TDAG
Transmission Tariff Working Group
Next Steps: Data, Study and Resources

February 7, 2018

Areas to be studied

Cost Causation

- What are the drivers of past, planned and potential transmission projects? How much does or did load growth and decline affect past, planned and potential transmission projects?
- How does the AESO include/evaluate planning criteria, load and generation forecasting, stressed cases, alternative identification and evaluation?

Functionalization

- Is utilization of lines related to system load? Is utilization of lines related to regional load?
- How does system peak correlate with area and regional peaks by type (DFO, DFO T-connect, Direct Connect, ISD)?

Areas to be studied (cont'd)

- Can we functionalize transmission costs by other methods (currently by voltage) MW-km, utilization/power flows?

Classification

- Methods to allocate costs between demand and energy – Average & Excess & Minimum System

Rate Design

- Should the AESO have more than one customer class?
- Does increasing transmission costs justify the economic decision to disconnect from the grid, reduce load or add generation to avoid grid costs?
- What has been the response to CP rate design? Estimate avoidance of transmission costs from CP.

Data requests summary

"Data"	Specifications	Resources	Priority
Planning processes and project drivers	• Document planning overview • Determine drivers for all past and planned transmission projects • Qualitative review of potential transmission impact with different rate designs (bookends?)	AESO Planning AESO Tariff TTWG input/review Potential external planning expert review	High
Historical load and generation	• Hourly load and generation data by region and type for period Jan 1, 2009 – Dec 31, 2018 • Hourly by POD for same period [Confidential] • 15min data for total DTS + FTS • 15min data for region . . POD [Confidential]	AESO Market Analytics AESO Tariff TTWG analysis/review [Confidential data to be analyzed by AESO internal only]	High
Forecast load and generation	• Hourly load data by region and type for period Jan 1, 2019 – Dec 31, 2038 • Generation data already supplied in 2017 LTO data file	AESO Market Analytics TTWG analysis/review	Medium

Data requests summary (cont'd)

"Data"	Specifications	Resources	Priority
Utilization by element	• Hourly flows by element (SCADA) • Hourly system demand • Hourly regional demand • For Jan 1, 2017 – Dec 31, 2018 period • Stage 1: 240kV and larger lines Stage 2: 138k/144kV lines Stage 3: review to determine next steps if required	AESO Modeling AESO Tariff TTWG to assist in creating script specifics for hourly flows by line External resource to compile data and complete analysis under TTWG's direction	High
Element database ("cost causation study")	• Update to include "economics/line usage/MW-km" from utilization results	AESO Tariff TTWG External resource to reduce load on AESO Tariff resources	Medium
Future elements	• Update element database to align with future costs included in the updated TRP workbook filed in Proceeding 22942	AESO Tariff External resource to reduce load on AESO Tariff resources	Medium

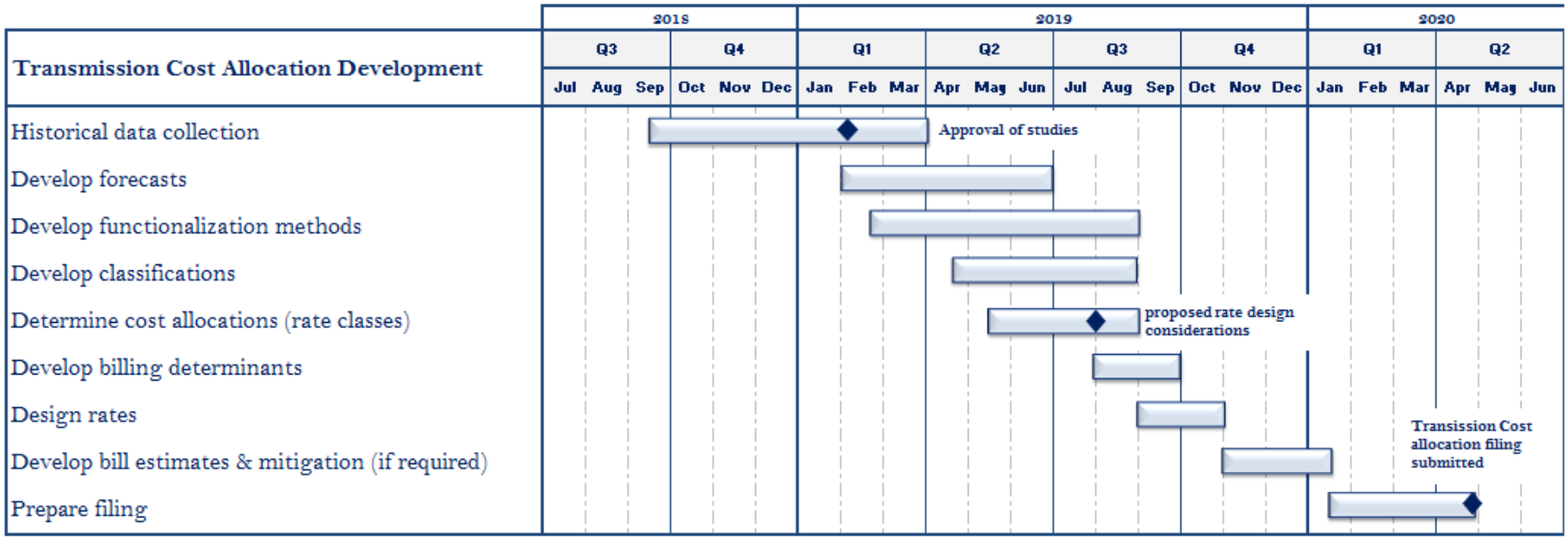
Data requests summary (cont'd)

"Data"	Specifications	Resources	Priority
Legislation/ regulation review of rate classes	• Review ISO tariff, regulation, legislation to determine hurdles, barriers to different rates/rate classes	AESO Legal	High
Historical coincident peak review	• Historical hourly data (already provided earlier)	AESO Tariff TTWG	High
Transmission costs	• TRP model • Publically available information for review of the economics of the addition of generation	AESO Tariff TTWG	High
Past decision summary (no interpretation)	• Document AESO applications regarding CP, bulk/regional, classification to demand/energy • Document AUC decisions regarding same topics as above	AESO Legal AESO Tariff	Potentially to be included in AESO application to assist all parties in documenting history

Studies resources

- AESO internal resources to acquire data
- AESO Tariff resources to assist and analyze data
- TTWG members resources for required data input and for some analysis
- External consultants:
  - To minimize bias and clearly document assumptions
  - Complete large analysis of correlation to line utilization and element database updates
  - Provide a unbiased review of TTWG requested work
  - Offload AESO Tariff resources to ensure work is timely

Schedule


2018
2019
2020
Q3
Q4
Q1
Q2
Q3
Q4
Q1
Q2
Jul Aug Sep Oct Nov Dec Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec Jan Feb Mar Apr May Jun
Transmission Cost Allocation Development
Historical data collection
Develop forecasts
Develop functionalization methods
Develop classifications
Determine cost allocations (rate classes)
Develop billing determinants
Design rates
Develop bill estimates & mitigation (if required)
Prepare filing
Approval of studies
proposed rate design considerations
Transission Cost allocation filing submitted

Approval

- Transmission Tariff Working Group requests approval for these studies
- Additional studies may be proposed as we move through the process

Next steps – February and March

- AESO tariff resources constrained for 2018 tariff proceeding
- Data pull by AESO resources can be fully scoped, resources and timing determined and potentially started/finished in alignment with priorities noted earlier
- Begin RFP process for external consultants
  - Consultant suggestions?

Thank you