

#	Common Problem	CPUC Proposed Common Metrics	PA Response Document	6/30/17 Ad Hoc CAEECC Mtg Notes
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General Follow up:

1. June 26, 2017 July 14, 2017 PAs file revised sector-level metric proposals
2. July 10, 2017 July 24, 2017 Parties comment on revised sector-level metrics
3. July 17, 2017 July 31, 2017 Reply comments on revised sector-level metrics

Public Sector

Pub 1	Capturing energy savings	Annual gas, electric, and demand savings	<p>Updated proposed metric with clarifications/revisions:</p> <p>First year annualized reported savings, gross and net</p> <p><i>Comments:</i></p> <ol style="list-style-type: none"> 1. The language above is as discussed in the Commercial sector during the CAEECC Ad-Hoc meeting on 6/14/17 2. Targets for IOU-PAs from Potential and Goals Study using specific methods to draw out public sector. (Commercial Sector currently includes Public Sector.) Breaking out Public Sector is currently different across PAs (e.g., Mapped energy use within building types to Public Sector and took as a percentage of Commercial.) Need to agree upon a common simplified approach (e.g., 15% of Commercial) or some other approach. One example given, 93% of K-12 falls to Public, but utility just mapped all K-12 to Public. 3. RENs have non-resource efforts to procure energy management software (MCE does not have anything). 	<ol style="list-style-type: none"> 1. Need to define what is a Public Sector building (should be consistent). PAs should work on this moving forward. However, given the tight timeline, PAs should put differences explicitly in their submission (i.e., describe clearly what it is in the denominator and the definitions as appropriate). 2. What is the denominator for REN vs. IOUs vs. MCE (e.g., is it the target market, eligible population, total sector). 3. Suggestion to do it by ownership (e.g., fed, state, local) and then subsector (e.g., higher education vs. K-12 – note that not all charter sectors are not all public). 4. Note: LGPs are not only conducting work in the Public sector yet they are classified as only public in the PAs budget supplement. Need to better attribute LGP work.
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Pub 1a	Capturing energy savings	Annual gas, electric, and demand savings as a percentage of overall sectoral usage	<p>Updated proposed metric with clarifications/revisions:</p> <p>First year annualized reported savings, gross and net as a percentage of 2016 sectoral usage</p> <p><i>Comments:</i></p> <ol style="list-style-type: none"> 1. Discussed in the CAEECC Ad-Hoc meeting on 6/14/17 meeting. Using 2016 as baseline year will be considered by CPUC staff, but there was no resolution during the meeting. 	<p>UPSTREAM/MIDSTREAM (same as other sectors) discussion from 6/14/17</p> <ol style="list-style-type: none"> 1. Discussed ways to track sales for midstream/upstream that impact customers. 2. PAs can track program participation but uncertain re: the denominator (sales in the market) b/c vendors and retailers don't tend to give sales information. 3. Suggestion for upstream/midstream: numerator = reported savings over denominator = amount of savings available from specific markets. 4. Hasn't been tracked-to-date so would only have data moving forward.
Pub 2	Depth of intervention project (project)	Energy savings (kWh, kW, therms) per project (building)	<p>Updated proposed metric with clarifications/revisions:</p> <p>No updates yet because need further discussion</p> <p><i>Comments:</i></p> <ol style="list-style-type: none"> 1. The PAs are continuing to discuss the possibility of obtaining savings by project or by building. 2. Only for downstream programs, so may be better as an Implementation Plan metric. 3. We know that the finance group is also working on a "depth of intervention" metric. Further discussion maybe needed once that metric is drafted. 4. Same question as for Commercial Sector: Is "project" defined as "by application"? 	<ol style="list-style-type: none"> 1. Total energy savings for reporting sector/total number of projects = average savings for project 2. Call out what is attached to the savings estimate (e.g., whether it is tied to a building or non-building) 3. All PAs, if they say "we don't have baseline right now" need to propose how to get it moving forward. 4. Should we break projects into categories? (e.g., buildings vs. non-buildings)

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PUB 2a	Depth of intervention	Energy savings (kWh, kW, therms) per square foot	<p>Updated proposed metric with clarifications/revisions: n/a</p> <p><i>Comments:</i></p> <ol style="list-style-type: none"> 1. The PAs do not collect square footage from participants at this point, but could moving forward. However, the PAs' experience with reliability of square foot data is that this is very poor (provided by customer when it is available at all) and the cost of collecting the data and then ensuring high quality may be high. 2. Additionally, one PA reached out to an implementer and received this information (<u>underline added for emphasis</u>): "The burden would be placed on our efficiency auditing staff. The result would be more time committed to unessential tasks and less staff hours committed to project scope development and efficiency sales. <u>This formula leads to higher non-incentive payment requirements and decreased savings delivery.</u>" 3. There is the possibility of studying how to cost-effectively capture square footage and ensure quality, but this may mean that the metric would not be available until this process is known and adopted by PA. 4. It would be difficult to set a baseline or good targets because of lack of historical information and uncertainty around volatility of the value. 	<ol style="list-style-type: none"> 1. Discussion re: ease of finding K-12 square footage but acknowledgement that other buildings are more difficult, although one would presume the public sector would have this compiled somewhere.

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			5. Only for downstream programs, so perhaps more appropriate as an Implementation Plan metric 6. We know that the finance group is also working on a “depth of intervention” metric. Further discussion may be needed once that metric is drafted.	
Pub 3	Penetration of energy efficiency programs and benchmarking in the eligible market	Percent of participation relative to eligible population	Updated proposed metric with clarifications/revisions: n/a <i>Comments:</i> 1. All the same issues as described above for the energy savings per square foot. 2. If the source of eligible square foot is purchased, the PAs recommend that the square foot within eligible population remain static over the business plan years to reduce costs. If the source of eligible square foot is from the CEC, the PAs note that the square foot cannot determine square footage for government buildings and therefore the eligible population for commercial and public would not be clear.	1. Don’t know what the programs are yet so tough to create a sector-metric. 2. Similar to above, describe what is the challenge and propose how the challenge will be solved in the future. 3. Could split resource and non-resource but would need to be explicit.
Pub 3a	Penetration of energy efficiency programs in the eligible market	Percent of square feet of eligible population	Updated proposed metric with clarifications/revisions: No changes proposed <i>Comments:</i> 1. The PAs continue to discuss specifics on who is a participant (e.g., is a participant an account, a unique combination of known IDs such as premise and account). 2. Eligible population = everyone flagged as Public in the customer database; need to	1. Determine what is resource vs. non-resource and be clear on the type of information 2. As above, be explicit in what is being considered public, participant, etc.

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			<p>discuss which NAICs codes. NAICs codes could have an issue. The PAs continue to discuss ensuring that all have the same definition of public (and therefore who is included in the eligible population).</p>	
Pub 4	Cost per unit saved	Levelized cost of energy efficiency per kWh, therm, and kW	<p>Updated proposed metric with clarifications/revisions: Levelized cost of energy efficiency per kWh, therm and kW using the PAC test <i>Comments:</i> 1. Not all PAs have costs by \$/kW.</p>	<p>Discussion points from 6/14</p> <ol style="list-style-type: none"> 1. PAs will need to add to the xls to pull info for sector levelized cost. 2. Should include all costs (ME&O, incentives, etc.). 3. CPUC taking back recommendation that this metric will be based on a PAC. 4. <u>Question from 6/30:</u> Should PAs file metrics with savings that are not yet approved by the CPUC? <u>Recommendation:</u> Include the proposed kWh estimate in the year when you presume the savings would be made (including baseline). Therefore, don't include an estimate for 2018 savings that have not yet been vetting or approved.
Pub 5	Investment	Dollars of investments (all sources)	<p>Updated proposed metric with clarifications/revisions: No updates yet because need further discussion with the larger group that includes the CPUC <i>Comments:</i> 1. During the commercial meeting with the PAs and CPUC at the CAEECC Ad-Hoc meeting on 6/14/17, the CPUC staff</p>	<ol style="list-style-type: none"> 1. Public comment to include target for spending in K-12 b/c there is a lot of opportunity there. 2. Similar comments to those discussed on 6/14/17 <ol style="list-style-type: none"> a. Some stakeholders have an issue with investment as a metric (creates an incentive just to spend).

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			<p>indicated they were going to confer among themselves and get back to the PAs regarding the need for this metric. If needed, the CPUC staff were going to clarify the intention and what the “investment in EE” would include.</p>	<p>b. What does “all sources” mean? c. Unclear if this is a metric vs. reporting to track trends. d. What goal does this align with?</p>
Pub 6	Energy intensity	<p>Average Energy Use Intensity of Public Buildings Percent of Square Feet of Eligible Population Benchmarked</p>	<p>Updated proposed metric with clarifications/revisions: n/a <i>Comments:</i></p> <ol style="list-style-type: none"> 1. During the commercial meeting with the PAs and CPUC at the CAEECC Ad-Hoc meeting on 6/14/17, the CPUC staff indicated they were going to confer among themselves and get back to the PAs regarding the need for this metric. During the meeting, both CPUC staff agreed this may be a better program metric. 2. If the CPUC staff indicate this metric should be kept, public has the same comments as commercial as follows: 3. Benchmarking is as defined in AB802. 4. Eligible population are buildings over 50,000 square feet. 5. The IOU-PAs will know what buildings are being benchmarked in their service territories (because the customer is asking for data). However, this information is a one-way flow (from the IOU to the customer) and may not capture customers who use hard copy billing statements to input data. As such, the IOU will not know the square foot benchmarked, just the approximate number of buildings. 	<ol style="list-style-type: none"> 1. Note: Some of these metrics require strategies that may not currently be in the Business Plans. Will need to update. 2. Unadjusted means total customer energy usage/total customer accounts. 3. RENs/CCA will need data for energy usage to provide this information. 4. As mentioned on 6/14, What’s the intent of this metric? The intent might be skewed by adoption of solar/EV. Might not be informative b/c of the implication of the other factors besides EE intervention. 5. Recommendation to consider reporting on other components. 6. ED noted at 6/14 that they would discuss with the assigned office.

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			<ol style="list-style-type: none"> 6. Should this metric move to being the number of buildings benchmarked in the service territory? (i.e., a market value, not a program value) 7. The CEC is capturing similar information – should the IOU-PAs duplicate the information from the CEC? 8. If kept, the PAs will need to purchase information to estimate the number of buildings (or square foot) is in their service territories that are over 50,000 square feet in size. 9. If kept, the numerator could be only those buildings benchmarked through a PA program, which would need to be part of any program application form. 	

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WE&T

1. See comments from the Coalition of Energy Efficiency here: <https://www.caeec.org/6-30-17-ee-metrics-part-2>

WE&T 1	Leveraging effective collaborations	Number of collaborations by sector (defined by curriculum developed jointly + agreement)	<p>Updated proposed metric with clarifications/revisions:</p> <p>Alternative:</p> <ol style="list-style-type: none"> Percentage of collaborations to deliver on specified outcomes (presented in the context of the workforce categories and the documented outcome of collaborations) <p><i>Comments:</i></p> <ol style="list-style-type: none"> The PAs are presenting alternative metrics that can be controlled by the PAs because of concerns around setting targets for the number of organizations that will be willing to partner, which is unknown. Even with a definition of a “partnership” or “collaboration,” setting a specific target number may be somewhat random since some collaborations are more resource-intensive than others depending on the desired outcome, stage of the collaboration, and/or collaborator. Cannot use terms with legal meanings (such as partnerships and MOUs), so modified to “collaborations” and “collaboration agreements.” “Collaborations” will need to be defined. The WE&T program employs different types of collaborations that reflect the different types of relationships with partners, and likely different outcomes or benefits. Initial suggestion for a definition: 	<ol style="list-style-type: none"> There was a long conversation about the value of understanding the value of these efforts (vs. just numbers) but we also need to understand what progress is being made if asked. For example, what would the CPUC say if a legislator asks “what’s going on in WE&T” Question: Is this an appropriate metric to roll up versus to be applied at the programmatic effort to see how a specific partnership is progressing? Can track and count numbers, but isn’t that valuable. Want metrics to measure outcome (e.g., are people using the information on the job site), which is harder to track than attendees. Could ask the partners who often track this as part of their effort (e.g., community colleges) How well the IOUs help other transform their efficiency curriculum isn’t necessarily telling us if we have more trained workforce, which is what many stakeholders want to see (per the strategic plan goal) Recommend moving toward collaboration agreement, that articulates the collaboration (instead
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			<p>Collaborations will have documented agreed-upon outcomes of the collaboration such as jointly developing teaching materials, training trainers, providing WE&T curriculums or trainers for use by partner, or co-funding efforts. All collaborations will leverage partner organizations in some way.</p> <p>5. WE&T also proposed “Expanding WE&T Reach via Collaborations”</p>	<p>of an MOU, which has more legal implications). Would include roles of each and objectives to achieve.</p> <p>8. Need specific outcomes, not just “percentage.” For example, if trades don’t have efficiency curriculum, then need to have a specific “contract” to explain what each party is going to do and what the outcome will be. For example, in this case, the outcome would be that the IOUs provide curriculum that the trades integrate into their processing, and then we can measure how it’s working in the field.</p> <p>9. This starts sounding like projects vs. sector. How do we go more than numbers but also have something meaningful at the sector level?</p> <p>10. Suggestion to have clear standards for the programs (beyond WE&T) b/c then the objectives are to ensure meeting of those standards, can have training for that standard, and can do EM&V to see if pre/post quality improves (which ties back to the WE&T effort).</p>

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WE&T 2	Penetration of training and diversity of participants	Number of participants by sector	<p>Updated proposed metric with clarifications/revisions:</p> <p>Number of participants by pre-defined workforce categories (occupations, industry, etc--i.e., engineers, architects, HVAC technicians, building operators.)</p> <p><i>Comments:</i></p> <ol style="list-style-type: none"> 1. May need to add language to show priority categories 2. Workforce segment = job categories as currently collected through the common registration form for trainings. There are currently 25 categories (see Appendix A). 3. Would like to discuss issues around setting mid- and long-term targets for each category. Could do on a short term basis during program planning based on the focus, direction, and budgets of each PA as they developed their WE&T plans. Unable to set mid and long-term targets at this time that are meaningful. Would that make this a program-level metric? 4. Could also determine high priority areas for a period of time and set targets for those areas. 	<ol style="list-style-type: none"> 1. What is diversity of training? Is it diversity of occupations or diversity of the participants? 2. As noted by the IOUs, should identify what are high priority categories to focus efforts there.

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WE&T 2a	Penetration of training and diversity of participants	Percent of participation relative to eligible target population for curriculum	<p>Updated proposed metric with clarifications/revisions:</p> <p>Percent of participation relative to eligible target population for training [focused on high-priority occupations doing high EE potential work.]</p> <p><i>Comments:</i></p> <ol style="list-style-type: none"> Difficult to set meaningful targets by each job category. Would this be combined for all targeted categories based on WE&T plans? Changed curriculum to training Not yet able to report on a metric like this because don't have data on eligible target populations. Would need to look into whether there are good estimates of the eligible populations by job category/workforce segment; or whether additional studies are needed. WE&T can look to the EDD data and seek alignment. Targeted geographies might also be smaller than full IOU territories. 	<ol style="list-style-type: none"> Similar to above, recommendation to target metrics to high priority occupations and report the others. Define participant (e.g., someone who shows up or someone that graduates). Do the 25 categories in Appendix A of the IOU feedback capture everything? Building commissioning should be on there. Look at the inclusion landscape report (ICF 2016 report) to look at the pathways. Comment that need to focus on students entering the workforce. Response from stakeholder that existing/incumbent workers are also critical to focus on as many workers are not trained well enough to make the system work well. ED needs to better understand how the proposal links to improved savings, which is by sector.
WE&T 2b	Penetration of energy efficiency programs in the eligible market	Percent of disadvantaged participants trained (identified by zip code and/or census tract)	<p>Updated proposed metric with clarifications/revisions:</p> <p>Percent of disadvantaged participants trained (<i>specific definition for disadvantaged still under discussion</i>)</p> <p><i>Comments:</i></p> <ol style="list-style-type: none"> WE&T is focused on the worker. The PAs await the Commission's definition of 	<ol style="list-style-type: none"> Similar to 6/14 notes, waiting on definition of DAC. For K-12, can look at the Title 1 schools. Can also look to measure the % of programs/savings/etc. that are installed by businesses, CBOs, etc. that have commitment to DAC. This

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			<p>“disadvantaged” and the application of that to workers in the WE&T sector.</p>	<p>is the end goal from the training efforts so should see if the training is ultimately leading to workers.</p> <ol style="list-style-type: none"> 4. Look at the matrix in the PAs’ BPs that focus on k-12 and disadvantaged communities to see their current proposed efforts. The plan is for the disadvantaged workforce training implementer include experience and connections to also place those trainees.
WE&T 3	Impact of training	Number of participants who report they applied the training annually	<p>Updated proposed metric with clarifications/revisions: n/a</p> <p><i>Comments:</i></p> <ol style="list-style-type: none"> 1. This would be based on self-reported information from one or two existing questions (e.g., likelihood to use the information from the course) in the current exist surveys. PAs will coordinate to see how closely these questions matched in 2016/17, and whether the questions need to be adjusted and/or standardized further to gather information for the CPUC. 2. Above proposed metric removes annually and includes clarification of intend 3. Remove “annually” or clarify what is meant by “annually”? 4. As written at left, it’s more appropriate for EM&V 	<ol style="list-style-type: none"> 1. Better to assess after the fact (i.e., EM&V) vs. output based, which can be tracked along time. Hard to track this. 2. What does “applied” mean? 3. Difficult and expensive to measure. How can you really claim impact on the job for a one-day training? Should this be only for more extensive trainings? 4. Would a better metric to partner to refer people to certificates, that would be the standard by which to measure the workforce. 5. Who are participants? Any thought to subdivide into categories?

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WE&T 3a	Impact of training	Number of projects implemented in applying the training annually	<p>Updated proposed metric with clarifications/revisions: n/a</p> <p><i>Comments:</i></p> <ol style="list-style-type: none"> 1. As written at left, it's more appropriate for EM&V 2. Number of projects isn't the best metric given the complexity of data collection and data tracking (3 HVAC technicians working on the same project; 1 large commercial multi-year project vs. multiple 1-week HVAC technicians projects, etc.) 3. Recommend removing and using the first "Impact of training" metric above. This metric requires information 4. about future projects, which would not be known at the time of the exit surveys. Projects can also overlap when 5. multiple trainees are working on the same projects. This type of data may be useful to collect in future EM&V 6. studies, but perhaps not appropriate for tracking. 	<ol style="list-style-type: none"> 1. Not necessarily a meaningful metric, as numbers could be high but savings low. 2. Through an EM&V study can look at marketability, how many projects.

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C&S

1. CPUC will look about adding a code compliance line in the next iteration of guidance.
2. Clarify if tracking is by building or on average

C&S 1	Capturing energy savings	Annual gas, electric, and demand savings	<p>Updated proposed metric with clarifications/revisions:</p> <p>Net GWH, MW, MMTherms reported savings</p> <p><i>Comments:</i></p> <ol style="list-style-type: none"> 1. In addition to the absolute energy savings metrics and targets, the C&S team plans to report savings values in the context of % of net portfolio and % of SB350 to give context to the numbers. 2. SoCalGas savings values will be reported net negative therm interactive effects per the commission reporting protocols. 	<ol style="list-style-type: none"> 1. Does this fall to all sub programs? No, just advocacy since compliance is not currently a resource program. 2. Recommendation to put forward a metric (0 now) for how to create measurements for compliance programs. Like with the BayREN public sector question, ED recommends putting in the year in which you think savings would be able to be measured. 3. Also need to be careful not to double count b/c compliance is captured in the general allocation of savings.
C&S 2	Activity in advocating for codes and standards tied to adoption in CA	<p>Annual number of CASE studies</p> <p>Annual number of CASE studies used to implement adopted codes and standards</p>	<p>Alternative metrics:</p> <p>% of codes and standards proposals adopted that were supported by IOU CASE studies and other work products</p> <p><i>Comments:</i></p> <ol style="list-style-type: none"> 1. The PAs are presenting the alternative metric above. The PAs feel that this is a more meaningful metrics for this area. The PAs cannot directly control the number of proposals considered or adopted, but they can show responsiveness to the policy activity that is occurring at the state level. 	<ol style="list-style-type: none"> 1. ED proposes the PA metric (%) be an additional metric to #. Want both data. 2. Add # of CASE studies by IOUs and # CASE studies implemented by the CEC. 3. IOUs can track these items, but setting targets is challenging b/c you don't know how many CASE studies may be available each year. Will ED be ok with this as an indicator? 4. ED would like to see a target number of CASE studies. PAs are

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				<p>able to report it, but prefer not to have a target.</p> <ol style="list-style-type: none"> 5. Proposal to also track opposition of C&S (e.g., is there a utility that is making it difficult to advance a particular code or standard). 6. NOTE: There is a difference b/n # of proposals vs. # CASE studies. Can be multiple proposals in a CASE study. The metric should be focused on proposals. 7. Also, should be <i>per code cycle</i> (not per year). 8. If keep the # metric, proposed Alternative: # of proposals per code cycle 9. There is also not a necessary correlation between savings and # proposals (e.g., 1 proposal could yield high savings while 5 could yield low savings).
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C&S 3	Activity in advocating for codes and standards tied to adoption at the federal level	Annual number of federal standards adopted for which a utility advocated	<p>Alternative metrics: % of DOE appliances added to federal register supported by IOUs (# IOU supported/ # DOE adopted = 90%, as an example)</p> <p><i>Comments:</i></p> <ol style="list-style-type: none"> The PAs are presenting the alternative metric above. The PAs feel that this is a more meaningful metric for this area. The PAs cannot directly control the number of proposals considered or adopted, but they can show responsiveness to the policy activity that is occurring at the federal level. 	<ol style="list-style-type: none"> ED should clarify what “advocated” for means. Same comments as above.
C&S 4	Local government participation and success in adoption of reach codes	Annual number of local government Reach Codes implemented (joint utility and regional energy network effort)	<p>Alternative metrics: # reach codes implemented</p> <p><i>Comments:</i></p> <ol style="list-style-type: none"> The numbers will be reported for REN and non-REN areas. The mid- and long-term targets will be dependent on the State C&S efforts that impact those periods, hence the mid-term and long-term targets may have to be adjusted as the new T-24 codes are implemented. 	No comments.