Executive Summary

This case study is an examination of Southern California Edison's (SCE) "SmartConnect" Advanced Metering Infrastructure (AMI), or smart meter program, to date. The report presents key findings stemming from the Division of Ratepayer Advocate's (DRA) review of cost requests thus far. DRA supported the use of AMI to the extent that it can provide net benefits to customers as projected when approval was granted by the California Public Utilities Commission (CPUC). DRA intends for this report to alert the CPUC to the challenges of tracking AMI costs and benefits and recommends regulatory actions be taken, if necessary, to ensure AMI systems statewide provide a net benefit to customers.

DRA reviewed SCE requests for SmartConnect-related cost recovery in multiple CPUC proceedings and compared them to the costs and benefits estimated in SCE's approved SmartConnect business case, which forecasted costs for its AMI program. DRA also evaluated progress toward the CPUC-adopted estimate of $9 million in lifetime net benefits for SCE customers, which should result in a net reduction in customer bills as a result of smart meter deployment.[1] This version of the report blacks out any confidential data in tables and text.

SmartConnect was approximately 40% deployed during the discovery phase of this study,[2] and only three years of a 24 year program had been completed. Therefore, this report does

[1] The $9 million figure is the result of a present value revenue requirement (PVRR) analysis. SCE also estimated $295 million in societal benefits reflecting reduced energy theft and increased meter accuracy, which parties accepted as reasonable but agreed not to include in the business case (i.e., for purposes of determining cost-effectiveness).

[2] As of January 31, 2012, deployment was approximately 78% complete.

not attempt to offer a conclusion as to the final net cost or net benefit of SCE's program. Further, this report is not intended to propose disallowances of approved SmartConnect costs. However, data thus far does reveal trends and potential hurdles to achieving an overall net benefit for customers. Based on the analysis in the case study, DRA offers recommendations to regulators, policymakers, and utilities on ways to overcome those hurdles.

Key Findings presented in Section V of this report include:

- According to SCE's AMI business case, the total cost to customers will be greater than $5 billion, rather than the $1.6 billion cost explicitly approved by the CPUC, which only included nominal deployment costs;
- Many forecasted benefits have been delayed or reduced, which erases the projected margin of net benefits as calculated in SCE's business case;
- SmartConnect-related costs not anticipated in SCE's original business case have already been approved by the CPUC in other proceedings, beyond the over $5 billion cost referenced above. In many cases, these costs were approved without a showing of incremental benefits, and DRA anticipates that more will be requested;
- SmartConnect features such as remote disconnect and SmartConnect-enabled time-varying rates have a high potential for adverse impacts for low-income and other "at-risk" customers; and
- Ascertaining SmartConnect net benefits is hampered by a complicated cost recovery process.

The report concludes with specific recommendations to assist the CPUC with ongoing review of AMI-related proposals by the utilities.

A detailed discussion of the recommendations is in Section VI. They include:

1. Track AMI benefits and cost impacts throughout the life of the investment;
2. Require that any request for AMI-related incremental cost recovery includes a showing of increased cost-effectiveness;
3. Ensure that realization of customer benefits are synchronized with recovery of costs;
4. Condition approval of Demand-side Management expenditures on corresponding adjustments to supply-side procurement needs;
5. Create an environment that fosters the development of new benefits from the sunk cost of AMI; and
6. Ensure the needs of low-income and other "at-risk" customers are considered in program development and implementation.