



Agenda for CEDM Annual Meeting – May 23rd-24th
 Carnegie Mellon University, Roberts Hall, Singleton Room

Monday, May 23

08:00 – 08:45	Hot Buffet Breakfast – All plates/napkins/utensils/drinkware ARE compostable
08:45 – 09:10	Welcome and overview – Granger Morgan
09:10 – 09:20	Introductions around the room

Part 1: Public understanding of, and communication about, climate issues.	
<i>Proposal reads:</i> Study public and decision makers' understanding of: a) the central role of CO ₂ in climate change and the fundamental difference between CO ₂ and conventional air pollutants; b) the fact that transforming the energy system will require a portfolio of technologies, and the associated implications of existing long-lived energy infrastructure; and, c) how best to communicate the knowledge needed for informed decision making and understand its implications.	
09:20 – 09:35	Understanding public perceptions of energy tradeoffs in climate, health, and economic cost – Brian Sergi
09:35 – 09:50	Public understanding of air pollution vs CO ₂ – Rachel Dryden
09:50 – 10:00	Minority community views of CO ₂ emissions abatement – Tylesha Drayton
10:00 – 10:15	Communicating uncertainty in seasonal climate forecasts to stakeholders – Andrea Taylor
10:15 – 10:30	Discussion
10:30 – 10:45	Brainstorming about present and future studies – open discussion with Inês Azevedo, Wandu Bruine de Bruin, Ann Bostrom, Alex Davis, Granger Morgan and others.

10:45 – 11:00	Break – coffee, tea, juice – All drinkware/napkins ARE compostable
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Part 2: Behavioral, economic, and technical issues, and issues in regulatory design	
<i>Proposal reads:</i> continue and seed research on key behavioral, economic, and technical issues, and issues in regulatory design, that lie along critical paths to decarbonizing the energy system. By focusing on a subset of important problems on which CEDM has a clear comparative advantage the team will work to: 1) find ways to use energy more efficiently; 2) develop more sources of energy that are safe, clean, affordable, secure, and sustainable; 3) deliver the energy the US uses with greater security and efficiency; and, 4) facilitate innovation in both technology and in organizations, regulation, and public policy. In later years the mix of topics addressed in Task 2 will be shaped by findings from Task 3.	
<i>Energy use and emissions in transportation</i>	
11:00 – 11:15	Understanding fuel choices – Inês Azevedo
11:15 – 11:30	How alternative vehicle sales trigger higher-emitting fleets – J. Michalek
11:30 – 11:45	Revised ICAO proposal on emissions from international air – Parth Vaishnav
11:45 – 12:00	Does using natural gas to power vehicles reduce greenhouse gas emissions? – Fan Tong
12:00 – 12:15	Energy implications of autonomous vehicles – Costa Samaras
12:15 – 12:30	Discussion

12:30 – 01:00	Pick up box lunches and return to the meeting
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<i>Energy conservation and end-use efficiency</i>	
01:00 – 01:15	Using marginal emissions factor estimates to assess social benefits of data center load-shifting – Nathaniel Horner
01:15 – 01:30	Assessing the value of information in building simulation – Brock Glasgo

01:30 – 01:45	Understanding how to effectively reduce personal computer electricity consumption in an office setting – Gabrielle Wong-Parodi
01:45 – 02:00	Discussion

<i>Projections and forecasts</i>	
02:00 – 02:15	An application of empirical prediction intervals to energy forecasting – Lynn Kaack
02:15 – 02:30	Has the energy system become harder to predict? – Evan Sherwin
02:30 – 02:45	Discussion

<i>Variable and intermittent renewables</i>	
02:45 – 03:05	Variable renewable energy and the electricity grid – Jay Apt
03:05 – 03:20	Solar PV and energy storage for commercial and industrial customers – Shelly Hagerman
03:20 – 03:40	First-order limits to integration of roof-top solar PV electricity generation in the Duke Energy Progress/Duke Energy Carolinas region - Dalia Patiño-Echeverri
03:40 – 03:55	Discussion
<i>Note: we will continue with additional talks related to Part 2 tomorrow morning</i>	

03:55 – 04:15	Break – coffee, tea, juice – All drinkware/napkins ARE compostable
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Part 3: Visioning – Roadblocks to deep decarbonization	
<i>Proposal reads:</i> CEDM plans major "visioning exercises", supported by background preparation, conducted in part through "theory and methods" workshops, and informed by results from Tasks 1 and 2. In these visioning exercises, a group of researchers, outside experts, and decision-makers will gather to identify behaviorally realistic cost-effective strategies and work to identify and avoid "dead ends." These efforts will be predicated on the hypothesis that "muddling through" will not achieve the major transformation needed to reduce CO2 emissions from the energy system.	
04:15 – 04:30	The US is dead in the water on advanced nuclear – Mike Ford
04:30 – 04:45	Why do IPCC scenarios use so much coal post 2050? – Justin Ritchie presented by Hadi Dowlatabadi
04:45 – 05:00	Muddling through is not enough for climate policy – Granger Morgan
05:00 – 05:15	Workshop on dead ends and missed opportunities – Parth Vaishnav
05:15 – 05:30	Discussion

05:30 – 06:30	POSTER SESSION with wine and cheese – All plates/napkins/utensils/drinkware ARE compostable
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07:00	Group dinner at Casbah - 229 S Highland Ave, Pittsburgh, PA 15206
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Tuesday, May 24

08:00 – 08:30	Continental Breakfast – All plates/napkins/utensils/drinkware ARE compostable
08:30 – 08:50	Dual (and occasionally conflicting) vocabularies with which lawyers and IPCC discuss uncertainty – Michael Dworkin
08:50 – 09:00	Discussion

<i>Water, energy and climate change</i>	
09:00 – 09:15	N2O and eutrophication/hypoxia in the Gulf of Mexico – Fiona Zhang

09:15 – 09:30	A systems level perspective on Marcellus wastewater management in PA – Leslie Abrahams
09:30 – 09:45	High-resolution model for estimating the economic and policy implications of agricultural soil salinization in California – Paul Welle
09:45 – 10:00	Discussion

<i>EPA Clean Power Plan</i>	
10:15 – 10:30	Viability of Carbon Capture and Sequestration Retrofits for Existing Coal-fired Power Plants under an Emission Trading Scheme – Shuchi Talati
10:00 – 10:15	Clean Power Plan insights for Pennsylvania – Jeff Anderson
10:30 – 10:50	Discussion

10:50 – 11:00	Break – coffee, tea, juice – All drinkware/napkins ARE compostable. Advisory Board leaves to meet separately in Dilks Library
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11:00 – 01:00	Tutorial on the design and execution of behavioral studies of how to design and analyze the results from behavioral interventions – Alex Davis
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01:00 – 02:00	Pick up box lunches. Advisory Board to present and discuss their feedback.
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02:00 – 04:00	Workshop on preparing first visioning exercise – Granger Morgan
04:00 – 05:00	Work on materials for CEDM annual report
05:00	Pizza and general discussion for those who can stay

Poster List:

Energy and Climate Change Choices, Beliefs, and Perceptions

- Valuing NIMBY concerns about wind farms – Julian Lamy
- The impact of climate change and air pollution information on support for CO₂ emissions regulations – Brian Sergi
- Beliefs about future weather and climate change independently alter willingness to adapt – Kelly Klima, Wandu Bruine de Bruin, Suraje Desai, Carmen Lefevre
- Minority community views of CO₂ emissions abatement – Tylesha Drayton
- Assessing the Damage of Large-scale Power Outages to Residential Customers – Sunhee Baik
- Comparing cumulative risk perceptions using judgments and choice: Application to flood risks – Cristobal de la Maza

GHG Emissions

- Reducing pollution from aviation and ocean shipping – Parth Vaishnav
- Coal-fired Power Plants with Flexible Amine-based CCS and Co-located Wind Power Operating in Markets with Ramp-Capability Products and High Penetration of Renewables: Environmental, Economic and Reliability Outcomes - Dalia Patiño-Echeverri (and students)
- Environmental Life Cycle Assessment of PRB coal exports to Asia: Assessing the potential for WRITCoal and other coal processing technologies - Dalia Patiño-Echeverri (and students)

Energy

- Refueling and infrastructure costs of expanding access to E85 in Pennsylvania – Stephanie Seki
- Assessing the Value of Information in Building Simulation – Brock Glasgo
- Life cycle GHG emissions of iron ore mining in China, Australia and Brazil—a comparison of different iron ore sources for China – Yu Gan
- Green Feedstocks vs. Green Energy in U.S. Plastics Production – Daniel Posen
- How does car-sharing impact car ownership – Michiko Namazu presented by Hadi Dowlatabadi
- Comparing deterministic and stochastic electricity market clearing mechanisms - Dalia Patiño-Echeverri (and students)
- The US energy system has become more volatile and harder to predict – Evan Sherwin
- The Economic and Societal Impact of Baseload Power Generation on Local Communities – Travis Carless