



Annual Report 2023













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Top row (L–R); LUNAMARINA, Vithun Khamsong. Middle row (L–R); Scott Hardesty, Nicolo Sertorio, Pgiam. Bottom row (L–R): Joanna McCarthy, Teresa Kopec, Jetta Productions Inc. All images from Getty Images.

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Looking Ahead after a Strong Year

Last year, like many before it, Resources for the Future (RFF) delivered trusted research insights and policy solutions to advance a healthy environment and thriving economy, equitably support people and communities, and help find solutions for the problem of climate change.

MOREOVER, 2023 brought with it a new energy of progress as decisionmakers in government, industry, and communities began to unpack the ways that the Inflation Reduction Act, the Infrastructure Investment and Jobs Act, and state and local policies can get us closer to net-zero-emissions goals and solve the challenges of climate change.

In this annual report, you'll read more about RFF's accomplishments for the year—but they are, of course, just the highlights. With more than 260 reports, journal articles, *Resources* magazine articles, and blog posts, along with 28 public events, these pages aren't enough to fully capture the breadth of the work that RFF completed in 2023. Our impact could not be possible without our dedicated research experts and staff, our funders and partners, and the decisionmakers across the globe who use our work to move our mission forward. Some of this year's highlights include:

• launching RFF's Carbon Scoring Project to assess the impacts of legislation on US greenhouse gas emissions and climate change;

 analyzing the effects of potential carbon border adjustment mechanisms on global trade competition;

 working closely with the US Department of Energy to consider ways to improve its evaluation and processes for its grantmaking;

• illuminating practical policy options and important research questions to encourage the efficient development of electric trucks and buses, alongside the charging and grid infrastructure that is needed to support an electric fleet;

• releasing research on property prices in flood zones to inform policies related to flood insurance, flood-risk disclosure, and the costs of climate adaptation; and



• applying economic and air-quality modeling to determine how climate policies in New York could be designed and deployed in ways that can benefit communities equitably.

We also have begun an important transition for RFF as we look to bring on a new RFF president after my announcement that I plan to move on from the role in 2024. On behalf of all RFF staff, I offer sincere thanks to our partners and supporters who have helped ensure that RFF is in a strong position during this transition, into the future, and for years to come.

All my best,

Richard G. Newell President and CEO Resources for the Future







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"Our impact could not be possible without our dedicated research experts and staff, our funders and partners, and the decisionmakers across the globe who use our work to move our mission forward."

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Left (top to bottom): Tegra Stone Nuess / Getty Images, RFDCphoto, Omar Chatriwala / Getty Images

Advancing RFF's Mission

RFF'S ANNUAL REPORT not only reflects on the accomplishments of the past year, but also takes stock of what a passionate and dedicated group of people can do when they come together. This deeply knowledgeable group of experts produces widely trusted research insights and policy solutions to advance a healthy environment and thriving economy.

As chair of the RFF Board of Directors, I have seen the organization evolve, grow, and thrive in 2023, ensuring that industry, government, philanthropic, and community leaders have the rigorous analyses needed to make sound environmental and economic decisions. I have seen firsthand how research published by RFF's scholars has made a real impact. I have seen how RFF's events and engagement with decisionmakers and other analysts have moved conversations forward to create more equitable environmental outcomes for all people.

I would be remiss in my reflections about RFF in 2023 if I did not mention Richard Newell's impact on RFF. Under his distinguished leadership, RFF has matured into a modern think tank that exemplifies commitment, progress, and excellence. It does not rest on its laurels as the world evolves around it, but rather leans forward and looks ahead at where the challenges will be in the future: How can the tech industry play a leading role in addressing its impact on the climate? How can communities quantify the benefits of policies that are intended to improve the environment? How can nations work together to ensure that international trade rules help rather than hinder climate progress? These are just some of the critical topics that RFF has helped to clarify and advance under Richard's leadership, and we will miss him dearly.

As the RFF Board of Directors works to identify the next leader of RFF in 2024, we are looking forward to building on the successes of 2023 and leading RFF into an even brighter future. We are grateful for these past years of success, and excited about what is next.

On behalf of the entire Board of Directors at RFF, we want to thank all our supporters and partners who understand the vital role of rigorous, nonpartisan research in finding solutions to climate change on a global scale. We look forward to continuing our work together to build a healthy environment and a thriving economy for all people.

Looking forward to what's ahead,

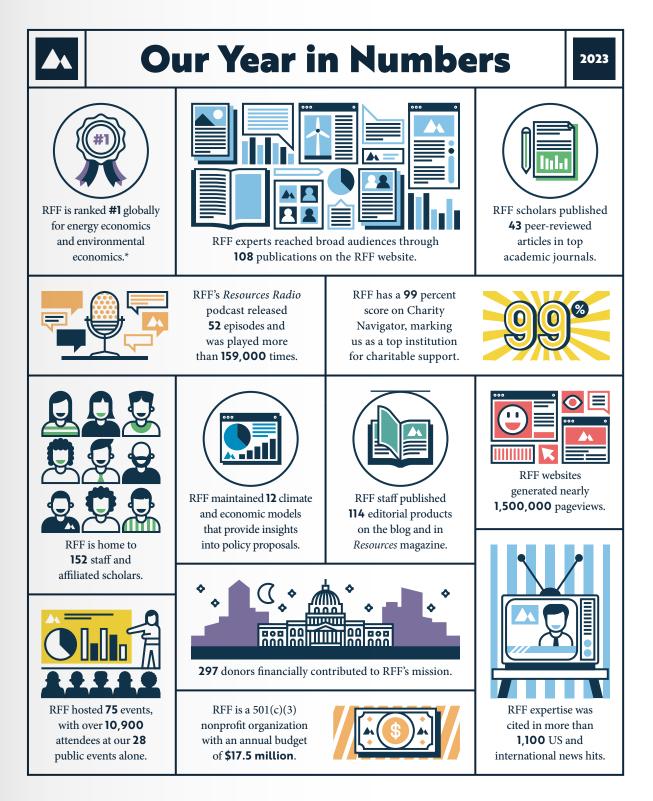
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Susan F. Tierney Chair, Board of Directors Resources for the Future



"I have seen the organization evolve, grow, and thrive in 2023, ensuring that industry, government, philanthropic, and community leaders have the rigorous analyses needed to make sound environmental and economic decisions."





Heavy-Duty Research in Transportation

Decarbonizing transportation will be key for climate change mitigation and improving equity impacts in the sector. Conducting research and finding opportunities for policy engagement can help identify solutions for a net-zero transportation sector.

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"As the United States works to decarbonize the transportation sector, how can decisionmakers encourage the electrification of these varied and complicated fleets?"



DESPITE MAKING UP 5 percent

of the US auto fleet, medium- and heavy-duty vehicles like freight trucks and city buses produce a quarter of the nation's transportation emissions. As the United States works to decarbonize the transportation sector, how can decisionmakers encourage the electrification of these varied and complicated fleets?

In 2023, RFF researchers Beia Spiller, Nafisa Lohawala, and Emma DeAngeli dug into this question. Through reports, blog posts, and workshops, these scholars worked to illuminate practical policy options and encourage the development of electric trucks and buses, alongside the charging and grid infrastructure that's needed to support an electric fleet. In June, the team convened a two-day workshop in which leading researchers and policymakers examined the state of research on zero-emission transportation, identified new research questions, and explored the need for new data. The workshop—which was conducted in light of recent rules in California and New York that require a significant increase in light-, medium-, and heavy-duty electric vehicle sales by 2035—yielded a summary report and a new research agenda to focus on the new state mandates.

The team also worked to develop a suite of research and editorial products that have informed the evolving policy conversation nationwide. A special series published on the *Common Resources* blog this summer by

26%

drop in diesel fuel prices anticipated due to limited growth in global demand and increased production



<0.5% of new mediumand heavy-duty vehicles sold in 2022 were electric



Lohawala, DeAngeli, and Spiller looked specifically at the evolution of mediumand heavy-duty vehicles in the context of the Inflation Reduction Act, a law which includes several incentives that encourage the electrification of large vehicles. Their blog series describes these incentives and what the future may hold for this important part of the transportation sector.

The series came on the heels of a major report published in May by the same team that discusses the challenges, policy solutions, and open research questions surrounding medium- and heavy-duty vehicle electrification. In August, Spiller and Lohawala published an article in the journal *Economics of Energy and Environmental Policy* that homed in on challenges with grid integration.

RFF scholars will build on this body of work in 2024. They're currently developing a comprehensive computational model of the mediumand heavy-duty trucking industry, which will help illuminate how truck manufacturers set their prices, how fleet operators decide which trucks to buy, and how much those trucks ultimately are used. This model will be instrumental in analyzing the impacts of new policies in the trucking sector. As new investments and policies promise to transform the ways that people and goods move from place to place, RFF research will be ready to inform this vital aspect of the net-zero transition.

Even more to look forward to in 2024: RFF researchers are working toward a better understanding of how critical mineral access will help shape the evolving landscape for electric vehicles. In July, RFF hosted a closed-door workshop with over 20 stakeholders from government, nongovernmental organizations, academia, and industry to identify challenges, questions, and solutions related to critical minerals and the transportation sector. The private event yielded a blog post that summarizes the main themes from the discussions. RFF scholars have started to publish research, such as a December report on the policy challenges of critical mineral access, based on this early and ongoing work. In the coming year, RFF researchers will continue to produce high-quality research and analysis in this space. Stay tuned.

ANNUAL REPORT 2023 O OUR IMPACTS AND ACCOMPLISHMENTS



Energy Transitions in Energy Communities

THE INFLATION REDUCTION

ACT leans on incentives ("carrots" rather than the "sticks" of punitive regulation) to encourage projects that help decarbonize the US economy. One such incentive is a bonus of up to 10 percent for projects that are located in what the law calls "energy communities." However, defining what an energy community actually is presents challenges and uncertainties. Daniel Raimi and former RFF scholar Sophie Pesek have done substantial legwork to translate what the Inflation Reduction Act means by "energy community" and how these communities may be affected by climate policy. Throughout the year, Raimi shared his insights on this research by offering testimony to the US Senate Budget Committee;

publishing related reports and blog posts; and holding a related event that convened experts who examined the provisions in the Inflation Reduction Act alongside their effectiveness, uncertainties, and implications.

RFF also has been conducting research on enhancing economic resilience in communities that traditionally have depended on fossil fuels. In the course of this work, Raimi and **Zachary Whitlock** have been traveling to oil and gas-producing communities to learn from local stakeholders and building a community of practice among scholars, policymakers, nongovernmental organizations, industry, and local stakeholders from across the United States.



\$138 billion in revenue derived

directly from fossil fuels for federal, tribal, state, and local governments each year



brownfield sites are spread across the United States

"

"Defining what an 'energy community' actually is presents challenges and uncertainties."

Hydrogen for Industrial Decarbonization

RFF EXPLORES WAYS to

decarbonize the hard-to-abate industrial sectors through economic modeling, policy analysis and design, cost-efficient technologies, development of supporting infrastructure, and markets—while being mindful of environmental justice and community transitions.

Interest has been ramping up for hydrogen, a potentially emissions-free fuel that can help decarbonize the economy. Since early 2022, the US Department of Energy has been putting concerted effort toward developing its Regional Clean Hydrogen Hubs Program, with the aim of building networks of hydrogen producers and consumers across the United States. RFF scholars have been following these developments closely, collating information and offering insights on the progress of the budding hydrogen industry. A slew of reports and blog posts by Alan Krupnick, Aaron Bergman, Yuqi Zhu, and Lucie **Bioret** have accompanied the development of the hydrogen hubs program, from the first major announcements released by the Department of Energy to the unveiling of grant winners. Krupnick, Zhu, and Bioret have continued to update RFF's popular Hydrogen Hub Explorer, an interactive map that has tracked the establishment of hydrogen hub projects from their inception.

This year, Bergman, Krupnick, and Kevin Rennert aided decisionmakers at the US Department of Energy, Department of the Treasury, and Environmental Protection Agency by evaluating a provision in the Inflation Reduction Act, known as "45V" in the tax code, that provides tax credits for clean hydrogen production. Implementation of the 45V tax credit gets complicated, especially when considering the emissions involved in powering the process of splitting water into oxygen and hydrogen fuel. Bergman helped parse these complexities with a series of issue briefs throughout the summer and into the fall that policymakers at the Department of the Treasury may take into account when finalizing the rules for implementation. At the end of July, RFF also hosted an event, with Rennert and other experts, that explored the challenges of implementing the 45V tax credit and the implications of the choices that the Department of the Treasury will make regarding the credit.

This growing body of work on hydrogen has attracted attention from government agencies; hub applicants; private-sector producers; investors; academics; and outlets like the *Washington Post, New York Times, Financial Times, Politico, Bloomberg,* C-SPAN, Marketplace, and more. "Implementation of the 45V tax credit gets complicated, especially when considering the emissions involved in powering the process of splitting water into oxygen and hydrogen fuel."

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4 end uses for hydrogen fuel will be possible through the forthcoming hubs: industrial, transportation, power generation, and residential and commercial heating.

Using Research-Based Tools to Get from Risk to **Resilience**

Communities around the world are grappling with how to respond to the risks associated with climate change. RFF experts are quantifying the economic and social impacts of climate change and evaluating strategies to enhance resilience, ensuring that communities and decisionmakers are equipped with the tools they need to respond.

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"Over the past year, researchers at RFF have worked hard to assess how homes. communities, and livelihoods can rise to the challenge."

\$237 billion in overvalued property prices in US flood zones



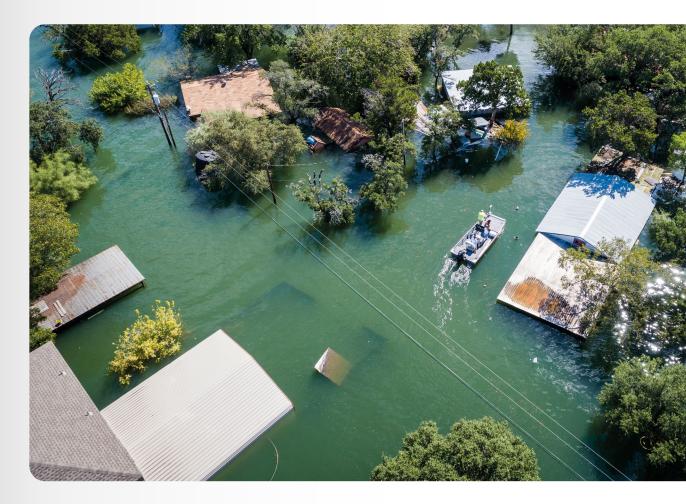
>66,000 clicks on a journal article coauthored by **RFF** authors in Nature **Climate Change**

contemporaneously released peerreviewed research.

RFF researchers also analyzed how housing markets are affected by wildfires. A paper in the journal Land Economics, corresponding working paper, and related blog post—all published coincident with the 2023 wildfire season—evaluated the effect of disclosure requirements in California on home prices in areas of high wildfire risk. Margaret Walls, Matthew Wibbenmeyer, RFF University Fellow Lala Ma, and another collaborator found

that California homes sold for less if required to disclose high wildfire risk. These findings add to a growing collection of research about how home prices can reflect the risks of climate change.

Climate change has a real, tangible impact on people and communities, but the complexity and density of available data can create barriers to smart, informed decisionmaking. To help with this problem, RFF launched the Weather Variability Explorer, an online visual database that shows how a range of climate variablesprecipitation, temperature, heat waves, and fires-have varied over the past four decades and predicts how weather variability and extremes are expected to evolve with climate change in the future. RFF Data Commons, created in collaboration with Google, also launched in 2023. The platform enables easy exploration of RFF data in conjunction with data from a variety of institutions. Together, these two new platforms aim to help researchers, policymakers, and the public engage with the information and data that will be critical to solving the climate challenge.



ACCORDING TO the National Oceanic and Atmospheric

Administration, the United States experienced more billion-dollar weather and climate disasters in 2023 than ever before, surpassing a record set in 2020. Hurricanes, floods, heat waves, and fires have irrevocably changed communities—and as the effects of climate change worsen, these communities will have to adapt to a new era of heightened risk. Over the past year, researchers at RFF have worked hard to assess how homes. communities, and livelihoods can rise and *Bloomberg*, ranked in the top 1 to the challenge.

(Penny) Liao coauthored an article in *Nature Climate Change* regarding the costs of unrealized flood risk in the United States. The research revealed that home prices in flood zones are overvalued by up to \$237 billion, an important finding that can help inform policies related to flood insurance, flood-risk disclosure, and the costs of climate adaptation. The paper, which was accessed more than 66,000 times and covered by major outlets such as the Washington Post percent for online attention among

In February, RFF researcher Yanjun

Plugging Into the Policy Discussion

THE ELECTRICITY SECTOR is

the linchpin of US decarbonization efforts, offering the lowest-cost options for direct emissions reduction and abundant opportunities to decarbonize the US economy through electrification. RFF explores various aspects of the electricity transition, aiming to inform efficient and equitable solutions for stakeholders.

Grid Reliability in the Energy Transition

Following major recent legislation, renewable energy is expected to proliferate as the power sector evolves and decarbonizes. Expanded use of renewable resources will come with its own challenges, such as meeting electricity demand at all times of day, which RFF scholars like Molly Robertson, Karen Palmer, and RFF Visiting Fellow **Todd Aagaard** are working to address. These researchers convened a group of subject-matter experts in February to discuss the power-sector reforms that are being considered to maintain the reliability of the US electric grid.

A Policy Leadership Series event in June with Jigar Shah, the Loan Programs Office Director at the US Department of Energy, and RFF President and CEO **Richard G**. **Newell** helped illustrate how the federal government plans to fund the clean energy transition, energy infrastructure, and technological innovation.

Informing State-Level Decisions on Climate Policy

Even as federal funding and programs gain traction, state-level efforts are continuing to facilitate climate change mitigation. RFF scholars regularly contribute to the process of state policy analysis and design and serve in advisory roles for several states, both formally and informally. For example, Dallas Burtraw and Nicholas Roy published a report and Resources magazine article that examines the California carbon market and considers how different communities in California may benefit differently from the cap-and-trade program. They have provided input to the California Air Resources Board and the California Environmental Justice Advisory Committee to ensure that the state government considers various equity and benefit-cost implications of its carbon policy.

Burtraw and Maya Domeshek also have taken a state-level focus with a report that assesses the prospective outcomes of Pennsylvania joining the Regional Greenhouse Gas Initiative. The report, created alongside the Kleinman Center for Energy Policy at the University of Pennsylvania, assesses the expected impact on Pennsylvania emissions, power generation, revenue, and jobs.



2015

was the year that California's cap-and-trade program expanded economy-wide



100

heavy-duty electric trucks charging simultaneously could reach electrical loads similar to a sports stadium



"RFF scholars regularly contribute to the process of state policy analysis and design and serve in advisory roles for several states, both formally and informally."

Innovation and Accountability

STIMULATING INNOVATIONS

in decarbonization technologies is a key element for meeting climate goals, and the US Department of Energy has been tasked by Congress to take much of this on. Improving innovation outcomes can be possible by improving the agency's processes for picking winners and building an evaluation culture into its grant programs.

In 2023, RFF researchers Alan Krupnick, Aaron Bergman,

Centering Equity and Justice

NEW YORK STATE signed into law the Climate Leadership and Community Protection Act in 2019. The legislation sets goals for decarbonization, which will affect air quality in the state—though decisions made by the New York State government in the near term will influence the benefits that accrue to communities across the state under the law. RFF researchers are providing input that may help inform those decisions and addressing the question of whether disadvantaged communities will see air-quality benefits; their work applied economic and air quality modeling to determine how policies can be designed and deployed in ways that can benefit communities equitably. The research involved RFF scholars Alan Krupnick, Molly Robertson, Wesley Look, Daniel Shawhan, and Joshua Linn; community collaborators at the New York City Environmental Justice Alliance; and researchers at Yale, UC Davis, and Northeastern University, ultimately producing a report and *Resources* magazine article. This collaborative work is ongoing, with related reports scheduled for release throughout the coming year.

This study, along with other environmental justice work from across RFF, comprised the theme of the October 2023 issue of *Resources* magazine: centering equity and justice in environmental policy. •

Jhih-Shyang Shih, Yuqi Zhu, and Lucie Bioret conducted two in-depth workshops with panels that featured leading experts and representatives from Department of Energy offices and other government agencies. RFF issued reports based on these workshops to help the Department of Energy increase program accountability and design better internal processes and evaluation systems. The scholars will pursue

related research in the coming year.

"RFF researchers are providing input that may help inform those decisions and addressing the question of whether disadvantaged communities will see air-quality benefits."

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>35,000

written comments and testimonies in the public comment process for New York's Climate Leadership and Community Protection Act

Getting a Lay of the Land with Climate Change on the Horizon

Forestry, agriculture, and other land uses are both sources of emissions and ways to remove carbon from the atmosphere. RFF scholars are identifying and measuring land-management solutions that can sustain people, ecosystems, and the climate through effective incentives, investments, and protections.



USING NATURE-BASED

solutions to store atmospheric carbon is a key strategy for meeting US climate goals. But as drought, wildfire, and other climate-related disasters have ravaged US forests and croplands, addressing problems and finding solutions to maintain and grow this important carbon sink is more vital than ever.

In 2023, RFF researchers worked extensively with other scholars, government officials, and private industry to shape the research agenda for this fast-evolving sector. This past year saw the official launch of a new RFF model, the Carbon and Land Use Model (CALM), which predicts land use change and corresponding changes in carbon sinks at a national scale. The new model provides robust, empirical predictions for how policy incentives and management strategies may affect carbon storage on US lands.

The new model already is informing research and decisionmaking. A report by **David N. Wear** and **Matthew Wibbenmeyer** used CALM to examine the prospects for continued carbon dioxide removals (achieving negative emissions) in the land sector and evaluated the potential for afforestation programs to provide additional climate benefits.

Climate change interacting with land and forest uses also drives the wildfire crisis in the western United States. RFF researchers have developed new analytical tools for evaluating foresttreatment policies. A working paper by Wear, Wibbenmeyer, and **Emily** Joiner, published in the summer, used these tools to examine how forest managers may engage with the private sector to bolster forest-fuel removal on federal lands.

This fuels-management strategy can help reduce wildfire hazards and was the topic of a September event hosted by RFF and the US Endowment for Forestry and Communities. The event gathered public land managers with representatives of the woodproducts sector and other interested parties for a roundtable discussion on the national science and innovation needs for expanding fuel treatments on public lands. Through this convening, the attendees worked to identify future areas of research, development, and investment by the US Forest Service.

RFF also partnered with the Forest Service to discuss the findings of the latest Resources Planning Act Assessment, an important federal report on the status of and projected changes in US forests and rangelands. During the July event, Ann Bartuska moderated a panel of leading experts in land use, climate, and policy who explored the implications of changing natural resources and what can be done to sustain forests in the United States. The event featured an opening address by US Under Secretary of Agriculture for Natural Resources and Environment Homer Wilkes.

In a year plagued by wildfires, RFF researchers continued to expand

their work on this salient issue. A first-of-its-kind study published in the Journal of Politics in February examined the efforts that federal agencies undertake in the aftermath of wildfires. Wibbenmeyer and coauthors found that, after wildfires, agencies are more likely to increase prescribed burns and thinning of risky vegetation near affected communities with high socioeconomic status. Notably, agencies place more risk-reduction projects near areas that already have experienced fire, even when wildfire already has reduced the risk. This paper's findings are consistent with other studies which show that communities with high socioeconomic status receive a disproportionate share of limited federal budgets for wildfire risk reduction.



>\$5 billion available through the Infrastructure Investment and Jobs Act to address wildfire issues



185 million gasoline-powered cars driven for one

year: the equivalent of the 0.83 gigatons per year of projected carbon removal with a 30-million-acre afforestation program

"

"As drought, wildfire, and other climaterelated disasters have ravaged US forests and croplands, addressing problems and finding solutions to maintain and grow this important carbon sink is more vital than ever."

Putting a Number on the Carbon Impact of Legislation

JUST AS "budget scores" in the US Congressional Budget Office can help Congress stay accountable to the federal budget, RFF scholars assert that "carbon scores" likewise could help hold the government accountable to climate goals and objectively assess a bill's effect on US greenhouse gas emissions. In March, Kevin Rennert and Aaron Bergman unveiled this idea with the launch of RFF's Carbon Scoring Project. Rennert and a collaborator from Brookings, which debuted a complementary project, shared their thoughts on the launch of this timely policy resource in a widely read op-ed for the Hill. The new effort could be the first step in making sure that legislators have the information they need to incorporate climate change in their decisionmaking.

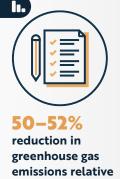
August 2022 brought the biggest piece of climate legislation ever in US history: the Inflation Reduction Act. The new law offers hundreds of billions of dollars in tax incentives to promote decarbonization efforts throughout the economy. As the law gets implemented, RFF researchers are measuring the

degree to which the law will help reduce greenhouse gas emissions in the United States and how close the reductions will get the nation to its Paris Agreement goals. Over the summer, RFF took full advantage of its modeling capabilities and made careful comparisons with modeling data from several collaborating institutions to answer these questions. The results of this analysis by **Dallas** Burtraw, Maya Domeshek, Rennert, Nicholas Roy, and coauthors were published in the high-profile journal Science (where the article ranked in the top 1 percent for online attention among contemporaneously released peerreviewed research); published in the journal Environmental Research Letters in collaboration with Sally Robson, Ethan Russell, Daniel Shawhan, and other coauthors; and featured on the Resources Radio podcast.

An event in February, prior to publication of the paper, previewed the results of this work and examined the future of the electricity sector in light of the Inflation Reduction Act and the Infrastructure Investment and Jobs Act.



"The new effort could be the first step in making sure that legislators have the information they need to incorporate climate change in their decisionmaking."



emissions relative to 2005 levels by 2030 would enable the United States to meet its Paris Agreement goals

International Climate Policy and Global Trade

AS COUNTRIES have been

increasing the ambition of their

climate goals, they've likewise been

considering how their compliance

competitiveness in global trade.

Kevin Rennert, Billy Pizer,

RFF scholars Raymond J. Kopp,

and Milan Elkerbout have been

hard at work analyzing a class of

policies called border adjustment

the playing field for firms that face

manufacturing emissions than the

regulations faced by firms that are

located in other countries. The

research has resulted in reports,

related US policy proposals and

outline associated challenges and

opportunities. US Senator Sheldon

Whitehouse recently discussed his

recent policy proposals analyzed

by RFF scholars—in a December

was published on the Common

Resources blog.

Clean Competition Act—one of the

interview with Kristin Hayes, which

magazine article that interpret recent

issue briefs, and a Resources

mechanisms, which aim to level

stricter domestic regulations on

with climate policies will affect their



45 times

more global trade volume happens today than in the early days of the General Agreement on Tariffs and Trade in 1950



\$6.8 trillion per year of potential global economic benefits from achieving global Paris Agreement goals

In December, RFF President and CEO **Richard G. Newell**, Elkerbout, Hayes, and Pizer took these issues to Dubai for COP28. There, the RFF delegates collaborated with leading global voices to explore the policies, innovations, and market forces needed to address climate change. RFF hosted a well-attended side event on border adjustments and the nexus of climate and trade, along with an event on the global stocktake. The RFF participants shared insights on the negotiations upon their return in a Q&A blog post for *Common Resources*.

Another global concern relates to

international progress on climate

goals. The 2023 global stocktake

from the Intergovernmental Panel

on Climate Change wrapped up at

the latest Conference of the Parties

(COP28) and offered the chance

for Jordan Wingenroth, Brian

C. Prest, and Rennert to assess the

which their analysis suggests could

amount to \$6.8 trillion per year of

avoided damages.

potential global economic benefits of

achieving the Paris Agreement goals-

"The research has resulted in reports, issue briefs, and a

issue briefs, and a *Resources* magazine article that interpret recent related US policy proposals and outline associated challenges and opportunities."

ANNUAL REPORT 2023
OUR IMPACTS AND ACCOMPLISHMENTS

A Year of Events

Events are an important part of our mission. They're an opportunity to connect experts, journalists, and the general public; exchange views and ideas; and strengthen networks among researchers, industry, and government. Our recent events have included conferences, workshops, live panel discussions, and webinars.

08 • JUNE 2023

09 • JUNE 2023 Policy Road Map to

BECCS Deployment

10 • JULY 2023

11 • JULY 2023

The 45V Hydrogen

Tax Credit: Considerations

for US Treasury Guidance

Solar Geoengineering Futures

12 • SEPTEMBER 2023

Changing Climate,

the US Forest Service's

2020 RPA Assessment

Changing Forests: Exploring

Financing the Energy

Transition: A Policy

01 • OCTOBER 2022 Net-Zero Economy Summit

02 • DECEMBER 2022 VALUABLES Consortium Capstone Celebration

03 • DECEMBER 2022 Energy Insights 2022

04 • JANUARY 2023 Big Decisions 2023

05 • MARCH 2023 Looking Ahead: Unpacking the EIA 2023 Annual **Energy Outlook**

06 • APRIL 2023 Modernizing Regulatory Review: Exploring OMB's Updated Benefit-Cost Guidance

07 • MAY 2023 Unplugging Emissions: Exploring New EPA Rules on Climate and Health

ANNUAL REPORT 2023 • A YEAR OF EVENTS



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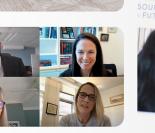
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MODERNIZING REGULATORY REVIEW

EXPLORING OMB'S UPD



























Our Leadership and Supporters

RFF draws on expertise from a world-class Board of Directors and is supported by a passionate and engaged group of individuals, foundations, corporations, and other institutions.

OUR LEADERSHIP

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 Kristina Gawrgy
- Vice President for Communications
 Carolyn Mollen
- Vice President for Finance and Administration, Treasurer
- Billy Pizer Vice President for Research
- and Policy Engagement
 Tommy Wrenn
- Chief of Staff
- Shannon Wulf Tregar Vice President for Development and Institutional Strategy

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Spark-Advisor, LLC

Tufts University

*RFF thanks departing board members Anthony Bernhardt, James K.

Asselstine, and Chair Emeritus Lawrence H. Linden for their service.

ANNUAL REPORT 2023 O OUR LEADERSHIP AND SUPPORTERS

Barbara Kates-Garnick

- Mary Landrieu
- Van Ness Feldman LLP • Jeff Luse
- Warburg Pincus, LLC • Kyung-Ah Park Temasek
- William Pate
 Par Pacific
- Jonathan Silver
- Apollo Global Management • Ramya Swaminathan
- Malta Inc. • Catherine Wolfram
- Massachusetts Institute of Technology

Chair Emeriti

- W. Bowman Cutter Roosevelt Institute
- Lawrence H. Linden* Linden Trust for Conservation
- Richard Schmalensee
 Massachusetts Institute
 of Technology

OUR SUPPORTERS

- Chair's Circle \$50,000+
- Jay Bartlett
- Anthony Bernhardt
 and Lynn Feintech
- W. Bowman Cutter/ The Cedars Foundation
- Ionathan Garfinkel
- Glenn Hubbard and
- Constance Pond
- Peter R. Kagan and Susannah Smetana Kagan
- LAD Climate Fund
- John C. Mulliken and
- Arianne Chernock
- Kenan Sahin
- Lise Strickler and Mark Gallogly

President's Council \$10,000-\$49,999

- Anonymous
- Gregory Alexander
- James Asselstine
- Vicky A. Bailey
- Kristin Breuss and Geoffrey Burgess
- Preston Chiaro
- Janet F. Clark
- James L. ConnaughtonElaine Dorward-King
- Linda I. Fisher
- Mark Florian
- Barbara Kates-Garnick
- barbara Kates-G
- and Marc B. Garnick • Donald M. and Alison K. Kerr
- Lawrence H. Linden
- Robert and Mary Litterman
- Jeffrey Luse
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21

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4

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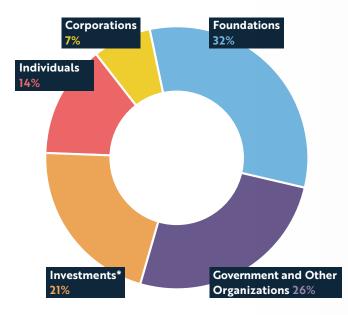
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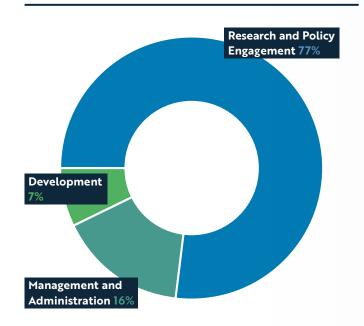
Portland Cement Association*

Revenue Breakdown



*The investments category includes investment earnings designated for operations.

Expenses Breakdown



Financial Summary

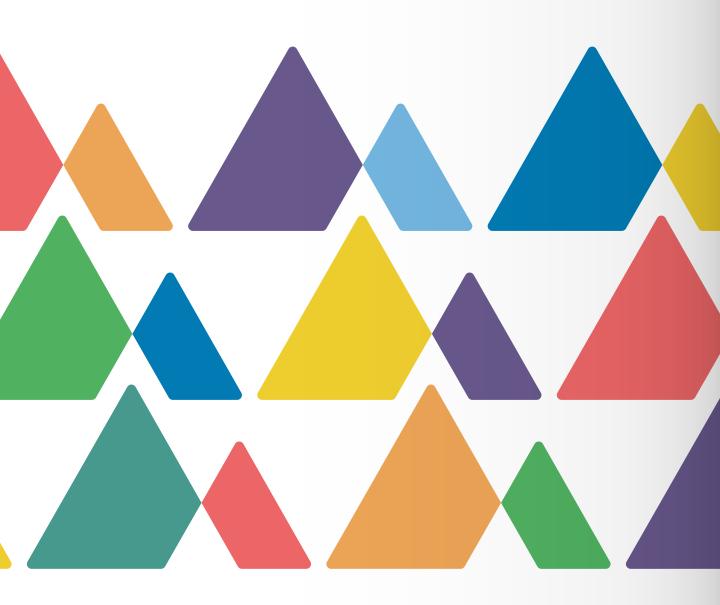
IN FISCAL YEAR 2023,

RFF's operating budget was \$17.5 million, over 79 percent of which came from grants from foundations, government, and other organizations, alongside individual and corporate contributions. RFF's operating budget in fiscal year 2024 is \$18 million. RFF augments its operating revenue with net income from the RFF building and earnings from the RFF reserve fund. At the end of fiscal year 2023, the reserve fund was valued at \$54 million.

RFF research and policy engagement represented 77 percent of total expenses in 2023. Management, administration, and development expenses combined were 23 percent of the total. RFF's audited financial statements, as well as detailed breakdowns of revenues and expenses, are posted on our website annually. These can be accessed by visiting:

rff.org/about/financial-reporting

ANNUAL REPORT 2023 FINANCIAL SUMMARY



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