



CARNEGIE MELLON UNIVERSITY, UNITED STATES

Fostering Inclusive Student Engagement for Environmental Action and Excellence



The Sustainable Development Goal of ensuring inclusive and equitable quality education and promoting lifelong learning opportunities for all aligns with our commitment to ensuring that all of our students are stewards of the environment. Across our colleges, faculty members are world leaders in global environmental challenges such as climate change resiliency and adaptation, drinking water treatment and supply, alternative energy, and environmental public policy. Where many of these challenges are led by the Wilton E. Scott Institute for Energy Innovation and the Steinbrenner Institute for Environmental Education and Research, the university also recently opened the new Center for Student Diversity & Inclusion as an integrated space dedicated to fostering a climate for intentional interaction and collaboration between individuals and groups at Carnegie Mellon. The intersection of these three centers provided the platform that resulted in a series of student-led project initiatives during the Spring of 2017.

This case study is based on three synergistic initiatives; all of which occurred during Carnegie Mellon's 2017 Energy Week, sponsored by the Scott Institute:

- **Energy, Science, Technology and Policy Energy Symposium** – The theme of the symposium was 'Low-Carbon Energy' and addressed advancements in both renewable and conventional energy. Students and industry leaders were joined together to discuss the future of energy and promote an affordable, stable and environmentally sensitive energy system for the greatest benefit for all.
- **Experiential Field Trips** – A series of local Pittsburgh-based energy and environmental operations included: Phipps Center for Sustainable Landscapes, East Liberty Electricity Site, GreenStar Recycling Center, Eaton Power Systems, and Chatham University's Eden Hall Campus. The intent was to observe environmentally sustainable practices within local economic and social structure.
- **Sustainability Weekend 'My Impact in Sustainability'** – This second annual conference was organized and executed by undergraduate and graduate students from diverse disciplines within Carnegie Mellon. Weekend activities included speakers and panel discussions covering a wide range of topics such as social injustice, recycling, involvement in the local community, entrepreneurship and food waste.



Project Objectives:

This case study describes intersecting, student-led initiatives that engage a broad and diverse community with the intent to understand, appreciate and internalize an individual's role in a collective society and environment. All 3 initiatives share the common objectives:

- **Convey the message.** The environment is the responsibility of all and the sustainability of the environment requires deliberate and cross-disciplinary conversations.
- **Be inclusive.** The solution must engage a diverse population to the interdisciplinary nature of education and research, such as that performed at Carnegie Mellon.
- **Be open-minded.** The conversation must listen to the voices of groups not typically heard.
- **Demonstrate the transfer of knowledge to action.** Experiential learning can provide a new lens and what the students do outside the classroom represents real learning.

Learning Outcomes:

The three initiatives provided the opportunity for the intersection of many communities, individuals and topics, including: multiple academic institutions from across Pittsburgh, industry representatives, student organizations (such as the Black Graduate Student Organization), eco-artists, nationally recognized leaders on tough topics (such as Majestic Lane speaking to issue gentrification in Pittsburgh), and startup entrepreneurs.

In addition, the initiatives helped to demonstrate the value of university-led events that contribute and support the regional spirit of collaboration and commitment to the environment. The connection of students with the community in which they live can help to make education more relevant.

Success:

All of these initiatives were successful in demonstrating the transfer of leadership from faculty and staff to the students. As an institute of higher education, we consider ourselves successful if our students internalize their formal learning to affect change in their everyday lives; as in the words of Andrew Carnegie, 'My heart is in the work.'

Diverse participation is also another measurement of success. Beginning with the inclusion of more colleges on campus and extending to more universities, as well as engaging a variety of community groups from the Pittsburgh region. This indicates that our students recognize that good solutions will come from collaborations with many.

Our experiences have also taught us that we need to break-out of our own silos and that dismantling the echo chamber (to engage communities of different interests) can help to deliver a message that can inspire action. Many groups share environmental goals and we will get closer to the solution if we can find the intersection.

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Remarks by President Farnam Jahanian
2018 CMU Energy Week Kick Off and Welcome
DATE: Wednesday, April 4, 2018

Additional Speakers

Jay Whitacre, Director, The Wilton E. Scott Institute for Energy Innovation (2-3 mins)

Farnam Jahanian, President, Carnegie Mellon University (5-8 mins)

Mike Doyle, Member of Congress, US. House of Representatives (PA-14) (5-8 mins)

Conor Lamb, Member-Elect, U.S. House of Representatives (PA-18) (5-8 mins)

Rich Fitzgerald, County Executive, County of Allegheny (5-8 mins)

Erika Staaf Strassburger, Councilwoman, Pittsburgh City Council District 8 (5-8 mins)

Anna J. Siefken, Associate Director for Innovation & Strategic Partnerships, Scott Institute (8 mins)

[WELCOME AND ACKNOWLEDGEMENTS]

Good morning, everyone. Jay, **thank you for that introduction.**

It is **my pleasure to warmly welcome all of you** to the start of Carnegie Mellon University's third annual celebration of Energy Week.

As one of Carnegie Mellon's most important and high-profile celebrations, Energy Week **brings together thought leaders from around the world to discuss the future of energy** and the role of inter-disciplinary research in informing this critical area.

This morning, I am **grateful to be joined by so many distinguished leaders** from within and beyond campus who have contributed to this work, **including several of our elected leaders.**

These representatives have been particularly central to CMU's leadership in this area, providing invaluable support for **attracting federal and industry research and advancing new models of energy education.**

Today, we are joined by:

- **U.S. Congressman Mike Doyle**, representing Pittsburgh's 14th district;
- **U.S. Congressman-Elect Conor Lamb**, who is making his first visit to campus since his recent victory in Pittsburgh's 18th district;
- **Rich Fitzgerald**, CMU alum and Allegheny County Executive;
- And finally, another newly elected official, **Councilwoman-Elect Erika Strassburger**, who represents Pittsburgh's 8th district.

Please join me in a round of applause for these leaders. *(Lead applause)*

I also want to **acknowledge and thank Jay Whitacre**, Trustee Professor in Energy, Engineering and Public Policy, as well as Materials Science and Engineering, **for his leadership** of the Wilton E. Scott Institute for Energy Innovation, which includes more than 150 researchers across campus.

I am grateful for his role in planning this extraordinary campus-wide event, together with Anna Siefken, Associate Director at the Institute, and the entire Scott Institute Team.

I would also like to **acknowledge Jerry Cohon**, President Emeritus of the University and Founding Director of the Scott Institute, for all he has done to elevate our leadership in this area. Thank you, Jerry.

Finally, this week would not be possible without our **exceptional faculty, alumni and academic leaders**, who are providing thought leadership at a critical time for our nation.

You'll hear from several of them during this event, including **Andrew Moore, dean of our School of Computer Science**, who is today's keynote speaker.

[REMARKS]

It is **entirely fitting that CMU is hosting** this week's important dialogues.

With our top ranked schools in engineering, computer science, business and policy, **Carnegie Mellon is proud of our tradition of collaborating with colleagues across disciplines** to consider complex, societal problems.

In particular, **we are at the center of innovation and policy related the future of energy**, creating sustainable and affordable energy alternatives, tackling the safety and reliability of our critical infrastructures, and so much more.

CMU's great work in this area has also been **made possible by collaborations** with the private sector – including companies in Pittsburgh—as well as

universities, foundations, community institutions and with DoE National Energy Technology Laboratories (NETL).

These tremendous partners have been instrumental in:

- developing green building technology;
- transforming brownfields;
- funding and supporting our dozens of energy related spinouts; and
- piloting new clean energy technologies.

Energy Week is all about **bringing these partners together to adopt and advocate a shared vision** for the economic and technological future of cities.

Make no mistake: Over the coming decades, the world must make **FUNDAMENTAL transformations in how energy is used, produced, and distributed.**

At this critical time for our energy-dependent world, it is **MORE** important than ever to reaffirm our **commitment to the pursuit of knowledge** and **support for long-term scientific discovery and engineering innovation.**

Energy Week is just one of the many campus traditions that pay tribute to this commitment – and **CMU's role in finding collaborative solutions for energy challenges** through research, education, and data-driven policy-making.

Over the next few days, you will hear from world-renowned leaders engaging in **thought-provoking discussions about topics at the nexus of technology and society** – from smart cities and smart data; to micro grids and efficiency improvements; to sustainability and clean tech.

We are particularly **delighted to be welcoming back several alumni** who have emerged as international leaders. In fact, this evening’s forum on energy and resilience for smart cities will **feature CMU alumna and Mayor of San Juan, Puerto Rico, Carmen Yulín Cruz** – in conversation with Mayor William Peduto, to be moderated by Provost Weingart. Welcome back to campus, Carmen.

There is truly something for everybody, so I encourage you to **explore all that Energy Week has to offer at energyweek.org**.

And now, it is my pleasure to **introduce a partner who has been helping advance CMU’s energy ambitions for more than a decade** and who is a recognized national leader in energy policy.

As a member of the House Energy and Commerce Committee, Mike has been **at the forefront of all the major energy policy innovations – including** advocating for clean fossil energy and strategies for climate change.

He has been a **champion for Pittsburgh's position as a world leader** in green building technology and green chemistry. And he has also worked hard to ensure that **energy research and innovation translates into real opportunities and better quality of life** for all Pittsburghers.

From his leadership in energy research and innovation, to his advocacy for federally funded research, to his support for local STEM initiatives – **we are truly fortunate to have Mike Doyle representing Pittsburgh and CMU.**

Please join me in **extending a warm welcome** to one of Pittsburgh's greatest natural resources, Congressman Mike Doyle. (Lead applause)

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