



MIT Alumni for Climate Action

<https://mit.alumniaction.com/mitletter>

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Statement of Purpose

We write as members of [MIT Alumni for Climate Action](https://mit.alumniaction.com), a nonpartisan group of alumni who are concerned about the devastating effects of climate change. A group within MIT Alumni for Climate Action analyzed MIT's 2015 Plan for Action on Climate Change and developed recommendations for the next iteration of the plan. We have been inspired by MIT's commitment to the climate issue expressed in President Reif's 2015 letter to all alumni and his lecture at the 2020 Alumni Leadership Conference. As proud alumni of the world's leading research university, we present these preliminary recommendations to the MIT administration and the MIT Climate Action Advisory Committee to initiate a discussion of our future role in solving one of the world's most serious problems. This letter illuminates certain gaps in MIT's 2015 Climate Action Plan and outlines our vision for the 2020 Plan for Action on Climate Change. This letter does not provide an exhaustive list of all of our suggestions but highlights the most crucial actions that we believe MIT takes to abate climate change. We look forward to initiating a dialog with MIT and participating in the discussions that this letter sparks among the MIT community to help retain MIT's Climate leadership.

The Imperative for Climate Action in 2020

In the last 5 years, climate change has become a crisis as natural disasters have accelerated, and the IPCC called for cutting emissions by about half in this decade to avoid the worst effects of climate change. The next 5 years as we all know will be crucial to setting the course towards limiting warming to 1.5°C.

Since MIT released its original [Plan for Action on Climate Change](#) in 2015, [climate disasters](#) have made the urgency of action apparent: the worst-ever 2020 wildfire season in Australia, South America, and Western US; severe droughts in East Africa in 2017 and again in 2019; deadly floods in South Asia that left a third of Bangladesh under water this past summer; and 6 years of drought in Central America’s Dry Corridor offer a preview of the climate crisis to come. The 2018 IPCC report on the impacts of [Global Warming of 1.5°C](#) calls for cutting net anthropogenic carbon dioxide emissions by 45 percent from 2010 levels by 2030 and reaching net zero around 2050. Already, the global average surface temperature has [risen nearly 1°C](#) relative to 1951-1980 average temperatures. Global carbon dioxide emissions [continue to rise](#) and the window to limit global warming to 1.5°C is closing fast. Meanwhile, the current U.S. administration has stalled climate progress in the U.S. by [rolling back environmental regulations](#) and globally by withdrawing from the Paris Agreement. COVID-19 has raised the stakes: the choices that leaders make for long-term economic recovery will chart our economic course for the next decade. Continuation of current policies is expected to result in upwards of [1-3 billion climate refugees](#) in the next 50 years. In such a critical environment, it’s imperative that MIT takes action by increasing its own commitment to climate change and leadership in at least the following areas.

1. Goals to Reduce Campus Greenhouse Emissions

Commit to develop plans for carbon neutrality by 2030 and a zero-emissions campus by 2040.

MIT originally committed to reduce greenhouse gas emissions by 32 percent from a 2014 baseline by 2030 and has reduced net emissions by 24 percent so far. This commitment is not commensurate with the IPCC’s stated need for a 45 percent net reduction from a 2010 baseline by 2030. MIT should exceed this global goal by committing to net zero greenhouse gas emissions by 2030. Already, [American University](#) became the first university in the U.S. to achieve carbon neutrality in 2018, and many of our peer institutions have committed to carbon neutrality before the middle of the century, as shown in the table below. MIT should draw on its formidable technical expertise and that of its alumni to forge the path to carbon neutrality for large research institutions by 2030.

Institution	Carbon Neutrality Commitment Date	Institution	Carbon Neutrality Commitment Date
Harvard University	2050	Brown University	2040 90% of Fossil Fuel investments divested
Stanford University	2050	University of Pennsylvania	2042
Yale University	2050	Columbia University	Reduced 35% by 2020; have aggressive plans for 2030
Princeton	2046	Northwestern	2050

University		University	
	2035		
Cornell University	Moratorium on Fossil Fuel Investments	Dartmouth University	80% reduction by 2050
University of Chicago	50% of baseline by 2030	Duke University	2024

MIT should also begin planning to achieve a zero-emissions campus by 2040. The vast majority of campus emissions reductions to date have been achieved through emissions offsets, namely by financing the [Summit Farms solar array](#) in North Carolina. While this net reduction is commendable, the 2040 global net zero ambition limits the long-term role of renewable energy credits. Eventually, MIT must operate without greenhouse gas emissions and should develop a plan for on-campus clean energy generation projects, energy neutral buildings, zero emissions transportation on campus, and other changes to eliminate greenhouse gas emissions. MIT's lead in implementing these changes will clear the way and provide valuable insights for other large institutions to develop zero-emissions campuses. Already, a [plan](#) has been submitted through Climate Colab for MIT to eliminate its building emissions completely and to do so effectively free. We think the 2020 plan is a great opportunity to set forth a goal for full campus (facilities & operations) decarbonization by 2040.

2. Engagement with the Fossil Fuel Industry

Develop clear standards for any type of relationship with fossil fuel companies, including policies of accepting funding. These metrics will prevent fossil fuel companies from using their relationship with MIT to conceal their environmentally destructive actions.

Some fossil fuel companies “greenwash” their public reputation by [sponsoring](#) research, buildings, and other academic activities at respected universities like MIT. At the same time, these companies have [failed](#) to align their own practices with the Paris Agreement, [spread climate disinformation](#), and [spent millions lobbying](#) against climate legislation. As a prominent research university, MIT should develop and publish clear standards for engagement (i.e. collaboration, accepting funding for research and capital projects, and other partnerships) with such fossil fuel companies that promote transparency, accountability and commitment to a shared purpose in minimizing their environmental footprint.

For example, MIT's advice to fossil fuel companies as they transition to a carbon-free business model is appreciated and should be further encouraged. A successful transition would reduce GHG emissions and increase the likelihood that MIT could continue to receive funds from the fossil fuel companies. MIT should also ensure that new business models do not contribute to the problem of plastic pollution, which disproportionately [harms](#) developing countries. These advisory relationships should be contingent upon the companies transparently tracking their transition toward fossil-free

operations and meeting MIT’s stringent benchmarks*. Any fossil fuel company that fails to make a good-faith effort to accomplish these goals and meet their benchmarks should be taken off MIT’s relationship list.

3. Divestment and Moral Leadership on Climate

For those fossil fuel companies that hinder the transition to a carbon-free economy by spreading climate disinformation and lobbying against climate legislation, MIT should immediately divest its endowment.

Beyond accepting direct funding from fossil fuel companies, MIT should not bet against the transition to a carbon-free economy by investing its endowment in fossil fuel companies that resist this transition. These investments are antithetical to MIT's commitment to address causes and propose solutions to climate change. Already, six peer institutions of MIT have fully divested from fossil fuels, and five more have divested from coal and/or tar sands, as shown in the following table.

Institution	Divestment Commitment	Institution	Divestment Commitment
Brown University	Full	Columbia University	Coal only
Cornell University	Full	Johns Hopkins University	Coal only
Georgetown University	Full	London School of Economics	Coal and tar sands only
University of California	Full	Stanford University	Coal only
University of Cambridge	Full (by 2030)	Yale University	Partial
University of Oxford	Full	-	-

Additionally, these investments also pose a financial risk. In 2018, the oil and gas sector placed last in the S&P 500 following nearly a [decade of poor stock performance](#). Clean power stocks also weathered the COVID shock [better](#) than fossil fuel stocks. If the transition to a decarbonized economy is successful, these stocks will face even more drastic losses as fossil fuel assets become stranded. MIT should divest from fossil fuel companies that prevent climate action and invest its endowment in a decarbonized future.

4. Leadership in Development of Technologies to Reach Carbon Neutrality and Draw Down

MIT’s establishment of the eight Low-Carbon Energy Centres (LCECs) and raising of \$300 million over 5 years are commendable. It however needs to demonstrate a tangible impact via solutions that the industry can quickly adopt, e.g., across

Solar PV, Energy Storage, Carbon Sequestration, Electric Power, Nuclear Energy, Clean Energy and Fuel Cells.

Membership is [currently at 25](#) and can be enhanced further. The consortia research is currently limited to [Mobility and Utility](#). We have limited information on the vitality of these LCECs, in terms of staffing and funding. There is no visibility on the progress of a 2°C roadmap study either. We need transparency on how MIT will continue to lead the charge and make its commitment stronger to develop new technologies via these LCECs.

MIT has issued a [climate grand challenge](#). We are supportive of this endeavor given its potential to address difficult and impactful research problems related to climate change (mitigation, adaptation or quantification of climate risk). We look forward to its fruition and are open to support in any way possible.

5. Climate Education

Currently, the institute has begun this effort to enhance climate education and awareness via the [Environment and Sustainability Minor](#) and the online Climate Change and Sustainability credential through MITx. MIT's educational offering needs to be reinforced in terms of the scope and extent of subject-matter coverage.

MIT should incorporate a holistic understanding of the climate crisis into all of its undergraduate programs and ensure that all programs prepare graduates for the role that their field will play in addressing the climate crisis. For example, MIT could consider an introductory course on climate change as a general education requirement or elective, and can offer advanced courses within each department that build on that foundation and explore unique technology solutions through the various disciplines.

Further, MIT's education efforts and influence could extend to industry sectors where professionals need continuing education to maintain their expertise, licensure or status. For example, the Engineers that design and build Energy Systems Electrification for buildings need to be trained to ensure faster adoption of Clean Energy systems. The window is narrow as most HVAC and Building equipment upgrades are done once every 20 years. MIT could build educational programs that aspire to promote uniform adoption across different jurisdictions.

New climate technologies will create a new landscape of jobs and opportunities for growth in the economy. As for previous disruptive technologies that MIT has primed its students for, MIT will also have the responsibility to ready the workforce with appropriate skills to take on these new and exciting roles.

Conclusion

We are proud to be alumni of the world's leading research university and believe that our alma mater has a crucial role in the global effort against climate change. We

envision MIT as a climate innovator among universities and research institutions, leading through its unparalleled research activities, operations and relationships with industry partners. In order for MIT to fulfill this role, the 2020 Plan for Action on Climate Change must be more ambitious than the last. The suggestions outlined in this letter are the most important actions we believe that MIT can take over the next 5 years to make a meaningful impact in climate change. We look forward to dialoguing with the community and offering our expertise to explore how these suggestions can be realized in earnest.

*While the metrics for each company may vary, the following list provides an example:

- 2021 – MIT announces publicly a willingness to help fossil-fuel companies transition to a carbon-free business model. Assistance could range from technology assessment to developing a business strategy.
- 2025 – Fossil-fuel companies' new fossil-free operations begin.
- 2030 – 25% of company revenue is generated by new fossil-free model.
- 2040 – 100% revenue by new model.

Signatories

Liliana Pimentel, SPURS/DUSP - Fulbright Hubert H. Humphrey Fellow 2012/13

Shiladitya DasSarma, PhD, 1984

Donald Rea, Class of 1954 Ph.D.

Andrea McGimsey, BS, 1987

Karen Plaut Berger, PhD, 2000

Bruce Parker, BS '69 and MS '70

Andrew Gregg, Class of 2004

Laurie Helller, Class of 1987

Christianna Raber, Course 4 - Class of 2004

Michael Mavrovouniotis, PhD, 1989

John R Dabels, Class of 1979, Sloan Fellow

José Luis del Valle Doblado, S.M.'78, Nucl.E.'78

James Adelstein, Class of 1948

Aaron Ucko, '00, M.Eng. '01

Mei Wan, Sloan MMFin Class 2021

Claire Halloran, Class of 2020

Susan Murcott, MIT, Course 1. S.B.1990, S.M.1992

LeNore Kerber, SB 1987, SM 1988

John Mark Ettinger, Class of 1987

Priya Giri, MBA - Sloan Fellows Class of 2013

Susan Udin, BS 1969, Phd 1975

Laura Liao, Class of 2020

Michael Laird, Class of 1969, Sloan MBA 1972

Brian P. Murphy, Naval Engineer & MSME 2000, MS Ocean Systems Mgmt. 2004

Tamara Shapiro Ledley, PhD, 1983

Tung Nhu Nguyen

Chuan-Fu Wu, PhD, 1988
Avital Baral, Class of 2020
Matthew Bruchon, TPP 2013
Shyamadas Banerji, SB 64, SM 65
Fen Labalme, 1981
Thomas J Hirasuna, 1976, SB Courses X and VII-A
Jeremy Poindexter, PhD 2018
Ronald Agronin, Class of 1960
William C. Sandberg, Sc. M. 1970
Jillian James, S.B. 2010, S.M. 2016
Arlis Reynolds, Class of 2006
Rick Clemenzi, Class of 1981
Britton Ward, MS 1996
Trevor Spreadbury, Class of 2020
Henning Colsman-Freyberger, Class of 1996
Chuan-Fu Wu, PhD 1988
Jonathan Sampson, Class of 2020
David Berney Needleman, PhD 2016
Leandra Zimmermann, Class of 2019
Vivian Song, Class of 2020
Margaux Filippi, ScD, 2019