

FOCA's Comments on Staff Discussion Paper dated March 31, 2008 on Rate Design for Electricity Distributors, Board File EB-2007-0031

These comments are provided from the point of view of all Ontario electricity consumers.

I will provide general comments and respond to requests for comment on specific issues throughout the discussion paper.

1.0 Retention of the Residential Class

There are several reasons for retention of residential as a separate class. Numerically it is the largest and more homogeneous than the General Service class in terms of average monthly use and load factor. In looking at the Milton Hydro data, individual residential load factors are half or less than load factors of smaller GS customers.

Residential customers are not as dependent on firmness of supply as the GS class. Reasonable length outages can be accommodated by the res class without economic loss. Only for prolonged outages would there be spoilage of refrigerated food.

Usually there is economic loss to GS customers, even for momentary outages. For more prolonged outages, there is usually loss of sales for a retail operation and production loss and spoilage for industrial operations. This indicates that GS customers should bear more of the considerable LDC costs related to system reliability.

Conditions of supply flowing from the Distribution System Code tend to be quite different for the Res and GS classes.

With heavy use of air conditioning in the south and electric space and water heating in rural areas and the north the res class peak can be expected to be more weather dependent than GS.

The risk of large financial loss due to bankruptcy or plant closures is much higher for the GS Class. As well, loss of a large GS customer often strands LDC assets. Therefore a risk premium should be built into GS rates. Numerous manufacturing and forestry related industries are closing shop at present, throwing stranded costs onto all remaining customers and LDC shareholders. However, the long time frame of this Dx rate design process provides little opportunity for protection from the current economic downturn.

Also, metering for the res class is simple and less costly than the GS class which often requires instrument transformers and multiple meters.

2.0 Residential and Small Business Response to Price Signals

At present, the conservation price signal on consumer bills is entirely energy based in the commodity component. Indeed many LDCs show energy consumption for the prior 12 months so consumers know whether their energy conservation efforts are paying off for them. Very few res consumers are aware that variable distribution costs, all transmission costs, debt retirement charges and the cost of losses are also billed on an energy basis, since most of these costs are hidden in the “black box” of the Delivery Charge component of the bill.

Be that as it may, conservation minded res consumers focus, and are encouraged by the bill format to concentrate entirely on reducing energy consumption.

It is worth noting that all smart meter pilot programs to date, including the OEB sponsored Ottawa pilot, have all concentrated on differential energy charges in peak, off-peak and super peak periods. Response to the energy price signal has been encouraging. One of the most effective programs was the instantaneous in-home signal of real energy prices piloted by Hydro One.

No pilots have been carried out on consumer response to demand price signals.

The Minister has made it abundantly clear in his letter to the Electricity Distributors Association that the government will be retaining RPP for all residential, farm and small business consumers well beyond 2009. The RPP price signal for conservation and load shifting is entirely in the energy component. It would be somewhat bold to introduce a conflicting demand based conservation price signal for the above consumers.

Going forward, the RPP will provide time differentiated energy price signals to encourage load shifting to lower cost periods. However, it is widely accepted that there is very little res consumers can do to shift load. Possibly recognizing this, the OPA has introduced the Peak Saver program so that air conditioners and water heaters can be taken off the Ontario system peak, with no intervention or action on the part of the consumer.

It is a stretch to believe that energy conservation habits ingrained over many generations can be changed to a dual energy/demand price signal.

So my strong recommendation is to continue to provide the historical energy conservation price signal for LDC variable costs and not to introduce the confusing demand reduction price signal. This is underlined by belief that demand price signals will do little or nothing to reduce LDC short or long run distribution costs that are heavily weighted by reliability or (firmness) of supply issues.

3.0 The Boundary Impact Issue

The boundary impact issue at the 50 kw GS level was identified in RP-2000-0069 proceeding. It is not at all clear that LDCs observed the solutions ordered by the Board at that time. This raises questions about the effectiveness of OEB's regulatory compliance efforts.

It is clear that the boundary issues in the GS class were the result of the fixed/variable rate structure introduced to the GS class at that time. Previously this issue was mitigated by rate coordination such that GS customers having a load factor close to the class average could slide either way through the 50 kw boundary with little or no impact.

The present impact problem is a result of the much higher fixed charge for the >50 kw class, rather than the difference in billing determinants. In the case of my own LDC, Barrie Hydro, the monthly fixed charge jumps from \$14.59 for <50 kw customers to \$358.12 for > 50 kw customers; a factor of about 24. Something is seriously wrong in either the rate design or cost allocation process for these discontinuities to appear. This single issue undermines the entire cost allocation/ rate design process. Combining the GS< 50 kw subclass with residential does not solve the over-riding problem of the fixed charge.

So I don't think that introduction of a uniform kw billing determinant for <50kw and >50kw GS customers will fix the problem which was created by the much higher fixed charge for the > 50kw GS customers.

It must be remembered that the >50kw group will not be getting Smart Meters, hence will not be participating in the time differentiated RPP energy charge.

4.0 Supply Voltage Related Rates

In addition to differentiation of 1 and 3 phase GS customers, supply voltage based rates are very supportable as they track LDC costs more accurately. Customers served at sub-transmission voltages should not have to pay LDC Distribution Station costs or any costs related to the lower voltage distribution system. To this point in time, this

difference in costs has been handled by means of a transformer ownership allowance of \$0.60/kw; a number that has not been increased for at least a quarter of a century.

This change will no doubt shift costs to smaller consumers but it is long overdue and well justified.

Customers in the proposed Primary customer class who own their transformation could possibly be added to the sub-transmission class if there is no upstream LDC owned transformation. The 27.6/16 kv and 13.8/8.0 kv systems often serves both larger customers owning their transformers and smaller customers supplied from LDC owned distribution transformers.

5.0 Capacity Based Rates

In the consultation sessions there was little support for rates based on service entrance capacity. They fail to track LDC costs on several fronts. If all or a portion of LDC customers reduced their service entrance capacity, but kept their demand and energy use unchanged, LDC costs would not change yet revenue would decline significantly.

Reduction in res service entrance capacity can be accomplished at little cost by simply hiring a contractor to replace the 100 amp breaker with a 60 amp breaker which still provides a peak capacity of about 14.5 kw, well above the average demand of 5.1 kw noted in the Milton Hydro data.

I think service entrance capacity based rates should be removed from discussion altogether.

6.0 Deficiencies in the Current Cost Allocation System

The Board, along with others, has little confidence in the current cost allocation system.

LDCs are allowed to choose among 3 very different methods for determining the fixed component, and there is a very wide spread in the target revenue/cost ratios among classes.

The minimum system concept is particularly problematic. If all customers used about the same amount of energy, the minimum system concept has some vague credibility.

But no-one yet has devised a formula for definition of a minimum system for a large user of 20,000 kw or a service for a small service for 1-4 street lights.

So before accurate rate design can proceed, deficiencies in the cost allocation needs correction. Both cost allocation and rate design should have been handled as a single process

7.0 Ancillary Issues

It is noted that the discussion paper does not address issues such as density based rates or rates for seasonal residential and GS consumers who consume much of their energy in a few months of the year..

Seasonal residential customers are differentiated largely on the basis of low annual consumption. Seasonal GS customers are not differentiated, but fall into the conventional year-round class.

Likewise, there is no discussion of rates for customers in remote communities not connected to the transmission grid.

Also, there is no recognition in rates that service outages are frequent and prolonged for many of these customers. In order to be comprehensive, the discussion paper and OEB policies should address rates for these customers. But then, it may be preferable for LDCs such as Hydro One and Great Lakes Power to propose appropriate rate structures, rather than developing an OEB policy for these somewhat unique situations.

Response to Specific Questions

4.2 Interruptible Rates

Historically interruptible service was offered to large customers who could disconnect large amounts of load from the grid on short notice. Interruptible loads would be devices such as large electric arc furnaces, large water pumping plants or other electrically intensive industrial processes. In return for an ongoing discount on demand charges, they would be required to disconnect in the event there was insufficient generating capacity to serve Ontario primary demand or a major transmission outage that prevented delivery of sufficient power to certain geographic areas. Most of these

customers were transmission connected. However there may be a few such loads connected to LDC distribution systems.

The responsibility for maintaining system integrity on a day-to-day basis is now in the hands of the IESO. Hence it should be an IESO decision as to whether and how they wish to pursue large interruptible loads. The LDC should be held harmless in the event the IESO wishes to enter an interruptible contract with an LDC customer. That is, I don't think it is an issue that needs consideration in the design of LDC rates.

Having said that, the OPA is continuing with its Peak Saver program targeting residential air conditioning and water heaters. At present, participating customers get a one time rebate of \$25 on their bill. The Peak Saver program is intended to defer the need for new peaking generating capacity. The LDC role is that of facilitator. Unless the program needs an ongoing discount to be successful, the LDC should not be financially affected.

4.3.1 Connection Voltage Based Rate Classes

As discussed above, I do not favour the combination of residential and single phase GS into the same class.

Subdivision of 3 phase GS into multiple sub-classes based on demand will exacerbate the boundary impact issues that presently exist mainly at the 50 kw level.

5.2 The Fixed/Variable Split

As discussed earlier, loading as much LDC cost as possible into the energy component will encourage energy conservation hence reducing demand on LDC facilities. As a result LDC long run costs would be reduced by deferring capacity upgrades.

I don't think res customers would understand a demand based price signal and would probably not respond to it.

5.3 Revenue Stability

The use of an energy rather than a demand billing determinant will enhance LDC revenue stability because peak demand is far more sensitive to weather than energy consumption. For example the presence (or absence) of a very hot day in the summer or very cold day in the winter would have a serious impact on revenue derived from demand charges for the billing period.

The idea of a mechanism to guarantee the OEB prescribed ROE is intriguing. However, such a mechanism would have to operate both ways. That is, if in a fiscal year the allowable ROE was exceeded, the excess would have to be refunded to customers in the following year.

If such a mechanism was in place, other mechanisms such as LRAM or SSM could be abandoned.

The downside of such a mechanism is the removal of LDC incentives for efficiency improvement, hence undercutting all performance based regulation initiatives and transferring the entire consumption related risk to the consumer

6.6 Single phase Secondary Customer Rates

In the discussion paper, a statement is made that low load factor customers are subsidized by those with high load factors under energy billing. This statement does not appear to take into account the fact that high load factor customers are far more likely to be right on the LDC or feeder peak than low load factor customers.

This statement cannot be accepted without further analysis of the variation (bell curve) of residential load factors and application of a probability analysis.

That is, an unproven hypothesis is not sufficient justification for abandoning energy based rates.

6.7 Residential Sub-Class

There are many reasons to maintain the residential class. Existing legislation covering RPP and Rural Rate Assistance are simply further reasons to retain it.

8.2 Contract Capacity and Demand Based Rates

Before considering or embarking on contract capacity based rates, one must realize that no already connected customer is obligated to enter into a contract with the LDC, especially if it could be detrimental to the customer. Only when a customer wants something, such as a new or upgraded service connection, is a contract likely to be signed. The larger and more sophisticated the customer, the less likely they would be to enter a contract that may not be to their benefit.

11 Rate Design for Load Displacement Generation

Since this issue is being looked at for transmission connected, distribution considerations can be deferred until that process is complete.

12 Rate Design for Unmetered Scattered Load

There is a suggestion that all USLs under common ownership should be aggregated for billing purposes and pay a single fixed charge without regard for the number of supply points. This has no basis in cost causality. If the principle is accepted it could be requested by customers in all classes that own multiple properties in the LDCs service territory. Examples would be chain retail outlets, such as coffee shops, gasoline stations and the like. It is clear that USLs benefit greatly from having access to a widely dispersed distribution system and should pay for each supply point.

Because of their unique load profile, street lights should probably be retained as a separate class, but paying for each supply point. Sentinel lights, having an identical load profile could be folded in with the street light class. Since Board direction gives no clues on how to set the fixed charge for each connection point, many have opted to introduce a nominal \$1/month charge, with no basis in the minimum system concept or cost causality.

I don't see a need for a mandatory USL class for cable TV amplifiers since many LDCs meter them.

13 Metered Scattered Loads

For reasons outlined in 12 above, I don't believe customers with multiple facilities on different parts of the distribution should be able to combine demands and pay a single fixed charge as if they had a single supply point. This would simply transfer costs to others in the class. This comment applies whether they are in the MUSH, commercial or industrial sectors.

If the LDC is able to render a single bill for multiple service locations, some slight bill reduction or rebate may be in order to reflect the savings in envelopes, paper, postage etc. But this bill reduction would have to account for the cost of any IT changes necessary to render single bills.

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