

2019 University Energy Institute Leadership Summit

Wyndham Grand Pittsburgh Downtown
600 Commonwealth Place
Pittsburgh, PA 15222

September 25–26, 2019

Welcome to the 2019 University Energy Institute Leadership Summit

Day One at a Glance

- 11:00 - Registration Opens
- 11:00 - Networking Reception
- 1:00 - Kick-Off
- 2:15 - Keynote: Vincent Martinez
- 3:15 - Networking Break
- 3:45 - Roundtable Discussion
- 5:00 - Fireside Chat
- 6:00 - End-of-Day Recap
- 6:30 - Networking Reception

Day Two at a Glance

- 8:00 - Continental Breakfast
- 9:00 - Day 2 Welcome
- 9:30 - Roundtable Discussion
- 10:30 - Networking Break
- 11:15 - Panel
- 12:00 - Networking Lunch
- 1:00 - Keynote: James Zhaller
- 2:00 - Roundtable Discussion
- 3:00 - Networking Break
- 3:30 - Keynote: Michael K. Dorsey
- 4:15 - Roundtable Discussion
- 5:00 - Closing
- 5:30 - Group Dinners
- 7:05 - Pirates vs. Cubs

Over 130 university-based energy institutes in the United States are working to solve the world's toughest energy and climate-related challenges. A large collection of these energy institutes, including over 80 leaders representing 60+ institutes, will meet for the 2019 University Energy Institute Leadership Summit on September 25-26, 2019 at the Wyndham Grand Hotel in downtown Pittsburgh, Pennsylvania.

Hosted by Carnegie Mellon University's Wilton E. Scott Institute for Energy Innovation, the Center for Energy Studies at Rice University's Baker Institute for Public Policy, and The Payne Institute for Public Policy at the Colorado School of Mines, this private workshop will explore the opportunities that are possible with the organization of a national consortium. Both the research and operational leadership at each institute will discuss the role of an organizational framework to advance research and education, funding pursuits, decarbonization strategies, public policy and advocacy, innovation, and partnerships.

We will focus on the benefits and challenges of collaboration and explore possible structures. Following the event, a report on recommendations for future development will be published. The Summit is funded by the Alfred P. Sloan Foundation and the U.S Department of Energy, Advanced Research Projects Agency-Energy (ARPA-E).

Host Universities

Carnegie Mellon University
Wilton E. Scott Institute
for Energy Innovation

RICE UNIVERSITY'S
BAKER INSTITUTE
FOR PUBLIC POLICY

 **COLORADO SCHOOL OF MINES**
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Day One Agenda (All meetings will take place in Sterlings, except where noted.)

11:00 AM	Registration Opens - <i>Main Lobby</i>
11:00 AM to 1:00 PM	Networking Reception - <i>Commonwealth 1, Lobby Level (Buffet lunch at noon)</i>
1:00 PM to 2:15 PM	<p>University Energy Institute Leadership Kick-Off: <i>Welcome, Meeting Objectives & Introductions</i></p> <p><u>Jay F. Whitacre</u> <i>Director, Wilton E. Scott Institute for Energy Innovation, Carnegie Mellon University (CMU)</i></p> <p><u>James H. Garrett, Jr.</u> <i>Provost and Chief Academic Officer, CMU</i></p> <p><u>Rich Fitzgerald</u> <i>Allegheny County Executive</i></p> <p><u>Anna J. Siefken</u> <i>Executive Director, Wilton E. Scott Institute for Energy Innovation, CMU</i></p> <p>Special Remarks by <u>Chanette Armstrong</u> <i>Principal Deputy Director, U.S. Department of Energy, Advanced Research Projects Agency-Energy (ARPA-E)</i></p> <p>Introductions around the room</p>
2:15 PM to 3:15 PM	<p>Keynote - Forming and Growing a Network</p> <p><u>Vincent Martinez</u> <i>Chief Operating Officer, Architecture 2030</i></p> <p>Creating a vision for collaboration can be daunting, but there are leaders who have paved the way, leveraging diverse and complementary strengths to meet goals that impact society. This talk will provide motivation for the establishment of a network of energy institutes. A network begins by open communication and, through the alignment of interests and goals, produces outcomes that benefit network members and stakeholders. Based on experience with the 2030 Districts Network, a global network of high-performance buildings and communities, this talk will address how to form and grow a network and build value through collaborations and mutual contributions.</p>
3:15 PM to 3:45 PM	Networking Break

<p>3:45 PM to 5:00 PM</p>	<p>Session 1 Roundtable Discussion - Commonalities, Differences, and Stakeholder Expectations</p> <p>Motivated by Michael M. Whiston, <i>Postdoctoral Research Associate, CMU</i></p> <p>After a brief introduction, this session seeks to identify commonalities, differences, and potential opportunities for collaboration among university energy institutes. Results from a nationwide survey, conducted by Carnegie Mellon University, will be presented to provide a snapshot of energy institute research, funding, and strategic focuses in the U.S. This session will also discuss the expectations that stakeholders have of a network. The roundtable discussion will address these questions:</p> <ul style="list-style-type: none"> ◆ What would the mission and vision statements of a university energy institute network say? What elements would be included? ◆ Recognizing that university energy institutes differ in goals, sizes, and budgets, how could a network meet individual institutes' needs while maximizing benefits to all? ◆ How could a network secure stakeholder buy-in? What are avenues for forming and growing collaborations with industry, policymakers, and other stakeholders?
<p>5:00 PM to 6:00 PM</p>	<p>Fireside Chat with Brian J. Anderson, Director of NETL: Fueling America's Energy Generation</p> <p>Brian J. Anderson <i>Director, U.S. Department of Energy, National Energy Technology Laboratory</i></p> <p>Jared Cohon, Moderator <i>President Emeritus and University Professor, Civil and Environmental Engineering, Engineering and Public Policy, CMU</i></p> <p>For more than a century, the U.S. Department of Energy's National Energy Technology Laboratory (NETL) has developed bold and innovative technology solutions to address America's energy challenges using fossil energy resources. Today, the NETL mission focuses on discovering, integrating, and maturing technology solutions to enhance the nation's energy foundation and protect the environment for future generations, and follows a vision that will continue to power the nation's economic progress, ensure its security, and enhance national prosperity.</p> <p>During this Fireside Chat, Brian J. Anderson will discuss NETL's research and development of technologies that address the nation's energy-related challenges. He will also discuss future trends in energy and NETL's partnerships. Jared Cohon, former director of the Wilton E. Scott Institute for Energy Innovation at Carnegie Mellon University, will moderate.</p>
<p>6:00 PM to 6:30 PM</p>	<p>End-of-Day Recap, Reflections</p> <p>Suzi Kerr - <i>Chief Economist, Environmental Defense Fund</i></p>

6:30 PM to 9:00 PM	Evening Networking Reception - <i>Commonwealth</i> Join us for networking and heavy hors d'oeuvres.
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Day Two Agenda

8:00 AM to 9:00 AM	Continental Breakfast and Networking
9:00 AM to 9:30 AM	Day 2 Welcome David Blockstein , <i>Senior Adviser, Association for Environmental Studies and Sciences</i>
9:30 AM to 10:30 AM	<u>Session 2</u> Roundtable Discussion - Energy in the Higher Education Curriculum <i>The Role of Energy Institutes in Education</i> Motivated by Elizabeth J. Wilson , <i>Director, Arthur L. Irving Institute for Energy and Society, Dartmouth College</i> To address the world's energy-related challenges, energy-focused educational programs are evolving. This session will explore approaches and visions for developing this type of education. Topics include course curricula, areas of specialization, "hands-on" opportunities for students, training for work in the private and public sectors, and degree and program requirements. The roundtable discussion will address the following questions: <ul style="list-style-type: none"> ◆ What energy-related skills should be covered in higher education? Should there be a "common core" of energy-related courses, topics, and skills? ◆ Should a network offer its own courses? If so, what would be the course format? ◆ How should professional development be blended in energy education initiatives?
10:30 AM to 11:15 AM	Networking Break
11:15 AM to 12:00 PM	Panel - Three Institutes, Three Perspectives <i>The Importance of Collaboration in the University Energy Space</i> Morgan Bazilian <i>Director, Payne Institute, Colorado School of Mines</i> Jay F. Whitacre <i>Director, Wilton E. Scott Institute for Energy Innovation, CMU</i> Martha Broad <i>Executive Director, MIT Energy Initiative, Massachusetts Institute of Technology</i>

Panel Continued	<p>Michael K. Dorsey, Moderator <i>Co-Founder, Around the Corner Capital</i> <i>Full Member, Club of Rome</i></p>
12:00 PM to 1:00 PM	Networking Lunch
1:00 PM to 2:00 PM	<p>Keynote: ARPA-E: Creating New Energy Frontiers in the U.S. Innovation Ecosystem</p> <p>James Zahler <i>Associate Director for Technology-to-Market, U.S Department of Energy, Advanced Research Projects Agency-Energy (ARPA-E)</i></p> <p>ARPA-E is advancing high-potential, high-impact technologies and creating new ground in energy innovation and investment. Universities are key players in the research and development that goes into advancing these technologies. This talk will provide an overview of ARPA-E and highlight one or two examples of technologies that have progressed from exploratory research to market entry. This talk will also speak to ARPA-E's potential new funding avenues that could push technologies down the development path in a more self-sustainable manner.</p>
2:00 PM to 3:00 PM	<p>Session 3 Roundtable Discussion - Setting Expectations for Collaboration: Benefits and Challenges of a Network</p> <p>Motivated by Michael D. Maher, <i>Senior Program Advisor, Center for Energy Studies, Rice University's Baker Institute for Public Policy</i></p> <p>What should collaboration look like among energy institutes? This session will explore the benefits and challenges of collaboration. Consideration will be given to funding a network, efficiently and effectively collaborating within a network, maintaining use of a network, and assigning and sharing responsibilities among individual institutes. The objective of this session is to arrive at a set of expectations that individual institutes have of a network. The roundtable discussion will address these questions:</p> <ul style="list-style-type: none"> ◆ How should an energy institute network be funded? What are potential funding sources? How could a network be used to create funding opportunities? ◆ How could members of a network communicate and initiate projects with one another? Would a central point of contact be needed? ◆ What is the intended product of a network? How would responsibilities be assigned and shared among institutes?
3:00 PM to 3:30 PM	Networking Break

<div>3:30 PM</div> <div>to</div> <div>4:15 PM</div>	<div> Keynote: What Do We Need for 21st Century Energy Justice? </div> <div> Michael K. Dorsey <i>Energy Investor and Member, Club of Rome</i> </div> <div> <p>We live in an uneven world, defined in part by energy injustice. Accordingly, utility regulation affects how much citizens pay for energy —electricity, gas, inter alia. At the moment, it can systematically over-reward investors resulting that consumers often pay too much. Data indicates energy consumption is simultaneously a contributor to and a product of, social inequality. The deployment of renewable energy infrastructure can impact inequality, positively or negatively —along energy and income trajectories— as it scales, as underway and further anticipated. This talk examines a variety of structural (i.e., political-economic) factors to foment energy justice (alleviate injustice) broadly as renewable deployment grows—with an emphasis on the U.S.</p> </div>
<div>4:15 PM</div> <div>to</div> <div>5:00 PM</div>	<div> Session 4 </div> <div> Roundtable Discussion - How to Structure a Network of University Energy Institutes </div> <div> Motivated by Morgan Bazilian, <i>Director, The Payne Institute for Public Policy, Colorado School of Mines</i> </div> <div> <p>Networks can take different forms, depending on the scope and objectives of collaboration. This session will introduce possible network structures, including models for collaboration, sharing resources, and management. We will differentiate between centralized (strong) networks and decentralized (weak) networks. The roundtable discussion will address these questions:</p> <ul style="list-style-type: none"> ◆ What kind of governance or administrative structure would most benefit institutes? ◆ How could a sophisticated marketing, branding, or communications strategy benefit network members? ◆ How could members of a network work together to secure research funding? What’s the best way to optimize or incentivize joint proposals? </div>
<div>5:00 PM</div> <div>to</div> <div>5:30 PM</div>	<div> Closing: A Path Forward and Action Items </div>
<div>5:30 PM</div> <div>to</div> <div>6:30 PM</div>	<div> Group Dinners <i>(Details forthcoming)</i> </div>
<div>7:05 PM</div>	<div> Pittsburgh Pirates vs. Chicago Cubs </div> <div> <p>The Pittsburgh Pirates will take on the Chicago Cubs at PNC Park at 7:05 p.m. The stadium is located in a prime location along the shore of the Allegheny River and takes advantage of scenic vistas of the downtown skyline and riverfront, creating an exciting and dramatic urban sports venue.</p> </div>