

## DOCKETED

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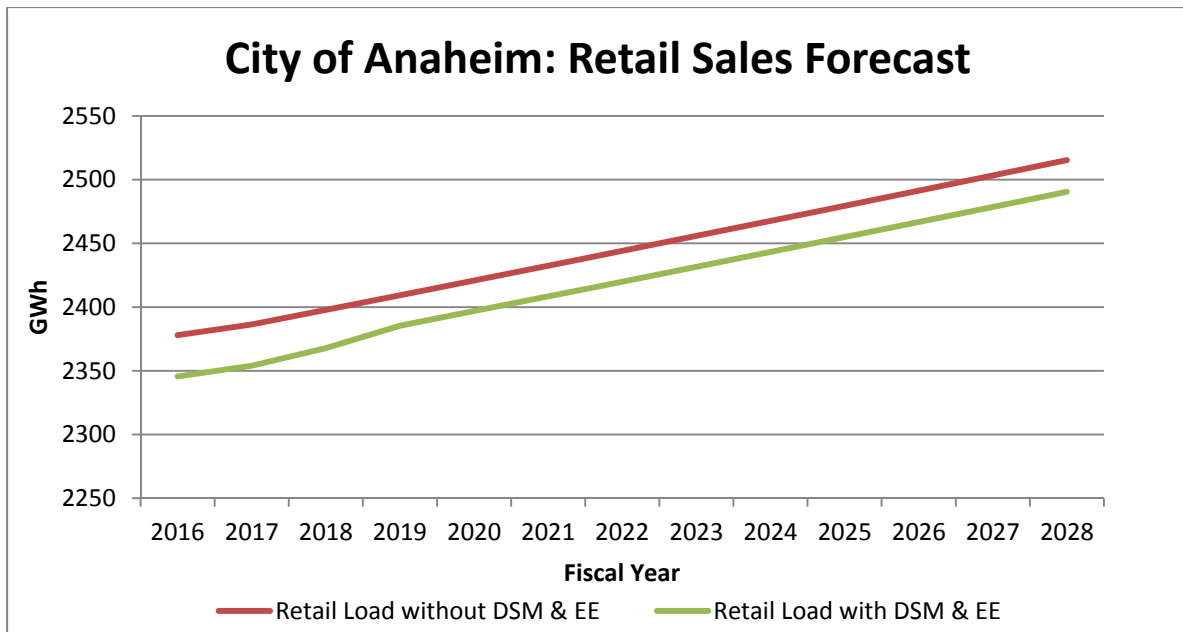
## **Form 5. Committed Demand Side Program Methodology**

**NOTE: ( Form 5 is no longer being requested)**

## **Form 6. Uncommitted Demand Side Program Methodology**

### **Efficiency Program Costs and Impacts**

The City of Anaheim does not separately identify the impacts of future efficiency programs in its peak load and energy forecasts. However, the program description section of Anaheim's Minimum Investment Report to the Western Area Power Administration has been inserted next to tab 3.1a (labeled tab "3.1a MIR 2015") of the data request and includes information on Anaheim's Energy Efficiency (EE), Renewable, and Distributed Generation Programs. The EE and Demand Side Management (DSM) Programs are embedded into the Anaheim Retail and Peak load forecast because Anaheim uses historical data to forecast peak load, system load and retail load. The historical data that is the basis for these forecasts already captures the EE and DSM savings. The chart below illustrates Anaheim's retail load with and without EE and DSM. As you can see, the inclusion of EE and DSM programs reduced Anaheim's overall retail load. The "Retail Load with DSM and EE" is Anaheim's forecasted retail load consumption for the 2015 IEPR.



### Demand Response Program Costs and Impacts

At this time, the City of Anaheim does not include the impacts of future demand response programs in its peak load and energy forecast. Anaheim is currently developing a robust demand response program that can be bid into the CAISO Day Ahead and Real Time Market. Once this program is created, future IEPR demand forecasts will include it. It is expected that Anaheim will have a program in place by the 2017 IEPR.

### Renewable and Distributed Generation Program Cost and Impacts

The City of Anaheim does not separately identify the impacts of future renewable and distributed generation programs in its peak load and energy forecasts. However, the program description section of Anaheim's Minimum Investment Report to the Western Area Power Administration has been inserted next to tab 3.1a of the data request and includes information on Anaheim's Energy Efficiency, Renewable, and Distributed Generation Programs. Overall, Anaheim does include long term renewable contracts, to comply with SB X 1 2, as part of the demand and peak forecast methodology and our 20 year power supply forecast, using the Aurora production cost model. Costs, MWh, etc. are taken into account for Anaheim's 20 year power supply forecast. Anaheim is currently working on a forecast to address SB 1 and other regulatory impacts that will impact the forecast, going forward.

## **Demand Forecast Methodology- Energy Efficiency and Demand-Side Measures (from Form 4 “Demand Forecast Methods and Models”)**

At this time, the City of Anaheim has a separate forecast for energy efficiency (EE) and other demand-side measures using historical data. These measures are embedded in the data used to determine the base load energy forecast. EE and other demand-side measures are absorbed in the actual numbers we use as constants for our forecast of peak demand, total system energy, and customer class consumption. For example, total savings for fiscal year ending June 2007 realized a total of 3.153 MW peak demand reduction as a result of energy efficiency and demand response programs. A total energy savings of 8,241 MWh (or 8.2 GWh) were realized as a result of energy efficiency and demand-side measures. Our peak for this period was 593 MW in July 2006. Our total energy as measured at Lewis substation was 2,687 GWh. If these programs were not in place, the resulting load for fiscal year 2007 would have been 2,695.2 with a peak load of 596 MW. In using the actual numbers as the constant, Anaheim creates the forecast using historical values and economic conditions.

The nominal amount of EE and other demand-side measures (which is currently around 1% of total retail energy consumption) is hard to forecast separately, as significant reductions have only occurred in the past few years. As the City of Anaheim moves forward with its EE and DSM, Anaheim will work on a method to forecast these measures more accurately. At this time, more data is needed to forecast the reduction in consumption caused by EE and demand-side measures. For the 2013 IEPR, the City of Anaheim did modify the forecasts for retail customers (industrial customers) and as a result, system load, to adjust for energy reduction through the implementation of Thermal Energy Storage program for two large customers. Staff subtracts these savings from customer load forecasts, to adjust for this demand side program. For the 2015 IEPR the Thermal Energy Storage program savings are now embedded into the historical data for load, as the program was implemented two years ago.

Anaheim uses historic energy usage by customer class in its forecast for future energy consumption. The historic energy usage reflects all energy efficiency programs that were implemented over the course of the last 10+ years (with the most significant reductions occurring in the past few years). This data is then absorbed in the actual load usage. The historic usage data includes the cumulative impacts of all Anaheim’s conservation programs, energy efficiency products (LED lights, CFL light bulb installation), and energy efficiency programs. Anaheim’s energy load growth is thereby impacted by the EE and demand-side programs the City provides, specifically conservation and energy efficiency programs. The past actual energy demand mega-watt hours are mitigated by a negative energy demand as a result of these programs.