

Appendix E

Load Forecast for the Integrated Resource Plan

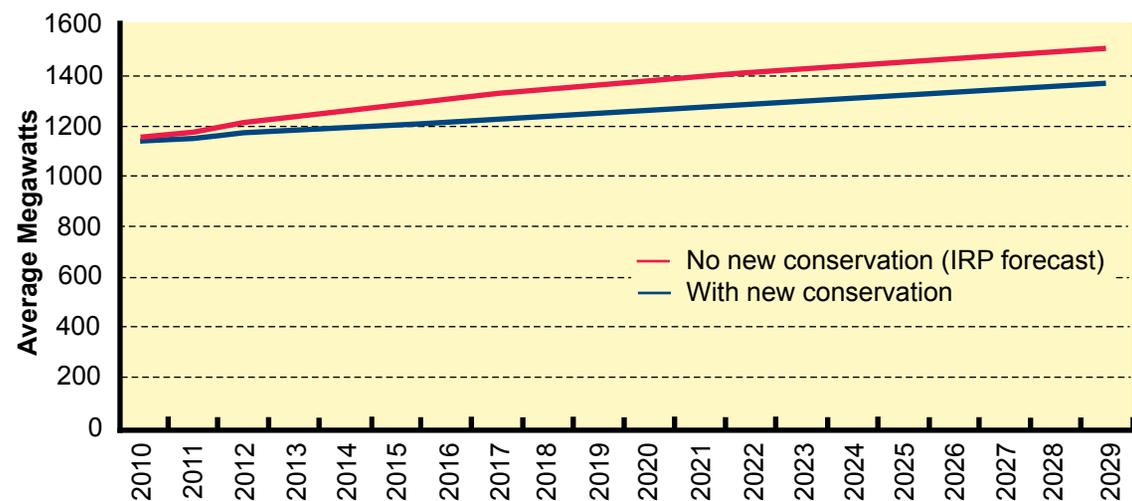
A long-range forecast of system load is produced annually at City Light. This forecast is used throughout the utility for variety of planning purposes, such as the Operating Plan, the Transmission and Distribution Capacity Plan, and the Revenue Forecast. It is also distributed to many external entities with planning functions, such as the Bonneville Power Administration, the Western Electricity Coordinating Council, the Pacific Northwest Utilities Coordinating Committee, and the City of Seattle Department of Finance. A forecast of load is needed for calculating the amount of renewable resources necessary for compliance with Washington state Initiative 937 and for producing the Integrated Resource Plan required by Washington state HB 1010.

The forecast of system load is based on the forecasts of selected economic and demographic variables for the service area. The main drivers of load growth are service area employment and the number of households. Both are expected to continue to grow in the long run, though there will be occasional periods of economic slowdown when load will exhibit negative growth temporarily. Overall, the Seattle area economy is strong, supported by two major industries – aerospace and software.

The forecast of system load that is used for other planning functions within the utility must be adjusted for use in the Integrated Resource Plan analysis. This is necessary so that the conservation resource can be evaluated in the same way as generating resources. The IRP forecast of load must, therefore, reflect load growth that would occur if there were no

more programmatic conservation in the future. Consequently, the IRP load forecast is higher than the load forecast used for other planning purposes. The accompanying graph shows the load forecast produced in March 2009 and the IRP load forecast, with the difference being the amount of programmatic conservation that City Light expects to acquire.

IRP Load Forecast Assumes No New Conservation



As a practical matter, a long-term forecast of load must be settled on and locked in early in the IRP process. The databases used in the IRP portfolio analysis are extremely large, comprising billions of calculations and data points, so computer runs are many hours long. All of the portfolio analysis is done after the Aurora model Long-Term study, which establishes a baseline of regional resources, load centers, and transmission for the planning period, is completed. Because the IRP process schedule and staffing cannot allow for repeated adjustments to the Long-Term Study and subsequent analyses, the 2010 IRP uses the long-range load forecast produced in March 2009. A newer load forecast was produced in

April of 2010, after the 2010 IRP quantitative analyses were nearly complete. The March 2009 forecast was based on national (IHS Global Insight) and regional (The Puget Sound Regional Forecaster) forecasts of economic data available at that time, and it reflects the expected impact from the so-called Great Recession in early 2009. At that time, a turnaround in the level of employment was predicted to occur in the second quarter of 2010. Since then, the revised outlook calls for very slow growth in the near term, with the turnaround delayed to 2011.

The April 2010 load forecast was less than 1% lower than the March 2009 forecast for the next five years. The newer economic data would

have had the effect of shifting the load forecast curve to the right, changing the timing of the load growth to a small degree. For example, a forecast of annual consumption of 1,204 aMW for 2016 in the March 2009 forecast is attained in 2017 in the April 2010 forecast. Had it been possible to use a newer load forecast for the IRP, the net impact would have been very small. The service area load is expected to grow at much the same rate in the long run in both forecasts. Load can be served by existing City Light resources until the mid-teens, and City Light's Resource Acquisition Strategy calls for the gradual acquisition of needed resources and/or renewable energy credits in the meantime.