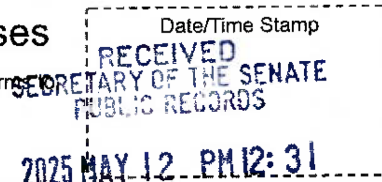


RE-2 Employee Post Travel Disclosure of Travel Expenses

Post Travel Filing Instructions: Complete this form within **30 days** of returning from travel. Submit all forms to the Office of Public Records in 144 Hart Building. **This form is a public disclosure. The form and all attachments will be made publicly available.**



Certification: In compliance with the Regulations Governing Privately Sponsored Travel, Senate Rule 35, and the Honest Leadership and Open Government Act of 2007, I certify that I accepted the following gift of privately sponsored travel:

Private Sponsor(s):

MIT

Travel Dates:

4/23/25-4/25/25

Name of accompanying family member (if any):

N/A

Relationship to Traveler:

Total Expenses

Transportation Expenses	Lodging Expenses	Meals Expenses	Other Expenses (Amount & Description)
\$412.61	\$582.00	\$173.06	N/A

I also certify that attached to this form are all required documents for post travel disclosure, including:

- The final **Employee Pre-Travel Authorization** (Form RE-1)
- The final **Private Sponsor Travel Certification Form** with all attachments
- The final invitation
- The final approved itinerary

Finally, I certify that all trip information reflected in the attachments above accurately reflects the travel that I accepted. If there were any changes to the trip after I received approval from the Committee, the changes are described in ATTACHMENT 1.

5/12/25

Date

Alyssa Rudelis

Printed Name of Traveler



Signature of Traveler

TO BE COMPLETED BY SUPERVISING MEMBER/OFFICER

I have made a determination that the expenses set out above in connections with travel described in the Employee Pre-Travel Authorization form, are necessary transportation, lodging, and related expenses as defined in Rule 35.

5/12/25

Date



Signature of Supervising Senator/Officer

Note: Material changes to a trip that occur after the Committee has issued an approval letter may invalidate the Committee's approval. Please contact the Committee with any questions regarding changes to an approved trip.

☐ Yes ☒ No

[illegible]

☐ Yes ☒ No

☐ Yes ☒ No

Age Group	Percentage
18-24	100%
25-34	95%
35-44	90%
45-54	85%
55-64	80%
65-74	75%
75-84	70%
85+	65%

RE-1 Employee Pre-Travel Authorization

Date/Time Stamp

Pre-Travel Filing Instructions: Complete and submit this form at least 30 days prior to the travel departure date to the **Select Committee on Ethics in SH-220**. Incomplete and late travel submissions will not be considered or approved.

Name of Traveler:

Alyssa Rudelis

Employing Office/Committee:

Office of Senator Tina Smith

Private Sponsor(s):

MIT (a public charity)

Destination(s):

Cambridge, MA

Travel Dates:

4/23/25-4/25/25

NOTE: If you plan to extend the trip for any reason you must notify the Committee.

Explain how this trip is specifically connected to the traveler's official or representational duties. This seminar is focused on how to translate research on climate and energy issues to policy. Alyssa is specifically interested in the agriculture sessions on how to abate emissions through agriculture practices.

Do you have an accompanying family member or spouse on this trip? Name and Relationship to Traveler:

☐

(signify "yes" by checking box)

I certify that the information contained in this form is true, complete and correct to the best of my knowledge.

3/24/25

Date

Signature of Employee

TO BE COMPLETED BY SUPERVISING MEMBER/OFFICER

(President of the Senate, Secretary of the Senate, Sergeant at Arms,
Secretary for the Majority, Secretary for the Minority, and Chaplain)

Sen. Tina Smith

Alyssa Rudelis

(Print Senator's/Officer's Name)

hereby authorize

(Print Traveler's Name)

an employee under my direct supervision, to accept payment or reimbursement for necessary transportation, lodging, and related expenses for travel to the event described above. I have determined that this travel is in connection with his or her duties as a Senate employee or an officeholder, and will not create the appearance that he or she is using public office for private gain.

I have also determined that the attendance of the employee's spouse or child is appropriate to assist in the representation of the Senate.

☐

(signify "yes" by checking box)

3/24/25

Date



Signature of Supervising Senator/Officer

Trip Name: 2025 MIT Energy seminar for Congressional Staff

Organization Information

Organization Name:

Massachusetts Institute of Technology

Is your organization classified as a §501(c)(3)?

☒ Yes ☐ No

If Yes, §501(c)(3) Organization Type:

☐ Private Foundation ☒ Public Charity

Address:

77 Massachusetts Avenue

Phone Number:

617 324 9105

City, State, Zip:

Cambridge, MA 02139

Organization URL:

<https://web.mit.edu/>

History of Congressional Travel

Describe your organization's history of sponsoring congressional travel.

MIT has hosted similar seminars on a wide range of public policy issues related to science & technology for over 20 years. The most recent 'in person' seminar was held on the MIT campus in October 2023.

Educational Activities

Describe the educational activities performed by your organization other than sponsoring congressional travel

MIT is a major non-profit research university with a mission focused on education & research in science, engineering and technology. It offers both undergraduate and graduate level degrees and has multiple departments working on cutting-edge energy & climate technology and related policy.

Lobbyist and Foreign Agent Registration Information

Lobbyist Registration Status (Select one):

- ☐ I certify that the sponsor is not a federally registered lobbyist and does not retain or employ a federally registered lobbyist
- ☒ I certify that the sponsor is not a federally registered lobbyist but does retain or employ one or more federally registered lobbyists

Foreign Agent Registration Status (Select one):

- ☒ I certify that the sponsor is not an agent of a foreign principal and does not retain or employ an agent of a foreign principal
- ☐ I certify that the sponsor is not an agent of a foreign principal but does retain or employ one or more agents of a foreign principal

Foreign Government Involvement

Foreign Agent Registration Status (Must select all):

- ☒ I certify that the sponsor is not a foreign government
- ☒ I certify that the sponsor is not an entity that is owned or operated by a foreign government
- ☒ I certify that the sponsor does not receive funding from a foreign government

Purpose and Details

Provide a brief description of the trip.

This is an intensive educational seminar presented by MIT faculty with a dinner talk by an industry expert on geothermal energy. The title of the seminar is 'Technologies and Strategies for Responding to Energy and Climate Challenges' and the majority of the seminar will be held on MIT's campus and utilizes its faculty, classrooms and laboratories. There will be two off-campus visits to MIT spin-off companies working on energy innovations.

Explain how the purpose of the trip relates to your organization's mission.

MIT is a major non-profit research university with a mission focused on education and research in science, engineering and technology. Congressional staff will be exposed to the latest research and thinking about technologies related to energy and climate and associated public policy options. MIT has hosted similar seminars on a wide range of public policy issues related to science and technology for over 20 years.

Is your organization the only sponsor for this trip?

☒ Yes ☐ No

If No, describe your organization's role in planning the trip.

Members of the MIT Washington Office, along with campus faculty who focus on energy and climate issues, were wholly responsible for organizing the agenda and logistics for the seminar. Funding for the seminar is being provided directly from MIT's office of the Vice President for Research.

If there are multiple sponsors, each sponsor must submit Organization Information (Page 1 of the Private Sponsor Travel Certification Form) and a Signature Page Form.

Grantmaking Organizations (Optional)

If you have a Grantmaking Organization, you must attach a Grantmaking Organization Certification Form.

- 1.
- 2.
- 3.

With or Without Regard to Congressional Participation (Select one):

- ☐ The trip is arranged or organized without regard to congressional participation
- ☒ The trip is arranged or organized with regard to congressional participation

Lobbyist/Foreign Agent Involvement in Planning, Organizing, Requesting or Arranging

- ☒ The trip will not in any part be planned, organized, requested, or arranged by a registered lobbyist or agent of a foreign principal, other than de minimis involvement.

Lobbyist/Foreign Agent Financing (Must select all):

- ☒ The trip will not be financed in any part by a registered lobbyist or agent of a foreign principal.
- ☒ No funds or in-kind contributions were earmarked directly or indirectly for the purpose of financing this specific trip from a registered lobbyist or agent of a foreign principal or from a private entity that retains or employs one or more registered lobbyists or agents of a foreign principal.

Lobbyist/Foreign Agent Accompaniment

Complete if all sponsors are §501(c)(3) organizations (Select one):

- ☒ The trip is limited to three days (for trips inside the continental United States) or seven days (for trips outside the continental United States), and no lobbyist or agents of a foreign principal will accompany the Member, officer, or employee at any point throughout the trip
- ☐ The trip is limited to a one-day event (exclusive of travel time and one overnight stay) and no registered lobbyists or agents of a foreign principal will accompany the Member, officer, or employee on any segment of the trip
- ☐ The trip is limited to a one-day event (exclusive of travel time and two overnight stays) and no registered lobbyists or agents of a foreign principal will accompany the Member, officer, or employee on any segment of the trip

Complete if any of the sponsors is not a §501(c)(3) organizations (Select one):

- ☐ No sponsor retains or employs a registered lobbyist or agent of a foreign principal, the trip is limited to three days (for trips inside the continental United States) or seven days (for trips outside the continental United States), and no lobbyist or agents of a foreign principal will accompany the Member, officer, or employee at any point throughout the trip
- ☐ The trip is limited to a one-day event (exclusive of travel time and one overnight stay) and no registered lobbyists or agents of a foreign principal will accompany the Member, officer, or employee on any segment of the trip
- ☐ The trip is limited to a one-day event (exclusive of travel time and two overnight stays) and no registered lobbyists or agents of a foreign principal will accompany the Member, officer, or employee on any segment of the trip

Required if selecting the third option in either column - Please explain why the second overnight stay is practically required and necessary to accomplish the purpose of the trip.

Certification of No Recreational Activity and No Alcohol (Must select all):

- ☒ Travel expenses paid for will not include expenditures for recreational activities.
- ☒ Travel expenses paid for will not include expenditures for alcohol, except as permitted by the Regulations Governing Privately Sponsored Travel

Invitees list

- ☒ A list of all Senate invitees is attached to this form (required)
- ☒ Members and staff from the House of Representatives will also receive invitations

Travel Details (Submit additional pages as needed)

Trip Start Date/Time:

April 23, 2025 8:30am



Trip End Date/Time:

April 25, 2025. 8:00pm

Will the traveler be accompanied by a family member for whom the sponsor will pay travel expenses?

☐

Yes

☒

No

Transportation (Member/Officer/Employee: \$ 488.60 Accompanying Family Member: \$ n/a)

Transportation Type	Class	Amount
Fully refundable JetBlue flights + booking fees	economy	\$396.60
Bus to/from airport & hotel/campus & site visits	Basic/no special seats	\$92.00

Details (optional)

Lodging (Member/Officer/Employee: \$ 582.00 Accompanying Family Member: \$ n/a)

Check-In	Check-Out	Facility	City	State	Country
4/23/25	4/25/25	Marriott Residence Inn	Cambridge	MA	USA
Nights	Cost/Night	Cost Exceed Per Diem (Yes/No)	If Yes, please explain why expenses over the per diem rate are reasonable and necessary		
2	291.00	NO			

Check-In	Check-Out	Facility	City	State	Country
Nights	Cost/Night	Cost Exceed Per Diem (Yes/No)	If Yes, please explain why expenses over the per diem rate are reasonable and necessary		

Check-In	Check-Out	Facility	City	State	Country
Nights	Cost/Night	Cost Exceed Per Diem (Yes/No)	If Yes, please explain why expenses over the per diem rate are reasonable and necessary.		

Meals (Member/Officer/Employee: \$ 234.00 Accompanying Family Member: \$ n/a)

Date	Breakfast	Lunch	Dinner	Incidentals	Total	City	State	Country	Cost Exceeds Per Diem (Y/N)
4/23/25	0 - included in hotel room rate	\$33.00	\$42.00	\$13.00	\$88.00	Cambridge	MA	USA	NO
4/24/25	0 - included in hotel room rate	\$24.50	\$73.00	\$12.00	\$109.50	Cambridge	MA	USA	YES
4/25/25	0 - included in hotel room rate	\$24.50	n/a	\$12.00	\$36.50	Cambridge	MA	USA	NO

If costs exceed the federal per diem, please explain why expenses over the per diem rate are reasonable and necessary.

There is a formal working dinner with speaker on 4/23/25 where there is no option to choose a less expensive caterer but we have picked the cheapest meal option available.

Reasonable Miscellaneous Expenses

(Member/Officer/Employee: \$ 80.00 Accompanying Family Member: \$ n/a)

Expense Type	Amount	Notes
Cabs to/from home & Reagan National Airport OR parking at Reagan airport.	\$80.00	MIT will cover UP TO \$80.00 per person

Additional Details (optional)

PRIVATELY SPONSORED TRAVEL

SPONSOR SIGNATURE PAGE

I hereby certify that the information submitted in connection with the trip listed below is true, complete, and correct to the best of my knowledge and belief.

Trip Name:

2025 Energy Summit for Congressional Staff

Travel Date(s):

April 23-25, 2025

Travel Destination(s):

Cambridge, MA

Sponsor:

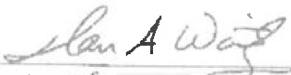
Massachusetts Institute of Technology

Ian Waitz

(printed name of sponsor representative)

Vice President for Research

(title)


(signature of sponsor representative)

2/26/25

(date)

JAMES LANKFORD, OKLAHOMA, CHAIRMAN
CHRISTOPHER A. COONS, DELAWARE, VICE CHAIRMAN

JAMES E. RISH, IDAHO
DEB FISCHER, NEBRASKA

BRIAN SCHATZ, HAWAII
JEANNE SHAHEEN, NEW HAMPSHIRE

SHANNON HAMILTON KOPPLIN, CHIEF COUNSEL AND STAFF DIRECTOR
WILLIAM B. CABLE, CHIEF CLERK

HART SENATE OFFICE BUILDING, ROOM 220
SECOND AND CONSTITUTION AVENUE, NE
WASHINGTON, DC 20510-6425

TELEPHONE: (202) 224-2981
FACSIMILE: (202) 224-7416

United States Senate

SELECT COMMITTEE ON ETHICS

April 22, 2025

Alyssa Rudelis
Office of Senator Tina Smith
United States Senate
Washington, DC 20510

Dear Ms. Rudelis:

This responds to your recent correspondence requesting approval from the Select Committee on Ethics (the Committee) to accept an invitation you received to travel to the 2025 *Congressional Seminar on Energy and Climate Challenges* in Cambridge, Massachusetts, on April 23–25, 2025, sponsored by Massachusetts Institute of Technology (MIT). Provided that you adhere to the guidance set forth below, it appears that it is permissible for you to accept necessary expenses from MIT in connection with this trip.

Background

Based on your communication with the Committee, the background in this matter is as follows.¹ You are employed as a legislative fellow for the Office of Senator Tina Smith. MIT invited you to travel to the 2025 *Congressional Seminar on Energy and Climate Challenges* in Cambridge, Massachusetts, on April 23–25, 2025. MIT certified to the Committee that it will pay the necessary expenses² related to the travel and that it is neither a lobbyist, lobbying firm, agent of a foreign principal, or otherwise acting as a representative or agent of a foreign government. Although MIT retains or employs a federally registered lobbyist or foreign agent, MIT has certified that it is an organization designated under § 501(c)(3) of the Internal Revenue Code³ and that no registered lobbyist or agent of a foreign principal will accompany you at any point throughout your trip.⁴

Discussion

Privately sponsored travel includes any gift of travel and travel-related expenses for travel outside the Senate duty station, including transportation, lodging, food and refreshments, and conference fees and materials, whether paid for directly, reimbursed, or provided directly,

¹ If this letter does not correctly recite the facts, contact the Committee immediately.

² The term “necessary expenses” has a specific definition. See *Select Committee on Ethics Regulations and Guidelines for Privately Sponsored Travel* at 10-13.

³ 26 U.S.C. § 501(c)(3).

⁴ The term “any point throughout your trip” has a specific definition. See *Select Committee on Ethics Regulations and Guidelines for Privately Sponsored Travel* at 15.

from a private individual or entity, in connection with a Member's, officer's, or employee's official Senate duties. Incorporating reforms from the Honest Leadership and Open Government Act of 2007 (HLOGA), Pub. L. 110-81 (2007), Senate Rule 35.2 permits Members, officers, and employees to accept privately sponsored travel only with the prior written approval of the Committee.

The Committee's approval process is governed by the *Regulations and Guidelines for Privately Sponsored Travel (Travel Regulations)*. The *Travel Regulations* contain detailed requirements regarding who may sponsor travel; time limits for trips; and the type and amount of expenses that can be reimbursed.

Entities that do not retain or employ a lobbyist or foreign agent and all non-profit organizations designated as tax-exempt organizations under § 501(c)(3) of the Internal Revenue Code of 1986, regardless of whether they retain or employ a lobbyist or foreign agent, may sponsor domestic trips for up to three days. The three-day limitation means three 24-hour periods, calculated from the time of arrival in the trip location to the time of departure from the trip location. For such trips, neither lobbyists nor foreign agents may accompany a Senate invitee at any point throughout the trip, other than in a *de minimis* way.⁵ This means that neither lobbyists nor foreign agents may accompany Senate invitees at any point to and from the event, at the event itself, or at the location being visited.⁶

Under Senate Rule 35, Senate staff must receive advance authorization signed by the Member or officer under whose direct supervision the individual works in order to accept payment or reimbursement for necessary expenses related to fact-finding travel. Further, such authorization and expenses must be disclosed to the Secretary of the Senate by filing the completed *Employee Pre-Travel Authorization* and the *Employee Post-Travel Disclosure of Travel Expenses* (Form RE-1 and Form RE-2), along with a copy of the *Private Sponsor Travel Certification Form*, and all relevant attachments (e.g., the private sponsor's invitation and itinerary) **within 30 days of the conclusion of Privately Sponsored Travel**.

Consistent with these standards and Committee precedent and MIT's factual representations, it appears that it is permissible for you to accept necessary expenses from MIT in connection with this trip, provided that the actual travel and travel-related expenses conform to the information and materials you provided, and the travel and all required documents are disclosed to the Secretary of the Senate (Office of Public Records).

⁵ The term "*de minimis*" has a specific definition. See *Select Committee on Ethics Regulations and Guidelines for Privately Sponsored Travel* at 6-8.

⁶ See *Select Committee on Ethics Regulations and Guidelines for Privately Sponsored Travel* at 6-10.

Finally, Senate Rule 34 requires a reporting individual⁷ on their financial disclosure report, to make an annual disclosure of the receipt of payments or reimbursements under Senate Rule 35 from a private sponsor for officially-related travel expenses where, in the aggregate, travel expenses exceed \$480 from that sponsor during a calendar year. However, if a Member, officer, or employee properly reports the receipt of necessary expenses for such travel to the Secretary of the Senate within 30 days of the travel, as discussed above, the travel expenses need not be disclosed a second time on their financial disclosure report.

I hope you find this information helpful. If you have any additional questions, please do not hesitate to contact the Committee.

Sincerely,



Shannon Hamilton Kopplin
Chief Counsel and Staff Director

Enclosure: Employee Privately Sponsored Travel Checklist

⁷ A reporting individual is someone whose salary equals or exceeds 120% of the basic rate of pay for GS-15 (\$150,160 for CY 2025) or is a political fund designee and is required to file financial disclosure reports.



**Massachusetts Institute of Technology
Senior Congressional Staff Seminar
“Technologies and Strategies for Responding to Energy and Climate Challenges”
April 23-25, 2025**

AGENDA

Wednesday, April 23: Day 1

Seminar location: Samberg Conference Center, 6th floor, Dining Rooms 5 and 6

- | | |
|--------------------------|---|
| 9:00 am | JetBlue Flight 1154 from Washington, D.C. to Boston |
| 10:30 am | Land in Boston, MA Logan airport |
| 10:30-11:00 am | Ground transportation from Boston Logan Airport to Residence Inn by Marriott Boston Cambridge (MIT buses) |
| 11:00-11:35 am | Check into Residence Inn by Marriott Boston Cambridge
120 Broadway, Cambridge, MA 02142 |
| 11:35 am | Bus from Residence Inn by Marriott Boston Cambridge to
Samberg Conference Center for registration
Samberg Conference Center, 6th floor, Dining Rooms 5 and 6
50 Memorial Drive, Cambridge, MA 02142 |
| 11:45 am-12:00 pm | Registration for participants |
| 12:00-1:30 pm | Welcome and luncheon
Samberg Conference Center, 6th floor, Dining Rooms 5 and 6 |
| 12:15-1:00 pm | Participants introduce themselves |
| 1:00-1:05 pm | Ian A. Waitz, MIT Vice President for Research; Jerome C. Hunsaker Professor
of Aeronautics and Astronautics
<i>Dr. Waitz welcomes participants on behalf of MIT's central administration.</i> |
| 1:05-1:20 pm | Evelyn N. Wang, MIT Vice President for Energy and Climate, Ford Professor
of Engineering
<i>Dr. Wang will speak about MIT Climate Project and MIT's approach to climate.
She will provide an overview of energy and climate research at MIT.</i> |
| 1:20-1:30 pm | William H. Green, Director, MIT Energy Initiative; Hoyt C. Hottel Professor,
MIT Department of Chemical Engineering
Christopher Knittel, Associate Dean for Climate and Sustainability, George P.
Shultz Professor and Professor of Applied Economics, MIT Sloan School of |



Management; Director, MIT Climate Project on Inventing New Policy Approaches

Professor Green will provide a brief background on MITEI, MIT's energy hub, focused on developing low- and no-carbon solutions to meet global energy needs. Professor Knittel will provide a brief background on MIT's Climate Policy Center, which serves as MIT's "front door" for local, state, federal, and international climate policymakers. In addition, both will give an overview of the seminar's program.

1:30-1:45 pm

Attendees transition from lunch space to main seminar space

1:45-3:00 pm

Climate & AI Session

AI tools offer opportunities for better climate mitigation but pose significant energy demand challenges. It will discuss: 1) the energy use of AI—how it might be reduced, and how to meet it; 2) the way AI can help with management of the electric grid, which can make it easier to use renewables; 3) the use of AI to study climate.

Moderator: Bethany Patten, Executive Director, MIT Climate Policy Center; Staff Director, MIT Climate Project Policy Mission; Senior Lecturer, MIT Sloan School of Management

Saurabh Amin, Edmund K. Turner Professor in Civil Engineering, MIT Laboratory for Information and Decision Systems and MIT Department of Civil and Environmental Engineering

Priya Donti, Silverman (1968) Family Career Development Professor and Assistant Professor, MIT Department of Electrical Engineering and Computer Science and MIT Laboratory for Information and Decision Systems

3:00-4:15 pm

The Role of Nuclear Energy in U.S. Power Generation

The panelists will explore the technological, economic, and other factors that could affect prospects for the expanded use of nuclear energy in the United States, including the development of small modular reactors and other newer nuclear technologies.

Moderator: John Parsons, Deputy Director for Research, MIT Center for Energy and Environmental Policy Research

Jacopo Buongiorno, Battelle Energy Alliance Professor of Nuclear Engineering; Director of Science and Technology, MIT Nuclear Reactor Laboratory; Director, MIT Center for Advanced Nuclear Energy Systems

Koroush Shirvan, Atlantic Richfield Career Development Professor in Energy Studies, MIT Department of Nuclear Science and Engineering

4:15-4:30 pm

Bus to MIT Plasma Science and Fusion Center
190 Albany St, Cambridge, MA 02139

4:30-6:15 pm

Tour of the MIT Plasma Science and Fusion Center
with a presentation by **Commonwealth Fusion Systems**



The MIT Plasma Science and Fusion Center is an international leader in the development of fusion energy. Scientists and engineers from the PSFC and MIT spinout Commonwealth Fusion Systems will present on recent advances in fusion science and technology and give an update on progress towards a commercial fusion power plant.

Jennifer Ganten, Chief Global Affairs Officer, Commonwealth Fusion Systems
Nuno F. Loureiro, Director, MIT Plasma Science and Fusion Center; Professor of Nuclear Science and Engineering and Herman Feshbach (1942) Professor of Physics, MIT

MIT Plasma Science and Fusion Center Lab tour instructions

- Closed-toe shoes should be worn on the lab tour.
- During the tour, information on the hallway walls may be photographed.
- In the lab, there are a few areas that cannot be photographed. Tour location staff will confirm these locations upon arrival.

6:15 pm

Bus to Residence Inn by Marriott Boston Cambridge
Residence Inn by Marriott Boston Cambridge
120 Broadway, Cambridge, MA 02142

6:30-8:30 pm

Dinner with Panel of MIT Graduate Students talking about the Future of Climate & Energy Research

Doc Edgerton Room, Residence Inn by Marriott Boston Cambridge,
120 Broadway, Cambridge, MA 02142

Working event for seminar participants to engage with MIT graduate students working on energy research to further discuss the topics explored during the afternoon sessions and those in upcoming sessions.

Moderator: Bethany Patten, Executive Director, MIT Climate Policy Center;
Staff Director, MIT Climate Project Policy Mission; Senior Lecturer, MIT Sloan School of Management



Thursday, April 24: Day 2

Seminar location: MIT Bush Room (10-105)

7:30-8:30 am Breakfast at Residence Inn by Marriott Boston Cambridge

Residence Inn by Marriott Boston Cambridge
120 Broadway, Cambridge, MA 02142

8:30-8:45 am Walk to MIT Bush Room (10-105)

8:45-10:15 am Agriculture: Climate Adaptation and Emissions Abatement Tools

The panelists will explore possible technological approaches to help feed the world as the climate changes and while reducing the climate impacts of agriculture. Specific topics will include capturing methane, strengthening crop resiliency, and developing low-carbon methods for crop fertilization.

Moderator: Desirée Plata, Professor, MIT Department of Civil and Environmental Engineering; Director, MIT Climate and Sustainability Consortium; Director, MIT Methane Network; Co-Director, MIT Superfund Research Program

David L. Des Marais, Cecil and Ida Green Career Development Professor and Associate Professor, MIT Department of Civil and Environmental Engineering

Ariel L. Furst, Paul M. Cook Career Development Professor of Chemical Engineering, MIT Department of Chemical Engineering

Bradley D. Olsen, Alexander and I. Michael Kasser (1960) Professor and Executive Officer, MIT Department of Chemical Engineering; Faculty Director, MISTI-Brazil and MISTI-Amazonia Programs

10:15-10:30 am Break

10:30 am-12:00 pm Advancing Industry & Commercial Transportation

The panelists will explore possible ways to reduce environmental impacts of industrial production, aviation, and trucking – sectors that contribute significantly to greenhouse gas emissions but which cannot be easily electrified. They will discuss their work to develop affordable low-emissions solutions for these sectors.

Moderator: William H. Green, Director, MIT Energy Initiative; Hoyt C. Hottel Professor, MIT Department of Chemical Engineering

Florian Allroggen, Principal Research Scientist, MIT Department of Aeronautics & Astronautics; Executive Director, MIT Laboratory for Aviation and the Environment

Yet-Ming Chiang, Kyocera Professor, MIT Department of Materials Science and Engineering

Bilge Yildiz, Breene M. Kerr (1951) Professor, MIT Departments of Nuclear Science and Engineering and Materials Science and Engineering

**12:00-1:30 pm****Lunch with MIT Climate Project Mission Directors**

In 2024, MIT launched a whole-of-MIT initiative to respond to the multiple challenges of global climate change. As part of that project, six areas of focus or "missions" emerged. Each mission addresses a broad domain where solutions are required for effective climate response and where a critical mass of excellent research capabilities exists at MIT. The panelists will cover their roles in the Climate Project, and will encourage an open dialogue with participants to identify areas at the intersection of the mission objectives and policy community needs.

Andrew R. Babbin, Associate Professor, MIT Department of Earth, Atmospheric & Planetary Sciences; Co-Director, MIT Climate Project Mission on Restoring the Atmosphere, Protecting the Land and Oceans

Christopher Knittel, Associate Dean for Climate and Sustainability, George P. Shultz Professor and Professor of Applied Economics, MIT Sloan School of Management; Director, MIT Climate Project on Inventing New Policy Approaches

Christoph Reinhart, Alan and Terri Spoon Professor of Architecture and Climate, MIT Department of Architecture; Director, MIT Climate Project Mission on Resilient and Prosperous Cities

1:30-2:45 pm**Resilient and Energy Efficient Housing for the Future**

The panelists will explore approaches to making housing more energy efficient and resilient to climate change in affordable ways. They will discuss examples of how technologists, architects, planners, and others involved in housing are working on these issues.

Moderator: **Drew Story**, Policy Director, MIT Climate Policy Center

Mariana Arcaya, Germeshausen Professor of Urban Planning and Public Health, MIT Department of Urban Studies and Planning

Christoph Reinhart, Alan and Terri Spoon Professor of Architecture and Climate, MIT Department of Architecture; Director, MIT Climate Project Mission on Resilient and Prosperous Cities

Justin Steil, Associate Professor of Law and Urban Planning, MIT Department of Urban Studies and Planning

2:45-3:15 pm**Travel time to Lab Tours****3:15-5:45 pm****Tours****Sublime Systems**

28 Park Street, Somerville, MA

Sublime Systems is an MIT spinout that makes low-carbon cement, using electrochemistry instead of heat and combustion to transform minerals into the building material. The visit will be to the headquarters of Sublime Systems, located in Somerville, MA. The headquarters houses Sublime's 5,000 square foot laboratory for R&D as well as Sublime's pilot plant, with a nameplate production



capacity of 250 tons per year. The tour will describe the core Sublime technology and showcase Sublime's world class cement testing laboratory.

Glen Junor, Program Manager, Public Sector, Sublime Systems

Sublime Systems tour instructions

- Sublime's office space includes a research lab and pilot cement-production plant.
- Photography is not allowed.
- Tour of Sublime's pilot cement-production plant requires a signed NDA.
- Closed-toe shoes and pants are required for entry.
- Protective eyewear will be provided for the tour.
- No food or drink is allowed.

Form Energy

30 Dane St, Somerville, MA 02143

Form Energy is an MIT spinout making iron-air batteries that store electricity for multiple days. We will tour the company's R&D and subscale testing facility and hear about the full-scale development and manufacturing of this American-made multi-day energy storage system. The batteries use common materials and can help utilities meet power demand and ensure a clean, secure, and reliable electric grid.

Ted Wiley, Co-founder and Chief Operating Officer, Form Energy

Form Energy tour instructions

- Tour of Form Energy requires a signed NDA.
- Footwear/Clothing: Please wear closed-toed shoes and long pants, as well as socks that leave no skin exposed on your ankles for your safety.
- Safety Glasses: If you take a tour of our lab spaces, you will be provided with regular, non-prescription safety glasses. We have both regular safety glasses and ones that fit over existing prescription glasses.
- Please do not take photos in lab spaces or technology. Form Energy team members on the tour will find time for some photos at the beginning and/or end of the tour for photos.

5:45-6:20 pm

Travel time back to campus/hotel

6:30 pm

Walk to Samberg Center

6:45-8:45 pm

Dinner with speaker: Terawatt Scale Geothermal

Samberg Conference Center, 7th floor, Salons T and West,
50 Memorial Drive, Cambridge, MA 02142

Carlos Araque, CEO of Quaise Energy, a U.S.-based geothermal energy MIT spin-out that is commercializing a drilling technology to unlock geothermal



energy at scale, will discuss this emerging technology — using gyrotrons to unlock superhot geothermal energy. It is one of the only solutions that can reach economic and power parity with fossil fuels. He will share perspectives on how the sector can contribute to decarbonizing primary energy and make the future of energy secure and affordable for everyone by drilling hotter and deeper than ever before.

Carlos Araque, Founder and CEO, Quaise Energy

**Friday, April 25: Day 3**

Seminar location: Doc Edgerton Room, Residence Inn by Marriott Boston Cambridge,
120 Broadway, Cambridge, MA 02142

7:30-8:45 am **Continental breakfast at hotel/check out**
(Bags can be left at the hotel front desk)

8:45-10:15 am **Electricity Transmission: Ensuring a Smart, Affordable, and Resilient Grid**
The panelists will explore possible approaches to enabling the U.S. electric power system to meet projected demand growth and spur economic development, to lower household energy costs, to bolster the system's resilience to natural or deliberate disruptions, and to achieve environmental outcomes. The discussion will include MIT research on smart grids and on modeling the impacts of various policy approaches.

Moderator: Drew Story, Policy Director, MIT Climate Policy Center
Anuradha Annaswamy, Senior Research Scientist, MIT Department of Mechanical Engineering; Founder and Director, Active-Adaptive Control Laboratory

Christopher Knittel, Associate Dean for Climate and Sustainability, George P. Shultz Professor and Professor of Applied Economics, MIT Sloan School of Management; Director, MIT Climate Project on Inventing New Policy Approaches

Juan Senga, Postdoctoral Associate, MIT Center for Energy and Environmental Policy Research and MIT Climate Policy Center

Introductions for the following individual presenters will be provided by:

Bethany Patten, Executive Director, MIT Climate Policy Center; Staff Director, MIT Climate Project Policy Mission; Senior Lecturer, MIT Sloan School of Management

10:15-11:00 am **The Effects of Climate Change on Home Insurance**
The speaker will discuss how climate risk is disrupting insurance markets, and will analyze policy responses being tried around the world and in the U.S.

Adam Solomon, PhD Candidate, MIT Department of Economics

11:00-11:20 am **Break**

11:20 am-12:45 pm **En-ROADS**
The En-ROADS Climate Workshop uses the En-ROADS climate solutions simulator, which gives users the opportunity to test out different policy approaches for climate change, and to assess their possible impacts. This will be an interactive, group exercise.

Andrew Jones, Executive Director, Climate Interactive; Research Affiliate, MIT Sloan School of Management



**Massachusetts
Institute of
Technology**

12:45-2:30 pm

Lunch with discussion

The Costs and Benefits of Environmental Policies

This session will present recent research that evaluated 96 U.S. environmental policies from the last 25 years to quantify their effects on Americans and their cost to taxpayers. This approach to policy analysis facilitates policy comparisons across policy categories, such as comparing environmental policies to public investments in education or healthcare.

Nathaniel Hendren, Professor, MIT Department of Economics; Co-Founder, Policy Impacts

2:30-3:30 pm

Fitting It All Together: Discussion & Seminar Evaluation

This session will review the entire seminar program, including sessions on climate and AI, nuclear energy, agriculture, industry and commercial transportation, MIT's Climate Project, housing, electricity transmission, carbon border adjustments, home insurance, and En-ROADS. We will answer additional questions from participants about the material throughout the seminar program and the full picture that has emerged. We will also ask for feedback on the seminar structure and additional areas of interest.

Moderator: David Goldston, Director, MIT Washington Office
William H. Green, Director, MIT Energy Initiative; Hoyt C. Hottel Professor, MIT Department of Chemical Engineering
Christopher Knittel, Associate Dean for Climate and Sustainability, George P. Shultz Professor and Professor of Applied Economics, MIT Sloan School of Management; Director, MIT Climate Project on Inventing New Policy Approaches

3:30-4:00 pm

Retrieve luggage and board bus

4:00-4:45 pm

Travel by bus to Boston Logan Airport

6:11-7:59 pm

JetBlue Flight 2255 from Boston to Washington, D.C.

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March 19, 2025

Ms. Alyssa Rudelis
Energy, Climate, and Environment Fellow
Office of Senator Tina Smith
720 Hart Senate Office Building
Washington, DC 20510

Dear Ms. Rudelis,

I am writing to invite you to attend an MIT seminar for senior Congressional staff. The seminar, **"Technologies and Strategies for Responding to Energy and Climate Challenges,"** will take place on the MIT campus in Cambridge, MA from April 23-25, 2025.

We are able to cover the cost of travel and hotel accommodations and are carefully following House and Senate Ethics Committee requirements. The necessary ethics approval forms will be provided to you should you apply to attend.

As you will see in the agenda below, the seminar will include sessions with MIT faculty on a range of technology matters designed to inform Congressional staff, as well as tours of MIT's Plasma Science & Fusion Center, and of two companies spun out from MIT— Sublime Systems, a company making low-carbon cement, and Form Energy, a maker of iron-air batteries for utility-scale energy storage (Form Energy also has facilities in Maine and West Virginia).

The seminar, which is sponsored by my office, was organized by the MIT Energy Initiative (MITEI), the MIT Washington Office, and the MIT Climate Policy Center. If you would like to attend, please apply no later than close of business on Friday, March 21 by clicking [here](#). This will allow sufficient time for filing the necessary paperwork with your Ethics Committee by Monday, March 24. Spaces are limited, so early application is strongly suggested.

If you have received this invitation in error and the seminar is not relevant to your portfolio, please feel free to forward it to a colleague who focuses on energy and/or climate issues.

Helen Haislmaier in the MIT Washington Office will be happy to answer any questions, and she can be reached at (202) 789-1828 or at helenh@mit.edu.

Sincerely,

A handwritten signature in black ink that reads "Ian A. Waitz".

Ian A. Waitz
Vice President for Research
Jerome C. Hunsaker Professor of Aeronautics and Astronautics

**Massachusetts Institute of Technology
Senior Congressional Staff Seminar
Technologies and Strategies for Responding to
Energy and Climate Challenges
April 23-25, 2025**

AGENDA

Wednesday, April 23: Day 1

- **9:00-10:45 am** Flight from Washington D.C. to Boston, MA
- **10:45-11:15 am** Ground transportation from Logan Airport to Residence Inn by Marriott Boston Cambridge
- **11:15-11:40 am** Check into Residence Inn by Marriott Boston Cambridge
- **11:40 am** Bus from Residence Inn by Marriott Boston Cambridge to Samberg Conference Center for registration
- **11:50 am-12:00 pm** Registration for participants
- **12:00-1:30 pm** Welcome and luncheon
 - Participants introduce themselves
 - **Ian A. Waitz**, Jerome C. Hunsaker Professor of Aeronautics and Astronautics; MIT Vice President for Research
Dr. Waitz will welcome participants on behalf of MIT's central administration.
 - **William H. Green**, Director, MIT Energy Initiative; Hoyt C. Hottel Professor, MIT Department of Chemical Engineering
Professor Green will provide a brief background on MITEI, MIT's energy hub, focused on developing low- and no-carbon solutions to meet global energy needs. In addition, he will give an overview of the seminar's program.
- **1:30-2:45 pm** Climate and AI
AI tools offer opportunities for better climate mitigation but pose significant energy demand challenges.
 - Moderator: **David Goldston**, Director, MIT Washington Office
 - **Saurabh Amin**, Professor, MIT Department of Civil and Environmental Engineering
 - **Priya Donti**, Silverman (1968) Family Career Development Professor; Assistant Professor, MIT Department Electrical Engineering and Computer Science
- **2:45-3:00 pm** Break
- **3:00-4:15 pm** The Role of Nuclear Energy in U.S. Power Generation
The panelists will explore the technological, economic, and other factors that could affect prospects for the expanded use of nuclear energy in the United

States, including the development of small modular reactors and other newer nuclear technologies.

- Moderator: **John Parsons**, Deputy Director for Research, MIT Center for Energy and Environmental Policy Research
- **Jacopo Buongiorno**, Battelle Energy Alliance Professor of Nuclear Engineering; Director of Science and Technology, MIT Nuclear Reactor Laboratory; Director, MIT Center for Advanced Nuclear Energy Systems (CANES)
- **Koroush Shirvan**, Atlantic Richfield Career Development Professor in Energy Studies, MIT Department of Nuclear Science and Engineering
- **4:15-4:30 pm** Bus to MIT Plasma Science and Fusion Center
- **4:30-6:00 pm** Tour of MIT Plasma Science and Fusion Center
The MIT Plasma Science and Fusion Center is an international leader in the development of fusion energy. Scientists and engineers from the PSFC and MIT spinout Commonwealth Fusion Systems will present on recent advances in fusion science and technology and give an update on progress towards a commercial fusion power plant.
 - **Jennifer Ganten**, Chief Global Affairs Officer, Commonwealth Fusion Systems
 - **Nuno F. Loureiro**, Director, MIT Plasma Science and Fusion Center; Professor of Nuclear Science and Engineering and Herman Feshbach (1942) Professor of Physics, MIT
- **6:00 pm** Bus to Residence Inn by Marriott Boston Cambridge
- **6:30-8:15 pm** Dinner with Panel of MIT Graduate Students talking about the Future of Climate & Energy Research
Working event for seminar participants to engage with MIT graduate students working on energy research to further discuss the topics explored during the afternoon sessions and those in upcoming sessions.
 - Moderator: **Bethany Patten**, Executive Director, MIT Climate Policy Center; Staff Director, MIT Climate Project Policy Mission; Senior Lecturer, MIT Sloan School of Management

Thursday, April 24: Day 2

- **7:30-8:30 am** Breakfast at Residence Inn by Marriott Boston Cambridge
- **8:30-8:45 am** Walk to MIT Bush Room
- **8:45-10:15 am** Agriculture: Climate Adaptation and Emissions Abatement Tools
The panelists will explore possible technological approaches to help feed the world as the climate changes and while reducing the climate impacts of agriculture. Specific topics will include capturing methane, strengthening crop resiliency, and developing low-carbon methods for crop fertilization.

- Moderator: **Desirée Plata**, Professor, MIT Department of Civil and Environmental Engineering; Director, MIT Climate and Sustainability Consortium; Director, MIT Methane Network; Co-Director, MIT Superfund Research Program
- **Ariel L. Furst**, Paul M. Cook Career Development Professor, MIT Department of Chemical Engineering
- **Benedetto Marelli**, Associate Professor, MIT Department of Civil and Environmental Engineering; Wild Cards Mission Director, MIT Climate Project
- **Bradley D. Olsen**, Alexander and I. Michael Kasser (1960) Professor, MIT Department of Chemical Engineering
- **10:15-10:30 am Break**
- **10:30 am-12:30 pm Advancing Industry & Commercial Transportation**
The panelists will explore possible ways to reduce the climate impacts of industrial production, aviation, and trucking—all sectors that contribute significantly to U.S. CO2 emissions but cannot be easily electrified. Specifically, the panelists will discuss their work to develop affordable, low-emissions solutions for these sectors.
 - Moderator: **William H. Green**, Director, MIT Energy Initiative; Hoyt C. Hottel Professor, MIT Department of Chemical Engineering
 - **Florian Allroggen**, Principal Research Scientist, MIT Department of Aeronautics and Astronautics
 - **Yet-Ming Chiang**, Kyocera Professor, MIT Department of Materials Science and Engineering
 - **Bilge Yildiz**, Breene M. Kerr (1951) Professor, MIT Departments of Nuclear Science and Engineering and Materials Science and Engineering
- **12:00-1:30 pm Lunch with MIT Climate Project Mission Directors**
In 2024, MIT launched whole-of-MIT initiative to respond to the multiple challenges of global climate change. As part of that project, six areas of focus or “missions” emerged. Each mission addresses a broad domain where solutions are required for effective climate response and where a critical mass of excellent research capabilities exists at MIT. The panelists will cover their roles in the Climate Project, and will encourage an open dialogue with participants to identify areas at the intersection of the mission objectives and policy community needs.
 - **Andrew R. Babbin**, Associate Professor, MIT Earth, Atmospheric & Planetary Sciences; Director, MIT Climate Project Mission on Restoring the Atmosphere, Protecting the Land and Oceans
 - **Christopher Knittel**, Associate Dean for Climate and Sustainability, George P. Shultz Professor and Professor of Applied Economics; MIT Sloan School of Management; Director, MIT Climate Project on Inventing New Policy Approaches
 - **Benedetto Marelli**, Associate Professor, MIT Department of Civil and Environmental Engineering; Director, MIT Climate Project Mission on Wild Cards

- **Elsa Olivetti**, Associate Dean of Engineering, Jerry McAfee Professor in Engineering, MIT Department of Materials Science and Engineering; Director, MIT Climate Project Mission on Decarbonizing Energy and Industry
 - **Christoph Reinhart**, Alan and Terri Spoon Professor of Architecture, MIT Department of Architecture; Climate Director, MIT Climate Project Mission on Resilient and Prosperous Cities
 - **Evelyn Wang**, MIT Vice President for Climate; Ford Professor of Engineering, MIT Department of Mechanical Engineering
- **1:30-2:45 pm** Resilient and Energy Efficient Housing for the Future
The panelists will explore approaches to making housing more energy efficient and resilient to climate change in affordable ways. They will discuss examples of how technologists, architects, planners, and others involved in housing are working on these issues.
 - **Mariana Arcaya**, Professor of Urban Planning and Public Health, MIT Department of Urban Studies and Planning
 - **Christoph Reinhart**, Alan and Terri Spoon Professor of Architecture, MIT Department of Architecture; Climate Director, MIT Climate Project Mission on Resilient and Prosperous Cities
 - **Justin Steil**, Associate Professor of Law and Urban Planning, MIT Department of Urban Studies and Planning
- **2:45-3:15 pm** Tour travel time
- **3:15-5:30 pm** Tours
 - **Sublime Systems**
Sublime Systems is an MIT spinout that makes low-carbon cement, using electrochemistry instead of heat and combustion to transform minerals into the building material.
Glen Junor, Program Manager, Public Sector, Sublime Systems
 - **Form Energy**
Form Energy is an MIT spinout that makes iron-air batteries that store electricity for multiple days. The batteries use common materials and can help utilities meet power demand and ensure a clean, secure, and reliable electric grid.
Ted Wiley, President and Chief Operating Officer, Form Energy
- **5:30-6:00 pm** Travel back to campus/hotel
- **6:30 pm** Walk/bus to Samberg Conference Center
- **6:45- 8:45 pm** Dinner with speaker
 Terawatt Scale Geothermal
Carlos Araque, CEO of Quaise Energy, a U.S.-based geothermal energy MIT spin-out that is commercializing a drilling technology to unlock geothermal energy at scale, will discuss this emerging technology and share perspectives on how the sector can contribute to decarbonizing primary energy.
 - **Carlos Araque**, Founder and CEO, Quaise Energy

Friday, April 25: Day 3

- **7:30-8:45 am** Continental breakfast at hotel/check out
- **8:45-10:15 am** Electricity Transmission: Ensuring a Smart, Affordable and Resilient Grid
The panelists will explore possible approaches to enabling the U.S. electric power system to meet projected demand growth and spur economic development, to lower household energy costs, to bolster the system's resilience to natural or deliberate disruptions, and to achieve environmental outcomes. The discussion will include MIT research on smart grids and on modeling the impacts of various policy approaches.
 - Moderator: **Drew Story**, Policy Director, MIT Climate Policy Center
 - **Anuradha Annaswamy**, Senior Research Scientist, MIT Department of Mechanical Engineering; Founder and Director, Active-Adaptive Control Laboratory
 - **Christopher Knittel**, Associate Dean for Climate and Sustainability, George P. Shultz Professor and Professor of Applied Economics; MIT Sloan School of Management; Director, MIT Climate Project on Inventing New Policy Approaches
 - **Juan Senga**, Postdoctoral Associate, MIT Center for Energy and Environmental Policy Research and MIT Climate Policy Center
- **10:15-10:45 am** Carbon Border Adjustments
This session will describe recent research on policy options for a carbon border adjustment policy and their potential impacts on trade flows, revenues, consumer prices, and environmental outcomes. The presentation will include discussion of the European Union Carbon Border Adjustment Mechanism and what the U.S. can conclude from it.
 - **Catherine D. Wolfram**, William Barton Rogers Professor in Energy and Professor of Applied Economics, MIT Sloan School of Management
- **10:45-11:00 am** Break
- **11:00-11:30 am** The Effects of Climate Change on Home Insurance
The speaker will discuss how climate risk is disrupting insurance markets, and will analyze policy responses being tried around the world and in the U.S.
 - **Adam Solomon**, PhD Candidate, MIT Department of Economics
- **11:30 am-12:45 pm** En-ROADS
*The En-ROADS Climate Workshop uses the [*En-ROADS climate solutions simulator*](#), which gives users the opportunity to test out different policy approaches for climate change, and to assess their possible impacts. This will be an interactive, group exercise.*
 - **Andrew Jones**, Executive Director, Climate Interactive; Research Affiliate, MIT Sloan School of Management
- **12:45-1:00 pm** Walk to MIT Energy Initiative

- **1:00-2:30 pm** Lunch with discussion: The Costs and Benefits of Environmental Policies
This session will present recent research that evaluated 96 U.S. environmental policies from the last 25 years to quantify their effects on Americans and their cost to taxpayers. This approach to policy analysis facilitates policy comparisons across policy categories, such as comparing environmental policies to public investments in education or healthcare.
 - **Nathaniel Hendren**, Professor, MIT Department of Economics; Co-Founder, Policy Impacts
- **2:30-3:30 pm** Fitting it all together, discussion & seminar evaluation
This session will review the entire program and provide participants a chance to ask questions about the full picture that has emerged.
 - Moderator: **David Goldston**, Director, MIT Washington Office
 - **William H. Green**, Director, MIT Energy Initiative; Hoyt C. Hottel Professor, MIT Department of Chemical Engineering
 - **Christopher Knittel**, Associate Dean for Climate and Sustainability, George P. Shultz Professor and Professor of Applied Economics; MIT Sloan School of Management; Director, MIT Climate Project on Inventing New Policy Approaches
- **3:30-4:15 pm** Return to Residence Inn by Marriott Boston Cambridge, retrieve luggage and board bus
- **4:15-4:45 pm** Travel by bus to Logan Airport
- **6:11-7:59pm** Flight from Boston to Washington, D.C.