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# Comments of the Natural Resources Defense Council (NRDC) on the Existing Buildings Energy Efficiency Draft Action Plan

*Additional submitted attachment is included below.*

**Comments of the Natural Resources Defense Council (NRDC) on the**
***Existing Buildings Energy Efficiency Draft Action Plan***
Docket Number 15-IEPR-05
April 21, 2015
Submitted by: Lara Ettenson
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## I. Introduction and Summary

The Natural Resources Defense Council (NRDC) appreciates the opportunity to offer these comments on the draft "Existing Buildings Energy Efficiency Action Plan" (Action Plan). NRDC is a non-profit membership organization with nearly 80,000 California members who have an interest in receiving affordable energy services while reducing the environmental impact of California's energy consumption.

## II. Discussion

NRDC appreciates the hard work to develop the draft Action Plan that will help achieve substantial efficiency upgrades in existing buildings. The following recommendations are focused on high level matters, including the description of the Governor's goal as well as key milestones and strategies in the draft Action Plan. We look forward to participating in the establishment of the statewide collaborative to set long term numerical targets and in the development of the work plans to outline critical details for successfully implementation.

### 1. Overview and milestones

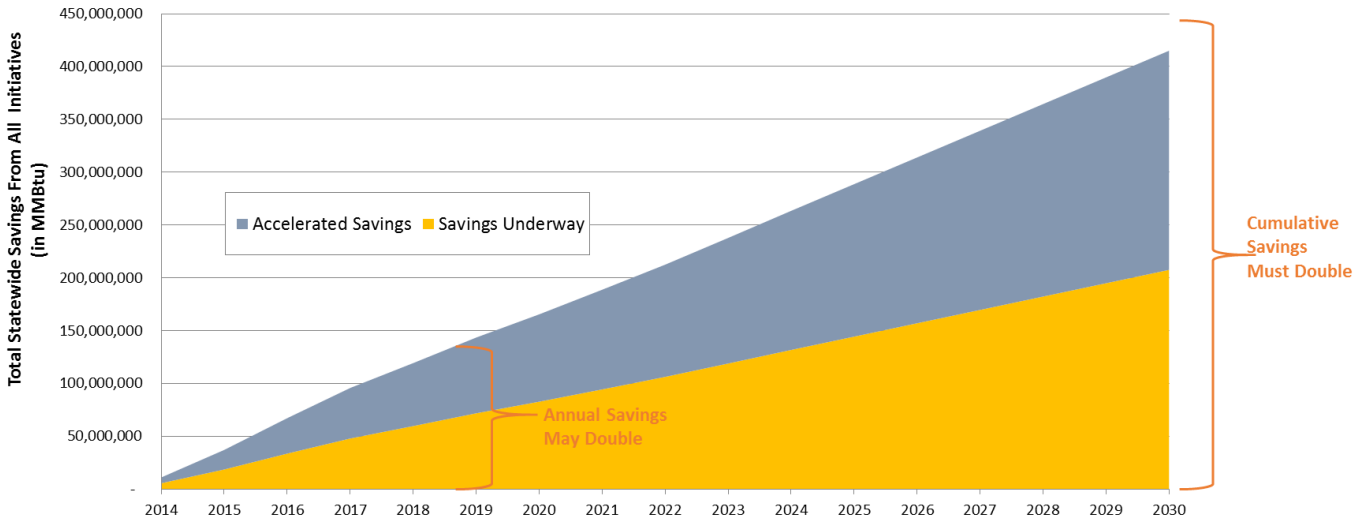
#### *a. Correct the characterization of the Governor's energy efficiency goal*

NRDC strongly supports the Governor's energy efficiency goal and agrees with staff's characterization at the April 7, 2015 workshop that the objective is to double the amount of currently expected savings in 2030, including the publicly owned utilities (POUs). This approach would make the goal truly statewide. However, the language in the current draft Action Plan appears to endorse a different goal that would substantially weaken the Governor's goal of doubling existing expected savings by 2030, potentially cutting it by half. Clarifying this goal is critical to get the guidance right for the workplans, ensure all entities are driving toward the same target, and meet greenhouse gas reduction goals while saving customers even more money.

The Governor's goal is to double projected statewide energy savings so that in 2030 the savings should be *twice as much* as the currently expected sum of investor-owned utilities (IOU)

and publicly owned utilities (POU).[1] The CEC played a helpful leadership role when it initially issued its fact sheet on the Governor's goal.[2] We offer the following illustration of the Governor's goal based on the CEC's graph from its fact sheet and urge the CEC to include this as the stated goal in the final Action Plan.

**Figure 1: Illustrative Graph of Governor's Goal to Double Efficiency by 2030**




This graph was derived by relying on doubling the mid-scenario for additional achievable energy efficiency (AAEE) extended to 2030, which *excludes* POU and "naturally occurring" savings.[3] However, the current description and illustration on p.24 of the draft Action Plan count POU and "naturally occurring" savings toward a doubling of this AAEE. This mixes apples with oranges as it would essentially use these savings to help meet the doubling of the IOU savings.[4] Doing so would result in a goal that is only a 54% increase in 2030 versus the doubling (100% increase) directed by the Governor, substantially undermining the Governor's goal as well as efforts to scale up efficiency.

Specifically, by counting these planned POU savings as new savings, when in fact they should be counted as existing projected savings, the overall goal of doubling savings would be

[1] Naturally occurring savings are also anticipated to double, but those savings would not be included in calculating the doubling of policy driven savings from the IOUs and POUs

[2] CEC, "*California's 2030 Climate Commitment Double Energy Savings In Existing Buildings & Develop Cleaner Heating Fuels By 2030"* Available at: http://www.arb.ca.gov/html/fact_sheets/2030_energyefficiency.pdf

[3] We note that future AAEE is expected to include POU moving forward. Source: CEC, California Energy Demand 2014-2024 Final Forecast Additional Achievable Energy Efficiency (April 2014). Available at: http://www.energy.ca.gov/2013_energypolicy/documents/demand-forecast_CMF/Additional_Achievable_Energy_Efficiency/

[4] This goal also includes savings from codes and standards

reduced by 23% (i.e., 77% increase in 2030).[5] Furthermore, "naturally occurring" savings could easily compose 23% of total savings anticipated in 2030, as was the case when the CEC last quantified naturally occurring savings for the long term forecast.[6] This would further reduce the goal in 2030 to 54%. This is far from doubling projected efficiency by 2030 and should be corrected.

We therefore urge the following modifications in the final Action Plan:

- ***Modify Figure 1.10 (p.24).*** The final Action Plan should include a description of the goal akin to that provided in the original CEC fact sheet and provided in Figure 1 to illustrate that all policy-driven savings will double, including both POU and IOU savings. Also, "naturally occurring savings" should not be counted as doubling policy-driven savings and therefore such references should be omitted. These modifications will create a truly statewide energy efficiency goal of doubling savings by 2030.
- ***Change language.*** Include the following modification to p.24 (deletions in ~~strikethrough~~ and new language is <u>underlined</u>).

> The double energy savings goal implicitly assumes achievement of the energy efficiency from currently adopted and funded policies, standards, and programs. The highest (purple) trend line includes these "committed" savings. The orange wedge ("Incremental Savings Under Development") represents the electricity and natural gas per capita savings projected to occur in IOU service territories through planned California and U.S. appliance efficiency standards, building energy efficiency standards through 2022, and a continuous implementation of approved IOU ~~rate-payer~~ <u>customer-</u>funded energy efficiency programs. The blue wedge ("Accelerated Deployment and New Savings Efforts") represents a doubling of the per capita savings expected from the orange wedge. This second savings wedge will be achieved in ~~part~~ <u>whole</u> by the efficiency accomplished ~~in publicly-owned utility (POU) service territories and also those "naturally occurring" savings from investments and behavioral changes made by consumers outside of any incentive program. However the vast majority of these additional savings will result~~ from new efforts and revised approaches. <u>Presently, these amounts only account for IOU programs, codes, and standards. However, POU savings will also approximately double under the Governor's statewide goal. Pursuant</u>

[5] POU ten-year potential study projects over 6,000 GWh over the next ten years. IOU electric savings in the Mid AAEE case are expected to be slightly over 20,000 GWh. Thus, POU portion of statewide savings are expected to be roughly 23% of statewide savings (6,000 GWh/26,000 GWh). CMUA/NCPA/SCPPA, *Energy Efficiency in California's Public Power Sector A 2013 Status Report*, Table 8. 10-Year Energy Savings Targets (MWh), 2014-2023, p.37 (March 2014) and footnote 3.

[6] Specifically, 6,292 GWh of "naturally occurring" savings over the ten year forecast, which represents over 23% of statewide policy-driven savings. CEC, *Energy Efficiency Adjustments for a Managed Forecast: Estimates of Incremental Uncommitted Energy Savings Relative to the California Energy Demand Forecast 2012-2022*, Spreadsheet - Estimates of Incremental Uncommitted Energy Savings Relative to the California Energy Demand Forecast 2012-2022 Posted July 31, 2012, updated September 20, 2012, Table: "Incremental Uncommitted Efficiency Savings for Electricity, Mid Savings Case" (September 2012).

to that statewide goal, the 2015 IEPR will include POU savings into the amount "Under Development," (Additional Achievable Energy Efficiency) for the first time. The CEC will update these goals at that time to represent a statewide doubling of Savings Under Development. Achieving the Governor's goal will ensure the building sector contributes its share to meet California's long term greenhouse gas reduction goals. The goals and strategies to realize these increased energy savings comprise this Plan.

***b. Add a plug-in equipment challenge***

NRDC greatly appreciates the attention to maximize savings from plug-in equipment. However, there are currently a number of barriers that inhibit scaling up to capture much more savings from plug loads. These include, but are not limited to, challenges in cost-effectiveness, evaluation and savings attribution, and timeliness and challenges of program administrators and implementers to respond to the market need (whether regulatory or otherwise). These barriers should be acknowledged and addressed in order to unleash the potential of efficiency programs for plug load efficiency. We therefore encourage the CEC to include the following challenge to p.10 and ensure the forthcoming workplan include strategies to overcome them.

- "*Limited opportunity to capture energy savings in plug in equipment*. Plug in equipment makes up more than 70 percent of our electricity use, yet there are limited opportunities to capture these energy savings due to existing challenges. These include, but are not limited to, the fact that these products are diffuse across a large number of different types of products that require a combination of appliance standards, data-driven targeted efficiency programs, and behavior programs."

***c. Modify and add milestones***

NRDC agrees that setting milestones is necessary to ensure the plan is on track as well as to enable course correction. We offer the following recommendations:

- **Modify milestone for increased program participation to include energy savings.**

Measuring program participation is critical to ensure administrators and implementers are designing programs that are of interest to customers and successful. But participation alone is not a sufficient metric to measure how well programs are saving energy or accomplishing other goals such as pulling new technologies and strategies to market so they can be integrated into codes and standards. We therefore recommend that the stated milestone on programs at minimum also include a goal associated with energy savings.

- **Modify milestone for a majority of savings to come from utility resource procurement programs to be balanced with efficiency programs.**

NRDC is supportive of experimenting with and learning about the potential of resource procurement models to supplement – not supplant – the suite efficiency programs needed to meet our public policy goals. Procurement programs may be able to effectively yield additional savings at a time or location where it is needed, or for particular markets or customers (e.g., large non-residential). However, these programs do not always achieve savings at the lowest cost, as was experienced with past procurement programs,[7] nor do they necessarily achieve a number of the other important goals that the energy commissions hope to accomplish through customer-funded efficiency programs. For example, resource procurement models are not well suited for ensuring a comprehensive portfolio of programs that sufficiently address all customer types. They also do not tend to include programs that are designed to advance codes and standards, move markets at the upstream level, or provide any of the critical non-resource programs associated with training, education, or outreach.

In addition, the state has not had a chance to evaluate the few existing programs to determine their effectiveness or the most appropriate applications for these programs. We need to assess the programs we have, and to more broadly experiment with a range of procurement programs to understand how and where to best deploy them. For example, NRDC and TURN have recommended several new procurement pilots in recent comments to the CPUC.[8]

The Commissions have also not explored what the impact would be on other efficiency programs if they used the same set of rules and assumptions being used in the targeted procurement programs. For example, the Energy Division approved plans for Southern California Edison's RFO (Request For Offers), which used different cost assumptions than are used for regular utility programs such as (1) no incremental customer cost[9] and (2) allowing

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[7] For example, see:
Goldman, Charles A., Suzie M. Kito, and Mithra M. Moezzi. Evaluation of Public Service Electric & Gas Company's Standard Offer Program Volume I & II. Berkeley: LBNL, 1995.
Goldman, Charles A., and Suzie M. Kito. Demand-Side Bidding: Six Years Later and the Results Are Coming In. Berkeley: LBNL, 1994.

[8] "NRDC Response to the Administrative Law Judge's Ruling Regarding Comments on Phase II Workshop 3," April 13, 2015. P.10

[9] The contract price was simply the amount the Seller expected to be paid for the delivered energy services. *See* SCE, LCR RFO Energy Efficiency Pro Forma Agreement, Article 1.1, Contract Price, (May 2014); SCE, ExhibitD4.4.2 LCR RFO Energy Efficiency Excel Appendix, v4.2 (May 2014). Available at: https://www.sce.com/wps/portal/home/procurement/solicitation/lcr

savings to be measured against the existing baseline.[10] Allowing other customer-funded efficiency programs to be designed with the same assumptions would likely unleash substantially more opportunities to scale efficiency and should be explored prior to replacing the current program structures with procurement models.

The Action Plan also included similar concerns and caveats: "Procurement-based energy efficiency *may* be helpful for reaching the Governor's objective to double efficiency gains in existing buildings….Even if a procurement model is successful, it will be a complement to, rather than a replacement of, collaborative and incentive-based program approaches" (p.56, *emphasis added*). Given these concerns and the need to learn about the potential of procurement programs, it is premature to set a target that 75% of efficiency would be achieved through procurement models by 2025. Instead, we urge the CEC to modify the milestone as follows:

- "By 2025, utility resource procurement programs play an increased role to achieve energy savings in coordination with other customer-funded programs." ~~75% of existing building energy efficiency is achieved through utility resource procurement programs."~~

**Add missing milestones.**

While we understand the individual workplans will further develop each strategy, NRDC recommends that the final Action Plan include at minimum one high level milestone for each strategy. For example, the following strategies do not have an accompanying milestone:

- Performance of state and school buildings
- Savings through plug-in equipment
- Local government leadership
- Statewide collaborative
- Quality assurance and a strong workforce
- Accessible programs for low income Californians

[10] *Id.* at 1.5(a)(i) ("Seller, at Seller's expense, shall engage an Evaluator to conduct an on-site "Pre-Installation Equipment Inspection" to verify the accuracy of the Pre-Installation Description and to test and make any measurements needed to calculate and establish the Measurement Baseline and each Individual Measurement Baseline for purposes of measuring the Expected Summer On-Peak Energy Savings, Expected Summer Off-Peak Energy Savings, Expected Winter On-Peak Energy Savings and Expected Capacity Savings. ") *Id.* at 1 - Definitions ("Individual Measurement Baseline" means the on-site energy use and capacity use associated with a single type of equipment or single process that is the subject of a Measure before such Measure is installed. For determining the amount of on-site energy use and capacity use for each type of equipment or each process that is the subject of a Measure, such use shall be the lesser of (i) the actual energy use and capacity use of the equipment or process prior to installation and operation of the Measure; or (ii) the energy use and capacity use of the equipment or process as if such equipment or process satisfied Title 20 and/or Title 24, as applicable.").

Establishing milestones for these items would outline the CEC's vision and provide guidance for the forthcoming development of the workplans.

**2. Goal 1: Proactive and informed government leadership in energy efficiency**

NRDC supports the extensive opportunities in Goal 1 to scale up efficiency and notes that utilities have a role in nearly all (if not all) of the proposed strategies, including providing access to data for benchmarking and contact with customers. In addition, utilities are able to modify or expand programs to support various efforts like asset ratings, state building efficiency, and other strategies listed throughout Goal 1. Therefore, we recommend that the IOUs and POUs be listed as partners throughout the entire Goal.

***a. 1.2 Statewide Non-Residential Benchmarking and Disclosure***

NRDC agrees that a statewide benchmarking program is essential and foundational for owners to identify and act on efficiency opportunities, but it alone does not necessarily motivate efficiency upgrade action. The Action Plan should clearly delineate the two elements it seeks to address: (i) methods to deliver information to owners so that they may do benchmarking (voluntary or mandatory) and basic energy management, and (ii) a program for disclosure of benchmarking information for all large buildings (of all types, residential, multifamily, institutional, etc.). It should also explicitly call out the need for accompanying strategies to enable action at the time of benchmarking and ensure the subsequent workplan include solutions toward this end.

There are a number of strategies to motivate action, including the bundling of non-capital programs at the time that building owners report benchmarking to the CEC (e.g., audits, facility staff training, operations and maintenance offerings) and setting up a plan for implementing capital programs (e.g., equipment upgrades) over a certain time period. Another approach could be to focus on requiring retro-commissioning efforts for buildings below a certain score. The workplan should link the final Action Plan strategies to such approaches to take advantage of the reporting of benchmarking as a key trigger point.

In addition, for benchmarking to be successful, utilities must be able to deliver energy usage information to building owners. This needs to be a top priority for the Action Plan and implementing authorities. In light of the experience with implementation of AB 1103, both investor-owned (IOU) and publicly owned utilities (POUs) require specific direction and authority to deliver whole building information needed to residential (multifamily) and non-

residential building owners, with guidance on methods to reasonably protect and preserve the confidentiality of customer information from realistic risks of unauthorized disclosure.

We also urge the Commission to consider two specific changes to the focus of the strategies. First, we recommend reducing the threshold to 30,000 square feet, at least for multifamily properties. The proposed 50,000 square footage requirement will exclude many properties, including those multifamily properties with single-residency occupancy. Second, we recommend changing "buildings" to "properties." Square footage should include common areas and circulation areas. Many properties are made up of several smaller multifamily buildings and this should be a property-level threshold, not a building-level one. Alternatively, if the CEC proceeds with using "building" instead of "property," it should also require utilities to report property energy usage where applicable for multifamily property owners.

We offer the following language modifications to support these recommendations:

- **1.2 Statewide Non-Residential Benchmarking and Disclosure.**

  "Establish a statewide energy benchmarking program with clear direction and guidance for utilities to deliver usage information to building owners, and eventual public disclosure of benchmarking information, for all commercial, public and multifamily ~~buildings~~ properties above ~~50,000~~ 30,000 sf gross floor area."

- **1.2.2 Benchmarking & Disclosure Rulemaking.**

  "Resolve outstanding questions related to utilities' obligations to deliver usage information needed to enable benchmarking and disclosure activities; Determine program structure, requirements, high-level process and timeline; Outline key strategies to accompany benchmarking requirements to motivate energy efficiency upgrades at the time of reporting."

- **1.2.4 Implement Statewide Program**.

  While strategy 1.2.4 indicates there will be compliance and monitoring activities, it is unclear who is responsible for enforcement (e.g., CEC, local governments, or other). Currently, the strategy states "Facilitate compliance and monitor…" with the CEC, CPUC, and utilities listed as lead and partners. The final Action Plan should clearly delineate the appropriate roles for each player.

***b. 1.3 Minimum Standards for Assessment Tools***

NRDC supports using asset rating to educate building occupants and owners, support a thriving efficiency industry, and to help identify opportunities to scale up efficiency. However, any asset rating must explicitly account for plug loads in order to support efforts to meet zero-net energy goals. RESNET already includes this in their rating and can be used as a model.

In addition, NRDC offers language to be added after the first paragraph on p.46 to further describe the importance of asset ratings to supplement benchmarking programs by offering additional information on building efficiency and retrofit opportunities:

- "Benchmarking is valuable as a relatively cheap method for inspiring data-focused energy management processes by building owners and managers, but may be too costly for smaller buildings. In addition, regardless of building size, benchmarking may not provide reliable guidance on assessing the building's efficiency level or ideal retrofit opportunities. Asset ratings can supplement this effort for all building types and sizes and new models are available to make it affordable as described below."

Finally, NRDC offers the following language under "HERS II Whole House Program" on p.46 to allow for a discussion to use asset rating for retrofits as well, recognizing the potential for lower income homes to result in higher energy use due to availability of more affordable energy use.

- "An upcoming Energy Commission rulemaking will examine multiple aspects of the HERS program and make substantive changes to resolve known issues and align with current industry assessment practices. ~~A clear need exists to distinguish residential performance assessments (to inform retrofit projects) from residential asset ratings (for property valuation), two important yet discrete elements of improving residential building energy efficiency.~~ This Proceeding should address the appropriateness of using asset ratings to guide retrofit decisions, recognizing that for many inefficient homes, where the occupants cannot afford to pay for high levels of comfort, savings projected from asset ratings will be greater than those realized savings in utility costs. But the benefits of the retrofit most valued by the consumer often are increased comfort rather than bill savings. This proceeding will also…"

***c. 1.4 Adopt uniform asset ratings to compare building properties***

The final Action Plan should emphasize even more strongly the importance of asset ratings in this process. We offer the following language modifications:

- P.48 "…widely varying operator behavior. Asset ratings are a practical way of separating out (or normalizing for) the effects of tenant needs, behaviors, and of building management capabilities from the effects of the efficiency of the building itself. Benchmarking data cannot do this."

We also agree with the goal of harmonizing with national rating practices. Harmonization across a broader area than California is needed, because appraisal, financing, and ownership patterns are broader than California. The CEC has done this in the past through participation in

the Commercial Energy Services Network (COMNET)[11] program in which the current Title 24 Alternative Calculation Manual (ACM) follows COMNET protocols. By deepening its participation in COMNET, the CEC can take advantage of out of state methods and also influence emerging national and global work. We therefore suggest that strategy 1.4.2 be modified to also include efforts to improve national practices.

- "Develop a California specification for asset rating calculations and labels that is consistent with national rating practices while also promoting improvements."

### *d. 1.5 Realize the Full Benefits of the Building Efficiency Standards for Existing Buildings*

The draft Action Plan discusses the need to simplify standards for existing buildings. It is important that "simplifying" the standards does not translate into weakening them. We understand that this is not the intent of the CEC and believe that working with the CPUC and utilities to better focus efficiency programs on further readying the market for advanced technologies and strategies will help alleviate some of the current pressures to weaken existing standards. We offer the following language clarification on p.50:

- "The Energy Commission will conduct a focused review of BES as they relate to existing buildings and make modifications as necessary to ensure that the requirements are both practical and will result in realized energy savings. To the extent possible, the Commission will simplify the processes needed to comply with BES for existing building upgrade projects, to improve manageability and reduce costs for building owners, local government building departments, and contractors. Any such modifications or simplified processes will not weaken the stringency of the standards."

### *e. 1.6 Efficiency of Plug-in Loads*

As noted above and in the draft Action Plan, plug-in equipment provides for substantial efficiency savings. To ensure a concerted effort to reduce plug in equipment energy use, NRDC recommends an additional strategy be added to 1.6:

- "Set a specific target for plug in equipment savings to drive reductions in energy use."
- The target should be set in 2016 and the CEC/CPUC/utilities should at minimum be the involved partners.

### *f. 1.8 Energy Efficiency as a Clean Distributed Energy Resource*

NRDC strongly supports efforts to improve upon and expand market transformation programs. Making sure programs are designed explicitly to bring new technologies and strategies

[11] www.comnet.org

to full market adoption is critical to continually improving on efficiency practices. However, programs that focus on capturing energy savings are similarly important as we rely on such programs to replace or avoid existing infrastructure. Therefore as the workplan is developed for this strategy, we suggest that the current portfolios are expanded to include additional market transformation programs, and not at the expense of other critical programs. There are opportunities to scale up both efforts to help meet the Governor's goal.

In addition, we suggest including a more comprehensive strategy for improving market transformation efforts. Simply modifying who administers the programs does not provide a solution to the challenges that currently inhibit market transformation activities. Utilities are critical players in helping advance markets and currently there are opportunities for multiple administrators and implementers to carry out market transformation programs, or portions of programs. However, the rules are currently set up to predominately support resource acquisition programs and must be modified – this underlying issue will not be changed by switching administrators. The CPUC has a number of these issues within the scope of the forthcoming Phase III of Rulemaking 13-11-005, including updating the cost-effectiveness and reviewing other modifications to support market transformation.

Therefore we propose language below to expand the ability of all program administrators and implementers to pursue market transformation programs:

- 1.8.2 Market Transformation Program Portfolios: ~~Evolve~~ Expand the energy efficiency program portfolios to focus more explicitly on market transformation activities in the upgrade marketplace.
    - Rely on the extensive literature and direct experience of existing market transformation programs around the country to develop solutions that address barriers to scaling up market transformation programs in California, and leverage the statewide collaborate to explore the pros and cons of alternative policies and administrative structures. ~~Revisit administration of market transformation efforts.~~
- Include both IOUs and POUs as listed partners in market transformation efforts

***g. 1.9 Energy Efficiency Collaborative - Statewide Agency Leadership***

NRDC strongly supports establishing a California collaborative for a variety of reasons, such as to (a) ensure statewide consistency, (b) engage stakeholders in cooperatively resolving challenges, and (c) leverage the expertise of those on the ground to ensure programs capture substantial savings and serve customer needs. NRDC, along with nearly a dozen other stakeholders, proposed a similar collaborative structure for the CPUC to consider as it transitions

to a "rolling portfolio" approach. This group includes consumer advocates, efficiency industry, investor-owned utilities, and other active parties at the CPUC. While this structure was focused on the CPUC process it could be scaled statewide to meet the stated needs of the CEC.

Since the Energy Principals forum already enables cross agency coordination, NRDC recommends that the Existing Building Efficiency Collaborative (EBEC) be expanded beyond the currently proposed agency staff only membership so as to also include key stakeholders (e.g., representatives from local governments, utilities, environment groups, consumer advocates, efficiency industry representatives, etc.). Including such representatives is key to making sure the effort is truly collaborative, is able to resolve as many issues prior to elevating them to the Commission, and promotes the buy-in needed for such a forum to work effectively. We also support strategy 1.9.2 that the EBEC would implement appropriate forums to leverage the expertise of key stakeholders beyond those on the EBEC.

Numerous other states have set up similar forums and advisory groups including Connecticut, Massachusetts, Rhode Island, and Illinois, which are further described in Attachments 1 and 2.[12] They include a group of stakeholders and agencies that prioritize issues, address matters collaboratively, and rely on subgroups to vet the details of subject matter issues with stakeholders who have expertise on the ground. These models enable creative problem solving and help minimize the number of issues that need to be formally addressed at their respective commissions thereby reducing the cost and time of participation.

In developing such a forum, it is important that the state learn from and specifically address the shortcomings of previous California and other efficiency forums. Any structure should also rely on identified best practices that are employed by well-functioning forums. For example, the following characteristics should be included in any collaborative structure:

- A clear charter or mission,
- Defined and measurable outcomes (e.g., deliverables or decision points),
- Process to keep track of discussions and action items,
- An independent facilitator and administrative support,
- Committed and representative membership,

[12] Attachment 1 includes extensive research done by Future Energy Enterprise (FutEE) for the California Technical Forum (www.caltf.org) on 21 collaborative forums across the country to determine how best to identify best practices and to set up such a forum in California. Attachment 2 includes the Daniel Sosland et al. ACEEE paper "Collaboration that Counts: The Role of State Energy Efficiency Stakeholder Councils" describing the collaborative structures of CT, MA, and RI. Available at: http://aceee.org/files/proceedings/2012/data/papers/0193-000250.pdf

- Presentation of ideas at an appropriate time to allow for input early in development,
- Resources to "follow through" with action items and decisions, and
- A feedback loop to update stakeholders on actions taken after a discussion.

A California collaborative effort would, if set up based on documented best practices, save time and costs for all involved without becoming overly bureaucratic or burdensome, leading to a more effective policy framework with improved program design and implementation. We suggest the following processes be established as the EBEC is developed:

1. Establish key structure, roles, responsibilities, etc. as noted above and based on the attached best practices documents.
2. Make sure the right people are at the table. This includes the overarching EBEC, which should include stakeholders and experts beyond the agencies, as well as the stakeholder engagements efforts. This will involve intentional outreach as well as making meetings available across the state, either by changing the location of the meetings or holding meetings where multiple video conferencing systems are available.
3. Develop a process for determining priorities (e.g., pre-determined set of criteria) and a schedule by which these priorities will be refreshed (e.g., quarterly).

Once launched, we suggest the first action of the EBEC be to evaluate the current policy framework and determine whether or not the existing rules enable a consistent statewide effort, are in line with national best practices, and align with the state's goals. We recommend the following list of priority issues to be resolved by the EBEC, a number of which are currently in scope for Phase III of the CPUC's energy efficiency proceeding:

1. *Update cost-effectiveness*: The various utilities and state programs are currently relying on different cost-effectiveness assumptions, making it impossible to compare across programs. Matters such as what discount rate to use, whether to rely on the Total Resource Cost test (customer and utility perspective) or the Program Administrator Cost test (utility perspective), the use of non-energy benefits and spillover, and other relevant matters should be determined across state agencies to enable a consistent framework for programs.
2. *Make energy saving estimates consistent:* The EBEC should facilitate a statewide effort to make energy saving estimates consistent across administrators and implementers so programs can be compared and savings can be sufficiently aggregated for procurement planning. In addition, determining what the existing baseline should be (which is currently being explored at the CPUC) as well as savings associated with operations and maintenance programs, should be consistent across the state.[13]

   To support this effort, the EBEC should leverage the California Technical Forum, which is a group of nearly 30 technical experts established last year to vet technical issues. This forum is also guided by an advisory committee consisting of state energy agencies, IOUs,

[13] There are strategies in the draft Action Plan that rely heavily on operations and maintenance efforts that IOUs are not currently able to pursue.

POUs, local governments, consumer advocates and others. (See Attachment 3)

3. *Establish statewide advisory groups*. The EBEC could also be an effective coordinator across various approaches that lend themselves to statewide implementation, such as workforce education and training (WE&T) as well as market transformation (MT). To enable consistent efforts across administrators and implementers, we suggest the EBEC establish advisory groups that help develop and oversee implementation of MT strategies and the WE&T recommendations outlined in the draft Action Plan.

To support these recommendations we offer the following language to include in the final Action Plan Strategy 1.9:

- **"1.9.1 Governance Structure:** Staff the EBEC with senior individuals from the Energy Commission and CPUC, who report to the lead commissioners, in addition to key stakeholders; develop a collaboration structure that incorporates active engagement of key agencies and stakeholders, coordinates across relevant rulemakings, and maintains consistency with agency roles and authorities."
- **"1.9.2 Agency Coordination and Stakeholder Engagement**: Implement appropriate forums and methods to coordinate analysis, identify promising strategy options, monitor and report on strategy effectiveness; provide public briefings on EBEC Action Plan progress and ~~invite~~ engage in collaborative discussions to leverage regular stakeholder feedback to identify and resolve issues."
- [New strategy]: "**Align efficiency policy rules with the state's goals**: Update the current policy framework to establish statewide consistent policy rules, energy saving estimates, and advisory groups."

**3. Goal 2 - Data drives informed decisions**

NRDC agrees that data is required for improved decisions across California and that the state should ensure that Californians have access to appropriate data sources to make informed decisions related to energy use, including efficiency and renewable energy. However, building/property owners are not explicitly mentioned in this strategy section (we offer recommended language below).

In addition, we also recommend differentiating data access needs for nonresidential and multifamily properties that are above the proposed threshold and data access for smaller buildings with greater than two units in addition to any owner's meter. Properties below the mandatory benchmarking threshold may not need to comply with a benchmarking mandate, but should have the opportunity to engage in voluntary benchmarking and need the information for basic energy management and financing activities.

Currently, property owners of multifamily housing have no consistent way of determining historic energy usage for a property because of difficulties obtaining both

*anonymized and aggregated whole-building data* and *individual tenant data.* These barriers impede effective energy management, have resulted in owners not being able to properly size their solar PV systems, and prevent the broader benchmarking efforts needed to support longer-term energy financing objectives.

We therefore recommend the following addition to 2.1:

- **"Aggregated Whole Building Energy Usage Data Provided to Property Owners and Their Agents:** Finalize regulations that clearly require utilities to provide aggregated whole-building data to all commercial and multifamily properties regardless of whether a given property is required to participate in mandatory benchmarking programs."
- Lead partners would include the CPUC, CEC, utilities, and POUs

**4. Goal 3: Building Industry Delivers Innovation a Performance**

One topic directly relevant both to the energy efficiency of existing buildings and the attainment of California's climate goals, is the potential need for widespread building electrification, i.e., moving to highly efficient heat pumps for heating and hot water applications. This issue was most recently highlighted by the E3 and Lawrence Berkeley National Laboratory modeling for the Energy Principals group,[14] but has been a key issue raised in other California climate mitigation analysis as well.[15],[16] Given the potential importance of this topic, and the need for research, demonstrations, piloting, and industry innovation in the next 5-10 years to understand the role of and potential for building electrification to help meet our climate goals, we recommend adding this as a topic in several places in the Action Plan:

***a.*** Add a section under Goal 3:

- **"3.5 Electrification of Buildings:** Actively explore through research, pilots, and partnership with industry the potential for building electrification to play a role in reducing greenhouse gas emissions."

***b.*** Add a milestone on p. 23:

- "By 2020, state agencies and the building and HVAC industry have worked together to explore the potential for building electrification to contribute to long-term climate mitigation in California and have developed a plan for market transformation for key technologies."

[14] Energy Principals modeling work available here: https://ethree.com/public_projects/energy_principals_study.php
[15] California Council on Science and Technology (2011), *California's Energy Future: the View to 2050*: http://www.ccst.us/publications/2011/2011energy.pdf
[16] Williams, J., et. al, *The Technology Path to Deep Greenhouse Gas Emissions Cuts by 2050: The Pivotal Role of Electricity*, Science 6 January 2012.

***c.*** In addition, the potential role for building electrification should be included:

- In a paragraph in the "The Opportunity and Challenge for Energy Efficiency" section of the Action plan (e.g. added on p. 7)
- In the "Opportunities" section of the residential section (p.9) and as appropriate in the commercial/public sections

**5. Goal 5 Solutions are accessible and affordable for all Californians**

***a. 5.7 Establish deeper subsidies for full participation by low-income households***

NRDC appreciates the inclusion of a low-income efficiency strategy and notes that we are part of a nation-wide coalition to advance efficiency in affordable multi-family housing (see Attachment 4). We look forward to bringing best practices from around the country to implement in California as appropriate. We also offer the following recommendations be included in the final Action Plan:

- Provide a summary of the affordable efficiency strategies in the executive summary as there is currently no mention of any low income strategies.
- Include the existing Strategy 5.7.3 "integrate low-income household services with building owner eligibility….to increase efficiency levels in multifamily building with low-income occupants" into the matrix summarizing multifamily efforts on p.97.
- Ensure the forthcoming workplan includes a specific energy saving target. This is currently within the scope of the CPUC Energy Saving Assistance Program (Application 14-11-007 et al.) scoping memo and should be leveraged as part of the Action Plan and work plan efforts. Ensuring that affordable housing residents are receiving as deep energy savings as possible is critical to both help meet the Governor's goal but also to provide the most effective service to low income customers.
- Leverage the statewide collaborative to actively coordinate across all low income offerings, including ESAP, the cap and trade funding programs, as well as the weatherization assistance program overseen by the Department of Community Services and Development (CSD).

## III. Conclusion

NRDC appreciates the opportunity to comment on the draft Action Plan. We look forward to working with the CEC and other agencies as well as stakeholders to successfully implement the Action Plan.

# Memorandum

To: Various Cal TF Interested Stakeholders
Re: Energy Efficiency Stakeholder Group Research
From: Alejandra Mejia, Cal TF
Date: May 1, 2014

## Overview

The California Technical Forum (Cal TF) will be an advisory organization to energy efficiency program administrators and implementers in California. The chief goal of the new organization is to achieve technically rigorous energy use and demand reduction estimates for energy efficiency measures through a process that is collaborative and transparent. A key element of the Cal TF is peer review of technical information by technical experts for the development of ex-ante savings estimates in the state.

Although the Cal TF was initially strongly modeled on the Northwest Regional Technical Forum (NW RTF), the structure and operation of other similar stakeholder groups were reviewed to identify other elements that could enhance or improve the collaborative model that is being developed for California. The research also sought to identify "lessons learned", both good and bad, so the formation and implementation of Cal TF could incorporate strengths and successes of other stakeholder groups while seeking to avoid pitfalls and failures.

The project evaluated the history, purpose, organizational structures, outcomes and "lessons learned" from each stakeholder group through review of written materials and interviews with key participants in each stakeholder group. This memorandum details how the results of this research can be used in the formation and operation of the Cal TF to further enhance and strengthen the initial Cal TF model, and ensure that the new collaborative will be tailored to California's own circumstances, needs and stakeholder preferences[17]. After describing the research approach (Section I), the following sections explain how findings informed essential formation principles (II) and best practices to ensure an effective launch and implementation (III), describe the success seen in 'organic growth' models (IV), other general findings (V), and finally highlight four case studies that were particularly informative to the Cal TF model (VI).

## I. Research Approach:

The organizations researched included every statewide energy efficiency stakeholder group that operated in California since the very beginnings of EE shareholder rewards (1989) as well as other successful energy-related collaboratives in California. In addition to California stakeholder groups, national well-regarded, high-impact EE initiatives and respected peer review organizations were also analyzed. The organizations researched are as follows:

[17] The following stakeholders were consulted during the Cal TF model development: the investor-owned utilities (PG&E, SCE, SDG&E, SCG); POUs and POU representatives (LADWP, SMUD, CMUA, NCPA, SCPPA); regulators (CEC and CPUC); the California system operator (CAISO); implementer representatives (California Efficiency Council and NAESCO); ratepayer advocates (TURN, DRA); the CCA (Marin); RENs (Southern and Northern), and local government partnerships.

1. California DSM Measurement Advisory Council (CADMAC)
2. The International Performance Measurement and Verification Protocol (IPMVP) and the Efficiency Valuation Organization (EVO)
3. California Board for Energy Efficiency
4. California Measurement Advisory Council (CALMAC)
5. Low Income Advisory Group, or Low Income Oversight Board (LIOB)
6. The IOU's Energy Efficiency Program Advisory Groups (PAGs)
7. The Energy Efficiency Peer Review Groups (PRGs)
8. California Renewable Energy Transmission Initiative (RETI)
9. CEC's Demand Analysis Working Group (DAWG)
10. The Uniform Methods Project (UMP)
11. The current EE Program Coordination Groups (PCGs)
12. ASHRAE
13. The International Code Council (ICC)
14. LEED (Leadership in Energy & Environment Design) Rating System
15. Northwest Regional Technical Forum (NW RTF)
16. Illinois Energy Efficiency Stakeholder Advisory Group (SAG)
17. Northeast Energy Efficiency Partnership (NEEP)
18. Connecticut's Energy Efficiency Board (EEB, formerly ECMB)
19. Rhode Island Energy Efficiency and Resources Management Council (RI EERMC)
20. Massachusetts' Energy Efficiency Advisory Council (EEAC)
21. Western HVAC Performance Alliance (WHPA)

The analysis itself consisted of an in-depth review of California regulatory decisions, organizational document (charters, by-laws, etc), and materials posted on the Internet. The information gathered during this initial review was then validated via in-person or over-the-phone interviews with individuals directly involved with each organization.[18] Interviewees were asked the following questions, which were designed to help answer understand organizational formation, structure and purpose. In addition, research questions were included to address issues raised by stakeholders in the initial stakeholder discussions about the Cal TF proposed model:

1. Why was the group formed?
2. How was it formed? (Regulatory decisions, individual leadership, etc.)
3. Who participated and on what basis? (Paid, un-paid, set membership, etc.)
4. What was the corporate structure? Was the collaborative an independent and/or nonprofit entity?
5. How were decisions made?
6. What was the conflict of interest policy?
7. How long did the collaborative last?
8. What did it accomplish?
9. Why did it disband?
10. What were the group's strengths and weaknesses?
11. What pitfalls should the Cal TF avoid?

[18] The time and insights provided by the interviewees listed in Appendix 2 has been crucial to the success of this project.

12. What characteristics should the Cal TF replicate?

The results of the analysis helped inform several key issues relating to the formation of the Cal TF. Those key findings are detailed below and are followed by other lessons learned that can help ensure a successful launch, implementation, and future growth.

## II. Essential Formation Principles

### A. Nonprofit vs. Contract Model Corporate Structure

Cal TF stakeholders have expressed interest in finding the ideal corporate form for the new organization. Specifically, they have asked if the Cal TF should be structured as an independent nonprofit or through a contract to an administrating entity.

Of the 21 organizations researched, only four, those with broad missions and multiple responsibilities, operate as 501(c)(3) nonprofit entities. NEEP, ASHRAE, LEED/USGBC, and the International Code Council all engage in training and certification activities in addition to their other research, publications, and/or standard and code-setting core roles. The IPMVP protocols were initially developed under the auspices of various government entities—and are thus not counted as nonprofits in this research—and only filed for 501c3 protection after expanding their mission to include training, certification, and international work.

Furthermore, as the section below details, California law and regulatory decisions have become increasingly adverse to formal advisory organizations.[19] An independent nonprofit advising the Commission with ratepayer funds is more likely to draw criticism and legal challenges than a less formal coalition of stakeholders advising utilities and other program implementers. Therefore, given the relatively narrow focus of the Cal TF and the laws and regulatory decisions that constrain more formal advisory organizations, it will be more efficient to launch the organization under a contract model. Operating under a contract model is also consistent with the majority practice in other jurisdictions.

### B. Advisory vs. Decision-Making Role

Only one of the California organizations researched, the CBEE, had a decision-making role. The remaining California organizations were advisory.[20] Although stakeholder processes are largely advisory, not decision-making, they have considered and rendered opinions on a broad range of matters, including policy, programs, standards, and technical issues, and the resulting advice has had considerable impact on issues they have considered. Thus, being an advisory body in no way means that the body cannot be effective and impactful. Even those organizations with formal voting and excellent track records of affecting regulation—like the NW RTF, CADMAC, and Calmac—could be overruled by the actual decision makers: NW utilities can choose to ignore RTF values, and the CPUC was free to rule against CADMAC and Calmac filings. Similarly, the large standard- and code-setting nonprofits are ultimately advisory to governments who can choose to adopt or not adopt their work products.

[19] See Public Utilities Code, Section 845 and CPUC D. 12-05-029.

[20] The three New England programmatic boards have authority to set energy efficiency portfolio goals and budgets. However, these boards have much closer ties to the state governments and statutory responsibilities. This is not the model California is looking for.

It isn't hard to understand why advisory rather than decision-making roles are the norm for stakeholder bodies. Stakeholder groups add value to the regulatory process in many ways: They bring together different opinions and perspectives that may otherwise have been neglected; they can discover and amass new information and data sources; and they have the ability to understand and respond to a broader range of needs. Collaboratives, at their best, also yield greater consensus, and build trust and better working relationships among stakeholders. Experts and stakeholders can be excellent policy and technical advisors, but ultimately, decisions can only be made by democratic bodies willing and able to be responsible for those decisions and their consequences. Those who are accountable for taking actions and achieving results must have final decision-making authority.

In the last few years, California state law has been amended to reflect this reality. Section 854.5 of the Public Utilities Code now has stricter restrictions against Commission-created "non-state entities." Furthermore, the Commission itself has expressed doubts as to the viability of CPUC advisory boards, and in D.12-05-029 refused to create a Small Business Advisory Council. It is therefore very important that the Cal TF retain a clear advisory role, and that it be advisory only to the utilities and other program administrators and implementers.

Given these legal and regulatory restrictions, it is worth noting that what will prove the value of the Cal TF is the collaborative's technically rigorous and reliable work, not any formal relationship with the regulators. This was the case with the Emerging Technologies Coordinating Council (ETCC), which performed valuable work for years in the absence of any formal regulatory approval. It was only after more than a decade of fruitful ETCC operations that the CPUC formally recommended that it be utilized to involve a growing number of industry stakeholders.[21] Furthermore, Cal TF's repute in the eyes of regulators will also grow as California stakeholders use and support the collaborative's work. In an assessment of the three programmatic boards in New England, Environment Northeast writes,

> A consensus position supported by the state's largest employers, consumer advocates, environmental justice interests, and energy efficiency advocates is a powerful signal to regulators and others, particularly when it is backed by a substantive record and quality of decision making.[22]

While this was written about the successful New England boards, it also explains the widespread adoption of RTF values in the Pacific Northwest. In theory, the NW RTF is advisory only to the Northwest Power & Conservation Council (Northwest Council); in practice, utility representative to the Northwest Council act with their peers and adopt RTF values in their own jurisdictions as well.

### C. Consensus Decision-Making vs. Formal Voting

Stakeholders have also discussed the most appropriate decision-making model for the Cal TF. While formal voting is proposed as being more expedient, consensus building offers several advantages that cannot be captured by simple voting. In fact, 11 out of 21 organizations researched operated under consensus-based decision-making

[21] D.12-05-015 at 193

[22] Sosland et. al., Collaboration that Counts: The Role of State Energy Efficiency Stakeholder Councils, 2012 ACEEE Summer Study, pg.4

models. Formal voting was utilized by organizations with responsibility over budget and other very quantitative decisions. Advisory bodies like the Cal TF reported repeated success with their consensus-building approach.

Consensus decision-making allows minority opinion parties to truly impact the process by either forging compromises or incorporating dissenting opinion exhibits into final work products. In many of the most successful groups, creating minority dissenting opinions was an option of last resort that was rarely used. This was and is the case with RETI and DAWG reports: The availability of dissenting opinions served as a useful pressure reliever, but the option was only used a few times. The majority of the time, parties were more willing to negotiate and compromise under the consensus models because they knew they wouldn't simply be out- voted. These results of consensus-building models are particularly beneficial given that majority opinions aren't inherently correct and that minority opinions may actually be more accurate in some cases.

Given the advantages, as well as the repeated success, of consensus-building decision-making models in California, the Cal TF collaborative should move forward without implementing formal voting rules.

### D. Conflict of Interest Policies

In defining the membership of the organization, the question of how to define and handle conflicts of interest has emerged. Stakeholders are concerned with keeping the organization unbiased without sacrificing valuable input from industry and other knowledgeable stakeholders.

Of the 20 collaboratives researched, the utility PRGs and NW RTF stand alone for limiting membership to non-financially interested parties[23]—and then only because members were made privy to confidential financial bid information. The USGBC/LEED asks members to acknowledge any potential conflicts and recuse themselves from any decision-making that could lead to financial benefits.[24] The remaining stakeholder groups operate under the assumption that every member will start from a position that benefits her own interests, and that maintaining a balanced membership will be enough to force compromises to arrive at a meaningful center opinion. Per this trend, the original IPMVP process, UMP, and DAWG do not have any formal conflict-of- interest policies.

As Steve Kromer stated when discussing the successful development of the IPMVP,[25] the energy efficiency industry "isn't rich enough in resources to be turning people away just because they have a conflict." Doing so would sacrifice too much valuable knowledge and experience. For this reason, the Cal TF should strive to limit how many parties it must exclude from participation as much as state law will allow.

### E. The Importance of Volunteer Peer Review

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[23] The New England programmatic boards allow utilities to participate as non-voting members.

[24] Per the USGBC Nevada Board Manual, "A conflict of interest exists where a member of the Board of Directors knowingly benefits directly or indirectly from a decision or action of the USGBC Nevada Chapter Board or its representatives," (USGB Nevada Policies & Procedures 2012, p. 27).

[25] Steve Kromer was part of the team that drafted the original IPMVP and currently serves on the Board of Directors of the Efficiency Valuation Organization (EVO). EVO is the nonprofit that now houses IPMVP.

Some stakeholders questioned the value of peer review, and questioned whether peer reviewers would provide valuable input if they were not paid for their time. Participants have asked for examples of successful all-volunteer peer review groups as well as for clarity on the actual roles and responsibilities of unpaid reviewers.

Not all the organizations researched have peer review functions, but all those that do operate on an all-volunteer basis. In fact, technical standards that have been widely adopted in the US and around the world are set by not only by volunteer, but dues-paying members of ASHRAE and the International Code Council (ICC). ASHRAE and the ICC have produced standards that have been widely adopted and resulted in very substantial energy savings. For example, all but seven state governments have mandated a version of ASHRAE's 90.1 standard for minimum energy efficiency in commercial buildings; The ICC's International Building Code (IBC) is in use at the state or municipal level in every US state and territory and the International Residential Code (IRC) is in use in 49 states; Currently, California state law mandates the 2009 versions of the IBC, IRC, IFC, and the International Existing Building Code; Three California counties, one fire district, and two cities have adopted the International Urban-Wildland Interface Code.

Peer review by volunteer reviewers is consistently viewed as the highest standard for validating technical and scholarly work. In the sciences, peer reviewers who receive more than nominal payment for peer review they perform (such as travel expenses) are viewed as providing biased results because review services can be distorted by the views and wishes of those paying for the peer review. Like NEEP and the NW RTF, Cal TF will operate on a volunteer peer review basis, with nominal payments made to cover expenses such as travel for those members who would not otherwise have the expenses covered through the normal course of their employment.

It is important to note the specific functions of volunteer reviewers. In all cases, volunteers are tasked with reviewing already prepared work that has been either drafted or compiled by paid staff. None of the peer review organizations reviewed expect their volunteer members to perform the functions of a project manager or technical writer.

**F. Collaborative meetings should be opened to the public only once the basic structural issues have been negotiated and finalized.**

Given that transparency is one of the Cal TF's guiding principles, the initial stakeholder outreach was broad and discussions incorporated feedback from a great number of parties; however, collaborative meetings should not be opened to the general public until all organizational and other potentially polarizing issues are settled. This follows the steps taken by the successful CADMAC and RETI collaboratives, both of which waited until their basic organizations and memberships had been discussed and settled in private to open their meetings to the public. This allowed stakeholders to be more forthright and effective in the critical initial stages while still ensuring the requisite transparency.

PAC meetings may be noticed and open to the public only after the membership is set and key structural issues and work are resolved. Part of the PAC's initial organizational deliberations will involve decisions about TF work scope, rules, and membership. These

decisions taken by the PAC will allow TF meetings to be open to the public from the beginning, with public announcements, meeting materials, notes and follow-up.

**III. Ensuring an Effective Launch and Implementation**

- **Collaboratives are not effective if they are merely "dog and pony shows."** If stakeholders are not consulted early enough in the process such that their input can be meaningfully considered, or they are consulted early on, but comments aren't captured or addressed meaningfully, stakeholders become disengaged and either discontinue participation, or participate in a lackluster way without real enthusiasm or contributions.
    - The Cal TF will continue to take notes and action items of Cal TF meetings and make these notes available to the participants. We will also collect all written comments and either circulate or post them (when the Cal TF website is operational) along with responses. To the extent possible, research and analysis will be performed so that responses to stakeholder comments and questions are based on data and best practices rather than rhetoric or supposition.
- **Collaboratives are also less likely to be successful if the decision-makers seeking advice aren't truly interested in stakeholder input or plan on meaningfully considering the collaborative's work.** Stakeholders quickly sense when their work and opinions don't really matter, and they become disengaged, dissatisfied, and resentful.
    - The Cal TF seeks to work closely with CPUC staff to make sure the collaborative produces work that will be truly valued by the Commission staff and meaningfully incorporates their perspectives, wants and needs.
- The CBEE was viewed as an unwelcome attempt by the Commission to delegate its authority. **Any perception that the Cal TF is attempting to usurp Commission authority should be avoided at all costs.**
    - The Cal TF will remain advisory only to public and private utilities and program implementers.
- The PAGs were lauded for **creating a new forum for discussion and increasing public participation.** Similarly, the Cal TF will increase public participation and collaboration on identifying technical issues on which the TF could constructively provide advice.
    - The PAC includes representatives from all key stakeholders involved in the California energy efficiency industry. No one sector (utilities, industry, regulators, etc.) will have a majority of the seats of the PAC. After the initial phase that will focus on new measure workpapers, all PAC Members will have the opportunity to provide their unique perspective and guidance for the future direction of the Cal TF. TF Members will be

permitted to recommend measures for Cal TF review. The broad, balanced stakeholder participation on the PAC will ensure that the Cal TF mission, principles and work will be guided by a balanced, well-informed, and very capable advisory organization.

- **Timeliness and Process Efficiency is Essential to the Success of a Volunteer Advisory Group**. As was expressed in RETI and PCG interviews, group members are much more likely to actively participate, if they can see decision makers considering their recommendations in a timely manner. Furthermore, groups that operate efficiently – with clear objectives, outcomes and timeframes in which participants are expected and required to provide input can be productive and maintain participant engagement and support. Groups without clear objectives, timelines and outcomes lose focus, forward momentum, accountability, productivity, and participant engagement and support.
    - The Cal TF will adhere to the timelines laid out in the New WP Process diagrams as well ask make use of templates and checklists to assure timely completion of WP reviews.
    - PAC and TF Members will be given ten (10) business days to review and comment on materials, as memorialized in the Code of Conduct.
    - PAC and TF Members who are unable or unwilling to meet the timelines in the Code of Conduct will be asked to discontinue participation in Cal TF.
- In terms of ensuring a timely and effective organization, **no single factor is a more positive indicator of a successful collaboration than effective, independent leadership**. The initial IPMVPs would not have been drafted in a timely fashion had it not been for Cary Bullock's leadership; Ralph Cavanagh is credited for being the driving force behind CADMAC's creation; Dave Olsen and Rich Ferguson's independent facilitation of RETI was instrumental to its success. Effective leaders have led collaborative to success posses humility, willingness to listen to all voices while demanding civility and respectful group processes, the ability to mediate between and forge consensus among competing positions, and are well-respected, mature professionals with considerable relevant expertise in the core subject matter of the collaborative.
    - Cal TF has created threshold requirements to ensure strong, experienced leadership. The Cal TF Administrator will have at least 10 years of EE experience, experience leading EE collaboratives, a graduate technical degree, and experience with Technical Reference Manual development.
- Given the need for transparency *and* efficacy in the new collaborative, **it will be important to have a committed membership**—a reliable group of stakeholders that can be depended on to perform their assigned responsibilities. Some collaboratives, like the IL SAG and WHAP subcommittees, have found that a

dynamic membership is conducive to their work; others, like RETI and the WHPA Executive Committee, rely on a set membership.

  - Each organization participating on the PAC will designate a specific individual to participate on the PAC. The PAC member must commit to preparing for and participate in each meeting, and providing review and comment on materials within a reasonable period of time, typically ten (10) business days.
  - TF Members are appointed as individuals, not representatives of particular organizations. To participate, TF members must commit to participate for at least a year, adequately prepare for and attend most meetings, and review material in a timely fashion, typically ten (10) business days.

- **For groups to maximize results, they need a clearly defined mission, operate according to defined principles, and have clear, measurable, actionable work scope so that results can be monitored and measured.** RETI was successful in part because the group had a very clear, specific goal from the outset. The very clear goal was for RETI to present a joint statewide transmission development plan in response to lagging renewable development and backlogs in CAISO's transmission and interconnection processes. Similarly, the NW RTF is viewed as being productive and effective in delivering value to its funders and other constituents. NW RTF has three-year business plans, with annual work plan updates.
  - Cal TF has a short, succinct mission and guidelines developed and refined through input from a broad range of California EE stakeholders.
  - Cal TF has a 2014 Business Plan developed with joint input from the California IOUs and CPUC staff. The 2014 Cal TF Business Plan contains specific tasks, tactics, and measure of success so that the PAC can monitor progress towards goals.
  - The future Cal TF Business Plans (post 2014) will be developed with input and guidance from all Cal TF PAC Members. TF Member input will also be sought in developing future Cal TF Business Plans. The Cal TF Business Plan form may evolve over time, but it will be specific, measureable, and actionable so it can demonstrate and provide real value to funders and participants.
- **Any attempt by a single part, or group of like-minded parties, to consolidate control over the group could lead to a loss of credibility among the remaining members as well as the general public.** While it is understandable for funders and/or parties with much at stake in a collaborative to feel a need to minimize any risk associated with releasing control, this has led to loss of credibility in other collaboratives in the past. The WHPA and DAWG have

struggled with such tensions. These shifts in power are noticeable to other stakeholders, who in turn become less motivated to provide meaningful input to the group. For instance, DAWG participants expressed lessened willingness to meaningfully participate in cases when they expected agency staff to overrule them. This might lessen the value of the collaborative.

- The Cal TF is committed to remaining a representative stakeholder group, and will use consensus decision making as on of its safeguards against power consolidation.

## IV. Form follows Function

Some of the most successful collaboratives have formalized their processes over time while building a broad support base and/or performing valuable work in the meantime. This trend, best explained by the "form follows function" adage, is partially explained by any new group's need to tailor itself to its, often not fully fleshed-out, mission, work, and audience. By allowing needs and functions to define form, groups can avoid wasting costly organizational work. Furthermore, endeavoring to define a group's structure too early can strain nascent collaborative relationships, while doing work and proving the group's value through said work can have the opposite effect on stakeholder relationships. These strengthened relationships can eventually make the structural work less costly.

The ETCC is a great example of how a collaborative can gradually use its work to prove its value and grow accordingly. The ETCC was a new concept at its inception, and it proved its own value as it grew organically, only receiving formal regulatory acknowledgment years into its tenure. Such a thorough, organic processes tend to lead to more stable, effective collaboratives. The Illinois SAG is another example of this trend, having been loosely organized in private negotiations over only a few weeks, and then allowing the more formal rules to be defined as the group went about its work.

Along these lines, The Cal TF has been working off of a "leap of faith" strategy. That is, founding members are forging through the organizing process without waiting for formal regulatory approval. This strategy makes perfect sense for the Cal TF—an innovative concept best proven with pragmatic results.

## V. General Findings

In addition to best formation practices and lessons learned about ensuring an effective launch, implementation, and optimizing growth, the research revealed several more general trends of successful stakeholder groups. The three most salient such findings are explained below.

- **Stakeholder collaboratives ad value to the regulatory process by bringing together different opinions and perspectives, discovering, sifting through, and processing new information, and understanding and responding to a greater variety of perspectives.** This may be why the Commission listed the use of "informal forums to reduce litigation in proceedings" as one of the goals for the ongoing rolling portfolio rulemaking and encouraged "parties to collaborate

through informal stakeholder forums to submit a joint proposal."[26] The Cal TF will bring together parties to discover and sift through a great amount of data and the various possible approaches for analyzing that data, while simultaneously narrowing the differences in their opinions. By the time a Cal TF value or policy position is presented to the CPUC, it will already have been sifted and worked into a sensible logical argument with broad stakeholder support. The Commission will then be at a more informed position from which it can exercise its authority.

- **Having the CPUC, CEC, and CAISO all participate in the work and discussions has helped the groups work towards consistent statewide policy as well as maintain a balance of opinions.** This has been particularly effective most recently in DAWG. The Cal TF will have representatives from both agencies as members of the PAC to ensure balance and consistent statewide recommendations that satisfy the needs of all California players.
- **The use of peer review and similar forums for technical energy efficiency work has been increasing recently.** The years since the NW RTF began successfully operating, NEEP launched a new quasi-peer review forum for EM&V in the New England and Mid Atlantic states. The new forum, initially funded in part by the Department of Energy, has helped develop and update Technical Reference Manuals for the Mid-Atlantic region, metering collection protocols, and emerging technology savings assumptions among other things.

## VI. Case Studies to Inform the Cal TF

### Emerging Technologies Coordinating Council (ETCC)

The Emerging Technologies Coordinating Council (ETCC) was born out of a desire by the California utilities to stay informed and connected to emerging technologies (ET) research after restructuring shifted control of ET programs to the CEC. ETCC organically evolved into a forum for the IOUs, SMUD, and the CEC, with oversight from the CPUC, to share information and collaborate on their various ET projects. While not a decision-making body, or even binding in any advisory capacity to its member organizations, the ETCC helps its members coordinate and leverage each other's research and therefore take full advantage of California's ET R&D dollars. CPUC Energy Division staff has been involved from the beginning, observing meetings and sometimes providing input on direction, but it wasn't until several years after it had already been operating that the Commission formally acknowledged the collaborative's existence.

ETCC's new governance model makes each IOU and SMUD a voting member of the Leadership Team. The CEC and CPUC will be non-voting observers.[27] It is important to clarify that ETCC's members will vote only on administrative decisions—as before, program and funding strategy will be left to the individual utilities. ETCC will also make

[26] R.13-11-005 at 10
[27] This was by choice of each agency.

use of a Board of Advisors, which will be composed by experts from across the country. The Board of Advisors will be subject to a new, stricter Conflict of Interest policy: Advisors will be required to disclose any potential conflict and recuse themselves from all discussions pertaining the disclosed topics. This policy is particularly relevant given that the topics discussed at the ETCC often involve details about technical innovations that could be very valuable.

Originally, each utility paid for its share of ETCC expenses out of regular ET program funds. One utility held the contract with the administrator, and the other utilities jointly funded the ETCC through co-funding agreements with the sponsoring utility. This models the current funding structure for Cal TF. Under the new governance structure, funds will continue to come from each utility separately—for instance, Livingston Energy Innovations, ETCC's independent administrator, operates under a separate contract for each ETCC utility—but there will be a Memorandum of Understanding in place to specify funding expectations. Once it was determined that ETCC would bill for work, and not manage funds, it followed that the ETCC would not need to file for 501c3 status.[28]

The Cal TF has been working off of a "leap of faith" strategy. That is, founding members are forging through the organizing process without waiting for formal regulatory approval. This strategy makes perfect sense for the Cal TF—an innovative concept best proven with pragmatic results. The ETCC is a successful example of such a "leap of faith" strategy, even though it was never officially branded as such. The ETCC too was a new concept at its inception, and it proved its own value as it grew organically, only receiving formal regulatory acknowledgment years into its tenure.

**Northwest Regional Technical Forum (NW RTF)**

In 1996, Congress charged Bonneville Power Administration and the Northwest Power Planning Council to establish and administer the Regional Technical Forum to develop energy efficiency measure parameters for consideration and use by the region's numerous utilities, including investor-owned and publically owned utilities, in the four Northwestern states. To engage in meaningful integrated resource planning, consistent values needed to be developed and adopted across the planning region.

The highly successful and well-regarded Northwest Regional Technical Forum (NW RTF) model develops consistent energy savings parameters that are used and accepted by over 160+ utilities in four Northwestern states. The NW RTF, has several attractive features that could enhance the development of measure parameters in California, including:

- Explicit, agreed-upon, consistent guidelines for determining energy savings and other measure parameters
- Timely and credible savings values and other measure parameters
- Technically rigorous and well-documented values

[28] It was decided that, given that ETCC would not need to manage funds nor depend on unified legal council, the administratively costly 501c3 filing was unnecessary.

- Transparency regarding how values were developed
- Effective peer review
- Accessible and convenient database of measure savings estimates and other parameter values.

The NW RTF has three entities: the RTF Policy Advisory Committee (PAC), the RTF members, and the RTF Administrator, each with key responsibilities. The NW RTF PAC is largely comprised of the RTF funders, and has operated for less than two years. The PAC directs the RTF work. The RTF members are up to 30 technical experts, largely volunteer, that guide, peer-review, and then ultimately approve the RTF work product, including measure parameters, templates/forms, and guidelines. The RTF Administrator works collaboratively with TF members to seek input and guidance as the work product is developed and ensures that completed RTF work products are consistent with RTF member-adopted guidelines. The RTF Administrator staff includes a Chair, technical staff (approximately 7 full-time equivalents) and administrative and managerial staff (approximately 3 full-time equivalents). The RTF has operated for nearly ten years.

The RTF Administrator develops draft work papers containing measure level parameters, often through close collaborative with the RTF subcommittees that include TF members, TF corresponding members who may be appointed by the TF Chair for project-specific work to provide input, and a member of the RTF Staff. The RTF members review measure workpapers and supporting materials. When a workpaper is discussed at the monthly Technical Forum meetings, all stakeholders, not just RTF Members, may publically comment on the workpaper to enhance the quality of the proposals. All deliberations are public, well-documented and consistent with RTF member-adopted guidelines.

RTF members vote on and endorse use of workpaper results to avoid future issues around savings estimates and other measure parameters. A super-majority of the RTF members is required for RTF approval (60%), with a 40% quorum.

**Renewable Energy Transmission Initiative (RETI)**

RETI was officially launched in April of 2008 in an effort to help California implement its aggressive renewable energy plans. It was designed to bring together all interested parties to collaborate on a statewide renewable generation and transmission plan. IOUs, POUs, transmission owners, representatives from all levels of government, and environmental and other advocates were asked to help identify zones for potential competitive renewable energy development and rank them according to cost and environmental concerns. The collaborative was further tasked with identifying the best, most cost-effective transmission improvements necessary to connect the new renewable zones to the state grid. RETI's consensus-building process was designed to help expedite citing and permitting of new renewable generation and transmission assets by solidifying a priori stakeholder support for particular projects. Secondarily, the collaborative served as a forum for discussion and information sharing between parties and regulatory staffs and thus helped inform agency planning and decision making

processes. This second benefit was realized largely through informal communication channels.

The collaborative was governed by one sole document—a Mission Statement drafted by a small group of senior CPUC, CEC, CAISO, SCPPA, NCPA, and SMUD representatives before the collaborative was formally established.[29] The Mission Statement lays out the collaborative's organizational structure, work plan, and expected deliverables. Although consensus building was the pervasive decision-making ethos throughout the RETI process, the policy was not officially enforced until after the Mission Statement was finalized. Dave Olsen and Rich Ferguson, who were later hired by the CEC to facilitate the collaborative, spearheaded the initial effort.

Per the Mission Statement, RETI was tasked with identifying "the next major CREZs [Competitive Renewable Energy Zones] to be developed and [working] through the California ISO's and POU's planning processes to provide transmission plans of service to access these zones."[30] This directive was widely interpreted as instructing RETI to create a comprehensive transmission plan for the entire state, as well as performing all the technical groundwork necessary for building said plan. Initially, the process was expected to last two years; however, achieving consensus on the requisite technical groundwork took longer than expected and the timeline had to be extended by about one year.[31]

The majority of RETI's work revolved around the central Stakeholder Steering Committee (SSC). The SSC met monthly for in-person daylong working meetings. These meetings were used to debrief and discuss the work of the various issue subgroups. In between meetings, each of the 29 SSC members was responsible for engaging with the other individuals whose opinions they were responsible for representing in the SSC. For example, the NRDC held bi-weekly phone conference with other environmental stakeholders. The SSC also held quarterly "Plenary Stakeholder Group" meetings, where it updated the general public on its work.

All decision-making in RETI was done through consensus building. There was no formal voting. Consensus was defined as "all can live with," and most consensus negotiations were undertaken during the drafting of reports. When consensus could not be reached, dissenting opinions were recorded as footnotes in the draft and final reports. The vast majority of the time, consensus was reached and there were no dissenting opinions.

### Western HVAC Performance Alliance (WHPA)

The Western HVAC Performance Alliance (WHPA) was established 2009 as a cornerstone policy in support of the California Energy Efficiency Strategic Plan. The Alliance advices the IOUs in matters relating to HVAC energy efficiency program design and implementation.

In the summer of 2007, the CPUC and CEC jointly convened a series of workshops to discuss 'big, bold' energy efficiency strategy. Among other aspects that made these workshops stand out was the wider breath and larger number of stakeholders that

[29] These representatives later went on to be called the Coordinating Committee.
[30] RETI Mission Statement, p. 3.
[31] Interview with Dave Olsen.

participated. In D.07-10-032, the Commission adopted a number of Big Bold Energy Efficient goals and directed the utilities to collaborate closely with the business leaders to develop and implement a strategic plan for meeting the goals.[32] The general sense at the end of the proceeding was that input from industry would be essential to achieving the Commission's very ambitious targets.[33]

Energy Division hired the UC Davis Western Cooling Efficiency Center and Dale Gustavson to launch and manage what eventually became the Western HVAC Performance Alliance (WHPA). The long-standing credibility of these two consultants within the industry was essential to convening influential HVAC leaders and convincing them to invest significant amount of un-paid time to establishing the organization. Partly due to particularities of HVAC industry players, the team behind the original WHPA development decided to pursue a lengthy 'self-chartering' process.[34] A Steering Committee of 24 volunteer industry and IOU representatives met bi-weekly for six months to draft the organizing documents. Consultants supported these efforts mostly with supporting research and coordination help. The whole process was consensus-based and all 24 charter members unanimously ratified the final charter in 2009.

The original WHPA charter relied heavily on consensus decision-making, and called for every 'nay' vote to be memorialized along with the voter's rationale for dissenting. However, a year into official WHPA operations this approach proved to be problematic—discussions and working group deliverables were being extended indefinitely by only a few dissenting voices. Alliance leadership, including CPUC staff, amended the charter to institute formal voting rules that now require a super majority of quorum to approve motions.

The WHPA Code of Conduct includes a 'self-disclosure' conflict of interest policy. Members are expected to disclose any potential conflicts at the outset of any discussion.[35] While this has led to the conflicted member recusing himself from a given working group a number of times, this is not usually the case. The general understanding among the membership is that everyone has their own individual interests, and all these interests are expected to be balanced through honest, productive collaboration.[36]

WHPA has continued to evolve since it was first established. Contracts for staff support were transferred from CPUC staff to SCE and later to PG&E.[37] An Executive Committee was created to assume the leadership role of the initial Steering Committee, and a new Council of Advisors was tasked with longer-term responsibilities, including keeping WHPA aligned with the HVAC Action Plan. The majority of members participate in the organization by serving on Committees and Working Groups. The organization now counts with 199 member organizations across 25 different categories. Peer review and volunteer labor have been integral to the success of the Alliance. Since the Alliance

[32] October 19, 2007, at 46
[33] Dale Gustavson interview, April 14, 2014
[34] Consultants believed that drafting a straw man Charter to begin discussions would isolate industry members who had been isolated from the IOUs since restructuring.
[35] http://www.performancealliance.org/Home/CodeofConduct/tabid/205/Default.aspx
[36] Dale Gustavson interview, April 14, 2014
[37] The UC Davis Western Cooling Efficiency Center ceased to be involved at the same time that contracts were transferred to SCE

was established, WHPA members have volunteered approximately 17,574 hours of subject matter expertise to further the organization's mission.[38]

## VII. Summary and Conclusion: Cal TF – Poised for Success

The Cal TF is poised to achieve many objectives that California stakeholders have for measure parameters and other technical information supporting the large and diverse California energy efficiency and integrated demand-side management portfolio, including: technical rigor, consistent statewide values, independence, transparency, collaboration, effective peer review, timely results, cost-efficient, and a greater opportunity for regional and national collaboration.

- Technical Rigor: Technical rigor will result from seeking input from a broad and diverse group of stakeholders. Given the breadth and complexity of California's portfolio, no one individual or consulting group has the technical knowledge or information needed to achieve the Commission's objectives of using the "best available data." [39] As a 2005 CPUC-commissioned report observed:

  > "[R]eaching out to broader groups of experts and DEER users" for open discussion of technical matters yields two distinct benefits that are important to the DEER development process: "First, these individuals and entities may have knowledge of technical information about which the DEER Committee and contractor are unaware. Second, reaching out to other experts and DEER users helps to increase the understanding and usefulness of DEER." [40]

- Consistent Statewide Values: Consistent statewide values will result from participation by all key California stakeholders, including the IOUs, POUs and their respective regulatory bodies (the CPUC and CEC).

- Independence: TF Members will pledge to provide input based on their best professional judgment, as in the NW RTF, and not their organizational interest. Furthermore, participation on the TF by investor-owned utilities who are viewed by some stakeholders as biased will be restricted to the minority of TF participants.

- Transparency: All TF meetings will be open to the public, and will be recorded and placed on the Cal TF website. Majority and minority opinions will be documented and posted where consensus is not reached. Finally, all TF-approved values will be linked to the data and methods supporting those values so the source and derivation of the values are transparent.

[38] Western Performance Alliance, *WHPA by the Numbers*, March 2014
[39] D.10-12-054, December 21, 2010 at 9.
[40] 2004-2005 Database for Energy Efficiency Resources (DEER) Update Study – Final Report (December 2005); Prepared for So Cal Edison, prepared by Itron, Inc. with assistance from JJ Hirsh & Associates.

- Collaboration and Effective Peer Review: Collaboration will be fostered through participation on the PAC of a broad range of interests representing all key stakeholders in California. Technical forum members will be selected to ensure a balanced representation of experts with relevant experience and training in a broad range of technical disciplines needed to effectively develop and review technical information for California's EE and IDSM portfolios
- Timely Results: Timely results will be sought by having clear templates, guidelines and checklists for the quality and type of data needed to support and seek TF review of measure parameters. Participants will be expected to provide review and comment within a set time frame. Metrics will be established to track whether the Cal TF process is more timely than the existing process for measure work paper review in California.
- Cost-Efficient: Cost-efficiencies will be sought through pooling resources to produce common statewide values, in contrast to the current practice where values are not developed statewide in a consistent way.
- Greater Opportunity for Regional and National Collaboration: Through modeling and adopting successful approaches and practices from other jurisdictions, the Cal TF will seek to leverage knowledge, best available data and practices from other jurisdictions through regional and national collaboration.

**Conclusion**

The Cal TF is an exciting, new opportunity for California. It is designed for success – closely modeled initially on the established, well-regarded NW RTF process, but improved through additional research on attributes of other effective stakeholder processes. Furthermore, the initial Cal TF model has been adapted based on California stakeholder input and requests, and the adaptations have been validated through extensive review of collaboratives within and outside of California. Finally, in many ways, the Cal TF is a return to earlier days of DEER in which a collaborative process involving multiple key stakeholders was used to develop ex ante values for DEER that produced ex ante values in a less controversial and more transparent way.

Collaboration that Counts: The Role of State Energy Efficiency Stakeholder Councils

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**ABSTRACT**

The three southern New England states are among the leading energy efficiency jurisdictions in North America. Of the many commonalities among these states, the presence of a central stakeholder body ('council' or 'board') focused on energy efficiency policy and planning stands out as an important factor in their accomplishments. This paper describes how a collaborative, multi-stakeholder council can foster a climate of efficiency program success and cooperation. Efficiency council success is premised on using a fact-based approach to decision making supported by the capacity to retain quality expert consultants. Importantly, stakeholder councils act as a focal point in state energy planning for efficiency and related demand side policy implementation.

Drawing on the experience of Rhode Island, Massachusetts, and Connecticut, we identify key factors for success and describe the demonstrated positive outcomes resulting from this strategy. Among the most important of these outcomes is a shift in the nature of decision-making from an adversarial process to collaboration. Rather than expend effort on contentious litigated proceedings between utilities, intervenor groups, and public agencies, a stakeholder council can bring all stakeholders into the discussion before policies and program details progress to the point where there is little flexibility to address concerns, and then seek solutions that better satisfy multiple objectives. The paper also identifies specific characteristics and contexts that may explain variation in outcomes and presents recommendations as to key features for these entities.

## IV. The Stakeholder Council Concept

The vast majority of efficiency programs in the United States are delivered by investor-owned electric and gas utilities. As regulated entities, decisions regarding how much to spend on efficiency programs, how they should be delivered, and mechanisms for compensating utilities for their program-related expenditures are typically addressed through hearings or dockets before state utility commissions. These proceedings provide the primary venue in which the utility, the regulator, and a wide variety of other stakeholders can discuss, advocate, and support their agenda.

An alternative venue in which these activities can occur is a stakeholder body ('council' or 'board'). In such an organization, the collaborative efforts of multiple parties replaces contentious proceedings driven by individual self-interest. The value of this approach has been realized for many years: "The collaborative efforts of multiple parties in a number of states have been a significant factor in designing administrative structures as well as in designing effective efficiency programs" (Harrington and Murray, 2003). Stakeholder councils in three New England states will be discussed below. A summary table appears later in this paper.

### 1. Connecticut

The first stakeholder council in New England with authority to oversee efficiency program spending was the Energy Conservation and Management Board (ECMB), created by the Connecticut General Assembly in 1998. Before this time, collaborative organizations intended to advise utilities, regulators, and state energy offices existed as a result of rate case settlements. In Connecticut, Massachusetts and Rhode Island, the settling parties to a docket met and negotiated programs, budgets, incentive levels and other components of a complete efficiency plan. This "collaborative" included the utility and non-utility parties ("NUP") such as the state consumer advocate, environmental advocates, business associations, and others that had participated in the PUC docket. As states moved to restructure the vertically integrated utility model in Connecticut, efficiency advocates successfully obtained substantial increases in efficiency funding as part of the new legislation on restructuring. Since efficiency budgets were then set by statute, rather than in a docket, the collaborative settlement model needed to be replaced. Advocates working in Connecticut therefore recommended that an official stakeholder board be created in the restructuring law.

The ECMB was created as a way to ensure that a diverse group of stakeholders could participate in setting the direction of the utilities' programs. Importantly, efficiency advocates sought to include on the ECMB parties who had expressed skepticism over the value of increased efficiency spending. Advocates of this approach felt that the Board should be separate from the state energy office to ensure independence. Furthermore, they realized the importance of retaining outside consultants for technical and policy support. This provided the Board with expert guidance uninfluenced by local factors.

Recently renamed the Energy Efficiency Board (EEB), the group advises and assists the state's utility companies in developing and implementing cost-effective conservation programs to meet Connecticut's changing and growing energy needs. Although the Board took a couple of years to become truly functional, it was successful enough to warrant expansion of the concept to nearby states. Within several years of the ECMB process, Connecticut rose dramatically in national efficiency rankings and eventually shared the number one position in ACEEE's annual State Energy Efficiency Scorecard. Although its ranking of late has slipped due to a lack of support from the past few administrations, it has remained in the top ten. Recently, Connecticut reorganized its energy agencies. The EEB retains its role advising and developing the state's electric and gas utility efficiency plans and works closely with the new Department of Energy and Environmental Protection (DEEP). The EEB continues to act as a focal point for state efficiency program development and to guide the distribution of the Connecticut Energy Efficiency Fund, money raised to support energy efficiency programs and initiatives through a surcharge on customer electric bills. In 2011, Connecticut electric and gas utilities invested $125 million in energy efficiency, generating over $600 million in lifetime savings.

### 2. Rhode Island

Created by the Comprehensive Energy Conservation, Efficiency and Affordability Act in 2006, the Rhode Island Energy Efficiency and Resources Management Council (RI EERMC) was recommended by energy efficiency advocates (principally Environment Northeast, which had experience with the Connecticut ECMB), as part of Rhode Island's wholesale revisiting of its

energy law. Importantly, this same Act also adopted the concept of least cost procurement (LCP): acquisition of energy efficiency resources whenever less expensive than supply. The Act also established an innovative approach to planning for other demand side resources such as combined heat and power (CHP) and distributed generation (DG). As a result, the EERMC was charged with a central role in developing the state's electric and gas utility efficiency plan. This includes conducting a mandatory assessment of efficiency potential in the state and beginning the system reliability review of other demand side resources to meet state energy needs.

The Rhode Island experience has been exciting and positive for efficiency resource acquisition. Due to planning undertaken by the EERMC and its consensus-based stakeholder approach, the state's leading business, consumer, large industrial and commercial and other interests worked together to create plans that are increasing investments in efficiency resources from around $16 million annually in 2008 to over $68 million in 2012 and $110 million in 2014. Most importantly, Rhode Island ratepayers will save $785 million as a result of the 2012 to 2014 plan. Rhode Island has steadily risen in the ACEEE rankings since the EERMC and LCP process was put in place, and is currently ranked fifth overall (tied with Vermont) and in second place for utility sector programs. The annual electric savings goal of 2.5 percent adopted by the EERMC is the highest in the country. The RI PUC has approved these budget and savings goals after careful consideration of the plans and supporting information provided by the EERMC.

### 3. Massachusetts

Although Massachusetts was home to an early collaborative effort around efficiency programs, it was not until the passage of the Green Communities Act in 2008 that a formal Energy Efficiency Advisory Council (EEAC) was created. Similar to the situation in Connecticut in1999, the EEAC replaced an existing collaborative process. The Massachusetts EEAC, as in Connecticut and Rhode Island, retained the model of being composed of a broad group of entities involved in energy policy discussion (e.g., end-uses, advocates, state energy offices), an emphasis on consensus driven decision making, and the retention of expert consultants to guide the Council. The Green Communities Act also adopted an LCP mandate, which the EEAC implemented through the process of identifying the efficiency potential in the state and then setting investment levels needed to capture cost-effective efficiency resources. The EEAC adopted a 2.4 percent annual savings rate, then the highest in the country, which it is overseeing through the statewide programs. Investment levels have risen from $125 million annually in 2008 to $540 million in 2012 on the electric side, and from $30 million to $140 million on the gas side. Massachusetts was ranked first in the nation in the most recent ACEEE rankings due to its redoubled commitment to energy efficiency investments.

## V. Structure and Roles of Stakeholder Councils

Here, we summarize the variation among stakeholder councils along a few dimensions of structure and operations, and identify pros and cons of each, with reference to actual experience in Connecticut, Rhode Island, and Massachusetts. Tables at the end of this section summarize much of this information.

## 4. Authority, Governance, and Funding

Stakeholder councils such as the CT EEB, MA EEAC, and RI EERMC get their authority from the legislature but may fit into state government in somewhat differing ways.

- In Massachusetts, the state energy office acts as the chair of the Council and manages the body as part of an Executive Committee composed of other key Council members. Because a state energy office is usually (but not always) aligned with mandates and guidance from enabling legislation, their participation is usually seen as a positive. Still, one of the primary benefits for a stakeholder council we noted above is the ability to shield efficiency programs from short-term swings in political power and policy priorities. The regulator (the Department of Public Utilities) does not participate in the Council.
- Connecticut recently combined the state's regulator and the energy office under a single agency (the Public Utilities Regulatory Authority) that also chairs the EEB. In this case, the existence of the EEB and the history of its positive contributions prevented even more authority from being transferred to the state administration.
- In Rhode Island, the Council is chaired by one of the voting members representing the regulatory and legal perspective, although not affiliated with the state regulator (the Public Utilities Commission). The state energy office has a non-voting seat but has statutory authority to administratively staff the EERMC.

Regardless of these differences, the Councils govern themselves in similar ways. All three strive for consensus in decision-making whenever possible. When the members cannot reach consensus, simply majority votes are sufficient to pass motions, with the exception that both the MA EEAC and the CT EEB require supermajorities to approve efficiency plans and budgets. In each of these cases, the strength of the efficiency board or council comes from the fact that diverse, key stakeholders representing all types of consumers and interests work together to make decisions from a common set of factual information developed collaboratively or by their consultants. A consensus position supported by the state's largest employers, consumer advocates, environmental justice interests, and energy efficiency advocates is a powerful signal to regulators and others, particularly when it is backed by a substantive record and quality of decision making. While the role of a state energy office can vary, the value of the board process is really in its members and dedicated commitment to fact-based efficiency plans that implement the legislative mandate to acquire all cost effective efficiency resources.

Also important is the fact that all three of these councils are funded by ratepayers through riders or a system-benefits charge. Each state has placed limits on the percentage of total efficiency funds that can be used to support the councils' activities and their consultants. As discussed below, keeping council operating funds separate from the state budgeting process is generally seen as providing some shelter from shifting political priorities.

## 5. Membership

Although there are many similarities in the type of organizations and stakeholders represented on the three councils in New England, the composition varies from state to state. Although the

utilities on the Connecticut ECMB were originally voting members, legislative changes have made them ex-officio members instead. Currently, none of the states allow utility representatives to vote on Council matters, as this would present conflicts of interest on issues such setting the utilities' performance incentive levels. Even as non-voting members, the utilities do play an important role in the council or board activity. They provide input and feedback on policy and implementation matters; utility staff engage in dialogue with the council members on a continuous basis, usually moderated or in conjunction with the council's consultants.
On the stakeholder side, low-income advocates are represented on all three councils, as are commercial entities, large industrial users, and environmental advocates. The Massachusetts EEAC reserves seats specifically for labor interests, the housing and economic development perspective, and the environmental justice community.

### 6. Reliance on Technical Consultants

Effectively engaging in the wide variety and large volume of work required to successfully monitor and guide utility program administrators demands substantial commitment of time and resources from a stakeholder council. To address these needs, councils may retain outside consultants who have greater efficiency industry knowledge than council members and who can provide a greater level of effort. This is not to say that staff members from the various represented organizations, particularly from public sector agencies such as state energy and attorneys general offices, do not contribute significant resources to the overall effort. Rather, independent consultants often bring different perspectives, new ideas, and more flexible staffing availability to meet the varying needs of the council.

The three New England councils rely on outside consultants for expertise on all aspects of program design, evaluation and monitoring, and program performance. The budget for consultants represents a very small portion of overall efficiency program budgets in all cases. Forecast budgets for 2012 range from 0.2 percent of total program budgets in Massachusetts to 0.6 percent in Rhode Island, with Connecticut splitting the difference at 0.4 percent. Some of the variation in spending can be explained by the relative size of the program budgets between the three states. The costs to attend monthly council meetings, participate on major committees, and engage in analyses of program performance are largely un-related to the overall size of the program budgets. Therefore, spending in Massachusetts, with the largest program budgets, is relatively lower than in Rhode Island, where similar consultant costs represent a much larger percentage of the smaller program budgets in that state.

Proponents of the stakeholder model believe that the consultant format is preferred to an alternative option of relying on existing or new agency staff. By utilizing consultants, the decision making process emphasis and responsibility remains with the diverse stakeholders, rather than with state employees. Selecting top-quality consultants from among the industry's leaders means that best practices and innovation are valued and sought out by council members.

## Summary of Stakeholder Council Characteristics

| State Entity | # of Members | Scope of Responsibility | Decision Making Process | Role of Regulatory Body | Role of Technical Consultants |
|---|---|---|---|---|---|
| **CT - EEB** | 9 | Advise utilities on development of the state's energy efficiency plan, including program design, deployment evaluation and spending<br>Work with DEEP on environmental issues | Aim for consensus, majority vote to approve motions, supermajority to approve efficiency plans and budgets | The DEEP chairs the EEB, and the PUC takes recommendations from the EEB and rules on utility program plans, appropriation of funds, and system benefit charges | Employ technical consultants to offer impartial advice and review |
| **RI – EERMC** | 7 | Develop state energy efficiency and system reliability plans<br>Advise PUC on approval of program design, deployment evaluation and spending<br>Mandate to capture least cost resources | Aim for consensus, majority vote to approve motions | Office of Energy Resources is a non-voting member of the EERMC, which makes recommendations to the PUC | Employ technical consultants to offer impartial advice and review |
| **MA - EEAC** | 11 | Develop state energy efficiency plan<br>Advise DOER and DPU on utility program design, deployment evaluation and spending<br>Mandate to capture least cost resources | Aim for consensus, majority vote for motions, supermajority to approve efficiency plans and budgets | DOER is a non-voting member and chair of the EEAC, which makes recommendations to the DPU on utility programs and system benefit charges | Employ technical consultants to offer impartial advice and review |

**Stakeholder Council Membership**

| | CT – EEB | RI - EERMC | MA - EEAC |
|---|---|---|---|
| **Voting Members** | | | |
| State Agencies | Department of Energy and Environmental Protection (DEEP) - **Chair**<br>Attorney General | | Department of Housing and Community Development<br>Department of Energy Resources - **Chair**<br>Department of Environmental Protection<br>Attorney General |
| Residential & Low Income Sectors | Connecticut Legal Services | University of Rhode Island | Tufts University<br>Low-Income Energy Affordability Network |
| Commercial & Industrial Sectors | United Technologies<br>Manufacturers Alliance of Connecticut<br>University of New Haven | Brown University<br>Citizens Bank | Organized Labor<br>Genzyme<br>Associated Industries of Massachusetts |
| Consumer Advocates | Office of Consumer Council | Independent Low-Income Consultant | |
| Environmental Advocates | ENE (Environment Northeast) | ENE (Environment Northeast) | ENE (Environment Northeast) |
| Regulatory and Industry | | S. Paul Ryan Attorney - **Chair** | |
| Energy Efficiency Experts | | Building Commissioner | Smith College |
| **Non-Voting Members** | | | |
| Utilities | United Illuminating<br>Connecticut Light & Power<br>Connecticut Municipal Electric Energy Cooperative<br>Southern Connecticut Gas | National Grid | Municipal Aggregators (Town of Marlborough)<br>National Grid<br>NSTAR<br>Cape Light Compact<br>Western Mass Electric<br>Unitil<br>Bay State Gas<br>Blackstone Gas<br>Berkshire Gas<br>New England Gas Co. |
| Other Entities | | Oil Heat Institute of RI<br>Office of Energy Resources | Energy Efficiency Businesses (Peregrine Energy)<br>Heating Oil Industry (Massachusetts Oil Heat Council) |

## VI. Stakeholder Councils as Performance Factor

Our argument in this paper is that the presence of a stakeholder council focused on energy efficiency policy stands out as an important factor in high achievement states and regions. The three states described above are all among the top-ranked states in efficiency accomplishments. Below, we described specific ways in which stakeholder councils improve efficiency program performance.

## 7. Collaborative Decision-Making

Rather than expend effort on contentious litigated proceedings between utilities, intervenor groups, and public agencies, a coordinating council can bring all stakeholders into the discussion before policies and program details progress to the point where there is little flexibility to address concerns and instead seek solutions that better satisfy multiple objectives. Reaching a unified vision can be tough work, but reaching consensus can add significant stability to the efficiency institution and to its programs.

In states with utility-administered efficiency programs, the typical way of doing business is for each utility to file plans with the regulator, which is followed by a process of review, comment by Staff and intervenors, testimony, hearings, etc. Recent experience in New York state shows how resource intensive this can be. In June of 2008 the Public Service Commission issued an order establishing an Energy Efficiency Portfolio Standard (EEPS), directing all utilities to file proposals for efficiency programs to meet certain savings targets. The volume of filings, understood in advance to be substantial, was divided into two groups for filing on different schedules. Most utilities filed multiple programs in each round. Over the ensuing months, the Commission had to work through dozens of individual filings from six different utilities and NYSERDA. With subsequent revisions and expansion there have been over 200 filings in total. The Commission's Office of Energy Efficiency and the Environment has 16 full-time employees working on EEPS issues. Unfortunately, program accomplishment as of the close of 2011 is falling far short of expectations. As a result, the Commission has reduced utility savings targets through subsequent orders to avoid levying large penalties.

Contrast this with recent experience in Massachusetts. As noted above, the Commonwealth has a long history of collaboration on efficiency programs. After creation of the EEAC, one of the first outcomes was an aggressive three-year target for efficiency savings. These targets, and the programs that were implemented to accomplish them, were hashed out over the course of several meetings and discussions in the fall of 2009. While the number of individuals involved may not have been less than in New York (comparatively), the process was more efficient, took less time overall, and bypassed much of the serial back-and-forth of filings, interrogatories, re-submissions, etc. before the regulator. Participants in the negotiations were primarily utility efficiency staff, the Council, and the Council's consultants, rather than a cadre of attorneys and expert witnesses. In contrast to New York, the Massachusetts utility Program Administrators met or nearly met their 2011 savings goals with lower than projected budget expenditures. While the presence or absence of a stakeholder council is not the only explanation for the difference in performance between these two states, the challenging, complicated, and at-times confrontational regulatory process in New York likely did not help matters.

Another recent example of the power of the collaborative approach fostered by a stakeholder council comes Rhode Island, where the Public Utility Commission quickly (in less than two months) and unanimously approved the 2012 System Reliability Procurement Plan. The Commission's review and approval was facilitated by the support of both the EERMC and the Division of Public Utilities and by their comfort with the quality of the EERMC's work over the prior years. With a requirement to approve any plan that is cost-effective and less than cost of alternative supply, the PUC's confidence in the Plan and its underlying analyses allowed for easy adoption.

## 8. Consistent Program Approaches

Closely related to the benefit described above, the presence of a stakeholder council provides a means for establishing consistent programs and joint program actions that overcome barriers to widespread program adoption and reduce administrative overhead. In a series of proceedings before a regulator, each utility will come forward with its own program approaches, and these hearings and decisions will be spread over some span of time due to the serial nature in which dockets must be processed. While a regulatory body could just mandate consistency, this may not meet the needs of all utilities and could confer an advantage to the utility whose filing is submitted or approved first by

As an alternative, a stakeholder council can facilitate discussions between all administrators and stakeholders to address the pros and cons of several alternative approaches, arriving at a set of decisions and solutions that best meet the needs of all involved and take advantage of economies of scale. In Massachusetts, the MassSave brand launched by the Program Administrators is an excellent example of this. As reported elsewhere at this conference, MassSave has achieved substantial successes in the areas of residential energy retrofits, upstream lighting in the commercial sector, efficiency of resources and utility staffing, and consistency in technical review of new efficiency opportunities. The MA EEAC was the primary driving force behind the creation of the brand, growing from the Council's priorities for integration and consistency of program offerings and delivery mechanisms.

A related area in which consistency and centralized discussion can improve efficiency program performance is evaluation. Typically, evaluation is carried out by either a contractor to the utility or by the regulator, who may in turn contract with another entity for this responsibility. In the case of the former, the regulator usually serves in a review capacity. Drawbacks of this include an expensive utility-by-utility approach to studies and the potential for insufficient independence for the evaluation contractor. Where the regulator acts as the evaluator, states have found it difficult to attract and retain top-quality staff in a very competitive market for evaluation services. Furthermore, the regulator, as a state entity, typically has much less flexibility in its ability to contract for outside assistance, which can slow evaluation activities and lead to delays between program activity and completed evaluation.

With a stakeholder council in place, the benefits of utility administration and close oversight can be brought together. In both Massachusetts and Connecticut, the utilities contract with the evaluator but the stakeholder council exercises oversight and substantial authority over all evaluation activities and outcomes, including evaluation consultant selection. This includes priority setting, study design, and application of findings to program reporting and design revisions. Furthermore, evaluation activities are conducted on a state-wide basis, which is more efficient and limits concerns about disparate treatment between utilities. Other states implement state-wide evaluation (notably California), but the underlying context of a stakeholder council for broader oversight of efficiency programs provides added support for such an effort.

### 9. Protection Against Short-Term Distractions

The National Action Plan for Energy Efficiency notes that "energy efficiency programs require consistent and long-term funding to effectively compete with energy supply options" (DOE 2006). This forms the basis for one of the Plan's five major recommendations, to promote sufficient, timely, and stable program funding for efficiency.

An independent stakeholder council can support and manage a fact-based process to respond to and stave off requests by legislators to direct program funds based on rapidly-shifting political whims. As different groups and ideas gain currency in the political realm, there is often a push to support specific parties, technologies, or program strategies without careful regard for their appropriateness or consistency with existing and planned efficiency program plans. While many of these ideas and concepts have some merit and positive attributes, they may not be the best use of resources to accomplish efficiency goals.

Unfortunately, there have been many instances of outside influences negatively affecting the consistency of program delivery. In one of the most egregious examples, Enron proposed in 2001 to use all of the efficiency funds and most of the renewable energy funds in Connecticut for a large investment in fuel cells. Enron attempted to bypass not only the CT ECMB but the regulators as well and sought approval from the Governor's office.

Although the Board was still in relative infancy, it convinced the regulator that Enron's proposal must be reviewed by the Board before proceeding any further. The Board recommended that the regulator deny the proposal and it was ultimately rejected. While the ECMB and EEB have not always been successful at staving off administrative and legislative attempts to reclaim some of the efficiency monies for the state's general fund, many believe that these have been minimized by the presence of a stakeholder council with independent authority and the ability to take the long view.

## VII. Recommendations

Based on the history and experience in the three councils described above, we have some recommendations for jurisdictions considering a stakeholder council or board to drive efficiency program performance at the state level. These are based in large part on the fact that the initial rationale for implementing a stakeholder council approach—to bring multiple stakeholders together in support of comprehensive energy efficiency programs—is being borne out in practice in these three leading states.

- **Structure the council for self-governance and independence.** This is critical to success, because it encourages buy-in and ownership from council members acting in their capacity of representing their particular ratepayer or stakeholder group. This can be strengthened by integration with the state's energy office as chair or board member, in order to guide the group towards achieving goals mandated by enabling statutes.
- **Reach decisions through consensus or supermajority,** to facilitate honest and motivated negotiation by disparate interests.

- **Empanel a diverse membership** that includes key parties who are engaged in energy policy in the state. Having these parties participating 'at the table' rather than commenting from the outside is a key element of the collaborative council process.
- **Have technical capability to** interact with program administrators, conduct analyses, monitor program performance, ascertain efficiency market potential, and evaluate new program concepts. This may be provided through outside consultants who contribute industry-wide knowledge and consistency.

With respect to stakeholder diversity and access to technical consultants, we believe that *both* are necessary for success. One without the other will not provide the quality of decision-making or political support needed to acquire all cost effective efficiency resources.

## VIII. Conclusion

Stakeholder councils have proven to be a valuable contributor to several leading states' efficiency efforts. The three councils described in detail in this paper share many characteristics and approaches to their operation, governance, and reliance on outside technical consultants. Other models and approaches to efficiency program oversight and regulation are certainly successful, and many other leading states in efficiency do not have stakeholder councils. Nevertheless, we believe that the stakeholder council model has many advantages and should be considered by states looking to increase their efficiency accomplishments. The recommendations above are derived from our experience with these entities in three states.

## IX. References

[DOE] Department of Energy. 2006. *National Action Plan for Energy Efficiency*. Washington, D.C. United States Department of Energy.

Harrington, Cheryl and Catherine Murray. 2006. *Who Should Deliver Ratepayer Funded Energy Efficiency?* The Regulatory Assistance Project. Montpelier, Vt.

# Overview of the California Technical Forum for Commissioner Peterman and Staff

CALIFORNIA
TECHNICAL FORUM

ANNETTE BEITEL, ALEJANDRA MEJIA,
JENNY ROECKS (CAL TF STAFF)
MARCH 19, 2015

## The California Technical Forum

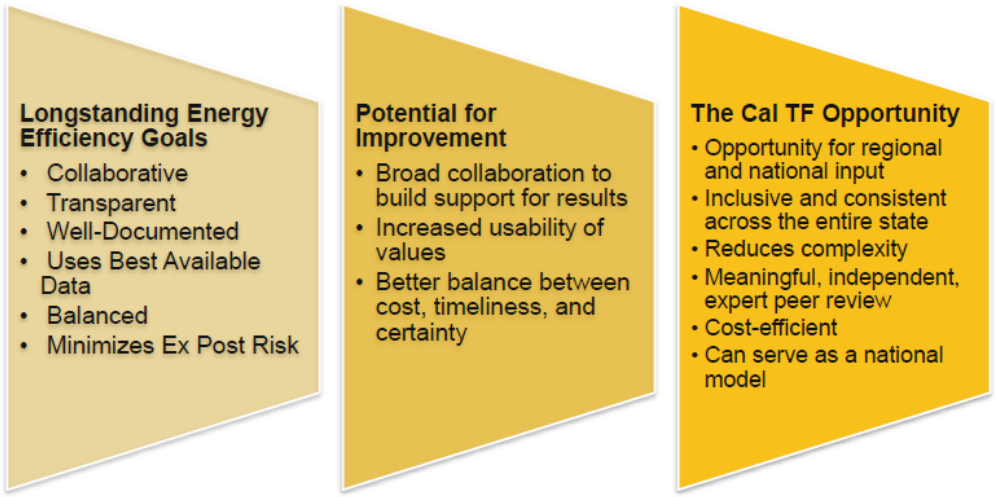


### *What is the Cal TF?*

A statewide group of technical experts that works in a collaborative and transparent way to develop accurate and credible savings estimates and methodologies for specific energy efficiency measures.

## The California Technical Forum: Addressing our State's Needs

3






## Supported by Best Practices: Stakeholder Collaboratives Research

5

- Starting Point: **Northwest Regional Technical Forum**
- Modified through **stakeholder discussions** and "**Best Practices**" research:
  - California DSM Measurement Advisory Council (CADMAC)
  - The International Performance Measurement and Verification Protocol (IPMVP) and the Efficiency Valuation Organization (EVO)
  - California Board for Energy Efficiency (CBEE)
  - California Measurement Advisory Council (CALMAC)
  - Low Income Advisory Group, or Low Income Oversight Board (LIOB)
  - The IOU's Energy Efficiency Program Advisory Groups (PAGs)
  - The PAGs' Peer Review Groups (PRGs)
  - California Renewable Energy Transmission Initiative (RETI)
  - CEC's Demand Analysis Working Group (DAWG)
  - The Uniform Methods Project (UMP)
  - The current EE Program Coordination Groups (PCGs)
  - ASHRAE
  - The International Code Council (ICC)
  - LEED (Leadership in Energy & Environment Design) Rating System
  - Northwest Regional Technical Forum (NW RTF)
  - Illinois Energy Efficiency Stakeholder Advisory Group (SAG)
  - Northeast Energy Efficiency Partnerships (NEEP) EM&V Forum
  - Connecticut's Energy Efficiency Board (EEB, formerly ECMB)
  - Rhode Island Energy Efficiency and Resources Management Council (RI EERMS)
  - Massachusetts's Energy Efficiency Advisory Council (EEAC)

# A Broad Collaborative

5




# Technical Forum

6

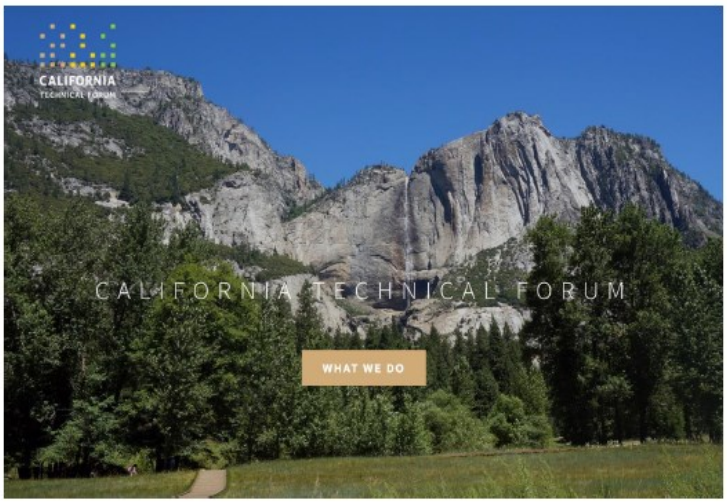
- **Selected through a competitive RFQ process with a ~50% selection rate.**
  - CPUC input on selection criteria
  - Even more competitive selection rate expected for 2015
- **2014 Composition:**
  - 29 members selected
  - 400+ years combined industry experience
  - Drawn from utilities, implementers, local government, and academia
  - 30% from outside of California

7

## Rigorous, Transparent Results

www.CalTF.org

- All documents for measures approved or under review
- Meeting notes and other materials
- TF and PAC member information






# 2014 Accomplishments

8

- Recruited technical experts to participate in new forum
- Conducted foundational/best practices research
- Launched Cal TF in June, 2014
  - Developed operations manual, templates, checklists, and tools
- Developed public website: www.CalTF.org
- TF review and approval of 5 new workpapers
  - Condensing Unit Heater (SCG)
  - Circulating Block Heaters (SCE)
  - Variable Speed Pool Pumps (SCE)
  - DC Pool Pumps (SDG&E/SCE)
  - Commercial Dishwashers (SCG)

# 2015 Work Plan

9

- Continue to memorialize DEER requirements
  - Essential for streamlining process and reducing contentiousness.
- Continue and expand review of new and outdated statewide workpapers
- Establish subcommittees to review and develop guidance on crosscutting technical issues and allow more in-depth discussions on measure-specific issues
  - CPUC Staff has expressed interest having Cal TF develop positions on ex ante issues for CPUC staff review.



# Cross Cutting Technical Subcommittees

10

- Currently ongoing:
  - Measure Complexity / Best Available Information
  - Savings Below Code
  - POU TRM Review / DEER Documentation
- Expected in the near future:
  - Residential HVAC Quality Installation
  - Variable Refrigerant Flow

# Measure Complexity Subcommittee

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- Trade-offs between measure complexity, precision /accuracy, cost, and ability to respond to fast-moving markets
- Commission directive to use best available information sometimes difficult to implement
- In the absence of existing guidance, subcommittee will create guidelines for:
  - Preferred calculation approaches
  - Use of measure expiration dates
  - Level of statistical rigor
  - Appropriate number of measure combinations
  - Relative impact of calculation inputs on individual point values, high level portfolio goals
  - Cost of obtaining information, updating workpapers, etc.
- Guidelines will seek to avoid both
  - "False precision" - more measure combinations does not necessarily translate into more accurate measure parameters and
  - "Bias" – Values that are neither too high nor too low



# POU TRM Review Subcommittee

12

- Joint POUs requested review of select subset of POU TRM measures by Cal TF
  - Targeting 8 to 10 measures
- DEER provides values or foundational info for many POU TRM measures
  - POU TRM review creates opportunity to leverage DEER documentation needs
- Objectives:
  - Document DEER methodologies and data sources when applicable
  - Vet the methods, data, assumptions used to develop TRM values
  - Compare values, methods, data, assumptions with other jurisdictions
  - Issue recommendations on how/if measure to be updated
- Measure review done through subcommittees, open to non-TF members
- Findings to be documented in a report, shared with POUs and CPUC

## Cal TF's Vision for the Future

*To support the growth and success of energy efficiency and IDSM through a technically rigorous, independent, transparent peer review of California energy efficiency values and other related technical information.*

- Statewide coordination on efficiency estimates
  - Savings values shared among CEC, CAISO, CPUC
- Timely, accurate, and transparent analysis
  - Improve and simplify current approach
- Consistent statewide approaches on savings estimates
  - Inclusive approach with broad stakeholder support
- Reduced cost and contention

ENERGY EFFICIENCY FOR ALL

www.EE4A.org


# Making multifamily homes healthy and affordable through energy efficiency

Affordable rental housing is critical for low-income Americans, but many apartments are in need of repair and come with higher energy bills. Increasing the energy efficiency of rental housing saves energy, improves residents' health and comfort, and maintains reasonable rents. This helps families, communities, and affordable building owners. Additionally, many states require utilities to invest in programs that support energy efficiency. Improving the energy savings in these apartments, by sealing drafty doors and windows and insulating water pipes, for example, helps utilities meet their mandated goals.

The mission of the Energy Efficiency For All project (EEFA) is to bring together the energy and housing sectors in order to tap the benefits of energy efficiency for millions of poor Americans. We work with a range of partners in twelve states to promote effective utility energy efficiency programs that can optimize energy use for all affordable building owners, and ensure healthy and inexpensive housing for residents.

**18 MILLION**
Number of American households living in buildings with 5+ apartments.

**15%**
Amount spent by low-income families on energy bills (compared to 2% by high-income).

**6.2 MILLION**
Number of low-income Americans with asthma.

**$3 BILLION**
Potential annual savings in 2020 from more efficient multifamily buildings.

*"Before the renovations at Galen, we constantly had to worry about fixing our thermostat to make the room comfortable... All of these things help me save money. I don't have to worry about health problems associated with my unit or even think about out-of-control bills for utilities. It's great!"*

Dewitt, Galen Terrace Resident[1]

[1] *Galen Terrace's 84 families banded together to secure energy efficiency renovations to their aging building. Residents have seen 60% electricity savings and 20% water savings*

## Everyone benefits from investments in energy efficiency in affordable multifamily housing:

**UTILITIES –** Helps meet mandated efficiency goals and improves services to customers most in need.

**BUILDING OWNERS –** Reduces operating costs, which frees up capital for maintenance and increases asset value.

**RESIDENTS –** Saves money through lower energy bills and creates healthier, comfortable living environments by improved unit upkeep.

**COMMUNITY –** Increases spending on non-energy necessities by residents, creates local jobs, and preserves affordable rents.


## WORKING TO REACH 5 MILLION HOMES IN TWELVE STATES

### TO SEIZE THIS OPPORTUNITY, *ENERGY EFFICIENCY FOR ALL* IS WORKING WITH PARTNERS TO:

- Provide technical resources for regulatory filings and utility energy efficiency program design
- Build state-based coalitions and connect them into a national network
- Connect, educate, and support stakeholders to boost capacity and influence
- Inform the public and policymakers of the many benefits of energy efficiency for low-income residents
- Share lessons and best practices among networks
- Support affordable building owners in their pursuit of efficiency retrofits

### COLLABORATION AMONG A DIVERSE SET OF STAKEHOLDERS IS CRITICAL TO OUR SUCCESS:

We are bringing together utilities, public utility commissions, state and local housing agencies, lenders, community organizers, policymakers, the multifamily building sector, the affordable housing community and the energy efficiency industry — so that we speak one another's language, understand each other's limitations and capabilities, and find the intersection of our respective goals.

If you would like to work with us, email **info@EE4A.org**.

### ABOUT THE *ENERGY EFFICIENCY FOR ALL* PROJECT

We are a partnership of organizations blending expertise in affordable housing, energy efficiency, finance, and building owner and utility engagement. We work closely to support local groups by bringing tools and resources that can help increase energy efficiency in affordable multifamily homes.

More resources and information are available, including research, materials and case studies at **www.EE4A.org**.

ENERGY EFFICIENCY FOR ALL

www.EE4A.org


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