

Stanford | NATURAL GAS INITIATIVE
School of Earth, Energy & Environmental Sciences
and Precourt Institute for Energy

NGI Symposium -- Future Energy Systems: The Role for Natural Gas in a High-Renewables, Decarbonizing World

Tuesday-Wednesday, 16-17 October 2018
Tresidder Memorial Union, Stanford University, California
Stanford map: <https://campus-map.stanford.edu>

16 October 2018

- 7:45 Breakfast, Arrival, Networking
- 8:30 Welcome and Introduction, Brad Ritts
- 8:40 **Opening Keynote: Shell Sky Scenario**
Brian Davis, Shell
- 9:30 **The Impact of Shale Gas on North American Energy Systems**
Tony Kavscek, Stanford
- 9:50 **Economic Impacts of Climate Policy Decisions**
Larry Goulder, Stanford
- 10:15 Break
- 10:30 **Armchair Discussion: The Global Energy Challenge: Energy Systems in Transition**
Mark Zoback, Stanford, Sally Benson, Stanford, and Arun Majumdar, Stanford
- 11:10 **Panel Discussion: Gas Integration in Regions with High Penetration of Intermittent Renewables**
Moderator: Frank Wolak, Stanford
Dave O'Brien, ExxonMobil
Steve Brick, CATF
Elbert Huijzer, Alliander
Arne Olson, Energy and Environmental Economics (E3)
- 12:15 Lunch
- 1:15 **Keynote: Strategies and Uncertainties in Meeting California's Decarbonization Goals**
Nick Stavropoulos, PG&E

- 2:00 **Panel Discussion: Decarbonizing Natural Gas**
Moderator: Brad Ritts, Stanford
David Dankworth, ExxonMobil
George Minter, SoCalGas
Jay Hopper, Aria Energy
Don Chahbazpour, National Grid
- 3:00 Break
- 3:30 **Panel Discussion: Decarbonizing Natural Gas – Policy Discussion**
Moderator: Johannes Escudero, Coalition for RNG
Floyd Vergara, CARB
Deanna Haines, SoCalGas
Don Chahbazpour, National Grid
- 4:30 **Panel Discussion: Gas Peakers Versus Storage**
Moderator: Mark Thurber, Stanford
Scott Ison, Origin Energy
Zach Ming, Energy and Environmental Economics (E3)
- 5:30 Networking Reception
- 7:30 Reception concludes

****Day 2 Agenda on Following Page****

17 October 2018

- 7:45 Breakfast, Arrival, Networking
- 8:30 Welcome and Introduction, Mark Zoback, Stanford
- 8:50 **Panel Discussion: Long Term Energy Storage**
Moderator: Tom Jaramillo, Stanford
Simon Bittleston, Schlumberger
Johney Green, NREL
Yuri Freedman, SoCalGas
- 9:50 **Decarbonizing Energy Systems: How Do We Measure Success?**
Adam Brandt, Stanford University
- 10:20 Break
- 10:50 **Carbon Capture, Utilization, and Storage**
Moderator: Mark Zoback, Stanford
Tom Jaramillo, Stanford
Sally Benson, Stanford
Tim Barckholtz, ExxonMobil
- 11:50 **Keynote: What Does the Future of Energy Look Like?**
Kim Greene, Southern Company Gas
- 12:30 Lunch
- 1:30 **Keynote: Energy Access, Sustainability, and Affordability**
Kimball Chen, Global LPG Partnership
- 2:10 **Energy Forecasting and Uncertainty About Future Energy Systems**
Moderator: Brad Ritts, Stanford
Todd Onderdonk, ExxonMobil
Dean Foreman, API
- 3:10 Break
- 3:30 **Investment and Finance Decisions on Future Energy Systems**
Moderator: Alicia Seiger, Stanford
Cassie Bowe, Energy Impact Partners
Bob Edwards, Natural Gas Partners
Kirk Coburn, Shell Ventures
Maynard Holt, Tudor, Pickering, Holt, and Co. (tentative)
- 4:30 **Digital Transformation of Energy**
Cosma Panzacchi, Snam
- 5:00 **Armchair Discussion: Economics in the Energy Transition**
Mark Zoback, Frank Wolak and Mark Thurber
- 5:30 Meeting Concludes (evening free)