Nova Scotia POWER
An Emera Company

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Avoided Cost of DSM
For Discussion

Determining “Avoided Cost”

APPROACHES USED IN OTHER JURISDICTIONS:

1. Proxy Unit
2. Peaker method
3. Difference in revenue requirement (DRR)

Proxy Unit Approach

- Simplest and dominant approach in use
- Assumes that DSM enables a utility to delay or defer a specific future generating unit
- Avoided costs are based on the projected capacity and energy costs of a specified proxy unit (generic, hypothetical or surrogate unit. Eg: CT or CC)
- Proxy unit's estimated fixed costs set the avoided capacity cost and its estimated variable costs set the energy costs
- Unit-specific and does not depend upon system marginal costs
- Agreement required re: choice of unit to serve as the proxy

Peaker Method

- Assumes that DSM, rather than displacing or delaying the need for a particular generating unit, allows the utility to reduce the *marginal* generation on its system and avoid building a peaking unit (typically, a combustion turbine (CT))
- Avoided capacity costs are typically those of a CT
- Avoided energy costs are the forecast marginal energy costs as determined from Strategist differential runs (with and without DSM)
- This approach is similar to the Proxy. The relatively low capital and high operating costs may approximate the alternative unit which may be a CC, with higher capital costs but lower operating costs.

DRR Approach

- Calculates the difference in revenue requirement (the utility's overall operating cost) with and without DSM
- System costs are determined (using strategist/plexos) for two scenarios:
  - Without DSM effects
  - With DSM effects
- Avoided costs are equal to the present value of the difference in total generation costs with and without DSM
- DRR approach in other jurisdictions is sometimes preferred in periods of "resource sufficiency"
  - Since no new unit is being considered, avoided costs are based on costs associated with existing fleet/purchases

Avoided Costs & Nova Scotia

- Future approach under new legislation warrants further discussion
- Difference in Revenue Requirement method is the method that has been used in the past by NSPI and is similar to screening capital investment decisions
- Strategist is a Production Cost Model
  - Emissions, RES benefits incorporated
  - Effects on T&D costs may need to be considered
- Avoided costs have been produced on an annual basis
- What DSM evaluation/screening process to be followed
  - Post IRP
  - in between IRPs, assumption set
- Stakeholder engagement