

Day 01 | Tuesday, January 17

January 17, 2023 9:20 AM - SIP | Session 01: The Challenge Of Climate Change

Date/Time: Tuesday, January 17, 2023; 9:20AM - 10:20AM EST

Session Lead: Professor Peter Tufano

Speakers: Dan Schrag

Description: Professor Schrag will present a broad overview of the challenge of climate change as well as a global perspective on possible solutions.

Questions that we will address in the session:

- 1) What is the problem?
- 2) Is it unusual? How do we know it is really caused by human activity?
- 3) What should we be afraid of? How can we prepare for it?
- 4) What is the solution? Why is solving it so difficult?
- 5) Why is there confusion in the way solutions are discussed?

Required Reading:

<https://revista.drclas.harvard.edu/the-timescales-of-climate-change/>

January 17, 2023 10:40 AM - SIP | Session 02: The Policy Levers to Address Climate Change

Date/Time: Tuesday, January 17, 2023; 10:40AM - 11:40AM EST

Session Lead: Professor Peter Tufano

Speakers: Joe Aldy

Description: The topics we will discuss include the following:

Three major types of emission reduction policies

Information disclosure may enable emission reductions

Significant economic risks and opportunities as a function of policy design and implementation

Managing climate change risks will require emission abatement and removal, adaptation and resilience, and amelioration

Required Reading:

How is the U.S. Pricing Carbon? How Could We Price Carbon? Please read the introduction which summarizes the material in the following sections and then select one or two sections to read. You may want to complete this reading as a "post-read" after the session.

January 17, 2023 11:40 AM - SIP | Session 03: The Routes To Solutions

Date/Time: Tuesday, January 17, 2023; 11:40AM - 12:20PM EST

Session Lead: Professor Peter Tufano

Speakers: Mekala Krishnan

Description: The topics we will cover include:

A net-zero report card

The building blocks to get us to net-zero

What this means for the private sector – risks, opportunities, and leadership

Question: What do you think are the biggest bottlenecks to getting to net-zero emissions?

Required Reading:

Skim through this website and get a sense of McKinesey's net zero research

January 17, 2023 1:20 PM - SIP | Session 04: Accounting For & Trading Carbon

Date/Time: Tuesday, January 17, 2023; 1:20PM - 2:40PM EST

Session Lead: Professor George Serafin

Speakers: Kristina Wyatt, Arek Zarowski, and Fernando Reyes-Gonzalez

Questions: Here at HBS but also in every single MBA program we teach accounting as a required curriculum course because without accounting there is no management. However, carbon accounting has proved challenging impeding carbon management. What makes carbon accounting so challenging?

Required Reading:

Emissions accounting needs a makeover, and it's coming

January 17, 2023 3:00 PM - SIP | Session 05: Removing & Reusing Carbon

Date/Time: Tuesday, January 17, 2023; 3:00PM - 4:40PM EST

Session Lead: Professor George Serafin

Speakers: Brian Banes, Rahul Shandur, and Karan Khimji

Questions:

On one hand, if we can make carbon removal really work at scale then we have solved the climate crisis. So some people may argue that carbon removal is the single most important thing in the climate fight. On the other hand, some believe that carbon removal will never work commercially at scale: it is too difficult, too costly, too late and therefore more of a distraction to what really needs to be done. Which of these two ideas resonates the most with you?

Day 02 | Wednesday, January 18

January 18, 2023 9:00 AM - SIP | Session 01: Designing & Deploying the Electric Grid of Tomorrow

Date/Time: Wednesday, January 18, 2023; 9:00AM - 11:00AM EST

Session Lead: Professor Jim Matheson

Speakers: Dr. Jurgen Weiss (former HBS Professor and Principal, The Brattle Group), Alicia Barton (President & CEO, FirstLight Power), and Dr. Tim Heidel (co-founder and CTO, VEIR Systems)

Description: In this session, we will discuss and debate the topology and technologies, priorities and political realities that will shape the electrical system & grid of the future. We'll frame the today's grid and explore where the greatest challenges reside in moving to an increasingly reduced carbon footprint while managing key cost and reliability concerns that have historically shaped our electric system.

Questions:

Given the progress of renewables, energy storage and other AI driven technologies, is there really a tradeoff between carbon, cost and reliability?

Who should bear the cost of upgrading and managing the grid?

Required Reading: How Does the US Power Grid Work? (Council on Foreign Relations) - please read including viewing the 3 min Scientific American video

Optional Reading: The Future of Electric Power in the US (National Academy of Sciences Report) - the Summary section is worth a quick review and this report is a good one for your climate solutions library.

January 18, 2023 11:20 AM - SIP | Session 02: Probable Futures

Date/Time: Wednesday, January 18, 2023; 11:20AM - 12:20PM EST

Session Lead: Professor Peter Tufano

Speakers: Spencer Gendon

Description: The topics we will discuss include:

Why humans didn't invent business schools until the 20th century.

How climate assumptions are embedded in all aspects of life.

Why climate will be like money and information: part of every job

How we might live better in a less ideal climate.

Question: How is the physical campus of HBS challenged by climate change?

Required Reading:

Take the three quick tours on the Probable Futures site: Temperature, Precipitation, and Drought.

January 18, 2023 1:20 PM - SIP | Session 03: Industrials & Materials

Date/Time: Wednesday, January 18, 2023; 1:20PM - 2:20PM EST

Session Lead: Professor Peter Tufano

Speakers: Shreya Dave, David Lipson, Trevor Best, and Alex Radomsky

Description: In this session we will talk to the founding teams of two firms that are working to transform complex industrial processes in order to reduce energy use and hence emissions. We will discuss:

How do you take an idea from a laboratory to market?

What are the different ways to market?

How do you sell into heavy industrial, hard-to-abate sectors?

Required Reading: Please take a look at the websites of the Via Separations and Syzygy Plasmonics.

www.viaseparations.com

www.plasmonics.tech

January 18, 2023 2:40 PM - SIP | Session 04: Balancing Profit and Purpose

Date/Time: Wednesday, January 18, 2023; 2:40PM - 3:20PM EST

Session Lead: Professor Eleanor Laurans

Speakers: Sarah Kearney

Question: Do you believe that every business ultimately has conflict between purpose and profit?

Required Reading:

Impact-First Due Diligence & Investment Process Comparison

Addressing capital gaps with catalytic capital

Videos/Recordings:

Episode 5: Sarah Kearney, Prime Coalition

Please listen to at least the first 8 minutes.

January 18, 2023 3:20 PM - SIP | Session 05: Building A Climate Career

Date/Time: Wednesday, January 18, 2023; 3:20PM - 4:20PM EST

Session Lead: Professor Eleanor Laurans

Speakers: Jason Jacobs & Sachi Blue-Smith

Description: Jason and Sachi both bring unique perspectives -- Jason having interviewed hundreds of accomplished people through his popular podcast, and Sachi in her role as the Chief People Officer at Galvanize. This will be a highly interactive session where Jason and Sachi will share their own paths and engage students, so please come prepared with questions.

Day 03 | Thursday, January 19

January 19, 2023 9:00 AM - SIP | Session 01: The Future of Mobility

Date/Time: Thursday, January 19, 2023; 9:00AM - 10:40AM EST

Session Lead: Professor Jim Matheson

Speakers: Jeffery Osborne (Cowen & Co, Managing Director for Mobility Research Coverage), Richard Vieira (Cowen & Co, Managing Director for Technology Investment Banking), and Libby Wayman (BEV, Lead Partner for Transportation)

Description: In this session, we will explore the major trends in mobility and transportation innovation and investment. We'll have two very broad set of perspectives: first, from Libby Wayman who leads Breakthrough Energy Ventures Transportation Team and also Jeff Osborne who leads Cowen & Co's Mobility Research Team. Between these two perspectives, we'll understand the entire spectrum of innovation and investment from early stage technology to mature public companies. We'll also hear from Richard Vieira about the recent SPAC-mania in the transportation sector and what we might expect from the public markets in this area moving forward.

Questions:

Which of the following do you think will have the most impact on the future of transportation: (1) Innovation, (2) Policy, or (3) Consumer Preference?

Which of the transportation themes presented in the two reports below would you be most excited about investing in? Why?

Required Reading:

BEV Transportation Sector Playbook - a quick look at the themes driving Breakthrough's Transportation Sector Investments & Policy Priorities

Cowen & Company "Future of Mobility Research Report Executive Summary" - frames key technology and capital market trends

January 19, 2023 11:00 AM - SIP | Session 02: A Conversation with Rodi Guidero, Executive Director of Breakthrough Energy

Date/Time: Thursday, January 19, 2023; 11:00AM - 12:00PM EST

Session Lead: Professor Jim Matheson

Speakers: Rodi Guidero & Alexandra Crosby

Description: This will be an open and free flowing discussion with Rodi Guidero who leads the entire global Breakthrough Energy organization which includes Breakthrough Energy Ventures, Fellows, Catalyst, and Policy Initiatives. Please come prepared to engage with Rodi and ask him your most provocative and difficult questions!

Required Prep:

Read the Programs Page on Breakthrough Energy Website to understand the various parts of the BE Team & Mission

Watch Bill Gates on "How We're Doing On The Path To Zero Emissions" (2:42 min)

Watch Bill Gates on "The Breakthrough Energy Catalyst Program" (3:00 min)

Optional Prep:

A recording of the Final Session at the recent Breakthrough Energy Summit. (PW: "Zero starts here"). This is a tightly distributed recording of the final plenary session at the inaugural BE Summit gathering last October in Seattle. The first ~40 minutes is a tour de force presentation by Dr. Eric Toone (BEV's Technical Leader) on problems worth solving and the technologies that can solve them, and there is a 1:1 rare and candid fireside chat with Bill Gates himself starting at the 44 min mark. Worth viewing when you have the time!

Day 04 | Friday, January 20

January 20, 2023 9:00 AM - SIP | Session 01: Food & Ag

Date/Time: Friday, January 20, 2023; 9:00AM - 10:00AM EST

Session Lead: Professor Eleanor Laurans

Speakers: Rebekah Moses & Alex Bondar

Description:

Questions:

As an investor, what would be your criteria to invest today in alternative foods and low GHG proteins?

Required Reading:

Falling sales suggest plant-based meat may be all hat, no cattle
No One Wants To Say 'Put Down That Burger,' but We Really Should
Twitter Thread

Food, Agriculture, and Land Use

Required Forms:

Media Release form - Please upload by Sunday 01.22.23

January 20, 2023 10:20 AM - SIP | Session 02: Buildings

Date/Time: Friday, January 20, 2023; 10:20AM - 12:00PM EST

Session Lead: Professor Eleanor Laurans

Speakers: Sam D'Amico, Ellen Le, Anastasia Istratova, Brandon Weiss, Chris Andersen, and Frank Yang

Description:

Questions: Buildings have historically been underrepresented in VC investment relative to their emissions. Do you think we'll see more investment and innovation in buildings going forward?

Required Reading:

Accelerating green growth in the built environment

Are modular homes making a comeback?

This Gates-backed startup is building net-zero housing in factories & Launching a climate startup? A climate tech VC shares what to know about funding

Induction cooking heats up with a \$20M cash injection for Impulse

January 20, 2023 1:20 PM - SIP | Session 03: Financing Your Start-Up

Date/Time: Friday, January 20, 2023; 1:20PM - 2:20PM EST

Session Lead: Professor Eleanor Laurans

Speakers: Megan O'Connor, Zaid Ashai, and Jonathan Webb

Description: We'll hear from three entrepreneurs in three very different companies about how they have financed their growth -- including the different types of capital they have tapped into, the pros and cons of each, and their take on the climate financing landscape from the entrepreneur's perspective.

January 20, 2023 2:20 PM - SIP | Session 04: Investing In Climate Ventures

Date/Time: Friday, January 20, 2023; 2:20PM - 3:40PM EST

Session Lead: Professor Eleanor Laurans

Speakers: Scott Jacobs, Anthony Oni, and Erik Synder

Description: We are delighted to be joined by three outstanding investors from three very different funds. We'll hear about where they fit in the investment landscape, their own personal path to get there, and open it up for discussion. Please come with questions.

January 30, 2023 12:00 PM - SIP | Feedback Poll

We hope you enjoyed SIPs. Thank you for being engaged and enthusiastic participants over the duration of the program.

Please take the time to share your candid feedback so that we can make SIPs even better for the MBA classes to come!

Feedback Survey

Please respond by 12pm on Monday, January 30th. Your answers to this survey will be anonymous. This survey's results will not be available to respondents online.