REAL TIMEPRICING RIDER

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>RATE CODE</th>
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<tbody>
<tr>
<td>Transmission Service</td>
<td>M660</td>
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<tr>
<td>Primary Service</td>
<td>M662</td>
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<tr>
<td>Secondary Service</td>
<td>M664</td>
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RULES AND REGULATIONS: Terms and conditions of this electric rate schedule and the General Rules and Regulations govern use under this rider.

AVAILABILITY: This rider is available on a voluntary basis and is limited to 20 Customers, who have maintained a measured Demand of at least 200 kW during the historical period used for Customer Baseline Load (“CBL”) development. Priority will be established based on the date that an agreement is executed by both the Customer and the Company.

MANDATORY AND VOLUNTARY RIDERS: The amount of a bill for service will be modified by any Mandatory Rate Riders that must apply and by any Voluntary Rate Riders selected by the Customer, unless otherwise noted in this schedule. See Sections 12.00, 13.00 and 14.00 of the Minnesota electric rates for the matrices of riders.

ADMINISTRATIVE CHARGE: An Administrative Charge in the amount of $340.00 will be applied to each monthly bill to cover billing, administrative, metering, and communication costs associated with real-time pricing, plus any other applicable Tariff charges.

TERM OF SERVICE: Service under this rider shall be for a period not less than one year. The Customer shall take service under this rider by either signing new electric service agreements with the Company or by entering into amendments of existing electric service agreements. A Customer who voluntarily cancels service under this rider is not eligible to receive service again under this rider for a period of one year.

PRICING METHODOLOGY: Hourly prices are determined for each day based on projections of the hourly system incremental costs, losses according to voltage level, hourly outage costs (when applicable), and profit margin.

MINNESOTA PUBLIC UTILITIES COMMISSION
Approved: September 20, 2018
Docket No. E017/M-18-380
CUSTOMER BASELINE LOAD: The Customer Baseline Load is specific to each Real Time Pricing ("RTP") Customer and is developed using a 12-month period of hourly (8,760) Energy levels (kWh) as well as the corresponding twelve monthly Billing Demands based on the Customer's rate schedule under which it was being billed immediately prior to taking service under the RTP Rider. The Customer's CBL must be agreed to in writing by the Customer as a precondition of receiving service under this rider. The Customer's CBL is a representation of its typical pattern of electricity consumption and is derived from historical usage data. The CBL is used to produce the Standard Bill and from which to measure changes in consumption for purposes of billing under the RTP rider.

STANDARD BILL: The Standard Bill is calculated by applying the charges in the rate schedule under which the Customer was being billed immediately prior to taking service under the RTP rider to both the Customer's CBL Demand (adjusted for Reactive Demand) and the CBL level of Energy usage for each month of the RTP service year. The Company will immediately adjust a Customer’s Standard Bill to reflect any changes which are approved by the Minnesota Public Utilities Commission to the applicable rate schedule or resource adjustment.

BILL DETERMINATION: A Real Time Pricing bill will be rendered after each monthly billing period. The bill consists of an Administrative Charge, a Standard Bill, a charge (or credit) for consumption changes from the CBL, and an excess Reactive Demand charge/credit. The monthly bill is calculated using the following formula:

$$\text{RTP Bill}_{Mo} = \text{Adm. Charge} + \text{Std Bill}_{Mo} + \text{Consumption Changes from CBL}_{Hr} + \text{Excess Reactive Demand}$$

Where:

- RTP Bill$_{Mo}$ = Customer's monthly bill for service under this Rider
- Adm. Chg. = See Administrative Charge section above
- Std. Bill$_{Mo}$ = See Standard Bill section above
- Consumption Changes From CBL = $\sum \{\text{Price}_{Hr} \times \{\text{Load}_{Hr} - \text{CBL}_{Hr}\}\}$
- Excess Reactive Demand = See Excess Reactive Demand section below
- $\sum$ = Sum over all hours of the monthly billing period
- Price$_{Hr}$ = Hourly RTP price as defined under Pricing Methodology
- Load$_{Hr}$ = Customer's actual load for each hour of the billing period
- CBL$_{Hr}$ = Customer's CBL Energy usage for each hour of the billing period

CONSUMPTION CHANGES FROM CBL: Hourly RTP prices are applied only to the
difference, determined in kWhs for each hour of the billing period, between the Customer's actual Energy usage and its CBL Energy usage.

**EXCESS REACTIVE DEMAND:** The Reactive Demand shall be the maximum kVar registered over any period of one hour during the month for which the bill is rendered. A separate charge or credit will be made on the bill to reflect incremental changes from the Reactive Demand used in the Standard Bill calculation.

**DETERMINATION OF THE CBL:**

1. Development of the Customer's CBL.
   For a Customer who elects to take service under this RTP rider, the Company and the Customer will develop a CBL using hourly load data from a representative 12-month period. The representative hourly load data to be used will be historical data that originates within two years (24 months) of the date that the Customer begins receiving service under the RTP rider.

   In situations where hourly data are not available for a particular Customer, a CBL will be made by using available aggregate metered usage data and load shapes from Customers with similar usage patterns along with engineering and operating data provided by the Customer and which is verified by the Company.

2. Calendar Mapping of the Base-Year CBL to the RTP service year.
   To provide the Customer with the appropriate CBL for each day of the RTP service year, each day of the base-year CBL is calendar-mapped to the corresponding day of the RTP service year. Calendar-mapping is a day-matching exercise performed to assure that Mondays are matched to Mondays, Tuesdays are matched to Tuesdays, holidays to holidays, and so forth. Calendar-mapping also reflects Customer shutdown schedules. Calendar-mapping is performed prior to each year of RTP service, after any necessary adjustments (as defined below) are made to the CBL.
CBL ADJUSTMENTS: In order to assure that the CBL accurately reflects the Energy that the Customer would consume on its otherwise applicable rate schedule, adjustments to the CBL shall be made for:

1. The installation of permanent Energy efficiency measures as a result of participation in the Company’s Conservation Improvement Project or other verifiable conservation or technology efficiency improvement measures. At any time during the RTP service year, Customers can request that CBL adjustments be made to reflect efficiency improvements and that the adjustment coincide with the time of the installation or change-out.

2. The permanent removal of Customer equipment or a change to operating procedures that results in a significant and permanent reduction of electrical load. At any time before or during the RTP service year, the Company will make adjustments to the CBL to coincide with the time that the equipment is removed or changes to operating procedures.

3. The permanent addition of Customer equipment that has been or will be made prior to the initial RTP service year is based upon known changes in Customer usage and/or Demand that are not directly related to the introduction of RTP.

4. One-time, extraordinary events such as a tornado or other natural causes or disasters outside the control of the Customer or the Company. In these cases, the Company will make adjustments to the CBL as warranted by the circumstance.

CBL RECONTRACTING: RTP Customers, at the time of initial subscription and during future re-subscription periods, shall select a recontracting Adjustment Factor that will be used in the CBL adjustment rule defined below for the next RTP service year. The Adjustment Factor shall be a number between zero and one inclusive.

After taking service under the RTP rider for one full year, the CBL for the second (and subsequent) year(s) of RTP service will be based on both the CBL and the actual load. CBLs will be developed for subsequent years based upon the following general rule:

\[
CBL_{t+1} = CBL_t + \{\text{Adjustment Factor} \times (\text{Actual load}_t - CBL_t)\}
\]
PRICE NOTIFICATION: The Company shall make available to Customers, no later than 4:00 p.m. (Central Time) of the preceding day, hourly RTP prices for the next business day. Except for unusual periods where an outage is at high risk, the Company will make prices for Saturday through Monday available to Customers on the previous Friday. More than one-day-ahead pricing may also be used for the following holidays: New Year’s Day, Memorial Day, Independence Day, Labor Day, Thanksgiving, and Christmas.

Because high-outage-risk circumstances prevent the Company from projecting prices more than one day in advance, the Company reserves the right to revise and make available to Customers prices for Sunday, Monday, any of the holidays mentioned above, or for the day following a holiday. Any revised prices shall be made available by the usual means no later than 4:00 p.m. of the day prior to the prices taking effect.

The Company is not responsible for a Customer's failure to receive or obtain and act upon the hourly RTP prices. If a Customer does not receive or obtain the prices made available by the Company, it is the Customer's responsibility to notify the Company by 4:30 p.m. (Central Time) of the business day preceding the day that the prices are to take effect. The Company will be responsible for notifying the Customer if prices are revised.

SPECIAL PROVISIONS:

1. If there is a change in the legal identity of the Customer receiving service under this RTP rider, service shall be terminated unless the Company and the Customer make other mutually agreeable arrangements.

2. All equipment to be served must be of such voltage and electrical characteristics so that it can be served from the circuit provided for the main part of the load and so that the electricity used can be properly measured by the Meter ordinarily installed on such a circuit. If the equipment is such that it is impossible to serve from existing circuits, the Customer must provide any necessary transformers, auto transformers, or any other devices so that connection can be made to the circuit provided by the Company.

3. If the Customer's actual load exceeds the CBL by an amount that requires the Company to install additional facilities to serve the Customer, the Customer will be responsible for any and all costs incurred by the Company to install the facilities.