One Conversation

Tackling the Toughest Energy Challenges

EFI FOUNDATION

The 2025 Annual Report

Innovation

Affordability

Security

Equity

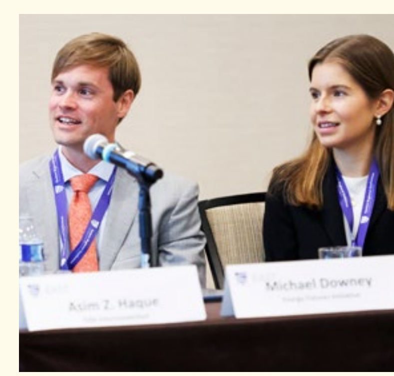
Who We Are

Making Innovative Energy Futures Possible

The EFI Foundation is an independent, nonpartisan leader tackling the toughest energy challenges of our time. Guided by thorough research and grounded in pragmatism, we provide rigorous analysis, actionable policy recommendations, and innovative strategies that shape the future of energy. We pave the way for cleaner, more resilient, and more affordable energy.

From accelerating breakthrough technologies and advancing market solutions to addressing equity, security, and workforce needs, the EFI Foundation brings clarity and direction to an often fragmented energy conversation. We convene diverse perspectives—from scientists and entrepreneurs to policymakers and community leaders—to ensure inclusive, practical, and collaborative solutions.

The EFI Foundation bridges evidence, markets, and policy to drive progress toward a prosperous energy future.



Inside this Report

Letter from the Founder and CEO

One Conversation Can Build Consensus

As the calendar turned to January, our organization entered its 10th year of existence. That milestone is both remarkable and, we believe, an indicator of impact.

After serving as the 13th U.S. Secretary of Energy under President Barack Obama, I founded a nonprofit, the Energy Futures Initiative (EFI), with two trusted colleagues from my tenure at the Department of Energy: Joseph Hezir, chief financial officer, and Melanie Kenderdine, founding director of the Energy Policy and Systems Analysis office. In government, we made science the foundation of fact-based policy development. As we built EFI, we again established it as a touchstone of our new organization's approach.

EFI aimed to support innovation and progress across technology, business, and policy to advance the transition to a low-carbon energy future. We had little idea that a decade later, now as the EFI Foundation (EFIF), we would still be driving that conversation, with our brief ever more relevant.

The work of our early years placed EFI at the forefront of the toughest energy challenges. Our first report examined the U.S. nuclear energy enterprise through the lens of national security. It was followed by a comprehensive survey of multiple innovation pathways to advance the energy transition, as well as pioneering work on carbon dioxide removal. All three of these reports are regarded today as important conversation starters.

Each project created new relationships, new data, and new frameworks that anchor our work—from hard-to-decarbonize industrial sectors and community transition strategies to grid modernization and workforce development.

In 2025 the United States abruptly reversed course on its hard-won gains in federal investment in innovation—from idea generation to deployment. A restrictive notion of U.S. energy dominance has emerged that picks winners outside the realities of market forces. The shortcomings of energy dominance provide an everyday reminder of the merits of an "all of the above" approach would align better with global market development.

We can't sensibly pretend that clean energy isn't a growing and crucial part of the global energy marketplace. It's a fact. Today, China is the leader in this important and expanding space. If we want to compete across the board, we will need to lean into *all* consequential energy markets and not weakly concede the field to economic competitors.

The United States has long used its position as the largest domestic market as the foundation for export markets. Energy is no exception. Diminishing clean energy domestically limits what our companies can do and what our government can influence internationally.

We must set aside ideology and renew our dedication to an all-of-the-above approach to the climate crisis.

Energy equity, climate change, energy project investability, and trade and energy security need to be part of *one conversation*. To meet these intertwined challenges, we must rely on a clear, evidence-based framework for durable policy.

These five pillars inform how EFIF promotes new technologies, advances markets, informs policy, and supports communities.

Continued on next page

“Energy equity, climate change, energy project investability, and trade and energy security need to be part of one conversation. To meet these intertwined challenges, we must rely on a clear, evidence-based framework for durable policy.”

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- **Shaping the Conversation:** We frame climate, energy security, economic competitiveness, affordability, and social equity as one interconnected challenge. We make complex issues accessible and actionable by building trust in research, data, analysis, and public institutions.
- **Advancing Innovation in Technology and Policy**: We encourage breakthrough technologies and pragmatic policies—working with the federal government, state and local governments, and the private sector to unlock solutions that accelerate progress while ensuring equity.
- **Creating Tools for Action:** We design the mechanisms needed to deliver change at scale: carbon accounting, workforce development, advanced modeling, and the integration of AI and digital tools that measure results and guide decisions.
- **Supporting Large-Scale Carbon Management:** We champion a full spectrum of carbon solutions—from clean power and fuels to carbon capture, removal, and geoengineering—ensuring reasonable pathways forward.
- **Preparing Communities for Adaptation and Resilience to Climate Change:** We work with communities and workers to identify infrastructure that furthers resilient design to reduce the human and economic costs of severe climate impacts, while identifying regional workplace needs and opportunities.

On the following pages you will see these pillars reflected in our thought leadership and program activity.

The past year was a busy one. EFIF leaders participated in more than 30 global events. Our engagements included briefings to members of Congress and their staffs and our Energy Futures Finance Forum (EF^3) financial bootcamps. At these private workshops, policymakers and investment professionals engaged in frank discussions about what it takes to increase available private capital for breakthrough clean energy innovations and specifically how policy shapes opportunities for investors with different risk-reward realities.

The past year marked the start of several important initiatives, including one we wished was not necessary: examining the innovation impacts after the abrupt loss of thousands of DOE employees and the cancellation of hundreds of federally awarded funds, which now total more than $11 billion. We will continue to track the impact on technology development in our *Modernizing American Energy Innovation* series.

We also will continue to advance a robust analysis of carbon accounting. The world lacks a rational framework for carbon dioxide (CO_2) emissions accounting, leaving energy-intensive industries to navigate a patchwork of international rules. This work started with EFIF’s publication last June of the “why” with our *Carbon Accounting Framework*, followed in October by *Integrated Product- and Entity-Level Carbon Accounting: Putting Concepts into Practice*. With this framework, we are striving to introduce a concise synthesis of ledger-based accounting for CO_2 emissions in a single, verifiable system applicable at the product level.

This is a long-term commitment that must deal with entrenched interests but is central to the energy transition. The carbon accounting framework can provide a needed data-based foundation for global trade and for international clean energy investments while differentiating products according to carbon intensity. It’s exactly the kind of work EFIF was created to do: proposing hard but realistic solutions to critical challenges that some organizations prefer to avoid.

In 2025, EFIF took the leadership role building out demand-side tools for low-carbon energy, tapping into the insights from the 2024 EFIF-led Hydrogen Demand Initiative (H_2DI) that designed and implemented demand-side support mechanisms for planned regional clean hydrogen hubs. Even as those hubs face an uncertain future, we are now working to apply those principals to state-level policy innovations by launching a demand-side policy toolkit—starting with a new initiative in Pennsylvania to expand markets for low-carbon building materials.

EFIF also accelerated the activities of the Nuclear Scaling Initiative (NSI)—a collaboration with the Clean Air Task Force and the Nuclear Threat Initiative—to advance its mission to build a global ecosystem capable of deploying 50 gigawatts or more of new nuclear capacity annually by the 2030s. Alongside more than 90 international engagements, NSI developed influential analyses and shaped discussions on the future of nuclear energy in United States and Central and Eastern Europe.

Global energy challenges demand realistic, actionable solutions. These are the tangible outcomes of our ambitious agenda.

Our work will continue to reflect a dedication to identifying innovative solutions; promoting pragmatic progress; building durable coalitions; advocating for outcomes; and weaving all of this into one conversation.

Ernest J. Moniz
EFIF Founder & Chief Executive Officer

A Year of Leadership

EFI Foundation Highlights from 2025

Following the Trump administration's abrupt dismissal—and subsequent reinstatement—of 300 staffers at the **National Nuclear Security Administration**, Founder and CEO Ernest J. Moniz speaks on CNN about the role those experts play in safeguarding U.S. nuclear resources.

The **Nuclear Scaling Initiative** (NSI) launches a global strategy to build a new, sustainable nuclear energy ecosystem.

Unlocking Private Capital for Carbon Capture and Storage in Industry and Power outlines key opportunities to attract private investment and strengthen incentives to **deploy CCS technologies**. EFIF Director Michael Downey and Distinguished Associate Jeffrey Brown participate in a webinar with the United States Energy Association to highlight opportunities to scale up CCS technologies.

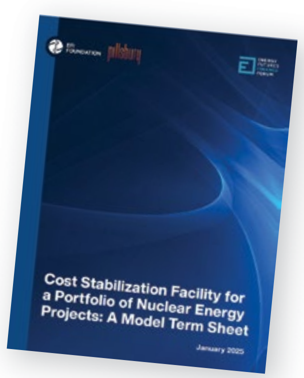
Moniz joins the **Council on Foreign Relations** for the launch of its Climate Realism Initiative. Speaking with NPR's Mary Louise Kelley, he says "clean energy markets are going to be dominant global markets for decades."

EFIF and Economist Impact release *Catalyzing Investment for Advanced Energy Technologies*, which explores how to increase private investment in clean energy.

Chief Operating Officer April Salas delivers keynote remarks on the need for **energy pragmatism** while navigating a new administration at Electric Power Research Institute's 28th Energy and Climate Research Seminar.

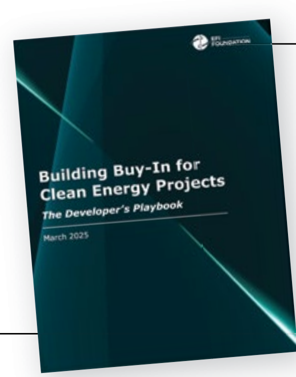
EFIF completes a partnership with **New Mexico's Energy, Minerals and Natural Resources Department** to support implementation of the state's Comprehensive Energy Transition Strategy.

JANUARY | FEBRUARY | MARCH | APRIL | MAY | JUNE



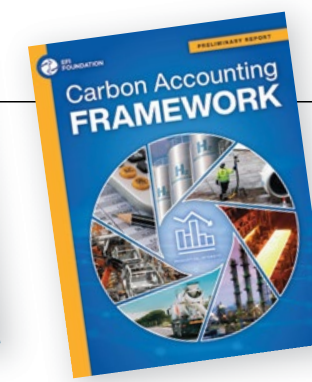
Cost Stabilization Facility for a Portfolio of Nuclear Energy Projects: A Model Term Sheet highlights the power of orderbooks for **building new nuclear reactors**.

At **CERAWeek**, Moniz, Chief Operating Officer April Salas, and Executive Vice President Alex Kizer outline ways to confront the "energy trilemma" between security, equity, and climate.



Building Buy-In for Clean Energy Projects analyzes effective community engagement to help capitalize on investments and avoid project delays. Vice President Madeline Schomburg and Project Manager Beth Dowdy share findings at the **World Hydrogen North America Congress.**

Modernizing American Innovation: 5 Ways to Re-energize DOE explores how the U.S. Department of Energy (DOE) can support **end-to-end energy innovation** and more effectively allocate funding. The report and subsequent analyses receive coverage from E&E News and Canary Media.



EFIF launches a framework for a series of **carbon accounting** analyses, using well-established financial accounting principles to achieve a globally standardized system.

At the Atlantic Council Global Energy Forum, EFIF co-hosts a private roundtable on strategies to mobilize catalytic financing to scale up clean energy nationwide.

At **London Climate Action Week**, NSI hosts a conversation with Moniz, NSI Executive Director Stephen D. Comello, Clean Air Task Force CEO Armond Cohen, and industry leaders to examine the evolving landscape of nuclear finance and deployment.

The Return on Investment of U.S. Clean Hydrogen Policy compares low-carbon hydrogen program costs with their potential economic benefits.

EFIF hosts a public webinar for *Exploring the Future of Geologic Hydrogen*, a report based on a convening of technical experts, industry, policymakers, and investors. In August, Dowdy presents findings at the **2025 Geologic Hydrogen Summit** in Minnesota.

JULY

TIME

Moniz speaks with *Time*'s Justin Worland, declaring:

"Eventually, fusion energy could become the dominant source."

At **Aspen Ideas: Climate Chicago**, Moniz calls for a product-based carbon accounting system. Moniz, Salas, and Executive Vice President David Ellis meet with Governor JB Pritzker to discuss Illinois' energy future and the state's goal to become a global center for quantum computing.

AUGUST

Moniz joins Christiane Amanpour and James Cameron for a webinar marking the **80th anniversary of the bombing of Hiroshima and Nagasaki**, and the Oscar-winning director's upcoming film *Ghosts of Hiroshima*.

NSI visits the **Diablo Canyon nuclear power plant**—the largest source of zero-carbon electricity in California—and shares insights on the critical role nuclear power plays in the clean energy transition.

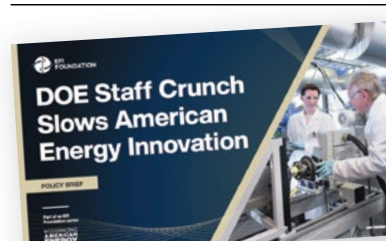
The New York Times

Following the Trump administration's cuts to wind and solar projects, Moniz tells *The New York Times* that energy policy should prioritize an "**all of the above**" approach over partisan divisions.

SEPTEMBER

At **Climate Week NYC**, Moniz shares his perspective on continued energy innovation in a fireside chat with former Colorado Governor Bill Ritter.

Also at Climate Week, Salas discusses the environmental challenges of AI growth, Kizer argues for a global carbon accounting system, and Comello calls for continued investment to scale nuclear energy.

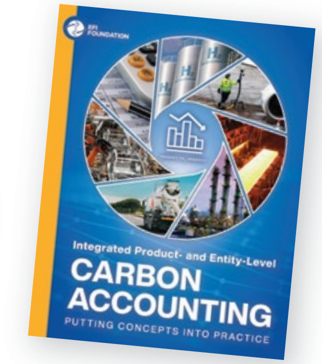


In *DOE Staff Crunch Slows American Energy Innovation*, EFIF finds that DOE currently has the **lowest staff-to-budget ratio in the past decade**, which may obstruct the administration's plan to unleash American energy.

OCTOBER

Kizer and Research Specialist Minji Jeong lead a carbon accounting workshop at the **North American SAF Conference in Houston, Texas**. On a separate panel, Deputy Director Tatiana Bruce da Silva discusses findings from EFIF studies on scaling sustainable aviation fuel and e-fuels.

Unpacking DOE's October Award Cancellations analyzes the impact of **$8 billion in cancellations** of awards by DOE.



EFIF's carbon accounting work continues with *Integrated Product- and Entity-Level Carbon Accounting: Putting Concepts into Practice*, which puts forward a **ledger-based accounting** framework that integrates emissions accounting into a unified system.

Moniz encourages the creation of a **regional nuclear consortium in the Middle East** to advance energy security and ease nuclear tensions in *Foreign Policy*.

FP | VARIETY

Moniz writes in *Variety* about the Netflix film, *A House of Dynamite*, which touches on the risks of a nuclear weapons accident.

NOVEMBER

Comello represents NSI in Brazil ahead of **COP30**. He participates in lively discussions about **mobilizing private capital** to support the safe and secure scaling of nuclear projects globally.

DECEMBER

Moniz and Comello travel to Abu Dhabi to speak at a Nuclear Threat Initiative and Emirates Nuclear Energy Corporation-hosted workshop on the **responsible global expansion of atomic power.**

Driving the Conversation

EFIF Leaders Deliver New Energy Solutions

In 2025, EFIF traveled the globe to impact policy debates on financing first-mover nuclear energy projects, scaling hydrogen power, building carbon markets, and more. EFIF thought leaders spoke at over two dozen public events alongside government officials, think tanks, academics, and industry experts, delivering expert analysis and solutions on accelerating a low-carbon energy transition in an increasingly challenging market.

EFIF shaped the conversation at CERAWeek, the preeminent global energy conference held each March in Houston. EFIF Founder and CEO Ernest J. Moniz spoke on four panels—including "Climate Change: What are the priorities?"—where he called for a new approach to the energy trilemma by addressing climate, energy security, and affordability goals as interconnected, rather than separate. Moniz pointed to cost reductions for nuclear energy as more reactors are deployed, demonstrating the impact of institutional learning and regulatory system design. On the sidelines of the conference, Moniz joined S&P Global's *Energy Evolution* podcast to discuss the Department of Energy's role in promoting clean investments.

Also in Houston, EFIF Chief Operating Officer April Salas spoke during a session on how regionalized policy frameworks and investment mechanisms demonstrate best practices that can scale globally. Executive Vice President Alex Kizer discussed rising demand for low-carbon hydrogen, stressing that stable pricing, offtake commitments, and clarity on tax credits are essential for continued growth.

Elsewhere, Stephen Comello, executive director of the Nuclear Scaling Initiative, outlined affordable, market-friendly ways to expand nuclear energy build-out and make first-mover projects bankable investments. The Trump administration is bullish on U.S. nuclear power, issuing a flurry of executive orders to deploy small modular reactors to data centers that are supporting the growth of AI chatbots. Comello examined these moves at the National Academies' Pathways for New Nuclear Development event in Washington, D.C. in January; the Baltic Nuclear Energy Forum in Gdańsk, Poland in March; and the Southeast Energy Policy Forum in Knoxville, Tennessee in July. Comello discussed financing a nuclear buildout, the importance of new risk-sharing models, and how community engagement and transparency are critical for building public trust. Moniz drew on his nuclear nonproliferation background in an August conversation with journalist Christiane Amanpour and Oscar-winning director James Cameron marking the 80th anniversary of the bombing of Hiroshima and Nagasaki. They discussed the book *Ghosts of Hiroshima*, which Cameron is adapting into a film. Moniz noted that, 80 years later, the world still has 12,000 nuclear warheads in nine countries, and the risk of use—by accident or intent—remains high.

EFIF experts led conversations about the future of hydrogen markets, infrastructure, and commercialization. In February, Kizer—who heads EFIF's Hydrogen Demand Initiative—spoke about hydrogen infrastructure at the Advanced Energy Group New York summit. In March, at the World Hydrogen North America Congress, Vice President Madeline Schomburg and Project Manager Beth Dowdy highlighted the deployment challenges facing hydrogen projects, including permitting, infrastructure constraints, and community support. In September, Dowdy also took part in the Drilling for Hydrogen 2025 Exhibition, where she explained the potential of hydrogen as a low-risk, high-reward decarbonization option and the importance of community backing in development. In October, Kizer participated in a panel about how hydrogen can contribute to a clean energy future at the Virginia Department of Energy's National Hydrogen Day celebration.

EFIF's public engagements also explored de-risking energy investments amid economic, industrial, and political uncertainty. In February, at the American Council on Renewable Energy's Policy Forum, Moniz explained how the Trump administration and Congress could reshape investment incentives. At the launch of the Council on Foreign Relations' Climate Realism Initiative in April, Moniz spoke with NPR's Mary Louise Kelly about pragmatic approaches to climate action and the importance of organizing private capital behind bankable projects. In May, Salas delivered keynote remarks at the Electric Power Research Institute's Energy and Climate Research Seminar about de-risking deployment of next-generation technologies. Finally, in June, at the Edison Electric Institute's conference, Moniz stressed that securing nuclear supply chains is essential for investor confidence in that sector.

EFIF leadership discussed the value of carbon accounting at multiple events this year. At Aspen Ideas: Climate Chicago in July, Moniz outlined the need for a new framework modeled after financial accounting to create a more accurate, verifiable, and globally scalable carbon accounting system. In October, Kizer and Research Specialist Minji Jeong led a workshop on carbon accounting at the Sustainable Aviation Futures North America Congress in Houston.

EFIF leadership was strongly represented at New York Climate Week in September. Moniz joined Climate Group for a fireside chat titled "The Closing Case for American Innovation and Abundance," where he emphasized the need for U.S. leadership in integrating affordability, social equity, climate, and national security into a single energy-innovation agenda. "If we do not build political coalitions across these boundaries, we are not going to succeed," said Moniz.

"If we do not build political coalitions across these boundaries, we are not going to succeed."

Ernest J. Moniz on integrating affordability, social equity, climate, and national security into a single energy-innovation agenda.

Comello spoke on multiple panels organized by the Atlantic Council on eliminating investment barriers for nuclear deployment. Kizer delivered framing remarks during an U.S.-Brazil roundtable on carbon accounting frameworks, where he discussed how a credible emissions accounting architecture can unlock market demand across clean energy sectors.

Additionally, EFIF leaders' perspectives appeared in more than 30 articles and podcasts in 2025. Highlights of this coverage include:

- A *New York Times* article highlights Moniz's remarks about the energy transition, saying, "there's going to be bumps in the road [but] we are moving to this low-carbon future."
- A Reuters article includes Comello's thoughts on the value of scaling-up small modular reactors in the Palisades nuclear plant.
- A *Washington Post* article featuring Moniz warns against weakening the Nuclear Regulatory Commission's independence as a result of Trump's executive orders on expediting nuclear reactors.
- *PBS News Hour*, NPR's *Here and Now*, and CNN interviewed Moniz about Israel's attack on Iran based on his role as a lead negotiator on Iran nuclear agreement.
- A Canary Media article cites EFIF research on the small percentage of Office of Clean Energy Demonstrations grants that were actually paid out by the Trump administration in March.

In 2026, EFIF will continue to foster conversations that put forward innovative, evidence-based solutions to the world's toughest energy challenges.

Constructing a New Nuclear Ecosystem

NSI Works to Realize Nuclear Energy's Potential

Nuclear energy is receiving unprecedented global attention as countries confront rising energy demand, energy security risks, and climate impacts. Yet, despite the global pledge to triple nuclear capacity by 2050, deployment remains sluggish. Without fundamental changes to how nuclear projects are planned, permitted, financed, and built, the world will fall short of its climate, energy security, and development goals.

The Nuclear Scaling Initiative (NSI)—a collaboration of the Clean Air Task Force, EFI Foundation, and Nuclear Threat Initiative—exists to realize nuclear energy's potential. NSI is building a new global deployment ecosystem: aggregating demand, forming multi-unit orderbooks, embedding collective action and nonproliferation, and driving regulatory coherence. NSI's long-term objective is to foster deployment of more than 50 gigawatts of safe, secure, and cost-effective nuclear energy annually by the 2030s.

NSI's Approach to Nuclear Energy Reindustrialization

NSI is reimagining how nuclear energy is constructed, financed, and regulated. NSI's April 2025 global roadmap structures the initiative around five outcomes: forming durable demand signals by establishing regional buyers clubs; assembling orderbooks, which are multi-unit commitments that unlock cost efficiencies; informing technology selection with tools to evaluate reactor designs based on timeline, cost, security, and waste considerations; advocating for cohesive and efficient regulatory frameworks by working with regulators on licensing pathways; and enabling a vibrant delivery system by strengthening workforce pipelines, supply chains, and construction practices. Since its September 2024 launch, NSI has grown into a 40-plus-person team across its three partner organizations, driving 19 coordinated workstreams to achieve these outcomes.

Establishing a Trusted Platform

In its first year, NSI emerged as a trusted, neutral broker across the nuclear ecosystem. The initiative worked closely with leaders in U.S. federal and state governments, the European Commission, and senior officials throughout Central and Eastern Europe (CEE) to shape policies, market conditions, and regulations for multicountry nuclear deployment. NSI convened vendors, utilities, hyperscalers, industrial offtakers, developers, and investors to design viable multi-unit consortia and risk-sharing structures. NSI proposed a multinational fuel cycle consortium for Gulf states to promote nuclear energy while upholding nonproliferation commitments. NSI thought leadership helped shift the global conversation from aspiration to execution and outlined the fastest, safest, and most cost-effective pathways for scale.

NUCLEAR SCALING INITIATIVE

NSI is a collaboration of the Clean Air Task Force, EFI Foundation, and Nuclear Threat Initiative.

CLEAN AIR TASK FORCE

EFI FOUNDATION

NTI

"NSI is reimagining how nuclear energy is constructed, financed, and regulated."

Action in the United States and Central and Eastern Europe

NSI's work in 2025 and 2026 focuses on two priority regions—the United States and CEE—where it employed tailored strategies to accelerate nuclear deployment and form orderbooks.

NSI's approach has resonated across the U.S. Nuclear Regulatory Commission (NRC), Department of Energy, National Energy Dominance Council, and bipartisan leaders in Congress and state governments. NSI engaged the NRC on alternative licensing pathways for new reactor types and submitted formal proposals that are shaping internal agency dialogue. NSI advanced first-mover state initiatives in Texas and New York and supported governors' compact efforts in Tennessee, Georgia, and Virginia. Working with utilities, hyperscalers, and industrial customers, NSI contributed to concepts behind the 2024 Accelerating Reliable Capacity (ARC) Act to support early fleet-scale builds. NSI's engagement with state legislatures, regional forums, and national associations helped design risk-sharing structures, inform policy choices, and catalyze coalitions for multi-unit orderbooks.

Across CEE, NSI supported Poland, Romania, Czechia, Bulgaria, and other countries committed to expanding nuclear capacity to meet decarbonization, energy security, and growth goals. NSI strengthened Poland's updated nuclear strategy through an August 2025 report, provided insights that shaped European Commission policies, and convened high-level dialogues among ministries, industry, and European Council officials to develop actionable policy and financing recommendations. NSI contributed to the European Industrial Alliance on Small Modular Reactors (SMRs) as one of only three civil society participants; launched regrant programs to build civil society coalitions in Poland, Czechia, Romania, and Brussels; supported U.S.-Poland financing discussions; and provided preconsultation support for Poland's forthcoming SMR roadmap.

In 2026, NSI will continue driving toward facilitating the formation of at least one multi-unit orderbook. Key priorities for the year include advancing a durable, multiparty U.S. investment decision to launch fleet-scale construction of proven large reactors through coordinated federal, state, and commercial orderbooks; launching the Reactor Selection Tool as a globally credible, widely adopted decision-support resource; delivering the first integrated U.S. nuclear demand-supply model to define where, when, and how many plants can be built within industrial, labor, and supply chain constraints; and contributing to key European Commission initiatives to enable coordinated, multicountry nuclear deployment.

Modernizing American Energy Innovation

How the Department of Energy Can Deliver on Its Mission

"DOE must modernize its tools, processes, and workforce."

The U.S. Department of Energy (DOE) plays a key role driving U.S. innovation, economic growth, national security, and competitiveness. Sweeping changes rocked DOE in 2025, including funding recissions and staff cuts. Nevertheless, the Trump administration has tasked DOE with implementing an ambitious agenda of technology deployment.

To deliver on its mission, DOE must modernize its tools, processes, and workforce. EFIF is conducting a series of analyses to propose innovation pathways and produce data-driven insights that provide policy transparency in a fast-changing environment.

Modernizing DOE

In June, EFIF published *Modernizing American Energy Innovation*, which examines how to reform DOE and its relationship with the private sector as the department takes on a larger role in technological demonstration and deployment. The report produces actionable recommendations following interviews with 20 recipients of Bipartisan Infrastructure Law (BIL) funding across 29 states.

DOE has struggled to translate funds from the BIL and Inflation Reduction Act into project deployment. BIL award recipients cite long timelines, unclear processes, and strict reporting requirements as major roadblocks for working with DOE to implement projects. Further, DOE mechanisms for research and development are not suited to commercializing clean energy innovations.

To unlock energy innovation, EFIF recommends DOE undertake five actions: build and retain a skilled workforce, streamline application and awards processes, take advantage of underutilized funding mechanisms, reform loan programs, and support innovation at DOE National Laboratories.

Workforce Reductions and Award Cancellations

EFIF built on its analysis with briefs in response to DOE workforce reductions and award cancellations, conducting thorough and timely research to deliver valuable insights.

DOE Staff Crunch Slows American Energy Innovation, published in September, explores the historical relationship between staffing and funding levels at DOE. Due to ongoing personnel reductions, the agency faces its largest budget-to-staff ratio in a decade. The report estimates that DOE currently manages $35 million in funding per employee, up sevenfold from $5 million in 2017.

A smaller staff slows DOE's ability to appropriate funds and deliver on the agency's clean energy mandate. DOE processes and workforce must also be retooled with the commercial sector acumen needed to guide project delivery. EFIF recommends hiring staff with private sector expertise and contractors with specialized skills to deploy innovative projects successfully.

On October 2, DOE announced the cancellation of 321 awards worth $8 billion. Three weeks later, EFIF published *Unpacking DOE's October Award Cancellations* to assess the impact of this decision, responding quickly to new developments with high-quality research.

EFIF finds that DOE workforce reductions and award cancellations impede the modernization required to foster clean energy innovation. Award cancellations affect projects in nearly every state, particularly those under DOE science and innovation offices. Nonprofit organizations, state governments, and public universities bore the brunt of the cancellations.

Reach and Accessibility

EFIF research is making sense of a tumultuous period at DOE and attracting wide-ranging media attention. Project experts have been quoted by E&E News' *Energywire*, Latitude Media, Canary Media, the Council on Foreign Relations, and others, contributing to the work's growing reach.

In 2026, EFIF will continue publishing briefs responding to the latest changes from DOE and will launch a database to aggregate federal data on funding and staff levels. EFIF analysis provides valuable information for decision makers working to keep the United States competitive in the clean energy sector.

Steps to Build a Modern, Competitive DOE

- Build a staff with skills to boost U.S. competitiveness
- Use Other Transactions Authority to maximize ROI
- Streamline applications and awards to get money out the door
- Expand loan programs' deficit-friendly support
- Harness National Labs for end-to-end innovation

A New Model for Carbon Accounting

Applying Financial Accounting Principles to Design a Better Carbon Accounting System

Business opportunities for carbon-differentiated products are expanding across global markets. Trade policies are paying increased attention to the carbon dioxide (CO_2) emissions profiles of major commodities. Companies operating in global markets are increasingly seeking accurate carbon accounting to compare product carbon intensities and direct investment toward lower-carbon solutions.

Accurate, verifiable, and consistent measures of product CO_2 emissions intensity are needed, yet there is no common system for carbon accounting at both the product and entity levels. While existing reporting frameworks serve specific purposes, they do not provide the structure needed to track carbon accurately throughout supply chains or to reconcile product-level measures with entity-wide emissions in a way that supports confident reporting.

In 2025, EFIF advanced a comprehensive, ledger-based carbon accounting system that addresses this gap. Built on engineering fundamentals, including full carbon mass and energy balances, and drawing from established financial accounting principles, the system records carbon stocks and flows with clarity and consistency. This approach enables reliable product carbon intensity metrics that connect directly to an entity's total emissions. It thereby establishes a foundation for accurate, verifiable reporting that is policy agnostic, technology neutral, and universal in its application.

A Ledger-Based Approach Based on Financial Accounting

A central insight of EFIF's work is that CO_2 emissions and associated carbon content data can be organized and recorded in a structured format modeled on financial accounting. The system uses a dual-sided ledger to record carbon as it enters an entity, is transformed within the entity's operations, and becomes embedded in products delivered to customers. Each activity is captured as a transaction, creating a transparent chain of information that mirrors how organizations track financial activity.

The ledger is grounded in comprehensive carbon mass and energy balances, providing complete, end-to-end accounting of all forms of carbon. This supports accuracy by tying data to actual operations, completeness by capturing all carbon sources and conversions within gate-to-gate boundaries, and verifiability through rigorous double-entry bookkeeping that enables clear audit trails. The framework is technology neutral and policy agnostic, making it adaptable across a wide range of sectors and reporting contexts.

Connecting Product-Level and Entity-Level Accounting

EFIF's system derives product-carbon intensity metrics directly from entity-level emissions totals. Carbon transferred from suppliers, carbon generated during production, and carbon embodied in final output is recorded once and allocated using consistent rules. This integration removes the gaps and overlaps that arise when product-level and entity-level reporting are handled separately.

By aligning carbon accounting with operational realities, the system provides a coherent foundation for product carbon intensity standards and for markets that differentiate products based on carbon attributes. It also strengthens confidence in carbon information used for investment decisions, supply chain assessments, and long-term decarbonization planning.

The Five Principles of a Comprehensive Carbon Accounting System

EFIF developed a ledger-based carbon accounting system, drawing from financial accounting principles, for tracking, recording, and reporting all forms of carbon throughout a product's value chain.

Reducing Concepts to Practice Across Multiple Sectors

To test the system across complex value chains, EFIF partnered with Sesame Sustainability on a series of case studies spanning sustainable aviation fuel, conventional and hydrogen-based steelmaking, and electricity generation and delivery. Each case study uses real-world data to demonstrate how carbon moves through the supply chain and how the ledger maintains a closed and consistent account of all carbon forms.

The studies show that the ledger-based structure can capture full carbon mass balance within specific time and location boundaries, allocate carbon across multiple product streams, and produce product carbon intensity values that reconcile cleanly with entity totals.

Throughout 2025, EFIF convened an advisory board of senior experts from academia, industry, and finance to review methodology and provide technical guidance. EFIF also hosted 15 convenings and published seven major reports. These efforts generated 10,000 social media impressions, 5,000 webpage visits, and 1,000 report downloads, signaling growing interest in practical, technically grounded carbon accounting tools.

Moniz calls for a product-based carbon accounting system during a panel this summer at Aspen Ideas: Climate Chicago.

This year, EFIF will continue developing the essential building blocks of a comprehensive carbon accounting system. This includes refining the ledger template, further developing rulebook elements, and expanding case studies to additional sectors. EFIF will work closely with early adopters to test implementation pathways and identify opportunities for alignment across industries. As markets for carbon-differentiated products mature, EFIF's objective is clear: create a technically robust, transparent, and verifiable foundation for carbon information that supports competitiveness, investment, and durable progress toward decarbonization.

States of Action

Advancing Energy Transitions Through State-Level Innovation

As federal energy policy priorities change, states have emerged as critical laboratories for energy innovation. State governments are not waiting for Washington—they are implementing their own ambitious clean energy goals and deploying innovative policy mechanisms that can reshape how America powers its future. EFIF has positioned itself at the forefront of state-led energy transitions.

Partnering with States to Navigate Complex Transitions

EFIF's integrated approach involves rigorous technical analysis grounded by deep understanding of local political, technological, and economic realities. This year, EFIF expanded its state-level engagement significantly, working directly with state governments to meet climate goals while ensuring economic vitality and energy security.

EFIF completed an extensive partnership with New Mexico's Energy, Minerals and Natural Resources Department (EMNRD) to support implementation of the state's Comprehensive Energy Transition Strategy. The initiative addressed one of the most politically sensitive aspects of the energy transition: supporting communities historically dependent on fossil fuel extraction as the economy decarbonizes.

EFIF conducted a comprehensive analysis of New Mexico's energy landscape, workforce dynamics, and opportunities for economic development and state revenue diversification. A series of 10 detailed policy memos provided EMNRD with actionable guidance on everything from job training to infrastructure investments. This work offers a roadmap for state leaders to ensure that New Mexico's energy transition creates broadly shared prosperity.

The New Mexico project is distinctive in its holistic view. Rather than focusing narrowly on deploying renewables or reducing emissions, EFIF examined the full spectrum of considerations that determine whether energy transitions succeed politically and economically. The research assessed how to leverage federal funding streams, build local workforce capacity, attract clean energy industries, and maintain grid reliability. This approach reflects EFIF's understanding that successful energy transitions require simultaneous progress across multiple dimensions.

In parallel, EFIF launched groundbreaking research examining how states can use energy-based compensation funds to accelerate clean energy deployment while delivering tangible benefits to host communities. Conducted in partnership with the University of Pennsylvania Carey Law School, the project analyzes three distinct models of state-managed energy funds in Alaska, New Mexico, and Pennsylvania.

Alaska's $81 billion Permanent Fund distributes annual payments of $1,000 to $2,600 to every resident and has been shown to reduce poverty and increase small business creation. Pennsylvania's Impact Fee, which channels revenues from natural gas development directly to affected communities for infrastructure improvements and services, has increased public acceptance of energy projects. New Mexico's $33 billion Land Grant Permanent Fund invests in education and public institutions, providing long-term public goods without raising taxes.

As states struggle with mounting opposition to clean energy projects, the success of these models suggests that similar mechanisms, adapted to infrastructure such as utility-scale solar, transmission lines, or carbon capture facilities, could build public support. EFIF is conducting extensive stakeholder interviews and comparative legal analysis to determine which fund design characteristics could apply effectively to clean energy and ensure development brings demonstrable benefits to affected populations.

EFIF also launched the first Demand Action Plan to help states develop demand-side strategies for low-carbon commodities. The Action Plans build on EFIF's experience leading the first federal effort to address market formation challenges for low-carbon hydrogen. In October, EFIF partnered with Team Pennsylvania to host a workshop convening state and regional stakeholders to explore opportunities for low-carbon concrete market formation. A subsequent report will outline the market-making potential of demand-side strategies in state government procurement. EFIF will develop and implement additional Action Plans for low-carbon concrete and other energy products and materials in 2026 and beyond.

EFIF Chief Operating Officer April Salas speaks in New Mexico about the state's Comprehensive Energy Transition Strategy.

States Driving the Transition

This work comes at a critical time. While federal policy oscillates with each election cycle, states provide sustained commitment to energy goals. Twenty-four states, the District of Columbia, and Puerto Rico—comprising 53% of the U.S. population—have established 100% clean energy goals. In 2024 alone, all 50 states took actions related to electric power decarbonization. Research indicates that state-led climate strategies can reduce nationwide emissions by 46% at costs comparable to federal action.

States also offer advantages of scale and adaptability. They can tailor policies to regional resources, economic conditions, and political contexts in ways that one-size-fits-all federal approaches cannot. EFIF's work demonstrates how rigorous analysis combined with deep stakeholder engagement can help states navigate their distinct transition challenges.

46%

Reduction in nationwide emissions that can be accomplished by state-led climate strategies—at costs comparable to federal action.

As energy policy changes course during the Trump administration, EFIF is moving forward on regional and state-level solutions. EFIF plans to conduct comprehensive energy landscape assessments for additional states, examining how specific resource endowments, economic structures, and policy environments shape transition opportunities and challenges. Each state's path will be different, and EFIF aims to provide the customized analysis and policy development support that enables successful energy transitions. States are where energy innovation happens, where policies are tested, and where the work of durable transition occurs. EFIF is committed to being a trusted partner in that work.

Geologic Hydrogen

Unlocking a New Clean Energy Frontier

Geologic hydrogen forms naturally underground or is produced by stimulating certain types of rocks. It holds great potential as an abundant, low-carbon energy source, but policy and regulatory frameworks are still largely undeveloped. While several countries, from Australia to Mali, have begun investigating natural hydrogen deposits, the United States is only starting to assess the potential of geologic hydrogen. With its expertise in geoscience and subsurface technology, the United States is well-positioned to lead—if it acts quickly to understand the resource and establish supportive policy frameworks.

Building Knowledge Through Collaboration

EFIF took a leading role in advancing geologic hydrogen policy knowledge, beginning with a private workshop in March 2025 that convened over 40 experts from government, industry, finance, think tanks, and academia to assess its scientific and commercial viability. The event facilitated open discussion about the opportunities and challenges for converting naturally occurring hydrogen into energy. Participants emphasized that while the potential is vast, realizing it will require multiple exploration attempts and the willingness to "fail fast" to learn where to find geologic hydrogen, how to produce it, and whether it can be done responsibly and cost effectively.

Insights from the workshop informed EFIF's June 2025 report, *Exploring the Future of Geologic Hydrogen: Defining the Path Ahead*. The report determines what is required to bring geologic hydrogen to scale: regulatory clarity, early government support to de-risk private sector exploration, the integration of federally funded science with state-level decision making, and early engagement with host communities to ensure socially sustainable development.

Shaping the Conversation

In June, EFIF hosted a public webinar to draw attention to the report's findings. The conversation featured industry experts to discuss how research, policy, and investment can accelerate progress on geologic hydrogen. "Geologic hydrogen is one of the few truly possible breakthrough pathways to an affordable clean energy future," said Ernest J. Moniz.

Modest discovery costs make this one of the most intriguing low-risk, high-reward frontiers in clean energy.

Following the webinar, EFIF shared its insights through a series of briefings with U.S. Department of Energy offices and National Laboratories, including the Hydrogen and Fuel Cell Technologies Office, Geothermal Technologies Office, and Office of Fossil Energy and Carbon Management. EFIF also met with Brazil's Energy Research Office (EPE)—a government agency that supports national energy planning—to share ideas and compare how different countries are approaching geologic hydrogen.

EFIF continued to advance the dialogue at key industry events. At a private workshop in Michigan hosted by Third Way, the Geologic Hydrogen Summit in Minnesota hosted by the Natural Resources Research Institute and the National Renewable Energy Laboratory, and the Drilling for Hydrogen Conference in Houston, EFIF presented highlights from its research and invited discussion on the next policy and regulatory questions stakeholders must tackle.

In 2025, EFIF established a foundation for informed action on geologic hydrogen. As the field transitions from scientific curiosity to commercial prospect, EFIF will continue to convene experts, share insights, and shape policy pathways for responsible exploration. By connecting science, policy, and investment, EFIF aims to ensure that, if proven viable, geologic hydrogen becomes a cornerstone of the clean, reliable, and affordable energy system of the future.

Catalyzing Catalytic Capital

Public and Philanthropic Funding is Essential to Unlock Private Investment

EFIF Director Michael Downey and Research Associate Sonia Griffen speak on how state governments can accelerate cost-effective grid investments at the annual meeting of the Council of State Governments (CSG) East in Providence, Rhode Island.

Global investment in clean energy is accelerating, but not at the scale or speed required to meet rising demand, strengthen energy security, and achieve climate goals. Private capital remains constrained by both perceived and actual risks. In advanced economies, revenue and infrastructure risks present challenges to the commercialization of early-stage technologies, while in emerging markets, political, currency, and market volatility continue to deter investment in proven technologies. While a range of policy tools can help mobilize capital, the strategic use of public and philanthropic funding remains essential to reduce project-level risk and unlock private investment at scale.

In partnership with Economist Impact, the Energy Futures Finance Forum (EF^3) identified barriers impeding capital deployment into clean energy technologies and proposed catalytic mechanisms to address them, differentiated by technology maturity, market conditions, and investor risk tolerance. The analysis drew on expert interviews and a global survey of 300 investment leaders across North America, Europe, the Asia-Pacific, and the Middle East, conducted from December 2024 to January 2025.

97%
View clean energy assets as competitive with or superior to other asset classes in terms of expected returns, according to a survey of 300 investment leaders.

Building on these insights, EF^3 convened policymakers, investors, solution providers, and technical experts at the Atlantic Council's Global Energy Forum in June 2025 to explore near-term pathways for scaling clean, firm technologies—including nuclear, advanced geothermal, and natural gas with carbon capture and storage—in advanced economies. Participants called for tailored de-risking mechanisms, highlighting fit-for-purpose insurance instruments (such as nuclear cost overrun insurance) as a promising approach to risk transfer that can unlock private capital for projects. In 2026, EF^3 will continue to advance the design and application of these mechanisms to enable large-scale deployment of clean energy technologies.

Unlocking Private Capital for CCS

Among clean firm solutions, carbon capture and storage (CCS) plays a critical role in achieving deep decarbonization. It is a commercially proven technology capable of markedly abating carbon dioxide emissions from existing facilities across major heavy industry and power sectors—together responsible for nearly half of U.S. greenhouse gas emissions. Yet domestic, commercial deployment of CCS remains limited.

In April 2025, EF^3 published a study assessing the state of CCS deployment in the United States and how retrofit costs across key sectors have been affected by inflation and high interest rates. Building on the 2023 EF^3 report on the bankability of CCS, the analysis found that the current 45Q tax credit remains insufficient to make projects in the power and industrial sectors financially viable. Additional, layered support—such as revenue guarantees or capital expenditure assistance—is required to advance first-of-a-kind demonstrations and overcome commercialization barriers, while slow permitting continues to impede progress.

Looking ahead, EF^3 will examine how leading economies are deploying carbon management and identify models that could help the United States close its own implementation gap.

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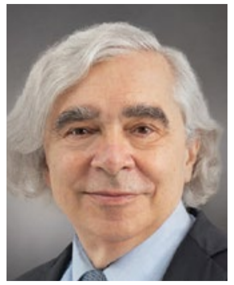

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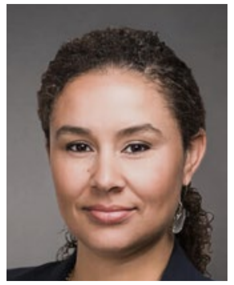

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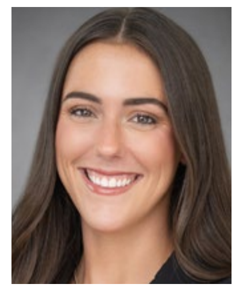

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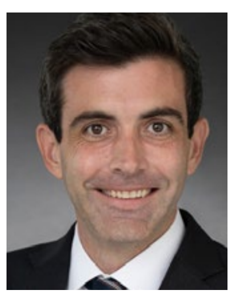

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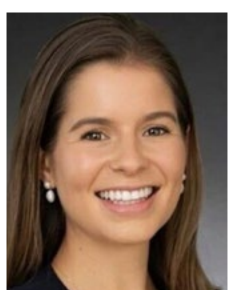

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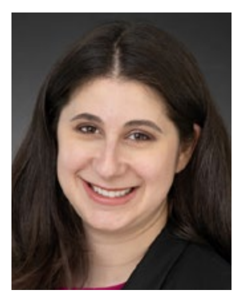

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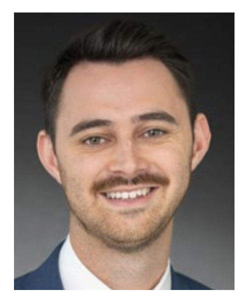

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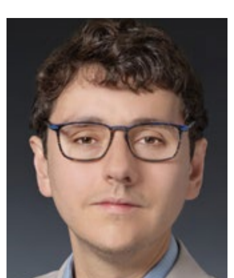

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Thank You

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- Google
- The William and Flora Hewlett Foundation
- Clean Air Task Force
- Growth Energy
- Toyota Research Institute
- Cynthia and George Mitchell Foundation
- JPMorganChase
- U.S. Department of Energy

EFIF's Impact by the Numbers

12
Federal initiatives
Inspired by our work, from reforms to DOE, to congressional funding of clean energy deployment, and more

80+
Reports and policy papers
Based on our independent analyses identifying actionable ways to decarbonize the global energy economy

100+
Workshops and convenings
In-person and virtually, many of which are available for the public to view online

70+
Energy experts
With a network that offers deep experience across a broad range of energy and policy topics

40+
Opinion pieces
Published in major media outlets, including The Wall Street Journal, The Economist, The Boston Globe, and Los Angeles Times

12
Congressional testimonies
On subjects including global energy security, the critical mineral supply chain, carbon dioxide removal and storage, and the needs of the 21st century energy workforce

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