHNL# 528: [VOLT 662 [WHITLA1 240.00]]
1.5125 -0.0446

CHNL# 527: [VOLT 659 [BOWMAN2 138.00]]
1.3531 0.03490

CHNL# 529: [VOLT 669 [BOWMAN1 240.00]]
1.4170 -0.0951

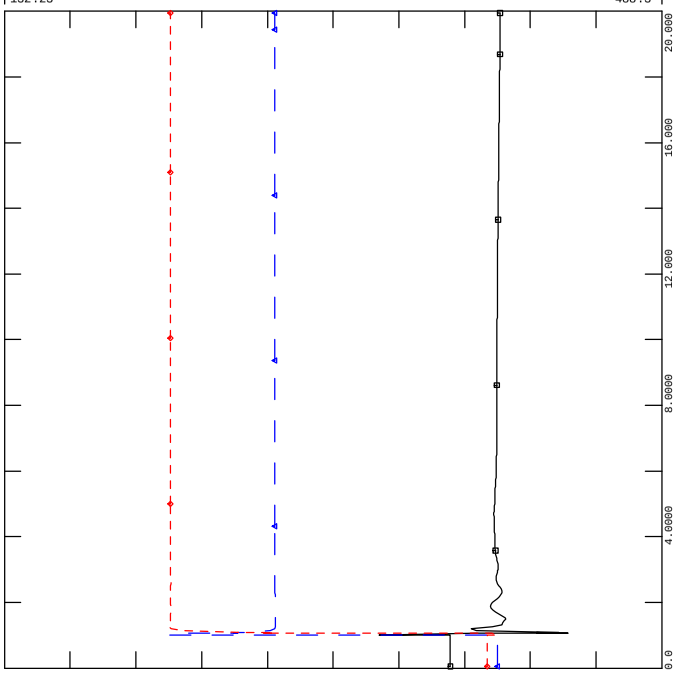


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_1034L_BOWMANTON

FILE: scn3_SP_1034L_Bowmanton.out

THU, APR 14 2022 19:12 BRANCH P

CHNL# 543: [964L_L5_P]
220.31 -113.1
CHNL# 547: [964L_L4_P]
211.69 -630.7
CHNL# 549: [1005L_P]
132.23 -488.3

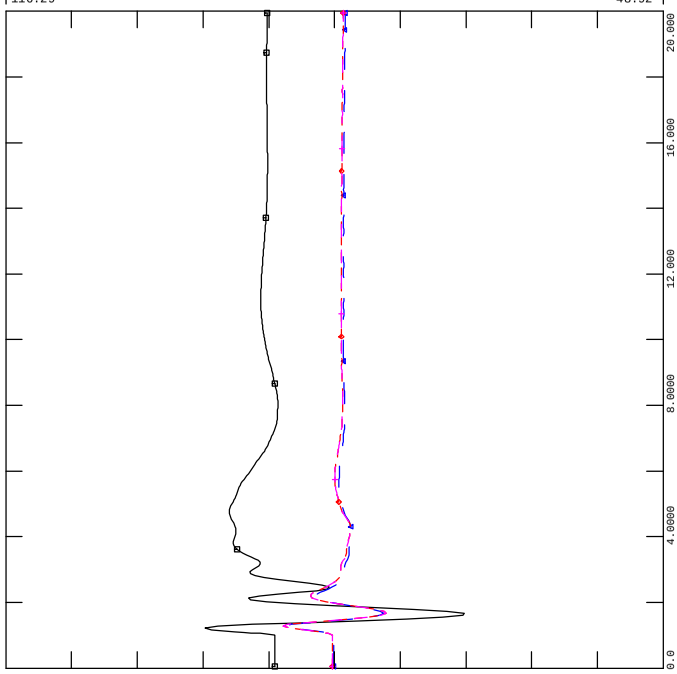


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_1034L_CASSILS

FILE: scn3_SP_1034L_Cassils.out

THU, APR 14 2022 19:12 ROTOR ANGLE

CHNL# 39: [ANGL 775[SECCT2 21.000]3]
62.527 -56.07
CHNL# 38: [ANGL 774[SECCT1 21.000]2]
62.527 -56.07
CHNL# 37: [ANGL 773[SECST 20.000]1]
64.375 -53.05
CHNL# 1: [ANGL 667[CANCARB9 13.800]1]
116.29 -48.92

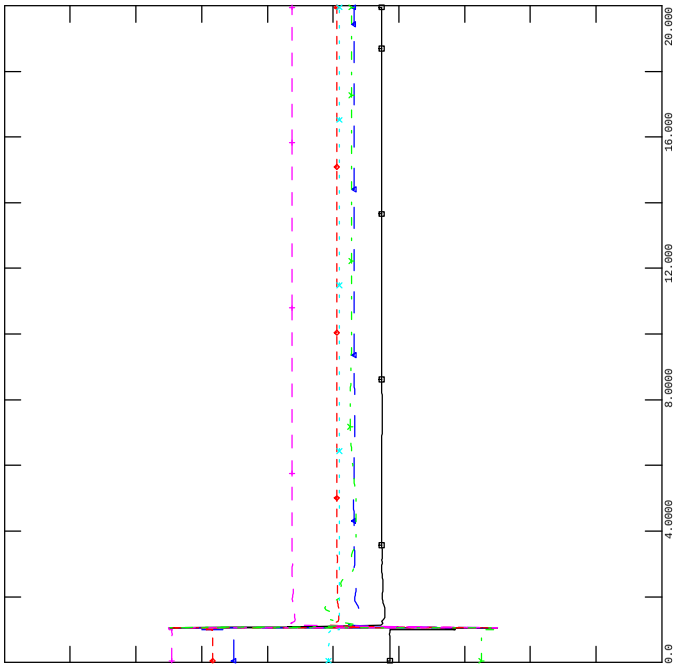


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_1034L_BOWMANTON

FILE: scn3_SP_1034L_Bowmanton.out

THU, APR 14 2022 19:12 BRANCH Q

CHNL# 552: [1035L_Q]
600.14 -209.4
CHNL# 546: [1034L_Q]
41.551 -40.00
CHNL# 538: [983L_L1_Q]
195.73 -582.5
CHNL# 536: [983L_L3_Q]
88.971 -273.0
CHNL# 534: [983L_L2_Q]
108.58 -331.3
CHNL# 532: [964L_L2_Q]
321.43 -119.1

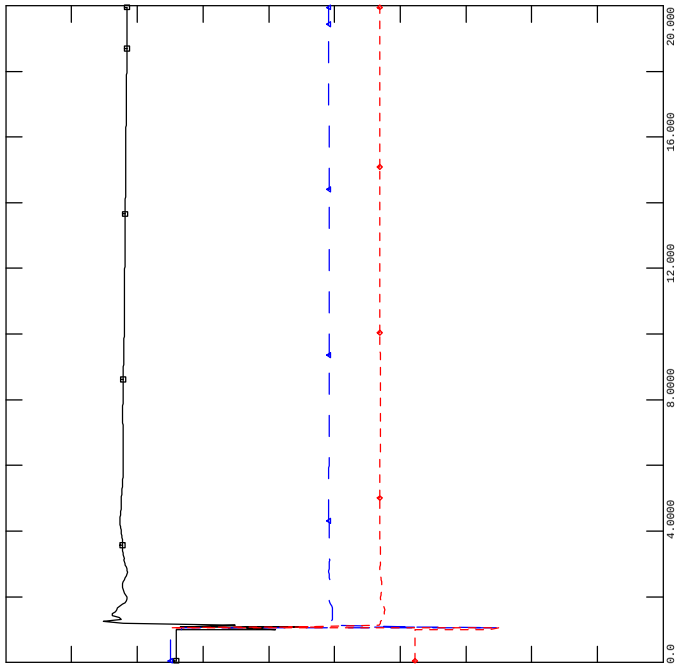


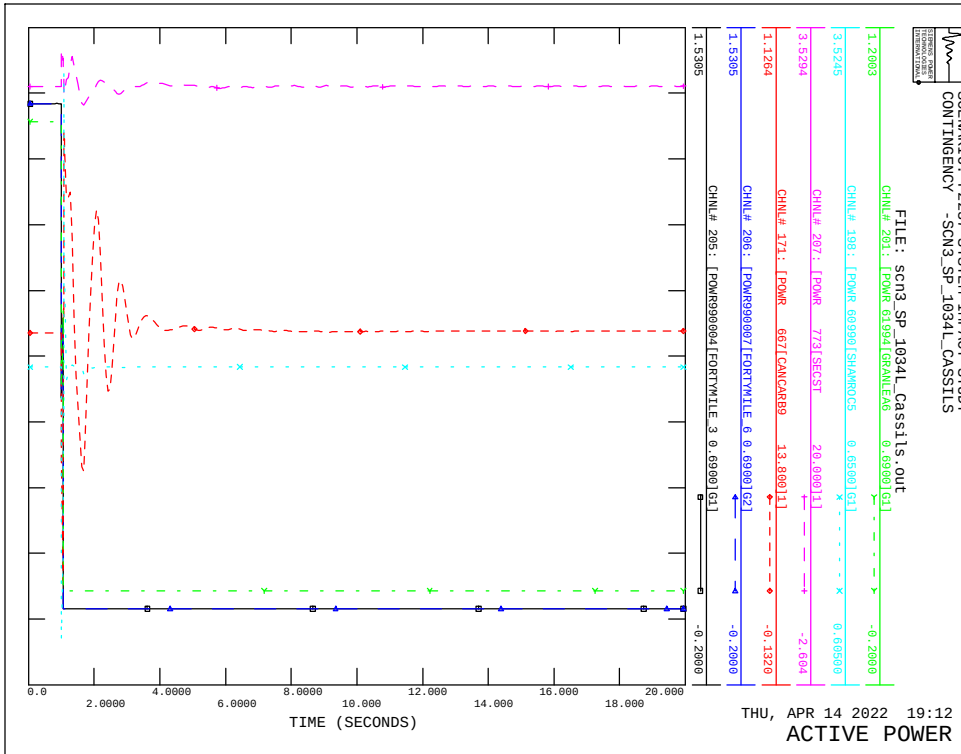
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_1034L_BOWMANTON

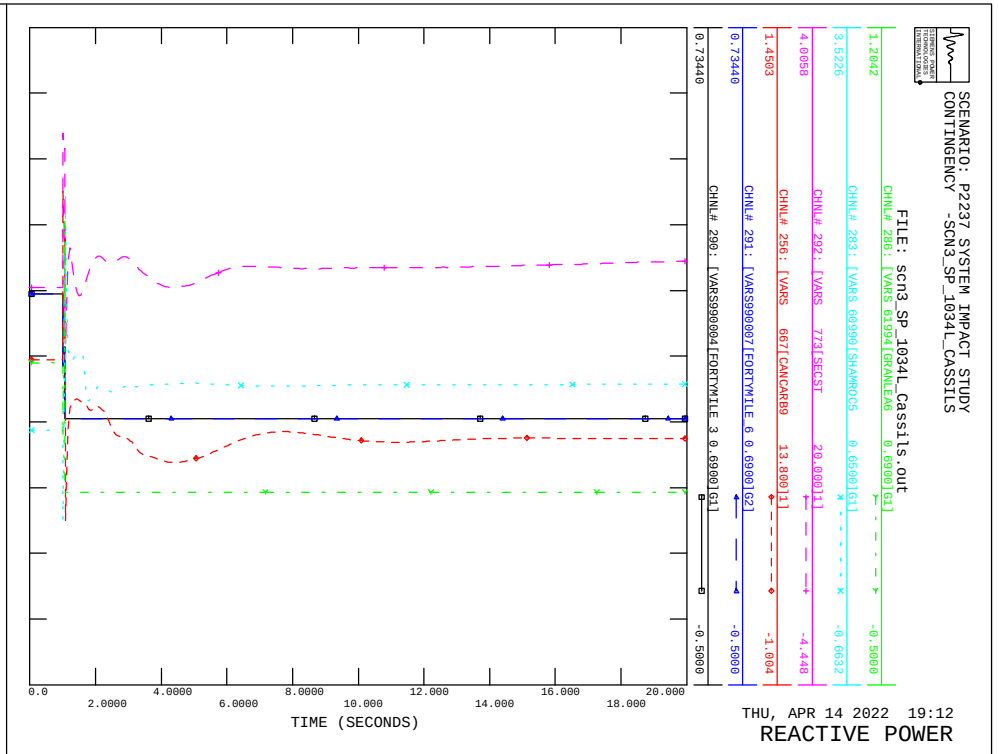
FILE: scn3_SP_1034L_Bowmanton.out

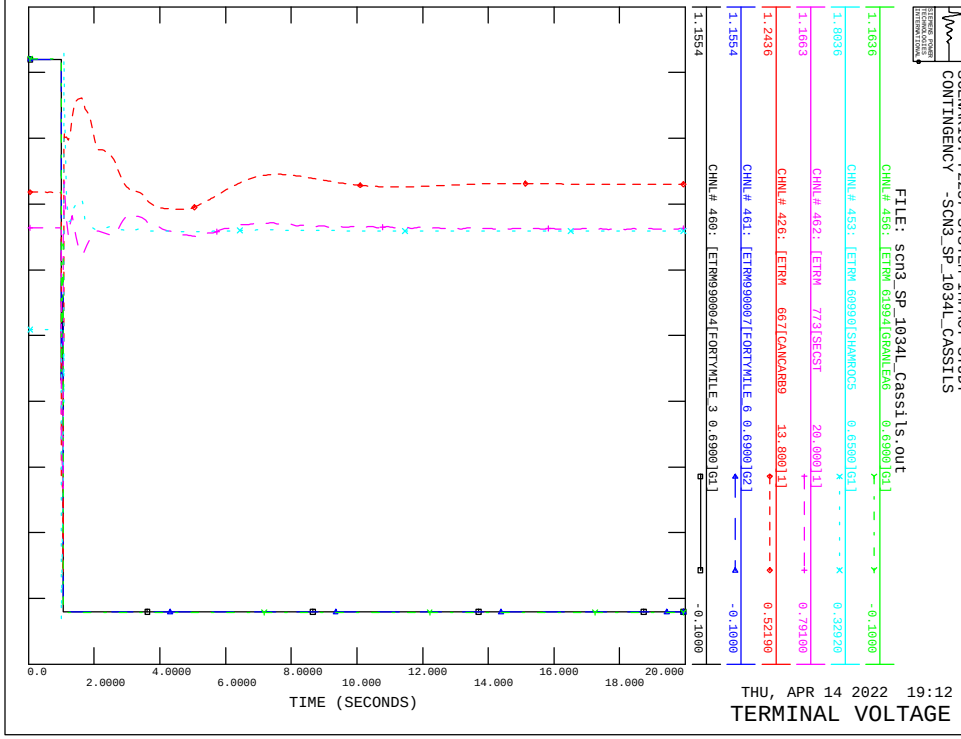
THU, APR 14 2022 19:12 BRANCH Q

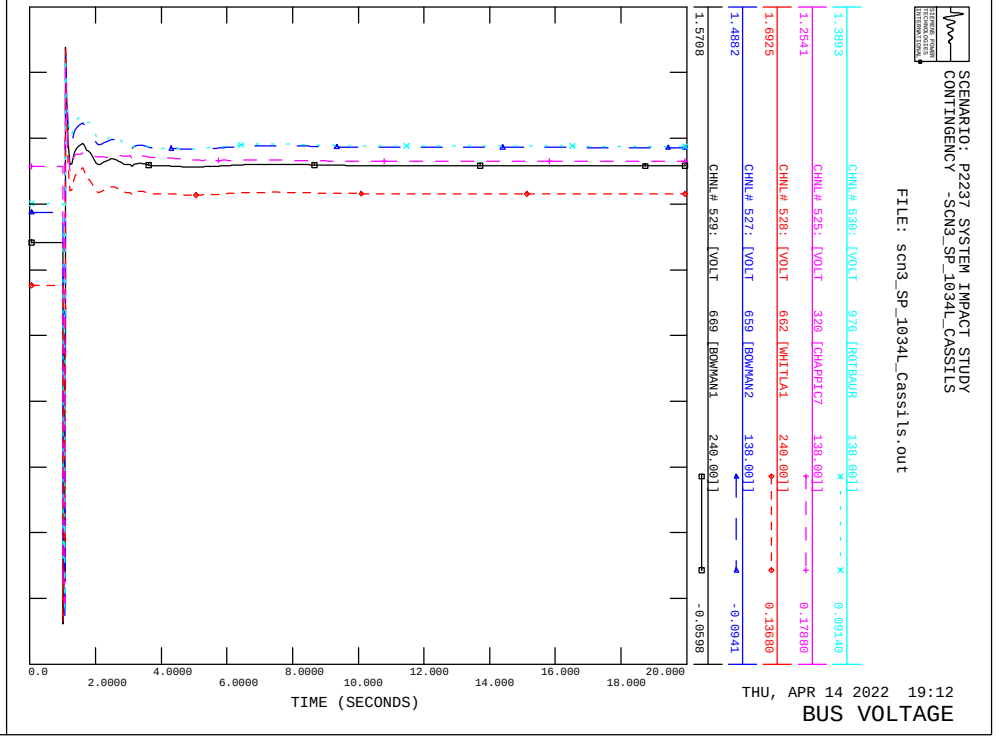
CHNL# 544: [964L_L5_Q]
303.50 -132.0
CHNL# 548: [964L_L4_Q]
150.42 -408.0
CHNL# 550: [1005L_Q]
217.88 -274.1




SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_1034L_CASSILS
FILE: scn3_SP_1034L_Cassils.out
CHNL# 201: [POWR 61994[GRANLEAG 0.6900[G1] 1.2003 -0.2000
CHNL# 198: [POWR 60999[SHAMROC5 0.6500[G1] 3.5245 0.60500
CHNL# 207: [POWR 773[SECST 20.000[1] 3.5294 -2.604
CHNL# 171: [POWR 667[CANCARB9 13.800[1] 1.1264 -0.1320
CHNL# 206: [POWR990007[FORTYMILE 6 0.6900[G2] 1.5305 -0.2000
CHNL# 205: [POWR990004[FORTYMILE 3 0.6900[G1] 1.5305 -0.2000
0.0 2.0000 4.0000 6.0000 8.0000 10.000 12.000 14.000 16.000 18.000 20.000
TIME (SECONDS)
THU, APR 14 2022 19:12
ACTIVE POWER


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_1034L_CASSILS
FILE: scn3_SP_1034L_Cassils.out
CHNL# 286: [VARS 61994[GRANLEAG 0.6900[G1] 1.2042 -0.5000
CHNL# 283: [VARS 60999[SHAMROC5 0.6500[G1] 3.5226 -0.6632
CHNL# 292: [VARS 773[SECST 20.000[1] 4.0658 -4.448
CHNL# 256: [VARS 667[CANCARB9 13.800[1] 1.4503 -1.004
CHNL# 291: [VARS990007[FORTYMILE 6 0.6900[G2] 0.73440 -0.5000
CHNL# 290: [VARS990004[FORTYMILE 3 0.6900[G1] 0.73440 -0.5000
0.0 2.0000 4.0000 6.0000 8.0000 10.000 12.000 14.000 16.000 18.000 20.000
TIME (SECONDS)
THU, APR 14 2022 19:12
REACTIVE POWER


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_1034L_CASSILS
FILE: scn3_SP_1034L_Cassils.out
CHNL# 456: [ETRM 61994[GRANLEAG 0.6900[G1] 1.1636 -0.1000
CHNL# 453: [ETRM 60999[SHAMROC5 0.6500[G1] 1.8036 0.32920
CHNL# 462: [ETRM 773[SECST 20.000[1] 1.1663 0.79100
CHNL# 426: [ETRM 667[CANCARB9 13.800[1] 1.2436 0.52190
CHNL# 461: [ETRM990007[FORTYMILE 6 0.6900[G2] 1.1554 -0.1000
CHNL# 460: [ETRM990004[FORTYMILE 3 0.6900[G1] 1.1554 -0.1000
0.0 2.0000 4.0000 6.0000 8.0000 10.000 12.000 14.000 16.000 18.000 20.000
TIME (SECONDS)
THU, APR 14 2022 19:12
TERMINAL VOLTAGE

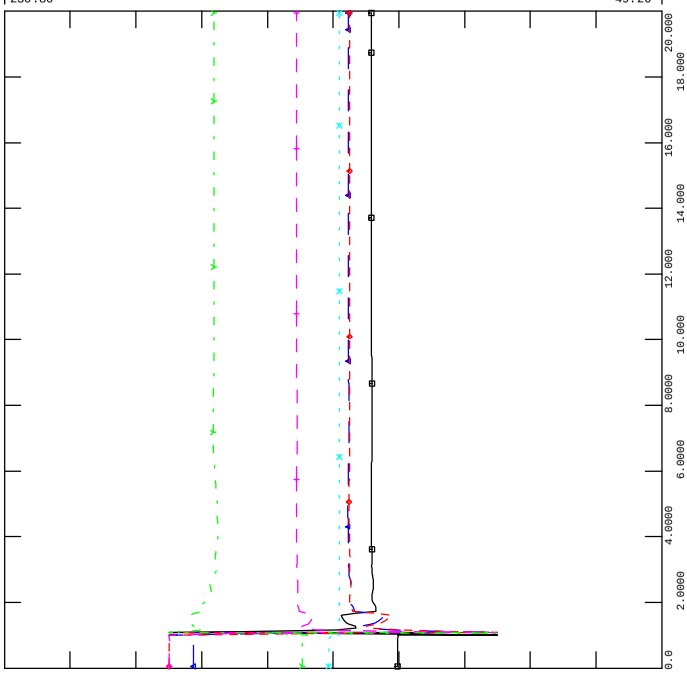

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_1034L_CASSILS
FILE: scn3_SP_1034L_Cassils.out
CHNL# 538: [VOLT 976 [ROTBAUR 138.00[1] 1.3893 0.09140
CHNL# 525: [VOLT 320 [CHAPPIC7 138.00[1] 1.2541 0.17680
CHNL# 528: [VOLT 662 [WHITLA1 240.00[1] 1.6925 0.13680
CHNL# 527: [VOLT 659 [BOWMAN2 138.00[1] 1.4882 -0.0941
CHNL# 529: [VOLT 669 [BOWMAN1 240.00[1] 1.5708 -0.0598
0.0 2.0000 4.0000 6.0000 8.0000 10.000 12.000 14.000 16.000 18.000 20.000
TIME (SECONDS)
THU, APR 14 2022 19:12
BUS VOLTAGE

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_1034L_CASSILS

FILE: scn3_SP_1034L_Cassils.out

THU, APR 14 2022 19:12 BRANCH Q

CHNL# 552: [1035L_Q] 578.59 -670.0
CHNL# 546: [1034L_Q] 41.551 -40.00
CHNL# 538: [983L_L1_Q] 189.46 -576.5
CHNL# 536: [983L_L3_Q] 42.611 -229.6
CHNL# 534: [983L_L2_Q] 61.464 -308.3
CHNL# 532: [964L_L2_Q] 230.80 -49.26

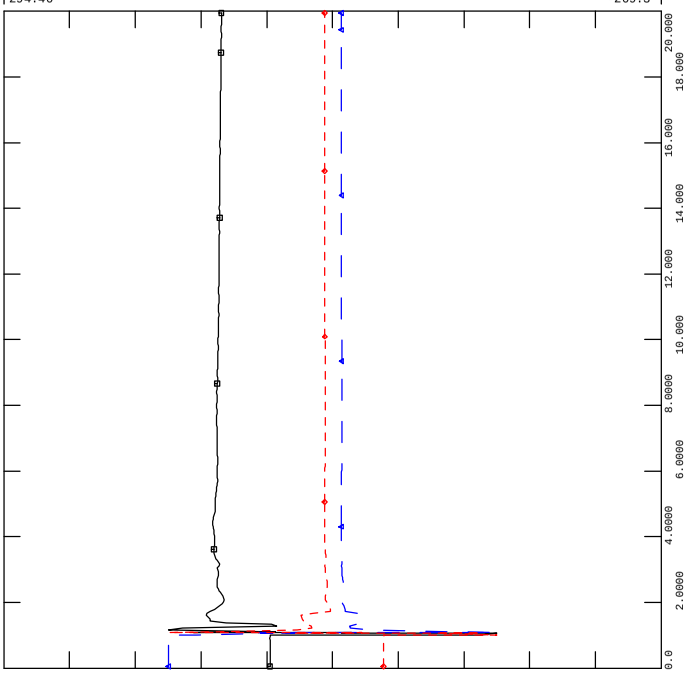


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_1034L_CASSILS

FILE: scn3_SP_1034L_Cassils.out

THU, APR 14 2022 19:12 BRANCH Q

CHNL# 544: [964L_L5_Q] 218.26 -103.3
CHNL# 548: [964L_L4_Q] 144.56 -390.4
CHNL# 550: [1005L_Q] 294.40 -209.3

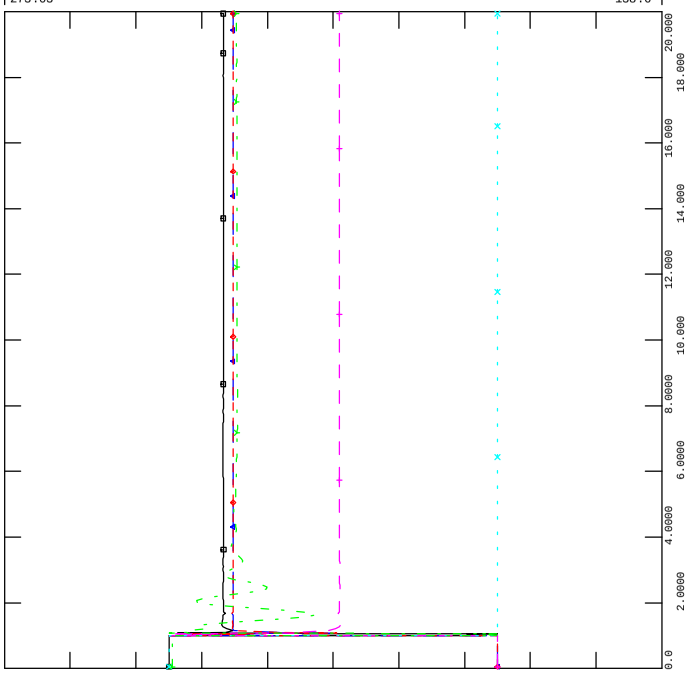


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_1034L_CASSILS

FILE: scn3_SP_1034L_Cassils.out

THU, APR 14 2022 19:12 BRANCH P

CHNL# 551: [1035L_P] 717.76 -242.0
CHNL# 545: [1034L_P] 673.17 -224.4
CHNL# 537: [983L_L1_P] 261.99 -759.5
CHNL# 535: [983L_L3_P] 155.43 -466.7
CHNL# 533: [983L_L2_P] 155.58 -466.5
CHNL# 531: [964L_L2_P] 273.03 -138.6

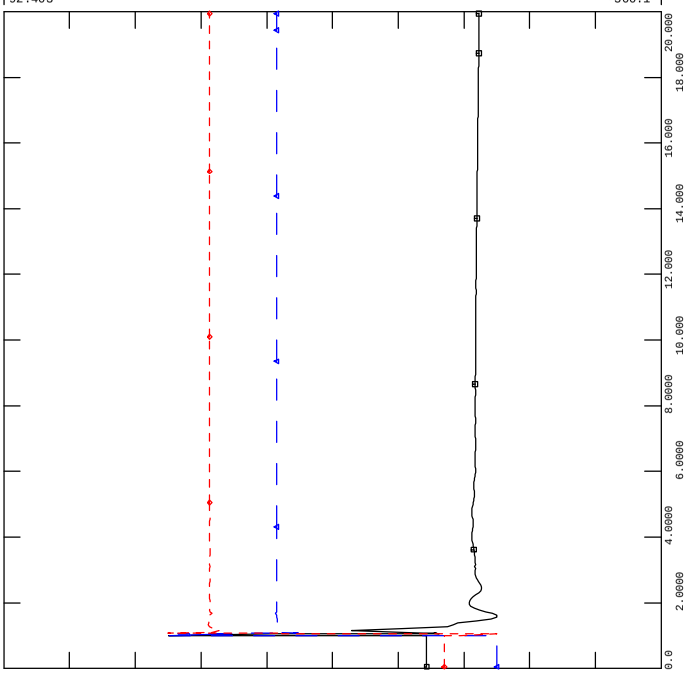


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_1034L_CASSILS

FILE: scn3_SP_1034L_Cassils.out

THU, APR 14 2022 19:12 BRANCH P

CHNL# 543: [964L_L5_P] 277.18 -173.2
CHNL# 547: [964L_L4_P] 218.76 -633.0
CHNL# 549: [1005L_P] 92.403 -500.1



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_1035L_BOWMANTON

FILE: scn3_SP_1035L_Bowmanton.out

THU, APR 14 2022 19:12 ACTIVE POWER

CHNL# 201: [POWR 61994[GRANLEA6 0.6900]G1]
1.2003 -0.2000
CHNL# 198: [POWR 60990[SHAMROC5 0.6500]G1]
3.5277 0.57800
CHNL# 207: [POWR 773[SECST 20.000]1]
3.5183 -2.614
CHNL# 171: [POWR 667[CANCARB9 13.800]1]
1.1155 -0.0406
CHNL# 206: [POWR990007[FORTYMILE_6 0.6900]G2]
1.5305 -0.2000
CHNL# 205: [POWR990004[FORTYMILE_3 0.6900]G1]
1.5305 -0.2000

TIME (SECONDS)
0.0 2.0000 4.0000 6.0000 8.0000 10.000 12.000 14.000 16.000 18.000 20.000

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_1035L_BOWMANTON

FILE: scn3_SP_1035L_Bowmanton.out

THU, APR 14 2022 19:12 TERMINAL VOLTAGE

CHNL# 456: [ETRM 61994[GRANLEA6 0.6900]G1]
1.1636 -0.1000
CHNL# 453: [ETRM 60990[SHAMROC5 0.6500]G1]
1.7823 0.31460
CHNL# 462: [ETRM 773[SECST 20.000]1]
1.1670 0.79310
CHNL# 426: [ETRM 667[CANCARB9 13.800]1]
1.2457 0.54150
CHNL# 461: [ETRM990007[FORTYMILE_6 0.6900]G2]
1.1554 -0.1000
CHNL# 460: [ETRM990004[FORTYMILE_3 0.6900]G1]
1.1554 -0.1000

TIME (SECONDS)
0.0 2.0000 4.0000 6.0000 8.0000 10.000 12.000 14.000 16.000 18.000 20.000

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_1035L_BOWMANTON

FILE: scn3_SP_1035L_Bowmanton.out

THU, APR 14 2022 19:12 ROTOR ANGLE

CHNL# 39: [ANGL 775[SECCT2 21.000]3]
62.476 -55.93
CHNL# 38: [ANGL 774[SECCT1 21.000]2]
62.476 -55.93
CHNL# 37: [ANGL 773[SECST 20.000]1]
64.313 -52.91
CHNL# 1: [ANGL 667[CANCARB9 13.800]1]
116.37 -47.04

TIME (SECONDS)
0.0 2.0000 4.0000 6.0000 8.0000 10.000 12.000 14.000 16.000 18.000 20.000

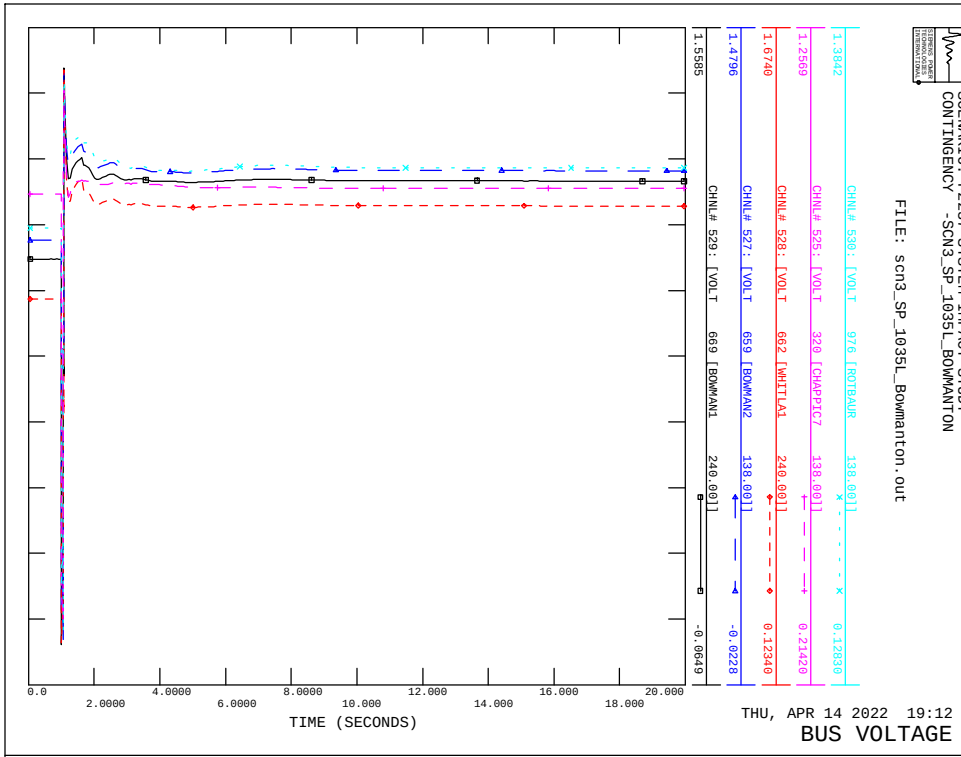
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_1035L_BOWMANTON

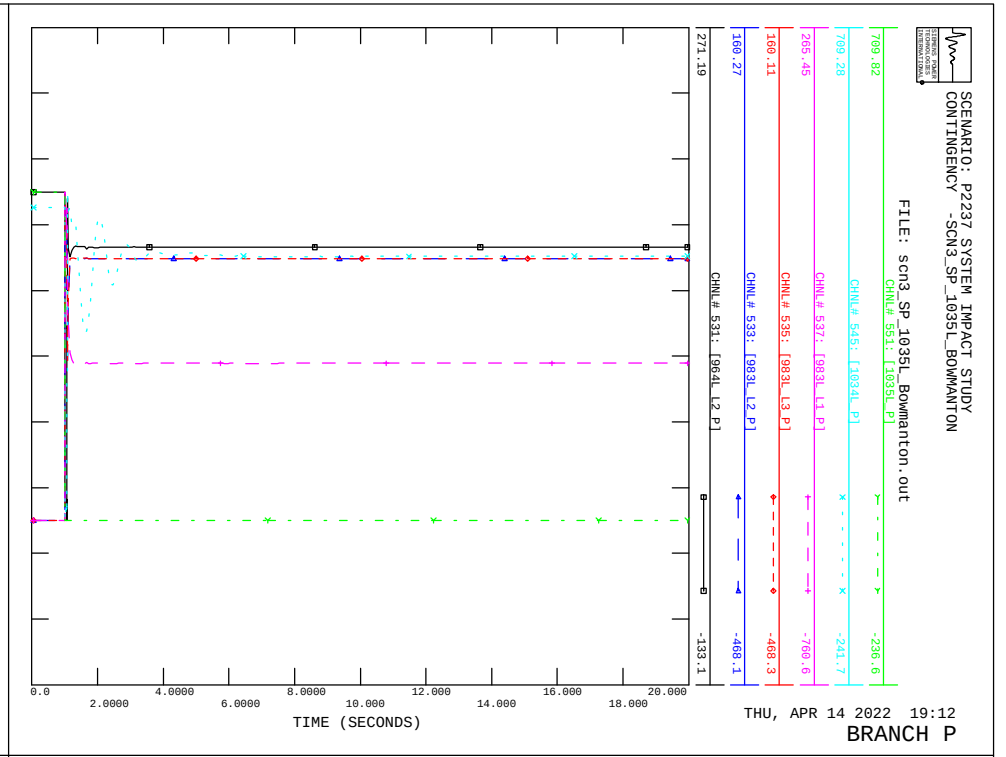
FILE: scn3_SP_1035L_Bowmanton.out

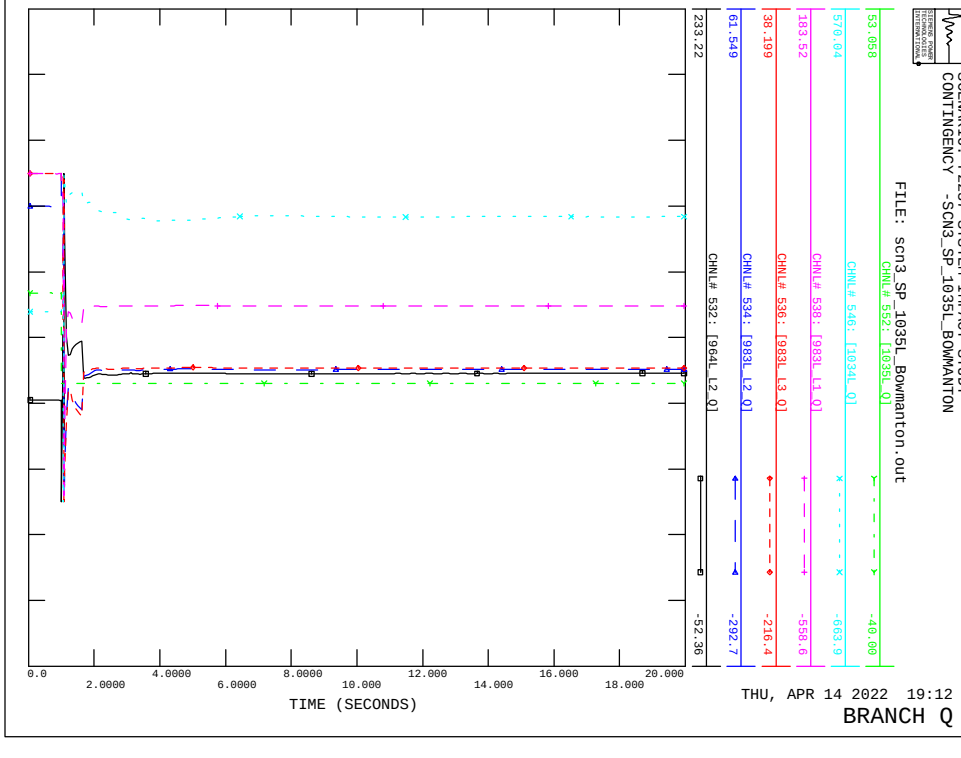
THU, APR 14 2022 19:12 REACTIVE POWER

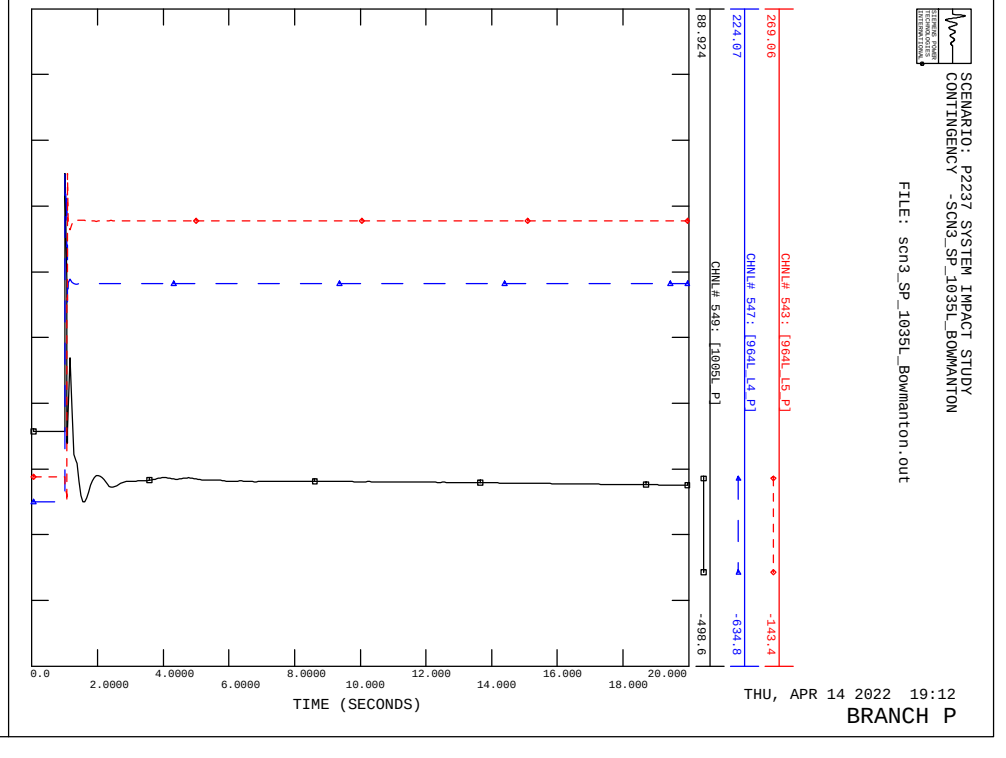
CHNL# 286: [VARS 61994[GRANLEA6 0.6900]G1]
1.1229 -0.5000
CHNL# 283: [VARS 60990[SHAMROC5 0.6500]G1]
3.5381 -0.6855
CHNL# 292: [VARS 773[SECST 20.000]1]
3.9345 -3.417
CHNL# 256: [VARS 667[CANCARB9 13.800]1]
1.4348 -0.9827
CHNL# 291: [VARS990007[FORTYMILE_6 0.6900]G2]
0.73440 -0.5000
CHNL# 290: [VARS990004[FORTYMILE_3 0.6900]G1]
0.73440 -0.5000

TIME (SECONDS)
0.0 2.0000 4.0000 6.0000 8.0000 10.000 12.000 14.000 16.000 18.000 20.000


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_1035L_BOWMANTON
FILE: scn3_SP_1035L_Bowmanton.out
CHNL# 538: [VOLT 976 [ROTBAUR 138.00]] 1.3842 0.12830
CHNL# 529: [VOLT 320 [CHAPPIC7 138.00]] 1.2569 0.21420
CHNL# 528: [VOLT 662 [WHITLA1 240.00]] 1.6740 0.12340
CHNL# 527: [VOLT 659 [BOWMAN2 138.00]] 1.4796 -0.0228
CHNL# 529: [VOLT 669 [BOWMAN1 240.00]] 1.5585 -0.0649
TIME (SECONDS)
THU, APR 14 2022 19:12
BUS VOLTAGE


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_1035L_BOWMANTON
FILE: scn3_SP_1035L_Bowmanton.out
CHNL# 551: [1035L P] 709.82 -236.6
CHNL# 545: [1034L P] 709.28 -241.7
CHNL# 537: [983L L1 P] 265.45 -760.6
CHNL# 535: [983L L3 P] 160.11 -468.3
CHNL# 533: [983L L2 P] 160.27 -468.1
CHNL# 531: [964L L2 P] 271.19 -133.1
TIME (SECONDS)
THU, APR 14 2022 19:12
BRANCH P


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_1035L_BOWMANTON
FILE: scn3_SP_1035L_Bowmanton.out
CHNL# 552: [1035L Q] 53.058 -40.00
CHNL# 546: [1034L Q] 570.04 -663.9
CHNL# 538: [983L L1 Q] 183.52 -558.6
CHNL# 536: [983L L3 Q] 38.199 -216.4
CHNL# 534: [983L L2 Q] 61.549 -292.7
CHNL# 532: [964L L2 Q] 233.22 -52.36
TIME (SECONDS)
THU, APR 14 2022 19:12
BRANCH Q


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_1035L_BOWMANTON
FILE: scn3_SP_1035L_Bowmanton.out
CHNL# 543: [964L L5 P] 269.06 -143.4
CHNL# 547: [964L L4 P] 224.07 -634.8
CHNL# 549: [1005L P] 88.924 -498.6
TIME (SECONDS)
THU, APR 14 2022 19:12
BRANCH P

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_1035L_NEWELL

FILE: scn3_SP_1035L_Newell.out

THU, APR 14 2022 19:12

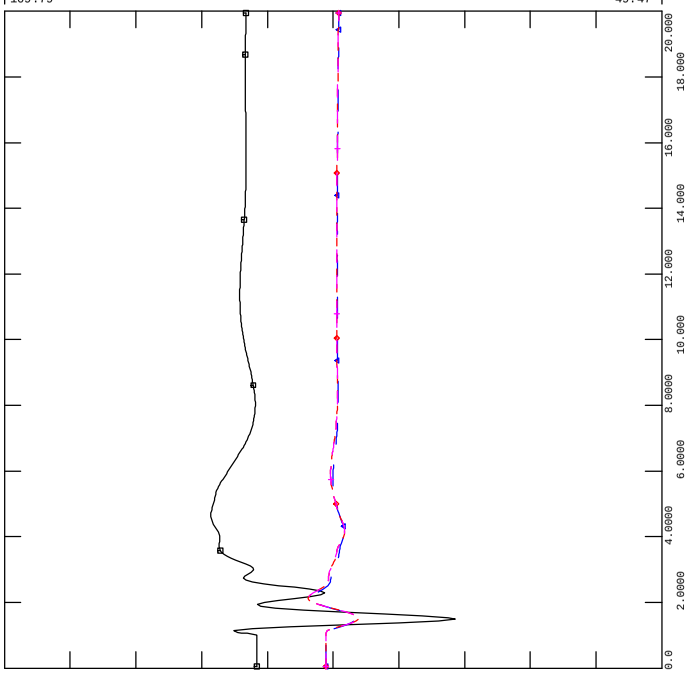
ROTOR ANGLE

CHNL# 39: [ANGL 775[SECCT2 21.000]3]
56.626 -51.64

CHNL# 38: [ANGL 774[SECCT1 21.000]2]
56.626 -51.64

CHNL# 37: [ANGL 773[SECST 20.000]1]
58.272 -48.98

CHNL# 1: [ANGL 667[CANCARB9 13.800]1]
109.79 -49.47



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_1035L_NEWELL

FILE: scn3_SP_1035L_Newell.out

THU, APR 14 2022 19:12

REACTIVE POWER

CHNL# 286: [VARS 61994[GRANLEA6 0.6900]G1]
1.1460 -0.5000

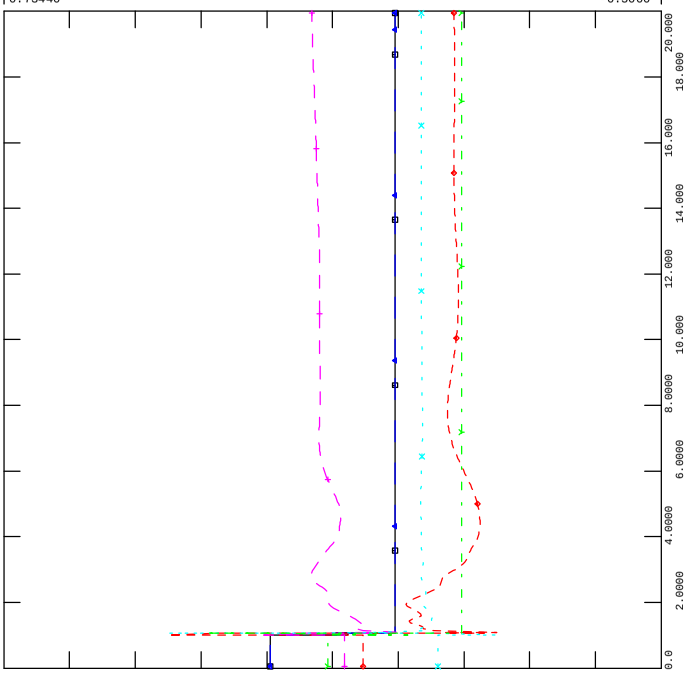
CHNL# 283: [VARS 60990[SHAMROC5 0.6500]G1]
5.3814 -1.318

CHNL# 292: [VARS 773[SECST 20.000]1]
4.2298 -2.654

CHNL# 256: [VARS 667[CANCARB9 13.800]1]
1.3455 -0.7319

CHNL# 291: [VARS990007[FORTYMILE_6 0.6900]G2]
0.73440 -0.5000

CHNL# 290: [VARS990004[FORTYMILE 3 0.6900]G1]
0.73440 -0.5000



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_1035L_BOWMANTON

FILE: scn3_SP_1035L_Bowmanton.out

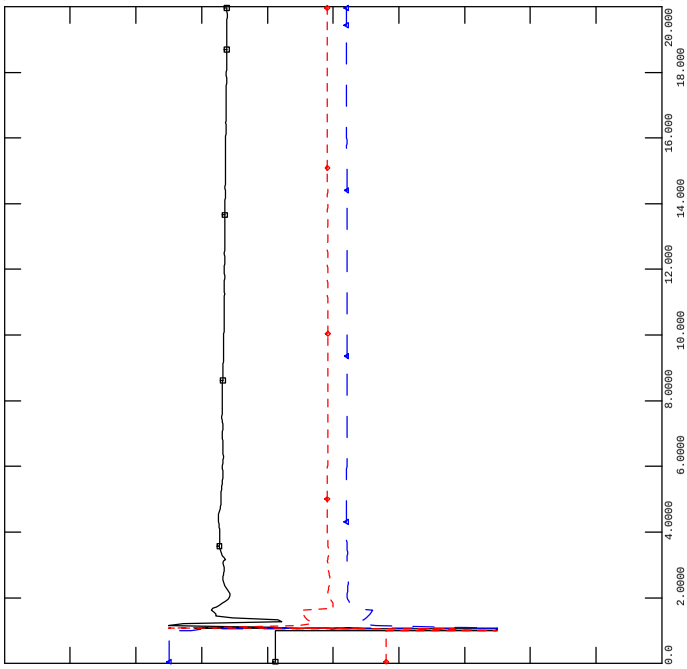
THU, APR 14 2022 19:12

BRANCH Q

CHNL# 544: [964L L5 Q]
221.90 -104.4

CHNL# 548: [964L L4 Q]
141.85 -382.3

CHNL# 550: [1005L Q]
290.57 -195.1



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_1035L_NEWELL

FILE: scn3_SP_1035L_Newell.out

THU, APR 14 2022 19:12

ACTIVE POWER

CHNL# 201: [POWR 61994[GRANLEA6 0.6900]G1]
1.2003 -0.2000

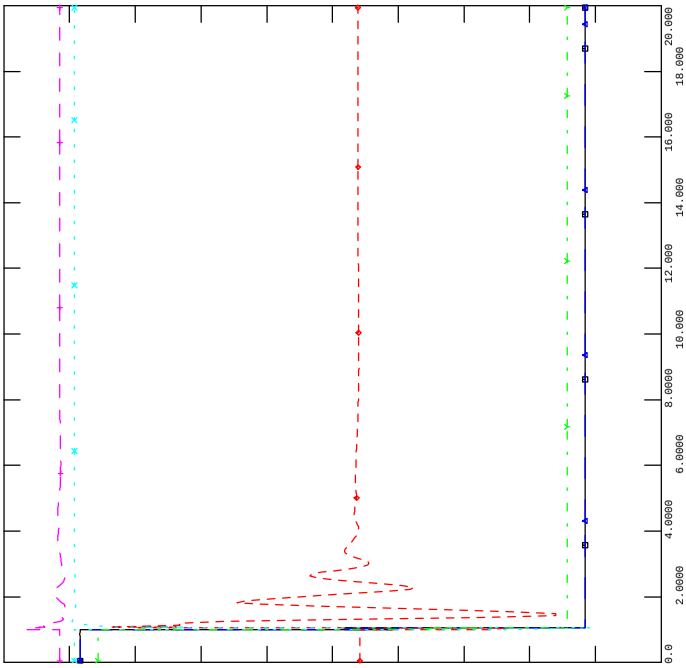
CHNL# 198: [POWR 60990[SHAMROC5 0.6500]G1]
2.2237 0.29620

CHNL# 207: [POWR 773[SECST 20.000]1]
3.5100 -2.728

CHNL# 171: [POWR 667[CANCARB9 13.800]1]
1.2175 -0.0299

CHNL# 206: [POWR990007[FORTYMILE_6 0.6900]G2]
1.5305 -0.2000

CHNL# 205: [POWR990004[FORTYMILE_3 0.6900]G1]
1.5305 -0.2000



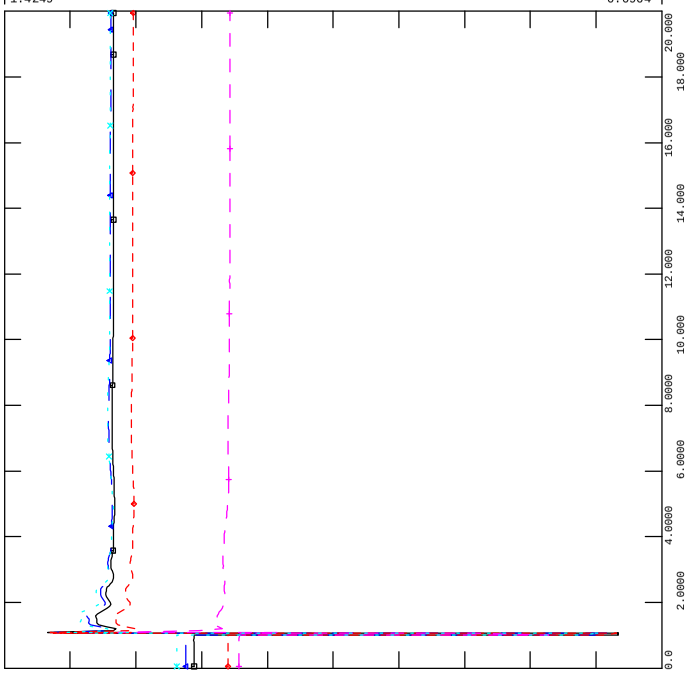
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_1035L_NEWELL

FILE: scn3_SP_1035L_Newell.out

THU, APR 14 2022 19:12

BUS VOLTAGE

CHNL# 530: [VOLT 976 [ROTBAUR 138.00]]
1.2882 0.19020
CHNL# 525: [VOLT 320 [CHAPPIC7 138.00]]
1.2004 0.61940
CHNL# 528: [VOLT 662 [WHITLA1 240.00]]
1.5259 0.07630
CHNL# 527: [VOLT 659 [BOWMAN2 138.00]]
1.3618 0.02790
CHNL# 529: [VOLT 669 [BOWMAN1 240.00]]
1.4249 -0.0964



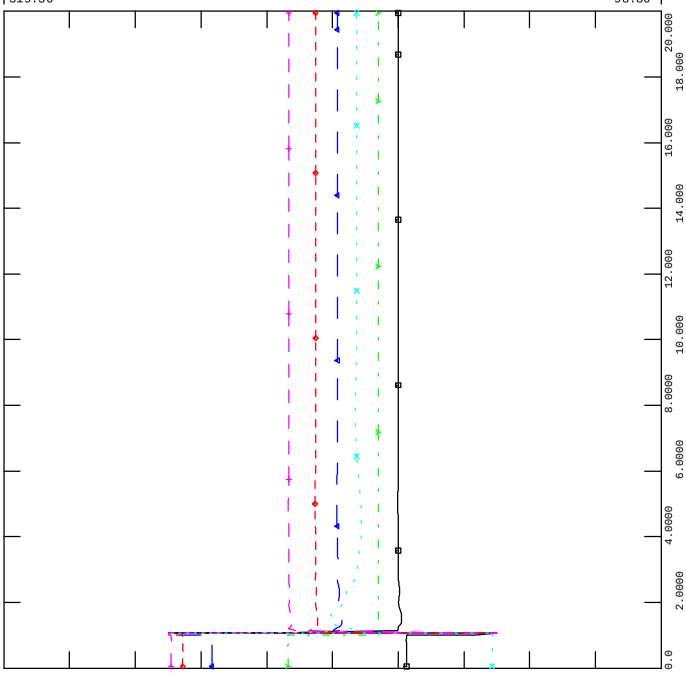
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_1035L_NEWELL

FILE: scn3_SP_1035L_Newell.out

THU, APR 14 2022 19:12

BRANCH Q

CHNL# 552: [1035L Q]
53.058 -40.00
CHNL# 546: [1034L Q]
614.55 -211.2
CHNL# 538: [983L_L1_Q]
200.45 -596.6
CHNL# 536: [983L_L3_Q]
66.963 -272.8
CHNL# 534: [983L_L2_Q]
88.685 -333.8
CHNL# 532: [964L_L2_Q]
319.36 -98.86



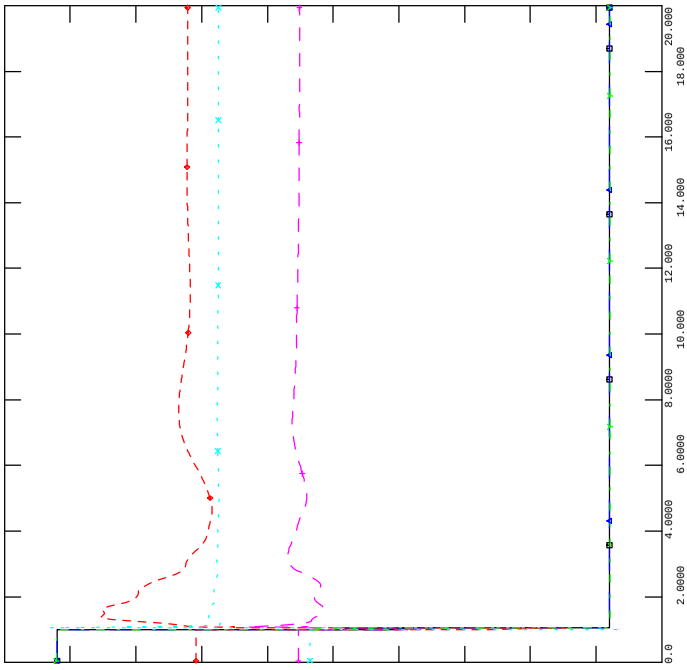
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_1035L_NEWELL

FILE: scn3_SP_1035L_Newell.out

THU, APR 14 2022 19:12

TERMINAL VOLTAGE

CHNL# 456: [ETRM 61994[GRANLEA6 0.6900]G1]
1.1636 -0.1000
CHNL# 453: [ETRM 60990[SHAMROC5 0.6500]G1]
1.7547 0.30090
CHNL# 462: [ETRM 773[SECST 20.000]1]
1.1617 0.88930
CHNL# 426: [ETRM 667[CANCARB9 13.800]1]
1.2386 0.55740
CHNL# 461: [ETRM990007[FORTYMILE_6 0.6900]G2]
1.1554 -0.1000
CHNL# 460: [ETRM990004[FORTYMILE_3 0.6900]G1]
1.1554 -0.1000



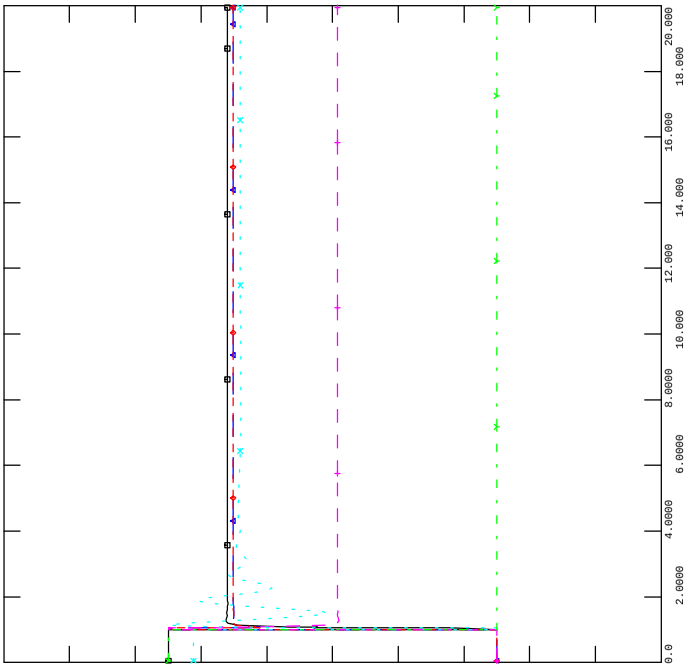
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_1035L_NEWELL

FILE: scn3_SP_1035L_Newell.out

THU, APR 14 2022 19:12

BRANCH P

CHNL# 551: [1035L_P]
709.82 -236.6
CHNL# 545: [1034L_P]
730.09 -245.7
CHNL# 537: [983L_L1_P]
254.34 -756.9
CHNL# 535: [983L_L3_P]
156.99 -467.3
CHNL# 533: [983L_L2_P]
157.03 -467.0
CHNL# 531: [964L_L2_P]
264.80 -113.9



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_1035L_NEWELL

FILE: scn3_SP_1035L_Newell.out

THU, APR 14 2022 19:12 BRANCH Q

CHNL# 544: [964L_L5_Q] 309.28 -137.6
CHNL# 548: [964L_L4_Q] 154.13 -419.1
CHNL# 550: [1005L_Q] 217.54 -278.1

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_964LY_BOWMANTON

FILE: scn4_SL_964LY_Bowmanton.out

THU, APR 14 2022 19:12 ACTIVE POWER

CHNL# 195: [POWR 61994[GRANLEA6 0.6900]G1] 1.2551 0.01910
CHNL# 193: [POWR 60990[SHAMROC5 0.6500]G1] 2.2191 0.23420
CHNL# 201: [POWR 773[SECST 20.000]1] 1.9196 0.96660
CHNL# 167: [POWR 667[CANCARB9 13.800]1] 0.89080 -0.1988
CHNL# 200: [POWR990007[FORTYMILE_6 0.6900]G2] 1.5300 -0.2000
CHNL# 199: [POWR990004[FORTYMILE 3 0.6900]G1] 1.5300 -0.2000

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN3_SP_1035L_NEWELL

FILE: scn3_SP_1035L_Newell.out

THU, APR 14 2022 19:12 BRANCH P

CHNL# 543: [964L_L5_P] 220.22 -113.1
CHNL# 547: [964L_L4_P] 212.36 -630.9
CHNL# 549: [1005L_P] 133.54 -484.2

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_964LY_BOWMANTON

FILE: scn4_SL_964LY_Bowmanton.out

THU, APR 14 2022 19:12 ROTOR ANGLE

CHNL# 37: [ANGL 775[SECCT2 21.000]3] 29.838 -75.92
CHNL# 36: [ANGL 774[SECCT1 21.000]2] 29.838 -75.92
CHNL# 35: [ANGL 773[SECST 20.000]1] 30.457 -74.69
CHNL# 1: [ANGL 667[CANCARB9 13.800]1] 74.672 -60.73

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_964LY_BOWMANTON

FILE: scn4_SL_964LY_Bowmanton.out

THU, APR 14 2022 19:12

TERMINAL VOLTAGE

CHNL# 444: [ETRM 61994[GRANLEA6 0.6900]G1]
1.7471 0.13830

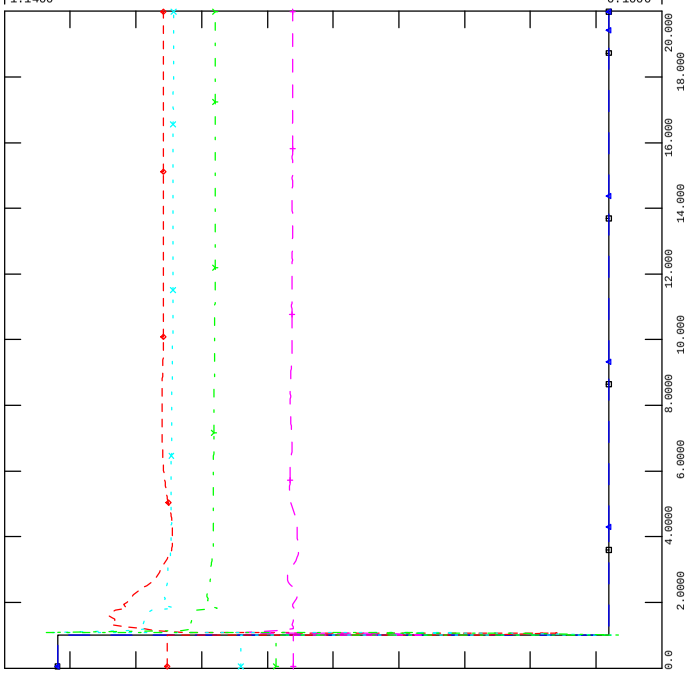
CHNL# 442: [ETRM 60990[SHAMROC5 0.6500]G1]
1.5577 0.17600

CHNL# 450: [ETRM 773[SECST 20.000]1]
1.1298 0.85690

CHNL# 416: [ETRM 667[CANCARB9 13.800]1]
1.1955 0.56780

CHNL# 449: [ETRM990007[FORTYMILE_6 0.6900]G2]
1.1400 -0.1000

CHNL# 448: [ETRM990004[FORTYMILE_3 0.6900]G1]
1.1400 -0.1000



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_964LY_BOWMANTON

FILE: scn4_SL_964LY_Bowmanton.out

THU, APR 14 2022 19:12

BRANCH P

CHNL# 539: [1035L P]
715.68 -237.4

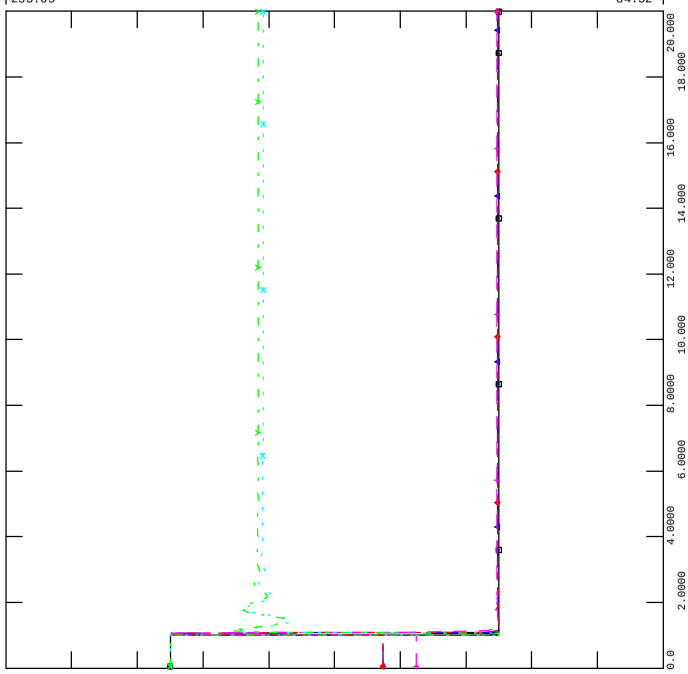
CHNL# 533: [1034L P]
681.73 -226.4

CHNL# 525: [983L_L1_P]
335.94 -1010.

CHNL# 523: [983L_L3_P]
239.46 -721.6

CHNL# 521: [983L_L2_P]
239.26 -720.9

CHNL# 519: [964L L2 P]
253.65 -84.52



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_964LY_BOWMANTON

FILE: scn4_SL_964LY_Bowmanton.out

THU, APR 14 2022 19:12

REACTIVE POWER

CHNL# 278: [VARS 61994[GRANLEA6 0.6900]G1]
2.2858 -0.6301

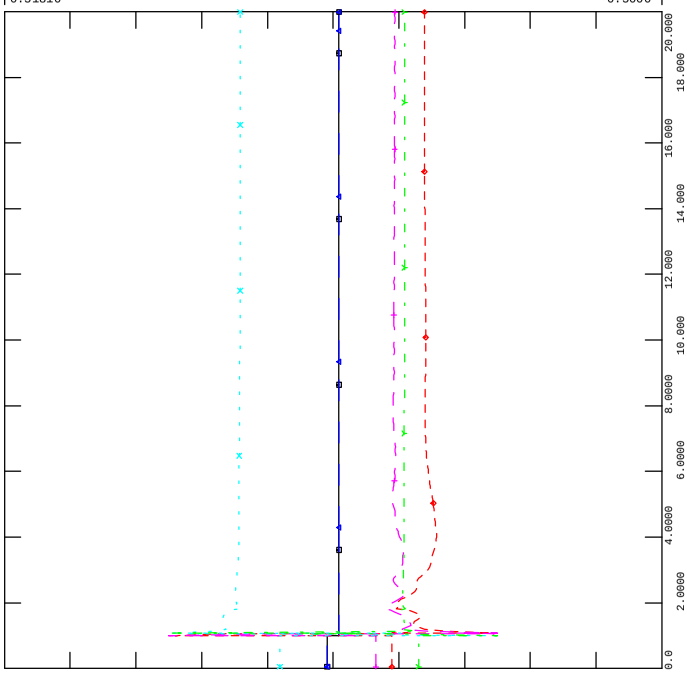
CHNL# 276: [VARS 60990[SHAMROC5 0.6500]G1]
1.8586 -0.2866

CHNL# 284: [VARS 773[SECST 20.000]1]
1.6482 -1.278

CHNL# 250: [VARS 667[CANCARB9 13.800]1]
1.2498 -0.6792

CHNL# 283: [VARS990007[FORTYMILE_6 0.6900]G2]
0.51810 -0.5000

CHNL# 282: [VARS990004[FORTYMILE_3 0.6900]G1]
0.51810 -0.5000



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_964LY_BOWMANTON

FILE: scn4_SL_964LY_Bowmanton.out

THU, APR 14 2022 19:12

BUS VOLTAGE

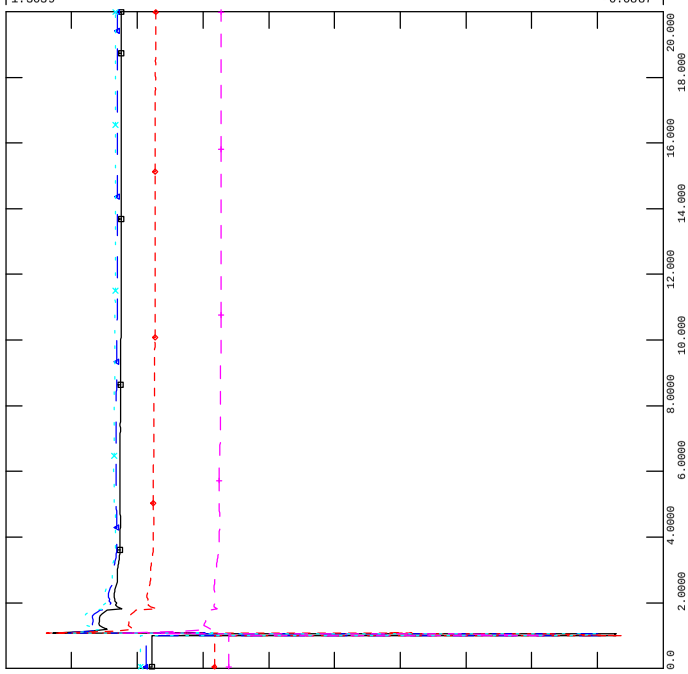
CHNL# 518: [VOLT 976 [ROTBAUR 138.00]]
1.2225 0.21150

CHNL# 513: [VOLT 320 [CHAPPIC7 138.00]]
1.2113 0.64590

CHNL# 516: [VOLT 662 [WHITLA1 240.00]]
1.5388 -0.0706

CHNL# 515: [VOLT 659 [BOWMAN2 138.00]]
1.2652 0.04420

CHNL# 517: [VOLT 669 [BOWMAN1 240.00]]
1.3039 -0.0887



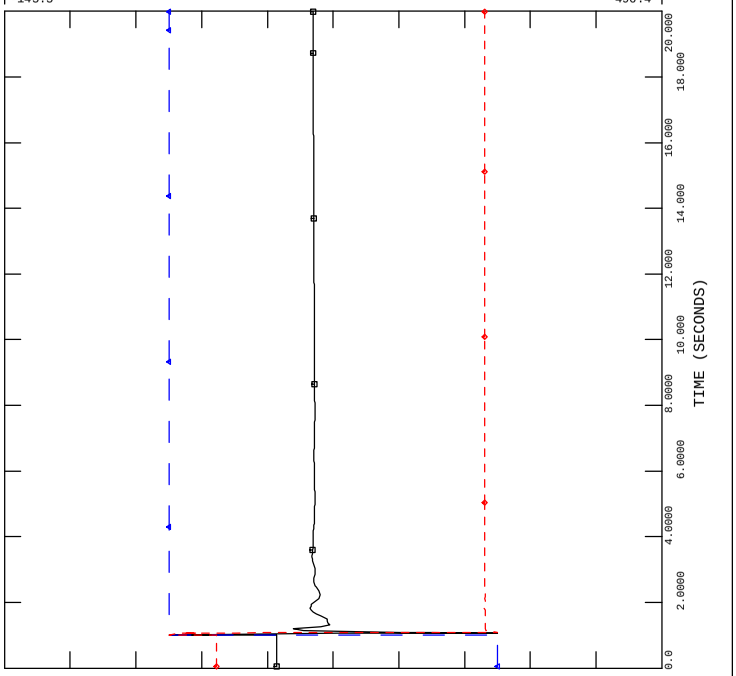
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_964LY_BOWMANTON

FILE: scn4_SL_964LY_Bowmanton.out

THU, APR 14 2022 19:12 BRANCH P

CHNL# 531: [964L_L5_P]
109.43 -307.3
CHNL# 535: [964L_L4_P]
209.50 -628.5
CHNL# 537: [1005L_P]
-145.5 -496.4

TIME (SECONDS)



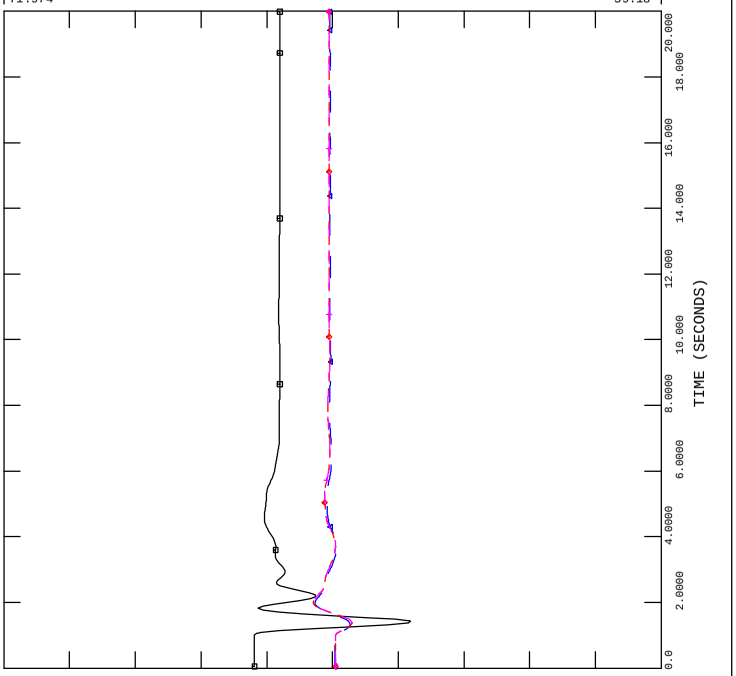
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_964LY_MURRAY_LAKE

FILE: scn4_SL_964LY_Murray_Lake.out

THU, APR 14 2022 19:12 ROTOR ANGLE

CHNL# 37: [ANGL 775[SECCT2 21.000]3]
29.676 -76.58
CHNL# 36: [ANGL 774[SECCT1 21.000]2]
29.676 -76.58
CHNL# 35: [ANGL 773[SECST 20.000]1]
30.316 -75.36
CHNL# 1: [ANGL 667[CANCARB9 13.800]1]
71.974 -59.18

TIME (SECONDS)



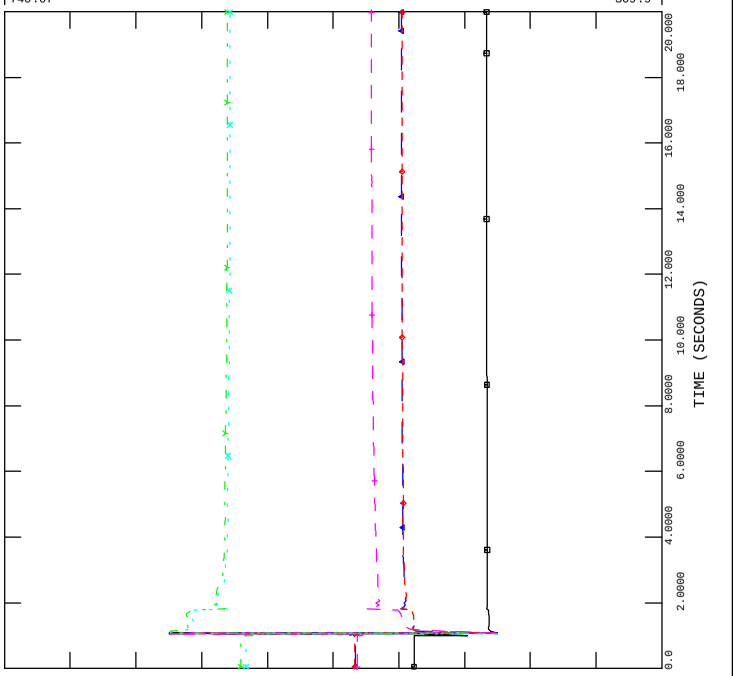
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_964LY_BOWMANTON

FILE: scn4_SL_964LY_Bowmanton.out

THU, APR 14 2022 19:12 BRANCH Q

CHNL# 540: [1035L_Q]
187.92 -333.1
CHNL# 534: [1034L_Q]
176.83 -332.7
CHNL# 526: [983L_L1_Q]
696.24 -582.7
CHNL# 524: [983L_L3_Q]
998.02 -883.5
CHNL# 522: [983L_L2_Q]
1010.9 -927.3
CHNL# 520: [964L_L2_Q]
740.07 -309.9

TIME (SECONDS)



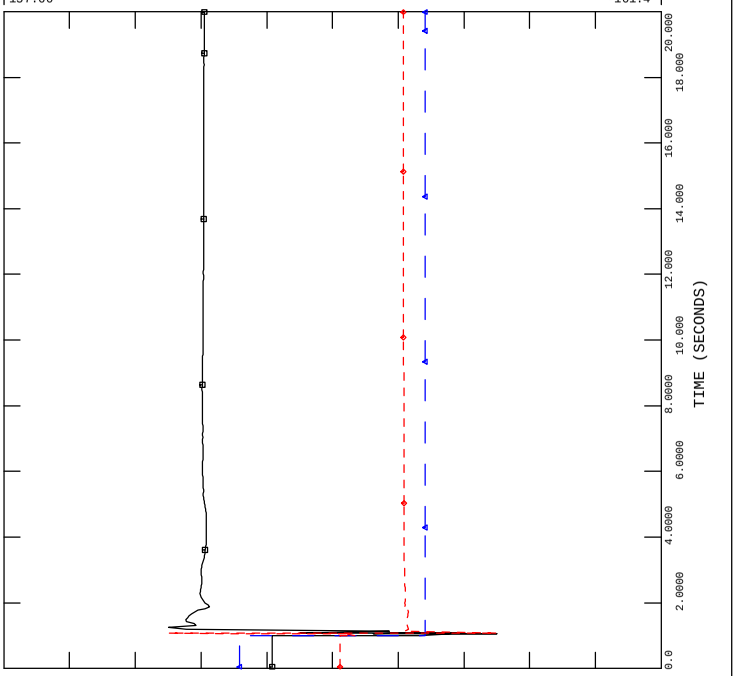
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_964LY_BOWMANTON

FILE: scn4_SL_964LY_Bowmanton.out

THU, APR 14 2022 19:12 BRANCH Q

CHNL# 532: [964L_L5_Q]
768.27 -667.3
CHNL# 536: [964L_L4_Q]
71.453 -40.00
CHNL# 538: [1005L_Q]
157.60 -101.4

TIME (SECONDS)

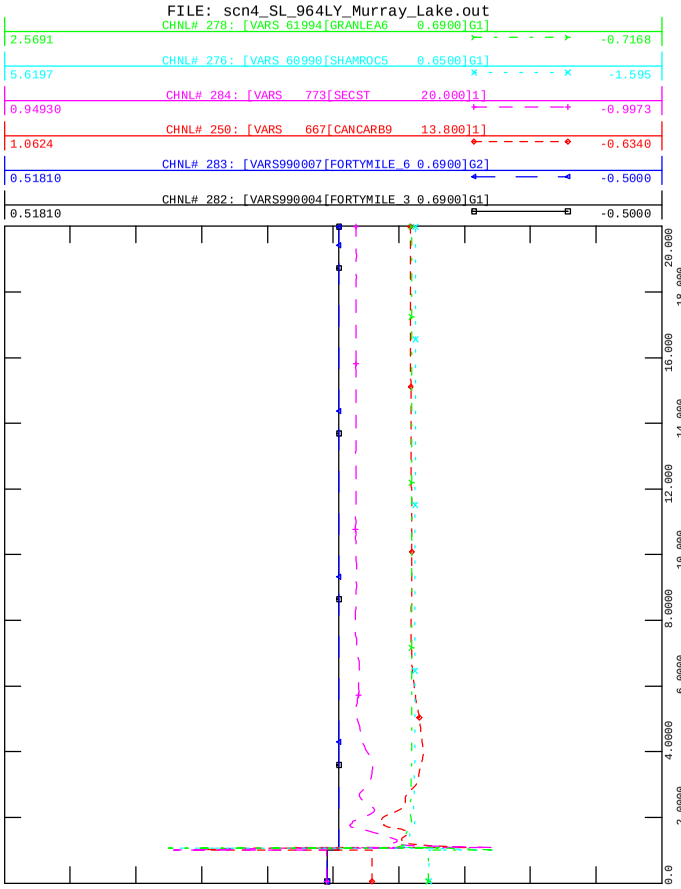


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_964LY_MURRAY_LAKE

FILE: scn4_SL_964LY_Murray_Lake.out

THU, APR 14 2022 19:12

REACTIVE POWER

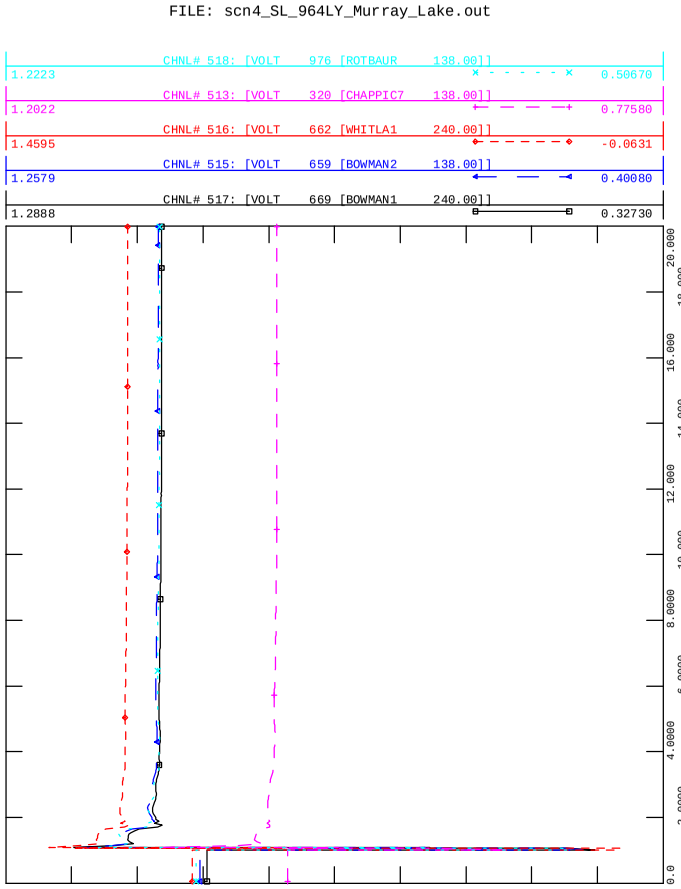


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_964LY_MURRAY_LAKE

FILE: scn4_SL_964LY_Murray_Lake.out

THU, APR 14 2022 19:12

BUS VOLTAGE

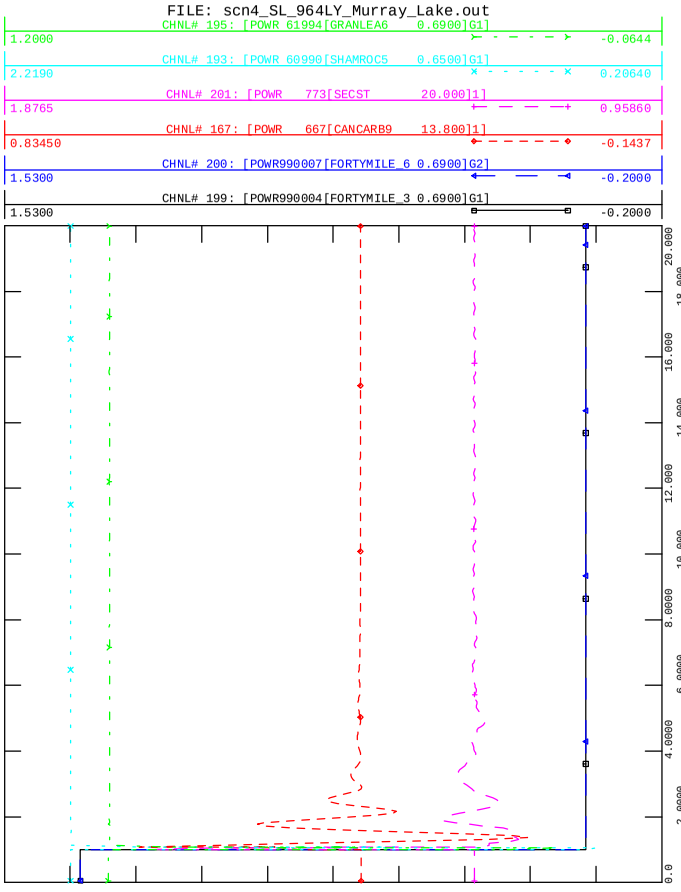


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_964LY_MURRAY_LAKE

FILE: scn4_SL_964LY_Murray_Lake.out

THU, APR 14 2022 19:12

ACTIVE POWER

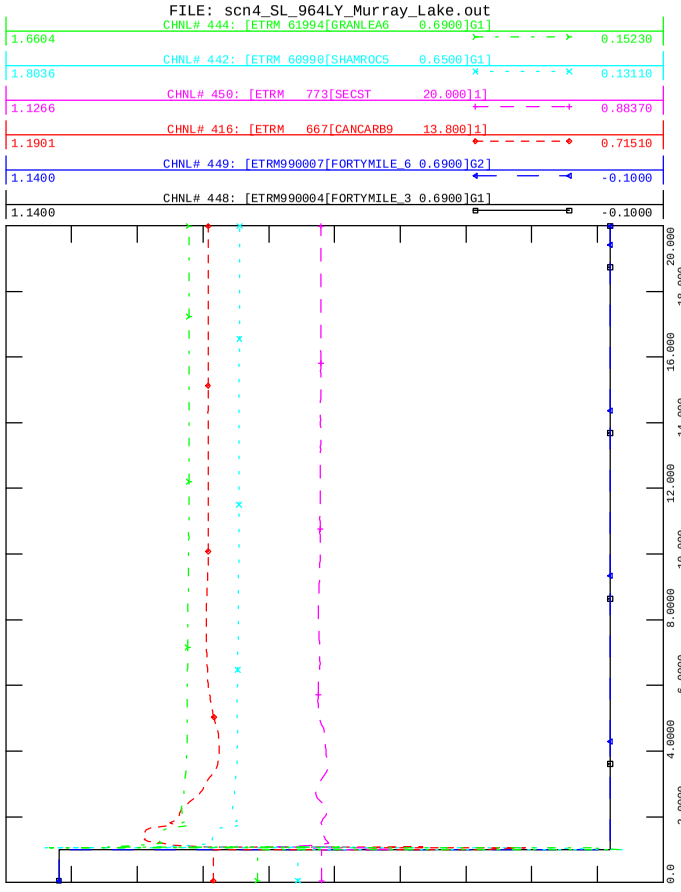


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_964LY_MURRAY_LAKE

FILE: scn4_SL_964LY_Murray_Lake.out

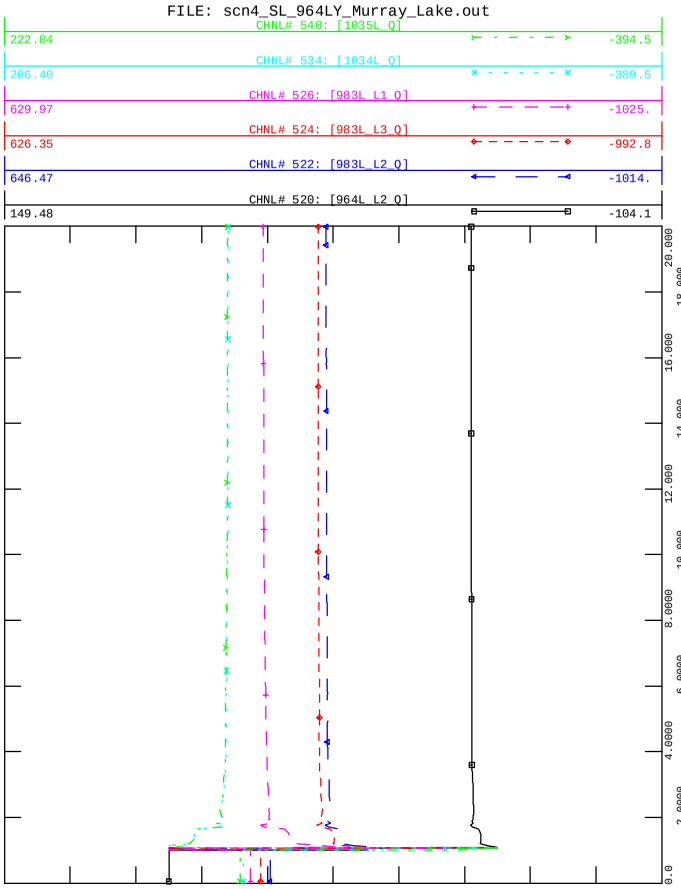
THU, APR 14 2022 19:12

TERMINAL VOLTAGE



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_964LY_MURRAY_LAKE

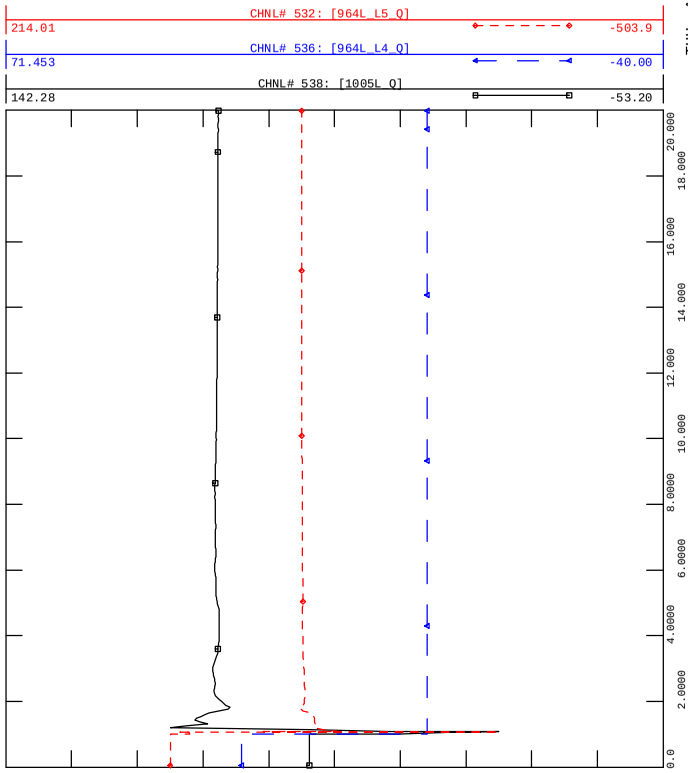
FILE: scn4_SL_964LY_Murray_Lake.out



THU, APR 14 2022 19:12 BRANCH Q

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_964LY_MURRAY_LAKE

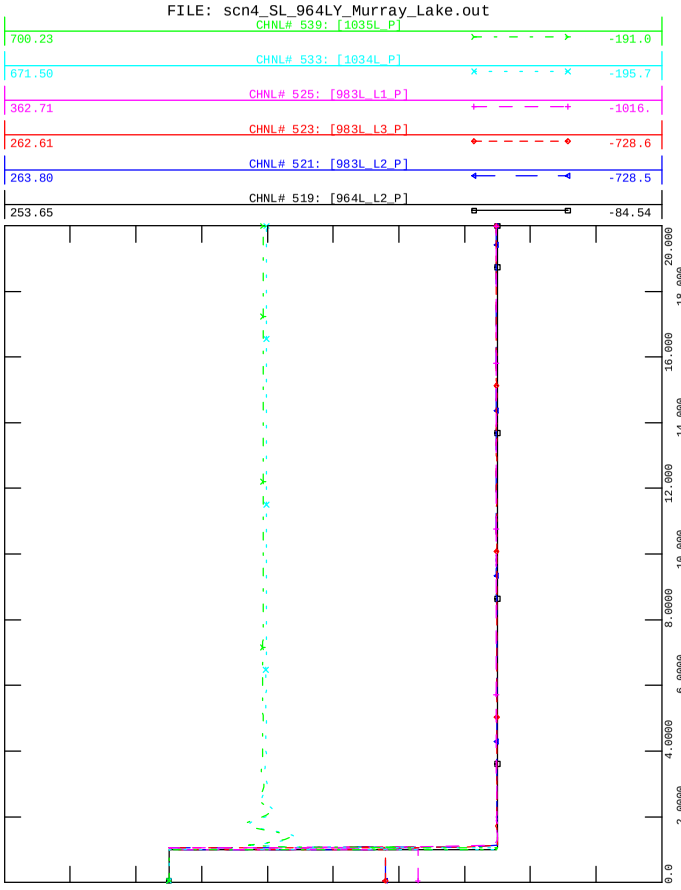
FILE: scn4_SL_964LY_Murray_Lake.out



THU, APR 14 2022 19:12 BRANCH Q

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_964LY_MURRAY_LAKE

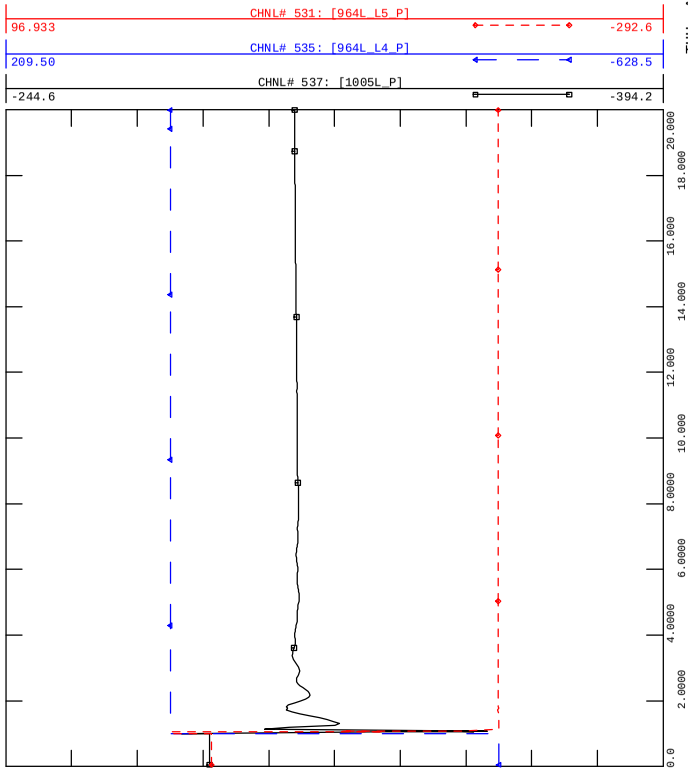
FILE: scn4_SL_964LY_Murray_Lake.out



THU, APR 14 2022 19:12 BRANCH P

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_964LY_MURRAY_LAKE

FILE: scn4_SL_964LY_Murray_Lake.out



THU, APR 14 2022 19:12 BRANCH P

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_983L_BOWMANTON

FILE: scn4_SL_983L_Bowmanton.out

THU, APR 14 2022 19:12

ACTIVE POWER

CHNL# 195: [POWR 61994[GRANLEA6 0.6900]G1]
1.2042 0.02690
CHNL# 193: [POWR 60990[SHAMROC5 0.6500]G1]
2.2264 0.27740
CHNL# 201: [POWR 773[SECST 20.000]1]
1.9215 -1.924
CHNL# 167: [POWR 667[CANCARB9 13.800]1]
0.95450 -0.3817
CHNL# 200: [POWR990007[FORTYMILE_6 0.6900]G2]
1.5300 -0.2000
CHNL# 199: [POWR990004[FORTYMILE_3 0.6900]G1]
1.5300 -0.2000

TIME (SECONDS)
0.0 2.0000 4.0000 6.0000 8.0000 10.000 12.000 14.000 16.000 18.000 20.000

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_983L_BOWMANTON

FILE: scn4_SL_983L_Bowmanton.out

THU, APR 14 2022 19:12

TERMINAL VOLTAGE

CHNL# 444: [ETRM 61994[GRANLEA6 0.6900]G1]
1.4915 0.15630
CHNL# 442: [ETRM 60990[SHAMROC5 0.6500]G1]
1.4641 0.15130
CHNL# 450: [ETRM 773[SECST 20.000]1]
1.1303 0.85640
CHNL# 416: [ETRM 667[CANCARB9 13.800]1]
1.2189 0.55790
CHNL# 449: [ETRM990007[FORTYMILE_6 0.6900]G2]
1.1400 -0.1000
CHNL# 448: [ETRM990004[FORTYMILE_3 0.6900]G1]
1.1400 -0.1000

TIME (SECONDS)
0.0 2.0000 4.0000 6.0000 8.0000 10.000 12.000 14.000 16.000 18.000 20.000

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_983L_BOWMANTON

FILE: scn4_SL_983L_Bowmanton.out

THU, APR 14 2022 19:12

ROTOR ANGLE

CHNL# 37: [ANGL 775[SECCT2 21.000]3]
32.025 -78.21
CHNL# 36: [ANGL 774[SECCT1 21.000]2]
32.025 -78.21
CHNL# 35: [ANGL 773[SECST 20.000]1]
32.386 -76.71
CHNL# 1: [ANGL 667[CANCARB9 13.800]1]
76.037 -84.69

TIME (SECONDS)
0.0 2.0000 4.0000 6.0000 8.0000 10.000 12.000 14.000 16.000 18.000 20.000

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_983L_BOWMANTON

FILE: scn4_SL_983L_Bowmanton.out

THU, APR 14 2022 19:12

REACTIVE POWER

CHNL# 278: [VARS 61994[GRANLEA6 0.6900]G1]
1.7345 -0.4364
CHNL# 276: [VARS 60990[SHAMROC5 0.6500]G1]
3.2878 -0.7929
CHNL# 284: [VARS 773[SECST 20.000]1]
1.6966 -1.394
CHNL# 250: [VARS 667[CANCARB9 13.800]1]
1.2521 -0.6647
CHNL# 283: [VARS990007[FORTYMILE_6 0.6900]G2]
0.51810 -0.5000
CHNL# 282: [VARS990004[FORTYMILE_3 0.6900]G1]
0.51810 -0.5000

TIME (SECONDS)
0.0 2.0000 4.0000 6.0000 8.0000 10.000 12.000 14.000 16.000 18.000 20.000

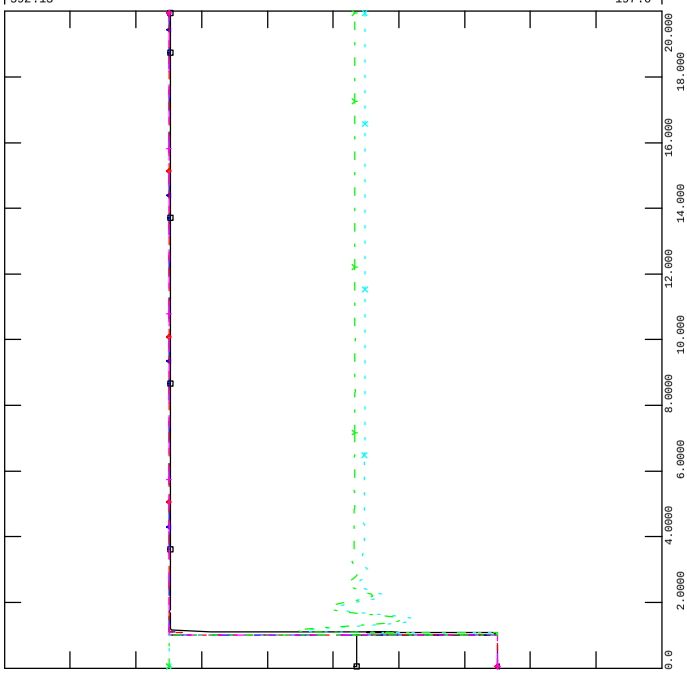
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_983L_BOWMANTON

FILE: scn4_SL_983L_Bowmanton.out

THU, APR 14 2022 19:12 BRANCH P

CHNL# 539: [1035L_P] 715.95 -238.2
CHNL# 533: [1034L_P] 681.93 -227.0
CHNL# 525: [983L_L1_P] 252.18 -756.5
CHNL# 523: [983L_L3_P] 155.79 -467.4
CHNL# 521: [983L_L2_P] 155.69 -467.1
CHNL# 519: [964L_L2_P] 592.13 -197.0

TIME (SECONDS)



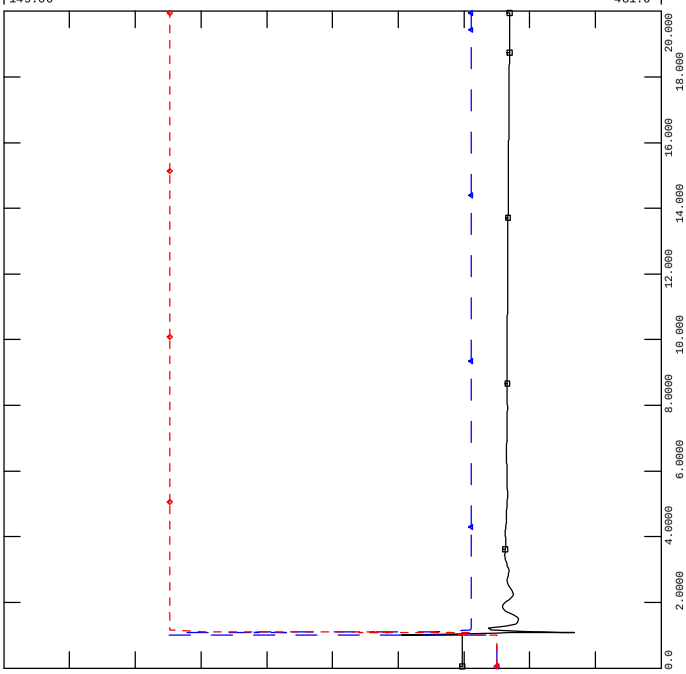
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_983L_BOWMANTON

FILE: scn4_SL_983L_Bowmanton.out

THU, APR 14 2022 19:12 BRANCH P

CHNL# 531: [964L_L5_P] 310.01 -136.8
CHNL# 535: [964L_L4_P] 209.20 -628.4
CHNL# 537: [1005L_P] 149.00 -481.6

TIME (SECONDS)



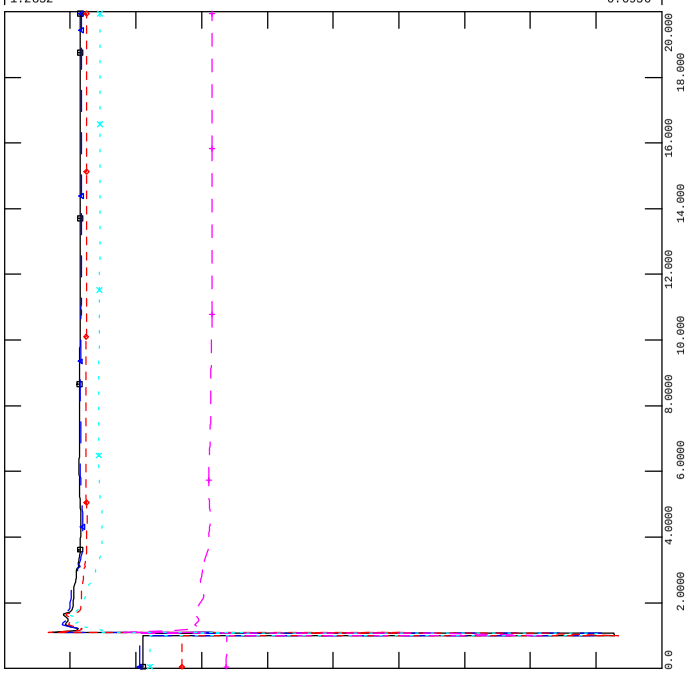
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_983L_BOWMANTON

FILE: scn4_SL_983L_Bowmanton.out

THU, APR 14 2022 19:12 BUS VOLTAGE

CHNL# 518: [VOLT 976 [ROTBAUR 138.00]] 1.2448 0.20510
CHNL# 513: [VOLT 320 [CHAPPIC7 138.00]] 1.2108 0.64380
CHNL# 516: [VOLT 662 [WHITLA1 240.00]] 1.4365 -0.0769
CHNL# 515: [VOLT 659 [BOWMAN2 138.00]] 1.2554 0.03840
CHNL# 517: [VOLT 669 [BOWMAN1 240.00]] 1.2852 -0.0950

TIME (SECONDS)



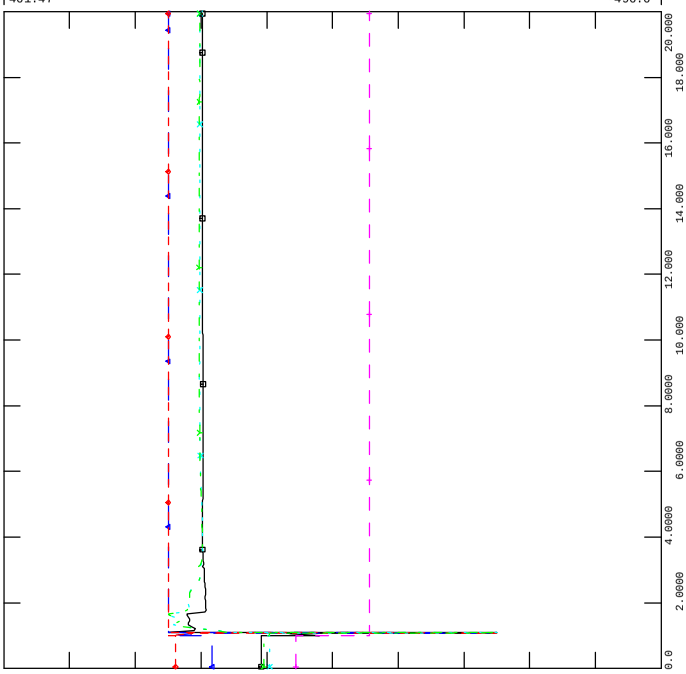
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_983L_BOWMANTON

FILE: scn4_SL_983L_Bowmanton.out

THU, APR 14 2022 19:12 BRANCH Q

CHNL# 540: [1035L_Q] 224.33 -340.8
CHNL# 534: [1034L_Q] 214.47 -341.4
CHNL# 526: [983L_L1_Q] 50.033 -40.00
CHNL# 524: [983L_L3_Q] 100.64 -301.9
CHNL# 522: [983L_L2_Q] 90.629 -271.9
CHNL# 520: [964L_L2_Q] 461.47 -496.6

TIME (SECONDS)



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_983L_WHITLA

FILE: scn4_SL_983L_Whitla.out

THU, APR 14 2022 19:12

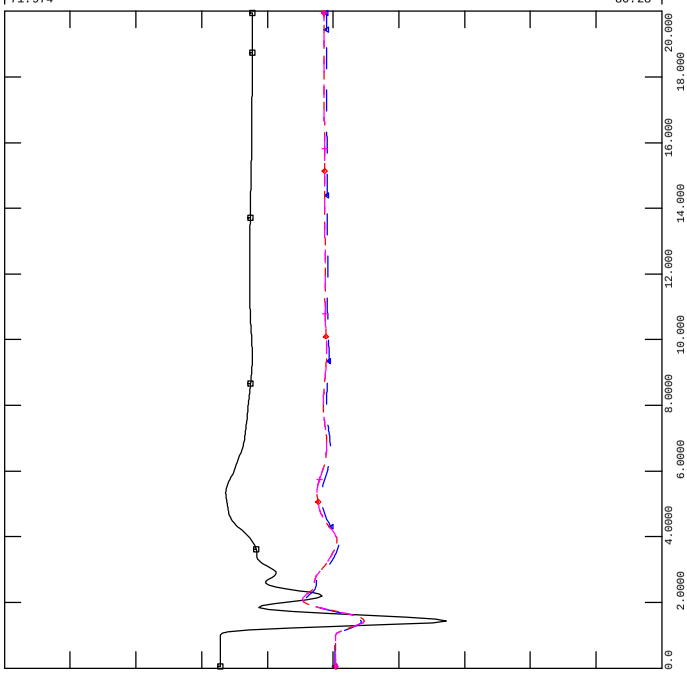
ROTOR ANGLE

CHNL# 37: [ANGL 775[SECCT2 21.000]3]
31.629 -78.77

CHNL# 36: [ANGL 774[SECCT1 21.000]2]
31.629 -78.77

CHNL# 35: [ANGL 773[SECST 20.000]1]
32.017 -77.32

CHNL# 1: [ANGL 667[CANCARB9 13.800]1]
71.974 -80.28



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_983L_WHITLA

FILE: scn4_SL_983L_Whitla.out

THU, APR 14 2022 19:12

REACTIVE POWER

CHNL# 278: [VARS 61994[GRANLEA6 0.6900]G1]
2.2517 -0.6005

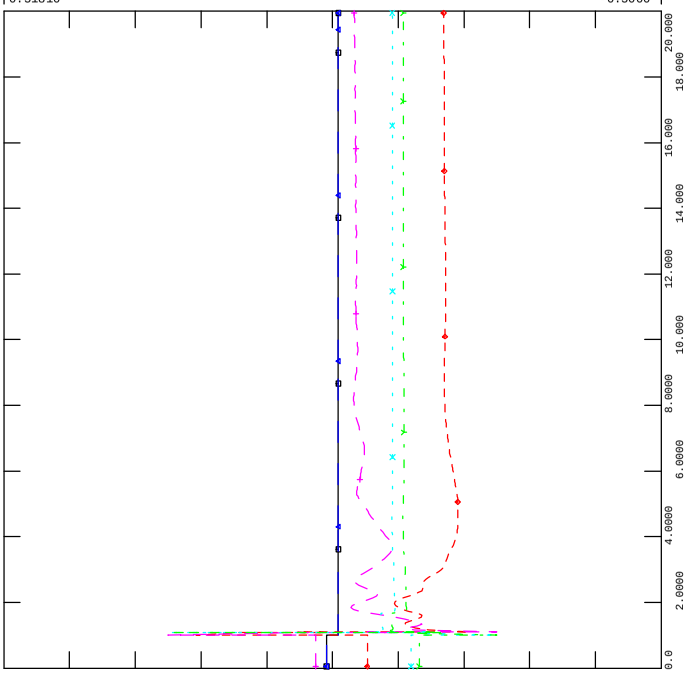
CHNL# 276: [VARS 60990[SHAMROC5 0.6500]G1]
4.4272 -1.174

CHNL# 284: [VARS 773[SECST 20.000]1]
0.94840 -1.061

CHNL# 250: [VARS 667[CANCARB9 13.800]1]
1.0605 -0.6521

CHNL# 283: [VARS990007[FORTYMILE_6 0.6900]G2]
0.51810 -0.5000

CHNL# 282: [VARS990004[FORTYMILE 3 0.6900]G1]
0.51810 -0.5000



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_983L_BOWMANTON

FILE: scn4_SL_983L_Bowmanton.out

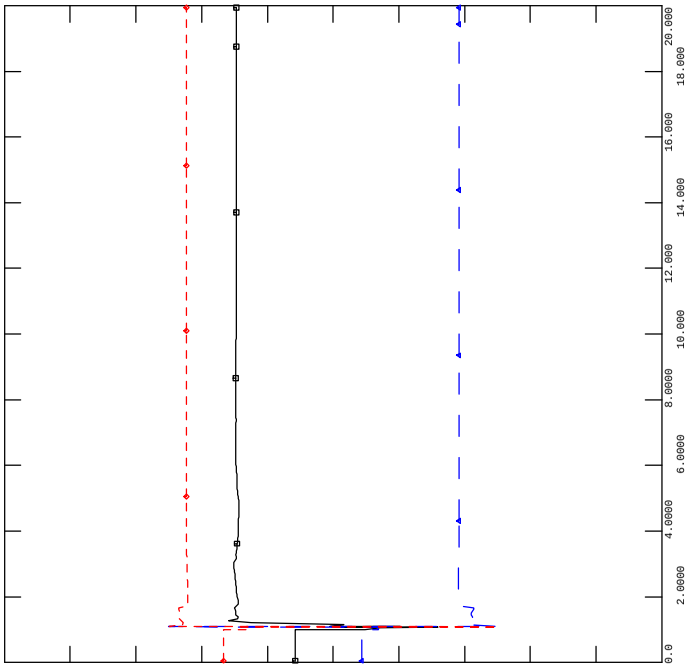
THU, APR 14 2022 19:12

BRANCH Q

CHNL# 532: [964L_L5_Q]
375.43 -646.8

CHNL# 536: [964L_L4_Q]
708.56 -537.6

CHNL# 538: [1005L_Q]
295.37 -255.4



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_983L_WHITLA

FILE: scn4_SL_983L_Whitla.out

THU, APR 14 2022 19:12

ACTIVE POWER

CHNL# 195: [POWR 61994[GRANLEA6 0.6900]G1]
1.2024 -0.0603

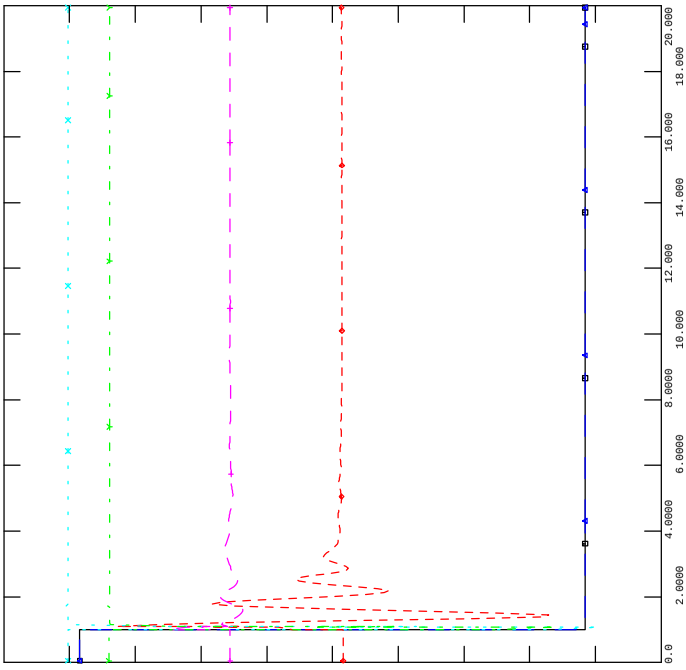
CHNL# 193: [POWR 60990[SHAMROC5 0.6500]G1]
2.2237 0.10530

CHNL# 201: [POWR 773[SECST 20.000]1]
2.8742 -1.929

CHNL# 167: [POWR 667[CANCARB9 13.800]1]
0.90700 -0.2606

CHNL# 200: [POWR990007[FORTYMILE_6 0.6900]G2]
1.5300 -0.2000

CHNL# 199: [POWR990004[FORTYMILE_3 0.6900]G1]
1.5300 -0.2000



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_983L_WHITLA

FILE: scn4_SL_983L_Whitla.out

THU, APR 14 2022 19:12

BUS VOLTAGE

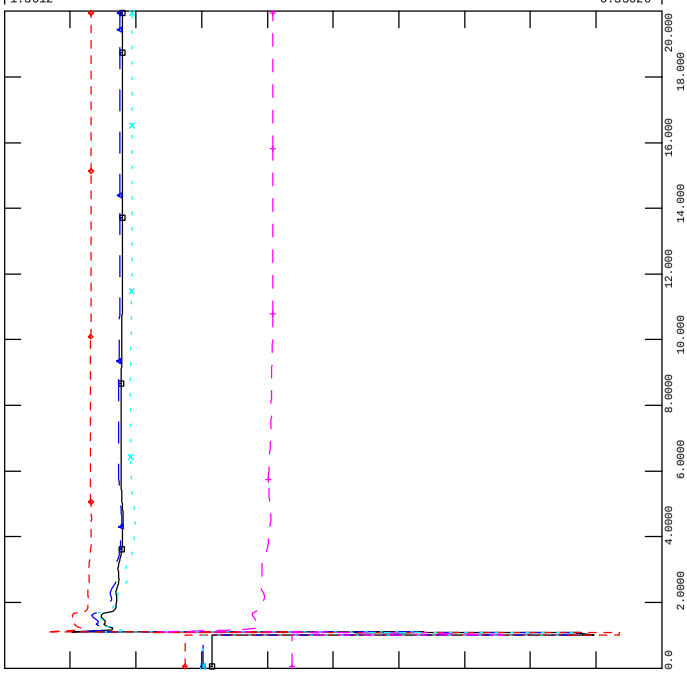
CHNL# 518: [VOLT 976 [ROTBAUR 138.00]]
1.2372 0.50230

CHNL# 513: [VOLT 320 [CHAPPIC7 138.00]]
1.2080 0.77670

CHNL# 516: [VOLT 662 [WHITLA1 240.00]]
1.4544 -0.0988

CHNL# 515: [VOLT 659 [BOWMAN2 138.00]]
1.2651 0.40340

CHNL# 517: [VOLT 669 [BOWMAN1 240.00]]
1.3012 0.33020



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_983L_WHITLA

FILE: scn4_SL_983L_Whitla.out

THU, APR 14 2022 19:12

BRANCH Q

CHNL# 540: [1035L Q]
248.40 -416.3

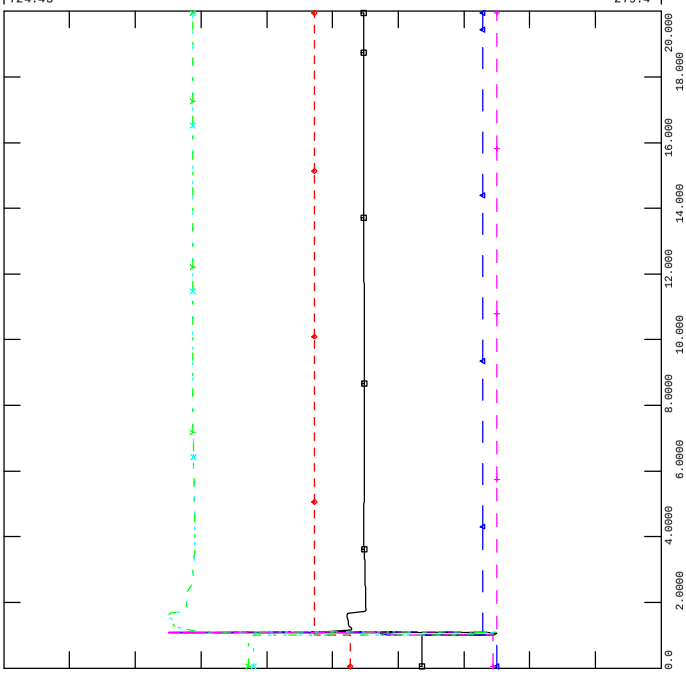
CHNL# 534: [1034L Q]
236.87 -413.3

CHNL# 526: [983L_L1 Q]
1264.3 -421.4

CHNL# 524: [983L_L3 Q]
40.000 -44.61

CHNL# 522: [983L_L2 Q]
823.13 -306.6

CHNL# 520: [964L_L2 Q]
724.43 -279.4



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_983L_WHITLA

FILE: scn4_SL_983L_Whitla.out

THU, APR 14 2022 19:12

TERMINAL VOLTAGE

CHNL# 444: [ETRM 61994[GRANLEA6 0.6900]G1]
1.5148 0.17130

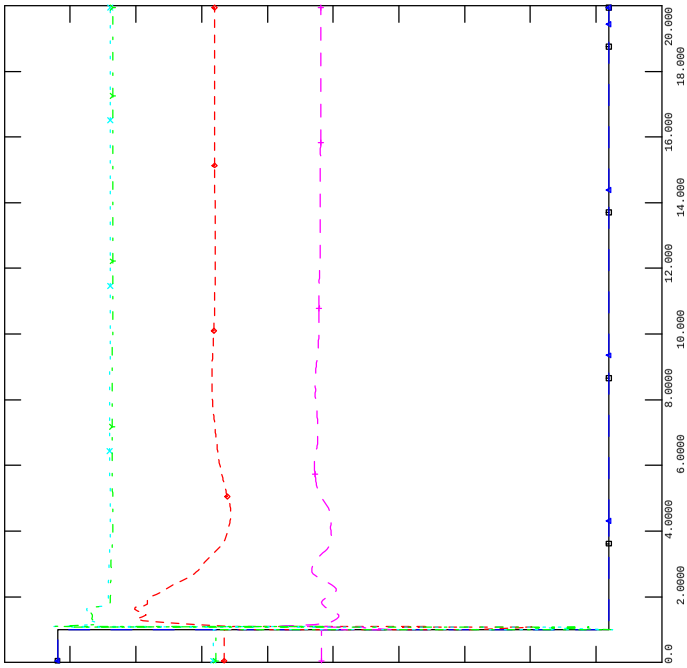
CHNL# 442: [ETRM 60990[SHAMROC5 0.6500]G1]
1.4852 0.15020

CHNL# 450: [ETRM 773[SECST 20.000]1]
1.1274 0.88390

CHNL# 416: [ETRM 667[CANCARB9 13.800]1]
1.2093 0.70320

CHNL# 449: [ETRM990007[FORTYMILE_6 0.6900]G2]
1.1400 -0.1000

CHNL# 448: [ETRM990004[FORTYMILE_3 0.6900]G1]
1.1400 -0.1000



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_983L_WHITLA

FILE: scn4_SL_983L_Whitla.out

THU, APR 14 2022 19:12

BRANCH P

CHNL# 539: [1035L P]
701.70 -195.5

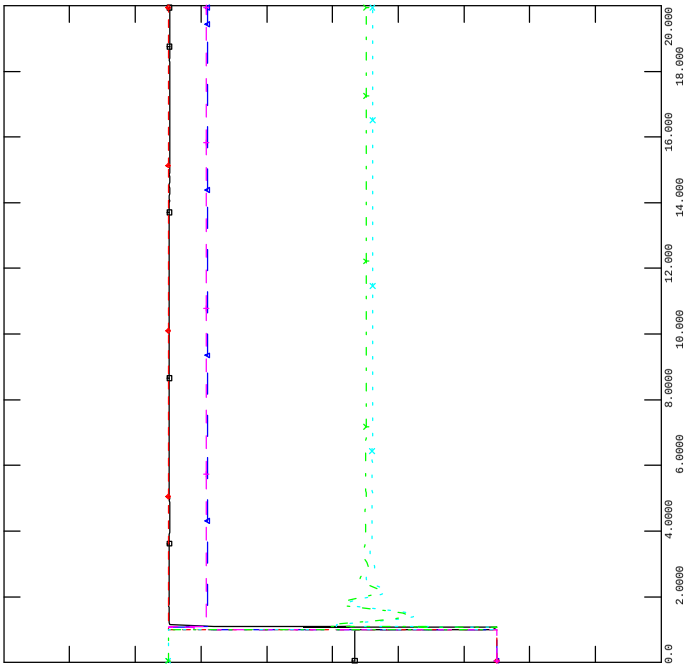
CHNL# 533: [1034L P]
672.73 -199.4

CHNL# 525: [983L_L1 P]
351.55 -789.7

CHNL# 523: [983L_L3 P]
155.79 -467.4

CHNL# 521: [983L_L2 P]
219.15 -488.2

CHNL# 519: [964L_L2 P]
592.29 -200.3

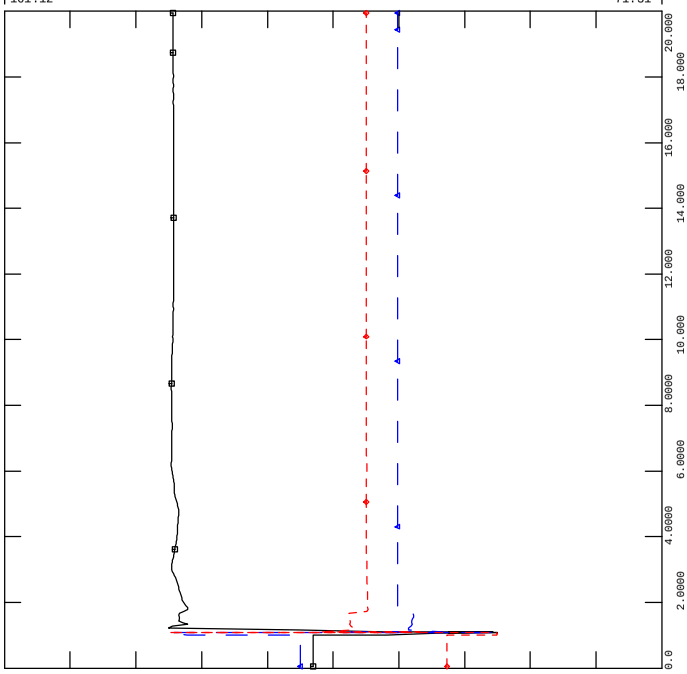


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_983L_WHITLA

FILE: scn4_SL_983L_Whitla.out

THU, APR 14 2022 19:12 BRANCH Q

CHNL# 532: [964L L5 Q] 357.88 -122.3
CHNL# 536: [964L_L4_Q] 599.02 -662.0
CHNL# 538: [1005L Q] 161.12 -71.31

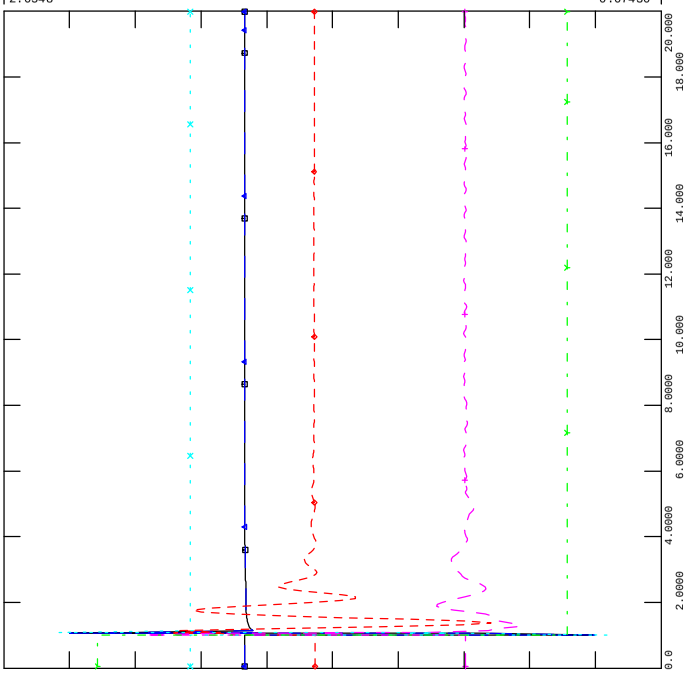


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_964LX_MURRAY_LAKE

FILE: scn4_SL_964LX_Murray_Lake.out

THU, APR 14 2022 19:12 ACTIVE POWER

CHNL# 195: [POWR 61994[GRANLEA6 0.6900]G1] 1.2000 -0.2000
CHNL# 193: [POWR 60990[SHAMROC5 0.6500]G1] 2.7174 0.24630
CHNL# 201: [POWR 773[SECST 20.000]1] 1.8761 0.94150
CHNL# 167: [POWR 667[CANCARB9 13.800]1] 0.66960 -0.1033
CHNL# 200: [POWR990007[FORTYMILE_6 0.6900]G2] 2.0548 0.07430
CHNL# 199: [POWR990004[FORTYMILE 3 0.6900]G1] 2.0548 0.07430

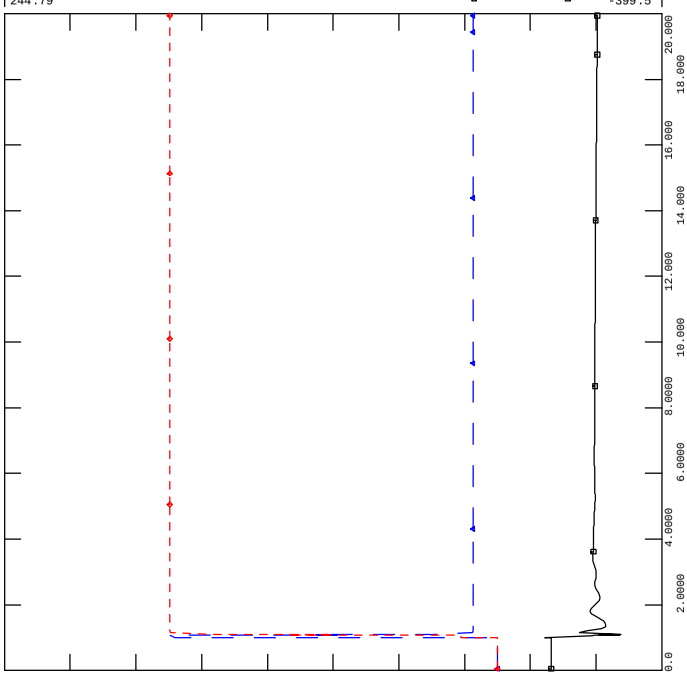


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_983L_WHITLA

FILE: scn4_SL_983L_Whitla.out

THU, APR 14 2022 19:12 BRANCH P

CHNL# 531: [964L L5 P] 309.56 -136.7
CHNL# 535: [964L_L4_P] 244.22 -640.1
CHNL# 537: [1005L_P] 244.79 -399.5

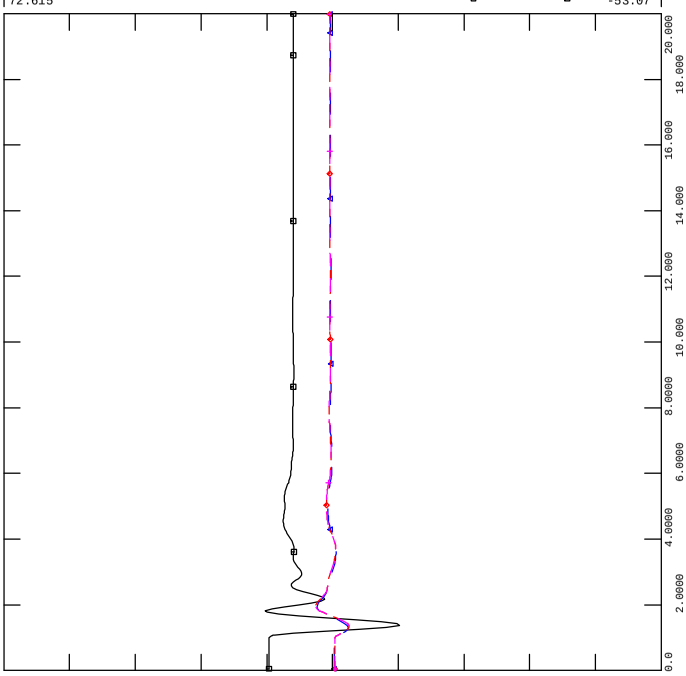


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_964LX_MURRAY_LAKE

FILE: scn4_SL_964LX_Murray_Lake.out

THU, APR 14 2022 19:12 ROTOR ANGLE

CHNL# 37: [ANGL 775[SECCT2 21.000]3] 29.136 -76.23
CHNL# 36: [ANGL 774[SECCT1 21.000]2] 29.136 -76.23
CHNL# 35: [ANGL 773[SECST 20.000]1] 29.853 -75.10
CHNL# 1: [ANGL 667[CANCARB9 13.800]1] 72.615 -53.07



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_964LX_MURRAY_LAKE

FILE: scn4_SL_964LX_Murray_Lake.out

THU, APR 14 2022 19:12

TERMINAL VOLTAGE

CHNL# 444: [ETRM 61994[GRANLEA6 0.6900]G1] 1.1825 -0.1000
CHNL# 442: [ETRM 60990[SHAMROC5 0.6500]G1] 1.5796 0.13490
CHNL# 450: [ETRM 773[SECST 20.000]1] 1.1120 0.88360
CHNL# 416: [ETRM 667[CANCARB9 13.800]1] 1.1718 0.71710
CHNL# 449: [ETRM990007[FORTYMILE_6 0.6900]G2] 1.1730 0.11450
CHNL# 448: [ETRM990004[FORTYMILE_3 0.6900]G1] 1.1730 0.11450

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_964LX_MURRAY_LAKE

FILE: scn4_SL_964LX_Murray_Lake.out

THU, APR 14 2022 19:12

BRANCH P

CHNL# 539: [1035L_P] 699.35 -188.4
CHNL# 533: [1034L_P] 670.32 -192.2
CHNL# 525: [983L_L1_P] 311.25 -776.2
CHNL# 523: [983L_L3_P] 213.74 -486.7
CHNL# 521: [983L_L2_P] 216.61 -487.4
CHNL# 519: [964L_L2_P] 253.66 -84.55

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_964LX_MURRAY_LAKE

FILE: scn4_SL_964LX_Murray_Lake.out

THU, APR 14 2022 19:12

REACTIVE POWER

CHNL# 278: [VARS 61994[GRANLEA6 0.6900]G1] 0.94920 -0.5000
CHNL# 276: [VARS 60990[SHAMROC5 0.6500]G1] 4.8652 -1.338
CHNL# 284: [VARS 773[SECST 20.000]1] 0.95030 -0.7125
CHNL# 250: [VARS 667[CANCARB9 13.800]1] 1.0628 -0.4912
CHNL# 283: [VARS990007[FORTYMILE_6 0.6900]G2] 2.6255 -0.9859
CHNL# 282: [VARS990004[FORTYMILE_3 0.6900]G1] 2.6255 -0.9859

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_964LX_MURRAY_LAKE

FILE: scn4_SL_964LX_Murray_Lake.out

THU, APR 14 2022 19:12

BUS VOLTAGE

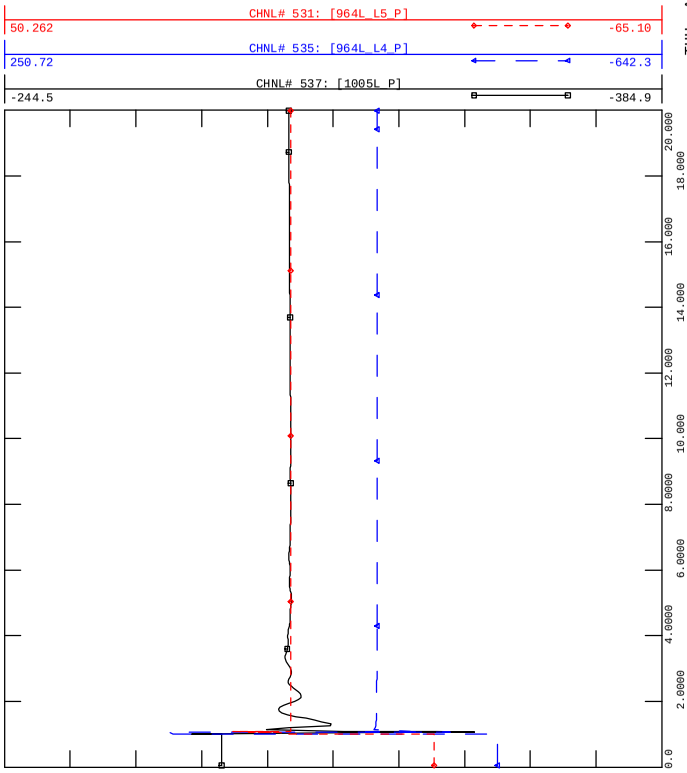
CHNL# 518: [VOLT 976 [ROTBAUR 138.00]] 1.1711 0.50620
CHNL# 513: [VOLT 320 [CHAPPIC7 138.00]] 1.1414 0.77550
CHNL# 516: [VOLT 662 [WHITLA1 240.00]] 1.2720 -0.0715
CHNL# 515: [VOLT 659 [BOWMAN2 138.00]] 1.1785 0.40010
CHNL# 517: [VOLT 669 [BOWMAN1 240.00]] 1.1835 0.32640

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_964LX_MURRAY_LAKE

FILE: scn4_SL_964LX_Murray_Lake.out

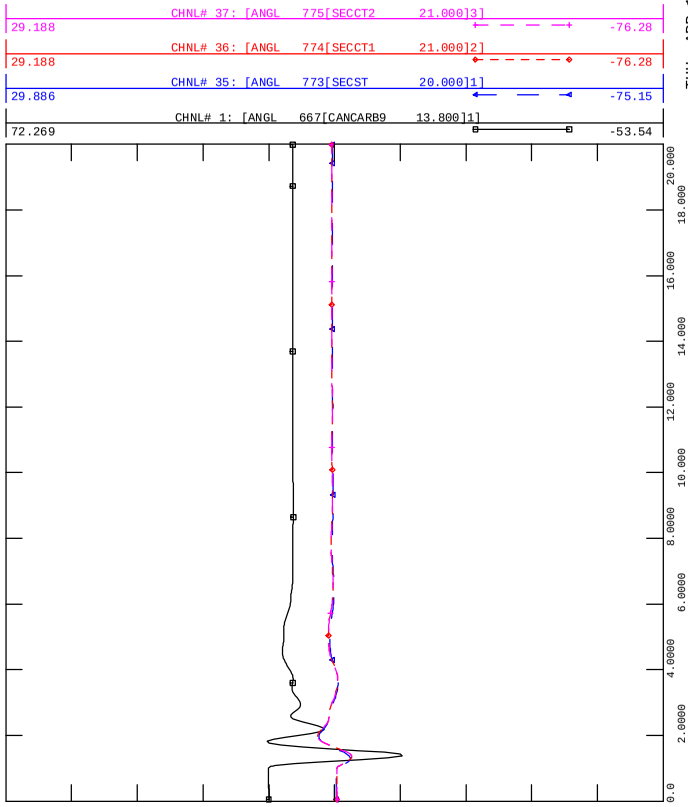
THU, APR 14 2022 19:12 BRANCH P



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_964LX_WHITLA

FILE: scn4_SL_964LX_Whitla.out

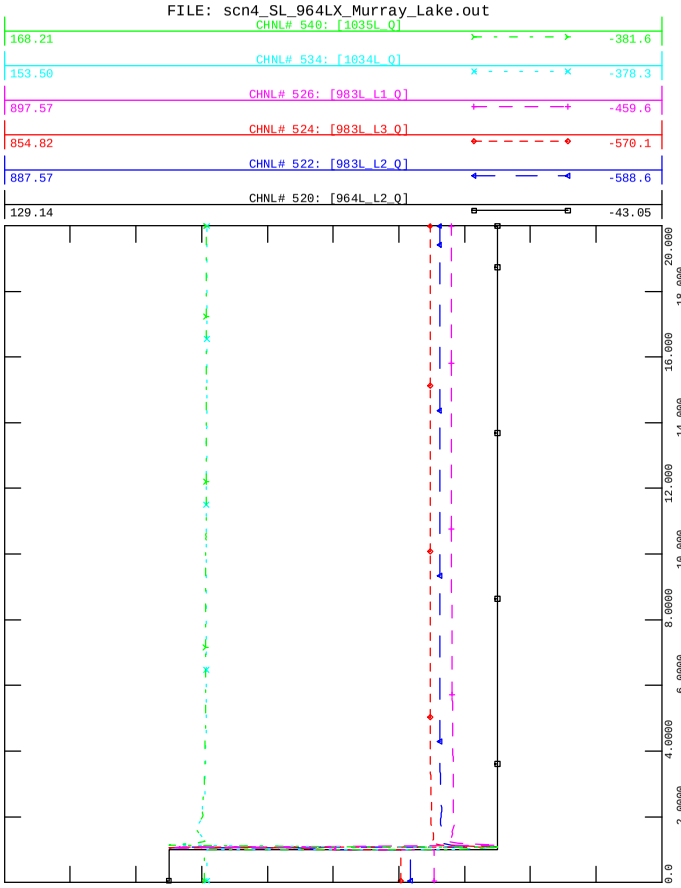
THU, APR 14 2022 19:12 ROTOR ANGLE



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_964LX_MURRAY_LAKE

FILE: scn4_SL_964LX_Murray_Lake.out

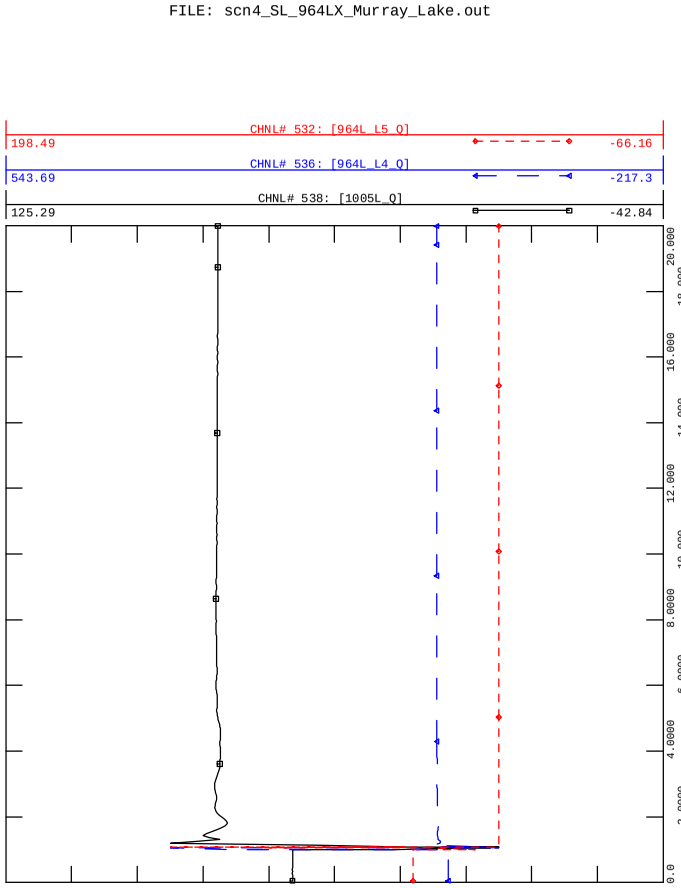
THU, APR 14 2022 19:12 BRANCH Q



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_964LX_MURRAY_LAKE

FILE: scn4_SL_964LX_Murray_Lake.out

THU, APR 14 2022 19:12 BRANCH Q



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_964LX_WHITLA

FILE: scn4_SL_964LX_Whitla.out

THU, APR 14 2022 19:12

REACTIVE POWER

CHNL# 278: [VARS 61994[GRANLEA6 0.6900]G1]
0.94920 -0.5000

CHNL# 276: [VARS 60990[SHAMROC5 0.6500]G1]
5.0287 -1.364

CHNL# 284: [VARS 773[SECST 20.000]1]
0.94260 -0.9554

CHNL# 250: [VARS 667[CANCARB9 13.800]1]
1.0580 -0.6733

CHNL# 283: [VARS990007[FORTYMILE_6 0.6900]G2]
4.0676 -1.438

CHNL# 282: [VARS990004[FORTYMILE_3 0.6900]G1]
4.0676 -1.438

TIME (SECONDS)

0.0 2.0000 4.0000 6.0000 8.0000 10.000 12.000 14.000 16.000 18.000 20.000

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_964LX_WHITLA

FILE: scn4_SL_964LX_Whitla.out

THU, APR 14 2022 19:12

BUS VOLTAGE

CHNL# 518: [VOLT 976 [ROTBAUR 138.00]]
1.2499 0.51170

CHNL# 513: [VOLT 320 [CHAPPIC7 138.00]]
1.2023 0.77790

CHNL# 516: [VOLT 662 [WHITLA1 240.00]]
1.3993 -0.0998

CHNL# 515: [VOLT 659 [BOWMAN2 138.00]]
1.2874 0.40670

CHNL# 517: [VOLT 669 [BOWMAN1 240.00]]
1.3164 0.33330

TIME (SECONDS)

0.0 2.0000 4.0000 6.0000 8.0000 10.000 12.000 14.000 16.000 18.000 20.000

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_964LX_WHITLA

FILE: scn4_SL_964LX_Whitla.out

THU, APR 14 2022 19:12

ACTIVE POWER

CHNL# 195: [POWR 61994[GRANLEA6 0.6900]G1]
1.2000 -0.2000

CHNL# 193: [POWR 60990[SHAMROC5 0.6500]G1]
2.2745 0.29130

CHNL# 201: [POWR 773[SECST 20.000]1]
1.8698 -1.835

CHNL# 167: [POWR 667[CANCARB9 13.800]1]
0.72760 -0.1023

CHNL# 200: [POWR990007[FORTYMILE_6 0.6900]G2]
3.3629 0.09170

CHNL# 199: [POWR990004[FORTYMILE_3 0.6900]G1]
3.3629 0.09170

TIME (SECONDS)

0.0 2.0000 4.0000 6.0000 8.0000 10.000 12.000 14.000 16.000 18.000 20.000

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_964LX_WHITLA

FILE: scn4_SL_964LX_Whitla.out

THU, APR 14 2022 19:12

TERMINAL VOLTAGE

CHNL# 444: [ETRM 61994[GRANLEA6 0.6900]G1]
1.1825 -0.1000

CHNL# 442: [ETRM 60990[SHAMROC5 0.6500]G1]
1.6315 0.15860

CHNL# 450: [ETRM 773[SECST 20.000]1]
1.1252 0.88410

CHNL# 416: [ETRM 667[CANCARB9 13.800]1]
1.1733 0.71470

CHNL# 449: [ETRM990007[FORTYMILE_6 0.6900]G2]
1.7977 0.12810

CHNL# 448: [ETRM990004[FORTYMILE_3 0.6900]G1]
1.7977 0.12810

TIME (SECONDS)

0.0 2.0000 4.0000 6.0000 8.0000 10.000 12.000 14.000 16.000 18.000 20.000

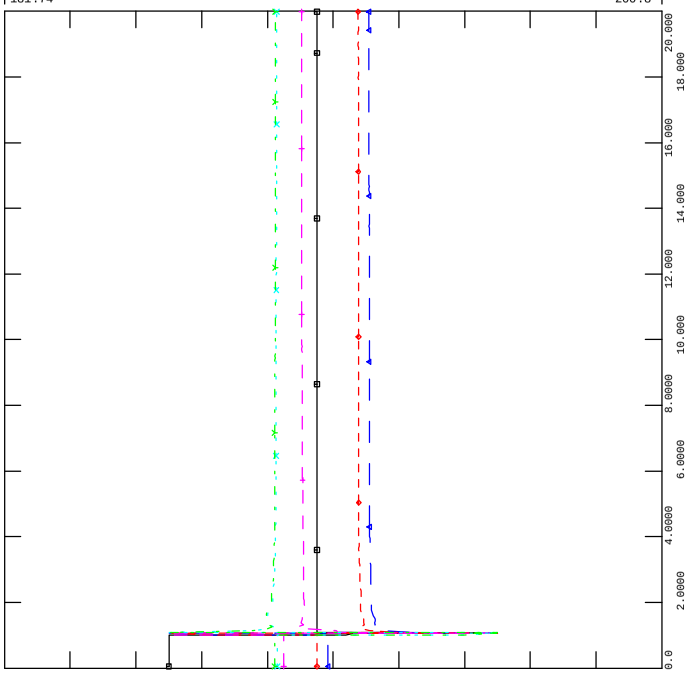
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_964LX_WHITLA

FILE: scn4_SL_964LX_Whitla.out

THU, APR 14 2022 19:12

BRANCH Q

CHNL# 540: [1035L Q] 293.07 -418.2
CHNL# 534: [1034L Q] 275.92 -414.0
CHNL# 526: [983L L1 Q] 576.37 -757.8
CHNL# 524: [983L L3 Q] 488.96 -550.1
CHNL# 522: [983L L2 Q] 514.87 -580.0
CHNL# 520: [964L L2 Q] 181.74 -200.8



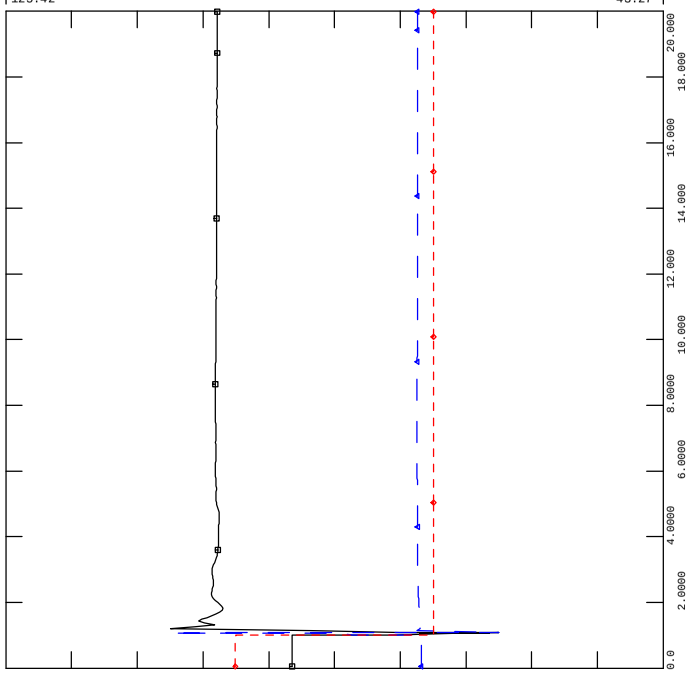
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_964LX_WHITLA

FILE: scn4_SL_964LX_Whitla.out

THU, APR 14 2022 19:12

BRANCH Q

CHNL# 532: [964L L5 Q] 74.524 -40.00
CHNL# 536: [964L L4 Q] 1444.6 -791.7
CHNL# 538: [1005L Q] 125.42 -43.27



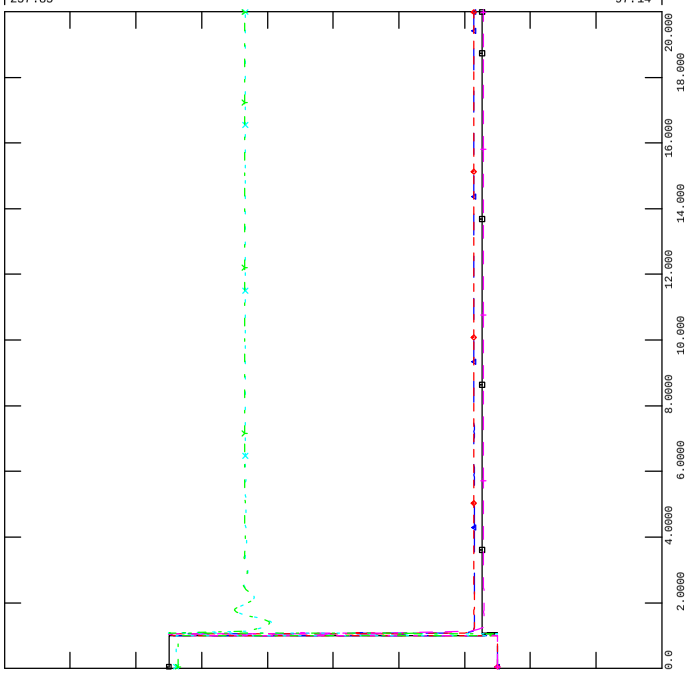
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_964LX_WHITLA

FILE: scn4_SL_964LX_Whitla.out

THU, APR 14 2022 19:12

BRANCH P

CHNL# 539: [1035L P] 720.35 -200.2
CHNL# 533: [1034L P] 687.60 -203.4
CHNL# 525: [983L L1 P] 289.88 -769.1
CHNL# 523: [983L L3 P] 182.36 -476.2
CHNL# 521: [983L L2 P] 183.90 -476.5
CHNL# 519: [964L L2 P] 257.85 -97.14



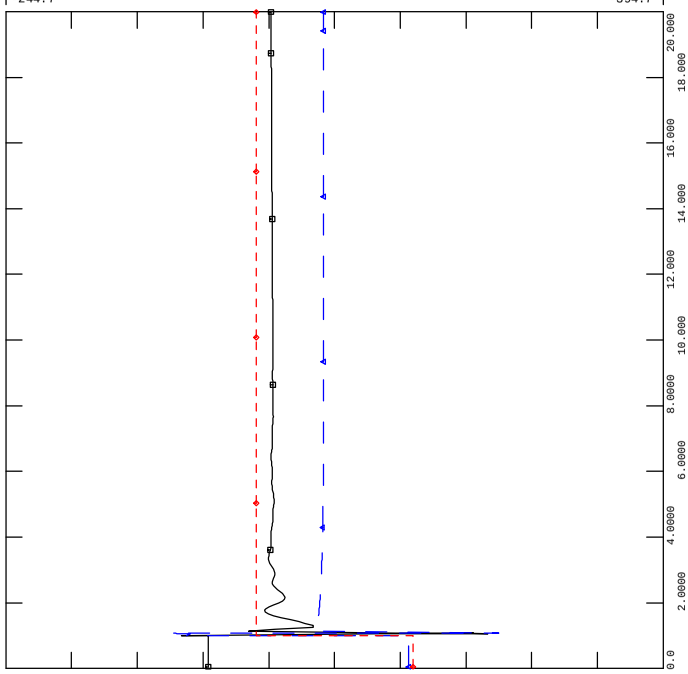
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_964LX_WHITLA

FILE: scn4_SL_964LX_Whitla.out

THU, APR 14 2022 19:12

BRANCH P

CHNL# 531: [964L L5 P] 40.000 -65.10
CHNL# 535: [964L L4 P] 353.98 -907.2
CHNL# 537: [1005L P] -244.7 -394.7



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_1034L_BOWMANTON

FILE: scn4_SL_1034L_Bowmanton.out

THU, APR 14 2022 19:12

ACTIVE POWER

CHNL# 195: [POWR 61994[GRANLEA6 0.6900]G1]
1.2001 -0.2000

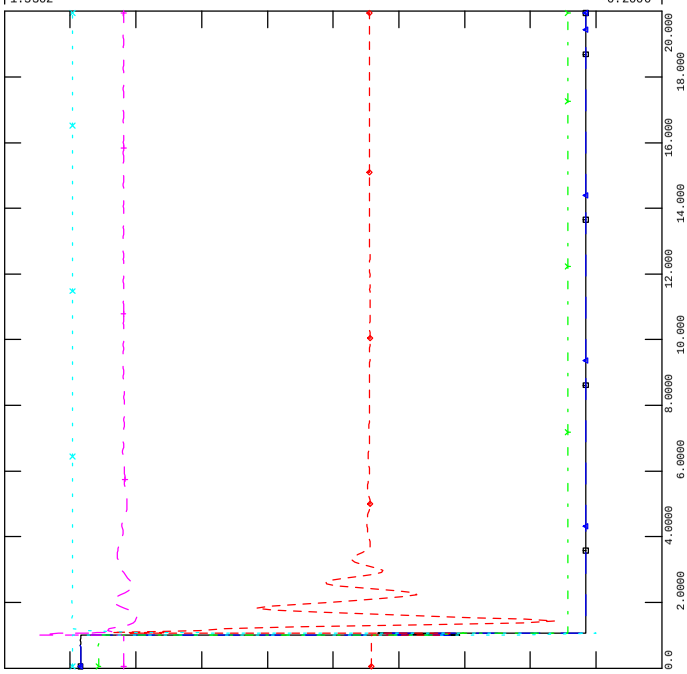
CHNL# 193: [POWR 60990[SHAMROC5 0.6500]G1]
2.2212 0.23130

CHNL# 201: [POWR 773[SECST 20.000]1]
1.9212 -1.942

CHNL# 167: [POWR 667[CANCARB9 13.800]1]
0.98800 -0.2380

CHNL# 200: [POWR990007[FORTYMILE_6 0.6900]G2]
1.5302 -0.2000

CHNL# 199: [POWR990004[FORTYMILE_3 0.6900]G1]
1.5302 -0.2000



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_1034L_BOWMANTON

FILE: scn4_SL_1034L_Bowmanton.out

THU, APR 14 2022 19:12

TERMINAL VOLTAGE

CHNL# 444: [ETRM 61994[GRANLEA6 0.6900]G1]
1.1827 -0.1000

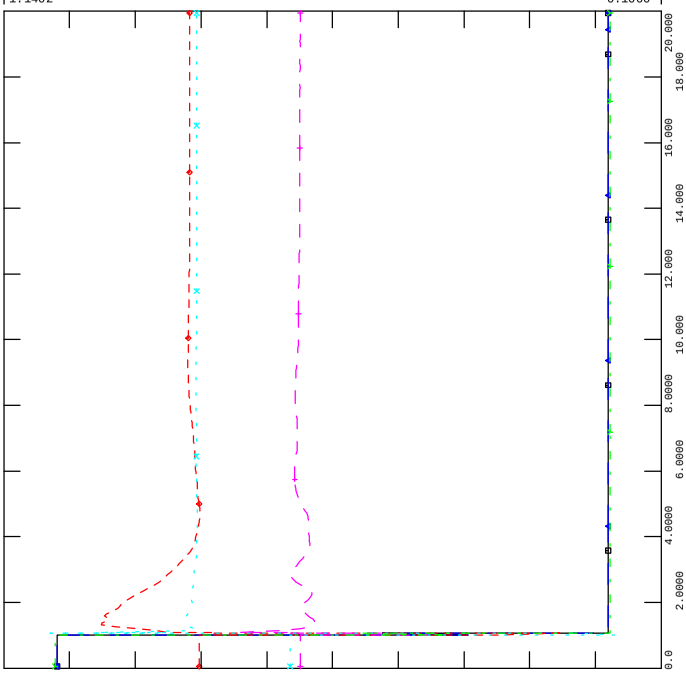
CHNL# 442: [ETRM 60990[SHAMROC5 0.6500]G1]
1.6838 0.25280

CHNL# 450: [ETRM 773[SECST 20.000]1]
1.1366 0.85610

CHNL# 416: [ETRM 667[CANCARB9 13.800]1]
1.2398 0.56710

CHNL# 449: [ETRM990007[FORTYMILE_6 0.6900]G2]
1.1402 -0.1000

CHNL# 448: [ETRM990004[FORTYMILE_3 0.6900]G1]
1.1402 -0.1000



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_1034L_BOWMANTON

FILE: scn4_SL_1034L_Bowmanton.out

THU, APR 14 2022 19:12

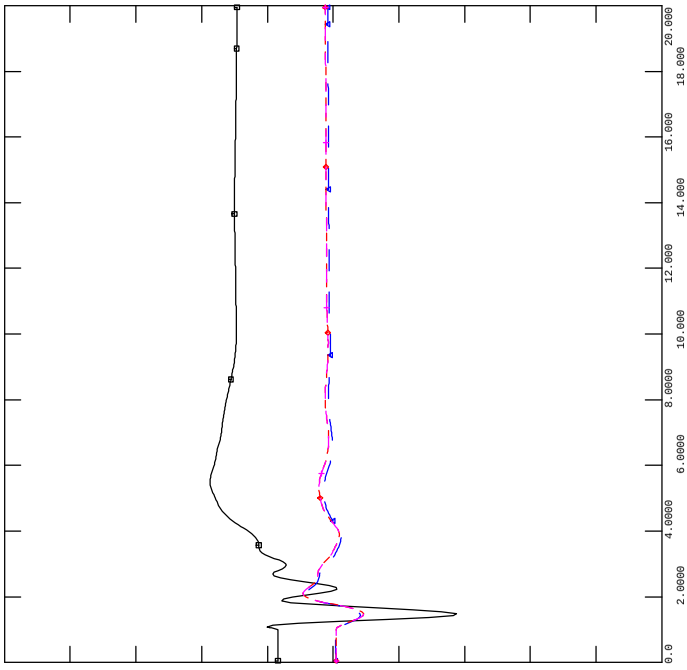
ROTOR ANGLE

CHNL# 37: [ANGL 775[SECCT2 21.000]3]
31.659 -78.48

CHNL# 36: [ANGL 774[SECCT1 21.000]2]
31.659 -78.48

CHNL# 35: [ANGL 773[SECST 20.000]1]
32.040 -77.00

CHNL# 1: [ANGL 667[CANCARB9 13.800]1]
88.503 -71.45



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_1034L_BOWMANTON

FILE: scn4_SL_1034L_Bowmanton.out

THU, APR 14 2022 19:12

REACTIVE POWER

CHNL# 278: [VARS 61994[GRANLEA6 0.6900]G1]
1.0353 -0.5000

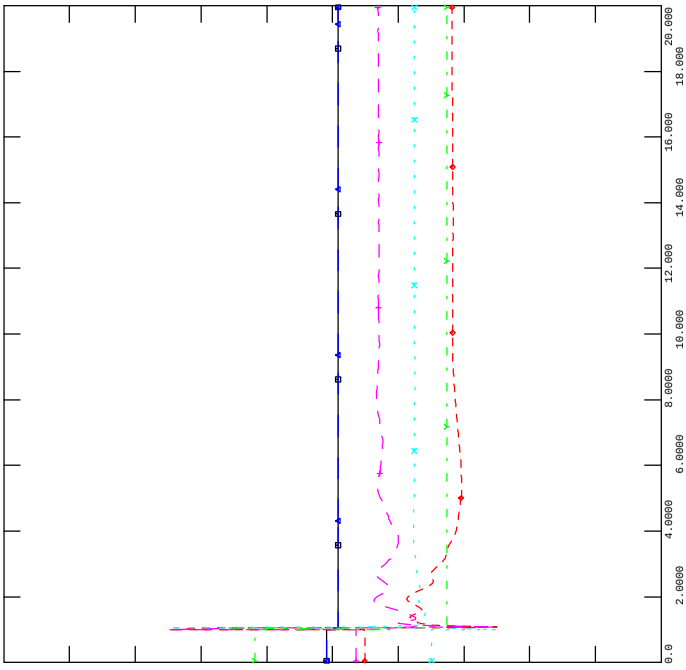
CHNL# 276: [VARS 60990[SHAMROC5 0.6500]G1]
5.1373 -1.288

CHNL# 284: [VARS 773[SECST 20.000]1]
1.7460 -1.523

CHNL# 250: [VARS 667[CANCARB9 13.800]1]
1.2840 -0.8479

CHNL# 283: [VARS990007[FORTYMILE_6 0.6900]G2]
0.51800 -0.5000

CHNL# 282: [VARS990004[FORTYMILE_3 0.6900]G1]
0.51800 -0.5000

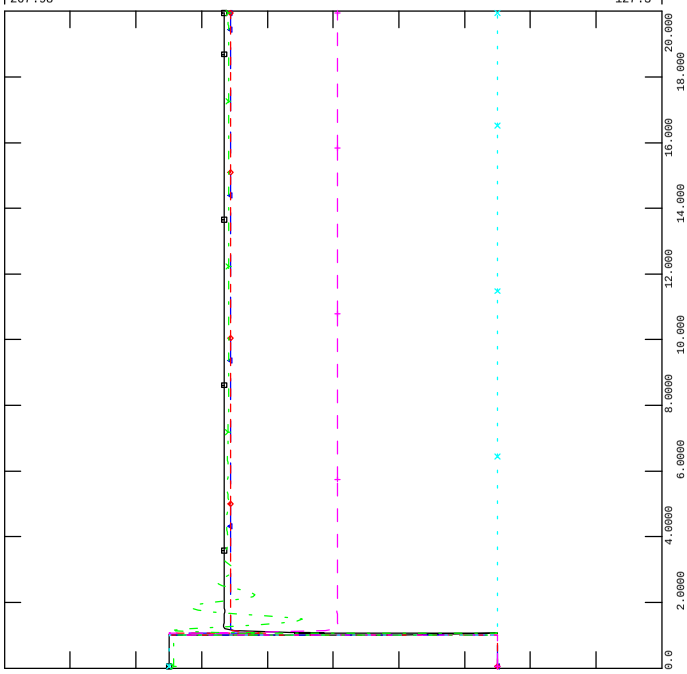


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_1034L_BOWMANTON

FILE: scn4_SL_1034L_Bowmanton.out

THU, APR 14 2022 19:12 BRANCH P

CHNL# 539: [1035L_P] 724.88 -238.5
CHNL# 533: [1034L_P] 682.16 -227.4
CHNL# 525: [983L_L1_P] 250.41 -756.1
CHNL# 523: [983L_L3_P] 150.61 -465.7
CHNL# 521: [983L_L2_P] 150.59 -465.4
CHNL# 519: [964L_L2_P] 267.98 -127.3

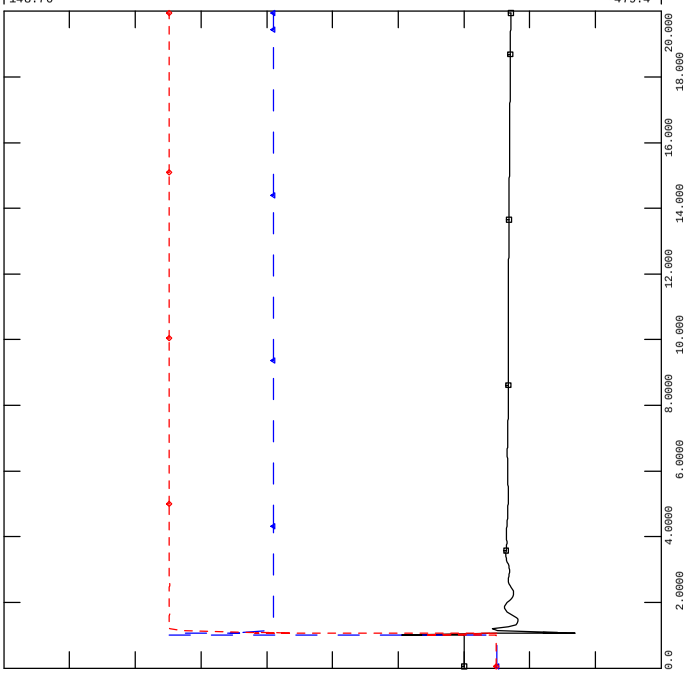


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_1034L_BOWMANTON

FILE: scn4_SL_1034L_Bowmanton.out

THU, APR 14 2022 19:12 BRANCH P

CHNL# 531: [964L_L5_P] 217.35 -106.3
CHNL# 535: [964L_L4_P] 207.85 -628.1
CHNL# 537: [1005L_P] 148.70 -479.4

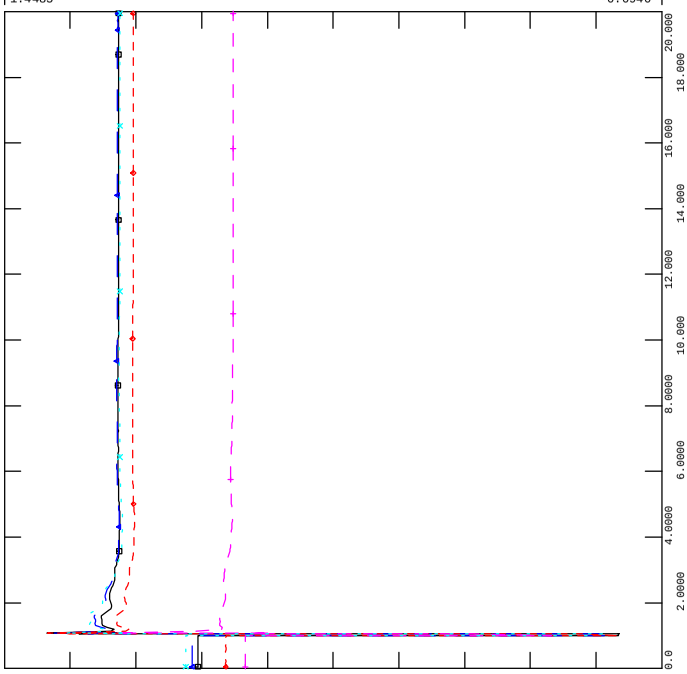


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_1034L_BOWMANTON

FILE: scn4_SL_1034L_Bowmanton.out

THU, APR 14 2022 19:12 BUS VOLTAGE

CHNL# 518: [VOLT 976 [ROTBAUR 138.00]] 1.3220 0.20980
CHNL# 513: [VOLT 320 [CHAPPIC7 138.00]] 1.2370 0.64240
CHNL# 516: [VOLT 662 [WHITLA1 240.00]] 1.5390 0.02180
CHNL# 515: [VOLT 659 [BOWMAN2 138.00]] 1.3894 0.04220
CHNL# 517: [VOLT 669 [BOWMAN1 240.00]] 1.4485 -0.0940

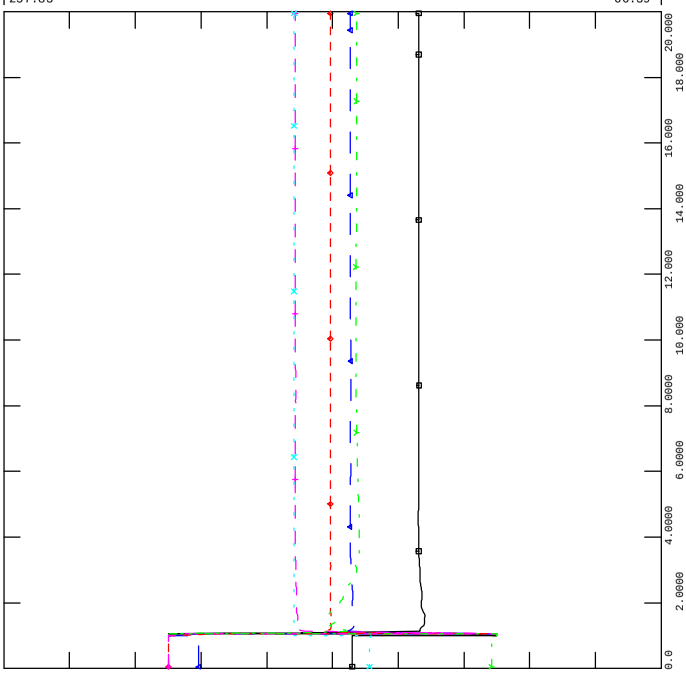


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_1034L_BOWMANTON

FILE: scn4_SL_1034L_Bowmanton.out

THU, APR 14 2022 19:12 BRANCH Q

CHNL# 540: [1035L_Q] 573.65 -198.2
CHNL# 534: [1034L_Q] 40.000 -50.62
CHNL# 526: [983L_L1_Q] 199.45 -556.9
CHNL# 524: [983L_L3_Q] 68.539 -223.8
CHNL# 522: [983L_L2_Q] 83.867 -281.0
CHNL# 520: [964L_L2_Q] 257.83 -66.39



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_1034L_CASSILS

FILE: scn4_SL_1034L_Cassils.out

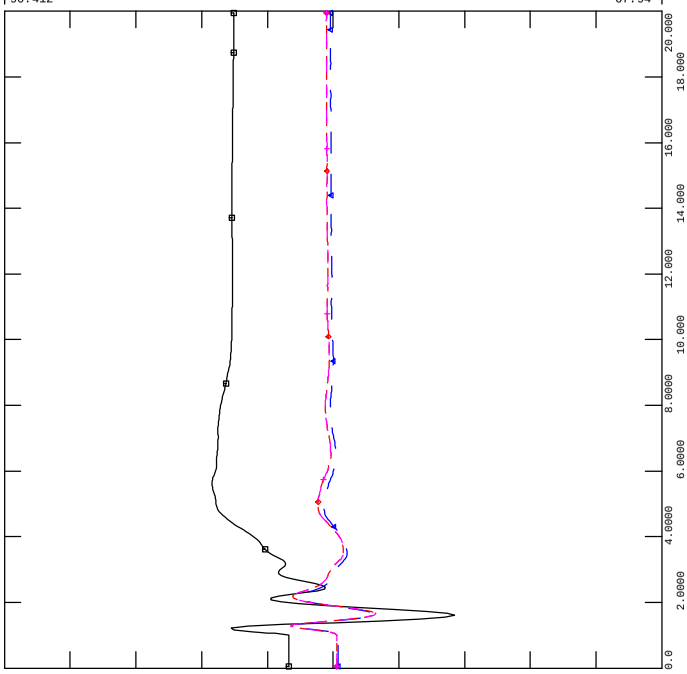
THU, APR 14 2022 19:12 ROTOR ANGLE

CHNL# 37: [ANGL 775[SECCT2 21.000]3]
34.165 -80.74

CHNL# 36: [ANGL 774[SECCT1 21.000]2]
34.165 -80.74

CHNL# 35: [ANGL 773[SECST 20.000]1]
35.075 -79.21

CHNL# 1: [ANGL 667[CANCARB9 13.800]1]
90.412 -67.94



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_1034L_CASSILS

FILE: scn4_SL_1034L_Cassils.out

THU, APR 14 2022 19:12 REACTIVE POWER

CHNL# 278: [VARS 61994[GRANLEA6 0.6900]G1]
1.3068 -0.5000

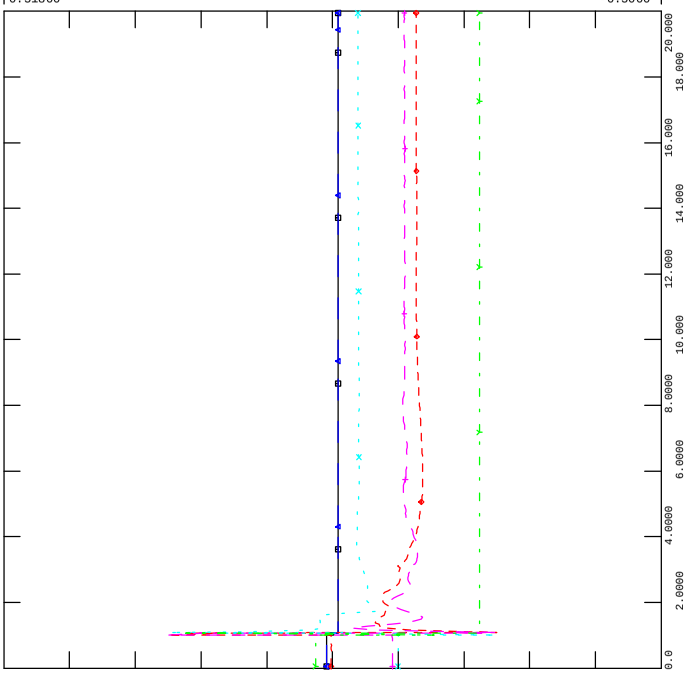
CHNL# 276: [VARS 60990[SHAMROC5 0.6500]G1]
3.4978 -0.7357

CHNL# 284: [VARS 773[SECST 20.000]1]
3.6456 -2.532

CHNL# 250: [VARS 667[CANCARB9 13.800]1]
1.3048 -1.086

CHNL# 283: [VARS990007[FORTYMILE_6 0.6900]G2]
0.51800 -0.5000

CHNL# 282: [VARS990004[FORTYMILE 3 0.6900]G1]
0.51800 -0.5000



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_1034L_BOWMANTON

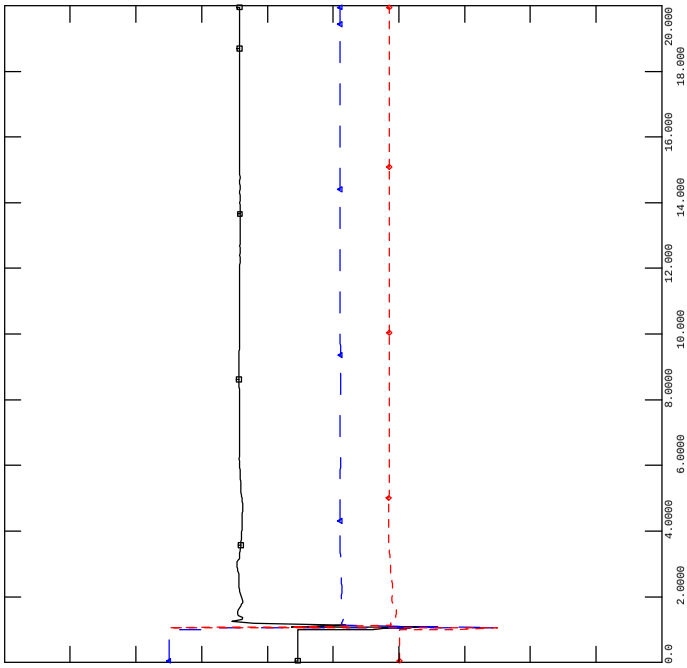
FILE: scn4_SL_1034L_Bowmanton.out

THU, APR 14 2022 19:12 BRANCH Q

CHNL# 532: [964L_L5_Q]
249.59 -108.4

CHNL# 536: [964L_L4_Q]
167.99 -377.4

CHNL# 538: [1005L_Q]
284.38 -236.5



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_1034L_CASSILS

FILE: scn4_SL_1034L_Cassils.out

THU, APR 14 2022 19:12 ACTIVE POWER

CHNL# 195: [POWR 61994[GRANLEA6 0.6900]G1]
1.2001 -0.2000

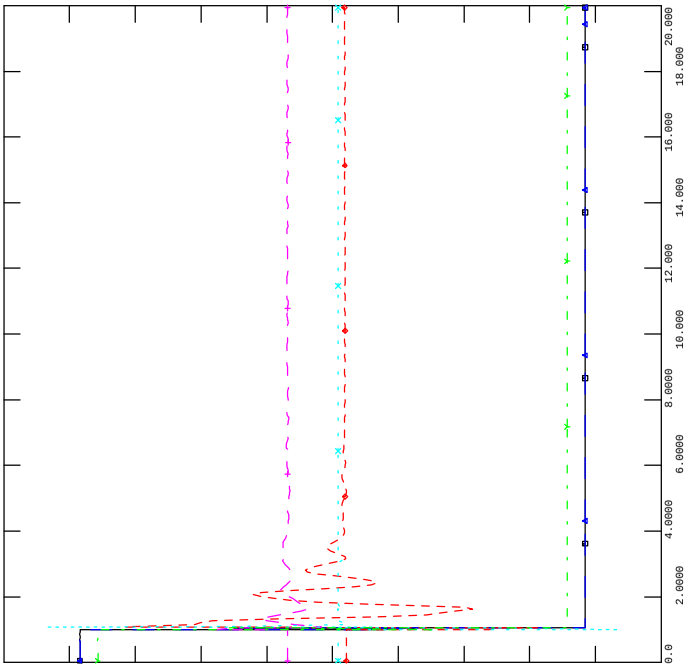
CHNL# 193: [POWR 60990[SHAMROC5 0.6500]G1]
3.6076 0.47770

CHNL# 201: [POWR 773[SECST 20.000]1]
4.1737 -2.670

CHNL# 167: [POWR 667[CANCARB9 13.800]1]
0.86770 -0.2134

CHNL# 200: [POWR990007[FORTYMILE_6 0.6900]G2]
1.5302 -0.2000

CHNL# 199: [POWR990004[FORTYMILE_3 0.6900]G1]
1.5302 -0.2000



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_1034L_CASSILS

FILE: scn4_SL_1034L_Cassils.out

THU, APR 14 2022 19:12

BUS VOLTAGE

CHNL# 518: [VOLT 976 [ROTBAUR 138.00]]
1.4235 0.17130

CHNL# 513: [VOLT 320 [CHAPPIC7 138.00]]
1.2939 0.18620

CHNL# 516: [VOLT 662 [WHITLA1 240.00]]
1.6967 0.11620

CHNL# 515: [VOLT 659 [BOWMAN2 138.00]]
1.5148 0.06480

CHNL# 517: [VOLT 669 [BOWMAN1 240.00]]
1.5911 0.05890

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_1034L_CASSILS

FILE: scn4_SL_1034L_Cassils.out

THU, APR 14 2022 19:12

BRANCH Q

CHNL# 540: [1035L Q]
547.69 -669.8

CHNL# 534: [1034L Q]
40.000 -50.62

CHNL# 526: [983L_L1_Q]
197.69 -551.6

CHNL# 524: [983L_L3_Q]
55.831 -185.6

CHNL# 522: [983L_L2_Q]
80.076 -267.1

CHNL# 520: [964L_L2_Q]
212.44 -98.14

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_1034L_CASSILS

FILE: scn4_SL_1034L_Cassils.out

THU, APR 14 2022 19:12

TERMINAL VOLTAGE

CHNL# 444: [ETRM 61994[GRANLEA6 0.6900]G1]
1.1827 -0.1000

CHNL# 442: [ETRM 60990[SHAMROC5 0.6500]G1]
1.7793 0.25950

CHNL# 450: [ETRM 773[SECST 20.000]1]
1.1463 0.76890

CHNL# 416: [ETRM 667[CANCARB9 13.800]1]
1.2537 0.55510

CHNL# 449: [ETRM990007[FORTYMILE_6 0.6900]G2]
1.1402 -0.1000

CHNL# 448: [ETRM990004[FORTYMILE_3 0.6900]G1]
1.1402 -0.1000

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_1034L_CASSILS

FILE: scn4_SL_1034L_Cassils.out

THU, APR 14 2022 19:12

BRANCH P

CHNL# 539: [1035L_P]
753.69 -237.0

CHNL# 533: [1034L_P]
682.16 -227.4

CHNL# 525: [983L_L1_P]
203.66 -740.5

CHNL# 523: [983L_L3_P]
109.65 -452.0

CHNL# 521: [983L_L2_P]
109.63 -451.8

CHNL# 519: [964L_L2_P]
275.90 -144.2

TIME (SECONDS)

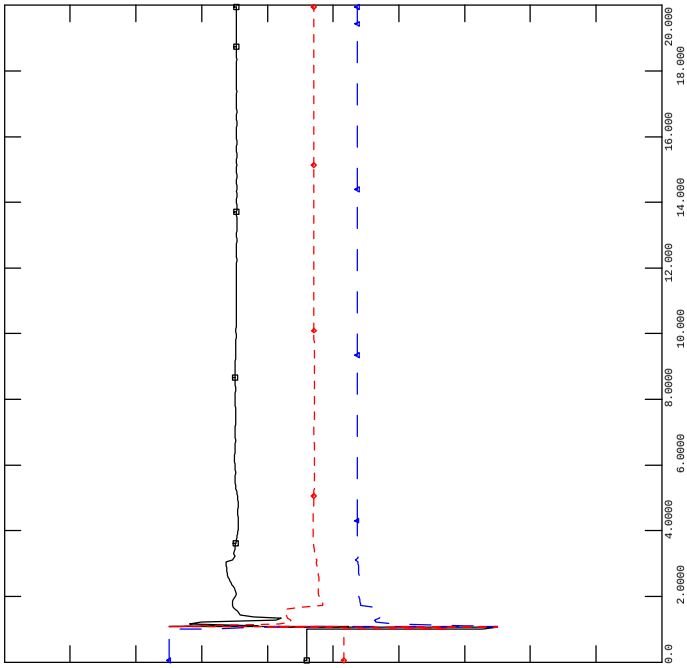
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_1034L_CASSILS

FILE: scn4_SL_1034L_Cassils.out

THU, APR 14 2022 19:12

BRANCH Q

CHNL# 532: [964L L5 Q] 184.69 -106.2
CHNL# 536: [964L_L4_Q] 164.07 -365.7
CHNL# 538: [1005L Q] 257.44 -189.4



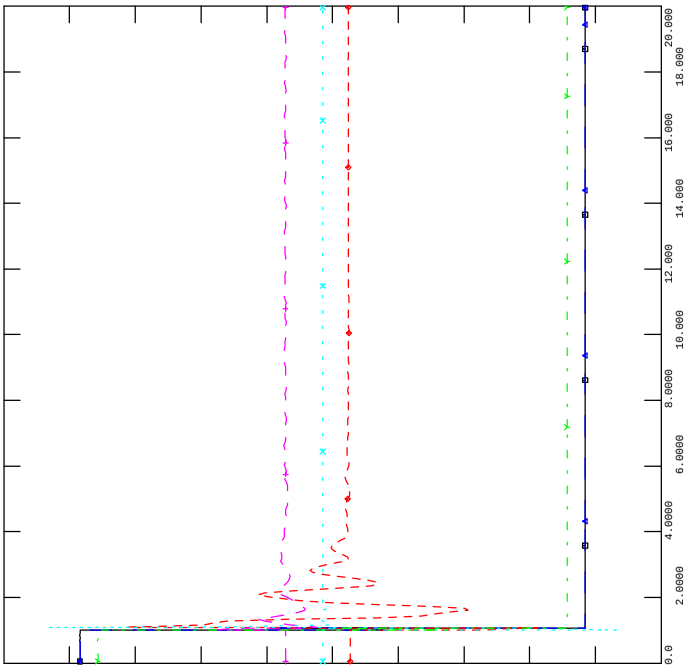
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_1035L_BOWMANTON

FILE: scn4_SL_1035L_Bowmanton.out

THU, APR 14 2022 19:12

ACTIVE POWER

CHNL# 195: [POWR 61994[GRANLEA6 0.6900]G1] 1.2001 -0.2000
CHNL# 193: [POWR 60990[SHAMROC5 0.6500]G1] 3.5012 0.43760
CHNL# 201: [POWR 773[SECST 20.000]1] 4.1462 -2.686
CHNL# 167: [POWR 667[CANCARB9 13.800]1] 0.86600 -0.2007
CHNL# 200: [POWR990007[FORTYMILE_6 0.6900]G2] 1.5302 -0.2000
CHNL# 199: [POWR990004[FORTYMILE 3 0.6900]G1] 1.5302 -0.2000



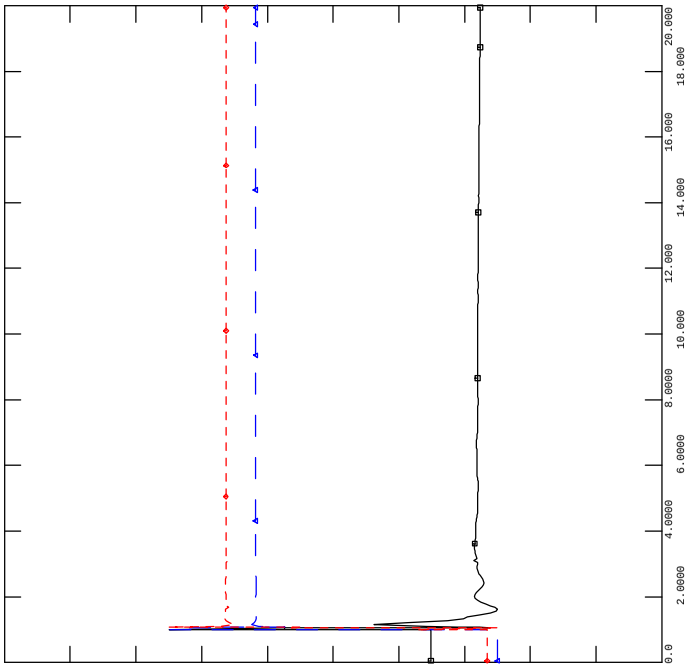
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_1034L_CASSILS

FILE: scn4_SL_1034L_Cassils.out

THU, APR 14 2022 19:12

BRANCH P

CHNL# 531: [964L L5 P] 272.22 -132.9
CHNL# 535: [964L_L4_P] 160.98 -612.4
CHNL# 537: [1005L P] 95.143 -500.2



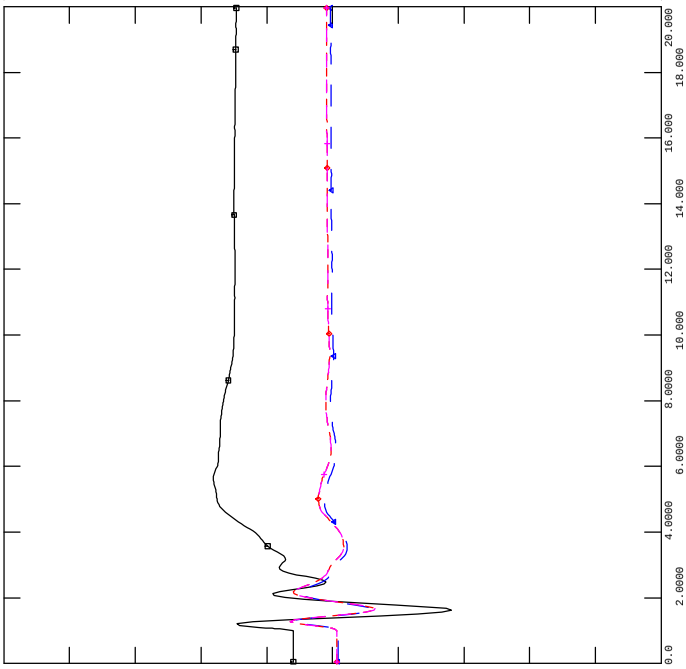
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_1035L_BOWMANTON

FILE: scn4_SL_1035L_Bowmanton.out

THU, APR 14 2022 19:12

ROTOR ANGLE

CHNL# 37: [ANGL 775[SECCT2 21.000]3] 34.193 -80.62
CHNL# 36: [ANGL 774[SECCT1 21.000]2] 34.193 -80.62
CHNL# 35: [ANGL 773[SECST 20.000]1] 35.106 -79.08
CHNL# 1: [ANGL 667[CANCARB9 13.800]1] 90.971 -65.87



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_1035L_BOWMANTON

FILE: scn4_SL_1035L_Bowmanton.out

THU, APR 14 2022 19:12

TERMINAL VOLTAGE

CHNL# 444: [ETRM 61994[GRANLEA6 0.6900]G1] 1.1827 -0.1000
CHNL# 442: [ETRM 60990[SHAMROC5 0.6500]G1] 1.7409 0.23790
CHNL# 450: [ETRM 773[SECST 20.000]1] 1.1466 0.77420
CHNL# 416: [ETRM 667[CANCARB9 13.800]1] 1.2508 0.58210
CHNL# 449: [ETRM990007[FORTYMILE_6 0.6900]G2] 1.1402 -0.1000
CHNL# 448: [ETRM990004[FORTYMILE_3 0.6900]G1] 1.1402 -0.1000

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_1035L_BOWMANTON

FILE: scn4_SL_1035L_Bowmanton.out

THU, APR 14 2022 19:12

BRANCH P

CHNL# 539: [1035L P] 716.25 -238.7
CHNL# 533: [1034L P] 729.96 -221.9
CHNL# 525: [983L_L1_P] 203.20 -740.4
CHNL# 523: [983L_L3_P] 107.98 -451.5
CHNL# 521: [983L_L2_P] 107.98 -451.2
CHNL# 519: [964L L2 P] 268.96 -130.2

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_1035L_BOWMANTON

FILE: scn4_SL_1035L_Bowmanton.out

THU, APR 14 2022 19:12

REACTIVE POWER

CHNL# 278: [VARS 61994[GRANLEA6 0.6900]G1] 1.1184 -0.5000
CHNL# 276: [VARS 60990[SHAMROC5 0.6500]G1] 3.4957 -0.7605
CHNL# 284: [VARS 773[SECST 20.000]1] 3.5627 -2.503
CHNL# 250: [VARS 667[CANCARB9 13.800]1] 1.2861 -1.061
CHNL# 283: [VARS990007[FORTYMILE_6 0.6900]G2] 0.51800 -0.5000
CHNL# 282: [VARS990004[FORTYMILE_3 0.6900]G1] 0.51800 -0.5000

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_1035L_BOWMANTON

FILE: scn4_SL_1035L_Bowmanton.out

THU, APR 14 2022 19:12

BUS VOLTAGE

CHNL# 518: [VOLT 976 [ROTBAUR 138.00]] 1.4125 0.21820
CHNL# 513: [VOLT 320 [CHAPPIC7 138.00]] 1.2973 0.23710
CHNL# 516: [VOLT 662 [WHITLA1 240.00]] 1.6678 0.10100
CHNL# 515: [VOLT 659 [BOWMAN2 138.00]] 1.4998 0.07800
CHNL# 517: [VOLT 669 [BOWMAN1 240.00]] 1.5706 0.03240

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_1035L_BOWMANTON

FILE: scn4_SL_1035L_Bowmanton.out

THU, APR 14 2022 19:12 BRANCH P

CHNL# 531: [964L_L5_P]
286.47 -198.1
CHNL# 535: [964L_L4_P]
160.62 -612.3
CHNL# 537: [1005L_P]
90.962 -506.9

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_1035L_NEWELL

FILE: scn4_SL_1035L_Newell.out

THU, APR 14 2022 19:12 ROTOR ANGLE

CHNL# 37: [ANGL 775[SECCT2 21.000]3]
31.581 -78.51
CHNL# 36: [ANGL 774[SECCT1 21.000]2]
31.581 -78.51
CHNL# 35: [ANGL 773[SECST 20.000]1]
31.969 -77.02
CHNL# 1: [ANGL 667[CANCARB9 13.800]1]
89.918 -69.73

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_1035L_BOWMANTON

FILE: scn4_SL_1035L_Bowmanton.out

THU, APR 14 2022 19:12 BRANCH Q

CHNL# 540: [1035L_Q]
40.926 -40.00
CHNL# 534: [1034L_Q]
528.59 -661.4
CHNL# 526: [983L_L1_Q]
189.97 -528.4
CHNL# 524: [983L_L3_Q]
59.219 -182.0
CHNL# 522: [983L_L2_Q]
84.295 -256.5
CHNL# 520: [964L_L2_Q]
214.72 -106.1

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_1035L_BOWMANTON

FILE: scn4_SL_1035L_Bowmanton.out

THU, APR 14 2022 19:12 BRANCH Q

CHNL# 532: [964L_L5_Q]
177.68 -78.07
CHNL# 536: [964L_L4_Q]
159.22 -351.1
CHNL# 538: [1005L_Q]
258.30 -188.2

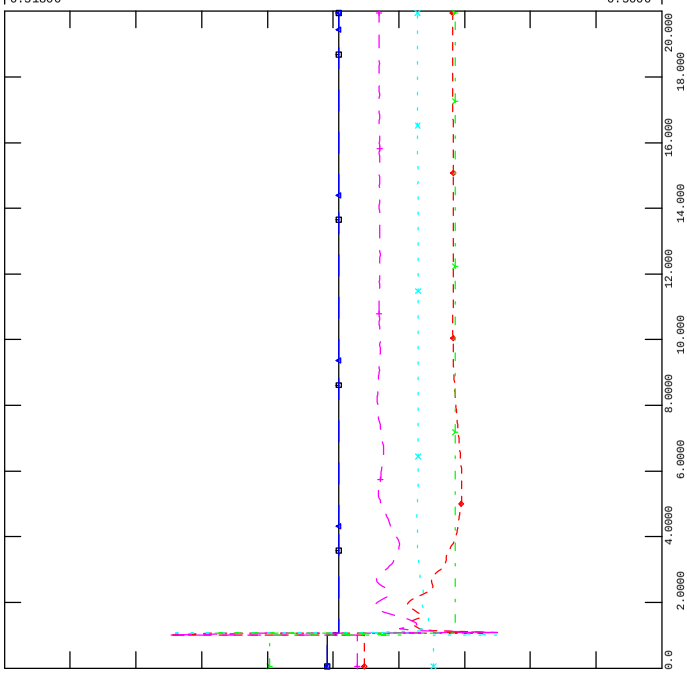
TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_1035L_NEWELL

FILE: scn4_SL_1035L_Newell.out

THU, APR 14 2022 19:12 REACTIVE POWER

CHNL# 278: [VARS 61994[GRANLEA6 0.6900]G1] 1.0917 -0.5000
CHNL# 276: [VARS 60990[SHAMROC5 0.6500]G1] 5.2740 -1.333
CHNL# 284: [VARS 773[SECST 20.000]1] 1.7431 -1.513
CHNL# 250: [VARS 667[CANCARB9 13.800]1] 1.2865 -0.8554
CHNL# 283: [VARS990007[FORTYMILE_6 0.6900]G2] 0.51800 -0.5000
CHNL# 282: [VARS990004[FORTYMILE_3 0.6900]G1] 0.51800 -0.5000

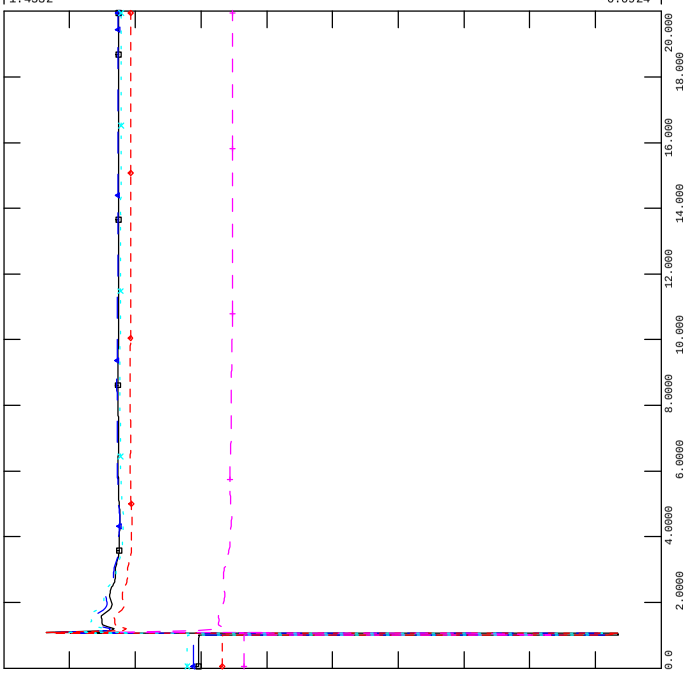


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_1035L_NEWELL

FILE: scn4_SL_1035L_Newell.out

THU, APR 14 2022 19:12 BUS VOLTAGE

CHNL# 518: [VOLT 976 [ROTBAUR 138.00]] 1.3266 0.21060
CHNL# 513: [VOLT 320 [CHAPPIC7 138.00]] 1.2365 0.64240
CHNL# 516: [VOLT 662 [WHITLA1 240.00]] 1.5436 -0.0060
CHNL# 515: [VOLT 659 [BOWMAN2 138.00]] 1.3941 0.04320
CHNL# 517: [VOLT 669 [BOWMAN1 240.00]] 1.4532 -0.0924

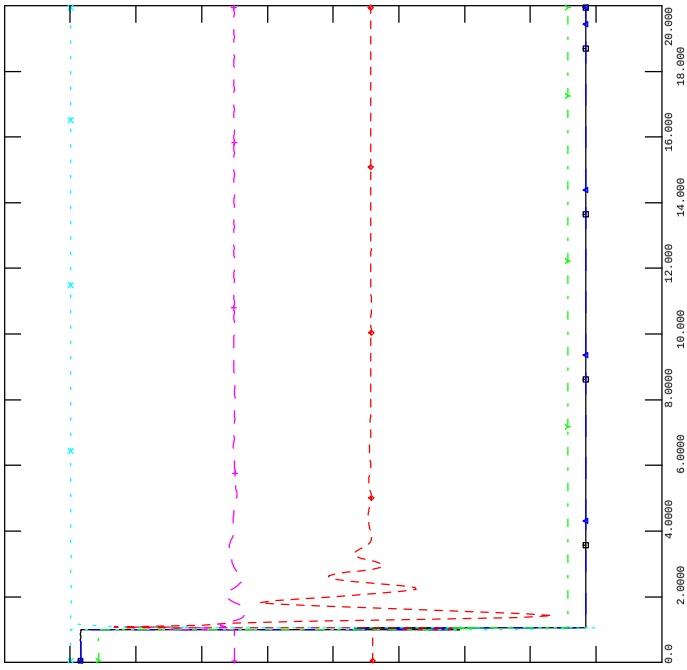


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_1035L_NEWELL

FILE: scn4_SL_1035L_Newell.out

THU, APR 14 2022 19:12 ACTIVE POWER

CHNL# 195: [POWR 61994[GRANLEA6 0.6900]G1] 1.2001 -0.2000
CHNL# 193: [POWR 60990[SHAMROC5 0.6500]G1] 2.2211 0.18940
CHNL# 201: [POWR 773[SECST 20.000]1] 2.9211 -1.946
CHNL# 167: [POWR 667[CANCARB9 13.800]1] 0.97660 -0.2248
CHNL# 200: [POWR990007[FORTYMILE_6 0.6900]G2] 1.5302 -0.2000
CHNL# 199: [POWR990004[FORTYMILE_3 0.6900]G1] 1.5302 -0.2000

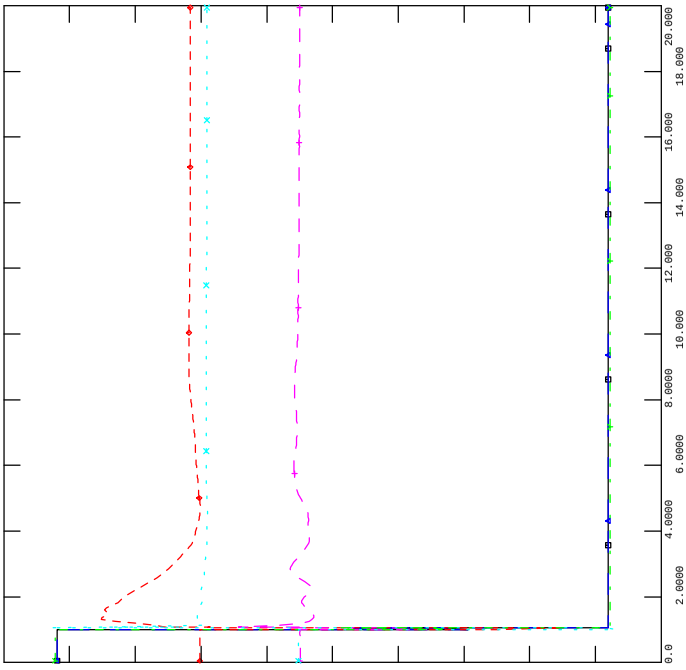


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_1035L_NEWELL

FILE: scn4_SL_1035L_Newell.out

THU, APR 14 2022 19:12 TERMINAL VOLTAGE

CHNL# 444: [ETRM 61994[GRANLEA6 0.6900]G1] 1.1827 -0.1000
CHNL# 442: [ETRM 60990[SHAMROC5 0.6500]G1] 1.7173 0.25290
CHNL# 450: [ETRM 773[SECST 20.000]1] 1.1362 0.85610
CHNL# 416: [ETRM 667[CANCARB9 13.800]1] 1.2407 0.56750
CHNL# 449: [ETRM990007[FORTYMILE_6 0.6900]G2] 1.1402 -0.1000
CHNL# 448: [ETRM990004[FORTYMILE_3 0.6900]G1] 1.1402 -0.1000

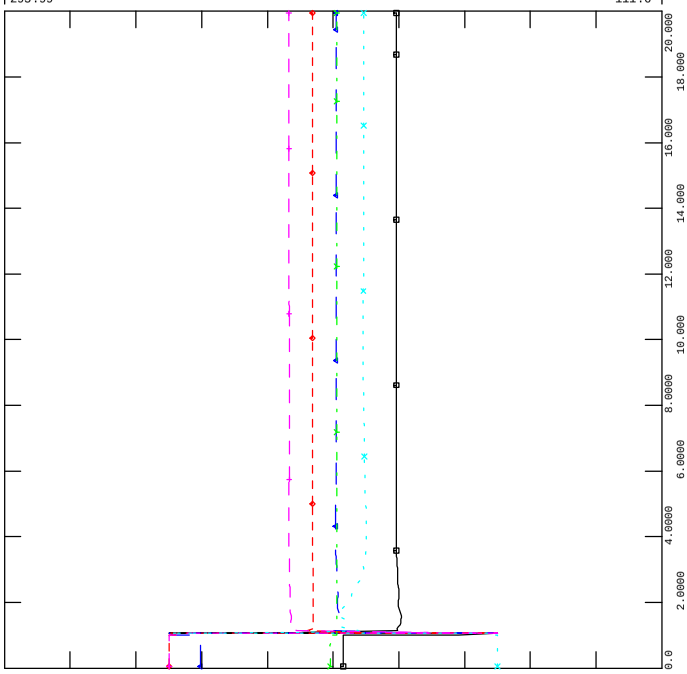


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_1035L_NEWELL

FILE: scn4_SL_1035L_Newell.out

THU, APR 14 2022 19:12 BRANCH Q

CHNL# 540: [1035L_Q] 40.926 -40.00
CHNL# 534: [1034L_Q] 610.69 -217.7
CHNL# 526: [983L_L1_Q] 210.64 -590.4
CHNL# 524: [983L_L3_Q] 77.872 -251.8
CHNL# 522: [983L_L2_Q] 97.674 -311.6
CHNL# 520: [964L_L2_Q] 295.99 -111.6

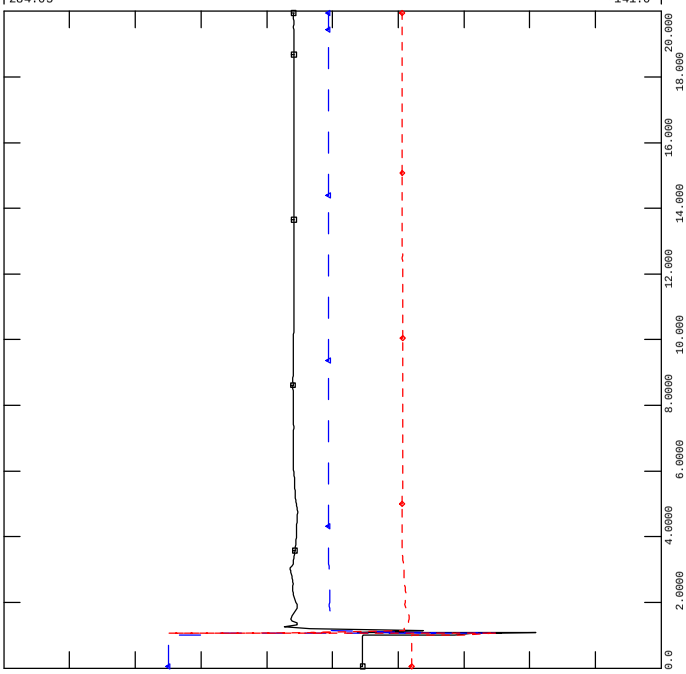


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_1035L_NEWELL

FILE: scn4_SL_1035L_Newell.out

THU, APR 14 2022 19:12 BRANCH Q

CHNL# 532: [964L_L5_Q] 273.67 -112.0
CHNL# 536: [964L_L4_Q] 177.66 -406.5
CHNL# 538: [1005L_Q] 284.05 -141.0

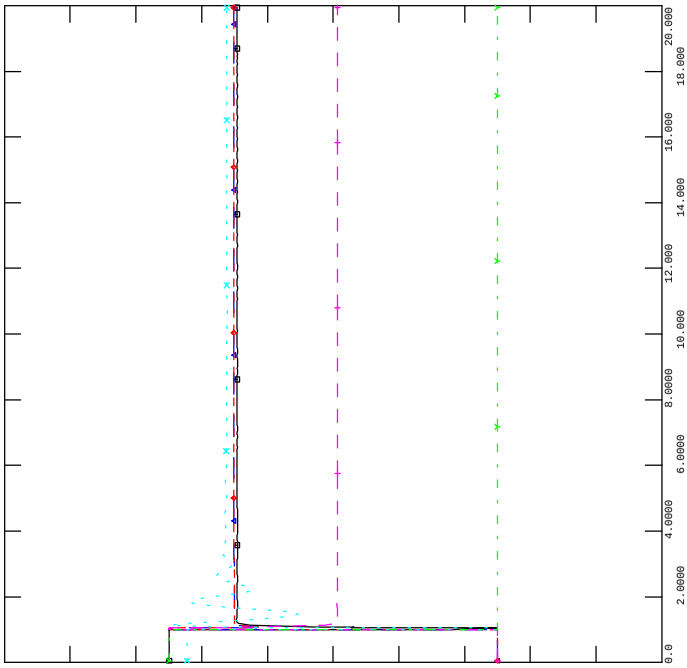


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_1035L_NEWELL

FILE: scn4_SL_1035L_Newell.out

THU, APR 14 2022 19:12 BRANCH P

CHNL# 539: [1035L_P] 716.25 -238.7
CHNL# 533: [1034L_P] 720.28 -237.0
CHNL# 525: [983L_L1_P] 250.39 -756.1
CHNL# 523: [983L_L3_P] 157.06 -467.9
CHNL# 521: [983L_L2_P] 156.98 -467.5
CHNL# 519: [964L_L2_P] 249.23 -71.05

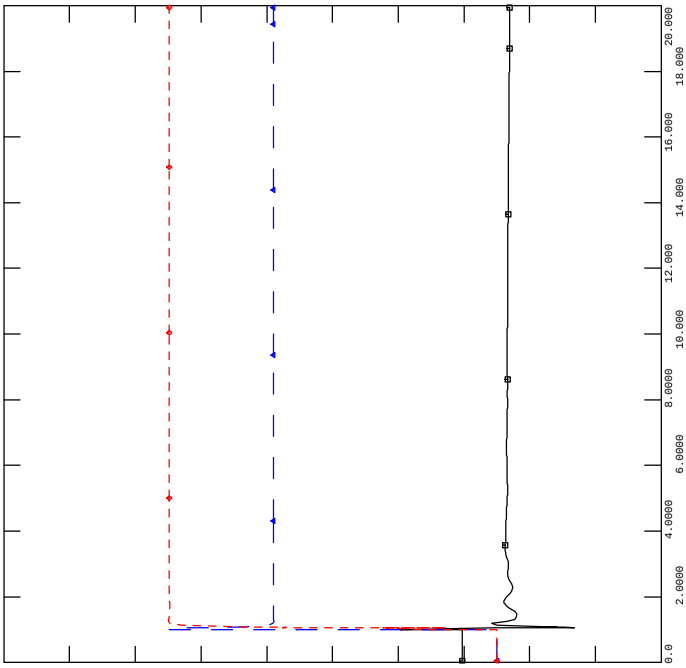


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN4_SL_1035L_NEWELL

FILE: scn4_SL_1035L_Newell.out

THU, APR 14 2022 19:12 BRANCH P

CHNL# 531: [964L_L5_P] 217.22 -105.9
CHNL# 535: [964L_L4_P] 207.83 -628.0
CHNL# 537: [1005L_P] 147.96 -481.3

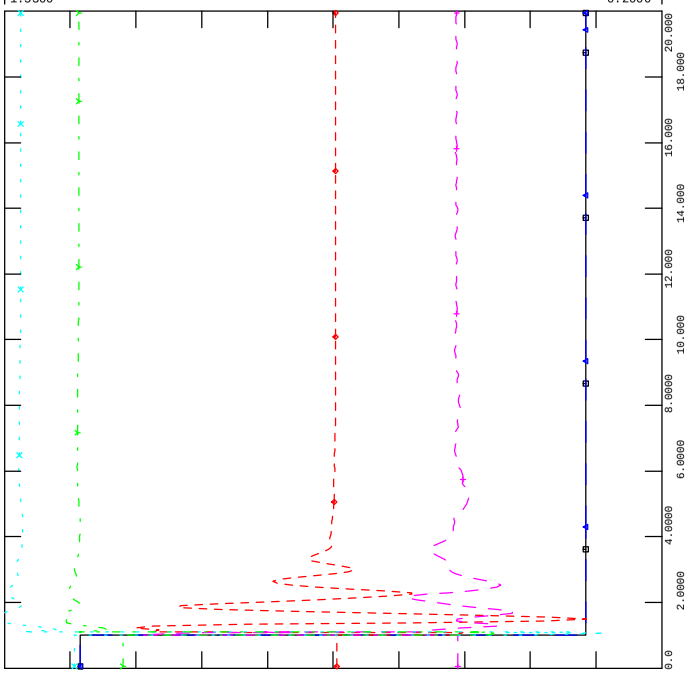


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_01_983L_BOWMANTON

FILE: Scn7_SP_01_983L_Bowmanton.out

THU, APR 14 2022 21:43 ACTIVE POWER

CHNL# 209: [POWR 61994[GRANLEA6 0.6900]G1]
1.2221 -0.0104
CHNL# 206: [POWR 60990[SHAMROC5 0.6500]G1]
2.2349 0.16960
CHNL# 219: [POWR 773[SECST 20.000]1]
3.5726 2.7114
CHNL# 179: [POWR 667[CANCARB9 13.800]1]
1.2891 -0.1897
CHNL# 218: [POWR990007[FORTYMILE_6 0.6900]G2]
1.5300 -0.2000
CHNL# 217: [POWR990004[FORTYMILE_3 0.6900]G1]
1.5300 -0.2000

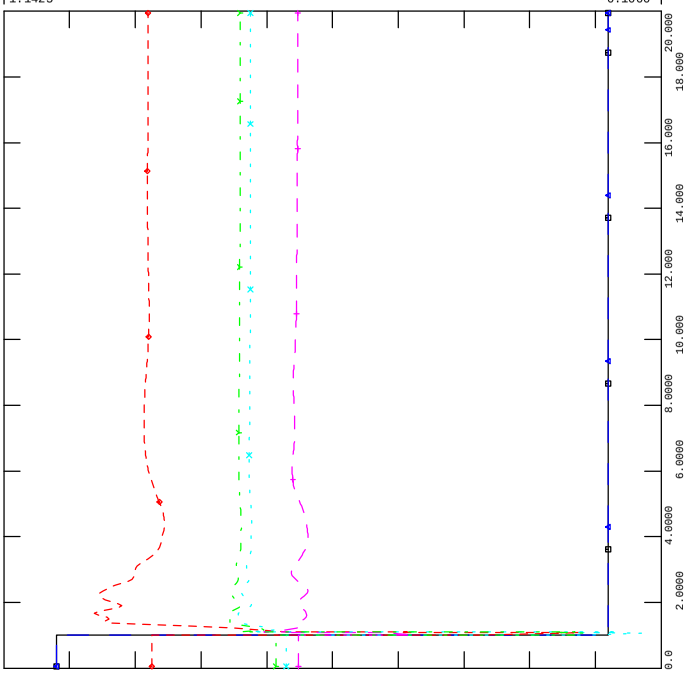


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_01_983L_BOWMANTON

FILE: Scn7_SP_01_983L_Bowmanton.out

THU, APR 14 2022 21:43 TERMINAL VOLTAGE

CHNL# 476: [ETRM 61994[GRANLEA6 0.6900]G1]
1.7511 0.12830
CHNL# 473: [ETRM 60990[SHAMROC5 0.6500]G1]
1.7384 0.13250
CHNL# 486: [ETRM 773[SECST 20.000]1]
1.1610 0.89090
CHNL# 446: [ETRM 667[CANCARB9 13.800]1]
1.1796 0.56060
CHNL# 485: [ETRM990007[FORTYMILE_6 0.6900]G2]
1.1425 -0.1000
CHNL# 484: [ETRM990004[FORTYMILE_3 0.6900]G1]
1.1425 -0.1000

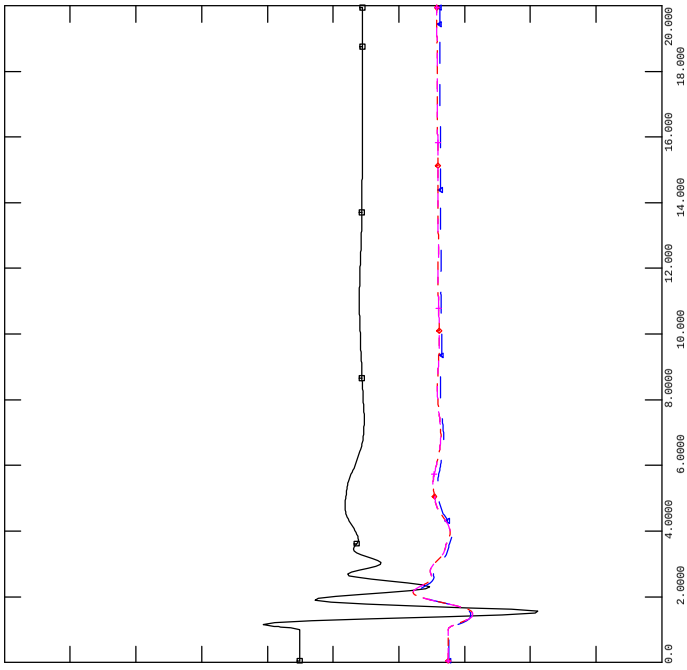


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_01_983L_BOWMANTON

FILE: Scn7_SP_01_983L_Bowmanton.out

THU, APR 14 2022 21:43 ROTOR ANGLE

CHNL# 43: [ANGL 775[SECCT2 21.000]3]
59.663 -49.07
CHNL# 42: [ANGL 774[SECCT1 21.000]2]
59.663 -49.07
CHNL# 41: [ANGL 773[SECST 20.000]1]
61.216 -46.53
CHNL# 1: [ANGL 667[CANCARB9 13.800]1]
121.49 -50.78

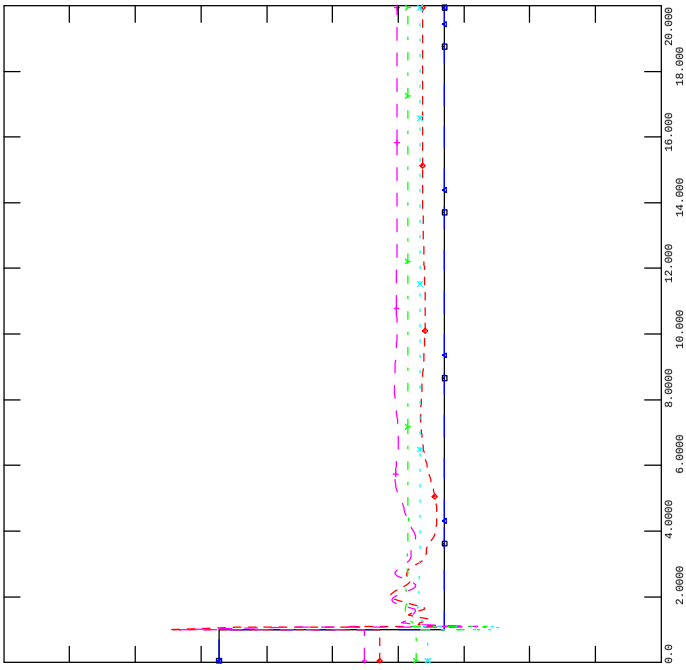


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_01_983L_BOWMANTON

FILE: Scn7_SP_01_983L_Bowmanton.out

THU, APR 14 2022 21:43 REACTIVE POWER

CHNL# 298: [VARS 61994[GRANLEA6 0.6900]G1]
2.2201 -0.6188
CHNL# 295: [VARS 60990[SHAMROC5 0.6500]G1]
4.2870 -1.210
CHNL# 308: [VARS 773[SECST 20.000]1]
2.1460 -0.6143
CHNL# 268: [VARS 667[CANCARB9 13.800]1]
1.2892 -0.7071
CHNL# 307: [VARS990007[FORTYMILE_6 0.6900]G2]
1.0174 -0.5000
CHNL# 306: [VARS990004[FORTYMILE_3 0.6900]G1]
1.0174 -0.5000



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_01_983L_BOWMANTON

FILE: Scn7_SP_01_983L_Bowmanton.out

THU, APR 14 2022 21:43 BRANCH P

CHNL# 575: [1035L_P]
826.02 -274.8
CHNL# 569: [1034L_P]
789.76 -262.8
CHNL# 561: [983L_L1_P]
264.35 -793.1
CHNL# 559: [983L_L3_P]
168.87 -506.6
CHNL# 557: [983L_L2_P]
168.75 -506.2
CHNL# 555: [964L_L2_P]
591.96 -197.2

TIME (SECONDS)
0.0 2.0000 4.0000 6.0000 8.0000 10.000 12.000 14.000 16.000 18.000 20.000

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_01_983L_BOWMANTON

FILE: Scn7_SP_01_983L_Bowmanton.out

THU, APR 14 2022 21:43 BRANCH P

CHNL# 567: [964L_L5_P]
299.10 -107.4
CHNL# 571: [964L_L4_P]
221.85 -666.0
CHNL# 573: [1005L_P]
-160.6 -462.7

TIME (SECONDS)
0.0 2.0000 4.0000 6.0000 8.0000 10.000 12.000 14.000 16.000 18.000 20.000

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_01_983L_BOWMANTON

FILE: Scn7_SP_01_983L_Bowmanton.out

THU, APR 14 2022 21:43 BUS VOLTAGE

CHNL# 554: [VOLT 976 [ROTBAUR 138.00]]
1.2303 0.23010
CHNL# 549: [VOLT 320 [CHAPPIC7 138.00]]
1.2237 0.64620
CHNL# 552: [VOLT 662 [WHITLA1 240.00]]
1.6349 -0.0903
CHNL# 551: [VOLT 659 [BOWMAN2 138.00]]
1.3144 0.05290
CHNL# 553: [VOLT 669 [BOWMAN1 240.00]]
1.3348 -0.0950

TIME (SECONDS)
0.0 2.0000 4.0000 6.0000 8.0000 10.000 12.000 14.000 16.000 18.000 20.000

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_01_983L_BOWMANTON

FILE: Scn7_SP_01_983L_Bowmanton.out

THU, APR 14 2022 21:43 BRANCH Q

CHNL# 576: [1035L_Q]
249.72 -357.3
CHNL# 570: [1034L_Q]
237.47 -356.1
CHNL# 562: [983L_L1_Q]
40.000 -88.00
CHNL# 560: [983L_L3_Q]
88.328 -265.0
CHNL# 558: [983L_L2_Q]
80.426 -241.3
CHNL# 556: [964L_L2_Q]
941.70 -669.2

TIME (SECONDS)
0.0 2.0000 4.0000 6.0000 8.0000 10.000 12.000 14.000 16.000 18.000 20.000

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_02_983L_WHITLA

FILE: Scn7_SP_02_983L_Whitla.out

THU, APR 14 2022 21:43

ROTOR ANGLE

CHNL# 43: [ANGL 775[SECCT2 21.000]3]
59.361 -49.39

CHNL# 42: [ANGL 774[SECCT1 21.000]2]
59.361 -49.39

CHNL# 41: [ANGL 773[SECST 20.000]1]
60.972 -46.77

CHNL# 1: [ANGL 667[CANCARB9 13.800]1]
113.27 -45.88

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_02_983L_WHITLA

FILE: Scn7_SP_02_983L_Whitla.out

THU, APR 14 2022 21:43

REACTIVE POWER

CHNL# 298: [VARS 61994[GRANLEA6 0.6900]G1]
2.2374 -0.6051

CHNL# 295: [VARS 60990[SHAMROC5 0.6500]G1]
4.4521 -1.272

CHNL# 308: [VARS 773[SECST 20.000]1]
1.5144 -0.3348

CHNL# 268: [VARS 667[CANCARB9 13.800]1]
1.1066 -0.6198

CHNL# 307: [VARS990007[FORTYMILE_6 0.6900]G2]
1.0174 -0.5000

CHNL# 306: [VARS990004[FORTYMILE 3 0.6900]G1]
1.0174 -0.5000

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_01_983L_BOWMANTON

FILE: Scn7_SP_01_983L_Bowmanton.out

THU, APR 14 2022 21:43

BRANCH Q

CHNL# 568: [964L L5 Q]
587.80 -655.5

CHNL# 572: [964L L4 Q]
916.34 -942.9

CHNL# 574: [1005L Q]
157.92 -173.2

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_02_983L_WHITLA

FILE: Scn7_SP_02_983L_Whitla.out

THU, APR 14 2022 21:43

ACTIVE POWER

CHNL# 209: [POWR 61994[GRANLEA6 0.6900]G1]
1.2217 -0.0520

CHNL# 206: [POWR 60990[SHAMROC5 0.6500]G1]
2.2665 0.10240

CHNL# 219: [POWR 773[SECST 20.000]1]
3.6043 2.7216

CHNL# 179: [POWR 667[CANCARB9 13.800]1]
1.1981 -0.0868

CHNL# 218: [POWR990007[FORTYMILE_6 0.6900]G2]
1.5300 -0.2000

CHNL# 217: [POWR990004[FORTYMILE_3 0.6900]G1]
1.5300 -0.2000

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_02_983L_WHITLA

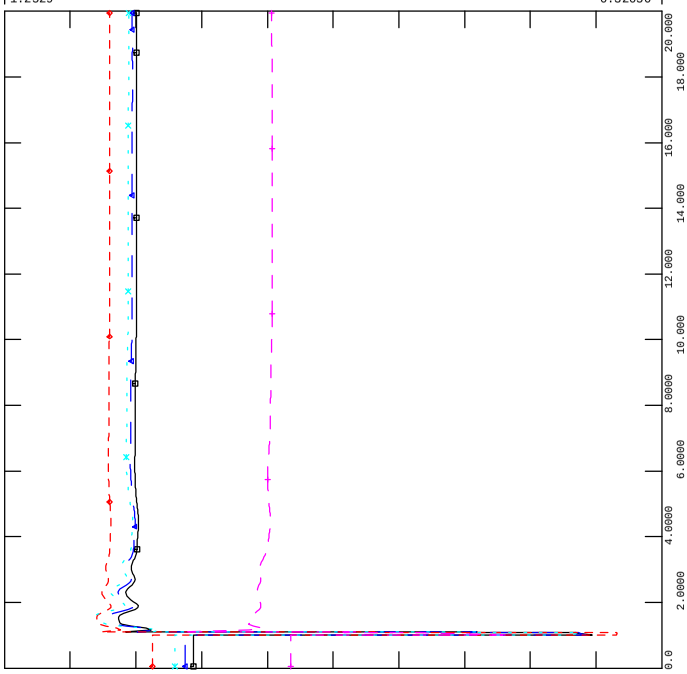
FILE: Scn7_SP_02_983L_Whitla.out

THU, APR 14 2022 21:43

BUS VOLTAGE

CHNL# 554: [VOLT 976 [ROTBAUR 138.00]]
1.2061 0.49520
CHNL# 549: [VOLT 320 [CHAPPIC7 138.00]]
1.1977 0.77730
CHNL# 552: [VOLT 662 [WHITLA1 240.00]]
1.3842 -0.0988
CHNL# 551: [VOLT 659 [BOWMAN2 138.00]]
1.2614 0.40140
CHNL# 553: [VOLT 669 [BOWMAN1 240.00]]
1.2529 0.32050

TIME (SECONDS)



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_02_983L_WHITLA

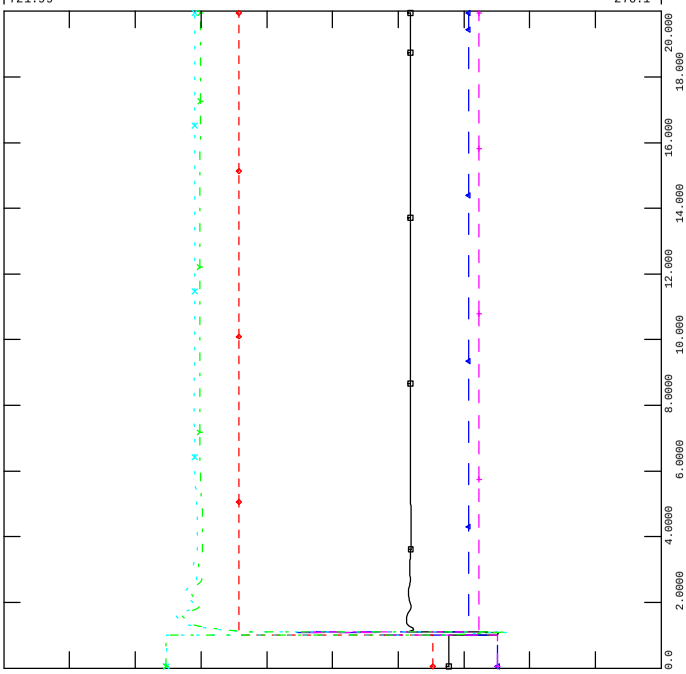
FILE: Scn7_SP_02_983L_Whitla.out

THU, APR 14 2022 21:43

BRANCH Q

CHNL# 576: [1035L Q]
179.26 -379.6
CHNL# 570: [1034L Q]
160.04 -375.0
CHNL# 562: [983L_L1 Q]
1289.0 -493.7
CHNL# 560: [983L_L3 Q]
40.000 -71.79
CHNL# 558: [983L_L2 Q]
835.38 -346.9
CHNL# 556: [964L_L2 Q]
721.99 -270.1

TIME (SECONDS)



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_02_983L_WHITLA

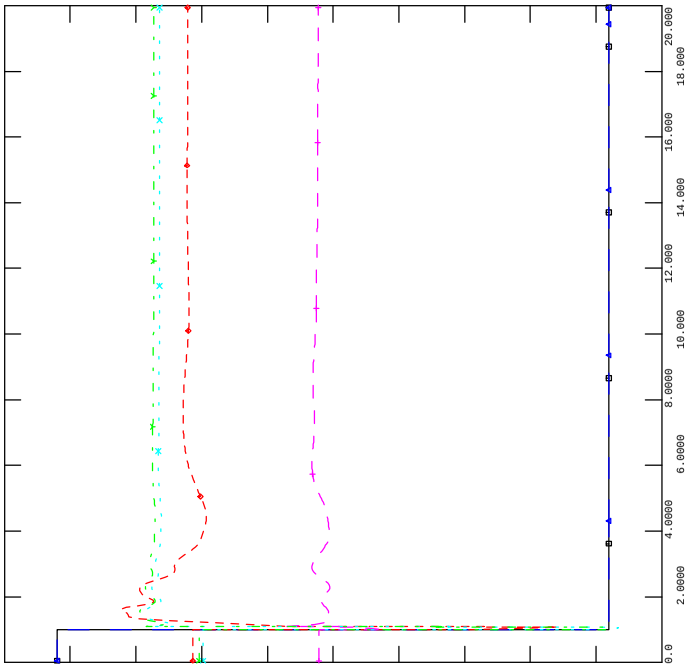
FILE: Scn7_SP_02_983L_Whitla.out

THU, APR 14 2022 21:43

TERMINAL VOLTAGE

CHNL# 476: [ETRM 61994[GRANLEA6 0.6900]G1]
1.4632 0.16500
CHNL# 473: [ETRM 60990[SHAMROC5 0.6500]G1]
1.4488 0.12530
CHNL# 486: [ETRM 773[SECST 20.000]1]
1.1534 0.91610
CHNL# 446: [ETRM 667[CANCARB9 13.800]1]
1.1816 0.68750
CHNL# 485: [ETRM990007[FORTYMILE_6 0.6900]G2]
1.1425 -0.1000
CHNL# 484: [ETRM990004[FORTYMILE_3 0.6900]G1]
1.1425 -0.1000

TIME (SECONDS)



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_02_983L_WHITLA

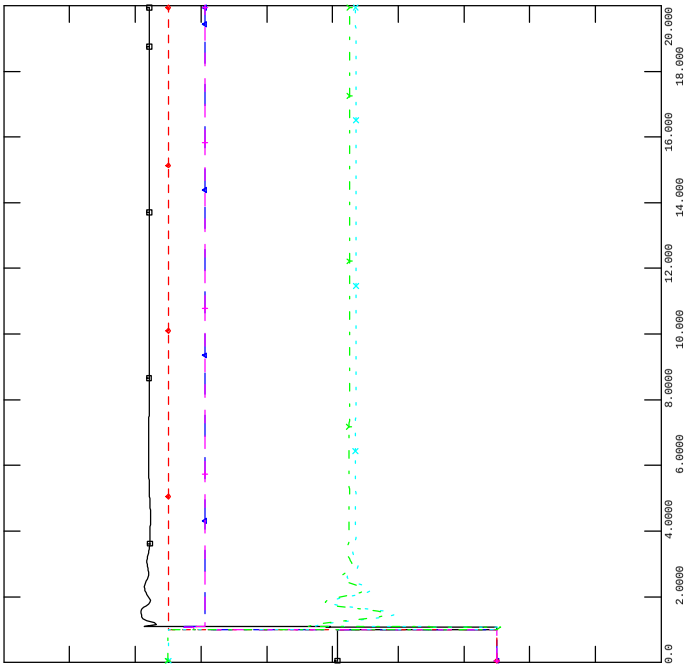
FILE: Scn7_SP_02_983L_Whitla.out

THU, APR 14 2022 21:43

BRANCH P

CHNL# 575: [1035L P]
801.66 -201.7
CHNL# 569: [1034L P]
770.55 -205.2
CHNL# 561: [983L_L1 P]
363.94 -826.3
CHNL# 559: [983L_L3 P]
168.87 -506.6
CHNL# 557: [983L_L2 P]
232.32 -527.4
CHNL# 555: [964L_L2 P]
600.62 -196.6

TIME (SECONDS)



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_02_983L_WHITLA

FILE: Scn7_SP_02_983L_Whitla.out

THU, APR 14 2022 21:43 BRANCH Q

CHNL# 568: [964L_L5_Q] 365.04 -124.1
CHNL# 572: [964L_L4_Q] 608.53 -666.7
CHNL# 574: [1005L_Q] 127.76 -82.06

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_03_964L_Y_P2237

FILE: Scn7_SP_03_964L_Y_P2237.out

THU, APR 14 2022 21:43 ACTIVE POWER

CHNL# 209: [POWR 61994[GRANLEA6 0.6900]G1] 1.2000 -0.0755
CHNL# 206: [POWR 60990[SHAMROC5 0.6500]G1] 2.2223 0.21720
CHNL# 219: [POWR 773[SECST 20.000]1] 3.6065 2.7031
CHNL# 179: [POWR 667[CANCARB9 13.800]1] 1.1416 0.11410
CHNL# 218: [POWR990007[FORTYMILE_6 0.6900]G2] 1.5300 -0.2000
CHNL# 217: [POWR990004[FORTYMILE 3 0.6900]G1] 1.5300 -0.2000

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_02_983L_WHITLA

FILE: Scn7_SP_02_983L_Whitla.out

THU, APR 14 2022 21:43 BRANCH P

CHNL# 567: [964L_L5_P] 303.40 -101.7
CHNL# 571: [964L_L4_P] 249.87 -675.3
CHNL# 573: [1005L_P] -237.8 -391.7

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_03_964L_Y_P2237

FILE: Scn7_SP_03_964L_Y_P2237.out

THU, APR 14 2022 21:43 ROTOR ANGLE

CHNL# 43: [ANGL 775[SECCT2 21.000]3] 58.593 -47.06
CHNL# 42: [ANGL 774[SECCT1 21.000]2] 58.593 -47.06
CHNL# 41: [ANGL 773[SECST 20.000]1] 60.402 -44.60
CHNL# 1: [ANGL 667[CANCARB9 13.800]1] 113.27 -18.34

TIME (SECONDS)

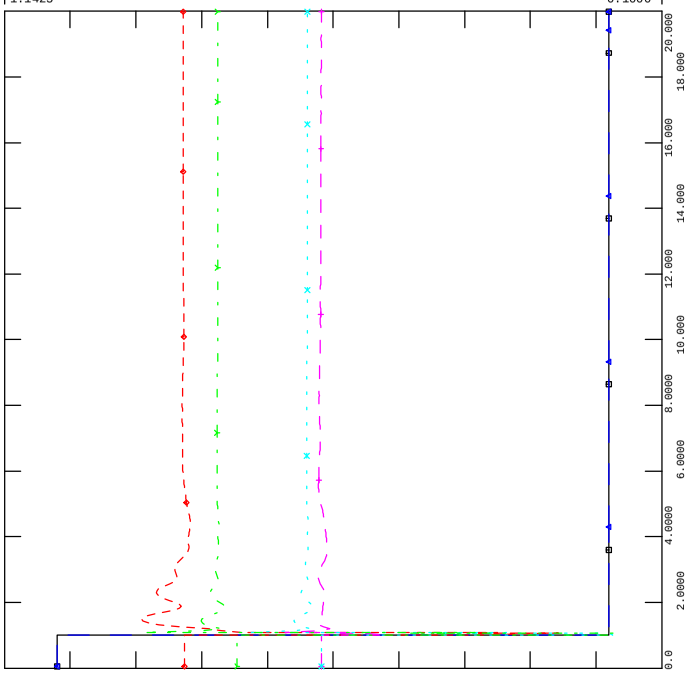
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_03_964L_Y_P2237

FILE: Scn7_SP_03_964L_Y_P2237.out

THU, APR 14 2022 21:43

TERMINAL VOLTAGE

CHNL# 476: [ETRM 61994[GRANLEA6 0.6900]G1] 1.5912 0.14460
CHNL# 473: [ETRM 60990[SHAMROC5 0.6500]G1] 1.9160 0.11700
CHNL# 486: [ETRM 773[SECST 20.000]1] 1.1554 0.91620
CHNL# 446: [ETRM 667[CANCARB9 13.800]1] 1.1667 0.70440
CHNL# 485: [ETRM990007[FORTYMILE_6 0.6900]G2] 1.1425 -0.1000
CHNL# 484: [ETRM990004[FORTYMILE_3 0.6900]G1] 1.1425 -0.1000



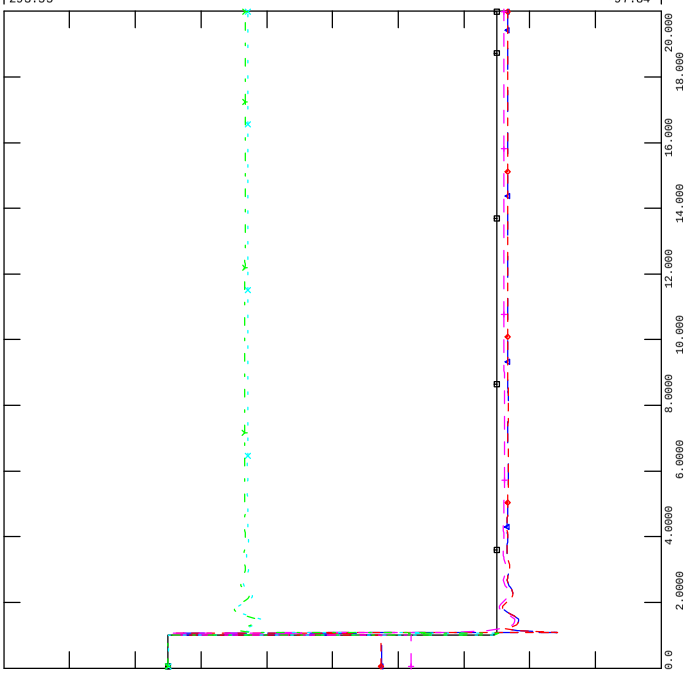
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_03_964L_Y_P2237

FILE: Scn7_SP_03_964L_Y_P2237.out

THU, APR 14 2022 21:43

BRANCH P

CHNL# 575: [1035L_P] 801.87 -202.3
CHNL# 569: [1034L_P] 770.80 -206.0
CHNL# 561: [983L_L1_P] 380.66 -1088.
CHNL# 559: [983L_L3_P] 289.90 -803.8
CHNL# 557: [983L_L2_P] 290.65 -803.3
CHNL# 555: [964L_L2_P] 293.55 -97.84



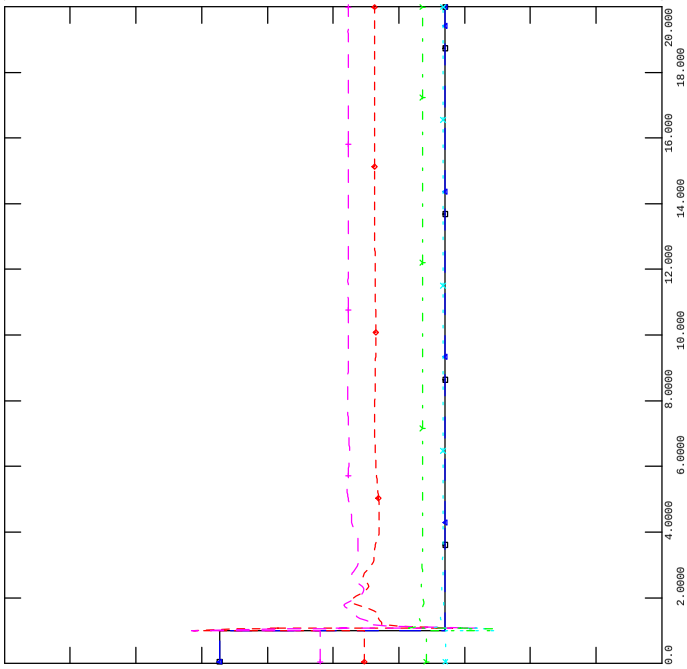
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_03_964L_Y_P2237

FILE: Scn7_SP_03_964L_Y_P2237.out

THU, APR 14 2022 21:43

REACTIVE POWER

CHNL# 298: [VARS 61994[GRANLEA6 0.6900]G1] 2.4565 -0.6890
CHNL# 295: [VARS 60990[SHAMROC5 0.6500]G1] 5.7402 -1.709
CHNL# 308: [VARS 773[SECST 20.000]1] 1.5124 -0.3190
CHNL# 268: [VARS 667[CANCARB9 13.800]1] 1.1050 -0.6451
CHNL# 307: [VARS990007[FORTYMILE_6 0.6900]G2] 1.0174 -0.5000
CHNL# 306: [VARS990004[FORTYMILE_3 0.6900]G1] 1.0174 -0.5000



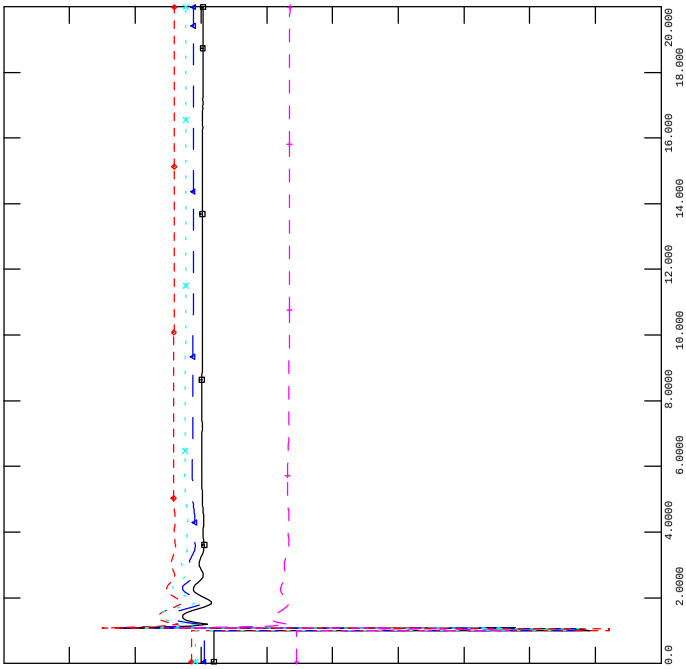
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_03_964L_Y_P2237

FILE: Scn7_SP_03_964L_Y_P2237.out

THU, APR 14 2022 21:43

BUS VOLTAGE

CHNL# 554: [VOLT 976 [ROTBAUR 138.00]] 1.2376 0.49700
CHNL# 549: [VOLT 320 [CHAPPIC7 138.00]] 1.2050 0.77820
CHNL# 552: [VOLT 662 [WHITLA1 240.00]] 1.4941 -0.0638
CHNL# 551: [VOLT 659 [BOWMAN2 138.00]] 1.2973 0.40390
CHNL# 553: [VOLT 669 [BOWMAN1 240.00]] 1.2960 0.32370



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_03_964L_Y_P2237

FILE: Scn7_SP_03_964L_Y_P2237.out

THU, APR 14 2022 21:43 BRANCH P

CHNL# 567: [964L_L5_P]
99.378 -292.3
CHNL# 571: [964L_L4_P]
222.00 -666.0
CHNL# 573: [1005L_P]
-237.8 -381.8

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_04_964L_Y_BOWMANTON

FILE: Scn7_SP_04_964L_Y_Bowmanton.out

THU, APR 14 2022 21:43 ROTOR ANGLE

CHNL# 43: [ANGL 775[SECCT2 21.000]3]
58.460 -46.56
CHNL# 42: [ANGL 774[SECCT1 21.000]2]
58.460 -46.56
CHNL# 41: [ANGL 773[SECST 20.000]1]
60.235 -44.07
CHNL# 1: [ANGL 667[CANCARB9 13.800]1]
118.33 -19.40

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_03_964L_Y_P2237

FILE: Scn7_SP_03_964L_Y_P2237.out

THU, APR 14 2022 21:43 BRANCH Q

CHNL# 576: [1035L_Q]
243.33 -402.2
CHNL# 570: [1034L_Q]
228.18 -396.9
CHNL# 562: [983L_L1_Q]
704.99 -1020.
CHNL# 560: [983L_L3_Q]
630.27 -958.6
CHNL# 558: [983L_L2_Q]
649.70 -978.2
CHNL# 556: [964L_L2_Q]
94.759 -86.87

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_03_964L_Y_P2237

FILE: Scn7_SP_03_964L_Y_P2237.out

THU, APR 14 2022 21:43 BRANCH Q

CHNL# 568: [964L_L5_Q]
231.20 -494.7
CHNL# 572: [964L_L4_Q]
40.000 -53.07
CHNL# 574: [1005L_Q]
95.948 -62.33

TIME (SECONDS)

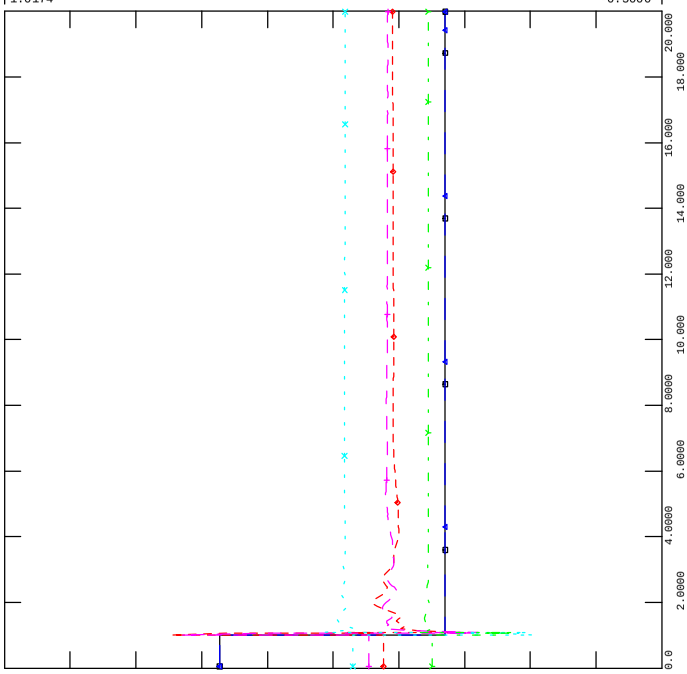
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_04_964L_Y_BOWMANTON

FILE: Scn7_SP_04_964L_Y_Bowmanton.out

THU, APR 14 2022 21:43

REACTIVE POWER

CHNL# 298: [VARS 61994[GRANLEA6 0.6900]G1] 2.3796 -0.6037
CHNL# 295: [VARS 60990[SHAMROC5 0.6500]G1] 1.9527 -0.3270
CHNL# 308: [VARS 773[SECST 20.000]1] 2.1209 -0.5636
CHNL# 268: [VARS 667[CANCARB9 13.800]1] 1.2873 -0.6893
CHNL# 307: [VARS990007[FORTYMILE_6 0.6900]G2] 1.0174 -0.5000
CHNL# 306: [VARS990004[FORTYMILE_3 0.6900]G1] 1.0174 -0.5000



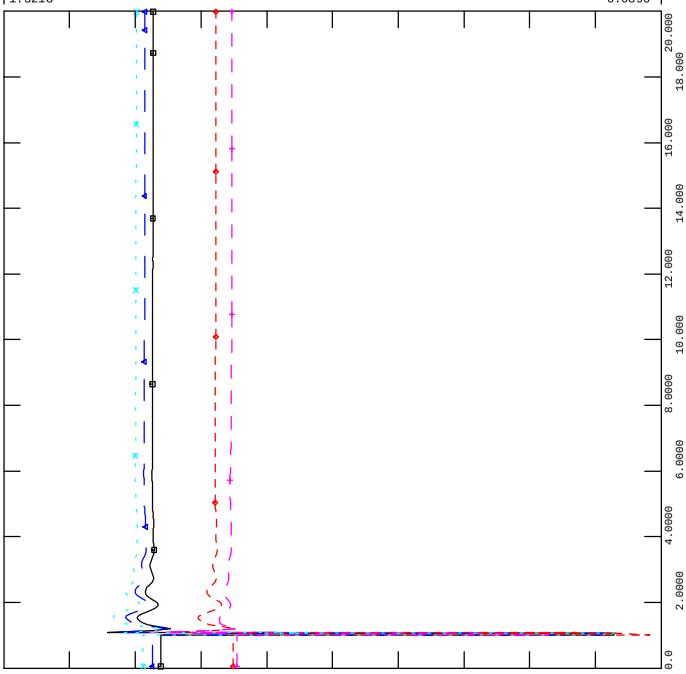
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_04_964L_Y_BOWMANTON

FILE: Scn7_SP_04_964L_Y_Bowmanton.out

THU, APR 14 2022 21:43

BUS VOLTAGE

CHNL# 554: [VOLT 976 [ROTBAUR 138.00]] 1.2340 0.23350
CHNL# 549: [VOLT 320 [CHAPPIC7 138.00]] 1.2166 0.64800
CHNL# 552: [VOLT 662 [WHITLA1 240.00]] 1.5927 0.03520
CHNL# 551: [VOLT 659 [BOWMAN2 138.00]] 1.3077 0.05710
CHNL# 553: [VOLT 669 [BOWMAN1 240.00]] 1.3218 -0.0890



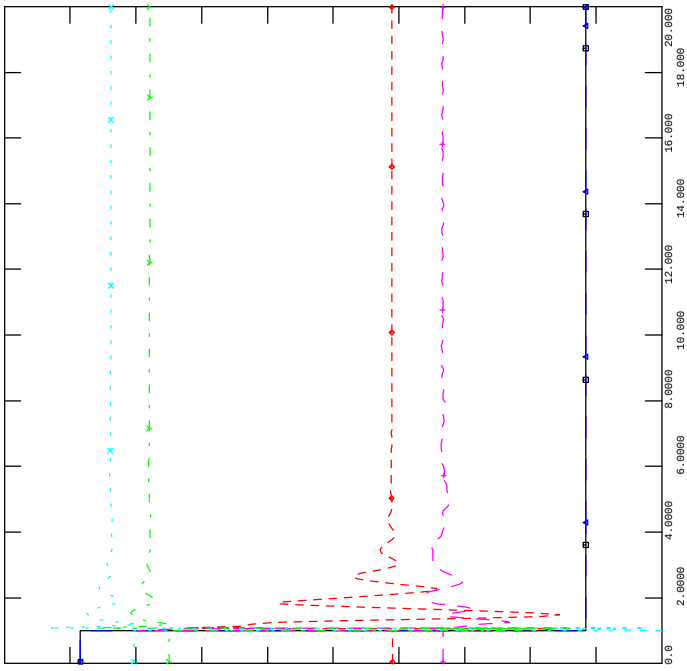
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_04_964L_Y_BOWMANTON

FILE: Scn7_SP_04_964L_Y_Bowmanton.out

THU, APR 14 2022 21:43

ACTIVE POWER

CHNL# 209: [POWR 61994[GRANLEA6 0.6900]G1] 1.3331 0.00500
CHNL# 206: [POWR 60990[SHAMROC5 0.6500]G1] 2.4324 0.31880
CHNL# 219: [POWR 773[SECST 20.000]1] 3.5723 2.6827
CHNL# 179: [POWR 667[CANCARB9 13.800]1] 1.2099 0.07790
CHNL# 218: [POWR990007[FORTYMILE_6 0.6900]G2] 1.5300 -0.2000
CHNL# 217: [POWR990004[FORTYMILE_3 0.6900]G1] 1.5300 -0.2000



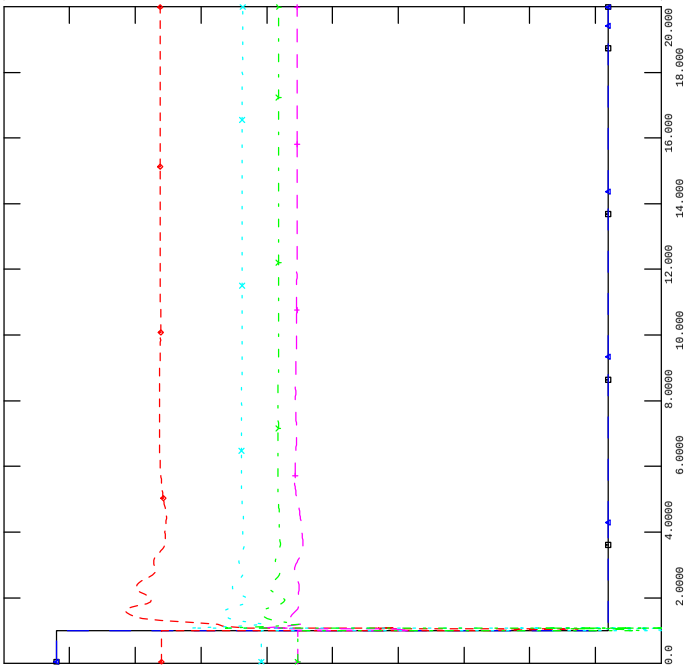
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_04_964L_Y_BOWMANTON

FILE: Scn7_SP_04_964L_Y_Bowmanton.out

THU, APR 14 2022 21:43

TERMINAL VOLTAGE

CHNL# 476: [ETRM 61994[GRANLEA6 0.6900]G1] 1.7434 0.25680
CHNL# 473: [ETRM 60990[SHAMROC5 0.6500]G1] 1.5678 0.24340
CHNL# 486: [ETRM 773[SECST 20.000]1] 1.1602 0.89130
CHNL# 446: [ETRM 667[CANCARB9 13.800]1] 1.1878 0.57040
CHNL# 485: [ETRM990007[FORTYMILE_6 0.6900]G2] 1.1425 -0.1000
CHNL# 484: [ETRM990004[FORTYMILE_3 0.6900]G1] 1.1425 -0.1000

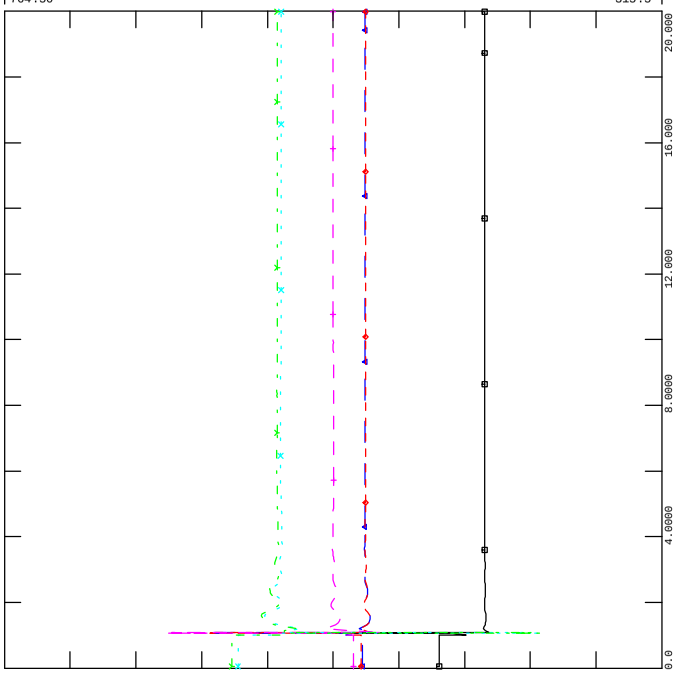


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_04_964L_Y_BOWMANTON

FILE: Scn7_SP_04_964L_Y_Bowmanton.out

THU, APR 14 2022 21:43 BRANCH Q

CHNL# 576: [1035L Q] 251.06 -354.8
CHNL# 570: [1034L Q] 237.66 -353.8
CHNL# 562: [983L L1 Q] 914.98 -900.4
CHNL# 560: [983L L3 Q] 1027.1 -925.4
CHNL# 558: [983L L2 Q] 1049.0 -973.6
CHNL# 556: [964L L2 Q] 764.50 -315.5

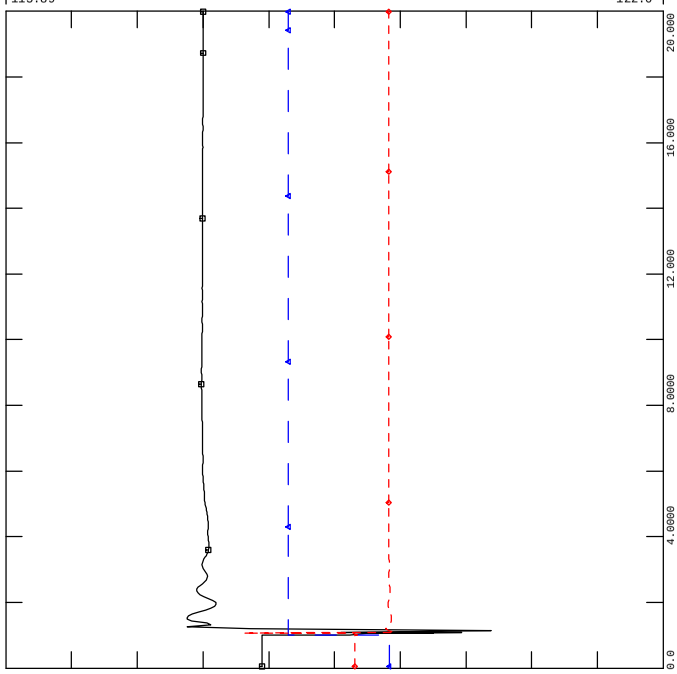


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_04_964L_Y_BOWMANTON

FILE: Scn7_SP_04_964L_Y_Bowmanton.out

THU, APR 14 2022 21:43 BRANCH Q

CHNL# 568: [964L L5 Q] 790.33 -697.6
CHNL# 572: [964L L4 Q] 40.000 -53.07
CHNL# 574: [1005L Q] 115.89 -122.0

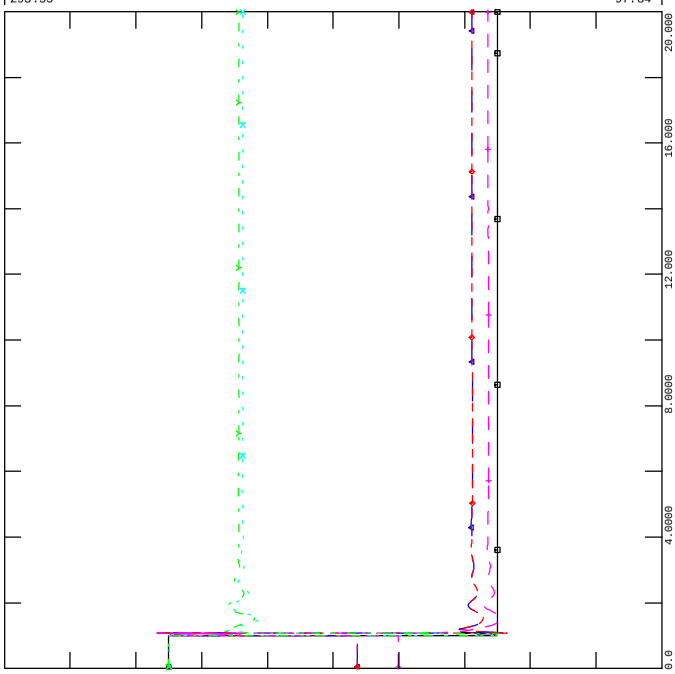


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_04_964L_Y_BOWMANTON

FILE: Scn7_SP_04_964L_Y_Bowmanton.out

THU, APR 14 2022 21:43 BRANCH P

CHNL# 575: [1035L P] 825.93 -274.5
CHNL# 569: [1034L P] 789.73 -262.8
CHNL# 561: [983L L1 P] 380.18 -1138.
CHNL# 559: [983L L3 P] 311.27 -897.6
CHNL# 557: [983L L2 P] 311.20 -896.8
CHNL# 555: [964L L2 P] 293.55 -97.84

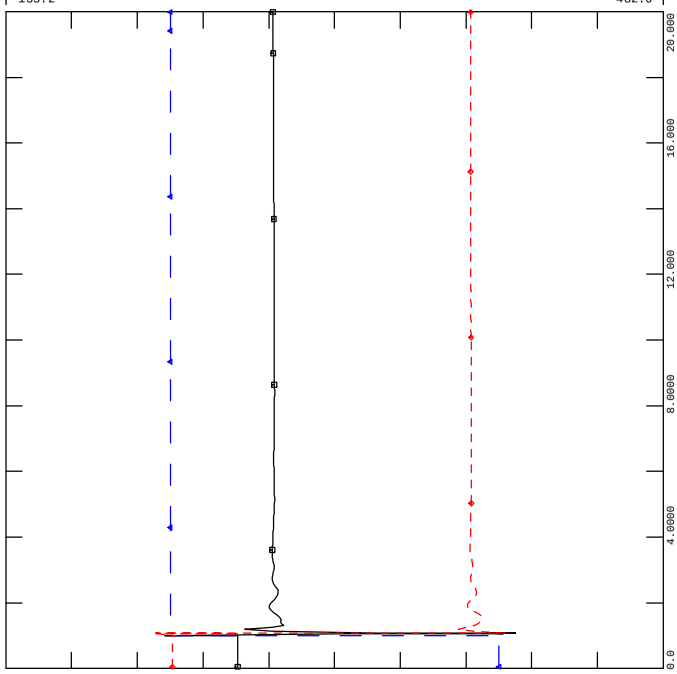


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_04_964L_Y_BOWMANTON

FILE: Scn7_SP_04_964L_Y_Bowmanton.out

THU, APR 14 2022 21:43 BRANCH P

CHNL# 567: [964L L5 P] 115.17 -333.2
CHNL# 571: [964L L4 P] 222.00 -666.0
CHNL# 573: [1005L P] -155.2 -482.6



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_03_964L_X_WHITLA

FILE: Scn7_SP_03_964L_X_Whitla.out

THU, APR 14 2022 21:43

ACTIVE POWER

CHNL# 209: [POWR 61994[GRANLEA6 0.6900]G1]
1.2000 -0.2000
CHNL# 206: [POWR 60990[SHAMROC5 0.6500]G1]
2.3432 0.25500
CHNL# 219: [POWR 773[SECST 20.000]1]
3.6009 2.6593
CHNL# 179: [POWR 667[CANCARB9 13.800]1]
0.99620 0.10320
CHNL# 218: [POWR990007[FORTYMILE_6 0.6900]G2]
2.8461 0.13870
CHNL# 217: [POWR990004[FORTYMILE_3 0.6900]G1]
2.8461 0.13870

TIME (SECONDS)
0.0 2.0000 4.0000 6.0000 8.0000 10.000 12.000 14.000 16.000 18.000 20.000

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_03_964L_X_WHITLA

FILE: Scn7_SP_03_964L_X_Whitla.out

THU, APR 14 2022 21:43

TERMINAL VOLTAGE

CHNL# 476: [ETRM 61994[GRANLEA6 0.6900]G1]
1.1768 -0.1000
CHNL# 473: [ETRM 60990[SHAMROC5 0.6500]G1]
1.6557 0.13660
CHNL# 486: [ETRM 773[SECST 20.000]1]
1.1533 0.91680
CHNL# 446: [ETRM 667[CANCARB9 13.800]1]
1.1742 0.70360
CHNL# 485: [ETRM990007[FORTYMILE_6 0.6900]G2]
1.6303 0.16550
CHNL# 484: [ETRM990004[FORTYMILE_3 0.6900]G1]
1.6303 0.16550

TIME (SECONDS)
0.0 2.0000 4.0000 6.0000 8.0000 10.000 12.000 14.000 16.000 18.000 20.000

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_03_964L_X_WHITLA

FILE: Scn7_SP_03_964L_X_Whitla.out

THU, APR 14 2022 21:43

ROTOR ANGLE

CHNL# 43: [ANGL 775[SECCT2 21.000]3]
58.559 -46.46
CHNL# 42: [ANGL 774[SECCT1 21.000]2]
58.559 -46.46
CHNL# 41: [ANGL 773[SECST 20.000]1]
60.379 -44.10
CHNL# 1: [ANGL 667[CANCARB9 13.800]1]
117.81 -16.10

TIME (SECONDS)
0.0 2.0000 4.0000 6.0000 8.0000 10.000 12.000 14.000 16.000 18.000 20.000

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_03_964L_X_WHITLA

FILE: Scn7_SP_03_964L_X_Whitla.out

THU, APR 14 2022 21:43

REACTIVE POWER

CHNL# 298: [VARS 61994[GRANLEA6 0.6900]G1]
0.92890 -0.5000
CHNL# 295: [VARS 60990[SHAMROC5 0.6500]G1]
5.1435 -1.491
CHNL# 308: [VARS 773[SECST 20.000]1]
1.5022 -0.2583
CHNL# 268: [VARS 667[CANCARB9 13.800]1]
1.0971 -0.6580
CHNL# 307: [VARS990007[FORTYMILE_6 0.6900]G2]
3.6195 -1.031
CHNL# 306: [VARS990004[FORTYMILE_3 0.6900]G1]
3.6195 -1.031

TIME (SECONDS)
0.0 2.0000 4.0000 6.0000 8.0000 10.000 12.000 14.000 16.000 18.000 20.000

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_03_964L_X_WHITLA

FILE: Scn7_SP_03_964L_X_Whitla.out

THU, APR 14 2022 21:43 BRANCH P

CHNL# 575: [1035L_P]
802.52 -204.2
CHNL# 569: [1034L_P]
772.17 -210.1
CHNL# 561: [983L_L1_P]
315.14 -819.9
CHNL# 559: [983L_L3_P]
217.92 -575.2
CHNL# 557: [983L_L2_P]
219.63 -575.5
CHNL# 555: [964L_L2_P]
296.90 -107.9

TIME (SECONDS)
0.0 2.0000 4.0000 6.0000 8.0000 10.000 12.000 14.000 16.000 18.000 20.000

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_03_964L_X_WHITLA

FILE: Scn7_SP_03_964L_X_Whitla.out

THU, APR 14 2022 21:43 BRANCH P

CHNL# 567: [964L_L5_P]
41.465 -40.00
CHNL# 571: [964L_L4_P]
349.78 -777.6
CHNL# 573: [1005L_P]
-237.8 -383.5

TIME (SECONDS)
0.0 2.0000 4.0000 6.0000 8.0000 10.000 12.000 14.000 16.000 18.000 20.000

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_03_964L_X_WHITLA

FILE: Scn7_SP_03_964L_X_Whitla.out

THU, APR 14 2022 21:43 BUS VOLTAGE

CHNL# 554: [VOLT 976 [ROTBAUR 138.00]]
1.2471 0.50650
CHNL# 549: [VOLT 320 [CHAPPIC7 138.00]]
1.1996 0.78200
CHNL# 552: [VOLT 662 [WHITLA1 240.00]]
1.3988 -0.0998
CHNL# 551: [VOLT 659 [BOWMAN2 138.00]]
1.3048 0.41540
CHNL# 553: [VOLT 669 [BOWMAN1 240.00]]
1.3052 0.33570

TIME (SECONDS)
0.0 2.0000 4.0000 6.0000 8.0000 10.000 12.000 14.000 16.000 18.000 20.000

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_03_964L_X_WHITLA

FILE: Scn7_SP_03_964L_X_Whitla.out

THU, APR 14 2022 21:43 BRANCH Q

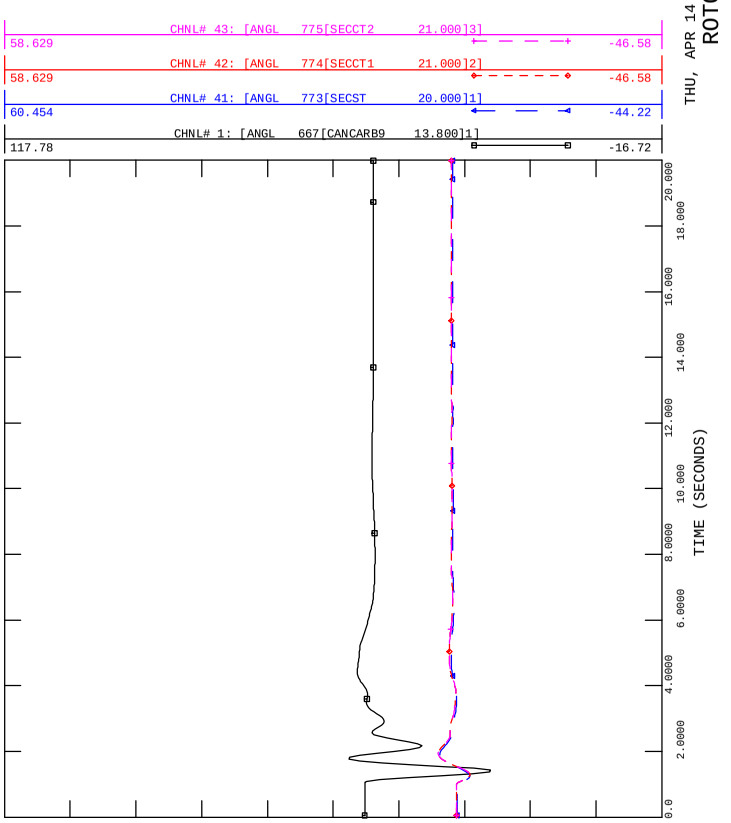
CHNL# 576: [1035L_Q]
327.09 -432.5
CHNL# 570: [1034L_Q]
307.07 -425.4
CHNL# 562: [983L_L1_Q]
587.72 -701.8
CHNL# 560: [983L_L3_Q]
506.44 -521.8
CHNL# 558: [983L_L2_Q]
532.76 -547.8
CHNL# 556: [964L_L2_Q]
117.22 -154.3

TIME (SECONDS)
0.0 2.0000 4.0000 6.0000 8.0000 10.000 12.000 14.000 16.000 18.000 20.000

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_04_964L_X_P2237

FILE: Scn7_SP_04_964L_X_P2237.out

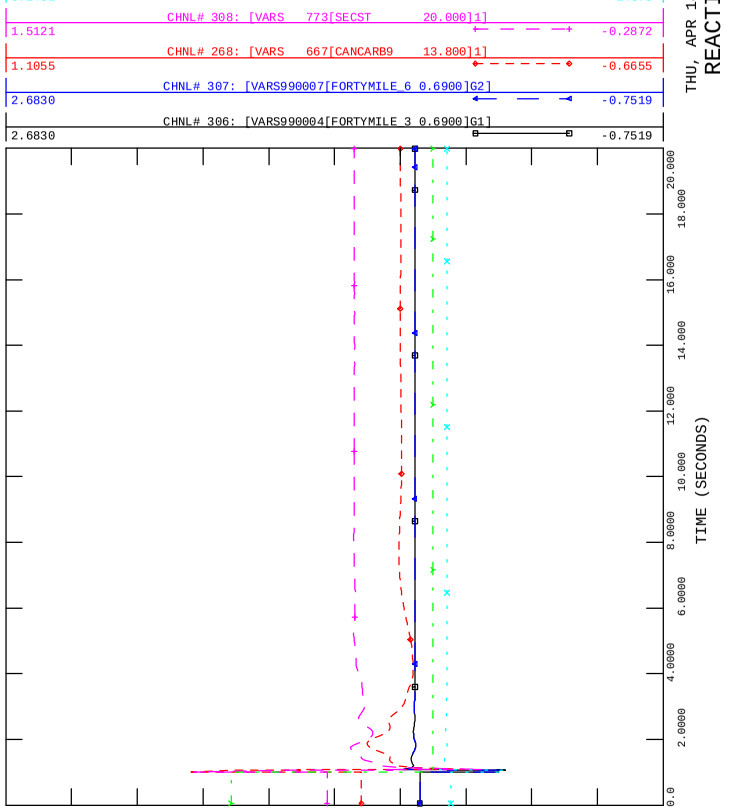
THU, APR 14 2022 21:43 ROTOR ANGLE



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_04_964L_X_P2237

FILE: Scn7_SP_04_964L_X_P2237.out

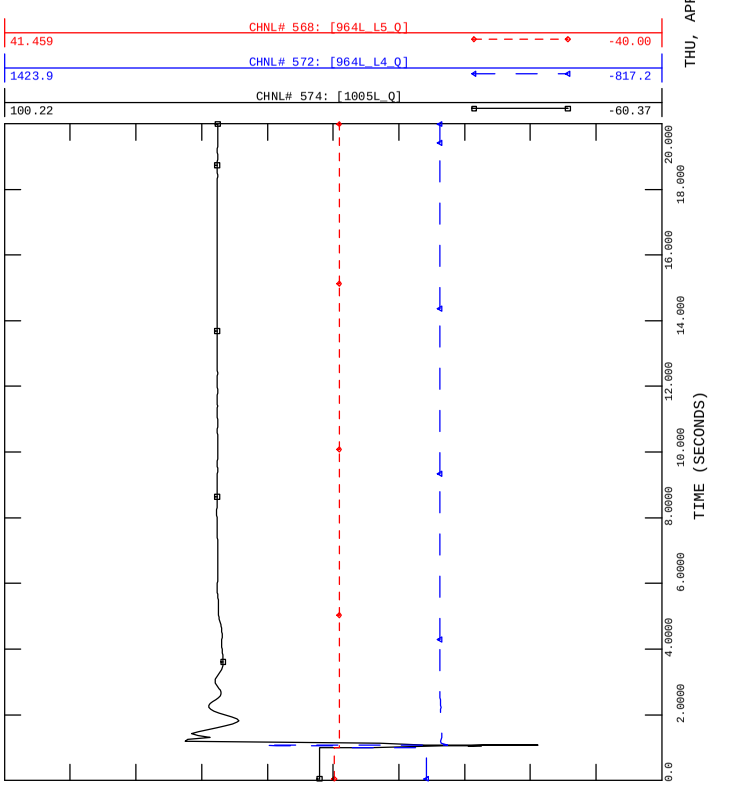
THU, APR 14 2022 21:43 REACTIVE POWER



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_03_964L_X_WHITLA

FILE: Scn7_SP_03_964L_X_Whitla.out

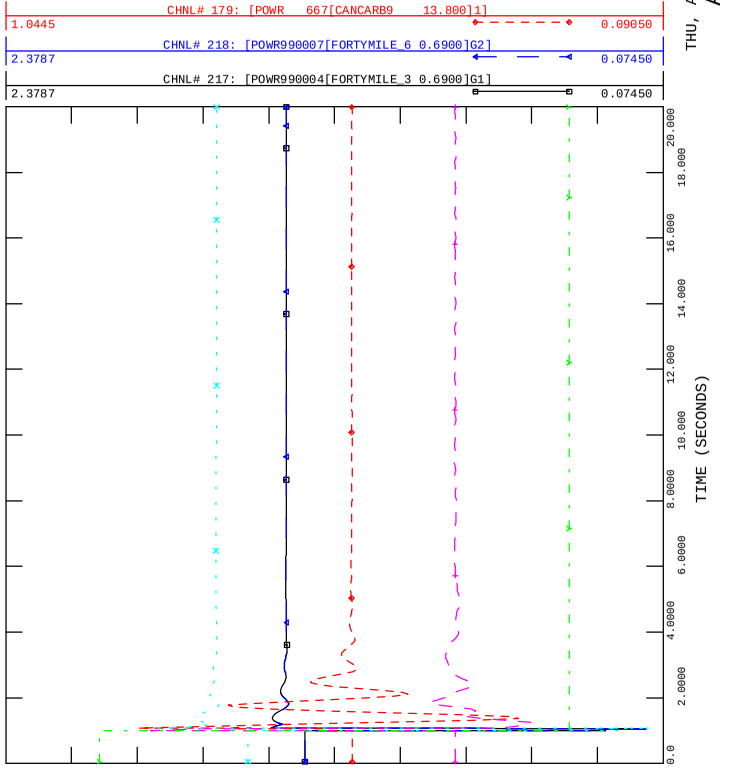
THU, APR 14 2022 21:43 BRANCH Q



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_04_964L_X_P2237

FILE: Scn7_SP_04_964L_X_P2237.out

THU, APR 14 2022 21:43 ACTIVE POWER



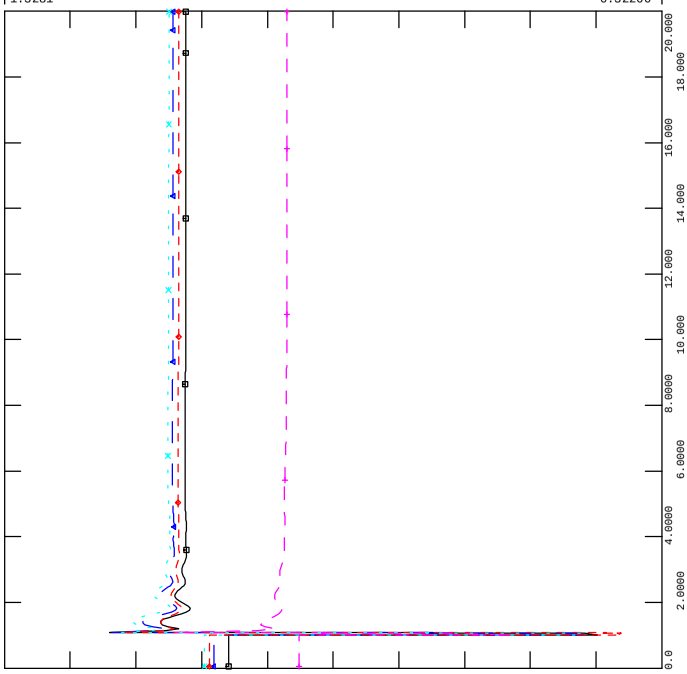
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_04_964L_X_P2237

FILE: Scn7_SP_04_964L_X_P2237.out

THU, APR 14 2022 21:43

BUS VOLTAGE

CHNL# 554: [VOLT 976 [ROTBAUR 138.00]]
1.2516 0.49640
CHNL# 549: [VOLT 320 [CHAPPIC7 138.00]]
1.2066 0.77820
CHNL# 552: [VOLT 662 [WHITLA1 240.00]]
1.5577 -0.0727
CHNL# 551: [VOLT 659 [BOWMAN2 138.00]]
1.3157 0.40300
CHNL# 553: [VOLT 669 [BOWMAN1 240.00]]
1.3281 0.32260



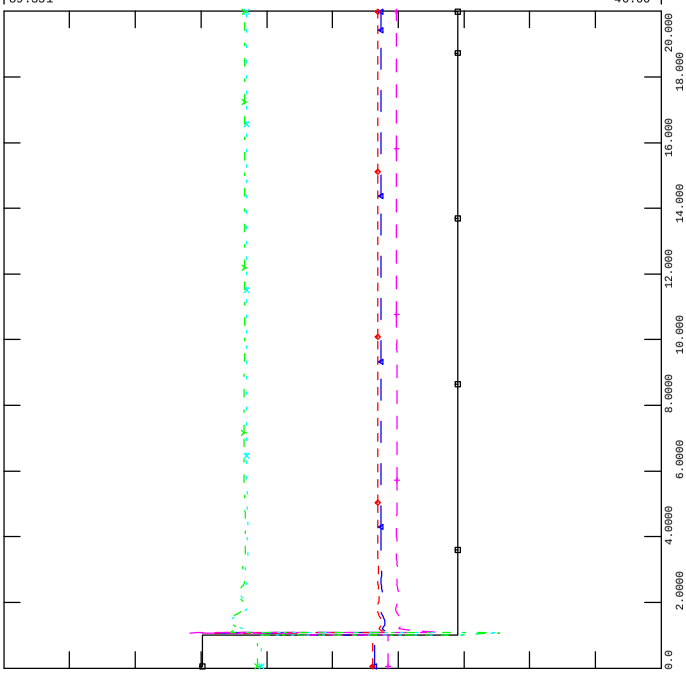
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_04_964L_X_P2237

FILE: Scn7_SP_04_964L_X_P2237.out

THU, APR 14 2022 21:43

BRANCH Q

CHNL# 576: [1035L Q]
340.12 -435.0
CHNL# 570: [1034L Q]
320.72 -428.0
CHNL# 562: [983L_L1 Q]
1103.6 -870.0
CHNL# 560: [983L_L3 Q]
1008.9 -849.7
CHNL# 558: [983L_L2 Q]
1058.0 -910.2
CHNL# 556: [964L_L2 Q]
89.351 -40.00



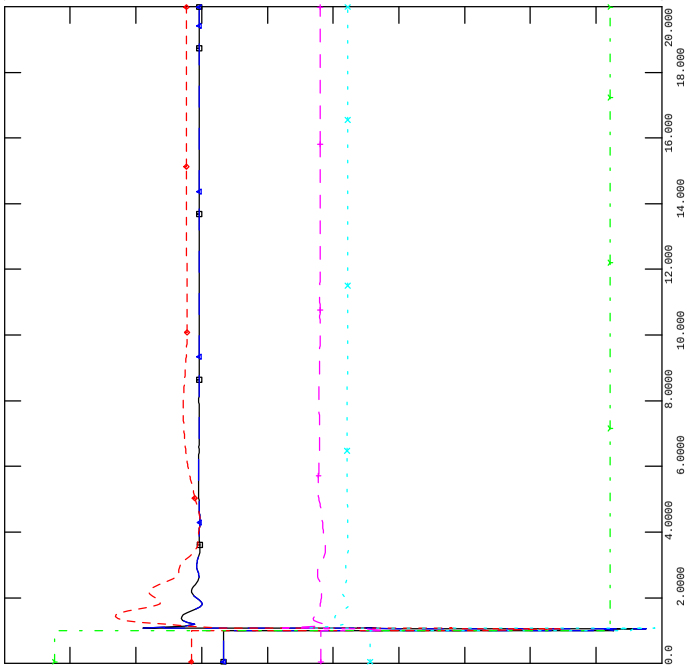
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_04_964L_X_P2237

FILE: Scn7_SP_04_964L_X_P2237.out

THU, APR 14 2022 21:43

TERMINAL VOLTAGE

CHNL# 476: [ETRM 61994[GRANLEA6 0.6900]G1]
1.1768 -0.1000
CHNL# 473: [ETRM 60990[SHAMROC5 0.6500]G1]
2.2183 0.11540
CHNL# 486: [ETRM 773[SECST 20.000]1]
1.1547 0.91620
CHNL# 446: [ETRM 667[CANCARB9 13.800]1]
1.1741 0.70210
CHNL# 485: [ETRM990007[FORTYMILE_6 0.6900]G2]
1.5066 0.11520
CHNL# 484: [ETRM990004[FORTYMILE_3 0.6900]G1]
1.5066 0.11520



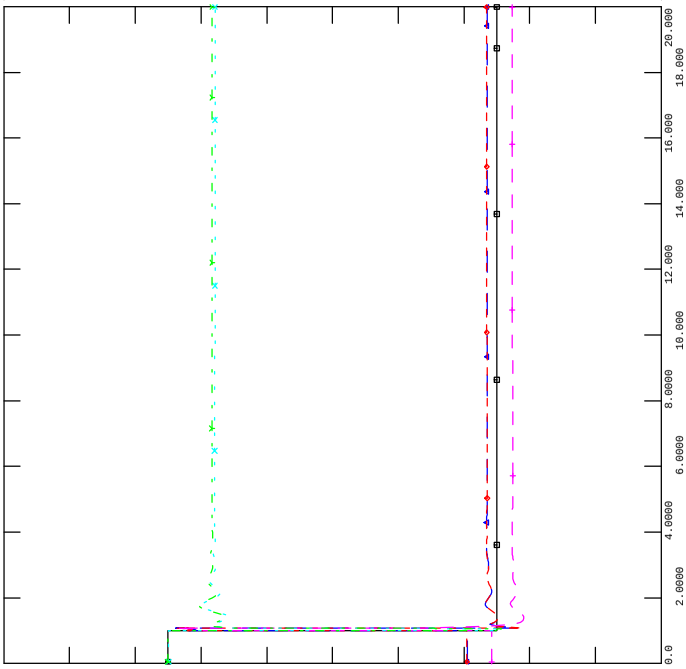
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_04_964L_X_P2237

FILE: Scn7_SP_04_964L_X_P2237.out

THU, APR 14 2022 21:43

BRANCH P

CHNL# 575: [1035L P]
802.12 -203.1
CHNL# 569: [1034L P]
771.80 -209.0
CHNL# 561: [983L_L1 P]
366.16 -839.7
CHNL# 559: [983L_L3 P]
247.33 -583.4
CHNL# 557: [983L_L2 P]
250.37 -583.9
CHNL# 555: [964L_L2 P]
293.55 -97.85



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_04_964L_X_P2237

FILE: Scn7_SP_04_964L_X_P2237.out

THU, APR 14 2022 21:43 BRANCH Q

CHNL# 568: [964L L5 Q] 167.83 -55.94
CHNL# 572: [964L L4 Q] 615.96 -409.2
CHNL# 574: [1005L Q] 100.43 -58.87

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_05_1034L_CASSILS

FILE: Scn7_SP_05_1034L_Cassils.out

THU, APR 14 2022 21:43 ACTIVE POWER

CHNL# 209: [POWR 61994[GRANLEA6 0.6900]G1] 1.2000 -0.2000
CHNL# 206: [POWR 60990[SHAMROC5 0.6500]G1] 2.2204 -0.1467
CHNL# 219: [POWR 773[SECST 20.000]1] 3.6745 2.5935
CHNL# 179: [POWR 667[CANCARB9 13.800]1] 1.1874 -0.0893
CHNL# 218: [POWR990007[FORTYMILE_6 0.6900]G2] 1.5300 -0.2000
CHNL# 217: [POWR990004[FORTYMILE 3 0.6900]G1] 1.5300 -0.2000

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_04_964L_X_P2237

FILE: Scn7_SP_04_964L_X_P2237.out

THU, APR 14 2022 21:43 BRANCH P

CHNL# 567: [964L L5 P] 48.743 -40.00
CHNL# 571: [964L L4 P] 263.53 -679.9
CHNL# 573: [1005L P] -237.8 -385.7

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_05_1034L_CASSILS

FILE: Scn7_SP_05_1034L_Cassils.out

THU, APR 14 2022 21:43 ROTOR ANGLE

CHNL# 43: [ANGL 775[SECCT2 21.000]3] 64.121 -54.52
CHNL# 42: [ANGL 774[SECCT1 21.000]2] 64.121 -54.52
CHNL# 41: [ANGL 773[SECST 20.000]1] 66.038 -51.48
CHNL# 1: [ANGL 667[CANCARB9 13.800]1] 131.14 -46.85

TIME (SECONDS)

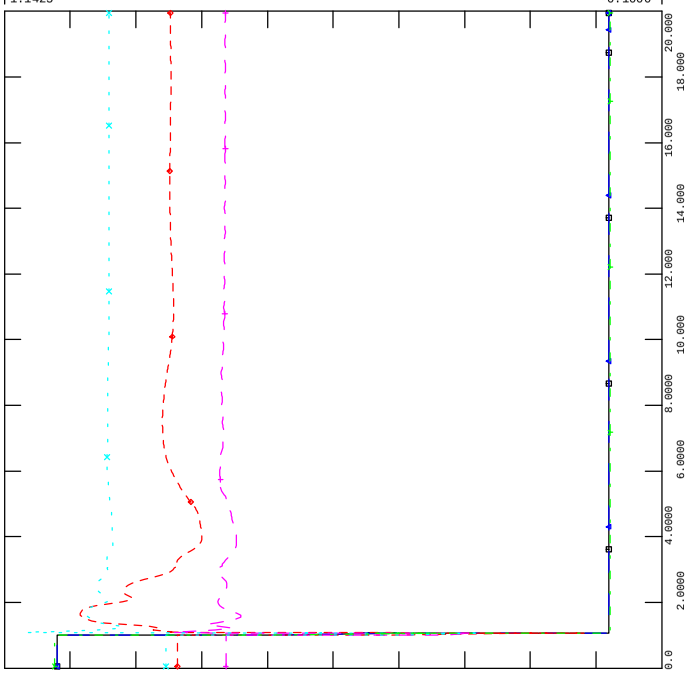
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_05_1034L_CASSILS

FILE: Scn7_SP_05_1034L_Cassils.out

THU, APR 14 2022 21:43

TERMINAL VOLTAGE

CHNL# 476: [ETRM 61994[GRANLEA6 0.6900]G1] 1.1768 -0.1000
CHNL# 473: [ETRM 60990[SHAMROC5 0.6500]G1] 1.4146 -0.0723
CHNL# 486: [ETRM 773[SECST 20.000]1] 1.1612 0.80120
CHNL# 446: [ETRM 667[CANCARB9 13.800]1] 1.2013 0.58860
CHNL# 485: [ETRM990007[FORTYMILE_6 0.6900]G2] 1.1425 -0.1000
CHNL# 484: [ETRM990004[FORTYMILE_3 0.6900]G1] 1.1425 -0.1000



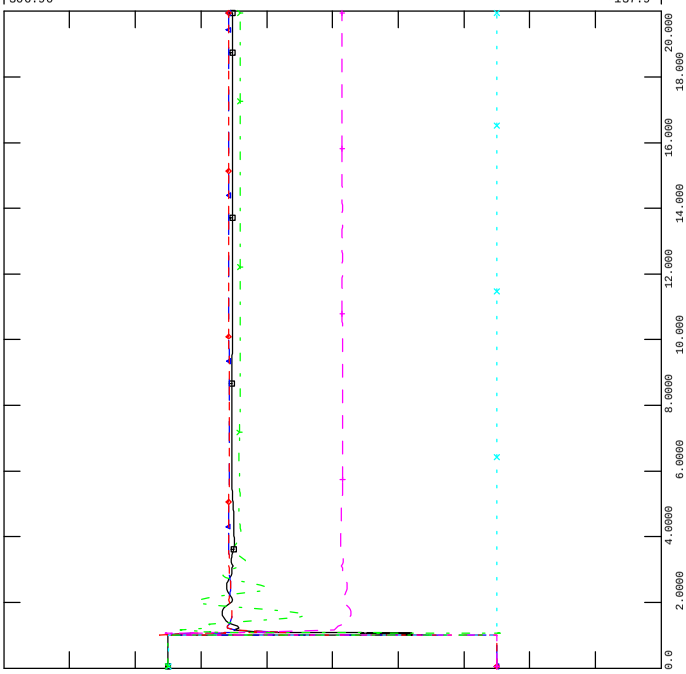
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_05_1034L_CASSILS

FILE: Scn7_SP_05_1034L_Cassils.out

THU, APR 14 2022 21:43

BRANCH P

CHNL# 575: [1035L P] 821.32 -260.7
CHNL# 569: [1034L P] 789.92 -263.3
CHNL# 561: [983L_L1_P] 222.65 -779.2
CHNL# 559: [983L_L3_P] 156.90 -502.6
CHNL# 557: [983L_L2_P] 156.78 -502.2
CHNL# 555: [964L_L2_P] 306.90 -137.9



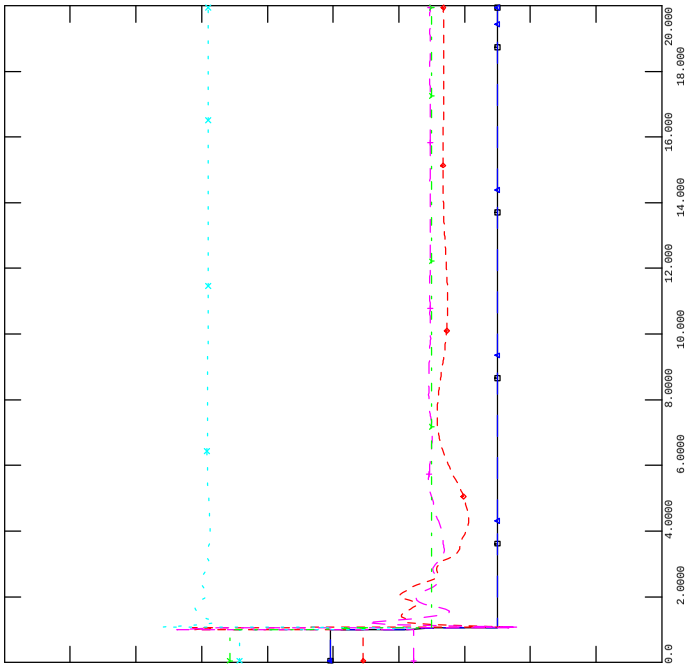
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_05_1034L_CASSILS

FILE: Scn7_SP_05_1034L_Cassils.out

THU, APR 14 2022 21:43

REACTIVE POWER

CHNL# 298: [VARS 61994[GRANLEA6 0.6900]G1] 0.92890 -0.5000
CHNL# 295: [VARS 60990[SHAMROC5 0.6500]G1] 1.4282 -0.4804
CHNL# 308: [VARS 773[SECST 20.000]1] 3.9214 -1.362
CHNL# 268: [VARS 667[CANCARB9 13.800]1] 1.1824 -0.7138
CHNL# 307: [VARS990007[FORTYMILE_6 0.6900]G2] 1.5335 -0.5112
CHNL# 306: [VARS990004[FORTYMILE_3 0.6900]G1] 1.5335 -0.5112



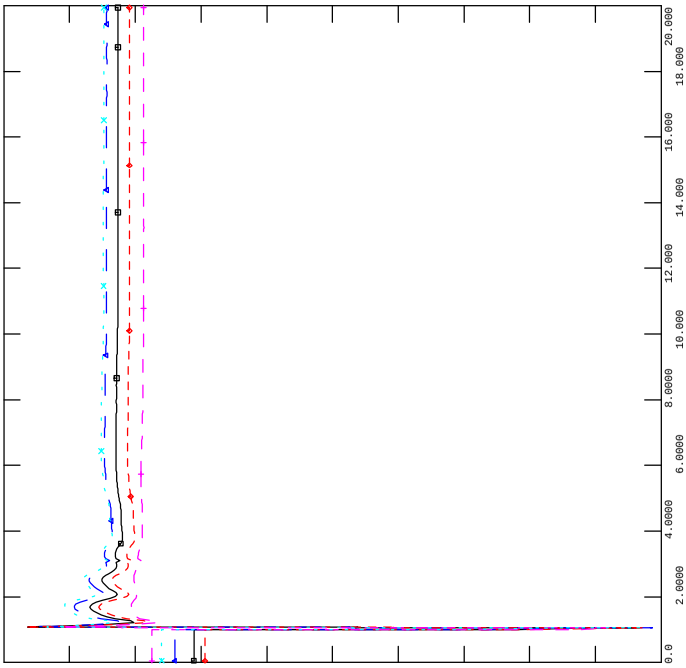
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_05_1034L_CASSILS

FILE: Scn7_SP_05_1034L_Cassils.out

THU, APR 14 2022 21:43

BUS VOLTAGE

CHNL# 554: [VOLT 976 [ROTBAUR 138.00]] 1.2619 0.26280
CHNL# 549: [VOLT 320 [CHAPPIC7 138.00]] 1.2510 0.20120
CHNL# 552: [VOLT 662 [WHITLA1 240.00]] 1.4284 0.19190
CHNL# 551: [VOLT 659 [BOWMAN2 138.00]] 1.3379 0.13390
CHNL# 553: [VOLT 669 [BOWMAN1 240.00]] 1.3633 0.05380



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_05_1034L_CASSILS

FILE: Scn7_SP_05_1034L_Cassils.out

THU, APR 14 2022 21:43 BRANCH P

CHNL# 567: [964L_L5_P]
229.83 -143.6
CHNL# 571: [964L_L4_P]
192.40 -656.1
CHNL# 573: [1005L_P]
94.539 -502.3

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_06_1034L_BOWMANTON

FILE: Scn7_SP_06_1034L_Bowmanton.out

THU, APR 14 2022 21:43 ROTOR ANGLE

CHNL# 43: [ANGL 775[SECCT2 21.000]3]
59.404 -50.27
CHNL# 42: [ANGL 774[SECCT1 21.000]2]
59.404 -50.27
CHNL# 41: [ANGL 773[SECST 20.000]1]
60.960 -47.55
CHNL# 1: [ANGL 667[CANCARB9 13.800]1]
118.03 -49.05

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_05_1034L_CASSILS

FILE: Scn7_SP_05_1034L_Cassils.out

THU, APR 14 2022 21:43 BRANCH Q

CHNL# 576: [1035L_Q]
315.45 -578.1
CHNL# 570: [1034L_Q]
66.286 -40.00
CHNL# 562: [983L_L1_Q]
63.644 -279.1
CHNL# 560: [983L_L3_Q]
78.321 -137.1
CHNL# 558: [983L_L2_Q]
76.977 -186.4
CHNL# 556: [964L_L2_Q]
115.06 -102.3

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_05_1034L_CASSILS

FILE: Scn7_SP_05_1034L_Cassils.out

THU, APR 14 2022 21:43 BRANCH Q

CHNL# 568: [964L_L5_Q]
125.30 -173.5
CHNL# 572: [964L_L4_Q]
46.557 -192.0
CHNL# 574: [1005L_Q]
177.67 -206.9

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_06_1034L_BOWMANTON

FILE: Scn7_SP_06_1034L_Bowmanton.out

THU, APR 14 2022 21:43 REACTIVE POWER

CHNL# 298: [VARS 61994[GRANLEA6 0.6900]G1]
1.2076 -0.5000
CHNL# 295: [VARS 60990[SHAMROC5 0.6500]G1]
4.9557 -1.342
CHNL# 308: [VARS 773[SECST 20.000]1]
2.1698 -0.6663
CHNL# 268: [VARS 667[CANCARB9 13.800]1]
1.2884 -0.6378
CHNL# 307: [VARS990007[FORTYMILE_6 0.6900]G2]
1.7672 -0.5891
CHNL# 306: [VARS990004[FORTYMILE_3 0.6900]G1]
1.7672 -0.5891

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_06_1034L_BOWMANTON

FILE: Scn7_SP_06_1034L_Bowmanton.out

THU, APR 14 2022 21:43 BUS VOLTAGE

CHNL# 554: [VOLT 976 [ROTBAUR 138.00]]
1.2217 0.23180
CHNL# 549: [VOLT 320 [CHAPPIC7 138.00]]
1.2162 0.64480
CHNL# 552: [VOLT 662 [WHITLA1 240.00]]
1.3963 -0.0043
CHNL# 551: [VOLT 659 [BOWMAN2 138.00]]
1.2791 0.05500
CHNL# 553: [VOLT 669 [BOWMAN1 240.00]]
1.2990 -0.0973

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_06_1034L_BOWMANTON

FILE: Scn7_SP_06_1034L_Bowmanton.out

THU, APR 14 2022 21:43 ACTIVE POWER

CHNL# 209: [POWR 61994[GRANLEA6 0.6900]G1]
1.2000 -0.2000
CHNL# 206: [POWR 60990[SHAMROC5 0.6500]G1]
2.2716 0.34040
CHNL# 219: [POWR 773[SECST 20.000]1]
3.5725 2.7168
CHNL# 179: [POWR 667[CANCARB9 13.800]1]
1.2405 -0.1003
CHNL# 218: [POWR990007[FORTYMILE_6 0.6900]G2]
1.5656 -0.2000
CHNL# 217: [POWR990004[FORTYMILE_3 0.6900]G1]
1.5656 -0.2000

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_06_1034L_BOWMANTON

FILE: Scn7_SP_06_1034L_Bowmanton.out

THU, APR 14 2022 21:43 TERMINAL VOLTAGE

CHNL# 476: [ETRM 61994[GRANLEA6 0.6900]G1]
1.1768 -0.1000
CHNL# 473: [ETRM 60990[SHAMROC5 0.6500]G1]
1.6099 0.22860
CHNL# 486: [ETRM 773[SECST 20.000]1]
1.1614 0.89060
CHNL# 446: [ETRM 667[CANCARB9 13.800]1]
1.2025 0.56430
CHNL# 485: [ETRM990007[FORTYMILE_6 0.6900]G2]
1.1425 -0.1000
CHNL# 484: [ETRM990004[FORTYMILE_3 0.6900]G1]
1.1425 -0.1000

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_06_1034L_BOWMANTON

FILE: Scn7_SP_06_1034L_Bowmanton.out

THU, APR 14 2022 21:43 BRANCH Q

CHNL# 576: [1035L_Q] 392.25 -138.3
CHNL# 570: [1034L_Q] 66.286 -40.00
CHNL# 562: [983L_L1_Q] 160.21 -476.9
CHNL# 560: [983L_L3_Q] 70.567 -227.1
CHNL# 558: [983L_L2_Q] 89.194 -280.1
CHNL# 556: [964L_L2_Q] 251.41 -58.13

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_06_1034L_BOWMANTON

FILE: Scn7_SP_06_1034L_Bowmanton.out

THU, APR 14 2022 21:43 BRANCH Q

CHNL# 568: [964L_L5_Q] 251.77 -116.8
CHNL# 572: [964L_L4_Q] 114.07 -338.7
CHNL# 574: [1005L_Q] 154.27 -157.8

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_06_1034L_BOWMANTON

FILE: Scn7_SP_06_1034L_Bowmanton.out

THU, APR 14 2022 21:43 BRANCH P

CHNL# 575: [1035L_P] 826.83 -277.2
CHNL# 569: [1034L_P] 789.92 -263.3
CHNL# 561: [983L_L1_P] 266.22 -793.7
CHNL# 559: [983L_L3_P] 165.01 -505.3
CHNL# 557: [983L_L2_P] 164.97 -505.0
CHNL# 555: [964L_L2_P] 330.33 -208.2

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_06_1034L_BOWMANTON

FILE: Scn7_SP_06_1034L_Bowmanton.out

THU, APR 14 2022 21:43 BRANCH P

CHNL# 567: [964L_L5_P] 244.96 -177.8
CHNL# 571: [964L_L4_P] 224.01 -666.7
CHNL# 573: [1005L_P] -151.0 -487.9

TIME (SECONDS)

SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_07_1035L_NEWELL

FILE: Scn7_SP_07_1035L_Newell.out

THU, APR 14 2022 21:43

ACTIVE POWER

CHNL# 209: [POWR 61994[GRANLEA6 0.6900]G1]
1.2000 -0.2000

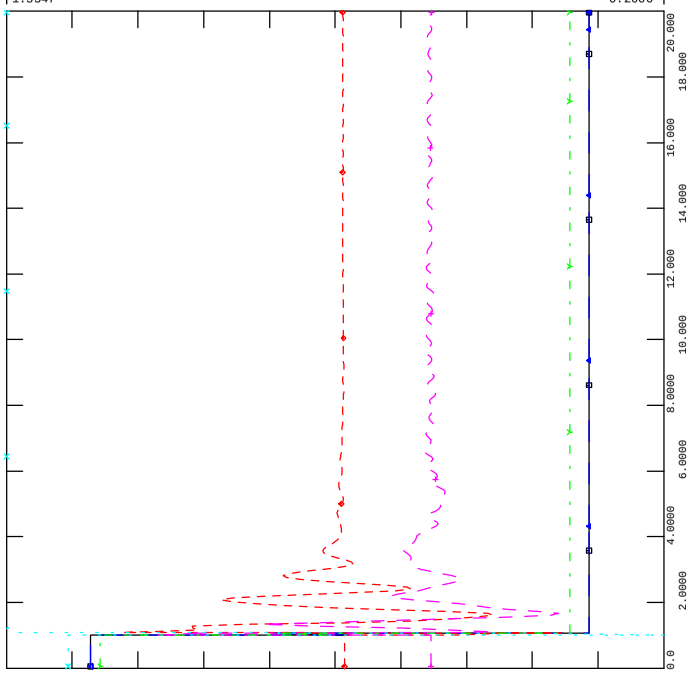
CHNL# 206: [POWR 60990[SHAMROC5 0.6500]G1]
2.2189 0.06060

CHNL# 219: [POWR 773[SECST 20.000]1]
3.6580 2.6059

CHNL# 179: [POWR 667[CANCARB9 13.800]1]
1.1863 -0.0661

CHNL# 218: [POWR990007[FORTYMILE_6 0.6900]G2]
1.5547 -0.2000

CHNL# 217: [POWR990004[FORTYMILE_3 0.6900]G1]
1.5547 -0.2000



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_07_1035L_NEWELL

FILE: Scn7_SP_07_1035L_Newell.out

THU, APR 14 2022 21:43

TERMINAL VOLTAGE

CHNL# 476: [ETRM 61994[GRANLEA6 0.6900]G1]
1.1768 -0.1000

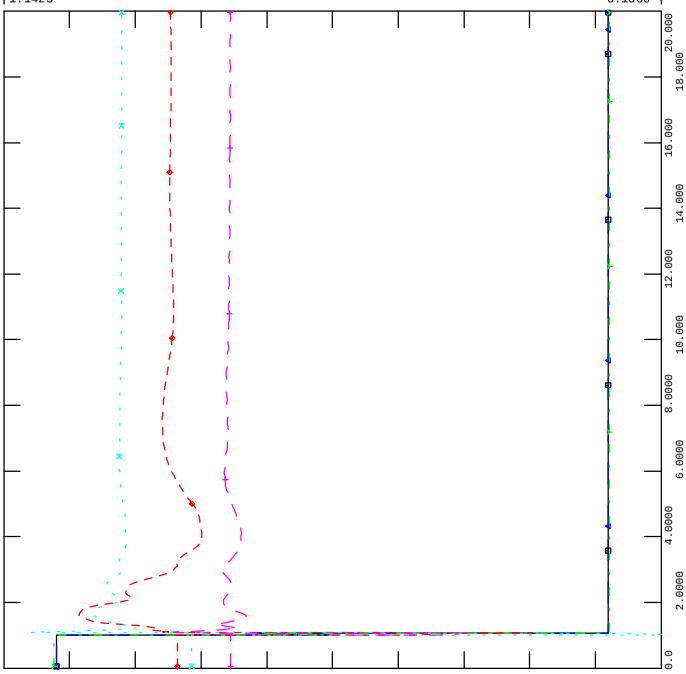
CHNL# 473: [ETRM 60990[SHAMROC5 0.6500]G1]
1.4007 0.16910

CHNL# 486: [ETRM 773[SECST 20.000]1]
1.1627 0.80710

CHNL# 446: [ETRM 667[CANCARB9 13.800]1]
1.2028 0.58720

CHNL# 485: [ETRM990007[FORTYMILE_6 0.6900]G2]
1.1425 -0.1000

CHNL# 484: [ETRM990004[FORTYMILE_3 0.6900]G1]
1.1425 -0.1000



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_07_1035L_NEWELL

FILE: Scn7_SP_07_1035L_Newell.out

THU, APR 14 2022 21:43

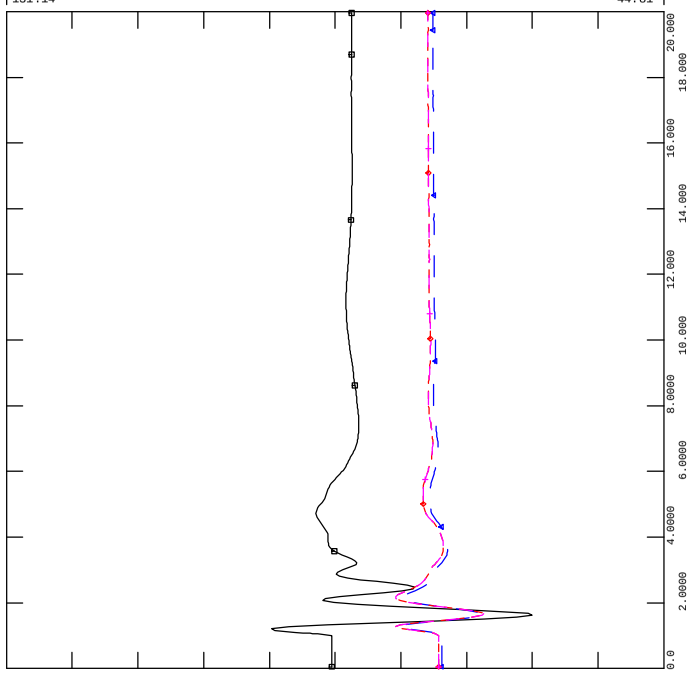
ROTOR ANGLE

CHNL# 43: [ANGL 775[SECCT2 21.000]3]
64.131 -54.32

CHNL# 42: [ANGL 774[SECCT1 21.000]2]
64.131 -54.32

CHNL# 41: [ANGL 773[SECST 20.000]1]
66.040 -51.29

CHNL# 1: [ANGL 667[CANCARB9 13.800]1]
131.14 -44.81



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_07_1035L_NEWELL

FILE: Scn7_SP_07_1035L_Newell.out

THU, APR 14 2022 21:43

REACTIVE POWER

CHNL# 298: [VARS 61994[GRANLEA6 0.6900]G1]
0.92890 -0.5000

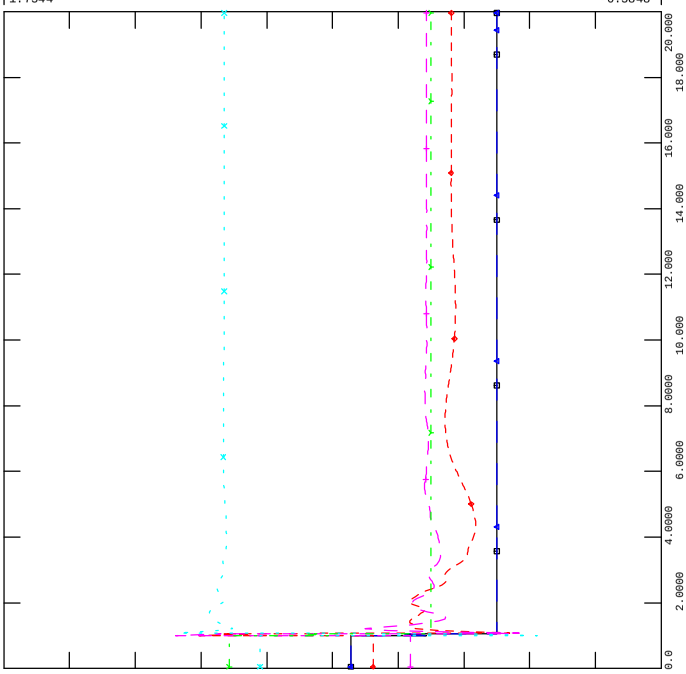
CHNL# 295: [VARS 60990[SHAMROC5 0.6500]G1]
1.4175 -0.3097

CHNL# 308: [VARS 773[SECST 20.000]1]
3.8563 -1.358

CHNL# 268: [VARS 667[CANCARB9 13.800]1]
1.2493 -0.7132

CHNL# 307: [VARS990007[FORTYMILE_6 0.6900]G2]
1.7544 -0.5848

CHNL# 306: [VARS990004[FORTYMILE_3 0.6900]G1]
1.7544 -0.5848



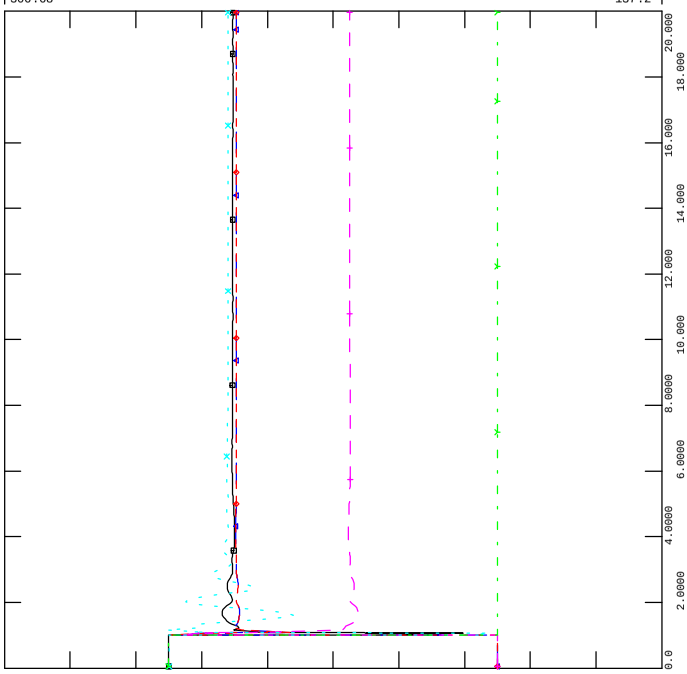
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_07_1035L_NEWELL

FILE: Scn7_SP_07_1035L_Newell.out

THU, APR 14 2022 21:43 BRANCH P

CHNL# 575: [1035L_P] 826.24 -275.4
CHNL# 569: [1034L_P] 786.49 -253.0
CHNL# 561: [983L_L1_P] 255.89 -790.2
CHNL# 559: [983L_L3_P] 169.51 -506.8
CHNL# 557: [983L_L2_P] 169.49 -506.5
CHNL# 555: [964L_L2_P] 306.68 -137.2

TIME (SECONDS)



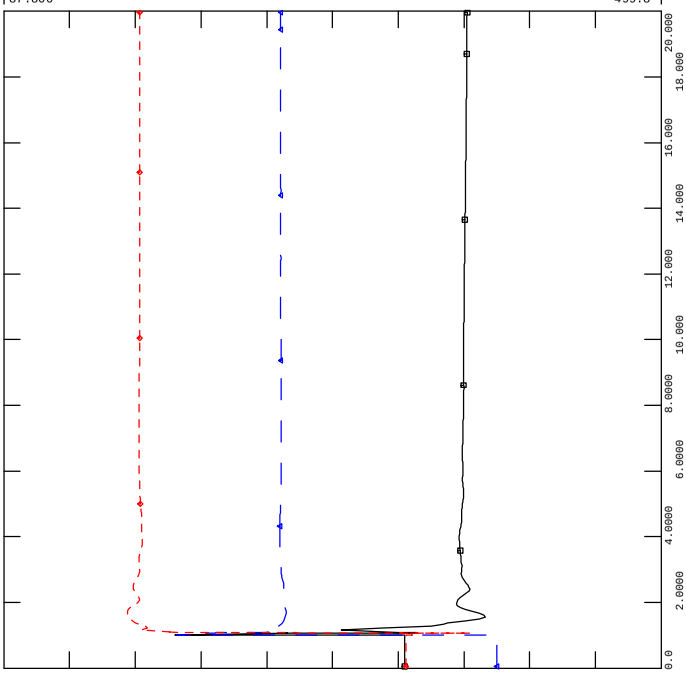
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_07_1035L_NEWELL

FILE: Scn7_SP_07_1035L_Newell.out

THU, APR 14 2022 21:43 BRANCH P

CHNL# 567: [964L_L5_P] 229.77 -143.3
CHNL# 571: [964L_L4_P] 223.76 -666.6
CHNL# 573: [1005L_P] 87.800 -499.8

TIME (SECONDS)



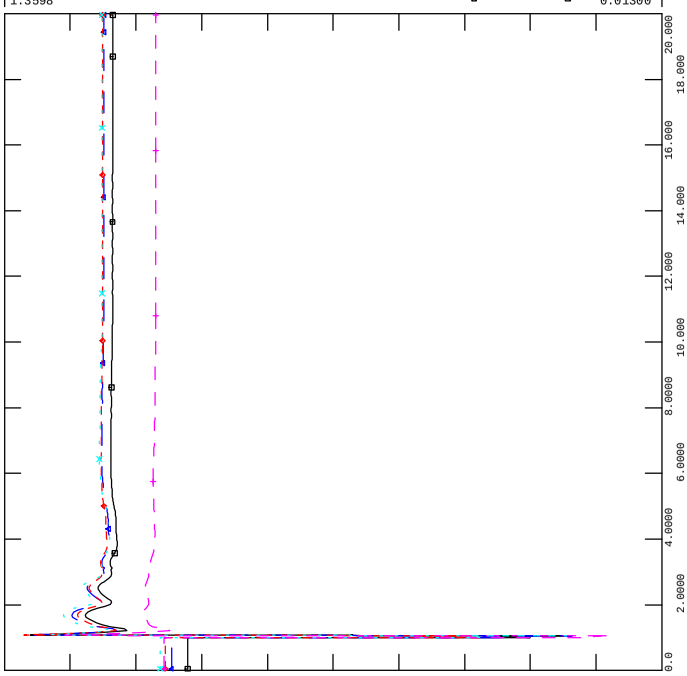
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_07_1035L_NEWELL

FILE: Scn7_SP_07_1035L_Newell.out

THU, APR 14 2022 21:43 BUS VOLTAGE

CHNL# 554: [VOLT 976 [ROTBAUR 138.00]] 1.2615 0.24840
CHNL# 549: [VOLT 320 [CHAPPIC7 138.00]] 1.2585 0.25390
CHNL# 552: [VOLT 662 [WHITLA1 240.00]] 1.4206 -0.0966
CHNL# 551: [VOLT 659 [BOWMAN2 138.00]] 1.3366 0.10990
CHNL# 553: [VOLT 669 [BOWMAN1 240.00]] 1.3598 0.01300

TIME (SECONDS)



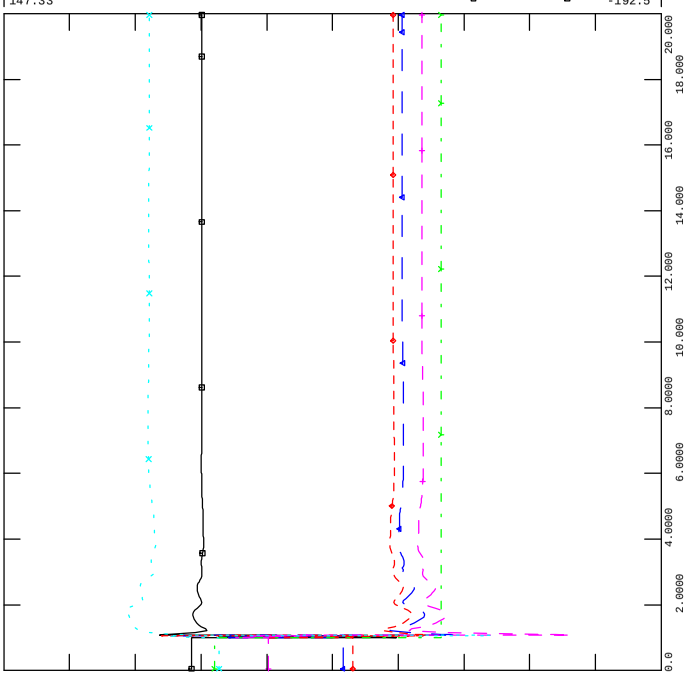
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_07_1035L_NEWELL

FILE: Scn7_SP_07_1035L_Newell.out

THU, APR 14 2022 21:43 BRANCH Q

CHNL# 576: [1035L_Q] 79.552 -40.00
CHNL# 570: [1034L_Q] 328.18 -590.7
CHNL# 562: [983L_L1_Q] 120.74 -301.0
CHNL# 560: [983L_L3_Q] 70.218 -124.2
CHNL# 558: [983L_L2_Q] 76.108 -173.1
CHNL# 556: [964L_L2_Q] 147.33 -192.5

TIME (SECONDS)

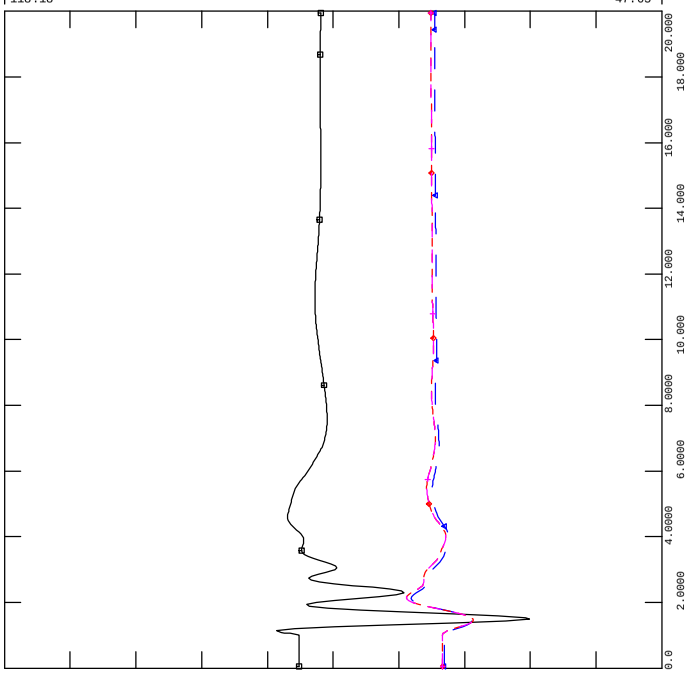


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_08_1035L_BOWMANTON

FILE: Scn7_SP_08_1035L_Bowmanton.out

THU, APR 14 2022 21:43 ROTOR ANGLE

CHNL# 43: [ANGL 775[SECCT2 21.000]3]
59.329 -50.29
CHNL# 42: [ANGL 774[SECCT1 21.000]2]
59.329 -50.29
CHNL# 41: [ANGL 773[SECST 20.000]1]
60.880 -47.56
CHNL# 1: [ANGL 667[CANCARB9 13.800]1]
118.18 -47.05

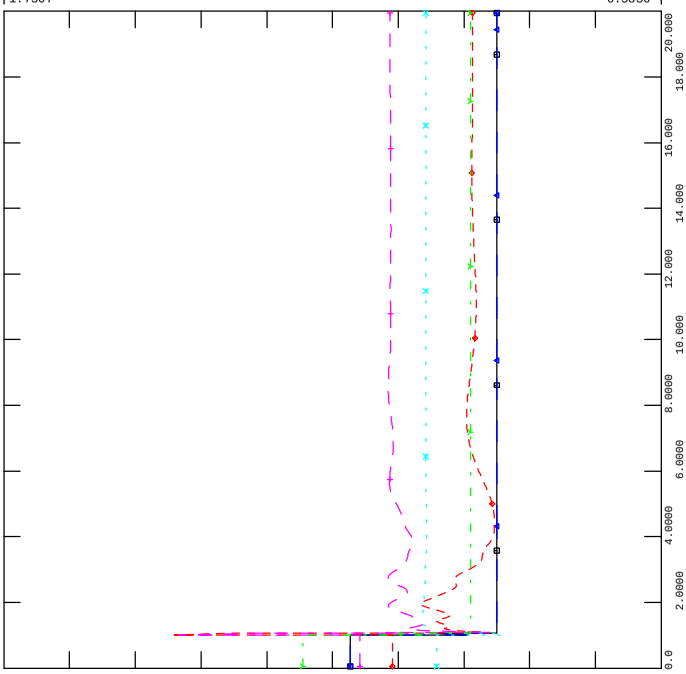


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_08_1035L_BOWMANTON

FILE: Scn7_SP_08_1035L_Bowmanton.out

THU, APR 14 2022 21:43 REACTIVE POWER

CHNL# 298: [VARS 61994[GRANLEA6 0.6900]G1]
1.2234 -0.5000
CHNL# 295: [VARS 60990[SHAMROC5 0.6500]G1]
4.4397 -1.170
CHNL# 308: [VARS 773[SECST 20.000]1]
2.1702 -0.6662
CHNL# 268: [VARS 667[CANCARB9 13.800]1]
1.2884 -0.6417
CHNL# 307: [VARS990007[FORTYMILE_6 0.6900]G2]
1.7507 -0.5836
CHNL# 306: [VARS990004[FORTYMILE 3 0.6900]G1]
1.7507 -0.5836

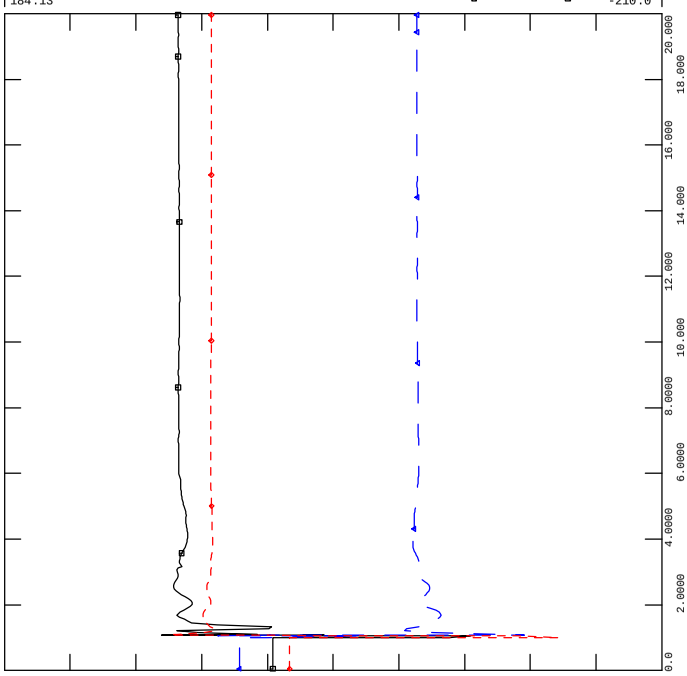


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_07_1035L_NEWELL

FILE: Scn7_SP_07_1035L_Newell.out

THU, APR 14 2022 21:43 BRANCH Q

CHNL# 568: [964L_L5_Q]
120.14 -155.3
CHNL# 572: [964L_L4_Q]
89.924 -201.8
CHNL# 574: [1005L_Q]
184.13 -210.0

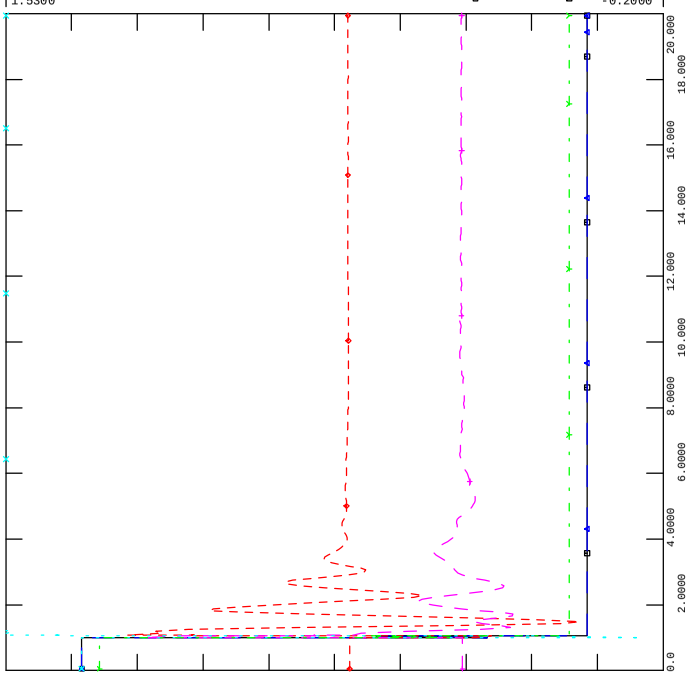


SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_08_1035L_BOWMANTON

FILE: Scn7_SP_08_1035L_Bowmanton.out

THU, APR 14 2022 21:43 ACTIVE POWER

CHNL# 209: [POWR 61994[GRANLEA6 0.6900]G1]
1.2000 -0.2000
CHNL# 206: [POWR 60990[SHAMROC5 0.6500]G1]
2.2252 0.41240
CHNL# 219: [POWR 773[SECST 20.000]1]
3.5724 2.7184
CHNL# 179: [POWR 667[CANCARB9 13.800]1]
1.2319 -0.0869
CHNL# 218: [POWR990007[FORTYMILE_6 0.6900]G2]
1.5300 -0.2000
CHNL# 217: [POWR990004[FORTYMILE_3 0.6900]G1]
1.5300 -0.2000



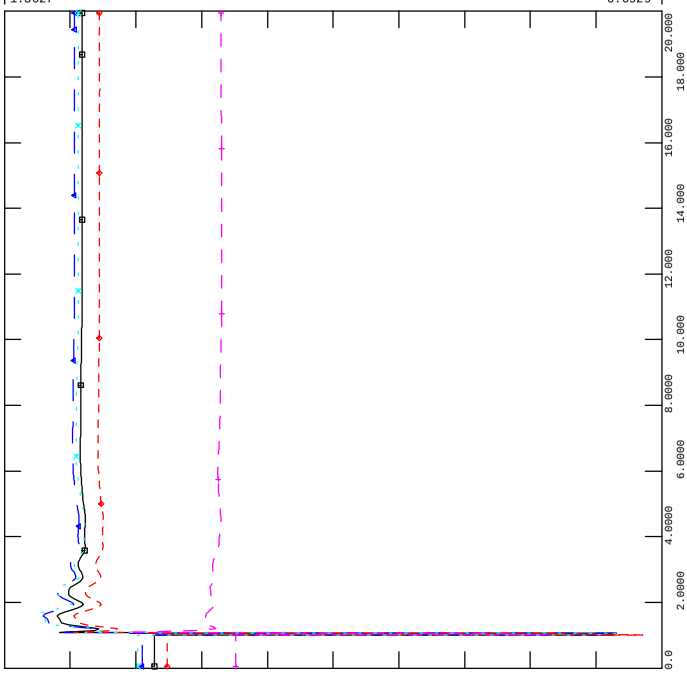
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_08_1035L_BOWMANTON

FILE: Scn7_SP_08_1035L_Bowmanton.out

THU, APR 14 2022 21:43

BUS VOLTAGE

CHNL# 554: [VOLT 976 [ROTBAUR 138.00]]
1.2229 0.23180
CHNL# 549: [VOLT 320 [CHAPPIC7 138.00]]
1.2155 0.64480
CHNL# 552: [VOLT 662 [WHITLA1 240.00]]
1.3968 -0.0043
CHNL# 551: [VOLT 659 [BOWMAN2 138.00]]
1.2818 0.05500
CHNL# 553: [VOLT 669 [BOWMAN1 240.00]]
1.3027 -0.0929



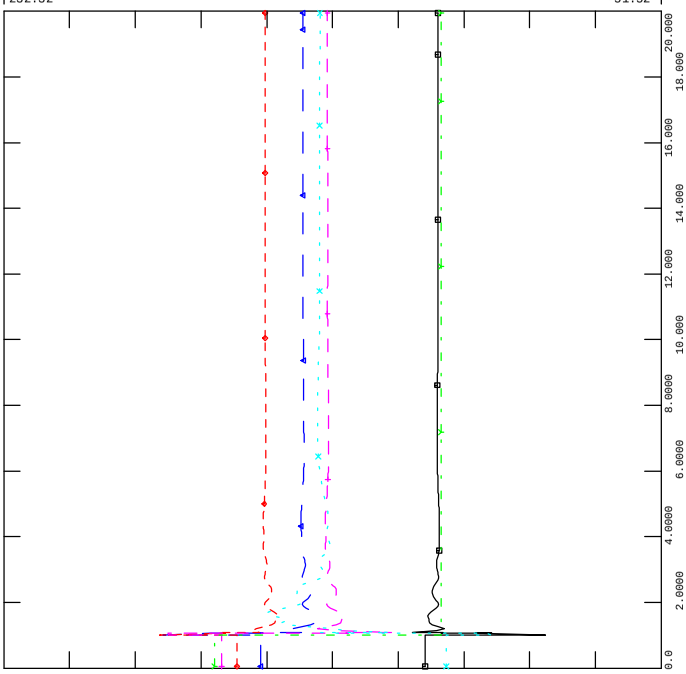
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_08_1035L_BOWMANTON

FILE: Scn7_SP_08_1035L_Bowmanton.out

THU, APR 14 2022 21:43

BRANCH Q

CHNL# 576: [1035L Q]
79.552 -40.00
CHNL# 570: [1034L Q]
368.04 -137.7
CHNL# 562: [983L_L1 Q]
153.90 -458.0
CHNL# 560: [983L_L3 Q]
65.878 -213.0
CHNL# 558: [983L_L2 Q]
84.318 -265.4
CHNL# 556: [964L_L2 Q]
232.32 -51.52



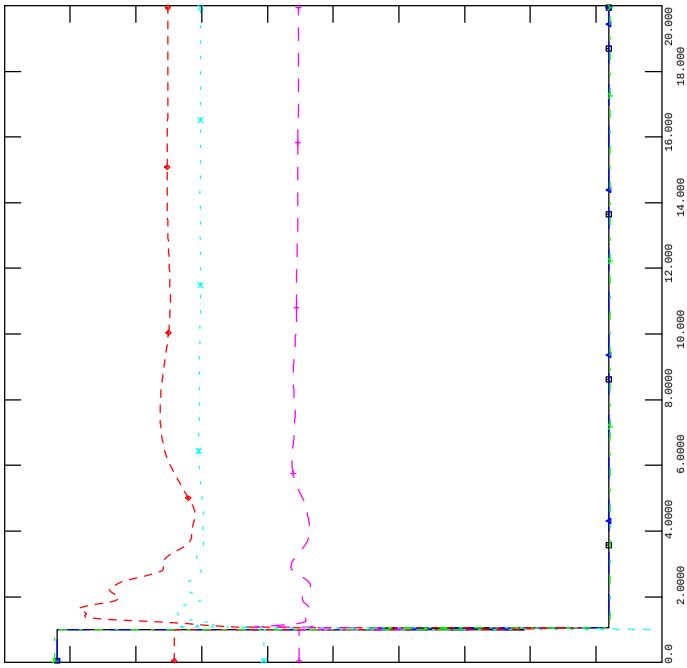
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_08_1035L_BOWMANTON

FILE: Scn7_SP_08_1035L_Bowmanton.out

THU, APR 14 2022 21:43

TERMINAL VOLTAGE

CHNL# 476: [ETRM 61994[GRANLEA6 0.6900]G1]
1.1768 -0.1000
CHNL# 473: [ETRM 60990[SHAMROC5 0.6500]G1]
1.5840 0.22850
CHNL# 486: [ETRM 773[SECST 20.000]1]
1.1612 0.89060
CHNL# 446: [ETRM 667[CANCARB9 13.800]1]
1.2034 0.57150
CHNL# 485: [ETRM990007[FORTYMILE_6 0.6900]G2]
1.1425 -0.1000
CHNL# 484: [ETRM990004[FORTYMILE_3 0.6900]G1]
1.1425 -0.1000



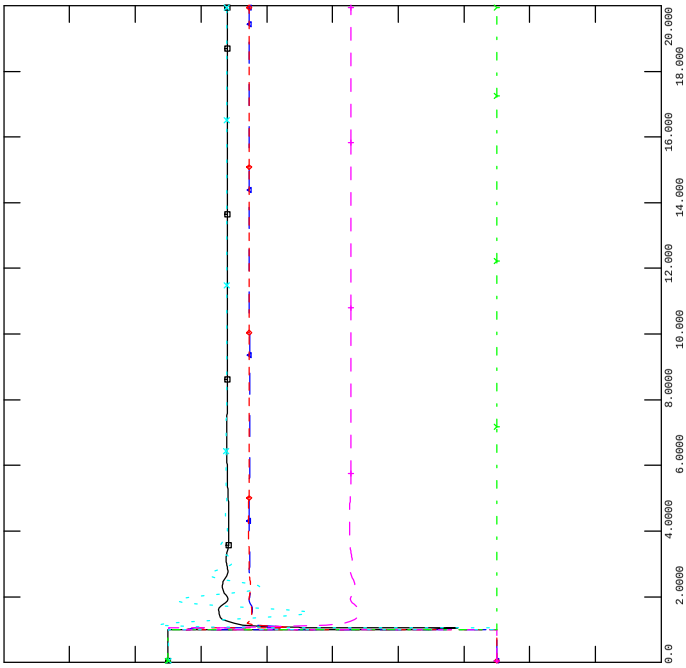
SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_08_1035L_BOWMANTON

FILE: Scn7_SP_08_1035L_Bowmanton.out

THU, APR 14 2022 21:43

BRANCH P

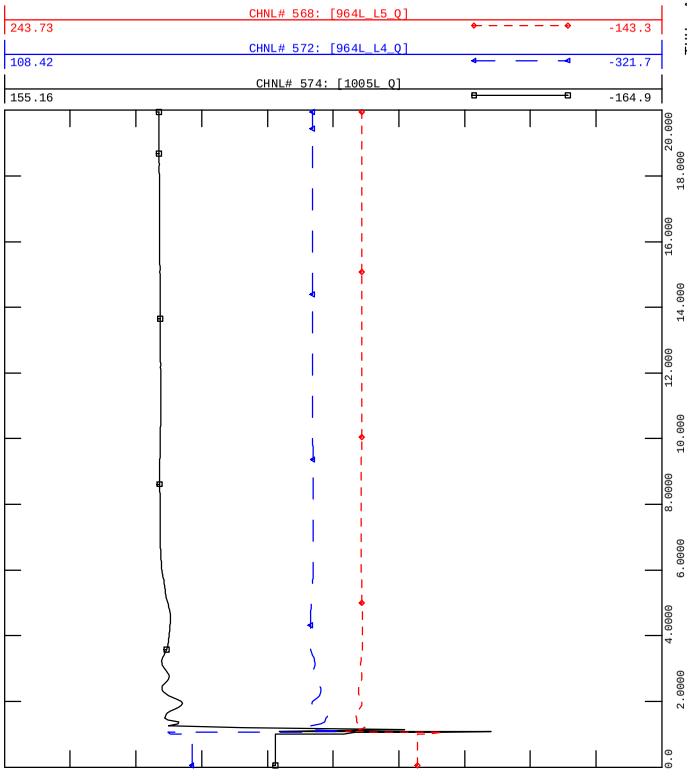
CHNL# 575: [1035L P]
826.24 -275.4
CHNL# 569: [1034L P]
789.54 -262.2
CHNL# 561: [983L_L1 P]
264.50 -793.1
CHNL# 559: [983L_L3 P]
196.89 -515.9
CHNL# 557: [983L_L2 P]
197.52 -515.8
CHNL# 555: [964L_L2 P]
315.39 -163.4



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_08_1035L_BOWMANTON

FILE: Scn7_SP_08_1035L_Bowmanton.out

THU, APR 14 2022 21:43
BRANCH Q



SCENARIO: P2237 SYSTEM IMPACT STUDY
CONTINGENCY -SCN7_SP_08_1035L_BOWMANTON

FILE: Scn7_SP_08_1035L_Bowmanton.out

THU, APR 14 2022 21:43
BRANCH P