



Tuck

IMPACT REPORT FY22



REVERS CENTER FOR ENERGY, SUSTAINABILITY AND INNOVATION

A group of Tuck students visit Green Mountain Power microgrid, the first utility in the country to island a distribution circuit using inverterbased sources with no reliance on fossil fuel generation backup.

Executive Summary

As the Revers Center for Energy marked its fifth year, we changed the name of the Center to the Revers Center for Energy, Sustainability and Innovation to reflect the important work that we have been undertaking since our founding. With this shift, we benefit from an expansion of our mission to call forward the importance of climate and sustainability in our student engagement work and to spur future collaboration across Dartmouth. The Center continues to build a thriving energy community at Tuck, Dartmouth, and beyond as we work to inspire and shape tomorrow's leaders in energy while engaging today's energy community.

We believe that regardless of industry, tomorrow's wise, decisive leaders will need to make informed energy, climate change, and sustainability decisions during their careers that drive innovation for a sustainable future. Business leaders need to have a broad view of the energy economy and how different energy systems are interconnected. The Center continues to have a deep impact on recruitment and student engagement with the industry. Roughly 40 percent of each Tuck class engages with the Center and nearly 100 Revers Center Fellows have joined the energy sector upon graduation since its inception in 2016.

New Courses Supported by the Center

Sustainable Marketing

Sustainable Marketing, a new course taught by Adjunct Professor Liana Frey, is framed around Philip Kotler's definition, "sustainable marketing holds that an organization should meet the needs of its present consumers without compromising the ability of future generations to fulfill their own needs." To do this well, marketers need to expand their traditional scope and leverage new tools and frameworks. Consumers' expectations are changing, and they now expect companies to not only be responsible for their environmental impact while making a product, but also in the sourcing, use, and disposal. Marketers want to leverage this interest in sustainability, but they struggle with what, where, and when to communicate during the customer journey. Through research, cases, and real-world examples, students learn sustainable marketing strategies and what sets the winners and losers apart.



Renewable Energy Finance Practicum

Tuck also added a Renewable Energy Finance Practicum, which supports the growing energy curriculum. The Practicum was developed this year to give students weekly exposure to models and practitioners in the renewable energy field. It was targeted at students pursuing a career in clean energy finance, project development, and origination and others who are interested in developing or refining their financial modeling skills for careers in finance. Signups were limited to 25 students so there would be plenty of 1:1 time with the practitioners. Companies participating were: Verogy, Swift Current Energy, and EnerSmart. The lead for the sessions was Alex Figueroa T'10, Caroline Mann T'15, James Beach T'95, and James Marett T'10.

Energy Treks: Great River Hydro and Green Mountain Power Microgrid

The Green Mountain Power microgrid is the first U.S. utility-built community microgrid with a 4.9MW storage battery for backup. The cutting-edge utility microgrid makes the company the first utility in the country to island a distribution circuit using inverter-based sources with no reliance on fossil fuel generation backup. The grid protects consumers in the event of a storm or prolonged outage, pulling backup power from batteries and solar panels to customers served by the traditional grid. The framework of “islanding” creates backup power that can work independently in local areas with solar-trackers that can assist with stretching the power supply for several days. Great River Hydro is New England’s largest conventional hydropower generator, with 13 generating stations across three states.



A group of Tuck students traveled to visit Great River Hydro, the first utility in the country to island a distribution circuit using inverter-based sources with no reliance on fossil fuel generation backup

“During my time at Tuck and with the Revers Center, I spent a lot of time digging into natural solutions to mitigate the effects of climate change and challenge our traditional energy system. Working with the center allowed me to dig deep into my curiosities about all aspects of energy.”

—Eva Greene T'22



Student Experience

Experiential learning and project work enables our future business leaders to gain a broad view of the energy landscape and how the energy economy is interconnected.

Tuck ESG Investment Fund

In its second year, Tuck’s student-led ESG Investment Fund, overseen by April Salas, Executive Director; Ramon Lecuona Torras, Assistant Professor; and Bill Martin D’87, Clinical Professor, provided development opportunities for a career in ESG to T’22s Abigail Gary, Kara Breen, Melissa Leung, and Takunda Ndoro. ESG investing has evolved rapidly over the last few years and has much to offer in terms of academic and professional growth for students. The “action-based learning” that the fund provides created an invaluable opportunity that cannot be easily emulated in the classroom. Students also learn and pitch investments consistent with the asset management industry’s best practices. As the industry is racing to



T’22s Abigail Gary, Kara Breen, Melissa Leung, and Takunda Ndoro managed the student-led ESG Investment Fund.



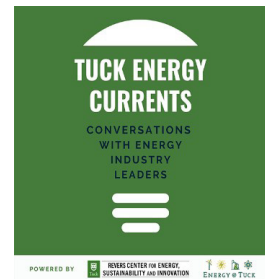
develop more ESG products and solutions to meet growing demand globally, business schools have an important role to play in developing the next generation of investment professionals who can readily and credibly assess long-term material ESG risks and opportunities.

Tuck Student Initiative for Decarbonization

Formerly the Tuck Carbon Offsets Project, the Tuck Student Initiative for Decarbonization, led by Revers Fellow Andrew Wood T'22 and Barbara Demidchuk T'22, had 34 students identifying material emissions sources for Tuck operations and student life, analyzing historical data to estimate components of a carbon footprint, and establishing an offsetting investment thesis. The project overall provides skill-building opportunities for students interested in environmentally focused careers, including hands-on experience and continues to strengthen Tuck's position among peer schools, including the 15 MBA programs that have started a carbon offsetting process.

Revers Energy Fellow Tuck Energy Currents Podcast

During the winter of 2021, Revers Energy Fellow Eric Lukas T'21 launched a podcast that explores emerging trends in the energy sector through conversations with Tuck students, alumni, and industry leaders. Lukas hosts the 12-episode first season, available now on Apple Podcasts, iHeart Radio, Spotify, and other leading podcast distribution platforms. There have been 784 downloads of the 13 episodes featuring Dan Revers T'89, Jon Fouts T'92, Caroline Mann T'15, Robert Sewell T'21, Edmund Gaither T'00, Thad Hill T'95, Scott Brown D'78, Margaret Murphy T'08, and Christian Fong T'05. In the 2022-23 academic year, new hosts Justin Meier, Susie Peerson and Umut Asikoglu T'22 plan to release the second season.



“The Revers Center’s activities were an important part of my decision to apply to and attend Tuck, and I wanted to help further the Center’s mission.”

—Eric Lukas T'21



Student Excellence: Sam Gant T'22 Reflects on COP26

Tuck has long participated in the annual U.N. Conference of Parties that addresses climate change. For students who attend, it's an experience that stays with them and builds upon the many climate-related courses and programs available at Tuck. Tuck sent a delegation of six T'22s to COP26, where they had observer status and could sit in on negotiations and panel discussions, and network with professionals at the intersection of climate change, business, and public policy. This year, COP26 was held in Glasgow, Scotland, and it generated more than the usual amount of attention, due to a year of catastrophic climate-change-related weather disasters, including record heat waves, droughts, flooding, and forest fires.



Sam Gant T'22 was one of six students who traveled to Glasgow, Poland to witness COP26 firsthand.

In Sam's own words, "COP has spurred me to reflect deeply on the role that I have played in exacerbating climate change, and what I can do going forward. I am what Graham Zimmerman would call a highly 'imperfect advocate.' Attending this conference has crystallized my thinking on a few things that I can do, and I think these are behaviors that other Tuck students can adopt as well. Work where you can maximize the scale of your impact. Speak plainly and don't get scared by jargon. Go outdoors. Time spent in nature recharges me and strengthens my resolve to protect these spaces."



COP26 Glasgow, Scotland

The Center co-sponsored extensive programming around the UN Climate Change Conference in Glasgow (COP26), which brought together 120 world leaders and over 40,000 participants. Ahead of the conference, Professor Tracy Bach hosted a session titled, “The Business of Sustainability Treaty Negotiations,” highlighting the trends and topics to watch during the annual conference of parties. Second-year students then applied and went through a selection process to attend COP as Tuck delegates to the conference. Six students were selected based on their motivation and a research topic they wanted to investigate during their trek. Professor Bach supported the students who attended by checking in and meeting with them during the event, which took place November 1 – 12, 2021.

As follow-up, the Center hosted “COP26: The Outcomes” with the students who attended COP along with Tracy Bach. Each student was tasked with writing a white paper and blog post on their research topic and reflecting on their experience. Topics included:

- India’s path to net-zero: Phasing-down Coal
- Understanding Oceans in the Climate Context: Important Learnings and Observations from COP 26
- COP26 & the “Methane Moment”
- Natural Capital Accounting for Infrastructure Planning
- Financial Inclusion Through Digital Communities

Networking: Career Lunch & Learns

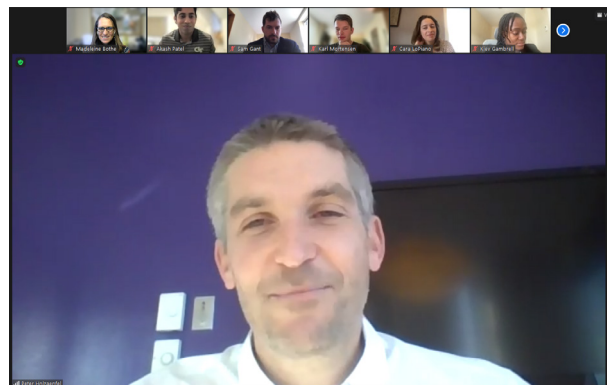
The Center coordinated a series of career-based “Lunch & Learn” opportunities with students and alumni across a wide range of industries.

- Energy Banking & Finance: Bank of America, UBS, Barclays, EDP Renewables, and PJT Partners
- Consulting: Deloitte, Bridgeway Partners, Strategy&, McKinsey, Bain & Co., and BCG
- Mobility Industry: GM Cruise, McKinsey & Company (Detroit), Google Inc., and Romeo Power
- Sustainability and Utilities: Peloton Sustainability, Microsoft Sustainability, Maine Venture Fund, National Grid, Available Power, National Park Service, and Romeo Power

Engaging Experts

The Center collaborates with partners across Tuck to bring experts in to meet with students in panels, as guest speakers in the classroom, and in small group settings. Our Power-Up Thursday series featured:

- **Energy Careers and Alumni Panel** | Co-sponsored with Tuck Career Services, featuring alumni Brandon Koone T’21, MBA Rotational Associate, NRG Energy; Anna Douglas T’21, Manager, Financial Analysis, Voltus; Aygul Sanzyapova T’19, Associate, Investment Banking, Marathon Capital
- **Boston Career Treks** | Students met with industry leaders from EnelX, Swift Current Energy, and ArcLight
- **Trends in Mobility- Electrification and Automation** | With Ryan McNamara T’22, Jonah Robinson T’22 and Wester C.H. Schoonenberg TH’21, Manager, Supplier Capacity Planning at Lucid Motors. They discussed the current state of the industry, an overview of major players, the ins and outs of autonomous vehicles, the industry business models, and the potential impact of EVs and AVs on adjacent industries.
- **Nuclear 101** | Presented by John Minderman and Mitchell Jacobs, this always a popular session explores the nuclear industry from the perspective of individuals who have worked in nuclear plants and are knowledgeable about the potential for



A group of Tuck students connect virtually with energy industry leaders from EnelX, to learn how the company helps businesses and communities create, store, use, and manage energy more efficiently.



nuclear and its impact on climate.

- **Oil & Gas 101** | Presented by James Jumper and Nick Vest, who shared their experiences on the front lines of drilling for oil and gas. They also discussed the upstream landscape, the drilling process, and the outlook for the sector.
- **Hawaiian Renewable Energy Transition in a Pandemic Economy** | Seven Center fellows attended this experiential learning trek: Jake Ochroch, Jacob Holzhauser, Akash Patel, Justin Meier, Hannah Saltman, Erin Kelly, Alex Krass
- **Hydrogen 101** | Kartik Gulati T'23 discussed the “fuel of the future” hydrogen fuel industry. Attendees learned about the basics of hydrogen, the key trends and forces acting on this up-and-coming industry, and the next-generation technologies which may play an important role in the future.
- **Imperfect Advocacy** | Discussion with Graham Zimmerman, award-winning professional climber, well-recognized creative, and vocal climate activist. Zimmerman is the co-founder of Protect Our Winters, an organization founded by outdoor people to protect the land they love by promoting non-partisan policies designed to protect the world. Co-sponsored with Tuck’s CBGS.
- **Corporate Purpose** | Discussion with Professor Argenti, Hannah Saltman T’22, and Caleb Dorfman T’21, exploring their recent research on the Business Roundtable’s statement on the purpose of a corporation. Their research examines how companies are moving towards a stakeholder model and what that means for the future of the corporation and their sustainability practices. Co-sponsored with Tuck’s CBGS.
- **Sustainable Innovation** | A chat with Scott Anthony, Senior Partner at Innosight, who taught an elective on Leading Disruptive Change at Tuck in the spring term. In his more than a decade with Innosight, Scott has advised senior leaders in companies on topics of growth and innovation. He has extensive experience in emerging markets, particularly in India, China, and the Philippines. In this session, Scott led us through innovative frameworks to help us think about sustainability. Co-sponsored with Tuck’s CBGS.
- At Tuck’s Emerging Markets Conference, the Center supported panels on:
 - **Infrastructure Investment in Transportation, Energy and Telecom** with panelists: Camilo Gonzalez, Infrastructure Lead Partner (LatAm) at EY; Francisco Monaldi, Director LatAm at Rice University; Nicole Maske, Co-founder of Eos Capital; and Melissa Cook, Founder & MD at African Sunrise Partners
 - **Infrastructure Investment in Renewable Energy** with panelists: Margaret Oghumu, AVP at Africa Finance Corporation; Pariphan Uawithya, Director at Rockefeller Foundation; Zanele Hlatshwayo, Investment Officer at IFC; and Miguel Mondonedo, VP Infrastructure at Keppel Capital.
- During a day dedicated to energy at Tuck’s signature 17th annual Private Equity and Venture Capital Conference, the Center supported speakers including:
 - **Keynote Speaker** Stina Brock D’01 Th’02, Proterra, VP of Business Development, facilitated by Mona ElNaggar, Valo Ventures, Partner
 - **Supporting the Clean Energy Transition** with Julie Blunden D’88, New Energy Nexus, Board Chair and Plus Power, Advisory Board Member; Robert Edwards Jr., U.S. Department of Energy, Director of Outreach and Business Development; and John Harper, Clean Energy Venture Group, Partner



T’23s John Minderman and Mitchell Jacobs lead the “Nuclear 101” session.



- **Investing for Climate Mitigation and Adaptation** with Julia Brady, Valo Ventures, Partner; Caitlin Wale, Senior Associate, Counteract; and Tim Woodward, Prelude Ventures, Managing Director.

Emerging Climate Leaders Collaborative

The ECLC continued to partner with the Hubbard Brook Research Foundation, League of Conservation Voters, Revers Center for Energy, and Sustainable Futures Consulting to host events that would convene students, early career professionals, policymakers, elected officials, business and nonprofit leaders, scientists, and environmental justice champions for regional, national, and international dialogues on climate, clean energy, science- and nature-based solutions to address today's climate challenges.

The Road to COP26 took place in October and provided a preview of international climate negotiations from COP26 organizers and attendees, highlighted what occurs outside of the negotiation rooms, showcased key themes, and outlined what can be done to join the global climate movement before, during, and after COP26. This half-day series hosted experts such as Dr. Peter Abbott OBE, British Consul General in Boston; Steven Rothstein, Managing Director, Ceres Accelerator for Sustainable Capital Markets; Andrew Marino, Senior Managing Director and Head of Strategy, Generate Capital; Phil Giudice, Member, Secretary of Energy Advisory Board (SEAB); Former Special Assistant to President Biden for Climate Policy; Board Chair at FirstLight Power; and Abby Hopper, President and CEO of Solar Energy Industries Association.

The Youth Forum on Climate-Smart Infrastructure took place in May and catalyzed the conversation about building sustainable affordable, equitable housing using regionally-sourced climate-smart wood products and clean energy technology. The panel for this event included representatives from Forest Products: Jameson French, President and CEO, Northland Forest Products; Policy: Ann Kuster, U.S. Congresswoman ; Housing: Carmen Lorentz, Executive Director, Lakes Region Community Developers; and Clean Energy: Madeleine Mineau, Chief Operating Officer, Essex Hydro.

Tuck Teams Make Strong Showing at Case Competitions

Students were eager to represent Tuck at several high-profile case competitions this year. The Center helped assemble teams of students for five different challenges. The experience was invaluable for students who succeeded in pulling together compelling submissions. The Center aims to combine attendance at case competitions with company visits to local firms to ensure that students with energy career goals have an opportunity to meet area alumni.

Tuck teams participated in the following:

- University of Texas, Austin Energy Finance Case Competition
- Duke Fuqua Energy in Emerging Markets Case Competition
- Michigan Ross Renewable Energy Challenge
- VF Sustainability Case Competition (Georgetown)
- Kellogg-Morgan Stanley Sustainable Investing Challenge





Each year, second-year RCESI Fellows work with Center leadership to engage experts and pursue opportunities across the energy industry.

Energy Fellows Program

The Energy Fellows are the hallmark of our programming. These second-year MBAs work with Center leadership and Tuck faculty, staff, and alumni to customize their MBA experience. The Center hosted quarterly Fellow meetings with special guests who are experts across the energy sector, including Scott Hall, CEO, Great River Hydro; Scott Fisher T'98 and David Coleman T'03, Partner, Northbridge Group; Pace Ralli T'09, Co-Founder and CEO, Clean Marine Energy; Founder and CEO, SW/TCH Maritime; and Kourtney Nelson, Renewable Energy Director, Microsoft.

Students pursue opportunities both within and outside the classroom that will prepare them for careers across the energy industry.

Our cohort of 19 Fellows explored the following topics this year:

- Renewable Energy Finance Practicum
- Energy Implications of Digital Assets
- Economic and Environmental Potential of Shale Infrastructure Closed Loop Geothermal Electric Generation
- Recommendations of Structures and Possibilities for Sources of Clean Energy for Hanover
- Battery Energy Storage Systems: What is the impact on GHG emissions and decarbonization efforts in the United States?
- India's path to net-zero: Phasing-down Coal
- Climate Change Impacts & Resilience Strategies in Mountain Tourism
- Energy Strategy at Simon Pearce: An Investigation into Reducing Energy Use in Specialty Glass Production
- NHEC Climate Initiative
- Tuck Energy Currents Podcast: Season 2

“One of the most valuable aspects for me was the independent study I worked on with a group of fellows for a local business. Getting to know the unique energy challenges they faced and putting together recommendations was a great way to expand my energy knowledge and prepare for life after Tuck.”

—Erin Kelly T'22





For their First-Year-Project (FYP), a team of Tuck students partnered with Vestas North America, a wind turbine manufacturing company.

Careers in Energy

The Center supported a First-Year Project this year through the Thad T'95 and Margaret Hill Career Exploration Fund. Building on an RCESI Fellow's independent study project last year, the student team working with Vestas North America had the opportunity to visit the site in Colorado where turbine components are manufactured. Vestas is a market leader in the North American wind industry with more than 6,000 employees. The team was able to visit a factory, sit in on management meetings, and network with colleagues at Vestas for this trip.

Energy Leaders Mentorship Program

Since 2016, this signature program has paired Revers Energy Fellows with successful energy industry leaders. The objective of this program is to cultivate a strong network of Tuck energy alumni. This program facilitates a transfer of knowledge, wisdom, resources, and life experiences. It creates lasting, meaningful mentor relationships through a two-way dialogue that extends far beyond the duration of the program.

Mentors this year included:

- Elyse Allan D'79, T'84, Board Director, Brookfield Asset Management; Former President & CEO, GE Canada
- David Brewster T'02, Chairman, Environmental Impact Acquisition Corporation; Co-Founder, Enernoc
- Grant Davis T'85, Managing Director, FIRSTavenue
- Alex Figueroa T'10, Co-Founder and CFO, Verogy
- Scott Fisher D'93, TH'93, T'98, Partner, Northbridge
- Christian Fong T'05, Co-Chairman and CEO, Spruce Power
- Jon Fouts T'92, Managing Director, Power & Utilities, Investment Banking Division, Morgan Stanley
- Jess Gunter T'09, Head of Global Product Marketing, Nest Energy and Connectivity, Google Nest
- Scott Hall, President and CEO, Great River Hydro
- Thad Hill T'95, CEO, Calpine
- Mike Miskovsky T'90, CEO, Tiveni Venture Advisor, Obvious Ventures
- Kourtney Nelson, Renewable Energy Director, Microsoft
- Pace Ralli T'09, Co-Founder and CEO, Clean Marine Energy; Founder and CEO, SW/TCH Maritime



Elyse Allan D'79 T'84, former president and CEO of GE Canada, is one of several accomplished Tuck alumni who mentor RCESI Fellows.

Curricular Connections

Energy Economics

Professor Erin Mansur

This course introduced students to energy markets, including structure, competition, investment, and regulation, as well as strategy and policy. Students ended the course with a deeper understanding of economic determinants of industry structure, the evolution of competition, drivers of supply and demand in various markets, the roles of storage and transportation, market power and antitrust concerns, and the rationales for economic and environmental regulations.

Business and Climate Change

Professor Anant Sundaram

Climate change and its impacts raise momentous concerns. There is an emerging, multi-trillion dollar "climate economy" that will mitigate and help us adapt to climate change. The class discussed the impacts of climate change on business, tools, and frameworks to understand regulatory responses, and ways to assess how a company's business model is exposed to climate change.

