

DOCKETED

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Cc: [Kevin Hamilton](#); [Bob Gould PSR](#); [Alice Sung](#)
Subject: 19-SB-100 and SB100 Non-Energy Benefits, Social Costs and Reliability Analysis comments
Date: Friday, November 12, 2021 5:00:31 PM

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Thank you for holding the workshop on Non Energy Benefits. Please consider the following general comments:

1. Include the NEBs of energy efficiency in your modeling scenarios, because energy efficiency is a key first step in reducing carbon emissions and decarbonizing our buildings and power grid.

Low income weatherization programs can produce improvements in improved thermal comfort, indoor air quality, health, safety, and energy equity that can be quite substantial. The workshop presentations and modeling plans do not appear to seriously consider these impacts.

2. Consider NEB utility programs in other states. Consult analyses by RMI, ACEEE and others.

3. Factor in the efficiency impacts on reduced peak demand and downsizing of HVAC and PV systems.

4. Factor in the rapidly growing average and peak demands for cooling due to climate change.

5. Factor in the benefits of energy efficiency (passive and active) on short term passive survivability during power outages and long term energy, carbon, and cost savings. Consider also the avoided costs of installing backup generators in a large number of homes and other buildings.

I can provide supporting information as needed.

Sincerely,
Tom

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***CLIMATE RESILIENCE, ADAPTATION, & MITIGATION (CRAM)***

Adjusting for New ABNORMALS: Adapting Buildings to Extreme Heat and Power Outages ([Phillips and Higbee, 2021](#). EEBA High Performance Home Summit)

Climate Adaptation and Resilience credits, Collaborative for High Performance Schools Core Criteria, National and California Criteria ([CHPS 2019, 2020](#)).

Adjusting for New Normals: Adapting Buildings to Extreme Heat and Power Outages ([Phillips and Higbee, 2018](#)). Conference on Health, Environment, and Energy, ACEEE. 2020 update, available on request.

The Heat is On: Future Proofing Buildings for Climate Change ([Phillips, 2017](#). Presentation at Beyond Energy Efficiency 2017, Build It Green).

Overheating and passive habitability: indoor health and heat indices ([Holmes, Phillips & Wilson, BR&I 2016](#))

Achieving Sustainable, Resilient Homes ([Phillips, 2014](#). Inst. of Medicine, Post Disaster Recovery Workshop)

Bigger, Longer Heat Storms Are Coming Soon: Will Your Building Keep Its Cool? ([Phillips, 2013](#). Resilient Design Institute)

## **IEQ & POLLUTANT INTRUSION**

[Kitchen Range Hoods](#): Best Practice Recommendations and NAPHN **presentation** (Phillips, 2018)

Reducing Outdoor Contaminants in Indoor Spaces ([ROCIS](#)) Initiative: White paper, workshop presentations, compendia

Indoor environmental quality research needs for low-energy homes ([Phillips & Levin](#), STBR 2015); Levin & Phillips, 2011, Indoor Environmental Quality: Research Roadmap 2012–2030: Energy-Related Priorities, [CEC Final Report # CEC-500-2015-012](#)