

# MIT ALUMNI FOR CLIMATE ACTION

## MACA Approved as an Official MIT Alumni Association Group

In May, MACA was endorsed as an official MIT Alumni Association group, positioning us to grow and lead a vision for solutions to the problems facing our planet. In an email welcoming MACA, MITAA CEO Whitney Espich wrote, “We look forward to working alongside you and [MACA’s] board to cultivate even stronger connections between the alumni community and the Institute. The [MITAA] Board of Directors is looking forward to the impactful work the MIT Alumni for Climate Action will do in building and strengthening relationships between alumni and the Institute.”

Over the past several months, MACA’s new Communications Manager, Victoria Owens, has been communicating our knowledge of climate change and its solutions on the MITAA website (<https://alum.mit.edu/>). Soon, MACA can be reached under the “Communities” and “Volunteers” tabs. MACA affiliation of members who have registered on the MITAA site have also been added to the Alumni directory. Via this platform, MACA members will be able to collaborate with each other and the greater alumni community to form new partnerships, inform climate research and policy, and share solutions to the increasingly complex global issues shaping Earth’s climate.

MACA’s public website (<https://maca.earth>) will continue to provide opportunities for the community beyond MIT, engaging our affiliates and friends. In doing so, we are becoming even more capable, efficient, and visible to respond to opportunities for protecting and enhancing the health of our planet.

## Upcoming Annual Meeting - January 18th

MACA’s Annual Meeting has been scheduled for Sunday, January 18, 2026 at 1 p.m. EST/10 a.m. PST on Zoom. Join us in welcoming our invited speakers from Climate XChange: Jordan Gerow, Policy & Research Director, and Paola Ferreira Minai, Executive Director. Established in Massachusetts in 2013, the nonprofit works to achieve a rapid and equitable transition towards a zero-emissions economy by advancing state climate policy in the US. Climate XChange launched its updated State Climate Policy Dashboard last year, including an all-in-one tool for advocates and other climate actors to research and advance climate policy.

Climate XChange will present its latest research entitled “Where States Stand on Data Centers: Exploring Climate Impacts and Policy Approaches.” The presentation will dive into state data center regulations, which has become a key priority for climate and energy advocates in 2025. Without meaningful policy guardrails, unchecked data center development poses a threat to water resources, energy affordability, grid reliability, and public health.

Following the Climate XChange presentation, members will hear about changes to MACA resulting from the promotion of our club to official status from MACA’s President, Shiladitya DasSarma, and our recent Strategic Planning survey and exercise from Margaux Filippi, Strategic Committee Chair. Members will be provided the opportunity to meet in breakout rooms to discuss meaningful climate action for 2026, including ways to partner with MIT, write position papers, and develop our strategic roadmap. All members are invited to come and voice their opinions on January 18, 1-3 pm EST. Questions and ideas may be shared at [info@maca.earth](mailto:info@maca.earth).

## MITALUMNI



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# Editorial: America Needs a Commitment to Address the Health Impacts of Climate Change

American climate policy turned away from democratic principles this year by abandoning our publicly supported Nationally Determined Contributions to the Paris Agreement, and rolling back climate policies in the Inflation Reduction Act and Bipartisan Infrastructure Law enacted by the US Congress during 2021-22. The Department of Energy has rescinded more than \$7.5 billion of grants for renewable energy projects and eliminated offices devoted to clean energy technologies, energy efficiency and assistance to states and communities, and expansion of the nation's electrical grid. The Environmental Protection Agency announced that it would weaken more than two dozen pollution abatement policies intended to protect the health and welfare of the public in the name of stated goals such as lowering the cost of energy.

During the United Nations COP30 in Belém, Brazil, in November, the US administration announced a series of decisions to dismantle environmental protections, including scaling back the 1972 Clean Water Act designed to protect from pollution of "all waters" by excluding upwards of 55 million acres of wetlands and streams reported by the Natural Resources Defense Council, and enacting changes to the Endangered Species Act which would allow oil drilling near critical habitat of endangered species such as Rice's whale. In addition, the Interior Department began approving new oil and gas drilling across nearly 1.3 billion acres of U.S. coastal waters, including the pristine Arctic National Wildlife Refuge. If these policy changes are permitted to stand, the impacts on the health and welfare of American citizens will be seriously impacted.

Due to the changing US priorities, GHG emissions from fossil fuels were up in the first half of 2025 and the International Energy Agency has lowered its forecast for growth of renewable energy by 2030 nearly in half. In the European Union, emissions have been trending up while in China and India, GHG emissions were trending down. Encouragingly, India installed solar and wind energy faster than the rise in demand, suggesting that the world may be close to reaching a tipping point for fossil fuels. Nevertheless, overall emissions from fossil fuels continue to rise globally in 2025, by an estimated 1.1% this year, and are projected to reach 38 MT of CO<sub>2</sub>e. Globally, the picture is mixed with renewables like wind and solar producing more electricity than coal for the first time, as reported by Ember, despite the price of oil tumbling from \$75 at the beginning of 2025 to \$60. The investment in renewables globally is double that of fossil fuels, with nearly 25 % of all new vehicles sold worldwide now being electric; and half of power-generating capacity of China and India is already low-carbon.

The US administration's termination in support of NOAA's Billion Dollar Weather and Climate Disasters database may have resulted in lack of continuity in government data, but Climate Central is continuing to the update database. It's clear that billion dollar catastrophes escalated in 2025, with the tally from the first half being \$101 billion from 14 events, the highest damages ever recorded. The most expensive disaster was the January wildfires in Los Angeles estimated to cost \$61 billion, affecting 16,000 buildings and causing deaths of around 400 people. While the cost of health damages from recent climate change disasters are not available, past estimates indicated that combined with air pollution from burning fossil fuels, the financial burden on healthcare represents more than 4% of GDP. Globally, the health impacts are much greater, with predicted grave consequences for 1-3 billion people over the 50 years spanning 2020-2070.

All of these changes require preparation for the inevitable challenges in a world with accelerating climate change. While a "strategic pivot" from slashing emissions, proposed by Bill Gates may be questionable, attempting to alleviate the widening climate gap resulting from climate change, poverty, and addressing the suffering of the poorest is not. The global commitment to triple the climate finance promised in COP30 is a step in the right direction but insufficient to address the accelerating damages from climate change impacting life, health, and livelihood. With the slower emissions reduction and mitigation, and continued burning of fossil fuels, air pollution will continue to cause respiratory, cardiovascular, and other diseases as well as increase the number and ferocity of disasters disproportionately impacting the poor and vulnerable.

As health costs of delayed climate action continue for the balance of the decade, and the world passes the 1.5 degrees C Paris target, the need for increasing resources from current levels of health funding will become apparent. Health costs will likely rise to become a global crisis. The challenges to the healthcare sector will be complex, with both impacts to health facilities such as hospitals becoming more acute and effects on healthcare workers working through ever increasing storms, wildfires, heat waves, diseases, etc. becoming more onerous. The pace of financial support must meet the increasing societal healthcare needs resulting from lack of continuing emissions reductions.

# Wrap-Up: COP30 Negotiations Smolder

By *Amelia Macapia*

As countries gathered for the United Nations COP30 climate conference in Belém, Brazil, progress on climate action has remained slow. Governments were required to affirm their climate commitments and submit new Nationally Determined Contributions, or ‘NDCs,’ covering the period up to 2035, and COP30 opened amidst a turbulent geopolitical context and climate extremes. The conference center in Belém was on fire, literally.

Amidst critiques of multilateralism and slow-walking unambitious pledges, as well as Indigenous protests demanding action, countries remained divided in their alignment of climate goals with trade relations and national security. In Europe and China, targets were set and private investments were made, while fossil fuel production had surged in the US and Russia.

With the US not having cooperating in climate talks, potentially majorly derailing climate funding, other countries have stepped up. Small island states and least developed countries pushed to close the gap between NDCs and the Paris Agreement’s 1.5 degree target.

A key issue had been how exactly adaptation will be financed, with last year’s agreements to triple climate finance to USD 300 billion, but this year’s contributions falling below what vulnerable countries need by a trillion dollars.

Other major disputes included how, or whether, COP30 will commit to ending fossil fuel use. The Roadmap from Baku to Belém to transition away from fossil fuels was not featured prominently on the agenda. Although some critics argue that the presidency-led process sidestepped formal UNFCCC negotiation by all 198 parties, the deeper issue is that countries could not agree on the transition itself.

That impasse was reflected in the Belém Political Package. While the phrase ‘transitioning’ was used previously in the Global Stocktake, Saudi Arabia and Russia have blocked all use of it since then, preventing the verb from gaining legitimacy in the final text. COP30 ended with no formal acknowledgement that fossil fuels must be phased out.

The political package also revealed wider equity disputes in climate diplomacy. The Mutirão cover decision, proposed by the COP30 Presidency and backed by more than 20 countries, was criticized for not including the core demands of small island states and least developed countries.

With COP30 offering no breakthrough on fossil fuels, little clarity on how adaptation will be funded, and no assurance that gender and justice will shape how the Global Stocktake is implemented, the world’s most vulnerable are still fighting for recognition and progress. With a missed 1.5 C target, the challenge is now to accelerate implementation of finance, adaptation and mitigation, and equity disparities amidst rapidly accelerating planetary change.

## Meet Key MACA Members!



Amelia Macapia



Victoria Owens



Lily Rose Smith

**Amelia Macapia, MACA Newsletter Editor.** Amelia is a science writer with interests in ocean and climate science and policy. She helps direct this year’s interviews articles with the MIT Science Policy Review. Previously, she worked as a Guest Investigator in two bioacoustics laboratories at the Woods Hole Oceanographic Institution. Reach out to her at [ameliamacapia@gmail.com](mailto:ameliamacapia@gmail.com) with your latest climate and club news!

**Victoria Owens, MACA Communications Manager.** Victoria is a member of the MACA Board and is responsible for MACA’s presence on the MITAA website (<https://alum.mit.edu>) which will go live prior to our Annual Meeting on January 18. The site will circulate information about shared events, activities, interesting content, etc., support the Newsletter & LinkedIn content, and facilitate collaborations within MACA and with the larger MIT alumni community. Reach out to her at [vowens114@gmail.com](mailto:vowens114@gmail.com)!

**Lily Rose Smith, MACA Community Manager.** Lily Rose is a class of 2023 Course 1 (environmental) graduate and is responsible for MACA’s events scheduling and membership activities. She is on the Annual Giving Leadership Team with the Alumni Association at MIT. Her goal is to become more involved in activism regarding the environment and help make MACA’s transition to an official MITAA member group smooth. Reach out to her at [lilyrose10smith@gmail.com](mailto:lilyrose10smith@gmail.com)!



## Renewables Boom Under Trump's Subsidies

By *Amelia Macapia*

Despite the Trump administration rolling back renewable energy tax breaks amidst a slew of policies to impede renewables, clean energy continues to surge. Construction must commence before July of 2026 for federal tax credits that will be eliminated under the Treasury Department's "One Big Beautiful Bill." As such, developers are scrambling to install solar panels, wind turbines, and battery storage before subsidies expire.

Renewable energy is still expected to surge across the grid through 2027, not only because of the race to expedite production but also because of renewable energy demand growth. Compared to natural gas and nuclear plants, solar and wind have faster installation times and are more affordable. For the first time, renewables globally outpaced coal electricity generation. This year alone, the U.S. Energy Information Administration projects that renewables and battery storage will account for 93% of new grid capacity.

By 2028, however, the effects of rolled back clean energy support under "drill, baby, drill" fossil fuel policies will be felt by American developers and homeowners alike. While larger developers are able to pay upfront costs for installations, smaller companies who can't keep up are preparing for the worst, potentially dismantling hundreds of renewable projects. For homeowners, supply issues with fossil fuels is likely to result in increased energy bills.

## Join Group Writing Paper on Emerging and Developing Economies

By *Jose Pareja*

Today, solar and wind energy are cheaper than fossil fuels alternatives. Developing nations are projected to account for the majority of future emissions growth, potentially contributing a large percentage of new emissions in the coming decades unless their energy systems undergo a major green transformation. In this context, energy security and economics, rather than climate change impacts, will likely move clean energy forward the most. A focus on investing in solar and wind projects is needed to diversify the grid and meet accelerating electricity demand. If economic dynamics are indeed a primary driver of the energy transition, instead of putting undue pressure on government policies, nations may instead find ways to reduce the cost of clean energy installation. Additional attention is needed on R&D in key sectors that are currently too expensive to decarbonize, providing avenues for economic viability in future and reducing price impacts on consumers. So far, China has driven massive investments in renewables as it seeks to expand energy security and geopolitical influence in the Global South, but this group will address ways to expand the US role in the future.

Join Jose Pareja ([japareja@live.com](mailto:japareja@live.com)) and the MACA Justice team to help analyze and develop a position paper on the subject of EDMs, a topic critical for limiting future emission of greenhouse gases.



## The Overlooked Climate Threat: Methane

By *Sudhakar Puvvada*

While carbon dioxide often dominates the climate conversation, methane remains one of the most overlooked yet powerful drivers of global warming. [The MACA Education Team](#) has created a clear and timely explainer showing why methane deserves far more attention. (See [Methane Post](#).) Methane traps 84× more heat than carbon dioxide over a 20 year period and is responsible for nearly one-third of today’s warming—yet public awareness remains low. The article breaks down where methane comes from, why recent studies show emissions rising faster than expected, and how cutting methane now can deliver rapid climate and health benefits. It also offers practical, actionable steps—from fixing leaky gas appliances to reducing food waste and supporting better waste-management policies. This important piece was developed by the MACA education sub-team of Sudhakar Puvvada, Jose Pareja, Michael Schneider, Jeffrey Smith, and Victoria Owens and reflects MACA’s commitment to elevating climate literacy and empowering our community to act on high-impact opportunities.

## The Climate Moonshot

By *Glenn Weinreb*

Should MACA start a Climate Moonshot Group to identify the R&D that would be needed to solve the climate problem? This would need to involve many scientists and engineers -- and require solutions beyond renewable energy which is already cost competitive with fossil fuels. Even if we stopped emissions today, the level of CO<sub>2</sub> in the atmosphere would result in sea level rise that would submerge many coastal cities.

## The Climate Moonshot continued

To solve such catastrophic problems arising from global warming, substantial R&D is needed that can restore the Earth’s climate to a state that is sustainable over centuries. Examples include reflecting sunlight back into space or burying the anthropogenic carbon dioxide already released into the atmosphere in geologically stable formations. Join us at an Annual Meeting breakout session to start a MACA group to discuss ideas for a Climate Moonshot leading to a MACA position paper.

Contact: Glenn Weinreb, MACA member,  
gWeinreb@manhattan2.org

## New MACA Architecture Group

By *Meral Ekincioglu*

We are thrilled to announce the formation of a new working group within MACA, dedicated to Architecture & Climate Action, and we warmly invite you to join us in shaping its vision, projects, and events. This group will be led by MACA affiliate, Meral Ekincioglu, Ph.D., who was a visiting scholar in the MIT Department of Architecture.

MIT is home to the oldest architecture school in the U.S. and has a remarkable legacy of shaping the built environment through teaching, research, and innovative design. Building on this legacy, it is time for us to advance collective climate action in architecture and urban design. As climate change accelerates, establishing the MACA’s Architecture & Climate Action working group is a crucial step toward MACA’s mission of driving measurable impact at the intersection of architecture and climate action.

This group will bring together MIT alumni, current and former fellows, scholars across architecture, urban design, planning and related design-centered disciplines, practices and professions.

## MACA Architecture Group continued



The goal is to foster collaboration on action-driven initiatives, share expertise, identify challenges, amplify ongoing efforts, and connect with other MIT climate-focused programs.

Whether your experience lies in practice, research, technology, policy, or simply a personal passion for carbon free, healthy and sustainable environments, your perspective, creativity, and engagement will be deeply valued. Together, we can envision and implement solutions that transform architecture and cities for a resilient, climate-conscious future.

Interested members are invited to email Meral at [meralekinci2020@gmail.com](mailto:meralekinci2020@gmail.com). There will be a breakout room at MACA's Annual Meeting for interested members to network to contribute their expertise, and help build a vibrant platform where MIT alumni collectively lead on climate action.

## MACA Strategic Roadmap

*By Margaux Filippi*

You wrote, we listened!

Thank you to all the MACA members who took the time to respond to our summer survey over the summer! The Board has been developing a strategy for MACA's continued progress and the member survey was a crucial opportunity to gather input from members. Your feedback on current MACA activities, as well as what you'd like to see more of, played a big part in shaping our strategy for MACA's future discussions.

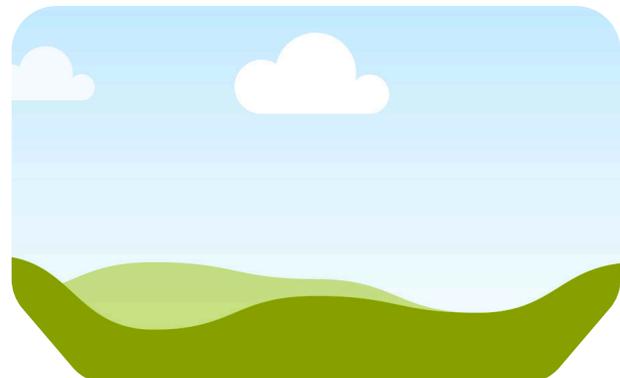
A summary of your strategic recommendations will be shared at the MACA Annual Meeting, to be hosted on January 18th. Following a presentation of our roadmap, we will host break-out rooms to discuss additional feedback from the membership.

In the meantime, we wanted to share several updates that are already underway based on the survey responses so far.

The MACA Board has created two new volunteer roles: Community Manager and Communications Manager. These roles will support help onboarding and member engagement, and ensure more regular, timely communication - both within our membership, the larger MIT alumni community, and others. In addition, MACA is committing to more frequent programming and networking opportunities.

These steps are just the beginning. We're excited to continue building a connected and impactful MACA community.

Thank you again for your thoughtful contributions. More to come!



## MACA-MIT Campus Decarbonization Plan

By Susan Murcott

Join MACA Campus members for an exciting breakout room discussion at the January 18th Annual Meeting on the latest news on the distributed thermal energy network plan for campus decarbonization, a collaboration resulting from several years of MACA-MIT Campus team, student, and faculty meetings. Everyone is welcome to contribute on how best to move forward with advocacy for campus decarbonization.

For background, the MACA-MIT Campus working group has investigated the three Thermal/Geothermal Heat Pump System Campus Decarbonization Plans put forth by separate MIT Administration, Faculty/Student and/or Alumni/Faculty/Student groups.

DECARB (5/2024) – A student-faculty project aiming for net-zero by 2050 through deep retrofits of buildings and working towards a 5th generation (distributed) district system (8 buildings/year). "Source: C Reinhart, D Hsu, C Mueller, L Norford, J Sterman and J Trancik, 2025, How to decarbonize the MIT campus?"

AEI (12//2024) – An unpublished consultant study proposing a centralized, phased approach with flexibility to adopt future technologies including nuclear microreactors or deep geothermal; targets ~90% reductions by 2045.

MITTEN (1/2025) – Alumni, student, faculty proposal (MACA-MIT Campus & MIT Thermal Energy Network) advocating for a distributed thermal energy network with water-source heat pumps and campus-wide retrofits, projecting full decarbonization by 2035 (assuming start-up in 2025 of campus building retrofits -- east, west south, north, location-by-location).

For those wishing for additional information, key documents for each of these three plans will be provided online, in advance of the MACA annual meeting. Contact Susan Murcott for more information: [murcott@mit.edu](mailto:murcott@mit.edu).

## Got News?



Send in your updates, announcements and events for the next quarterly newsletter via this NEW [submission form](#) to share with the MACA Community.

**Looking for volunteers:** MACA needs your help! Is your passion advocacy/policy, justice, entrepreneurship, technology, education, or campus-related? Let us know ways in which you want to engage with us. After the last two summers' heat waves, storms, floods, and wildfires, and the world on the verge of passing the 1.5°C Paris target, the fight against climate change is more urgent than ever. We need volunteers for creating content and more. Email us at [info@maca.earth](mailto:info@maca.earth) to get (more) involved.

To facilitate dissemination of meetings and minimize overlap of events, Liliana Pimentel has set up MACA's new calendar, which can be found at [here](#). Please add events!

Help our community grow - *it takes a member to bring in a member* - invite other Alumni to join MACA. MIT Alumni can join by filling out this [form](#). Non-MIT Alumni can be sponsored and join as affiliates members by filling out this [form](#).

You can organize MACA events with local MIT Clubs and request a MACA panel for [events here](#).

Remember to also check out [MACA.Earth](#) webpages for more news and information.