

Members of CEE Comments on REN Draft Business Plans: (1) Southern California Regional Energy Network (SoCalREN), (2) California Central Coast Regional Energy Network (3C-REN), (3) Bay Area Regional Energy Network (BayREN), and (4) Marin Clean Energy (MCE)

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The Coalition for Energy Efficiency is a coalition of environmental, energy, labor, disadvantaged community, and consumer organizations working together to review and reach consensus on energy efficiency incentive policy issues. These comments represent the consensus comments of the following members of the coalition: (1) BlueGreen Alliance, (2) Sierra Club California, (3) The Greenlining Institute, (4) California Community Colleges Chancellor’s Office, (5) Joint Committee on Energy and Environmental Policy, (6) Operating and Stationary Engineers, locals 39 and 501, (7) Avery Energy Enterprise, (8) International Brotherhood of Electrical Workers, California Inside Locals, (9) the California Labor Federation, (10) Western States Council of Sheet Metal, Air, Rail and Transportation Workers, (11) California State Pipe Trades Council, (12) National Electrical Contractors Association (California), and (13) Carol Zabin, Chair of the Don Vial Center for Employment in the Green Economy.

Program Administrator to receive feedback: (1) Southern California Regional Energy Network (SoCalREN), (2) California Central Coast Regional Energy Network (3C-REN), (3) Bay Area Regional Energy Network (BayREN), and (4) Marin Clean Energy (MCE)

Date: November 21, 2016

Commenter: Coalition for Energy Efficiency (CEE): (1) BlueGreen Alliance, (2) Sierra Club California, (3) The Greenlining Institute, (4) California Community Colleges Chancellor’s Office, (5) Joint Committee on Energy and Environmental Policy, (6) Operating and Stationary Engineers, locals 39 and 501, (7) Avery Energy Enterprise, (8) International Brotherhood of Electrical Workers, California Inside Locals, (9) the California Labor Federation, (10) Western States Council of Sheet Metal, Air, Rail and Transportation Workers, (11) California State Pipe Trades Council, (12) National Electrical Contractors Association (California), and (13) Carol Zabin, Chair of the Don Vial Center for Employment in the Green Economy.					
Comment Number	PA(s)	Sector	Page #	Comment	Supporting Guidance Documents

CEE-1	3C-REN SoCalREN BayREN MCE			<p>Observations (re missing issues and details)</p> <p>The REN Business Plans fail to address (or even identify) all the issues set forth in the applicable guidance decisions and raised by the CAEECC stakeholder process. (See e.g., D.15-10-028 at p. 47). In addition, numerous sections of the Business Plans are either cursory in nature, incomplete or entirely blank.</p> <p>As a result, the draft Business Plans are lacking in sufficient detail or content to allow for meaningful stakeholder input on a number of key issues. Examples of issues missing from the REN Business Plans include:</p> <ol style="list-style-type: none"> 1. Business Plans fail to identify strategies to address the issue of poor workforce and installation quality resulting in underperforming energy efficiency measures and stranded savings opportunities. (See Guidance Decision D.16-08-019 at p. 63, fn. 24.) 2. Business Plans fail to address the recommendations for increasing the demand for skilled workers set forth in the 2014 University of California, Berkeley, Donald Vial Center for Employment in the Green Economy (UCB-DVC) report, “<i>Workforce Issues and Energy Efficiency Programs: A Plan for California’s Utilities.</i>” (See D.14-10-046 at p. 102.) 3. Business Plans fail to identify goals, strategies or approaches to incorporate workforce diversity and inclusion goals into the contractor selection process. (D.12-11-015, <i>Decision Approving 2013-2014 Energy Efficiency Programs and Budgets</i>, at p. 84 (ordering IOUs to develop approaches to incorporate workforce diversity and inclusion goals into their third-party contractor selection process; see Guidance Decision D.16-08-019 at p. 63, fn. 24 (affirming continued applicability of prior workforce orders).) 4. Business Plans ignore Decision’s recommendation to track measure installation quality over time as a metric. (D.15-10-028 at p. 52.) 5. Business Plans fail to include transition plans to demonstrate the minimum level of third party delivery required by the Guidance decision. (Guidance Decision D.16-08-019 at p. 74.) 6. The Business Plans fail to identify which strategies will be coordinated statewide or regionally and who will be the lead administrators. (Guidance Decision D.16-08-019 at p. 102-103; D.15-10-028 at p. 47.) 7. Business Plans fail to identify at least four downstream programs to be piloted on a statewide basis, including proposed lead administrator and other program details. (Guidance Decision D.16-08-019 at p. 111.) 8. Business Plans fail to describe how collection strategies are embedded in the design of the program or intervention to ensure ease of reporting and near term feedback, and how performance will be analyzed during deployment. (D.15-10-028 at p. 47-48.) 	
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CEE-2	3C-REN SoCalREN BayREN MCE		<p>Observations (re workforce quality)</p> <p>The REN Business Plans need to be amended to address the workforce quality issues set forth in the applicable guidance decisions and raised by the CAEECC stakeholder process. The REN Business Plans addresses worker education and training (“WE&T”) programs, but fails to address workforce qualification standards for installers of incentive measures. This is inconsistent with the Commission’s Long-Term Energy Efficiency Strategic Plan and conflicts with prior decisions directing the IOUs to develop and implement a comprehensive approach to ensure that energy efficiency measures are installed correctly by engaging a trained, skilled and diverse workforce. It also conflicts with the goals and strategies of the Existing Building Energy Efficiency Action Plan and it fails to describe how it would incorporate the U.C. Berkeley Donald Vial Center report, <i>Workforce Issues and Energy Efficiency Programs, A Guidance Plan for California Utilities</i>. (Zabin, et al, Donald Vial Center on Employment in the Green Economy, <i>Workforce Issues and Energy Efficiency Programs, A Guidance Plan for California Utilities</i> (2014) (“UCB-DVC Report”).) The REN Business Plans should be amended to include clear and detailed descriptions of how incentive programs will ensure energy efficiency measures are installed by a trained, skilled and diverse workforce, and amended to include actual metrics to assess the achievement of these goals.</p> <p>The Rolling Portfolio Guidance Decision articulated the importance of using “the limited ratepayer funds under our purview in the most targeted and effective way possible, to induce even more energy efficiency than we have in the past, especially in light of SB 350’s goal of doubling the amount of energy efficiency in the economy.” (Guidance Decision D.16-08-019 at p. 23.) The Coalition strongly agrees with this concept. Ratepayer funds, however, are not effectively targeted and used where they fund poor quality installation of energy efficiency measures. Education and training programs alone will not effectively address the lost energy savings and safety risks associated with poorly installed energy efficiency measures without a corresponding requirement, incentive or inducement to actually hire installers who have received the appropriate workforce education and training.</p>	<p>CONSISTENCY WITH GOALS AND GUIDANCE: In order to address energy efficiency losses from poor quality installation, the 2016 Existing Building Energy Efficiency Action Plan Update adds a goal to “ensure that a certified, high performing workforce will be engaged to deliver energy efficiency retrofits, thereby transforming efficiency incentive work from a low-cost bidder framework to a lowest-cost qualified bidder framework.”</p>

			<p>The need for Business Plan policy on workforce engagement issues is well-documented by prior commission studies and decisions. (Zabin, et al, Donald Vial Center on Employment in the Green Economy, <i>Workforce Issues and Energy Efficiency Programs, A Guidance Plan for California Utilities</i> (2014) (“UCB-DVC Report”) Appendix 2B.) At the same time, contractors who invest in a higher skilled workforce that is more effective in producing energy savings are not being cultivated or rewarded.</p> <p>The PA energy efficiency incentive programs do not include rigorous contractor or workforce standards. As a result, program analyses have consistently found that actual savings are substantially below projected savings, resulting in a persistent and significant gap between reported and evaluated savings across the PA energy efficiency incentive portfolios. (UCB-DVC Report at pp. 32-34 and Appendix 2B.) As noted in the Decision, “system planners need reasonable assurance that the energy efficiency assumed in the forecast is real and will materialize at the time needed to avoid the need for investment in other resources.” (Guidance Decision D.16-08-019 at p. 23.) The gap between reported and evaluated savings undermines the reliability of demand forecasts used for electricity planning activities.</p> <p>Studies have found that actual energy efficiency savings from incentive programs are as little as 51% of expected savings when evaluated post-installation. (UCB-DVC Report at pp. 32-34 and Appendix 2B.) This gap is most prevalent in replacement HVAC systems. The efficiency of heating and air conditioning equipment is highly dependent on the quality of its installation. (<i>Ibid.</i>) A study for the California Energy Commission reported that up to 85% of replacement HVAC systems were installed or designed incorrectly, resulting in substantial unrealized energy savings. (<i>Ibid.</i>)</p> <p>Similar gaps between expected savings and realized savings have also been found in installations of lighting control systems. One post-installation evaluation found that automatic day-lighting controls failed to perform as expected in 7 out of 7 tests, and occupancy sensors failed to perform as expected in 2 out of 3 tests. All of the failures were due to design, installation, or calibration issues. (<i>Ibid.</i>)</p> <p>In contrast, when lighting controls were installed by technicians who had obtained lighting control installation training and certification from CALCTP, IOU-funded studies found significant energy savings and increased cost effectiveness. (<i>Ibid.</i>, at p. 47.) Evidence from six pilot studies demonstrates not only increased energy savings, but also actual customer cost savings in the range of 10-30 % for the installation of advanced lighting controls by a CALCTP-certified contractor versus a non-certified contractor. (<i>Ibid.</i>, citing Office of the Future Landmark Square Pilot Results (Design and Engineering Services, SCE, October 2010; Office of the Future 25% Solution Assessment (Emerging Technology Solutions, December</p>	<p>(2016 Action Plan Update at p. 52.) To achieve these goals, the Action Plan expressly recommends that PAs incorporate contractor and workforce standards into the energy efficiency program requirements. (2016 Action Plan Update at p. 49.)</p> <p>The Action Plan’s goal is consistent with CPUC decisions and rulings supporting workforce standards. In 2008, the Commission issued its Long-Term Energy Efficiency Strategic Plan. The Strategic Plan requires that, by 2020, “California’s workforce is trained and fully engaged to provide the human capital necessary to achieve California’s</p>
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			<p>This creates an economic disincentive for contractors to invest in worker training and employ qualified workers, since the cost of those investments puts them at a competitive disadvantage with other contractors that hire workers at poverty wages and do not invest in training or offer apprenticeship opportunities for their employees.</p> <p>DESIRED OUTCOMES:</p> <ul style="list-style-type: none"> • Reduce lost energy savings opportunities that are stranded in buildings when energy efficiency construction work is not properly performed. • Create a demand for a skilled and trained workforce. • Reward contractors that invest in a skilled and trained workforce to ensure quality installations that are safe and achieve energy saving goals. <p>INTERVENTION STRATEGIES</p> <p>Move energy efficiency work from a lowest cost bidder framework to lowest price responsible and qualified bidder framework, and require or incentivize the engagement of a trained and skilled workforce to ensure quality installations that achieve energy saving goals.</p> <p>(1) Include in the Business Plans direction that ensures the Implementation plans shall identify how energy efficiency outcomes may be improved by imposing skill and trained workforce requirements.</p> <p>(2) For each midstream and downstream program, identify and incorporate program requirements and standards designed to foster the use of a skilled and trained workforce in the installation of efficiency measures and the performance of energy efficiency construction work under the program. Such program requirements and standards shall be based on the recommendations set forth in the 2014 University of California, Berkeley, Donald Vial Center for Employment in the Green Economy (UCB-DVC) report, “<i>Workforce Issues and Energy Efficiency Programs: A Plan for California’s Utilities.</i>” These recommendations include: (1) workforce skill certification requirements, such as CALCTP certification for advanced lighting projects; (2) prevailing wage requirements for certain projects – so that contractors will be selected based on competency and not just price; and (3) skilled workforce prequalification requirements based on requiring jobsite workers to be comprised of a certain percentage of journey persons or apprentices from a registered apprenticeship program. Where available, the Commission should adopt specific skills certification requirements in conjunction with quality assessment activities for contractors and technicians working on ratepayer-subsidized energy efficiency projects. These certifications should include:</p> <ul style="list-style-type: none"> • Advanced lighting controls equipment: require California Advanced Lighting Controls Training Program (CALCTP) firm certification for contractors on all projects. 	<p>92.)</p> <p>The proposed metrics are consistent with D.15-10-028, which encourages tracking measure installation quality over time as a metric. (D.15-10-028 at p. 52.)</p>
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				<p>(See February 23, 2015 Tier 2 advice letter)</p> <ul style="list-style-type: none"> • Identify all program areas where energy efficiency outcomes would likely be improved by imposing skill and trained workforce requirements • Support development of HVAC equipment sales registry as recommended by SB 1414. <p><u>Mid-Term Actions:</u></p> <ul style="list-style-type: none"> • Require that 50% of midstream and downstream incentive funds be installed by a verified skilled and trained workforce. Verification shall be based on compliance with one or more of the DVC recommendations for increasing engagement of a skilled and trained workforce. • Support use of HVAC equipment sales registry. • Identify strategies to incorporate skilled and trained workforce requirements into upstream incentives. <p><u>Long-Term Actions:</u></p> <ul style="list-style-type: none"> • Require 100% of midstream and downstream incentive funds be installed by a verified skilled and trained workforce. Verification shall be based on compliance with one or more of the DVC recommendations for increasing engagement of a skilled and trained workforce. • Implement strategies to incorporate skilled and trained workforce requirements into upstream incentives. 	
CEE-3	3C-REN SoCalREN BayREN MCE			<p>Observations (re Free Ridership)</p> <p>In its November 4, 2015 white paper on the implementation of the new AB 802 to-code baseline for “High Opportunity Programs or Projects” CPUC staff warned repeatedly of the increased risk of free-ridership concerns with the new baseline. Free Ridership is a concern because if an energy efficiency measure would have been installed in a privately-owned building even without the incentive, then the public receives no benefit from the expenditure of ratepayer funds. For the most part, the REN Business Plans fail to identify free ridership as a potential barrier to achieving real energy saving gains and fails to propose any strategies for addressing this issue. This is an issue that affects all sectors, with the possible exception of public sector projects – and has been expressly raised as a concern by CPUC staff.</p> <p>It is difficult to accurately assess what role an incentive has in any private party decision to install an energy efficiency measure, but the free ridership concern is particularly heightened in to-code projects. For example, a commercial customer installing a new HVAC unit must comply with title 20 and any title 24 requirements and thus would have to meet to-code requirements even without the incentive. Incentives to exceed code are less prone to free ridership issues since exceeding code is entirely voluntary.</p>	

				<p>(We acknowledge that BayREN does address some free ridership issues for one of its programs on page 2.33 of its comments. We support BayREN’s proposal, but encourage it to consider the additional actions proposed in this comment.)</p> <p>Recommended Action The Coalition recommends that the following Problem Statements, Barriers, Desired Outcomes, Intervention Strategies and Metrics be added to the REN Business Plans:</p> <p>PROBLEM: Free Ridership – If energy efficiency measures would have been installed in a privately-owned building even without the incentive, then the public receives no benefit from the expenditure of ratepayer funds. Free ridership concerns are heightened in to-code projects. For example, a commercial customer installing a new HVAC unit must comply with title 20 and any title 24 requirements and thus would have to meet to-code requirements even without the incentive. Incentives to exceed code are less prone to free ridership issues since exceeding code is entirely voluntary.</p> <p>MARKET BARRIER: It is difficult to accurately assess what role an incentive has in private party decision to install an energy efficiency measure.</p> <p>DESIRED OUTCOMES: Minimize free ridership concerns with to-code incentives</p> <p>INTERVENTION STRATEGIES</p> <ol style="list-style-type: none"> 1. Direct majority of to-code incentive funds to public sector, low-income sector, or to targeted business sectors that have been identified as resistant to upgrade energy efficiency systems. 2. Offset free ridership concerns by linking to-code incentives to the use of a skilled and trained workforce to ensure better energy efficiency outcomes than non-incentive to-code work. 3. Offset free ridership concerns by linking to-code incentives to completion of permit inspection and title-24 compliance documentation to ensure better energy efficiency outcomes than non-incentive to-code work. 	
CEE-4	3C-REN SoCalREN BayREN MCE			See CEE-4 in CEE’s comments to PG&E’s Business Plan	<i>Long Term Strategic Plan: The 2008 Long Term Energy Efficiency</i>

					<p>Strategic Plan includes a goal to “ensure that minority, low-income and disadvantaged communities fully participate in training and education programs at all levels of the demand-side management (DSM) and energy efficiency industry.”</p> <p><i>CPUC Decisions:</i> D.12-11-015, at p. 84 (ordering IOUs to develop approaches to incorporate workforce diversity and inclusion goals into their third-party contractor selection process). D.15-10-028 at p. 52 (Identify performance metrics for non-resource programs).</p> <p><i>SB 350:</i> calls for coordination between the</p>
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					Energy Commission and the CPUC in developing energy efficiency programs including workforce development and job training for disadvantaged communities.
CEE-5	3C-REN SoCalREN BayREN MCE			<p>Observations (re Permit and Code Compliance)</p> <p>The REN Business Plans need to identify more specific and more effective strategies for improving enforcement of and compliance with permit and code requirements. Final inspection and permit closure is critical to ensure compliance with Title 24 functional testing requirements that are intended to increase the likelihood that newly installed systems function properly and provide the energy efficiency assumed by code compliance. Inspection requirements are also critical to ensure occupant health and safety.</p> <p>The lack of compliance with permit, inspection and compliance documentation requirements is undermining energy efficiency efforts. Contractors that fail to pull permits are more likely to be unlicensed, use low wage, untrained workers, and to skip acceptance testing or commissioning of systems. As a result, this work is likely to be installed poorly and to be less energy efficient. The Existing Building Energy Efficiency Action Plan thus states that “Addressing the application, compliance and enforcement of building standards in existing buildings is a high priority” and calls for improving retrofit compliance with permitting and code requirements to 90 percent by 2020.</p> <p>The Business Plans need to set forth specific and effective strategies to meet the Action Plan’s goals. This starts with ensuring that all ratepayer-subsidized energy efficiency measures comply with final inspection and permit closure requirements. Incentives should not be used to subsidize projects that fail to comply with permit inspection and title 24 compliance documentation requirements. The recent adoption of SB 1414 now requires this for all incentives provided to customers or contractors for the purchase or installation of HVAC systems. The same performance and safety concerns apply to other energy efficiency measures as well. Lighting, plumbing, roofing and other existing building retrofit work are also often performed without complying with permitting, safety inspection or Title 24</p>	Existing Buildings Energy Efficiency Action Plan at p. 10: “Addressing the application, compliance and enforcement of building standards in existing buildings is a high priority.” See also discussion on p. 13 and milestone goal on p. 25 (“By 2018, establish baseline code compliance rate for residential HVAC replacements. By 2021, improve compliance to 80 percent.” “By 2020, retrofit compliance with the Building Energy Efficiency

			<p>compliance documentation requirements. For example, a review of CALCTP’s 2016 annual acceptance test report to the CEC reveals that, in some California jurisdictions, contractors are not complying with Title 24 lighting control acceptance test requirements at all.</p> <p>Ratepayer-funds should not be used to subsidize poorly performing and potentially unsafe retrofits that fail to comply with state and local requirements for permit closure. Requiring a customer to email, mail or fax a copy of the permit closure documentation is not burdensome, will not delay project completions and does not require customers to do anything that they are not already required by law to do. This simple and straightforward requirement is an inexpensive and effective method to increase the actual energy savings achieved from incentives and to reduce the illusory paper savings that these incentive programs are currently claiming.</p> <p>Permit closure requirements, however, are limited in the scope of their effectiveness. This strategy will not address the vast majority of HVAC retrofits that are installed without incentives or permits. To address this pervasive market problem, SB 1414 recommends development of an HVAC equipment sale registry that can be used to track HVAC sales to ensure that permit requirements are being followed for all HVAC installations. The Business Plans should include a strategy to support development of this registry.</p> <p>Recommended Action</p> <p>The Business Plans should add the following Problems, Barriers, Goals and Strategies to their Codes and Standards Chapter.</p> <p>PROBLEM: The lack of compliance with permit, inspection and compliance documentation requirements is undermining energy efficiency efforts. The vast majority of existing building energy efficiency system retrofits do not comply with permit, inspection or Title 24 compliance documentation requirements. For residential HVAC retrofits, industry experts have estimated that around 90% of installations do not comply with permit or inspection requirements. Contractors that fail to secure permits are more likely to be unlicensed, use cheap untrained workers, and to skip acceptance testing or commissioning of systems. As a result, this work is likely to be installed poorly and to be less energy efficient. Current energy efficiency incentive programs, however, are poorly aligned with permit, inspection and Title 24 compliance documentation requirements. Owners and contractors can purchase energy efficiency equipment and receive energy efficiency incentives without demonstrating compliance with permit, inspection and Title 24 compliance documentation requirements. Providing incentives to unlawful installations encourages and exacerbates permit and code compliance problems.</p>	<p>Standards is at 90 percent and is achieved at lower cost.” pp. 52-53).</p>
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CEE-6	3C-REN SoCalREN BayREN MCE		<p>Observations (Implementation and Procurement Process) The draft Business Plans fail to set forth the process for oversight and stakeholder involvement in implementation plans and the procurement process. Because the historic public and commission review process for implementation plans has been eliminated, the</p>	

business plans need to address what new process will be provided to (a) provide stakeholder input and Commission oversight on how PAs structure their specific incentive programs and procurement process to ensure consistency with Commission guidance and state policy; and (b) provide stakeholder input and Commission oversight in the assessment of the effectiveness of the PAs' portfolios.

The 2015 Decision on Rolling Portfolio Mechanics states that “there will be a stakeholder process associated with implementation plan preparation” and that this “should be the first forum for addressing any aspect of the implementation plans.” (D.15-10-028 at p. 64.) While the Decision states that a Motion for Implementation Plan Dispute Resolution may be filed if there is alleged non-compliance with Commission or Commission Staff direction, this procedure “may only be invoked after informal attempts to resolve disputes have been exhausted.”

The Coalition has serious concerns with the lack of Commission oversight of the implementation plans and with the elimination of the implementation protest process in favor of more burdensome, post-hoc formal dispute process. For one, the grounds for filing a dispute may be more limited than the grounds for filing a protest. In addition, changing policy decisions after they have been adopted is inherently more difficult and costly than resolving policy disputes during the adoption process. The Coalition agrees with the 2015 Decision on Rolling Portfolio Mechanics, when it cautions that “a stakeholder process, even with Commission Staff participation, is not necessarily an adequate substitute for Commission review of an application or advice letter.” (D.15-10-028 at p. 44.)

Within the framework of the Decision on Rolling Portfolio Mechanics, the Business Plans need to set forth in detail the stakeholder process associated with implementation plan preparation, including how to informally resolve stakeholder disputes.

The Guidance Decision expressly encourages the development of a process that included procurement review groups and/or independent evaluators. It further called for the IOUs to work with stakeholders to bring forward a workable proposal for such oversight as part of the business plans. (Guidance Decision D.16-08-019 at p. 75.)

The Coalition supports the concept of an independent evaluator. The Energy Division is already authorized to hire an Independent Evaluator. D. 05-01-055 authorizes the Energy Division, as Chair of the PRG, to hire an independent consultant to be paid for out of energy efficiency program funds (D. 05-01-055, page 105). The use of an Independent Evaluator in reviewing the IOUs' entire competitive bidding process should be an essential element of the improved energy efficiency portfolio structure adopted by the Commission. This is especially true in light of the increased amount of portfolio bidding ordered in the Decision. The

Business Plans should set forth whether or not an independent evaluator will be utilized and the justification for that decision.

Recommended Action

Consistent with the applicable Guidance decisions, the Business Plans should set forth in detail the stakeholder process associated with implementation plan preparation, including the continued role of the CAEECC and how to informally exhaust stakeholder disputes. Without a clear and effective informal process, the Commission's burdensome, post-hoc dispute procedure will be required for even minor disputes.

The Business Plans should add a section on Implementation that describes the following:

Annual Budget Authority Advice Letters

- Advice letters to justify annual budget, consistent with business plans and the implementation plans.
 - How have program changes or administrative activities changed the budget?
 - How have new contracts changed the role of the administrator, and the associated budget?

Implementation of Business Plans

- Meaningful oversight of procurement process
 - Utilization of Independent Evaluator reporting to Energy Division with regular stakeholder meetings to review bidding plans, RFPs, bid evaluations, and final selection. Non-financially interested stakeholders would participate.
 - PAs to submit proposed contracts to CPUC for approval. Benefits include:
 - Stakeholder process should reduce party protests, or at least expedite the protest period (no need for extensive data requests).
 - CPUC approval reduces PA and implementer community uncertainty about contracts.
- Regular status updates at CAEECC of PA activities using Business Plans as review point, as described in D.15-10-028. These updates would include activities such as:
 - Examination of PA achievements vs. metrics
 - Implementation of Commission's direction to put programs out to bid
 - Achievement of savings vs spending
 - Identification of additional needed programs/RFPs, and modifications to existing programs/contracts.
 - Conduct annual reviews of PA activities to assess overall program consistency with state energy goals and policies and to identify any changes that may be necessary to Business Plans, implementation plans, budgets or programs to comply with changes or updates to state energy goals and

			<p>policies.</p> <ul style="list-style-type: none"> ▪ PA's to prepare annual report demonstrating performance. ▪ Stakeholders and staff review report and assess program consistency. ▪ Staff may request any additional information needed for assessment. ▪ PA's must propose any necessary amendments to Business Plans, implementation plans, budgets or programs to address issues identified by the annual review. <p>Implementation Plan Review Process</p> <ul style="list-style-type: none"> • Implementation plans should be aligned with terms of signed contracts (e.g., pay-for-performance) with implementers and provide metrics that roll up to the metrics in the business plans. • Implementation plans should be developed with early stakeholder input in a process similar to the use of the CAEECC in the Business Plan adoption process. <ul style="list-style-type: none"> ○ Stakeholders and staff should be consulted early on for input on general proposal design and its consistency with Business Plan requirements and applicable state guidance documents and decisions. ○ Stakeholders and staff should have an opportunity to review and comment on Implementation Plans before they are finalized. PAs must provide response to any written comments. <p>The Business Plans should also set forth the scope of Independent Evaluator review and the process for such review. An Independent Evaluator should perform the following functions, in conjunction with the Peer Review Group (PRG) whose advisory role is described in D.05-01-055:</p> <ol style="list-style-type: none"> 1. Review how IOUs structure their bids to ensure consistency with Commission guidance and state policy, including proposed budgets, prequalification requirements, scopes of work, performance and M&V requirements, target TRC and PAC, evaluation criteria and each criterion's respective weight, and RFP distribution lists to be used. 2. Review the results of the IOUs' evaluation processes (e.g., how many parties responded to each bid, what was the range of scoring results, disqualified respondents, etc.). 3. Assist the PRG in its assessment of the effectiveness of the IOUs' portfolios. 4. Provide a written assessment to the Energy Division and the PRG of the RFP processes and results, with possible suggestions for future enhancements. 	
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CEE-7	3C-REN SoCalREN BayREN MCE			<p>Observations (re WE&T)</p> <p>The REN Business Plans need to establish a clear framework for WE&T implementation that enables tangible assessment of return on ratepayer funds and ensures timely progress in the PAs’ contribution to the Long-Term Energy Efficiency Strategic Plan goal for a qualified and fully engaged workforce by 2020.</p> <p>The use of “short”, “medium”, and “long” time horizons do not support the urgency required for meeting the Strategic Plan 2020 workforce goals since only twelve or fewer quarters remain before the Strategic Plan goal of a qualified and fully engaged workforce must be reached (presumably by the beginning of 2020).</p> <p>At this point in the planning cycle, specific initiatives need to be defined in enough detail to allow meaningful measurement of progress to be determined at the end of each quarter. The argument against a quarter-by-quarter timeline, of course, is that this level of detail is found in the Program Implementation Plan. But this argument is not appropriate because of the urgency of the 2020 mandate and lag time between the business plan and the first Program Implementation Plan.</p> <p>In addition, there needs to be a common strategy for meeting the Strategic Plan workforce goal, among not only the PAs, but also with the larger body of stakeholders and market actors. Outcomes are not specified over the life of the business plan. No meaningful framework and timeline exists for achieving these outcomes in the current draft business plan.</p> <p>An effective and integrated statewide approach to WE&T cannot be done without adequate input from training institutions, workforce development providers, market actors, or other stakeholders. Ratepayer funds should be leveraged to achieve stronger outcomes from other funding sources.</p> <p>Intervention strategies are far too general as a framework or timeline for meaningful Program Implementation Plans. Additionally, these Intervention Strategies do not map specifically to either the Strategic Plan’s 2020 engaged workforce goal or to the 2016 Existing Building Energy Efficiency Action Plan draft, which creates concerns that these requirements are not a significant consideration in the business plan.</p>	

Recommended Actions:

The business plan must be specific enough for meaningful evaluation to be made for each Program Implementation Plan. At a minimum, quantifiable outcomes should be specified for each intervention on a quarterly basis leading up to 2020, with annual milestones for the rest of business plan cycle.

The coalition strongly supports Business Plan language that leads to increased PA’s collaboration with the state’s major training institutions and that leverages the PAs expertise to improve the energy efficiency content of the these institutions’ curricula for the major occupations that impact the use of energy in buildings, industry, etc. This means allocating resources for training to help the Energy Centers develop targeted support for the California Community Colleges, Registered Apprenticeship programs, State Universities, through the mechanisms outlined in the Don Vial Guidance document. In addition it requires allocating resources for training of disadvantaged workers by requiring the PAs to work with training programs that have a track record of training and placing disadvantaged workers in career track jobs or advanced training paths in higher education institutions. The DVC guidance document suggested an immediate collaboration with the California Workforce Development Board which funds a successful pre-apprenticeship programs housed in community based organizations and community colleges through their Proposition 39 training program.

Acquiring better data and analysis to prioritize training efforts is referenced as part of Intervention Strategy 1. Deep collaboration with training institutions and workforce development providers on data analysis is essential to properly focus on occupations with the greatest potential impact and best use of funds across the entire workforce landscape.

It is also necessary to move beyond counting the number of class attendees to outcomes for both the workforce (i.e. placement in career track jobs) and for improving the performance of energy efficiency installations in the field. WE&T metrics need to be more specific and quantifiable. Metrics base on the raw number of persons trained should be avoided because they fail to assess training outcomes. Similarly, metrics based solely on curriculum transformation also fail to assess the impact or success of the new curriculum. Metrics should be developed in collaboration with other training institutions and workforce providers to quantify the WE&T program’s contribution to standard metrics that are tracked in the rest of the EE workforce landscape.

The REN Business Plans should commit to partnering with the state’s workforce development entities – the California Workforce Development Board, the California Community Colleges, Registered Apprenticeship programs, State Universities, Community Based Organizations, etc. – to identify and remove workforce barriers to achieving Senate

				<p>Bill 350 mandates. This partnership should leverage multiple funding streams in addressing regional needs for increasing access to education and training, promoting equity, building new workforce competencies, and reducing workforce supply/demand gaps via an integrated statewide strategy that is specifically responsive to Senate Bill 350. This partnership will work in close collaboration with the current IOU-managed training centers that continue to provide valuable training classes to various market actors. The Coalition strongly supports continued funding for the WE&T training programs by IOU energy centers, but thinks these funds should support partnerships with and funding opportunities for apprenticeship programs and community colleges.</p> <p>Intervention Strategies should be consistent with the recommendations and time frames set forth in the 2016 Existing Building Energy Efficiency Action Plan draft. These planning and implementation horizons should be stipulated in terms of quarters since only twelve or fewer quarters remain before the Strategic Plan goal of achieving a qualified and fully engaged workforce by 2020 must be reached.</p> <p>At this point in the planning cycle, specific initiatives need to be defined in enough detail to allow meaningful measurement of progress to be determined at the end of each quarter.</p>	
<i>CEE-8</i>	3C-REN SoCalREN BayREN MCE			<p>Observations (re Statewide Administration)</p> <p>The Coalition supports the Commission’s move towards statewide administration of upstream and midstream programs. This shift is a move in the right direction to improve customer participation and access, reduce transaction costs for customers and market actors, and increase in energy efficiency savings. The Coalition supports this effort and agrees that this transition will reduce portfolio overhead by eliminating redundant capacity and can potentially provide a bridge to more collaboration with the California Energy Commission (Energy Commission), California Air Resources Board (ARB), and public and municipal utilities. We further support the Commission’s decision to allow non-utility PAs to lead statewide programs.</p> <p>However, this transition to statewide programs alone will not result in market transformation, as required by Senate Bill (SB) 350, which the Commission identifies as a primary goal of statewide programs. Market transformation is an intervention approach that will require additional changes to the Commission’s policy framework. We look forward to discussing these necessary changes, and the role of market transformation within the EE portfolio, in Phase III of this proceeding.</p>	
<i>CEE-9</i>	3C-REN SoCalREN BayREN MCE			<p>Observations (re EM&V)</p> <p>The Coalition supports requiring statewide programs and third party programs to measure and verify the actual performance-based energy savings of ratepayer-funded projects except for small projects where measurement and verification may not be economical. Such a</p>	

requirement would be consistent with Assembly Bill 802’s direction to begin measuring incentive savings by looking at “meter-based performance.” If programs are not required to verify that persistent energy savings have actually been achieved, there is little incentive to design these programs in a manner that ensures quality installation.

The REN Business Plans, however, fail to set forth clear guidance or standards for when incentive programs would be required to include meter-based verification. The Business Plans should also set forth clear metrics for transitioning to greater meter-based verification of incentive programs. Monitoring and verification based on actually achieved energy savings” is a critical strategy for addressing the gap between assumed and actually achieved savings from energy efficiency retrofit projects. If large-scale and medium-scale existing building energy efficiency programs are not required to verify that persistent energy savings have actually been achieved, there is little incentive to design these programs in a manner that ensures quality installation.

The need for actual performance-based energy savings is well documented. Currently, the vast majority of utility incentives are based upon assumed or “deemed” savings instead of actual savings. Numerous studies have shown that a significant portion of these “deemed savings” are not real or don’t fully materialize due to poor quality work. Studies have found that the gap between energy efficiency programs’ expected savings and the savings actually realized when evaluated has been as much as 51% and 63% of reported savings. (See Zabin, et al, Donald Vial Center on Employment in the Green Economy, *Workforce Issues and Energy Efficiency Programs, A Guidance Plan for California Utilities* (2014) [“DVC Guidance Plan”] at pp. 32-34 and Appendix 2B (citing and summarizing studies on energy savings outcomes).

Measuring actual performance-based energy savings is also superior to calculations based on models because this is how customers measure project success and are assured that they are getting their money’s worth from undertaking retrofit projects. One reason why today many customers undertake solar projects with their limited capital dollars, instead of much more efficient energy efficiency projects, is that solar energy reductions and cost savings take place with respect to actual, metered usage, not a hoped-for baseline.

Recommended Actions:

The Business Plans should set forth clear guidance or standards for when incentive programs would be required to include meter-based verification. The Business Plans should also set forth clear metrics for transitioning to greater meter-based verification of incentive programs. The goals should be for incentive programs to be verifiable by meter-based performance as follows:

				<ul style="list-style-type: none"> • 25% of incentive programs by January, 2018 • 50% of incentive programs by January, 2019 • 75% of incentive programs by January, 2020 	
CEE-10	3C-REN SoCalREN BayREN MCE			<p>Observations (re SB 1414 Compliance)</p> <p>The Business Plans fail to incorporate the new SB 1414 requirements and guidance. SB 1414 states that “if a customer or contractor is the recipient of a rebate or incentive offered by a public utility for the purchase or installation of central air-conditioning or a heat pump, and their related fans, the public utility shall provide the rebate or incentive only if the customer or contractor provides proof of permit closure.” In order to address HVAC installations that do not receive incentives, SB 1414 also directs the CEC to investigate the feasibility of creating a registry to track HVAC equipment sales to ensure that that they are installed lawfully and in compliance with code and permit requirements.</p> <p>Recommended Actions:</p> <ul style="list-style-type: none"> • Require HVAC equipment whose sale, purchase or installation has been subsidized by an incentive program to provide proof of code and permit compliance. Stakeholders have been recommending this for years, but it has taken the adoption of SB 1414 to get the PAs to agree to this requirement. • Support development of a registry to track HVAC equipment sales to ensure that that they are installed lawfully and in compliance with code and permit requirements. 	
CEE-11	3C-REN		pp. 5, 6, 25, 26	<p>Observations</p> <p>Coalition is not clear what is meant by the intervention strategy “Clearly define quality standards in participation agreement and subcontracts. Hold quality installation as conditional to payment.” Installation quality standards are already set by Title 24 – what is missing are workforce qualification standards. Unclear on what basis 3C-REN assumes that further defining installation quality standards would effectively address installation issues. The intervention should be revised to clarify that workforce training and qualification standards will be included in participation agreements. It is also not clear what is meant by “hold quality installation as conditional to payment.” How does 3C-REN intend to determine quality installation for each incentive project? Coalition would recommend meter-based efficiency verification requirements, consistent with AB 802.</p> <p>Recommended Action:</p> <p>See CEE-2.</p>	
CEE-12	3C-REN		p. 7	<p>Observations</p> <p>Coalition supports the proposal to implement an online streamlined and more cost-effective method for contractors to acquire permits and comply. However, the issue with permit non-</p>	

				<p>compliance is not just cost and time to obtain permits. The issue is also homeowners who want to evade code requirements and unlicensed contractors operating unlawfully. BP cites no evidence that this proposal will have its assumed result. Moreover, its Performance Indicator is conclusive and assumes success without verification.</p> <p>Documentation of compliance with title 24 permit and acceptance test requirements should be part of prerequisite for program participation. Addressing deliberate permit and code avoidance, however, requires more effective enforcement methods. To address this issue, 3C-REN should support SB 1414 efforts to establish a system to track central heating and air cooling equipment sales and installations in the state to verify compliance with permitting, inspection and testing requirements.</p> <p>Recommended Action: Support SB 1414 efforts to establish a system to track central heating and air cooling equipment sales and installations in the state to verify compliance with permitting, inspection and testing requirements. See CEE-5 and CEE-10</p>	
CEE-13	3C-REN		p. 21	<p>Observations The proposal to fix a set price schedule for energy efficiency work may have merit, but raises a number of questions that must be addressed to be effective and fair. How is the price going to be set? Will it be high enough to allow contractors who pay their workers prevailing wages to participate? Does it factor in contractor’s overhead for ensuring a skilled and trained workforce?</p> <p>Recommended Action: The Business Plans should set forth the process for determining the price schedule and set forth standards to ensure participating contractors are paid enough to invest in a trained and skilled workforce and to maintain area wage standards.</p>	
CEE-14	MCE		p. 52	<p>Observations The intermediate outcomes of of “increase demand for skilled workforce” and “program graduates find meaningful employment” cannot be met solely through marketing and outreach, as is proposed. Current proposal fails to provide a market incentive to hire and retain a skilled and trained workforce. Incentive contractor and workforce standards will create spillover by providing market incentive to employ a trained and skilled workforce which then will also be used for non-incentive work that does not have those same requirements.</p> <p>Recommended Action: See CEE-2.</p>	
CEE-15	SoCalREN		pp. 45-	<p>Observations</p>	

			46.	<p>The Coalition appreciates SoCalRen’s commitment to ensure energy efficiency measures are properly installed, operated and maintained by a skilled and trained workforce in order to increase energy savings by reducing lost or foregone energy savings and to help workers from minority, low-income and disadvantaged communities gain better access to career-track opportunities in the energy economy, and defined pathways for advancement into higher skilled and higher wage jobs. SoCalRen’s reliance on a third party consultant is not, in itself, a strategy. Specific goals, strategies and metrics for the third party consultant to implement should be set forth. See comments in CEE-2.</p> <p>Recommended Action: See CEE-2.</p>	
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