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Comments from Decarbonization's Last Mile regarding AB 3232

Additional submitted attachment is included below.

Decarbonization's Last Mile
Tanya A. Barham, Chair
tanyab@communityenergylabs.com

Commissioner Andrew McAllister
California Energy Commission
1516 9th Street, MS 34
Sacramento, California 95814

Dear Commissioner McAllister,

With this letter, the undersigned organizations, who are members of “Decarbonization’s Last Mile,” respectfully submit the following comments regarding the Building Decarbonization Assessment (Assessment) that the California Energy Commission (Commission) is developing pursuant to Assembly Bill (AB) 3232.

Decarbonization's Last Mile is a group of scientists, entrepreneurs and technologists dedicated to making buildings clean, energy efficient and impactful in a decarbonizing future. More specifically, each of our organizations is working in various ways to provide the data and technology needed to enable buildings and energy devices to adjust their power usage to adapt to changing grid conditions, such as the availability of wind and solar electricity. As such, we are deeply committed to the core purpose of AB 3232: enabling zero-carbon buildings, and we commend the commission for their very important work on this topic.

We believe that the core purposes of AB 3232 would be further enhanced if the commission were to consider the following comments.

Specifically, we encourage the Commission to promote open and interoperable standards for communication with systems controlling electrical loads in buildings in response to grid signals. Such standards will contribute to achieving California’s ambitious decarbonization goals. While imperfect, standards such as IEEE 2030.5, ANSI/CTA 2045 and OpenADR show significant promise by enabling large energy devices, such as HVAC systems, water heating systems and energy storage resources to be coordinated in a way that can provide valuable grid services and enable buildings to more optimally use variable wind and solar energy resources. There is still work to be done to make them truly open standards for the entire market rather than be reliant on how open particular manufacturers are. This is where the commission could be helpful in opening up the entire ecosystem to innovation by third parties in a transparent way.

Enabling large energy consuming devices in buildings to be flexible has tremendous value, both in terms of avoided grid infrastructure costs (avoided transmission and distribution infrastructure and avoided costs from fossil fuel power plants), and by enabling the transition to variable energy sources of electricity such as wind and solar. The overall value of flexible grid services can range between \$50 and \$300 per kW per year, or as much as \$3,000/year for a medium-sized building with 10kW of flexible load. Good communications standards is the first step to unlocking this value. Based on a report from the Brattle Group, the overall value of flexibility in California could exceed 1.5 billion per year.¹ Failing to adopt effective standards for building communications would dramatically inhibit this potential savings and impede California’s policy goals associated with decarbonization.

We are particularly concerned about the fact that a number of HVAC thermostat manufacturers, inverter manufacturers, inverter, and battery manufacturers do not allow communications with their devices through open protocols in a way that would enable interoperability. We suggest that the commission require that all large energy devices be required to comply with at least one of the three standards above.

We thank the commission for the opportunity to comment on the Building Decarbonization Assessment that the California Energy Commission is developing pursuant to AB 3232.

Sincerely,

Kay Aikin

Kay Aikin
CEO

Paul D. Hines

Paul D. Hines
CEO

Tanya A. Barham

Tanya A. Barham
CEO



John T. Powers

John Powers
CEO

Ron Bernstein

Ron Bernstein
CEO

Samuel V. Golding

Samuel V. Golding
President



¹ Based on results from “The National Potential for Load Flexibility” by Hledik et al, The Brattle Group, June 2019. Results were adjusted from the US-wide figures provided in the report for the California population.