

Data Request Review Working Group Presentation

September 27

Prepared for AESO Tariff Design Advisory Group

Scope and Deliverables

- Scope

- Review data/information requests submitted by the AG members and from Spring 2018 tariff consultation sessions, recognizing the need for allowing new requests to fill the data gaps
- Identify issues and seek clarifications on data requests
- Prioritize data requirement based on criticality for executing the work plan and the time/resource required to deliver

- Deliverables

- Make a recommendation on data requirement by September 27
- Present the recommendation to and discuss with the AG at next AG meeting (October 4)

Approach

- Data requests
 - Consolidated data requests to be provided by the AESO
 - Working group to clarify the request with the person who submitted the request where necessary
- Review and prioritize data requests based on two set of criteria:
 - Purpose
 - Tutorials to better understand context/background/details on the work that is already done by the AESO
 - Issues/analysis that is required as part of the Tariff Design work plan
 - Information and data required to support the analysis
 - Prioritization
 - Criticality (To what extent the requested data support the work identified in the work plan, either analysis or decision making?)
 - Time requirement
 - Resources requirement

Screening criteria

	Criticality	Time Required	Resource Required
Tutorial			
Analysis			
Data			

Summary and Recommendation - Tutorials

Summary of the requests received

1. Transmission planning session to cover
 - Planning process/key drivers
 - Definition of bulk vs regional and any difference in planning approach
 - Drivers of each project identified in LTP
 - Overview of TRIP model
 - Transmission project development process
2. RAM model session to cover
 - Modeling approach, inputs/assumptions, and results
 - Key drivers of capacity needs
3. Self supply session to cover
 - AESO analysis on self-supply as it pertains to the cost allocation
 - Existing and proposed new on-site and BHF generation projects identified in LTO
 - Is CP charge a factor in forecasted BHF energy
4. An overview of previous cost causation studies

Recommendations

1. Proceed to provide requested tutorial sessions
 - Enable effective participation of all AG members
 - Most of the materials are readily available
2. Expand tutorial session 4 to cover the following:
 - Utility tariff design process (e.g. objectives, revenue requirement, cost of service studies, rate design, evaluation)
 - AESO tariff design process
 - An overview of previous cost causation studies (1998 to 2018)
 - AESO cost of service options and limitations
 - An overview of previous tariff designs (1998 to 2018) – John Martin
 - AESO tariff design options and limitations
3. Schedule multiple tutorial sessions in one day to maximize in-person participation

Summary of Requested Analysis – Main Categories

Analysis related requests received by the AESO to date fall into the following categories:

- A. Capacity cost allocation
- B. Transmission planning
- C. Rate design
- D. BHF/DG/DR analysis
- E. Line use analysis

Summary and Recommendation:

A. Capacity Cost Allocation Analysis

Summary of the requests received

1. Impact of moving 100 MW out of each EEA events hour
2. Distribution of unserved energy from RAM model
3. Distribution of EEA events from RAM model
4. Distribution of 250 stressed hours

Recommendations

1. AG to further define the scope of requested analysis #1
 - Sensitivity cases – develop bookends and sensitivity cases (e.g. 1/1, 4/1, base case, scarcity value of load reduction)
 - Criteria – how to compare different cases?
 - What price signals are considered to be “right”?
 - Big enough to drive load response?
 - Reduction has to be real – price tied to fixed hours does not necessary result in reduced capacity procurement even though it reduces load during those hours
 - What about off peak hours who doesn’t cause the capacity need but benefit from capacity available to them?
 - Balance between causation and beneficiary paying
 - How to interpret Gov’t policy direction?
2. Proceed to provide other three requested analyses
 - 250 hours better correlate with UCAP determination
 - RAM model results less so

Summary and Recommendation:

B. Transmission Planning Analysis

Summary of the requests received

1. Drivers of new transmission
 - CP, NCP, regional CP, higher versus lower load
 - Generation (grid gen, DCG)
2. How do these drivers differ in terms of driving the need of bulk versus regional projects
3. Project \$ impact of these drivers
4. Rate impact based on TRIP model
5. Effect of location signals (Gen and load)

Recommendations

1. AG to work with the AESO to further define the scope of the transmission planning analysis after the transmission planning and rate design tutorial sessions
 - What scenarios we should test?
 - How these scenarios will help inform rate design?
2. Other comments
 - Should we consider a case with minimal/zero transmission build?
 - How do we factor into locational factor
 - Should AESO calibrate TRIP model to the most recent available data?

Summary and Recommendation:

C. Rate Design Analysis

Summary of the requests received

1. Gross load versus net load
2. Legislative issues for locational signals
3. Alternative functionalization approach
 - Bulk = 500 kV, regional = 240 kV and below
4. Alternative billing determinant
 - 12 highest hours in a month
5. Rate impact of the above changes
6. Pool price impact of alternative bulk cost allocation approaches

Recommendations

1. All requests should be consider by the AG
2. AG to work with the AESO to further define a scope of the rate design analysis
 - Define a set of rate design options which will form the basis for guiding other analysis
 - Establish evaluation criteria for comparing alternatives
3. Other comments
 - What are the regulatory constraints with respect to using gross load as billing determinant?
 - Should we functionalize policy driven projects into a separate category?
 - What is the impact on market price due to CP load reduction as a result of CP signal

Summary and Recommendation:

D. BHF/DG/DR Analysis

Summary of the requests received

1. Historical MW bypass during CP hours (reacting to CP signal)
2. Monitoring MW bypass on a going forward basis (reacting to CP signal)
3. Uneconomic bypass analysis
 - Focus on with/without transmission cost bypass
4. Forecast of DCG/BHF/DR in the AESO LTO

Recommendations

1. Proceed with requests 1, 2 and 3
2. AG to work with the AESO to further define the scope of a bypass analysis
 - “Uneconomic bypass” needs to be defined
 - BHF generation/DCG economics as a way of reducing transmission cost or earn transmission credit under current tariff
3. Other comments
 - How can we define a set of typical customers, recognizing each customer is unique?

Summary and Recommendation:

E. Line Use Analysis

Summary of the requests received

1. Major bulk line loading during CP/monthly CPs
2. Individual
3. All lines at the same time

Recommendations

1. The transmission planning analysis, coupled with recommended Rate Design Options work, should be able to provide forward looking causation assessment between CP and transmission build
2. Line use analysis based on historical data is less effective in informing rate design relative to forward looking analysis
3. Other comments
 - CP reduction under current tariff is already embedded in historical data
 - Many policy changes will influence generation and result in change of flows
 - Line use analysis could be a proxy if no other ways available to understand the causal relationship between CP and transmission build.

Summary and Recommendation: Data

Summary of the requests received	Rationales
1. Pool price forecast	Benchmark against which to test impact of cost allocation
2. Transmission plan and cost by each project	Understand future transmission costs that may be avoidable by tariff signals
3. Individual self supply's exchange with the grid during 250 hours	Understand historical performance of self-supplier to support capacity cost allocation
4. 5-year Hourly data set on AIES, DTS, supply cushion, supply cushion including available ATC, pool price, generation by fuel type, export, and SD1-2, BR3-5 hourly output	Enable stakeholders to assess alternative cost allocation options
5. Breakdowns of DTS hourly data by demand components of: (1) bulk system with interval meter, (2) distribution system with interval meters; and (3) distribution system without interval meters	Understand the implications and efficiencies of alternative cost allocation options
6. Installed on-site and distributed generation	Understand current situation/implication of alternative cost allocation options
7. Load data and the hour of monthly CP	Understand current situation/implication of alternative cost allocation options
8. Self gen hourly data by facility and aggregated	Understand current situation/implication of alternative cost allocation options

Recommendations

1. Proceed with all the requests
2. Self gen data may have to be grouped into a few categories to protect commercial sensitive info/data
3. On request #5, AESO will need input from DFOs for data at POD level.
4. Comments from DFOs
 - For large services over 2 MWs, getting interval data for 1-2 years is realistic, might be possible to extend to 5 years if the value of doing so is worth the effort
 - For less than 2 MW, DFOs could quantify the amount of interval meters service by rate class on a system wide basis but not on a POD basis

Key takeaways

- All tutorial and data requests can be met without too much of resourcing/timing concerns
- Most of the analysis requests are relevant but further scoping is required on transmission planning and rate design
- Define rate design options early on is critical to guide other work
- Open for another round of the request from AG members would be helpful after tutorials sessions