

FOR BOARD ACTION

Agenda Item # 6

Meeting Date:

7/27/04

SUBJECT: Proposed Electric Utility Rate Tariff Additions

PREPARED BY: Stephanie Yrjo, Commercial Account Representative
Bryan Blom, Sr. Financial Analyst

ITEM DESCRIPTION:

Two new rate tariffs, General Service-High Efficiency HVAC (GS-HEF) and Medium General Service-High Efficiency HVAC (MGS-HEF) are proposed. "Redlined" tariff sheets of the current GS and MGS tariffs showing the HEF changes are attached. The differences in the two proposed rates vs. the standard rates affect non-summer month charges, as follows:

General Service

| <u>Non-Summer (Oct-May)</u> | <u>GS</u> | <u>GS-HEF</u> |
|-----------------------------|-----------|---------------|
| Customer Charge | \$13.00 | \$13.00 |
| kWh Charge | 6.858¢ | 5.560¢ |

Medium General Service

| <u>Non-Summer (Oct-May)</u> | <u>MGS</u> | <u>MGS-HEF</u> |
|-----------------------------|------------|----------------|
| kW Charge | \$10.537 | \$8.586 |
| kWh Charge | 3.806¢ | 3.195¢ |

The purpose of these tariffs is to encourage energy conservation with our commercial customers through the installation of all-electric, high efficiency heating and cooling technology (e.g., air-source heat pumps and ground source heat pumps).

The benefits of this rate are:

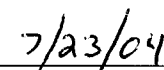
1. Encourages energy conservation through creative "marginal" costing.
2. Enables RPU to accommodate other technologies that meet the criteria and thereby, increases RPU's customer value-package.
3. Provides strategic load growth as qualifying technologies curtails load peaks and fills load valleys.
4. Increases RPU's load factor as measured by kWh sales to total kW demand.

UTILITY BOARD ACTION REQUESTED:

The Board is requested direct staff to provide public notice of the Board's intent to approve the RPU General Service High Efficiency HVAC Rate Schedule (GS-HEF) and the RPU Medium General High Efficiency MGS-HEF (both effective October 1, 2004) at its August 31, 2004 meeting.



General Manager



Date

GENERAL SERVICE - HIGH EFFICIENCY HVAC

AVAILABILITY:

At all locations for loads of less than 75 kW where facilities of adequate capacity and suitable voltage are adjacent to the premises to be served **and to customers who:** For loads where the service desired by the customer is not adjacent to the premises to be served, additional contract arrangements may be required prior to service being furnished.

1. **Use either an air-source heat pump or ground-source heat pump as the only source of heating and cooling in their facility* and**
2. **Use an electric water heater (usually connected to the desuperheater of the heat pump) as the only source of water heating and**
3. **Receive from RPU prior approval of the equipment and**
4. **Equipment must be rated by the American Refrigeration Institute (ARI) and meet the minimum efficiency standards listed below:**

Minimum Qualifications for Air Source Heat Pump (ASHP) Systems:

| <u>SEER ⁽¹⁾</u> | <u>COP⁽²⁾</u> |
|----------------------------|--------------------------|
| <u>9.3</u> | <u>3.2</u> |

Minimum Qualifications for Ground Source Heat Pump (GSHP)/Geothermal Systems:

| <u>EER ⁽³⁾</u> | <u>COP</u> |
|---------------------------|------------|
| <u>14.1</u> | <u>3.2</u> |

⁽¹⁾ SEER: Seasonal Energy Efficiency Ratio

⁽²⁾ COP: Coefficient of Performance

⁽³⁾ EER: Energy Efficiency Ratio

***Note: Other all-electric HVAC systems may be considered for this rate if they meet the stated efficiency standards. To have a system considered, customers must submit an engineering analysis documenting the efficiency of the system (COP, EER, etc.).**

APPLICATION:

To commercial, industrial, governmental, and other types of general service customers with all service taken at one point and measured through one meter. **Not applicable to standby service.** Also applicable to temporary service in accordance with RPU's published Electric Service Rules and Regulations.

CHARACTER OF SERVICE:

Single or three phase, 60 Hertz, alternating current at any one of the standard secondary service voltages as described in RPU's published Electric Service Rules and Regulations.

RATE:

| | <u>Non-Summer</u> | <u>Summer</u> |
|------------------------|---|----------------|
| Customer Charge: | \$13.00 | \$13.00 |
| Energy Charge: | <u>5.560¢</u> 6.858¢ per kWh | 8.437¢ per kWh |
| Rural Customer Charge: | <u>\$12.87</u> \$14.30 | \$14.30 |
| Rural Energy Charge: | <u>6.116¢</u> 7.544¢ per kWh | 9.281¢ per kWh |

GENERAL SERVICE – HIGH EFFICIENCY HVAC (Cont.)

Definition of Season: Summer months are June through September. Non-summer months are January through May and October through December.

PURCHASED POWER ADJUSTMENT CLAUSE:

Bills computed under this rate schedule are subject to adjustment in accordance with the Purchased Power Adjustment Clause (PPAC).

SURCHARGE:

Customers whose service is taken outside the Rochester City limits are subject to a 10% surcharge on their bills (excluding charges computed under the Purchased Power Adjustment Clause).

MINIMUM BILL:

\$11.70 ~~\$13.00~~ per month.

PAYMENT:

Payments are due on or before the due date.

CONDITIONS OF DELIVERY

1. Service ~~furnished~~ under this rate **is only for air-source or ground-source heat pumps and any other all-electric system that meets the stated efficiency standards as explained in the Availability subhead of this rate schedule.** ~~schedule is subject to applicable provisions of RPU's published Electric Service Rules and Regulations.~~

1. **Service under this rate must be separately metered from other facility loads.**
2. **Since the HVAC system must be separately metered for this rate, the customer is responsible for any rewiring and its associated costs.**
3. **Service provided under this rate is subject to applicable provisions of RPU's published Electric Service Rules and Regulations.**
4. Energy **provided** ~~furnished~~ under this rate shall not be resold.
5. RPU shall not be liable for any damage or loss sustained by the customer resulting from interruptions, deficiencies, or imperfections of service provided under this rate.
6. Unless authorized by separate written agreement, standby electric generating equipment installed by the customer shall not be interconnected, or operated in parallel, with the RPU system. Customer shall own, install, operate, and maintain electrical interlocking equipment, which will prevent parallel operation, and such equipment shall be approved by RPU prior to installation.

Approved by Rochester Public Utility Board:
Effective Date:

August 31, 2004 ~~December 30, 2003~~
October 1, 2004 ~~January 6, 2004~~

MEDIUM GENERAL SERVICE – HIGH EFFICIENCY HVAC

AVAILABILITY:

At all locations for loads where the demand is at least 75 kW or more for three or more billing periods in a given calendar year, but less than 1,000 kW, and where facilities of adequate capacity and suitable voltage are adjacent to the premises to be served, and to customers who: For loads where the service desired by the customer is not adjacent to the premises to be served, additional contract arrangements may be required prior to service being furnished.

1. Use either an air-source heat pump or ground-source heat pump as the only source of heating and cooling in their facility* and
2. Use an electric water heater (usually connected to the desuperheater of the heat pump) as the only source of water heating and
3. Receive from RPU prior approval of the equipment and
4. Equipment must be rated by the American Refrigeration Institute (ARI) and meet the minimum efficiency standards listed below:

Minimum Qualifications for Air Source Heat Pump (ASHP) Systems:

| <u>SEER</u> ⁽¹⁾ | <u>COP</u> ⁽²⁾ |
|----------------------------|---------------------------|
| <u>9.3</u> | <u>3.2</u> |

Minimum Qualifications for Ground Source Heat Pump (GSHP)/Geothermal Systems:

| <u>EER</u> ⁽³⁾ | <u>COP</u> |
|---------------------------|------------|
| <u>14.1</u> | <u>3.2</u> |

⁽¹⁾ SEER: Seasonal Energy Efficiency Ratio

⁽²⁾ COP: Coefficient of Performance

⁽³⁾ EER: Energy Efficiency Ratio

*Note: Other all-electric HVAC systems may be considered for this rate if they meet the stated efficiency standards. To have a system considered, customers must submit an engineering analysis documenting the efficiency of the system (COP, EER, etc.).

APPLICATION:

To commercial, industrial, and governmental, and other types of general service customers with all service taken at one point and measured through one meter. ~~Also applicable to temporary service in accordance with RPU's published Electric Service Rules and Regulations.~~ Not applicable to standby service.

CHARACTER OF SERVICE:

Single or three phase, 60 Hertz, alternating current at any one of the standard secondary service voltages as described in RPU's published Electric Service Rules and Regulations.

MEDIUM GENERAL SERVICE – HIGH EFFICIENCY HVAC (Cont.)

| RATE: | <u>Non-Summer</u> | <u>Summer</u> |
|----------------------|---|-----------------|
| Demand Charge: | <u>\$8.586</u> \$10.537 per kW | \$13.581 per kW |
| Energy Charge: | <u>3.195¢</u> 3.806¢ per kWh | 3.806¢ per kWh |
| Rural Demand Charge: | <u>\$9.445</u> \$11.591 per kW | \$14.939 per kW |
| Rural Energy Charge: | <u>3.515¢</u> 4.187¢ per kWh | 4.187¢ per kWh |

Definition of Season: Summer months are June through September. Non-summer months are January through May and October through December.

PURCHASED POWER ADJUSTMENT CLAUSE:

Bills computed under this rate schedule are subject to adjustment in accordance with the Purchased Power Adjustment Clause (PPAC).

POWER FACTOR ADJUSTMENT:

The customer agrees to maintain an average power factor of 0.95 or greater for the billing period and to prevent a leading power factor. If the customer's average power factor is less than 0.95 for the billing period, the billing demand will be determined by multiplying the measured demand by 0.95 and dividing the results by the customer's average power factor. The average power factor is defined to be the quotient obtained by dividing the kWh used during the month by the square root of the sum of the squares of the kWh used and the lagging reactive kilovoltampere-hours supplied during the same period. The customer's average power factor will be determined by means of permanently installed meters.

PRIMARY METER DISCOUNT:

Customers approved for metering at 13.8 kV will receive a discount of 1.25% on base rate charges for measured demand and energy.

TRANSFORMER OWNERSHIP CREDIT:

Customers owning transformers will receive a credit of \$.20 per kW on each month's measured demand.

SURCHARGE:

Customers whose service is taken outside the Rochester City limits are subject to a 10% surcharge on their bills (excluding charges computed under the Purchased Power Adjustment Clause).

DEFERMINATION OF DEMAND:

Measured demand is defined as the maximum rate at which energy is used for any period of fifteen consecutive minutes during the billing period. The billing demand shall be the greater of the measured demand for the billing period adjusted for power factor, or 75% of the maximum measured demand for the most current June - September months adjusted for power factor (**referred to as ratchet**).

For an existing facility reconfiguring its current electric service to come under this rate by separately metering its high efficiency HVAC equipment, the ratchet will be removed from the current electric service. The ratchet will be effective beginning in October following the first separately metered high efficiency HVAC service during one of the summer months, June-September. At that time the ratchet will be reapplied to the current electric service and will be applied for the first time to the high-efficiency HVAC service.

MEDIUM GENERAL SERVICE – HIGH EFFICIENCY HVAC (Cont.)

MINIMUM BILL:

The minimum bill shall not be less than the billing demand, as provided above, whether or not energy is used.

PAYMENT:

Payments are due on or before the due date.

CONDITIONS OF DELIVERY:

1. Service ~~furnished~~ under this rate schedule is ~~subject to applicable provisions of RPU's published Electric Service Rules and Regulations.~~ **only for air-source or ground-source heat pumps and any other all-electric HVAC system that meets the stated efficiency standards as explained in the Availability subhead of this rate schedule.**
2. **Service under this rate must be separately metered from other facility loads.**
3. **Since the HVAC system must be separately metered for this rate, the customer is responsible for any rewiring and its associated costs.**
4. **Service provided under this rate is subject to applicable provisions of RPU's published Electric Service Rules and Regulations.**
5. Energy **provided** ~~furnished~~ under this rate shall not be resold.
6. RPU shall not be liable for any damage or loss sustained by the customer resulting from interruptions, deficiencies, or imperfections of service provided under this rate.
7. Unless authorized by separate written agreement, standby electric generating equipment installed by the customer shall not be interconnected, or operated in parallel, with the RPU system. Customer shall own, install, operate, and maintain electrical interlocking equipment, which will prevent parallel operation, and such equipment shall be approved by RPU prior to installation.

Approved by Rochester Public Utility Board:
Effective Date:

August 31, 2004 ~~December 30, 2003~~
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