ASPEN ENERGY WEEK

# Post Forum Report

Miranda Ballentine, Colette Honorable, Dawn Lippert, Robin Millican, Rich Powell, Michael Terrell, & Justin Worland, Co-chairs

Cina Vazir, Rapporteur

*August 2 – August 6, 2024*
*Aspen, Colorado*

ENERGY & ENVIRONMENT
aspen institute

**The Aspen Institute** is an educational and policy studies organization based in Washington, D.C. Its mission is to foster leadership based on enduring values and to provide a nonpartisan venue for dealing with critical issues. The Institute has campuses in Aspen, Colorado, and Washington, D.C. It also maintains offices in New York City and has an international network of partners. www.aspeninstitute.org

**Aspen Institute Energy and Environment Program (EEP)** explores significant challenges with diverse thinkers and doers to make a more prosperous, equitable, and sustainable society for all. We address critical energy, environmental, and climate change issues through non-partisan, non-ideological convening, with the specific intent of bringing together diverse stakeholders to improve the process and progress of policy-level dialogue. This enables EEP to sit at a critical intersection in the conversation and bring together diverse groups of expert stakeholders. In addition to energy and environmental policy, which the program has been addressing for several decades, EEP is now actively and purposefully engaging in climate change policy – mitigating the effects of climate change, adapting to the inevitable impacts of climate change, and the international cooperation needed to achieve these goals.

This report from the **Aspen Energy Week** is issued under the auspices of the Aspen Institute Energy & Environment Program, and attempts to capture key themes, ideas, and perspectives raised during the Forum. This convening, like most hosted by the Energy & Environment Program, was held under a not-for-attribution rule, with the exception of the publication of the names and affiliations of participants in the appendix of this report.

Participants were not asked to agree to the wording of this report and, therefore, neither participants, sponsors, discussants, nor their organizations, are responsible for the report contents. Not all views captured in this report were unanimous and the contents of the report cannot be attributed to any one individual or group of individuals in attendance. The report does not necessarily represent the views of the Aspen Institute nor the Energy and Environment Program, nor any of their respective staff or scholars.

For all inquiries, please contact:
Energy & Environment Program
The Aspen Institute
2300 N Street, NW | Suite 700
Washington, DC 20037
Phone: 202.736.2933


Published in the United States of America in 2025 by The Aspen Institute

# INTRODUCTION:

The Aspen Institute's Energy Week convened in August 2024 during yet another year in which the global transition to clean energy continued to advance, while absolute carbon emissions stubbornly continued to rise.

2024 likely marked a record year for clean energy investment in the U.S., with some estimating over $300 billion in domestic capital flows into clean energy. But while generation of electricity from solar and wind sources finally surpassed generation from coal, total U.S. greenhouse gas emissions (GHG) remained relatively stable.[1]

The U.S. and much of the rest of the world face significant challenges to meet their climate commitments.[2] Rising power demand, lengthy interconnection queues, permitting delays, and political polarization pose barriers domestically. Meanwhile, the path globally is even steeper—especially for emerging markets and developing economies (EMDEs), where annual carbon emissions are projected to grow this decade.[3]

In August 2024, leaders across the energy ecosystem gathered in Aspen to discuss these challenges. The tone of this year's Energy Week was both optimistic and realistic. Dialogue focused on the largest challenges of the energy transition and how to address them.

Topics at Energy Week included repurposing pipelines for low-carbon fuels, addressing load growth, scaling next-generation technologies, expanding electric vehicle adoption, and building a more reliable power system. Participants also explored central policy challenges like competition with China, enhancing U.S. exports, fostering clean energy demand, supporting carbon utilization, improving climate messaging, and facilitating finance for innovative projects.

The insights below capture the essence of these discussions, highlighting the key issues and solutions debated in Aspen. They reflect the collective dialogue, not the individual views of any single participant.

---

[1] https://rhg.com/research/preliminary-us-greenhouse-gas-estimates-for-2024/
[2] https://rhg.com/research/taking-stock-2024/
[3] https://www.iea.org/reports/financing-clean-energy-transitions-in-emerging-and-developing-economies/executive-summary

1. **Rising energy demand from data centers is reshaping projections and priorities in the U.S. power and technology sectors.**

Most long-term forecasts of U.S. demand for electricity have significantly risen in the last year to account for new demand from artificial intelligence (AI) data centers.[4] U.S. demand for electricity has been relatively stagnant over the last two decades, growing at under 1% per year.[5] Now, demand from data centers, electrification, and the reshoring of manufacturing are causing electricity consumption to sharply rise for the first time in decades.

Growth in the U.S. electric load is not unprecedented. Participants at Energy Week highlighted how estimates of 3-4% annual load growth in the next five years will be similar to the rate of growth in the 1980s and 1990s, and lower than the rate of growth in the decades before that.

AI is also only one piece of the puzzle. Research provider Rhodium Group, for example, estimates data centers will only contribute 22% of new U.S. demand for electricity from 2023-2035.[6] Nevertheless, participants highlighted how data centers play an outsized role in the power sector given the unexpectedness and unpredictability of their demand.

Years ago, traditional data centers were only consuming 100-200 MW of electricity. Now, mega clusters like the Stargate supercluster can consume 1-5 GW. Participants at Aspen outlined how the geographic concentration of these clusters can strain scarce grid resources. Although AI is currently less than 2% of global energy demand, it will have heterogeneous impacts on energy, creating a heavy impact on demand in certain areas and almost no impact in others.

In fact, load growth is already leading parts of the U.S. power system to become increasingly volatile and tightly balanced. One participant pointed to PJM, noting how the rise in capacity market auction prices from $28.92/GW for 2024/2025 to $269.92/GW in 2025/2026 was indicative of both the volatility and tightness of the market.[7]

Another participant mentioned that AI could have a large impact on marginal demand, like how hydraulic fracturing did with water during the shale boom from 2007-2012. AI might not be the largest source of demand, but it could have the highest willingness to pay for new generation. Participants also debated the immense shareholder pressure for technology companies to lead on AI. Various participants predicted that tech companies will prioritize AI leadership over their clean energy pledges, which many made at a time when the market looked much different.

---

[4] https://gridstrategiesllc.com/wp-content/uploads/National-Load-Growth-Report-2024.pdf
[5] https://gridstrategiesllc.com/wp-content/uploads/National-Load-Growth-Report-2024.pdf
[6] https://rhg.com/wp-content/uploads/2024/07/Taking-Stock-2024_US-Energy-and-Emissions-Outlook.pdf
[7] https://www.spglobal.com/commodity-insights/en/news-research/latest-news/electric-power/073024-pjm-power-capacity-auction-clears-at-record-high-price-of-26992mw-day-for-most-of-footprint

Some participants speculated that data centers will likely grow more energy efficient in the future due to innovations in cooling systems, chip design, and algorithms. Despite this potential, most participants agreed that data centers are adding to prior forecasts of load growth, creating new projections, challenges, and imperatives for the U.S. power and technology sectors.

2. **The U.S. needs to bridge policy and financing gaps to scale next-generation clean energy technologies.**

Various participants at Energy Week were optimistic about the potential of next-generation technologies like geothermal, nuclear fission, and nuclear fusion. According to some, innovation and demand for these technologies is outpacing the policy and financing environment.

Participants outlined policy challenges with permitting, particularly for nuclear fission and geothermal. There was also discussion around challenges with interconnection delays. Some participants speculated that these delays could cause large projects to move entirely off the grid to more quickly and directly service the needs of their customers.

The clean energy sector currently faces significant challenges in financing projects to move from early-stage innovation to commercial scalability. Participants referred to this challenge as that of moving technologies from a "one of a kind" to a "tenth of a kind," with one participant estimating a $150 billion gap in finance to bridge the gap. While the U.S. has a strong lab system, tax credits, and financial markets to start and finish projects, there is a "missing middle" to get projects to commercial viability.

Financing challenges are particularly important since many clean energy technologies are "capex-heavy" and "opex-light", and therefore sensitive to interest rates. According to one participant, this means projects must quickly find ways to move from the interest rates of venture capital (e.g., 20%) to those of infrastructure financing (e.g., 8%).

The discussion at Energy Week touched on various proposals to solve these challenges. Policy recommendations included expediting permitting for nuclear fission and geothermal, and enabling clean, firm projects to jump the interconnection queue. There was also discussion around financial proposals, such as the need for government and philanthropies to underwrite project specific risks and to empower programs focused on commercialization like the DOE's Foundation for Energy Security and Innovation.

The urgency to solve these challenges is furthered not only by climate change, but also by competition with China. One participant highlighted how China has taken U.S. roadmaps for

new technologies and implemented them more aggressively. The Chinese government, for example, has now begun to outspend the U.S. government on nuclear fusion.[8]

3. **Climate messaging must more clearly resonate with people's priorities, honestly communicate the benefits and challenges of the energy transition, engage at the local level, and reframe the transition as a long-term investment.**

Many Americans view climate change as a major threat and an important issue, but not as a top priority for elected officials.[9] Polling data shows that voters are generally more likely to prioritize issues like inflation and employment over climate change. However, the public's priorities on climate can change quickly, as they did in the 1960s when the environmental movement put air and water pollution onto the mainstream national agenda.

Climate messaging needs to be reframed to better resonate with Americans. Participants at Energy Week compared the energy transition to an "open heart surgery" that is taking a massive risk to remake the energy system in live time. Convincing voters to support such an endeavor is increasingly challenging in a time of economic difficulty and mistrust of institutions.

Some participants highlighted how the energy transition is often seen as an "elite" movement, similar to globalization. While globalization had positive macroeconomic impacts, it failed to pay enough attention to the microeconomic damage inflicted on certain communities. How can the energy transition avoid falling into the same trap?

Participants at Energy Week brainstormed a series of suggestions. Many promoted framing the energy transition in terms of people's values like national security and economic opportunity. At the same time, participants raised the need to be clear about the benefits and costs of the transition. An honest approach requires building mutual understanding of the problem and alignment around solutions, not running away from the word "climate" and ignoring the costs of the phaseout of fossil fuels. Various participants supported the idea to frame the energy transition as a "long-term investment", similar to defense and infrastructure.

There was also discussion around the need to localize messaging and climate action. Some participants argued that local jobs and the local environment resonate more than national-level statistics. Similarly, people across the U.S. may be less likely to listen when climate messengers are almost exclusively highly-educated elites from coastal cities. To make matters worse, climate

[8] https://www.cnn.com/2024/09/19/climate/nuclear-fusion-clean-energy-china-us/index.html

[9] https://www.pewresearch.org/short-reads/2023/08/09/what-the-data-says-about-americans-views-of-climate-change/

communication often uses jargon that is difficult to understand. Participants generally agreed that a more effective approach would focus on local issues, center on engagement and listening, and empower more representative messengers with a more accessible message.

4. **Carbon storage and utilization require more policy and market support to scale to their meaningful potential.**

The carbon capture and storage industry may be reaching a turning point according to participants at Energy Week. While there is not yet a functional market, transactions around the size of $10 million are beginning to emerge. However, the industry lacks a clear trajectory on how to scale and attract more customers.

Carbon utilization is even more nascent. Stored carbon can be used to create a range of products, but is seeing little movement and may need more policy support, according to one participant.

Some estimates predict that carbon dioxide removal (CDR) could become a $40 billion market by 2040.[10] CDR will not be a silver bullet, but can play an important role in reducing global emissions. Momentum is also growing given the challenges with verifying and trusting carbon credits. CDR, unlike other offsets, is more measurable since it takes physical carbon and stores it underground. Nonetheless, one participant estimated the current scale of CDR is only 30,000 tons, much lower than targets of 1 gigaton by 2030 and 5-10 gigatons by 2050.

Participants at Energy Week highlighted that many carbon removal solutions are still nascent and expensive. Additionally, the pool of customers is extremely concentrated, with some large customers like Microsoft dominating the market. Public backlash, government indecision, and insufficient mechanisms to claim credit for captured and stored carbon are further restricting the growth of carbon storage and utilization.

The conversation at Energy Week also covered carbon taxes, which many participants think are required to monetize the negative externality of emitting carbon and the positive externality of capturing, storing, and utilizing that carbon. Similarly, better carbon accounting systems are needed to properly measure, verify, and account for carbon. Participants also discussed the potential for the government to act as a primary offtaker for carbon storage and utilization, although there will ultimately need to be strong market infrastructure in the long term.

[10] https://www.bcg.com/publications/2023/the-need-and-market-demand-for-carbon-dioxide-removal

5. **Electric vehicle (EV) adoption is growing, but the rate of growth is slowing; markets will need to continue improving battery technologies and strengthening charging infrastructure to fully move EVs from early adoption into the mainstream.**

Transport accounts for about 28% of U.S. greenhouse gas (GHG) emissions and is the largest single source of domestic emissions. EVs are key to reducing emissions from transport, yet only around 7% of sales of new light duty vehicles in the U.S. are battery electric vehicles.[11]

While EV sales in the U.S. continue to grow, the rate of growth is slowing.[12] EVs now face the challenge of moving from enthusiastic early adopters to a more mainstream consumer base. As one participant put it, EV adoption must transition from early adopters who structure their lifestyles around EVs to mainstream consumers who integrate EVs seamlessly into their existing routines. This requires regulatory certainty and overcoming popular myths like the claim that EVs are dirtier than other vehicles or that all EVs are made in China.

Moving EVs into the mainstream also requires more innovation on battery technologies. Some participants in Aspen argued that EV batteries are still too big, heavy, and expensive. According to one participant, costs need to continue to decline a further 50% for American EVs to reach cost parity with internal combustion engine vehicles. Part of this shift is coming from adoption of lithium-iron phosphate (LFP) batteries, but participants highlighted issues stemming from Chinese ownership of intellectual property for LFP batteries. One participant from the industry was hopeful that next-generation batteries will have longer lives, integrate modular designs which make replacement easier, and improve performance faster than most analysts expect.

Participants additionally argued that the U.S. needs to rapidly expand its charging infrastructure, and that recent standardization over a single charging standard is a positive step forward.[13] However, participants mentioned that charging infrastructure is still too slow to develop outside of supercharger hubs. Charging infrastructure remains a challenge due to high upfront capital costs, long timelines, and uncertain operating models. Additionally, providers have to balance locating chargers close to clean, available power sources with placing chargers where customers need them. This is increasingly complicated since most of the data on customers comes from existing early adopters, which might have different needs and preferences than the mass market.

Lastly, a participant at Energy Week advocated that U.S. policymakers should accelerate support for bidirectional charging, which allows consumers to sell energy from their EV batteries back to

---

[11] https://www.eia.gov/todayinenergy/detail.php?id=62924

[12] https://apnews.com/article/ev-emissions-china-eu-trump-electric-b6a432557ac314d02654008bfbaa09fb#:~:text=Pure%20EVs%20accounted%20for%208,enough%20to%20meet%20climate%20goals.

[13] https://driveelectric.gov/charging-connector

the electric grid. According to the participant, bidirectional charging could be a gamechanger, particularly as communities across the U.S. face rising issues with power reliability.

6. **Climate finance can continue to scale if more projects are de-risked through offtake agreements, creative "bundled" investments, and catalytic finance from government and philanthropies.**

Decisions on equity and debt are fundamentally driven by business models and investment risk, while the goal for the energy transition is to attract the lowest cost capital to make the transition quicker and more affordable. Participants at Energy Week highlighted several key areas where the needs of investors can align with the capital requirements of the climate challenge.

One of these areas is offtake agreements. Institutional investors are currently constrained by financial regulators who favor investments in projects with positive cash flow and tight, long-term offtake agreements. These regulators also disincentivize leveraged lending, particularly to companies with no cash flow and uncertain demand. Unfortunately, many clean energy companies fall into this category. Participants emphasized how offtake agreements can play a crucial role in improving bankability and attracting catalytic finance. This is especially important for projects that would receive tax credits but are not yet investment-grade. De-risking can also be achieved through government procurement, efficient markets that connect producers and consumers, and more technology demonstration sites.

Several participants discussed the potential for investing as a platform, rather than as standalone investments. According to one participant, lending is often not particularly profitable due to reserve requirements and low-risk tolerance, which limit returns on capital. As a result, financial institutions are looking for additional revenue streams. This suggests that projects offering more than just a one-off transaction may become more attractive for investment. One participant also pointed out that bundling loans or counterparties could help scale financing. The administrative costs and time involved in managing a large investment are not substantially different from a smaller one, so bundling could increase overall investment volume.

Lastly, part of the discussion on finance focused on other ways to reduce risk. Participants generally agreed that many important clean energy projects are perceived as risky, particularly those requiring physical infrastructure due to social and regulatory risks. Some participants believe the U.S. government—especially the Loans Program Office (LPO)—should assume more risk in investing in these projects. Additionally, participants suggested that philanthropy could play a larger role in de-risking projects and attracting investment. U.S. philanthropies hold

around $1.5 trillion in assets and could grow their impact through investments.[14] Equity and debt could prove more scalable than the conventional philanthropic model of financial grants.

### 7. Pipeline infrastructure for carbon dioxide ($CO_2$) and hydrogen faces substantial permitting, planning, and technical challenges.

Participants at Energy Week had a large discussion on the various challenges the U.S. faces to build transportation infrastructure for carbon dioxide and hydrogen.

Some participants argued that permitting and regulatory reform are needed across the federal, state, and local levels. With hydrogen, for example, one participant highlighted a lack of clarity on federal oversight for transportation and low standardization between states. Another participant proposed taking aspects of the Natural Gas Act and adding more flexibility. For example, a new approach could include eminent domain siting authorities, remove overlapping regulations, scale back certain federal authorities, and loosen rate of return requirements.

Participants further mentioned that companies, not just regulators, need to take more action on community engagement. Stakeholder consultations should take place before project applications are filed to effectively manage risk and gain community buy-in. Right of way to build and maintain pipelines on private or public land remains a key hurdle.

Another major challenge in building $CO_2$ and hydrogen infrastructure is the unpredictability of future supply and demand. Participants questioned whether hydrogen infrastructure will look like a "hub with small spokes" or consist of large connected pipelines as with natural gas. One participant speculated that hydrogen may require less transport infrastructure than natural gas since demand is centered primarily around industrial clusters. These clusters are signaling more demand for hydrogen than utilities, which see hydrogen as an expensive way to produce power. Regardless of the model, transport infrastructure for hydrogen could require substantial investment, potentially exceeding $100 billion according to a participant's estimates.

Participants at Energy Week generally agreed on the technical challenges of repurposing natural gas pipelines for $CO_2$ or hydrogen. One participant explained that carbon dioxide can be transported through natural gas pipelines in its gaseous phase, but not over long distances or in large volumes due to its lower density and limitations of existing pipelines. New pipelines will likely need to be built for the large-scale transportation of $CO_2$. Hydrogen presents additional

---

14 https://www.pnc.com/insights/corporate-institutional/manage-nonprofit-enterprises/philanthropic-giving-headwinds-and-tailwinds.html#:~:text=Foundation%20assets%20hit%20a%20record,and%20strong%20U.S.%20GDP%20growth.

challenges as it can exacerbate the vulnerabilities of natural gas pipelines. As a result, hydrogen requires dedicated solutions, such as specialized compressors, coatings, and storage systems.

Additional discussion touched on various points, such as blending methane and hydrogen. A participant argued that blending methane and hydrogen at high concentrations reduces the value of both gases while introducing risks like pipeline vulnerabilities, leaks, and inefficiencies. This may mean it is more practical to invest in on-site hydrogen production rather than blending for broad distribution. Participants also discussed large natural hydrogen reserves, which are vast, potentially inexpensive, and located in areas that are not historical energy producers. But significant technical and extraction challenges remain, and it may take 3-4 years to determine if these reserves can be commercially viable.

8. **The U.S. can achieve long-term, mutually beneficial collaboration with China through a "Peace Through Strength" framework predicated on conditions-based collaboration.**

Participants at Aspen Energy Week generally agreed that the U.S. cannot avoid working with China to address climate change. China alone contributed 35% of global $CO_2$ emissions in 2023.[15] In contrast, the U.S. only contributed 12.5% of global emissions that same year.[16] There is no realistic path to meeting the climate challenge without working with China to reduce its carbon emissions.

Chinese products are also key to the energy transition. China currently produces more than 60% of the world's electric vehicles and more than 80% of its solar panels, battery cells, and processed critical minerals like graphite and rare earths.[17] Participants injected a sense of realism into the discussion by pointing out that many of the clean energy products emerging from China are of very high quality. China is also promoting overcapacity which challenges manufacturers in other parts of the world, and is actively seeking to outcompete the U.S. on science and technology for clean energy. While the U.S. needs to work with China on the big science and technology challenges of our time, it also needs to find ways to compete with it.

Participants outlined a new approach for U.S.-China relations through a "Peace Through Strength" framework predicated on conditions-based collaboration. This approach would balance competition and collaboration. Participants discussed pillars of such an approach, including investing in domestic R&D, drafting more stringent conditions for collaboration, balancing competition with economic realism, and weathering short-term costs.

---

[15] https://www.iea.org/reports/co2-emissions-in-2023/the-changing-landscape-of-global-emissions
[16] https://www.iea.org/reports/co2-emissions-in-2023/the-changing-landscape-of-global-emissions
[17] https://www.brookings.edu/articles/how-do-china-and-america-think-about-the-energy-transition/

The group in Aspen appeared to hold relative consensus around the importance of U.S. investment at home to build a strong domestic clean energy sector. As one participant put it, "to win in a techno-economic world, you can't just win by slowing others down—you need to invest in your own economic excellence and research." The U.S. can do this by continuing to build on recent legislation. A participant mentioned how production tax credits for batteries, for example, have significantly helped attract investment in the U.S. Participants argued that policies should focus investment on key areas of strategic import and/or comparative advantage, rather than trying to do everything at once.

Participants also focused on the need to create more stringent and clear conditions for collaboration with China. Ideas included escalating tariffs on key sectors, implementing a carbon adjustment mechanism, more forcibly enforcing Uighar forced labor laws, and rewriting the IRA's foreign entity of concern rules. There was also a dose of realism about these measures, with one participant questioning whether tariffs provide a durable incentive for domestic manufacturing and whether U.S. customs can properly enforce complex policies like the Uighur Forced Labor Protection Act. But some blanket tariffs could still be helpful. One participant mentioned how the 100% tariff on Chinese EVs will positively impact U.S. automakers. Overall, participants generally agreed that trade policy should be targeted and that intermingled, global supply chains remain crucial to meeting our clean energy goals.

Some participants were enthusiastic about mandating Chinese companies operating in the U.S. to engage in technology transfer to their American counterparts. These forced technology transfers would reciprocate Chinese treatment of American companies over the last decades.Participants argued that the overarching purpose of conditions-based collaboration should not be to punish China, but to show an alternative path that rewards improvement on key issues like emissions, forced labor, dumping, and theft of intellectual property. Such an approach will be more effective with support from the U.S.'s European and Asian allies.

Nonetheless, more stringent conditions for collaboration with China will likely result in higher costs and a slower energy transition in the near term. According to one participant, short-term pain may be a necessary sacrifice to preserve the long-term economic, political, and national security sustainability of the energy transition.

9. **Countries have an opportunity to harness artificial intelligence and scalable project construction methods to accelerate the energy transition.**

Participants highlighted artificial intelligence and centralized approaches to project construction as two important avenues to lower the costs and increase the speed of the energy transition.

Numerous participants were optimistic about the myriad energy applications of AI. Potential applications that were discussed include using AI to accelerate materials discovery and the regulatory process. One participant also outlined how digital twinning—the use of virtual replicas of systems for simulations—can reduce waste and increase efficiency before things are actually built. The computational power and potential of digital twinning could improve massively in the years to come.

Significant discussion focused on the intersection of AI and biotechnology. Participants were optimistic about the potential for AI to advance genomics. The resulting innovations could lead to more climate resiliency as AI helps unlock crops that are more tolerant to heat, disease, and flood, and require less water. Alterations in microorganisms could also reduce emissions from crops and livestock in the next decade.

Another strand of the conversation focused on the potential to use more conventional techniques to build clean energy projects faster and cheaper. One of the main takeaways from project infrastructure is that learning often comes from building. A participant pointed to the Vogtle nuclear power plant as an example, stating that Vogtle Unit 4 was cheaper and quicker to build than Vogtle Unit 3 due to the lessons learned.

Participants highlighted the importance of building an ecosystem and centralized production in hubs. This approach has been key for lowering costs for products like solar panels, particularly in China. A participant ventured that the U.S. could pursue a similar approach by leveraging shipyards, many of which are underutilized and have a track record of executing large projects at low costs. Workforce is another key for production ecosystems. Several participants discussed how workforce development is lacking in the U.S., which is slowing the energy transition. More coordinated policy can help build an American clean energy workforce while concentrating clean energy projects in areas with adequate availability of skilled labor.

10. **Targeted government intervention, through policy tools and procurement strategies, will be crucial in overcoming demand-side challenges and accelerating the development of clean technologies like green cement, concrete, hydrogen, and recycling.**

Market development of many clean energy technologies in the U.S. is facing what participants termed a “chicken and egg” problem. Investors worry that if new supply is built, demand may not exist. Customers, on the other hand, are unwilling to commit to a product that may or may not be built. How can functional supply chains form before a technology has reached scale?

Participants at Energy Week also commented on insufficient incentives for first movers. Oftentimes many of the first companies in an industry have misaligned risk and reward, making companies and investors inclined to wait until others have first tried and failed.

Participants discussed a series of policy tools to address these demand-side challenges. Conversation touched on offtake agreements, procurement standards, market standards, consumer tax credits, advanced market commitments, and voluntary corporate commitments.

There was general agreement that solutions will vary across technologies. One participant mentioned that hydrogen, for example, requires increased price protection and demand signals. Several participants believed that the U.S. government should play a more aggressive role as a first offtaker for green cement and concrete; public procurement is a significant portion of demand for both products and could reasonably kickstart the market.

Another opportunity may come through stimulating demand for efficiency and recycled products. A participant described how many efficiency solutions are accessible and economic, but are not being fully implemented due to insufficient incentives and the time and cost of repurposing existing physical infrastructure. Similarly, recycled products have substantial demand and large potential. But many are currently bought on 90-day spot markets, rather than long-term contracts. One participant stated that these short-term contracts make many recycling projects difficult to finance.

11. **The U.S. electric grid is under strain and must prioritize reliability, with a comprehensive approach that includes communication, infrastructure investment, and supportive policies to balance clean energy goals and reliable power supply.**

The electric grid in the U.S. is coming under increasing strain and needs both short- and long-term solutions. Participants at Energy Week were worried about the reliability of the grid, with some participants predicting a high probability of a massive power outage somewhere in the U.S. in 2025. The grid currently struggles with power generation and connecting electricity to where it is needed. In other words: fuel and transmission. Other challenges abound, including cybersecurity, natural disasters (accelerated by climate change), and managing a shift from aggregated power generation to dispersed power generation.

Participants also pointed to aging infrastructure and fragile supply chains as barriers for a reliable power system. Aging infrastructure applies both to the grid (supply) and to products related to electricity demand, like heat pumps. Meanwhile, limited availability of key supply chain inputs like transformers “is creating a system in which everyone is fighting to preserve scarce resources”, according to one participant.

Discussion focused on three areas to help improve reliability. The first is communication with customers. Participants at Aspen mentioned how customers play a key role in grid reliability. Customers can be part of the solution through functional demand participation to lower costs and increase reliability of the grid. Customers can also play a role in areas like vegetation management. Regulators should audit vegetation management plans for utilities to ensure a lower risk of supply disruption, but oftentimes vegetation management also requires action from private property owners. For utilities, communication with customers is also key. Participants at Energy Week stressed the need to clearly communicate failures and risks to customers, regulators, and politicians.

Reserve margins and excess capacity can also play a key role in building a more reliable long-term system, particularly given the unpredictability of demand. One participant pointed to the 1950s, in which the U.S. built excess capacity and ran operations with reserve margins. That seems a far shot from where the energy sector is headed today. A central policy challenge is determining how to expand the system quickly before expanding and incentivizing usage.

Lastly, participants had a long discussion on the role of natural gas. Many agreed that the U.S. will need more gas in the medium term to provide reliability. Questions remain around how and when gas can be phased out. Various participants expect that gas consumption will likely have a long plateau in the U.S. Most participants were in agreement that it is not the role of the U.S. government to regulate away or to find the solution for replacing gas. Rather, participants urged the government to focus on enabling markets to accelerate the timeline for phasing out gas and reducing its carbon emissions. Such a policy framework would ideally center around a price on carbon, with supportive structures for various technologies (battery storage, carbon capture, etc.) but a technology-agnostic stance on the ultimate winner.

12. **The U.S. must align its climate goals with economic and geopolitical strategy by boosting clean energy exports and investment abroad, capitalizing on a $2 trillion market opportunity while addressing structural gaps in financing and policy.**

The U.S. risks falling behind China in leadership on climate action. Participants at Energy Week discussed how China is currently playing a far more active role in the developing world, leveraging initiatives like the Belt and Road to expand its influence and provide countries with clean energy technologies. In contrast, the U.S. accounts for only a small fraction of global clean tech exports, hampered by inadequate investment frameworks and a lack of cohesive strategy. Participants pinpointed hurdles for U.S. agencies to invest abroad, including restrictions on loan guarantees, local currency lending, and equity investment. The U.S. also simply lacks the scale

of China's production of many clean energy technologies. If policymakers address these barriers, the U.S. can play a larger role in reducing global emissions while gaining geopolitical strength.

With ~90% of future emissions projected to come from foreign countries, participants were adamant that the U.S. must focus on providing technology and capital abroad to accelerate global emissions reductions. Reforms to climate finance tools, like increasing equity investments and streamlining project approval processes, would allow U.S. firms to compete more effectively in the global marketplace. This could be coupled with the U.S. "value add" of helping countries improve environmental and social standards while building local employment, which, according to one participant, is a far different offer than China's typical way of doing business abroad.

Several participants also argued that the U.S. must align its trade and climate policies to maintain credibility on the world stage. While Europe's carbon border adjustment mechanism is pushing global conversations on carbon pricing, the U.S. remains behind, lacking a federal carbon price and risking accusations of hypocrisy if it places tariffs on high-carbon imports or demands a premium for its low-carbon exports. By adopting strategic carbon pricing mechanisms and aligning trade policy with economic incentives, the U.S. can position itself as a leader in clean energy innovation while driving both global emissions reductions and domestic economic growth. A coordinated and bold approach—spanning trade, finance, and industrial policy—is essential to seize this opportunity and ensure long-term competitiveness.

# PARTICIPANT LIST

*** Participants attending Virtually**

**Sarah Adair,** Managing Director, Public Policy, Duke Energy

1. ***Doug Arent**, Executive Director, Strategic Public Private Partnerships, National Renewable Energy Laboratory
2. **Benton Arnett**, Senior Director, Markets and Policy, Nuclear Energy Institute
3. **Lindsay Baker**, Chief Executive Officer, International Living Future Institute
4. **Miranda Ballentine**, Former Founding Chief Executive Officer, Clean Energy Buyers Alliance *(Co-Chair)*
5. **Roger Ballentine,** President, Green Strategies Inc.
6. **Kathleen Barrón,** Executive Vice President and Chief Strategy Officer, Constellation
7. **Paul Bauman**, Energy Projects Director, Rodel Foundation
8. **Lee Beck**, Senior Director, Clean Air Task Force
9. **Claire Behar**, Chief Commercial Officer, Hy Stor Energy
10. ***Shawn Bennett**, Energy and Resilience Division Manager, Battelle
11. **Greg Bertelsen**, Chief Executive Officer, Climate Leadership Council
12. **Drew Bond**, President & Co-Founder, C3 Solutions &PowerField Energy Inc.
13. **Jason Bordoff**, Founding Director, Center on Global Energy Policy at Columbia University SIPA
14. **Mark Caine**, Senior Lead, Energy & Climate, Google
15. **Gilbert Campbell,** Founder & Chief Executive Officer, Volt Energy Utility
16. ***Vishaan Chakrabarti**, Founder and Creative Director, Practice for Architecture and Urbanism
17. **Dr. Vanessa Z. Chan**, Chief Commercialization Officer & Director of the Office of Technology Transitions, US Department of Energy
18. **Brice Clemente**, Chief Operating Officer, ENGIE Renewables North America
19. **Dave Conover**, Vice President, Government Relations & Communications, Kinder Morgan, Inc.
20. ***John Corrigan,** Senior Director for Trade and Climate, Silverado Policy Accelerator
21. **Jon Creyts**, Chief Executive Officer, RMI
22. **Bryce Dalley**, Director, Commercial Energy Supply, Meta
23. **Kyle Danish**, Partner, Van Ness Feldman LLP
24. **Aart de Geus**, Executive Chair & Founder, Synopsys Inc.
25. **Sara Decker**, Senior Director, Walmart
26. **Phil Dion**, Senior Vice President, Customer Solutions, Edison Electric Institute

27. **Anne Dougherty**, Founder, ILLUME Advising, LLC
28. **Carrie Doyle**, Program Officer in the Environment Program at the William and Flora Hewlett Foundation
29. ***Kerry Duggan**, Founder & Chief Executive Officer, SustainabiliD
30. **Katie Dykes**, Commissioner, Connecticut Department of Energy & Environmental Protection
31. **Shelley Fidler**, Senior Policy Advisor, Van Ness Feldman LLP
32. **Cody Finke**, Chief Executive Officer, Brimstone Energy, Inc.
33. **Alex Fitzsimmons**, Head of Government Affairs, Sila Nanotechnologies
34. **Michael Fitzpatrick**, Partner, Brunswick Group
35. **Alex Flint**, Executive Director, Alliance for Market Solutions Research
36. **Peter Fox-Penner**, Chief Impact Officer, Energy Impact Partners
37. **Josh Freed**, Senior Vice President, Third Way
38. **Peter Freed**, Research Fellow, Sustainable Finance Initiative, Doerr School of Sustainability, Stanford University
39. **Kelly Sims Gallagher**, Dean ad interim, The Fletcher School, Tufts University
40. **Justina Gallegos**, Deputy Director, White House Office of Science and Technology Policy
41. ***Jimmy Glotfelty**, Commissioner, Public Utility Commission of Texas
42. ***Paula Glover**, President, Alliance To Save Energy
43. **Kristen Golden**, Senior Vice President and Chief Legal Officer, Grid United LLC
44. ***Tiya Gordon**, Co-Founder, itselectric
45. ***Albert Gore**, Executive Director, Zero Emission Transportation Association
46. **Susan Gray**, Head of Energy Transition and Sustainability, Argo Infrastructure Partners
47. **Jason Grumet**, Chief Executive Officer, American Clean Power
48. **Emma Hand**, Partner and US Sector Co-Lead, Energy, Dentons US LLP
49. **Chante Harris**, Founder and Managing Partner, Eunoia Group
50. **Maureen Hinman**, Chairman and Co-Founder, Silverado Policy Accelerator
51. **Jessica Hogle**, Vice President, Federal Affairs, Tennessee Valley Authority
52. **Colette Honorable**, Executive Vice President, Public Policy and Chief External Affairs Officer, Exelon Corporation *(Co-Chair)*
53. **Sarah Hunt**, President, Joseph Rainey Center for Public Policy
54. **BJ Johnson,** Co-Founder & Chief Executive Officer, ClearFlame Engines Inc
55. **Vishal Kapadia,** Senior Vice President, Energy Transformation, Walmart
56. ***Rober Kaplan**, Senior Fellow and Marvin Bower Professor of Leadership Development, Emeritus, Harvard Business School
57. **Andy Karsner**, Chairman, Manifest Energy
58. ***Nathaniel Keohane**, President of the Center for Climate and Energy Solutions

59. **Nadia Khawar**, Managing Director, Business Development, Energy & Infrastructure, U.S. International Development Finance Corporation
60. **Briana Kobor**, Head of Energy Market Innovation, Google
61. **Kalee Kreider,** President, Ridgely Walsh
62. **Mary Landrieu**, Senior Policy Advisor, Van Ness Feldman LLP
63. **Tim Latimer**, Co-Founder & Chief Executive Officer, Fervo Energy
64. **Louis Lazzara**, Senior Research Analyst, Energy Income Partners, LLC
65. **Zachary Learner,** Chief of Staff, International Trade Administration
66. **Robert Leland,** Director, Climate Change Security, Sandia National Laboratories
67. **Jamal Lewis**, Director of Implementation Learning and Integration, Rewiring America
68. **Laura Lightbody**, Director, U.S. Energy Modernization, The Pew Charitable Trusts
69. **Dawn Lippert**, Founder and Chief Executive Officer, Elemental Excelerator *(Co-Chair)*
70. **Frank Macchiarola**, Chief Policy Officer, American Clean Power
71. **Sasha Mackler**, Executive Director, Energy Program, Bipartisan Policy Center
72. **Sanjna Malpani**, Chief of Staff, WeaveGrid
73. **Michael Maten,** Director, EV Policy & Regulatory Affairs, General Motors
74. **David McCollum**, Distinguished Scientist, Oak Ridge National Laboratory
75. **John Miller**, Director, Market Policy, Clearway Energy Group
76. **Robin Millican**, Head of Strategic Initiatives and Integration, Breakthrough Energy *(Co-Chair)*
77. **Richard Mroz**, Board Member, ClearPath Foundation
78. ***Sandhya Murali**, Chief Executive Office, Solstice
79. **Jeff Navin**, Partner & Co-Founder, Boundary Stone Partners
80. **Rick Needham**, Chief Commercial Officer, Commonwealth Fusion Systems
81. **Hillary O'Brien**, Senior Program Director, Carbon Management and Science, ClearPath
82. **Jessica Olson**, Head of Global Affairs, Americas, Topsoe
83. **Urvi Parekh**, Director, Renewable Energy, Meta Platforms
84. ***Joshua Parker**, Senior Director, Corporate Sustainability, NVIDIA
85. **Geneviève Piché**, Head of Sustainable Finance and Advisory, Wells Fargo
86. **Lara Pierpoint**, Managing Director, Trellis Climate, Prime Coalition
87. **Rich Powell**, Chief Executive Officer, Clean Energy Buyers Association *(Co-Chair)*
88. ***Karthik Ramanna,** Professor, Business & Public Policy, Blavatnik School of Government, University of Oxford
89. **Julia Reichelstein**, Chief Executive Officer & Co-Founder, Vaulted Deep
90. ***Brad Ringeisen**, Executive Director, Innovative Genomics Institute
91. **Daniel Schory**, Chief of Staff, Infrastructure, Arnold Ventures
92. **Jeffrey Schub**, Senior Vice President, Sustainable Finance Integration, Wells Fargo

93. ***Reed Schuler**, Senior Advisor, The Massachusetts Institute of Technology
94. **Erin Searcy**, Chief Technology Officer, Idaho National Laboratory
95. **Shayak Sengupta**, Fellow, Observer Research Foundation America
96. ***Christopher Smith**, Chief Government Affairs Officer, Ford Motor Company
97. ***Jonathan Smith**, Senior Chief Deputy Director, Michigan Department of Labor & Economic Opportunity
98. **Jon Sohn**, Vice President, Government Relations, Regulatory & Environmental Policy, Capital Power
99. **Steph Speirs**, Board Director, Clean Energy for America
100. ***Simone H. Stewart**, Senior Industrial Policy Specialist, National Wildlife Federation
101. **Martha Symko-Davies**, Senior Laboratory Program Manager, National Renewable Energy Laboratory
102. **Michael Terrell**, Senior Director, Energy and Climate, Google *(Co-Chair)*
103. **Douglas True**, Senior Vice President & Chief Nuclear Officer, Nuclear Energy Institute
104. **Carla Tully**, Board Director, Citizens for Responsible Energy Solutions Forum
105. **Vijay V. Vaitheeswaran**, Global Energy & Climate Innovation Editor, The Economist
106. ***Clinton Vince**, Chair, U.S. Energy Practice, Dentons US LLP
107. **Michael Webber**, John J. McKetta Centennial Energy Chair, Cockrell School of Engineering, The University of Texas at Austin
108. **Chase Weir**, Chief Executive Officer, Distributed Sun | trucurrent
109. ***Jeff Weiss**, Executive Chairman, Distributed Sun | trucurrent
110. **Tim Whitehead,** Managing Director, Goldman Sachs
111. **Jahi Wise,** Senior Advisor, US Environmental Protection Agency
112. ***Catherine Wolfram**, William Barton Rogers Professor in Energy, MIT Sloan School of Management
113. **Justin Worland**, Senior Correspondent, TIME *(Co-Chair)*
114. **Laura Zapata**, Chief Executive Officer & Co-Founder, Clearloop

**Aspen Institute Staff**

1. **Greg Gershuny**, Executive Director & Vice President, Energy & Environment Program
2. **Tanzia Huq**, Program Associate, Energy & Environment Program
3. **Jérôme Krumenacker,** Senior Operations Associate, Energy & Environment Program
4. **Timothy Mason**, Director, Energy & Climate, Energy & Environment Program
5. **Julia Merjan**, Senior Development Associate, Energy & Environment Program
6. **María Ortiz Pérez**, Managing Director, Energy & Environment Program

# AGENDA

## * Participants attending Virtually

**Friday, August 2, 2024**

**Arrivals and Check-In**

**Short Seminar: Leadership, Creativity, and Constraint**

**Opening Reception and Dinner**

**Saturday, August 3, 2024**

**Welcome Remarks**

**Session 1: Data Room**
**Moderated by Rich Powell**

2023-2024 may well be remembered as the pivotal year when long-range projections of enormous growth in the U.S. electric power sector finally aligned with truth on the ground. After decades of no net growth in demand due to an ever more efficient economy, projections for new demand growth doubled in the space of one year, driven by new high tech data demand (AI) and the reindustrialization of the U.S. economy. All of this is in part driven by the enormous policy interventions in the U.S. energy sectors of the past several years, and further policy is scrambling to keep up with the various second order implications. And, this is all occurring at a time with two other major forces: first, the American public continues to reel from inflation, much of it in energy prices, so new regulatory models are now under consideration to insulate low income and residential customers from the major shifts. And second, ever increasing trade tensions add uncertainty, higher prices, and in many cases absolute constraints on the supply chains necessary to meet this new demand.

**Discussants:**
- *Jason Bordoff, Center on Global Energy Policy at Columbia University SIPA*
- *Peter Freed, Stanford University*
- *Justina Gallegos, White House Office of Science and Technology Policy*

**Session 2 : Next-Gen Power: Exploring New Technologies**
**Moderated by Dawn Lippert and Michael Terrell**

The United States is enjoying something of a golden age of investment in clean energy innovation. What are the most promising examples of next generation technologies which might majorly advance decarbonization progress? What novel government policies or supports might be brought to bear to further supercharge progress? How will economic forces factor into ultimate technology outcomes?

**Discussants:**
- *Claire Behar, Hy Stor Energy*
- *Tim Latimer, Fervo Energy*
- *Jeff Navin, Boundary Stone Partners*
- *Rick Needham, Commonwealth Fusion Systems*

**Session 3: Navigating Public and Consumer Sentiments**
***Moderated by Justin Worland***

As efforts to combat climate change continue to accelerate, consumers and the public will increasingly develop and

express views about mitigation and adaptation agendas. What will it take to win and maintain the public trust in support of climate change action? What risks loom ahead? How might these risks be avoided, or otherwise addressed and overcome?

**Discussants:**

- *Lee Beck, Clean Air Task Force*
- *Josh Freed, Third Way*
- *Mary Landrieu, Van Ness Feldman LLP*
- **Jonathan Smith, Michigan Department of Labor & Economic Opportunity*

**Sunday, August 4, 2024**

**Breakout Session 4A: Beyond Storage: Offtake Markets for Captured Carbon**
***Moderated by Dawn Lippert***

Carbon management is now squarely in the realm of public dialogues about climate change mitigation, and often focuses on storage and sequestration of captured carbon. What are the next generation opportunities for offtake markets for captured carbon that don't yet have policy regimes, emerging technologies, or other drivers propelling them forward? How might captured carbon serve as an input for manufacturing or fuels production? What novel industries, industry collaborations, or economic innovations might emerge?

**Discussants:**

- *Andy Karsner, Manifest Energy*
- *Julia Reichelstein, Vaulted Deep*
- *Vijay V. Vaitheeswaran, The Economist*

**Breakout Session 4B: Financing the Future: Pioneering Finance for Emerging Clean Energy Projects**
***Moderated by Rich Powell***

The financial sector, while not a creator of clean energy projects, plays a crucial role in enabling their realization once they achieve viability. How might leaders unlock transformative potential of financial institutions in accelerating the clean energy transition, exploring innovative financial mechanisms and public sector collaborations. How can financial institutions act as catalysts for clean energy projects that are still in the conceptual or early development stages? What innovative financing models could be developed to support early-stage clean energy initiatives without depending solely on concessionary financing? In what ways can public policy shape financial interventions to make emerging clean energy solutions attractive to the financial sector?

**Discussants:**

- *Susan Gray, Argo Infrastructure Partners*
- *Louis Lazzara, Energy Income Partners, LLC*
- *Geneviève Piché, Wells Fargo*
- *Tim Whitehead, Goldman Sachs*

**Breakout Session 5A : Building or Repurposing Pipeline Infrastructure for Hydrogen and CO2**
***Moderated by Robin Millican***

Streamlining the federal permitting process for clean energy and other infrastructure projects is crucial for reducing emissions, cutting energy costs, improving energy reliability, and enhancing energy production and supply chain security in the US. Building linear infrastructure, including transmission lines and pipelines for hydrogen, carbon dioxide (CO2), and natural gas is critical in this regard. How might regulatory processes

balance environmental and community imperatives with the urgency of expediting the construction of linear infrastructure projects? Should laws and regulations differ between pipelines and transmission projects? In the context of U.S. federalized democracy, what are the optimal jurisdictional divisions of authority among federal, state, and local governments for linear infrastructure?

**Discussants:**

- *Dave Conover, Kinder Morgan, Inc.*
- *Jon Creyts, RMI*
- *Emma Hand, Dentons US LLP*
- *Michael Webber, The University of Texas at Austin*

**Breakout Session 5B : The Electric Commute - Getting the Middle Class into Electric Transportation**
***Moderated by Colette Honorable***

As electric vehicles eventually reach price parity with internal combustion cars, the next decade seems likely to witness a significant and continued shift towards electric transportation. What will it take to break free of inertia that constrains more widespread adoption of electrified transportation?

**Discussants:**

- **Vishaan Chakrabarti, Founder and Creative Director, Practice for Architecture and Urbanism*
- **Tiya Gordon, itselectric*
- **Albert Gore, Executive Director, Zero Emission Transportation Association*
- *Michael Maten, Director, EV Policy & Regulatory Affairs, General Motors*

**Forum Reception and Dinner**

**Monday, August 5, 2024**

**Session 6: The Case for Optimism in the US / China Clean Energy Interplay**
***Moderated by Kelly Sims Gallagher***

In parallel to (and despite) the various geopolitical tensions underpinning the US / China relationship, bilateral cooperation on climate change is essential for humanity. What is the case for optimism that the United States and China can, in working together, make possible a clean energy future for the world? What essential elements might define this outcome? How will other countries factor into the mix?

***Discussants:***

- *Alex Fitzsimmons, Sila Nanotechnologies*
- *Hillary O'Brien,ClearPath*
- **Christopher Smith, Ford Motor Company*

**Break**

**Session 7: The Solutions Quartet - Clean Energy, Response to Climate Impacts, Artificial Intelligence, and Biotechnology**
***Moderated by Justin Worland***

***Discussants:***

- *Greg Gershuny, Energy & Environment Program*
- **Joshua Parker, NVIDIA*
- *Lara Pierpoint, Prime Coalition*
- **Brad Ringeisen, Innovative Genomics Institute*

Four primary forces will shape the next century: the clean energy transition, the impacts of climate change on humans, the rise of artificial intelligence, and the evolution and deployment of biotechnologies (like CRISPR, or bio-synthetic substitutes for rare natural materials). Even more so, the confluence and interactions between each of these forces will multiply the impacts - both positive and negative. Confronting the interplay between these forces offers the potential to significantly accelerate progress, yet some potential solutions also present complex challenges to societies existing systems and norms. How might leaders elicit the best from transformative technologies while simultaneously managing the risks they might implicate? How might the policy process keep pace, proactively, and also reactively? How will economics, and economies, be transformed?

**Session 8: The Limitations of "If You Build It, They Will Come:" Demand Side Policy Making Opportunities**
***Moderated by Miranda Ballentine and* Michael Terrell**

Historic federal investment is poised to dramatically enhance the production and availability of clean energy and its inputs in the coming years. While these supply-side policies undoubtedly hold great promise, some decarbonization pathways (for instance, C02 removal, chemicals, or hydrogen) might need demand-side support as well. How might policymaking support help reduce price risk of novel technologies and stimulate offtake in key applications?

***Discussants:***
- *Sarah Adair, Duke Energy*
- *Dr. Vanessa Z. Chan, US Department of Energy*
- *Sara Decker, Walmart*
- *Sasha Mackler, Executive Director, Energy Program, Bipartisan Policy Center*

**Session 9: Maintaining and Reinforcing Energy System Reliability**
***Moderated by Colette Honorable***

Recent reliability failures or near-misses have thrust energy system reliability and resilience to the forefront of concern for system operators, policymakers, and other planners. What lessons can be learned from recent high-profile incidents? How might leaders best address regulatory, technical, and market barriers to reinforce system reliability while simultaneously managing ever escalating load growth? What will it mean to ensure energy systems remain reliable in 2030, and beyond?

***Discussants:***
- *Phil Dion, Edison Electric Institute*
- **Jimmy Glotfelty, Public Utility Commission of Texas*
- *Jason Grumet, American Clean Power*
- *Jessica Hogle, Tennessee Valley Authority*

**Forum Reception and Dinner**

**<u>Tuesday, August 6, 2024</u>**

**Session 10: American Clean Energy Export Leadership**
***Moderated by Robin Millican***
The ongoing energy transition offers new opportunities for American manufacturing, intellectual property, and financial leadership in the deployment of clean technologies globally. What will it take for the United States to become and remain the global leader in ensuring that clean energy technologies are adopted everywhere, especially in the developing world? How could clean energy export and trade policy be brought to bear in strengthening the United States' alliances and other international relationships? What policies and other enabling mechanisms will be necessary to catalyze these outcomes?

***Discussants:***

- *Greg Bertelsen, Climate Leadership Council*
- *Maureen Hinman, Silverado Policy Accelerator*
- *Nadia Khawar, U.S. International Development Finance Corporation*
- **Catherine Wolfram, MIT Sloan School of Management*

**Wrap up**
***Moderated by Miranda Ballentine***

**Forum Adjourns**

# THANK YOU TO OUR 2024 ASPEN ENERGY WEEK SPONSORS!