Final 2016 ESPI Uncertain List

IOU	Measure(s)	Discussion of uncertainty
PG&E	Screw-in CFLs of all types and wattage values in non-residential use.	Examine and review whether an update of the gross baseline assumptions to account for the type and wattage of the lamp being replaced is required. There is uncertainty regarding the common applications (building types and operating hours) for high wattage CFLs and NTG for high wattage CFL lamps.
PG&E	Computer network and workstation power management software	Major concern that use of this software is standard practice or high level of free riders; this measure has not been previously studied and impact assumptions need verification.
PG&E, (and other IOUs if claimed)	Irrigation - low pressure nozzles and micro or drip conversions and/or VSD addition.	Energy savings estimates uncertain due to unclear measure definition; this measure has not been previously studied and impact assumptions need verification.
PG&E	HVAC quality maintenance activities (both comprehensive and individual measures)	Changing program design, participating contractors and evolving measure offering makes assumption for impact highly uncertain. Need to establish standard practice maintenance baseline and coordinated NTG value for measures. Installation rate observed to vary by measure, contractor and delivery approach.
PG&E	Interior LED bay and high bay lighting	Examine and review whether updating metal halide baseline assumptions to consider high output linear fluorescent technologies as part of the standard practice (as indicated in recently published SCE/Navigant LED research findings) is needed. There is uncertainty in the standard practice assumptions of metal halide baselines.
PG&E	LED street lights and outdoor area lighting	Baseline assumptions and net savings including replaced lamp/ballast for early retirement versus standard practice for normal replacement and replace-on-burnout; market move to LED technology requires verification of assumptions.

PG&E	Multi-family home upgrade programs	Change in program design and maturing program offering makes assumption uncertain; normal replacement assumptions versus early retirement assumptions are uncertain. Participant's involvement in planned renovation activities makes existing NTG values for this segment of the residential sector highly uncertain.
PG&E	Water savings kits/items (including showerhead, shower thermostatic control valve, faucet and faucet aerator replacements)	Energy impacts of this measure not subject to previous evaluation and assumptions are uncertain; uncertain install rate and level of free riders. Recent CEC emergency rule making for water conservation affects what can be sold and will at least change the baseline for normal replacement, ROB and NC.
PG&E	Pipe and tank insulation - steam and hot water pipes and high temperature tanks	Uncertain typical pipe internal and surrounding temperatures, install rate (measure eligibility), EUL (length of time insulation remains in place in good functional condition) and level of free riders.
PG&E	Food-service equipment: fryers, steamers, ovens of all types, and holding cabinets.	There has been insufficient investigation into field performance (including hours of use and loading), EUL, and standard practice (for gross baseline and NTG). Direction was issued to PA's to perform this work in D.11-07-030, but from the recent workpaper submissions it appears the appropriate work has not been undertaken.
PG&E	Refrigeration case LED lighting and controls	The main areas of uncertainty are operating hours, standard practice for baseline determination and NTG. Additionally, it is unclear if the measures include application to new and replacement case situations or just retrofits of existing cases. There are likely varying values required for facilities with large, medium and small refrigeration case amounts as well as retail stores with different standard operating hours.
PG&E	Refrigeration case Anti-Sweat Heater (ASH) controls	The main areas of uncertainty are operating hour reductions, standard practice and NTG. Additionally, it is unclear if the measure includes application to new and replacement case situations or just retrofits of existing cases. There are likely varying values required for facilities with large, medium and small refrigeration case amounts as well as retail stores with different standard operating hours.

PG&E	PTAC and PTHP controllers	The main areas of uncertainty are operating hour reductions, baseline considerations for retrofits such as standard practice and NTG. In lodging applications this measures may be a code requirement and thus the standard practice needs to be established. The assumptions of early retirement for retrofit cases need investigation.
PG&E	High Efficiency Water heating for commercial and residential use – tankless/instantaneous water heaters and 0.9 and higher EF storage water heaters	The main areas of uncertainty are overall system differential water and energy use considering tank and pipe losses as well as firing efficiency, standard practice versus code baseline and NTG.
PG&E	Comparative energy usage disclosure programs- All types	Comparative energy usage programs are the only authorized behavioral programs. These programs shall be credited solely on an ex post basis per D.10-04-029.
SCE	Screw-in CFLs of all types and wattage values in non-residential use.	Examine and review whether an update of the gross baseline assumptions to account for the type and wattage of the lamp being replaced is required. There is uncertainty regarding the common applications (building types and operating hours) for high wattage CFLs and NTG for high wattage CFL lamps.
SCE	Computer network and workstation power management software	Major concern that use of this software is standard practice or high level of free riders; this measure has not been previously studied and impact assumptions need verification.
SCE	HVAC quality maintenance activities (both comprehensive and individual measures)	Changing program design, participating contractors and evolving measure offering makes assumption for impact highly uncertain. Need to establish standard practice maintenance baseline and coordinated NTG value for measures. Installation rate observed to vary by measure, contractor and delivery approach.
SCE	Interior LED bay and high bay lighting	Examine and review whether updating metal halide baseline assumptions to consider high output linear fluorescent technologies as part of the standard practice (as indicated in recently published SCE/Navigant LED research findings) is needed. There is uncertainty in the standard practice assumptions of metal halide baselines.
SCE	LED street lights and outdoor area lighting	Baseline assumptions and net savings including replaced lamp/ballast for early retirement versus standard practice for normal replacement and replace-on-burnout; market move to LED technology requires verification of assumptions.

SCE	Multi-family home upgrade programs	Change in program design and maturing program offering makes assumption uncertain; normal replacement assumptions versus early retirement assumptions are uncertain. Participant's involvement in planned renovation activities makes existing NTG values for this segment of the residential sector highly uncertain.
SCE, (and other IOUs if claimed)	Home Energy Surveys (mail, internet and phone)	Changing survey and audit methods and target population makes use of previous results inappropriate without continued update. Possible double counting with other claims and likely changes of attribution of savings to program activity with evolving technology standard choices.
SCE	Water savings kits/items (including showerhead, shower thermostatic control valve, faucet and faucet aerator replacements)	Energy impacts of this measure not subject to previous evaluation and assumptions are uncertain; uncertain install rate and level of free riders. Recent CEC emergency rule making for water conservation affects what can be sold and will at least change the baseline for normal replacement, ROB and NC.
SCE	Food-service equipment: fryers, steamers, ovens of all types, and holding cabinets.	There has been insufficient investigation into field performance (including hours of use and loading), EUL, and standard practice (for gross baseline and NTG). Direction was issued to PA's to perform this work in D.11-07-030, but from the recent workpaper submissions it appears the appropriate work has not been undertaken.
SCE	Refrigeration case LED lighting and controls	The main areas of uncertainty are operating hours, standard practice for baseline determination and NTG. Additionally, it is unclear if the measures include application to new and replacement case situations or just retrofits of existing cases. There are likely varying values required for facilities with large, medium and small refrigeration case amounts as well as retail stores with different standard operating hours.
SCE	Refrigeration case Anti-Sweat Heater (ASH) controls	The main areas of uncertainty are operating hour reductions, standard practice and NTG. Additionally, it is unclear if the measure includes application to new and replacement case situations or just retrofits of existing cases. There are likely varying values required for facilities with large, medium and small refrigeration case amounts as well as retail stores with different standard operating hours.

SCE	PTAC and PTHP controllers	The main areas of uncertainty are operating hour reductions, baseline considerations for retrofits such as standard practice and NTG. In lodging applications this measures may be a code requirement and thus the standard practice needs to be established. The assumptions of early retirement for retrofit cases need investigation.
SCE	Comparative energy usage disclosure programs- All types	Comparative energy usage programs are the only authorized behavioral programs. These programs shall be credited solely on an ex post basis per D.10-04-029.
SDG&E	Screw-in CFLs of all types and wattage values in non-residential use.	Examine and review whether an update of the gross baseline assumptions to account for the type and wattage of the lamp being replaced is required. There is uncertainty regarding the common applications (building types and operating hours) for high wattage CFLs and NTG for high wattage CFL lamps.
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SDG&E	High Efficiency Water heating for commercial and residential use – tankless/instantaneous water heaters and 0.9 and higher EF storage water heaters	The main areas of uncertainty are overall system differential water and energy use considering tank and pipe losses as well as firing efficiency, standard practice versus code baseline and NTG.
SDG&E	Comparative energy usage disclosure programs- All types	Comparative energy usage programs are the only authorized behavioral programs. These programs shall be credited solely on an ex post basis per D.10-04-029.
SCG	Multi-family home upgrade programs	Change in program design and maturing program offering makes assumption uncertain; normal replacement assumptions versus early retirement assumptions are uncertain. Participant's involvement in planned renovation activities makes existing NTG values for this segment of the residential sector highly uncertain.
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