

**DOCKETED**

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## **Form 6- Incremental Demand Side Program Methodology**

### **Efficiency Program Impacts**

Roseville Electric estimates coincident peak impacts for all energy efficiency programs utilizing several resources:

- CMUA Technical Resource Manual (TRM)- primary resource
- Northwest Regional Technical Forum Reference Manual
- IOU publications (white papers)
- Evaluation, Measurement and Verification of prior year program results
- Custom engineering calculations for measures not in the CMUA TRM or available through IOU white paper documentation.
- Calculation of baseline watts removed to installed watts for lighting technologies that are not included in the TRM.

The forecast for energy efficiency is based on Roseville Electric's adopted energy efficiency targets for 2017-2028. These targets were modeled for POU's by Navigant in the potential study contracted by the California Municipal Utility Association in 2016. Energy efficiency forecasts are integrated within Roseville's demand forecast.

### **Demand Response Program Impacts**

Roseville Electric has 2.1 MW of installed residential demand response program. This program was introduced to residents in 2007 and is supported by one way communication air conditioner cycling devices. The program has not been required for a load reduction event in the 12 years it has been available for load reduction. The low utilization of the program can be attributed to other market and resource alternatives available.

Roseville Electric has identified smart thermostats as a potential future demand response program that may replace the existing program. Rebates have been put in place for customers who install web-enabled smart thermostats. Roseville Electric is undergoing an evaluation of the smart thermostat program evaluating the existing capacity of web-enabled devices, and potential benefits for contributing the peak load events.

Additionally, Roseville Electric is implementing Advanced Metering Infrastructure. This provide interval data and will enable detailed analysis of benefits to both the utility and customer, allowing opportunity to evaluate new demand response program potential.

## **Renewable and Distributed Generation Program**

Residential and commercial customers with solar represented 8% of Roseville Electric's total customer base as of 12/31/18. The reported 20.45 MW figure is based on the California Solar Initiative (CSI) reports generated from the California Go Solar website. Roseville requires submission of a CSI report with every interconnection.

The forecast for PV is broken out by new construction and retrofit. Roseville Electric distributed solar forecast includes retrofit adoption curves for commercial and residential based on market potential and historical adoption. Additionally, new construction is forecasted based on current trends pre-2020, and assume solar contributing to net zero housing building standards post-2020.

As part of the IRP, Roseville Electric modelled variability due to solar and supply needs for solar integration as installations increase. The sub-hourly modelling results show Roseville is sufficient in flexible capacity until approximately 2025. The IRP outlines a plan of solutions to mitigate this variability including distributed energy resources leveraging Advanced Metering Infrastructure, energy storage evaluation, and market options including the Energy Imbalance Market.

Roseville Electric has evaluated its distribution and determined sufficient capabilities to absorb high penetrations of distributed PV.