



## **Rocky Mountain Institute** Annual Report 2010–2011





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Caminante, no hay camino Se hace camino al andar

## Walker, there is no path The path is made by walking

-Antonio Machado (1875–1939)

## **BOLD BUSINESS SOLUTIONS FOR THE NEW ENERGY ERA**



Rocky Mountain Institute will be 30 years old next year. We'll be throwing a celebration (or, more likely, convening a summit—that's more our style), and you'll be getting an invitation. We have a lot to celebrate, like the launch of Reinventing Fire, an initiative and book (debuting in October) that lays out pathways to achieve our vision for a new energy era.

Nearly everyone in the Institute contributed to the book this year and last. We're proud of our staff for the rigorous research, analysis, and writing they've done to lay out this important energy path for our nation. This independent research offers a new vision with a whole-system approach that can revitalize business models. The competitive strategies we share show promising ways to win the global clean energy race using today's technologies.

The tipping point where energy alternatives work better and compete on cost is not decades in the future; it is here now. Our vision for a fossil-free future is already underway. Technologies that save energy and replace fossil fuel are now a global business with revenues over \$200 billion a year. Technology has advanced. Minds have advanced. The world is ready for this shift, and not a moment too soon.

Reinventing Fire maps pathways for running a 2050 U.S. economy 158 percent bigger than today's but with no oil, no coal, no nuclear energy, and dramatically lower costs. We ran the numbers over and over. We built our research on everything we know and everything we've done over the past

30 years and laid it out in a grand synthesis that integrates the transportation, buildings, industrial, and electricity sectors.

In the pages that follow, we take you down the path we set this past year, sharing some of Reinventing Fire's vision for the future, key solutions along the path and some concrete examples from our work—the people and projects that are laying the foundation for this energy revolution we're calling for. We've already begun implementing Reinventing Fire through our initiatives and collaborations, and here we focus on a few examples. Please see rmi.org for details on additional projects and for more technical information on our Reinventing Fire research.

Whether you care most about profits and jobs or national security or environmental stewardship, climate change or health, Reinventing Fire makes sense and makes money. It can create jobs and revive the national economy. Whether you are a vegan tree-hugger in Birkenstocks or a buttondown businessman investing in stocks, we believe you have the courage to join us on this path, to stand up and make important choices to protect not only your business and our economy but also your children. As Amory asks in *Reinventing Fire:* "When your shareholders in this decade, and later your grandchildren in your retirement, ask what you did to meet humanity's supreme energy challenge, how will you answer?"

# whole System solutions

## SECURITY

ENVIRONMENT & HEALTH



## **A LETTER FROM OUR COFOUNDER**

"Never undertake a project," said my mentor, the inventor Edwin Land, "unless it is manifestly important and nearly impossible." So Rocky Mountain Institute undertook Reinventing Fire.

RMI's strategic focus is on getting the United States (for starters) completely off oil and coal by 2050. This requires a "new fire"—a profound shift to efficiency and renewables. So in mid-2010, we began integrating innovations in technology, design, policy, and business strategy across four sectors: transportation, buildings, industry, and electricity. A year later, this "grand synthesis" was headed to press as Reinventing Fire: Bold Business Solutions for the New Energy Era, them. (Solving the auto and electricity problems is easier to be released in October by Chelsea Green.

This \$5.1-million effort by most of our 80-odd staff members created a fresh, deep, pragmatic energy vision: a prosperous 2050 economy that uses no oil, coal, or nuclear energy and one-third less natural gas, at a \$5 trillion lower net cost in 2010 present value (ignoring all externalities)—the transition led by business and requiring no Act of Congress.

Novel state-level policies like auto feebates and aligned utility incentives can enable and speed adoption, but the driver will be durable business advantage. Efficiency returns more than twice its cost in industry, four times its cost in buildings. Electrified ultralight cars combine three steep, synergistic learning curves—in carbon fiber, composite structures, and electric powertrains—to win as decisively as shifting from typewriters to computers. (Several automakers are adopting this strategy, and three—BMW, Volkswagen, Audi—say they'll mass-produce such cars in 2012–13.) Competition is accelerating the car and truck, plane, and military transport efficiency races—and moving to warp speed in electricity, where half of new global capacity since 2008 is renewable.

Oil and coal each emit more than two-fifths of U.S. fossil carbon. Oil's total costs, \$2-trillion-plus a year, dwarf coal's \$100-billion-a-year health care costs. But the aging, brittle electricity system, 45% fueled by 95% of U.S. coal, bears vast hidden costs and risks too. Routine power failures cost businesses up to \$160 billion a year, while the risk that solar storms or terrorism could cause economy-shattering blackouts is existential and incalculable.

Nearly three-fourths of U.S. oil fuels transportation; nearly three-fourths of U.S. electricity powers buildings; the remaining oil and electricity run factories. Thus very efficient vehicles, buildings, and factories are the keys to saving oil and coal—best accomplished via RMI's integrative design techniques, which make savings bigger and cheaper. Efficient use makes fuel substitutions feasible and the electricity system renewable, distributed, and resilient-at similar cost but far lower risk.

For three decades RMI, almost uniquely, has worked in equal depth in all these sectors and learned how to integrate together than separately.) Reinventing Fire is what those three decades have prepared us for. Thanks to your help, it will take RMI, our nation, and the world to a new level of success, security, and stewardship.

HMOM

—Amory B. Lovins Cofounder, Chairman, and Chief Scientist



## A LETTER FROM THE CEO

Calling all leaders! This includes captains of industry, elected officials, journalists, activists, and other thoughtful citizens. Since you are reading RMI's annual report, you are most likely one or more of the above, and you have a unique role to play in speeding our shift to a better world.

It's time for action. Whether you care most about economics or national security or environment and health doesn't really matter. All these worthy causes motivate us to make this change. Let's step on the accelerator.

The challenges to Reinventing Fire are huge and daunting. We've relied on the old fire, combustion of fossil fuels, to build a spectacular world that provides mobility, shelter, goods, and entertainment far beyond the wildest dreams of our ancestors. Every one of us depends today on old fire for our lifestyle and livelihood. Current business models and economic incentives favor this old energy system, and untangling its stubborn threads calls for insight, creativity, and determination.

Turning obstacles into business opportunities, we must drive a change to the new energy era. This change will be revolutionary, and yet we are not talking about a revolution. There is too much at stake, and key players in the current era have too much to offer. *Reinventing Fire* proposes a different path: engage the strongest, bestspirited practitioners of the current world and mobilize them to build a better one. We are talking about a reinvention.

Your generous support has allowed Rocky Mountain Institute to participate in breakthrough initiatives in transportation, buildings, industry, and electricity. The pages of this report show your donations at work in a tangible way, and we hope these accomplishments inspire you to further action.

This report also shows our partners at work, the "reinventionary" architects, engineers, and businesspeople who are the heroes of the new energy era. We love to help create breakthrough buildings and superefficient data centers, but our biggest thrill comes from seeing professionals gain the insights and excitement that will take their work in new directions. We see clear signs of rising momentum. Substantially more businesses have sought collaboration with RMI in just the past year. Companies and government entities ask better questions and send us clear signals that they are serious about increasing their efficiency and shifting to renewable energy. RMI's National Solutions Council is growing in membership—and demanding more interaction and insight from RMI.

With your help, we are rising to meet these opportunities. We are strengthening our Research and Collaboration team and, in the process, meeting superb professionals eager to join our ranks. We are stepping up our inmarket activities in targeted sectors. We are launching an aggressive multimedia campaign to get the insights of *Reinventing Fire* into the right heads. We are also building new web and social media capabilities to foster deeper and more sustained conversations.

Thank you for joining us. *Reinventing Fire* is all about leaders like you. Deepen your professional commitment to the new energy era. Step up your participation in the National Solutions Council. Give *Reinventing Fire* to 50 of your closest friends this holiday season, and intensify your good work on the "reinvention" of the new energy era.

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—Michael Potts Chief Executive Officer









people and goods burns

#### 13 million barrels of oil

-costing American drivers **\$2 billion** directly and \$4 billion in additional hidden costs.

#### BUILDINGS

America's 120 million buildings consume

of the nation's energymore than any other sector. and more than any country but China and the U.S.

())

COAL

\$

NUCLEAR

BIOMASS

HYDRO

#### INDUSTRY

76% of the industrial sector energy use comes from fossil fuels.

ELECTRICITY

OTHER

RENEWABLES



of U.S. electricity is generated from natural gas, coal, and nuclear in large, centralized power plants.

- - dominated supply
  - Smart, secure, resilient grid
  - Full competition between investment options
  - Fast, broad, transparent markets
  - Utilities' and customers' incentives aligned

#### TRANSPORTATION

- Ultralight low-drag autos
- Electrified autos
- Productive vehicle use
- Superefficient trucks and planes
- Advanced biofuels needing no cropland
- Revenue-neutral feebates

#### BUILDINGS

- Wide adoption of energy-efficient technologies
- Easy-to-use IT-based controls
- Integrative design
- Next generation codes and equipment standards
- Easy-to-access, low-cost financing
- Valuing non-energy benefits

#### INDUSTRY

- Wide adoption of energy-efficient
- technologies
- Integrative design
- Thorough use of cogeneration
- Fuel-switching
- Dematerialization and closed material cycles
- Revolutions in biomimicry & additive manufacturing

#### ELECTRICITY

- Superefficient end use
- Diverse, largely distributed, renewable-

HYDRO

## \$3.8 trillion

not spent on oil will be pumped into the economy. Autos will reach an average of 125-240 mpg-equivalent





2050 Efficiency and renewables can end our addiction to fossil fuels, create the core industries of the new energy era, generate \$5 trillion in new economic value, and enhance resilience and security.



#### TRANSPORTATION

#### **BUILDINGS\***

America's buildings would Industry will have use 1/2 to 3/4 less energy than today and save \$0.7 trillion net greater production, use 9-13% less energy, and save \$0.5

#### **ELECTRICITY**

Needing no oil, coal, or nuclear power, at least 80% of our electricity will come reliably from renewable energy.

WHAT WE GET

Unlock \$5 trillion in savings

> Support a 158% bigger economy

# energy from oil, coal, and nuclear

Use

SOURCES:

Data prior to 2035: U.S. Energy Information Administration Data after 2035: RMI analysis, detailed in Reinventing Fire (Chelsea Green, 2011).

\*The figures above reflect the effects of transforming the electricity sector, which mainly powers buildings and industry.

trillion net

**INDUSTRY\*** 

#### VISION

We see uncompromised U.S. autos, heavy trucks and planes that don't need oil. And we see Americans driving fewer miles.

We see a future where, by 2050, we'll drive superefficient vehicles fueled by a flexible mix of electricity, hydrogen, and sustainable biofuels. Our autos will get 125–240 mpg-equivalent of alternative fuel. They'll be affordable, comfortable, and safe. Their makers will gain strong competitive advantage.

### WHY?

You probably know our mantra by now: economy, national security, and environment. Just one notable fact, according to Reinventing Fire: \$2 billion a day is plucked from Americans' pockets to buy petroleum for personal mobility, half of which is paid to foreign countries, some of them considered national security threats. Another \$4 billion a day shows up through taxation, and the burdens that oil dependence imposes on the economy.

#### PATH

If you are lucky enough to have held the carbon fiber bowl, tougher than titanium, that Amory Lovins passes around during lectures, you already know how strong advanced composites are. The bowl even rings like a bell when he strikes it. Such ultrastrong, ultralight materials are a "disruptive technology" that can help automakers create much more efficient vehicles at comparable costs.

As Reinventing Fire explains, two-thirds of the energy needed to move a typical car is caused by its weight. Straightforward reductions in weight, drag, and tire losses could together boost fuel economy by 50% even before electrification. Compelling competitive strategies and smart policies are starting to drive the shift to ultralight materials (advanced composites) plus electric powertrains.

U.S. automobiles burn **64%** of the **13 million barrels** of oil we use **daily** to move people and goods

#### Project Get Ready (PGR)

RMI's initiatives implement Reinventing Fire strategies in the real world as case studies or models. We also convene, facilitate, and educate through our initiatives. The longterm goal of our Project Get Ready (PGR) initiative is to enable working partners to help put 1 million electric vehicles on the road by 2015, a goal set by President Obama in 2008.

In the past 12 months, PGR has convened a dozen educational and collaborative webinars with its 60 partners around the country, sharing information to help cities understand best practices for getting sufficient EV infrastructure up and running. These best practices include taking advantage of street excavations, parking garage construction, or other opportunities to pre-install electric conduit or wiring for later interconnections between EVs and the grid.

In the next 12 months, PGR will engage with investorowned utilities to ensure that 30% have an EV strategy including at least five of the ten largest, based on market capitalization. In addition, PGR will continue to collaborate on EV readiness plans with key stakeholders in half of America's 50 largest metropolitan areas.

Our PGR partners include Columbus, Ohio; State of Virginia; Kansas City; North Central Texas; Tampa Bay; Central Florida; Rhode Island; Vancouver; Houston; Denver and Boulder, Colo.; Indianapolis Region; Greater Toronto; Raleigh and Research Triangle, N.C.; Portland, Ore; St. Louis; Atlanta: and St. Paul. Minn.

city worker insta rtesy of City of F A Raleigh Photo cou

**PGR Expands Reach** 



RMI has formed a partnership with the National Renewable Energy Laboratory (NREL) to collaborate on EV-readiness reporting in the PGR network and in the Department of Energy's (DOE) Clean Cities Coalition. This national network of nearly 100 Clean Cities coalitions brings together stakeholders in the public and private sectors to deploy alternative and renewable fuels, idle-reduction measures, fuel economy improvements, and emerging transportation technologies. Through this collaboration, PGR will share its expertise and best practices with a larger network, while capturing new insights into the challenges and opportunities that cities nationwide are facing in preparing for electric vehicles.

In the next year PGR will also begin working internationally to develop a casebook of cities around the world. In collaboration with the International Energy Agency, the Clinton Foundation, and DOE, RMI will document EV readiness in more than 50 cities in the United States, Europe, and Asia. This will be the first step in RMI's more expansive data collection efforts; we hope not only to share what each city has done to prepare for EVs, but also to understand how the cars are performing, how they're driven, and how they're charged.

"We're working with our partners on a joint effort to create a central clearinghouse for what is happening with EVs and charging stations throughout the world," says PGR project manager Ben Holland.



We recently installed a charging station in the parking lot at RMI. In opening this station to public use, we'll be able to track and analyze the charging behavior of Boulder's early-adopter EV drivers. We're really excited to be part of EV adoption!

—Ben Holland, RMI Project Manager, PGR

#### VISION

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BUILDINGS

We see an energy efficiency revolution that could revitalize the real estate sector, create jobs, and help to rejuvenate the national economy—while dramatically reducing the need for fossil fuels.

We see a future where buildings are an integrated part of energy storage, energy production, and energy markets. Intelligent buildings can make and perhaps store and sell electricity. Superefficient buildings won't just use less energy; they will free up electricity for autos, and natural gas for industry and flexible power production.

#### WHY?

Because if America's buildings were a separate country, they would be the third biggest energy user behind China and the U.S. Buildings that use electricity far more productively are key to shifting from coal to more resilient and benign sources of electricity.

#### PATH

Reinventing Fire found that aggressively adopting straightforward energy efficiency can, by 2050, make our buildings deliver the same or better services with 60% less energy than today—despite 70% more floorspace. This would save \$1.4 trillion in energy costs, while making people healthier, happier, and more productive.

Clearly, to jumpstart and dramatically speed widespread investment in building efficiency, building owners, energy service firms, and utilities need to spearhead change. In addition, Reinventing Fire recommends effective policies such as next-generation building codes and rewarding utilities for cutting customers' bills, not selling more energy. Finally, building owners, tenants, and investors need to comprehend both the enormous potential for savings and the new business opportunities inherent in transforming the nation's buildings.

#### **RMI Buildings Initiatives**

RMI has two initiatives focused on driving long-term improvements in buildings: RetroFit, for commercial buildings, and Superefficient Housing, for residential buildings.

#### **RetroFit Initiative**

The goal of this initiative is to set in motion the wide, timely adoption of "deep" energy retrofits that save far more energy than standard retrofit practices—reducing the U.S. commercial building stock's current energy use by at least 50% by 2050.

Admittedly, the task is daunting. America's 120 million buildings are staggeringly diverse, and upgrading them can only be done one building at a time. We can't do them all ourselves, so we took steps in 2011 to engage with industry leaders—including owners and managers of large, owner-occupied portfolios—to demonstrate the business case for deep energy retrofits and to train those who perform them. We are leveraging education,

# The U.S. runs at least eight giant power plants to power stuff that's turned off.

partnerships, and outreach to amplify our influence. This unique approach—where education activities, marketing activities, and partnership activities build on and spin out from each project in a cohesive and integrated braid can elevate our effectiveness.

We successfully carried out this strategy in 2011 by convening two educational summits for industry leaders, a summit for building energy modelers, and a summit for financiers of energy-efficient retrofits. We also held workshops for energy modelers around the country, directly training 678 energy modelers in the practices of modeling for deep energy efficiency. (See rmi.org for more details on the summits.)

Part of our training shows energy service companies, property managers, and architectural/engineering companies that creating deep retrofit savings does not necessarily require adding a lot of advanced technology. We always start by pursuing natural and passive designs that greatly reduce energy use before we add fancier systems. We persistently show how deeper, betterintegrated energy savings are a better investment than single-purpose improvements. We are also creating and distributing free tools for building energy analysis. To learn more about the right steps in the right order for greater energy savings, and what we mean by "deep" retrofits, please visit retrofitdepot.org.

Some of our 2010–11 buildings practice clients and projects: Byron Rogers Federal Office Building (described next), Ford, International Monetary Fund (IMF), Empire State Buildina, Clark Museum of Art, The Smithsonian's National Museum of African American History and Culture, RetroFit Depot, Energy Modeling Toolkit, Green Building Finance Summit, and Building Energy Modeling Summit

#### **Byron Rogers RMI Retrofit Could Create Nation's Most Energy-Efficient Office**



For maximum leverage, RMI's RetroFit Initiative focuses on retrofitting buildings that are part of a large portfolio. Each retrofit then becomes a case study to stimulate a domino effect of similar retrofits across the portfolio, so the energy savings multiply.

The General Services Administration (GSA) is the nation's largest property owner. The 620,000-square-foot Byron Rogers building, which houses 11 government agencies, is one of five GSA-owned buildings in downtown Denver Four of these will undergo retrofits to improve energy use, starting with Byron Rogers—saving taxpayers money over the long run, improving comfort, and generally modernizing the workspaces.

RMI and the design-build team\* on the project are helping GSA design what may become the most energy efficient office building in the country. The retrofit is embracing innovative technologies, such as chilled beams, to help bring the building to net zero energy use by 2030. Solar collectors on the roof are expected to meet 100 percent of the building's hot water demand. The

building is aiming to attain LEED platinum certification from the U.S. Green Building Council.

RMI is also working to educate the GSA and its tenants on important sustainability issues and to break down institutional barriers that are preventing federal buildings from achieving a truly integrative design. For instance, RMI is helping to implement a green leasing program that will allow tenants to be charged based on their individual energy consumption. Addressing these issues on a single project will enable more sustainable solutions to be employed on all future GSA retrofits. Byron Rogers will become an outstanding case study and model for the federal government and other large commercial building owners.

\* The design-build team includes Mortenson Construction (design-build contractor), Bennett Wagner & Grody Architects PC (lead architect, core/shell), HOK (interior design/LEED consultant), The RMH Group Inc. (mechanical/ electrical engineer), Rocky Mountain Institute (green building consultant), and Martin/Martin Inc. (structural engineer/blast consultant).

It is very inspiring to not only contribute to creating one of the most energy-efficient office buildings in the country, but also to know that this building could become a model for all the other buildings to be renovated by America's largest property owner.

---Nicole LeClaire, P.E. RMI Project Manager, Byron Rogers retrofit





You cannot travel the path until you have become the path.

-Gautama Buddha (CA. Fifth Century BCE)





#### **Superefficient Housing Initiative**

Residential buildings use 21% of total U.S. energy and 38% of total electricity. We can dramatically improve the homes that are not yet built but that will constitute 40% of the U.S. housing stock by 2050.

RMI's goal for the Superefficient Housing Initiative (SHI) is to mainstream superefficiency in new residential design and construction, delivering housing that is 60% more efficient than today's code for comparable costs. SHI's near-term goal is to bring superefficient design and construction to affordable housing—a segment with disproportionately high energy use per square foot. This will reduce utility costs while improving comfort and livability for low-income households.









Early concept sketch by CCY Architects in partnership with Chamberlin Architects.

#### Aspen Forest Service Campus, **Employee Housing**

A stunning design by the team of Chamberlin Architects of Grand Junction and local architects CCY Architects highlights the fact that "green" can be both beautiful and comfortable, with ample natural light, fresh air, natural nontoxic materials, magnificent views of nature, and integration into the community. RMI will ensure that the building's energy demands are dramatically reduced before adding the onsite renewable energy to make the project net zero.

The project faces a mix of climatic challenges and opportunities. At 8,000 feet above sea level in the coldest climate zone in the contiguous U.S., the site gets an average 138 inches of snow per year but also enjoys dry air and ample sun.

Located in a mainly residential area on the western access route into the city, the current Aspen District office building was built by the Forest Service nearly 70 years ago and later renovated into the district office. It's now in serious disrepair, as are the housing buildings also located on the government-owned site. It makes sense to maintain housing here, since extremely high construction costs and land values and low availability make housing difficult, if not impossible, to obtain for the local federal workforce.

With the help of RMI, the U.S. Forest Service is aiming to achieve net zero energy usage with the redesign of its Aspen District Forest Service campus. This project showcases the agency's unprecedented model of appropriate, efficient, deep green development.

To that end, we're using energy modeling, lifecycle cost assessment, and the Passivhaus approach, a popular European system for dramatically reducing energy loads. (Dr. Wolfgang Feist, who developed Passivhaus, was inspired by the design approach of the Lovins GreenHome, the original RMI office, in Old Snowmass.) The campus could become the first U.S. federal building to earn Passivhaus certification; its office and housing buildings also aim to achieve the U.S. Green Building Council's LEED gold certification.

RMI works all over the world, from New York City and Dallas to Singapore and Australia, and our surveys show that more people know us in New York City than in Boulder. This project serves as an opportunity to showcase our goal of getting off fossil fuels right in our own backyard—from our Old Snowmass location, the Forest Service campus is just 15 miles away, preferably by bike, along the scenic Rio Grande Trail.





*RMI's new work to mainstream* superefficient housing will make a huge difference, especially in affordable and workforce housing, where low energy bills and healthier, more comfortable places to live are needed the most. Demonstrating that this can be done beautifully and economically is key.

—Alexis Karolides, AIA RMI Architect and Project Manager, Aspen Forest Service Housing project



#### VISION

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We see a highly competitive U.S. industrial sector that has doubled its energy productivity by 2050 and is poised to for even greater savings.

#### WHY?

America's industrial sector generates more than 40% of the country's GDP and employs almost 20 million people in refineries, paper mills, chemical plants, smelters, assembly plants, light manufacturing and countless other facilities. This mighty engine consumed one-guarter of all U.S. energy in 2010, 76% of which came from fossil fuels. Greater adoption of energy efficiency is an opportunity to increase the productivity of the sector, creating jobs and driving global competitiveness.

With an investment of \$0.28 trillion, U.S. industry would generate a \$0.66 trillion present value return from efficiency alone by 2050. Companies that can overcome longstanding institutional barriers and make the bold commitment to invest in efficiency improvements would also become more globally competitive—and more protected from volatile fossil fuel prices.

#### PATH

By adopting current and emerging energy efficiency technologies, widely reusing waste heat, and using integrative design to reshape and optimize subsystems and entire processes, by 2050 it is possible to reduce energy consumption at least 9% below 2010 levels even while industrial output grows by 84%.

Switching fuels and transforming industrial process and design can eliminate coal and oil and all but 10 guads of natural gas from U.S. industry, even before adopting solar process heat.

As we complete *Reinventing Fire* research, RMI is reinvigorating its industrial work. This is a key part of RMI's heritage and one we intend to keep active and vibrant. As before, RMI will work with select major firms to maximize energy efficiency across their operations focusing on radically productive processes and effective products. We may also help drive fundamental changes in buildings, fleets, selfgeneration of power, and corporate strategy.

#### FOCUS

RMI has a long history of collaborating with industry on solutions, design of products and processes and the application of renewable and alternative energy sources.

We push clients hard on efficiency, renewables, and related sustainability issues. Our strengths in working with industry include our knowledge of energy and efficiency technologies, our expertise in shaping integrative, cross-functional design experiences, our information-gathering network, and our professionalism. We facilitate innovative thinking and bring together unusual partners. We have new clients in the mining, automotive, industrial process, and oil and gas industries. We look forward to sharing more in the future as this work unfolds—creating rapid mutual learning, teachable cases, and competitive pressure for emulation.

# Less than

of the power-plant fuel that makes electricity for a data center actually creates customer value.

energy into plant 100 W



4 by **50%** ...





Some of the most exciting work RMI has done, and is doing, is with our industrial collaborators. We work with some of the best engineers and planners in the world, who feel that RMI really adds something to their products, investments, capabilities, and strategies. We are at the front of a wave of better design combined with more responsible, long-term thinking—and we've been helping shape that wave.

-Robert "Hutch" Hutchinson, RMI Managing Director

#### VISION

We see a renewable, diverse, distributed, resilient, and customer-oriented U.S. electricity system.

This transformation starts by dramatically increasing energy efficiency across the entire economy, flattening or even decreasing-total electricity demand, even when millions of electric cars are on the road. Our *Reinventing* Fire research found that 80% of the electricity we'll then need can be produced and integrated from wind, solar, and other renewable sources by 2050, and more thereafter. These renewable sources will also increasingly be distributed—small-scale electricity generation close to demand—reducing the need for new long-distance transmission, increasing reliability, and empowering customers.

#### WHY?

The electricity sector's accelerating shifts will have farreaching implications for businesses and customers, and for the competitiveness of the U.S. economy. Already the vital root system that sustains our economy, electricity is poised for even greater importance as the key enabler of the transitions away from fossil fuels in transportation, buildings, and industry. Strong forces are already aligning to drive transformative change in the electricity sector, creating a "perfect storm" of opportunity to reinvent it. Today, more than 86% of the nation's electricity is produced from coal, natural gas, and nuclear power. Replacing these aging power plants will require an investment of \$3.5 trillion over the next 40 years—money better spent buying more wind turbines, solar arrays, and countless other right-sized renewable power generators across the nation.

#### PATH

We are already on the path: Since 2008, half the world's new electric generating capacity has been renewable due to its lower risk and competitive cost. Replacing most ultimately all, of our aging fossil-fueled power plants with renewable and distributed energy sources makes sense and makes money.

Success depends on getting the rules right. We must level the playing field by opening the market to new actors, providing price and information transparency, realigning

utility interests with customer interests, proving new business models, supporting greater regional cooperation and planning, and coordinating power markets and system operations.

#### Next Generation Utility (NGU) Initiative

RMI's Next Generation Utility (NGU) Initiative has driven our work in the electricity sector for several years. It aims partly to catalyze a shift from fossil fuels to renewable and distributed resources. We have collaborated with utilities and other businesses key to the electricity sector and built a set of models and tools to help inform strategic decision making. In the past year, we focused on creating a compelling, practical vision of the future U.S. electric system that now defines our path forward.

RMI has begun engaging with leading utilities, regulators, and financial institutions to design and implement business solutions that enable the shift to a new electricity paradigm. In addition, RMI will convene industry stakeholders—utilities, regulators, technology providers, NGOs, and key customers—to tackle the critical issue of aligning utility regulatory constructs and business models with society's changing risk, security, reliability, environmental, and affordability goals.

Some of our electricity practice's clients and projects: Next Generation Utility (NGU), Deutsche Bank, Pacific Gas & Electric, Duke Energy, San Francisco Public Utility Commission, Credit Lyonnais Securities Asia, Rio Tinto.

#### Solar Balance of Systems Initiative

Solar is the world's largest energy source, and solar photovoltaic (PV) technologies offer the most scalable and commercially feasible way of converting sunlight to electricity. While module costs have plummeted in the past decade and continue to decline rapidly, the "balance of system" costs—all the upfront costs of an installed PV system except the modules—remain a barrier to largescale PV adoption.

RMI's Solar Balance of Systems (BoS) project is focused on reducing the non-module half (or more) of the total installed costs of a solar PV system. High BoS costs are

driven by a range of challenges: highly inconsistent local codes, tedious and uncertain utility and regulatory approvals, complex financing deals, and poorly monitored system performance. To reduce these costs, RMI is collaborating with stakeholders across the BoS value chain, including the U.S. Department of Energy, utilities, PV developers, and BoS component manufacturers.

Our collaborative efforts facilitate overcoming technology and market barriers. This helps make PV an attractive investment for building owners, utility planners, and third-party developers—an essential step in fulfilling the vision of *Reinventing Fire*.

This past year we saw our chain of impact unfold directly in Washington, D.C., when DOE issued over \$55 million in funding opportunities specifically focused on the areas identified by our collaborative efforts. Just last month, DOE announced the funding awards, and RMI is involved in multiple successful bids. Most significantly, DOE selected us to lead an effort to work directly with utilities to develop new and innovative business models that make renewables a valuable part of their generation portfolio. RMI will also work in association with Solar Tech (a PV Industry Association based in California) and others to develop novel and replicable solutions to the complex and costly permitting, inspection and interconnection processes that plague the industry. RMI is also partnering with Georgia Tech and others to focus on innovation in system design, hardware, and processes for rooftop installation.

Lastly, RMI is participating in a regional response to DOE's Regional SunShot Challenge, via a group including Boulder County and the cities of Golden, Fort Collins, and Denver. The goal is to bring best practices and standardization to local jurisdictions and develop a Solar Friendly Communities recognition program that could be replicated on a national scale. These new partnerships show how outside collaborators have come to value RMI's expertise in this area and how we have successfully used collaboration to drive innovative solutions in a highly complex and fragmented industry.



#### Hong Kong city skyline

#### **RMI Advises Global Investors on Renewables**

The rise of renewable energy means new opportunities for investors. Along with the growth of technologies such as solar and wind come additional investment opportunities in industries that integrate renewables into the grid, such as EVs, energy storage, and loadmanagement technologies.

## It is too late to turn back the tide of renewable energy.

"We consider the financial audience a really important one," says Eric Maurer, a consultant with RMI's electricity practice, which prepared a special investment report, Gridlaunch, Renewables Take Off, on investment opportunities for Credit Lyonnais Securities Asia (CLSA). CLSA Asia-Pacific Markets, Asia's leading independent brokerage and investment group, provides equity brokering, capital markets, merger and acquisition, and asset management services to global corporate and institutional clients. RMI's analysis was part of CLSA U, an executive-level education program for CLSA's select top clients. The global syllabus is designed to help fund managers understand the latest industry trends, investment theories, and macro developments that affect their markets and sectors.

RMI's analysis included a look at the challenges, costs and opportunities of incorporating a high share of renewables. The report is globally focused and examines the effect of renewables on the grid and balancing their variability.

"This information should help people make smart investments in related industries, in addition to renewable energy, because now they understand the market," says RMI consultant Ryan Matley, project manager for the research and report.

"Most people are not aware of the grid implications of a higher penetration of renewable energy. One of the most impactful things we can do is make the electric grid accessible to people who don't understand it well. Balancing variable renewables always goes on behind the scenes," says Matley.

CLSA has distributed the analysis, published in June 2011, to its clients, and RMI will follow up with those who want to dig deeper.



"We really need to make the electric grid accessible to people who don't understand it well. This project is so exciting because we are peeling back the curtain on what goes on to help the investment audience understand opportunities they might not have thought o

-Ryan Matley RMI project manager, CLSA Report

# INVESTING TO MAKE A DIFFERENCE

I'd like to extend a sincere thank you to all RMI supporters for your continuing support, your time and your involvement. Your partnership and investment with RMI keeps us on the cutting edge. Last year, thanks to your support, RMI was able to conclude the rigorous research that led to making *Reinventing Fire* a credible path for courageous business-led transformation to the new energy era.

Your support has tangible impact. For example, a small group of donors invested in an innovative design workshop in 2008 that tackled the interconnections between electric vehicles, home charging stations, and the utility grid. These donors then watched as the seeds of what happened over two days during what we called the "Smart Garage charrette" blossomed into Project Get Ready, a full-fledged nationwide program for cities as they prepare their infrastructure for the arrival of electric vehicles. Now internationally recognized, PGR is bridging the private and public sectors to increase the adoption of electric vehicles.

In addition, gifts to RMI totaling hundreds of thousands of dollars for our solar work leveraged significant additional Department of Energy funding for RMI and many private companies and labs to focus on reducing the often overlooked costs of installing solar. RMI changed the conversation. We moved the needle. (See our story on the Solar Balance of Systems project for more details about our funding and collaboration through DOE.)

In 2011 we saw our best fundraising year with \$10.5 million coming in to RMI to help us create a world that uses resources efficiently. The new fiscal year will present amazing opportunities for engagement, and we hope you will take the time to get involved. With your generous support we will take *Reinventing Fire* from findings and recommendations to actionable projects in the transportation, buildings, industry, and electricity sectors.

This new year will build the momentum for enhanced national donor networks through the evolving National Solutions Council.\* This will enhance and clarify the opportunities for grassroots action, and better align the values that supporters hold dear with the inspiring insights from RMI's vital and urgent work. The highest use of capital is not to make more money, but to make money do more for the betterment of life.

—Henry Ford

Through partnerships with you we will have a further reach to make the world a better place. Because you share our vision for the future and understand the urgency of the energy issues we are confronting, together we can make lives better for our children, our children's children, our communities, our nation, and our world. By partnering with us, you are doing nothing short of changing the world.



Rich Larson
Vice President of Development

\*A gift of \$1,500 or more brings you into RMI's National Solutions Council, a collaborative community of people committed to understanding, supporting, and advancing an energy future free of fossil fuels and powered by efficiency and renewables.

# A DONOR'S PERSPECTIVE

When I first heard Amory Lovins speak at the Commonwealth Club in San Francisco, I knew immediately that I had just encountered someone and something quite special. Here was a clear voice speaking with hope, brilliance, imagination, and sparkling wit. And he was speaking this way about *energy*, a field seemingly mired in deep pessimism and fatalism. So I began asking around about this Lovins character and his mountaintop Institute. From among those who pay attention to the energy challenge, a chorus of praise, respect, and near awe emerged. Then I began to study RMI's and Amory's writings and was eventually moved to carry 10 or 20 copies of *Winning the Oil Endgame* around in my car to give out to anyone who seemed (or who I felt should seem) interested in ending our oil addiction.

Since then, I have gradually ramped up my engagement and support of RMI. My wife, Terry, has joined me in this support, which includes our time, our attention to the work of the Institute, and, of course, dollars. Assets are by definition valuable and must never be squandered. Amory and RMI pioneered the power of energy *efficiency* as the primary tool of sensible energy policy. The Institute is similarly efficient in its own operations and in its creation and use of intellectual capital. Especially now, with so much of our public policy and discourse gridlocked, RMI's nimble approach is critical. Their strictly nonpartisan approach ensures that the solutions they discover and put in place avoid wasteful ideological squabbles.

We therefore choose to make our personal donations to RMI in the form of general support, in complete trust that it will be put to its best use. We have also helped direct foundation funds to specific projects, most recently to the exciting magnum opus, *Reinventing Fire*.

RMI has challenged us to answer what will likely be our descendants' most urgent question: What did you do to meet humanity's supreme energy challenge?

Being donors, volunteers, and ambassadors for RMI takes us a long way toward that answer.

—Peter Boyer and Terry Gamble Boyer



It's very important to me to find those organizations and individuals who have found a way to effect rapid, effective, and breakthrough change. That's what distinguishes RMI from many others.

—Peter Boyer Chair of RMI's National Solutions Council

# RMI'S MESSAGE

Getting off fossil fuels is our greatest energy challenge. Envisioning energy solutions is not enough, and we know RMI can play a stronger role than we have in the past in communicating our ideas and engaging others effectively and widely.

In the history of RMI, we have never done anything like the marketing campaign we are launching for *Reinventing Fire*. We have spent the past six months creating a multifaceted strategic plan to promote the book and roll out the information in its pages. The campaign includes speaking events, summits, blogs and articles, multimedia such as video and infographics, social media, a new website, and a web-based knowledge center that houses technical information. We'll reach both the lay and the technical audiences with the appropriate level of detail for each. We engaged two outside agencies to support us in creating strategies, contacts, and materials for the campaign, which is beginning as we send this report to press and as *Reinventing Fire* hits bookstore shelves.

We also rolled out the RetroFit Depot this year at retrofitdepot.org. The Depot is a comprehensive resource for building owners, energy service companies, architects, engineers, and facility managers seeking to conduct deep energyefficiency retrofits. The site includes case studies, tools, and step-by-step processes. It's an important online resource for educating property owners on the benefits of deep energy-efficiency retrofits and provides technical process information for practitioners on how to conduct deep retrofits.

We look forward to applying many of the marketing strategies, tools, and platforms we've developed for the *Reinventing Fire* campaign to all our initiatives at RMI in the next year.

# REINVENT D

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It is my hope to see our world transition off of fossil fuels in my lifetime. Working in the communications department gives me the opportunity to share the right information with the right people to make that hope a reality. I take a lot of pride in RMI's ability to reach so many people with high-quality information about how to use our resources more efficiently.

—Jamie Moir RMI Internet Marketing Manager



"Everyone at RMI is a thinker and a doer, so there is never a boring day. It's great to work at a place where the question, 'How can we have the most impact?' drives our work. RMI staff are talented and passionate people who could do anything in the world. But they are all here, working together. That makes RMI the special place it is."

—Albert Chan. RMI Consultant. Industry Practice

"The RMI strategy is successful because it is based on leading a diverse set of stakeholders in an atmosphere of collaborative and constructive tension."

—John Abele founder. Boston Scientific: owner, Kingbridge Center and Institute; author, *The Collaboration* Paradox; Trustee, National Solutions Council member, donor, Rocky Mountain Institute







# collaboration



"My favorite part of my job here at RMI is working collaboratively with design teams on our various building projects. It is exciting to not only have opportunities to help the team set high energy efficiency and sustainability goals for a project, but also to work alongside them in an integrative design process to help generate creative solutions and strategies for reaching those goals."

—Stephanie Hodgin, LEED AP BD+C RMI Analyst,

**Buildings** Practice





"From the very start, Rocky Mountain Institute pushed the entire design team on Byron Rogers to go beyond traditional design for existing building retrofits. They challenged us to do more and look for innovations way beyond what is considered leading edge today. Their indepth expertise and broad range of knowledge has been a resource that helped us achieve outstanding results. This project will set a new worldwide standard for existing building retrofits where we have the greatest potential to dramatically reduce both energy consumption and carbon emissions."

-Bill Green , P.E., DBIA, LEED AP President, The RMH Group, Inc. Design Build Team, Byron Rogers retrofit project

# **FINANCIAL** COMMENTARY



#### **Charity Navigator:** Fourth Consecutive 4-Star Rating

We are proud to announce that RMI has earned its fourth consecutive 4-star rating from Charity Navigator for its effective and efficient stewardship of its financial resources. With this exceptional designation, RMI now joins the top 9% of all non-profits in the U.S. for consistently executing its mission in a fiscally responsible manner.

Rocky Mountain Institute's fiscal year 2011 financial performance remained strong. While revenues showed a modest decline from FY 2010, continued spending discipline kept operating expenses in check as compared with FY 2010, resulting in a net income for the Institute that exceeded our FY 2011 targets by almost \$900K. These outcomes helped RMI to significantly strengthen its balance sheet, reduce liabilities and end the year with net assets of \$9.34 million, \$1.66 million over the previous fiscal year's end.

Fiscal year 2011 GAAP revenues of \$12.9 million were slightly reduced from our FY 2010 revenues of \$13.1 million. A substantial year-over-year decline (-\$3.1 million) in grant funding corresponded to the reduction in foundation philanthropic giving; however, individual and corporate contributions showed enormous growth (\$4.1 million) over the previous year. Revenues from fees for professional services were also down considerably (-\$1.3 million) primarily due to the Research and Consulting group's concentration on strategic initiatives, particularly Reinventing Fire. Operationally, RMI continued its discipline around general spending with a reduction in total operating expenses of \$849K (8%) for FY 2011.

We anticipate that prolonged weakness in the economy, coupled with soft philanthropic conditions will continue to provide a challenging environment for Rocky Mountain Institute. As such we will continue to embrace strategic. cooperative planning with staff, management and other stakeholders to insure a solid, viable Institute. As we move into the new fiscal year, effective management and ongoing stewardship of resources, along with the major emphasis on building the capacity of our development, marketing and communications groups will foster broad institutional engagement helping to influence key audiences, donors and decision makers.



Ned Harvey, Chief Operating Officer



Ed McCullough, Director of Finance

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#### **Balance Sheet—Audited** (thousands of current dollars, GAAP basis; RMI's Fiscal Year is 1 July-30 June)

	6/30/11	6/30/10	6/30/09
etable Securities	\$2,544	\$1,133	\$412
rve Fund	4,669	4,318	4,508
w Fund	1,588	1,569	1,258
ceivable	248	665	1,120
dges Receivable	-	242	269
rable	-	-	-
	1	16	48
l Equipment (Net)	1,494	1,555	1,726
cted for Endowment	747	704	673
	233	360	435
TS	\$11,524	\$10,562	\$10,449
AND NET ASSETS	6/30/11	6/30/10	6/30/09
BILITIES			
yable	\$157	\$374	\$542
d Absences	228	305	340
roll	238	228	232
ed Expenses	949	1,239	962
ion–Liabilities	230	367	253
t	-	-	950
nt Liabilities	\$1,802	\$2,514	\$3,279
Liabilities	\$380	\$363	\$520
ILITIES	\$2,182	\$2,877	\$3,799
	\$9,342	\$7,685	\$6,650
ILITIES & NET ASSETS	\$11.524	\$10,562	\$10.449



1	2 months ending 6/30/11	% of Operating Revenue	12 months ending 6/30/10	% of Operating Revenue	12 Months Ending 6/30/09	% of Operating Revenue
OPERATING REVENUE AND SUPPORT						
Consulting	\$1,991	15.7%	\$3,303	24.7%	\$4,843	37.3%
Foundation & Government Grants	925	7.3%	4,031	30.1%	4,690	36.1%
Individual & Corporate Contributions	9,561	75.3%	5,839	43.6%	3,113	24.0%
Publishing & Royalty Revenue	5	0.0%	13	0.1%	41	0.3%
Contributed Facilities/In-Kind Donations	135	1.1%	135	1.0%	135	1.0%
Other Revenue	76	0.6%	72	0.5%	162	1.2%
TOTAL OPERATING REVENUES AND SUPPORT	12,693	100.0%	13,392	100.0%	12,984	<b>100.0</b> %
OPERATING EXPENSES						
Program Services	\$8,288	65.3%	\$9,459	70.6%	\$10,062	77.5%
Expenses on behalf of Windstar Land Conservancy (Facili	ties) 68	0.5%	102	0.8%	86	0.7%
Management & General	1,372	10.8%	1,274	9.5%	1,610	12.4%
Fundraising	1,136	8.9%	1,116	8.3%	1,258	9.7%
Total Operating Expenses	10,864	85.6%	11,951	89.2%	13,016	<b>100.2</b> %
OPERATING MARGIN	1,829	14.4%	1,441	1 <b>0.8</b> %	(32)	-0.2%
NON-OPERATING REVENUES						
Gain/(Loss) on Sale of Assets	-	0.0%	(3)	0.0%	-	0.0%
Gain/(Loss) on Sale of Investments	295	2.3%	(39)	-0.3%	(262)	-2.0%
Investment Income	116	0.9%	142	1.1%	185	1.4%
Gain/(Loss) on Other Investments	(110)	-0.9%	-	0.0%	-	0.0%
TOTAL NON-OPERATING INCOME	301	2.4%	100	0.7%	(77)	-0.6%
NON-OPERATING EXPENSES						
Depreciation	\$303	2.4%	\$286	2.1%	\$277	2.1%
Prior Period Adjustment	-	0.0%	-	0.0%	-	0.0%
Facilities Contributed Expense	135	1.1%	135	1.0%	197	1.5%
Interest Expense	35	0.3%	85	0.6%	78	0.6%
Total Non-Operating Expenses	473	3.7%	506	3.8%	552	4.3%
CHANGE IN NET ASSETS	1.657	13.1%	1.035	7.7%	(661)	-5.1%



With inspiration from the likes of Ray Anderson, the phenomenal energy of trustees such as Carl Bass, and the generosity of our fine and farseeing sponsors, we are poised to move into the post-fossil fuel era envisioned in Reinventing Fire. The unique ambition of this project has set the stage to move RMI's effectiveness to a new level in the years ahead. I am proud to be a part of it.

-Suzanne H. Woolsey, Lead Trustee

## Letter From Our Lead Trustee



As I close my ninth year on Rocky Mountain Institute's Board of Trustees and my fourth as Lead Trustee, I'm pleased to report a year of gratifying achievement. We accelerated our strategic focus on Reinventing Fire mapping business-led pathways to a new energy era.

To create this unprecedented new intellectual capital, we shifted our research/collaboration balance toward research, generously funded by philanthropic support from key friends of the Institute. The process we launched

two years ago to guide internal allocation of our funding—our Programmatic Review and Evaluation Panel (PREP), made up of our leadership team—monitors progress quarterly. They lead a staff of some 80 dedicated and highly effective professionals.

Our board meetings emphasize strategy, delegating details to five committees. RMI's board has 20 seats, all but three of whom are independent of management. We are delighted to report that Carl Bass, CEO of Autodesk, has joined the board.

Trustee Emeritus Ray C. Anderson, founder and chairman of Interface and a leading green industrialist, died in August 2011, leaving a rich legacy of inspiration at RMI and beyond. I join my fellow trustees in deep gratitude for his leadership and service to the Institute; we also greatly admired his inspiring work at Interface.

### **RMI Board of Trustees**

John Abele, Shelburne, Vermont. BA, Physics and Philosophy, Amherst College. Chairman, FIRST. Founder and Director of Boston Scientific Corporation, a 16,000-employee, \$6-billion worldwide leader in the field of "Less Invasive Medicine."

Sharman Altshuler, Cambridge, Massachusetts. BA, University of Vermont; VMD, University of Pennsylvania School of Veterinary Medicine. Veterinarian. Trustee of Merck Family Fund, Bur and Burton Acacdemy, and The Farm School.

Peter Boyer, San Francisco, California. BA, American Studies, San Francisco State University. Former owner of a design-build residential construction firm. Artist, fine art painting, exhibited widely in the U.S. and Japan with works owned by numerous public and private collections. Trustee of The Ayrshire Foundation; frequent speaker on energy efficiency issues.

Mary Caulkins, Chair, Development Committee; Denver, Colorado. BA, Pitzer College. Artist, philanthropist, lead investor in one of the largest LEED-H residential and solar community projects in the nation in Mosier, Oregon. Director of the Caulkins Family Foundation.

Thomas Dinwoodie, Richmond, California. BS, Structural Engineering, Cornell; MS, Mechanical Engineering, MIT; MA, Architecture, UC Berkeley. Founder and CTO, SunPower Corporation Systems, a leading and global supplier of PV products and systems; founder; former CEO and Chairman of PowerLight. Author of numerous papers; over 30 patents on building-integrated photovoltaics and related products.

Michael Fain, Aspen, Colorado. University of Chicago. Mechanical and Optical Engineer and Project Manager, various aerospace companies; founder and former President, Alphametrics, Ltd., manufacturer of precision light-measuring equipment. Cofounder and former Chairman of Computers for Kids Foundation; Director, Aspen Center for Physics and Independence Pass Foundation; Member of National Council of NPT and Anderson Ranch Arts Center; co-author, with wife Judith Barnard, of eleven contemporary novels.

Suzanne Farver, Chair, Finance Committee; Woody Creek, Colorado. BA, Grinnel College; JD, University of Denver; ALM in Environmental Management, Harvard. Former Executive Director, Aspen Art Museum; Former Director of Development and Public Relations, Anderson Ranch Arts Center. Trustee of Denver Art Museum and Spiritual Paths Foundation; Chair and Trustee, Aspen Art Museum Foundation.

Arjun Gupta, San Francisco, California. BA, Economics, St. Stephen's College; MS and BS Computer Science, Phi Beta Kappa, Washington State; MBA, Stanford; Founder and Managing Partner of Telesoft Partners, a special situations venture capital firm; Director, Calient Networks, LogLogic, Nexant and Validity Sensors. Henry Crown Fellow and Trustee of the Aspen Institute.

Craig Kennedy, Chair, Audit Committee; Washington, DC. AB, Civilization Studies, University of Chicago; MBA, University of Chicago; MA, Social Service Administration, University of Chicago. President, German Marshall Fund; former President, Joyce Foundation; employed with Richard J. Dennis, a Chicago investor and philanthropist; created a consulting firm working with nonprofit and public-sector clients, including City of Chicago and Environmental Defense Fund. Director, Thomas B. Fordham Foundation; independent trustee, Van Kampen mutual funds.

Amory B. Lovins, Cofounder (1982), Chairman, and Chief Scientist of RMI; Snowmass, Colorado. MA, Oxford (by special resolution); 11 honorary doctorates; Hon. AIA; Fellow, Royal Society of Arts; Foreign Member, Royal Swedish Academy of Engineering Sciences; Chairman Emeritus, Fiberforge Corporation (an RMI spinoff); physicist, author, consultant; visiting professor (most recently at Stanford University's School of Engineering, 2007).

Reuben Munger, Boulder, Colorado. BA, Politics and Economics and BS, Business Administration magna cum laude, Washington and Lee University. Chairman and CEO, Bright Automotive (an RMI spinoff); Managing Partner, Vision Ridge Partners, LLC; former Managing Director at The Baupost Group, LLC, a \$20-billion investment firm. Chair of the Governing Board of Edvestors, Director of Stand for Children Leadership Center and Founding Member of The Electrification Coalition.

Martha C. Pickett, Executive Director and General Counsel of RMI; Snowmass, Colorado. BA, Guilford College; MCDP, College of Architecture and Planning, University of Colorado, Denver; JD, University of Denver. President, Windstar Land Conservancy; member of Advisory Board to Catawba College's Center for the Environment.

Michael Potts, CEO of RMI; Denver, Colorado. BA, Beloit College. Former CEO, American Fundware; Vice President of the Public-Sector Solutions division at Intuit. Member Colorado Cleantech Industry Alliance, Van Filder Insurance Corporation, and Community Banks of Colorado.

Chris Sawyer, Atlanta, Georgia. BA, UNC; Master of Divinity, Yale; JD, Duke. Partner, Alston & Bird since 1985, specializing in corporate governance, real estate, and conservation issues. Former Chairman, Trust for Public Land; Chairman of the Chattahoochee River Coordinating Committee; Director, Industrial Developments International and EDAW, one of the world's largest land-consulting firms; Chairman, Board of Advisors, Yale Divinity School.

Suzanne H. Woolsey, Lead Trustee; Chevy Chase, Maryland. BA, Stanford; MA, PhD, Harvard. Former COO and Chief Communications Officer, The National Academies of Science, Engineering, and Medicine. Member, Council on Foreign Relations; Director of the German Marshall Fund, Institute for Defense Analyses, Van Kampen Mutual Funds, Colorado College, Neurogen Corporation, and Intelligent Medical Device, LLC; former Associate Director, U.S. Office of Management and Budget; former consulting partner, Coopers and Lybrand; former member, Washington Post editorial board.

## RMI Awarded €900,000 by Dutch **Postcode Lottery**



RMI received its third grant from the Dutch Postcode Lottery (Nationale Postcode Loterij) during fiscal year 2010-2011. As one of the Lottery's long-term beneficiaries, RMI received an award of €900,000 (US\$1,262,585). RMI's CEO Michael Potts and

Executive Director Marty Pickett accepted the generous grant at the Lottery's Goed Geld ("Good Money") Gala held at the Singer Museum in Laren, Netherlands on February 9, 2011.

During the gala, thanks to the Dutch Postcode Lottery's 2.5 million participants, a total of €270,000,000 was awarded to over 80 charitable organizations around the world that work in the areas of environment. conservation, developmental aid, and human rights. The Lottery, which donates 50 percent of its gross revenues to these organizations has distributed more than €3.2 billion to its beneficiaries since its founding in 1989.

This year's funding from the Dutch Postcode Lottery was instrumental in carrying out the work described in this report, particularly our ability to complete the groundbreaking research and analysis for Reinventing Fire: Bold Business Solutions for the New Energy Era.

#### **RMI** Supporters

#### Contributions to RMI between 1 July 2009 and 30 June 2010

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\$1,000,000 and above Nationale Postcode Loterij Alice & Fred Stanback

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