INDEPENDENT
ENERGY
PRODUCERS
ASSOCIATION

California Energy Commission
DOCKETED
13-IEP-1C
TN 72076
OCT. 15 2013

October 15, 2013

California Energy Commission
Docket Office, MS-4
Sacramento, CA 95814-5512
docket@energy.state.ca.us

Re: California Energy Commission Docket No. 13-IEP-1C Lead Commissioner Workshop on Revised Electricity and Natural Gas Demand Forecasts 2014-2024

To Whom It May Concern:

The Independent Energy Producers Association (IEP) appreciates the opportunity to comment on the "Draft Staff Report: Estimates of Additional Achievable Energy Savings" (Staff AAEE Draft Report), the presentation at the October 1, 2013 workshop regarding Customer-Side Distributed Generation Impacts (DG Presentation), and the impact of these two topics on the overall electricity demand forecast.

In summary, IEP believes that the draft Mid Case forecasts of additional achievable energy efficiency (AAEE) significantly overstate the future expected levels of AAEE because of a set of flawed assumptions used in their development. The flawed assumptions assuming energy-only rate design instead of a two-part rate for commercial customers and Total Resource Cost (TRC) values of 0.85 instead of 1.0 and excessive levels of impacts from Emerging Technologies for the Mid Case scenario. IEP recommends reductions in the Mid Case, Low-Mid Case and Low Case AAEE forecasts to account for correction of those flawed assumptions. In addition, IEP also believes that the draft forecast of distributed generation impacts overstates the level of impacts from these technologies because of the forecasts were developed using incorrect assumptions about rate design. In combination with the proposed draft revised baseline demand forecasts, the resultant demand forecasts significantly understates expected future demands. Given time constraints, IEP does not recommend that Staff re-run the AAEE and DG forecasts but instead make simple modifications to the demand forecasts based on existing data.

Comments on Staff AAEE Draft Report

IEP is pleased to see that the Staff AAEE Draft Report developed three Mid Case scenarios for the impacts of future AAEE. Given the uncertainty associated with the

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levels of future AAEE, such an approach is reasonable. IEP is also pleased at the range of impacts captured by the three Mid Case scenarios. While IEP might have differences with some of the input assumptions in the different Mid Case scenarios (as discussed below), the Staff effort to define a reasonable range of potential future impacts is a good first step.

IEP has concerns about three of the key assumptions used by Staff in the development of the AAEE forecasts.

Flawed Rate Design Assumptions Result in an Overestimate of AAEE for all Scenarios

IEP believes that the revised rate forecasts used to derive the forecasted levels of AAEE are a good step in the right direction[1] but the failure to account for electric rate design in the AAEE assessment is a shortcoming to Staff's approach that likely results in an overstatement of AAEE impacts. IEP understands that Staff uses average electric rates in its AAEE modeling. While this might be reasonable for today's residential customers, it is clearly incorrect for commercial customers, which have two-part electric rates consisting of energy charges (based on consumption levels) and demand charges (based on maximum usage at time of system peak, at any time during the day, or both.) It is often difficult to reduce maximum demand (especially for energy efficiency programs that target on-peak usage).[2] Failure to use two-part tariffs in the assessment of the cost-effectiveness of energy efficiency likely overstates the costs avoided by energy efficiency, thereby overstating the cost-effectiveness of some commercial energy efficiency programs and, ultimately, the impacts of AAEE in the Commercial class. This is an important flaw in the Staff's AAEE forecasts, since Commercial AAEE is by far the largest segment of any customer class.

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[1] Staff reduced its forecasts of average electric rates between its preliminary and revised forecasts. According to Staff, the impact of the reduction in rates also results in somewhat higher demand forecasts but that the rate effect is counterbalanced to a certain extent by the revised population forecasts used in the revised forecasts.

[2] For example, an efficiency program that improves commercial air conditioning efficiency would reduce usage during peak demand but would have less of an impact on usage during evening hours, thereby possibly having little or no effect on maximum demand (if the customer's maximum demand occurs during shoulder or off-peak hours), which would result in little change in a customer's maximum demand charges.

TRC Threshold for Mid Case Should Be 1.0

Second, IEP is encouraged to see that the Low-Mid AAEE scenario uses a Total Resource Cost score of 1.0 to screen potential programs in its forecast.[3] This makes sense since it appears that energy efficiency may well be compared directly to generation resources in the future through All-Source solicitations.[4] Because of this evolution in cost-effectiveness "testing," it is unreasonable to test the cost-effectiveness of AAEE programs against a Total Resource Cost test that is less than 1.0. Unfortunately, this is exactly what Staff has done in the Staff AAEE Draft Report, where the Mid Case assumes a "TRC Threshold" value of 0.85, meaning that the AAEE programs included in the Mid Case scenario (and the High-Mid and High Cases) allow energy efficiency programs with costs that are 15% greater than benefits to be added to the assumed AAEE portfolio. IEP believes that cost-effectiveness testing of energy efficiency programs should require a TRC threshold of 1.0 for existing programs in the Mid Case scenario.[5]

Excessive Levels of Emerging Technologies in Mid Case Scenario

IEP is concerned about the assumptions about the level of impacts related to Emerging Technologies in the Mid Case scenario in the Staff AAEE Draft Report. As discussed by IEP in its comments to the Demand Analysis Working Group, the assumed level of Emerging Technologies is a key factor in the level of AAEE impacts. In the Staff AAEE Draft Report, Staff has assumed that 100% of the impacts from Emerging Technologies as predicted by the Navigant Potential, Goals, and Targets model should be included in the Mid Case scenario. Such an assumption might be acceptable if the results of the Staff AAEE Draft Report were only to be used for estimation of system loads. However, this is not the case: the level of energy efficiency impacts will ultimately be used to determine loads and peak demands in the Los Angeles Basin and San Diego, which will then be used to predict the need for new resources in those Local Capacity Reliability areas. Assuming that all of the impacts of Emerging Technologies will be realized is a highly risky approach when it comes to reliability planning. IEP recommends a lower level of impacts from Emerging Technologies in the Mid Case scenario, such as 75% of the model results.

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[3] Staff AAEE Draft Report, p. 13.

[4] Southern California Edison has issued an All-Source solicitation to meet some of the need authorized by the California Public Utilities Commission in Track 1 of the current Long-Term Procurement Plan (LTPP) proceeding (R.12-03-014).

[5] It might be reasonable to allow programs that are pursuing Emerging Technologies to have TRC thresholds less than 1.0 since the goal of such programs is likely market transformation. However, as emerging technologies evolve into baseline technologies, the cost-effectiveness threshold should increase to 1.0.

Comments on DG Presentation

IEP appreciates the Staff's efforts to improve its models for forecasting the impacts of DG. This is a significant step forward in arriving at defensible forecasts of the impacts of DG on the demand forecast.

While IEP is supportive of the direction of Staff's efforts, IEP is very concerned about the rate forecasts used by Staff in deriving its DG forecasts. IEP understands that Staff used average $/kWh forecasts of electric rates in developing its forecasts of DG penetration. As noted above with regards to the impact of rate design on energy efficiency levels, the failure to use a two-part rate for determining the cost-effectiveness of DG investments will result in a significant overstatement of the level of DG. This is the case because currently DG cannot avoid the entire retail rate for commercial customers.[6] Also, for behind-the-meter solar projects that use Net Metering, those projects will not be "paid" at as high a rate when generation exceeds onsite load, thereby resulting in a greater level of costs incurred when net metered energy is consumed by the customer. By overstating the costs avoided by customers and the impact of Net Metering, Staff's forecasts overstate the amount of load avoided by DG and, as a result, understate the demand forecasts. IEP recommends that Staff revise its modeling to reflect the true costs that can be avoided by DG.

Conclusions About Impact of Flawed Assumptions on Demand Forecasts

The use of the three flawed assumptions in the Staff AAEE Draft Report and the incorrect rate design assumptions in the Staff DG forecast result in an overstatement of load that reduced by AAEE and DG. While IEP believes that Staff should ultimately revise its modeling approach to use the appropriate modeling assumptions as recommended by IEP to develop new AAEE and DG forecasts, IEP is also cognizant of the level of effort that such a revision to these forecasts would require. However, at the same time, IEP is very concerned that the demand forecasts that are being proposed by Staff are significantly understated.

For this IEPR cycle, IEP proposes two temporary solutions to the clear understatement of the demand forecasts. First, IEP recommends that Low-Mid Case AAEE forecast become the Mid Case AAEE forecast. While this is clearly an approximation, it avoids the need

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[6] Also, given the language of Assembly Bill 327, which was just signed into law, it is possible that even residential customers might face stiff fixed charges in the future.

to redo forecasts of AAEE forecasts and it at least moves the AAEE forecast in the proper direction given the flawed assumptions used in the Mid Case scenario. This would also help to compensate for the overstatement of DG impacts. Second, recognizing that the Commission needs a high-case demand forecast, IEP recommends that the Commission adopt a new Low Case AAEE forecast. This forecast would maintain the same percentage reduction in AAEE impacts as are currently seen between the Mid Case and Low Case AAEE scenarios.[7] Again, this is an approximation but does result in a revised Low Case scenario that is more reasonable than the current Low Case scenario, which clearly over-states a reasonable lower bound on AAEE impacts.

Conclusion

IEP appreciates the opportunity to provide these comments regarding the revised demand forecasts and looks forward to working with the Staff to enhance its forecasting process in the future.

Respectfully submitted,

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Association

[7] For example, the reduction in AAEE impacts between the Mid Case and Low Case scenario for PG&E in 2024 is 40% (a reduction from 2,141 MW to 1,274 MW (see Table 7 on page 9 of the Staff AAEE Draft Report). Thus, the revised Low Case scenario would be 40% below the Mid-Low Case scenario (i.e., -40% * 1,319 MW = -534 MW, resulting in a new Low Case AAEE level for PG&E of 785 MW (1,319 – 534 = 785)).