

MANITOBA)
)
THE PUBLIC UTILITIES BOARD ACT) Order No. 159/03
)
THE CROWN CORPORATIONS PUBLIC) October 31, 2003
REVIEW AND ACCOUNTABILITY ACT)
)
THE MANITOBA HYDRO ACT)

BEFORE: G.D. Forrest, Chair
R.A. Mayer, Q.C., Vice-Chair
Dr. K. Avery Kinew, Member

**AN ORDER APPROVING THE TERMS AND CONDITIONS
OF SERVICE OF THE CURTAILABLE RATES PROGRAM**

1.0 CURTAILABLE RATES PROGRAM

Board Order 7/03 approved the new Curtailable Rate Program (CRP) as a permanent rate offering. Hydro has filed the terms and conditions of service in accordance with the directives in Order 7/03, and these are attached as Appendix A. Order 51/03 stayed Order 7/03, including the provisions respecting the CRP.

By correspondence to the Board dated March 24, 2003, Hydro indicated as of April 1, 2003 there will be approximately 230 MW of curtailable load, as compared to the 110 MW load at the time of the hearing leading to Order 7/03. An internal review indicates the 230 MW is sufficient to meet current planning reserve requirements. However, according to Hydro, additional curtailable load may not provide the same level of value. Hydro is considering a request to cap the level of curtailable load of 250 MW. Hydro had not previously proposed this cap because the program was initially scheduled to terminate November 30, 2003. Hydro subsequently noted this is not an application by Hydro, but mere notification of an upcoming issue.

Board Findings

The Board will approve the terms and conditions of service for the CRP as set out in Appendix A.

With respect to the subscription cap, the Board notes this was not reviewed at the hearing leading to Order 7/03. Any cap and limitation must be considered in light of various issues including accessibility, fairness, universality and competitiveness for Hydro's customers, and can be fraught with a number of practical impediments. These form an integral component of the terms and conditions of service. The Board is of the view interested parties and customers should be involved in any process that considers capping the level of curtailable load to assist the Board in making such a decision.

Accordingly, the Board will require Hydro to file an application in the future if Hydro determines a subscription cap is required. The application should include, at a minimum, the financial implications, the methods considered for capping, and a recommended process for this matter to be heard by the Board.

2.0 IT IS THEREFORE ORDERED THAT:

1. The Terms and Conditions of Service for the Curtailable Rate Program, attached as Appendix A, BE AND ARE HEREBY APPROVED.

THE PUBLIC UTILITIES BOARD

"G.D. FORREST"

Chairman

"G.O. BARRON"

Secretary

Certified a true copy of Order No. 159/03
issued by The Public Utilities Board

Secretary

APPENDIX A

CURTAILABLE RATE PROGRAM

EFFECTIVE APRIL 1, 2003

**TERMS AND CONDITIONS
IN ACCORDANCE WITH
PUB ORDER 7/03**

MARCH 2003

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CURTAILABLE RATE PROGRAM TERMS AND CONDITIONS

1. DEFINITIONS

The following expressions when used in these Terms and Conditions shall have the following meanings:

- a) “Billing Month”: the period of time, generally 30 days, in which Energy and/or Demand is consumed and thereafter billed to the Customer;
- b) “Curtailement”: a reduction in the use of Energy by the customer, as initiated by Hydro, for reliability reasons.
- c) “Demand”: the maximum use of power within a specified period;
- d) “Guaranteed Make-Up”: that quantity of energy consumed during the Off-Peak period (without incurring additional Demand Charges) which exactly compensates the customer for the energy use curtailed during the period of curtailment;
- e) “Energy”: power integrated with time and measured or expressed in kilowatt-hours (kW.h).
- f) “Firm”: load that is not considered interruptible (curtailable);
- g) “Interruption”: a discontinuance in the supply of Energy;
- h) “Load Factor”: the ratio of a customer’s average Demand over a designated period of time to the Customer’s maximum Demand occurring in that period. Monthly Load Factor is found by calculating the ratio of Energy use (kW.h) to highest Demand (kW) multiplied by time (usually measured at 730 hours);

$$LF = \frac{\text{Energy (kW.h per month)}}{\text{Peak Demand (kW) x hours per month}}$$

- i) “Power Factor”: is the ratio of real power in watts of an alternating current circuit to the apparent power in volt-amperes, expressed as $\frac{\text{kW}}{\text{kV.A}}$;
- j) “Protected Firm Load (PFL)”: the amount of load (expressed in kW) that the customer wishes to protect from being curtailed.
- k) “Peak”: defined as all hours from 7:01 hours through 23:00 hours Monday through Sunday inclusive.
- l) “Off-Peak”: all night time hours from 23:01 hours through 07:00 hours. Monday through Sunday inclusive.

2. CURTAILABLE RATE DISCOUNT

A Curtailable customer’s bill is reduced by the Curtailable Load Discount, calculated in accordance with the discount appropriate to the curtailment option selected by the customer and the formula for determining curtailable load.

3. CURTAILABLE LOAD OPTIONS

Available curtailable load options are:

Option ‘A’: Curtail within five minutes of notice for up to four hours and 15 minutes per curtailment

Option ‘C’: Curtail within one hour of notice for up to four hours per curtailment

Option ‘E’: Curtail within 48 hours of notice for up to 10 days per curtailment

Additional description of limits on curtailments (e.g. maximum curtailments per year) is provided on Page 10.

Options ‘A’ or ‘C’ can be combined with Option ‘E’ to increase the discount. Options ‘A’ and ‘C’ cannot be combined with each other.

The terms and conditions of combined Options 'AE' and 'CE' are combinations of the individual options (e.g. notice to curtail for 'AE' would be five minutes for Option 'A' curtailments and 48 hours for Option 'E' curtailments).

4. **USE OF CURTAILABLE LOAD**

Manitoba Hydro maintains generation reserves in order to minimize disruption to firm customers in the event of loss of generation or transmission reserves or unexpected increases in firm load. Manitoba Hydro is also committed to maintain minimum reserves as part of its reliability obligations with the Mid Continent Area Power Pool (MAPP) or successor organization's region.

Manitoba Hydro will use curtailable load resources to meet reliability obligations only. These include:

- to reestablish Manitoba Hydro's MAPP or successor organization's contingency reserves. If Manitoba Hydro's reserves are committed to a MAPP or successor organization's contingency for more than 30 minutes, a curtailment would be called; and
- to maintain Manitoba Hydro's MAPP or successor organization's planning reserve obligations. A curtailment would be called if Manitoba Hydro were in immediate danger of failing to meet its MAPP or successor organization's reserve obligations and thereby be subjected to costly penalties.
- to protect firm Manitoba load when MAPP or successor organization's reserves are insufficient to avoid curtailing firm load (i.e. curtailable load would be curtailed first prior to firm load).

Manitoba Hydro will make firm sales to export customers to the extent that its reserve obligation allows while domestic curtailable customers will be requested to curtail in order to maintain a firm export sale. They will not be requested to curtail in order to facilitate a high value opportunity sale.

5. **CONTRACTS AND TERMINATION NOTICE**

- (i) Discounts or credits offered by the program, as well as all other terms and conditions, are fixed from the date of approval by the Public Utilities Board, unless superseded

by a further order of the Public Utilities Board or unless the program is withdrawn by Manitoba Hydro.

- (ii) Customers selecting the Curtailable Rate Program will be required to contract for the service. In the event that the Public Utilities Board mandates changes to the program, which in Manitoba Hydro's opinion are material, Manitoba Hydro and the customer will agree to amend the contract to incorporate the changes, failing which the contract shall terminate immediately.
- (iii) Customers accepting Curtailable service for the first time may switch curtailment options or switch to Firm service entirely within the first six months, unless they have entered into the Curtailable Service Program from another interruptible rate program.
- (iv) Customers who have participated in the program for a period in excess of six months may:
 - a) re-contract for another Curtailable Rate Option for the following changes by providing two months' written notice to Manitoba Hydro.
 - switch from Option 'C' to Option 'A';
 - add Option 'E' to any other Option.
 - b) switch from Curtailable to Firm service by providing one year's written notice to Manitoba Hydro in which case Manitoba Hydro may convert the load from Curtailable to Firm service at any time during the one year notice period. The one-year notice will not apply when the customer's decision to withdraw from the program is a result of material changes mandated by the Public Utilities Board as outlined in Section 4(ii). Customers who have switched from Curtailable to Firm service may not be permitted to switch back to Curtailable service.
- (v) Customers may re-designate their monthly Protected Firm Loads by providing 12 months' written notice to Manitoba Hydro. Decreases to Protected Firm Load may be subject to capacity limitations and will be at the discretion of Manitoba Hydro. Customers increasing their Protected Firm Load must maintain a minimum curtailable load of 5 MW per month.

6. NOMINATION OF CURTAILABLE LOAD

A customer must have a minimum, nominal curtailable load of 5 MW. Customers may have two options to nominating eligible load.

(i) Guaranteed Curtailment

The customer nominates curtailable load equal to the amount of which is guaranteed to be reduced at the time requested. For example, a customer with a 100 MW load may nominate 10 MW and guarantee that whenever requested that 10 MW of load will be shed. In order to honour this guarantee, the customer will be required to ensure that its load prior to curtailment would be such that it never falls below 10 MW plus whatever firm load the customer wishes to protect.

This customer would receive the full discount for the option chosen for the nominated curtailable load.

(ii) Curtail to Protected Firm Load

The customer nominates a firm load below which curtailment will not occur. The curtailable portion of the customer load will be the load available above the protected firm load at the time of curtailment request. With this type of nomination, there is a risk to Manitoba Hydro that there will be little or no load to curtail when a request is made: i.e. that the customer is operating at or below protected firm level when curtailment request is made.

For this customer, the discount is determined in accordance with the following formula:

Monthly Credit = (PD-FL) x LF x \$/kW Credit for Selected Option where,

PD = the customer's highest demand (kW) in the peak billing period in the billing month.

FL = protected firm load of the customer in kW.

LF = is the customer's overall load factor during the peak billing period in the billing month and excluding any periods during which the customer complied with a curtailment request.

At Manitoba Hydro's discretion customers with load factors less than 50% during peak periods on the curtailable portion of the load may be required to guarantee curtailable load, i.e. to take up Option 6(i).

7. **MANNER OF NOTICE TO CURTAIL**

(i) **Option 'A' and 'C' Customers**

For Option 'A', the Notice to Curtail of five minutes means that the customer must reduce the load by the contracted amount or to the contracted firm amount within five minutes of the initiation from Manitoba Hydro. For Option 'C', the Notice to Curtail of one hour means that the customer must reduce the load within one hour. Initiation will be by telephone or by an electronic signal sent to the customer by the Manitoba Hydro System Control Centre. Both the initiation signal and the load response will be recorded by Manitoba Hydro.

(ii) **Option 'E' Customers**

Manitoba Hydro will give Option 'E' customers notice in writing that their load may be curtailed when Manitoba Hydro expects to be short of firm energy supplies. Manitoba Hydro will provide not less than 30 days notice. Notice will be deemed received three days from the date of mailing; or if faxed or sent by electronic mail, on the date that it was sent.

After the notice period has been met, Option 'E' customers will be on standby and curtailable on 48 hours notice by fax or electronic mail. Manitoba Hydro will give Option 'E' customers notice in writing whenever their standby status is withdrawn.

8. **GUARANTEED MAKE-UP OF CURTAILED ENERGY**

(i) **Option 'A' and 'C' Customers**

When curtailments occur, customers will forego use of energy that would otherwise have been used in production. To assist Option 'A' and 'C' customers in maintaining

production, Manitoba Hydro will guarantee that all kW.h lost during the curtailment can be made up within 30 days from completion of the curtailment, provided such make-up is accomplished except under circumstances described below. In order to make up the energy foregone during a curtailment, Curtailable Service customers will be allowed to exceed, during Off-Peak periods in the 30-day period, the On-Peak Demand established during the billing month without attracting further Demand Charges. Normal Energy Charges will apply to make-up energy immediately following the completion of a curtailment.

Guaranteed Make-Up will be determined by subtracting the customer's maximum allowed load during curtailments from the maximum demand established during the previous 30 days and by multiplying that amount by the duration of the curtailment (or by some other mutually agreed upon formula). Where the maximum demand in the previous 30 days is not representative, the calculation of make-up will be made on a mutually agreed upon basis.

Guaranteed Make-Up quantities will be provided as soon as possible subsequent to a curtailment and Manitoba Hydro will delay Guaranteed Make-Up only in the event that an actual capacity shortage occurs. Under normal circumstances, customers curtailed under Options 'A' and 'C' should be able to complete Guaranteed Make-Up within a few days. Except as noted below, however, make-up is not guaranteed beyond 30 days from the curtailment.

In the event that a curtailment occurs within 30 days of the previous curtailment, the make-up period will be extended such that the customer receives its full 30-day make-up period in respect of each curtailment.

(ii) Option 'E' Customers

Customers curtailed under Option 'E' may be required to wait several weeks before beginning Guaranteed Make-Up (because of system conditions) and may require several months to complete it. If Guaranteed Make-Up becomes unavailable, Manitoba Hydro will notify customers using the same means as employed to notify them of actual curtailments. Because of the difficulty Option 'E' customers may have in completing Guaranteed Make-Up, an additional offset is also provided. For Option 'E' customers only, Manitoba Hydro will also prorate Demand Charges on the curtailable portion of load to exclude the period during which an Option 'E' curtailment was in effect. For example, if the load were curtailed for ten days in

December, the Demand Charge would be reduced by 10/31 or 32% and, as well, the curtailable credit would be applied. This additional discount would apply only during months of curtailment and only to that portion of load which is curtailable. This provision will not reduce the maximum demand established for the purposes of computing the winter ratchet.

9. ADDITIONAL CHARGES FOR FAILURE TO CURTAIL

(i) Option 'A' and 'C' Customers

The first failure to curtail load on request in any contract period will not attract additional charges, but the customer will forego the discount for that month.

After the first failure in a contract period, the following additional charges will apply. First subsequent failure in any 12-month period: loss of monthly discount plus additional charge equal to discount. Second and subsequent failure in any 12-month period: loss of discount and additional charge equal to 3 X discount.

If a customer reaches a point at which cumulative additional charges during any contract period equal or exceed cumulative discounts, Manitoba Hydro will have the right to exclude the customer from further participation in the program.

(ii) Option 'E' Customers

If the customer has elected to participate in Option 'E', in the event of a single failure to curtail load, Manitoba Hydro may in its own discretion exercise one of the following remedies:

- a) the normal additional charges, as described in 9(i); or
- b) twenty-four hours after the time curtailment was to have started, Manitoba Hydro may cause electricity service to the Point of Delivery to be restricted to achieve the maximum load that should have been achieved by curtailment; or
- c) if load limitation as described in 9(ii)b) above is, in Manitoba Hydro's opinion, not practical or reasonable, 24 hours after the time curtailment was to have started, Manitoba Hydro may cause electricity service to the Point of Delivery

to be disconnected for the remainder of the period. Disconnection shall only take place after explicit written communication with the customer and only if, otherwise, firm load customers would be impacted.

10. **MONTHLY VARIATION**

Customers may nominate different quantities of curtailable or firm load for each month provided that a minimum of 5 MW of curtailable load is available in each month. Customers must specify the 12 months Protected Firm Load or 12 months' curtailable load prior to participation in the program and must provide 12 months' written notice to Manitoba Hydro should they wish to increase or decrease their load in any month. Decreases to Protected Firm Load may be subject to capacity limitations and will be at the discretion of Manitoba Hydro.

11. **DURATION OF CURTAILMENTS**

Notwithstanding the maximum single curtailment duration provisions of each of the options, Manitoba Hydro will attempt to minimize the duration.

12. **UNPLANNED INTERRUPTIONS**

In addition to program curtailments for which notice is provided, customers will continue to be subject to unplanned interruptions such as those due to under frequency relay operation during power system emergencies. Manitoba Hydro cannot guarantee continuous service to any class of service in Manitoba or extra provincially.

**CURTAILABLE RATE PROGRAM OPTIONS
FOR APPLICATION AS OF APRIL 1, 2003
UNLESS SUPERCEDED BY FURTHER ORDER OF THE PUB**

Discount to Demand Charge Expressed as Percentage of Reference Discount per kW/month.

OPTIONS	TERMS AND CONDITIONS					
	Minimum Notice to Curtail	Maximum Duration Per Curtailment	Maximum Daily Hours of Curtailment	Maximum Number Curtailments Per Year	Maximum Annual Hours of Curtailment	Discount as Percentage of Reference Discount
A	5 minutes	4-1/4 Hours	6 Hours (Oct. 1 - April 30) 10 Hours (May 1 - Sept. 30)	15 Curtailments	63.75 Hours	70%
C	1 Hour	4 Hours	8 Hours	15 Curtailments	60.00 Hours	40%
E	48 Hours	10 Days	24 Hours	3 Curtailments	720.00 Hours	35%
A&E	Combination	Combination	Combination	18 Curtailments	783.75 Hours	100%
C&E	Combination	Combination	Combination	18 Curtailments	780.00 Hours	70%

The Monthly Reference Discount shall equal A, adjusted by the annual inflation factor as of April 1st of each fiscal year, where:

A = the amount of the Reference Discount which is related to Generation Deferral benefits, expressed in Canadian Dollars; after April 1, 2003, this amount shall be adjusted at the start of each fiscal year of Manitoba Hydro by the Inflation Factor;

Inflation Factor = at the end of each fiscal year of Manitoba Hydro, the percentage change since 2003 in the Consumer Price Index for Manitoba as recorded for the most recent set of 12 month periods for which data are available.

Prior to the yearly adjustment for inflation, the Reference Discount, shall be \$2.75 per kW/month.