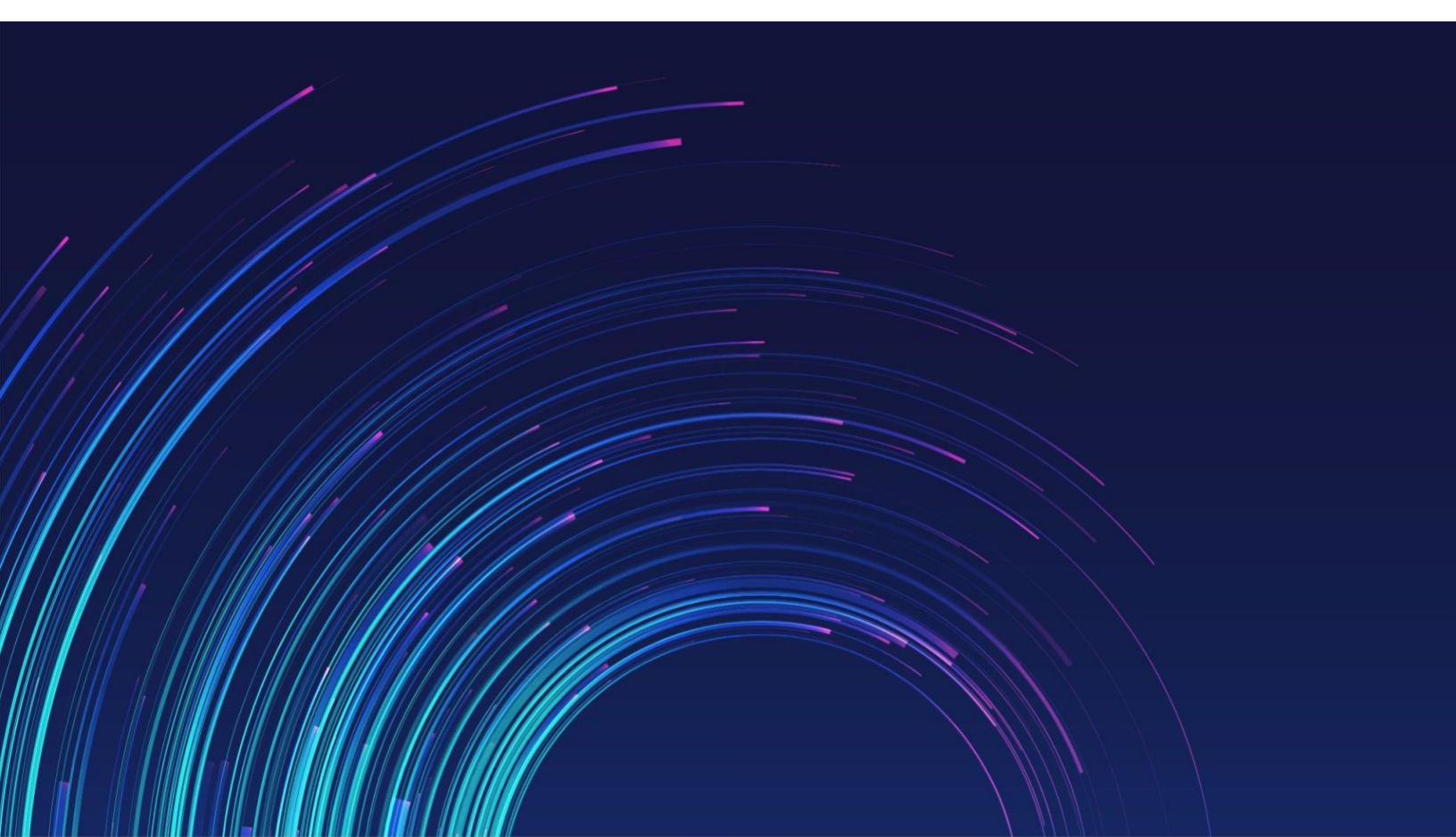




2025 ASPEN WINTER ENERGY FORUM

Post-Forum Report

February 7 – February 10

Aspen, Colorado

Roger Ballentine, Jim Connaughton, & Katie McGinty, Co-Chairs

Cina Vazir, Rapporteur

[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.

The [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.

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

Copyright © 2025 by The Aspen Institute
Published in the United States of America in 2025 by The Aspen Institute
All rights reserved

Table of Contents

Introduction.....	5
The Energy Transition in the United States.....	6
Meeting Rising Demand for Electricity.. ..	7
A New Moment for Nuclear.....	7
Hydrogen Benchmarks.....	9
Artificial Intelligence (AI) as a Solution.. ..	9
Energy Efficiency.....	10
Constructive Engagement with the Oil and Gas Industry.....	11
Carbon Accounting.....	11
New FEOC Rules.	12
Opportunity for the U.S. Department of Defense.....	12
Agenda	13
Participant List	16

Introduction

The Aspen Energy & Environment Program hosted its annual Winter Energy Forum this year to discuss the evolving energy landscape and look around the corner to what lies ahead. Over the four days from February 7-10, 2025 leaders from the private, public, and nonprofit sectors gathered in Aspen, Colorado. The agenda spanned a range of topics, from the future of nuclear energy to the role of the oil and gas industry in the energy transition. Conversations focused on the intersection of finance, policy, technology, and markets.

Each year, a few memorable phrases emerge from the Forum, capturing the mood and perspective of the moment. This year, one metaphor resonated especially strongly: the need for climate advocates to “surf the wave they are on.” In other words, success in the current political and economic environment will require pragmatism—recognizing the opportunity that lies between long-term climate goals and the near-term drive for “energy dominance.” Another recurring phrase reminded participants that “climate solutions cannot be the enemy of affordability.” While the energy transition will entail costs, there was a shared emphasis on minimizing those costs and aligning action with economic reality.

This report seeks to summarize some of the key insights from the 2025 Winter Energy Forum. While the text below captures the general essence of the conversation, it should not be misconstrued to represent the views of any individual participant.

The energy transition in the United States is in a turbulent moment. Clean energy technologies continue to grow more competitive, and their deployment continues to rise. At the same time, the national conversation has increasingly focused on energy affordability, reliability, and access alongside climate concerns. Economic competitiveness is at the forefront of policymaking as U.S.-China competition accelerates and domestic electricity demand increases at a pace not seen since the 1980s.

There is an opportunity zone between the Trump Administration's priorities and the energy transition; this zone includes nuclear, carbon capture and storage (CCS), geothermal, hydrogen, critical minerals, grid reliability, and permitting reform. Participants in Aspen highlighted a broad shift taking place in the United States away from climate action and toward prioritizing energy affordability, reliability, and access. But the two things can exist at once. Urgency around energy security and economic competitiveness can be a powerful driver for climate action in the near term. There are concrete ways that the United States can strengthen its toolkit now to prepare for when the political pendulum eventually swings back to climate action.

Participants identified an "opportunity zone" that includes nuclear energy, carbon capture and storage, hydrogen, geothermal, critical minerals, grid reliability, and permitting. The United States can double down on these areas over the next four years to achieve tangible success that aligns climate goals with the current Administration's vision of making more energy, moving more energy, and manufacturing more in America. Participants discussed permitting reform as one particularly important opportunity. Bipartisan consensus on permitting could include deadlines and transparency for filings and expansion of categorical exclusions. The difficulty will be threading a needle across multiple sectors, since Congress will likely intend to pass a permitting reform package that spans the entire economy.

Various participants were wary of the net impact of upcoming potential U.S. policies on the climate, including the rollback of tax credits, drags on clean energy investment due to uncertainty, lower availability of public data, and reduced federal funding to states. These risks would prove a major headwind to the energy transition in the United States. Nonetheless, the industry must "surf the wave" it is on, to borrow a prominent metaphor from this year's Winter Energy Forum. That means finding ways in the near term to maximize progress in the "opportunity zone" outlined above.

Meeting rising demand for electricity is a key area of bipartisan consensus and priority. Demand for electricity in the United States is increasing at a much higher rate than it has in the last two decades. Research provider Rhodium Group, for example, expects load growth in the United States to average 1.5-2.3% from 2024-2029 and 2.0-2.2% from 2030-2035. That rate of growth far exceeds the load growth of 0.7%, 0.5%, and 0.3% that occurred in the United States during the 2000s, 2010, and 2020-2023, respectively. Transport, data centers, buildings, and industrial applications are all contributing to the new increase in electricity demand.

There are signs that the U.S. electric grid is struggling to accommodate new demand. Electricity prices have been rising faster than inflation since 2022.¹ This rise is expected to continue in 2026, continuing the reversal of a decade-long trend of electricity prices climbing slower than inflation.² Increasing electricity prices are a major cause of political concern. U.S. consumers spend over \$1,700 annually on electricity and will be sensitive to changes in prices or reliability.³ An overstretched electric grid could also deeply erode American economic competitiveness.

Upgrading the electric grid was a key part of the Biden Administration's energy transition agenda and has featured prominently in the Trump Administration's vision of energy dominance albeit for the separate and intertwined reasons of energy, economic, and national security.⁴ Regardless of the motivations, the concern over electricity is both new and bipartisan.

Participants in Aspen discussed how uncertainty complicates the challenge of meeting demand. Projections of the impact of technologies like the internet and cryptocurrency on electricity demand have been largely wrong in the past. Participants stated that projections for demand from data centers are similarly unpredictable. However, there were varied opinions on the harm that could arise from overbuilding the grid. Some participants opined that overestimating long-term demand could lead to bankruptcies and unnecessary costs on consumers. Others stated that the United States needs to focus on building all it can for now, given the large mismatch between projections of demand growth and current grid capacity.

We are in a new moment for nuclear—can the moment become a movement? Participants at Aspen emphasized the benefits of nuclear energy, including that it is low-carbon, firm, reliable, and resilient. This mix of benefits is helping nuclear energy gain bipartisan favor in the United States since it meets the energy and national security priorities of the Republican party and the clean energy priority of the Democratic party.

Nuclear energy has been an outcast in the United States over prior decades due to its reputation—whether warranted or not—for environmental harm, risks to safety, and cost overruns. But the tides for nuclear energy may now be changing. Various pieces of legislation at the state and federal level in the last year have sought to promote nuclear's role in the U.S. generation mix. Countries around the world have also signalled interest in growing their nuclear fleets. Since COP 28 in 2023, 31 countries have agreed to triple nuclear capacity by 2050.⁵

¹ <https://www.eia.gov/todayinenergy/detail.php?id=65284>

² <https://www.usinflationcalculator.com/inflation/electricity-prices-adjusted-for-inflation/>

³ <https://www.eia.gov/todayinenergy/detail.php?id=65284>

⁴ <https://www.whitehouse.gov/presidential-actions/2025/01/unleashing-american-energy/>

⁵ <https://world-nuclear.org/news-and-media/press-statements/six-more-countries-endorse-the-declaration-to-triple-nuclear-energy-by-2050-at-cop29>

Leading technology companies like Amazon, Google, and Microsoft are investing billions in nuclear energy and now see it as similar to any other low-carbon source of electricity.⁶

The first goal for the nuclear industry in the United States is to focus on the existing fleet. This includes life extensions, relicensing, and reinvestments for current plants. It also includes restarting old nuclear facilities like those in Michigan, Iowa, and Pennsylvania.

The second stage of expanding nuclear capacity is more complicated: new builds. Participants identified a first-mover problem. Investment risk for nuclear is more about cost escalation than technology. The cost of building nuclear projects is uncertain due to the low number of new domestic builds over the last decades. Participants discussed risks, ranging from a lack of experts to insufficient supply chains, that can cause capital costs to balloon. One participant ventured that, as more new projects are constructed and these issues are resolved, capital costs could decrease 30-40% for the next batch of projects. The challenge is determining who will be a first-mover to take on the risk of higher capital costs for the first set of projects.

Solving the first-mover problem requires allocating risk across stakeholders. Building new nuclear capacity is lengthy and capital intensive. Few entities are capable and/or willing to individually shoulder the risk on their balance sheets. In the mid-20th century, vertically integrated utilities built most of America's nuclear capacity under a cost-plus model that guaranteed cost recovery through regulated rates. Participants in Aspen view that model as no longer plausible—citing increased utility risk aversion, the shift away from regulated cost recovery, and a growing emphasis on shielding ratepayers from financial exposure.

Some participants discussed the potential for connecting multiple states and using public-private partnerships, which could include hyperscalers, to spread financial risk across different players. Some of these risk-sharing mechanisms may already be taking place in the market. The challenge, as one participant put it, is to find a place to house huge capital risk that is more than five years out from market for hardware-level returns.

Given the juxtaposition between the financial challenges and potential benefits of nuclear energy, some participants encouraged more government intervention. Several individuals suggested facilitating permitting on federal lands and military bases. Another suggestion was for the government to develop insurance mechanisms that can backstop projects and protect first-movers from cost overruns. The United States is now in a moment for nuclear energy — several participants noted that realizing this opportunity may require greater public-sector support or risk-sharing mechanisms.

⁶ <https://www.nytimes.com/2024/10/16/business/energy-environment/amazon-google-microsoft-nuclear-energy.html>

Hydrogen needs a benchmark to create a functional marketplace and help the industry move from colors to carbon intensity. The use of hydrogen as fuel dates back nearly two centuries.⁷ Today, most hydrogen is currently used for refining and industrial applications. Despite its long history, however, the market for hydrogen remains immature. Customers often do not know what to pay for hydrogen offtake since the market lacks a functioning futures market and benchmark price.

Various participants at the Winter Energy Forum advocated for creating a hydrogen benchmark. Prices for specific products could deviate from the benchmark based on carbon intensity. The level of that spread from the benchmark price would be based on how much consumers value carbon intensity and on supporting policy mechanisms. Several participants speculated about the potential for a reduction of the cutoff date for 45V tax credits and funding for hydrogen hubs. According to some participants, 45V is in the political crosshairs since it favored green hydrogen too early rather than first focusing on developing a functional market structure and ecosystem for all forms of the fuel.

Artificial intelligence (AI) can offer important sustainability solutions and reduce its own strain on the grid, including potentially through load flexibility. The conversation on AI at the Winter Energy Forum started with a discussion about the potential benefits for sustainability. Participants highlighted how AI can accelerate sustainability solutions by optimizing systems, enabling digital twins to reduce waste, and turbocharging innovation for climate technologies.

While data centers only consumed 4.4% of total U.S. electricity in 2023, their total demand for electricity is expected to double or triple by 2028.⁸ Industry has a responsibility, and incentive, to limit its own demand for electricity. That has occurred during periods in the past when compute grew drastically but energy demand remained flat due to innovation.⁹ However, the trend has changed in recent years. The rapid growth of data centers is now leading to corresponding increases in electricity demand.¹⁰ Some participants from industry were optimistic that innovation can continue to drive down the energy intensity of AI. In the meantime, participants discussed measures that industry and regulators could take to better understand future demand, such as creating more transparency by better mapping the data center pipeline and tracking financial commitments to understand a project's likelihood.

Participants also discussed the potential for data centers to engage in demand-side flexibility to improve grid stability. Some participants believe that load flexibility is a significant opportunity that deserves more attention. While it is not trivial to shift demand in real time, it is fundamentally a software problem that theoretically can be solved. The ease of shifting demand,

⁷ <https://www.kdcprojects.com/the-history-of-hydrogen-fuel/>

⁸ <https://www.energy.gov/articles/doe-releases-new-report-evaluating-increase-electricity-demand-data-centers>

⁹ <https://www.iea.org/commentaries/data-centres-and-energy-from-global-headlines-to-local-headaches>

¹⁰ <https://www.iea.org/reports/energy-and-ai/executive-summary>

however, varies greatly based on system design, the purpose of the data center, and the nature of its customers. Several participants advocated the development of stronger incentives—either in the form of carrots or sticks, or a blend of the two—for data centers to flex demand. Ultimately, it is also important for utilities and hyperscalers to remember that load shifting is dependent on strong transmission and therefore to focus resources on developing the necessary transmission infrastructure.

Hyperscalers—companies that build and operate large data centers—also need to continue to develop their value proposition for local communities, according to participants in Aspen. Data centers generally have a large environmental footprint related to energy, water, and land use, as well as generation of noise. Companies will need to innovate on these fronts to address legitimate community concerns. In terms of benefits, data centers are not very labor-intensive, but can generate an important source of tax revenue that also could be better communicated.

Energy efficiency is a large, overlooked opportunity to reduce emissions. As one participant put it, there is currently “amazing inefficiency” in the current U.S. energy ecosystem. A variety of technologies exist that are not yet deployed at scale but are far more energy-efficient than those currently in use. Similarly, significant capital is wasted on systems that operate at low capacity. According to research by RMI, the world currently wastes over \$4.6 trillion per year—almost 5% of global GDP and 40% of energy expenditure—on fossil fuel inefficiency.¹¹

One participant at Aspen stated that “energy efficiency should be our first fuel. And yet, it’s not where everyone is focused today when we think about the current energy crisis.” Energy efficiency is a huge missed opportunity absent from the current U.S. conversation on energy dominance and the global conversation on Nationally Determined Contributions.

Participants outlined a variety of action items to promote more efficient energy systems. Potential solutions include investing more in innovation on demand, aligning utility incentives, and thinking and working in systems rather than at the incremental level. One participant stated that many of the necessary technologies are already de-risked but there is a lag in the necessary financial and regulatory incentives to encourage implementation. Policymakers could consider turning to mandates. Some of the largest efficiency measures in U.S. history have come through mandates, such as those found in the 2007 Energy Independence and Security Act and vehicle efficiency mandates. Another idea that surfaced is for utilities to set money aside to compensate companies for capital expenditure related to efficiency.

¹¹ <https://rmi.org/the-incredible-inefficiency-of-the-fossil-energy-system/>

Several participants suggested that climate advocates should seek constructive engagement with the oil and gas industry, acknowledging that collaboration and cooperation are needed to advance the energy transition. Many participants at Aspen acknowledged that oil and gas will likely remain a central part of the global energy system in the near and medium term. If demand for oil and gas continues, it is important for the environmental community to work with oil and gas companies to ensure they reduce their emissions. The opportunity here is significant—production of oil and gas directly contributes around 15% of global energy-related emissions. Deploying carbon capture and storage and reducing methane leaks can have a major impact on climate targets. It is widely acknowledged that CCS will be crucial to achieving net-zero emissions by 2050.¹²

Oil and gas companies are also uniquely positioned to use their massive balance sheets, engineering expertise, project management capabilities, and existing infrastructure to advance deployment of energy technologies like hydrogen, geothermal, and wind. Worryingly, some companies have recently backtracked on clean energy targets, removed chief sustainability officers, and stepped away from bold climate leadership. More engagement is needed to help stem this trend.

Participants in Aspen generally agreed that there is an opportunity for the oil and gas industry and clean energy advocates to collaborate and cooperate. Discussants acknowledged, however, that this view is not reflective of how most of the world thinks today. Methane emissions may be one of the most immediate opportunities to make the relationship between the industry and environmental community more collaborative. Oil and gas operations likely contribute between 80-120 million tons of methane emissions per year, carrying a huge effect on climate. Recent initiatives like the OGCI, OGMP, and OGDC are seeking to tackle this issue and are a good example of cooperation between the industry and environmental groups.

Carbon accounting and accountability are essential; the former is needed to properly enforce the latter. There was a clear call from participants in Aspen to advance the carbon accounting system. Carbon accounting is critical to ensure that carbon removals are legitimate. The global solid and liquid waste management industries are worth hundreds of billions of dollars and it is unthinkable to imagine a world without those services. The same may be true of carbon in the future. A mix of regulation and accounting is needed for such a market to exist.

Participants discussed various approaches to carbon accounting, including a transparent CO2 ledger, auditing process, and verification process. There was also discussion around the benefits of a midstream cap and trade system rather than a traditional upstream cap and trade system. An upstream cap-and-trade system places the obligation at the point of fuel production or import, based on the carbon content of fossil fuels. A midstream system assigns responsibility at the point of actual emissions, such as power plants or refineries. This system is more targeted, makes

¹² <https://www.iea.org/reports/ccus-in-clean-energy-transitions/ccus-in-the-transition-to-net-zero-emissions>

it easier to track mitigation, and incentivizes efficiency, but is more difficult to administer. A midstream system would likely rely on calculation, not just measurement.

As one participant put it, “accounting is how you make the market; it’s the foundation for everything.” One participant speculated that if several large companies start issuing ledgers, major banks could follow and help kickstart the market. However, several participants stated that carbon capture and sequestration will ultimately require government policy to work at scale. CCS is a cost addition to an incumbent technology. There is little profit incentive without monetizing carbon. In the past, accounting systems and waste management markets have usually resulted from a policy and regulatory framework. One participant reasoned that voluntary markets may play an initial role, but that corporations seek to maximize shareholder value, not correct market externalities. That logic implies a clear role for policy.

Some participants noted that new FEOC rules may significantly influence supply chain decisions in ways that are not yet widely understood. Many individuals in the energy industry are closely watching the rollback of tax credits for clean energy technologies. Despite receiving less attention, changes to the application of rules for foreign entities of concern (FEOC) could have a similar, if not even larger impact on the deployment of clean energy in the United States.

Participants discussed the difficulty of drafting, implementing, reporting on, and meeting requirements meant to remove FEOC content from supply chains. These requirements were finalized during the Biden Administration to determine eligibility for electric vehicle tax credits under the Inflation Reduction Act, with phased implementation for battery components and critical minerals. If similar requirements are broadened to other clean energy technologies and/or expanded in scope, it could greatly limit the number of projects that are able to access tax credits. This is both due to the challenge of diversifying away from China and of the corresponding reporting requirements. The result could significantly slow clean energy deployment in the United States.

The U.S. Department of Defense (DOD) can be a first mover in promoting certain strategic clean energy technologies, such as small modular reactors and geothermal. Participants grappled with the extent to which the Pentagon can help commercialize clean energy technologies. Are DOD applications large enough to meaningfully address the market failures slowing climate innovation? And where do DOD’s strategic interests—like resilience for defense-critical assets—align with the broader energy transition?

While DOD is the largest energy user in the United States, it only accounts for about 1% of total domestic energy consumption. According to one participant, roughly 70% of that is operational (e.g., jet fuel) and 30% is installation energy. This implies that although DOD’s procurement power is real, its direct leverage over U.S. energy markets is limited. Still, its strategic and symbolic role can help catalyze early deployment.

Participants focused on two primary areas of potential. First, the military could deploy small modular reactors (SMRs) at remote bases, improving energy security while demonstrating new nuclear technology. SMRs are particularly suited to isolated environments where fuel supply is logistically challenging and reliability is critical. Second, geothermal systems could be installed at domestic bases to enhance resilience and simultaneously validate a promising clean energy solution. Geothermal offers baseload power with minimal fuel needs and high on-site reliability—an appealing match for permanent military installations.

Participants discussed concerns that diminishing U.S. leadership in clean energy could reduce America’s long-term strategic influence. It is often stated that there cannot be an energy transition without China, which currently accounts for around one-third of CO₂ emissions and for the overwhelming majority of the growth in CO₂ emissions in the last decade.¹³ China is also the world’s dominant producer of a variety of clean energy technologies, ranging from solar panels to batteries for electric vehicles and stationary storage.

As the United States questions its clean energy ambitions, China continues to charge ahead in producing clean energy technologies and innovating on its existing products. Countries around the world are also moving forward with the energy transition for a range of reasons. In South Asia, for example, India and Pakistan are rapidly deploying solar panels to improve their energy security. As countries seek to decarbonize and China strengthens its hold on production of clean energy technologies, the likely outcome is deeper integration between the rest of the world and China. That integration will render countries increasingly dependent on China. Participants in Aspen outlined how U.S. policymakers should consider the national security implications of willingly ceding the global clean energy marketplace to China.

¹³ <https://www.iea.org/countries/china/emissions>
<https://asiasociety.org/policy-institute/charting-chinas-path-its-2035-nationally-determined-contribution>

Agenda

Sunday, February 7, 2025

Opening Reception and Dinner

Monday, February 8, 2025

Welcome Remarks

Session 1: Briefing Room: Getting it Built

Energy and climate policy increasingly centers on a critical question: what will it take to build the energy infrastructure needed to ensure reliability, security, and meet climate goals? This 'Briefing Room' session will assess recent successes and setbacks, and explore the strategies required to accelerate the deployment of energy assets at the necessary speed and scale.

Session 2: Tale of Two Technologies: Hydrogen and Nuclear

The Biden years saw unprecedented policy support for low-carbon or “clean” hydrogen. These mostly supply-side tax credits and other policies sought to jump start what is essentially a new industry. While the potential role of clean H2 in hard-to-decarbonize sectors is clear, the scale of demand for clean hydrogen remains uncertain, costs of production and of compression, storage, and transport are high, and there is no transparent market price for clean H2. Will clean H2 become a truly usable market commodity? What are the barriers? Will lack of ongoing policy support threaten the maturation of the market for clean H2?

Meanwhile, nuclear power is a mature industry that in recent years in the U.S. has largely flatlined – despite a greater need than ever for clean (and firm) generation. While advanced technologies like modular reactors and even fusion have gotten a lot of attention, traditional nuclear remains America’s largest source of zero carbon power. Nuclear energy has arguably gotten less policy support than newer technologies like clean H2, but there have been signs of resurgence in the marketplace. What will it take to accelerate nuclear deployment? Are new subsidies needed or can innovative transactions make a difference without new government funding? What other policy tools are realistic?

Session 3: Solutions for AI/Digital Driven Demand Growth

The rapid growth of artificial intelligence is driving soaring electricity demand, particularly from energy-intensive data centers. This session will explore the pivotal solutions needed to meet this rising demand sustainably, including innovations to achieve net-zero operations. What challenges and controversies lie ahead? How might technological advancements reshape outcomes, and what strategies will be essential to align this growth with climate goals?

Tuesday, February 9, 2025

Session 4: Advancing Demand Side to Cut Carbon and Costs

Often noted but less often actioned, energy efficiency is the low hanging fruit of decarbonization. In the buildings sector, for example, efficiency, electrification and digitalization can slash emissions and operating cost. Efficiency measures are compelling in delivering operating cost savings even as advancing climate action. Yet, deployment lags, with building upgrades stuck at low single digits annually. What is the potential of energy efficiency to drive carbon reductions? How can energy efficiency become a more prominent strategy in climate transition action plans? At COP28, global leaders announced a commitment to doubled energy efficiency. This session will examine the technologies available and the strategies needed to accelerate progress in putting energy efficiency to work.

Session 5: Energy & Climate Policy Post-Election

What new directions might a new presidency and Congress bring to U.S. energy and climate policy? Which policy and legislative themes are poised to take center stage in the coming years? Are there opportunities for bipartisan collaboration on key issues? How have shifting political dynamics reframed topics previously seen as bipartisan or partisan, potentially altering their alignment?

Session 6: The Role of Oil & Gas

Oil and gas remain dominant and indispensable in the energy system, despite broad consensus on the need to transition to new, clean technologies. In transportation, petroleum based products have incomparable energy density and economic advantages that are hard for electric alternatives to beat at scale. In electricity, natural gas is the lynchpin of system reliability now and in the foreseeable future, and even the most optimistic energy transition scenarios contemplate a significant role for oil and gas between now and 2050 and beyond. Electrification, clean H₂, biofuels, nuclear, and renewables all offer some degree of displacement, but oil and gas are not going away completely. How can we accommodate and reconcile oil and gas use with achieving global net zero by mid-century? What is the most we hope to displace? What do we do with the rest? What will it take to outcompete oil and gas in the long run? What technological, economic, and policy developments will need to occur to make this eventuality possible?

Session 7: Climate & Security – Tensions and Complementarities

Especially in the wake of Russian aggression in Ukraine, intersections between national security and energy policy have been top of mind for policymakers in ways not seen in decades. Meanwhile, “security” concerns arising from climate change and the energy transition are increasing in acuity, ranging from geopolitical complications arising from melting ice in the Arctic, nuclear proliferation concerns, broadened disease vector geographies, implications for

military readiness, and more. How might leaders conceptualize the emergent trilateral relationship between climate, growth, and security? What tensions and complementarities are or likely will become prominent? What are key implications for the policy process?

Wednesday, February 10, 2025

Session 8: Wrap Up / Concluding Remarks

Participant List

*Attending Virtually

1. **Sarah Adair**, Managing Director of Public Policy, Duke Energy
2. **Roger Ballentine**, President, Green Strategies, Inc. **(Co-Chair)**
3. **Manish Bapna**, President and Chief Executive Officer, Natural Resources Defense Council
4. ***Damian Beauchamp**, President and Chief Development Officer, 8 Rivers Capital
5. **Drew Bond**, Co-Founder, President, and Chief Executive Officer, PowerField Energy
6. ***Jason Bordoff**, Professor and Founding Director, Center on Global Energy Policy at Columbia University
7. **Scott Borgerson**, Chief Executive Officer, H2X
8. **Alex Breckel**, Director, Clean Tomorrow
9. **Bill Brown**, Chief Executive Officer, New Waters Capital
10. **Mark Caine**, Senior Lead, Energy and Climate, Google
11. **Robin Carnahan**, Former Administrator, U.S. General Services Administration
12. **Amy Chiang**, Chief Sustainability and External Affairs Officer, Topsoe
13. **Jim Connaughton**, Chairperson, Nautilus Data Technologies **(Co-Chair)**
14. ***Kristina Costa**, Former Deputy Assistant to the President and Director, Office of Clean Energy Innovation and Implementation
15. **Jon Creyts**, Chief Executive Officer, Rocky Mountain Institute
16. **Bryce Dalley**, Director, Commercial Energy Supply, Meta
17. **Luke Dunnington**, President and Founder, Intersect Power
18. **Courtney Durham Shane**, Senior Officer, Climate Mitigation, The Pew Charitable Trusts
19. **Katie Dykes**, Commissioner, Connecticut, Department of Energy and Environmental Protection
20. ***Neal Elliott**, Director Emeritus, The American Council for an Energy Efficient Economy
21. ***Ken Elser**, Renewable Energy Finance and Technology Leader, Wells Fargo
22. **Mason Emnett**, Senior Vice President, Public Policy, Constellation
23. **Lisa Epifani**, Head of Policy, ClearPath
24. **Lauren Faber O'Connor**, Partner, Lowercarbon Capital
25. **Emily Fisher**, Chief Strategy Officer, Smart Electric Power Alliance
26. **Laurie Fitzmaurice**, President, Elimini
27. **Jane Flegal**, Executive Director, Blue Horizons Foundation
28. **Anna Foglesong**, Managing Director, Clean Grid Initiative
29. **Peter Freed**, Research Fellow, Stanford University
30. **Sherri Goodman**, Senior Fellow, The Wilson Center
31. **Anand Gopal**, Executive Director, Policy Research, Energy Innovation

32. ***Todd Grabowski**, President of Global Data Center Solutions, Johnson Controls
33. **Karl Hausker**, Senior Fellow, World Resources Institute
34. **Christina Hayes**, Executive Director, Americans for a Clean Energy Grid
35. ***Clara Heuberger-Austin**, Lead Power Market Analyst, Shell
36. **Darcy Immerman**, Director, Energy Solutions Center of Excellence, Carrier
37. ***Amy Myers Jaffe**, Director, Energy, Climate Justice and Sustainability Lab, New York University
38. **Maggie Kelley Riggins**, Director of Community Benefits and Engagement, The American Council for an Energy Efficient Economy
39. **Maria Korsnick**, President and Chief Executive Officer, Nuclear Energy Institute
40. ***Kalee Kreider**, Senior Advisor, Ridgely Walsh
41. **Kate Larsen**, Partner, Rhodium Group
42. **Louis Lazzara**, Senior Research Analyst, Energy Income Partners Investments
43. **Rob Leland**, Director, Climate Security, Sandia National Laboratories
44. **Jake Levine**, Former Special Assistant to the President and Senior Director for Climate and Energy, National Security Council
45. **Ray Long**, President and Chief Executive Officer, American Council on Renewable Energy
46. **Melissa Lott**, Partner General Manager, Energy Technologies, Microsoft
47. **Joseph Majkut**, Director, Energy Security and Climate Change, Center for Strategic and International Studies
48. **Katie McGinty**, Vice President and Chief Sustainability and External Relations Officer, Johnson Controls (*Co-Chair*)
49. **Steve Metruck**, Executive Director, Port of Seattle
50. **Robinson Meyer**, Founder and Executive Editor, HeatMap News
51. **Max Minzner**, Vice President and Deputy General Counsel, Federal Energy Regulation and Commercial Transactions, Exelon
52. ***Jim Murchie**, Chief Executive Officer, Energy Income Partners
53. **Richard Newell**, Chief Sustainability Officer and Chief Technology Officer, Sustainability Solutions, C3 AI
54. ***Luisa Palacios**, Managing Director and Deputy Research Director, Center on Global Energy Policy, Columbia University
55. **Urvi Parekh**, Head of Global Energy, Meta Platforms
56. **Josh Parker**, Senior Director, Legal, Corporate Sustainability, NVIDIA
57. **Billy Pizer**, President and Chief Executive Officer, Resources for the Future
58. **Rich Powell**, Chief Executive Officer, Clean Energy Buyers Association
59. **Anne Rosenau**, Managing Director, Cushman & Wakefield
60. ***Costa Samaras**, Director, Scott Institute for Energy Innovation, Carnegie Mellon University
61. **Daniel Schory**, Vice President, Infrastructure, Energy and Permitting, Arnold Ventures

62. **Alicia Seiger**, Director of Climate, Chan Zuckerberg Initiative
63. **Arushi Sharma Frank**, Senior Advisor, Distributed Energy, Partners Group AG
64. **Varun Sivaram**, Senior Fellow for Energy and Climate, Council on Foreign Relations
65. **Jon Sohn**, Vice President, Government Relations, Regulatory and Policy, Capital Power
66. **Vijay Swarup**, Senior Director, Climate Strategy and Technology, Exxon Mobil
67. **David Szmigielski**, Executive Director, Sustainable Finance, Investment Banking, Wells Fargo
68. **Michael Terrell**, Senior Director, Clean Energy and Carbon Reduction, Google
69. **Nidhi Thakar**, Senior Vice President, Policy, Clean Energy Buyers Association
70. **Carla Tully**, Board Director, Citizens for Responsible Energy Solutions Forum
71. **John Wagner**, Laboratory Director, Idaho National Laboratory
72. ***Jane Wales**, Vice President, Philanthropy and Society, Executive Director, Program on Philanthropy and Social Innovation, The Aspen Institute
73. **Michael Webber**, Sid Richardson Chair in Public Affairs and John J. McKetta Centennial Energy Chair in Engineering, University of Texas at Austin
74. **Chase Weir**, Chief Executive Officer and Vice Chairman, Distributed Sun
75. ***Jeff Weiss**, Executive Chairman, Distributed Sun

Aspen Institute Staff

1. **Greg Gershuny**, Vice President & Executive Director, Energy and Environment Program
2. **Timothy Mason**, Director, Energy and Climate, Energy & Environment Program
3. **Kitty Pollack**, Senior Advisor to the Executive Director, Energy & Environment Program
4. **Jade Rouse**, Senior Program Associate, Energy & Environment Program