PARTICIPANT-RELATED COSTS FOR DFOS (SUBSTATION FRACTION) AND DFO COST FLOW-THROUGH PROPOSAL

OVERVIEW OF PROPOSAL

- To connect to the AIES, Transmission-connected Generation (TCG) pays only its incremental costs to connect.

- To connect to the AIES, Distribution-connected Generation (DCG) pays not only its incremental costs to connect but also costs that flow through from the Distribution Facilities Owner (DFO) related to transmission system substation projects, past and future, that were or will be initiated by the DFO to address load servicing distribution reliability deficiencies.

- To reconcile this incongruity, the AESO need only exercise the legal discretion it has within the existing ISO tariff provisions to determine the non-incremental costs in question to be system-related and not participant-related.

PRINCIPLES PROPOSAL BASED ON

1. Consistent Treatment under the AESO BTF Connection Process

2. Encourage DCG (Without Subsidy)

3. Consistent and Fair Treatment Between TCG and DCG, Through Equal Access to the AIES

1. Consistent Treatment under the AESO BTF Connection Process

DCG should not bear transmission system upgrade costs. As Behind-The-Fence (BTF) projects, DCG is explicitly and categorically barred from requiring or effecting such upgrades.

Flowing through these costs, whether retroactively or in the future, for transmission system changes, that are forbidden for a DCG project to participate in, is patently nonsensical.

This treatment becomes increasingly egregious considering that such transmission system changes were and/or are specifically vetted as necessary and entirely unrelated to the DCG project.

2. Encourage DCG (Without Subsidy)

The flow-through of substation fraction allocations to DCG projects defeats, discourages and terminates DCG projects, confining them to aging, no load growth PODs. DCG needs to go where the load growth is, and bring with it the tangible benefits that DCG brings to the AIES:

- Offsets to investments in transmission, or distribution facilities that would otherwise be recovered through rates
- Increased electric system reliability
- Reduced reliance on the high voltages and currents and the complex delivery systems that are conducive to grid failures, particularly in Alberta's high wind and other climatological conditions

- Islanding localizes the impact of transmission system failures, giving local distribution systems and customers the ability to ride out major or widespread outages

- Flexibility and fuel source diversity with DG gas peaker, DG solar, and DG storage all very competitive in Alberta now, offering an ideal stand-alone DG generation mix

- Emergency supply of power

- Reduction of peak power requirements

- Efficiency, eliminating entirely complete transmission line loss equivalents

- Improvements in power quality, and provision of ancillary services

- Inverter based DG (solar PV) systems use capacitors that innately provide reactive power up to the nameplate capacity of the generator
- Inverter based DG (solar PV) actively cancels/ mitigates transients in real time at or near the customer level, improving grid stability
- Inverter based DG (solar PV) provides extremely fast ramping to follow sudden increases or decreases in load, improving system stability and component lifetimes
- Reductions in land-use effects and rights-of-way acquisition costs
- Reduction in vulnerability to terrorism and improvements in infrastructure resilience

3. Consistent and Fair Treatment Between TCG and DCG, Through Equal Access to the AIES

There needs to be consistent and fair treatment between TCG and DCG. If TCG pays only its incremental costs to connect to the AIES then DCG should pay only its incremental costs to connect to the AIES also.

PROPOSAL

1. Backdrop
2. How This Plays Out
3. How To Reconcile This Incongruity
4. What Mechanism To Use

1. Backdrop

To connect to the AIES, TCG connects to the transmission system. To connect to the transmission system, TCG pays only its incremental costs to connect. Beyond these incremental costs, TCG does not pay or contribute to the costs of the transmission system. Load customers pay these transmission system costs and the AESO characterizes these non-incremental costs as “system-related”.

To connect to the AIES, DCG connects to the distribution system. To connect to the distribution system, DCG pays not only its incremental costs to connect but also costs that flow through from the DFO related to transmission system substation projects, past and future, that were or will be initiated by the DFO to address load servicing distribution reliability deficiencies. The AESO characterizes these non-incremental flow-through costs (i.e., substation fraction costs) as “participant-related”.

2. How This Plays Out

TCG benefits from the deeming of construction costs related to the transmission system substation facilities that TCG tie into, as system-related, effectively shielding TCG from the construction costs of these facilities, whether existing or new, notwithstanding TCG's full use and access to such facilities at no cost to them.

DCG enjoys no such privilege where construction costs of transmission system substation facilities flow-through to them.

3. How To Reconcile This Incongruity

DCG needs to be treated no differently than TCG. TCG is shielded from non-incremental transmission system costs (i.e., "system-related costs"), paying only the incremental costs to connect to the AIES. DCG too needs to be shielded from transmission system costs, including transmission system costs attributable to DFO initiated projects to address load servicing distribution reliability deficiencies, and like TCG, pay only its incremental costs to connect to the system. This is parity. This is the fair and balanced approach, and this is the approach taken by every reasonably competitive jurisdiction on the planet.

The issue arises from the treatment of the DFO and DCG as though they are one and the same, as equivalents, and from the delineation of the AIES into two separate systems (transmission and distribution).

4. What Mechanism To Use

The ISO tariff, as it is currently written and approved, provides a mechanism to protect DCG (and equally important the DFO) and allow for viable DCG where transmission system substation upgrades are (or were) implemented to address load servicing distribution reliability deficiencies: The AESO need only exercise the legal discretion it has under subsection 10 of section 8 of the Tariff to determine the costs to be system-related and not participant-related.

Subsection 10 of section 8 of the Tariff:

ISO Tariff – Section 8
Construction Contributions for Connection Projects (continued)

aeso

Limitations

10 The **ISO** may exercise discretion in the application of the **construction contribution** provisions in the **ISO tariff**, including the determination of costs to be system-related in certain circumstances that might, under strict application of the **construction contribution** provisions, have been classified as participant-related.

Through equal access to the AIES, this is the only approach that gives rise to consistent and fair treatment between TCG and DCG.

IMPLICATIONS OF PROPOSAL

- Establishes consistent treatment of DCG under the AESO BTF connection process
- Encourages DCG (without subsidy)
- Establishes consistent and fair treatment between TCG and DCG, through equal access to the AIES