MIT-GE Vernova Energy and Climate Alliance kicks off with slate of 13 new energy and climate research projects, eight endowed fellowships, campus activities, key collaborations

- On campus launch follows creation of Alliance in March and GE Vernova’s commitment to invest $50 million over five years to fund research initiatives, student fellowships, internships, educational and professional development programs, and support philanthropic initiatives

- Inaugural research projects focus on areas of Electrification, Digital Solutions, Decarbonization, and Renewables Acceleration

- Celebratory event, science displays, food trucks and more help launch Alliance aimed at advancing new technologies and fostering new leaders in power industry

- Welcoming eight endowed GE Vernova Fellows, Technology and Policy Program funding recipients, and nearly 1,000 students to learn from Advanced Research Center tech demonstrations and connect with GE Vernova's Executive Leadership Team

CAMBRIDGE, MA (September 15, 2025) – MIT and GE Vernova today formally kicked off their unique Energy and Climate Alliance with multiple research and fellowship announcements, career discussions, science displays and more. Bringing GE Vernova’s advanced technology and innovation together with MIT’s world class researchers, the MIT-GE Vernova Energy and Climate Alliance is committed to accelerating cutting-edge technologies and fostering the next generation of power industry leaders.

As part of the Alliance, GE Vernova will provide $50 million over five years to fund MIT research initiatives, student fellowships, and internships, philanthropic causes, as well as educational and professional development programs for GE Vernova leaders. The first 13 of these research initiatives were announced today, which will focus on the areas of Electrification, Decarbonization, Renewables Acceleration and Digital Solutions. The Alliance also announced eight GE Vernova Fellows, who will continue their research at MIT with tuition support from GE Vernova, funding for three master's students per year through MIT's Technology Policy Program, and philanthropic partnerships. More details on these three announcements are below.

Leaders and researchers from both organizations celebrated the milestone with a campus event that included MIT alumnae now working at GE Vernova, aiming to attract students considering a career in the energy and climate industries. Scheduled to give remarks at the kickoff events are Anantha P. Chandrakasan, Provost of the Massachusetts Institute of Technology and Vannevar Bush Professor of Electrical Engineering and Computer Science, Dr. Betar Gallant, Kendall Rohsenow Associate Professor of Mechanical Engineering, Faculty Director for the MIT-GE Vernova Energy and Climate Alliance, Massachusetts Secretary of Energy and Environmental Affairs Rebecca Tepper, Massachusetts Secretary of Economic Development Secretary Eric Paley, and GE Vernova CEO Scott Strazik and Chief Corporate Officer Roger Martella.

"The mission of this alliance is ambitious — advancing research, education, and career opportunities that can help shape a more sustainable, energy-efficient future. Through this exciting Alliance, we are already seeing exciting results: new research projects, new graduate fellowships, and new opportunities for our students to lead," said **Anantha P. Chandrakasan, MIT Provost, and Vannevar Bush Professor of Electrical Engineering and Computer Science.**

"Decarbonizing our energy systems demands new ideas, new tools, and new talent. As of today's launch, MIT teams are already pursuing bold projects that span disciplines and open new frontiers — and crucially, give our students a chance to learn, contribute, and lead," said **Betar Gallant, Faculty Director of the MIT–GE**

Vernova Energy and Climate Alliance and Kendall Rohsenow Associate Professor of Mechanical Engineering at MIT.

“The Energy and Climate Alliance represents Massachusetts at its best – putting pioneering companies in the same space as brilliant students and watching innovation take off,” said **Massachusetts Energy and Environment Secretary Rebecca Tepper**. “We’ve seen time and again, ideas born out of our colleges and universities grow into thriving businesses that employ thousands and solve some of the world’s toughest challenges. Years from now, I look forward to seeing what innovation was started here at MIT today.”

“We’re proud to collaborate with the world’s leading research institution and combine forces to bring tomorrow’s technologies to life faster and solve some of the world’s most pressing challenges,” said **GE Vernova CEO Scott Strazik**. “Building on our sense of relentless optimism, I’m inspired by MIT’s amazing students and researchers and excited to develop career paths and opportunities for their futures.”

The MIT-GE Vernova Energy and Climate Alliance also include commitments to support philanthropic initiatives, including the MIT Human Insight Collaborative initiative (MITHIC). For 2025-26, GE Vernova’s MITHIC contribution will tackle the shared priority of addressing global energy poverty by supporting the MIT Abdul Latif Jameel Poverty Action Lab (J-PAL), which among other areas is working on an initiative to improve the growth of affordable electricity in South Africa.

Another focus area of the Alliance is the development of future energy leaders, including through donations to the New Engineering Education Transformation program and commitment to supporting MIT interns. GE Vernova has also provided funding and become an official member of critical sustainability, automation/robotics and AI focused programs at MIT, including the Initiative for New Manufacturing, MIT Energy Initiative, MIT Climate and Sustainability Consortium, and Center for Transportation and Logistics. The Alliance will also support critical cross-institution engagements for energy and climate policy development, including funding three Technology and Policy Program research

projects annually, and hosting an Annual Symposia.

The slate of 13 new MIT-lead research initiatives will include the following projects:

- **Electrification –** Focused on building the grid of the future with resilient cutting-edge hardware and software.
  - Professors Samantha Coday and David Perrault's labs will be addressing the expected power surge demands from datacenters through innovative converter and transformer designs.
  - Professors Priya Donti and Deep Deka's labs will tackle the ever-changing needs of the electric grid's constraints and limits in a unified and adaptable approach using AI-based solvers.
  - Professor Marija Illic's lab will be developing a scalable control and protection framework for stable and optimal grid forming operation.
- **Digital -** Accelerating design of complex industrial tools and products through AI, multi-robot intelligence and Cyber security infrastructure.
  - Professor Chuchu Fan's lab will develop autonomous manufacturing and field inspection robots to perform complex/unsafe tasks in place of humans.
  - Professor Faez Ahmed's lab will seek to develop a physics-aware foundation model to reduce turnaround time of high-fidelity simulations, including a Large-Language Model (LLM) agent to demo on selected component redesigns.
  - Professor Rahul Mazumder's lab will seek to develop a functional chatbot capable of processing multimodal data and engaging users in interactive dialogue.
  - Professor Pulkit Agrawal's lab will develop a foundation model for robotic assembly that can support human tasks in manufacturing.
- **Decarbonization -** Meeting the world's growing needs for electricity while accelerating breakthroughs in carbon-free energy solutions.
  - Professor Asegun Henry's lab will be exploring the limits of their methane-to-hydrogen process, which uses a unique molten-metal reactor

and carbon separator. This process may offer a more economical route to hydrogen production.
    - Professors Ericmoore Jossou and Koroush Shirvan's labs will be developing a new alloy for next-gen nuclear fuel cladding to withstand extreme heat and radiation. The result would be stronger, longer-lasting fuel components that reduce downtime, lower maintenance costs, and help deliver more affordable, reliable nuclear energy.
    - Professor Ju Li's lab will be exploring a novel system to convert CO2-derived syngas from solid oxide electrolysis (SOEC) to Ethanol using alternating current electrolyzers, with the goal to reduce CO2 waste.
    - Professors Yogesh Surendranath and Rohit Karnik's labs seek to develop high-conversion, cost-and energy efficient ammonia cracking through a novel, scalable electrochemical membrane reactor design demo.
- **Renewables acceleration -** Driving innovation in energy storage, wind power and operational optimization to improve efficiency, reliability, scalability and affordability.
    - Professor Mike Howland's lab will identify conditions that trigger damaging vibration events for wind blades, with validation from Prof Marcus Hultmark's experimental work at Princeton University.
    - Professor Cohen Tal's lab, partnering with Professor John Pojman at Louisiana State University, proposes a more sustainable alternative blade manufacturing process.

The 8 GE Vernova Fellows are as follows:

- **Gage Coon,** Department of Earth, Atmospheric, and Planetary Sciences
    - Research focus: Designing microbial and geochemical systems that are scalable, cost-effective, and compatible with existing waste streams or geologic formations.
- **Kevin Hsu,** Department of Urban Studies and Planning
    - Research focus: Understanding systemic barriers that slow, stall, or stop outright the delivery of clean energy projects and finding ways of surmounting these challenges.

- **Nicolas Tricard**, Department of Mechanical Engineering
    - Research focus: Physics-informed and data-driven inverse modeling of gas-phase reacting systems.
- **Owen Mylotte,** Department of Nuclear Science and Engineering
    - Research focus: Developing an open source, high performance neutron transport software targeted at improving the ease and efficiency with which new reactors can be designed and deployed to market.
- **Julia Estrin**, Department of Electrical Engineering and Computer Science
    - Research focus: Developing high-voltage, high-efficiency, and high-frequency power electronics that will help form the foundation of an electrified grid.
- **Aaron Langham**, Department of Electrical Engineering and Computer Science
    - Research focus: Applying advanced signal processing, physical modeling, and computer systems to create new physically trustworthy power monitoring capabilities that provide actionable information for operating electric grids
- **Hannah Grauer**, Center for Computational Science and Engineering
    - Research focus: Advancing deep learning and physics-informed methods for more accurate and interpretable satellite-based emissions quantification.
- **Jack Morris**, Institute for Data, Systems, and Society
    - Research focus: Developing energy system optimization models to identify pathways to more affordable, reliable and clean electric power systems.

Technology Policy Program awardees are:

- **Michelena O’Rourke**, Department of Electrical Engineering and Computer Science
    - Research focus: Developing a Digital Twin to model and analyze electricity markets.
- **Jason Frost**, Institute for Data, Systems, and Society

- Research focus: Modeling the generation interconnection process to rapidly evaluate and develop interconnection reforms that accelerate deployment of clean energy resources.
- **Martin Staadecker**, Institute for Data, Systems, and Society
  - Research focus: Understanding how companies report their greenhouse gas emissions, especially supply chain emissions.

The selected projects were reviewed and approved through a joint process led by MIT faculty and GE Vernova's Advanced Research Center lead researchers.

The MIT-GE Vernova Energy and Climate Alliance is managed through MIT's Office of Innovation and Strategy, bringing together faculty, researchers, and students to address some of the most pressing challenges in energy and climate technology. Beyond research, the collaboration will play a vital role in developing the energy sector's future workforce. Through fellowships, research support, and internships, MIT students will gain hands-on experience at GE Vernova's global facilities tackling real-world energy challenges. A dedicated career exploration program will further connect MIT students and faculty with opportunities across GE Vernova's global teams.

To foster interdisciplinary dialogue, MIT and GE Vernova will host an annual symposium in February 2026 on the MIT campus, bringing together thought leaders, students, and industry experts to present research results and explore cross-cutting solutions in energy, climate, and technology policy.

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About GE Vernova

GE Vernova Inc. (NYSE: GEV) is a purpose-built global energy company that includes Power, Electrification and Wind segments and is supported by its accelerator businesses. Building on over 130 years of experience tackling the world’s challenges, GE Vernova is uniquely positioned to help lead the energy transition by continuing to electrify the world while simultaneously working to decarbonize it. GE Vernova helps customers power economies and deliver electricity that is vital to health, safety, security, and improved quality of life. GE Vernova is headquartered in Cambridge, Massachusetts, U.S., with approximately 85,000 employees across approximately 100 countries around the world. Supported by the Company’s purpose, The Energy to Change the World, GE Vernova technology helps deliver a more affordable, reliable, sustainable, and secure energy future.

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