Transmission Contribution Policy

Issue

BC Hydro's Tariff Supplement 6 (TS6) governs customer contributions towards new transmission to serve them. System expansion costs are "rolled in" to BC Hydro's rates provided a customer purchases a sufficient volume of electricity. This shifts costs from the new customer to all BC Hydro ratepayers.

Background

New industrial customers paid 100 percent of system reinforcements required to serve them up to 1991. New industrial customers argued that this was a barrier to new investment. Government concurred and directed BC Hydro to develop a new tariff with a cost-sharing mechanism. TS6 was approved by the British Columbia Utilities Commission (Commission) in early 1991.

Under TS6, the connection between a customer's facility and the BC Hydro grid has three parts.

1. The customer undertakes "the design, approval, land acquisition, and construction" of the transmission line connecting the facility to BC Hydro's system where "reasonable, practical, and economic." If it is not "reasonable, practical, and economic" for the proponent, BC Hydro undertakes these activities. The new customer is responsible for 100 percent of costs.

2. BC Hydro makes a Basic Transmission Extension (BTE), in which it modifies its existing facilities to allow the transmission line to connect to the grid. The new customer is responsible for 100 percent of costs.

3. BC Hydro identifies upgrades to its existing transmission system (known as System Reinforcement) required to supply electricity to the point of BTE. System reinforcement costs are shared according to the terms and conditions set out in TS6.

BC Hydro also provides the new customer with an offset for its share of system reinforcement costs. The offset is the lower of either a) the actual system reinforcement costs; or b) the first year of anticipated electricity sales revenue times 7.4. The new customer typically provides a letter of credit (or equivalent form of security) for the value of the system reinforcement which is drawn down over the first 7-8 years of operations. The offset typically covers all of the costs of transmission reinforcements for facilities with high utilization factors.

System reinforcement costs do not include incremental generation costs or 500 kilovolt (kV) transmission lines unless the load exceeds 150 megavolt amperes (MVA). The assignment of

incremental generation costs to loads 150 MVA or higher potentially leads to the new customer paying the full cost of new transmission. (See Generation Contribution Policy)

Transmission contribution policy has been relatively stable since TS6 was implemented. However, Government decided on a proportional contribution policy for the Northwest Transmission Line (NTL) in 2010 given the unique characteristics of the project. The NTL is a system expansion undertaken to meet Government's clean energy and industrial development objectives. A lack of demand, high project costs and TS6 security provisions would have likely made the project cost-prohibitive without an alternative approach. The intent of the proportional approach is to keep ratepayers whole over time as new load and generation materializes.

Discussion

The TS6 offset rebates new customers for some or all system reinforcement costs based on a more expansive definition of revenue than costs. This spreads incremental transmission costs of new customers across all ratepayers. However, TS6 only provides the maximum offset when revenue from the new customer is relatively large compared to the system reinforcement required. This leads some new customers with smaller projects to argue connection costs are cost-prohibitive and that the broader benefits of their projects are ignored.

The use of electricity sales revenue to offset system reinforcements mixes generation and transmission costs. Customers under 150 MVA can reclaim their security under the offset by paying the same embedded-cost rates as other customers. Customers over 150 MVA may pay the full cost of transmission, even if system reinforcements costs may be no higher than a customer under the threshold. This is potentially a barrier that does not support the job creation objective in the *Clean Energy Act*.

Changing transmission contribution policy would not impact existing customers aside from its impact on the future trajectory of rates. Tightening policy would protect existing customers from costs of new expansion but potentially limit economic development in remote regions, especially by relatively small potential customers. This might also have an environmental impact if it led to missed opportunities for fuel switching in remote communities. Eliminating the policy, on the other hand, could create upward rate pressure due to transmission expansion costs, but potentially improve economic development opportunities in remote communities. Transmission development under such a policy could lead to ecosystem impacts if more corridors were developed.