CLEAN AIR TASK FORCE

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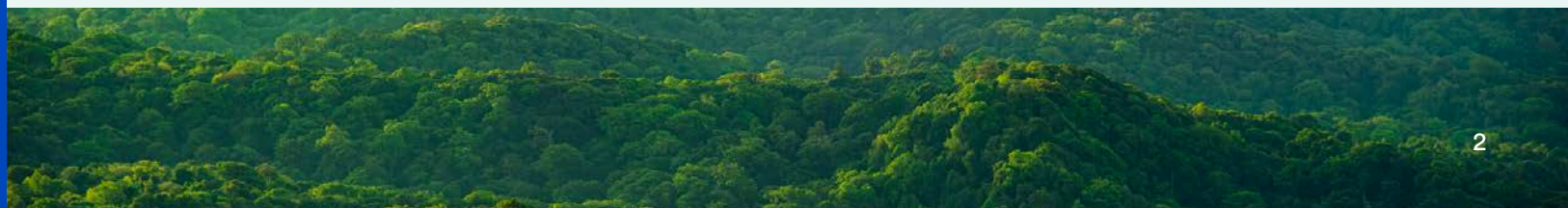
2025 IMPACT REPORT

CONTENTS



A NOTE FROM THE EXECUTIVE DIRECTOR

Effectiveness over everything.

In 2025, climate strategies were put to the pressure test.

Political volatility intensified. Economic pressure persisted. Geopolitical fragmentation deepened. Climate ambition was no longer judged on the heights of its aspiration, but on whether it could survive collision with a messier reality shaped by global competition, conflict, affordability concerns, industrial policy, and shifting public priorities.

Many climate approaches were forced to bend. Others broke. CATF's was proven uniquely effective.

For nearly three decades, CATF has operated from a simple conviction: progress depends not on slogans, wishful thinking, or ideological purity, but on the ability to grapple with the world as it is and intervene effectively within it. We have always understood that durable climate progress must be technically sound, politically resilient, economically credible, and responsive to the way the real world works.

That understanding served us well in 2025, and gave us an edge in a tough political environment.

At a moment when many climate gains came under threat, CATF continued to deliver. We defended carbon and air pollution regulations that directly reduce pollution and protect public health. We advanced practical frameworks for cutting methane emissions around the world. We helped move clean, firm, always-available power like geothermal and nuclear energy further into the mainstream. We shaped serious pathways for tackling emissions from even tougher sectors like industry and heavy transport.

We advanced new, less expensive approaches to build transmission for clean electrons by using lower-cost public financing. And we did so across a rapidly shifting global landscape — from Washington to Brussels, from statehouses across the United States to ministries in Central and Eastern Europe, from Africa to the Middle East.

Taken together, these efforts prove out that – even in turbulent times – progress is possible when we pursue it with flexibility, clarity, and courage.

While some might have retreated in the face of the world's many mounting uncertainties, we operated inside them. We defended what works and improved what doesn't, finding openings where others see only backsliding or deadlock. We navigated uncertainty without losing strategic focus – advancing a vision of climate progress that is equal to the scale and complexity of the challenge.

Tellingly, despite our modest size, we were named by several charity raters as among the world's most effective climate organizations for the sixth year-in-a-row in 2025 – an unprecedented honor and yet another signal that our pragmatic approach is resonating.

We are proud of what our team accomplished in 2025, and we are grateful to the partners who worked alongside us. We are especially thankful for the supporters who continue to invest in CATF's mission and in the kind of pragmatic, high-impact climate work this world demands.

Thank you for your partnership,

Armond Cohen
Executive Director
Clean Air Task Force

WHO WE ARE

We are not just environmental advocates. We're pragmatic problem solvers, strategic thinkers, and catalysts for a brighter future.

CATF is a global climate organization that advances scalable solutions based on scientific evidence, intellectual integrity, and pragmatism. We understand that meeting the world's needs while meeting the climate challenge requires innovation, collaboration, and a willingness to work in the real world. For nearly 30 years, we have pushed the boundaries of conventional environmental advocacy to bring unique insights, substantive advocacy, and rigorous research to the task of ushering in a zero-emissions, high-energy planet at an affordable cost – advancing breakthrough solutions that deliver a low-emissions future, and striving for a world where we meet humanity's needs in a way that is financially, socially, and environmentally sustainable.

This is an enormous challenge that requires innovation and change at every level, in all parts of the world.

WHAT WE DO

Change the narrative to ensure the world understands and reckons with the full scope of the climate challenge, rallying around the need to advance a wide range of solutions while allowing for regional flexibility and pragmatism.

Change technology to make available and affordable the solutions we need to meet the climate challenge, including advanced renewable energy, zero-carbon fuels, advanced nuclear energy, superhot rock geothermal energy, and carbon capture and storage.

Change business models to develop modern, modular, manufacturable energy solutions that can be deployed quickly all over the world — improving markets while meeting energy demand and boosting energy security.

Change policy to cut harmful pollution and catalyze the development, demonstration, and scale-up of the systems and technologies required in a net-zero emissions, high-energy planet.

Change politics to increase support for clean energy and climate solutions, building movements that encourage leaders to advance pragmatic, fact-based, diverse, and implementable climate solutions.

WHERE WE WORK

CATF is active in 46 countries on 6 continents, advancing climate solutions on a global scale.

Advanced coordinated, forward-looking infrastructure planning in Europe

Sustained engagement on the European Commission's Grids Package saw most of our detailed recommendations incorporated, ensuring greater cross-border coordination, streamlined permitting, and long-term network development. This legislation moves the region closer to an electricity framework that integrates clean energy at scale, maintains reliability, and prepares power systems for continued growth in demand.

Defended clean energy investment, programs, and incentives in the U.S.

Advocated for Congress to keep essential clean energy production and investment tax credits, highlighted the economic benefits of clean energy programs, and challenged the rollback of clean air regulations in court.

Trained the next generation of climate leaders in Central and Eastern Europe (CEE)

This program united ten emerging professionals from across the CEE region to build knowledge, exchange ideas, and accelerate progress toward a cleaner energy future – providing the next generation of leaders with the tools and networks they need to shape a sustainable future.

Expanded the Fossil Fuel Regulatory Programme to drive progress worldwide

Supported the governments of Ghana and Iraq in developing new policies to reduce methane emissions from their oil and gas sectors.

Strengthened regional collaboration and technical capacity in Africa

Convened the West Africa Utilities Roundtable in Accra, Ghana, bringing together utility executives from eight countries, regulators, and financing institutions, to tackle shared challenges and advance practical solutions for resilient, low-carbon power systems. Provided targeted technical analysis to utilities in Ghana, Kenya, and The Gambia, informing grid upgrades and variable renewables integration planning.

Drove methane momentum at COP30 in Belém, Brazil

Worked with the government of Brazil to develop a national plan to address methane emissions from the waste sector.

2025 YEAR IN REVIEW

In a year defined by political uncertainty, economic pressure, and intensifying geopolitical complexity, 2025 underscored a reality CATF has long embraced: climate progress depends not just on ambition, but on the ability to deliver results in the real world. As regulatory frameworks came under pressure and global priorities shifted toward energy security, affordability, and industrial competitiveness, CATF helped find through-lines that worked within these competing imperatives rather than against them. From defending critical pollution safeguards and strengthening methane accountability, to advancing enforceable industrial obligations in Europe and scaling the technologies needed for clean, reliable power, CATF's pragmatic strategy continued to drive measurable results.

This progress reflects decades of work building the analytical, technical, and geopolitical foundation required to operate in complex conditions. By aligning climate solutions with the broader forces shaping energy systems and economies, CATF helped move forward practical pathways for industrial decarbonization, clean firm power, and next-generation energy technologies across regions and sectors. In 2025, as the broader climate movement adjusted to a more constrained and contested environment, CATF's approach proved its value: rigorous, flexible, and relentlessly focused on what works.

DRIVING DOWN POLLUTION

Securing and defending regulations that directly reduce pollution

Pollution from energy and industrial systems drives climate change and harms public health – yet efforts to reduce it are colliding with economic pressure, geopolitical fragmentation, and shifting political priorities. Ambitions once seen as secure are being revisited, and regulations that deliver measurable pollution reductions face delay, dilution, or repeal. Durable progress on climate and public health depends on a dual effort: preserving protections that work while also advancing well-designed rules that meet the moment. In 2025, CATF focused on both, defending hard-won standards from rollback and shaping practical, enforceable regulations that translate climate ambition into measurable pollution reductions that protect communities and limit global warming.

26 billion

The amount of carbon dioxide released globally from energy use.

80x

Methane traps over 80 times more heat in our atmosphere than carbon dioxide over the first 20 years.

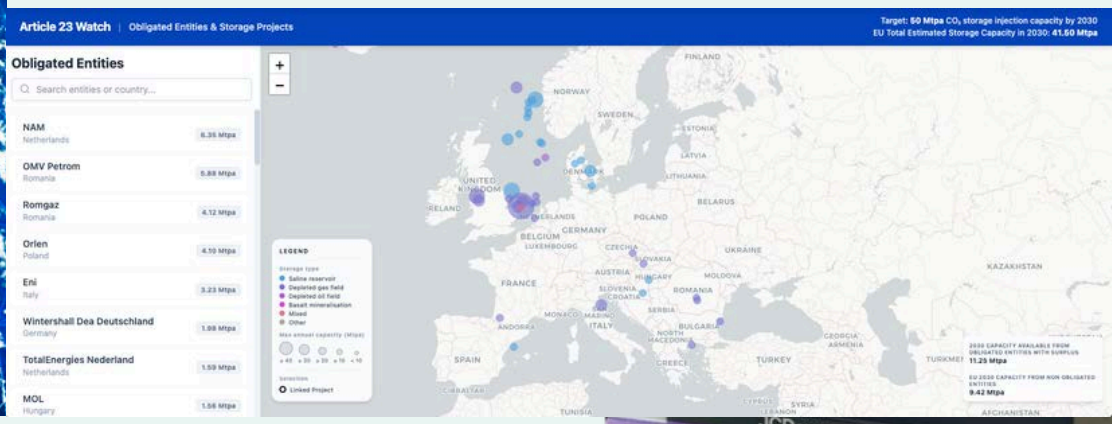
Holding polluters accountable through Article 23 of the Net Zero Industry Act

Carbon storage is essential for meeting the EU's climate targets: it permanently stores underground the carbon dioxide from industrial processes that cannot be fully eliminated by electrification, preventing it from entering the atmosphere. Yet its development has lagged due to unclear accountability for who should build and pay for it. In spring 2024, the EU passed Article 23 of the Net Zero Industry Act, the first regulation of its kind requiring oil and gas companies to build CO_2 storage infrastructure proportional to their fossil fuel production. The regulation established a collective target of 50 million tonnes of storage capacity by 2030, shifting carbon storage from voluntary corporate commitment to legal requirement and ensuring fossil fuel producers contribute to climate solutions.

CATF played a key role engaging the European Commission during the law's development, and as implementation began in 2025, launched a joint initiative with partner NGOs Bellona Europa and Carbon Balance Initiative to monitor compliance, promote transparency, and build political momentum for full and effective implementation. Through tools – like our Article 23 Implementation Tracker – policy briefs, and stakeholder workshops, the three organizations worked to ensure Article 23 delivers on its promises.

In May, when the Commission assigned individual storage obligations to 44 producers – a critical enforcement milestone – CATF and its partners hosted "From Obligation to Opportunity" to explore implementation pathways for developers and regulators. And when at least 15 companies launched legal challenges to the Article 23, the coalition responded with technical analysis clarifying feasibility and infrastructure requirements.

This monitoring infrastructure and coalition work helped defend Article 23's ambition during its first implementation year, providing data, analysis, and oversight to counter industry opposition.



Driving strong methane policy and accountability from the EU to the world

As European and U.S. industry groups pushed to delay and weaken the implementation of the EU's flagship Methane Regulation, CATF worked with policymakers, industry representatives and civil society to reinforce the regulation's core architecture, create technical solutions for implementation, and consolidate political support amongst EU Member States. CATF was the only NGO invited by the European Commission to present at the formal Network of Competent Authorities, and by both providing technical guidance and field documentation of methane emissions across Europe, CATF made the case for traceability, verification, and credible compliance, and worked to dispel myths about the negative impact of the regulation to energy security.

CATF's research demonstrated how emissions accountability can extend across global supply chains through trace-and-claim systems that "Follow the Money", helping translate regulatory intent into practical mechanisms for implementation. In this context, the Methane Regulation became a broader test of whether ambitious climate standards can withstand sustained political and economic pressure while still delivering measurable emissions reductions, something that the EU has repeatedly affirmed thanks in part to our work.

Harnessing global momentum – including from trade policy, energy security, market access, climate action, and environmental priorities – for methane emissions mitigation, CATF expanded the Fossil Fuel Regulatory Programme (FFRP), in partnership with the United Nations Environment Programme and the Climate and Clean Air Coalition. In 2025, CATF announced new FFRP initiatives with the governments of Ghana and Iraq to support the development of new policies to reduce emissions from oil and gas. Technical and policy analysis, specialized trainings, and implementation guidance from CATF fostered comprehensive, context-conscious regulatory language, and robust foundations for enforcement and compliance.

CATF launched FFRP in September 2024 and has been doing extensive government outreach over the last two years. Countries across Central Asia; Asia Pacific; Northern, Western, and Central Africa; South and Central America; and Eastern Europe have approached CATF for support in regulating oil and gas, and coal, or in some instances both. This level of engagement has reaffirmed that global demand for methane mitigation support among governments remains strong, despite concerns of backsliding on climate commitments and action from other major economies.

Meanwhile, as the UK moved from pledge to action on methane mitigation, CATF provided technical analysis and policy recommendations to help translate commitments into enforceable domestic policy in the oil and gas and agriculture sectors. Through targeted analysis and public advocacy tied to the UK Methane Action Plan and Carbon Budget Delivery Plan, CATF pressed for stronger domestic fuel-supply regulation and positioned methane reductions as a near-term opportunity to prevent wasted gas, strengthen energy security, support farmers, and sustain UK climate leadership.

CATF analyzed national policy and regulatory approaches worldwide to help governments prioritize methane mitigation in the waste sector. Efforts included both direct feedback on national and subnational regulatory processes (e.g., Brazil and Colorado, respectively), as well as broader guidance that can be used by decision makers. For example, CATF developed The Waste Methane Toolbox, which highlights successful regulatory models and practical policy options, equipping countries to translate international climate commitments into effective domestic action.

Our work has also expanded into the agriculture sector, pairing technical analysis with policy and regulatory development and stakeholder engagement across the livestock sector to close technology development and deployment gaps. This work focuses on scaling regionally appropriate, on-farm technologies and practices that integrate methane mitigation with agricultural development, contributing to more sustainable food systems and improved rural livelihoods. Working with stakeholders and policymakers, we advance policies that accelerate sustainable productivity gains, reduce emissions intensity where productivity gaps exist, and promote innovative market-based mechanisms that can drive demand for breakthrough methane-reducing technologies.

ADVANCING CLEAN ENERGY

Scaling up clean firm power with advanced nuclear energy

Global energy demand continues to climb, with electricity use projected to grow dramatically through midcentury. Meeting that demand while reducing emissions requires expanding every viable source of clean, firm energy. Nuclear energy – with its ability to deliver reliable, firm zero-carbon electricity and heat at scale and speed – was increasingly recognized by governments and markets as indispensable to that strategy. Yet deployment still faces cost, financing, and regulatory barriers that limit speed and scale. CATF focused on strengthening the policy, commercial, and institutional foundations needed to move nuclear energy from isolated projects to repeatable, large-scale deployment. Over the past year, this meant sustained state-level advocacy, coalition-building, and international ecosystem development to position nuclear as a core clean firm resource.

50+ gigawatts

The Nuclear Scaling Initiative is catalyzing an effort to scale the nuclear energy ecosystem to 50 or more gigawatts per year by the 2030s.

NY + IL

Advocated for lifting a decades-long ban on nuclear energy in Illinois; created regional momentum for advanced nuclear deployment in New York.

We did this by:

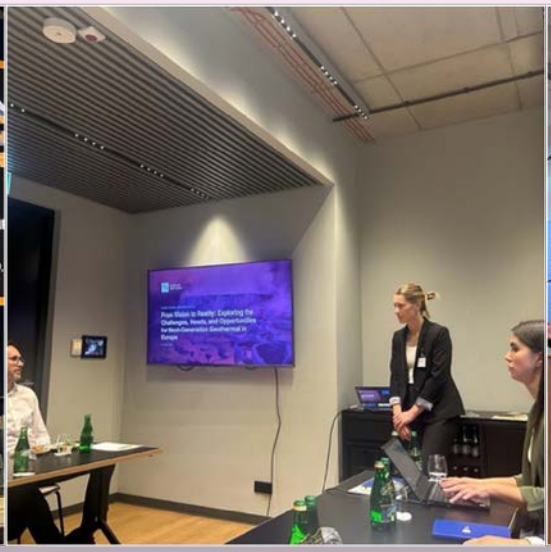
Changing the global commercial ecosystem for nuclear energy.
Through the Nuclear Scaling Initiative, in partnership with EFI Foundation and the Nuclear Threat Initiative, CATF is catalyzing an effort to build a new nuclear energy ecosystem to scale to 50 or more gigawatts per year by the 2030s – a tenfold increase of the current deployment rate.

Supporting passage of Illinois' Clean and Reliable Grid Affordability Act.
On October 30th, the Illinois General Assembly passed the Clean and Reliable Grid Affordability Act, lifting the decades long ban on constructing new nuclear plants in the state. Over the past two years, CATF maintained an aggressive advocacy presence throughout the state, engaging directly with lawmakers and stakeholders to underscore the importance of nuclear to meet rising energy demands and achieve Illinois' goal of a carbon-free grid by 2050.

Creating regional momentum for advanced nuclear deployment in New York.
Through sustained engagement with policymakers, utilities, and other across New York and the region, CATF is helping shape the policy, financing, and procurement conditions needed to support larger, more predictable nuclear orderbooks and clearer long-term market signals for developers and supply chains.

Advancing European policy for new wave of nuclear energy deployment.
As the EU moves toward its 2050 climate-neutrality goal, CATF championed nuclear fission as a source of firm, low-carbon power that can complement renewables and strengthen energy resilience. Through sustained engagement across EU institutions, CATF helped shape the strategic vision for nuclear energy in Europe — influencing how it is supported through policy and state aid, identifying pathways for future financing, and conceptualizing new regulatory approaches to facilitate the development of strong supply chains.

Shaping the EU and Member State strategies for small modular reactor deployment.
Through targeted research and policy engagement, CATF developed recommendations for the EU SMR Strategy and Poland's Nuclear Strategy that align regulatory streamlining, market development, and clear policy signals — providing EU institutions and Member States with a practical roadmap to accelerate deployment.




Bridging the gaps to advance superhot rock geothermal energy

Superhot rock (SHR) geothermal energy is a potentially game changing technology, offering an opportunity for limitless supplies of clean firm power by tapping the heat beneath our feet. SHR is an always-on energy source, making it a valuable compliment to other variable renewable energy sources in fully decarbonized power systems. While resources exist nearly everywhere and no major scientific breakthroughs are needed, the systems, financing, and policies required to bring SHR to market are still lacking. CATF's work in 2025 has further bridged the gap from technical potential to global deployment by:

Advancing federal research support for superhot rock geothermal.
CATF engaged extensively with the U.S. Department of Energy's Advanced Research Projects Agency – Energy (ARPA-E) on the importance of establishing a dedicated $30M research and development program, contributing to the creation of a targeted initiative aimed at overcoming key technical hurdles to commercialization.

Providing foundational research through our Bridging the Gaps series.
CATF published a set of reports identifying the most significant technical, cost, and commercialization barriers facing superhot rock geothermal development, creating a shared evidence base for policymakers, researchers, and investors and helping clarify the highest-impact pathways to scale this emerging clean firm energy resource.

Launching an international collaboration on superhot rock geothermal through the IEA.
CATF proposed and helped establish a new initiative under the International Energy Agency's Geothermal Technology Collaboration Programme to connect leading superhot rock projects across countries. Serving as the first Task Leader, CATF is convening governments and research teams to share data, coordinate technical priorities, and develop common guidelines — creating a structured platform for global collaboration to accelerate commercialization of this clean, always-available energy source.

Building awareness and policy readiness for next-generation geothermal in the EU.
Through roundtables, speaking engagements, and targeted policy campaigns, CATF socialized superhot rock and other next-generation geothermal technologies across Europe — publishing a joint policy letter signed by 22 organizations, a formal policy position paper, and multiple op-eds, while supporting cabinet-level engagements led by CATF's Europe team. These efforts drove tangible narrative progress, with "superhot rock" appearing explicitly in EU working documents and kept next-generation geothermal firmly on the agenda within the EU Geothermal Action Plan.

Developing the first comprehensive technology roadmap for superhot rock geothermal.
Co-created with global experts, the roadmap provides a living framework linking research and development, demonstrations, and early commercial deployment, with clear priorities across key technology verticals, near- and mid-term KPIs, and defined roles across the ecosystem to reduce coordination risk and guide collaboration, investment, and deployment at scale.

8x

Just 1% of the world's superhot rock geothermal potential could generate 63 terawatts of clean firm power – 8x more energy than the rest of the world's electricity put together.

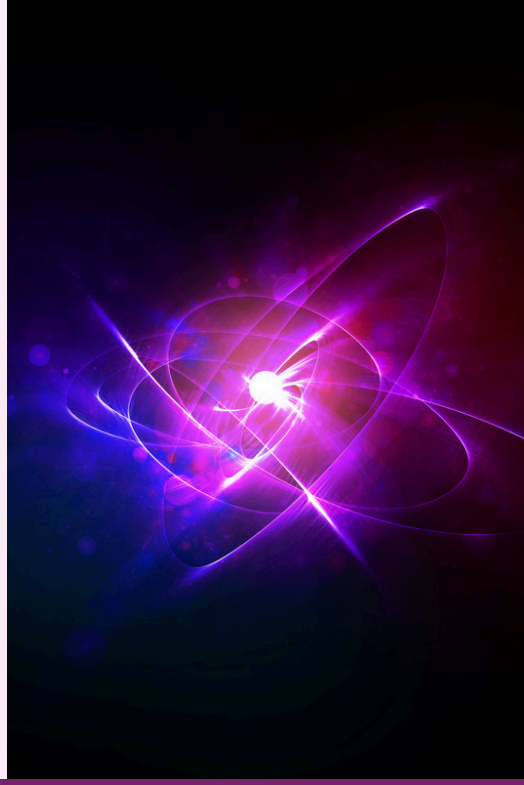
24/7

Superhot rock geothermal is a high-capacity power supply with a small land footprint, available 24/7, almost anywhere on Earth.

Creating a commercial pathway for fusion energy

Fusion energy represents an opportunity to deliver abundant, firm, carbon-free electricity by harnessing the same reaction that powers the sun. As a clean firm resource, fusion could provide reliable, around-the-clock power that strengthens grid resilience and complements variable renewable generation in fully decarbonized systems.

Although technical breakthroughs and private-sector momentum have accelerated progress, the policy frameworks, public investment structures, and commercialization pathways needed to bring fusion to market at scale are not yet fully in place.



27
Commercial fusion initiatives in North America.

55+
Attendees at CATF's Fusion Safety and Regulation Course.

In 2025, CATF worked to close this gap – translating rapid scientific advancement into the institutional, regulatory, and market readiness required for commercial deployment – by:

Supporting the launch of the U.S. Department of Energy's Office of Fusion Energy.
The creation of a dedicated DOE Office of Fusion marked a critical toward building a public fusion program that matches the needs of today's fusion industry. CATF engaged policymakers and stakeholders to underscore the importance of structuring the Office to bridge remaining gaps to commercialization, align federal research with private-sector progress, and ensure the U.S. fusion energy sector remains competitive globally.

Developing federal and state-level playbooks for fusion deployment in the United States.
As fusion companies begin identifying potential host regions for first-of-a-kind facilities, state and federal policy readiness will become crucial for fusion deployment. CATF published recommendations for Western states navigating the evolving fusion technology landscape and outlined the need for a comprehensive state policy playbook to clarify siting, regulation, workforce, and economic development. We also detailed the federal policy reforms needed to integrate fusion into future power markets and support early commercial projects.

Shaping Europe's emerging fusion industrial strategy.
As the European Union advances its fusion strategy, CATF provided recommendations to better align research, commercialization, and industrial policy — positioning fusion not only as a climate solution, but as a strategic technology to strengthen Europe's industrial competitiveness and long-term energy security.

Increasing transparency in the global fusion landscape.
To inform policymakers, investors, and the public, CATF released an updated Global Fusion Energy Map tracking the rapid growth of fusion companies, projects, and public investments worldwide. The map provides a clearer picture of where innovation is occurring and highlights the pace at which international competition is intensifying.

Accelerating fusion materials research through global collaboration.
The availability of high-quality materials data is a key constraint for advancing fusion technologies toward commercial deployment. To help close this gap, CATF developed MatDB4Fusion, a comprehensive, quality-controlled international database for materials used in the fusion energy sector, developed in partnership with the OECD Nuclear Energy Agency and an international working group. The platform consolidates global knowledge on fusion materials, enabling advanced analytics and machine learning tools that can accelerate materials discovery, qualification, and the development of reliable components for future fusion power plants.

Deploying clean energy infrastructure for a resilient and cost-effective energy transition

Building a reliable, affordable, and decarbonized energy system will require far more infrastructure than exists today. Clean electricity cannot cut emissions or maintain reliability without the transmission capacity and grid modernization needed to deliver it where and when it's needed. Expanding transmission, reforming permitting, and strengthening community engagement are essential to enabling a resilient and cost-effective energy transition.

Yet across the U.S., critical infrastructure projects face mounting delays driven by fragmented planning, siting conflicts, financing constraints, and regulatory uncertainty. Without clearer rules and stronger coordination, needed projects stall – raising costs, slowing deployment, and undermining public confidence. Ensuring infrastructure can be built at the scale and speed required demands durable policy frameworks, clear and streamlined processes, and meaningful community engagement that maintain environmental integrity and public trust.

In 2025, CATF focused on strengthening the policy, financial, and community foundations necessary to accelerate infrastructure deployment while upholding high environmental and social standards. We did this by:

Advancing transmission expansion through improved financing and planning.
CATF highlighted how treating communities as partners, rather than obstacles, can accelerate transmission development while delivering better local outcomes. We also analyzed how expanding public financing for transmission in California could save ratepayers billions, showing that innovative financial design can both reduce costs and speed project delivery.

Elevating community engagement and benefits as core deployment strategy.
Through our Power of Engagement initiative, CATF advanced research and practical guidance to help policymakers, developers, and advocates integrate meaningful community participation into clean energy planning. By identifying best practices for early engagement, benefit-sharing, and procedural fairness, CATF worked to ensure infrastructure projects are more durable, equitable, and locally supported.

Strengthening clean energy siting policy through a "Fair Share" framework.
CATF advanced a set of principles to guide more balanced and durable siting decisions, emphasizing that the benefits and burdens of clean energy infrastructure must be distributed fairly across regions and communities. Through research and policy engagement, CATF helped reframe siting debates around equity, system need, and shared responsibility.

Defending and advancing effective permitting reform.
CATF engaged extensively in federal permitting debates, including congressional testimony, formal agency comments, and public analysis of proposed changes to National Environmental Policy Act (NEPA) procedures. We advocated for reforms that improve efficiency and predictability without undermining environmental safeguards or public participation – and pushed back against rollbacks that risk creating greater uncertainty, litigation, and long-term deployment barriers.

Providing clear-eyed analysis of offshore wind challenges.
As offshore wind projects faced delays and federal policy uncertainty, CATF examined the structural causes behind rising costs and deployment slowdowns, and highlighted how abrupt administrative freezes undermine affordability, reliability, and permitting certainty. By grounding debate in evidence, CATF worked to preserve offshore wind as a viable component of a diversified clean energy portfolio.

19

CATF case studies, research, and initiatives on community engagement across the U.S.

15%

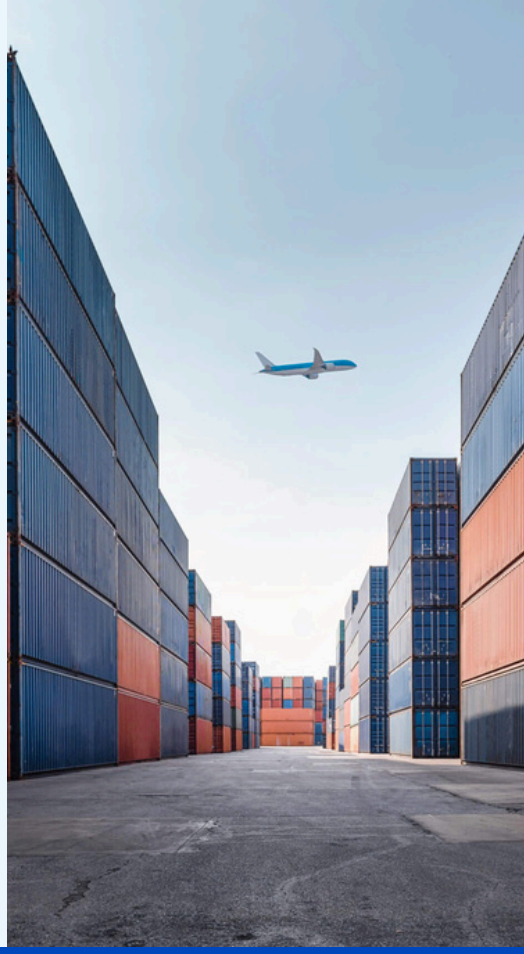
Of counties in the U.S. have some restriction on renewable energy development.

A SYSTEMS APPROACH TO THE HARDEST CLIMATE CHALLENGES

Decarbonizing transportation

The transportation sector comprises billions of cars, trucks, aircraft, and marine vessels powered by a wide array of energy carriers. In its current arrangement, this diverse network of vehicles remains a leading source of climate-warming carbon dioxide emissions and major and growing source of pollutants that affect near-term warming and public health.

CATF elevated the role of contrails, for example – short-lived but heat-trapping formations that can contribute significantly to warming – demonstrating that reducing carbon dioxide alone will not fully mitigate aviation's climate footprint. This work advanced the case for integrating closely targeted contrail-mitigation strategies into aviation policy alongside traditional emissions-reduction measures.



20%

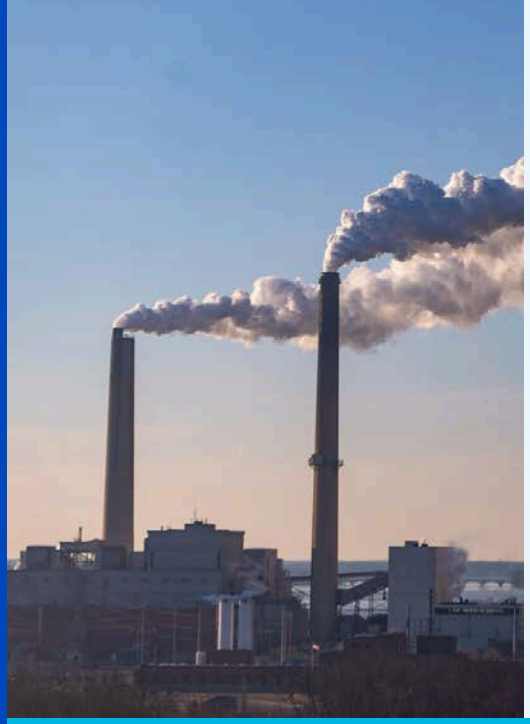
The global transportation sector accounts for roughly 15-20% of total greenhouse gas emissions.

1,000+ lives

If the Advanced Clean Truck Rule stands in states where it has already been implemented, it could save more than 1,000 lives.

An update to our popular Deaths by Dirty Diesel analysis also mapped the health impacts of diesel pollution on communities across the United States and, for the first time, quantified how adoption and implementation of the embattled Advanced Clean Trucks Rule would have saved lives and reduced severe illness by cutting truck emissions. This update informed reporting around Congress' efforts to revoke the rules, as well as grassroots and NGO efforts to defend them, and continues to be a frequently referenced resource for understanding the public health impacts of pollution from diesel trucks.

CATF also paired rigorous analysis with targeted advocacy to align policy with climate and air-quality outcomes — pushing for enforceable global shipping decarbonization standards, defending U.S. clean truck rules, spotlighting the need for energy transition policies to account for cross-sectoral competition for low-carbon fuels, and scrutinizing fuel tax credits such as 45Z to ensure incentives support meaningful emissions reductions.



Industrial Innovation

Industry represents one of the largest and most complex sources of global greenhouse gas emissions, driven not only by energy use but by inherent chemical processes, high-temperature heat, and fossil-based feedstocks. Because many of these emissions cannot be eliminated through electrification alone, industry remains one of the hardest sectors to decarbonize. Achieving economy-wide net-zero targets therefore depends on developing multiple, viable industrial decarbonization pathways that pair technology innovation with practical policy and market solutions.

Advancing realistic pathways for steel and cement decarbonization.
Through targeted research and policy analysis, CATF examined how two of the most emissions-intensive industrial sectors can reduce their climate impact while maintaining economic competitiveness. Reports on U.S. steel and cement at the federal and state level outlined technology options, adoption strategies, and policy measures that balance emissions reductions with manufacturing activity, workforce considerations, and infrastructure needs – providing decision-makers with practical roadmaps rather than one-size-fits-all solutions.

Delivering interactive tools to guide industrial decarbonization decisions.
CATF expanded a suite of public tools that help policymakers and industry navigate complex carbon-management choices. These include an updated European CO_2 transport and storage cost tool, an interactive map identifying emissions-reduction opportunities in the U.S. pulp and paper sector, and the Direct Air Capture Lifecycle Analysis Tool (DAC-LAT), which assesses full lifecycle emissions and net-removal potential for DAC projects under varying technology and energy assumptions.

4.4%

The cement sector is responsible for 4.4% of the U.S. total industrial emissions.

8%

Steel production is responsible for 8% of global greenhouse gas emissions.

Building a clean industrial framework in Louisiana through targeted advocacy on hydrogen and carbon capture and storage.
CATF played a leading role in establishing and supporting the Louisiana Clean Hydrogen Task Force, helping conceive the initiative, cultivate legislative sponsorship, and build cross-industry backing. In November, the task force adopted a set of policy recommendations designed to position the state as a competitive supplier in the emerging clean hydrogen economy, aligning economic development goals with credible emissions-reduction strategies. During spring legislative sessions, when over 22 CCS related bills were under consideration, CATF provided expert testimony and engaged with more than 15 legislators and key stakeholders. CATF's technical materials and messaging on the importance of CCS for Louisiana's export economy were widely adopted by industry groups and state agencies. CATF also engaged at the community level, attending parish meetings and working with local stakeholders to address public acceptance barriers to CCS deployment.

Shaping pragmatic hydrogen strategies for industrial decarbonization in Poland.
CATF provided technical analysis, policy recommendations, and stakeholder convening to inform updates to Poland's Hydrogen Strategy, emphasizing flexible, technology-neutral pathways that align climate targets with industrial competitiveness. Through modelling and expert roundtables, CATF highlighted the near-term role of low-carbon hydrogen with carbon capture and storage, the importance of industrial clusters, and coordinated carbon-management infrastructure to deliver emissions cuts without undermining economic resilience.

Advancing social acceptance of carbon capture and storage in Poland.
CATF co-developed research and policy guidance on how public trust, community engagement, and transparent communication shape the success of CCS deployment, providing practical recommendations for policymakers and project developers to integrate social-acceptance strategies into national carbon-management planning. The work highlighted the importance of early stakeholder dialogue, local benefit-sharing, and clear safety communication to ensure technically viable CCS projects can move from concept to implementation.

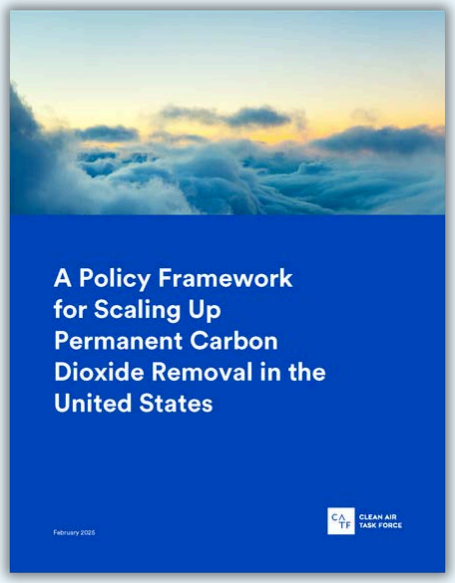
Removing carbon dioxide from the atmosphere

Carbon dioxide removal (CDR) is an essential part of credible net-zero strategies. Even with deep cuts to emissions, most projections show that the world will still need to actively remove large amounts of carbon dioxide from the atmosphere – somewhere between 20 and 660 gigatonnes – by 2100 to limit warming continue removing carbon beyond that point. Yet CDR deployment faces significant barriers: high costs, uncertain policy frameworks, untested compliance market integration, methodological disputes over durability and verification, and limited understanding of how different removal approaches fit into national climate strategies. In 2025, CATF focused on ensuring that CDR policy frameworks balance environmental integrity with deployment incentives, recognizing that scaling CDR requires both technical innovation and pragmatic policy design.

Shaping Europe's approach to permanent carbon removal in compliance markets.
In collaboration with CONCITO, CATF released a landmark report addressing how permanent CDR can be integrated into the European Emissions Trading System – among the first to tackle this critical design question. The work steered policy conversations toward implementation approaches that maintain environmental credibility while supporting deployment. CATF and CONCITO are now in a third phase focused on policy recommendations for incorporating international CDR credits into the EU's 2040 targets.

Advancing sound CDR methodologies through direct engagement.
CATF worked closely with CDR companies and the European Commission to resolve methodological challenges in the Carbon Removals and Carbon Farming regulation, particularly for direct air capture with storage and biochar. Through participation in the Commission's Expert Group on carbon removals, CATF shaped EU-specific methodologies ensuring technical rigor while maintaining practical deployment pathways. This credibility has positioned CATF as a trusted resource – companies including Microsoft and Stripe now regularly seek guidance, and the Commission views CATF as a leader in this space.

Building U.S. CDR policy frameworks.
CATF published policy recommendations for scaling CDR deployment in the United States, outlining pathways that align removal strategies with federal climate goals. This work continues through collaboration with Cornell's Atkinson Center for Sustainability, where CATF engages with scholars conducting policy innovation modeling to identify how regulatory, procurement, and market mechanisms can accelerate CDR adoption.



Expanding access to reliable, affordable, and emissions-free electricity

Transforming the electricity sector is essential to meeting rising energy demand while cutting greenhouse gas emissions, and its importance will only grow as transportation, industry, and buildings electrify. CATF's Electricity Program focuses on closing strategic, regulatory, and market gaps that slow the deployment and commercialization of clean power solutions, with the goal of lowering long-term system costs while expanding access to reliable, affordable, and emissions-free electricity.

This work begins with improving how energy systems are evaluated and planned. With our Beyond LCOE report, CATF demonstrated that relying solely on Levelized Cost of Electricity comparisons can obscure system-wide costs, reliability needs, and emissions outcomes. The analysis encourages policymakers and regulators to adopt more comprehensive, systems-based planning approaches that better reflect real-world grid complexity and long-term affordability.

40%

Electricity is responsible for roughly 40% of global energy emissions.

70%

Nearly 70% of transmission lines are over 25 years old.

Building on this analytical foundation, CATF works to translate systems thinking into practical policy tools. In the United States, CATF provided research and an interactive mapping tool to help states design and implement clean electricity standards that reduce emissions while maintaining grid reliability and cost stability. The work highlights region-specific opportunities and concrete policy pathways that align climate ambition with economic and energy security goals.

Our team also commissioned a popular report from The Brattle Group identifying near-term, actionable strategies to help policymakers, utilities, and grid planners respond to surging electricity demand driven by data center expansion, electrification, and manufacturing growth. A joint webinar with Brattle on the report's recommendations drew strong stakeholder interest, extending the work's reach across the policy and planning community. These efforts reflect a broader CATF approach: translating rigorous analysis into actionable guidance for policymakers and planners at every level.

CATF advances similar principles internationally by supporting more coordinated and forward-looking infrastructure planning. In Europe, sustained engagement on the European Commission's Grids Package saw most of our detailed recommendations incorporated, ensuring greater cross-border coordination, streamlined permitting, and long-term network development.

Together, these efforts promote electricity frameworks that integrate clean energy at scale, maintain reliability, and prepare power systems for continued growth in demand.

Reducing land sector emissions and protecting the world's carbon sinks

Land-based climate solutions and robust carbon removal remain critical for meeting deep decarbonization goals. Forests, biomass, and agricultural lands can remove or avoid significant greenhouse gas emissions – but their climate value depends on protecting and strengthening the carbon sinks we already have.

As intensifying wildfires, drought, and land degradation threaten forests and other natural systems, safeguarding carbon sinks is a climate imperative. Catastrophic fires can reverse years of carbon gains in a matter of days, while soil degradation from unsustainable agricultural practices can release stored soil carbon. Ensuring that land-based solutions deliver durable, resilient carbon benefits requires strong protocols, credible markets, and clear policy frameworks that account for permanence, reversal risk, and long-term stewardship.

In 2025, CATF focused on ensuring that carbon markets and land-based solutions maintain environmental integrity, promote durable removals, and provide predictable, scalable pathways for investment – even in the face of growing climate-driven risks. We did this by:

Strengthening oversight and integrity in carbon markets.
CATF urged regulators at the Commodity Futures Trading Commission to reinstate guidance and enhance oversight of voluntary and compliance carbon markets, helping to protect buyers, maintain credibility, and ensure that carbon credits reflect real, verifiable climate benefits.

10 gigatonnes

The amount of carbon dioxide that will need to be removed from the atmosphere annually to meet 2050 climate goals.

75 MMT

Biomass carbon removal and storage systems could deliver up to 75 million metric tons of carbon dioxide equivalent removal annually.

Evaluating and improving forest carbon protocols.
Through rigorous assessment of existing forest carbon offset protocols, CATF and a team of leading scientists identified gaps in accounting, durability, and consistency, helping policymakers and market participants understand where reforms are needed. We applied this work globally including to state programs such as California and Washington, the UK Woodland Code, and the EU Carbon Removal and Carbon Farming regulation providing guidance on draft rules, implementation approaches, and opportunities to enhance credibility.

Clarifying state cap-and-invest offset rules.
CATF supported policies that provide market certainty while limiting overreliance on offsets. In 2025, California reauthorized its cap-and-invest program with clear limits on the use of carbon offsets, helping guide investment toward high-quality, verifiable climate outcomes.

Guarding against the misuse of climate science in U.S. federal policy.
CATF submitted detailed comments on the U.S. Department of Energy's 2025 draft climate report, identifying inaccuracies, selective use of research, and omissions the misrepresent the impacts of greenhouse gas emissions. By challenging flawed claims in the report – including the overstated benefits of carbon dioxide fertilization – CATF worked to protect the scientific consensus and evidence-based climate policy.

Promoting rigor in climate-smart agriculture crediting for biofuels.
CATF provided technical comments on the U.S. Department of Agriculture's 2025 guidelines for climate-smart biofuel crops, urging stronger standards for modeling, verification, and crediting to ensure incentives reflect real, durable emissions reductions. We also recommended that the U.S. Department of Treasury take a nuanced approach to the crediting of agricultural practices in the 45Z clean fuel production tax credit by limiting it to those practices with demonstrated and measurable climate benefits.

Advancing biomass carbon removal pathways.
In 2025, CATF released a new analysis examining how Biomass Carbon Removal and Storage (BiCRS) systems could help meet California's 2045 carbon dioxide removal target. The analysis found that BiCRS could remove between 13 and 75 million metric tons of carbon dioxide annually by 2045 – potentially meeting the state's entire CDR target without competing with food production or driving land-use change. By providing a practical, scenario-based framework, CATF equipped policymakers with clear options for integrating biomass-based removal into a broader CDR portfolio – balancing climate ambition with economic opportunity, community priorities, and sustainability safeguards.

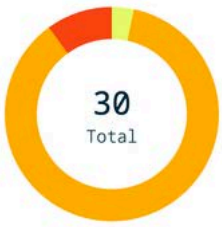
Forest Carbon Protocol Scorecard

About the Scoring

Our in-depth evaluation analyzed 20* forest carbon credit protocols used in North American voluntary and compliance carbon markets.
We assessed 18 distinct protocol features to produce detailed scores for three types of forest projects: Avoided Conversion, Improved Forest Management, and Reforestation.

Score Summary

Score		Protocol Results
6	Exemplary	0 (0%)
5	Very Robust	0 (0%)
4	Robust	0 (0%)
3	Satisfactory	1 (3.3%)
2	Weak	26 (86.7%)
1	Very Weak	3 (10%)
0	Fund. Flawed	0 (0%)



REGIONAL ADVOCACY AND NARRATIVE CHANGE

Finding new ways to move the climate needle in the United States

As the United States inaugurated President Trump for the second time, CATF stood ready to defend climate gains, assess the changing landscape, and find new ways to move forward – the work that CATF was built for. Although the administration pledged to roll back many landmark climate and clean air policies, we understood the importance of stepping up instead of stepping back. CATF continued to advocate for federal and state policies and defend regulations to protect public health and the climate, bolster domestic energy production, and drive economic growth and global competitiveness through our policy and legal advocacy, technical analysis, and communications efforts.

Defending federal clean energy investment, programs, and incentives

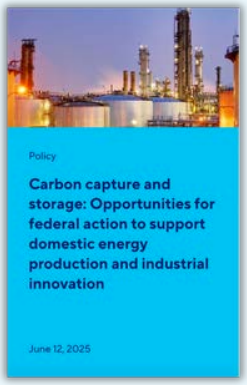
While the Trump administration's actions over the last year have made addressing climate even more challenging, CATF did not sit back and wait for a more favorable political environment. Instead, we found ways to defend investments, programs, and incentives at risk. We did this by:

- Advocating for Congress to keep essential clean energy production and investment tax credits for advanced nuclear energy, geothermal, fusion, carbon capture and storage, direct air capture, hydrogen, and clean fuels.
- Highlighting the economic benefits of programs like the Regional Clean Hydrogen Hubs program and the importance of these programs to bolster domestic energy production and keep the United States competitive.
- Identifying the conditions that need to be established by the federal government to scale energy infrastructure technologies to bridge the investment gap and boost American innovation.

Creating opportunities for federal leadership to bolster energy innovation, commercialization, and deployment

Although federal climate action took a backseat, the administration's focus on American innovation, global competitiveness, and domestic energy production created clear opportunities for energy innovation. On Earth Day, for example, President Trump signaled his support for advancing carbon capture and storage, nuclear energy, and next-generation geothermal. CATF created policy briefs to show the administration how to turn this signal of support into action.

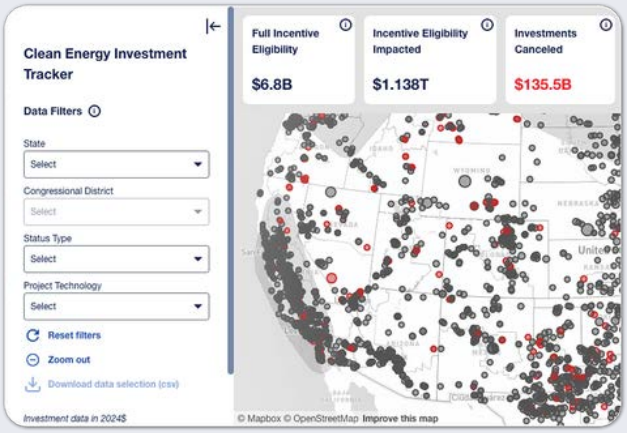
- The carbon capture and storage brief highlights federal actions that can support domestic energy production and industrial innovation.
- The advanced nuclear energy brief focuses on federal actions to help scale advanced nuclear energy production and exports.
- The next-generation geothermal brief provides recommendations for the federal government to maintain the country's competitive innovation edge.
- The fusion energy brief advocates for federal action that can support energy innovation and commercialization of fusion technologies.



CATF also defended important policies and provided recommendations following executive actions to push for solutions that would support emissions reductions and Congress and the administration's stated priorities. For example, CATF analyzed the expansion of the 45Z clean fuel production tax credit included in the "One Big Beautiful Bill" Act. Our message was clear: U.S. fuels policy should support innovative fuels to reduce emissions and grow the U.S. economy, and the enacted changes to this policy fail to deliver on both of those objectives and will cost taxpayers billions of dollars. CATF also provided strategic recommendations to the Trump administration following executive orders focused on reforming the Nuclear Regulatory Commission and unlocking advanced nuclear energy domestically and abroad.

Making the case for federal clean energy investment

Executive and congressional action have threatened investments in clean energy technologies across the United States, creating uncertainty for businesses and communities in red and blue states alike. As Congress eliminated or scaled back many clean energy tax credits included in the Inflation Reduction Act and as the Department of Energy unilaterally reneged on congressionally mandated spending by cutting federal funds from hundreds of projects, CATF built resources to highlight the impacts of these cuts.



Tracking clean energy investments in the U.S.

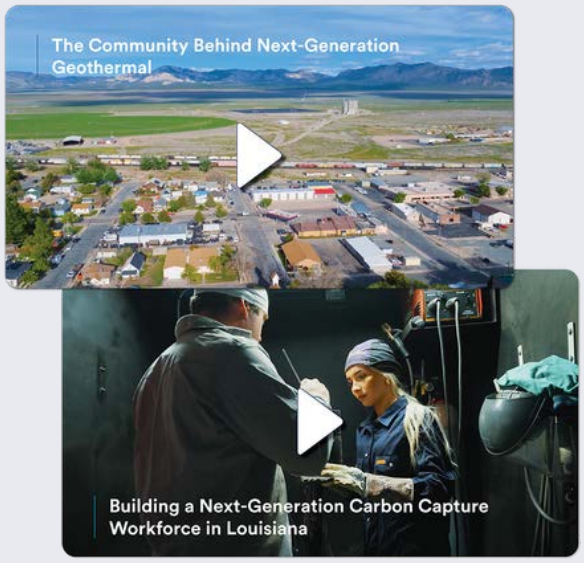
While federal policy plays an important role in deploying clean energy technologies, private investment is also a critical component to get projects off the ground. CATF created a resource to track where these investments are going to better understand how federal policies are benefiting communities and strengthening the energy system – and what's at stake should they be disrupted. CATF also published a quarterly analysis that highlighted changes to federal tax credits and how they are impacting investments in clean energy projects.

This tracking resource has been shared with congressional staff to educate them on where private investment is catalyzed in their states and districts and how federal support and certainty is essential to realizing the economic benefits of clean energy deployment.

CATF also analyzed the economic impacts of the confirmed and reported DOE cuts, including what states would be hit the hardest to show Congress and the administration that cutting projects would be detrimental to American innovation and economies across the country.

Clean energy investment in action

In small towns and large cities across the U.S., innovative energy technologies are boosting communities, creating high quality jobs, catalyzing investment, and improving air quality. CATF set out to tell these stories through a video series, highlighting local voices as they share how clean energy projects are powering opportunities where they live and work, to make the case for investment in clean energy technologies.



- In Vernon Parish, Louisiana, a local trade union, school board, and carbon capture developer joined forces to build the next-generation energy workforce through the "Capturing Better Futures" initiative.
- In Austin, Texas, public-private partnerships are turning cutting-edge research into real-world solutions, offering communities and local governments a chance to experience hydrogen energy system in operation – and showing how the project can be an example to drive a nationwide clean hydrogen market.
- In Milford, Utah, a next-generation geothermal project has helped transform the town into a hub of clean energy innovation, giving workers and businesses new ways to apply their expertise in building a stronger, healthier energy future.
- In Kemmerer, Wyoming, investment in advanced nuclear energy is transforming its energy workforce and creating opportunities for students, businesses, and residents alike.
- In East Tennessee, scientists, engineers, and developers in Knoxville and Oak Ridge are working together to shape a fusion energy future and transform energy, economies, and communities across the region.

Defending clean air regulations to protect public health and the environment

As the Environmental Protection Agency announced its intent to eliminate dozens of clean air and climate safeguards – including the reconsideration of the endangerment finding, vehicle regulations, carbon pollution standards, and air toxic standards for power plants – CATF's legal advocacy has served as a stronghold for the legal record and scientific evidence that underpin these regulations:

- Providing rigorous technical and legal arguments in defense of the landmark endangerment finding with nearly a dozen additional organizations to sign on in support.
- Providing technical comments on the vehicle regulations proposal, which EPA is seeking to eliminate, and submitting joint comments with more than a dozen other organizations.
- Defending methane compliance standards for oil and gas despite EPA's move to further delay implementation of the critical pollution regulations.
- Defending the health-based fine particulate matter standards, even in the face of EPA switching sides in the litigation and asking the court to strike down its own rule.

3.8 million tons

A one-year delay of the U.S. methane regulations for oil and gas would result in 3.8 million tons of methane emissions

800,000

EPA's fine particulate air pollution standard would avoid 800,000 cases of asthma symptoms.

In addition to opposing these regulatory rollbacks, CATF challenged the administration's misuse of a variety of emergency powers to prop up aging coal plants, including emergency orders under section 202(c) of the Federal Power Act and proclamations under section 112(i)(4) of the Clean Air Act.

CATF also defended in court the Federal Energy Regulatory Commission's groundbreaking Order 1920, which for the first time mandates that utilities and TROs/ISOs engage in long-term regional transmission planning.

As federal climate action and commitments falter, states double down

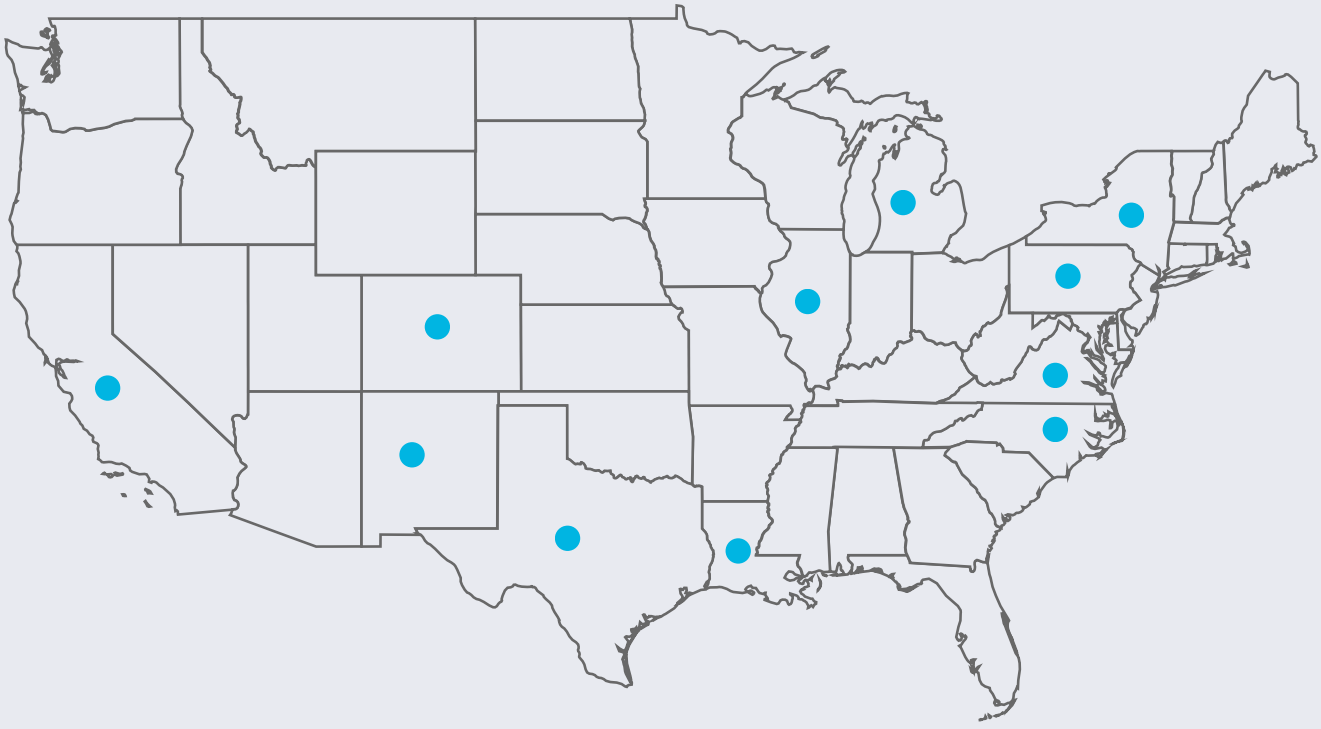
Clean energy, innovation, clean air, and climate action are broadly popular across the country, and they can and must progress regardless of who sits in the White House or the halls of Congress. And despite headwinds – including multiple attempts to eliminate federal clean air protections and scale back or rescind incentives for clean energy – states continue to take climate action, and in many cases, lead.

From California to Texas to New York, states across the country have made progress to advance clean firm technologies, improve permitting and siting, decarbonize the industrial sector, and more. CATF and CATF Action were engaged in 13 states across the U.S. to advocate, support, and provide recommendations for policies and practices that support emissions reductions and climate goals.

For example, CATF developed the State Industrial Policy Playbook to guide policymakers interested in decarbonizing the industrial sector – the cornerstone of the U.S. economy but also a major source of air pollution and greenhouse gas emissions. These recommendations acknowledge that states have unique political, economic, and industrial contexts, and are built in a way that allows states as different as California and Texas to find pathways to reduce emissions from the sector. CATF also published a report, "State Policy Options for Fusion Energy Deployment," that recognizes the role state policy decisions made today play in ensuring effective commercial deployment of the technology over the next decade.

CATF was also deeply engaged in regions across the U.S. With the West having immense clean energy resource potential matched with growing energy demand that is rising faster than anywhere else in the country – we created a pragmatic roadmap to help Western governors meet the moment with resilience, innovation, and affordability as they continue to shape the region's energy future. CATF was also engaged in New Mexico for the first time. With its large oil and gas industry coupled with political ambition for climate policy across its economy, New Mexico is uniquely positioned to serve as a model for transitioning an economy largely dependent on legacy energy production to one that is cleaner and more diversified. In 2025, CATF successfully advocated for legislation in New Mexico that laid the foundation for future climate, clean energy, and public health policies.

Coast to coast, states have made climate progress



New York
Successfully advocated for preserving and expanding New York's nuclear capacity and for the state energy plan to include the importance of clean firm power.

Pennsylvania
Drove interest in Pennsylvania's RISE PA program applications, which may catalyze one of the largest industrial clean energy clusters in the country.

Virginia
Advocated for fusion energy to be classified as carbon-free and supported reforming utility rate structures.

North Carolina
Successfully defended the state's 2050 carbon neutrality requirement despite interim requirement for 70% carbon dioxide emissions reductions by 2030.

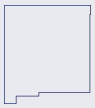
Louisiana
Recommended a framework for clean hydrogen policy in Louisiana as a member of the bipartisan Clean Hydrogen Task Force.

Texas
Successfully advocated for ambitious nuclear energy policy, which Texas passed, that established a dedicated nuclear office, permitting officer, and a $350 million deployment fund.

Illinois
Successfully advocated for Illinois to fully lift its decades-long nuclear moratorium and supported the passage of major grid reliability and affordability legislation.

Michigan
Educated policymakers on the importance of carbon capture and storage as well as nuclear energy to begin building the foundation for legislation in the next session.

Colorado
Successfully advocated for multiple bills that support a variety of clean energy technologies and practices, including nuclear, next-generation geothermal, carbon capture and storage, and methane pollution reduction.



New Mexico
Successfully advocated for a series of bills that advanced carbon capture rules, increased geothermal funding, modernized the grid, and leveraged energy revenues to establish a community benefit fund to support clean energy, clean transportation, and methane reduction projects.

California
Supported the passage of legislation to reform transmission finance, support regional grid coordination, reauthorize the cap-and-invest program, streamline geothermal permitting, and lift the moratorium on intrastate carbon dioxide transport.

Bridging the climate and development gap in Africa

Expanding energy access while advancing decarbonization is one of the defining development challenges of this decade. Across Africa, rising electricity demand, persistent energy poverty, and aging infrastructure are converging at a moment of heightened financial strain. Clean energy cannot scale without affordable capital, well-functioning utilities, and aligned policy frameworks that support both economic growth and climate ambition.

Yet the path forward is growing more complex. A global retreat from climate and development finance – coupled with shifting geopolitical dynamics and conflict – has increased competition for capital and heightened risk perceptions across emerging markets. At the same time, high financing costs, underperforming utilities, and policy misalignment continue to slow clean energy deployment, limiting access, constraining economic growth, and undermining climate goals. Without structural reform and stronger coordination between climate and development priorities, progress will remain uneven and fragile.

In 2025, CATF focused on equipping African policymakers, utilities, and financial institutions with the data, technical analysis, and convening power needed to unlock affordable financing, strengthen power systems, and align climate ambition with economic development.

500%

Without new climate mitigation policies, Africa's emissions could increase by nearly 500% by 2100.

3%

Africa attracts just 3% of global energy investments.

We did this by:

Highlighting the challenge of high costs and energy poverty.
Clean energy projects in Africa face some of the highest financing costs in the world, while households and businesses bear hidden electricity expenses that hamper growth. These financial barriers make it difficult for utilities and governments to expand access, integrate renewables, and modernize aging power systems.

Bridging climate ambition and development priorities.
CATF identified a persistent disconnect between national climate plans and development strategies across African countries — a gap that threatens both decarbonization and energy access. While early net-zero initiatives can deliver significant climate gains, poorly coordinated efforts — or misunderstandings about the trade-offs between clean energy deployment and impacts on agricultural land, food prices, and water demand — risk compounding development challenges across the continent. CATF analysis also shows how different net-zero timelines could reshape Africa's energy systems, land use, water demand, and economic growth — underscoring that climate choices are fundamentally development choices. The findings highlight that more accelerated timelines can reduce long-term emissions but may raise near-term mitigation costs and intensify pressure on food and water systems if not carefully managed, reinforcing the need for pragmatic, sequenced transition pathways tailored to regional realities. At Africa Climate Week and COP30 in Brazil, CATF elevated the case for African-led strategies that integrate climate ambition with economic growth, industrialization, and social priorities, recognizing that durable progress depends on integrating, not separating, development and decarbonization goals.

Stabilizing power systems to crowd in investment and expand access to clean, reliable, and affordable electricity.
Many utilities operate in financially fragile or technically underperforming systems that deter private capital and slow clean energy deployment. CATF works directly with utilities to improve operational efficiency, strengthen grid reliability, and enhance long-term investment planning. Stronger, better-managed utilities reduce financing risk and create the foundation for onboarding clean energy, expanding access to businesses and communities without access and attracting sustained investment.

Strengthening regional collaboration and technical capacity.
In 2025, CATF convened the West Africa Utilities Roundtable in Accra, Ghana, bringing together utility executives from eight countries, regulators, and financing institutions, to tackle shared challenges and advance practical solutions for resilient, low-carbon power systems. CATF also provided targeted technical analysis to utilities in Ghana, Kenya, and The Gambia, informing grid upgrades and variable renewables integration planning.

Through these efforts, CATF is helping unlock capital, reinforce utility performance, and align policy — laying the groundwork for expanded energy access and a durable, development-centered clean energy transition across the continent.



Broadening the climate policy scope in Europe

Decarbonization as a growth strategy

In 2025, Europe's climate agenda was built around economic competitiveness and energy security. The debate largely focused on how Europe can make decarbonization an engine of its economic growth by tackling the energy prices, doubling down on innovation, and boosting investment financing.

Through engagement on the Clean Industrial Deal, the Affordable Energy Action Plan, and the European Investment Bank Roadmap, CATF focused on one priority: aligning climate ambition with technically and economically credible implementation.

3 regions

CATF has a presence in the EU, Central and Eastern Europe, and the UK.

9

Number of active programs in Europe.

Clean firm power gains momentum

In 2025, policymakers increasingly recognized the importance of clean firm power – dispatchable, low-emission generating resources that do not rely on weather – for competitiveness, reliability, and industrial resilience. With a growing volatile geopolitical environment, clean firm technologies present policymakers with options to reduce uncertainty and mitigate risks to achieving decarbonization.

CATF advanced this shift across three technology areas:

- Advanced nuclear energy and small modular reactors: Through recommendations on the EU SMR Strategy, Nuclear Illustrative Programme, and RePowerEU Roadmap, CATF outlined pathways to standardization, cost reduction, and coordinated deployment.
- Geothermal: CATF led coalition and awareness building efforts to ensure that next-generation geothermal technologies, including superhot rock, are supported by the forthcoming EU geothermal framework.
- Fusion energy: We supported the development of a standalone, commercially driven industrial EU Fusion Strategy, capable of reigniting Europe´s engine for growth. Through 2025, CATF has led coalition letters and convened stakeholder policy workshops aimed at influencing the scope and ambition of the upcoming EU fusion strategy.

The policy conversation evolved from whether these technologies belong in the EU's electricity mix to how they can rapidly scale and make a credible contribution at an affordable cost.

Grids as a cornerstone of energy system transformation

By 2025, grid capacity emerged as a binding constraint on electrification and industrial decarbonization and was placed at the front and center of political debates.

CATF's work to improve EU wide system planning has been foundational in setting EU policy priorities and direction. Through 2025, CATF gathered expert input on challenges facing the power system and commissioned a report focused on advancing coordinated, long-term planning. CATF has used this analysis to efficiently engage and influence the outcome of the EU Grids Package. Without system integration, industrial targets cannot be met at scale, and the EU will not deliver reliable and low-cost energy.

Methane pollution: Defending regulatory integrity

As implementation began, some stakeholders sought to delay compliance, weaken import standards, and dilute measurement rules under the EU Methane Regulation.

CATF worked to protect the regulation's core architecture. Through technical analysis, close collaboration with the European Commission and the Member States, and field documentation of methane emissions in Romania, Croatia and other member states, we reinforced the case for traceability and compliance.

Our "Follow the Money" proposal has shown how emissions accountability can extend across global supply chains – rewarding producers that invest in cleaning up their processes.

Together with the International Energy Agency (IEA) and partners, we convened EU Member States, the European Commission, and industry experts, highlighting existing solutions for tracing environmental attributes along global supply chains and kicking off a vital capacity building effort.

Central and Eastern Europe: Linking climate, energy, and sovereignty

In Central and Eastern Europe (CEE), climate policy is inseparable from energy security and geopolitical resilience.

CATF invested in long-term regional capacity by launching the inaugural CEE Fellowship, which graduated 10 emerging leaders from six countries. This initiative strengthens in-country expertise at a moment when implementation decisions are accelerating.

Our report, "Strategy at the Geopolitical Crossroads" reframed clean energy deployment in CEE as a sovereignty issue — reducing dependence on volatile imports while modernizing industrial systems.

Poland remained a focal point in CEE. CATF provided ministry-level policy guidance on nuclear energy financing, hydrogen strategy, and carbon management, helping anchor industrial decarbonization in security-driven policymaking. Complementary research on social acceptance of carbon capture translated abstract climate targets into local political and community realities. At regional level CATF worked to elevate next-generation geothermal on agenda and will continue to do so at this year's 3Seas Forum to ensure strong political commitment. Moreover, CATF invested in creating a vibrant nuclear energy ecosystem in Poland, Romania, and Czechia and provided evidence for overcoming structure bottlenecks for scaling up both conventional nuclear energy and small modular reactors (SMRs).

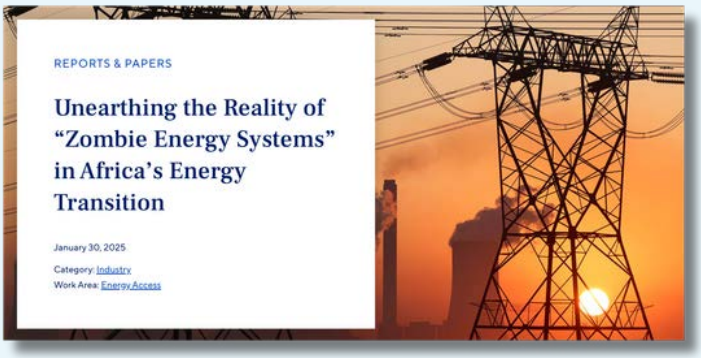
10

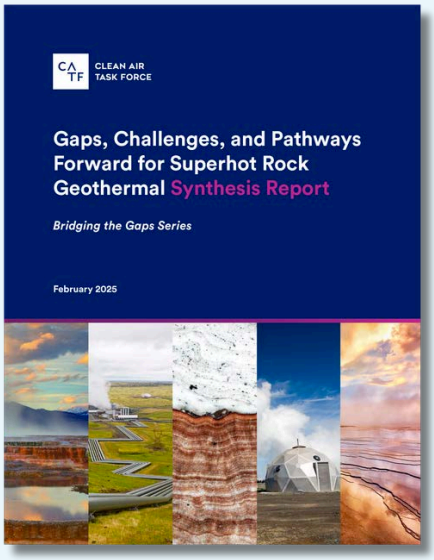
Emerging climate and energy leaders participated in CATF's inaugural CEE Fellowship.

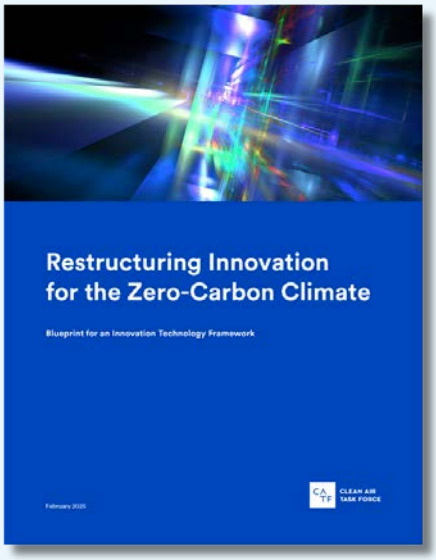
6

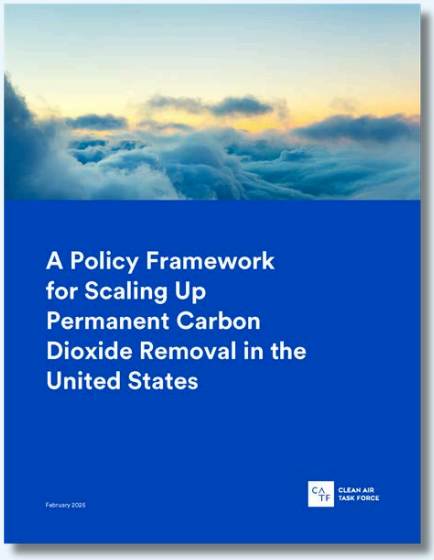
Different countries represented in CATF's CEE Fellowship.

CATF RESEARCH AND ANALYSIS IN 2025









The geography factor: How environmental conditions shape methane monitoring from space

Satellites are transforming global methane monitoring, offering unprecedented insights and actionable data to support mitigation efforts. With a growing number of methane-sensing instruments in orbit, a diverse community—including NGOs, governments, and other sectors—are increasingly eager to integrate satellite data into their work. This report serves as a resource for new users, helping them effectively utilise satellite data by identifying regions where environmental conditions may affect data coverage.

18 March 2025

Dr Sarah Shannon (Ember) and
Dr Ioannis Binietoglou (Clean Air Task Force)

EMBER

Aviation Non-CO_2 Effects

Strategies for Minimizing Contrail Climate Impact

Rocio Gonzalez Sanchez
Thomas K. Walker III

March 2025

CLEAN AIR TASK FORCE

Ecuadorian Waste Sector Methane Analysis

Published March 2025

CLEAN AIR TASK FORCE | ambire GLOBAL | WASTEMAP

Decarbonization Pathways and Policy Recommendations for the United States Steel Sector

Report prepared by CRU International Limited for Clean Air Task Force

Contributing Authors
Sam Bailey, Toby Lockwood, Ghassan Wakim

April 2025

CRU | CLEAN AIR TASK FORCE

Recasting the Future: Policy Approaches to Drive Cement Decarbonization

May 2025

Report prepared by Synapse Energy Economics, Inc. for Clean Air Task Force

CLEAN AIR TASK FORCE

Beyond LCOE: A Systems-Oriented Perspective for Evaluating Electricity Decarbonization Pathways

Jill Moraski,[1] Malvina Gvist, Kasperas Spokas

May 2025

CLEAN AIR TASK FORCE

A Fusion Engine for Growth

A European Industrial Strategy for Fusion Energy

June 2025

Jack Moore, Policy Consultant, Clean Air Task Force

CLEAN AIR TASK FORCE

Wind and solar energy. Adobe Stock.

A FAIR SHARE FOR CLEAN ENERGY

Key Principles, Justification, and a Call to Action

Sarah Mills, Natalie Manitius, Lanzhao Cheng, Maggie Allan, and Alex Haddad[1]

In Fall 2023, Clean Air Task Force partnered with the University of Michigan's Graham Sustainability Institute to host a series of workshops called Science of Siting. These workshops convened experienced practitioners and researchers to identify paradigm-shifting opportunities and solutions to increase community acceptance of renewable energy infrastructure.

One promising solution identified was a 'fair share' flexible mandate where the state establishes clean energy requirements for localities, but provides flexibility in achieving them. This concept draws parallels to fair share policy frameworks from affordable housing and other domains. Here we present a set of principles to guide a fair share energy policy, informed by reviews of existing policies and the lessons learned from their implementation. Additional research is essential. As we move this work forward, we welcome fresh perspectives and new collaborators who bring a shared commitment to equitable clean energy solutions.

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1 The authors would like to thank and acknowledge the reviewers of this report as well as those who participated in an October 2024 Workshop to flesh out the concepts: Brian Connolly, Tom Cook, Eli Gold, Douglas Jester, Noah Kazis, Madeleine Krol, Maïcha Menghaney, Richard Norton, Emily Palacios, Nicole Pavia, Mark Wyckoff.

Unlocking California's Geothermal Potential: A Strategic Opportunity for Clean, Firm Power

Terra Rogers, Ann Garth, Ashley Arax

June 2025

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Accelerating the deployment of clean power technologies to reliably decarbonise Europe through enhanced planning and contracting mechanisms
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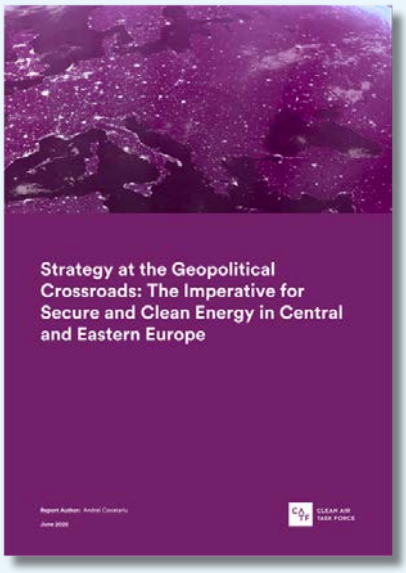
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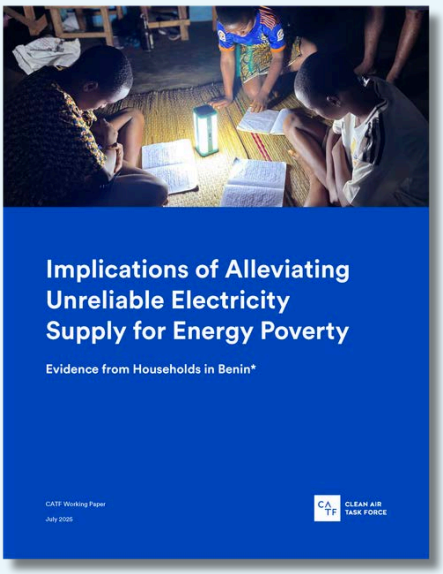
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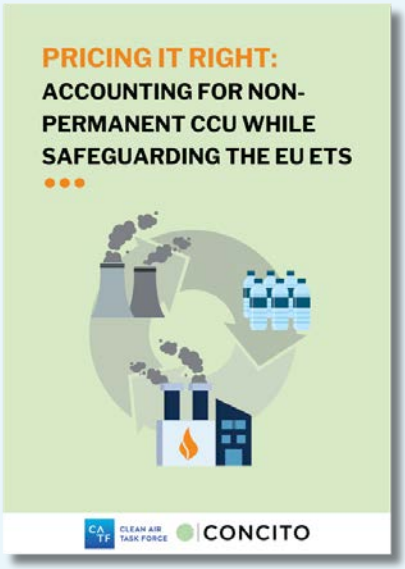
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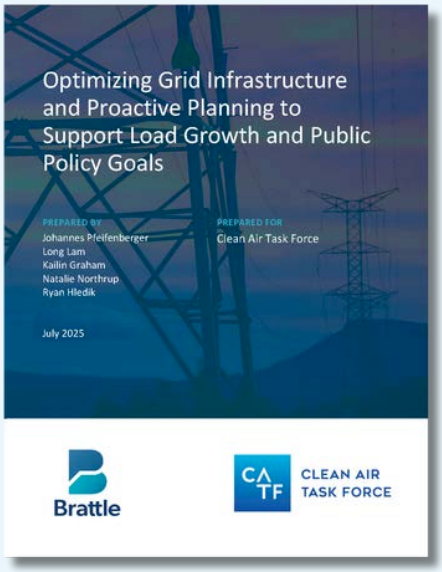
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PREPARED FOR
Clean Air Task Force
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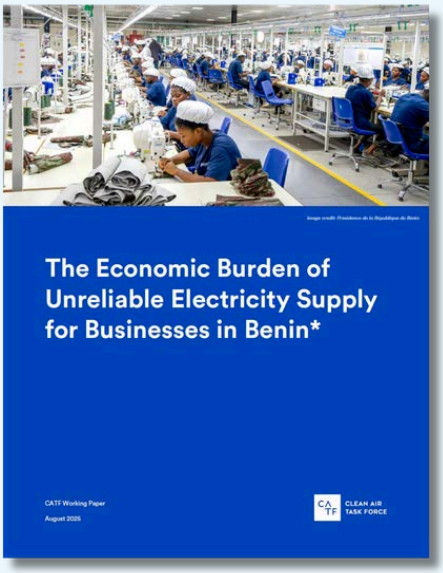
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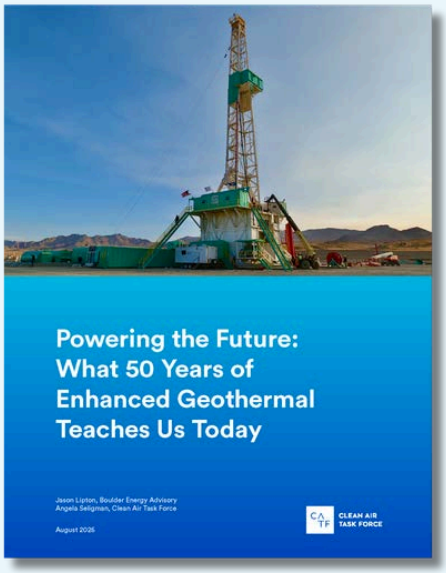
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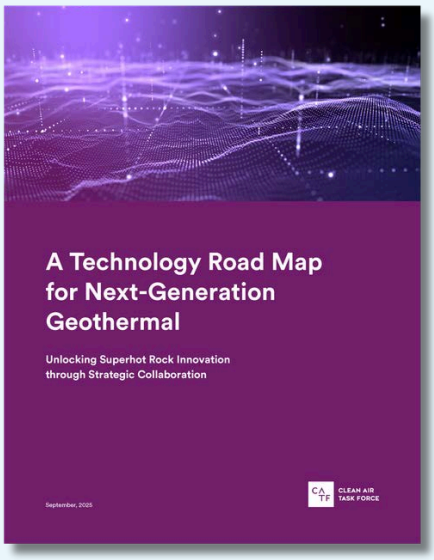
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Unlocking Superhot Rock Innovation through Strategic Collaboration
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Building demand for decarbonised products of heavy industry in the European Union
Recommendations for the Industrial Decarbonisation Accelerator Act
Key recommendations
Establish harmonised methodologies and labelling protocols for embodied carbon in key products of heavy industry, by applying common principles to existing, well-established standards.
Establish labels with intermediate and progressive decarbonisation categories for industrial products, including clear and ambitious thresholds for categories of 'lower-emission' and 'near-zero-emission' products to aid policy design.
Expand mandatory requirements for embodied emissions reporting for a wide range of manufactured products using cement, steel, ammonia and other chemicals, including clear indication of the embodied carbon in these basic material inputs, assessed to a common standard and process stage.
Ensure demand-side drivers are designed to directly incentivise deep decarbonisation projects in energy-intensive industries, for example, by limiting the free attribution of emissions reductions.
Harmonise and strengthen public procurement targets and mandates for reducing the embodied carbon in purchased materials.
Design and adopt demand-side mandates for purchase of decarbonised materials in selected end-use sectors with high potential impact on upstream decarbonisation. For example, by setting quotas on the proportion of lower-emission and near-zero emission products (such as cement, steel, and fertiliser inputs) in purchases by actors at an appropriate stage in the value chain. Target sectors could include construction, automotive, food retail, and packaging.
In parallel, apply overarching limits on the embodied carbon of selected end-use products and buildings, with gradual tightening of limits over time.
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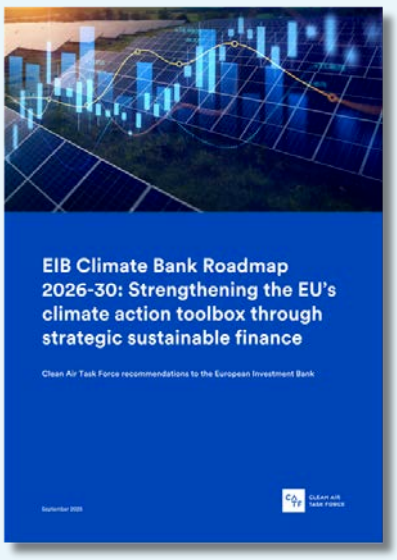
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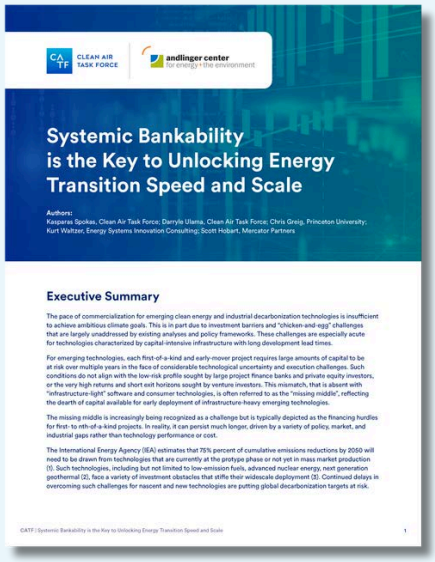
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andlinger center for energy + the environment
Systemic Bankability is the Key to Unlocking Energy Transition Speed and Scale
Authors:
Kasparas Spokas, Clean Air Task Force; Darryle Ulama, Clean Air Task Force; Chris Greig, Princeton University; Kurt Waltzer, Energy Systems Innovation Consulting; Scott Hobart, Mercator Partners
Executive Summary
The pace of commercialization for emerging clean energy and industrial decarbonization technologies is insufficient to achieve ambitious climate goals. This is in part due to investment barriers and 'chicken-and-egg' challenges that are largely unaddressed by existing analyses and policy frameworks. These challenges are especially acute for technologies characterized by capital-intensive infrastructure with long development lead times.
For emerging technologies, each first-of-a-kind and early-mover project requires large amounts of capital to be at risk over multiple years in the face of considerable technological uncertainty and execution challenges. Such conditions do not align with the low-risk profile sought by large project finance banks and private equity investors, or the very high returns and short exit horizons sought by venture investors. This mismatch, that is absent with "infrastructure-light" software and consumer technologies, is often referred to as the "missing middle", reflecting the dearth of capital available for early deployment of infrastructure-heavy emerging technologies.
The missing middle is increasingly being recognized as a challenge but is typically depicted as the financing hurdles for first- to nth-of-a-kind projects. In reality, it can persist much longer, driven by a variety of policy, market, and industrial gaps rather than technology performance or cost.
The International Energy Agency (IEA) estimates that 75% percent of cumulative emissions reductions by 2050 will need to be drawn from technologies that are currently at the prototype phase or not yet in mass market production (1). Such technologies, including but not limited to low-emission fuels, advanced nuclear energy, next generation geothermal (2), face a variety of investment obstacles that stifle their widescale deployment (3). Continued delays in overcoming such challenges for nascent and new technologies are putting global decarbonization targets at risk.
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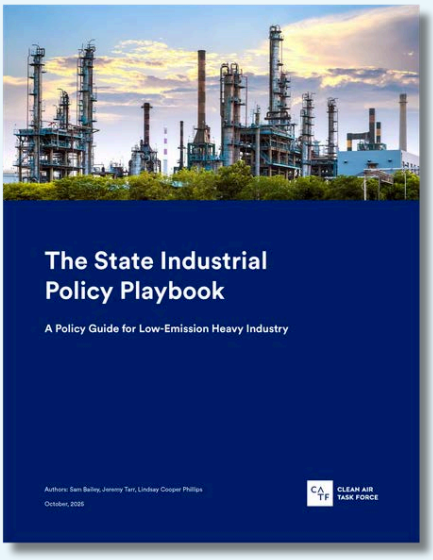
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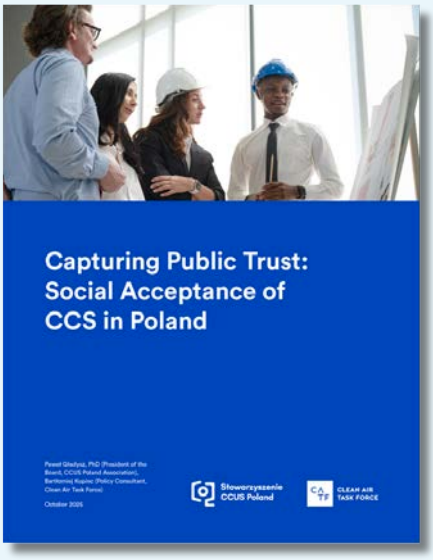
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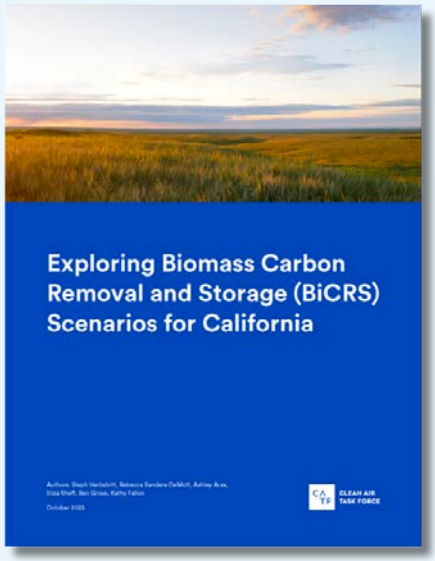
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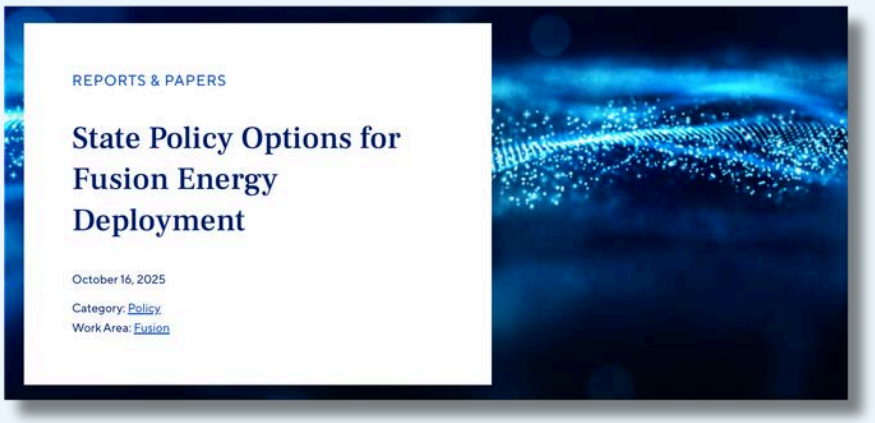
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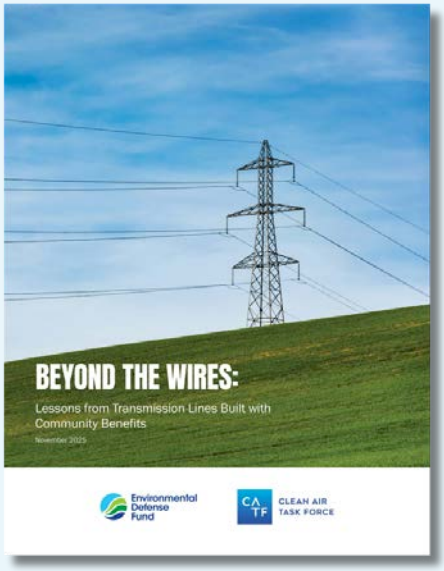
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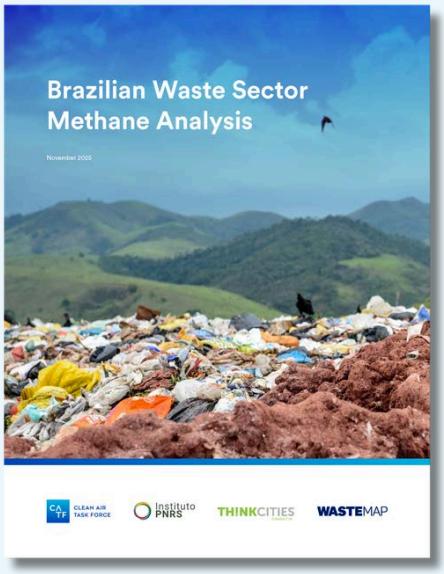
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