

REPORT TO
THE PUBLIC UTILITIES BOARD

LIMITED USE OF BILLING DEMAND

2011/12

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**REPORT TO PUBLIC UTILITIES BOARD
ON THE
LIMITED USE OF BILLING DEMAND RATE OPTION**

SUMMARY

The Limited Use of Billing Demand (“LUBD”) rate option, implemented on July 1, 2000, is an effective way for Manitoba Hydro to address the concerns of low load factor customers. This group of customers, if billed on regular firm General Service rates, is affected by high demand charges in comparison to their relatively low energy use, resulting in a high cost of energy per kilowatt-hour. Over the 2011/12 fiscal year there were 85 customers on the LUBD rate. Of the 85 customers, 62 are classed as General Service Small, 18 are General Service Medium, and 5 are General Service Large.

Billing on LUBD rates as opposed to regular General Service rates has saved LUBD customers, as a whole, \$295,049 during the 2011/12 fiscal year. This represents annual savings of roughly \$3,470 per LUBD customer or \$290 per month per customer. Customers on this rate option continue to have a lower impact on the system peak compared to the overall General Service class, as is evident by their low winter coincidence factor of 33%.

BACKGROUND

On January 27, 2000 Manitoba Hydro filed an Application with the Public Utilities Board (PUB) requesting interim *ex parte* approval for a new rate option, the Limited Use of Billing Demand (LUBD). The application was approved on June 30, 2000 in PUB Order 91/00 for a two year period ending June 30, 2002. The LUBD rate was implemented for billing on July 1, 2000. Since that time several Board Orders have been issued extending the program and Manitoba Hydro has prepared several reports on the status of the rate.

The LUBD rate was introduced to address the high unit energy costs faced by a relatively small number of customers with very low load factors. These customers, who set high demands relative to their overall energy use, were opposed to paying high demand charges when they used little energy. Under the program, customers could opt for a lower demand charge in exchange for a higher energy charge. Demand charges are intended to recover at least a portion of the utility’s costs which do not vary with a customer’s consumption but which are incurred to meet the peak load. The LUBD rate option recognized that low load factor customers, as a group,

have a much lower ratio of coincidence with system peak periods than typical General Service customers, and therefore the cost associated with meeting the peak of low-load factor customers is lower.

Initially the main supporters of the LUBD rate were winter energy users typically affected by the winter ratchet¹, however given the customers that subscribe to this rate option, the winter ratchet was not the main driver of this rate. The LUBD rate was designed to provide relief to all low load factor customers. The majority of customers has been, and continues to be, the General Service Small Demand rate class where the winter ratchet provision was never applicable.

DESCRIPTION

The LUBD rate was designed such that customers would be indifferent between this rate and the regular firm General Service rate for which they otherwise qualified at a billing load factor of approximately 18%. At billing load factors less than 18% customers could reduce their overall bills by paying a higher energy charge in exchange for a lower demand charge.

There is no change in the Basic Charge or determination of the Billing Demand when customers choose LUBD over standard rates.

ELIGIBILITY

All General Service Demand customers are eligible for the LUBD rate but only those customers with low energy use relative to their billing demand benefit. Customer savings depend on the manner of which the business operates and consumes energy. This means that two customers with the same average annual billing load factor may not see the same results, and a lower annual billing load factor doesn't necessarily mean more savings. For example, a GS Small Demand customer who only exceeds 50 kV.A in a few months of the year, may save little on Demand Charges if they are on LUBD (and pay for all energy at the higher LUBD Energy rate) compared to a customer with an identical billing load factor who exceeds 50 kV.A by a significant margin in most or all months of the year.

Customers on LUBD who choose to convert back to the General Service Firm Rate are not eligible again for the LUBD rate option for the next 12 months.

¹ Winter Ratchet which was applicable to General Service Medium and Large rate classes was removed from the rate tariffs as of December 1, 2009.

CUSTOMER PARTICIPATION

There were a total of 85 customers billing on the LUBD rate in the 2011/12 fiscal year, an overall decrease of 6 customers (most of which ceased operation), from the previous 2010/11 fiscal year.

The majority of customers on LUBD continue to be in the General Service Small rate class.

Table 1:

Rate Class	No. of Customers
General Service Small	62
General Service Medium	18
General Service Large (750 V to 30 kV)	3
General Service Large (> 100 kV)	2
Total	85

In the 2011/12 fiscal year the majority, or 88%, of LUBD customers had an annual billing load factor of 20% or less, as shown in Table 2. Customers with a load factor over 20% or not benefiting on LUBD have been referred to their Manitoba Hydro Representative for review.

Table 2:

Billing Load Factor	No. of LUBD Customers
0% - 5%	17
6% - 10%	23
11% - 15%	17
16% - 20%	10
over 20%	10
Total	85

The billing load factors for LUBD customers are considerably lower than billing load factors associated with typical General Service customers. Based on the most current billing data available, the billing load factor for regular General Service customers was 44% for GS Small, 61% for GS Medium, 57% for GS Large 750 V to 30 kV, and 79% for GS Large > 100 kV.

Load Research data indicates that the peak coincidence factor for the LUBD class is also lower than the class average peak coincidence factor, as shown in Table 3:

Table 3:

Rate Class	Summer Coincidence Factor %	Winter Coincidence Factor %
LUBD	35%	33%
GSS Demand	79%	86%
GSM	81%	86%
GSL 750 V - 30 kV	83%	86%
GSL > 100 kV	72%	86%

Customers participating in LUBD represent 29 different industry types as listed in Table 4. The majority of customers fall in the category of “Other Utility Industries” which typically represents water and waste pumping stations. Other major industry types include Amusement/Recreational Services, Agriculture, and Wood industries. These four industries represent 42% of the LUBD customers.

Table 4:

Industry Type	# of Customers
Accommodation	1
Agriculture	7
Amusement and Recreational Services	8
Auto. Vehicles, Parts, Sales & Service	1
Business Services	1
Chemical and Chemical Products	1
Education	3
Fabricated Metal Products	4
Furniture and Fixtures	1
Industrial and Heavy Construction	2
Local Government	1
Membership Organizations	2
Metals, Hardware, Plumb, Heat, Wholesale	2
Miscellaneous Government	2
Non-Metallic Mineral Products	1
Other Products, Wholesale	6
Other Service Industries	2
Other Utility Industries	14
Paper and Allied	1
Plastic Products	3

Industry Type	# of Customers
Primary Metals	1
Printing, Publishing & Allied	1
Real Estate Operators	2
Refined Petroleum and Coal Products	2
Storage and Warehousing	5
Transportation	1
Transportation Equipment	2
Wood	7
Household Furniture & Appl., Retail	1
Grand Total	85

FINANCIAL IMPACTS

For 2011/12 the total savings to customers on the LUBD rate option, compared to the standard General Service rate, was \$295,049 or approximately \$3,470 annually per customer (\$290 per customer month). Of the 85 customers, 64 benefited during the 12 month period, while 21 customers paid more than they would have been had they been billed on the regular GS rate. Of the 21 paying more, one customer ceased operation, and four have chosen to return to the standard General Service rate. Two accounts are water pumping stations and two are used for irrigation. Due to the effects of weather on the nature of their operation, their usage continually fluctuates resulting in the LUBD rate being more advantageous in some years than in others. All accounts negatively impacted have been forwarded to their Manitoba Hydro Representative for review. Some may choose to remain on the rate because the loss is minimal and they anticipate savings in the future.

Table 5 provides a comparison based on the 2011/12 fiscal year, of the revenue billed to LUBD customers versus what they would have been billed had they remained on the standard General Service rate. Table 6 provides a distribution of the customers as to the amount they saved (or lost) on an average monthly basis for the same fiscal year.

Table 5:

Rate Class	As Billed on LUBD	If Billed as Standard GS	Annual Difference
General Service Small	\$394,341	\$463,130	\$68,789
General Service Medium	\$417,491	\$547,437	\$129,946
General Service Large (750 V to 30 kV)	\$89,357	\$101,612	\$12,255
General Service Large (> 100 kV)	\$100,155	\$184,213	\$84,059
Total	\$1,001,344	\$1,296,392	\$295,049

Table 6:

Average Monthly Savings (Loss)	No. of Customers	% of Customers
Over \$1,501	3	3.5%
\$1,001 - \$1,500	3	3.5%
\$501 - \$1,000	10	11.8%
\$201 - \$500	13	15.3%
\$101 - \$200	14	16.5%
\$0 - \$100	21	24.7%
\$(1) - \$(50)	18	21.2%
\$(51) - \$(100)	0	0.0%
Over \$(100)	3	3.5%
Total	85	100.0%

CONCLUSION

The LUBD rate was designed to provide relief to customers with low billing load factors. Low billing load factors can arise for a number of reasons. When the winter billing demand ratchet existed prior to December, 2009, it was one possible reason for low billing demand load factor, but only one of several, and not the most important reason. Consequently, the removal of the winter ratchet in December, 2009, does not eliminate the need for the LUBD rate or the benefits received by customers who subscribe to it. . Since the inception of the program the majority of customers have been in the General Service Small rate class to which the winter ratchet provision has never applied. Many of these customers are water pumping stations that typically are not used in the winter season. Other customers are primarily summer users in the recreation industry such as golf courses or services used for farm irrigation. Therefore, discontinuation of the LUBD program would adversely affect these low load factor customers.

Though the customer base for LUBD has remained relatively constant, ongoing rate rebalancing between Demand and Energy charges may result in the standard General Service rate once again

becoming advantageous for some of these customers. Manitoba Hydro will continue to monitor customer usage to determine if the LUBD rate is the best option. Aside from the standard General Service rate and interruptible rate programs offered by Manitoba Hydro (which apply primarily to larger loads), the LUBD is the only other rate option available to small and medium commercial/industrial customers.

Manitoba Hydro continues to believe that the LUBD rate option provides the benefits to low-load factor customers as it was intended to. As noted previously, the limited number of customers on this rate has minimal financial impact on Manitoba Hydro or other ratepayers which appears to be more than offset by the much lower coincidence peak of these customers to the system peak.