United States House of Representatives
Select Committee on the Climate Crisis

Hearing on December 9, 2021
"Cleaner, Cheaper Energy:
Climate Investments to Help Families and Businesses"

Questions for the Record

The Hon. Miranda A.A. Ballentine
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The Honorable Kathy Castor

1. **Ms. Ballentine, how would lowering the cost of clean energy help companies achieve their climate and clean energy goals?**

The Clean Energy Buyers Association's (CEBA) research arm, the Clean Energy Buyers Institute (CEBI), in partnership with the Resources for the Future (RFF) and the National Renewable Energy Laboratory (NREL) conducted a study of the most effective ways to decarbonize the electricity system.[i] The study found that expanding wholesale markets and supporting significant transmission expansion are one of the most effective and cost-efficient approaches. Organized wholesale markets expanded to the West and SE could save consumers additional $11 billion per year and a national transmission macrogrid could reduce retail bills a further roughly 2%.[ii] If pursued in combination with a national Clean Energy Standard, the study also found that these measures could result in close to $100 billion in net annual benefits by 2035. A copy of the report is included with this response.

Companies are committed to addressing the climate crisis by setting clean energy goals and significantly contributing to clean energy deployment, as evidenced by the 43 GW of clean energy transacted to date. Continuing to drive down the cost of clean energy, along with increasing access to clean energy, will accelerate their ability to decarbonize their operations and their supply chains. Companies lack sufficient market options to directly control their clean energy procurement options, and where markets do exist, capacity constraints, due to lack of adequate infrastructure, causes congestion, which increases prices, and often limits their ability to procure the clean energy they want. Hence, why expanding wholesale markets and transmission is critical to enabling customers to help drive the clean energy transition.

2. **Ms. Ballentine, you mentioned companies passing on energy costs and savings to customers. Can you tell us other ways companies have dealt with volatile fossil fuel prices?**

For many institutions, energy is one of the top controllable operating expenses, often second only to labor costs. Fossil fuel price volatility and future price uncertainty can wreak havoc on even the best business plan.

Most businesses do everything they can *not* to pass on volatile commodity costs to customers, and they first seek ways to mitigate the volatility.

One way to mitigate rising electricity prices is for companies to enter into long term power purchase agreements (PPA) for zero-marginal cost renewable energy, and they are doing exactly that. Corporate PPA's announced in 2020—over 10.2GW—were equivalent to over 40% of all new zero-carbon capacity added that year.

Likewise, before passing through costs to customers, most companies would see other paths to lower costs. For example, when electricity prices increase, the ROI on energy efficiency projects improve.

3. **Ms. Ballentine, can you speak further to the question of what kinds of technologies could help achieve a zero-carbon energy system?**

A combination of zero-carbon generation technologies, plus enhanced transmission, plus storage for intermittent zero-carbon generation, plus potentially carbon capture on emitting generation sources, plus smarter demand response, plus energy efficiency are likely to be required to fully decarbonize the grid.

CEBA supports the Build Back Better Act's investment of $30 billion to the Department of Energy for clean technology development and deployment.

There is fascinating research being conducted at the Department of Energy's national labs on electric power generation from green hydrogen, next generation and smaller scale nuclear, tidal power, and biomass gasification. If these innovative technologies meet the criteria of a zero-carbon energy system, CEBA welcomes the addition of a more diverse clean energy mix. CEBA is technology neutral and defers to our members to determine their application and use as several factors will warrant one region's or one company's use of certain technologies versus another region or company.

As more attention and investments are directed toward modernizing the electric grid, however, we can anticipate further technological advances that will improve the transmission efficiency and operations. Dr. Uday Varadarajan mentioned some of the advancements in technology that have the potential to reduce transmission power loss, improve efficiencies, and lower operating costs during his testimony on December 9, 2021, in front of the House Select Committee on the Climate Crisis.

4. **Ms. Ballentine, in your testimony, you spoke about some of the transmission investments in the Build Back Better Act and the Infrastructure Investment and Jobs Act. How would moving towards a more nationally-connected grid, a MacroGrid, help your companies achieve their clean energy and climate goals?**

A macrogrid could help CEBA's member companies achieve their clean energy and climate goals as it would provide a backbone electrical system with significant capacity options to procure clean energy. More significantly, the presence of a macrogrid, while important to my membership, is a hardening of the electrical grid that would provide substantial reliability benefits especially in extreme weather events, which are regular occurrences. The macrogrid provides resiliency to the system by utilizing neighboring electric supply options and mitigating system outages.

In addition, modeling by Resources for the Future shows that the clean energy tax credits in the House-passed Build Back Better Act alone could incentivize up to 69% carbon-free electricity by 2030.[iii] The House-passed Build Back Better Act's $180 billion in clean energy tax incentives will generate billions in additional private sector investment in a broad spectrum of clean energy technologies from more investments in renewables, advanced nuclear, carbon capture and sequestration to clean hydrogen. These additional investments will lower emissions from electric generators, reduce technology deployment costs, break ground on new construction projects creating thousands of new jobs across the clean energy supply chain, and as further progress becomes apparent, catalyze more investment in emerging technologies.

When these tax incentives are complemented with transmission capacity investments now available through the Infrastructure Investment Jobs Act, and the potential expansion of organized wholesale electricity markets, which is already under consideration in several regions, we will have the tools, the technology, and the resources to decarbonize the electric grid. We will also enable the private sector to fulfill its commitments to meet fully their clean energy and decarbonization objectives.

5. **President Biden just announced a new Executive Order on sustainable procurement, which is a great step forward for creating jobs and reducing carbon pollution. Using the Federal government's procurement power for clean vehicles, clean fuels, and innovative building technologies will help bring new solutions to market so all American can experience the benefits of lower-cost, zero-emission climate solutions. How would 24/7 clean electricity help expand clean energy deployment in communities across the country?**

CEBA applauds federal efforts to achieve 100% carbon-free electricity by 2030 as directed in Executive Order (EO) 14057. The order provides the ambition and scale needed to use the full procurement and purchasing power of the federal government and 24/7 carbon-free pollution electricity standard sends a strong market signal that time and location-matched clean energy is imperative to accelerating decarbonization.

Through power purchase agreements and other tools, energy customers have facilitated the deployment of more than 44 gigawatts (GWs) of renewable energy since 2008, which is over a quarter of all wind and solar capacity in the United States. Voluntary energy customers

contracted for 10.6 GW of clean energy in 2020 — the equivalent of 40% of all new carbon-free capacity installed. Last year through the end of the third quarter, voluntary energy customers contracted approximately 7.88 GW of new off site, utility scale renewables — equivalent to 34% of the new generating capacity added (or planned to be added) to the grid.

To fully decarbonize the electric grid, however, we must consider the decarbonization impact of energy procurement options more intentionally. Energy customers' ambitions have evolved beyond the traditional annual matching of clean energy with an invested interest in matching consumption with carbon-free energy on a local, temporal, and demand-driven basis.

Advancing the suite of next-generation procurement strategies will require a coalition of stakeholders collaborating on the market, technology, and data solutions. CEBA looks forward to working alongside the committee and other lawmakers to overcome the barriers that presently exist and implementing solutions to accelerate progress towards decarbonizing the grid.

6. **Ms. Ballentine, your members have ambitious clean energy and climate goals, and in many cases have partnered with cities on meeting those targets. How are your members addressing the situation in states where the state leadership is preventing cities from moving forward? Could you tell us more about your state-level initiatives?**

As I noted in my testimony, the lack of organized wholesale markets and transmission bottlenecks are the largest obstacles to carbon-free electricity. Expanding organized wholesale markets to every region of the country and expanding transmission capacity would not only decarbonize the grid but could also save energy customers $11 billion annually.

While CEBA is focused on advancing policies in the halls of Congress and before the Federal Energy Regulatory Commission to modernize the electric system, CEBA also works collaboratively with the business community and others at the local and regional level to grow support from the ground up for competitive organized wholesale markets. This work is being done both at the Clean Energy Buyers Institute where we are conducting research and developing educational material to inform regional, state, and local officials on the benefits of organized wholesale markets and other related issues, as well as at CEBA where we engage interested parties in policy development at the state and regional level.

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[i] Clean Energy Buyers Institute (formerly Renewable Energy Buyers Institute) and Resources for the Future. July 2021. Evaluation of Power Sector Emissions Reduction Pathways. https://cebuyers.org/wpcontent/uploads/2021/07/Evaluation-of-Power-Sector-Emissions-Reduction-Pathways-Summary-forPolicymakers.pdf

[ii] Clean Energy Buyers Institute (formerly Renewable Energy Buyers Institute) and Resources for the Future. July 2021. Evaluation of Power Sector Emissions Reduction Pathways.

https://cebuyers.org/wpcontent/uploads/2021/07/Evaluation-of-Power-Sector-Emissions-Reduction-Pathways-Summary-forPolicymakers.pdf

[iii] Roy, N., Burtraw, D., and Rennert, K. 7 October 2021. *Cost Analysis and Emissions Projections under Power Sector Proposals in Reconciliation*. Resources for the Future. https://www.rff.org/publications/issue-briefs/cost-analysis-andemissions-projections-under-power-sector-proposals-in-reconciliation/