

To: Parties in R.12-01-005
From: Katie Wu, Regulatory Analyst
Subject: Final ESPI Uncertain List for 2013-14
Date: December 6, 2013

To all Parties in R.12-01-005,

On September 5, 2013, the Commission adopted D.13-09-023, which established the Efficiency Savings and Performance Incentive (ESPI) mechanism for the 2013-14 portfolio cycle and beyond. Attachment 3 of the decision included the draft list of deemed measures subject to ex post evaluation (the "2013 Uncertain List") for the purpose of award incentives based on energy savings.

In accordance with the timeline adopted in the decision, on October 31, 2013, Commission staff held a webinar to finalize the 2013 Uncertain List and discuss the 2014 Uncertain List. Given the timing, Commission staff elected to make the 2013 list identical to the 2014 list. Stakeholders in R.12-01-005 were asked to provide comments on the 2013-14 Uncertain List with regard to the following questions:

- Are there measures on the list where ex post study is not likely to lead to a better savings estimate than what we currently have?
- Are there measures on the list that will be overly burdensome or expensive to study?
- Are there measures that are not currently on the ESPI list that should be awarded on an ex post basis?

On November 21, 2013, Pacific Gas and Electric Company (PG&E), Southern California Edison Company (SCE), and the Natural Resources Defense Council (NRDC) posted comments to the Commission's Public Documents Area website. Comments can be found by searching for "ESPI" on the Public Documents Area website (<http://www.energydataweb.com/cpuc/home.aspx>) and clicking on "Comment." In general, the comments are summarized as:

- PG&E:
 - Add Commercial Whole Building to the 2014 list.
 - Remove computer network and workstation power management, occupancy sensor lighting controls, and variable speed pool pumps from the 2013-14 Uncertain List.
 - There are no measures on the list where ex post studies would not lead to better savings estimates and there are no measures that would be overly burdensome to study.
 - Clarify slides 12 and 13 from the October 31 presentation.
- SCE:
 - There are no additional technology groups that need to be added to the list.
 - Remove computer network and workstation power management, occupancy sensor lighting controls, T5 fluorescent lamps replacing metal halides, delamping of T12 lamps, variable speed pool pumps, and sprinklers from the 2013-14 Uncertain List.

- The P4 Uncertainty Analysis group should clearly define uncertainty ranges and parameters determined from actual portfolio measures/parameters in addition to (or instead of) expert opinion.
- Commission staff should establish a set of criteria to determine if the cost and time of the impact evaluation would be worth the investment.
- NRDC:
 - Clarify how the Uncertain List is coordinating with EM&V activities.
 - Clarify the Uncertain List with specific measure (or program) names and parameters that contribute to uncertainty.

Commission staff responses to comments are as follows:

- Each utility will have a unique 2013-14 Uncertain List. Some comments pertained to measures that were not the list for the commenting utility.
- The Commercial Whole Building program is a custom project and, as such, will be subject to ex post verification per D.13-09-023.
- Computer network and workstation power management software will remain on the 2013-14 Uncertain List because of uncertain baselines and lack of previous study. If the utilities continue to find little update of the measure in future program years, the utilities should consider removing the measure from their respective portfolios.
- Occupancy sensor lighting controls will remain on the 2013-14 Uncertain List because it remains an important measure in the 2013 program year and may continue to be significant in the 2014 program year. Commission staff intend to study this measure on an ex post basis regardless of the ESPI mechanism to verify savings, even if the measure is adopted into code.
- T5 linear fluorescents replacing metal halides will remain on the 2013-14 Uncertain List due to the high contribution to variance noted in the P4 Uncertainty Analysis results.
- Delamping of T12 lamps will remain on the 2013-14 Uncertain List because the measure has not been extensively studied historically and it collectively represents a large proportion of deemed savings statewide.
- Variable speed pool pumps are on the 2013-14 Uncertain List for San Diego Gas and Electric Company (SDG&E) only. Variable speed pool pumps will not be added to the 2013-14 Uncertain List for PG&E or SCE.
- Sprinklers will be removed from the 2013-14 Uncertain List for SCE due to low measure uptake. Sprinklers will remain on the 2013-14 Uncertain List for PG&E due to the significant projected savings.
- Slide 12 of the October 31 presentation identified non-residential onsite audits as a deemed measure in association with Commercial Whole Building due to the categorization method used for the P4 Uncertainty Analysis. While the Commercial Whole Building program is not tied to any specific existing measure, Commission staff found it logical to include non-residential audits under Commercial Whole Building.

- Slide 13 of the October 31 presentation is correct. The T5 linear fluorescent lamps and fixtures replacing metal halides is the only linear fluorescent lamp and fixture version on the 2013-14 Uncertain List.
- Commission staff and consultants are currently developing the draft 2013 Evaluation Plans. The Evaluation Plans are being drafted with the understanding that measures on the 2013-14 Uncertain List must be covered. EM&V activities will focus on specific parameters to study in order to reduce the uncertainty of the energy savings estimate. Stakeholders will have the opportunity to comment on the draft Plans once they are posted. Please note that exclusion from the 2013-14 Uncertain List does not preclude ex post study on any measure.

The final 2013-14 Uncertain List for each utility is attached to this memorandum as an appendix and posted to the CPUC Shareholder Incentive Mechanism website (<http://www.cpuc.ca.gov/PUC/energy/Energy+Efficiency/Shareholder+Incentive+Mechanism.htm>). In the coming months, Commission staff will continue to work with stakeholders to develop and refine the draft 2013 Evaluation Plans. Stakeholders are invited to participate in that process.

If you have any questions regarding the final 2013-14 Uncertain Lists, please contact Katie Wu at katie.wu@cpuc.ca.gov or 415.703.2452.

Thanks,
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**Appendix: List of Deemed Measures Subject to Ex Post Evaluation for Program Years
2013 and 2014**

Utility	Measure Description	Contribution to Portfolio (Gross Savings)		Comments on need
		2013-2014 Compliance Filing Portfolio	2010-2012 Portfolio Ex Ante Claims	
PGE	Total Portfolio (less C&S)	>1,710 GWH	> 4,000 GWH	
	Total Deemed Portfolio	> 933 GWH	> 2,090 GWH	
	Home Energy Reports (Residential Energy Advisor Program)	> 150 GWH	n/a	Behavioral program requires ex post evaluation of all claims.
	Screw-in CFLs of all types	> 100 GWH	> 550 GWH	Update of the gross baseline assumptions to account for CFLs replacing CFLs will also alter NTG and installation rate due to inter- relationships of values. Previous NTG values included CFL-CFL replacements, so net and gross analysis needs coordinated update. Details of amounts and timing of lamps placed into storage and removed to be installed require coordination with net and gross analysis.
	Computer network and workstation power management software	> 62 GWH	> 24 GWH	Major concern that supply of this software is standard practice; this measure has not been previously studied and impact assumptions need verification.
	Sprinklers - low pressure nozzles and micro conversions	> 45 GWH	> 30 GWH	Energy savings estimates uncertain due to unclear measure definition; this measure has not been previously studied and impact assumptions need verification.
	HVAC Quality Maintenance activities	> 40 GWH	> 37 GWH	Change in program design and maturing program offering with many new measures makes assumption for impact highly

			uncertain.	
	T5 fluorescent lamps and fixtures replacing metal halide	> 37 GWH	> 150 GWH	Update baseline of replaced lamp assumptions, net savings and installation rate; market move to T5 technology requires verification of assumptions.
	LED Surface, Pendant, Track, Accent, and Recessed Downlight	> 10 GWH	> 13 GWH	Update baseline of replaced lamp assumptions, net savings and installation rate; market move to LED technology requires verification of assumptions.
	Occupancy sensor lighting controls - integrated and wall/ceiling	> 7 GWH	> 50 GWH	Code changes may change standard practice.
	De-lamping of T12 lamps in existing fixtures	> 2 GWH	> 60 GWH	De-lamping may normally be a required action during retrofit of surrounding fixtures thus subject to code or other baseline consideration.
	Energy Upgrade California	new	n/a	Change in program design and maturing program offering makes assumption uncertain; normal replacement versus early retirement assumptions are uncertain.
SCE	Total Portfolio (less C&S)	> 1,870 GWH	> 4,300 GWH	
	Total Deemed Portfolio	> 1,000 GWH	> 3,390 GWH	
	Screw-in CFLs of all types	> 100 GWH	> 550 GWH	Update of the gross baseline assumptions to account for CFLs replacing CFLs will also alter NTG and installation rate due to inter-relationships of values. Previous NTG values included CFL-CFL replacements, so net and gross analysis needs coordinated update. Details of amounts and timing of lamps placed into storage and removed to be installed require coordination with net and gross analysis.

T5 fluorescent lamps and fixtures replacing metal halide	> 180 GWH	> 250 GWH	Update baseline of replaced lamp assumptions, net savings and installation rate; market move to T5 technology requires verification of assumptions.
Occupancy sensor lighting controls - integrated and wall/ceiling	>35 GWH	> 100 GWH	Code changes may change standard practice.
De-lamping of T12 lamps in existing fixtures		> 65 GWH	De-lamping may normally be a required action during retrofit of surrounding fixtures thus subject to code or other baseline consideration.
Home Energy Surveys (mail and phone)	> 10 GWH	> 45 GWH	Changing survey and audit methods and target population makes use of previous result inappropriate.
LED night lights	> 1 GWH	> 30 GWH	Assumptions of replaced equipment and use uncertain.
Computer network and workstation power management software	> 16 GWH	> 22 GWH	Major concern that supply of this software is standard practice; this measure has not been previously studied and impact assumptions need verification.
Sprinklers – low pressure nozzles and micro conversions	new	n/a	Energy savings estimates uncertain due to unclear measure definition; this measure has not been previously studied and impact assumptions need verification.
HVAC mini-split system	> 50 GWH	n/a	This new technology is now widely available yet expensive with limited applicability; performance has not been studied and free ridership is uncertain.
HVAC Quality Maintenance activities	> 30 GWH	n/a	Change in program design and maturing program offering with many new measures makes assumption for impact highly uncertain.

	Energy Upgrade California	new	n/a	Change in program design and shifting program offerings make assumptions uncertain; normal replacement versus early retirement assumptions are uncertain.
SDGE	Total Portfolio (less C&S)	> 495 GWH	> 775 GWH	
	Total Deemed Portfolio	> 225 GWH	> 543 GWH	
	Screw-in CFLs of all types	> 100 GWH	> 550 GWH	Update of the gross baseline assumptions to account for CFLs replacing CFLs will also alter NTG and installation rate due to inter-relationships of values. Previous NTG values included CFL-CFL replacements, so net and gross analysis needs coordinated update. Details of amounts and timing of lamps placed into storage and removed to be installed require coordination with net and gross analysis.
	Occupancy sensor lighting controls - integrated and wall/ceiling	> 10 GWH	> 20 GWH	Code changes may change standard practice.
	De-lamping of T12 lamps in existing fixtures	> 2 GWH	> 8 GWH	De-lamping may normally be a required action during retrofit of surrounding fixtures thus subject to code or other baseline consideration.
	HVAC Quality Maintenance activities	> 9 GWH	n/a	Change in program design and maturing program offering with many new measures makes assumption for impact highly uncertain.
	Variable speed pool pump	> 7 GWH	> 6 GWH	Rapid reduction in equipment pricing and improved efficiency makes gross and net savings uncertain.
	Energy Upgrade California	new	n/a	Change in program design and maturing program offering makes assumption uncertain; normal replacement versus early retirement assumptions are

				uncertain.
	Water savings kits/items (shower and faucet)		> 1 MMTherm	Energy impacts of this measure not subject to previous evaluation and assumption are uncertain; uncertain install rate and level of free riders.
SCG	Total Portfolio (less C&S)	> 55 MMTherm	> 77 MMTherm	
	Total Deemed Portfolio	> 19 MMTherm	> 28 MMTherm	
	Water savings kits/items (shower and faucet)	> 2.5 MMTherm	> 7.5 MMTherm	Energy impacts of this measure not subject to previous evaluation and assumption are uncertain; uncertain install rate and level of free riders.
	Pipe insulation - steam and hot water	> 3.4 MMTherm	> 4 MMTherm	Uncertain typical pipe internal and surrounding temperatures, install rate (measure eligibility) and level of free riders.