C10-26

Industrial Electricity Policy Review Task Force Final Report

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October 31, 2013

BC Hydro should work with its industrial customers and the Commission to develop options that take advantage of industrial power consumption flexibility, such as time of use rates and interruptible rates.	Over the next year
The industrial tariff supplement that sets out the terms and conditions of connections, Tariff Supplement 6, is over 20 years old and should be reviewed in a Commission public process.	Before next IRP
End use rates which have no impact on ratepayers could be considered but those which impact ratepayers and are directed by Government should be paid for by taxpayers and not ratepayers.	Before next IRP
Government need not act on the Commission's 2009 Transmission Service Rate report until BC Hydro's surplus has diminished and the effect of the other recommendations in this report can be seen.	Before 2020
Other Recommendations:	
Recommendation:	**Timing**
An independent review of the Commission should be undertaken to evaluate resource needs, review processes, and performance.	Immediate
BC Hydro should host a workshop on its regulatory accounts to improve understanding of the balances and the provisions in place for dealing with them.	Over the next year
BC Hydro should benchmark and publicly report on its transmission interconnection turnaround times for both new generation and new load.	Before next IRP

2. Rationale and Mandate for Industrial Electricity Policy Review

Concerns about rising electricity costs, the suitability of BC Hydro's industrial tariff, outstanding Commission recommendations about the Transmission Service Rate (TSR), and policy and scope matters arising from the Dawson Creek/Chetwynd Area Transmission Reinforcement Project review, pointed to the need for some sort of systematic evaluation. The then Minister of Energy, Mines and Natural Gas launched the Industrial Electricity Policy Review (Review) in January 2013. The Terms of Reference (ToR) require the task force to review the current industrial electricity policy and legislative framework, and advise Government on changes that may be required to achieve provincial policy objectives.

We are to identify how transmission voltage rates contribute to the Province's conservation, environmental policy and economic development objectives. We have also been directed to assess the tradeoffs that may be necessary between the three objectives as well as provide principles to guide the Province's use of its directive powers related to BC Hydro and the Commission in order to pursue provincial policy objectives.

The ToR further requested us to consider the following specific items:

- Allocation of embedded cost resources between new and existing customers;
- Whether postage stamp rates remain appropriate for industrial customers;
- Whether end use rates would be appropriate for industrial customers;
- Whether retail access would be appropriate for industrial customers;
- What action(s) the Province should take in relation to the Commission's 2009 TSR report;
- A comparison of effective industrial electricity costs in relevant jurisdictions; and
- Any other issues related to current or future transmission voltage rates the task force determines relevant to its recommendations.

In June 2013, the Review ToR were supplemented to include:

- A review and evaluation of industrial time of use pricing;
- A review of utility interconnection policies and timelines;
- Approaches to interconnecting large loads in hydroelectric based jurisdictions; and
- A review and evaluation of retail access policies.

The ToR and the June supplement are included as Appendix 2 and the task force process and consultation summaries are included in Appendix 3.

allow sufficient difference in ToU rates between low cost periods and high cost periods to be attractive enough to potential customers.

Industrial customers who might be interested in interruptible rates could face initial costs to invest in equipment to make interruptions possible and would likely face additional costs whenever they were interrupted. The number of interruptions a customer might face in a given time as well as the duration of each interruption would likely be factors increasing interruption costs. The reduction in rates or payments in return for interruptions will have to compensate the customer for these costs if there is to be any acceptance of the interruptible rate by industrial customers.

BC Hydro's ability to interrupt customer loads can meet increased reserve requirements, possibly reducing BC Hydro's costs. For an interruptible rate to be feasible, the savings to BC Hydro must exceed the incentives required to attract a potential customer.

Conclusion

ToU and interruptible load rates may provide cost relief to some industrial customers and reduce BC Hydro costs. There are many variations of these rates in other jurisdictions. Careful program design will help avoid unintended consequences, so there should be detailed consultations and possibly use of pilot programs.

Recommendation: BC Hydro should work with its industrial customers and the Commission to develop options that take advantage of industrial power consumption flexibility, such as time of use rates and interruptible rates.

6.13 Utility Interconnection Timelines

Analysis

Delays in transmission availability are cited as an obstacle to industrial development in British Columbia. BC Hydro's transmission interconnection process is perceived as slow, cumbersome, unresponsive and expensive by customers. The risk of missing in-service dates could drive new industries to self-supply rather than take grid service.

Interconnection processes in British Columbia, like those in most jurisdictions, are governed by tariffs. While BC Hydro is subject to timelines on its open access transmission tariff, it is not on its tariff to connect large industrial customers. Fixing timelines for potential new industrial electricity customers could remove a source of investment uncertainty from projects.

Information on connection timelines in other jurisdictions has been limited. Alberta's Electricity System Operator estimates a typical timeline of 24-36 months, but timelines can vary with project complexity, the number of projects active, stakeholder impacts, etc. Bonneville Power Administration staff indicate that utilities in the Pacific Northwest do not have fixed

interconnection timelines for industrial interconnections. Even with better information on other jurisdictions, the topography and amount of radial transmission in British Columbia may complicate transmission development in ways that make it difficult to directly compare timelines in British Columbia to other jurisdictions.

Fixed interconnection timelines would likely require that utilities devote more resources to the interconnection process or that they take on additional risks associated with delivery or less comprehensive analysis when multiple connection requests happen at once. Regulatory and consultation process requirements may mean any timeline is no longer under the utility's control. If the utility staffs up to deal with a rush of interconnection requests, it becomes difficult for the regulator to assess whether costs are appropriately allocated after the requests slow down. There is a risk of upward pressure on rates. If utilities do not devote additional resources to meet timelines, they must accept the risk that either they will not meet the timeline (and incur any penalty for failing to meet it), or reliability or cost overrun risks due to lack of study.

Public-private partnerships for the planning and development of transmission might offer utilities an opportunity to reduce their exposure to project cost risks as long as there are safeguards to ensure standards are met. Natural gas generation sited nearer to load may, in some cases, be another way to limit costs and risks associated with interconnection by limiting the need for transmission reinforcement.

Conclusion

Limiting interconnection timelines would be useful to new industrial customers, but would involve costs to ratepayers and/or potential risks to utilities. It is not clear that current practices optimally weigh this trade-off. Careful consideration must be made of the appropriate targets and processes and the potential costs and benefits of any change.

Recommendation: BC Hydro should benchmark and publicly report on its transmission interconnection turnaround times for both new generation and new load.

6.14 Government Approaches to Attracting and Retaining Industrial Load

Analysis

Government has the ability to intervene by modifying interconnection policy or by setting rates to attract or retain industrial customers. British Columbia has done so in the past, notably with the Power for Jobs program in the 1990s. Ontario has a program to provide price relief for up to 5,000 GW.h per year to new or expanding loads to recover load lost through the 2008 economic downturn.

In its early days, the Bonneville Power Administration served several industrial customers directly, but has not issued new contracts of this type. The Government of Quebec has

legislative authorities to set electricity rates for certain customers and to grant load allocations at certain rates. It has apparently negotiated deals with large industrial customers in the past, offering lower electricity rates for things like employment guarantees, and may continue to do so.

Newfoundland and Labrador's Electrical Power Control Act (EPCA) specifies that rates should promote the development of industrial activity in Labrador, and specific industrial customers have lower rates assigned to them, offset by specific charges. However, the Public Utilities Board and not the government administers the EPCA and the charges. It's not clear what role government had in setting these.

The Government of Manitoba works with potential new large electricity customers who are considering locating in the province, but not on rate or interconnection issues. These are the responsibility of the Manitoba Public Utilities Board and Manitoba Hydro. If a new customer has a concern with Manitoba Hydro's execution of its policies or timelines, they can raise the issue through government.

One risk of using special electricity rates to encourage specific kinds of load arises from the fact that rate allocation is typically zero-sum: the revenue shortfall from one group of customers must be made up somewhere else. One option is to fund targeted rate cuts through a reduction in the dividend, but otherwise the revenue would have to come from other customers. Cross-subsidization of a favoured customer group by another can impact the disfavoured group's competitiveness. For example, a rate intended to attract new industrial load could shift costs to an existing customer and cause that customer to go out of business, taking its associated jobs, investment, tax revenue, and load with it.

Tax policy may be an alternative to using interconnection cost or electricity rates as a means to attract load. Few jurisdictions in North America apply state or provincial sales taxes to industrial electricity consumption; Manitoba has lower provincial sales tax rates on some trade-exposed industries, like mining and manufacturing. This approach would avoid cross-subsidization, and the costs of meeting government priorities would remain with the taxpayer. Government would assess whether the socio-economic benefits of the project justified foregoing tax revenues.

Conclusion

Different jurisdictions each face their own unique geographic, market, and political pressures and have different approaches to policy as a result.

Appendix 2.2: Text of Minister Bill Bennett's Letter Expanding the Task Force's Mandate

June 19, 2013

Mr. Chris Trumpy
Chair
Industrial Electricity Policy Review Task Force
2083 Neil Street
Victoria, BC V8R 3E1

Dear Mr. Trumpy:

On January 13, 2013, Honourable Rich Coleman, the previous Minister of Energy, Mines and Natural Gas, issued a Terms of Reference (ToR) for the Industrial Electricity Policy Review (Review). The ToR appointed a task force consisting of you, Mr. Peter Ostergaard and Mr. Tim Newton. I understand the task force is currently working on its Interim Report. As the recently appointed Minister of Energy and Mines, I would like to thank you for your work to date as well as add to the Review ToR.

I am aware of the content included in the task force's draft Consultation Summary. There appear to be several issues that emerged from the task force's consultation process that were either not explicitly noted in the ToR or require further analysis. These include, but are not limited to:

- The feasibility of "Time of Use" pricing to provide capacity benefits to BC Hydro and financial benefits to industrial customers with flexible operations;
- Industrial customer concerns related to the time and costs associated with BC Hydro interconnecting new industrial loads;
- Mixed views on the appropriateness of a threshold above which new industrial customers would pay the marginal cost of energy supply versus spreading costs across BC Hydro's entire rate base; and
- The feasibility of different retail access models (i.e., enabling industrial customers to meet some or all of their electricity needs from a supplier other than BC Hydro).

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framework does not strike the appropriate balance between environment and economic development objectives. One stakeholder noted that only one of the 16 provincial energy objectives listed in the *Clean Energy Act (CEA)* relates to economic development. Another emphasized that minimizing environmental impact should be considered along with cost.

Industrial customers indicated that most electricity-intensive industries in British Columbia are trade-exposed price-takers that cannot pass increased electricity costs through to their respective customers. This means that increased electricity costs must be offset through operational efficiencies that are getting more difficult to find or reduced returns that may lead to decisions to invest outside British Columbia. Large rate increases over a relatively short period of time may make some industrial customers operations uneconomic. Industrial customers indicated this would cause a ripple effect through the economy (particularly in the forest sector).

Stakeholders did not feel that British Columbia continues to be a low-cost electricity jurisdiction. Industrial customers indicated that BC Hydro's industrial rates in some industry sectors are no longer competitive. They also made the point that BC Hydro's relatively low, cross subsidized residential rates are irrelevant when considering the competitiveness of industrial rates in British Columbia. Many stakeholders indicate that BC Hydro's low cost electricity advantage has been, and will continue to be, eroded due to BC Hydro's capital spending plans and the eventual recovery of the deferral accounts. Industrial customers felt that any provincial energy policy needs to recognize the inherent link between the level of electricity consumption and economic activity.

There was general agreement that taxpayers, rather than ratepayers, should bear the costs of achieving Government economic development objectives.

Industrial stakeholders from different sectors stated that shifting industrial demand from peak periods has a value to BC Hydro. Voluntary curtailment or setting up economic incentives for industrial customers to shift their usage could help address BC Hydro's projected capacity constraint at potentially lower cost than constructing new projects. Industrial customers provided various options for consideration.

Some industrial stakeholders expressed concerns at how long it takes BC Hydro to move through the transmission interconnection process from initial system studies to the project entering service. This has a material impact on what energy supply option an industrial customer would choose (if the customer has an option). One stakeholder suggested exploring public-private partnerships to undertake transmission projects.

Contribution Policy (Generation)

Most stakeholder input concerning this issue related to the 150 MV.A threshold that has the potential to trigger a contribution for the full marginal cost of generation. The majority of stakeholders, particularly industrial customers, argued that the 150 MV.A threshold is arbitrary