Dr. Crago Shares Current Research on Sustainability
The Pizza & Prof series kicked off on Monday, September 24 with a presentation from Christine L. Crago, Assistant Professor in the UMass Amherst Department of Resource Economics and Commonwealth Honors College. Dr. Crago is currently teaching an Honors Thesis seminar, “Sustainability in Today's Economy.” Her course focuses on multidisciplinary perspectives on sustainability issues. “Working with honors students and seeing them complete their thesis projects are some of my most enjoyable experiences here at UMass,” said Dr. Crago.

The lecture started with Dr. Crago asking students about the last time they thought about energy in their daily life. The students’ silence demonstrated her point that “energy is something that we take for granted.” She then asked students to think carefully about daily energy use because “the way we use energy has important implications, not just for our generation, but also future generations.”

Dr. Crago went on to explain the extent of excessive energy use. One kilowatt-hour (KWH) is equal to one year's worth of phone charge — the energy it takes to drive a mile — and one hour's worth of powering 10 light bulbs; the average Massachusetts resident consumes 38,000 KWH per year. It is estimated that about eighty percent of energy sources in America comes from non-renewable fossil fuels such as natural gas, oil, coal, uranium. This is important, Crago said, because 18,000 people worldwide die each day from air pollution, and the annual health cost of handling ill effects is between $40-50 billion per year. Fossil fuels play a part in increasingly extreme weather, which also makes people act in extreme ways.

Possible renewable energy sources include sunlight, wind, hydro, geothermal, and biomass. Part of Dr. Crago's research included finding compelling policy incentives for people to make the transfer to solar energy. Some of the policy incentives she brought up were income tax credit, rebates, renewable portfolio standards, third-party ownership, sales tax exemption, and solar rights regulation. Crago told students to keep in mind that solar energy policy is “not going to happen overnight, or even in many years; it will happen in decades.” Students discussed controls that limit or assist in the effectiveness of these policy incentives, such as income, education, age, insolation, electricity prices, and pro-environmental attitudes. In Crago's own research on which policy incentive is most effective, she found that the rebate was the most effective policy.

"I was really interested in her discussion on the different ways to make the prices more affordable to low-income families," said Hayden Latimer-Ireland, a freshman political science and psychology double major. "The project that she's working on right now, about how to do that and how people make the transition to solar, really stood out to me."

Dr. Crago's current research projects "examine the role of time and risk preferences on consumers’ solar PV adoption decisions, behavioral incentives for energy conservation, and impacts of climate change on fertilizer use and water pollution from agriculture." You can read more about her work at christinelcrago.com.

Dr. Crago presented on the “UMass Model Green Dorm Room,” a student project about how UMass students can reduce their energy consumption by using smart power strips, LED bulbs, and shorter showers. When asked what she would like students to take away from her talk, Dr. Crago emphasized the importance of students paying attention to their energy consumption.

"I would like students to be aware of the negative effects of energy consumption so they can be more thoughtful about their energy consumption habits,” said Crago. “The way we have harnessed energy for our purposes is remarkable and has done so much to improve our well-being, but it also has serious consequences for ourselves and our planet, so we have to take steps to lower our energy footprint. These steps can be as small as using a power strip, turning lights off when you leave the room, and using LED light bulbs. More impactful actions involve supporting and advocating for legislation that supports renewable energy and puts a price on carbon emissions."

At the end of the event, Honors College Dean Gerzina remarked, “We are really happy to have the first Pizza & Prof be on such an important topic — sustainability — and to see that so many students show up, and not just for the pizza!”

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