Catalyst Paper Submission to the IEPR Task Force

April 11, 2013

Proposal: Exempt PST on Electricity used for industrial processing of goods
Reduce the PST on electricity from 7% to an effective rate of 1.4%. Adopt the approach used by Manitoba regarding PST on Electricity Taxation to keep BC Industry competitive with other jurisdictions in North America.

Background

The reintroduction in April 1, 2013 of the Provincial Sales Tax (PST) in its original form before the transition to the Harmonized Sales Tax (HST) has put significant cost pressure on electricity intensive industries in BC that are not already exempted.

Prior to the introduction of the HST, the PST was applied to the bills of industrial customers served at the Transmission Service Rate (TSR). No residential customers are taxed on their electricity use. The HST removed this inequitable burden for TSR customers, as it did not apply to any rate class including TSR. The impact of the PST treatment on Catalyst Paper for 2013 is projected to be ~$ 8 million.

Our research indicates that BC will be the only jurisdiction in North America that fully taxes the electricity used in industrial processing. Manitoba is the only other jurisdiction that we are aware of that does tax some of the electricity used in industrial processing since it applies a tax of 1.4% on electricity for qualifying manufacturers.

Challenge

Although taxation is technically not a rate design issue, in this case it materially impacts the delivered cost of energy to industrial customers and creates an additional issue with respect to the competitiveness of energy supply in BC relative to the rest of North America. Moreover, as with any tax, it compounds the impact of any base rate increases.

Any change in taxation policy needs to balance the potential harm to future growth against the direct tax revenue to the province. As Catalyst is about 20% of the domestic industrial load, we estimate that to adopt this policy, it would reduce PST collections from industrial customers by approximately $40 million.

Proposal

The Manitoba taxation model, an effective rate of 1.4% on industrial electricity purchases, provides a sustainable solution recognizing there is no taxation in almost all of North America versus the high PST rate applied in BC.

Proposal: Interruptible Rates

Develop a rate schedule for interruptible power supply that would create a price signal for industrial customers to provide load shaping and demand response services for the utility.

The intent of these rates is to provide the utility with low cost capacity, increased reliability for other rate classes, operational flexibility, and additional trade opportunities. Customers would benefit from a lower cost structure.

Background

Many industrial customers have the operational flexibility and sophistication to quickly change their load profile. This ability has been employed in the past in various bi lateral demand response agreements with some customers and time of use rates. However, discussions with BC Hydro regarding increasing the use of customer resources have not led to any concrete resolutions.

The increasing proportion of non-firm energy sources such as wind and run of river from recent calls creates a need for additional firm balancing resources. In some jurisdictions this has been met with the installation of SCGT as peaking plants. The use of heritage resources for demand response compromises their ability to optimize trade for the benefit of all rate payers.

Industrial loads are distributed throughout the province and the integration of these loads as a response tool provides the system operator a cost effective method to manage loads and voltages throughout the system as variable generators are introduced. These customer loads can effectively act as batteries and capacitors throughout the system.

Energy Intensive companies, like Catalyst with their mechanical pulping capacity and self-generation, have the ability to quickly modify their loads. This ability to load shape is presently limited due to current mill configurations. However, with targeted capital spending, the capacity to swing load could be greatly enhanced. Catalyst Paper alone, for example, could potentially move 200 -300MW from minimum load operation to maximum load.

Challenge

Previous load response arrangements relied on telephone conversations and manual intervention for customer response. This mechanism is prone to human error and miscommunication. It was rarely called upon and was typically done only during periods of

projected high system loads. Installation of equipment that would allow the utility direct control of some customer loads is possible that would qualify as non-spinning reserve. Investment in equipment that would provide utility control or additional to swing load is possible if there is sufficient incentives or certainty that would justify the expenditure.

Outline

1. **Principle**
   Provide a rate structure for interruptible energy that is valued based on its non-firm attributes.
2. **Volume**
   a. Customers would commit to a set of conditions associated with this energy, including:
      i. Amount of energy to shed
      ii. Notice period
      iii. Maximum duration of curtailment
      iv. Maximum curtailment events per year
      v. Minimum period in between curtailment events
      vi. Period available for curtailment
   b. The response would be based on the aggregate response
   c. The customer CBL would be adjusted to reflect participation in this program
3. **Rate Structure**
   a. This can either be administered by a specific energy rate or a monthly availability credit with additional payments for specific curtailment events.
   b. the energy rate would reflect the lower cost of supply of non-firm resources
   c. this tranche of energy would not be subject to demand charges, consistent with RS1880 (Generator Maintenance and Backup supply)
4. **Term**
   a. The term could range from 5-10 years
   b. The term would coincide with the BC Hydro year to simplify administration of the TSR
   c. At the end of the program the CBL adjustment would end and the customer would return to the TSR for that energy

Proposal: Time of Use Rates

Develop a rate schedule for power supply that would create a price signal for industrial customers to plan their loads to the benefit of the utility.

The intent of these rates is to provide the utility with higher loads when there is abundant supply and reduced domestic requirements when supply is expensive. Customers would have the opportunity to benefit from a lower aggregate rate based on their load profile.

Background

Many industrial customers have the operational flexibility to change their load profile. This is presently not done and most customers maintain a flat load profile and schedule maintenance and production runs based on their own market and cost factors.

There have been some time of use rates developed but they have been rarely used since the rates were complex and the price signal was weak (e.g., it only impacted the cost of the Tier 2 portion of the energy).

Industrial loads are all already equipped with smart meters that provide real time power measurements. BC Hydro has an existing table of Seasonal Time of Delivery Factors (STDF) that reflects the relative value of energy at any given hour during the year. The time weighted average of all the factors in a year is equal to unity.

Energy Intensive companies, like Catalyst with their mechanical pulping capacity and self-generation, have the ability to alter their load during the day while maintaining productivity over the long run. This ability to load shape is presently limited due to current mill configurations. However, with targeted capital spending, the capacity to load shape could be greatly enhanced. Catalyst Paper alone, for example, could potentially move 200 -300MW from minimum load operation to maximum load operation.

Challenge

Application of this rate provides predictability for customers but will create additional complexity in the billing process. The other potential issue is revenue volatility for the utility depending on the level of customer response.

The uptake on this type of rate and the potential benefit to the utility in energy purchases and trade opportunities will be a function of the nature of the rate and the magnitude of the incentives for customers to justify these types of expenditures.

Outline

1. **Principle**
   Provide a rate structure that is based on the real time load profile of a customer.
2. **Volume**
   a. Customer load would be the same as the existing Contract Demand
3. **Rate Structure**
   a. Monthly bills would be based on the aggregate of the hourly consumption multiplied by the energy rate and the STDF (see table below)
   b. Demand charges would be the same as TSR1823
   c. Any Tier 2 energy incurred would not have the STDF applied.
   d. term could range from 5-10 years
   e. The term would coincide with the BC Hydro year to simplify administration of the TSR

Table 1. Seasonal Time of Delivery Factors

	Peak	Super Peak	Off Peak	Average
Jan	122%	141%	105%	117%
Feb	113%	124%	101%	109%
Mar	112%	124%	99%	108%
Apr	95%	104%	85%	92%
May	82%	90%	70%	78%
Jun	81%	87%	69%	77%
Jul	96%	105%	79%	90%
Aug	101%	110%	86%	96%
Sep	107%	116%	91%	101%
Oct	112%	127%	93%	106%
Nov	112%	129%	99%	108%
Dec	120%	142%	104%	115%

Proposal: Commodity Indexed Rates

Create a pool of electricity indexed to newsprint prices available to industrial customers in BC. This energy would be linked to the Canadian Entitlement energy from the Columbia River Treaty to avoid any perceived subsidization from other rate classes.

The intent is to provide a price hedge for customers as they transition their businesses and provide the province with at least the same amount of revenue as they would have received if this energy was sold at market prices.

Background

The impact of escalating Tier 1 rates and taxes is disproportionately harsh on electrically intensive, export trade exposed customers. Mechanical pulp and paper producers are an example of this customer class and are unique for BC in that they represent ~10% of the domestic load. Electricity is about 20% of the manufacturing cost for paper and greater for mechanical market pulps.

This concentration of mechanical pulping in BC can be attributed to a legacy of competitive electricity rates and the suitability of the local wood species (bright, strong) for products such as newsprint, magazines and flyers. Moreover, mechanical pulping complements the solid wood sector by consuming sawmill residuals created from their primary process of producing lumber from logs.

All printing and writing grades of paper are declining due to the advancement of electronic media with newsprint particularly hit hard. This market remains oversupplied and this has created a very competitive pricing environment throughout the world. Newsprint continues to be the bellweather paper grade and has pricing which is highly visible and verifiable by independent third party sources like RISI.

Challenge

Flat or declining newsprint prices and increasing rates result in a higher proportion of sales revenue being consumed by electricity costs. Companies like Catalyst Paper have consistently reduced controllable costs over the last ten years working with employees and communities, and developed new grades to diversify sales. However, the pressure of electricity rate increases threatens the sustainability of these businesses. The transition to a different products and/or the reduction in electrical intensity will require significant capital, but those funds are presently being drained away in higher electricity costs.

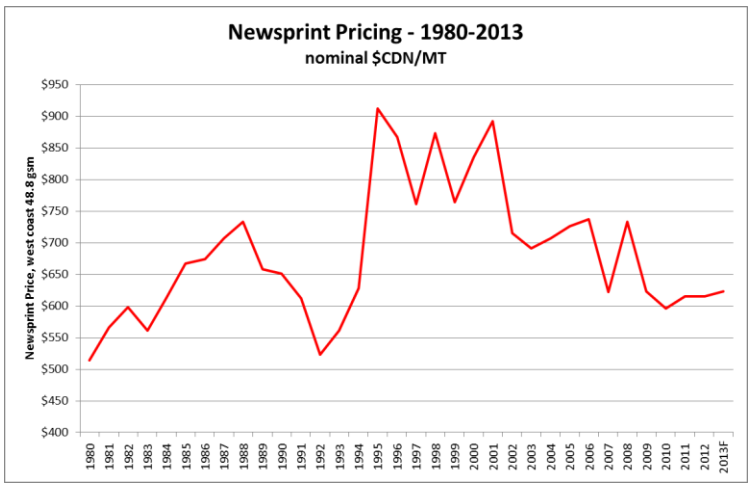
The loss of these mills will not only impact host communities (Catalyst provides an economic benefit of $2 billion to BC) but the larger forest industry as it would need to restructure how

to sell, or dispose, residual chips, pulp logs and hog fuel (e.g., beehive burners are outlawed). In short, the loss mechanical paper mills would be very costly and dramatic across several sectors.

Outline

5. **Principle**
   Provide a rate structure that mitigates the impact of electricity prices on mechanical pulp producers and, over the term of the agreement, provides the province with revenues no less than market sales with an opportunity to share in the benefits of increasing market prices.

6. **Volume**
   a. Customers would commit to a fixed volume of monthly energy
   b. This may be managed as a flat capacity service ("x" MW/hour for all hours) or a monthly aggregate ("y "MWh/month)
   c. The customer CBL would be adjusted to reflect participation in this program



7. **Rate Structure**
   a. the energy rate would be based on an energy price multiplied by the newsprint adjuster
      i. the newsprint adjuster = published monthly RISI newsprint ÷ benchmark price
      ii. the ratio would be based on $CDN (Paper is transacted in $US)
   b. the demand portion would be treated as per the Transmission Service Rate (TSR) to ensure that the customer is making the appropriate contribution to the utilities fixed cost
   c. the rate would have a floor and ceiling, namely:
      i. minimum rate = monthly average Mid C rate, otherwise the province would be worse off than selling directly to market in certain market pricing scenarios
      ii. maximum rate = the rate would never exceed the 1823A blended rate, most customers have significantly reduced their Tier 2 exposure. This would reduce customer upside risk to 10% Tier 2.

8. Term

a. The term could range from 3-5 years
b. The term would coincide with the BC Hydro year to simplify administration of the TSR
c. At the end of the program the CBL adjustment would end and the customer would return to the TSR for that energy