Memorandum

To: Interested Cal TF Stakeholders

Re: California Technical Forum's Support of California's Broader Energy Policies

From: Alejandra Mejia, Cal TF

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Overview

As an independent source of peer reviewed energy efficiency values, the California Technical Forum (Cal TF) can help advance several of California's energy policy goals. This memorandum explains how Cal TF's mission, organizational structure, and work products are well suited to support the state's broader energy policies.

The conclusions presented in this document were drawn from an analysis of the longstanding documents that serve as key guiding posts for California's energy policy, as well as more recent legislative and regulatory developments at both the state and federal levels. The policy documents analyzed were:

- 2013 State Senate Committee Hearings on Energy, Utilities, and Communication documents and recordings
- CPUC Energy Efficiency Rolling Portfolios OIR and Commissioner comments
- California Energy Action Plan
- CPUC Energy Efficiency Policy Manual
- Long Term Energy Efficiency Strategic Plan
- CAISO Energy Efficiency and Demand Response Draft Roadmap
- AB 32 and Proposition 39 Implementation Efforts
- EPA 111(d) Rulemaking

This approach led to several findings about how Cal TF is aligned with California's long-standing policy objectives for energy efficiency, and also can help foster the success of new initiatives, including implementation of California Assembly Bill (AB) 32 and Proposition 39, and compliance with Section 111(d) of the federal Clean Air Act.

I. Cal TF's Alignment with Key California Policy Objectives for Energy Efficiency

Throughout the policy documents reviewed, certain themes were repeatedly highlighted as very important to the people and decision-makers of California: innovation, cost-effectiveness and collaboration.

Innovation

The need for technological and programmatic innovation is a clear theme across the various policy documents analyzed. In fact, one of the overarching process goals of the ongoing CPUC Rolling Portfolio Rulemaking is to increase flexibility and innovation.[1] California's urgent and repeated calls for innovation in demand-side technologies are not surprising, given the state's leadership role in technology innovation. Furthermore, California is well into its third decade of continuous IOU-administered energy efficiency programs. Between its long-standing programs and ambitious goals, California no longer has the luxury of relying on the 'low-hanging energy efficiency fruit' that most other states can still target with their portfolios. Furthermore, as is made clear in the Energy Action Plan, the need for innovative energy efficiency measures will only increase as the state is forced to adapt to the inevitable effects of global warming.[2]

Cal TF will help bring much-needed innovative thinking to California by way of the more than 30 highly skilled members of its Technical Forum (TF), who bring in-state and out-of-state knowledge, experience and approaches from diverse perspectives, including public and investor-owned utilities, implementers, academics, national laboratories, and others. Selected through a competitive bidding process, TF members were appointed based on strong technical skills and experience, but also to meet holistic goals of creating a panel of experts that collectively brings a balance of technical expertise, sector experience (e.g. commercial, agriculture, etc…), technology focus (e.g. lighting, HVAC, etc…), and different institutional experience. The broad range of expertise and in-state and out-of-state perspectives and knowledge should lead to increased innovation.

Cost-Effectiveness

Portfolio cost-effectiveness is another central, long-standing California energy efficiency policy objective. The CPUC Energy Efficiency Policy Manual has an entire chapter devoted to heading the regulatory and legislative cost effectiveness mandates.[3]

Despite the portfolio cost-effectiveness standard, as was demonstrated in last year's State Senate Committee on Energy, Utilities, and Communication, policy makers are concerned about the steadily declining cost-effectiveness rate of California's efficiency portfolio.[4] This distrust may be related to a more general lack of confidence in savings estimates associated with particular measures and the process by which those figures are decided.[5] Regulators, IOUs,

[1] Rolling Portfolio OIR at 10
[2] Energy Action Plan at 3
[3] Energy Efficiency Manual at 17
[4] *Energy Efficiency and Alternative Energy Programs*, LAO, December 2012, p. 11
[5] During the hearing, Committee Chair Senator Padilla and several of the Committee members (among them Senators DeLeon and Wright) expressed grave concerns with the current system. They were particularly perplexed with the different methodologies used by the CPUC, CEC, and CAISO to measure

and stakeholders are all likely to be more comfortable with lower portfolio cost-effectiveness if they have confidence in the values used to plan and evaluate energy efficiency portfolios are accurate and reliable. Two attributes of the current process that reduce confidence in the accuracy and reliability of energy savings estimates are the degree of contention around the values, and the very marked and significant difference between ex ante and ex post savings values for the 2006 – 2008 California efficiency portfolios.

Cal TF can bolster state policy-maker confidence that the state is in fact meeting its portfolio cost effectiveness requirement despite declining portfolio cost-effectiveness values. The Cal TF process is public, and resulting values will be well-documented and transparent. Furthermore, the process will yield values that are better understood and supported by a broader base of stakeholders. The reduced contentiousness and greater transparency should help build policy-maker trust that the savings from efficiency are a real and reliable alternate resource. Finally, a thorough, public vetting of values up-front will hopefully reduce the after-the-fact changes to those values, which erodes confidence in efficiency as a reliable resource for meeting California's energy needs.

Collaboration

In the last year and a half, the legislature has become concerned with the lack of collaboration between the CPUC, the CEC, and CAISO. A Legislative Analyst Office report published in December of 2012 found California's EE efforts in serious need of a "comprehensive framework [to] fully coordinate" programs and EM&V. The LAO warned that the current uncoordinated system could be resulting in programs not aligned with legislative priorities.[6] Subsequently, the State Senate Committee on Energy, Utilities, and Communication held a hearing to discuss the lack of inter-agency collaboration in February of 2013. In response to concerns expressed by Committee members during this hearing, the CPUC, CEC, and CAISO committed to work together on a number of key issues, including standardizing the level of confidence on EE metrics so that all three agencies can confidently rely on the same data.[7]

Cal TF's Policy Advisory Committee (PAC) has representatives from the CPUC, CEC, and CAISO. Having active involvement from both the CEC and CPUC will ensure that the organization takes into account the expectations and requirements of the two state agencies responsible for efficiency oversight, as well as California's independent system operator, who can only rely on efficiency as a resource of savings values are trusted, stable and reliable. Cal TF will be one more step towards improved statewide collaboration on energy issues, consistent with the direction from the state legislature.

II. Other California Policy Initiatives: Implementation of AB 32 and AB 39

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and forecast energy efficiency savings. The Committee was concerned that this incoherence in the state's EM&V processes would lead to misuse of the roughly $500 million expected to be raised for energy programs by Prop 39 (Hearing Agenda, Introduction; hearing recording).

[6] *Energy Efficiency and Alternative Energy Programs*, LAO, December 2012, summary

[7] *Letter to Senators Padilla and Fuller*, CEC, CPUC, and CAISO, February 25, 2013, p.3

Cal TF will support the implementation of other key California initiatives: Assembly Bill (AB) 32 and Proposition 39. AB 32 requires that greenhouse gas (GHG) emissions be reduced to 1990 limits by 2020. Proposition 39 creates the $2.5 billion Clean Energy Fund to upgrade California's public school facilities with energy efficiency and clean energy improvements. Proposition 39 provides guidelines for expenditures from the Clean Energy Fund to ensure that schools achieve energy and cost savings and that the public stays informed of jobs created, energy saved, and the amount of clean energy installed.

While the Air Resources Board's (ARB) novel Cap-and-Trade system may be the most notable aspect of California's plan to meet AB 32's ambitious GHG reduction goals, it is far from the only component required for success. In fact, energy efficiency is one of six key strategies recommended in the ARB's AB 32 implementation Scoping Plan.[8] The Scoping Plan discusses how California needs to reformulate its approach to energy efficiency so as to better "pursue new technologies, and new policy and implementation mechanisms."[9] Given the important role of efficiency in AB 32 implementation, a statewide approach to developing energy savings values is important. Greenhouse gas reductions from efficiency will be less trusted and credible if there is lack of statewide commonality or agreement on how the reductions should be calculated. .

Cal TF can also help optimize Proposition 39 energy efficiency funds. As has already become clear in the various Proposition 39-related fillings, the current process is in danger of becoming overwhelmed with an onslaught of custom school retrofit projects.[10] The Cal TF's alternative, independent review process can help establish common, consistent savings values for school efficiency upgrades throughout California, regardless of whether they occur in POU or IOU service territories.

III. EPA 111d Rulemaking and Subsequent Implementation

Spurred by explicit directives from President Obama, the Environmental Protection Agency (EPA) is expected to release a proposed rule for regulating CO2 emission from existing power generators on June 2, 2014. The proposed rule derives legislative authority from Section 111(d) of the Clean Air Act, and is thus commonly referred to as the 111(d) rule. A one-year comment period is required, then, the final 111(d) rule may be issued in June of 2015. States would then be required to submit implementation plans within the year. The California Technical Forum has the potential to help California further its energy policy interests in both the rulemaking *and* implementation processes by providing a statewide-consistent process for developing common energy savings estimates.

In terms of cost efficiency and avoiding unforeseen implementation pitfalls, it is in the interest of the EPA to capitalize on systems already implemented by states. The agency has already stated that it wishes to design a guideline

[8] California Air Resources Board, December 2008, *Climate Change Scoping Plan*, ES-3
[9] Ibid, pg. 41
[10] *Reply Comments of the Natural Resources Defense Council (NRDC) Regarding the Various Program Administrators' 2015 Energy Efficiency Program Funding Requests*, p. 4 and other Opening and Reply Comments filed by parties in R.13-11-005 between 04/04/2014 and 04/17/2014.

> That recognizes and builds off efforts already underway to reduce CO2 emissions from the power sector, provides flexibility for states to adopt measures that meet the reduction goals, and accommodates the diverse needs of states.[11]

As California plans to advocate for a system-wide approach that will enable it to use end-use energy efficiency to meet EPA standards,[12] it will benefit from being able to point to Cal TF's statewide approach to developing energy savings estimates rather than only the current IOU-POU segmented process. Furthermore, the Cal TF's streamlined, transparent, and technically robust process could no doubt strengthen California's State Implementation Plan when it is submitted to the EPA in 2016. While the current ex ante process could likely satisfy the EPA's standards of proof as it is a state-approved process for counting energy savings, the EPA may be concerned if California submits two different approaches for measuring energy savings– one for POUs, and one for IOUs. Creating a uniform, statewide system for developing energy savings would likely ease the EPA's review and adoption of California's implementation plan for its 111(d) goals where energy efficiency plays a key role in meeting the 111(d) goals.

Conclusion

At the forefront of American energy policy, California has adopted several very ambitious goals and policies for using efficiency as a resource and carbon reduction goals. The Cal TF provides an alternative, independent process that fulfils the goals already outlined by policy makers: innovation, cost-effectiveness, and collaboration. The Cal TF also has the potential to help California implement AB 32 and AB 39, as well comply with forthcoming federal rules under Section 111(d) of the Clean Air Act.

[11] US. Environmental Protection Agency, *Considerations in Design of a Program to Reduce Carbon Pollution from Existing Power Plants*, September 23, 2013, http://www2.epa.gov/sites/production/files/2013-09/documents/20130923statequestions.pdf

[12] Edie Chang, Deputy Executive Officer, Air Resources Board, *Using Energy Efficiency to Meet State and Federal Carbon Pollution Reduction Goals*, National Governors Association State Workshop on Innovations in Energy Efficiency Policy: West and Midwest, January 29, 2014.

Attachment

Specific Policy Directives in California Documents

Rolling Energy efficiency Portfolios ROI and Commissioner comments

- Among the ROI's overarching process goals are: to simply the EE review program without sacrificing portfolio performance, **increase flexibility and innovation** (see Commissioner quotes below), synchronize timing with other relevant activities (DEER revisions, etc.), and **use informal forums to reduce litigiousness** in EE proceedings: "The Commission encourages parties to collaborate through informal stakeholder forums," (pg. 10).
- "**The Commission encourages parties to collaborate through informal stakeholder forums** to submit a joint proposal or party proposal for a 'Rolling Portfolio' filing and review process" (p.10).
- "Perhaps the most critical process issue is how to simplify the portfolio review process while still ensuring adequate Commission oversight" (p.11).
- ***"I believe that we should consider how California might adopt a Regional Technical Forum as used in the Northwest to help create greater collaboration and innovation in our market," Commissioner Ferron****, November 14, 2013 Open Meeting.*
- *"I'm delighted to support this new rule making… I urge everybody, the utilities, energy efficiency stakeholders and advocacy groups to roll up their sleeves and get to work on this collaborative process," Commissioner Fiorio, November 14, 2013 Open Meeting.*

Energy Action Plan

- The 2008 Energy Action Plan calls out energy efficiency as the most important tool for reducing emissions in the energy sector; EE measures are predicted to supply roughly a quarter of the AB 32 reductions that are possible with known technologies (p.6). Unfortunately, while savings from building and appliance standards have increased over time, **yearly savings from IOU programs have remained relatively stagnant** over the last 30 years (p.7). The technical collaborative will bring new ideas, players, and energy to the IOU EE process.
- Not only will effective and reliable EE be essential to help meet the state's GHG reduction goals, it will also be needed to **help as California's adapts to the now inevitable effects of global warming**. Some of the state's integral generation facilities might be forced to retire as sea levels rise at the same time as hotter temperatures lead to growth in air conditioning loads (p.3). This means that both the nature and purpose of the EE programs of the future are likely to be different from traditional widget-based programs offered historically in California. The cutting-edge expertise to be housed in the technical collaborative will be ideally suited to help evaluate these new measures and widgets.
- California has long prided itself for being a leader in energy policy—AB 32, the state's dormant per-capita energy use curve, and aggressive building and appliance standards are a few of the landmark achievements that have kept California on the cutting edge (p.3). The technical collaborative **can be California's newest contribution to the state-of-the-art of energy policy in the US and the world**.
- As electricity prices continue to rise along with fuel and cap-and-trade costs, more and more innovative but possibly more expensive EE measures will become comparatively

cost-effective (p.6) and therefore eligible to be included in IOU portfolios. The new collaborative will be a perfect forum for IOUs, CEC and CPUC staff and stakeholders to **discuss how best to measure these new, complex, innovative measures** that have the potential to increase savings from efficiency.

- Furthermore, there is still 20% of the AB 32 goal that depends on technology that doesn't yet exist (p.4). As the EAP predicts, the IOUs will be forced to offer their customers ever more comprehensive and complex EE measures (p.8). The discussions to be fostered by the technical collaborative will **help both IOUs and stakeholders to stay current on upcoming measures and on how best to calculate their effectiveness**.

<u>EE Policy Manual Version 5.0, July 2013</u>

- In D.08-07-047, the Commission redefined IOU EE goals in a gross basis so as to "open up the opportunity for more program options" (D.08-07-047, p.30). The new collaborative will be the ideal forum in which stakeholders can publically and collaboratively **review expected savings from new, technically complex program approaches**.
- Per the Energy Efficiency Policy Manual, the Commission expects the IOUs to implement statewide programs and use industry best practices "to encourage the application of best practices, portfolio diversity, and innovation" (Version 5, July 2013, p.4).
- For emerging technology programs, the EE policy manual dictates that IOU strategies should focus on minimizing performance uncertainties related to new products (p.6).

<u>CAISO DR and EE Roadmap</u>

- CAISO is committed to undertaking the transition of EE and DR to the top of the loading order in a way that does not compromise market stability or reliable operations (p.2). While intermittent renewables will continue to add uncertainty to system operations, EE has the potential to provide counteracting grid balancing and reliability (p.6). The technical collaborative can help **increase CAISO's confidence in the product** by increasing consensus on the '*negawatt*' value of EE measures. Without greater confidence on the product, EE could become yet another source of uncertainty for the ISO.
- CAISO is very interested in using EE in a much more geographically targeted way. Improved EM&V achieved under the auspices of the technical collaborative can help **increase the precision with which CAISO can use EE** to meet the needs of troubled areas like the post-SONGS L.A. basin (p.11).
- In terms of continuing to guarantee resource sufficiency, its vital that CAISO, the CPUC, and the CEC better align their forecasting, planning, and procurement procedures. It is equally important that all three agencies find a way to agree on performance measurements for DR and EE resources (p.21). The new collaborative would create the p**erfect forum for the three agencies to work together to develop statewide agreement on ex ante values**. Reaching consensus on ex ante savings value through the technical collaborative process would also help the agencies in their efforts to improve and harmonize their forecasting and planning processes.

<u>Air Resources Board Climate Change Scoping Plan, Pursuant to Assembly Bill 32</u>

- Energy Efficiency is one of six key strategies for AB 32 implementation (Executive Summary p.3-4).
- In order to maximize attainment of the state's energy efficiency potential, California will have to pursue "new technologies, and **new policy and implementation mechanisms**" (pg. 41).
- Along these same lines, the Scoping Plan explicitly calls out the need for new intra-government partnerships, and promises to work with the CEC and CPUC to ensure these relationships occur (pg. 41).
- Lastly, the document specifies that "additional planning and strategies will be needed, both to achieve the 2020 emission reduction goals and to set the State on a trajectory towards 2050" (pg. 43).

<u>The Legislature on Collaboration</u>

- In December of 2012, the Legislative Analyst Office (LAO) published a report that found California's EE efforts in **serious need of a "comprehensive framework [to] fully coordinate" programs and EM&V**. The LAO warned that the current uncoordinated system could be resulting in programs not aligned with legislative priorities (*Energy Efficiency and Alternative Energy Programs*, LAO, December 2012, summary). Informed by the LAO report, and under pressure to pass implementation legislation for the Proposition 39 funds, the State Senate Committee on Energy, Utilities and Communications convened an informational hearing to investigate the issue further.
- During the hearing, Committee Chair Senator Padilla and several of the Committee members (among them Senators DeLeon and Wright) expressed grave concerns with the current system. They were **particularly perplexed with the different methodologies used by the CPUC, CEC, and CAISO to measure and forecast energy efficiency savings**. The Committee was concerned that this incoherence in the state's EM&V processes would lead to misuse of the roughly $500 million expected to be raised for energy programs by Prop 39 (Hearing Agenda, Introduction; hearing recording).
- In a follow-up letter, the Committee **pressed the two Commissions and CAISO to "provide specific joint specific recommendations"** to help ensure that the state's EE programs actually achieve the stated goal of deferring traditional generation investments. Specifically, the Committee **asked the three agencies to work collaboratively on synchronizing EM&V mechanisms designed to keep California's EE investments cost-effective** (*Letter to Chairman Weisenmiller, Mr. Randolph, and Mr. Casey*, Senators Padilla and Fuller, January 30, 2013).
- In response to the Committee's concern, the CPUC, CEC, and CAISO committed to work together on a number of key issues, including **standardizing the level of confidence on EE metrics** so that all three agencies can confidently rely on the same data (*Letter to Senators Padilla and Fuller*, CEC, CPUC, and CAISO, February 25, 2013, p.3). The CEC and CAISO also pledged to **work together to help the CPUC focus IOU EE programs** on strained local reliability areas and peak demand times (p.4).
- The original LAO report, and the LAO analyst's testimony to the committee, recommended that the CEC be made the lead agency in charge of all statewide EM&V. Although no such drastic step was taken, the CEC's central role in the administration and evaluation of the Prop 39 programs indicates that the committee was influenced by the LAO recommendations (*Proposition 39: California Clean Energy Jobs Act – 2013*

Program Implementation Draft Guidelines, California Energy Commission, October 2013).