MEETING ROOMS AT ROYAL SONESTA HOUSTON

**LOBBY LEVEL**
- PLENARY SESSION ROOM
- CONCURRENT SESSION ROOM
- CONCURRENT SESSION ROOM
- CONCURRENT SESSION ROOM
- MORNING NETWORKING COFFEE
- COFFEE BREAKS

**LEVEL TWO**
- PHD DAY SESSION
- CASE COMPETITION
- WASHINGTON CONFERENCE PLANNING MEETING
- WORKSHOP: ENERGY RISK MGMT
- CONCURRENT SESSION ROOM
- CONCURRENT SESSION ROOM
- CHAPTER LEADERSHIP MEETING
- USAEE GENERAL MEMBERSHIP MEETING
- CONCURRENT SESSION ROOM
**PHD DAY SESSION**

9:00 am - 3:30 pm ■ Champions III

A pre-conference event for students only. Each paper presented at this session will be reviewed by a discussant for a more in-depth and stimulating analysis.

**TOUR: OFFSHORE DRILLING RIG MUSEUM**

1:00 pm - 5:00 pm ■ Offshore Drilling Rig Museum

Join us for a tour on the Ocean Star Offshore Drilling Rig Museum and Education Center. Meet at the front of the Royal Sonesta Hotel, porte-cochere to board bus.

**REGISTRATION**

12:00 noon - 7:00 pm ■ Directors Room

**CASE COMPETITION SESSION**

4:00 pm - 5:30 pm ■ Champions III

Parth Vaishnav (Presiding)  
ASST. RESEARCH PROFESSOR, CARNEGIE MELLON UNIVERSITY

Team #1 - Energy Wranglers  
Scott Vitter  
Thomas Deetjen  
Phillip White  
Katrina Ramirez-Meyers  
UNIVERSITY OF TEXAS, AUSTIN

Team #2 - EcoFin Environment  
Salahedine Soummane  
Fatima Shuwalh  
UNIVERSITY OF PARIS-SACLAY

Team #3 - The Live Wires  
Liza Reed  
Tobi Adebayore  
Anne Walker  
CARNEGIE MELLON UNIVERSITY

Team #4 - Team Lehigh  
Huilai Gu  
Adhitya Jayasinghe  
Salvador (Josh) Tarun  
LEHIGH UNIVERSITY

**MORNING NETWORKING COFFEE**

7:45 am - 8:30 am ■ Legends Ballroom
Two-sided and Non-Convex Markets for Electricity Markets
Alberto Lamadrid
Luis F Zuluaga
Xiaolong Kuang
LEHIGH UNIVERSITY
Forward Contracts and Generator Market Power: How Externalities Reduce Benefits in Equilibrium
Ian Schneider
MIT
Audun Botterud
ARGONNE NATIONAL LABORATORY AND MIT LIDS
Mardavij Roozbehani
MIT LIDS

3. Alternatives to Fossil Fuels in Future Energy Supply
- Legends VII
  Ricardo Raineri Berma (Presiding)
  PROFESSOR, PONTIFICIA UNIVERSITAT DE CHILE
  Sensitivity of Solar Fossil Hybrid Electricity Technology Penetration to Price and Efficiency Projections
  Kristen E Brown
  U.S. ENVIRONMENTAL PROTECTION AGENCY
  Designing a Global Energy System Based on 100% Renewables for 2050
  Pao-Yu C Oei
  BERLIN UNIVERSITY OF TECHNOLOGY
  Thorsten Buhrandt
  Konstantin Loeffler
  Karlo Hainsch
  BERLIN UNIVERSITY OF TECHNOLOGY (TU BERLIN)
  Examining a “No Regrets” Policy to Facilitate a Transition to a Lower Carbon Future
  Frances Wood
  Sharon Showalter
  ONLOCATION, INC.
  A Review of Hydrogen Production Pathways, Cost and Decarbonization Potential
  Fan Tong
  CARNEGIE INSTITUTION FOR SCIENCE
  Ines L Azevedo
  Jeremy Michalek
  CARNEGIE MELLON UNIVERSITY

- Legends II
  Robert Borgstrom (Presiding)
  INDEPENDENT CONSULTANT
  A MARKAL-Based Analysis to Assess the Role of Natural Gas in Electricity Sector Emission Reductions for Future Energy Scenarios
  Bandypadhyay Rubenka
  U.S. EPA
  Prospects for North American LNG Exports—How Much and How Soon
  Robert E Brooks
  Ning Lin
  RBAC, INC.
  RBAC’s 2017 North American NGL Market Forecast
  Robert E Brooks
  Ken Chow
  MUSE, STANCL & CO.

5. Macroeconomics and Energy: GE Models, Cycles and Growth
- Legends I
  Ronald Ripple (Presiding)
  PROFESSOR OF ENERGY BUSINESS AND FINANCE, THE UNIVERSITY OF TULSA
  The U.S. Shale Oil Boom, the Oil Export Ban and the Economy: A General Equilibrium Analysis
  Michael Plante
  Mine Yucel
  FEDERAL RESERVE BANK OF DALLAS
  Nida Meleik
  FEDERAL RESERVE BANK OF KANSAS CITY
  Gbadebo Oladosu
  Paul N Leiby
  OAK RIDGE NATIONAL LAB
  Jennifer C Li
  U.S. DEPARTMENT OF ENERGY
  Credit Market Frictions and Business Cycle Dynamics in an Oil-Rich Emerging Economy Model
  Fred O Iklaga
  Fadimah Yusuf
  Moses K Tule
  CENTRAL BANK OF NIGERIA
  Non-Renewable Resources, Extraction Technology and Endogenous Growth
  Martin Stuermer
  FEDERAL RESERVE BANK OF DALLAS
  Gregor Schwerhoff
  MCC BERLIN

6. Role of OPEC in the World Oil Market
- Legends III
  Samih Khayyat (Presiding)
  ASSISTANT PROFESSOR, KING ABDULAZZ UNIVERSITY
  The Value of Exporting an Additional Barrel of Oil Saved in Saudi Arabia
  Jorge Blazquez
  Axel Pierru
  KAPSARC
  Baltasar Manzano
  UNIVERSIDAD DE VIGO AND KAPSARC
  Lester C Hunt
  UNIVERSITY OF PORTSMOUTH AND KAPSARC
  Integration in the Global Production of Energy Commodities
  Neil A Wilmot
  ASSOCIATE PROFESSOR, UNIVERSITY OF MINNESOTA
  Shale Producers’ Erosion of OPEC Market Power:Captured in an Empirical Dominant Firm Model
  Peter N Volkmar
  PHD STUDENT, RICE UNIVERSITY
  Investment in Incremental Production Capacity by a Dominant Oil Producer
  Yaser Faquih
  RICE UNIVERSITY

7. Coping with Risks in the Natural Gas Industry
- Champions III
  James Smith (Presiding)
  PROFESSOR OF FINANCE, SOUTHERN METHODIST UNIVERSITY
  Securing Regulatory Stability for International Gas Commercialisation and LNG Projects: The Nigerian Experience
  Tade Oyewunmi
  CENTRE FOR CLIMATE CHANGE, ENERGY AND ENVIRONMENTAL LAW
  The Cost of the Missing Pipeline — Constraints and Adaptation
  Patty S VanHorn
  NEVADA PUBLIC UTILITIES COMMISSION
  How Reliable Is Natural Gas? An Historical Overview of Natural Gas Transmission’s Outage Track Record
  Carly J Page
  NEVADA PUBLIC UTILITIES COMMISSION
  Diagnostic Metrics for The Adequate Development of Efficient-Market Base-Load Natural Gas Storage Capacity
  Ernesto Guzman
  COLORADO SCHOOL OF MINES
8. Student Best Paper Competition

- Champions VII
  
  Anastasia Shcherbakova (Presiding)
  
  ASST PROF DEPT OF AG ECON, TEXAS A&M UNIVERSITY

  Natural Gas Salt Cavern Storage Cost Predictability
  
  Nathalie Hinchev
  
  RICE UNIVERSITY

  Fuel Switching from Coal to Gas: The Impact of Coal Stockpiling at U.S. Coal-fired Plants
  
  Sul-Ki Lee
  
  COLORADO SCHOOL OF MINES

  Peaking Interest: How Awareness Drives the Effectiveness of Time-of-use Electricity Pricing
  
  Brian Prest
  
  DUKE UNIVERSITY

9. Costs, Benefits and Pricing of Renewable Generation

- Champions V
  
  Thomas Drennen (Presiding)
  
  PROFESSOR OF ECONOMICS, HOBART AND WILLIAM SMITH COLLEGES

  U.S. Wind and Solar Are Much Less Efficient Decarbonizers than Combined Cycle Gas Turbines
  
  James L. Plummer
  
  CLIMATE ECONOMICS FOUNDATION

  Charles R. Frank
  
  BROOKINGS INSTITUTION

  Robert R. Michaels
  
  CALIFORNIA STATE U FULLERTON

  On Renewable Energy Pricing
  
  Julian L. Silk
  
  KEE

  Evaluating Net Energy Metering: Insights into Welfare Impacts from an Economic Efficiency Approach
  
  Melanie Craxton
  
  James Sweeney
  
  STANFORD UNIVERSITY

  
  Peter H Kobos
  
  Vincent S Neary
  
  Bernadette A Hernandez-Sanchez
  
  Ryan G Coe
  
  SANDIA NATIONAL LABORATORIES

AWARDS LUNCHEON

12:45 pm - 2:30 pm ■ Discovery Center A & B

USAE Adelman Frankel Award to:
Mine K. Yucel

USAE Senior Fellow Awards to:
James T. Jensen
Edward L. Morse
Samuel A. Van Vactor

Robert McNally (Keynote Speaker)
FOUNDER AND PRESIDENT, THE RAPIDAN GROUP
*Welcome Back to Boom-Bust Prices*

DUAL PLENARY SESSION:
Innovation in Energy Finance and Investment — Accelerating a Transition

2:30 pm - 4:00 pm ■ Legends IV

Rapidly changing dynamics in energy infrastructure, consumer demands, and technology innovations are stimulating change and innovation in energy sector finance. The financing of and investment in the energy industry is increasingly occurring through more innovative vehicles and techniques. From third party financing of rooftop solar to leveraging the yieldco model to provide liquidity to debt financings, these changes introduce complexity and opportunity for the investment community and economic stakeholders.

Martha Goodell (Presiding)
MANAGING PARTNER, ENIGAMI PARTNERS LLC

Jason Blumberg
CEO AND MANAGING DIRECTOR, ENERGY FOUNDRY

Ric Abel
MANAGING DIRECTOR, PRUDENTIAL CAPITAL ENERGY PARTNERS

Caitlin MacLean
DIRECTOR, INNOVATIVE FINANCE, MILKEN INSTITUTE

DUAL PLENARY SESSION:
Future of the Refining Sector — Trumponomics and Low Oil Prices

2:30 pm - 4:00 pm ■ Legends V & VI

Globalization has transformed the downstream refining sector, but can global product demand keep pace with expectations for new supply amid emerging new environmental regulations? How will downstream refiners, in both domestic and international markets, evolve to regain market balance? What are the myths versus realities? Our panel of experts will provide insights into the changing conditions and answers to these questions.

Tina Vital (Presiding)
DIRECTOR, AEGIS ENERGY ADVISORS CORP

Carol A Dahl
SENIOR FELLOW, COLORADO SCHOOL OF MINES

Garfield L Miller III
PRESIDENT AND CHIEF EXECUTIVE OFFICER, AEGIS ENERGY ADVISORS CORP

Susan W Grissom
CHIEF INDUSTRY ANALYST, GOVERNMENT RELATIONS/OUTREACH, AMERICAN FUEL & PETROCHEMICAL MANUFACTURERS

COFFEE BREAK

4:00 pm - 4:30 pm ■ Legends Ballroom Pre-Function

CONCURRENT SESSIONS 10-18

4:30 pm - 6:15 pm

10. Evolution of the North American Electricity Supply System

■ Legends IV

Peter Balash (Presiding)
SENIOR ECONOMIST, U.S. DEPARTMENT OF ENERGY - NETL

Efficiency and Productivity of U.S. Coal-Burning Power Plants

Jermaine A Moulton
BELOIT COLLEGE

Natural Gas Combined Cycle Innovations in the U.S.: The Impact of the Advanced Turbine System Program

Kelly A. Stevens
UNIVERSITY OF CENTRAL FLORIDA

Risky Business: Marginal Switching and Price Volatility in PJM

Anastasia V Shcherbakova
TEXAS A&M UNIVERSITY

Evolution of North American Gas Power in the Post-Obama Era

Robert E Brooks
BETHLEHIM A KING

Rahul Dhal
EPIS, LLC

MONDAY, NOVEMBER 13, CONTINUED
11. Risk in Electricity Markets and Effects on Suppliers and Customers
- Alberto J. Lamadrid (Presiding)
  Assistant Professor of Economics, Lehigh University

The Effect of Procuring Electricity In-House on Utility’s Performance: Evidence from the U.S. Electric Utility Industry
Takuro Tanaka
Central Research Institute of Electric Power Industry

Effect of Suppliers’ Risk Appetite on Market Performance in Electricity Markets
Masahiro Ishii
Sophia University

Who Pays in Deregulated Electricity Markets?: Quasi-Experimental Evidence of Inter Class Subsidization from Ohio Complete Bill Data
Noah C Dormady
Alfredo Roa-Henriquez
Ohio State University

Matthew Hoyt
Exeter Associates

Price Dispersion in the Norwegian Electricity Market
Kari-Anne Fange
Oslo University College/Norwegian University of Life Sciences

Olav Bergland
Norwegian University of Life Sciences

- Legends VII

Martha Goodell (Presiding)
Managing Director, Enigami Partners LLC

Price and Carbon Tax Elasticities of Diesel Demand in British Columbia
Jean-Thomas Bernard
Maral Kichian
University of Ottawa

Flexibility in Petroleum Product Mix Undelines Greenhouse Gas Benefits from Biofuel Policies
I. Daniel Posen
University of Toronto

W. Michael Griffin
Paulina Jaramillo
Inês L Azevedo
Carnegie Mellon University

Richard J Plevin
University of California, Berkeley

A Spatial Assessment of Vehicles’ Climate Change and Air Pollution Damages Across the United States
Fan Tong
Carnegie Institution for Science

Inês L Azevedo
Paulina Jaramillo
Carnegie Mellon University

Cost-Effective Methane Mitigation Policy in an Era of Low Natural Gas Prices
Arvind P Ravikumar
Adam R Brandt
Stanford University

13. Modeling Energy Supply, Demand and Prices
- Legends II

Melanie Craxton (Presiding)
PhD Candidate, Stanford University

Long-Run Productivity Models of Oil and Gas for Energy and Climate Policy: A Stable Equilibrium or Inherent Volatility?
Justin Ritchie
Hadi Dowlatabadi
University of British Columbia

Sana Ben Kebaier
PhD Student, University of Paris Dauphine

The Cost Implications of Managing Outliers in Energy Commodity Prices
Joe Byers
Financial Seal

Betty J. Simkins
Oklahoma State University

Ivilina Popova
Texas State University

Analysis of Electricity Demand and Price Patterns of the United States Electricity Sector
Suman Gautam
Economist, Daymark Energy Advisors

14. Energy Intensity and Energy Transition in Japan and China
- Legends I

David H. Knapp (Presiding)
Chief Energy Economist, Energy Intelligence Group

Economic Cycles and the Responsiveness of Natural Gas Demand in China’s Residential Sector – An Unobserved Components Model
Noha Razek
Senior Research Associate, KAPSRAC

Regional Electricity Demand and Economic Transition in China
Jiang Lin
Xu Liu
Lawrence Berkeley National Laboratory

Jin Guo
China NDRC MACRO Economic Research Institute

Gang He
Stony Brook University

Induced Technological Change and the Declining Energy Intensity of the Japanese Economy
Toshihiro Mukai
Central Research Institute of Electric Power Industry

Embodied and Disembodied Capital in Energy Conservation: The Case of Chinese Industry
Sarah Tang
Suffolk University

Gary Jefferson
Brandeis University

15. Interactions between Energy Markets and Monetary and Fiscal Policy
- Legends III

Peter Hartley (Presiding)
Mitchell Professor of Economics, Rice University

The Empirical Relationship between U.S. Monetary Policy and Oil Prices
Jungho Baek
University of Alaska

Dragan Miljkovic
North Dakota State University

Finders, Keepers?
Niko Jaakkola
Ifo Institute

Daniel Spiri
Oslo Business School

Arthur van Benthem
The Wharton School

A Merged Biophysical and Monetary Model Linking Natural Resources and Debt
Carey King
The University of Texas at Austin

Evaluation of the Impact of Oil Price Volatility on Investor and Fiscal Revenues
Aki Zaimi
KAPSARC

Baltasar Manzano
KAPSARC and Universidad de Vigo

16. The Future of LNG and Natural Gas Markets More Generally
- Champions III

Burcu Cigerli Esmerok (Presiding)
Senior Analyst, Shell Oil Company

Will There Still be a Golden Age of Gas?
Kirsten N Smith
James Kendall
Asia Pacific Energy Research Centre

Yoshikazu Kobayashi
Institute of Energy Economics, Japan
Future LNG Market in Japan Based on the Potential Capacity Back of its Nuclear by 2020
Hisanori Nei
PROFESSOR, GRIPS
Will the Natural Gas Price Remain Low?
Jean-Pierre M FavenneC
CONSULTANT, WD COOPERATION
What Drives LNG Spot Prices?
Ziya Cologlu
PH.D. CANDIDATE, UNIVERSITY OF TEXAS AT DALLAS

17. Transportation: Electric Vehicles, Fuel Economy Standards and Other Policies
• Champions VII
Benjamin Schlesinger (Presiding)
PRESIDENT, BENJAMIN SCHLESINGER & ASSOC LLC
Sanya Carley
DerviC Duncan
Nikos Ziogiannis
John D Graham
INDIANA UNIVERSITY
Saba Siddiki
SYRACUSE UNIVERSITY
Energy Policies in the Transportation Sector
Paulo Henrique de Mello Santana
Luiza P Bertazzoli
ABC FEDERAL UNIVERSITY
Understanding Latent Demand for Hybrid and Plug-In Electric Vehicles Using Large-Scale Longitudinal Survey Data of U.S. New Vehicle Buyers
Rubal Dua
Kenneth White
KAPSARC
Evaluating Future Emissions from Electric Vehicles Across the United States with a Changing Electric Grid Mix Under the Clean Power Plan
Alan Jenn
UNIVERSITY OF CALIFORNIA, DAVIS

18. Solar PV: Deployment and Impacts
• Champions V
Peter Kobos (Presiding)
MGR WATER POWER TECHNOLOGIES, SANDIA NATIONAL LABORATORIES
The Impacts of Photovoltaic Electricity Self-Consumption on Value Transfers Between Private and Public Stakeholders in France
Jonathan Richard Ludovic Roulot
Ricardo Raineri Bernain
PONTIFICIA UNIVERSIDAD CATÓLICA DE CHILE
Measuring PV Technical Potential and Financial Feasibility for Educational Buildings in the United States
Nichole Hanus
Gabrielle Wong-Parodi
Ines Azevedo
Alex Davis
CARNEGIE MELLON UNIVERSITY
The Political Economy of Community Solar: Lessons from Minnesota
Gabriel Chan
UNIVERSITY OF MINNESOTA
Screening Solar PV Adopters and Non-adopters: An Application of Machine Learning Methods
Changqiu Dong
RENNIN UNIVERSITY OF CHINA
Benjamin Sigrin
NATIONAL RENEWABLE ENERGY LABORATORY

USAEE CHAPTER LEADERSHIP MEETING
5:15 pm - 6:15 pm • Champions VII

POSTER SESSION & NETWORKING RECEPTION
6:30 pm - 8:00 pm • Discovery Center A & B
1. Opportunities and Risk Factors in Construction of Solar Photovoltaic Plant with Venture of Public Private Partnership, Case Study of Largest PV Plant
Bilal Anwar
PHD RESEARCH SCHOLAR, XI’AN JIAOTONG UNIVERSITY
2. The Design of Flat Energy Management Structure for Iron & Steel Enterprises in China
Yuhui Jin
Shiping Jin
Junyin Zhang
Yan Long
HUZHONG UNIVERSITY OF SCIENCE AND TECHNOLOGY
Yonghong Huang
WISDR ENGINEERING & RESEARCH INCORPORATION LIMITED
3. The Future of the Energy Sector and Geopolitical Impact
Ikechukwu Igwe
EMERALD ENERGY INSTITUTE
Jing Liang
Yueming (Lucy) Diu
UNIVERSITY OF MARYLAND
5. An Analyze of Oil Royalties Impacts on the Southeastern Municipalities per Capita GDP: A Spatial Econometric Approach for the Natural Resource Curse
Felipe Tavares
Augusto Seabra
Alexandre Almeida
UNIVERSITY OF SÃO PAULO
6. Optimum Hybrid Configuration For Off-Grid Rural Electricity Generation In The Six Geopolitical Zones Of Nigeria
Nathaniel A Babajide
CENTRE FOR ENERGY, PETROLEUM AND MINERAL LAW AND POLICY
Hyungkwan Kim
Andrew L Liu
Paul V Preckel
PURDUE UNIVERSITY
Douglas Gotham
STATE UTILITY FORECASTING GROUP
8. Energy Storage Shaping The Grid
Hudson R Howard
FROSTBURG STATE UNIVERSITY
9. Effectiveness of Feed-in Tariff and Renewable Portfolio Standard under Strategic Pricing in Network Access
Kurakawa Yukihide
WASEDA UNIVERSITY
Hibiki Akira
TOHOKU UNIVERSITY
Mohammed AlMehdar
BRANDEIS UNIVERSITY
11. Stochastic versus Deterministic Grid-Evolution Models- A Case Study on MISO
Naga S. Goteti
Eric Williams
Eric Hittinger
ROCHESTER INSTITUTE OF TECHNOLOGY
Aramayis Dallakyan
Reid Stevens
TEXAS A&M UNIVERSITY

STUDENT HAPPY HOUR MONDAY 8:00 PM - 10:00 PM • THE RAILYARD
Immediately following the Poster Session & Networking Reception, come join fellow students at The Railyard, a 15 minute walk from the conference hotel, for further drinks and networking opportunities. Gather at the Meeting Point (Hotel Lobby) at 7:45 pm to walk over with the first group, or join us at your convenience. Railyard – 4206 San Felipe St., Houston, TX 77027
TUESDAY, NOVEMBER 14

REGISTRATION
7:00 am - 6:30 pm ■ Directors Room

MORNING NETWORKING COFFEE
7:45 am - 8:30 am ■ Legends Ballroom Pre-Function

CONCURRENT SESSIONS 19-27
8:30 am - 10:15 am

19. Energy Storage in Electricity Supply Systems
■ Legends IV
John Jimison (Presiding)
ATTORNEY AT LAW - ENERGY
Effects of Grid-Scale Electricity Storage on System Carbon Dioxide Emissions as a Power System Decarbonizes
Michael Craig
Paulina Jaramillo
CARNEGIE MELLON UNIVERSITY
Can Energy Storage Operation Be Clean? Reducing System Emissions While Retaining Revenue
Eric Hittinger
Laura Arciniegas
ROCHESTER INSTITUTE OF TECHNOLOGY
Arbitrage Strategies for Energy Storage Units
Olvar Bergland
NMU

20. Electricity Transmission and Trade in Electricity
■ Legends V, VI
Paul Christie (Presiding)
SENIOR ANALYST, ALPINE ENERGY
The Impact of International Trade on Electric Loads in Mexico
Marc H Vatter
MARC H. VATTER, PH.D.
Daniel F Suurkask
BRICH ENERGY ECONOMICS, LLC

21. Environmental Issues Arising from Energy Production
■ Legends VII
Troy Thompson (Presiding)
BUSINESS PLANNING & ANALYTICS MGR, CHEVRON
Life Cycle Cost Analysis Comparing the Conventional and a Prototype Bio-Based Manufacturing Process for a Wind Turbine Blade
Katerin Yessenia Ramirez Tejeda
David A. Turcotte
Daniel Schmidt
Kelechi Adejumo
Emmanuelle Reynaud
UNIVERSITY OF MASSACHUSETTS LOWELL
The Impact of Environmental Regulation on the U.S. Coal Industry: A Counterfactual Analysis
Isaac A Duah
WASHINGTON STATE UNIVERSITY
Climate Change and Energy Production: The Effect of Drought on Hydraulic Fracturing Productivity
Reid B Stevens
Gregory L. Torell
TEXAS A&M UNIVERSITY
Case Study - Dynamic Pressure-Limited Capacity and Costs of CO2 Storage in the Mount Simon Sandstone
Steven T. Anderson
 Hossein Jahediesfanjani
U.S. GEOLOGICAL SURVEY

22. Modeling Interactions between Energy Markets and CO2 Emissions
■ Legends II
David H. Knapp (Presiding)
CHIEF ENERGY ECONOMIST, ENERGY INTELLIGENCE GROUP
The Effect of Restricting Coal Consumption on Coal Exports and Greenhouse Gas Emissions
Andre J Barbe
U.S. INTERNATIONAL TRADE COMMISSION
The Impact of Climate Change on Residential Energy Demand: A Case Study of Australia
Nnaemeka V Emoti
Rabiul Beg
Taha Chaiechi
JAMES COOK UNIVERSITY
Decarbonization of Power Markets and Fairness: An Application of Cooperative Game Theory
Christoph Weissbart
IFO INSTITUT
Electric Generation Scenario Modelling with Uncertainty in CO2 Price
Joel R Theis
Charles A Zelek
Christopher J Nichols
Peter C Balash
NATIONAL ENERGY TECHNOLOGY LABORATORY

23. Energy Security and Emergency Oil Stockpiling
■ Legends I
Shirley Neff (Presiding)
SENIOR ADVISOR, ENERGY INFORMATION ADMINISTRATION
Gbadebo Oladosu
Paul Leiby
David Bowman
Megan Johnson
Rocio Uria-Martinez
OAK RIDGE NATIONAL LABORATORY
Economic Benefits of Alternative Configurations of the Strategic Petroleum Reserve
Paul Leiby
Rocio Uria-Martinez
Gbadebo A Oladosu
OAK RIDGE NATIONAL LABORATORY
David C Bowman
ECOTECH LLC
Megan Johnson
ORISE/ORNL
Using Meta-Analysis to Estimate World Oil Demand Elasticity
Rocio Uria-Martinez
Megan M Johnson
Paul N Leiby
OAK RIDGE NATIONAL LABORATORY
David Bowman
ECOTECH
Gbadebo Oladosu
OAK RIDGE NATIONAL LABORATORY
   - Tina Vital, Presiding
   - DIRECTOR, AEGIS ENERGY ADVISORS CORP.
   - Impact of Incidences in Regional Natural Gas Price
     - Negar Dahi Taleghani
     - UNIVERSITY OF WYOMING
     - Arash Dahi Taleghani
     - LOUISIANA STATE UNIVERSITY
   - Are U.S. Federal Reporting Thresholds Adequate to Address an Interdependent Electricity and Natural Gas Grid?
     - Gerald M Freeman
     - JAY APT
     - CARNEGIE MELLON UNIVERSITY

25. Issues Arising from the Shale Revolution
   - Champions III
   - Michael Plante, Presiding
     - SENIOR RESEARCH ECONOMIST, FEDERAL RESERVE BANK OF DALLAS
   - Revisiting the Economic Impacts of Fracking in the Pennsylvania
     - Timothy Considine
     - UNIVERSITY OF WYOMING

26. Financing Energy Projects, with a Focus on Government Enterprises
   - Champions VII
   - Kim Coffman, Presiding
     - ECONOMIST, U.S. BUREAU OF OCEAN ENERGY MGMT.
   - Why Federal Agency Energy Projects are Privately Financed
     - Michael E Canes
     - DISTINGUISHED FELLOW, LMI
   - Performance Measurement for Oil and Gas Companies: Functional Currency
     - Fumihiko Matsubara
     - HOSEI UNIVERSITY
     - Nasir A Kolade
     - UNIVERSITY OF THE WEST OF SCOTLAND
   - Have the Chinese National Oil Companies Paid Too Much in Overseas Asset Acquisition?
     - Xiaoyi Mu
     - UNIVERSITY OF DUNDEE

27. Global Adoption of Solar Power and Solar Technology Transfer
   - Champions V
   - Seth Blumsack, Presiding
     - ASSOCIATE PROFESSOR, PENN STATE UNIVERSITY
   - Patent Quality, Intellectual Property Rights, and Technology Transfer in the Solar Sector: All in the Family?
     - Amanda Phalin
     - LECTURER, WASHINGTON COLLEGE OF BUSINESS, UNIVERSITY OF FLORIDA
   - Assessing the Effectiveness of Feed-in-Tariffs and Renewable Portfolio Standards: An Analysis of Global Renewable Energy Policy
     - Gregory B Upton
     - LOUISIANA STATE UNIVERSITY
     - Sanya Carley
     - INDIANA UNIVERSITY BLOOMINGTON

Cross-Border Cost Reductions from PV Capacity in Germany
   - Felix Muesgens
     - BRANDENBURG UNIVERSITY OF TECHNOLOGY

International Model for Diffusion of Residential Solar Power
   - Eric Williams
     - MATTISON ENERGY ADVISORS
     - Rexon Carvalho
     - ROCHESTER INSTITUTE OF TECHNOLOGY

COFFEE BREAK
   - 10:15 am - 10:45 am • Legends Ballroom Pre-Function

DUAL PLENARY SESSION:
Changing Ties with Mexico
   - 10:45 am - 12:15 pm • Legends IV
   - Mexican energy regulators and operators will discuss their expectations on the country’s outlook as the Energy Reform is implemented as well as the vulnerabilities and potential impacts of a policy shift in the U.S. The trends toward larger foreign direct investments and trade links with the U.S. have strengthened. Most of the natural gas consumed in Mexico today is imported from the U.S. through pipelines and LNG vessels. Furthermore, U.S. oil and gas companies participated in tendering processes for oil fields, and some will start operations soon.

Alejandra Elizondo (Presiding)
   - RESEARCH FELLOW, IDE

Guillermo Garcia Alcocer
   - PRESIDENT COMMISSIONER, ENERGY REGULATORY COMMISSION

Jimena Marvan
   - DEPUTY EXECUTIVE DIRECTOR, ASEA

Hector Moreira Rodriguez
   - COMMISSIONER, NATIONAL HYDROCARBONS COMM. OF MEXICO

DUAL PLENARY SESSION:
Electricity Markets
   - 10:45 am - 12:15 pm • Legends V & VI
   - The electricity industry is undergoing significant change. This panel will explore some of the rapidly evolving characteristics within electricity markets such as the role of different market players, legal issues that may arise at the grid’s edge, and resource price dynamics.

William C (Bill) Starnes (Presiding)
   - PARTNER, RESOLVED ENERGY CONSULTING LLC

Michael Wara
   - ASSOCIATE PROFESSOR OF LAW, JUSTIN M ROACH, JR. FACULTY SCHOLAR, STANFORD LAW SCHOOL

Elizabeth Wilson
   - PROFESSOR, DARTMOUTH COLLEGE

Joshua D Rhodes
   - POSTDOCTORAL RESEARCH FELLOW, UNIVERSITY OF TEXAS AUSTIN
AWARDS LUNCHEON
12:15 pm - 2:00 pm ■ Discovery Center A & B
Student & Other Awards/Recognitions
Case Competition Presentation

GOVERNMENT TRACK & CONCURRENT SESSIONS 28 TO 36
2:00 pm - 3:45 pm

28. Customer Response to Electricity Prices
■ Legends IV
Eric Hittinger (Presiding)
ASSISTANT PROFESSOR, ROCHESTER INSTITUTE OF TECHNOLOGY
A Novel Approach to Improve the Estimation of Customer Baseline Loads in Residential Demand Response Programs
Peter M Schwarz
Saeed Mohajeryami
UNC CHARLOTTE
Optimizing the Generation Capacity Expansion Cost in Presence of Demand Response in the German Electricity Market
Hamid Aghaie
AIT AUSTRIAN INSTITUTE OF TECHNOLOGY
How Do Households Respond to Critical Peak Pricing? Experimental Evidence on the Role of Information and Incentives
Kenneth Gillingham
ASSOCIATE PROFESSOR, YALE UNIVERSITY
Analysis on the Relationship Between Literacy and Energy Choices in Japan
Miwa Nakai
Yasunori Kikuchi
Tatsuya Okubo
THE UNIVERSITY OF TOKYO

29. Some Wider Lessons from the ERCOT Experience?
■ Legends V, VI
Karl Nalepa (Presiding)
PRESIDENT, RESOLVED ENERGY CONSULTING
Operating Reserve Demand Curve, Scarcity Pricing and Intermittent Generation: Lessons from the Texas ERCOT Experience
Raul Bajo-Buenestado
UNIVERSITY OF NAVARRA
Smooth Transition and Integration of the ERCOT Market
Xiaodong Du
UNIVERSITY OF WISCONSIN-MADISON
Offr D Rubin
BEN-GURION UNIVERSITY OF THE NEGEV, ISRAEL
Does Electricity Get Cheaper and Cleaner with More Wind in ERCOT
Chen-Hao Tsai
CENTER FOR ENERGY ECONOMICS, THE UNIVERSITY OF TEXAS AT AUSTIN
Derya Eryilmaz
NERA ECONOMIC CONSULTING INC.
The Cost of Policy Uncertainty in Electric Sector Capacity Planning: Implications for Instrument Choice
Benjamin D Leibowitz
ASSISTANT PROFESSOR, THE UNIVERSITY OF TEXAS AT AUSTIN

31. Modeling CCS, Energy Efficiency and Non-fossil Energy Alternatives
■ Legends II
John Holding (Presiding)
INDEPENDENT ENERGY ANALYST
Are U.S. Coal-Fired Power Plants Quantity-Quality Efficient?
Saleem Shaik
Dragan Miljkovic
David Ripplinger
NORTH DAKOTA STATE UNIVERSITY
Older Wind Power Projects: Market Performance and Planning Considerations
Michael Giberson
TEXAS TECH UNIVERSITY
Michael Reed
WEST VIRGINIA UNIVERSITY

30. Electricity System Flexibility
■ Legends VII
As electricity systems include more variable energy resources and experience changing use patterns, greater flexibility may be needed to ensure reliability. In the near-term, existing generation assets could deliver adequate flexibility if market rules provided sufficient incentives. Without rule changes, however, such assets may be inefficiently utilized and their long-term viability threatened. Meanwhile, nascent technologies such as transactive controls may allow demand-side assets to deliver flexibility, but their impacts on utilities and customers, as well as their public acceptability, are uncertain. This session will explore these diverse perspectives on flexibility by bringing together experts from Department of Energy headquarters and its National Laboratories to review recently completed and ongoing analytical work that is helping to inform operations, planning, policy, and other decisions in this space. This session also will feature a Federal Energy Regulatory Commission presentation concerning market design efforts underway to enable economically efficient deployment and utilization of the myriad of flexibility resources available.
Eric Hsieh, (Moderator)
DIRECTOR, OFFICE OF ENERGY FINANCE AND INCENTIVES ANALYSIS, U.S. DEPARTMENT OF ENERGY
Josh Novacheck
SENIOR ANALYST, ELECTRICITY SYSTEM RESEARCH ENGINEER, GRID SYSTEM ANALYSIS, NATIONAL RENEWABLE ENERGY LABORATORY
Abhishek Somani
SENIOR RESEARCH ECONOMIST, ELECTRICITY INFRASTRUCTURE INTEGRATION, PACIFIC NORTHWEST NATIONAL LABORATORY
Fletcher Fields
ECONOMIST, OFFICE OF ENERGY POLICY AND SYSTEMS ANALYSIS, U.S. DEPARTMENT OF ENERGY
Mary Wierzbicki
MANAGER, OFFICE OF ENERGY POLICY AND INNOVATION, FEDERAL ENERGY REGULATORY COMMISSION

32. Energy and Geopolitics with a Focus on LNG
■ Legends I
Nathalie Hinchev (Presiding)
PHD CANDIDATE, RICE UNIVERSITY
Implications of the Panama Canal Expansion on the Global LNG Market: Lessons for African LNG Producers
Israel J Onyije
Onowumi Iledare
EMERALD ENERGY INSTITUTE, UNIVERSITY OF PORT HARCOURT
U.S. Potential as a Swing Supplier in the Atlantic Basin
Hannah Gagarin
OAK RIDGE INSTITUTE FOR SCIENCE AND EDUCATION
Carly J Page
NEVADA PUBLIC UTILITIES COMMISSION
Revisiting the Long-run Income Elasticity of Energy Consumption: An OECD-country Panel Analysis
Brantley Liddle
ENERGY STUDIES INSTITUTE

The Long Run Price Elasticity of Demand for Residential Gas Consumption in the United States: A Time Varying Approach
Kelly R Burns
CURTIN UNIVERSITY

Forecasting Motor Gasoline Consumption in the United States
Melissa Lynes
ENERGY INFORMATION ADMINISTRATION

Energy Demand Estimation and Forecasting in Qatar
Ahmed A Khalifa
QATAR UNIVERSITY

Relative Efficiency of Hedging U.S. Saudi Crude Oil Imports: Employing WTI and Brent Futures Contracts
Kelly D. Burns
Julian Inchauspe
CURTIN UNIVERSITY

Identifying and Quantifying Risks and Uncertainties in Developing an Offshore Oilfield Under Varying Oil Price Regimes
Oyebimpe Adeogun
Ovundo O. Green
Onowumui O. Iledare
EMERALD ENERGY INSTITUTE, UNIVERSITY OF PORT HARCOURT

Intended and Unintended Consequences of U.S. Renewable Energy Policies
Nisal Herath
Wally Tyner
PURDUE UNIVERSITY

Bioenergy Prospects in Mexico
Hector M Nunez
CENTRO DE INVESTIGACIÓN Y DOCENCIA ECONÓMICAS

General Equilibrium Effects of Mitigation Actions in the Primary Sector in Mexico
Alejandra Elizondo
CIDE

COFFEE BREAK
3:45 pm - 4:15 pm  ■  Legends Ballroom Pre-Function

DUAL PLENARY SESSION:
Entrepreneurship in the Energy World
4:15 pm - 5:45 pm  ■  Legends IV

Innovation and entrepreneurship are growing in the energy eco-system. New Startups are proposing improvements, sometimes incremental, sometimes disruptive, to energy production, delivery or consumption. Low and volatile prices pressure businesses to reduce costs, while high and volatile prices encourage consumers to reduce demand and look for alternatives. Universities are also playing a vital role in connecting researchers and collegiate entrepreneurs to investors in launching successful ventures.

Shree Vikas (Presiding)
DIRECTOR MARKET INTELLIGENCE & BUSINESS ANALYSIS, CONOCOPHILLIPS

Brad Burke
MANAGING DIRECTOR, RICE ALLIANCE FOR TECHNOLOGY AND ENTREPRENEURSHIP

Jim Sledzik
DIRECTOR, HALL LABS LLC

Kemal Anbarci
MANAGING VENTURE EXECUTIVE, CHEVRON TECHNOLOGY VENTURES

Surya Rajan
MANAGING PARTNER AND VICE PRESIDENT, PROFITABILITY3
DUAL PLENARY SESSION:
Renewable Energy - Integration Challenges and Emerging Solutions
4:15 pm - 5:45 pm ■ Legends V & VI
This plenary explores challenges related to the integration of renewable energy generation into electrical grids and emerging solutions implemented in U.S. wholesale electricity markets. Topics of interest include the need for better coordination between renewable energy assets and transmission planning; the definition of new markets and products to maintain grid stability and accommodate renewable penetration; and interactions with climate change policy.

Alberto J Lamadrid (Co-Presiding)
ASSISTANT PROFESSOR, LEHIGH UNIVERSITY
Chiara Lo Prete (Co-Presiding)
ASSISTANT PROFESSOR ENERGY ECONOMICS, THE PENNSYLVANIA STATE UNIVERSITY
Benjamin F. Hobbs
PROFESSOR OF ENVIRONMENTAL MANAGEMENT, JOHNS HOPKINS UNIVERSITY
Michael Robinson
PRINCIPAL ADVISOR OF MARKET DESIGN, MISO
Nitika Mago
SUPERVISOR OPERATIONS ANALYSIS, ERCOT

USAEE GENERAL MEMBERSHIP MEETING
5:45 pm - 6:15 pm ■ Champions II

REGISTRATION
7:00 am - 6:00 pm ■ Directors Room

WASHINGTON CONFERENCE PLANNING MEETING
7:30 am - 8:30 am ■ Champions III

MORNING NETWORKING COFFEE
7:45 am - 8:30 am ■ Legends Ballroom Pre-Function

DUAL PLENARY SESSION:
Strategies to Adapt, Survive and Evolve in the Upstream Oil and Gas Markets
8:30 am - 10:00 am ■ Legends IV
The downturn in global crude prices negatively impacted all segments of the upstream sector, and has forced a broad rethink in how firms operate. What strategies have companies across the upstream sector, from service companies to operators, both onshore and offshore, employed to emerge in better position after the downturn? What structural changes have upstream players employed? Have these lessons been learned for the long-term or are we in danger of repeating history? Our panel of experts from across the upstream sector will speak from their experiences on these and other questions affecting the upstream.

Caldwell Bailey (Presiding)
INVESTOR RELATIONS, HI CRUSH
Ron Gusek
PRESIDENT, LIBERTY OILFIELD SERVICES
John Daniel
SENIOR RESEARCH ANALYST, OILFIELD SERVICES, SIMMONS
Robert Kleinberg
SCHLUMBERGER FELLOW EMERITUS, SCHLUMBERGER
Laura Fulton
CHIEF FINANCIAL OFFICER, HI-CRUSH PROPPANTS LLC

COFFEE BREAK
10:00 am - 10:30 am ■ Legends Ballroom Pre-Function

DUAL PLENARY SESSION:
Intelligent Energy Systems
8:30 am - 10:00 am ■ Legends V & VI
Infrastructure, technologies, and the ‘Internet of Things’ are changing the energy sector in ways that were recently only science fiction. From using ‘Big Data’ for real-time electricity grid monitoring to cutting-edge technologies in smart buildings, smart grids, and autonomous vehicle networks, the prospects, management tools, as well as the cyber risks continue to gyrate upward. This panel of experts will explore such issues including the intelligent energy systems of today, what they envision as enablers and opportunities for the energy systems of the future, along with accompanying risks and challenges.

Melanie Craxton (Presiding)
PHD CANDIDATE, STANFORD UNIVERSITY
Anna Scaglione
PROFESSOR, ARIZONA STATE UNIVERSITY
Zoltan Nagy
PROFESSOR, UT AUSTIN
Ram Rajagopal
ASSISTANT PROFESSOR OF CIVIL AND ENVIRONMENTAL ENGINEERING, STANFORD UNIVERSITY

CLOSING PLENARY SESSION:
Pulling It All Together: Are We Cycling Uphill or Downhill?
10:30 am - 12:15 pm ■ Legends IV
The closing plenary session will gather three nationally-recognized experts from industry and academia in a participatory discussion of the state of energy markets and policy in North America. The panelists will make brief remarks and the audience will then be invited to have a highly interactive discussion with the panelists and the panel moderator. As much of the time for this session will be dedicated to the audience rather than the panelists, this session is a great chance for conference participants to engage in sustained and meaningful dialogue with the panelists and each other.

David H Knapp (Presiding)
CHIEF ENERGY ECONOMIST, ENERGY INTELLIGENCE GROUP
Adam E Sieminski
ENERGY & NATIONAL SECURITY PROGRAM, CENTER FOR STRATEGIC & INT'L STUDIES
Michael Webber
DEPUTY DIRECTOR, ENERGY INSTITUTE, UNIVERSITY OF TEXAS AT AUSTIN
Guy Caruso
SENIOR ADVISOR, CENTER FOR STRATEGIC AND INTERNATIONAL STUDIES

OPTIONAL NETWORKING DINNERS
TUESDAY 6:30 PM - 9:00 PM
Sign up at registration desk; cost not included in registration fee. See page 12 for more information.
WORKSHOP:

Global Energy Risk Management: Turning Risk into a Competitive Opportunity

12:45pm - 5:00pm  ■ Champions III

Energy risk management requires focus on the complexities associated with asset transformation, storage, processing, treatment and transportation of energy commodities to develop sound risk management strategies. This session will communicate from lectures and case studies to gain an understanding of:

- The basics of energy risk management.
- Fostering a mindset of real option valuation to address risk and value added strategies.
- Hedging strategies to add extrinsic value to a company’s asset structure.

Separate registration required. See Registration Desk.

Glenn Labhart (Presiding)
CHAIRMAN OF ENERGY OVERSIGHT COMMITTEE OF THE GARP ERP PROGRAM & SENIOR PARTNER LABHART RISK ADVISORS

Spyros Maragos
MANAGER ANALYTICS, DIRECT ENERGY

Gordon E. Goodman
INDEPENDENT ENERGY CONSULTANT

TOUR: PETRA NOVA

12:45pm - 5:00pm

Attendees of the USAEE/IAEE North America Conference will have the unique opportunity to visit and tour the Petra Nova generation and carbon capture facility, located southwest of Houston. Meet at the front of the Royal Sonesta Hotel, porte-cochere to board bus.
Meal tickets are only valid for conference provided meal functions. Meal tickets are not transferrable to general hotel restaurants or bars.
USAEE SUSTAINING MEMBERS
Advanced Resources International
American Petroleum Institute
Aramco Services Company
Carnegie Mellon University
Center for Energy Studies, Louisiana State University
Chevron Corporation
ConocoPhillips, Inc.
ExxonMobil Corporation
Institute of Transportation Studies, University of California, Davis
John and Willie Leone Family Department of Energy and Mineral Engineering, Pennsylvania State University
KAPSARC
National Renewable Energy Laboratory
Rice University, Baker Institute
Shell Oil Products US
Toyota Motor North America
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Administración del Mercado Eléctrico, Uruguay
Aramco Services Co., USA
Berlin University of Technology, Germany
BP Plc., UK
Carleton University, Faculty of Public Affairs, Canada
ConocoPhillips, USA
Energy Information Administration, USA
ESCP Europe Business School, UK
Institut Francais Du Petrole, France
Institute of Transportation Studies, University of California, USA
Institute of Energy Economics, Japan
Institute of Nuclear Energy Research, Taiwan
King Abdullah Petroleum Studies & Research Center, Saudi Arabia
Korea Electric Power Corporation, South Korea
National Energy Board, Alberta, Canada
Norwegian School of Economics and Business Administration, Norway
Rice University, Baker Institute, USA
Shell International, Ltd., Netherlands
The Energy Studies Institute, National University of Singapore, Singapore
University of Alberta, Canada
University of Auckland, New Zealand
University of Stavanger, Norway
University of Western Australia, Australia
UTE, Uruguay

FUTURE IAEE EVENTS

2018
April 22-24
Abuja, Nigeria
11th NAEE/IAEE Conference
Theme to be Announced

June 10-13
Groningen, The Netherlands
41st IAEE International Conference
Transforming Energy Markets

September 23-26
Washington, DC, USA
36th USAEE/IAEE North American Conference
Evolving Energy Realities: Adapting to What's Next

October 18-20
Tbilisi, Georgia
3rd IAEE Eurasian Conference
Theme to be Announced

November 2-4
Wuhan, China
6th IAEE Asian Conference
Energy Exploitation and Cooperation in Asia

2019
May 26-29
Montreal, Canada
42nd IAEE International Conference
Local Energy, Global Markets

August 25-28
Ljubljana, Slovenia
16th IAEE European Conference
Energy Challenges for the Next Decade

October 17-19
Astana or Almaty, Kazakhstan
4th IAEE Eurasian Conference
Theme to be Announced
The Inaugural Government Track was offered at our North American Conference in Tulsa, Oklahoma. It took place two weeks before the U.S. Presidential election in 2016 and focused on lessons learned in previous Presidential and other government transitions.

This year, the USAEE Government Committee has arranged the opening plenary session on international oil and natural gas markets, geopolitics and U.S. energy policy, which extends beyond the Government Track, and a separate Government Track panel discussion on the need for electricity system flexibility in the face of variable generation sources and changing use patterns.

This Government Track session, Electricity System Flexibility, will take place on Tuesday, November 14, 2:00 - 3:45pm in Legends VII. The panel of speakers will bring together experts from the Department of Energy headquarters offices, DOE’s National Laboratories, and the Federal Energy Regulatory Commission. They will discuss recent analytical work to help inform operations, planning, policy, and other decisions in this space as well as to describe market design efforts underway at FERC to enable economically efficient deployment and utilization of the myriad of flexibility resources available.

Although Government Track sessions will tend to be discussions regarding policy, rather than presentations of individual research projects, in future conferences these sessions may vary considerably and are expected to include plenary-level talks and discussions, panel discussions of policies, laws, and regulations, skill-based workshops, and other events. Often, these will be developed in collaboration with other parts of the USAEE organization, as was the case of the post-conference energy risk workshop in 2016. Please include any suggestions for future Government Track session with your conference evaluation or submit them directly to usaee@usaee.org.