

ADVANCED ENERGY BUYERS GROUP

the policy voice of advanced energy purchasers

COMMENTS OF THE ADVANCED ENERGY BUYERS GROUP

In Response to the House Select Committee on the Climate Crisis
Request for Information

November 22, 2019

I. INTRODUCTION

The Advanced Energy Buyers Group (“AEBG”) on behalf of large energy users¹ appreciates the opportunity to provide initial comments in response to the request for information (“RFI”) put forward by the Select Committee on the Climate Crisis (“SCCC” or “Committee”) in the House of Representatives. The potential for Congressional action on climate change is of great interest and potential benefit to large customers, especially those invested in a cost-effective, reliable transition to a 100% clean energy future for both their own operations and the

¹ These comments represent the consensus view of the Advanced Energy Buyers Group (information and membership available at <https://www.advancedenergybuyersgroup.org/>). However, this document does not necessarily reflect the position of any specific member of the AEBG, and these comments should not be attributed to any individual company or companies participating in the AEBG.

broader economy. AEBG looks forward to remaining engaged as the Committee explores this complex and important topic.

One element we were very glad to see highlighted in the RFI is the acknowledgement that the transition to a clean energy future “must involve local, state, and tribal governments, *businesses*, academic institutions, non-profits, and all residents of the United States...”

(emphasis added). AEBG members have keenly considered the short-term costs and long-term risks associated with increased carbon emissions, and our companies are currently addressing our own environmental and sustainability goals through procurement of cost-competitive renewable energy projects, energy efficiency upgrades, and pursuit of energy storage and other advanced energy resources. The report by the National Climate Assessment earlier this year only further demonstrates the economic risks and potential adverse impacts of climate change to our country and to our businesses.

As Congress considers legislative action to address the risks posed by climate change, AEBG supports policies that would accelerate adoption of cleaner energy resources, particularly policies that complement and support our own progress toward our corporate sustainability goals. Any legislative or regulatory actions should follow the same principles that we have followed in our own sustainability efforts, seeking least-cost solutions to reduce climate impacts. Specifically, such policies should be market-based, and allow all advanced energy technologies to compete to provide the most cost-effective approach to addressing the challenge of climate change. Congress should work with corporate buyers of renewable and other advanced energy resources, such as members of the AEBG, to ensure that Federal action will complement, and not interrupt, our progress toward our own sustainability goals.

Members of the AEBG, as large electricity customers, share a desire for the electricity we consume to be *reliable, affordable, and clean*. Our comments reflect these three priorities as they outline our perspective on the transition to a clean energy economy, articulate four guiding principles to inform the Committee’s exploration of potential policy pathways, and respond to some of the specific questions raised in the RFI.

II. ABOUT THE ADVANCED ENERGY BUYERS GROUP

The Advanced Energy Buyers Group is a business-led coalition of large energy users engaging on policies to expand opportunities to procure energy that is secure, clean, and affordable. Members of the Buyers Group are market leaders and major employers spanning different industry segments, including technology, retail, and manufacturing. Our companies are among the 71% of Fortune 100 companies and 43% of Fortune 500 companies that have established renewable and/or climate targets as part of our corporate sustainability commitments. We share a common interest in expanding our use of advanced energy, such as renewable energy like wind, solar, geothermal, and hydropower; demand-side resources like energy efficiency, demand response, and energy storage; and onsite generation from solar, advanced natural gas turbines, and fuel cells. In addition to pursuing advanced energy for our own operations, we also share a goal to accelerate the transition to an advanced energy future that benefits all ratepayers, including our customers and employees.

In 2017, members of the AEBG totaled over \$1 trillion in revenue and collectively consumed over 18 TWh of electricity, including over 11 TWh hours of renewable electricity, equivalent to the electricity sales for the states of North Dakota and Delaware, respectively.

III. OVERVIEW OF AEBG'S PERSPECTIVE

A. Importance of Including Commercial and Industrial Customers in the Transition to a 100% Clean Electricity System

Large corporate customers are major drivers of the growth of renewable and advanced energy technologies; as noted above, 71% of Fortune 100 companies and 43% of Fortune 500 companies have established renewable and/or climate targets as part of their corporate sustainability commitments. Companies are setting these goals for multiple reasons, including obtaining cost savings from renewable energy, meeting the needs and expectations of their employees and the communities where they work, responding to concerns from leadership and boards of directors regarding the risks of climate change, and responding to customer preferences to be aligned with brands that support clean energy and environmental goals.

To fulfill their commitments, companies such as members of the AEBG are increasing their purchases of advanced energy technologies. Since 2008, commercial and industrial customers have signed contracts to procure 22 gigawatts (GW) of renewable energy, including a record of 7.15 GW in 2019 year-to-date. Most recently, large renewable energy purchases to power their operations were announced by both Google (18 power purchase agreements for a total of 1,600 megawatts²) and Amazon (two power purchase agreements totaling 215 MW of solar in Virginia and North Carolina³).

In addition to renewable energy, companies are increasing their investments in energy efficiency, demand response, distributed energy resources, and energy storage, to make their

² Eamon Barrett, "Google Has Bought Enough Renewable Electricity to Power All of Uruguay," *Fortune* (Sept. 20, 2019), <https://fortune.com/2019/09/20/google-renewable-energy-uruguay-climate-week/>

³ Catherine Morehouse, "Amazon announces 265 MW in new solar, wind as part of 100% renewables pledge," *Utility Dive*, <https://www.utilitydive.com/news/amazon-announces-265-mw-in-new-solar-wind-as-part-of-100-renewables-pledge/565788/>

operations more resilient, save them money, and provide benefits to the grid. For example, Microsoft's Virginia data center has behind the meter battery storage for backup power and power quality, piloting an advanced uninterruptible power supply system with capability to support both critical load and grid services applications; this project provides around the clock reliability at the host site while providing frequency regulation service to the wholesale market. Other data centers, including those run by Equinix, Apple, and eBay, are utilizing fuel cells to provide backup power in the event of grid failure. In another example, over two-dozen Walmart stores in California have installed advanced energy storage systems to shave the retailer's peak load, balance out on-site solar generation with store consumption, and help the local utility, Southern California Edison, reduce peak demand on the grid in conjunction with a broader grid modernization plan. Similarly, over 800 Target stores in 31 states participate in demand-response programs, reducing peak demand and helping to keep the electric system in balance while also delivering operational savings.

As Congress seeks to enact ambitious clean energy policy goals, AEBG encourages looking to C&I customers as valuable partners in this transition. By enacting policies that enable greater action by C&I customers—or, at the very least, avoiding policies that hinder such actions—Congress can accelerate the transition to a low-carbon economy while meeting the needs of large C&I customers. Our comments here reflect the importance of ensuring that any action by Congress acknowledges corporate action to date and enables future progress by members of AEBG and other companies.

B. Importance of Maintaining Reliability and Affordability During the Transition to a Clean Energy Economy

Maintaining affordable electric service is an important component of fostering a healthy business environment in the U.S., while failure to do so will have a direct impact on the cost of

doing business. At the same time, companies also place significant value on grid reliability; for example, an outage at a data center costs an average of \$9,000 per minute.⁴ As AEBG members track toward renewable energy and sustainability goals, our companies cannot afford to compromise on cost or reliability. We hope and expect that Congress will adopt the same strict commitment to affordability and reliability when designing and implementing clean energy policies.

It is our view, consistent with our own experience, that emission reductions need not come at the expense of the affordability and reliability of the electricity system or other sectors of the economy. However, a cost-effective and reliable transition to a low-carbon economy is not guaranteed. To achieve emission reductions at least cost, Congress must carefully weigh different policy options and select those that foster technology-neutral competition and create incentives for innovation.

C. Guiding Principles to Inform the SCCC's Policy Recommendations

Consistent with the issues discussed above, AEBG offers the following four guiding principles, which apply regardless of the specific policy or suite of policies the Committee pursues; we will use these principles as a benchmark to evaluate any policy proposals the Committee advances. Specifically, AEBG recommends that any policies put forward by the Congress do the following:

1. **Support Voluntary Customer Action.** Federal policies to accelerate a transition to a clean energy economy should be compatible with and encouraging of voluntary actions to reduce emissions taken by businesses, institutions, municipalities, and residential customers.

⁴ Ponemon Institute, *Cost of Data Center Outages* (January 2016), available at https://www.vertivco.com/globalassets/documents/reports/2016-cost-of-data-center-outages-11-11_51190_1.pdf.

2. **Prioritize Affordability.** Policies should be designed with affordability as a core objective, not an afterthought.
3. **Maintain Reliability.** Companies depend on always-on electricity and readily available transportation infrastructure to meet business needs, and a clean energy future must not compromise on these fundamental inputs to a healthy economy.
4. **Encourage Technology-Neutral Competition and Foster Innovation.** Congress should prioritize policy pathways that allow all technologies to compete to deliver emission reductions reliably and cost-effectively. In addition to ensuring that new policies are technology-neutral, this will also involve removing financial or regulatory barriers faced by certain technologies, and will necessitate special consideration of often-ignored demand-side resources such as energy efficiency, as well as technologies not yet in commercial use.

IV. RESPONSES TO SELECT SCCC QUESTIONS

In addition to and consistent with the overarching observations and recommendations above, AEBG provides the following initial responses to a subset of the questions raised by the Committee's RFI.

1. **What policies should Congress adopt to decarbonize the following sectors consistent with meeting or exceeding net-zero emissions by mid-century? Where possible, please provide analytical support that demonstrates that the recommended policies achieve the goal.**

- a. **Transportation**

As noted above, AEBG members are pursuing a range of advanced energy technologies to meet our own business needs, including incorporating electric vehicles (EVs) and other zero-emission vehicles into our fleets and installing electric vehicle service equipment (EVSE) at our

facilities for use by our employees and customers. Federal action should seek to enable customer-driven adoption of zero-emission vehicles through a mix of financial support and incentives, development of standards and best practices, and research and development.

Specifically, we recommend considering the following policy actions:

Financial support through tax policies and grants:

- Support for upfront incentives for zero-emission vehicles and charging or fueling infrastructure through tax incentives and other means, speeding both private and public adoption of zero-emission vehicles.
- Financial support for investment in EVSE through competitive grants and other means, to ensure that fleet owners and other EV users have access to charging infrastructure where and when they need it.

Development of standards and best practices:

- Support for development of industry standards, making it easier for companies to make EV and infrastructure procurement decisions without worrying about interoperability and technical obsolescence.
- Support for development of best practices for utility tariffs, aiming to avoid disincentives (e.g., those sometime created by utility demand charges) and to further rate design supporting EV adoption (e.g., effective time-varying rates).

Research and development:

- Support for research and development to bring zero-emission vehicles to cost parity with conventional vehicles more quickly and to solve challenges currently preventing more widespread zero-emission vehicle adoption by fleet owners, including lack of vehicle

options, range anxiety, and electricity system considerations (e.g., operation of vehicle fleets during electrical outages).

These actions are all within the purview of Congress, working with the Department of Energy, the National Labs, and other federal agencies, and would complement efforts at the state level and by consumers such as our companies.

b. Electric power. The Select Committee would like policy ideas across the electricity sector but requests specific comment on two areas.

AEBG acknowledges that there are many viable policy ideas that would drive cost-effective emission reductions from the electricity sector; at this time, AEBG does not take a position in favor of any particular approach, but rather directs the Committee to consider the guiding principles above when designing and implementing a carbon price, cap-and-trade market, clean energy standard, or any other policy intended to address emissions from the electricity sector. We additionally note the importance of complementary policies not directly tied to carbon emission reductions, including financial incentives for advanced energy technologies, funding for research and development, and support of competitive wholesale and retail electricity markets. Such policies have value immediately, whether or not Congress pursues specific policies related to carbon emission reduction. Prior to addressing the Committee's two specific questions regarding the electric power system, we offer a few thoughts on these three relevant complementary policies.

First, financial incentives have been instrumental in enabling renewable energy resources such as wind and solar to compete and enter the market, helping these technologies to fall rapidly in price and improve in performance as deployment has risen. Financial incentives remain an important tool to help bring newer technologies to scale in an industry still dominated by incumbent resources that have themselves benefitted from significant financial support.

Second, research and development will continue to be necessary to develop the new technologies and tools to meet our shifting electricity system needs—for example, to address the growing need for long-duration (seasonal) storage.

Third, competitive wholesale electricity markets have a key role to play in enabling both market entry of new technologies and participation by customers in the transition to a zero-carbon electricity system. Ensuring that advanced energy technologies—including large-scale renewable energy as well as energy storage and DERs—are able to fully compete in these markets, and providing customers with choice and flexibility to take action and innovate, will allow for an electricity system that is not only cost-effective, reliable, and clean, but also aligned with the needs and preferences of the customers it serves. Through its oversight role, Congress can and should work with the Federal Regulatory Energy Commission (“FERC”) to address barriers to participation by advanced energy technologies.

Relatedly, expansion of competitive wholesale markets in regions that currently still operate without them—particularly the Southeast and much of the Western United States—would also bring multiple benefits of relevance to the Committee’s goals. Broader organized wholesale markets open opportunities to: reduce curtailment of renewable energy due to greater operational coordination over a broader geographic area; facilitate more efficient planning and buildout of generation resources and transmission infrastructure; improve reliability and reduce costs for all consumers; and provide additional flexibility and choice for customers such as members of the AEBG seeking renewable energy and other advanced energy resources to meet our needs. Notably, the vast majority of C&I renewable energy contracts have been transacted in regions with organized competitive wholesale markets, with Texas the clear leader for such projects. In addition to expansion of competitive wholesale markets, expansion of competitive

retail markets can also help companies achieve their renewable energy and advanced energy goals. Partial or full retail choice gives C&I customers the most flexibility and control in meeting their specific needs through customized solutions.⁵ Congress can provide funding and research support for states and regions to study, explore, and implement expansion of competitive wholesale markets and competitive retail markets, and can also work with FERC as states explore wholesale market expansion.

i. If you recommend a Clean Energy Standard, how should it be designed?

As noted above, AEBG does not take a position at this time regarding specific preferred policies to address emissions from the electricity sector. However, we point back to the guiding principles outlined above, and further recommend that any Clean Energy Standard (“CES”) be designed such that it avoids double-counting actions taken voluntarily by customers such as our companies, avoids double-charging customers that have already voluntarily taken action (and incurred costs) to transition to low- and zero-emitting resources at a faster pace than mandated by the CES, and allows all technologies to compete on the basis of cost and emission reduction capabilities. We also urge against unnecessary complexity in the design and implementation of a CES to avoid diluting the market signal for investment and innovation.

ii. How can Congress expedite the permitting and siting of high-voltage interstate transmission lines to carry renewable energy to load centers.

The AEBG appreciates the Committee’s focus on the importance of high-voltage interstate transmission lines to facilitate development of renewable energy needed to transition to a clean energy economy. AEBG encourages Congress to work with FERC, the Department of

⁵ For guidance on a responsible and fair expansion of retail competition, see Advanced Energy Buyers Group, *Renewable energy offerings that work for companies: A practical guide to meeting corporate renewable energy demand in vertically integrated markets* (April 2019), <https://info.aee.net/renewable-energy-offerings-that-work>.

Energy, and other relevant agencies to address this challenge, and we direct the Committee to recent comments filed by AEBG in response to FERC’s Notice of Inquiry regarding transmission incentives and policies.⁶

c. Industry

AEBG reiterates our request that any policies developed by the Committee encourage and allow C&I customers to chart their own path to decarbonization at or ahead of the schedule mandated by Congress. However, we also encourage Congress to enact policies that level the playing field such that companies that have not voluntarily taken steps to address their greenhouse gas impacts be required to do so.

4. Carbon Pricing:

- a. What role should carbon pricing play in any national climate action plan to meet or exceed net zero by mid-century, while also minimizing impacts to low- and middle-income families, creating family-sustaining jobs, and advancing environmental justice? Where possible, please provide analytical support to show that the recommended policies achieve these goals.**

As noted above, AEBG does not take a position at this time with regard to preferred policy pathways to facilitate the transition to a clean energy economy. Nevertheless, we observe that a carbon price could achieve all four guiding principles described above. Specifically, a carbon price could be designed such that it would (1) encourage accelerated action by businesses and other customers, because it would provide a financial motivation for companies to take action to lower emissions, (2) facilitate an economically efficient transition, supporting the principle of affordability, (3) preserve reliability by allowing flexibility with respect to the technologies and solutions deployed to lower emissions, and (4) allow for competition between different technologies on the basis of price and emission reduction potential. A carbon price

⁶ Advanced Energy Buyers Group, June 26, 2019 Comments in Docket No. PL19-3-000, available at https://info.aee.net/hubfs/Advanced%20Energy%20Buyers%20Group_PL19-3-000.pdf.

would also provide a clear and level playing field across all states and all sectors of the economy, providing policy certainty that is helpful for business planning.

b. How could sectoral-specific policies, outlined in questions 1-3, complement a carbon pricing program?

A carbon price is not well suited to overcome certain challenges standing in the way of a cost-effective transition to a 100% clean energy economy. Only in the context of an energy system that levels the playing field for different technologies, that fosters innovation, and that allows customer participation will a carbon price result in efficient and equitable outcomes. Therefore, should Congress pursue a carbon price, the sector-specific policies discussed above, as well as other policies not considered here, will still play an important role in the transition to a low-carbon economy.

In the electricity system, for example, a carbon price will not result in cost-effective, reliable outcomes if rules and regulations still present barriers to market entry by advanced energy technologies. Complementary policies to enable decarbonization of the transportation sector will also be important to enable customers and industries to respond to the incentive of a carbon price, just as technologies like renewable energy, demand response, and energy efficiency allow companies to cost-effectively lower the greenhouse gas emissions associated with their electricity use. Currently, there are few viable models of medium- and heavy-duty zero-emission vehicles available, leaving fleet owners with limited opportunities to pursue proactive measures to reduce emissions. Lack of fueling and/or charging infrastructure exacerbates this challenge. Complementary policies developed alongside a carbon price can address such challenges.

V. CONCLUSION

The Advanced Energy Buyers Group appreciates the opportunity to provide feedback to the House Select Committee on the Climate Crisis as Congress explores potential policy pathways to accelerate the transition to a clean energy economy. As companies committed to reach our own advanced energy and greenhouse gas reduction goals in cost-effective, reliable, and innovative ways, we look forward to continuing to work with Congress on these important issues, and encourage the Committee to view AEBG as a resource as it explores ways to ensure that climate policies will work with, and not against, voluntary customer actions.

Respectfully Submitted,



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