RMI
ENERGY. TRANSFORMED.

QUARTERLY IMPACT REPORT SUMMER 2025

Accelerating the pace of change.

RMI's vision of a clean energy future commits us to THINK bigger, DO boldly, and SCALE globally.

Africa's Climate Tech Moment

Third Derivative startup BasiGo is deploying an electric bus fleet and charging in Nairobi, taking advantage of surplus clean geothermal energy on Kenya's grid at night.

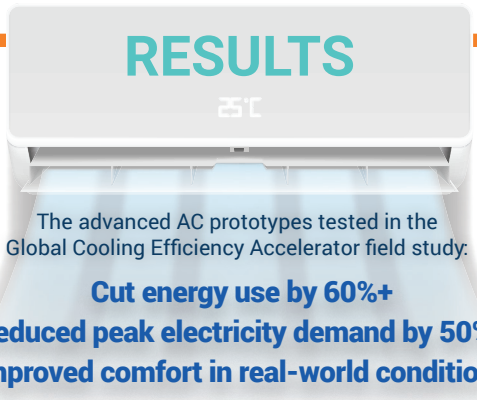
Emergent climate technologies represent a trillion-dollar opportunity for Africa to chart a clean energy path and build gigaton-scale, climate-positive industries. RMI's *Emergent Climate Tech in Africa* report highlights how early-stage solutions like advanced cooling, carbon-storing materials, and decentralized renewables can boost economic development, lower costs by 30 percent, and cut emissions by 90 percent. Supported by RMI's climate tech accelerator, Third Derivative, these innovations can drive inclusive growth and accelerate global climate progress.

Smart Policy Ripple Effect

In 2023, Minnesota passed a groundbreaking policy to reduce tailpipe emissions from major roadway projects by investing in clean transportation alternatives. When a delay in implementation was proposed in 2025, RMI published *The Domino Effect: States Prioritize Affordable Transportation Choices over Traffic*, showing the policy's growing relevance as five other states considered similar legislation. The piece helped illustrate the policy's broader impact and contributed to the state's decision to stay on track, starting in 2025 rather than 2028, locking in further cost savings, health benefits, and emissions reductions.

THINK | TESTING OUR ANALYSIS

RESULTS



The advanced AC prototypes tested in the Global Cooling Efficiency Accelerator field study:

Cut energy use by 60%+
Reduced peak electricity demand by 50%+
Improved comfort in real-world conditions

Rewriting the Rules of Cooling

In a first-of-its-kind field study, RMI and the Global Cooling Efficiency Accelerator partnered with Lodha, one of India's largest real estate developers, and CEPT University to test super-efficient air conditioners (ACs) in Palava City, India. Over nine months, the advanced AC prototypes outperformed typical market models, cutting energy use by more than 60 percent and reducing peak electricity demand by over 50 percent. These findings show that energy efficient and smarter cooling technologies that are designed for real-world conditions not only deliver better comfort in heat and humidity but also offer critical benefits for grid stability and emissions reductions. The results have the potential to shape global testing standards for ACs and accelerate the adoption of climate-friendly systems.

Arctic Insights, Global Impact

From Kotzebue to Cordova, RMI's Energy Leadership Accelerator convening in Alaska brought together a diverse cohort of energy leaders and fellows. Hosted in partnership with the Alaska Center for Energy and Power, it focused on local innovation in rural and remote power systems, including hydropower, microgrids, and energy equity. Firsthand learning from Arctic communities helped fellows develop new insights into affordability and reliability that will shape resilient, community-driven energy transitions in off-grid areas worldwide.

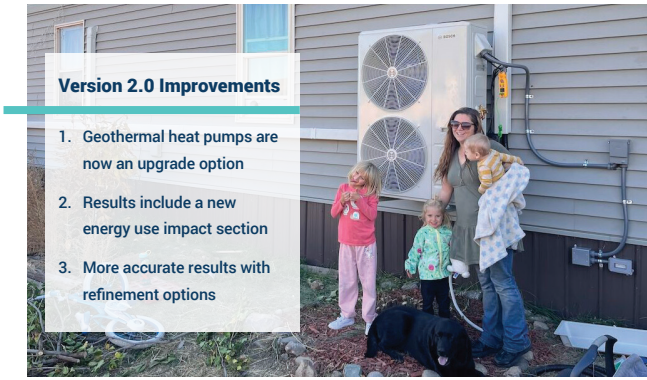
Unlocking Climate Finance for Resilience

Since its start in 2021, the Climate Finance Access Network (CFAN) has supported a $2 billion pipeline of country-led projects across the Pacific and Caribbean. With embedded advisors helping governments access funding for clean energy, adaptation, and infrastructure resilience, CFAN is turning climate ambition into action. As the network matures, additional investment can scale its reach and help more vulnerable nations navigate climate finance challenges and seize sustainable development opportunities.

DO | PILOTING SOLUTIONS

Home Upgrades, Supercharged

RMI launched Version 2.0 of the Green Upgrade Calculator, a free powerful tool designed to help contractors, residential energy program implementers, and policy advisors estimate the cost, energy savings, and emissions impacts of home electrification and efficiency upgrades. With just a few inputs, users can assess the benefits of technologies like rooftop solar, battery storage, air- and ground-source heat pumps, weatherization, heat pump water heaters, induction cooktops, and electric vehicles — alone or in combination.



The Cavarra family in front of their new heat pump.
Photo courtesy Gunnison Valley Regional Housing Authority

Version 2.0 includes three major enhancements: geothermal heat pumps have been added to the upgrade options; results provide new estimates of energy usage and impacts; and calculations support complex or customized scenarios. These improvements make the calculator an even more valuable planning tool for advancing clean, cost-effective residential energy solutions.

Since the launch of Version 1.0 just one year ago, more than 10,000 individuals have used the calculator. Multiple home upgrade programs and HVAC software platforms are now integrating the calculator to deliver tailored results within their own tools — helping scale adoption of climate-friendly technologies.

SCALE | CATALYZING MARKETS

Built to Weather the Storm — How RMI Is Future-Proofing Solar

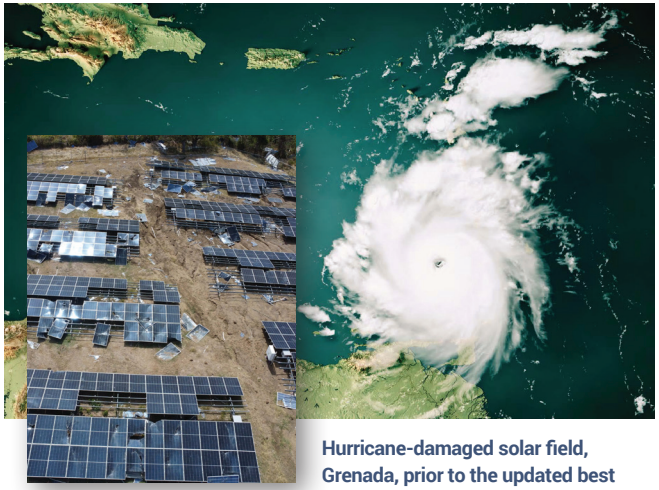
In the summer of 2024, Hurricane Beryl — the earliest Category 5 hurricane ever recorded in the Atlantic — ravaged parts of the Caribbean, including solar arrays on the Grenadine islands. The destruction underscored a critical truth: as solar power becomes a lifeline for island nations, ensuring its resilience isn't optional, it's essential.

RMI's *Solar Under Storm III* report, released in June 2025, marks the third installment in a vital series of reports spanning seven years. Each report builds on field investigations and engineering analysis to provide best practices for hurricane-resilient ground-mount solar photovoltaic (PV) systems. The latest edition is the most comprehensive yet, drawing lessons from three solar arrays directly impacted by Hurricane Beryl and offering updated guidance based on evolving technologies, design codes, and field-tested data.

The stakes couldn't be higher. The Caribbean is rapidly transitioning from fossil fuels to solar power — over 90 percent of utilities in the region now deploy solar, and some islands generate more than 90 percent of their electricity from it. As these clean energy systems replace diesel, their reliability, especially in the face of intensifying storms, determines whether communities have power when they need it most.

Solar Under Storm III contrasts projects that followed previous RMI recommendations with those that didn't. One array built with best practices remained structurally sound; another, lacking key design features, suffered catastrophic damage.

Construction of the first ground-mount solar project on Anegada British Virgin Islands, where it will supply the majority of generation for the utility.



Hurricane-damaged solar field, Grenada, prior to the updated best practices and Hurricane Beryl over the eastern Caribbean, July 2024.

These outcomes reinforce the value of rigorous standards and offer clear guidance for improving survivability across four key areas: module mounting, structural racking, foundation design, and electrical systems.

New to this latest report is a deeper analysis of failure in panel frames after fewer high-stress events, a type of failure not seen in prior reports but responsible for 95 percent of system damage in one site after Beryl. Also emphasized are topographical risks, component corrosion, and lateral loads — issues that can jeopardize even well-designed systems.

Beyond technical fixes, the report calls for stronger collaboration. It encourages solar stakeholders to coordinate on manufacturing standards, share test results, and engage with forums like the PV Resiliency Working Group hosted on CAREC (Caribbean Renewable Energy Community), a community of energy professionals and organizations supported by the Caribbean Electric Utility Services Corporation. This collective action is key to building an industry that not only mitigates climate change but also withstands it.

Over three editions, the *Solar Under Storm* series has become a go-to resource for solar developers, utilities, engineers, and policymakers across the Caribbean and other hurricane-prone regions. It offers more than engineering specs — it offers a blueprint for adaptation.

As climate change fuels increasingly extreme weather, even in places unaccustomed to such threats, the insights from *Solar Under Storm* extend far beyond the Caribbean. From coastal nations to inland communities contending with more frequent and intense storms, these recommendations are setting the global standard for what resilient solar looks like in a changing world.

SUPPORTER SPOTLIGHT

George Krumme — WWII hero, scientist, and writer — passed away in July 2024 at age 101, leaving a $1 million bequest to RMI's Strategy team. A longtime supporter, George believed deeply in confronting climate change with courage and clarity. His extraordinary life of service and scholarship continues to inspire our mission.

"George was a man of rare depth — thoughtful, farsighted, and quietly courageous," says Lena Hansen, chief strategy officer at RMI. "His support helped RMI challenge outdated assumptions in the global energy conversation, and his final gift ensures that work will continue. We're deeply honored by his trust and his vision."

Krumme's gift sustains RMI's work to shape the global energy narrative and accelerate a just, clean energy transition — an effort George championed with heart and vision.

Estate gifts of any size are meaningful contributions.

August is Make-A-Will Month in the United States. RMI partners with FreeWill to make accepting and tracking estate gifts easier. As a part of our partnership, ***you can use FreeWill to easily and quickly create or update your will at no cost.*** *While there's no requirement to include RMI in your plans, the tool offers the option to do so, helping ensure your legacy supports bold clean energy solutions for generations to come. Learn more at rmi.mygiftlegacy.org.*

WHAT YOU CAN DO

Learn more about any of this work and how you can take part in the clean energy transition by scanning this QR code with the camera app on your smartphone or visiting: rmi.org/impact-summer-2025