Generator Unit Owner Contribution #1
1608
Fortis Bull Creek Phase 2 Generator Increase

***Project Name**: Fortis Bull Creek 2 Generator Increase (Behind-the-Fence)*

***AESO Project #**: 1608*

***Substation:** Hayter 277S substation*

***Associated Line #'s:** Fortis Distribution lines 464L feeder relay*

***Market Participant Name**: FortisAlberta Inc.*

***Date**: September 2, 2015*

***Estimate Type**: GUOC (+/-30% Estimate)*

***Project Type**: STS*

***Prepared By**: Anita Patel*

Project Overview:

- FortisAlberta Inc. (Fortis) has requested 10MW of STS to connect BluEarth Renewables Inc. (BluEarth) generating unit on the Fortis distribution lines that are tied to Hayter 277S substation via 25kV distribution feeder 464L. Project 1607 – Fortis Bull Creek Phase 1 Generator Increase is being connected to distribution feeder 2187L, however, there is no STS contract being requested.
- Hayter 277S substation is an existing substation that is being modified on the distribution side of the substation, adding distribution modules, protection relays and an anti-islanding scheme on the feeder relays.
- Existing and proposed DTS for this substation is 29.30MW and the proposed STS is 10MW for the 464L distribution feeder, with no change in DTS.
- Target In-Service Date is December 6, 2015
- This is the first GUOC CCD being completed to produce a GUOC invoice for the project.

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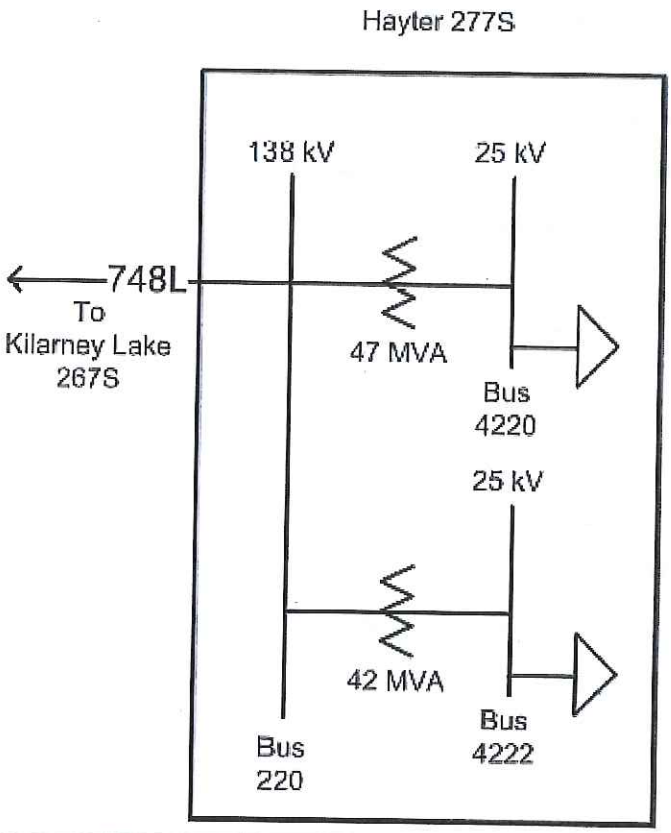
Project Number: Project Name: Project Stage:

Pre-Project SLD:

Power System prior to Project (assumes the following projects are complete: _____)



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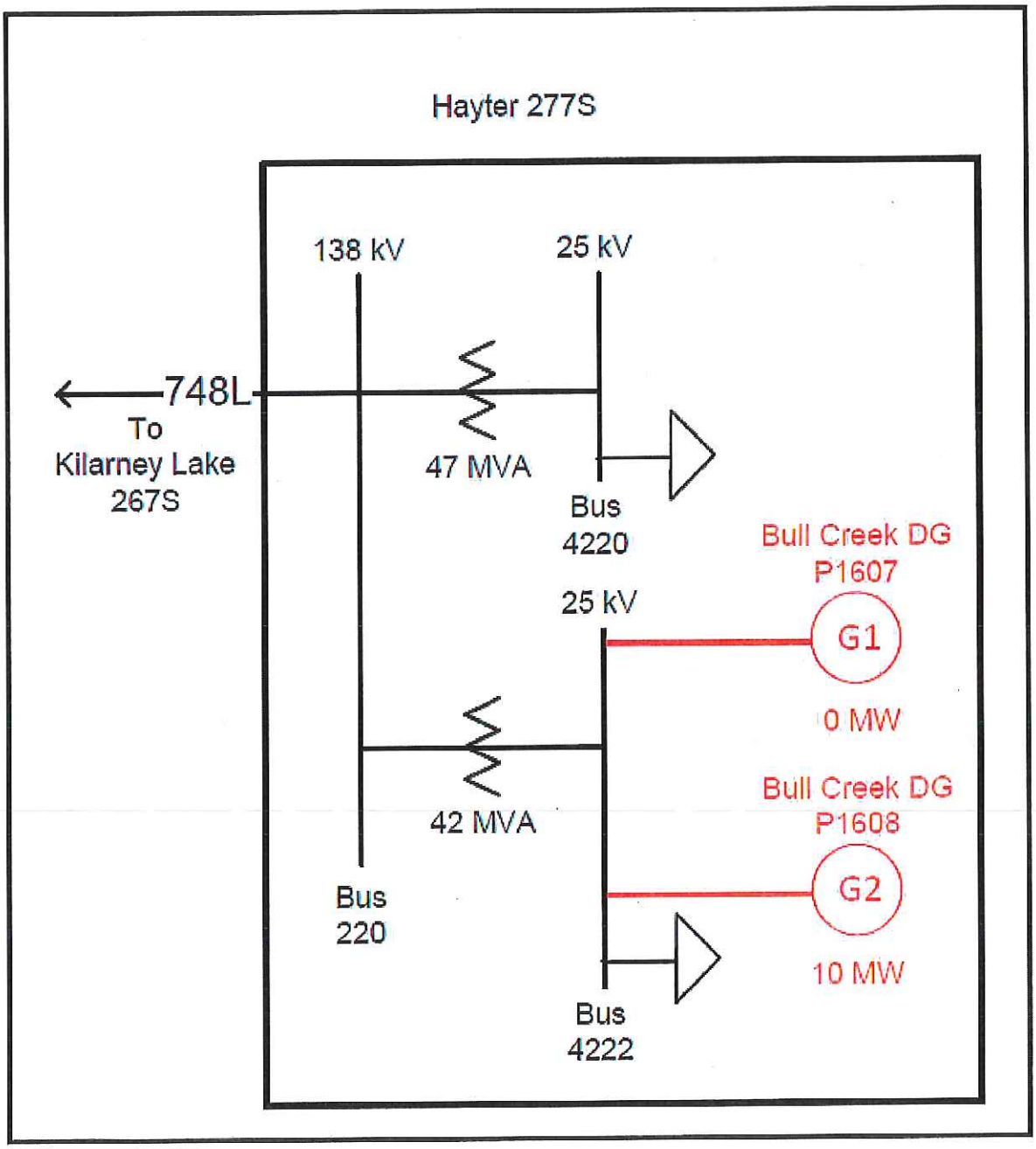
Project Number: Project Name: Project Stage:

Post-Project SLD:



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Contribution Policy:

Permit and Licence: Not Applicable
Contribution Policy Applied: 2013 per Commission Decision 2013-325, effective October 1, 2013

Proposed Commercial Terms:

Reference: +/-30% Project Estimate Summary, dated August 14, 2015

1. Generating Unit Owner's Contribution

Per subsection 3 of section 10 of the ISO Tariff, Generating Unit Owner's Contribution (per MW) applicable to this project is located on line (r) of Attachment A2.

Generating Unit Owner's Contribution is refundable over 10 years from the Commercial Operation Date as outlined in ISO Rule 9.5)

Please indicate resource type below:

Resource Type	
Coal	☐
Natural Gas — Base Load	☐
Natural Gas — Peaking	☐
Hydro	☐
Wind	☒
Biomass & Waste	☐

Fortis is applying on behalf of BluEarth, as they are installing distribution generating units that will connect to distribution lines at the Hayter 277S substation.

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Project Number: Project Name: Project Stage:

Sign-off

Note: STS or Maximum Capability estimates provided in the Project Estimate Summary identified in this GUOC have been used to determine the Generating Unit Owner's Contribution applicable to the Project based on the information and calculations outlined herein. Signing of this GUOC by the AESO approves only the application of the Tariff provisions applicable to the Project and is not intended to imply endorsement of any third party information (i.e. cost estimates) provided in the Project Estimate Summary.

Project Manager — Date: September 21, 2015

Program Manager — Date: Sept. 22/2015

Manager, Tariff Applications (Lee Ann Kerr) — Date: OCT 1 2015

Director, Tariff Applications (LaRhonda) — Date: Oct. 6, 2015

Attachments

- Attachment A1: Costs and Contract Details
- Attachment A2: Contribution Determination
- Attachment A3: Allocation of Costs and Substation Fractions
- Attachment A4: Investment Determination
- Attachment B: Cost estimate

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Attachment A1: Costs and Contract Details

Participant:	FortisAlberta Inc.			Tariff:	AESO 2014
Project:	Fortis Bull Creek Phase 2 Generator Increase			Effective:	1 Jul 2015
Number:	1608	Type:	DTS and STS (Dual-Use)	To:	Current
Prepared by:	Anita Patel	Date:	Sep 2, 2015	Version:	2014.0.0

PROJECT DETAILS

(a)	New Service or Expansion of Existing Service?	Expansion
(b)	Is Service at New or Existing Substation?	Existing Substation
(c)	Will Primary Service Credit Apply to Service?	No
(d)	Any Other Market Participant(s) at Substation?	No

COST OF CONNECTION PROJECT

			Reference
(e)	Cost of New Transmission Facilities:	$344,000	+/- 30% Estimate
(f)	Shared Cost of Existing Transmission Facilities:	$0	
(g)	Less: System-Related Costs:	$0	
(h)	Participant-Related Costs:	$344,000	
(i)	Less: Facilities in Excess of Good Practice:	$0	
(j)	Less: Reduction for Replaced Transformer:	$0	
(k)	Balance of Participant-Related Costs:	$344,000	
(l)	Estimated Operations and Maintenance:	$0	

CONTRACT DETAILS

			Reference
(m)	Date of Commission Permit and Licence:	Oct 1, 2015	BTF project-start of constr.
(n)	Date of AESO Energization Authorization:	Dec 1, 2015	
(o)	Date of Commercial Operation of Project:	Feb 1, 2016	
(p)	Maximum Investment Term (years):	20	
(q)	Discount Rate for Incremental Capacity:	6.14%	
(r)	Prior Contribution (for Final Costs or Adjustment):	$0	

Contract Stages			Contract Capacities at Substation (MW)					
			Contracted After Project			Contracted Prior to Project		
			This Participant		Other	This Participant		Other
No	Start Date	Duration Months	DTS	STS	Participant	DTS	STS	Participant
(1)	Feb 2016	240	29.30	10.00		29.30	0.00	
	Total	240						

GENERATING UNIT OWNER'S CONTRIBUTION

			Reference
(s)	Planning Region Where Unit Will be Located:	Central	
(t)	Contribution Amount Dates to be Used:	2014-2015	
(u)	Owner's Contribution Previously Paid (If Any):	$0	

Attachment A2: Contribution Determination

Participant:	**FortisAlberta Inc.**			Tariff:	AESO 2014
Project:	**Fortis Bull Creek Phase 2 Generator Increase**			Effective:	1 Jul 2015
Number:	1608	Type:	DTS and STS (Dual-Use)	To:	Current
Prepared by:	Anita Patel	Date:	September 2, 2015	Version:	2014.0.0

Line	Description	Reference	Amount	Section
(a)	Cost of New Facilities	+/- 30% Estimate	$344,000	8:2
(b)	Plus: Shared Cost of Existing Facilities		$0	8:3(2)(c)
(c)	Less: System-Related Costs		$0	8:3(3)
(d)	Participant-Related Costs	(a) + (b) – (c)	$344,000	8:3(2)
(e)	Less: Facilities in Excess of Good Practice		$0	8:4
(f)	Less: Reduction for Replaced Transformer		$0	8:5(2)
(g)	**Balance of Participant-Related Costs**	(d) – (e) – (f)	**$344,000**	8:6(1)

			Required Facilities		In Excess of Good Practice	
Line	Description	Reference	Demand-Related	Supply-Related		Section
(h)	Participant-Related Costs	From (g) and (e)	$344,000		$0	8:6(3)
(i)	Operations and Maintenance Charge	Estimated by Market Participant	NA		$0	8:9
(j)	**Total Costs Allocated to Market Participant**	(h) + (i)	**$344,000**		**$0**	8:6
(k)	Substation Fractions	Other Participant NA	0.00000	1.00000	NA	8:6(3)
(l)	Allocated Costs (j) × (k)	Other Participant NA	$0	$344,000	$0	8:6
(m)	Less: Maximum Local Investment	Investment Term of 20 Years	$0	NA	NA	8:8
(n)	Construction Contribution Required	(l) – (m)	$0	$344,000	$0	8:7
(o)	**Total Construction Contribution Required**			**$344,000**		8:7

			Generating Unit Owner's Contribution			
Line	Description	Region/Policy	STS MW	Amount/MW	Contribution	Section
(r)	**Owner's Contribution to be Paid**	**Central 2014-2015**	**10.00**	**$22,400**	**$224,000**	10:3

Attachment A3: Allocation of Costs and Substation Fractions

Participant:	**FortisAlberta Inc.**			Tariff:	AESO 2014
Project:	**Fortis Bull Creek Phase 2 Generator Increase**			Effective:	1 Jul 2015
Number:	1608	Type:	DTS and STS (Dual-Use)	To:	Current

ALLOCATION OF COSTS TO SERVICES AT SUBSTATION

Participant-Related Costs of Required Facilities **$344,000**

Contract Stages			Incremental Contract Capacity			Incremental Substation Fractions		
			This Participant		Other	This Participant		Other
No	Start Date	Duration Years	DTS	STS	Participant	DTS	STS	Participant
(1)	Dec 2015	20.00	0.00	10.00	0.00	0.00000	1.00000	0.00000
	Total	20.00		Duration-Weighted Average		0.00000	1.00000	0.00000

Allocation of Participant-Related Costs **$0** **$344,000** **$0**

SUBSTATION FRACTIONS FOR DETERMINATION OF MAXIMUM INVESTMENT

Contract Stages			Contract Capacity After Project			Substation Fractions After Project		
			This Participant		Other	This Participant		Other
No	Start Date	Duration Years	DTS	STS	Participant	DTS	STS	Participant
(1)	Dec 2015	20.00	29.30	10.00	0.00	0.74555	0.25445	0.00000
	Total	20.00						

Attachment A4: Investment Determination

Participant:	**FortisAlberta Inc.**			Tariff:	AESO 2014
Project:	**Fortis Bull Creek Phase 2 Generator Increase**			Effective:	1 Jul 2015
Number:	1608	Type:	DTS and STS (Dual-Use)	To:	Current

Demand-Related Costs of This Participant Eligible for Investment: **$0**

Investment Amounts From Subsection 8(4) of Section 8 of 2014 ISO Tariff					
Tier	Tier (a)	Tier (b)	Tier (c)	Tier (d)	Tier (e)
Investment	$76,050	$30,800	$19,300	$13,450	$8,700
Unit	/year	/MW/year	/MW/year	/MW/year	/MW/year

Incremental Rate DTS Contract Capacity Eligible for Investment							
Stage		**Tier (a)**	**Tier (b) MW**	**Tier (c) MW**	**Tier (d) MW**	**Tier (e) MW**	**Total**
No	Years	Sub Frac	7.5 × SF	9.5 × SF	23 × SF	Remaining	MW
(1)	20.00		0.00	0.00	0.00	0.00	0.00

Stage/Year		Nominal Investment per Year of Investment Term					Discounted	Cumulative
No	Year	Tier (a)	Tier (b)	Tier (c)	Tier (d)	Tier (e)	Increments	Total
(1)	1	$0	$0	$0	$0	$0	$0	*Investment term must be a minimum of 5 years*
(1)	2	$0	$0	$0	$0	$0	$0	
(1)	3	$0	$0	$0	$0	$0	$0	
(1)	4	$0	$0	$0	$0	$0	$0	
(1)	5	$0	$0	$0	$0	$0	$0	$0
(1)	6	$0	$0	$0	$0	$0	$0	$0
(1)	7	$0	$0	$0	$0	$0	$0	$0
(1)	8	$0	$0	$0	$0	$0	$0	$0
(1)	9	$0	$0	$0	$0	$0	$0	$0
(1)	10	$0	$0	$0	$0	$0	$0	$0
(1)	11	$0	$0	$0	$0	$0	$0	$0
(1)	12	$0	$0	$0	$0	$0	$0	$0
(1)	13	$0	$0	$0	$0	$0	$0	$0
(1)	14	$0	$0	$0	$0	$0	$0	$0
(1)	15	$0	$0	$0	$0	$0	$0	$0
(1)	16	$0	$0	$0	$0	$0	$0	$0
(1)	17	$0	$0	$0	$0	$0	$0	$0
(1)	18	$0	$0	$0	$0	$0	$0	$0
(1)	19	$0	$0	$0	$0	$0	$0	$0
(1)	20	$0	$0	$0	$0	$0	$0	$0

Actual Investment (Not Greater Than Costs Eligible for Investment):	**$0**
Investment Term Required to Minimize Construction Contribution:	**20 years**
Investment Term Begins on:	Dec 1, 2015
Investment Term ends on:	Nov 30, 2035

Stage 6 Construction Contribution Decision #1
1495 Fortis Hayter 277S 42 MVA Transformer and 25 kV Breaker Add

***Project Name*: Fortis Hayter 277S 42 MVA Transformer and 25 kV Breaker Add**

***AESO Project #*: 1495**

***Substation*: 277S Hayter**

***Market Participant Name*: FortisAlberta Inc.**

***Date*: March 8, 2016**

***Estimate Type*: Final Cost**

***Project Type*: DTS**

***Prepared By*: Ilice Tan**

Project Overview:

- FortisAlberta Inc. ("Fortis") had submitted a System Access Service Request to add a 138/25KV 25/33/42 MVA transformer and a 25kV feeder breaker at Hayter substation, 277S, located in 37 Provost planning area. Hayter substation upgrade is needed to address capacity and reliability issues for distribution systems supplied by the Hayter 277S, Kilarney Lake 267S and Provost 545 substations.

  There will be no DTS capacity change at 277S POD.

  The project was in service on September 16, 2015.

  The difference between this CCD and previous CCD is this CCD reflects the Construction Contribution based on the actual final cost; see Attachment B for the cost estimate.

  See Attachment C for the single line diagram.

Contribution Policy:

Permit and Licence: P&L received on February 9, 2015
Contribution Policy Applied: 2013 per Commission Decision 2013-325, effective October 1, 2013

Proposed Commercial Terms:

Reference: NA

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1. Project Cost

Project cost is located on line (e) of Attachment A1.

2. Shared Facilities Cost

- There are no shared facilities.

3. System Related Cost

- There is no system related cost.

4. Facilities In Excess of Good Electric Industry Practice

- There are no facilities in Excess of Good Electric Industry Practice.

5. Construction Contribution

- Participant related cost is located on line (h) of Attachment A1.
- The Construction Contribution is estimated to be as stated on line (o) of Attachment A2. Please see Attachments A1, A2, A3 and A4 for details of these calculations and the resulting Construction Contribution.

- This Construction Contribution is subject to change based on the following items:
  - Changes to contract capacity or term
  - Changes to estimated costs or resulting from final costs
  - Changes to the classification of system-related and market participant -related costs
  - Development of the transmission system as it relates to this project, including sharing of facilities with other market participants.

6. Primary Service Credit

- The transformation facilities for this service are owned and operated by the transmission facility owner, and the Primary Service Credit does not apply.

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Project Number: Project Name: Project Stage:

Sign-off

Note: Cost estimates provided in the Final Cost submission identified in this CCD have been used to determine the Construction Contribution and/or Generating Unit Owner's Contribution applicable to the Project based on the information and calculations outlined herein. Signing of this CCD by the AESO approves only the application of the Tariff provisions applicable to the Project and is not intended to imply endorsement of any third party information (i.e. cost estimates) provided in the Connection Proposal.

Project Manager/Coordinator — Date: Mar 9, 2016

Program Manager Jasmin Judge — Date: March 10/2016

Tariff Manager
(Lee Ann Kerr) — Date: MARCH 14 2016

Manager, Tariff Applications
(LaRhonda Papworth) — Date: March 15, 2016

Director, Transmission Regulatory
(Doyle Sullivan) — Date: MARCH 16, 2016

Attachments

- Attachment A1: Costs and Contract Details
- Attachment A2: Contribution Determination
- Attachment A3: Allocation of Costs and Substation Fractions
- Attachment A4: Investment Determination
- Attachment B: Cost estimates
- Attachment C: Single Line Diagram
- Attachment D: Previous or related Construction Contribution Decision

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Attachment A1: Costs and Contract Details

Participant:	**FortisAlberta Inc.**			Tariff:	AESO 2013
Project:	**Fortis Hayter 277S 42MVA Transformer and 25kV Breaker Add**			Effective:	1 Oct 2013
Number:	1495	Type:	DTS Only	To:	Current
Prepared by:	Ilice Tan	Date:	March 8, 2016	Version:	2013.0.1

PROJECT DETAILS

(a)	New Service or Expansion of Existing Service?	Expansion
(b)	Is Service at New or Existing Substation?	Existing Substation
(c)	Will Primary Service Credit Apply to Service?	No
(d)	Any Other Market Participant(s) at Substation?	No

COST OF CONNECTION PROJECT			**Reference**
(e)	Cost of New Transmission Facilities:	$4,998,437	Final Cost Report
(f)	Shared Cost of Existing Transmission Facilities:	$0	
(g)	Less: System-Related Costs:	$0	
(h)	Participant-Related Costs:	$4,998,437	
(i)	Less: Facilities in Excess of Good Practice:	$0	
(j)	Less: Reduction for Replaced Transformer:	$0	
(k)	Balance of Participant-Related Costs:	$4,998,437	
(l)	Estimated Operations and Maintenance:		

CONTRACT DETAILS			**Reference**
(m)	Commercial Operation Date of Project:	September 16, 2015	
(n)	Maximum Investment Term (years):	20	
(o)	Discount Rate for Incremental Capacity:		
(p)	Prior Contribution (for Final Costs or Adjustment):	$6,042,411	

Contract Stages			**Contract Capacities at Substation (MW)**					
			Contracted After Project			**Contracted Prior to Project**		
			This Participant		**Other**	**This Participant**		**Other**
No	**Start Date**	**Duration** Months	DTS	NA	**Participant**	DTS	NA	**Participant**
(1)	Sep 2015	240	29.30			29.30		
	Total	**240**						

Attachment A2: Contribution Determination

Participant:	**FortisAlberta Inc.**			Tariff:	AESO 2013
Project:	**Fortis Hayter 277S 42MVA Transformer and 25kV Breaker Add**			Effective:	1 Oct 2013
Number:	1495	Type:	DTS Only	To:	Current
Prepared by:	Ilice Tan	Date:	March 8, 2016	Version:	2013.0.1

Line	Description	Reference	Amount	Section
(a)	Cost of New Facilities	Final Cost Report	$4,998,437	8:2
(b)	Plus: Shared Cost of Existing Facilities		$0	8:3(2)(c)
(c)	Less: System-Related Costs		$0	8:3(3)
(d)	Participant-Related Costs	(a) + (b) – (c)	$4,998,437	8:3(2)
(e)	Less: Facilities in Excess of Good Practice		$0	8:4
(f)	Less: Reduction for Replaced Transformer		$0	8:5(2)
(g)	**Balance of Participant-Related Costs**	(d) – (e) – (f)	**$4,998,437**	8:6(1)

			Required Facilities		In Excess of Good Practice	
Line	Description	Reference	Demand-Related	Supply-Related		Section
(h)	Participant-Related Costs	From (g) and (e)	$4,998,437		$0	8:6(3)
(i)	Operations and Maintenance Charge	Estimated by Market Participant	NA		$0	8:9
(j)	**Total Costs Allocated to Market Participant**	(h) + (i)	**$4,998,437**		**$0**	8:6
(k)	Substation Fractions	Other Participant NA	1.00000	0.00000	NA	8:6(3)
(l)	Allocated Costs (j) × (k)	Other Participant NA	$4,998,437	$0	$0	8:6
(m)	Less: Maximum Local Investment	Investment Term of 20 Years	$0	NA	NA	8:8
(n)	Construction Contribution Required	(l) – (m)	$4,998,437	$0	$0	8:7
(o)	**Total Construction Contribution Required**		**$4,998,437**			8:7
(p)	Construction Contribution Previously Paid for Project		$6,042,411			5:2(8) or 9:2(2)
(q)	**Construction Contribution to be Refunded**		**($1,043,974)**			5:2 or 9:4

Attachment A3: Allocation of Costs and Substation Fractions

Participant:	**FortisAlberta Inc.**	Tariff:	AESO 2013
Project:	**Fortis Hayter 277S 42MVA Transformer and 25kV Breaker Add**	Effective:	1 Oct 2013
Number:	1495 Type: DTS Only	To:	Current

ALLOCATION OF COSTS TO SERVICES AT SUBSTATION

Participant-Related Costs of Required Facilities **$4,998,437**

Contract Stages			Incremental Contract Capacity			Incremental Substation Fractions		
			This Participant		Other	This Participant		Other
No	Start Date	Duration Years	DTS	NA	Participant	DTS	NA	Participant
(1)	Sep 2015	20.00	0.00	0.00	0.00	1.00000	0.00000	0.00000
	Total	20.00		Duration-Weighted Average		1.00000	0.00000	0.00000

Allocation of Participant-Related Costs **$4,998,437** **$0** **$0**

SUBSTATION FRACTIONS FOR DETERMINATION OF MAXIMUM INVESTMENT

Contract Stages			Contract Capacity After Project			Substation Fractions After Project		
			This Participant		Other	This Participant		Other
No	Start Date	Duration Years	DTS	NA	Participant	DTS	NA	Participant
(1)	Sep 2015	20.00	29.30	0.00	0.00	1.00000	0.00000	0.00000
	Total	20.00						

Attachment A4: Investment Determination

Participant:	**FortisAlberta Inc.**			Tariff:	AESO 2013
Project:	**Fortis Hayter 277S 42MVA Transformer and 25kV Breaker Add**			Effective:	1 Oct 2013
Number:	1495	Type:	DTS Only	To:	Current

Demand-Related Costs of This Participant Eligible for Investment: **$4,998,437**

Investment Amounts From Subsection 8(4) of Section 8 of 2011 ISO Tariff					
Tier	Tier (a)	Tier (b)	Tier (c)	Tier (d)	Tier (e)
Investment	$52,000	$35,350	$13,050	$7,900	$4,250
Unit	/year	/MW/year	/MW/year	/MW/year	/MW/year

Incremental Rate DTS Contract Capacity Eligible for Investment							
Stage		**Tier (a)**	**Tier (b) MW**	**Tier (c) MW**	**Tier (d) MW**	**Tier (e) MW**	**Total**
No.	Years	Sub Frac	7.5 × SF	9.5 × SF	23 × SF	Remaining	MW
(1)	20.00		0.00	0.00	0.00	0.00	0.00

Stage/Year		Nominal Investment per Year of Investment Term					Discounted	Cumulative
No.	Year	Tier (a)	Tier (b)	Tier (c)	Tier (d)	Tier (e)	Increments	Total
(1)	1	$0	$0	$0	$0	$0	$0	*Investment*
(1)	2	$0	$0	$0	$0	$0	$0	*term must be*
(1)	3	$0	$0	$0	$0	$0	$0	*a minimum of*
(1)	4	$0	$0	$0	$0	$0	$0	*5 years*
(1)	5	$0	$0	$0	$0	$0	$0	$0
(1)	6	$0	$0	$0	$0	$0	$0	$0
(1)	7	$0	$0	$0	$0	$0	$0	$0
(1)	8	$0	$0	$0	$0	$0	$0	$0
(1)	9	$0	$0	$0	$0	$0	$0	$0
(1)	10	$0	$0	$0	$0	$0	$0	$0
(1)	11	$0	$0	$0	$0	$0	$0	$0
(1)	12	$0	$0	$0	$0	$0	$0	$0
(1)	13	$0	$0	$0	$0	$0	$0	$0
(1)	14	$0	$0	$0	$0	$0	$0	$0
(1)	15	$0	$0	$0	$0	$0	$0	$0
(1)	16	$0	$0	$0	$0	$0	$0	$0
(1)	17	$0	$0	$0	$0	$0	$0	$0
(1)	18	$0	$0	$0	$0	$0	$0	$0
(1)	19	$0	$0	$0	$0	$0	$0	$0
(1)	20	$0	$0	$0	$0	$0	$0	$0

Actual Investment (Not Greater Than Costs Eligible for Investment): **$0**

Investment Term Required to Minimize Construction Contribution: **20 years**

Ilice Tan

From: Scott, Tarra <Tarra.Scott@AltaLink.ca>
Sent: Wednesday, March 09, 2016 8:27 AM
To: Ilice Tan
Cc: Navarre, Luis
Subject: RE: 1495_Hayter277sTsf+25kVBkrAdd: Contribution currently being held by AML

Please note that AltaLink is currently holding $6,042,411 in security for Hayter.

Thank you,
Tarra

Sr. Account Representative
AltaLink Management Ltd.
P: (403) 267-6149
C: (403) 479-2503
E: tarra.scott@altalink.ca

'Find what you would die for, and live for it!'
Cpl Nathan Hornburg

From: Ilice Tan [mailto:Ilice.Tan@aeso.ca]
Sent: Tuesday, March 08, 2016 4:58 PM
To: Scott, Tarra <Tarra.Scott@AltaLink.ca>
Cc: Navarre, Luis <Luis.Navarre@AltaLink.ca>
Subject: 1495_Hayter277sTsf+25kVBkrAdd: Contribution currently being held by AML

Hi Tarra,
Could you please advise how much in contribution is currently held by AML on this project?

Thanks and regards,
Ilice

Attachment B

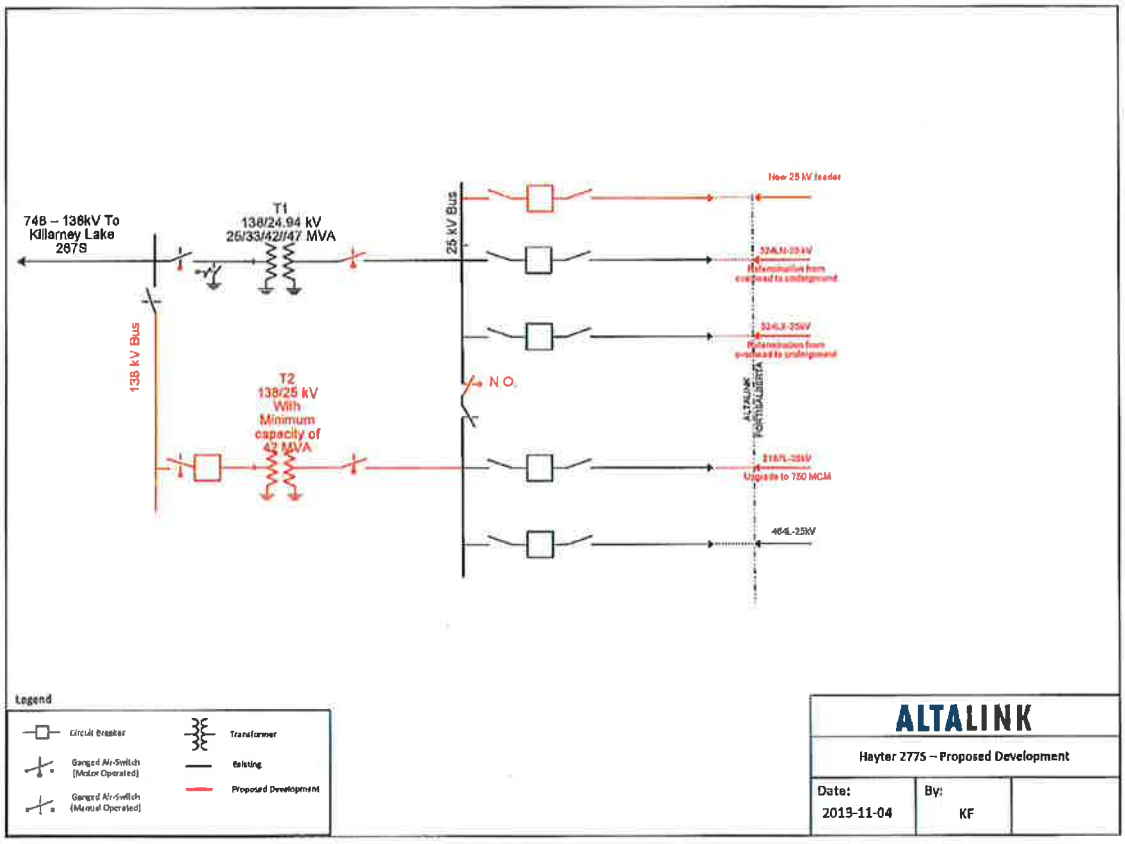
Final Cost Report

Project Name: D.0543 Hayter 277S
TFO: AltaLink Management Ltd
Prepared by: Luis Navarre/Kyle Harry
Date: March 1, 2016

	System Portion			Customer Portion			TOTAL			
	PPS Estimate	Actual	Variance	PPS Estimate	Actual	Variance	PPS Estimate	Actual	Variance	Variance Explanation
Transmission Line Costs										
Total Material Costs	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	
Labour										
Total Labour Costs	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	
Total-Material and Labour	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	
Hayter 277s Substation Facilities Cost										
Total Material Costs	$ -	$ -	$ -	$ 2,359,000	$ 1,917,174	$ (441,826)	$ 2,359,000	$ 1,917,174	$ (441,826)	There were savings on the transformer cost and on the cost of the circuit breakers. Also, the cost of the use of a mobile substation was avoided in the execution of the project.
Labour										
Total Labour Costs	$ -	$ -	$ -	$ 1,794,000	$ 1,711,937	$ (82,063)	$ 1,794,000	$ 1,711,937	$ (82,063)	
Total-Material and Labour	$ -	$ -	$ -	$ 4,153,000	$ 3,629,111	$ (523,889)	$ 4,153,000	$ 3,629,111	$ (523,889)	
Telecommunications										
Total Material Costs	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	
Labour										
Total Labour Costs	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	
Total-Material and Labour	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	
Owner Costs										
Owner's Cost	$ -	$ -	$ -	$ 195,000	$ 228,844	$ 33,844	$ 195,000	$ 228,844	$ 33,844	The regulatory process for the project required more work that estimated originally (IRs and maps for the AUC).
Distributed Costs										
Distributed Costs	$ -	$ -	$ -	$ 1,757,000	$ 850,897	$ (906,103)	$ 1,757,000	$ 850,897	$ (906,103)	1. Approximately $360k of Contingency was not used. 2. Also, there were savings in project management, project controls and construction management as the project didn't require these extra costs.
Salvage										
Salvage Costs	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	
Other Costs										
AFUDC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	
E&S	$ -	$ -	$ -	$ 354,000	$ 289,585	$ (64,415)	$ 354,000	$ 289,585	$ (64,415)	The E&S cost reduction is related to a reduction of the overall direct costs of the project.
Total - Overheads	$ -	$ -	$ -	$ 354,000	$ 289,585	$ (64,415)	$ 354,000	$ 289,585	$ (64,415)	
TOTAL PROJECT COSTS	$ -	$ -	$ -	$ 6,459,000	$ 4,998,437	$ (1,460,563)	$ 6,459,000	$ 4,998,437	$ (1,460,563)	

Attachment C

Figure 4: Proposed Development Arrangement at Hayter 277S



Stage 2 Construction Contribution Decision #1
1782 Fortis Provost Reliability

***Project Name*: Fortis Provost Reliability**

***AESO Project #*: 1782**

***Associated Line #s:* new 138 kV line 398L as well as existing lines 715L, 748L, 749L**

***Substations:* Provost 545S, Hayter 277S, Killarney Lake 267S, Edgerton 899S, Metiskow 648S, Handsman Lake 650S**

***Market Participant Name*: FortisAlberta Inc.**

***Date*: September 12, 2016**

***Estimate Type*: +/- 50%**

***Project Type*: DTS**

***Prepared By*: Tana Lailan**

Project Overview:

- On April 19, 2016 FortisAlberta Inc. ("FortisAlberta") submitted a SASR to address the distribution reliability concerns in the Provost area (AESO Planning Area Edmonton 60).
- The preferred alternative involves a transmission upgrade at the Provost area and construction of a new 138 kV transmission line connection between Hayter 277S substation and Provost 545S substation.
- The requested In-Service Date (ISD) for the Provost Area transmission upgrade is October 1, 2018.
- No Demand Transmission Services (DTS) change is requested at the Edgerton 899S, Hayter 277S, Killarney Lake 267S, Metiskow 648S, and Provost 545S substations.
- This CCD is issued to capture the OOM level estimated project cost of $35,201,000.00 (in 2016$) with accuracy of +50/-50% (Attachment B).
- Once Service Proposal is submitted by AML, Stage 3 CCD calculations are to be completed for each of the substations involved (transmission line and distributed labor costs will to be allocated to each of the substations).
- The cost of this project is 100% customer cost. The additional line proposed between Hayter and Provost is not required for transmission system reliability purposes and is only required by the market participant for distribution reliability concerns.
- There is not any system NIDs being contemplated for this project.
- There is not any N-1 or RAS associated with the preferred alternative
- A Single Line Diagram is included in the Attachment C.

Contribution Policy:

2500, 330-5th Avenue SW, Calgary, Alberta T2P 0L4 Phone: 403-539-2450 Fax: 403-539-2949
www.aeso.ca www.poweringalberta.com

Permit and Licence: not yet filed
Contribution Policy Applied: 2016 per Commission Decision 21302-D01-2016, effective April 1, 2016.

Proposed Commercial Terms:

Reference: Draft Connection Proposal dated August 19, 2016

1. Project Cost

Project cost is located on line (e) of Attachment A1.

2. Shared Facilities Cost

- There are no shared facilities.

3. System Related Cost

- There is no system related cost.

4. Facilities In Excess of Good Electric Industry Practice

- There are no facilities in Excess of Good Electric Industry Practice.

5. Construction Contribution

- Participant related cost is located on line (h) of Attachment A1.
- Based on contract details listed in Attachment A1, the maximum local investment is located on line (m) of Attachment A2.
- The Construction Contribution is estimated to be as stated on line (o) of Attachment A2. Please see Attachments A1, A2, A3 and A4 for details of these calculations and the resulting Construction Contribution.

- This Construction Contribution is subject to change based on the following items:
  - Changes to contract capacity or term
  - Changes to estimated costs or resulting from final costs
  - Changes to the classification of system-related and market participant -related costs
  - Development of the transmission system as it relates to this project, including sharing of facilities with other market participants.

6. Primary Service Credit

- The transformation facilities for this service are owned and operated by the transmission facility owner, and the Primary Service Credit does not apply.

2500, 330-5th Avenue SW, Calgary, Alberta T2P 0L4 Phone: 403-539-2450 Fax: 403-539-2949
www.aeso.ca www.poweringalberta.com

Sign-off

Note: Cost estimates provided in the Connection Proposal identified in this CCD have been used to determine the Construction Contribution and/or Generating Unit Owner's Contribution applicable to the Project based on the information and calculations outlined herein. Signing of this CCD by the AESO approves only the application of the Tariff provisions applicable to the Project and is not intended to imply endorsement of any third party information (i.e. cost estimates) provided in the Connection Proposal.

Project Manager/Coordinator
(Tana Lailan)

Sep 12, 2016
Date

Program Manager
(Jasmin Judge)

Sept. 13/2016
Date

Tariff Manager
(Lee Ann Kerr)

Date

Manager, Tariff Applications Design
(LaRhonda Papworth)

Oct. 6, 2016
Date

Director, Transmission Regulatory Market and Tariff Design
(Doyle Sullivan)

Oct 7, 2016
Date

Attachments

- Attachment A1: Costs and Contract Details
- Attachment A2: Contribution Determination
- Attachment A3: Allocation of Costs and Substation Fractions
- Attachment A4: Investment Determination
- Attachment B: Cost estimates
- Attachment C: Project SLDs

2500, 330-5th Avenue SW, Calgary, Alberta T2P 0L4 Phone: 403-539-2450 Fax: 403-539-2949
www.aeso.ca www.poweringalberta.com

Attachment A1: Costs and Contract Details

Participant:	**FortisAlberta Inc.**			Tariff:	AESO 2016
Project:	**Fortis Provost Reliability**			Effective:	1 Apr 2016
Number:	1782	Type:	DTS Only	To:	Current
Prepared by:	Tana Lailan	Date:	Sep 12, 2016		

PROJECT DETAILS

(a)	New Service or Expansion of Existing Service?	Expansion	
(b)	Is Service at New or Existing Substation?	Existing Substation	5 substations
(c)	Will Primary Service Credit Apply to Service?	No	
(d)	Any Other Market Participant(s) at Substation?	No	

COST OF CONNECTION PROJECT			**Reference**
(e)	Cost of New Transmission Facilities:	$35,201,000	Cost Estimate in CP
(f)	Shared Cost of Existing Transmission Facilities:	$0	
(g)	Less: System-Related Costs:	$0	
(h)	Participant-Related Costs:	$35,201,000	
(i)	Less: Facilities in Excess of Good Practice:	$0	
(j)	Less: Reduction for Replaced Transformer:	$0	
(k)	Balance of Participant-Related Costs:	$35,201,000	
(l)	Estimated Operations and Maintenance:	$0	

CONTRACT DETAILS			**Reference**
(m)	Date of Commission Permit and Licence:		Not yet applied for
(n)	Date of AESO Energization Authorization:	Oct 1, 2018	
(o)	Date of Commercial Operation of Project:	Oct 1, 2018	
(p)	Maximum Investment Term (years):	20	
(q)	Discount Rate for Incremental Capacity:	5.78%	AML rate of Sep 1, 2016
(r)	Prior Contribution (for Final Costs or Adjustment):		

Contract Stages			**Contract Capacities at Substation (MW)**					
			Contracted After Project			**Contracted Prior to Project**		
	Start	**Duration**	**This Participant**		**Other**	**This Participant**		**Other**
No	**Date**	Months	DTS	NA	**Participant**	DTS	NA	**Participant**
(1)	Oct 2018	240	96.90			96.90		
	Total	**240**						

Attachment A2: Contribution Determination

Participant: **FortisAlberta Inc.**
Project: **Fortis Provost Reliability**
Number: 1782
Prepared by: Tana Lailan

Type: DTS Only
Date: September 12, 2016

Tariff: AESO 2016
Effective: 1 Apr 2016
To: Current

Line	Description	Reference	Amount	Section
(a)	Cost of New Facilities	Cost Estimate in CP	$35,201,000	8:2
(b)	Plus: Shared Cost of Existing Facilities		$0	8:3(2)(c)
(c)	Less: System-Related Costs		$0	8:3(3)
(d)	Participant-Related Costs	(a) + (b) – (c)	$35,201,000	8:3(2)
(e)	Less: Facilities in Excess of Good Practice		$0	8:4
(f)	Less: Reduction for Replaced Transformer		$0	8:5(2)
(g)	**Balance of Participant-Related Costs**	(d) – (e) – (f)	**$35,201,000**	8:6(1)

			Required Facilities		In Excess of Good Practice	
Line	Description	Reference	Demand-Related	Supply-Related		Section
(h)	Participant-Related Costs	From (g) and (e)	$35,201,000		$0	8:6(3)
(i)	Operations and Maintenance Charge	Estimated by Market Participant	NA		$0	8:9
(j)	**Total Costs Allocated to Market Participant**	(h) + (i)	**$35,201,000**		**$0**	8:6
(k)	Substation Fractions	Other Participant NA	1.00000	0.00000	NA	8:6(3)
(l)	Allocated Costs (j) × (k)	Other Participant NA	$35,201,000	$0	$0	8:6
(m)	Less: Maximum Local Investment	Investment Term of 20 Years	$0	NA	NA	8:8
(n)	Construction Contribution Required	(l) – (m)	$35,201,000	$0	$0	8:7
(o)	**Total Construction Contribution Required**		**$35,201,000**			8:7

Attachment A3: Allocation of Costs and Substation Fractions

Participant: **FortisAlberta Inc.**
Project: **Fortis Provost Reliability**
Number: 1782 Type: DTS Only

Tariff: AESO 2016
Effective: 1 Apr 2016
To: Current

ALLOCATION OF COSTS TO SERVICES AT SUBSTATION

Participant-Related Costs of Required Facilities **$35,201,000**

Contract Stages			Incremental Contract Capacity			Incremental Substation Fractions		
			This Participant		Other	This Participant		Other
No	Start Date	Duration Years	DTS	NA	Participant	DTS	NA	Participant
(1)	Oct 2018	20.00	0.00	0.00	0.00	1.00000	0.00000	0.00000
	Total	20.00			Duration-Weighted Average	1.00000	0.00000	0.00000

Allocation of Participant-Related Costs **$35,201,000** **$0** **$0**

SUBSTATION FRACTIONS FOR DETERMINATION OF MAXIMUM INVESTMENT

Contract Stages			Contract Capacity After Project			Substation Fractions After Project		
			This Participant		Other	This Participant		Other
No	Start Date	Duration Years	DTS	NA	Participant	DTS	NA	Participant
(1)	Oct 2018	20.00	96.90	0.00	0.00	1.00000	0.00000	0.00000
	Total	20.00						

Attachment A4: Investment Determination

Participant: **FortisAlberta Inc.**
Project: **Fortis Provost Reliability**
Number: 1782 Type: DTS Only

Tariff: AESO 2016
Effective: 1 Apr 2016
To: Current

Demand-Related Costs of This Participant Eligible for Investment: **$35,201,000**

Investment Amounts From Subsection 8(4) of Section 8 of 2015 ISO Tariff					
Tier	Tier (a)	Tier (b)	Tier (c)	Tier (d)	Tier (e)
Investment	$78,350	$31,750	$19,900	$13,850	$8,950
Unit	/year	/MW/year	/MW/year	/MW/year	/MW/year

Incremental Rate DTS Contract Capacity Eligible for Investment							
Stage		**Tier (a)**	**Tier (b) MW**	**Tier (c) MW**	**Tier (d) MW**	**Tier (e) MW**	**Total**
No	Years	Sub Frac	7.5 × SF	9.5 × SF	23 × SF	Remaining	MW
(1)	20.00		0.00	0.00	0.00	0.00	0.00

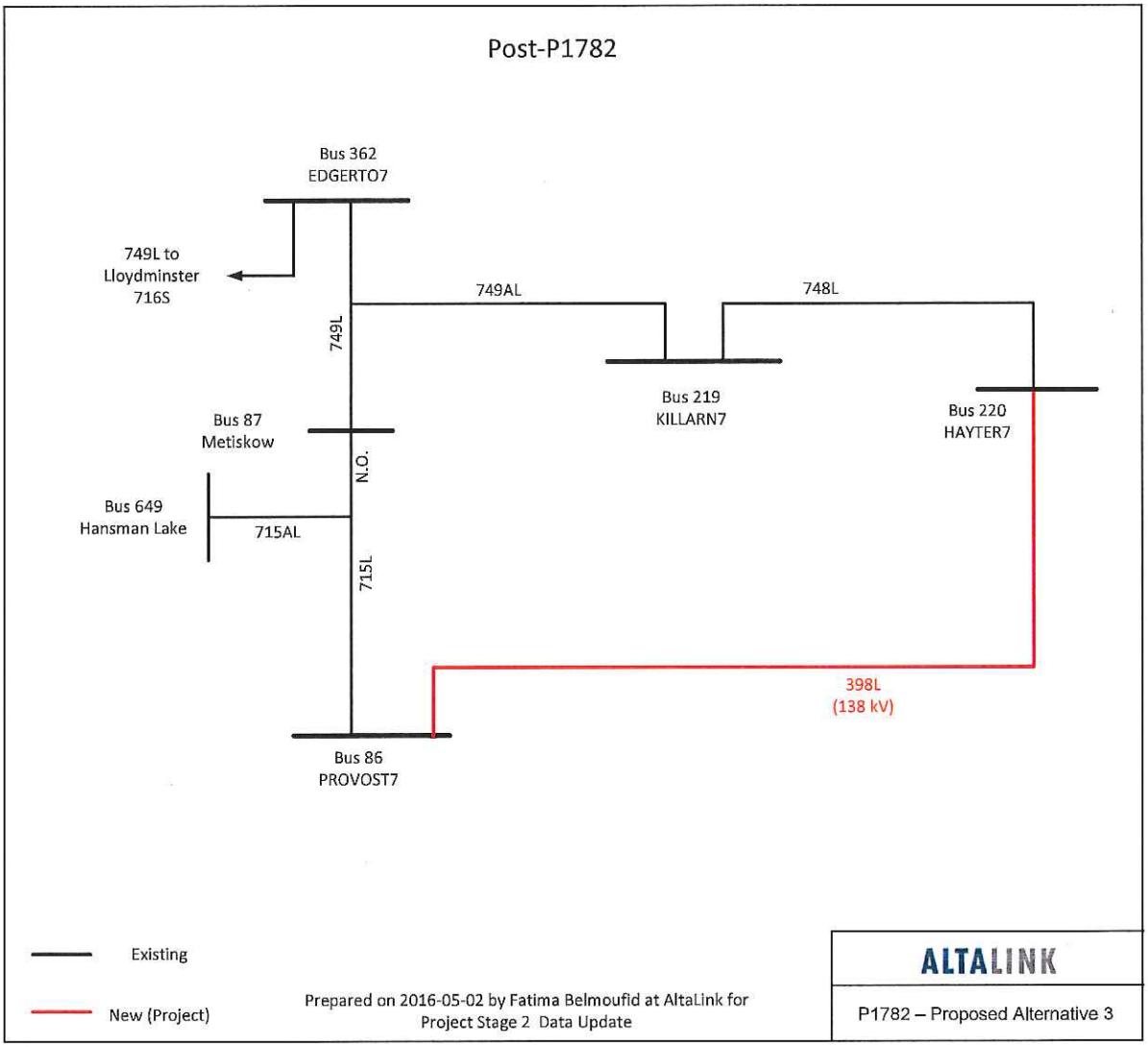
Stage/Year		Nominal Investment per Year of Investment Term					Discounted	Cumulative
No	Year	Tier (a)	Tier (b)	Tier (c)	Tier (d)	Tier (e)	Increments	Total
(1)	1	$0	$0	$0	$0	$0	$0	*Investment*
(1)	2	$0	$0	$0	$0	$0	$0	*term must be*
(1)	3	$0	$0	$0	$0	$0	$0	*a minimum of*
(1)	4	$0	$0	$0	$0	$0	$0	*5 years*
(1)	5	$0	$0	$0	$0	$0	$0	$0
(1)	6	$0	$0	$0	$0	$0	$0	$0
(1)	7	$0	$0	$0	$0	$0	$0	$0
(1)	8	$0	$0	$0	$0	$0	$0	$0
(1)	9	$0	$0	$0	$0	$0	$0	$0
(1)	10	$0	$0	$0	$0	$0	$0	$0
(1)	11	$0	$0	$0	$0	$0	$0	$0
(1)	12	$0	$0	$0	$0	$0	$0	$0
(1)	13	$0	$0	$0	$0	$0	$0	$0
(1)	14	$0	$0	$0	$0	$0	$0	$0
(1)	15	$0	$0	$0	$0	$0	$0	$0
(1)	16	$0	$0	$0	$0	$0	$0	$0
(1)	17	$0	$0	$0	$0	$0	$0	$0
(1)	18	$0	$0	$0	$0	$0	$0	$0
(1)	19	$0	$0	$0	$0	$0	$0	$0
(1)	20	$0	$0	$0	$0	$0	$0	$0

Actual Investment (Not Greater Than Costs Eligible for Investment):	**$0**
Investment Term Required to Minimize Construction Contribution:	**20 years**
Investment Term Begins on:	Oct 1, 2018
Investment Term ends on:	Sep 30, 2038

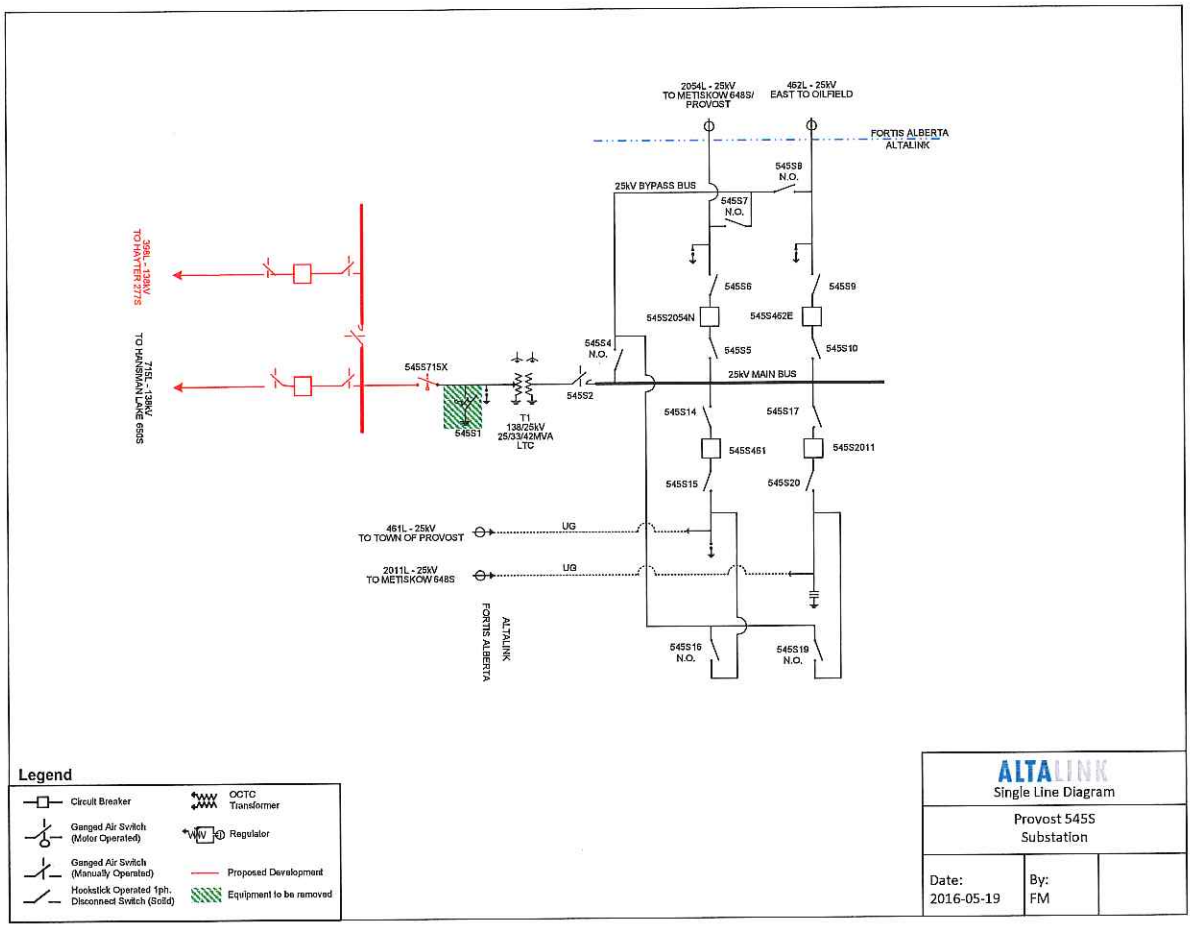
Project Name & No.	Fortis Provost Reliability		D.0626 / P1782	TRANSMISSION PROJECT ESTIMATE SUMMARY
Prepared by:	AltaLink			
AACE Class: (future use)	N/A	Estimate Basis	OOM	
High Range	50%	Low Range	-50%	
Date of Estimate:	August 16, 2016	Base Year Used	2016	

	SYSTEM	CUSTOMER	TOTAL	ASSUMPTIONS
TRANSMISION LINE				
Material	$ -	$ 2,561,000	$ 2,561,000	
Labour	$ -	$ 7,721,000	$ 7,721,000	
Supply & Install	$ -	$ -	$ -	
TOTAL TRANSMISSION LINE	**$ -**	**$ 10,283,000**	**$ 10,283,000**	
SUBSTATION				
Material	$ -	$ 2,811,000	$ 2,811,000	
Labour	$ -	$ 4,124,000	$ 4,124,000	
Supply & Install	$ -	$ -	$ -	
TOTAL SUBSTATION	**$ -**	**$ 6,935,000**	**$ 6,935,000**	
TELECOMMUNICATION				
Material	$ -	$ 715,000	$ 715,000	
Labour	$ -	$ 1,781,000	$ 1,781,000	
Supply & Install	$ -	$ -	$ -	
TOTAL TELECOMMUNCATIONS	**$ -**	**$ 2,496,000**	**$ 2,496,000**	
OWNERS				
Pre-PPS cost	$ -	$ 130,000	$ 130,000	
Proposal to Provide Service	$ -	$ 275,000	$ 275,000	
Facility Applications	$ -	$ 2,195,000	$ 2,195,000	
Regulatory & Compliance	$ -	$ 10,000	$ 10,000	
Land Rights - Easements	$ -	$ 424,000	$ 424,000	
Land - Damage Claims	$ -	$ 61,000	$ 61,000	
Land - Acquisitions	$ -	$ -	$ -	
Other	$ -	$ -	$ -	
TOTAL OWNERS COST	**$ -**	**$ 3,094,000**	**$ 3,094,000**	
DISTRIBUTED				
Procurement Management	$ -	$ 175,000	$ 175,000	
Project Management	$ -	$ 1,448,000	$ 1,448,000	
Construction Management	$ -	$ 3,078,000	$ 3,078,000	
Contingency	$ -	$ 4,141,000	$ 4,141,000	
Escalation	$ -	$ 1,514,000	$ 1,514,000	
TOTAL DISTRIBUTED	**$ -**	**$ 10,356,000**	**$ 10,356,000**	
SALVAGE				
Transmission Line Labour	$ -	$ -	$ -	Project cost excludes $18,000 of Transmission Line salvage labour
Substation Labour	$ -	$ -	$ -	Project cost excludes $98,000 of Substation salvage labour
Telecom Labour	$ -	$ -	$ -	Project cost excludes $30,000 of Telecom salvage labour
Land Remediation and Reclamation	$ -	$ -	$ -	
	$ -	$ -	$ -	
	$ -	$ -	$ -	
TOTAL SALVAGE	**$ -**	**$ -**	**$ -**	
OTHER COSTS				
AFUDC	$ -	$ -	$ -	
E&S/Overhead	$ -	$ 2,037,000	$ 2,037,000	
TOTAL OTHER	**$ -**	**$ 2,037,000**	**$ 2,037,000**	
TOTAL PROJECT	**$ -**	**$ 35,201,000**	**$ 35,201,000**	

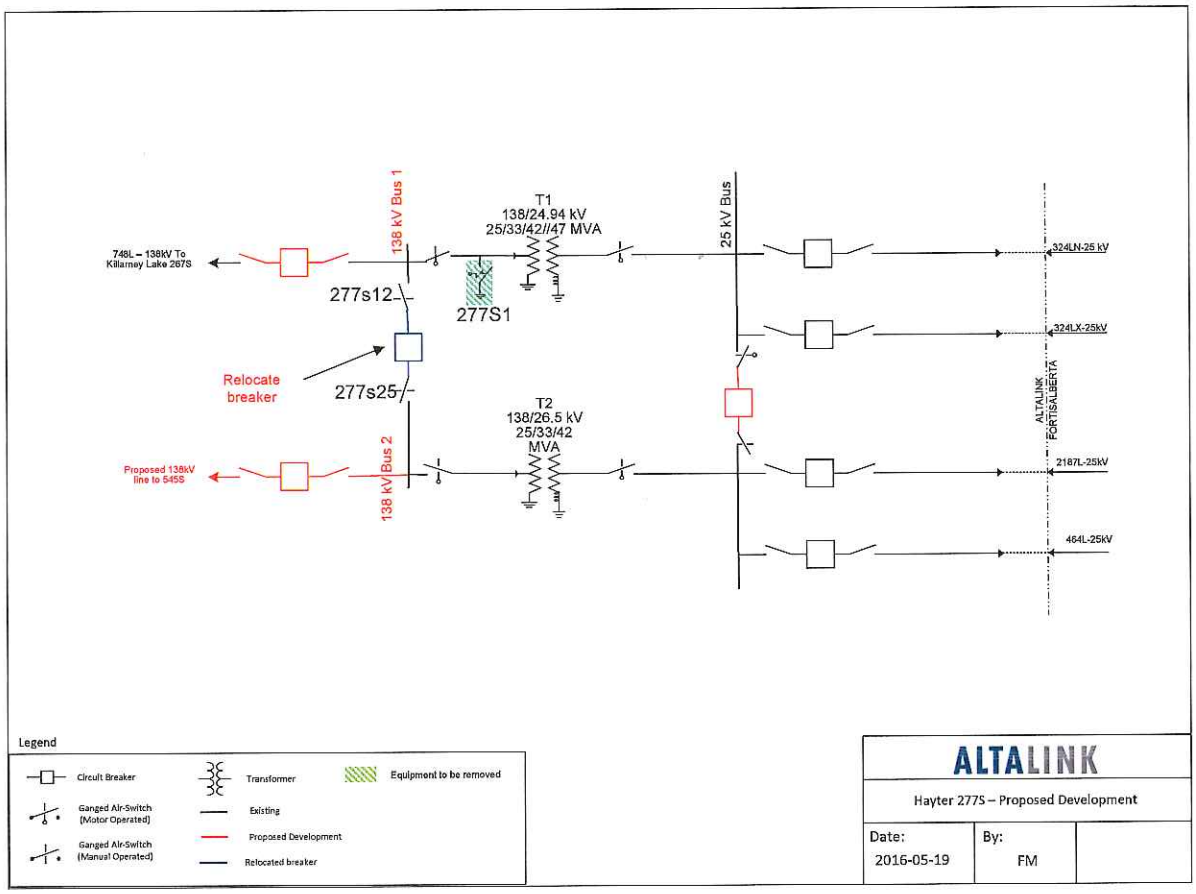
2. After the Project SLD



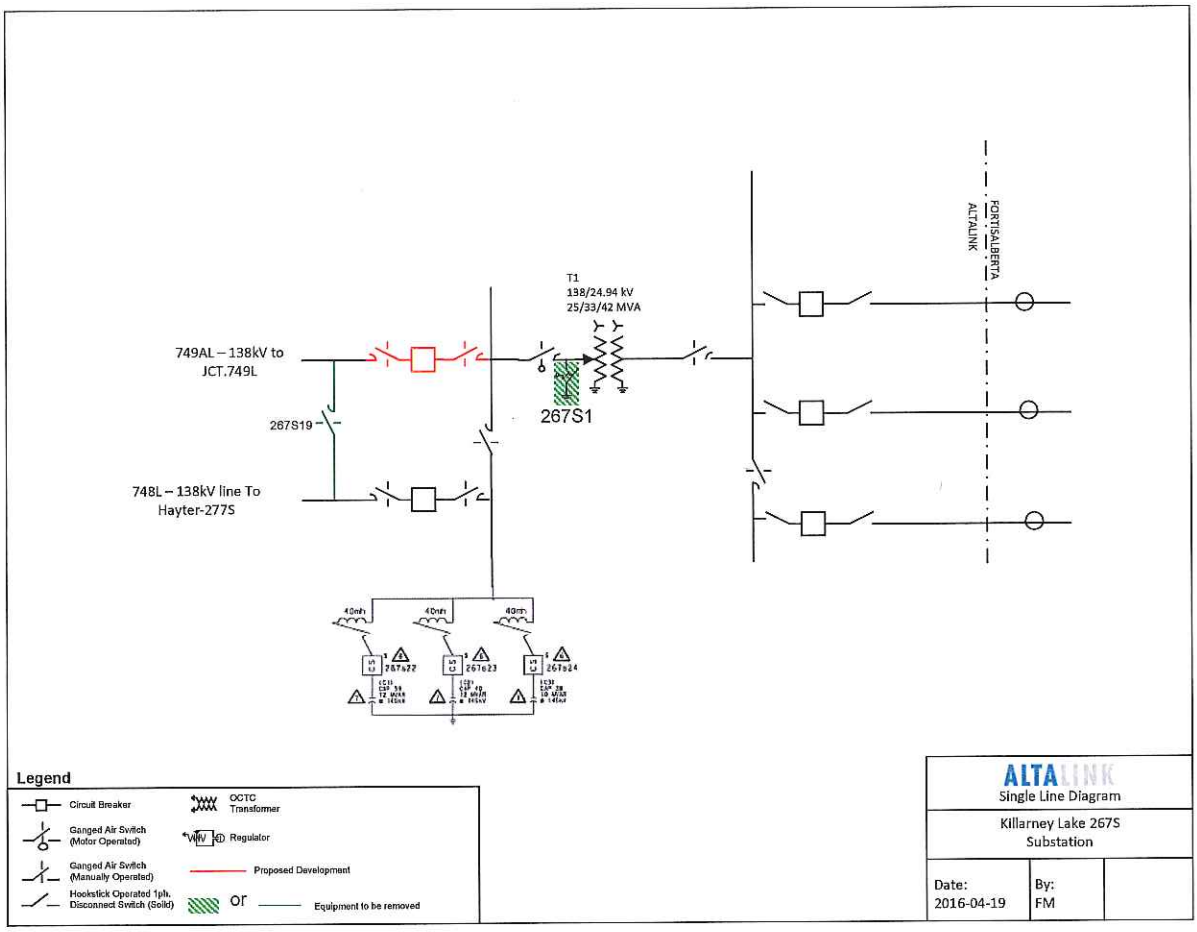
6.0 PROPOSED SLD AT PROVOST 545S



8.0 PROPOSED SLD AT HAYTER 277S



10.0 PROPOSED SLD AT KILLARNEY LAKE 267S



Stage 6 Construction Contribution Decision/GUOC #1
1607/1608 Fortis Bull Creek Phase 1 & 2 Generator Increase

***Project Name*: Fortis Bull Creek Phase 1 & 2 Generator Increase**

***AESO Project #*: P1607/P1608 (P1495 Stage 6, CCD#1 carried forward to adjust contract amounts)**

***Substation:* Hayter 277S**

***Market Participant Name*: FortisAlberta Inc.**

***Date*: May 4, 2017**

***Estimate Type*: Final Cost**

***Project Type*: STS**

***Prepared By*: Ilice Tan**

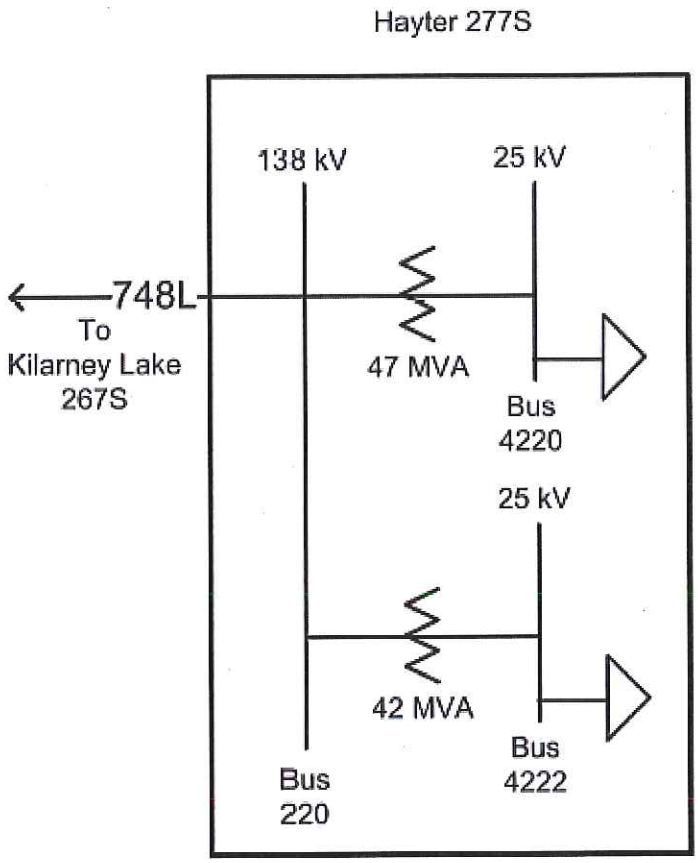
Project Overview:

- FortisAlberta Inc. (Fortis) has requested a 10 MW of STS to connect BluEarth Renewables Inc. (BluEarth) generating units on the Fortis distribution lines that are tied to Hayter 277S. Project 1607 Fortis Bull Creek Phase 1 Generator (Maximum Capacity of 13.5 MW) is connected to distribution feeder 2187L. Project 1608 Fortis Bull Creek Phase 2 Generator (Maximum Capacity of 16 MW) is connected to distribution feeder 464L.
- There are no new facilities required for this project. However, a contract adjustment is required to add a STS contract amount of 10 MW. Therefore, the past project P1495 Stage 6 CCD (transformer and breaker addition - ISD September 15, 2015 - CCD signed on March 2016) staging has been adjusted to reflect this new STS contract.
- The ISD for Fortis Bull Creek Phase 1 & 2 was Dec 5, 2015.
- The difference between this CCD and the previous P1607/1608CCD (signed October 2015) is to reflect this carry forward of the P1495 CCD rather than the CCD reflecting $344,00 project costs which was incorrectly identified as "Cost of New Facilities". There are no new facilities required for P1607/P1608.
- There is no system NIDs being contemplated for this project.
- There is no N-1 or RAS associated with the preferred alternative.
- The pre and post project SLDs are shown below:

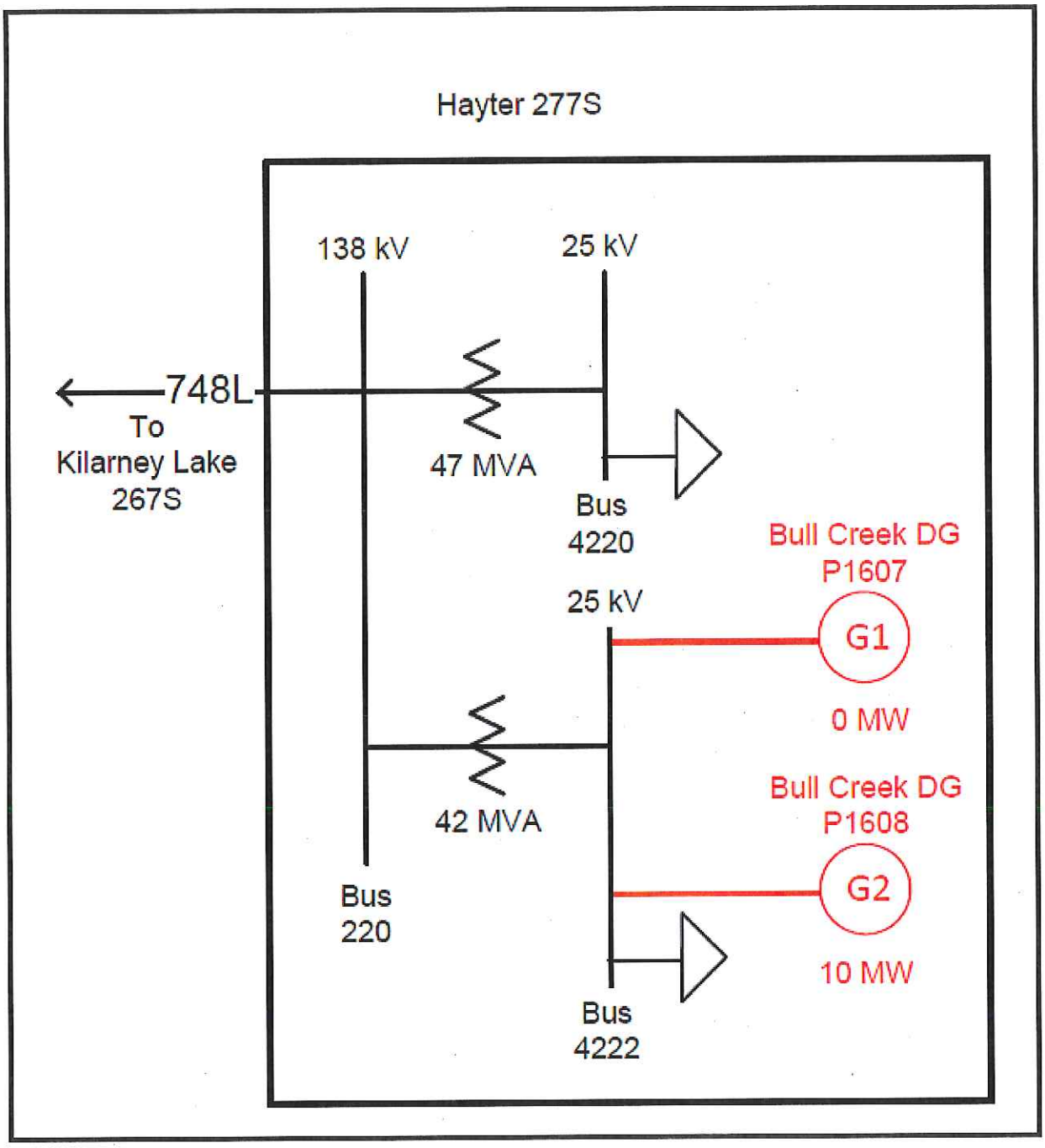
Alberta Electric System Operator, Calgary Place, 2500, 330 – 5th Avenue SW Calgary, AB T2P 0L4
Phone: 403-539-2450 Fax: 403-539-2949 www.aeso.ca @theaeso

Pre-Project SLD:

Power System prior to Project (assumes the following projects are complete: _____)



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



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

Contribution Policy:

Permit and Licence: P&L received on February 9, 2015
Contribution Policy Applied: 2013 per Commission Decision 2013-325, effective October 1, 2013

Proposed Commercial Terms:

Reference: NA

1. Project Cost

Project cost is located on line (e) of Attachment A1.

2. Shared Facilities Cost

- There are no shared facilities.

3. System Related Cost

- There is no system related cost.

4. Facilities In Excess of Good Electric Industry Practice

- There are no facilities in Excess of Good Electric Industry Practice.

5. Construction Contribution

- Participant related cost is located on line (h) of Attachment A1.
- Participant related cost is divided between demand related and supply related on line (l) of Attachment A2.
- Based on contract details listed in Attachment A1, the maximum local investment is located on line (m) of Attachment A2.
- The Construction Contribution is estimated to be as stated on line (o) of Attachment A2. Please see Attachments A1, A2, A3 and A4 for details of these calculations and the resulting Construction Contribution.

- This Construction Contribution is subject to change based on the following items:
  - Changes to contract capacity or term
  - Changes to estimated costs or resulting from final costs
  - Changes to the classification of system-related and market participant -related costs
  - Development of the transmission system as it relates to this project, including sharing of facilities with other market participants.

6. Generating Unit Owner's Contribution

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

Per subsection 3 of section 10 of the ISO Tariff, Generating Unit Owner's Contribution (per MW) applicable to this project is located on line (r) of Attachment A2.

Generating Unit Owner's Contribution is refundable over 10 years from the Commercial Operation Date as outlined in ISO Rule 9.5)

Please indicate resource type below:

Resource Type	
Coal	☐
Natural Gas — Base Load	☐
Natural Gas — Peaking	☐
Hydro	☐
Wind	☒
Solar	☐
Biomass & Waste	☐

7. Primary Service Credit

- The transformation facilities for this service are owned and operated by the transmission facility owner, and the Primary Service Credit does not apply.

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

Project Number: Project Name: Project Stage:

Sign-off

Note: Cost estimates provided in the Final Cost submission identified in this CCD have been used to determine the Construction Contribution and/or Generating Unit Owner's Contribution applicable to the Project based on the information and calculations outlined herein. Signing of this CCD by the AESO approves only the application of the Tariff provisions applicable to the Project and is not intended to imply endorsement of any third party information (i.e. cost estimates) provided in the Final Cost submission.

Project Manager/Coordinator — Date: May 4, 2017

Program Manager — Date: May 5/2017

Tariff Manager
(Lee Ann Kerr) — Date

Manager, Tariff Design
(LaRhonda Papworth) — Date: May 17, 2017

Director, Tariff Design
(Doyle Sullivan) — Date: June 7/2017

Attachments

- Attachment A1: Costs and Contract Details
- Attachment A2: Contribution Determination
- Attachment A3: Allocation of Costs and Substation Fractions
- Attachment A4: Investment Determination
- Attachment B: Cost estimates
- Attachment C: Previous and related Construction Contribution Decisions

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

Attachment A1: Costs and Contract Details

Participant:	FortisAlberta Inc.			Tariff:	AESO 2013
Project:	Fortis Hayter 277S 42MVA Transformer and 25kV Breaker Add			Effective:	1 Oct 2013
Number:	1607/1608 from P1495	Type:	DTS and STS (Dual-Use)	To:	Current
Prepared by:	Ilice Tan	Date:	May 4, 2017	Version:	2013.0.1

PROJECT DETAILS

(a)	New Service or Expansion of Existing Service?	Expansion
(b)	Is Service at New or Existing Substation?	Existing Substation
(c)	Will Primary Service Credit Apply to Service?	No
(d)	Any Other Market Participant(s) at Substation?	No

COST OF CONNECTION PROJECT

			Reference
(e)	Cost of New Transmission Facilities:	$4,998,437	P1495 Final Cost Report
(f)	Shared Cost of Existing Transmission Facilities:	$0	
(g)	Less: System-Related Costs:	$0	
(h)	Participant-Related Costs:	$4,998,437	
(i)	Less: Facilities in Excess of Good Practice:	$0	
(j)	Less: Reduction for Replaced Transformer:	$0	
(k)	Balance of Participant-Related Costs:	$4,998,437	
(l)	Estimated Operations and Maintenance:		

CONTRACT DETAILS

			Reference
(m)	Commercial Operation Date of Project:	September 16, 2015	
(n)	Maximum Investment Term (years):	20	
(o)	Discount Rate for Incremental Capacity:	6.14%	
(p)	Prior Contribution (for Final Costs or Adjustment):	$4,998,437	

Contract Stages			Contract Capacities at Substation (MW)					
			Contracted After Project			Contracted Prior to Project		
			This Participant		Other	This Participant		Other
No	Start Date	Duration Months	DTS	STS	Participant	DTS	STS	Participant
(1)	Sep 2015	3	29.30	0.00		29.30	0.00	
(2)	Dec 2015	237	29.30	10.00		29.30	0.00	
	Total	240						

GENERATING UNIT OWNER'S CONTRIBUTION

			Reference
(q)	Planning Region Where Unit Will be Located:	Central	
(r)	Contribution Amount Dates to be Used:	2014-2015	
(s)	Owner's Contribution Previously Paid (If Any):	$224,000	

Attachment A2: Contribution Determination

Participant: **FortisAlberta Inc.**
Project: **Fortis Hayter 277S 42MVA Transformer and 25kV Breaker Add**
Number: 1607/1608 from P1495 Type: DTS and STS (Dual-Use)
Prepared by: Ilice Tan Date: May 4, 2017

Tariff: AESO 2013
Effective: 1 Oct 2013
To: Current
Version: 2013.0.1

Line	Description	Reference	Amount	Section
(a)	Cost of New Facilities	P1495 Final Cost Report	$4,998,437	8:2
(b)	Plus: Shared Cost of Existing Facilities		$0	8:3(2)(c)
(c)	Less: System-Related Costs		$0	8:3(3)
(d)	Participant-Related Costs	(a) + (b) – (c)	$4,998,437	8:3(2)
(e)	Less: Facilities in Excess of Good Practice		$0	8:4
(f)	Less: Reduction for Replaced Transformer		$0	8:5(2)
(g)	**Balance of Participant-Related Costs**	(d) – (e) – (f)	**$4,998,437**	8:6(1)

			Required Facilities		In Excess of Good Practice	
Line	Description	Reference	Demand-Related	Supply-Related		Section
(h)	Participant-Related Costs	From (g) and (e)	$4,998,437		$0	8:6(3)
(i)	Operations and Maintenance Charge	Estimated by Market Participant	NA		$0	8:9
(j)	**Total Costs Allocated to Market Participant**	(h) + (i)	**$4,998,437**		**$0**	8:6
(k)	Substation Fractions	Other Participant NA	0.01250	0.98750	NA	8:6(3)
(l)	Allocated Costs (j) × (k)	Other Participant NA	$62,480	$4,935,957	$0	8:6
(m)	Less: Maximum Local Investment	Investment Term of 20 Years	$0	NA	NA	8:8
(n)	Construction Contribution Required	(l) – (m)	$62,480	$4,935,957	$0	8:7
(o)	**Total Construction Contribution Required**		**$4,998,437**			8:7
(p)	Construction Contribution Previously Paid for Project		$4,998,437			5:2(8) or 9:2(2)
(q)	**Construction Contribution to be Refunded**		**$0**			5:2 or 9:4

			Generating Unit Owner's Contribution			
Line	Description	Region/Policy	STS MW	Amount/MW	Contribution	Section
(r)	**Owner's Contribution to be Paid**	**Central 2014-2015**	**10.00**	**$22,400**	**$224,000**	10:3
(s)	Generating Unit Owner's Contribution Previously Paid for Project				$224,000	10:3
(t)	**Generating Unit Owner's Contribution to be Refunded**				**$0**	10:3

Attachment A3: Allocation of Costs and Substation Fractions

Participant:	**FortisAlberta Inc.**	Tariff:	AESO 2013
Project:	**Fortis Hayter 277S 42MVA Transformer and 25kV Breaker Add**	Effective:	1 Oct 2013
Number:	1607/1608 from P1495 Type: DTS and STS (Dual-Use)	To:	Current

ALLOCATION OF COSTS TO SERVICES AT SUBSTATION

Participant-Related Costs of Required Facilities **$4,998,437**

Contract Stages			Incremental Contract Capacity			Incremental Substation Fractions		
			This Participant		Other	This Participant		Other
No	Start Date	Duration Years	DTS	STS	Participant	DTS	STS	Participant
(1)	Sep 2015	0.25	0.00	0.00	0.00	1.00000	0.00000	0.00000
(2)	Dec 2015	19.75	0.00	10.00	0.00	0.00000	1.00000	0.00000
	Total	**20.00**			**Duration-Weighted Average**	**0.01250**	**0.98750**	**0.00000**

Allocation of Participant-Related Costs **$62,480** **$4,935,957** **$0**

SUBSTATION FRACTIONS FOR DETERMINATION OF MAXIMUM INVESTMENT

Contract Stages			Contract Capacity After Project			Substation Fractions After Project		
			This Participant		Other	This Participant		Other
No	Start Date	Duration Years	DTS	STS	Participant	DTS	STS	Participant
(1)	Sep 2015	0.25	29.30	0.00	0.00	1.00000	0.00000	0.00000
(2)	Dec 2015	19.75	29.30	10.00	0.00	0.74555	0.25445	0.00000
	Total	**20.00**						

Attachment A4: Investment Determination

Participant: **FortisAlberta Inc.**
Project: **Fortis Hayter 277S 42MVA Transformer and 25kV Breaker Add**
Number: 1607/1608 from P1495 Type: DTS and STS (Dual-Use)

Tariff: AESO 2013
Effective: 1 Oct 2013
To: Current

Demand-Related Costs of This Participant Eligible for Investment: **$62,480**

Investment Amounts From Subsection 8(4) of Section 8 of 2011 ISO Tariff					
Tier	Tier (a)	Tier (b)	Tier (c)	Tier (d)	Tier (e)
Investment	$52,000	$35,350	$13,050	$7,900	$4,250
Unit	/year	/MW/year	/MW/year	/MW/year	/MW/year

Incremental Rate DTS Contract Capacity Eligible for Investment							
Stage		**Tier (a)**	**Tier (b) MW**	**Tier (c) MW**	**Tier (d) MW**	**Tier (e) MW**	**Total**
No.	Years	Sub Frac	7.5 × SF	9.5 × SF	23 × SF	Remaining	MW
(1)	0.25		0.00	0.00	0.00	0.00	0.00
(2)	19.75		0.00	0.00	0.00	0.00	0.00

Stage/Year		Nominal Investment per Year of Investment Term					Discounted	Cumulative
No.	Year	Tier (a)	Tier (b)	Tier (c)	Tier (d)	Tier (e)	Increments	Total
(1)-(2)	1	$0	$0	$0	$0	$0	$0	*Investment*
(2)	2	$0	$0	$0	$0	$0	$0	*term must be*
(2)	3	$0	$0	$0	$0	$0	$0	*a minimum of*
(2)	4	$0	$0	$0	$0	$0	$0	*5 years*
(2)	5	$0	$0	$0	$0	$0	$0	$0
(2)	6	$0	$0	$0	$0	$0	$0	$0
(2)	7	$0	$0	$0	$0	$0	$0	$0
(2)	8	$0	$0	$0	$0	$0	$0	$0
(2)	9	$0	$0	$0	$0	$0	$0	$0
(2)	10	$0	$0	$0	$0	$0	$0	$0
(2)	11	$0	$0	$0	$0	$0	$0	$0
(2)	12	$0	$0	$0	$0	$0	$0	$0
(2)	13	$0	$0	$0	$0	$0	$0	$0
(2)	14	$0	$0	$0	$0	$0	$0	$0
(2)	15	$0	$0	$0	$0	$0	$0	$0
(2)	16	$0	$0	$0	$0	$0	$0	$0
(2)	17	$0	$0	$0	$0	$0	$0	$0
(2)	18	$0	$0	$0	$0	$0	$0	$0
(2)	19	$0	$0	$0	$0	$0	$0	$0
(2)	20	$0	$0	$0	$0	$0	$0	$0

Actual Investment (Not Greater Than Costs Eligible for Investment): **$0**
Investment Term Required to Minimize Construction Contribution: **20 years**

Attachment B

Final Cost Report

Project Name: D.0543 Hayter 277S
TFO: AltaLink Management Ltd
Prepared by: Luis Navarre/Kyle Harry
Date: March 1, 2016

	System Portion			Customer Portion			TOTAL			
	PPS Estimate	Actual	Variance	PPS Estimate	Actual	Variance	PPS Estimate	Actual	Variance	Variance Explanation
Transmission Line Costs										
Total Material Costs	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	
Labour										
Total Labour Costs	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	
Total-Material and Labour	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	
Hayter 277s Substation Facilities Cost										
Total Material Costs	$ -	$ -	$ -	$ 2,359,000	$ 1,917,174	$ (441,826)	$ 2,359,000	$ 1,917,174	$ (441,826)	There were savings on the transformer cost and on the cost of the circuit breakers. Also, the cost of the use of a mobile substation was avoided in the execution of the project.
Labour										
Total Labour Costs	$ -	$ -	$ -	$ 1,794,000	$ 1,711,937	$ (82,063)	$ 1,794,000	$ 1,711,937	$ (82,063)	
Total-Material and Labour	$ -	$ -	$ -	$ 4,153,000	$ 3,629,111	$ (523,889)	$ 4,153,000	$ 3,629,111	$ (523,889)	
Telecommunications										
Total Material Costs	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	
Labour										
Total Labour Costs	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	
Total-Material and Labour	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	
Owner Costs										
Owner's Cost	$ -	$ -	$ -	$ 195,000	$ 228,844	$ 33,844	$ 195,000	$ 228,844	$ 33,844	The regulatory process for the project required more work that estimated originally (IRs and maps for the AUC)
Distributed Costs										
Distributed Costs	$ -	$ -	$ -	$ 1,757,000	$ 850,897	$ (906,103)	$ 1,757,000	$ 850,897	$ (906,103)	1. Approximately $360k of Contingency was not used. 2. Also, there were savings in project management, project controls and construction management as the project didn't require these extra costs.
Salvage										
Salvage Costs	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	
Other Costs										
AFUDC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	
E&S	$ -	$ -	$ -	$ 354,000	$ 289,585	$ (64,415)	$ 354,000	$ 289,585	$ (64,415)	The E&S cost reduction is related to a reduction of the overall direct costs of the project.
Total - Overheads	$ -	$ -	$ -	$ 354,000	$ 289,585	$ (64,415)	$ 354,000	$ 289,585	$ (64,415)	
TOTAL PROJECT COSTS	$ -	$ -	$ -	$ 6,459,000	$ 4,998,437	$ (1,460,563)	$ 6,459,000	$ 4,998,437	$ (1,460,563)	

Generator Unit Owner Contribution #1
1921 FortisAlberta Hayter STS Increase

Project Name: FortisAlberta Hayter STS Increase

AESO Project #: 1921

Substation: Hayter 277S

Market Participant Name: FortisAlberta Inc.

Date: Jun 2, 2017

Estimate Type: GUOC

Project Type: STS

Prepared By: Ilice Tan

Project Overview:

- FortisAlberta Inc. (Fortis) had submitted a SASR, on Mar 9, 2017, for a STS increase at Hayter 277S substation to 20 MW from 10 MW. The previously distribution-connected BluEarth's Bull Creek 1 wind farm and Bull Creek 2 wind farm, at the Hayter substation, has a Maximum Capacity (MC) of 13.5 MW and 16 MW, respectively. Fortis currently has a DTS contract at Hayter 277S for 29.3 MW.
- The STS contract increase effective date is November 1, 2017.
- This is the first CCD for Project 1921.

Contribution Policy:

Permit and Licence: P&L received on February 9, 2015
Contribution Policy Applied: 2013 per Commission Decision 2013-325, effective October 1, 2013

Proposed Commercial Terms:

Reference: NA

1. Generating Unit Owner's Contribution

2500, 330-5th Avenue SW, Calgary, Alberta T2P 0L4 Phone: 403-539-2450 Fax: 403-539-2949
www.aeso.ca www.poweringalberta.com

Per subsection 3 of section 10 of the ISO Tariff, Generating Unit Owner's Contribution (per MW) applicable to this project is located on line (r) of Attachment A2.

Generating Unit Owner's Contribution is refundable over 10 years from the Commercial Operation Date as outlined in ISO Rule 9.5)

Please indicate resource type below:

Resource Type

Coal	☐
Natural Gas — Base Load	☐
Natural Gas — Peaking	☐
Hydro	☐
Wind	☒
Biomass & Waste	☐

2500, 330-5th Avenue SW, Calgary, Alberta T2P 0L4 Phone: 403-539-2450 Fax: 403-539-2949
www.aeso.ca www.poweringalberta.com

Sign-off

Note: STS or Maximum Capability estimates identified in this GUOC have been used to determine the Generating Unit Owner's Contribution applicable to the Project based on the information and calculations outlined herein. Signing of this GUOC by the AESO approves only the application of the Tariff provisions applicable to the Project and is not intended to imply endorsement of any third party information (i.e. cost estimates) provided in the Connection Proposal.

Project Manager/Coordinator
(Ilice Tan) — Date: Jun 5, 2017

Program Manager
(Jasmin Judge) — Date: June 6/2017

Manager, Tariff Design
(LaRhonda Papworth) — Date: June 16, 2017

Director, Tariff Design
(Doyle Sullivan) — Date: June 19, 2017

Attachments

- Attachment A1: Costs and Contract Details
- Attachment A2: Contribution Determination
- Attachment A3: Allocation of Costs and Substation Fractions
- Attachment A4: Investment Determination
- Attachment B: Previous or related Construction Contribution Decisions

2500, 330-5th Avenue SW, Calgary, Alberta T2P 0L4 Phone: 403-539-2450 Fax: 403-539-2949
www.aeso.ca www.poweringalberta.com

Attachment A1: Costs and Contract Details

Participant:	FortisAlberta Inc.			Tariff:	AESO 2013
Project:	STS Increase Fortis Hayter 277S			Effective:	1 Oct 2013
Number:	1921	Type:	DTS and STS (Dual-Use)	To:	Current
Prepared by:	Ilice Tan	Date:	April 27, 2017	Version:	2013.0.1

PROJECT DETAILS

(a)	New Service or Expansion of Existing Service?	Expansion
(b)	Is Service at New or Existing Substation?	Existing Substation
(c)	Will Primary Service Credit Apply to Service?	No
(d)	Any Other Market Participant(s) at Substation?	No

COST OF CONNECTION PROJECT

			Reference
(e)	Cost of New Transmission Facilities:	$4,998,437	P1495 Final Cost Report
(f)	Shared Cost of Existing Transmission Facilities:	$0	
(g)	Less: System-Related Costs:	$0	
		$4,998,437	
(h)	Participant-Related Costs:	$0	
(i)	Less: Facilities in Excess of Good Practice:	$0	
(j)	Less: Reduction for Replaced Transformer:	$4,998,437	
(k)	Balance of Participant-Related Costs:		
(l)	Estimated Operations and Maintenance:		

CONTRACT DETAILS

			Reference
(m)	Commercial Operation Date of Project:	September 16, 2015	
(n)	Maximum Investment Term (years):	20	
(o)	Discount Rate for Incremental Capacity:	6.14%	
(p)	Prior Contribution (for Final Costs or Adjustment):	$4,998,437	

Contract Stages			Contract Capacities at Substation (MW)					
			Contracted After Project			Contracted Prior to Project		
			This Participant		Other	This Participant		Other
No	Start Date	Duration Months	DTS	STS	Participant	DTS	STS	Participant
(1)	Sep 2015	3	29.30	0.00		29.30	0.00	
(2)	Dec 2015	23	29.30	10.00		29.30	0.00	
(3)	Nov 2017	214	29.30	20.00		29.30	0.00	
	Total	240						

GENERATING UNIT OWNER'S CONTRIBUTION

			Reference
(q)	Planning Region Where Unit Will be Located:	Central	
(r)	Contribution Amount Dates to be Used:	2014-2015	
(s)	Owner's Contribution Previously Paid (If Any):	$224,000	

Attachment A2: Contribution Determination

Participant: **FortisAlberta Inc.**
Project: **STS Increase Fortis Hayter 277S**
Number: 1921
Prepared by: Ilice Tan
Type: DTS and STS (Dual-Use)
Date: April 27, 2017

Tariff: AESO 2013
Effective: 1 Oct 2013
To: Current
Version: 2013.0.1

Line	Description	Reference	Amount	Section
(a)	Cost of New Facilities	P1495 Final Cost Report	$4,998,437	8:2
(b)	Plus: Shared Cost of Existing Facilities		$0	8:3(2)(c)
(c)	Less: System-Related Costs		$0	8:3(3)
(d)	Participant-Related Costs	(a) + (b) – (c)	$4,998,437	8:3(2)
(e)	Less: Facilities in Excess of Good Practice		$0	8:4
(f)	Less: Reduction for Replaced Transformer		$0	8:5(2)
(g)	**Balance of Participant-Related Costs**	(d) – (e) – (f)	**$4,998,437**	8:6(1)

			Required Facilities		In Excess of Good Practice	
Line	Description	Reference	Demand-Related	Supply-Related		Section
(h)	Participant-Related Costs	From (g) and (e)	$4,998,437		$0	8:6(3)
(i)	Operations and Maintenance Charge	Estimated by Market Participant	NA		$0	8:9
(j)	**Total Costs Allocated to Market Participant**	(h) + (i)	**$4,998,437**		**$0**	8:6
(k)	Substation Fractions	Other Participant NA	0.01250	0.98750	NA	8:6(3)
(l)	Allocated Costs (j) × (k)	Other Participant NA	$62,480	$4,935,957	$0	8:6
(m)	Less: Maximum Local Investment	Investment Term of 20 Years	$0	NA	NA	8:8
(n)	Construction Contribution Required	(l) – (m)	$62,480	$4,935,957	$0	8:7
(o)	**Total Construction Contribution Required**		**$4,998,437**			8:7
(p)	Construction Contribution Previously Paid for Project		$4,998,437			5:2(8) or 9:2(2)
(q)	**Construction Contribution to be Refunded**		**$0**			5:2 or 9:4

			Generating Unit Owner's Contribution			
Line	Description	Region/Policy	STS MW	Amount/MW	Contribution	Section
(r)	**Owner's Contribution to be Paid**	**Central 2014-2015**	**20.00**	**$22,400**	**$448,000**	10:3
(s)	Generating Unit Owner's Contribution Previously Paid for Project				$224,000	10:3
(t)	**Additional Generating Unit Owner's Contribution Required**				**$224,000**	10:3

Attachment A3: Allocation of Costs and Substation Fractions

Participant: **FortisAlberta Inc.**
Project: **STS Increase Fortis Hayter 277S**
Number: 1921 Type: DTS and STS (Dual-Use)

Tariff: AESO 2013
Effective: 1 Oct 2013
To: Current

ALLOCATION OF COSTS TO SERVICES AT SUBSTATION

Participant-Related Costs of Required Facilities **$4,998,437**

Contract Stages			Incremental Contract Capacity			Incremental Substation Fractions		
			This Participant		Other	This Participant		Other
No	Start Date	Duration Years	DTS	STS	Participant	DTS	STS	Participant
(1)	Sep 2015	0.25	0.00	0.00	0.00	1.00000	0.00000	0.00000
(2)	Dec 2015	1.92	0.00	10.00	0.00	0.00000	1.00000	0.00000
(3)	Nov 2017	17.83	0.00	20.00	0.00	0.00000	1.00000	0.00000
	Total	20.00		Duration-Weighted Average		0.01250	0.98750	0.00000

Allocation of Participant-Related Costs **$62,480** **$4,935,957** **$0**

SUBSTATION FRACTIONS FOR DETERMINATION OF MAXIMUM INVESTMENT

Contract Stages			Contract Capacity After Project			Substation Fractions After Project		
			This Participant		Other	This Participant		Other
No	Start Date	Duration Years	DTS	STS	Participant	DTS	STS	Participant
(1)	Sep 2015	0.25	29.30	0.00	0.00	1.00000	0.00000	0.00000
(2)	Dec 2015	1.92	29.30	10.00	0.00	0.74555	0.25445	0.00000
(3)	Nov 2017	17.83	29.30	20.00	0.00	0.59432	0.40568	0.00000
	Total	20.00						

Attachment A4: Investment Determination

Participant: **FortisAlberta Inc.**
Project: **STS Increase Fortis Hayter 277S**
Number: 1921 Type: DTS and STS (Dual-Use)

Tariff: AESO 2013
Effective: 1 Oct 2013
To: Current

Demand-Related Costs of This Participant Eligible for Investment: **$62,480**

Investment Amounts From Subsection 8(4) of Section 8 of 2011 ISO Tariff					
Tier	Tier (a)	Tier (b)	Tier (c)	Tier (d)	Tier (e)
Investment	$52,000	$35,350	$13,050	$7,900	$4,250
Unit	/year	/MW/year	/MW/year	/MW/year	/MW/year

Incremental Rate DTS Contract Capacity Eligible for Investment							
Stage		**Tier (a)**	**Tier (b) MW**	**Tier (c) MW**	**Tier (d) MW**	**Tier (e) MW**	**Total**
No.	Years	Sub Frac	7.5 × SF	9.5 × SF	23 × SF	Remaining	MW
(1)	0.25		0.00	0.00	0.00	0.00	0.00
(2)	1.92		0.00	0.00	0.00	0.00	0.00
(3)	17.83		0.00	0.00	0.00	0.00	0.00

Stage/Year		Nominal Investment per Year of Investment Term					Discounted	Cumulative
No.	Year	Tier (a)	Tier (b)	Tier (c)	Tier (d)	Tier (e)	Increments	Total
(1)-(2)	1	$0	$0	$0	$0	$0	$0	*Investment term must be a minimum of 5 years*
(2)	2	$0	$0	$0	$0	$0	$0	
(2)-(3)	3	$0	$0	$0	$0	$0	$0	
(3)	4	$0	$0	$0	$0	$0	$0	
(3)	5	$0	$0	$0	$0	$0	$0	$0
(3)	6	$0	$0	$0	$0	$0	$0	$0
(3)	7	$0	$0	$0	$0	$0	$0	$0
(3)	8	$0	$0	$0	$0	$0	$0	$0
(3)	9	$0	$0	$0	$0	$0	$0	$0
(3)	10	$0	$0	$0	$0	$0	$0	$0
(3)	11	$0	$0	$0	$0	$0	$0	$0
(3)	12	$0	$0	$0	$0	$0	$0	$0
(3)	13	$0	$0	$0	$0	$0	$0	$0
(3)	14	$0	$0	$0	$0	$0	$0	$0
(3)	15	$0	$0	$0	$0	$0	$0	$0
(3)	16	$0	$0	$0	$0	$0	$0	$0
(3)	17	$0	$0	$0	$0	$0	$0	$0
(3)	18	$0	$0	$0	$0	$0	$0	$0
(3)	19	$0	$0	$0	$0	$0	$0	$0
(3)	20	$0	$0	$0	$0	$0	$0	$0

Actual Investment (Not Greater Than Costs Eligible for Investment): **$0**
Investment Term Required to Minimize Construction Contribution: **20 years**

Stage 2 Generator Unit Owner Contribution/Construction Contribution Decision #1
1988 FortisAlberta 277S Hayter Contract Change

Project Name: FortisAlberta 277S Hayter Contract Change

AESO Project #: 1988

Substation: Hayter 277S

Market Participant Name: FortisAlberta Inc.

Date: Oct 17, 2017

Estimate Type: GUOC

Project Type: STS

Prepared By: Ilice Tan

Project Overview:

- FortisAlberta Inc. (Fortis) had submitted a SASR for a Supply Transmission Service (STS) increase of 5.3 MW at Hayter 277S substation. This will bring the STS after this project to 25.3 MW. The current STS is 10 MW. After project 1921 – FortisAlberta Hayter STS Increase, the STS will be 20 MW. The scheduled In-Service Date (ISD) for Project 1921 is December 1, 2017. The current Maximum Capacity (MC) for BluEarth's Bull Creek 1 wind farm (BC1) and Bull Creek 2 wind farm (BC2), at the Hayter substation, is 13.5 MW and 16 MW, respectively.
- The scheduled ISD for this project is August 1, 2018.
- This is the 1st GUOC/CCD for Project 1988.
- There is no N-1 or RAS associated with this project and system NIDs is not being contemplated for this project.

Contribution Policy:

Permit and Licence: NA for Project 1988
Contribution Policy Applied: 2017 per Commission Decision 22093-D02-2017, effective January 1, 2017.

Proposed Commercial Terms:

Reference: NA

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. Project Cost

Project cost is located on line (e) of Attachment A1.

2. Generating Unit Owner's Contribution

Per subsection 3 of section 10 of the ISO Tariff, Generating Unit Owner's Contribution (per MW) applicable to this project is located on line (r) of Attachment A2.

Generating Unit Owner's Contribution is refundable over 10 years from the Commercial Operation Date as outlined in ISO Rule 9.5)

Please indicate resource type below:

Resource Type	
Coal	☐
Natural Gas — Base Load	☐
Natural Gas — Peaking	☐
Hydro	☐
Wind	☒
Solar	☐
Biomass & Waste	☐

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

Sign-off

Note: STS identified in this GUOC have been used to determine the Generating Unit Owner's Contribution applicable to the Project based on the information and calculations outlined herein. Signing of this GUOC by the AESO approves only the application of the Tariff provisions applicable to the Project and is not intended to imply endorsement of any third party information (i.e. cost estimates) provided.

Project Manager/Coordinator
(Ilice Tan)

Oct 17, 2017
Date

Program Manager
(Jasmin Judge)

Oct. 19/2017
Date

Tariff Manager
(Lee Ann Kerr)

Nov 6 2017
Date

Manager, Tariff Design
(LaRhonda Papworth)

Date

Director, Tariff Design
(Doyle Sullivan)

Nov 9, 2017
Date

Attachments

- Attachment A1: Costs and Contract Details
- Attachment A2: Contribution Determination
- Attachment A3: Allocation of Costs and Substation Fractions
- Attachment A4: Investment Determination
- Attachment B: Previous or related Construction Contribution Decisions

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

Attachment A1: Costs and Contract Details

Participant:	FortisAlberta Inc.			Tariff:	AESO 2017
Project:	FortisAlberta 277S Hayter Contract Change			Effective:	1 Jan 2017
Number:	1988	Type:	DTS and STS (Dual-Use)	To:	Current
Prepared by:	Ilice Tan	Date:	Oct 16, 2017	Version:	2017.0.1

PROJECT DETAILS

(a)	New Service or Expansion of Existing Service?	Expansion
(b)	Is Service at New or Existing Substation?	Existing Substation
(c)	Will Primary Service Credit Apply to Service?	No
(d)	Any Other Market Participant(s) at Substation?	No

COST OF CONNECTION PROJECT

			Reference
(e)	Cost of New Transmission Facilities:	$4,998,437	1495 Final Cost Repport
(f)	Shared Cost of Existing Transmission Facilities:	$0	
(g)	Less: System-Related Costs:	$0	
(h)	Participant-Related Costs:	$4,998,437	
(i)	Less: Facilities in Excess of Good Practice:	$0	
(j)	Less: Reduction for Replaced Transformer:	$0	
(k)	Balance of Participant-Related Costs:	$4,998,437	
(l)	Estimated Operations and Maintenance:		

CONTRACT DETAILS

			Reference
(m)	Date of Commission Permit and Licence:		NA for Project 1988
(n)	Date of AESO Energization Authorization:	Aug 1, 2018	
(o)	Date of Commercial Operation of Project:	Aug 1, 2018	
(p)	Maximum Investment Term (years):	20	
(q)	Discount Rate for Incremental Capacity:		
(r)	Prior Contribution (for Final Costs or Adjustment):	$4,998,437	

Contract Stages			Contract Capacities at Substation (MW)					
			Contracted After Project			Contracted Prior to Project		
			This Participant		Other	This Participant		Other
No	Start Date	Duration Months	DTS	STS	Participant	DTS	STS	Participant
(1)	Aug 2018	240	29.30	25.30		29.30	20.00	
	Total	240						

GENERATING UNIT OWNER'S CONTRIBUTION

			Reference
(s)	Planning Region Where Unit Will be Located:	Central	
(t)	Contribution Amount Dates to be Used:	2014-2015	
(u)	Owner's Contribution Previously Paid (If Any):	$0	

Attachment A2: Contribution Determination

Participant: **FortisAlberta Inc.**
Project: **FortisAlberta 277S Hayter Contract Change**
Number: 1988 Type: DTS and STS (Dual-Use)
Prepared by: Ilice Tan Date: October 16, 2017

Tariff: AESO 2017
Effective: 1 Jan 2017
To: Current
Version: 2017.0.1

Line	Description	Reference	Amount	Section
(a)	Cost of New Facilities	1495 Final Cost Repport	$4,998,437	8:2
(b)	Plus: Shared Cost of Existing Facilities		$0	8:3(2)(c)
(c)	Less: System-Related Costs		$0	8:3(3)
(d)	Participant-Related Costs	(a) + (b) – (c)	$4,998,437	8:3(2)
(e)	Less: Facilities in Excess of Good Practice		$0	8:4
(f)	Less: Reduction for Replaced Transformer		$0	8:5(2)
(g)	**Balance of Participant-Related Costs**	(d) – (e) – (f)	**$4,998,437**	8:6(1)

Line	Description	Reference	Required Facilities		In Excess of Good Practice	Section
			Demand-Related	Supply-Related		
(h)	Participant-Related Costs	From (g) and (e)	$4,998,437		$0	8:6(3)
(i)	Operations and Maintenance Charge	Estimated by Market Participant	NA		$0	8:9
(j)	**Total Costs Allocated to Market Participant**	(h) + (i)	**$4,998,437**		**$0**	8:6
(k)	Substation Fractions	Other Participant NA	0.00000	1.00000	NA	8:6(3)
(l)	Allocated Costs (j) × (k)	Other Participant NA	$0	$4,998,437	$0	8:6
(m)	Less: Maximum Local Investment	Investment Term of 20 Years	$0	NA	NA	8:8
(n)	Construction Contribution Required	(l) – (m)	$0	$4,998,437	$0	8:7
(o)	**Total Construction Contribution Required**		**$4,998,437**			8:7
(p)	Construction Contribution Previously Paid for Project		$4,998,437			5:2(8) or 9:2(2)
(q)	**Construction Contribution to be Refunded**		**$0**			5:2 or 9:4

Line	Description	Region/Policy	Generating Unit Owner's Contribution			Section
			STS MW	Amount/MW	Contribution	
(r)	**Owner's Contribution to be Paid**	**Central 2014-2015**	**5.30**	**$22,400**	**$118,720**	10:3

Attachment A3: Allocation of Costs and Substation Fractions

Participant: **FortisAlberta Inc.**
Project: **FortisAlberta 277S Hayter Contract Change**
Number: 1988 Type: DTS and STS (Dual-Use)

Tariff: AESO 2017
Effective: 1 Jan 2017
To: Current

ALLOCATION OF COSTS TO SERVICES AT SUBSTATION

Participant-Related Costs of Required Facilities **$4,998,437**

Contract Stages			Incremental Contract Capacity			Incremental Substation Fractions		
			This Participant		Other	This Participant		Other
No	Start Date	Duration Years	DTS	STS	Participant	DTS	STS	Participant
(1)	Aug 2018	20.00	0.00	5.30	0.00	0.00000	1.00000	0.00000
	Total	20.00		Duration-Weighted Average		0.00000	1.00000	0.00000

Allocation of Participant-Related Costs **$0** **$4,998,437** **$0**

SUBSTATION FRACTIONS FOR DETERMINATION OF MAXIMUM INVESTMENT

Contract Stages			Contract Capacity After Project			Substation Fractions After Project		
			This Participant		Other	This Participant		Other
No	Start Date	Duration Years	DTS	STS	Participant	DTS	STS	Participant
(1)	Aug 2018	20.00	29.30	25.30	0.00	0.53663	0.46337	0.00000
	Total	20.00						

Attachment A4: Investment Determination

Participant: **FortisAlberta Inc.**
Project: **FortisAlberta 277S Hayter Contract Change**
Number: 1988 Type: DTS and STS (Dual-Use)

Tariff: AESO 2017
Effective: 1 Jan 2017
To: Current

Demand-Related Costs of This Participant Eligible for Investment: **$0**

Investment Amounts From Subsection 8(4) of Section 8 of 2015 ISO Tariff					
Tier	Tier (a)	Tier (b)	Tier (c)	Tier (d)	Tier (e)
Investment	$80,150	$32,450	$20,350	$14,200	$9,150
Unit	/year	/MW/year	/MW/year	/MW/year	/MW/year

Incremental Rate DTS Contract Capacity Eligible for Investment							
Stage		**Tier (a)**	**Tier (b) MW**	**Tier (c) MW**	**Tier (d) MW**	**Tier (e) MW**	**Total**
No	Years	Sub Frac	7.5 × SF	9.5 × SF	23 × SF	Remaining	MW
(1)	20.00		0.00	0.00	0.00	0.00	0.00

Stage/Year		Nominal Investment per Year of Investment Term					Discounted	Cumulative
No	Year	Tier (a)	Tier (b)	Tier (c)	Tier (d)	Tier (e)	Increments	Total
(1)	1	$0	$0	$0	$0	$0	$0	*Investment*
(1)	2	$0	$0	$0	$0	$0	$0	*term must be*
(1)	3	$0	$0	$0	$0	$0	$0	*a minimum of*
(1)	4	$0	$0	$0	$0	$0	$0	*5 years*
(1)	5	$0	$0	$0	$0	$0	$0	$0
(1)	6	$0	$0	$0	$0	$0	$0	$0
(1)	7	$0	$0	$0	$0	$0	$0	$0
(1)	8	$0	$0	$0	$0	$0	$0	$0
(1)	9	$0	$0	$0	$0	$0	$0	$0
(1)	10	$0	$0	$0	$0	$0	$0	$0
(1)	11	$0	$0	$0	$0	$0	$0	$0
(1)	12	$0	$0	$0	$0	$0	$0	$0
(1)	13	$0	$0	$0	$0	$0	$0	$0
(1)	14	$0	$0	$0	$0	$0	$0	$0
(1)	15	$0	$0	$0	$0	$0	$0	$0
(1)	16	$0	$0	$0	$0	$0	$0	$0
(1)	17	$0	$0	$0	$0	$0	$0	$0
(1)	18	$0	$0	$0	$0	$0	$0	$0
(1)	19	$0	$0	$0	$0	$0	$0	$0
(1)	20	$0	$0	$0	$0	$0	$0	$0

Actual Investment (Not Greater Than Costs Eligible for Investment): **$0**
Investment Term Required to Minimize Construction Contribution: **20 years**
Investment Term Begins on: Aug 1, 2018
Investment Term ends on: Jul 31, 2038

Stage 3 Construction Contribution Decision #1
1782B Fortis Provost Reliability

Project Name: Fortis Provost Reliability

AESO Project #: 1782

Associated Line #s: new 138 kV line 398L as well as existing lines 715L, 748L, 749L

Substations: Hayter 277S

Market Participant Name: FortisAlberta Inc.

Date: November 7, 2017

Estimate Type: Service Proposal +20%/- 10%

Project Type: DTS

Prepared By: Tana Lailan

Project Overview:

- On April 19, 2016 FortisAlberta Inc. ("FortisAlberta") submitted a SASR to address the distribution reliability concerns in the Provost area (AESO Planning Area Edmonton 60).
- The preferred alternative involves a transmission upgrade at the Provost area and construction of a new 138 kV transmission line connection between Hayter 277S substation and Provost 545S substation.
- The requested In-Service Date (ISD) for the Provost Area transmission upgrade is May 1, 2020.
- No Demand Transmission Services (DTS) change is requested at Hayter 277S substation.
- As part of the Service Proposal submission and in accordance with the current Tariff requirements, AML provided cost allocations per Point of Delivery (transmission line and distributed labor costs were allocated to each of the substations). (Attachment B).
- This CCD is issued to capture the Service Proposal estimates allocated to Hayter 277S substation in the amount of $18,073,889 (in 2017$) with accuracy of +20/-10%.
- The cost of this project is 100% customer cost. The additional line proposed between Hayter and Provost is not required for transmission system reliability purposes and is only required by the market participant for distribution reliability concerns.
- There is not any system NIDs being contemplated for this project.
- There is not any N-1 or RAS associated with the preferred alternative
- A Single Line Diagram is included in the Attachment C.

Contribution Policy:

Permit and Licence: not yet filed
Contribution Policy Applied: 2017 per Commission Decision 22093-D02-2017, effective January 1,

2500, 330-5th Avenue SW, Calgary, Alberta T2P 0L4 Phone: 403-539-2450 Fax: 403-539-2949
www.aeso.ca www.poweringalberta.com

Proposed Commercial Terms:

Reference: Service Proposal dated October 27, 2017

1. Project Cost

Project cost is located on line (e) of Attachment A1.

2. Shared Facilities Cost

- There are no shared facilities.

3. System Related Cost

- There is no system related cost.

4. Facilities In Excess of Good Electric Industry Practice

- There are no facilities in Excess of Good Electric Industry Practice.

5. Construction Contribution

- Participant related cost is located on line (h) of Attachment A1.
- Based on contract details listed in Attachment A1, the maximum local investment is located on line (m) of Attachment A2.
- The Construction Contribution is estimated to be as stated on line (o) of Attachment A2. Please see Attachments A1, A2, A3 and A4 for details of these calculations and the resulting Construction Contribution.

- This Construction Contribution is subject to change based on the following items:
  - Changes to contract capacity or term
  - Changes to estimated costs or resulting from final costs
  - Changes to the classification of system-related and market participant -related costs
  - Development of the transmission system as it relates to this project, including sharing of facilities with other market participants.

6. Primary Service Credit

- The transformation facilities for this service are owned and operated by the transmission facility owner, and the Primary Service Credit does not apply.

2500, 330-5th Avenue SW, Calgary, Alberta T2P 0L4 Phone: 403-539-2450 Fax: 403-539-2949
www.aeso.ca www.poweringalberta.com

Sign-off

Note: Cost estimates provided in the Connection Proposal identified in this CCD have been used to determine the Construction Contribution and/or Generating Unit Owner's Contribution applicable to the Project based on the information and calculations outlined herein. Signing of this CCD by the AESO approves only the application of the Tariff provisions applicable to the Project and is not intended to imply endorsement of any third party information (i.e. cost estimates) provided in the Connection Proposal.

Project Manager (Tana Lailan)	Date: Nov 7, 2017
Program Manager (Jasmin Judge)	Date: Nov. 15/17
Tariff Manager (Lee Ann Kerr)	Date: Nov 21 2017
Manager, Tariff Design (LaRhonda Papworth)	Date
Director, Tariff Design (Doyle Sullivan)	Date: Nov 24, 2017

Attachments

- Attachment A1: Costs and Contract Details
- Attachment A2: Contribution Determination
- Attachment A3: Allocation of Costs and Substation Fractions
- Attachment A4: Investment Determination
- Attachment B: Cost estimates
- Attachment C: Project SLDs

2500, 330-5th Avenue SW, Calgary, Alberta T2P 0L4 Phone: 403-539-2450 Fax: 403-539-2949
www.aeso.ca www.poweringalberta.com

Attachment A1: Costs and Contract Details

Participant:	**FortisAlberta Inc.**			Tariff:	AESO 2017
Project:	**Fortis Provost Reliability - Hayter 277S**			Effective:	1 Jan 2017
Number:	1782B	Type:	DTS Only	To:	Current
Prepared by:	Tana Lailan	Date:	Nov 7, 2017	Version:	2017.0.1

PROJECT DETAILS

(a)	New Service or Expansion of Existing Service?	Expansion
(b)	Is Service at New or Existing Substation?	Existing Substation
(c)	Will Primary Service Credit Apply to Service?	No
(d)	Any Other Market Participant(s) at Substation?	No

COST OF CONNECTION PROJECT

			Reference
(e)	Cost of New Transmission Facilities:	$18,073,889	
(f)	Shared Cost of Existing Transmission Facilities:	$0	
(g)	Less: System-Related Costs:	$0	
(h)	Participant-Related Costs:	$18,073,889	
(i)	Less: Facilities in Excess of Good Practice:	$0	
(j)	Less: Reduction for Replaced Transformer:	$0	
(k)	Balance of Participant-Related Costs:	$18,073,889	
(l)	Estimated Operations and Maintenance:		

CONTRACT DETAILS

			Reference
(m)	Date of Commission Permit and Licence:		not yet filed
(n)	Date of AESO Energization Authorization:	May 1, 2020	
(o)	Date of Commercial Operation of Project:	May 1, 2020	
(p)	Maximum Investment Term (years):	20	
(q)	Discount Rate for Incremental Capacity:	6.26%	AML rate as of Nov 1, 2017
(r)	Prior Contribution (for Final Costs or Adjustment):	$0	

Contract Stages			Contract Capacities at Substation (MW)					
			Contracted After Project			Contracted Prior to Project		
			This Participant		Other	This Participant		Other
No	Start Date	Duration Months	DTS	NA	Participant	DTS	NA	Participant
(1)	May 2020	240	29.30			29.30		
	Total	240						

Attachment A2: Contribution Determination

Participant:	**FortisAlberta Inc.**			Tariff:	AESO 2017
Project:	**Fortis Provost Reliability - Hayter 277S**			Effective:	1 Jan 2017
Number:	1782B	Type:	DTS Only	To:	Current
Prepared by:	Tana Lailan	Date:	November 7, 2017	Version:	2017.0.1

Line	Description	Reference	Amount	Section
(a)	Cost of New Facilities		$18,073,889	8:2
(b)	Plus: Shared Cost of Existing Facilities		$0	8:3(2)(c)
(c)	Less: System-Related Costs		$0	8:3(3)
(d)	Participant-Related Costs	(a) + (b) – (c)	$18,073,889	8:3(2)
(e)	Less: Facilities in Excess of Good Practice		$0	8:4
(f)	Less: Reduction for Replaced Transformer		$0	8:5(2)
(g)	**Balance of Participant-Related Costs**	(d) – (e) – (f)	**$18,073,889**	8:6(1)

			Required Facilities		In Excess of Good Practice	
Line	Description	Reference	Demand-Related	Supply-Related		Section
(h)	Participant-Related Costs	From (g) and (e)	$18,073,889		$0	8:6(3)
(i)	Operations and Maintenance Charge	Estimated by Market Participant	NA		$0	8:9
(j)	**Total Costs Allocated to Market Participant**	(h) + (i)	**$18,073,889**		**$0**	8:6
(k)	Substation Fractions	Other Participant NA	1.00000	0.00000	NA	8:6(3)
(l)	Allocated Costs (j) × (k)	Other Participant NA	$18,073,889	$0	$0	8:6
(m)	Less: Maximum Local Investment	Investment Term of 20 Years	$0	NA	NA	8:8
(n)	Construction Contribution Required	(l) – (m)	$18,073,889	$0	$0	8:7
(o)	**Total Construction Contribution Required**		**$18,073,889**			8:7

Attachment A3: Allocation of Costs and Substation Fractions

Participant:	**FortisAlberta Inc.**	Tariff:	AESO 2017
Project:	**Fortis Provost Reliability - Hayter 277S**	Effective:	1 Jan 2017
Number:	1782B Type: DTS Only	To:	Current

ALLOCATION OF COSTS TO SERVICES AT SUBSTATION

Participant-Related Costs of Required Facilities **$18,073,889**

Contract Stages			Incremental Contract Capacity			Incremental Substation Fractions		
			This Participant		Other	This Participant		Other
No	Start Date	Duration Years	DTS	NA	Participant	DTS	NA	Participant
(1)	May 2020	20.00	0.00	0.00	0.00	1.00000	0.00000	0.00000
	Total	**20.00**		**Duration-Weighted Average**		**1.00000**	**0.00000**	**0.00000**

Allocation of Participant-Related Costs **$18,073,889** **$0** **$0**

SUBSTATION FRACTIONS FOR DETERMINATION OF MAXIMUM INVESTMENT

Contract Stages			Contract Capacity After Project			Substation Fractions After Project		
			This Participant		Other	This Participant		Other
No	Start Date	Duration Years	DTS	NA	Participant	DTS	NA	Participant
(1)	May 2020	20.00	29.30	0.00	0.00	1.00000	0.00000	0.00000
	Total	**20.00**						

Attachment A4: Investment Determination

Participant: **FortisAlberta Inc.**
Project: **Fortis Provost Reliability - Hayter 277S**
Number: 1782B Type: DTS Only

Tariff: AESO 2017
Effective: 1 Jan 2017
To: Current

Demand-Related Costs of This Participant Eligible for Investment: **$18,073,889**

Investment Amounts From Subsection 8(4) of Section 8 of 2015 ISO Tariff					
Tier	Tier (a)	Tier (b)	Tier (c)	Tier (d)	Tier (e)
Investment	$80,150	$32,450	$20,350	$14,200	$9,150
Unit	/year	/MW/year	/MW/year	/MW/year	/MW/year

Incremental Rate DTS Contract Capacity Eligible for Investment							
Stage		**Tier (a)**	**Tier (b) MW**	**Tier (c) MW**	**Tier (d) MW**	**Tier (e) MW**	**Total**
No	Years	Sub Frac	7.5 × SF	9.5 × SF	23 × SF	Remaining	MW
(1)	20.00		0.00	0.00	0.00	0.00	0.00

Stage/Year		Nominal Investment per Year of Investment Term					Discounted	Cumulative
No	Year	Tier (a)	Tier (b)	Tier (c)	Tier (d)	Tier (e)	Increments	Total
(1)	1	$0	$0	$0	$0	$0	$0	*Investment*
(1)	2	$0	$0	$0	$0	$0	$0	*term must be*
(1)	3	$0	$0	$0	$0	$0	$0	*a minimum of*
(1)	4	$0	$0	$0	$0	$0	$0	*5 years*
(1)	5	$0	$0	$0	$0	$0	$0	$0
(1)	6	$0	$0	$0	$0	$0	$0	$0
(1)	7	$0	$0	$0	$0	$0	$0	$0
(1)	8	$0	$0	$0	$0	$0	$0	$0
(1)	9	$0	$0	$0	$0	$0	$0	$0
(1)	10	$0	$0	$0	$0	$0	$0	$0
(1)	11	$0	$0	$0	$0	$0	$0	$0
(1)	12	$0	$0	$0	$0	$0	$0	$0
(1)	13	$0	$0	$0	$0	$0	$0	$0
(1)	14	$0	$0	$0	$0	$0	$0	$0
(1)	15	$0	$0	$0	$0	$0	$0	$0
(1)	16	$0	$0	$0	$0	$0	$0	$0
(1)	17	$0	$0	$0	$0	$0	$0	$0
(1)	18	$0	$0	$0	$0	$0	$0	$0
(1)	19	$0	$0	$0	$0	$0	$0	$0
(1)	20	$0	$0	$0	$0	$0	$0	$0

Actual Investment (Not Greater Than Costs Eligible for Investment):	**$0**
Investment Term Required to Minimize Construction Contribution:	**20 years**
Investment Term Begins on:	May 1, 2020
Investment Term ends on:	Apr 30, 2040

Stage 3 Construction Contribution Decision #2
1782B Fortis Provost Reliability

Project Name: Fortis Provost Reliability

AESO Project #: 1782

Associated Line #s: new 138 kV line 398L as well as existing lines 715L, 748L, 749L

Substations: Hayter 277S

Market Participant Name: FortisAlberta Inc.

Date: August 2, 2018

Estimate Type: Service Proposal +20%/- 10%

Project Type: DTS / STS

Prepared By: Tana Lailan

Project Overview:

- On April 19, 2016 FortisAlberta Inc. ("FortisAlberta") submitted a SASR to address the distribution reliability concerns in the Provost area (AESO Planning Area Edmonton 60).
- The preferred alternative involves a transmission upgrade at the Provost area and construction of a new 138 kV transmission line connection between Hayter 277S substation and Provost 545S substation.
- The requested In-Service Date (ISD) for the Provost Area transmission upgrade is May 1, 2020.
- No Demand Transmission Services (DTS) change is requested at Hayter 277S substation.
- No Supply Transmission Services (STS) change is requested at the Hayter 277S substation.
- As part of the Service Proposal submission and in accordance with the current Tariff requirements, AML provided cost allocations per Point of Delivery (transmission line and distributed labor costs were allocated to each of the substations). (Attachment B).
- This CCD is issued to capture the Supply Transmission Services (STS) change occurred at Hayter 277S substation as of August 1, 2018 under the project P1988.
- The cost of this project is $18,073,889 (in 2017$) with accuracy of +20/-10% and is 100% customer cost. The additional line proposed between Hayter and Provost is not required for transmission system reliability purposes and is only required by the market participant for distribution reliability concerns.
- There is not any system NIDs being contemplated for this project.
- There is not any N-1 or RAS associated with the preferred alternative
- A Single Line Diagram is included in the Attachment C.

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Contribution Policy:

Permit and Licence: not yet filed
Contribution Policy Applied: 2017 per Commission Decision 22093-D02-2017, effective January 1,

Proposed Commercial Terms:

Reference: Service Proposal dated October 27, 2017

1. Project Cost

Project cost is located on line (e) of Attachment A1.

2. Shared Facilities Cost

- There are no shared facilities.

3. System Related Cost

- There is no system related cost.

4. Facilities In Excess of Good Electric Industry Practice

- There are no facilities in Excess of Good Electric Industry Practice.

5. Construction Contribution

- Participant related cost is located on line (h) of Attachment A1.
- Allocation of participant-related costs by contract capacity in order to deem demand-related and supply-related required facilities in line (k) are per subsections 6(4) and 6(5) of Section 8, *Construction Contributions for Connection Projects*, of the ISO tariff.
- Based on contract details listed in Attachment A1, the maximum local investment is located on line (m) of Attachment A2.
- The Construction Contribution is estimated to be as stated on line (o) of Attachment A2. Please see Attachments A1, A2, A3 and A4 for details of these calculations and the resulting Construction Contribution.

- This Construction Contribution is subject to change based on the following items:
  - Changes to contract capacity or term
  - Changes to estimated costs or resulting from final costs
  - Changes to the classification of system-related and market participant -related costs
  - Development of the transmission system as it relates to this project, including sharing of facilities with other market participants.

6. Primary Service Credit

- The transformation facilities for this service are owned and operated by the transmission facility owner, and the Primary Service Credit does not apply.

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Sign-off

Note: Cost estimates provided in the Connection Proposal identified in this CCD have been used to determine the Construction Contribution and/or Generating Unit Owner's Contribution applicable to the Project based on the information and calculations outlined herein. Signing of this CCD by the AESO approves only the application of the Tariff provisions applicable to the Project and is not intended to imply endorsement of any third party information (i.e. cost estimates) provided in the Connection Proposal.

Project Manager
(Tana Lailan)

Aug 2, 2018
Date

FOR

Program Manager
(Steve Muenchrath)

Aug 2, 2018
Date

Tariff Manager
(Lee Ann Kerr)

Date

Manager, Tariff Design
(LaRhonda Papworth)

August 3, 2018
Date

Director, Tariff Design
(Doyle Sullivan)

August 3, 2018
Date

Attachments

- Attachment A1: Costs and Contract Details
- Attachment A2: Contribution Determination
- Attachment A3: Allocation of Costs and Substation Fractions
- Attachment A4: Investment Determination
- Attachment B: Cost estimates
- Attachment C: Project SLDs

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Attachment A1: Costs and Contract Details

Participant:	**FortisAlberta Inc.**			Tariff:	AESO 2018
Project:	**Fortis Provost Reliability - Hayter 277S**			Effective:	1 Jan 2018
Number:	1782B	Type:	DTS and STS (Dual-Use)	To:	Current
Prepared by:	Tana Lailan	Date:	Aug 2, 2018	Version:	2018.0.0

PROJECT DETAILS

(a)	New Service or Expansion of Existing Service?	Expansion
(b)	Is Service at New or Existing Substation?	Existing Substation
(c)	Will Primary Service Credit Apply to Service?	No
(d)	Any Other Market Participant(s) at Substation?	No

COST OF CONNECTION PROJECT			**Reference**
(e)	Cost of New Transmission Facilities:	$18,073,889	
(f)	Shared Cost of Existing Transmission Facilities:	$0	
(g)	Less: System-Related Costs:	$0	
(h)	Participant-Related Costs:	$18,073,889	
(i)	Less: Facilities in Excess of Good Practice:	$0	
(j)	Less: Reduction for Replaced Transformer:	$0	
(k)	Balance of Participant-Related Costs:	$18,073,889	
(l)	Estimated Operations and Maintenance:		

CONTRACT DETAILS			**Reference**
(m)	Date of Commission Permit and Licence:		filed on Feb 13, 2018
(n)	Date of AESO Energization Authorization:	May 1, 2020	
(o)	Date of Commercial Operation of Project:	May 1, 2020	
(p)	Maximum Investment Term (years):	20	
(q)	Discount Rate for Incremental Capacity:	6.26%	
(r)	Prior Contribution (for Final Costs or Adjustment):	$0	

Contract Stages			**Contract Capacities at Substation (MW)**					
			Contracted After Project			**Contracted Prior to Project**		
	Start	**Duration**	**This Participant**		**Other**	**This Participant**		**Other**
No	**Date**	Months	DTS	STS	**Participant**	DTS	STS	**Participant**
(1)	May 2020	240	29.30	25.30		29.30	25.30	
	Total	**240**						

GENERATING UNIT OWNER'S CONTRIBUTION			**Reference**
(s)	Planning Region Where Unit Will be Located:	Central	
(t)	Contribution Amount Dates to be Used:	2014-2015	
(u)	Owner's Contribution Previously Paid (If Any):		

Attachment A2: Contribution Determination

Participant:	**FortisAlberta Inc.**			Tariff:	AESO 2018
Project:	**Fortis Provost Reliability - Hayter 277S**			Effective:	1 Jan 2018
Number:	1782B	Type:	DTS and STS (Dual-Use)	To:	Current
Prepared by:	Tana Lailan	Date:	August 2, 2018	Version:	2018.0.0

Line	Description	Reference	Amount	Section
(a)	Cost of New Facilities		$18,073,889	8:2
(b)	Plus: Shared Cost of Existing Facilities		$0	8:3(2)(c)
(c)	Less: System-Related Costs		$0	8:3(3)
(d)	Participant-Related Costs	(a) + (b) – (c)	$18,073,889	8:3(2)
(e)	Less: Facilities in Excess of Good Practice		$0	8:4
(f)	Less: Reduction for Replaced Transformer		$0	8:5(2)
(g)	**Balance of Participant-Related Costs**	(d) – (e) – (f)	**$18,073,889**	8:6(1)

			Required Facilities		In Excess of Good Practice	
Line	Description	Reference	Demand-Related	Supply-Related		Section
(h)	Participant-Related Costs	From (g) and (e)	$18,073,889		$0	8:6(3)
(i)	Operations and Maintenance Charge	Estimated by Market Participant	NA		$0	8:9
(j)	**Total Costs Allocated to Market Participant**	(h) + (i)	**$18,073,889**		**$0**	8:6
(k)	Substation Fractions	Other Participant NA	0.50000	0.50000	NA	8:6(3)
(l)	Allocated Costs (j) × (k)	Other Participant NA	$9,036,945	$9,036,945	$0	8:6
(m)	Less: Maximum Local Investment	Investment Term of 20 Years	$0	NA	NA	8:8
(n)	Construction Contribution Required	(l) – (m)	$9,036,945	$9,036,945	$0	8:7
(o)	**Total Construction Contribution Required**		**$18,073,889**			8:7

			Generating Unit Owner's Contribution			
Line	Description	Region/Policy	STS MW	Amount/MW	Contribution	Section
(r)	**Owner's Contribution to be Paid**	**Central 2014-2015**	**0.00**	**$22,400**	**$0**	10:3

Attachment A3: Allocation of Costs and Substation Fractions

Participant:	**FortisAlberta Inc.**			Tariff:	AESO 2018
Project:	**Fortis Provost Reliability - Hayter 277S**			Effective:	1 Jan 2018
Number:	1782B	Type:	DTS and STS (Dual-Use)	To:	Current

ALLOCATION OF COSTS TO SERVICES AT SUBSTATION

Participant-Related Costs of Required Facilities	**$18,073,889**

Contract Stages			Incremental Contract Capacity			Incremental Substation Fractions		
			This Participant		Other	This Participant		Other
No	Start Date	Duration Years	DTS	STS	Participant	DTS	STS	Participant
(1)	May 2020	20.00	0.00	0.00	0.00	0.50000	0.50000	0.00000
	Total	**20.00**		**Duration-Weighted Average**		**0.50000**	**0.50000**	**0.00000**

Allocation of Participant-Related Costs	**$9,036,945**	**$9,036,945**	**$0**

SUBSTATION FRACTIONS FOR DETERMINATION OF MAXIMUM INVESTMENT

Contract Stages			Contract Capacity After Project			Substation Fractions After Project		
			This Participant		Other	This Participant		Other
No	Start Date	Duration Years	DTS	STS	Participant	DTS	STS	Participant
(1)	May 2020	20.00	29.30	25.30	0.00	0.53663	0.46337	0.00000
	Total	**20.00**						

Attachment A4: Investment Determination

Participant:	**FortisAlberta Inc.**			Tariff:	AESO 2018
Project:	**Fortis Provost Reliability - Hayter 277S**			Effective:	1 Jan 2018
Number:	1782B	Type:	DTS and STS (Dual-Use)	To:	Current

Demand-Related Costs of This Participant Eligible for Investment: **$9,036,945**

Investment Amounts From Subsection 8(4) of Section 8 of 2015 ISO Tariff					
Tier	Tier (a)	Tier (b)	Tier (c)	Tier (d)	Tier (e)
Investment	$78,500	$31,800	$19,900	$13,900	$9,000
Unit	/year	/MW/year	/MW/year	/MW/year	/MW/year

Incremental Rate DTS Contract Capacity Eligible for Investment							
Stage		**Tier (a)**	**Tier (b) MW**	**Tier (c) MW**	**Tier (d) MW**	**Tier (e) MW**	**Total**
No	Years	Sub Frac	7.5 × SF	9.5 × SF	23 × SF	Remaining	MW
(1)	20.00		0.00	0.00	0.00	0.00	0.00

Stage/Year		Nominal Investment per Year of Investment Term					Discounted	Cumulative
No	Year	Tier (a)	Tier (b)	Tier (c)	Tier (d)	Tier (e)	Increments	Total
(1)	1	$0	$0	$0	$0	$0	$0	*Investment*
(1)	2	$0	$0	$0	$0	$0	$0	*term must be*
(1)	3	$0	$0	$0	$0	$0	$0	*a minimum of*
(1)	4	$0	$0	$0	$0	$0	$0	*5 years*
(1)	5	$0	$0	$0	$0	$0	$0	$0
(1)	6	$0	$0	$0	$0	$0	$0	$0
(1)	7	$0	$0	$0	$0	$0	$0	$0
(1)	8	$0	$0	$0	$0	$0	$0	$0
(1)	9	$0	$0	$0	$0	$0	$0	$0
(1)	10	$0	$0	$0	$0	$0	$0	$0
(1)	11	$0	$0	$0	$0	$0	$0	$0
(1)	12	$0	$0	$0	$0	$0	$0	$0
(1)	13	$0	$0	$0	$0	$0	$0	$0
(1)	14	$0	$0	$0	$0	$0	$0	$0
(1)	15	$0	$0	$0	$0	$0	$0	$0
(1)	16	$0	$0	$0	$0	$0	$0	$0
(1)	17	$0	$0	$0	$0	$0	$0	$0
(1)	18	$0	$0	$0	$0	$0	$0	$0
(1)	19	$0	$0	$0	$0	$0	$0	$0
(1)	20	$0	$0	$0	$0	$0	$0	$0

Actual Investment (Not Greater Than Costs Eligible for Investment):	**$0**
Investment Term Required to Minimize Construction Contribution:	**20 years**
Investment Term Begins on:	May 1, 2020
Investment Term ends on:	Apr 30, 2040

Stage 2 Generator Unit Owner Contribution/Construction Contribution Decision #2

1988 FortisAlberta 277S Hayter Contract Change

***Project Name*: FortisAlberta 277S Hayter Contract Change**

***AESO Project #*: 1988**

***Substation*: Hayter 277S**

***Market Participant Name*: FortisAlberta Inc.**

***Date*: October 15, 2018**

***Estimate Type*: Contract change - GUOC and CCD adjustment**

***Project Type*: STS**

***Prepared By*: Ilice Tan/LaRhonda Papworth**

This construction contribution decision is intended solely for the use of the market participant, for the purpose of detailing the calculations required under the provisions of Section 8, *Construction Contributions for Connection Projects*, and Section 9, *Changes to System Access Service After Energization*, of the ISO tariff.

Project Overview:

- FortisAlberta Inc. (Fortis) had submitted a SASR for a 5.3 MW Supply Transmission Service (STS) addition at Hayter 277S substation that will increase the STS from 20.0 MW to 25.3 MW. The In-Service Date (ISD) for this contract change was August 1, 2018.
    - Fortis had requested previous SASR's for STS additions of 10 MW (from 0 to 10 MW, Project 1607/08) with an effective date of December 1, 2015 and a further 10 MW (from 10 MW to 20 MW, Project 1921) with an effective date of December 1, 2017
    - Fortis' end-use generation customer is Blue Earth; the Maximum Capacity (MC) for BluEarth's Bull Creek 1 wind farm (BC1) and Bull Creek 2 wind farm (BC2), at the Hayter 277S substation, is 13.5 MW and 16 MW, respectively, both wind farms were connected to the AIES on December 1, 2015.

- An initial GUOC/CCD for Project 1988 was issued prior to this GUOC/CCD and resulted in a GUOC payment for the incremental 5 MW Rate STS increase of $112,000, for a total GUOC payment of $566,720. Therefore, the GUOC charge will not be adjusted in this GUOC/CCD as total amounts have been collected previously.

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- However, this 2nd GUOC/CCD corrects to add the staging of Rate STS and corrected the demand-related and supply-related allocated ratios to account for the pro-rated contract values over time of Rate DTS and Rate STS at the Hayter 277S substation. This results in a recalculation of the deemed demand-related and supply-related required facilities at Hayter 277S resulting from the previous project, P1495 (Fortis Hayter 277S Transformer and Breaker Addition) with total project costs of $4,991,412. There is a calculated change in the construction contribution amounts from previous CCDs for Project 1495 resulting from the AML's discontinuance of CWIP and addition of AFUDC. No refund of construction contribution is due. See 1. Project Cost below.

- There is no N-1 or RAS associated with this project and system NIDs is not being contemplated for this project.

Contribution Policy:

Permit and Licence: NA for Project 1988
Contribution Policy Applied: 2013 per Commission Decision 2013-325, effective October 1, 2013.

Proposed Commercial Terms:

Reference: NA

1. Project Cost

Project cost is $4,991,412 and is located on line (e) of Attachment A1. This CCD updates the project costs from previous final cost report ($4,998,437) to $4,991,412 as of July 19, 2017. The update results from AML's discontinuance of CWIP and the addition of AFUDC. **As the change in contribution is less than $10,000, no refund is due to the market participant as per subsection 7(5) of Section 9, *Changes to System Access Service After Energization*.**

2. Generating Unit Owner's Contribution

Per subsection 3 of section 10 of the ISO Tariff, Generating Unit Owner's Contribution (per MW) applicable to this project is located on line (r) of Attachment A2.

Generating Unit Owner's Contribution is refundable over 10 years from the Commercial Operation Date as outlined in ISO Rule 9.5)

Please indicate resource type below:

Resource Type	
Coal	☐
Natural Gas — Base Load	☐
Natural Gas — Peaking	☐
Hydro	☐
Wind	☒
Solar	☐
Biomass & Waste	☐

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Sign-off

Note: STS identified in this GUOC have been used to determine the Generating Unit Owner's Contribution applicable to the Project based on the information and calculations outlined herein. Signing of this GUOC by the AESO approves only the application of the Tariff provisions applicable to the Project and is not intended to imply endorsement of any third party information (i.e. cost estimates) provided.

Project Manager/Coordinator
(Ilice Tan)
Nov 5, 2018
Date

Program Manager
(Steve Muenchrath)
Nov 5, 2018
Date

Senior Tariff Lead
(Lee Ann Kerr)
Date

Manager, Tariff Design
(LaRhonda Papworth)
November 5, 2018
Date

Director, Tariff Design
(Doyle Sullivan)
Nov. 5, 2018
Date

Attachments

- Attachment A1: Costs and Contract Details
- Attachment A2: Contribution Determination
- Attachment A3: Allocation of Costs and Substation Fractions
- Attachment A4: Investment Determination
- Attachment B: Previous or related Construction Contribution Decisions

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Attachment A1: Costs and Contract Details

Participant:	**FortisAlberta Inc.**			Tariff:	AESO 2013
Project:	**Fortis Hayter 277S 42MVA Transformer and 25kV Breaker Add**			Effective:	1 Oct 2013
Number:	1495/1607/1608/1921/1988	Type:	DTS and STS	To:	Current
Prepared by:	Ilice Tan	Date:	October 15, 2018	Version:	2013.0.1

PROJECT DETAILS

(a)	New Service or Expansion of Existing Service?	Expansion
(b)	Is Service at New or Existing Substation?	Existing Substation
(c)	Will Primary Service Credit Apply to Service?	No
(d)	Any Other Market Participant(s) at Substation?	No

COST OF CONNECTION PROJECT

			Reference
(e)	Cost of New Transmission Facilities:	$4,991,412	P1495 Tx and Breaker Add. FCR July 19, 2017
(f)	Shared Cost of Existing Transmission Facilities:	$0	
(g)	Less: System-Related Costs:	$0	
(h)	Participant-Related Costs:	$4,991,412	
(i)	Less: Facilities in Excess of Good Practice:	$0	
(j)	Less: Reduction for Replaced Transformer:	$0	
(k)	Balance of Participant-Related Costs:	$4,991,412	
(l)	Estimated Operations and Maintenance:		

CONTRACT DETAILS

			Reference
(m)	Commercial Operation Date of Project:	September 16, 2015	
(n)	Maximum Investment Term (years):	20	
(o)	Discount Rate for Incremental Capacity:	6.14%	
(p)	Prior Contribution (for Final Costs or Adjustment):	$4,998,437	

Contract Stages			Contract Capacities at Substation (MW)					
			Contracted After Project			Contracted Prior to Project		
			This Participant		Other	This Participant		Other
No	Start Date	Duration Months	DTS	STS	Participant	DTS	STS	Participant
(1)	Sep 2015	3	29.30	0.00		29.30	0.00	
(2)	Dec 2015	23	29.30	10.00		29.30	0.00	
(3)	Nov 2017	9	29.30	20.00		29.30	0.00	
(4)	Aug 2018	205	29.30	25.30		29.30	0.00	
	Total	**240**						

GENERATING UNIT OWNER'S CONTRIBUTION

			Reference
(q)	Planning Region Where Unit Will be Located:	Central	
(r)	Contribution Amount Dates to be Used:	2014-2015	
(s)	Owner's Contribution Previously Paid (If Any):	$566,720	

Attachment A2: Contribution Determination

Participant:	**FortisAlberta Inc.**			Tariff:	AESO 2013
Project:	**Fortis Hayter 277S 42MVA Transformer and 25kV Breaker Add**			Effective:	1 Oct 2013
Number:	1495/1607/1608/1921/1988	Type:	DTS and STS	To:	Current
Prepared by:	Ilice Tan	Date:	October 15, 2018	Version:	2013.0.1

Line	Description	Reference	Amount	Section
(a)	Cost of New Facilities	P1495 Tx and Breaker Add. FCR	$4,991,412	8:2
(b)	Plus: Shared Cost of Existing Facilities		$0	8:3(2)(c)
(c)	Less: System-Related Costs		$0	8:3(3)
(d)	Participant-Related Costs	(a) + (b) – (c)	$4,991,412	8:3(2)
(e)	Less: Facilities in Excess of Good Practice		$0	8:4
(f)	Less: Reduction for Replaced Transformer		$0	8:5(2)
(g)	**Balance of Participant-Related Costs**	(d) – (e) – (f)	**$4,991,412**	8:6(1)

			Required Facilities		In Excess of Good Practice	
Line	Description	Reference	Demand-Related	Supply-Related		Section
(h)	Participant-Related Costs	From (g) and (e)	$4,991,412		$0	8:6(3)
(i)	Operations and Maintenance Charge	Estimated by Market Participant	NA		$0	8:9
(j)	**Total Costs Allocated to Market Participant**	(h) + (i)	**$4,991,412**		**$0**	8:6
(k)	Allocated Ratio	Other Participant NA	0.56461	0.43539	NA	8:6(3)
(l)	Allocated Costs (j) × (k)	Other Participant NA	$2,818,185	$2,173,227	$0	8:6
(m)	Less: Maximum Local Investment	Investment Term of 20 Years	$0	NA	NA	8:8
(n)	Construction Contribution Required	(l) – (m)	$2,818,185	$2,173,227	$0	8:7
(o)	**Total Construction Contribution Required**		**$4,991,412**			8:7
(p)	Construction Contribution Previously Paid for Project		$4,998,437			5:2(8) or 9:2(2)
(q)	**Construction Contribution to be Refunded**		**($7,025)**			5:2 or 9:4

			Generating Unit Owner's Contribution			
Line	Description	Region/Policy	STS MW	Amount/MW	Contribution	Section
(r)	**Owner's Contribution to be Paid**	**Central 2014-2015**	**25.30**	**$22,400**	**$566,720**	10:3
(s)	Generating Unit Owner's Contribution Previously Paid for Project				$566,720	10:3
(t)	**Generating Unit Owner's Contribution to be Refunded**				**$0**	10:3

Attachment A3: Allocation of Costs and Substation Fractions

Participant:	**FortisAlberta Inc.**			Tariff:	AESO 2013
Project:	**Fortis Hayter 277S 42MVA Transformer and 25kV Breaker Add**			Effective:	1 Oct 2013
Number:	1495/1607/1608/1921/1988	Type:	DTS and STS (	To:	Current

ALLOCATION OF COSTS TO SERVICES AT SUBSTATION

Participant-Related Costs of Required Facilities **$4,991,412**

Contract Stages			Incremental Contract Capacity			Incremental Substation Fractions		
	Start	Duration	This Participant		Other	This Participant		Other
No	Date	Years	DTS	STS	Participant	DTS	STS	Participant
(1)	Sep 2015	0.25	0.00	0.00	0.00	1.00000	0.00000	0.00000
(2)	Dec 2015	1.92	0.00	10.00	0.00	0.00000	1.00000	0.00000
(3)	Nov 2017	0.75	0.00	20.00	0.00	0.00000	1.00000	0.00000
(4)	Aug 2018	17.08	0.00	25.30	0.00	0.00000	1.00000	0.00000
	Total	**20.00**			**Duration-Weighted Average**	**0.01250**	**0.98750**	**0.00000**

Allocation of Participant-Related Costs	**$62,393**	**$4,929,019**	**$0**

SUBSTATION FRACTIONS FOR DETERMINATION OF MAXIMUM INVESTMENT

Contract Stages			Contract Capacity After Project			Substation Fractions After Project		
	Start	Duration	This Participant		Other	This Participant		Other
No	Date	Years	DTS	STS	Participant	DTS	STS	Participant
(1)	Sep 2015	0.25	29.30	0.00	0.00	1.00000	0.00000	0.00000
(2)	Dec 2015	1.92	29.30	10.00	0.00	0.74555	0.25445	0.00000
(3)	Nov 2017	0.75	29.30	20.00	0.00	0.59432	0.40568	0.00000
(4)	Aug 2018	17.08	29.30	25.30	0.00	0.53663	0.46337	0.00000
	Total	**20.00**			**Duration-Weighted Average**	**0.56461**	**0.43539**	**0.00000**

	$2,818,185	**$2,173,227**	**$0**

Attachment A4: Investment Determination

Participant: **FortisAlberta Inc.**
Project: **Fortis Hayter 277S 42MVA Transformer and 25kV Breaker Add**
Number: 1495/1607/1608/1921/1988 Type: DTS and STS

Tariff: AESO 2013
Effective: 1 Oct 2013
To: Current

Demand-Related Costs of This Participant Eligible for Investment: **$62,393**

Investment Amounts From Subsection 8(4) of Section 8 of 2011 ISO Tariff					
Tier	Tier (a)	Tier (b)	Tier (c)	Tier (d)	Tier (e)
Investment	$52,000	$35,350	$13,050	$7,900	$4,250
Unit	/year	/MW/year	/MW/year	/MW/year	/MW/year

Incremental Rate DTS Contract Capacity Eligible for Investment							
Stage		**Tier (a)**	**Tier (b) MW**	**Tier (c) MW**	**Tier (d) MW**	**Tier (e) MW**	**Total**
No.	Years	Sub Frac	7.5 × SF	9.5 × SF	23 × SF	Remaining	MW
(1)	0.25		0.00	0.00	0.00	0.00	0.00
(2)	1.92		0.00	0.00	0.00	0.00	0.00
(3)	0.75		0.00	0.00	0.00	0.00	0.00
(4)	17.08		0.00	0.00	0.00	0.00	0.00

Stage/Year		Nominal Investment per Year of Investment Term					Discounted	Cumulative
No.	Year	Tier (a)	Tier (b)	Tier (c)	Tier (d)	Tier (e)	Increments	Total
(1)-(2)	1	$0	$0	$0	$0	$0	$0	*Investment*
(2)	2	$0	$0	$0	$0	$0	$0	*term must be*
(2)-(4)	3	$0	$0	$0	$0	$0	$0	*a minimum of*
(4)	4	$0	$0	$0	$0	$0	$0	*5 years*
(4)	5	$0	$0	$0	$0	$0	$0	$0
(4)	6	$0	$0	$0	$0	$0	$0	$0
(4)	7	$0	$0	$0	$0	$0	$0	$0
(4)	8	$0	$0	$0	$0	$0	$0	$0
(4)	9	$0	$0	$0	$0	$0	$0	$0
(4)	10	$0	$0	$0	$0	$0	$0	$0
(4)	11	$0	$0	$0	$0	$0	$0	$0
(4)	12	$0	$0	$0	$0	$0	$0	$0
(4)	13	$0	$0	$0	$0	$0	$0	$0
(4)	14	$0	$0	$0	$0	$0	$0	$0
(4)	15	$0	$0	$0	$0	$0	$0	$0
(4)	16	$0	$0	$0	$0	$0	$0	$0
(4)	17	$0	$0	$0	$0	$0	$0	$0
(4)	18	$0	$0	$0	$0	$0	$0	$0
(4)	19	$0	$0	$0	$0	$0	$0	$0
(4)	20	$0	$0	$0	$0	$0	$0	$0

Actual Investment (Not Greater Than Costs Eligible for Investment): **$0**
Investment Term Required to Minimize Construction Contribution: **20 years**

Stage 3 Construction Contribution Decision #3
1782B FortisAlberta Provost Reliability

Project Name: FortisAlberta Provost Reliability

AESO Project #: 1782

Associated Line #s: new 138 kV line 398L as well as existing lines 715L, 748L, 749L

Substations: Hayter 277S

Market Participant Name: FortisAlberta Inc.

Date: November 1, 2018

Estimate Type: Service Proposal +20%/- 10%

Project Type: Connection Project with no contract change

Prepared By: Tana Lailan/LaRhonda Papworth

This construction contribution decision is intended solely for the use of the market participant, for the purpose of detailing the calculations required under the provisions of Section 8, *Construction Contributions for Connection Projects*, and Section 9, *Changes to System Access Service After Energization*, of the ISO tariff.

Project Overview:

- On April 19, 2016 FortisAlberta Inc. ("FortisAlberta") submitted a SASR to address the distribution reliability concerns in the Provost area (AESO Planning Area Provost 37).
- The preferred alternative involves transmission additions and upgrade in the Provost area which includes construction of a new 138 kV transmission line connection between Hayter 277S substation and Provost 545S substation and associated substation upgrades to accommodate the new line
- The requested In-Service Date (ISD) for the Provost Area transmission upgrade is May 1, 2020.
- No Demand Transmission Services (DTS) change is requested at Hayter 277S substation.
- No Supply Transmission Services (STS) change is requested at the Hayter 277S substation as part of this project. Note however that an STS increases has been requested at Hayter-277S via a different SASR and was effective on August 1, 2018.

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- The total cost of the upgrades at Hayter 277S and a portion of the new 138 kV transmission line (and associated other upgrades) is $19,394,495 (in 2017$) with accuracy of +20/-10% and is 100% participant-related cost and is comprised of the following;
    - Hayter 277S upgrade costs at $10,070,698
    - The total 138 kV line costs (and associated costs) are $16,006,382, of which 58.25% will be assigned to Hayter 277S at $9,323,797. The percent calculation is based on a pro-rata allocation of the highest of the STS or DTS contracted amounts between Hayter 277S and Provost 545S (detail in Attachment B1)
    - The costs were provided by AML in a Service Proposal submission provided in Attachment B.
- This CCD is issued to capture the capital additions under this project and the Supply Transmission Services (STS) increase to 25.3 MW that occurred at Hayter 277S substation as of August 1, 2018 under the project P1988. The increased Rate STS to 25.3 MW results in a deemed demand-related and supply related required facilities of 54%/46% to reflect the relative weighting of Rate DTS and Rate STS contract amounts at Hayter 277S..
- The additional line proposed between Hayter 277S and Provost 545S is not required for transmission system reliability purposes and is only required by the market participant for distribution reliability concerns.
- There are no system NIDs being contemplated for this project.
- There is no N-1 or RAS associated with the preferred alternative
- A Single Line Diagram is included in the Attachment C.

Contribution Policy:

Permit and Licence: Filed on February 13, 2018
Contribution Policy Applied: 2018 per Commission Decision 23065-D01-2017, effective January 1, 2018

Proposed Commercial Terms:

Reference: Service Proposal dated October 27, 2017

1. Project Cost

Project cost is located on line (e) of Attachment A1 and further detailed in Attachments B and B1.

2. Shared Facilities Cost

- There are no shared facilities.

3. System Related Cost

- There is no system related cost.

4. Facilities In Excess of Good Electric Industry Practice

- There are no facilities in Excess of Good Electric Industry Practice.

5. Construction Contribution

- Participant related cost is located on line (h) of Attachment A1.
- Allocation of participant-related costs by contract capacity in order to deem demand-related and supply-related required facilities in line (k) are per subsections 6(4) and 6(5) of Section 8, *Construction Contributions for Connection Projects*, of the ISO tariff.
- Based on contract details listed in Attachment A1, the maximum local investment is located on line (m) of Attachment A2.

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- The Construction Contribution is estimated to be as stated on line (o) of Attachment A2. Please see Attachments A1, A2, A3 and A4 for details of these calculations and the resulting Construction Contribution.
- This Construction Contribution is subject to change based on the following items:
  - Changes to contract capacity or term
  - Changes to estimated costs or resulting from final costs
  - Changes to the classification of system-related and market participant -related costs
  - Development of the transmission system as it relates to this project, including sharing of facilities with other market participants.

6. Primary Service Credit

- The transformation facilities for this service are owned and operated by the transmission facility owner, and the Primary Service Credit does not apply.

Sign-off

Note: Cost estimates provided in the Connection Proposal identified in this CCD have been used to determine the Construction Contribution and/or Generating Unit Owner's Contribution applicable to the Project based on the information and calculations outlined herein. Signing of this CCD by the AESO approves only the application of the Tariff provisions applicable to the Project and is not intended to imply endorsement of any third party information (i.e. cost estimates) provided in the Connection Proposal.

Project Manager (Tana Lailan)	Nov 5, 2018 Date
Program Manager (Steve Muenchrath)	Nov 5, 2018 Date
Senior Tariff Lead (Lee Ann Kerr)	Date
Manager, Tariff Design (LaRhonda Papworth)	November 5, 2018 Date
Director, Tariff Design (Doyle Sullivan)	Nov 5, 2018 Date

Attachments

- Attachment A1: Costs and Contract Details
- Attachment A2: Contribution Determination
- Attachment A3: Allocation of Costs and Substation Fractions
- Attachment A4: Investment Determination
- Attachment B: Cost estimates
- Attachment B1: Substation breakout of cost estimates
- Attachment C: Project SLDs

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Attachment A1: Costs and Contract Details

Participant:	**FortisAlberta Inc.**			Tariff:	AESO 2018
Project:	**Fortis Provost Reliability - Hayter 277S**			Effective:	1 Jan 2018
Number:	1782B	Type:	DTS and STS	To:	Current
Prepared by:	Tana Lailan	Date:	Sep 20, 2018	Version:	2018.0.0

PROJECT DETAILS

(a)	New Service or Expansion of Existing Service?	Expansion
(b)	Is Service at New or Existing Substation?	Existing Substation
(c)	Will Primary Service Credit Apply to Service?	No
(d)	Any Other Market Participant(s) at Substation?	No

COST OF CONNECTION PROJECT

			Reference
(e)	Cost of New Transmission Facilities:	$19,394,495	Attached
(f)	Shared Cost of Existing Transmission Facilities:	$0	
(g)	Less: System-Related Costs:	$0	
(h)	Participant-Related Costs:	$19,394,495	
(i)	Less: Facilities in Excess of Good Practice:	$0	
(j)	Less: Reduction for Replaced Transformer:	$0	
(k)	Balance of Participant-Related Costs:	$19,394,495	
(l)	Estimated Operations and Maintenance:		

CONTRACT DETAILS

			Reference
(m)	Date of Commission Permit and Licence:		filed on Feb 13, 2018
(n)	Date of AESO Energization Authorization:	May 1, 2020	
(o)	Date of Commercial Operation of Project:	May 1, 2020	
(p)	Maximum Investment Term (years):	20	
(q)	Discount Rate for Incremental Capacity:	6.26%	
(r)	Prior Contribution (for Final Costs or Adjustment):	$0	

Contract Stages			Contract Capacities at Substation (MW)					
			Contracted After Project			Contracted Prior to Project		
			This Participant		Other	This Participant		Other
No	Start Date	Duration Months	DTS	STS	Participant	DTS	STS	Participant
(1)	May 2020	240	29.30	25.30		29.30	25.30	
	Total	240						

GENERATING UNIT OWNER'S CONTRIBUTION

			Reference
(s)	Planning Region Where Unit Will be Located:	Central	
(t)	Contribution Amount Dates to be Used:	2014-2015	
(u)	Owner's Contribution Previously Paid (If Any):		

Attachment A2: Contribution Determination

Participant: **FortisAlberta Inc.**
Project: **Fortis Provost Reliability - Hayter 277S**
Number: 1782B
Type: DTS and STS
Prepared by: Tana Lailan
Date: September 20, 2018

Tariff: AESO 2018
Effective: 1 Jan 2018
To: Current
Version: 2018.0.0

Line	Description	Reference	Amount	Section
(a)	Cost of New Facilities	Attached	$19,394,495	8:2
(b)	Plus: Shared Cost of Existing Facilities		$0	8:3(2)(c)
(c)	Less: System-Related Costs		$0	8:3(3)
(d)	Participant-Related Costs	(a) + (b) – (c)	$19,394,495	8:3(2)
(e)	Less: Facilities in Excess of Good Practice		$0	8:4
(f)	Less: Reduction for Replaced Transformer		$0	8:5(2)
(g)	**Balance of Participant-Related Costs**	(d) – (e) – (f)	**$19,394,495**	8:6(1)

			Required Facilities		In Excess of Good Practice	
Line	Description	Reference	Demand-Related	Supply-Related		Section
(h)	Participant-Related Costs	From (g) and (e)	$19,394,495		$0	8:6(3)
(i)	Operations and Maintenance Charge	Estimated by Market Participant	NA		$0	8:9
(j)	**Total Costs Allocated to Market Participant**	(h) + (i)	**$19,394,495**		**$0**	8:6
(k)	Allocated Ratio	Other Participant NA	0.53663	0.46337	NA	8:6(3)
(l)	Allocated Costs (j) × (k)	Other Participant NA	$10,407,669	$8,986,826	$0	8:6
(m)	Less: Maximum Local Investment	Investment Term of 20 Years	$0	NA	NA	8:8
(n)	Construction Contribution Required	(l) – (m)	$10,407,669	$8,986,826	$0	8:7
(o)	**Total Construction Contribution Required**		**$19,394,495**			8:7

			Generating Unit Owner's Contribution			
Line	Description	Region/Policy	STS MW	Amount/MW	Contribution	Section
(r)	**Owner's Contribution to be Paid**	**Central 2014-2015**	**0.00**	**$22,400**	**$0**	10:3

Attachment A4: Investment Determination

Participant: **FortisAlberta Inc.**
Project: **Fortis Provost Reliability - Hayter 277S**
Number: 1782B Type: DTS and STS

Tariff: AESO 2018
Effective: 1 Jan 2018
To: Current

Demand-Related Costs of This Participant Eligible for Investment: **$9,697,248**

Investment Amounts From Subsection 8(4) of Section 8 of 2015 ISO Tariff					
Tier	Tier (a)	Tier (b)	Tier (c)	Tier (d)	Tier (e)
Investment	$78,500	$31,800	$19,900	$13,900	$9,000
Unit	/year	/MW/year	/MW/year	/MW/year	/MW/year

Incremental Rate DTS Contract Capacity Eligible for Investment							
Stage		**Tier (a)**	**Tier (b) MW**	**Tier (c) MW**	**Tier (d) MW**	**Tier (e) MW**	**Total**
No	Years	Sub Frac	7.5 × SF	9.5 × SF	23 × SF	Remaining	MW
(1)	20.00		0.00	0.00	0.00	0.00	0.00

Stage/Year		Nominal Investment per Year of Investment Term					Discounted	Cumulative
No	Year	Tier (a)	Tier (b)	Tier (c)	Tier (d)	Tier (e)	Increments	Total
(1)	1	$0	$0	$0	$0	$0	$0	*Investment*
(1)	2	$0	$0	$0	$0	$0	$0	*term must be*
(1)	3	$0	$0	$0	$0	$0	$0	*a minimum of*
(1)	4	$0	$0	$0	$0	$0	$0	*5 years*
(1)	5	$0	$0	$0	$0	$0	$0	$0
(1)	6	$0	$0	$0	$0	$0	$0	$0
(1)	7	$0	$0	$0	$0	$0	$0	$0
(1)	8	$0	$0	$0	$0	$0	$0	$0
(1)	9	$0	$0	$0	$0	$0	$0	$0
(1)	10	$0	$0	$0	$0	$0	$0	$0
(1)	11	$0	$0	$0	$0	$0	$0	$0
(1)	12	$0	$0	$0	$0	$0	$0	$0
(1)	13	$0	$0	$0	$0	$0	$0	$0
(1)	14	$0	$0	$0	$0	$0	$0	$0
(1)	15	$0	$0	$0	$0	$0	$0	$0
(1)	16	$0	$0	$0	$0	$0	$0	$0
(1)	17	$0	$0	$0	$0	$0	$0	$0
(1)	18	$0	$0	$0	$0	$0	$0	$0
(1)	19	$0	$0	$0	$0	$0	$0	$0
(1)	20	$0	$0	$0	$0	$0	$0	$0

Actual Investment (Not Greater Than Costs Eligible for Investment):	**$0**
Investment Term Required to Minimize Construction Contribution:	**20 years**
Investment Term Begins on:	May 1, 2020
Investment Term ends on:	Apr 30, 2040

P1782 - FortisAlberta Provost Reliability
Attachment B1 - Cost breakout by Substation

Project Cost distributed to Provost 545S, Hayter 277S, Killarney Lake 267S

ORIGINAL	Total	Provost 545S	Hayter 277S	Killarney Lake 267S
Transmission Line	$ 14,394,382	$ 7,197,191	$ 7,197,191	$ -
Substation	$ 7,990,729	$ 3,694,530	$ 2,381,268	$ 1,914,931
Substations (899S, 9532R, 650S, 648S)	$ 1,078,156	$ 539,078	$ 539,078	$ -
Telecommunication	$ 1,423,868	$ 252,656	$ 634,244	$ 536,968
Other Telecommunication (899S, 9532R, 650S,	$ 533,844	$ 266,922	$ 266,922	$ -
Owners	$ 4,183,408	$ 2,016,857	$ 1,917,060	$ 249,491
Distributed	$ 8,887,704	$ 3,955,588	$ 3,698,583	$ 1,233,533
Salvage	$ 94,016	$ 55,068	$ 24,388	$ 14,560
Other costs	$ 3,291,058	$ 1,546,797	$ 1,415,155	$ 329,106
Total Facility Costs	$ 41,877,165	$ 19,524,687	$ 18,073,889	$ 4,278,589

ORIGINAL	Total	Provost 545S	Hayter 277S	Killarney Lake 267S
Transmission Line	100.00%	50.00%	50.00%	0.00%
Substation	100.00%	46.24%	29.80%	23.96%
Substations (899S, 9532R, 650S, 648S)	100.00%	50.00%	50.00%	0.00%
Telecommunication	100.00%	17.74%	44.54%	37.71%
Other Telecommunication (899S, 9532R, 650S,	100.00%	50.00%	50.00%	0.00%
Owners	100.00%	48.21%	45.83%	5.96%
Distributed	100.00%	44.51%	41.61%	13.88%
Salvage	100.00%	58.57%	25.94%	15.49%
Other costs	100.00%	47.00%	43.00%	10.00%

		21 MW (21 MW + 29.3 MW)	29.3 MW (21 MW + 29.3 MW)	
REVISED by Tariff 2018-11-01	Total	Provost 545S	Hayter 277S	Killarney Lake 267S
Transmission Line	100.00%	41.75%	58.25%	0.00%
Substation	100.00%	46.24%	29.80%	23.96%
Substations (899S, 9532R, 650S, 648S)	100.00%	41.75%	58.25%	0.00%
Telecommunication	100.00%	17.74%	44.54%	37.71%
Other Telecommunication (899S, 9532R, 650S,	100.00%	41.75%	58.25%	0.00%
Owners	100.00%	48.21%	45.83%	5.96%
Distributed	100.00%	44.51%	41.61%	13.88%
Salvage	100.00%	58.57%	25.94%	15.49%
Other costs	100.00%	47.00%	43.00%	10.00%

REVISED by Tariff 2018-11-01	Total	Provost 545S	Hayter 277S	Killarney Lake 267S
Transmission Line	$ 14,394,382	$ 6,009,583	$ 8,384,799	$ -
Substation	$ 7,990,729	$ 3,694,530	$ 2,381,268	$ 1,914,931
Substations (899S, 9532R, 650S, 648S)	$ 1,078,156	$ 450,125	$ 628,031	$ -
Telecommunication	$ 1,423,868	$ 252,656	$ 634,244	$ 536,968
Other Telecommunication (899S, 9532R, 650S,	$ 533,844	$ 222,877	$ 310,967	$ -
Owners	$ 4,183,408	$ 2,016,857	$ 1,917,060	$ 249,491
Distributed	$ 8,887,704	$ 3,955,588	$ 3,698,583	$ 1,233,533
Salvage	$ 94,016	$ 55,068	$ 24,388	$ 14,560
Other costs	$ 3,291,058	$ 1,546,797	$ 1,415,155	$ 329,106
Total Facility Costs	$ 41,877,165	$ 18,204,081	$ 19,394,495	$ 4,278,589

REVISED by Tariff 2018-11-01	Total	Provost 545S	Hayter 277S	Killarney Lake 267S
Transmission Line	$ 14,394,382	$ 6,009,583	$ 8,384,799	$ -
Substation	$ 9,068,885	$ 4,144,655	$ 3,009,299	$ 1,914,931
Telecommunication	$ 1,957,712	$ 475,533	$ 945,211	$ 536,968
Owners	$ 4,183,408	$ 2,016,857	$ 1,917,060	$ 249,491
Distributed	$ 8,887,704	$ 3,955,588	$ 3,698,583	$ 1,233,533
Salvage	$ 94,016	$ 55,068	$ 24,388	$ 14,560
Other costs	$ 3,291,058	$ 1,546,797	$ 1,415,155	$ 329,106
Total Facility Costs	$ 41,877,165	$ 18,204,081	$ 19,394,495	$ 4,278,589

AESO Project Name & No.	Fortis Provost Reliability		P1782	TRANSMISSION PROJECT ESTIMATE SUMMARY
Prepared by:	AltaLink			
AACE Class:	N/A	Estimate Basis	Service Proposal	
High Range	20%	Low Range	-10%	
Date of Estimate:	January 14, 2017	Base Year Used	2017	
In Service Date	2020-05-01			
	SYSTEM	PARTICIPANT	TOTAL	ASSUMPTIONS
TRANSMISSION LINE				
Material	$ -	$ 2,503,642	$ 2,503,642	
Labour	$ -	$ 11,890,740	$ 11,890,740	
Supply & Install	$ -	$ -	$ -	
TOTAL TRANSMISSION LINE	**$ -**	**$ 14,394,381**	**$ 14,394,381**	
SUBSTATION				
Material	$ -	$ 2,341,828	$ 2,341,828	
Labour	$ -	$ 6,727,056	$ 6,727,056	
Supply & Install	$ -	$ -	$ -	
TOTAL SUBSTATION	**$ -**	**$ 9,068,885**	**$ 9,068,885**	
TELECOMMUNICATION				
Material	$ -	$ 573,612	$ 573,612	
Labour	$ -	$ 1,384,100	$ 1,384,100	
Supply & Install	$ -	$ -	$ -	
TOTAL TELECOMMUNCATIONS	**$ -**	**$ 1,957,712**	**$ 1,957,712**	
OWNERS				
Pre-SP Cost		$ 144,037	$ 144,037	
Service Proposal		$ 589,914	$ 589,914	
Facility Applications		$ 1,703,037	$ 1,703,037	
Regulatory & Compliance		$ 57,922	$ 57,922	
Land Rights - Easements		$ 1,405,949	$ 1,405,949	
Land - Damage Claims		$ 282,549	$ 282,549	
Land - Acquisitions		$ -	$ -	
Land - Other			$ -	
TOTAL OWNERS COST	**$ -**	**$ 4,183,408**	**$ 4,183,408**	
DISTRIBUTED				
Procurement Management	$ -	$ 247,134	$ 247,134	
Project Management	$ -	$ 2,286,331	$ 2,286,331	
Construction Management	$ -	$ 2,791,715	$ 2,791,715	
Contingency	$ -	$ 2,462,587	$ 2,462,587	
Escalation	$ -	$ 1,099,937	$ 1,099,937	
TOTAL DISTRIBUTED	**$ -**	**$ 8,887,704**	**$ 8,887,704**	
SALVAGE				
Transmission Line Labour	$ -	$ 38,376	$ 38,376	
Substation Labour	$ -	$ 55,640	$ 55,640	
Telecom Labour	$ -	$ -	$ -	
Land Remediation and Reclamation			$ -	
TOTAL SALVAGE	**$ -**	**$ 94,016**	**$ 94,016**	
OTHER COSTS				
AFUDC			$ -	
E&S/Overhead		$ 3,291,057	$ 3,291,057	
TOTAL OTHER	**$ -**	**$ 3,291,057**	**$ 3,291,057**	
TOTAL PROJECT	**$ -**	**$ 41,877,163**	**$ 41,877,163**	

ALTALINK
A BERKSHIRE HATHAWAY ENERGY COMPANY | 2611 3rd Ave SE, Calgary, Alberta, T2A 7W7 | www.altalink.ca

October 27, 2017

Alberta Electric System Operator
2500, 330 – 5th Avenue SW
Calgary, Alberta
T2P 0L4

Attention: Tana Lailan – Project Manager, Transmission Connection Projects

Dear Ms. Lailan,

Re: P1782 – Fortis Provost Reliability (the "Project") – Service Proposal Estimate 'Point-of-Delivery' Allocation

The AESO informed AltaLink that according to the 2017 ISO Tariff – Section 8 Construction Contributions for Connection Projects, this Project shall require three (3) Customer Contribution Decisions ("CCD"), one for each Point of Delivery ("POD") identified by the AESO. For this Project the AESO has identified three (3) PODs that shall require a CCD: Provost 545S, Hayter 277S, and Killarney Lake 267S. Therefore, the AESO requested that the Service Proposal Estimate for this Project be allocated to those three Points of Delivery.

This letter provides AltaLink's proposed model for the requested allocation, the rationale for how that model was developed, and AltaLink's assumptions on how this model should be applied throughout the execution of the project.

Proposed Allocation Model

AltaLink proposes that the submitted Service Proposal Estimate for the Project be allocated to the three PODs as follows:

Provost 545S

- 100% of the Provost 545S Direct Facility Costs (Substation and Telecommunication);
- 50% of the 398L transmission line;
- 50% of the Direct Facility Costs (Substation and Telecommunication) for the other impacted Substations: Edgerton 899S, Edgerton Radio 9532R, Hansman Lake 650S, and Metiskow 648S;
- 47% of the Owner's Costs;
- 47% of the Distributed Costs (including Contingency and Escalation);
- 47% of the E&S/Overhead Costs;
- 100% of the Provost 545S Salvage Costs; and
- 50% of the 398L Salvage Costs.

Hayter 277S

- 100% of the Hayter 277S Direct Facility Costs (Substation and Telecommunication);
- 50% of the 398L transmission line;
- 50% of the Direct Facility Costs (Substation and Telecommunication) for the other impacted Substations: Edgerton 899S, Edgerton Radio 9532R, Hansman Lake 650S, and Metiskow 648S;
- 43% of the Owner's Costs;
- 43% of the Distributed Costs (including Contingency and Escalation);
- 43% of the E&S/Overhead Costs;
- 100% of the Hayter 277S Salvage Costs; and
- 50% of the 398L Salvage Costs.

Killarney Lake 267S

- 100% of the Killarney Lake 267S Direct Facility Costs (Substation and Telecommunication);
- 10% of the Owner's Costs;
- 10% of the Distributed Costs (including Contingency and Escalation);
- 10% of the E&S/Overhead Costs; and
- 100% of the Killarney Lake 267S Salvage Costs.

The following table (Table 1: P1782 Proposed Service Proposal Estimate Allocation) illustrates the proposed allocation model.

	Provost 545S	Hayter 277S	Killarney Lake 267S
Transmission Line	$7,197,191	$7,197,191	$0
Substation	$4,233,608	$2,920,346	$1,914,931
Telecommunication	$519,578	$901,167	$536,968
Owners	$2,016,857	$1,917,060	$249,491
Distributed	$3,955,588	$3,698,583	$1,233,533
Salvage	$55,068	$24,388	$14,560
Other Costs	$1,546,797	$1,415,155	$329,106
Total Project (per POD)	$19,524,686	$18,073,889	$4,278,588

Table 1: P1782 Proposed Service Proposal Estimate Allocation

Proposed Allocation Rationale

The rationale for the proposed allocation model is outlined below:

- Transmission Line: the proposed 389L transmission line will connect the Provost 545S and Hayter 277S substations; therefore, AltaLink proposes that the Direct Facility Costs for the 389L transmission line are shared equally between the Provost 545S POD and the Hayter 277S POD.

- Substation: the Direct Facility Costs (Substation) for each of the three identified POD's (Provost 545S, Hayter 277S, and Killarney Lake 267S) shall be allocated to those PODs.

  However, the scope of work required at the other impacted substations (Edgerton 899S, Edgerton Radio 9532R, Hansman Lake 650S, and Metiskow 648S) is primarily associated with Protection and Control, SCADA, and telecommunications for the 398L transmission line. Therefore, AltaLink proposes that the Direct Facility Costs (Substation) for these four substations are allocated using the same methodology as the 398L transmission line costs and are shared equally between the Provost 545S POD and the Hayter 277S POD.

- Telecommunication: the Direct Facility Costs (Telecommunication) for each of the three identified POD's (Provost 545S, Hayter 277S, and Killarney Lake 267S) shall be allocated to those PODs.

  However, the scope of work required at the other impacted substations (Edgerton 899S, Edgerton Radio 9532R, Hansman Lake 650S, and Metiskow 648S) is primarily associated with Protection and Control, SCADA, and telecommunications for the 398L transmission line. Therefore, AltaLink proposes that the Direct Facility Costs (Telecommunication) for these four substations are allocated using the same methodology as the 398L transmission line costs and are shared equally between the Provost 545S POD and the Hayter 277S POD.

- Salvage: the identified salvage scope of work impacts the Provost 545S, Hayter 277S, and Killarney Lake 267S substations. Therefore, AltaLink proposes that the Direct Salvage Costs for each of the three identified POD's (Provost 545S, Hayter 277S, and Killarney Lake 267S) shall be allocated to those PODs.

  The transmission line salvage costs are directly related to the 398L transmission line terminations at both Provost 545S and Hayter 277S. Therefore, AltaLink proposes that the transmission line salvage costs are shared equally between the Provost 545S POD and the Hayter 277S POD.

- Owners, Distributed, and Other Costs: AltaLink proposes that the remaining Service Proposal Estimate costs (Owners, Distributed, and Other Costs) – which are shared costs required to deliver the complete project scope – are allocated according to the following percentage split:
  - Provost 545S = 47%
  - Hayter 277S = 43%
  - Killarney Lake 267S = 10%

  This allocation was developed through an analysis of the Direct Facility Costs once the allocations proposed above were applied (i.e. the transmission line facility costs were allocated to the Provost 545S and Hayter 277S substations). AltaLink believes this is a fair representation of the required work for this project and allocates the shared costs appropriately to the three Points of Delivery.

  The following table (Table 2: P1782 Direct Facility Cost Allocation Ratio) provides the basis for the proposed allocation ratio.

	Provost 545S	Hayter 277S	Killarney Lake 267S
Transmission Line	$7,197,191	$7,197,191	$0
Substation	$3,694,530	$2,381,268	$1,914,931
Substations (899S, 9532R, 650S, 648S)	$539,078	$539,078	$0
Telecommunication	$252,656	$634,244	$536,968
Other Telecommunication (899S, 9532R, 650S, 648S)	$266,922	$266,922	$0
Total Facility Costs (per POD)	$11,950,377	$11,018,703	$2,451,899
Total Facility Costs		$25,420,978	
Percent Allocation (per POD)	47%	43%	10%

Table 2: P1782 Direct Facility Cost Allocation Ratio

Proposed Allocation Assumptions

Based on the proposed Point of Delivery allocation provided above, AltaLink is also proposing the following assumptions regarding the execution of the P1782 Fortis Provost Reliability project.

1. The AESO has indicated that this project shall maintain a single AESO project number (P1782) and therefore, AltaLink will also maintain a single AltaLink project number for this project. The implication of this is that AltaLink will manage the project as a single project throughout its life-cycle, and the application of this cost allocation will only be calculated for CCD purposes (i.e. project change proposals, estimate updates, and the Final Cost Report).

2. AltaLink will submit to the AESO the master estimate file (re-submission from August 2017), plus three separate summary sheets showing the cost split to each of the three substations. The three additional sheets will not include any variance explanations relating to the costs on each category. These costs come from a calculation and will not correlate to accurate material quantities or labor assumptions.

3. The Project Change Proposals (PCPs) will be reported against the total project budget in the master estimate file just like any other project. PCPs will be reported in the AESO template and the proposed allocation will not be applied to a PCP. If a PCP requires a CCD revision, then AltaLink, will provide the revised estimate allocation separately.

4. AFUDC (if applicable later), will be calculated and allocated using the proposed allocation ratio.

5. Purchase Orders and invoices for material and labor will not be allocated (according to the proposed allocation ratio) to the individual PODs. However, for the Final Cost Report, AltaLink would apply the proposed allocation for the Stage 6 CCD.

6. Only one monthly report will be prepared and submitted to the AESO; with a single Financial Table providing cost information for the entire project.

7. The project will have a single risk register.

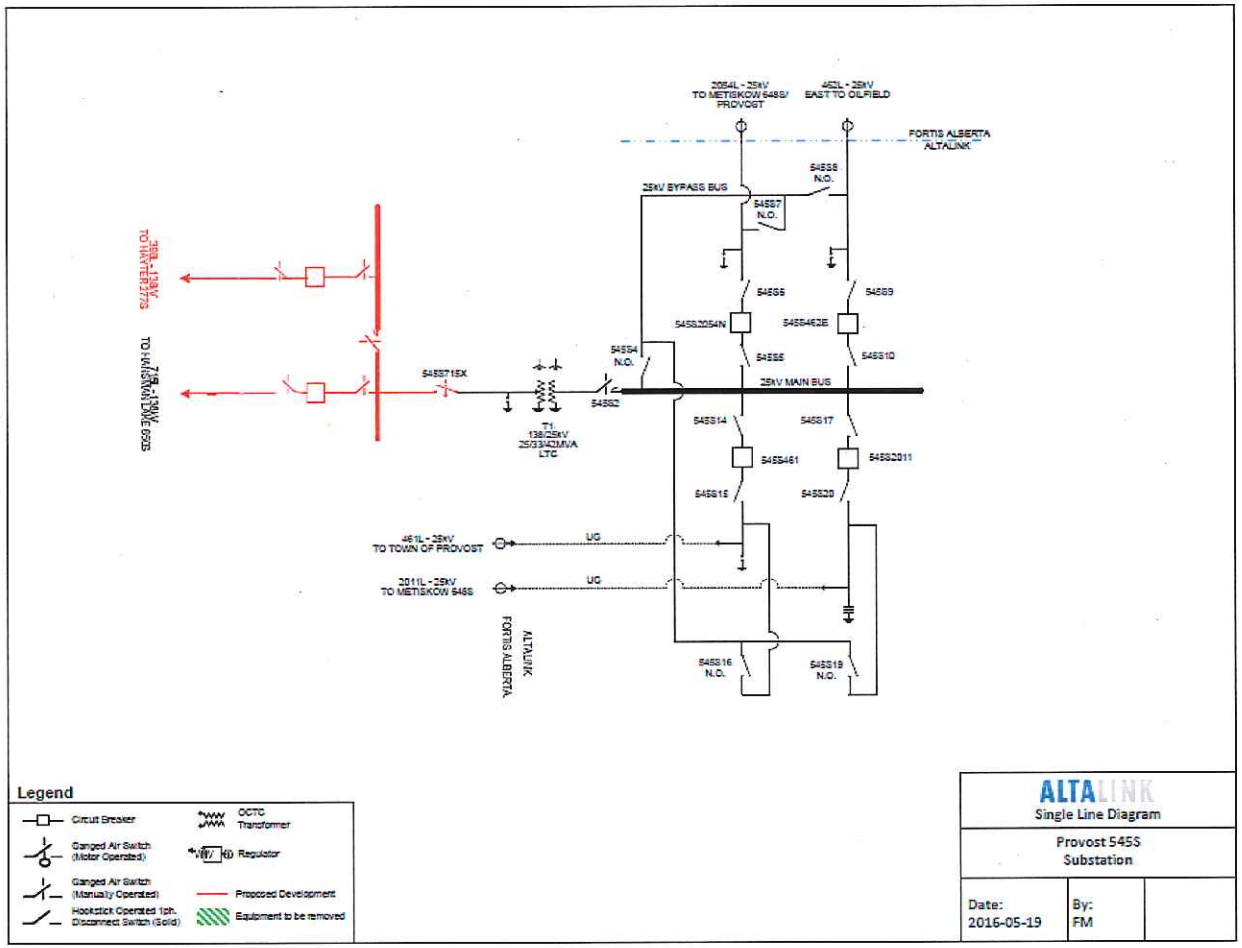
8. The project will have a single Basis of Estimate (BoE) document.

In order to maintain project schedule, AltaLink requests that the AESO reviews and accepts this proposal by November 24, 2017; or provides an alternative cost allocation that meets the needs of the AESO Tarrif.

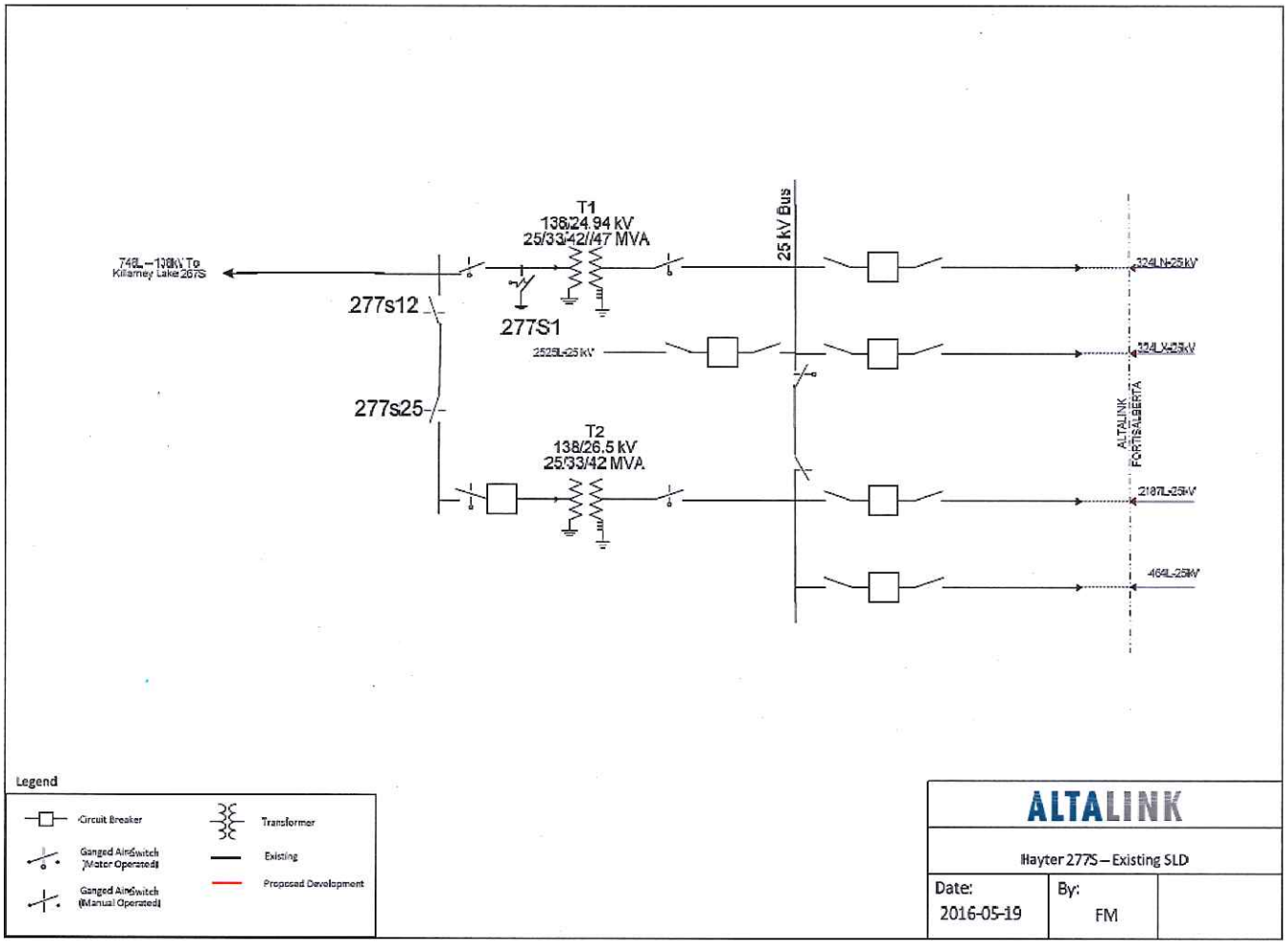
If you have any questions or concerns regarding this correspondence, please contact Ghaith Saab at (403) 267-4408 or by email at Ghaith.Saab@AltaLink.ca.

Sincerely,

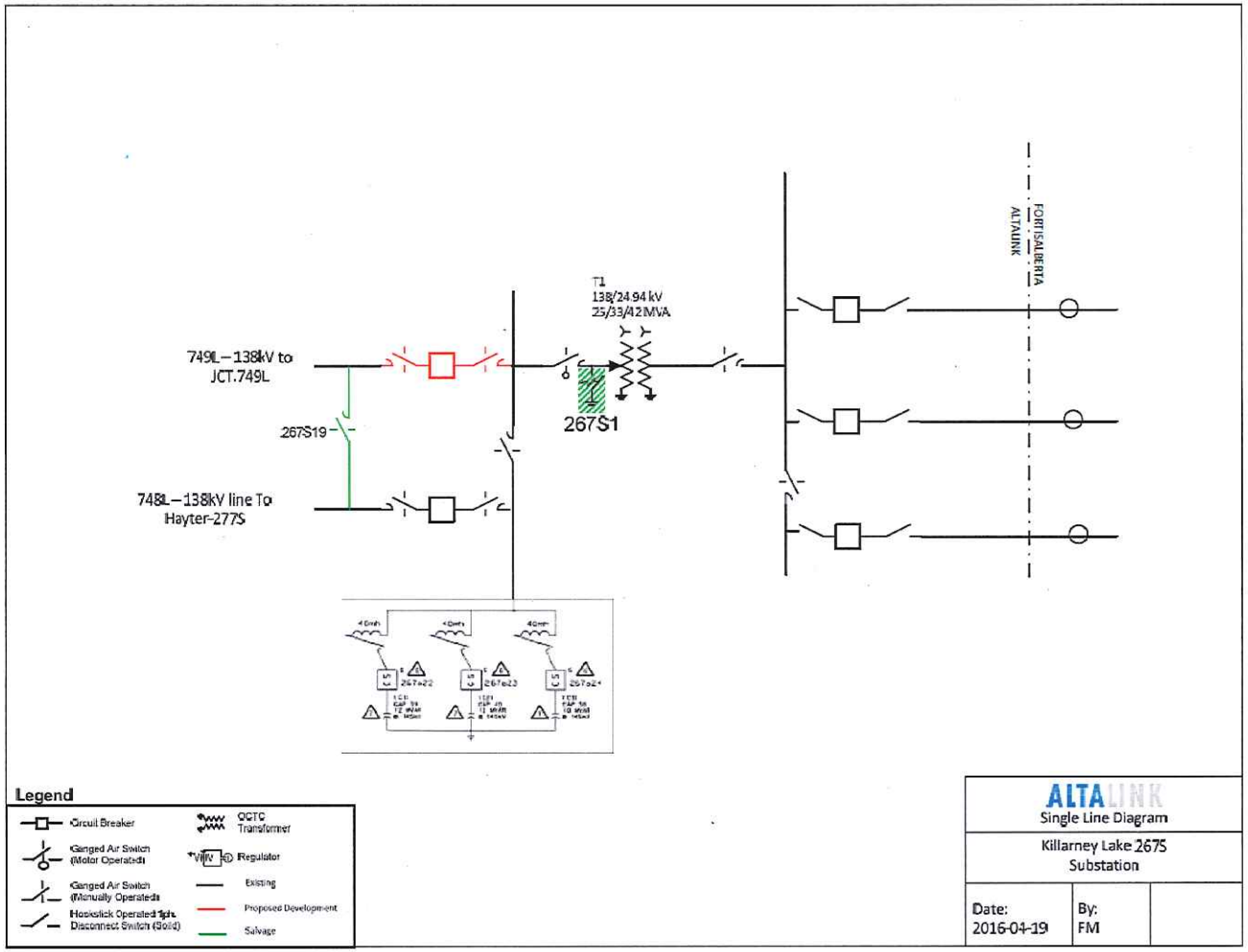
Lidia Serpas
Director, Customer Projects



Provost 545S - Proposed



Hayter 277S – Existing



Killarney Lake 267S - Proposed