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California Energy Commission
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DOCKET	
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Re: California Energy Commission Docket No. 11-IEP-1A: Comments Related to the Committee on the California Clean Energy Future

To Whom It May Concern:

On July 6, 2011, the California Energy Commission (“Energy Commission”) held a committee workshop (“the Workshop”) on the California Clean Energy Future (“CCEF”) and the proposed metrics for measuring progress on the initiatives essential to meeting California’s clean energy goals. This Workshop was held as part of the Energy Commission’s 2011 Integrated Energy Resource Policy Report process (“2011 IEPR”). Southern California Edison (“SCE”) welcomed the opportunity to participate in the Workshop and to provide these additional written comments for your consideration.

California has adopted aggressive statewide goals, which attempt to reduce greenhouse gas (“GHG”) emissions to 1990 levels and serve 33% of electricity demand from renewable resources. The CCEF initiative is being developed by representatives from several State Agencies¹ “to identify and align the key initiatives needed to achieve the state’s far-reaching environmental and energy policy goals.”² The CCEF initiative includes “(1) an Overview document describing the scope of the initiative; (2) a set of implementation tools; and (3) tracking tools for measuring progress towards the various identified goals.”³ The Energy Commission published eleven proposed metrics (the tracking tools) on July 1, 2011 and presented these at the Workshop. As part of the 2011 IEPR, the Energy Commission has requested feedback on these metrics as well as updates to the Overview to reflect recent energy regulatory changes.⁴ SCE is supportive of the State Agencies’ efforts to

¹ The Energy Commission, the California Air Resources Board (“CARB”), California Independent System Operator (“CAISO”), California Public Utilities Commission (“CPUC”) and the California Environmental Protection Agency (“CalEPA” and with the Energy Commission, CARB, CAISO, the “State Agencies”).

² See Workshop Notice at p.2.

³ See CCEF Implementation Plan, p. 19 available at:

http://www.cacleanenergyfuture.org/common/CCEF%20Implementation%20Plan_vFinal_2a.pdf (describing the CCEF initiative as consisting of “(1) an Overview document describing the scope of the initiative; (2) a set of implementation tools; and (3) tracking tools for measuring progress towards the various identified goals.”).

⁴ See Energy Commission Notice of Committee Workshop on the California Clean Energy Future, p.2 available at: <http://www.cacleanenergyfuture.org/2ba6/2ba6dbd7271e0.pdf> (“Workshop Notice”).

involve stakeholders in this process going forward and submits the following four general recommendations with respect to the role of the CCEF initiative:

1. Grid reliability, safety and cost containment should be primary concerns when developing additional state policy goals;
2. The proposed metrics should be considered in the broader context of California-wide GHG reduction;
3. The CCEF should be viewed as dynamic; and
4. The CCEF initiative should leverage markets and existing processes to provide practical solutions.

Each of these recommendations is discussed below. Additionally, SCE's technical comments regarding each of the eleven metrics are attached hereto as Appendix A.

I. Reliability, Safety and Cost Containment Should be Primary Considerations

SCE is concerned that the CCEF initiative does not adequately consider critical issues of electric system reliability, safety and cost containment. State Agencies must keep in mind that the State's environmental policies must compliment the primary goal of providing safe and reliable electric service at just and reasonable rates. Electric system reliability, safety and costs are crucial in system planning and should not be compromised to achieve aggressive environmental goals.

II. The Proposed Metrics Should be Considered in the Broader Context of California-wide GHG Reduction

While the CCEF initiative considers the impact of several state environmental initiatives on GHG emissions levels, it fails to appreciate fully the interrelation of those initiatives and the resulting impacts to the overall goal. In some cases, the accomplishment of one goal may undermine the success of another goal. For example, initiatives focused on adding large amounts of renewable resources to the transmission system do not necessarily consider that integration of larger amounts of renewable power onto the transmission grid requires additional supplies of fossil-fuel generation to account for the intermittent nature of renewable resources. Thus, in some circumstance, the need for additional higher emitting resources may reduce the expected GHG reduction benefits from a renewable initiative.

Likewise, the deployment of solar generation may shift reliability needs to the early evening period, undermining the potential value for traditional forms of demand response. Both solar generation and demand response can be important elements in achieving California's environmental goals, if appropriate consideration is given to the impact of the solar initiative on the demand response program. Other examples of interdependent goals are reflected in SCE comments on the individual metrics.

The CCEF recognizes this interdependency of the initiatives in the following excerpt from the Overview:

The task at hand will require more than summing up individual actions. State agencies must maintain a broad perspective on which policies are pursued in order to *recognize their interactions* and avoid unpleasant surprises or missed opportunities.⁵

However, by focusing on measuring the achievements of discrete initiatives, the proposed metrics do not appear to reflect this principle. SCE agrees that strict adherence to one initiative without consideration of the impacts that implementing that initiative will have on other initiatives risks compromising California's long-term clean energy goals. For this reason, the CCEF provides the greatest value as a platform for evaluating the state's progress towards its overall goals rather than rigidly tracking the progress of individual initiatives.

In fact, SCE questions the usefulness of the proposed metrics for tracking California's progress towards its environmental goals. The proposed metrics are lagging indicators -- in many cases, the state's actions taken today will not have an impact until 5 to 15 years from now. Without forward trending, the option of making course correction will be lost. Additionally, the metrics would be more useful in measuring GHG reductions across all sectors, in part, because GHG initiatives may result in shifting GHG emissions between sectors. For example, the use of Plug-in-Electric Hybrids has a net positive impact on the environment, but will result in an increase in GHG emissions from the electricity sector. Furthermore, by tracking only the electricity sector, the performance metrics are missing a large portion of California's GHG emitters. The electricity sector is already lower in GHG intensity, contributing 23% of the state's total GHG emissions as compared to 38% from the transportation sector. The CCEF would greatly benefit from tracking California's overall GHG emission levels, which would serve to substantiate the assumptions used to develop the state policy goals and initiatives.

In addition, SCE is concerned that the specific goals included in the CCEF Overview have not all been properly analyzed and vetted through a transparent stakeholder process.

III. The CCEF Initiative Should be Dynamic

SCE encourages the State Agencies to view the CCEF initiative as a dynamic set of documents. As the Overview accurately states:

Everything will not go as expected and adaptive management practices must be employed to identify policy overlaps, conflicts, unanticipated or unintended consequences, and vulnerabilities in time to make necessary trade-offs and course corrections.⁶

SCE agrees with the approach adopted in the CCEF Overview to periodically review and revise CCEF strategies and targets in order to address these uncertainties.⁷ SCE also recommends that the State Agencies take the time necessary to understand how the initiatives interact with the existing

⁵ California's Clean Energy Future: An Overview on Meeting California's Clean Energy and Environmental Goals in the Electric Power Sector in 2020 and Beyond; CEC-100-2010-002; p. 2 available at: <http://www.cacleanenergyfuture.org/2821/282190a82f940.pdf> (emphasis added).

⁶ Overview at p. 2.

⁷ Id.

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goals and how appropriate metrics can be established. SCE encourages the State Agencies to follow the example of CARB with respect to GHG cap-and-trade program by making sure to get it right even if it requires delaying implementation.

IV. The CCEF Initiative Should Leverage Markets and Existing Processes to Provide Practical Solutions

The CCEF initiative should be used as a set of documents that describe a vision, not an effort to implement centralized planning. The appropriate application of the CCEF initiative will rely on markets, where possible, and recognize and take advantage of existing checks and balances that support the electricity market such as the California Independent System Operator (“CAISO”)’s oversight of reliability and the California Public Utility Commission (“CPUC”)’s oversight of customer issues. The State Agencies should pursue a practical solution, not an ideological one.

As always, SCE appreciates the opportunity to submit its comments. SCE supports a transparent process for updating the CCEF. Careful consideration and caution are essential to creating goals that are in-line with California’s energy goals. Feel free to contact me regarding any questions or concerns.

Sincerely,

/s/ Manuel Alvarez

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Appendix A SCE's Comments to the Proposed Metrics

SCE supports the State Agencies' efforts to quantify and measure progress toward meeting California's environmental goals. Such efforts are essential to fostering a continuing dialog and reevaluation of the state's progress in achieving its energy policies moving forward. However, SCE is concerned that the State Agencies' proposed metrics do not provide a complete picture of California's progress towards the CCEF. Therefore, these metrics will not effectively serve their intended purpose. In SCE's view, the metrics do not fully capture the key interactions between the different resources that they are separately measuring.

In this Appendix A, SCE recommends that the State Agencies carefully consider whether each metric appropriately provides insight about whether the state is meeting its environmental goals and addressing impacts resulting from the system changes in pursuing those goals. SCE also recommends the inclusion of several additional metrics and highlights its specific concerns with certain metrics.

Overview of SCE's Metric Recommendations

As SCE explains in its general Workshop comments, the CCEF is an initiative of the State Agencies to review the progress of reducing California's GHG emissions. SCE encourages the State Agencies to track GHG emission reductions in other sectors in California in addition to the electricity sector given that the state's GHG reduction targets specified in AB 32 are for all of California. As also stated in the general Workshop comments, GHG emissions reductions in the electricity sector may not be indicative of the entire state's progress towards meeting its GHG goals. More importantly, a metric limited to the electricity sector may even provide misleading results, because some measures target GHG emissions outside of the electricity sector. For example, greater numbers of electric vehicles increase GHG emissions from the electricity sector, but decrease GHG emissions for California as a whole. Accordingly, the metrics should be revised to include other GHG-emitting sectors and to focus on GHG emissions across all sectors.

In addition, the metrics should be revised to take into account the potential impacts of CCEF policies on electricity load shape. For example, increased night load as a result of off-peak night charging for electric vehicles coincides with the typical peak generation from wind resources which could change the value of the wind generation.

Lastly, SCE recommends that the metrics include three points in time: the current year, 5 years past, and the trend 5 years forward to better assess progress.

SCE supports using appropriate metrics to track the progress of the state in meeting its environmental goals and more importantly, as a framework for initiating a reevaluation of the effectiveness of the state's current policy mix. As stated at the Workshop, SCE would support using the IEPR as forum for developing and would welcome the opportunity to participate in developing the final metrics.

SCE's Proposed Additional Metrics

SCE recommends that the State Agencies include a metric that considers the cumulative impact in GHG emissions reductions of resource changes, i.e. increasing demand response, electric vehicles, energy efficiency, and renewable generation and decreasing thermal generation. Cumulative load shapes could provide that information. Such a metric would help state agencies understand how each CCEF initiative interacts with other metrics over time.

Additionally, metrics for demand response, electric vehicles, energy efficiency, and renewable generation should always be coupled with an on-going evaluation of each initiative's contribution to meeting the state GHG goals. For example, the Renewables Portfolio Standard ("RPS") Program has provided a considerable amount of new information regarding the operating challenges associated with renewable generation. This information should be incorporated in an update of the expected GHG emissions reductions attributable to the RPS. Doing so for each of the CCEF initiatives will ensure that the state goals are focused on the most cost-effective measures for achieving statewide reductions.

The State Agencies should also develop a set of metrics to compare the flexibility of the state's resources with changing operating requirements as the state integrates increasing amounts of renewable generation. As indicated by the CAISO 33% RPS Supplemental Results Presentation,¹⁰ new resource options above and beyond those selected to meet the planning reserve margin will likely be needed to meet these changing operating requirements. For example, ramping and load following resources will become increasingly important as renewable generation is added to the system. There may be several options to supply those resources. Creating a simple, but meaningful metric for measuring the use of these new options to supply resources to meet changing system operating requirements will be useful for evaluating the impact of higher penetrations of renewable generation.

SCE's Specific Comments on the State Agencies' Proposed Metrics

Demand Response

¹⁰ CAISO 33% RPS Study of Operational Requirements and Market Impacts – Supplemental Results; presented at the CPUC on November 30th, 2010.

The demand response metric measures the customers' capacity reduction in megawatts ("MW") in response to a financial incentive. SCE believes that measuring DR with a simple capacity metric may not be adequate in the future. As metering advances enhance the dispatchability and precision with which DR can be utilized, the potential roles for DR are likely to expand greatly. Other capabilities for DR could include reserves, load following, and other ancillary services that will be necessary for renewable integration. Metrics for Smart Grid applications (including energy storage) are under consideration in the CPUC's Smart Grid Rulemaking.¹¹

The State Agencies' proposed DR metrics incorrectly assume that the amount of additional DR that can realistically be expected as a result of Advanced Metering Infrastructure ("AMI") deployment is being addressed in the Long-Term Procurement Plan ("LTPP") proceeding. This issue is not being specifically addressed in the 2010 LTPP.

Statewide Energy Demand, Electric Vehicles, Energy Efficiency

SCE has no specific comments on these proposed metrics. The Additional Metrics section above discusses use of additional metrics concerning GHG emissions, load shape and flexibility.

Installed Capacity, Once-Through Cooling (OTC) and Renewable Energy

The proposed installed capacity metrics should incorporate a review of forward trend of the capacity to identify the impact of once-through cooling ("OTC") plants in order to understand the progression of overall system changes. Additionally, the capacity should be provided on a net qualifying capacity ("NQC") basis, rather than based on nameplate capacity, to be consistent with resource adequacy requirements. SCE Figure 1 (below) outlines a recommendation for grouping resource information and the recommended metrics to optimize the information on how the system is changing as the state continues to implement its energy policies.

In reporting metrics for the OTC plants, SCE recommends including the following as additional information: 1) the proposed method of compliance with state OTC requirements for each unit, 2) the resulting expected net qualifying capacity as a result of implementing the proposed compliance method, and 3) identification of any units that are not able to comply because of a lack of particulate matter 10 microns or less in size ("PM-10") emission reduction credits. This information will provide better insight into how OTC policy compliance may impact the future electricity grid.

With respect to Figures 2-3 of the Installed Capacity Metric entitled "Governor's Goals for Large-Scale Renewables and Renewable DG (20 MW and Smaller) and CCEF Goal for Storage," SCE strongly recommends delaying the inclusion of metrics related to the achievement of (1) the 12,000 MW of localized energy resources (2) the energy storage target of 1000 MW and (3) the 8,000 MW of Large Scale RPS Resources. First, the Governor's goals have not been evaluated for feasibility or effects on system reliability. Second, SCE does not, at this time,

¹¹ R.08-12-009, Rulemaking to Consider Smart Grid Technologies Pursuant to Federal Legislation and on the Commission's Own Motion to Actively Guide Policy in California's Development of a Smart Grid System (filed December 18, 2008).

support a MW target of any amount for electricity storage. As referred to previously, energy storage metrics are under consideration in the Smart Grid Rulemaking.

Figure 1 of the Renewable Energy Metric shows the RPS program targets as a step function. SCE suggests that future targets reflect reasonable progress in interim years to reflect the CPUC's implementation of the RPS program.

The Energy Commission should make clear its assumption regarding expiring RPS targets in Figure 2, in the State Agencies' Renewable Energy Metric. It appears that no re-contracting is assumed. Additionally, the Energy Commission should include securing transmission access and completion of equipment sourcing as separate project development milestones, given the importance of these milestones toward successful project development. Finally, the Energy Commission should consider differentiating between milestones that are more or less difficult to attain and therefore, are more or less indicative of future success. For example, securing financing indicates that many hurdles to project development have been cleared. Such a project is much more likely to succeed than a project that has only obtained land permits.

Transmission Expansion

Transmission for the expansion of renewable energy is inextricably linked to the renewable projects it supports. SCE recommends that the Energy Commission include information regarding the status of renewable projects interconnecting to each proposed transmission upgrade using the same milestones as those proposed in the renewable energy metrics. SCE also recommends that additional details be described in the current status of each transmission project be more detailed as well (e.g. status of CAISO / Federal Energy Regulatory Commission approval, status of CPUC Certificate of Public Convenience and Necessity or Permit to Construct, Under Construction). Presenting the information in this manner will relate the status of the renewable energy projects to the status of the transmission infrastructure needed to interconnect those projects. Finally, import capability into the Southern California load center is another concern related to renewable transmission. Without adequate import capability into the Southern California load center, the state's renewable goal may not be met. As the OTC units comply with the State Water Resource Control Board ("SWRCB") policy, a metric related to the change in inertia level (either in transmission expansion or OTC section) should be incorporated so as to be able to keep in view the changes in import capability associated with those changes.

Reserve Margin

Historically, the reserve margin is the total capacity above that which is needed to meet expected annual peak load. It has been adequate for use in the past, but integrating more renewable energy may require additional ancillary services that exceed the reserve margin capacity. Metrics should be developed for additional resource products (e.g. ramping, regulation) for integration.

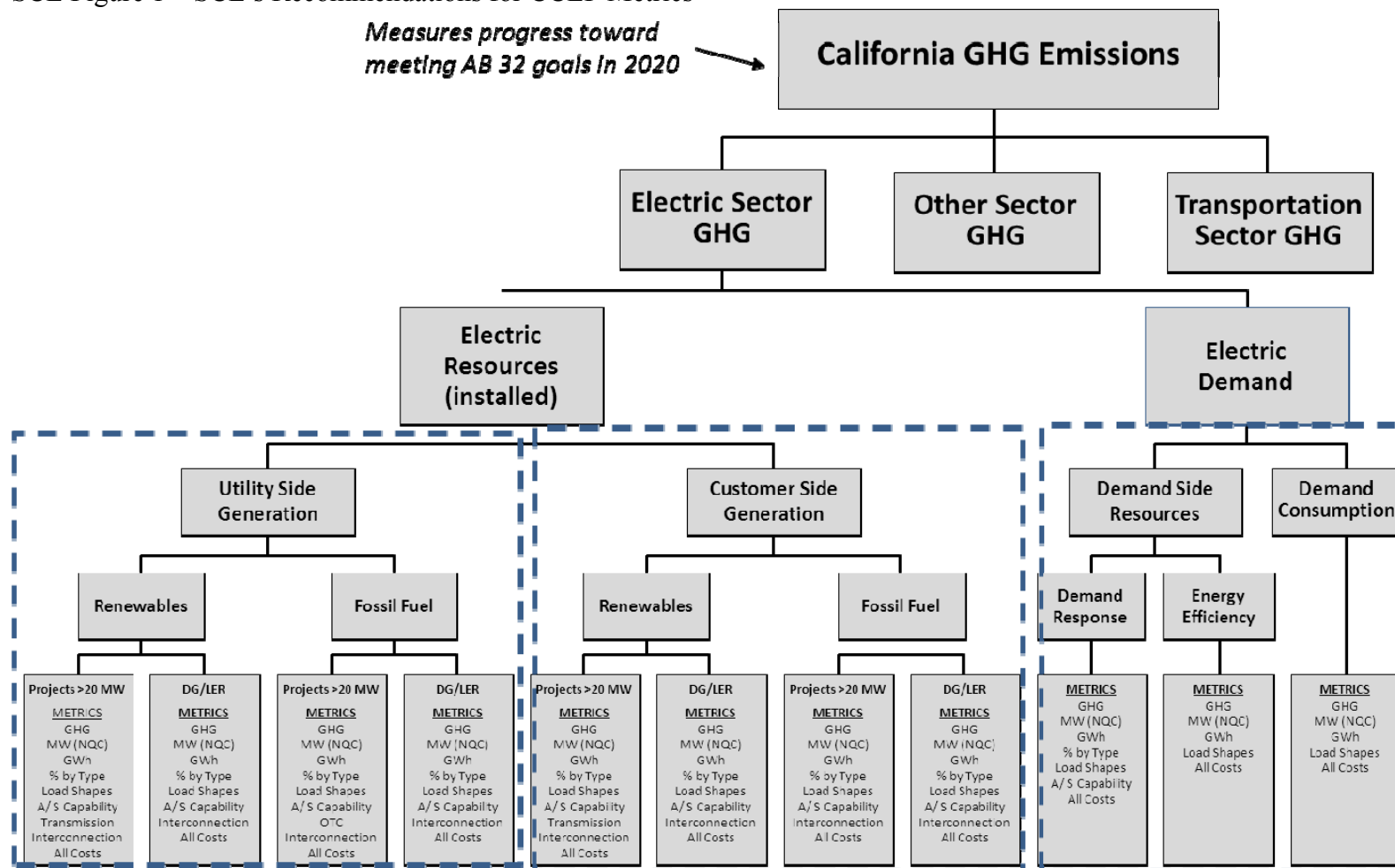
System Average Rates for Electricity

The proposed system average rate ("SAR") calculation, as presented in the System Average Rate Metric, does not identify the primary drivers for changes in the SAR and how the SAR impacts

various customer segments and the bills that they pay. The supporting documentation makes note of these two shortfalls in the SAR methodology. SCE urges the State Agencies to consider ways to make clearer the cumulative rate and bill impacts associated with achieving the state's environmental goals. For instance, the State Agencies could track the System Average Bill ("SAB") by customer class (e.g., large industrial, residential, commercial) in addition to tracking the SAR. While tracking the SAB can lead to compositional bias as SCE's customer base changes over time, it will incorporate the impact of energy efficiency programs on the total customer bill. SCE also recommends that the State Agencies conduct additional analyses to understand how differing programs impact the electricity bills that the state's electricity customers pay. This is because evaluating the impact of the state's various policy initiatives will be impossible using only SAR and SAB by customer class.

Additionally, the Energy Commission's proposed methodology for calculating SAR is problematic because it will systematically understate the true SAR paid by IOU customers. Departed customers, such as direct access customers, do not receive generation service from IOUs but do take delivery services. Therefore, they have a lower revenue requirement per energy sale than do bundled customers. Including these customers in the proposed SAR methodology will misrepresent the average rate IOU bundled electricity customers are paying. SCE recommends using the SAR for bundled service customers only.

SCE Figure 1 – SCE's Recommendations for CCEF Metrics



All metrics should be reported as present, 5 yr past trend and the 5 yr forward trend