2015 Ex-Ante Savings Adjustment Statement

This Resolution makes the following adjustments to energy savings values used to verify the ESPI ex-ante savings awards:

1. Use of the quarterly reported claims data stored on the ED CS to calculate deemed ESPI savings in place of savings accomplishments provided in the IOUs’ advice letters,
2. Proper application of Early Retirement (ER) policy and related effective and remaining useful life (EUL and RUL) values for, ER, retrofit add-on (REA) measures and measures with savings calculated over existing baselines,
3. Proper application of net-to-gross (NTG) values,
4. Application of DEER EUL for screw-in compact fluorescent lamps (CFLs),
5. Revisions to SCE ER claims for commercial package HVAC equipment to reflect available evidence based on review of current and historical claims by all IOUs, and
6. Proper application of CPUC Decision direction for schools that allows only above code savings to be claimed.
7. **Use of Quarterly Reported Claims Stored on the Energy Division’s Central Server Database**

Instead of accomplishment’s reported in advice letters, CPUC staff used claims from Energy Division’s Central Server database (EDCS) as the basis for calculating the deemed measure payments. Staff also excluded savings for measures that had application dates identified in the EDCS quarterly data prior to January 1, 2015. In the last year ESPI filing (Ex-ante 2014 claims), some IOUs had included claims for savings for measures installed before 2014. Resolution G-3510 forfeited such awards and directed IOUs to only include measures installed in the respective year of claims for the next year submission. IOUs were also directed to indicate in their data submissions what year each measure is installed[[1]](#footnote-1). None of the IOUs complied with these directions in their 2016 submissions.

1. **Adjustment for Early Retirement, Retrofit Add-on and Other Measures with Savings Calculated Over Existing Baselines**

The measure application type reported for a measure, its EUL and RUL along with the savings (first and second period) must all be consistent. Staff revised claims with inconsistent or incorrect assignments in the following categories:

* **Use of high RUL or EUL for add-on measures:** The EUL of measures that add new technologies to existing equipment or systems is typically limited by the RUL of the existing equipment. These measures are commonly referred to as “Retrofit Add-on” or “REA” measures. Examples of REA measures are the addition of an air economizer onto an air conditioning system, installing insulation to a heated storage tank or the installation of night covers on open refrigerated cases. Staff has revised these measures so that the EUL of the measure is equal to the lower of the RUL of modified system or equipment and the EUL of the new component. The RUL has been revised in all cases to be zero.
* **Measures misclassified as add-on measures:** Some measures appear to be classified as REA, but actually are defined as a replacement of specific component of an existing operating system or piece of equipment with a more efficient component. Examples of these types of measures are replacement of linear fluorescent lighting in refrigerated cases with LEDs and the replacement of wall switches for lighting with wall-box occupancy sensors. Since the existing equipment cannot operate without the replaced component, these measures should have been classified as Early Retirement (ER) rather than REA. For these measures, the RUL has been revised to be the lower of the RUL of modified system or equipment and the EUL of the new component, and the EUL has been set equal to the RUL.
* **Measures misclassified as Replace-on-Burnout measures:** Any measure with savings calculated above a pre-existing condition implies an early retirement application. Where the measure is a replacement of a component of an existing system or piece of equipment, the EUL of the measure must be the lower of the RUL of modified system or equipment and the EUL of the new component. Staff has revised these measures to reflect this requirement. These measures are likely misclassified as ROB and should be classified as ER where the RUL is set to follow this requirement and the EUL is set equal to the RUL.
* **Early retirement measures without correct dual baseline calculations:** Any measure with savings calculated above a pre-existing condition implies an early retirement application. Some measures appear in the claims with a measure application type of “RET” where savings are calculated above a pre-existing condition, but now send period savings or RUL have been entered into the claims. Staff has revised these measures to include appropriate RUL and second period savings entries.
* **Early retirement measures with incorrect RUL values:** The DEER 2011 update revised the RUL for early retirement lighting measures where the pre-existing technology included 4-foot, 8-foot or U-tube T12 lamps. For these measures, DEER requires the RUL be calculated based on the EUL of the pre-existing lamp (instead of the ballast as is the case for all other linear fluorescent measures). Staff reviewed and revised as needed the RULs for all early retirement lighting measures with T12 pre-existing technologies to be consistent with DEER requirements.
* **Early retirement measures for K-12 schools and community colleges:** All K-12 schools and community college measures and projects are specifically identified in the claims. Some measures are identified as early retirement, however, PAs are only allowed to claim above code savings for these measures[[2]](#footnote-2). Staff has revised any early retirement claims so that the claimed second period savings becomes the first period savings as well, which results in only the above-code savings is credited for the entire EUL.
1. **Net-to-Gross Revisions**

Staff classifies the erroneous and inappropriate assignments of NTG into
five categories as described below.

* **Use of direct install to hard-to-reach customer default:** Compared to 2014, claims for HTR NTG values have decreased, but there appears to be at least one program where customer eligibility for the program does not meet the criteria for classification as hard-to-reach customers[[3]](#footnote-3).

*This NTG designation is NOT for activities that are either direct install OR to
hard-to-reach customer, but instead they are only for direct install activities into hard-to-reach customer facilities/homes*.

Specific criteria were developed by staff to be used in classifying a customer as hard-to-reach. Two criteria are considered sufficient if one of the criteria met is the geographic criteria defined below. There are common, as well as separate, criteria when defining hard-to-reach for residential versus small business customers. The barriers common to both include:

* Those customers who do not have easy access to program information or generally do not participate in energy efficiency programs due to a combination of language, business size, geographic, and lease (split incentive) barriers. These barriers to consider include:
	+ Language *–* Primary language spoken is other than English, and/or
	+ Geographic *–* Businesses or homes in areas other than the United States Office of Management and Budget Combined Statistical Areas of the San Francisco Bay Area, the Greater Los Angeles Area and the Greater Sacramento Area or the Office of Management and Budget metropolitan statistical areas of San Diego County.
* For small business added criteria to the above to consider:
	+ Business Size *–* Less than ten employees and/or classified as Very Small (Customers whose annual electric demand is less than 20kW, or whose annual gas consumption is less than 10,000 therm, or both) , and/or
		- Leased or Rented Facilities *–* Investments in improvements to a facility rented or leased by a participating business customer
	+ For residential added criteria to the above to consider:
		- Income *–* Those customers who qualify for the California Alternative Rates for Energy (CARE) or the Family Electric Rate Assistance Program (FERA), and/or
		- Housing Type *–* Multi-family and Mobile Home Tenants (rent and lease)

In place of the direct install hard-to-reach NTG values (0.89 for T8 linear fluorescent, 0.80 for commercial CFL, and 0.85 for all other technologies) for measure installations at the facilities and homes of customers who do not meet the hard-to-reach minimum criteria, staff expects the use of more appropriate defaults, most commonly 0.55 to 0.70 for residential sectors and 0.60 to 0.70 for commercial, industrial and agricultural sectors.

* **Use of Emerging Technology default Net-to-Gross:** Some LED measures are still being claimed with the Emerging Technology default NTG value of 0.85. There are other measures that have been in portfolios for several years that are also claimed with this value. As directed in D.12-05-015, program administrators must propose and request approval from staff for the use of the emerging technology default. Additionally, D.12-05-015 requires that, in order for the emerging technology default to be used, the measure inclusion into the portfolio must be directly attributable to the emerging technology program activity. Simply including the emerging technology NTG designation in a workpaper or other document, with no documentation to support the emerging technology program influence claim, is not sufficient. ET NTGs were claimed inconsistently across PAs for the same measures. If only one PA claimed the ET NTG, staff revised that PA’s NTG to the standard DEER NTG. Also, if the ET study that introduced the measure was older than 2010, NTG was revised to the standard DEER NTG.
* **Use of constrained area program Net-to-Gross:** There are specific rules that apply to transmission, distribution, or generation constrained areas[[4]](#footnote-4). Measures in these constrained areas may claim a NTG or 0.85, however, customer incentives must also be “the higher of 75% of incremental measure cost, or what is available under prior policies.” Staff compared incentive claims for identical measures across constrained and non-constrained areas. For the most part, staff observed very little difference in these incentives. For measures in constrained areas with incentives at least 5% greater than incentives for identical measures in non-strained areas, staff accepted the 0.85 NTG value ordered in D.14-10-046. For all other measures, staff revised the claimed values to the standard DEER NTG values.
1. **DEER EUL for Screw-in Compact Fluorescent Lamps**

DEER requires a 0.523 multiplier on the listed EUL for residential interior CFLs of 9.67. All, or nearly all, of the PA’s claims for residential interior CFLs were submitted with an EUL of 9.67 without consideration for the required EUL multiplier. Staff reviewed and revised all EULs for residential interior CFLs to meet the DEER EUL requirements. Multiplying the DEER EUL by the required degradation multiplier results in an EUL of 5.06[[5]](#footnote-5). In previous years, screw-in CFLs were on the uncertain measures list, subject to ex post evaluations for final savings. In 2016, the Commission updated the DEER EUL to be equal to the product of the EUL year value and the degradation multiplier. Therefore, it is expected that all future claims will have the correct EUL value with no future adjustments being required starting with 2016 claims.

1. **Package HVAC Early Retirement Claims**

The Commission staff ex ante team reviewed the details of the SCE savings claims for its commercial HVAC ER program. Those claims were adjusted to be in conformance with the previous CPUC direction as well as staff direction to SCE staff regarding the requirements on the claims for that specific program. Commission direction regarding requirements for ER claims clearly place a burden on SCE to only submit such claims after an examination of evidence supporting or refuting such claims[[6]](#footnote-6).

“In D.11-07-030, we adopted an approach to establishing a baseline for ex ante gross savings values.491 This approach requires the review of the evidence related to one of the two baseline choices: (1) the pre-existing equipment used in the early retirement case; or (2) new equipment that is feasible to use and is code-compliant or an industry standard practice. Evidence relating to the reasons for the equipment replacement is used to make the baseline choice.

We note that D.11-07-030 may not reflect our clarification that the compelling evidence standard for the determination of baseline equipment must be applied to both possible outcomes.492 Specifically, D.11-07-030 notes that it is necessary to establish, by a preponderance of evidence, that the program has induced the replacement rather than merely caused an increase in efficiency in a replacement that would have occurred without the program.”

491 D.11-07-030, Appendix I to Attachment B.

492 D.11-07-030 at 40.

On 26 November, 2013 SCE filed Advice Letter 2973-E Request to Implement a Commercial HVAC Early Retirement Program. That advice letter was suspended to allow Commission staff review. During the review Commission staff brought the ER evidence requirements to SCE staff attention and began discussions on SCE proposals to meet those requirements. On February 5, 2014, the advice letter was approved effective 26 December, 2013. Over the course of several meetings during 2014 and 2015 Commission staff reiterated that SCE must implement a method to collect and evaluate evidence to support any ER claims to be submitted for the program. In reviewing submissions by SCE for this program during 2014 and 2015, Commission staff explained to SCE staff several times that their proposed approach did not satisfy the required preponderance of evidence analysis to establish that the program participating units were qualified to be treated as program induced ER. SCE’s 2014 and 2015 efforts centered mostly on evidence supporting a determination that the equipment **could** continue to provide service and failed to focus appropriately on program influence to determine if the equipment **would** continue in service. The **could** versus **would** distinction brings in the key requirement that program influence caused the replacement. The Commission ex ante team focused on the evidence of what would have happened absent the program ER designation and determined that an adjustment was warranted. The Commission ex ante team examined the claims for commercial package HVAC equipment from 2010 through the second quarter of 2016 by all IOUs to verify that the fraction of ER claims represents actual ER installations. This analysis, and the resultant adjustments to claims, is further supported as an installation rate adjustment allowed in the ESPI payment calculation process[[7]](#footnote-7) as well as an adjustment to gross savings for early retirement claims as discussed previously.

A summary of the analysis performed can be seen in the total tons of SCE commercial HVAC normal and early retirement claims in comparison to the commercial HVAC claims of the other IOUs. This comparison is shown in Table 1[[8]](#footnote-8). As the SCE ER claims rise the SCE normal replacement claims fall. At the same time SCE normal replacement claims fall the other IOUs normal replacement claims rise. This evidence indicates a likely labeling of normal replacement activity as ER in addition to actual ER activity. Since an early retirement claim represents several times the program cost and savings per claim compared to the normal replacement claims, the program reaches its goals and expends its budget much more rapidly when simply allowing normal replacements to be claimed as ER. This insufficient screening of ER participation has resulted in reduced overall participation in the SCE program compared to the increasing participation in the other IOU parallel programs. Reduced participation at higher cost seems to conflict with overall CPUC policy and direction relative to commercial HVAC.

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|  | **2010** | **2011** | **2012** | **2013** | **2014** | **2015** |
| **PGE - ROB** | 16,806 | 28,187 | 34,264 | 38,113 | 33,119 | 51,267 |
| **SCE-ROB** | 27,146 | 41,174 | 26,933 | 56,773 | 43,665 | 35,107 |
| **SCE-ER** | 0 | 0 | 0 | 0 | 1,443 | 12,626 |
| **SDGE-ROB** | 688 | 3,298 | 1,386 | 1,244 | 744 | 3,906 |
| **SDGE-ER** | 0 | 0 | 0 | 160 | 31 | 0 |

Table 1: Tons of commercial packaged HVAC claims by IOU Q1 2009 to Q2 2016

The adjustments made to the SCE commercial HVAC ER program claims are to remove a percentage that do not meet the preponderance of evidence standard that the program induced the early retirement rather than just caused an efficiency increase for a replacement that would happen independent of the program. Staff adjusted the early retirement portion of SCE’s commercial HVAC claims by applying a gross savings adjustment of 0.25, to reflect that the majority of SCE early retirement claims were in actuality normal replacement installations. This change reduces early retirement claims and associated savings by 75%[[9]](#footnote-9).

1. **Above Code Savings for Schools Programs**

All K-12 schools and community college measures and projects are specifically identified in the claims. Some measures are identified as early retirement; however, PAs are only allowed to claim above code savings for these measures[[10]](#footnote-10). Staff has revised any early retirement claims so that the claimed second period savings becomes the first period savings as well, which results in only the above-code savings is credited for the entire EUL.

1. This annual installation date based claims requirement was introduced in D.04-09-060 (page 33 and OP 14) , clarified in and reiterated in D.05-04-051 (page 55, Findings of Fact 36-42, Conclusion of Law 3, Ordering Paragraph 17), D.05-09-043 (page 84) and again in Resolution G-3510 . [↑](#footnote-ref-1)
2. See D.14-10-046 @ 77: “We will credit PAs with gross above-code savings, and allow a .85 NTG ratio for those savings (before market and spillover effects). [↑](#footnote-ref-2)
3. See CPUC resolution G-3497 (December 18, 2014) @61 [↑](#footnote-ref-3)
4. D.14-10-046 OP 9 [↑](#footnote-ref-4)
5. The DEER2008 EUL update included a “switching degradation factor” of 0.523 for indoor residential screw-in CFLs. Explicit calculations of EULs for CFLs are included in the DEER 2008 update documentation showing that the final EUL in years is always multiplied by the degradation factor. The DEER 2008 update documentation is available from www.deeresources.com: http://deeresources.com/files/deer0911planning/downloads/EUL\_Summary\_10-1-08.xls. The degradation factor is also included in ex ante database for DEER accessible via the REAI tool. Refer to the EUL table in the Support Tables section of the READI interface. [↑](#footnote-ref-5)
6. D.12-05-015 at 346 [↑](#footnote-ref-6)
7. D.13-09-023 at 51: “For measures that are not on the "deemed but high uncertainty" measure list, only the measure count will be subject to verification in calculating ESPI earnings (as well as any errors in the ex-ante parameter values and calculations included in the claim, of course). The installation rate represents the actual number of an EE measure (e.g., efficient lighting, advanced heating systems) put in place as compared to the claimed amount. We authorize Commission staff to adjust IOU claimed measure counts with verified installation rates for any EE measures in the portfolio, including those deemed measures not identified as highly uncertain. [↑](#footnote-ref-7)
8. Source: See sheet “Package HVAC Claims Charts“ in workbook “2015 ESPI Ex-Ante Workbook” located on the CPUC ESPI Website [↑](#footnote-ref-8)
9. Detailed analysis is included in the “2015 ESPI Ex-Ante Workbook” available on the [CPUC ESPI website](http://www.cpuc.ca.gov/General.aspx?id=4137) [↑](#footnote-ref-9)
10. See D.14-10-046 @ 77: “We will credit PAs with gross above-code savings, and allow a .85 NTG ratio for those savings (before market and spillover effects). [↑](#footnote-ref-10)