Navigant's Response to Comments on Technical Issues

Throughout its development, the 2013 Potential and Goals Study provided various opportunities for stakeholder engagement, which were incorporated into the Study. This document includes Navigant's responses to formal comments submitted in response to the ruling on November 14, 2013 that were technical in nature. Per the direction of the ALJ, policymaking issues are to be addressed directly by this ruling if they are relevant to setting the 2015 goals; or to be addressed in Phase II of the proceeding if they are comments on the long term application of goals.

General Methodology

Stakeholder Organization	Comment	Response
Independent Energy Producers Association (IEP)	The Study relies on a range of old and outdated resources. DEER data used in the model are outdated and there could be inconsistencies between goals, evaluation metrics and DEER, as DEER is being updated.	Navigant used the most recent available data and vetted all major assumptions with stakeholders. Energy Efficiency always has a lag between data inputs that require complex processes to adopt. **See section 2.1.1 for additional details.**
Independent Energy Producers Association (IEP)	The Study fails to provide policy makers with the historic context of established goals.	The study provides historic context of past potential studies and does not make recommendations of goals. The PUC interprets the Goals and Potential Study and applies its findings to the setting of goals. **Additional discussion can be found in Sections 2.3.4 and 2.3.5 of the report.**
Office of Ratepayer Advocates (ORA)	The Study should provide IOU program savings potential additionally on a net basis.	The report provides savings in gross values, as is consistent with IOU goal setting. The Analytica model offers users the ability to run the model using net values. Net values also shown in the AAEE scenarios.
Office of Ratepayer Advocates (ORA)	There are limitations to vetting the accuracy of the Study. Most stakeholders are not able to replicate its results or manipulate the model because of the model's size and complexity.	The study provides numerous comparative metrics intended to help stakeholders assess the accuracy of the study by comparing study outputs to known metrics such as Sector sales or end-use consumption as detailed in the RASS or CEUS studies. To help stakeholders vet the model, Navigant is working on an optimized version of the model that can run on less powerful computers to be released with the final model. Navigant provided detailed results in the form of spreadsheets for stakeholders who were unable to run the model and made requests.

Stakeholder Organization	Comment	Response
Office of Ratepayer Advocates (ORA)	The Study should identify and summarize all study gaps and make recommendations for research initiatives that should be pursued by the PUC.	Navigant will develop a list of recommendations for 2013/14 EM&V activities. This will be included in a new appendix titled '**Appendix R: Recommended 2013-2014 EM&V Support Activities.**
Pacific Gas and Electric Company (PGE), SoCal Edison Company (SCE), SoCal Gas Company and San Diego Gas and Electric Company (SCG & SDGE)	The Study fails to account for policy decisions and current practices that prevent IOUs from claiming certain savings potential. PGE recommends that the PUC revises the industrial and agricultural potential once ineligible measures have been identified and used to revise the estimates for goal setting.	Additionally, Navigant performed a de-rating exercise with specific stakeholder input to account for ineligible measures. Ineligibility is typically associated with industrial standard practice, code and other regulatory requirements (ARB, OSHA, Title 20/24, Federal Standards), and programmatic requirements/constraints. Additionally, consultants to Commission Staff found that certain activities in the mining sector were also disallowed, so Navigant applied derating factors to these sections as well. **See Section Section 3.3 for mining for additional discussion and 4.3.10 for results**
Pacific Gas and Electric Company (PGE), SoCal Edison Company (SCE), SoCal Gas Company and San Diego Gas and Electric Company (SCG & SDGE)	SCE recommends removing all measures which IOU programs are unable to claim savings. Basic CFL potential should be removed.	Navigant has reviewed input and output assumptions for basic CFLs and believes that the current forecast is consistent with current portfolio consumption and near term production through 2014 and does not recommend adjustments to basic CFL potential at this time. **See Appendix G - Section G.8.**
SoCal Edison Company (SCE)	SCE recommends the Study more accurately account for measure decay rather than assuming savings refresh. The Study should account for the likelihood that claimable savings will not persist and will be affected by EE measure saturation and future codes and standards.	Navigant developed a more comprehensive methodology for estimating the impact of measure decay than the 2011 Study, as documented in the report. Both decay and EE measure saturation are accounted for in the Bass diffusion methodology used to estimate potential for each measure based on each measure's estimated position in its market adoption curve. The impact of future codes and standards were considered in the model in such a way that scenarios can be constructed that include either near-term, mid-term and long-term codes and standards activity. **See Section 2.3.1.4 for additional discussion.**

Stakeholder Organization	Comment	Response
SoCal Gas Company and San Diego Gas and Electric Company (SCG & SDGE)	The model should include an additional parameter to differentiate the consumer's value for gas vs. electricity. Various studies have reported differing values for gas and electric, showing gas demand to be less likely to change.	While the model already includes current retail prices, this may be an area for future study. Low gas prices are reflected.
SoCal Gas Company and San Diego Gas and Electric Company (SCG & SDGE)	It is recommended for the future expansion of the Study to include locational EE potential. The Study should address the shift in system peak in the next few years from the traditional mid-afternoon peak to a much later peak between 6pm and 9pm.	This is a broader issue that the State will need to study in future years. **Navigant did discuss the limitations of the model's ability to forecast locational potential in Section 1.1.1**.
SoCal Gas Company and San Diego Gas and Electric Company (SCG & SDGE)	The Study includes interactive effects from electric measures that renders an overall negative C&S therm goal for SCG in 2015. Since SCG is a gas-only utility, it should not have an artificially lower therm saving potential and reduced cost-effectiveness due to actions of the electric IOUs.	The potential model provides the ability to run forecasts of potential that include or exclude the impacts of interactive effects. The program and C&S goals shown in tables ES-3, ES-4, and ES-5 in section ES.3 exclude interactive effects for SCG and SCE. Interactive effects are included for PG&E and SDG&E. No utility has negative goals for either program or C&S activity for any fuel type in 2015 or beyond.
The Utility Reform Network (TURN)	TURN is concerned about relying on business-as usual conditions in assessing EE potential.	The model has the provision to run multiple scenarios that are either more or less aggressive than the current business as usual market. It is possible in the future to add additional variables that allow for additional variations in business conditions, but these should be clearly specified such that they can be incorporated into future research. The model is calibrated to historic data because that is the best grounding we have for the model. Please see report section on Calibration for additional discussion. **See Sections 2.3.4 and 2.3.5 for additional discussion.**

Stakeholder Organization	Comment	Response
Office of Ratepayer Advocates (ORA)	PUC should include reasonable estimates for potential savings from financing.	The potential model quantifies the savings associated with financing initiatives consistent with the design of the pilot programs that are currently being fielded. Navigant acknowledges that alternative delivery models are possible and provided the ability for stakeholders to run additional financing potential scenarios. **Sections 2.3.2.4 and 4.3.8 of the report include discussion and findings from the inclusion of financing.**
Pacific Gas and Electric Company (PGE), SoCal Edison Company	PGE and SCE requests that the modeling be reviewed to ensure it accounts for street lights' ownership issue.	Navigant did not change the market potential, but broke out the potential savings for IOU streetlights, in the final goals table. **Section ES.4 addresses goals recommendations.**

Behavior Programs

Stakeholder Organization	Comment	Response
Office of Ratepayer Advocates (ORA)	Future potential may be greater than the outcome of the Study as a result of uncaptured behavioral, operation and market potential.	During the development of the 2013 potential model, Navigant conducted research to identify whether updates to the 2011 PGT model for residential behavior were appropriate. Upon completion of this research, Navigant recommend not updating the current residential behavior model as discussed in **Section 2.3.2.5.** Additionally, **Section 1.1.1** acknowledges the limited ability to forecast long term potential for behavioral initiatives and indicates that this should not be a limitation in setting goals for this activity.
OPower, INC.	OPower agrees to disaggregation of usage-based and equipment-based behavior modifications.	Navigant considers there may be alternative approaches to modeling behavioral initiatives. **See Section 2.3.2.5 for additional insight.**

Stakeholder Organization	Comment	Response
OPower, INC.	The Study underestimates the potential of behavior programs. The Study continues to use 2011 penetration estimates and has not incorporated recent third-party evaluation results. Much is known today about behavior programs and they have been incorporated into a long-term EE strategy and planning in several other states.	The current PGT model assumes that behavior programs reach 5% of residential households across the IOU service territories. That is consistent with the direction provided by the CPUC in the development of this final report. The 5% assumption is used as a placeholder until additional information is available about the cost-effectiveness of behavior programs in California. Additionally, see the response to ORA's earlier comment on behavior.
OPower, INC.	Comparison of the IOUs portfolios should not be factored into assessing the technical and economic potential for behavior. They should only be factored into market potential with respect to available budgets.	See response to ORA's earlier comment, restated below. During the development of the 2013 potential model, Navigant conducted research to identify whether updates to the 2011 PGT model for residential behavior were appropriate. Upon completion of this research, Navigant recommend not updating the current residential behavior model as discussed in **Section 2.3.2.5**. Additionally, **Section 1.1.1** acknowledges the limited ability to forecast long term potential for behavioral initiatives and indicates that this should not be a limitation in setting goals for this activity.
OPower, INC.	PUC should direct consultant to quantify the technical, economic, and market potential of behavior programs based upon evidence in existing evaluations.	The approach selected for this modeling effort reflects the variability of results for multiple EM&V studies conducted for various jurisdictions and industry stakeholders. Future studies that are based on a broader range of California-specific data could develop a more complex approach (e.g., an intervention-based model that incorporates the various types of behavioral programs being deployed by the utilities). These studies will need to account for issues regarding savings persistence.

Emerging Technologies

Stakeholder Organization	Comment	Response
Independent Energy Producers Association (IEP)	Inclusion of Emerging Technologies, TRC Threshold, Title 20, and Title 24 future adoption dates should be revised. Relying on Emerging Technologies as the basis for almost half of the long-term incremental Residential and Commercial sector impacts is too aggressive. The TRC Threshold assumption means that the AAEE programs being added to the AAEE portfolio in the Mid Case Scenario consist of efficiency measures that have costs that are 15% greater than benefits.	The Additional Achievable Energy Efficiency Forecast is an application of this study, but the scenario development for the forecast is addressed in DAWG and CEC's demand forecast proceeding. Emerging technologies account for 5% of the residential and commercial potential in 2015 and 18% in 2020, as the cost effectiveness of LEDs is anticipated to improve significantly. Furthermore, the cost of measures with low TRC are offset in the portfolio by the higher savings of measure with high TRC, since the whole portfolio must be above 1.
SoCal Edison Company (SCE)	The LED Technology Improvements graphic understates cost while over stating savings. SCE proposes: (1) avoid use of National data, (2) code requires (Jan 2018) that the base case for general service lighting to be 45 Lumens per watt, (3) research in LED market is lacking.	This concern was discussed at the December 2013 DAWG meeting. The group concluded that, while LED technology data can be updated over time, the impact of using the current data have a minimal impact on near-term potential. The stakeholders at the December 2013 DAWG meeting also agreed that Navigant's assumptions are reasonable. **The initial discussion in Section 4.3.6 remains unchanged.**
SoCal Gas Company and San Diego Gas and Electric Company (SCG & SDGE)	The risk adjustment for emerging technology is inadequate as it does not include: future building codes, TRC threshold levels, incentive funding, equipment funding, equipment cost changes, environmental costs, market branding, and level of competition for a particular product.	The risk adjustment is not intended to include future building codes, TRC threshold levels, incentive funding, equipment funding, equipment cost changes, environmental costs, market branding, etc. There are other parts of the model where these factors are accounted for. **The report includes an updated explanation of what the risk factor represents in Section 2.1.1**