

Pacific Gas and Electric Company's Comments on:
The Energy Efficiency Potential – 2018 and Beyond – Measure List
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Pacific Gas and Electric Company (PG&E) appreciates the opportunity to comment on the Navigant Energy Efficiency Potential – 2018 and Beyond – Measure List for the new Potential and Goals model. PG&E recognizes Navigant's goal of reducing the size of the measure list to 'measure groups', which will reduce the computational burden, minimize spurious precision, and will hopefully make model results be more actionable.

PG&E has two primary concerns with the new measure list: 1) the list ignores many measures which we believe to have significant stranded potential; 2) the list is too coarse in terms of technology efficiency levels. Additionally, PG&E has recommended a few new measures which may have significant potential in the near future. PG&E also wants to encourage Navigant to focus their energy on detailing how fuel substitution would be included in the model, rather than performing the calculations on what might pass this test.

All four of these comments are detailed below.

1. The reduced measure list misses significant stranded potential

PG&E understands Navigant compared the previous list of measures with EEStats and other resources to remove low energy efficiency (EE) potential measures. However, resources such as EEStats only identify how much EE by end use has been claimed in previous years by the Utilities. Yet, there is plenty of EE potential in the market that is either not cost effective under existing rules or the Utilities have not been allowed to claim savings (e.g. below code).

PG&E encourages Navigant to re-evaluate many of the 'Other Reviewed Technologies' (those removed from the new model measure list) for Technical Potential. If the measure is not cost effective, the model will screen it out. The Potential and Goals model should continue to strive for assessing the true Technical potential, not just the past regulatory potential.

The attached spread sheet has a measure-by-measure response; however some examples PG&E hopes Navigant will reconsider include:

- Commercial HVAC Duct Sealing measure
- Many Industrial and Commercial Refrigeration measures
- Several Residential Building Envelope measures

2. The reduced measure list is too coarse in terms of technology efficiency levels

PG&E, again, recognizes Navigant's intent for reducing the measure list in the new Potential and Goals model. However, reducing the list should not be at the expense of actionable information. PG&E is primarily concerned the new list will not provide sufficient information for products and program teams to make decisions. For example, the previous model included a rich set of measures for Commercial HVAC including:

- Advanced Package Rooftop AC (> EER 12) - Emerging
- EER Rated Package Rooftop AC (EER 11)
- EER Rated Package Rooftop AC (EER 11)
- SEER Rated Package Rooftop AC (SEER 14)
- SEER Rated Package Rooftop AC (SEER 15)
- SEER Rated Package Rooftop HP (SEER 14)
- SEER Rated Package Rooftop HP (SEER 15)
- SEER Rated Split System AC (SEER 14)
- SEER Rated Split System AC (SEER 15)
- SEER Rated Split System HP (SEER 14)
- SEER Rated Split System HP (SEER 15)
- ...

However the new Commercial HVAC measure list is very coarse:

- Packaged Rooftop/Split AC
- Packaged Rooftop/Split Heat Pump

The new categories (all two of them) may be sufficient if they can be split by efficiency levels. For example, can we split these between 'Code' and 'High Efficiency'? Commercial HVAC is only one of several end uses which PG&E would like to see a little more resolution. Other measures are detailed in the attached spreadsheet.

PG&E has identified a few new measures we would like to see added to the list. These are new end uses which we expect to see growing potential over the next few years. They include:

- Agricultural, Electric, Lighting: Hort. Interior LED grow lighting. SCE has a pilot program underway, and we expect growing potential over next decade (pun intended)



- Commercial, Electric, AppPlug: Television and Displays. This is an Energy star spec. and should be in COM (study can be found here: <http://aceee.org/files/proceedings/2014/data/papers/9-881.pdf>)
- Residential, Electric, AppPlug: Air Cleaners/purifiers. This is an Energy Star RPP line item
- Residential & Commercial, Both, HVAC: Quality Maintenance. This is a new PG&E offering that we believe is worth including

3. Fuel switching

Fuel switching programs are subject to the three prong test, the requirements of which are detailed below. Given the rigor of this test, PG&E believes Navigant should focus their energy on detailing how fuel substitution would be included in the model, rather than performing the calculations on what might pass this test. The role of demonstrating what could pass is best addressed by a program administrator wishing to offer such a program. Once a program is developed by a program administrator, has successfully passed the test, and then is incorporated into a program offering, then it would be appropriate to include it in the Potential Study. Furthermore, it's not clear to PG&E that any special modification needs to be made to the Potential Study to accommodate such measures. It seems likely that they could be incorporated by use of the opposite sign on the kwh or therm savings to indicate savings or increased load.

Per version 5 of the Policy Manual:

“Fuel-substitution programs/projects, whether applied to retrofit or new construction applications, must pass the following three-prong test to be considered further for funding (Rules for fuel substitution programs were most recently modified by D.09-12-022):

- a) The program/measure/project must not increase source-BTU consumption. Proponents of fuel substitution programs should calculate the source-BTU impacts using the current CEC-established heat rate.
- b) The program/measure/project must have TRC and PAC benefit-cost ratio of 1.0 or greater. The TRC and PAC tests used for this purpose should be developed in a manner consistent with Rule IV.4.
- c) The program/measure/project must not adversely impact the environment. To quantify this impact, respondents should compare the environmental costs with and without the program using the most recently adopted values for avoided costs of emissions. The burden of proof lies with the sponsoring party to show that the material environmental impacts have been adequately considered in the

analysis.”