

**RATE SCHEDULE NO. 99**  
**LOAD FORECAST ADJUSTMENT**

**APPLICABILITY:** All customers billed on rate schedules 14, 15, 16, and 85 are subject to the requirements and charges described in this rate schedule.

**EFFECTIVE:** Customer's Annual Load Forecast is due October 1, 2010. Monitoring of the forecast accuracy will begin January 1, 2011. Charges resulting from forecast errors will begin for billings covering energy usage on January 1, 2012.

**PROCESS:** By October 1 each year (beginning October 1, 2010), customers must provide an Annual Load Forecast for the upcoming calendar year (January through December). The Annual Load Forecast will provide how much energy by month, on average, the customer expects to utilize over the upcoming year. Throughout the year the customer's actual energy usage will be monitored. At the end of the year, if the customer's Annual Forecast Error is more than the Annual Threshold then a Load Forecast Adjustment is calculated and the adjustment will be billed to the customer.

Up to 45 days prior to the beginning of a month, the customer may submit a Revised Load Forecast to update the District on the amount of energy by month, on average, the customer expects to utilize over the remaining months of the year. If the customer's Monthly Forecast Error is less than the Monthly Threshold, the Maximum Adjustment Rate will be reduced by \$1 for each month it does not exceed the Monthly Threshold, for a maximum reduction of \$12.

**If a customer obtains load subject to a Load Forecast Adjustment, the customer also takes responsibility for the obligations of the previous customer created by this policy.**

See **Exhibit 1** for specific calculations and methodology.

**VARIABLES:**

Maximum Adjustment Rate:	\$ 15.00 per Megawatt-hour (MWh)
Annual Threshold:	3 Average Megawatts (aMW)
Monthly Threshold:	3 Average Megawatts (aMW)

**TAX ADJUSTMENT:** The amounts of any tax levied by any city or town, in accordance with RCW 54.28.070 of the Laws of the State of Washington, will be added to the above charges.

**SERVICE:** Service under this Schedule is subject to the terms and conditions in the District's Customer Service Policies, as the same may be amended from time to time.

## **Exhibit 1. Load Forecast Adjustment Calculations and Methodology**

### **DEFINITIONS:**

**Load Forecast Adjustment (LFA)** – The amount to be charged as a result of providing inaccurate load forecast information for the previous year. For example, if the customer (or previous customer on an acquired load) provided an inaccurate load forecast for 2011, a Load Forecast Adjustment is calculated and it will be collected from the customer throughout 2012.

**Megawatt (MW)** - The electrical unit of power which is equal to 1,000 kilowatts.

**Megawatt-hour (MWh)** – The use of a Megawatt (MW) of power for one hour.

**Average Megawatts (aMW)** – Average energy usage over a period of time; calculated as the total energy used over a period of time, divided by the period of time. For example if the customer used 7,440 MWh during July, their aMW for July would be: 7,440 MWh / 744 hours (24 hours \* 31 days) = 10 aMW.

**Annual Load Forecast (ALF)** – Customer provided forecast (in aMW) which provides how much energy by month, on average, the customer expects to utilize for the Forecast Year. The Annual Load Forecast must be submitted to the District by October 1, preceding the Forecast Year. **If the customer fails to provide an Annual Load Forecast before the specified date, the Annual Load Forecast will be 0 aMW. No changes will be accepted to the Annual Load Forecast after October 1.**

**Monthly Load Forecast** – Customer provided monthly load forecast (in aMW) for the Forecast Year. The Monthly Load Forecast is established from the Annual Load Forecast and may be updated by a Revised Load Forecast as detailed below.

**Forecast Year** – The calendar year (January through December) over which the customers load is forecasted and measured for purposes of the Load Forecast Adjustment.

**Actual Annual Load (AAL)** – The customer's actual (metered) average load over the calendar year, expressed in aMW.

**Actual Monthly Load (AML)** – The customer's actual (metered) average load over the month, expressed in aMW.

**Annual Forecast Error (AFE)** – The absolute value of the difference between the Annual Load Forecast and the Actual Annual Load.

**Monthly Forecast Error (MFE)** – The absolute value of the difference between the Monthly Load Forecast and the Actual Monthly Load.

**Maximum Adjustment Rate (MAR)**– The maximum rate at which the Annual Forecast Error is charged to determine the Load Forecast Adjustment.

**Final Adjustment Rate (FAR)** – The rate used to determine the Load Forecast Adjustment. The Final Adjustment Rate is equal to the Maximum Adjustment Rate minus one dollar for each month the Monthly Forecast Error is less than the Monthly Threshold.

**Revised Load Forecast (RLF)** – Customer provided Revised Load Forecast covering the remaining months of the Forecast Year. The Revised Load Forecast replaces the previous Monthly Load Forecast for all months that begin at least 45 days after the District receives the Revised Load Forecast for purposes of calculating the Monthly Forecast Error. The Revised Load Forecast DOES NOT change the Annual Load Forecast. For example, if the District receives the Revised Load Forecast on February 13, 2011, the Monthly Load Forecasts for April through December 2011 would be replaced by those in the Revised Load Forecast. The customer can provide multiple Revised Load Forecasts.

**Annual Threshold** – Annual Forecast Errors up to this amount will not be charged a Load Forecast Adjustment. If the Annual Forecast Error exceeds the Annual Threshold a Load Forecast Adjustment will be calculated and charged to the customer over the following calendar year.

**Monthly Threshold** – If a customer’s Monthly Forecast Error is less than the Monthly Threshold, a reduction to the Maximum Adjustment Rate will be made for the month.

**Calculation Specifics and Example:**

**Step 1 – Customer Must Submit an Annual Load Forecast for the upcoming Forecast Year**

By October 1 of each year, the customer is required to provide an Annual Load Forecast (ALF) covering the next Forecast Year. The monthly loads provided by the customer should be average megawatt (aMW) usage (not peak). For example, by October 1, 2010 the customer will need to provide a forecast for calendar year 2011 similar to the one shown below in Table 1:

**Table 1.** Example Customer-provided Annual Load Forecast; submitted to District by Oct 1, 2010 covering Forecast Year 2011.

	Jan 2011	Feb 2011	Mar 2011	Apr 2011	May 2011	Jun 2011	Jul 2011	Aug 2011	Sep 2011	Oct 2011	Nov 2011	Dec 2011	ALF 2011
<b>Forecast in aMW</b>	23	22	20	19	20	24	25	27	24	22	22	23	<b>22.6</b>

Using the values in Table 1, this example would have a calculated ALF of 22.6 aMW (round to the nearest 10<sup>th</sup>). The ALF is used by the District to determine if a Load Forecast Adjustment is warranted. If the customer does not provide an ALF, the ALF will be 0 aMW and each monthly value will be 0. At any time after the October 1 due date, the customer may provide a Revised Load Forecast. The Revised Load Forecast is in the same format (monthly average loads) and covers the remaining months of the Forecast Year. No changes may be made to the Monthly Load Forecast for periods beginning in less than 45 days from the date of delivery to the District. The Revised Load Forecast does NOT alter the ALF. The original ALF, as calculated from the ALF submitted on or before October 1, is fixed and unalterable. The Revised Load Forecast is able to change the Monthly Load Forecast for purposes of determining each month’s Monthly Forecast Error (see Step 3 below).

**Step 2 – Determine if a Load Forecast Adjustment is warranted**

At the end of each year (beginning at the end of 2011) the customer’s ALF is compared to the customers Actual Annual Load (AAL) for the year. To continue the example, Table 2 below shows the Actual Monthly Load for the customer for each month of the Forecast Year 2011.

**Table 2.** Example actual load for customer. All loads are average usage (aMW).

	Jan 2011	Feb 2011	Mar 2011	Apr 2011	May 2011	Jun 2011	Jul 2011	Aug 2011	Sep 2011	Oct 2011	Nov 2011	Dec 2011	AAL 2011
<b>Actual (aMW)</b>	27	22	15	10	11	15	17	19	22	21	20	25	<b>18.7</b>

Using the actual loads throughout the year, the customer’s AAL is calculated. For the example customer shown in Table 2, the AAL would be calculated as 18.7 aMW (rounded to the nearest 1/10 of an aMW). Once the AAL is determined it is compared to the customer’s ALF. The absolute value of the difference between the AAL and ALF is the Annual Forecast Error (AFE). If the AFE is less than the Annual Threshold, no Load Forecast Adjustment is necessary. If the AFE is greater than the Annual Threshold (3 aMW) then a Load Forecast Adjustment will be calculated and applied to the customer’s energy charges the following year.

Abs(Actual Annual Load – Annual Load Forecast) = Annual Forecast Error  
 If Annual Forecast Error > Annual Threshold then a Load Forecast Adjustment is calculated  
 If Annual Forecast Error < Annual Threshold then NO Load Forecast Adjustment is calculated

In the example: Abs(18.7 aMW – 22.6 aMW) = 3.9 aMW  
 3.9 aMW > 3.0 aMW; therefore a Load Forecast Adjustment will be calculated.

### Step 3 – Calculate the Load Forecast Adjustment amount

If a Load Forecast Adjustment is necessary it is calculated as follows:

The Maximum Adjustment Rate is \$15 per MWh off the Annual Forecast Error. Based on this Maximum Adjustment Rate, the customer could be charged up to \$512,460. However, this rate can be reduced by \$1 for any month the Monthly Forecast Error was less than the Monthly Threshold (3 aMW). The Monthly Load Forecast is compared to the Actual Monthly Load to determine the Monthly Forecast Error for each month. For any months where the Monthly Forecast Error is less than the Monthly Threshold, one dollar is deducted from the Maximum Adjustment Rate. Table 3 illustrates how this would work in our example:

**Table 3.** Example Monthly Forecast Error. Each month is calculated individually.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
<b>Monthly Load Forecast (aMW)</b>	23	22	20	19	20	24	25	27	24	22	22	23
<b>Actual Monthly Load (aMW)</b>	27	22	15	10	11	15	17	19	22	21	20	25
<b>Monthly Forecast Error</b>	4	0	5	9	9	9	8	8	2	1	2	2

Example Monthly Forecast Error Calculations:

$$\text{Abs(Actual Monthly Load – Forecasted Monthly Load)} = \text{Monthly Forecast Error}$$

January:      Abs(Jan AML – Jan MLF) = Jan MFE  
                     Abs(27 aMW – 23 aMW) = 4 aMW

September:    Abs(Sep AML – Sep MLF) = Sep MFE  
                     Abs(22 aMW – 24 aMW) = 2 aMW

*The January Monthly Forecast Error is greater than the Monthly Threshold and therefore the customer does **not receive a reduction to the Maximum Adjustment Rate.** However, the September Monthly Forecast Error is less than the Monthly Threshold and therefore the customer will receive a reduction to the Maximum Adjustment Rate of \$1. In our example there are 5 months where the Monthly Forecast Error is less than the Monthly Threshold. As a result the Maximum Adjustment Rate is reduced by \$5. Therefore, the Final Adjustment rate is \$10 (\$15 MAR less \$5).*

After the Final Adjustment Rate has been calculated, it is used to determine the Load Forecast Adjustment. The Final Adjustment Rate is multiplied by the Annual Forecast Error (expressed in MWh) and the result is the Load Forecast Adjustment in dollars.

Example Load Forecast Adjustment Calculation:

*Final Adjustment Rate \* Annual Forecast Error = Load Forecast Adjustment*

*Example Customer: \$10/MWh \* 3.9 MW \* 8,760 hrs (365 x 24) = **\$341,640** (\$170,820 less than the calculation using the Maximum Adjustment Rate)*

**Step 4 – Collect the Load Forecast Adjustment**

The Load Forecast Adjustment is collected over the subsequent year. One-twelfth of the adjustment will be billed to the account every month. For the example customer, Load Forecast Adjustment will be added as an additional charge throughout the 2012 billing starting with the billing covering energy usage during January 2012 and ending with the billing for energy usage during December 2012.

Example Load Forecast Adjustment Charges:

*Load Forecast Adjustment / 12 months = Monthly Charge*

*Example Customer: \$341,640/12 = \$28,470 per month*

*The calculated Load Forecast Adjustment was \$341,640. The District will collect this money from the customer throughout the following year, in this example, 2012. \$28,470 will be added to each monthly billing during 2012 as an additional charge.*