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California Energy Commission
Dockets Office, MS-4
RE: Docket No. 11-IEP-1A
1516 Ninth Street
Sacramento, CA 95814-5512

Re: Draft *2011 IEPR*

**Comments of the California Center for Sustainable Energy
on the Lead Commissioner Draft *2011 Integrated Energy Policy Report***

The California Center for Sustainable Energy (CCSE) is a mission-driven 501(c)(3) non-profit, based in San Diego, founded in the wake of California's electricity deregulation under a Memorandum of Understanding between the San Diego Association of Governments (SANDAG), San Diego Gas and Electric Company (SDG&E) and the San Diego State University Foundation. Since our founding, we have grown considerably, developing competence across the clean energy spectrum. Our staff of 75 professionals is focused on creating a sustainable energy future for all Californians.

CCSE commends Lead Commissioner Robert B. Weisenmiller and California Energy Commission (Energy Commission) staff for their work to develop the Lead Commissioner Draft *2011 Integrated Energy Policy Report (2011 IEPR)*. The Draft *2011 IEPR* provides a comprehensive summary of California's priority energy issues, as well as a number of sound policy strategies and recommendations to further California's goal of ensuring reliable, affordable, and environmentally responsible sources of

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electricity, natural gas, and transportation fuels for its residents. CCSE is pleased to provide comments pertaining to the following energy issues discussed in the Draft *2011 IEPR*:

- Energy Efficiency
- Renewable Energy
- Transportation

I. ENERGY EFFICIENCY

Chapters 2 and 3 of the Draft *2011 IEPR* focus on energy efficiency in California. CCSE recognizes and enthusiastically supports the State's designation of energy efficiency as the first best resource in the electric loading order. We fully support the Energy Commission's efforts with respect to the residential retrofit sector through the Energy Upgrade California (EUC) program and through implementation of AB 758. CCSE currently works with a number of local governments, including both the City and County of San Diego and the County of Los Angeles, to design and implement ARRA-funded EUC programs. Through partnerships with local governments and San Diego Gas and Electric (SDG&E), CCSE delivers high quality EUC programs largely focused on contractor outreach and training and financing.

Contractor outreach and training

In cooperation with San Diego County and the California Energy Commission, CCSE administers the GETUP Training Program. This program includes two weeks of hands-on retrofit work in the field (a component that is critical in developing the home performance industry that is often missing in training programs), but also provides soft skills training and paid internship opportunities for those looking to work with participating EUC contractors. This experience has made even more clear the value of

comprehensive contractor training to ensure those entering the EE workforce have the skills needed for success in the marketplace.

Financing

CCSE has worked with many local, regional and state entities, including the Commission, to bring a variety of financing products and supports to the efficiency market: the City of San Diego's loan loss reserve program, HUD's Power Saver loan product, CHF's low-interest loan product, and San Diego Metropolitan Credit Union's product, rolled out in November 2011. Further, we are hopeful that optimized PACE models will become viable in the near future.

We agree on the need to incorporate societal value of energy into a jointly developed definition of zero net-energy. We further support the Energy Commission's call for collaboration with local governments to develop and promote financing products for energy efficiency upgrades to existing buildings. We believe local governments are key market actors in the transition to a clean energy future for California, as they have both the community level engagement as well as state mandates to achieve major energy reductions and greenhouse gas mitigation as well. CCSE emphatically supports efforts to further empower local governments in these endeavors.

CCSE agrees with the Energy Commission assertion that the Building Energy efficiency Compliance standards give California builders, designers and contractors the flexibility to achieve energy efficiency in buildings using a wide array of measures; and that this flexibility in these performance standards is consistent and required in meeting measures fitting with construction goals and standards at the lowest cost in both existing and new home construction. Consistency across these industries is critical in market transformation and continued progress towards success.

We also support the Energy Commission's recommendations on addressing plug loads and appliance standards. CCSE believes that energy usage from plug loads can and should be addressed through incorporation into EUC and other whole house performance programs aimed at achieving long-term savings in the residential sector; end-user outreach through EUC channels would complement well any mid- and upstream programs seeking to influence appliance and plug load markets.

II. RENEWABLE ENERGY

Given CCSE's vision of creating a sustainable energy future for all Californians, we fully support the call in Governor Jerry Brown's Clean Energy Jobs Plan for 20,000 megawatts (MW) of new renewable generating capacity by 2020, including 12,000 MW of localized or distributed generation (DG). Energy Commission staff has estimated that the San Diego Region has a preliminary target by 2020 of 1,180 MW for renewable DG projects 20 MW and smaller that are interconnected to the distribution or transmission grid.¹ We agree with the Energy Commission's assessment that achieving these goals will require an intensive effort among our state's energy agencies, utilities, industry, and environmental and ratepayer advocates to address challenges to future development.² CCSE looks forward to participating in regional and statewide efforts to address any challenges and work toward meeting the Governor's goals.

CCSE agrees with the Energy Commission's assessment that renewable development, which includes permitting at the local level, will be an essential component of the state's efforts to meet the goal of adding 12,000 MW of DG by 2020.³ CCSE agrees with the Energy Commission's assessment that given the trend of declining costs for solar photovoltaic (PV) technologies, the focus should be on

¹ California Energy Commission, 2011. *2011 Integrated Energy Policy Report*. Publication Number: CEC-100-2011-001-LCD. ("Draft 2011 IEPR"). Pages 31-32, Table 3.

² Draft 2011 IEPR, page 2.

³ Draft 2011 IEPR at 45.

developing the “low-hanging fruit” in the next few years.⁴ Furthermore, we fully agree that in the meantime, the state should focus on reforming permitting and interconnection processes so that subsequent development of renewable DG installations can take advantage of cost reductions and improved regulatory structures in later years.⁵ As the Draft 2011 *IEPR* notes, “[f]or renewable DG facilities, widely varying codes, standards, and fees among local governments with jurisdiction over these projects are a challenge for developers trying to meet permitting requirements.”⁶ We agree that many jurisdictions are beginning to address these issues “by identifying permitting barriers, developing expedited permitting processes, offering online permits for solar PV systems, and offering permit fee waivers for solar and wind projects.”⁷ However, additional efforts need to be made to further reduce permitting barriers across *all* regions of California and ensure that all jurisdictions are actively supporting renewable DG.

In concordance with Commission focus on decreasing barriers to renewables deployment, CCSE is working toward streamlined standardized permitting processes across regions to reduce developer confusion, as well as reduce duplication and inefficiency in permitting processes. As noted in the Draft 2011 *IEPR*, the United States (U.S.) Department of Energy’s (DOE’s) SunShot Initiative “provides funding to encourage cities and counties to streamline and digitize permitting processes and to develop innovative information technology systems, local zoning and building codes, and regulations.”⁸ On December 1, 2011, the DOE announced \$12 million in funding for 22 regional teams competing in the DOE’s Rooftop Solar Challenge, part of the SunShot Initiative. CCSE, as lead for the Southern California regional team made up of many

⁴ Draft 2011 *IEPR* at 32.

⁵ Draft 2011 *IEPR* at 32.

⁶ Draft 2011 *IEPR* at 34.

⁷ Draft 2011 *IEPR* at 36.

⁸ Draft 2011 *IEPR* at 36.

local governments, utilities and a university partner⁹, , was awarded \$700,001 to develop model rules for permitting and interconnection processes. This project, one of four “California SunShot Rooftop Challenge” awards, will bring a streamlined approach to 21% of California’s population, as well as create custom implementation plans and jurisdictional mentorship programs. In these efforts, CCSE will lead the team of eleven jurisdictions and five utilities in a project to develop a set of regional model rules that will improve uniformity, speed and transparency of permitting and interconnection processes for rooftop solar systems across the Southern California region; expand financing options for residential and commercial customers; and standardize net metering and interconnection standards.

Additional efforts are underway at the federal level to further address permitting barriers. Representatives Brian Bilbray (R-Calif.) and Steve Cohen (D-Tenn.) recently introduced the “Solar Energy Regulatory Relief Act of 2011”, a bill seeking to standardize local permitting requirements for solar energy systems. Under this bill, the Secretary of Energy would establish a program under which competitive grants or challenge grants, or both, would be provided to local governments, or consortia of local governments, that have adopted, or offer a commitment to adopt, best practices for solar permitting for properties located in the United States. The goals of the program would be to reduce local regulatory burdens and ease private investment in small solar technologies, as well as to achieve cost reductions in the price of solar energy by December 31, 2020, consistent with the DOE’s SunShot Rooftop Solar Challenge.

We believe that these combined efforts will help to inform and assist the Energy Commission in carrying out its five overarching strategies to address challenges to future development of new renewable generating capacity. Most notably, we believe

⁹ CCSE SunShot Rooftop Challenge partners are: the Cities of Los Angeles, San Diego, Chula Vista, Anaheim, Long Beach, Santa Ana, Santa Monica, Palm Desert, Pasadena, and Palmdale, Los Angeles County; the Energy Policy Initiatives Center (EPIC) at the University of San Diego; San Diego Gas & Electric, and Southern California Edison.

these efforts will help the Energy Commission to carry out its Strategy 1 to identify and prioritize geographic areas in the state for renewable DG development; Strategy 2 to evaluate the costs and benefits of renewable energy projects beyond technology costs, including costs associated with integration, permitting, and interconnection; and Strategy 3 to minimize interconnection costs and time.¹⁰ We commend Energy Commission staff for their work to develop these sound policy strategies and look forward to participating in regional and statewide efforts to carry out these strategies, address the challenges to future development of new renewable generating capacity, and meet the Governor's 12,000 MW DG goal by 2020.

III. TRANSPORTATION

CCSE has established itself at the forefront of California's transportation energy sector through the implementation and management of programs and research that directly support the adoption of clean, efficient vehicle and fuel technologies. Working closely with individual consumers, fleet managers, fuel distributors, private technology providers, academic institutions, national laboratories, automobile manufacturers and many others, CCSE's activities span the clean transportation sector like few organizations. This perspective lends both urgency and excitement to our contribution to the sector, not only facilitation of increased penetrations of the vehicles themselves and the supporting direct infrastructure, but also managing their integration into distribution grids and coordination with the myriad simultaneous developments taking place across the utility sector.

Vehicle Electrification

As the administrator of the California Air Resources Board and Energy Commission-funded Clean Vehicle Rebate Project (CVRP), CCSE has been very pleased to have a hand in firmly establishing California as the nation's leader in the deployment

¹⁰ Draft 2011 IEPR at 49.
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and adoption of plug-in electric vehicles (PEVs); the number of full-function PEVs in the state is approaching 7,000 at the end of 2011. We believe that PEVs will play an increasingly important role in California's transportation sector. Additionally, we agree with recent findings that vehicle electrification, combined with renewable energy generation and smart-charging of the vehicle fleet, is the only viable technology alternative in order to meet the state's very aggressive 2050 GHG emission reduction goals in the transportation sector. Even at this very early stage of adoption, efforts to facilitate and encourage PEV owners to charge their vehicles during super off-peak hours (midnight to 5am), efforts that include access to PEV time-of-use (TOU) rates, low-cost utility metering for PEVs, consumer outreach and education, and subsidized residential charging equipment and installation, have led to real-world results that will serve as a model for future PEV deployment and efficient integration of these vehicles with a low-carbon electricity sector. For example, because of the measures listed above, roughly 80% of PEV charging in the San Diego region occurs during super off-peak hours, resulting in a 10-35% reduction in GHG emissions compared to charging that takes place during other hours of the day.

Maximizing the benefits of off-peak home charging will require providing low-cost access to PEV TOU rates for all PEV owners, including the market share of small battery format plug-in hybrid electric vehicle (PHEV) owners that rely solely on Level 1 residential charging. Moreover, in order to extend PHEV ownership beyond early adopters spurred by generous financial and non-financial government and manufacturer incentives, owners must have access to electricity rates that result in significantly lower fueling costs than gasoline. Due to California's Investor Owned Utility (IOU) tiered residential rate structures, this objective can only be achieved through access to PEV TOU rates. These rates, moreover, can only be accessed by the existence of low-cost sub- or separate-metering for PEV charging. CCSE encourages the Energy Commission to work closely with the state's IOUs, the California Public Utilities

Commission, and vehicle original equipment manufacturers (OEMs) to address this critical enabler.

In addition to affordable home charging options and access to PEV TOU rates, the availability of public charging infrastructure is very important to the widespread adoption of PEVs. CCSE's early experience with the deployment of PEVs and public-access electric vehicle supply equipment (EVSE) has revealed that the permitting, installation and inspection of EVSE vary widely between jurisdictions and can be a confusing process for potential EVSE host property owners. CCSE strongly agrees with and further encourages the Commission's support of regional PEV readiness activities to address these barriers. Moreover, CCSE is proud to participate in both CEC and U.S. DOE supported PEV readiness planning efforts aimed at streamlining the deployment of EVSE.

Alternative and Low Carbon Fuels

As the U.S. DOE designated coordinator for San Diego Regional Clean Fuels/Clean Cities Coalition, CCSE works regularly with local governments, fleets, and fuel providers to reduce petroleum consumption and increase the use of alternative fuels. Based on these experiences, CCSE has documented substantial and growing interest in the adoption of alternative fuels such as propane and natural gas. However, the high incremental cost of the vehicles and availability of fueling infrastructure both remain a concern. The Energy Commission's support for alternatives fuels through the ARFVT Program is important for greater deployment of vehicles and further development of infrastructure for these fuels. For example, CCSE currently manages an alternative and clean fuel vehicle incentive program in partnership with the San Diego International Airport (www.energycenter.org/avrp), with over 50 vehicles placed in the field to date. Critical to the success of this program is the Energy Commissions natural gas and propane vehicle buy-down incentives funded through the ARFVT Program.

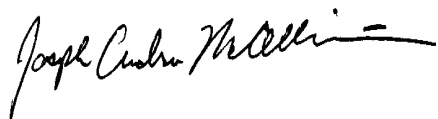
Lower carbon, competitively priced biofuels are also of interest to many fleet and consumers in the San Diego Region. CCSE supports the Commission's continued efforts to monitor the state of the ethanol market under existing regulations and support the future availability of lower carbon intensity biofuels. Working with fleet managers throughout the San Diego region and the state, CCSE receives regular inquiries regarding the availability of low-carbon ethanol and biodiesel. CCSE also supports the expansion of blending and storage for biofuels at existing fuel terminals.

Finally, CCSE strongly supports the efforts of the Energy Commission to provide high quality analysis of policies and programs that enhance energy security, lower the carbon intensity of transportation fuels, and minimize price impacts.

IV. CONCLUSION

CCSE commends Lead Commissioner Robert B. Weisenmiller and Energy Commission staff for their work to develop the Draft 2011 *IEPR* and appreciates the opportunity to provide these comments. We look forward to participating in regional and statewide efforts to carry out the Energy Commission's strategies to further California's goal of ensuring reliable, affordable, and environmentally responsible sources of electricity, natural gas, and transportation fuels for its residents.

Sincerely,



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