THIRD WAY

Financing Advanced Energy Technologies

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In the fifth installment of Third Way's Clean Energy Industrial Strategy for America workshop, we convened key stakeholders across government, business, finance, and the nonprofit sector under Chatham House rule to discuss how clean energy financing is evolving and what it will take to scale it in an increasingly uncertain global landscape.

While previous sessions focused on closing investment gaps and de-risking deployment, this year, we expanded those conversations to reflect a burgeoning reality–clean energy deployment must be led by the private sector, but it cannot succeed without smart, strategic public policy. We convened leading voices to assess where we stand, examine the opportunities and challenges ahead, and reaffirm the importance of defending the Inflation Reduction Act.

Note: Since our workshop in late March, substantial volatility and policy uncertainty have surged to historic levels. Even amid this turbulence, we remain focused on advancing a strong, viable, and significant industrial strategy: boosting US competitiveness in clean energy technologies to drive economic growth, create jobs, and strengthen national security. The workshop convened leading voices across sectors to grapple with these challenges and chart a path forward.

The Strategic Case for Clean Energy Investment

In 2023, Third Way released its When America Leads analysis with a clear core finding: American companies have real advantages across workforce, manufacturing, and operations but they cannot compete on their own against state-owned and heavily subsidized competitors, particularly those from China. We need an investment-driven industrial strategy, led by the private sector and supported by the government, to stay competitive. And the results of that approach are becoming clear.

The Bipartisan Infrastructure Law and the Inflation Reduction Act have delivered significant federal support, which has already begun to catalyze private investment. In 2024, clean energy investment grew by more than 15% and accounted for 5% of total US non-residential investment. For every $1 of public investment, more than $5 in private capital follows.

At the same time, global markets are evolving. Energy demand is rising–with nuclear and renewables delivering a growing share of our power mix–and new technologies are emerging to meet the market gaps. However, the policy landscape is shifting as well. While still focused on boosting domestic manufacturing, the current administration is moving away from an investment-led strategy and embracing a protectionist agenda built on tariffs and trade barriers. This approach is creating substantial volatility and policy uncertainty.

Not all global trade is bad, but unchecked globalization has exposed supply chain vulnerabilities, heightened risk, and hollowed out parts of the American middle class and communities. The answer, however, is not a laissez-faire withdrawal of government. That's what helped push the US out of key value chains in the first place. To lead in clean energy, the government must act as a partner, a catalyst, and an investor–creating the conditions for private sector success.

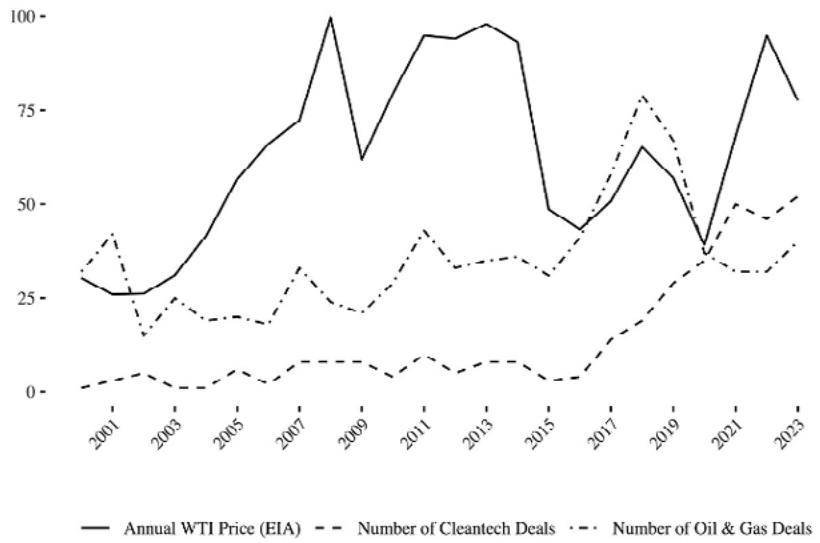
Clean Energy Tech Winners—Where Is Financing Flowing?

Clean energy technologies are no longer on the sidelines–they are being commercialized and creating markets and supply chains to support strong growth. To understand how market conditions are evolving and how institutional investors are recalibrating their priorities, we brought together a panel of finance experts to assess where we stand and examine the opportunities and challenges ahead.

Clean Energy is Already Shaping the Market:

Clean energy technologies are reshaping clean and traditional energy markets alike and actively competing with fossil fuels. The 2022 energy crisis–in Europe and beyond–demonstrated this clearly. When commodity prices like LNG and oil surged, deployments of solar, battery storage, and EVs accelerated. In some markets, clean technologies have become the price-setters, shaping overall energy costs. This is happening not only in Europe but also in Texas, where solar and battery storage met 10% of peak demand during critical hours that may otherwise have led to blackouts.

Despite these positive trends, clean energy capital remains vulnerable to macroeconomic cycles. Research has shown that clean technology investment has historically moved with oil prices–periods of declining oil prices have correlated with a pullback in clean technology investment.



El-Gamal, Mahmoud A., Amy Myers Jaffe, and Saskia Salak. "Fickle environmental attitudes and cleantech underinvestment." Applied Economics Letters (2024): 1-5.

As global economic signals turn more cautious, the risk of reduced investment looms. We have to be realistic about the role of private capital, where it will enable progress, and where public capital is still required. First-of-a-kind technologies, like small modular reactors and other advanced nuclear technologies, for example, lack proven manufacturing processes, predictable returns, or established markets. In these cases, public capital remains critical to unlocking early-stage scale and building credibility.

How Asset Managers Are Approaching Clean Investment in the Post-IRA Era:

Amid IRA policy uncertainty and tighter capital markets, investor priorities are shifting. The previous era of low interest rates and enthusiasm around net-zero-enabled long-term investments was based on cheaper capital and long-term horizons. That window has shuttered, and financial firms are responding to new signals.

Today, the focus is less on climate and emissions outcomes and more on energy security, cost reductions, robust supply chains, and resilience. Across venture and institutional capital alike, the key question being asked is: will this technology make our energy system more secure and cheaper? There is precedent for the kind of pivot we're seeing today.

During the oil shocks of the 1970s, concerns over energy independence–not decarbonization–drove massive investment in cleaner energy systems. One of the most visible examples was France's decision to rapidly build out its nuclear fleet, adding 52 new reactors by 1990. That effort not only secured domestic energy supply but also drove down the cost of nuclear energy through replicability and scale. The result: France now operates one of the most decarbonized power grids in the world—not because of climate policy, but because of an aggressive energy security strategy.

The impact of this preoccupation on energy security is measurable. From 1973 to 1993, fossil fuels' share of the global primary energy supply dropped from 94% to 85%–much sharper than the 85% to 81% decline we've seen in the last 10–15 years of climate-focused investment.

The most effective decarbonization strategies have often emerged from strategic security concerns, not from environmental imperatives. Investors may not be moved by net-zero pledges alone, but the case for clean energy as a pillar of national security and energy resilience generates traction.

How Large Buyers Can Unlock Clean Energy Deployment:

Large corporate energy buyers with net-zero targets are finding that meeting their own decarbonization goals–particularly in high-demand sectors like Gen AI, cloud, and quantum computing–requires more than just buying clean power. It requires catalyzing the actual deployment and guaranteed offtake. What began as a strategy focused on power purchase agreements (PPAs) to match consumption with renewable generation is now evolving into deeper, earlier engagement across the value chain to deploy much-needed clean energy technologies at scale. Corporate buyers are rethinking their role–not just as off takers but as early investors and partners. In so doing, this draws in other investors who see corporate investment as a form of collateral.

To ensure the technologies they will need are available and deployable by the 2030s, some of the largest corporate energy buyers are moving upstream. This includes taking direct equity stakes in clean firm technologies like small modular reactors (SMRs), helping manufacturers scale production capacity, and investing in specific projects to serve future load. These investments are not about becoming utility operators. They are about accelerating deployment timelines, signaling long-term demand, and de-risking the market for others by acting as an anchor investor. By stepping in early, large corporate buyers help to validate the market. This, in turn, draws in other investors (institutional and private equity) who see reduced financial risk when a large corporation is also taking equity stakes.

Q&A

Question: How are decisions being made about the structure of capital–whether to act as an offtaker, invest in the energy supply chain, or to just finance specific projects?

Answer: As demand grows, corporate buyers are moving beyond offtake deals to help fund the infrastructure needed to meet it. They are engaging more actively in policy processes while also adjusting their investment posture. That includes taking equity positions in key technologies at the company level, investing early in transmission, and leveraging market commitments to fill order books.

Question: As ESG faces political backlash and sustainable funds lose momentum, is clean tech investment at risk? Could we see a shift from 'greenwashing' to 'security washing'?

Answer: Clean tech investment is not drying up, it's just being redefined. The focus is shifting from ESG and the environment to energy security, price stability, and national competitiveness. Globally, clean energy is seen as a tool to stabilize energy systems and reduce exposure to geopolitical shocks. In the US, cultural polarization around clean technologies obscures their practical advantages, risking economic and geopolitical fallout.

Strategies to Defend the IRA and Crowd in More Private Investment

Despite the historic surge in clean energy investment triggered by the Inflation Reduction Act (IRA), the tax credits at the core of this progress remain vulnerable to repeal or restrictions by shifting political forces. Nearly all of the incentives—perhaps aside from a few related to carbon sequestration and fuels—are at risk of repeal or rollback through Republican-led budget reconciliation efforts. Whether driven by ideological opposition or the need to offset other fiscal priorities, the threat is real.

Defending these credits is critical. They are not just temporary boosts—they're foundational tools that have unlocked hundreds of billions in private investment across clean energy production, storage, transport, and manufacturing. The policy certainty and long-term stability they provide has helped de-risk projects, accelerate deployment, and build long-term investment momentum.

But support cannot be taken for granted. Many lawmakers remain unclear on the full economic impact of these credits—not just locally but nationally. The finance and clean energy communities have a role to play in making the case: defending the IRA means defending the future of American energy competitiveness.

Why Defending Clean Energy Tax Credits is Vital for Innovation

The dominant narrative around defending the IRA often centers on protecting tax credits–while this is important, it often misses a critical part of the story. The IRA isn't just a set of incentives, it's a catalyst for breakthrough innovation. It's driving capital into early-stage technologies like geothermal and geologic hydrogen.

These technologies are aiming to follow the same S-curve trajectory and cost-decline pathway that wind, solar, and increasingly storage have already proven possible. The goal is scale and cost reductions – the IRA is one of the few tools helping them get there.

Since the passage of the IRA, we've already seen a tenfold increase in emerging climate technology funding. Up to 80% of tax credit transactions to date have involved either emerging technologies or manufacturing-related investments–proof that the law is not just supporting mature, clean energy deployment but directly accelerating the commercialization of what's next.

But many of the companies driving this wave–particularly in these emerging sectors–lack the internal infrastructure to advocate for themselves. Most don't have policy teams or communications operations. As a result, they've been largely absent from the political debate over

repeal, even though their futures hinge on policies like the tech-neutral 45X credit.

Defending the IRA requires building up the advocacy infrastructure to show how these credits are creating new industries in places like Nevada, New Mexico, and Texas and how losing them could stall technologies just as they begin their rise.

Focusing On The Economic Impact of Tax Credits:

In recent months, some of the biggest names in the tech industry, like Google, Amazon, and Microsoft, have taken equity positions in clean energy startups, signaling a broader shift in corporate strategy. These investments aren't about speculative returns, they're about securing the reliable, clean power needed to fuel rapid load growth from AI, advanced manufacturing, and data infrastructure. Moreover, these companies continue to target emissions reductions in their operations and purchases.

At the same time, load growth is surging at levels not seen since the 1990s, driven by data centers, advanced manufacturing, and new industrial activity. The energy system is under strain, and reliability is now a central concern. That's why resource diversification and the ability to deploy a wide range of clean energy technologies is so critical. The tech-neutral tax credits enable precisely that, by supporting everything from wind and solar to geothermal, batteries, and gas with carbon capture.

Analysis shows that repealing tech-neutral tax credits would increase retail electricity rates by an average of 7% and commercial and industrial rates by 10%–equivalent to roughly $110 per year for the average household. For businesses, that means higher costs potentially passed on to consumers.

Messaging around carbon and climate won't sway many of the lawmakers making decisions about these credits. But affordability, reliability, and energy independence still resonate. When factory jobs tied to 45X are visible in a district–and when voters feel the pressure of rising electricity bills–those arguments have political power.

Why Transferable Tax Credits Are Worth Protecting

Prior efforts to pass national climate legislation, like Waxman-Markey, were made under tough economic conditions and based largely on the promise of future jobs. Today, the clean energy coalition is operating from a far stronger position. The IRA is actually delivering on that promise, with thousands of jobs and billions in investment flowing into communities, many of them into conservative districts. That momentum is creating new political durability around clean energy tax credits, especially those that support advanced manufacturing, CCS, nuclear, biofuels, and geothermal technologies.

A major factor in this shift has been the introduction of transferability, which allows clean energy developers to sell their tax credits to a third party–typically an investor or large corporation–instead of using them themselves. This feature, unique to the IRA, has enabled a broader range of technologies to access clean energy tax incentives without relying solely on traditional tax equity

structures, which are slower and more complex. In fact, roughly 70% of tax credit transfers in the second half of last year were tied to newly eligible technologies. Transferability is speeding up deployment, reducing financing friction, and allowing smaller and more innovative projects to scale–often in regions with strong bipartisan support. And the benefits go beyond speed. For critical minerals companies, transferability is helping collateralized debt, creating new pathways to project finance and development.

Defending IRA tax credits means defending the entire financing architecture that underpins this investment boom. Without transferability, capital will slow, and deployment will stall.

Q&A

Question: What investments in infrastructure are being driven by the IRA?

Answer: The IRA has accelerated innovation across a wide range of technologies–not just "big tech" but is enabling smaller or emerging players to scale. At the same time, it's playing a key role in ensuring energy reliability. While some political rhetoric blames the IRA for grid strain, grid operators themselves have clarified that these projects are needed to meet rising demand. This makes the case that the IRA is part of the solution, not the problem.

Question: What messages resonate the most when defending clean energy tax credits?

Answer: The most effective messages focus on local economic impact and national strength. Highlighting job creation and local impacts can boost public support by 33%, even through nonpartisan education campaigns.Emphasizing how tax credits like 30D anchor US supply chains and drive deals between automakers and domestic producers also resonates.

Question: When it comes to protecting the IRA, what's the next step beyond 'do not repeal'?

Answer: The advocacy space is already opening up for potential modifications to clean energy tax credits. Rather than just making defensive asks, the strategy includes explaining the risks of unintended consequences–like inadvertently harming emerging industries such as advanced nuclear or geothermal through overly rigid domestic content rules.

Question: Is there more the finance community could do to advocate for tax credits?

Answer: The finance sector has stayed mostly silent–even as contract sanctity is threatened. Instead of joining collective advocacy efforts, big asset managers are seeking quiet carve outs or one-off exemptions, a strategy set during the first Trump Administration. Early-stage investors have also largely stayed out of policy debates, but as tax credit timelines grow more critical, they may need to step up and help shape policy.

In Practice: Financial Market and Business Perspectives on Clean Energy Financing

Financing is a significant barrier to the clean energy transition, with US Treasury Secretary Janet Yellen estimating that we will need $3 trillion in annual investment through 2050 to stay on track with our economic and climate goals. Business leaders and financial markets have a unique vantage point on what it will take to unlock that level of investment and the challenges, constraints, and opportunities facing market participants today.

Barriers to Transatlantic Investment:

Carbon-Free Europe recently partnered with Breakthrough Energy to conduct a survey of 40 companies, investors, NGOs, and other organizations to understand the top barriers to clean energy investment across the US and Europe. Financing emerged as the most cited hurdle, with over 77% of respondents flagging it as a major challenge.

While funding is growing, accessing funding remains difficult. Initiatives like the European Union's (EU) Innovation Fund and the Net Zero Industry Act are steps in the right direction, however respondents felt they lack the clarity and simplicity needed to unlock real capital flow. Political uncertainty and fragmented capital markets–particularly differing listing and reporting requirements–further complicate cross-border investment.

The US clean energy sector is increasingly reliant on European partners to scale, but that cooperation faces friction due to differing regulatory environments and persistent risks in emerging sectors like hydrogen. Broadly speaking, companies value transatlantic cooperation. However, rising trade tensions and competing industrial strategies risk undermining that alignment. Future partnerships will depend on how both sides of the Atlantic choose to balance cooperation with each other against competition with China and other state-backed players.

As political and economic developments continue to evolve, particularly from elections, companies are rethinking how to present their public profiles to policymakers on either side of the Atlantic. That could mean emphasizing energy security in the US while leaning into competitiveness and climate alignment in the EU. These shifts create a communications and compliance burden, especially for global firms managing billions across both markets.

The risk is that divergence in standards, regulations, and reporting frameworks–especially in an uncertain political environment–could make it harder for firms to access and integrate into transatlantic capital markets and present a unified business model. Navigating regulatory whiplash is challenging for large asset managers and small firms alike to navigate.

Unlocking European Capital:

As the US clean energy ecosystem navigates shifting support for clean energy, Europe is facing its own strategic inflection point. A landmark report by former European Central Bank President Mario Draghi made it clear–to remain competitive, meet its climate goals, and protect its industrial base, the EU needs to mobilize roughly €800 billion in investment per year by 2030.

One possible solution is to connect savings with investment needs through a savings and investment union. Currently, roughly 70% of household savings, totaling about €10 trillion, is sitting idle in low-risk savings accounts across Europe. The EU is now pushing to unlock this capital through various legislative and regulatory reforms to help redirect individual and institutional capital toward much-needed energy and infrastructure projects.

Q&A

Question: How is a strong US dollar and the rise of subordinated debt shaping US–Europe clean energy investment?

Answer: A strong US dollar and attractive subordinated debt pull European companies into US capital markets, but policy uncertainty and volatility can make investors cautious. As the US shifts from energy importer to exporter, it's stepping back from global economic leadership, leaving Europe, which still relies heavily on imported energy, vulnerable. Europe now faces a critical choice–deepen investment in US markets to scale western energy supply, invest more in domestic clean energy, or re-engage with China on clean tech.

Question: Are investors still willing to take on risk in clean energy, especially through tools like subordinated debt?

Answer: Yes, but the fundamentals that shape investor decisions are shifting quickly. Indicators that used to change quarterly now evolve week to week, even day to day, depending on new tariffs or policy moves. While there's longer-term optimism, the current moment is about managing risk. Investors are holding onto generation assets like wind and solar, which are seen as relatively safe, even in a downturn. Still, how this plays out over the next few months will depend heavily on how policy and market dynamics continue to evolve.

Question: The Draghi Report recommended integrating capital markets across the EU to create a bigger investment pipeline. Is there optimism about that idea in Europe?

Answer: There's cautious hope but Europe also has a long history of stalled attempts. In theory, the EU should already function as a single market but there are still significant barriers. Efforts to harmonize listing rules, tax policy, and supervision across the 27 member states have been underway for nearly a decade. Despite different rebrandings, the policy solutions remain largely the same, and the structural hurdles remain significant. However, there's a renewed sense of urgency that could move the needle.

International Financing Challenges and Opportunities

The US energy posture is shifting toward repealing climate legislation, weakening targets, and doubling on natural gas. This risks isolating the US from strategic allies just as global competition–especially from state-backed actors like China–intensifies. The response cannot be retreating into a zero-sum mindset over market share. The opportunity lies in growing the pie–deepening transatlantic cooperation to unlock public and private capital for shared deployment of clean technologies.

The US has powerful tools at its disposal–the Export-Import Bank (EXIM), the US International Development Finance Corporation (DFC), Millennium Challenge Corporation (MCC), the Defense Production Act (DPA), and Loan Programs Office (LPO) finance mechanisms. These institutions are designed to support exports and secure infrastructure and supply chains, helping get clean energy technologies from first-of-a-kind to nth-of-a-kind. But they must be used strategically to decarbonize.

Decarbonization is more than a climate goal–it underpins our national defense, control of critical commodities, industrial competitiveness, and global leadership. If we want to stay ahead, we must capitalize on Europe's decarbonization momentum and treat the continent not as a competitor but as a partner in scaling the technologies that will shape the future.

How Export Credit Agency Cooperation Can Help Scale US Clean Tech:

Third Way recently partnered with Stonehaven to highlight the importance of strengthening a US-UK civil nuclear partnership and expanding cooperative approaches to clean energy finance. The global clean energy landscape is narrowing–from the hundreds of advanced nuclear designs in development, fewer than ten are now approaching first-of-a-kind demonstrations within the next several years. That convergence opens a unique opportunity to align supply chains around common reactor designs to reduce costs, diversify financing sources, and accelerate deployment.

Export credit agencies and other public finance institutions, particularly those with national security mandates, are increasingly willing to take on higher-risk capital in the name of strategic competition–a characteristic especially helpful in countering influence from China and Russia. This moment calls for leveraging those tools through deeper cooperation, not just for nuclear, but across other emerging clean technologies.

Export credit agencies (ECAs) are powerful tools in deploying clean energy technologies globally but are often underutilized. With roughly $2 trillion in combined capacity worldwide and over $100 billion available through the US EXIM Bank alone, ECAs have historically played a central role in commercializing emerging technologies. From financing atoms for peace-era nuclear exports to backing the global rollout of Boeing aircraft, ECAs have repeatedly catalyzed large-scale industrial shifts.

As the US leads in several emerging technologies–from advanced cooling systems used in data centers to geothermal drilling–ECAs can help scale these innovations to global markets by taking on more risk and aligning with clean energy deployment. And the demand is present. Strategic regions like Central and Eastern Europe are actively seeking SMRs and other alternatives to Russian and Chinese energy tech. Australia is also stepping up to challenge China's dominance in rare earth processing and mineral supply chains. ECAs can play a critical role in helping the US and its allies take on China and Russia in support of broader geopolitical objectives.

What the UK Is Doing To Finance Its Clean Energy Transition and How It Is Partnering Internationally:

The UK's new government has made clean energy central to its economic strategy, aiming to become a "clean energy superpower" by 2030 and 95% of its electricity from clean sources by 2030–up from over 50% today, with coal already fully phased out. To do so, they have done the following:

The UK has launched a National Wealth Fund–a state-backed investment vehicle modeled on other sovereign wealth funds. This one, however, is focused on scaling clean energy technologies. The fund is designed to back scalable, profitable innovations and will work in tandem with a newly established government-owned clean energy company responsible for developing, building, and deploying domestic clean energy projects.

Last year, the UK closed its final coal power plant, marking a major milestone: the grid is now coal-free for the first time, with renewables supplying over 50% of electricity and continuing to grow. In addition to offshore wind, solar, and battery storage, the UK is supporting first-of-a-kind technologies like small modular reactors (SMRs), diversifying its energy mix. Its ongoing SMR competition has shortlisted four finalists–three of them American–signaling strong US-UK cooperation on nuclear innovation. The UK is also putting together an Industrial Strategy and Clean Energy Action Plan, with a clear focus on cutting permitting delays, reforming grid connection queues, and prioritizing projects that advance national energy goals.

On financing, the UK has deployed multiple tools: UKRI, and its innovation arm, Innovate UK, to help fund early-stage innovation; the British Business Bank to help scale promising startups; and UK Export Finance and British International Investment to support clean energy projects around the world.

The Path to Financing Capital-Intensive and Emerging Clean Technologies:

Double-digit clean energy investment growth, thanks to private investors and recent federal funding, created an opportunity to grow the clean energy technologies of the future. Notwithstanding this substantial growth in public and private investments in clean energy technologies over the past four years, financing capital-intensive (nuclear and offshore wind) and emerging clean technologies (SMRs, clean hydrogen, advanced thermal systems) remains an

ongoing focus. Persistent barriers–lack of firm, bankable offtake, cost uncertainty, and unclear regulations–continue to constrain deployment. These challenges are further compounded by growing policy uncertainty and shifting trade measures. Expanding the financing pipeline will, over time, allow for scale expansion of clean tech deployment, securing economic growth, job creation, cost efficiencies, and energy security. Unlocking this additional investment will depend not just on continued public support, but on more coordinated and credible demand signals–particularly from large anchor investors to firm orders.

Surging energy demand from AI and data centers can help position emerging clean energy technologies to meet market needs. Additional policy and regulatory shifts in financing orderbooks, permitting new projects, and market rate design are needed to improve–not diminish–the foundational certainty investors require to deploy capital at scale.