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Joint Agency Staff Workshop on Building Decarbonization pre-conference public comments by Kelly Murphy

Additional submitted attachment is included below.

Public comments by Kelly Murphy – as an individual
on the
Joint Agency Workshop on Building Decarbonization to be held July 30, 2019
Docket #: 19-IEPR-06
Project Title: Energy Efficiency and Building Decarbonization
Submitted July 24, 2019
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SUBJECT:
Comments preceding the July 30th, 2019 Joint Agency Workshop on Building Decarbonization
Docket #: 19-IEPR-06

Commissioners and Staffs:

I appreciate the opportunity to pre-comment on the California Energy Commission (CEC) and California Public Utilities Commission (CPUC) joint agency Building Decarbonization Workshop being held on July 30, 2019 conducted jointly as part of the CEC's 2019 Integrated Energy Policy Report (IEPR) and the CPUC's Building Decarbonization Order Instituting Rulemaking (OIR) (R. 19-01-011) proceedings.

Currently, I am not a Party to these CEC or CPUC dockets, therefore my submittal is a public comment not associated with ALJ Colon Rizzo's July 16th ruling requesting comments from Docket Parties.

Public Comment by section from the joint staff Attachment A

#8) Comment on whether the Staff Proposal's analysis and recommendations for the BUILD program's technology eligibility criteria, process for evaluating new technologies, guidelines and evaluation metrics, and criteria for scoring and selecting projects are reasonable.

Eligible Technologies:
The "clean heating technologies" that will be targeted in BUILD and TECH should include heat pump technologies for space and water heating, and solar thermal technologies for water heating. Other technologies that achieve comparable heating-related GHG emission reductions to heat pumps and solar thermal in new and/or existing homes should also be considered.

Comment: Agreed – in particular, Title 24 compliant PV driven Solar Water Heating with Electric Backup will be a significant enabler for faster GHG savings and at greater scale. Both OG-100 and OG-300 are certification programs, not a standards. OG-300 provides compliance assessment based on the requirements found in the ICC 900/SRCC 300 standard. Right now, that standard is referenced in the 2018 IBC, IPC, IRC, IMC, ISPSC from ICC and the 2018 USEHC from IAPMO. It is also referenced in the EPA ENERGY STAR Residential Water Heater Specification and in Title 24 in CA (California Energy Code).

I see this syncing with CPUC's aim for coordination of decarbonization with Title 24 State Building Code.

Information Clarification: My employer has achieved OG-100 & OG-300 Certification compliance along with the associated Energy Star Certifications for each of two versions of PV-driven Solar (Thermal) Water Heating Systems with Electric Backup.

EVALUATION METRICS

BUILD
Total avoided GHGs, number of low-emission systems installed, projected utility bill savings, cost per metric ton of avoided GHG Emissions.

TECH
Total avoided GHGs, market share of eligible technologies, projected utility bill savings, cost per metric ton of avoided GHG emissions.

Comment: Agreed – Again, Title 24 Compliant PV driven Solar (Thermal) Water Heating with Electric Backup (PV-SWHEB) will provide all these required metrics.

2.2 Procedural History of R.19-01-011
In January 2019, the CPUC instituted a new rulemaking on building decarbonization (R.19-01-011). The initial scope of this proceeding was designed to be inclusive of any alternatives that could lead to the reduction of GHG emissions associated with energy use in buildings.

3.4 Guiding Principles
~ The revised Guiding Principles are listed here:
~ #2 **Path to carbon neutrality:** The CPUC should focus on the most promising and economic strategies to reduce building emissions in line with the statewide goal of achieving carbon neutrality by 2045 or sooner.

Comment: Agreed – Since > 92% of all California's WHs are Natural Gas, a combined PV-SWHEB contributes directly to large scale reduction of embedded GHG infrastructure.

4.4.3 Incentive Structure
~ Staff propose to use the 2019 software used to determine compliance with the Title 24 performance approach for residential buildings (California Building Energy Code Compliance-Residential, CBECC-Res) to calculate the incentive levels based on expected GHG emission reductions from a GHG baseline defined in the next section.[42] This approach will have lower implementation costs because the CBECC-Res software will not need to be modified and maintained over the BUILD program period to calculate incentives for individual projects.

~ Any technology option that receives Title 24 performance credit cannot receive an incentive from the BUILD program. For example, if a builder uses a Northwest Energy Efficiency Alliance (NEEA) Tier 3 heat pump to comply with the Building Energy Efficiency Standards, they may not receive a BUILD incentive for that heat pump. The intent is to avoid providing incentives for equipment or installations that the builder would have had to install anyway to comply with the mandatory standards.

Comment: Disagree – SWHEB is a performance option in CBECC-Res, however, it is not at all considered equipment that a builder would have typically installed anyway.

4.4.6 Kicker Incentives
Energy Commission Staff recommends including additional BUILD incentives for a small number of technologies that will provide incremental GHG emission reductions beyond the basic incentives introduced above. These additional "kicker incentives" will only be available for projects that qualify for one or more of the basic incentives introduced above. Examples of "kicker incentives" include very high-efficiency heat pumps for space cooling, electric battery technologies where a PV system is installed, heat pump water heaters that use low global warming potential (GWP) refrigerants, or design assistance incentives to fund complex efficient designs.

Comment: Like batteries, SWHEB is storage and we recommend it be added to this Kicker specification.

5.2 Program Architecture & the Program Implementer
This effort will focus a long-term approach to promote electric heating equipment (space and water).

Comment: Agreed enthusiastically

6.4 Potential Incentive Allocation Schema
~ Water Heating Heat Pump WH Tier 3 [65]
~ Solar Thermal [66]
Footnotes # 65 and # 66
[65] Defined in NEEA's HPWH Qualified Products List

Comment: Agreed and already included in Title 24

[66] Solar thermal performance specification to be determined. BUILD will be aligned with and complement other incentive programs. For solar thermal technologies fully incentivized by other programs, they may be removed from eligible technologies as part of SB 1477. Alternatively, SB 1477 incentive may be offered in an amount that covers any gap cost for solar thermal technologies.

Comment: Strongly disagree with speculating that Solar Thermal could be removed from eligible technologies. During the next 5 – 10 years, not only will PV-SWHEB greatly accelerate the current < 1% market share of HPWHs market now but will do so in a highly cost-effective way while simultaneously mitigating circuit constraints and concurrently providing emerging Distribution grid-edge services.