

Commission Staff Additional Clarifications for July 14th Program Administrator Filing of Revised Statewide (Common) Sector/Cross-Cutting Level Metrics

Residential – Single Family

Common Problem	Common Metric	Commission Staff Clarification
Capturing energy savings	First year annual ex-ante gas, electric, and demand savings (gross and net) for Single Family Customers	PA proposed/revised metric of “First year annual ex ante gas, electric and demand savings, gross and net” is reasonable
Greenhouse Gas Emissions	Greenhouse gasses (MT CO ₂ eq) Net kWh savings, reported on an annual basis	This is a new metric for this sector. Annual net greenhouse gas emissions, reported as the weight of CO ₂ with equivalent global warming potential, saved through annual net electric and therm savings, accounting for estimated emissions related to generation and transmission for same year
Depth of interventions	Average savings per participant	Based on discussions with PAs, this could be revised to distinguish between opt-in programs (Home Upgrade, for example) and opt-out (Home Energy Reports) as well as down-, mid- and upstream efforts. While it may be difficult to determine participant savings from upstream (lighting) programs, the IOUs/PAs may be able to extrapolate participant savings from mid-stream efforts, in which incentives go to retailers or contractors), using existing historical downstream participant data .
Penetration of energy efficiency programs in the eligible market	Percent of participation relative to eligible population	Commission staff believes this should be a sector level metric. The PAs should leverage their experience and knowledge of their own customer base(s) to develop a sense of what their overall target market is and how much of it they intend to reach over the short-, mid-, and long-term. With regard to concerns about penetration of Hard to Reach (HTR) and Disadvantaged Communities (DAC) populations- Commission staff’s understanding is that the competing Commission definitions of HTR will be clarified. For DAC, PAs need to identify by a specific date whether they can map census tract to zip code. If there is overlap between HTR, DAC and low income, PAs need to propose a way to clarify that overlap.
Cost per unit saved	Levelized cost of energy efficiency per kWh, therm and kW (use	Use TRC and PAC for levelized cost

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	both TRC and PAC)	
Energy intensity	Average energy use intensity of single family homes (average usage per household – not adjusted)	PA feedback states that the PAs need to develop a common definition of MF to develop a data query to determine SF and MF. The PAs need to establish a date by which making this distinction will be feasible. The PAs can work to refine this distinction over the life of the business plan.

Residential – Multi Family

Common Problem	Common Metric	Commission Staff Clarification
Capturing energy savings	First year annual ex-ante gas, electric, and demand savings (gross and net) for multifamily customers (in-unit, common area, and master metered accounts)	Commission staff acknowledges that PAs may not be able to calculate upstream savings for measures that are installed in MF properties by tenants. PAs could explore using EM&V data/results to determine what percentage of upstream/midstream rebated measures go to this market segment. This bifurcation by customer account types should remain and the PAs should differentiate these accounts in their CIS systems in the future.
Depth of interventions	Average savings per participant Savings per project (property) I'm open to using the Commercial property metrics (below): Energy savings (kWh, kw, therms) per project (building) Energy savings (kWh, kw, therms) per square foot	
Penetration of energy efficiency programs in the eligible market	Percent of participation relative to eligible population (by unit, and property) Percent of square feet of eligible population participating (by property)	
Cost per unit saved	Levelized cost of energy efficiency per kWh, therm and kW (use both TRC and PAC)	Use TRC and PAC for levelized cost
Energy intensity	Average energy use intensity of multifamily buildings (average usage per square foot – not adjusted and including in-unit accounts)	New metric added to address concerns about the influence by non-EE factors (EV adoption, PV penetration, etc.) since these

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	Average energy use intensity of multifamily units.	types of loads cannot appear on a MF sub metered account.

Commercial

Common Problem	Common Metric	Commission Staff Clarification
Capturing energy savings	First year annual ex-ante gas, electric, and demand savings (gross and net) First year annual ex-ante gas, electric, and demand savings (gross and net) as a percentage of overall sectoral usage	
Greenhouse gas emissions	Greenhouse gasses (MT CO ₂ eq) Net kWh savings, reported on an annual basis	This is a new metric for this sector. Annual net greenhouse gas emissions, reported as the weight of CO ₂ with equivalent global warming potential, saved through annual net electric and therm savings, accounting for estimated emissions related to generation and transmission for same year
Depth of interventions	Energy savings (gross kWh, therms) as a fraction of total project consumption.	
Penetration of energy efficiency programs in the eligible market	Percent of participation relative to eligible population for small, medium, and large customers Percent of square feet of eligible population Percent of participation by customers defined as "hard to reach"	PAs do not collect square footage now but should moving forward.
Penetration of benchmarking in the eligible market	Percent of benchmarked customers relative to eligible population for small, medium, and large customers Percent of benchmarked square feet of eligible population Percent of benchmarking by customers defined as "hard to reach"	
Cost per unit saved	Levelized cost of energy efficiency per kWh, therm and kW (use both TRC and PAC)	Use TRC and PAC for levelized cost
Use of whole building metered data to estimate savings	Fraction of total projects utilizing Normalized Metered Energy Consumption (NMEC) to estimate savings Fraction of total savings (gross kWh and therm) derived from NMEC analysis	

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Program Satisfaction	Improvement in customer satisfaction Improvement in trade ally satisfaction	Compute change in satisfaction scores relative to a baseline period using a common survey technique.
Investment in energy efficiency	Fraction of total investments made by ratepayers and private capital	

Public

Common Problem	Common Metric	Commission Staff Clarification
Capturing energy savings	First year annual ex-ante gas, electric, and demand savings (gross and net) across Public Sector	
Greenhouse Gas Emissions	Greenhouse gasses (MT CO ₂ eq) Net kWh savings, reported on an annual basis	Annual net greenhouse gas emissions, reported as the weight of CO ₂ with equivalent global warming potential, saved through annual net electric and therm savings, accounting for estimated emissions related to generation and transmission for same year
Depth of interventions	Average percent energy savings (kWh, kw, therms) per project building or facility Average annual energy savings (kWh, kw, therms) per project building floor plan area Average annual energy savings (kWh, kW therms) per annual flow through project water/wastewater facilities	<ul style="list-style-type: none"> Total annual net kWh, kW, and therm savings divided by total counterfactual kWh, kW, and therm consumed at all Public Sector project sites: [net kWh, kW, or therm savings] / [kWh, kW, or therm consumed + net kWh, kW, or therm savings] Annual net kWh, kW, and therm savings from building interventions (i.e. retrofits, retrocommissioning, BROs--not entire Public Sector) divided by total square footage of project buildings Annual net kWh, kW, and Therm savings from water/wastewater projects divided by annual treated volume (million gallons) of water/wastewater through project facilities; only include water/wastewater treatment-specific interventions
Penetration of energy efficiency programs and benchmarking in	Percent of Public Sector accounts participating in programs Percent of estimated floorplan area of all Public Sector buildings	<ul style="list-style-type: none"> Number of utility accounts directly enrolled in current Public Sector programs (resource or non-resource) divided by total number of Public Sector accounts;

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the eligible market	participating in building programs Percent of Public Sector water/wastewater flow enrolled in water/wastewater programs	accounts participating in multiple programs are counted only once for this metric <ul style="list-style-type: none"> • Floorplan area of Public Sector buildings enrolled in one or more program (resource or non-resource) divided by estimated total building floor plan area within Public Sector • Flowrate of Public Sector water/wastewater facilities enrolled in one or more program (resource or non-resource) divided by total flowrate of all water/wastewater facilities within Public Sector
Cost per unit saved	Levelized cost of energy efficiency per kWh, therm and kW (use both TRC and PAC)	Use TRC and PAC for levelized cost
Investment in energy efficiency	Total program-backed financing distributed to Public Sector customers requiring repayment (i.e. loans, OBF)	
Energy intensity	Average energy use intensity of all Public Sector buildings Percent of Public Sector buildings with current benchmark Percent of floorplan area of all Public Sector buildings with current benchmark	<ul style="list-style-type: none"> • Total Energy Use (combined electric and gas) of Public Sector water/wastewater treatment facilities divided by total nominal Public Sector water/wastewater flowrate (million gallons per day) • Cumulative total number of buildings with current benchmark divided by estimated total number of buildings in Public Sector • Cumulative total building floor plan area benchmarked divided by estimated total floor plan area of all buildings in Public Sector

Industrial

Common Problem	Common Metric	Commission Staff Clarification
Capturing energy savings	First year annual ex-ante gas, electric, and demand savings (gross and net) in industrial sector	
Greenhouse Gas Emissions	Greenhouse gasses (MT CO ₂ eq) Net kWh savings, reported on an annual basis	Annual net greenhouse gas emissions, reported as the weight of CO ₂ with equivalent global warming potential, saved through annual net electric and therm savings, accounting for estimated emissions related to generation and transmission for same year

Penetration of energy efficiency programs and diversity of participants	Percent of participation relative to eligible population for small, medium and large customers	Commission acknowledges that “large customers” would be hard to aggregate across all PAs as they use different definitions based on demand
New participation	Percent of customers participating that have not received an incentive for the past three years, annually, by small, medium and large customer categories	
Cost per unit saved	Levelized cost of energy efficiency per kWh, therm and KW (use both TRC and PAC)	Use TRC and PAC for levelized cost

Agricultural

Common Problem	Common Metric	Commission Staff Clarification
Capturing energy savings	First year ex ante annualized gas, electric, and demand savings in agriculture sector, gross and net	
Greenhouse Gas Emissions	Greenhouse gasses (MT CO ₂ eq) Net kWh savings, reported on an annual basis	Annual net greenhouse gas emissions, reported as the weight of CO ₂ with equivalent global warming potential, saved through annual net electric and therm savings, accounting for estimated emissions related to generation and transmission for same year
Penetration of energy efficiency programs and diversity of participants	Percent of participation relative to eligible population for small, medium and large customers	
Cost per unit saved	Levelized cost of energy efficiency per kWh, therm and kW (use both TRC and PAC)	Use TRC and PAC for levelized cost

Codes and Standards

Common Problem	Common Metric	Commission Staff Clarification
Capturing energy savings (for any resource program)	Net Energy Savings: GWH, MMTherms and MW (demand)	

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<p>Activity in advocating for building codes (T-24) tied to adoption in CA</p>	<p>Number of CASE studies or proposed measures within CASE studies and a subset of the number that actually were used to implement codes and standards.</p> <p>Additional metric of percent of codes that were supported by IOU CASE studies and other work products. (optional)</p>	<p>It is important to measure the CASE studies in addition to the percentage of CASE studies adopt for the reasons and examples below:</p> <ul style="list-style-type: none"> • If the IOUs do not provide the information the CEC needs, then it is likely that it will not become a standard due to lack of information. It is likely that the percent of CEC standards supported by the IOUs will be 100% all of the time. The exception is if the denominator includes federal standards that are adopted into T-20 (but these should be excluded because they are accounted for under the federal standard advocacy) <p>The two scenarios below illustrate the value of providing discrete number of CASE studies and not just percentages.</p> <ul style="list-style-type: none"> • CASE 1: IOUS provide one CASE study and CEC implements one new standard. The CEC may not implement more because they do not have enough information, even though if they had the information they would implement another standard. As a result, the metric result based on percentage is 100% • CASE 2: If the IOUs had provided two CASE studies and enabled two CASE studies and the CEC implemented two new standards and doubled the savings. As a result, the metric is still 100%. • The IOUs concern may be that if the CPUC sets a discrete amount of CASE studies, then the CPUC might conclude that the IOUs are not achieving their goal; in addition, one large CASE study can save as much as many small CASE studies. On the other hand, there could be many small low energy savings studies implemented instead of one large one. However, because an additional metric measures kWh and therm savings metric, this would account for the aggregated savings of all measures. The energy savings and number of studies together provide a complete picture.

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Activity in advocating for appliance, lighting and equipment standards tied to adoption in CA	<p>Number of CASE studies or proposed measures within CASE studies and a subset of the number that actually were used to implement codes and standards.</p> <p>Additional metric of percent of codes that were supported by IOU CASE studies and other work products. (optional)</p>	Same clarifications as previous metric
Activity in advocating for codes and standards tied to adoption at the federal level	<p>Number of federal standards adopted for which a utility advocated (IOUs to list advocated activities)</p> <p>Percent of DoE appliances, equipment and lighting standards added to federal register final rule that IOUs advocated for.</p>	<p>Cannot give credit for the same code or standard if:</p> <ul style="list-style-type: none"> • It was first a California standard (T-20) and was adopted by the federal government • It was first a federal standard and was automatically adopted by T-20 <p>Exceptions are:</p> <ul style="list-style-type: none"> • if the federal standard is more stringent than the current California standard • If advocacy efforts prevent the federal government from implementing standards that are lower than the California standard. <p>IOUs suggested a metric of “Percent of DoE appliances, equipment and lighting standards added to federal register final rule that IOUs advocated for”. This by itself is not adequate because it is not unprecedented that the federal government will put a moratorium on federal standards, in which case the denominator will be zero. This is not a reflection of the IOUs efforts. Because the IOUs do not implement standards it is important to measure what standards they enabled even if not implemented for the budgetary and political reasons of the CEC and the DoE.</p>
Local government participation and success in adoption of reach codes	The number of local government Reach Codes implemented (this is a joint IOU and REN effort)	
Compliance Improvement	Number of training activities (classes, webinars) held, number of market actors participants by segment (e.g., building officials, builders, architects, etc.) and the total size (number) of the target	

Common Problem	Common Metric	Commission Staff Clarification
	audience by sector. Increase in code compliance knowledge pre/post training.	

Work force Education and Training

Common Problem	Common Metric	Commission Staff Clarification
Leveraging effective partnerships	Number of partnership by sector (complete “partnership” defined by curriculum developed jointly + agreement)	Based on the comments from the California Community Colleges and the Coalition for Energy Efficiency the utilities shall work with these stakeholders to incorporate the Community Colleges’ proposed framework of using existing industry partner metrics for the partnership metrics. Commission staff agrees with the proposed general definition of collaborations and their category title.
Penetration of training and diversity of participants	Number of participants by sector Percent of participation relative to eligible target population for curriculum Percent of disadvantaged participants trained (ID by zip code)	<ul style="list-style-type: none"> • “Number of participants by pre-defined workforce categories (occupations, industry, etc.--i.e., engineers, architects, HVAC technicians, building operators.)” is reasonable. Use list of 25 occupations, prioritized by high priority categories based on Potential and Goals study, as recommended by IOUs. • “Percent of participation relative to eligible target population for training [focused on high-priority occupations doing high EE potential work.]” is reasonable. Eligible target populations could be occupations (as prioritized above), incumbent worker populations, and students.

Emerging Technologies Program

Common Problem	Common Metric	Commission Staff Clarification
Need to track Technology Priority Map (TPM)	ETP-M1: 6* TPMs (gas and electric combined) initiated within the first 3 years (including 1 Technology-focused Pilot TPM identifying market barriers for a diverse range of high-impact technologies through studies, and subsequently breaking down identified	This is edited from the version submitted to the CAEECC meeting on 6/30 for more clarity.

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development	barriers via cooperative projects initiated in coordination with WE&T, ME&O, and other relevant IOU programs) * This number will be updated once all third party contracts have been awarded.	
Need to track TPM updating activity	ETP-M2: 3 TPMs updated within the first 3 years	This was submitted in the Business Plans, but removed by the IOUs in their most recent iteration. Commission staff believes this is a useful metric as the statewide TPM development will need to be an iterative process.
Need to project activity	ETP-M3: 183* projects initiated within the first 3 years *This averages 61 projects per year; this number will be updated once all third party contracts have been awarded.	Taken directly from the IOU's most recent iteration of metrics. This was a portion of another metric directly from the BPs that has now been separated out.
Need to track event activity	ETP-M4: Host 15 outreach events with technology developers with products <1 year from commercialization within the first 3 years, including new technology vendors, manufacturers, and entrepreneurs.	
Need to track event activity	ETP-M5: Host 6 outreach events with technology developers with products <5 years from commercialization within the first 3 years, including new technology vendors, manufacturers, and entrepreneurs.	These were in the Business Plans, but removed from the latest iteration of the metrics from the IOUs. Commission staff believes outreach should be tracked to ensure a minimum level of activity, and the separate outreach at different points in the technology development cycle would enable early awareness of technologies for ETP projects or TFPs
ETP is not utilizing other programs to confront barriers to market penetration	ETP-M6: 2* projects initiated with cooperation from other internal IOU programs associated with each Technology-focused Pilot *This number may be updated according to the results of the TPM development working group process	This is to ensure that the TFPs are executed properly. Multiple projects must be initiated to support these technologies against market barriers. The TPM development stakeholder working group sessions may help determine whether two projects is an appropriate target.
Need to track Technology-focused Pilot (TFP) TPM efforts	ETP-M7: 3* Technology-focused Pilots initiated as part of the TFP TPM within the first 3 years *This number may be updated according to the results of the TPM development working group process	New metric. This is to ensure that the TFP TPM is made up of several technology directions to diversify risk and increase learning opportunities from this early pilot. Technologies suitable for this approach will be identified during the TPM development stakeholder work group sessions, leading to a possible adjustment of this target.

Common Problem	Tracking for ETP	Commission Staff Clarification
Savings are not being tracked	<ul style="list-style-type: none"> • ETP-T1: Prior year: % of new measures added to the portfolio that were previously ETP technologies • ETP-T2: Prior Year: # of new measures added to the portfolio that were previously ETP technologies • ETP-T3: Prior year: % of new codes or standards that were previously ETP technologies • ETP-T4: Prior Year: # of new measures added to the portfolio that were previously ETP technologies • ETP-T5: Savings of measures currently in the portfolio that were supported by ETP, added since 2009. Ex-ante with gross and net for all measures, with ex-post where available 	<p>For ETP-T2, need the absolute number as well as the impact on the portfolio.</p> <p>For ETP-T5, Ex-ante and ex-post were determined to be easily available once the ETP and savings databases were matched up. Therefore ex-ante will allow comparison across all years, while ex-post will allow more accurate tracking and comparison among years where ex-post is available.</p>
Input from other groups is not being tracked	<ul style="list-style-type: none"> • ETP-T6: Number of ETCC project ideas submitted outside of TPM process by source. [Note: Categories of sources (e.g. PA, national lab, manufacturer, technology incubator, etc.) will be developed collaboratively with ED, and self-reported by submitter.] Project source also labeled in the ETP database. • ETP-T7: Number of TPM project ideas by source, if available [Note: Categories of sources (e.g. PA, national lab, manufacturer, technology incubator, etc.) will be developed collaboratively, and attributed by ETP based on ETP's expert judgment.] Project source also labeled in the ETP database. 	<p>IOUs were concerned that some technologies may not have a clear source, so an exemption was made. Commission staff will coordinate on this to ensure that all sources are identified if possible, with remaining technologies' source attributed to their technology developer.</p>
Output from ETP is not explicitly aligned with long-term goals	<p>ETP-T8: Mapping of ETP projects and technologies aligned with specific statewide goals, with specificity as to what aspect of each goal it is fulfilling. For example: "4 ETP projects are aligned with statewide ZNE-readiness" in addition to "a list of ETP projects aligned with ZNE-readiness are as follows:". Goals will also be labeled in the ETP database. A list of eligible goals will be developed collaboratively with ED.</p>	