



FINAL PROGRAM

The Role of Carbon Management in Creating a Pathway to Sustainability

Friday, April 13, 2018

McCormick Tribune Campus Center | Auditorium and Ballroom
Illinois Institute of Technology
3201 South State Street
Chicago, IL 60616

A Symposium Sponsored by:



Friday | April 13, 2018

8:00 am - 8:45 am **Continental Breakfast**

8:45 am - 9:20 am *Morning Session Chair*

Hamid Arastoopour, Linden Professor of Engineering and Director,
Wanger Institute for Sustainable Energy Research (WISER),
Illinois Tech

Welcome

Russell Betts, Provost, Illinois Tech

Introductory Remarks

"Social Sciences and Sustainability"

Jonathan Rosenberg, Professor of Political Science and Chair,
Department of Social Sciences, Illinois Tech

"Disseminating Information, Framing the Debates, Facilitating Partnerships"

Wil Burns, Co-Executive Director, The Forum for Climate Engineering Assessment, School of International Service, American University

"Carbon Capture Activities at IIT WISER"

Hamid Arastoopour, Linden Professor of Engineering and Director, Wanger Institute for Sustainable Energy Research (WISER), Illinois Tech

9:20 am - 10:10 am Opening Keynote Address

Speaker Introduction

Natacha DePaola, Carol and Ed Kaplan Dean of Engineering and Professor of Biomedical Engineering, Illinois Tech

"DOE's Carbon Capture Program"

Lynn Brickett, Carbon Capture and Carbon Use and Reuse R&D Technology Manager, National Energy Technology Laboratory, U.S. Department of Energy

10:10 am-10:20 am Break

**10:20 am-11:45 am Panel 1:
Technological Options for CO₂ Capture and Sequestration**

Experts on this panel will provide an overview of the state of the art in CO₂ capture technologies, CO₂ sequestration, recent advances in conversion of CO₂ back to fuel, and the pathway for industry to carbon capture and sequestration from a techno-economic perspective.

Moderator

Javad Abbasian, Professor of Chemical Engineering, Department of Chemical and Biological Engineering, Illinois Tech

Panelists

"DOE's Carbon Capture Program"

Lynn Brickett, Carbon Capture and Carbon Use and Reuse R&D Technology Manager, National Energy Technology Laboratory, U.S. Department of Energy

*“Eliminating CO₂ Emissions from the Production of Biofuels:
A ‘Green’ Carbon Process”*

Scott McDonald, Biofuels Development Director and Project Director, Illinois Industrial Carbon Capture and Storage Project, Archer Daniels Midland

“CO₂ Conversion to Energy Rich Chemicals Using an Inexpensive and Earth-Abundant Catalytic System”

Amin Salehi-Khojin, Assistant Professor of Mechanical and Industrial Engineering, University of Illinois at Chicago

“The Role of Carbon Capture in Industrial Sector Decarbonization”

Eric Masanet, Associate Professor, Departments of Mechanical Engineering and Chemical and Biological Engineering, Northwestern University

11:45 am – 1:15 pm Luncheon and Keynote Address

Speaker Introduction

Michelangelo Sabatino, The Rowe Family Endowed Chair and Dean, College of Architecture, Illinois Tech

“Sustainable Cities in a World of Climate Change”

Karen Weigert, Senior Fellow, Global Cities, The Chicago Council on Global Affairs

1:15 pm – 2:45 pm Afternoon Session Chair

Jonathan Rosenberg, Professor of Political Science and Chair Department of Social Sciences, Illinois Tech

**Panel 2:
CO₂ and the Built Environment**

Building construction and operation have been the largest source of energy demand and carbon emissions in the United States for years. Panelists will discuss how our built environment impacts and can mitigate carbon emissions. Experts representing academia, research labs, and the architecture profession will address issues such as CO₂ benefits of the coming smartgrid and grid interactive buildings, contributions of tall buildings to sustainability and carbon reduction, indoor air quality

aspects of carbon reduction strategies in buildings, and the need for social innovation to achieve low-carbon buildings.

Moderator

Rahman Azari, Assistant Professor, College of Architecture,
Illinois Tech

Panelists

“CO₂ Benefits of the Coming Smartgrid and Grid Interactive Buildings”

Ralph T. Muehleisen, Principal Building Scientist, Global Security
Sciences, Argonne National Laboratory

“Are Tall Buildings Sustainable?”

Antony Wood, Executive Director, Council on Tall Buildings and
Urban Habitat, and Research Professor, Illinois Tech

***“Can We Improve the Indoor Environment and Cut Carbon Emissions
at the Same Time?”***

Brent Stephens, Associate Professor of Architectural Engineering,
Department of Civil, Architectural and Environmental Engineering,
Illinois Tech

***“The Need for Social Innovation Towards a Low-Carbon Building
Industry”***

Tom Jacobs, Principal, Krueck + Sexton Architects

2:45 pm – 3:00 pm **Break**

3:00 pm – 4:30 pm **Panel 3:**
“Great Ideas” Meet the “Real World”:
The Politics and Policies of Carbon Management

This panel assembles experts from academia and non-governmental organizations to explore the societal landscape for developing and deploying carbon management technologies. Panelists will consider such critical issues as the framing and communication of the benefits and costs of different technologies and policies; the legal and political requisites for, and impediments to, implementing promising

technologies; and the challenges CO₂ management poses for climate change governance at global, national, regional, and local scales.

Moderator

Simon Nicholson, Co-Executive Director, Forum for Climate Engineering Assessment, and Director, Global Environmental Politics Program, School of International Service, American University

Panelists

“Key Factors in Unlocking the Potential for Carbon Sequestration through Natural Processes”

Jason Funk, Associate Director-Land Use, Center for Carbon Removal

“Politicized Communications Regarding Carbon Management: The Hazards of Using Climate Change as a Policy Making Frame”

Matthew Shapiro, Associate Professor of Political Science, Department of Social Sciences, Illinois Tech

“The Paris Agreement and Negative Emissions Technologies”

Wil Burns, Co-Executive Director, The Forum for Climate Engineering Assessment, School of International Service, American University

“Electricity Game Changers: Cleaner, Greener, and More Decentralized Smart Policies Drive Energy Markets”

Howard A. Learner, President and Executive Director, Environmental Law & Policy Center

“The Politics of Inclusive Governance and the New Carbon Frontier”

Elisabeth Graffy, Professor of Practice, School for the Future of Innovation in Society and Co-Director, Energy and Society, ASU LightWorks, Arizona State University

4:30 pm - 5:00 pm **Closing Remarks**

Simon Nicholson, Co-Executive Director, Forum for Climate Engineering Assessment, and Director, Global Environmental Politics Program, School of International Service, American University