



Revers Center for Energy

Center Fellows traveled to Hawaii in early 2020 to learn about the state's plan to transition to 100% renewable energy.

Executive Summary

The Center is building 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 throughout their careers.

Energy impacts every industry, with energy experts needed in non-energy companies and non-energy jobs available in every energy-intensive company. Our work is organized around three thematic categories: Oil & Gas, Power Generation & Renewables, and Climate & Sustainability. The Center aims to balance our programming equally within these categories throughout the academic year. Our workshops and expert speakers are in high demand from not only Tuck students who seek to expand their knowledge in different energy fields but also the greater Dartmouth energy community.

Creating opportunities for all stages of the MBA journey, our programming connects students with a network of global business leaders, supports research and thought leadership, and offers a distinctive blend of courses and programs devoted to the energy ecosystem. In the coming year, the Center plans to continue addressing current trends in energy including digital innovation in oil and gas; climate finance; Environmental, Social, and Corporate Governance (ESG); trends in mobility and smart cities; sustainability at Tuck and Dartmouth's energy transition; and the impact of COVID-19 on energy markets and industries.

Highlights

Ecosystem Deep Dive: Hawaii's Renewable Energy Landscape

In early 2020, a group of Center Fellows participated in an experiential learning opportunity to explore a unique energy ecosystem that takes political, geographic, cultural, and resource factors into consideration. Center Fellow Pete Cahill T'20 spearheaded this effort to examine the challenges of transitioning to 100% renewable energy by 2045.



Tuck students visited the Hawaiian Electric Company; the Hawaii State Energy Office; the Office of Climate Change, Sustainability, and Resiliency; the Elemental Excelerator; University of Hawaii; AES Hawaii (coal plant); Covanta Honolulu H-Power Waste to Energy plant; a community microgrid project; the Natural Energy Laboratory; and Parker Ranch, a working cattle ranch with alumni Dutch Kuyper T'92 and Jonathan Mitchell T'12. The Fellows then presented their conclusion and outlook for the state of Hawaii as part of the Dartmouth Energy Collaborative Lunch & Learn in February.

New Programming on Transportation and Mobility

More than 115 students attended a kickoff event for the newly launched Future of Automotive Mobility student club. The topic was “Autonomy in Sight: A Discussion on the Future of Autonomous Vehicles” with special guests Bryan Reimer, Ph.D., Research Scientist at the MIT Center for Transportation and Logistics, and Doug DeMuro, Automotive Journalist for Oversteer by Autotrader. In response to growing student interest, the event began a discussion of transportation and mobility topics at Tuck.

Experiential Learning Through Case Competitions

The Center supports a fellows-led program for the development and preparation of Tuck teams to compete at high-impact case competitions. The competitions showcase the top energy-focused MBA candidates from around the country and provide a unique opportunity to address real-world finance issues relevant to today's dynamic energy industry.

This year, a Tuck team was shortlisted as a finalist in the Duke Energy Emerging Markets Case Competition. The one-day competition “connects students, academia, and industry in pursuit of unconventional business-based solutions that expose unrecognized opportunities with positive social and environmental impact.” Tuck teams also participated in the University of Texas Austin Energy Finance Case Competition, the University of Michigan Ross Business School Renewable Energy Competition, and the UCLA Anderson Business School Challenges in Energy Competition.

Lessons Learned: COVID-19

The energy industry was dramatically impacted by the COVID-19 pandemic. The oil markets were front-page news and it was predicted that air quality would benefit from less travel and manufacturing. The Center used these topics along with special guests from BP and Shell to address the pandemic's influence on their industries. We hosted a Fellows' led discussion with Kevin Yuan T'20 addressing air quality and how climate change impacts may be slowed during a period of less air and car travel. Kevin shared images and data to kick-off an engaging discussion. Michael Cohen, Chief US Economist and Head of Oil Analysis in BP's Group Economics team addressed [BP's announcement to reach net zero by 2050](#) as well as his perspective on the company's reaction to the pandemic and the dramatic oil markets changes. We also hosted Travis Sheehan, Lead for City Solutions North America, Shell New Energies who shared his views on market trends for lower carbon technologies and how that might change as a result of the pandemic. For a list of all of our speakers throughout the spring term, see the “Engaging Experts: Power-Up Thursday Speaker Series” section below.

Student Experience

Student Excellence: Cristian Molina Cornejo T'21

Cristian received a Young Professional Scholarship by the National Association of Investment Companies (NAIC) to attend the



During their trek to Hawaii, students met with a variety of energy stakeholders, including the Covanta Honolulu H-Power Waste to Energy plant.



annual Private Equity & Hedge Fund Conference in Los Angeles, CA. NAIC is the largest trade association of diverse and emerging Private Equity and Hedge Funds, composed of 75 members and representing over \$150 billion in AUM. With support from the Revers Center and the Center for Private Equity and Venture Capital, Cornejo took the opportunity to attend the conference and pursue his interest in the impact that the proliferation of distributed energy resources and renewable generation will have on electrical infrastructure, and the implications for capital allocators.

“Since I started at Tuck, I have had multiple coffee chats, lunches, and conversations with investors and C-suite executives. The exposure to leaders in the field and the quality of learning have been invaluable to my career and personal growth.”

—CRISTIAN MOLINA CORNEJO T'21, VENTURE CAPITAL FELLOW

Student Excellence: Center Fellow Kevin Yuan T'20

Featured in *Poets & Quants* 2020 Best & Brightest MBAs, Yuan balanced academic excellence with several leadership and community roles while at Tuck, including serving as the Student Board Diversity and Inclusion Chair; a Revers Center for Energy Fellow; Tuck United Nations COP24 and COP25 Delegate; and community consultant with the Hanover Conservancy land trust. He chose Tuck because we are committed to developing leaders for climate change and the renewable energy industry and are the only business school in the world to be represented at the UN Climate Change Conference.



Revers Center Fellow Kevin Yuan T'20 was featured in Poets & Quants 2020 Best & Brightest MBAs.

Ecosystem Deep Dive: Climate Change and the Paris Agreement

This unique experiential learning program, Climate Change and the Paris Agreement: The Business of Sustainable Development and Multilateral Treaty Negotiation at COP25, immersed Tuck students in the multi-party treaty negotiations of COP25. Tuck's observer status at the Conference of Parties provided students with an opportunity to witness the negotiations first-hand. It introduced them to the myriad ways investors, companies, and governments navigate the risks and opportunities associated with the transition to a low-carbon economy.

The initiative was co-led by the Revers Center for Energy; the Center for Business, Government & Society; and content expert Tracy Bach—a law professor for over twenty years who has focused on climate change. The program engaged more than 30 students through workshops, pre-departure, and debrief sessions, and 10 students attended COP25 in Madrid, Spain.

“The climate crisis can seem like this huge problem, where we don't even know where to start, and it can feel defeating and deafening. But if you find your sliver of the pie and give it everything you can give, the world will be in a better place.”

—KEVIN YUAN T'20, TUCK COP25 DELEGATION MEMBER



Ten Tuck students attended COP25 in Spain where they learned about the high-stakes negotiations involved in the transition to a low-carbon economy.



Ecosystem Deep Dive: Denmark Energy Trek

The Revers Center for Energy staff and fellows joined Dartmouth staff and representatives from the Town of Hanover to visit stakeholders of Denmark's effort to become 100% independent of fossil fuels. The trip was organized by the State of Green, Embassy of Denmark of Washington D.C. and the Danish Board of District Heating. Center Fellows Pete Cahill T'20 and Kevin Yuan T'20 shared their experiences visiting Danish universities, offshore wind, technical companies and utilities, and the district energy industry during a lively Dartmouth Ecosystem Collaborative Lunch & Learn in October.



Fellows Pete Cahill T'20 and Kevin Yuan T'20 visit offshore wind facilities during the Denmark Energy Trek.

TuckGO Collaboration: Global Insight Expeditions (GIX)

Global Insight Expeditions encourage students and faculty to engage in coursework and experiential learning around the globe. The program creates an immersive experiential learning opportunity for students and prepares them to address real-world business challenges within a globalized economy. This year, the COVID-19 pandemic prevented students from taking part in our planned trip, "A New Energy Future for Morocco: Tradition, Innovation, and Entrepreneurship."

Co-Curricular Opportunities: Introductory Programming

The Center offers several regular and topical workshops aimed at facilitating practical learning opportunities that prepare students for a successful transition into energy careers. These workshops are led by outside industry experts and range from introductory (101s) to advanced (201s) topics. The following workshops, including several open to the greater Dartmouth energy community, are offered to all Tuck students.

Energy 101 Intro to Power and Gas: The Center hosts this one-day seminar at the start of each academic year. The seminar utilizes several case studies from the power and gas industries, and topics include what natural gas and electricity are and how they work, how regulation works and how it affects various market participants, and the future of US gas and electricity. This is an in-depth introduction to future seminars and experiential learning opportunities hosted by the Center. The workshop is also useful for Tuck students preparing for the fall term recruitment cycle.

Solar 101 Energy Workshop: Featuring Tuck Partner Paul Hildebrand and Josh Hotvet T'18, this first-time offering addressed the basics of solar energy.

Engaging Experts: Speaker Series

The Center hosted two speaker series, with special offerings for Center Fellows and select Energy Club members as part of the Fellows Energy Leaders Program. A highlight of the year was "Trends in Energy Project Finance" with Jon Fouts T'92, Managing Director, Global Power and Utility Group at Morgan Stanley. This year, two new speakers were featured in the series, Financing the New Energy Economy.

- Frank Hermelink T'05, Managing Director, European Power and Utility Group, Investment Banking Division, Morgan Stanley in London met with T'21s who were excited to learn more about investment banking at the start of their Tuck experience.
- Curtis Probst, Co-CEO of the New York City Energy Efficiency Corporation, spoke with Center Fellows and students from across campus, and presented "Financing the Clean Energy Transition and the Role of State and Local Green Banks."



Learning Experiences Across the Industry

The Center brings to life what is learned in the classroom by sponsoring treks, workshops, conferences, and other experiences that immerse Tuck students in the energy community.

ClimateCAP: The Global MBA Summit on Climate, Capital, &

Business: Three Tuck students were sponsored to attend this business school sustainability summit hosted by the UVA Darden School of Business. This was an important opportunity to begin benchmarking Tuck's actions toward sustainability goals.



Panelists speak on "Energy Private Equity: Investing in the Energy Transition" during the 2020 Tuck Private Equity & Venture Capital Conference.

Tuck Private Equity Conference: RCE co-sponsored a panel on "Energy Private Equity: Investing in the Energy Transition." Moderated by Ryan

Ganong T'20, panelists included Patrick Fox T'07, managing partner at New Energy Capital, Timothy Healy D'91 T'02, CEO of P3 Energy, Matt Prescottano T'15, vice president of BlackRock, and Pooja Yadav T'18, senior advisor at CrossBoundary.

Trek to Covanta Haverhill Energy Plant: The trek to this waste-to-energy facility included a tour of operations and discussions with a business manager, operations manager, environmental specialist, and a plant engineer.

ISO-New England: The Center led this annual trek to the regional grid Independent System Operator for New England to learn about US electricity markets, load management, and how renewables are integrated into "the grid." This year, Dartmouth undergraduates and Thayer MEM students were invited to join the trek.

Engaging Experts: Power-Up Thursday Speaker Series

This student-led technology series incorporated topics our students were most interested in, including energy trends, oil and gas value chain, and commodity trading.

- **Microsoft Sustainability Goals:** Kourtney Nelson, renewable energy director at Microsoft, led a discussion on Microsoft's recent carbon neutrality announcement, the role that her team plays, and what she has learned so far from 20-year career working with companies looking to drive climate and clean energy initiatives.
- **Current Energy and Oil Markets:** Chief US Economist and Head of Oil Analysis in BP's Group Economics team Michael Cohen shared his perspective on the energy and oil markets.
- **Smart Cities:** Travis Sheehan, lead for City Solutions North America, Shell New Energies, discussed Shell's investment in lower-carbon technology which includes renewables such as wind and solar; new mobility options such as electric vehicle charging and hydrogen; and an interconnected power business that will provide electricity to millions of homes, companies, and businesses.



A group of Tuck students, Dartmouth undergraduates, and Thayer MEM students visited the Independent System Operator for New England.



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 towards future careers across the energy industry, both inside and outside of the classroom. Key programs include our Energy Leaders Lunches where we host CEO's from across the industry to frame a key leadership challenge, and describe how they managed and led their teams to success (or failure) in a small group setting with our fellows; an Executive Mentorship Program where we match our fellows with industry leaders for a 16-month long mentorship to help guide career planning and offer perspective on balancing life and a career; and a Fellows Experiential Learning Project or FELP, which is an independent study or project with a company over 1-3 terms diving deeper into the business of energy in preparation for their career transition into a field such as finance, operations, etc.



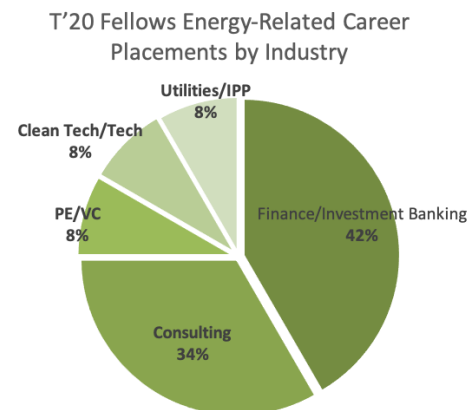
Revers Center Fellow Vishal Aggarwal T'20 explored AI applications in the energy sector at the Time Machine conference in Austin, TX.

Center Fellows led three “Recruiting in Energy” career panels during the fall term: Energy Banking; Energy Consulting; and Energy Operations, Manufacturing, and Sustainability Companies. These panels enabled students to network and gain insights around three important aspects of energy. Fellows shared the conclusions of the projects they worked on throughout the year at the Energy Project Forum in May. The Fellows also met with Calpine CEO Thad Hill T'95 and Arclight Capital CEO and Co-founder Dan Revers T'89 to discuss the CEO experience and expose them to experiences in different energy industries.

Center Fellow Vishal Aggarwal T'20 attended Time Machine 2019 in Austin, TX. The conference presented by Spark Cognition featured sessions titled, “Transforming the Energy Industry with AI” and “The AI Boom in Oil & Gas.” Vishal shared his experience since this field is a new career opportunity for Tuck students.

Careers in Energy

The Center supported four summer internships in sustainability roles with start-ups or not-for-profits, through the Thad T'95 and Margaret Hill Career Exploration Fund. Students had the opportunity to learn and experience energy roles that are not traditionally offered through on-campus recruitment. Twelve of the T'20 Fellows headed off to energy careers in four different industries. Finance/banking and consulting are top career destinations, with three quarters of Fellows joining those industries.



*Percentages based on energy-related career placements for 12 T'20 Revers fellows.

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 and community of Tuck energy alumni. This program facilitates a transfer of knowledge, wisdom, resources, and life experiences. It creates lasting, meaningful mentorship relationships through a two-way dialogue that extends far beyond the duration of the program.

Past mentors include:

- Siemens retired President and CEO Eric Spiegel T'87
- New Energy Capital CEO Scott Brown D'78
- ArcLight Capital Head of Commodity Markets Bob McGaughey



- Blue Earth Capital/Kenmont Capital Partners, LP CEO and Managing Director Don Kendall T'76
- GE Canada President and CEO Elyse Allan D'79 T'84
- Cleantech CEO and Venture Advisor Mike Miskovsky T'90
- Apache Offshore Investment Partnership board member Chansoo Joung T'87
- Calpine CEO Thad Hill T'95
- Ambri CEO and President Phil Guidice T'85
- SemGroup Corporation Director Sarah Barpoulis T'91
- Infra-Energy Capital Advisors Managing Partner Grant Davis T'85
- Spruce Finance Co-Chairman and CEO Christian Fong T'05
- Irving Oil Executive VP and Chief Brand Officer Sarah Irving D'10 T'14

Leadership and Collaboration

2020 Presidential Candidate Town Hall on Climate Change: NH Clean Energy Forum

Days ahead of the New Hampshire primary in February, the Revers Center for Energy and the Center for Business, Government & Society co-hosted a town hall where Revers Center Fellow Kevin Yuan T'20 and Melina Sanchez T'20 shared the stage with 2020 presidential candidates and asked about their plans to combat climate change. This event gave each candidate a forum to discuss their climate change and clean energy agenda in front of a young audience.

Tuck students asked the candidates about their clean energy and environmental policies and learned how they would directly address the problem at an inspiring and engaging town hall in Concord, N.H. The risks posed by climate change are among the biggest challenges that our MBA students will face as business leaders and experiential learning opportunities like the town hall expose students to the challenges of climate change and invite them to learn about potential solutions.

Across Dartmouth: Building the Network

On November 12th, the Revers Center for Energy sponsored and supported the inaugural speed-dating/networking event with Thayer and Dartmouth students. Approximately 50 students from the Tuck Energy Club, Thayer Energy Club, and the Dartmouth Energy Alliance came together for an Energy trivia night. Tuck students submitted questions across all aspects of energy for this engaging evening where teams circulated around different tables led by Revers Center for Energy Fellows. There were many laughs along with great networking.



In November 2019, the Center sponsored a speed-networking event with Thayer School of Engineering and Dartmouth undergraduate students.

Dartmouth Energy Collaborative Partnership

The Center continued to partner with the Dartmouth Energy

Collaborative (DEC) for programming that included Lunch & Learn events throughout the year. The Center co-sponsored an event on the "Health Impacts of Air Pollution" featuring Laura Paulin of the Geisel School of Medicine. In addition, this year we piloted a Tuck Student Careers in Energy Panel with five T'20 Fellows from a variety of energy backgrounds who talked about their experiences with Dartmouth Thayer School of Engineering and Dartmouth undergraduate students. This was a valuable touchpoint for all students to ask questions and share Tuck's expertise with other Dartmouth students.

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.



Professor Erin Mansur teaches a popular full-time elective course on Energy Economics.

Independent Study Projects

All students at Tuck, both first and second years are welcome to take on an energy related independent project with the support of the Center. These projects provide training in critical thinking and often impact the local community or a business. Center Fellows will also take on an independent project during their second year. Independent study projects by Fellows and first-year students included:

- China Plastics Ban (Max Pinto and Deepak Sankaran)
- Energy Blockchain (Junyang Ke)
- Haiti Microgrid (Daniel Vasquez, Lucas Rehaut, and Vishal Aggarwal)
- Offshore Wind (Pete Cahill and Ryan Ganong)
- Oil Artificial Intelligence (Vishal Aggarwal)
- Supermajors and Renewables (Kyle Crymes)
- Sustainable Fashion (Alex Wood and Kevin Yuan)
- Technergy (Liam Roche)
- Hawaii Energy Landscape (Alex Johnston and Ilexa Gales)



Minnesota Senator Amy Klobuchar addresses the audience at a town hall on climate change co-hosted by the Center in February 2020.

