Monday, February 4: Policy Focus

Welcome Remarks and Keynote; Panel Discussions; Research Poster Competition; Networking Reception

Time	Topic	Description	Panelists (Moderator / Keynotes in Bold)
0800 - 1330	Registration		
1245 - 1300	Welcome Remarks		Sharon Mosher, Dean, Jackson School of Geosciences
1300 - 1400	Conference Keynote		**Scott Tinker, Director, Bureau of Economic Geology**
1400 - 1415	Break		
1415 - 1515	Panel 1: Power Relations between the US, China, and Russia	The geopolitics of energy is increasingly important in expanding globalized energy markets. This panel will examine the geopolitics of energy and dissect the current obstacles to a profitable global energy market. What are currently the most important international energy trends? How might these trends play out over time? The panel will focus on relations between the United States, Russia and China.	**Fred Beach, Assistant Director for Energy & Technology Policy, The University of Texas Energy Institute (Moderator)** David Firestein, UT China Public Policy Center Matthew Bey, Stratfor Analyst In Progress
1515 - 1530	Break		
1530 - 1630	Panel 2 - Can we reach a political consensus on a carbon tax?	10 years after the Waxman-Markey bill, what does the future for carbon pricing in the US look like? Despite increasing numbers of conservative think tanks and multinational oil and gas companies pledging support for carbon pricing, even relatively liberal states such as Washington are struggling to gather enough political consensus to legislate carbon pricing. This panel will evaluate if there is an agreeable political middle ground that could be reached to pass carbon legislation. Panelists will offer opinions on some of the key hurdles to achieving carbon pricing, how revenue from carbon taxes should be distributed, how states should (and are) responding to a lack of policy consistency at the federal level, and environmental justice concerns.	**Sheila Olmstead (Moderator)** Yoram Bauman, Stand-up Economist In Progress In Progress
1630 - 1730	Panel 3: Grid Cybersecurity	The US recognizes reliable flow of energy as critical infrastructure. In order to protect energy supply, great efforts are made at all levels of the energy industry to ensure security, especially in the cyber realm. This panel will address what efforts are being taken by electricity suppliers, transmission providers, and governmental agencies to ensure a reliable grid system. In particular, discussion will focus on emergency response in the event of a breach in cybersecurity and the impact of a breach on everyday life.	**Elizabeth Rogers,** **Michael Best and Friedrich LLP Partner (Moderator)** Kip Fox, President, Electric Transmission Texas Dave Darnell, CEO, Systrends In Progress
1730 - 1900	Research Poster Competition		
1730 - 1900	Networking Reception		

Tuesday, February 5: Technology Focus

Panel Discussions; Keynote Interview; GAIN Networking Event

Time	Topic	Description	Panelists (Keynotes / Moderators in Bold)
0800 - 0900	Registration		
0900 - 0915	Opening Remarks		LEC Master of Ceremony
0915 - 1015	Panel 1 - The Tipping Point for Electric Vehicles	According to the International Energy Agency, the global fleet of electric vehicles grew 54% in 2017 and will skyrocket from 3 million to 125 million by 2030. From sustainable policy initiatives, to the decreasing price of batteries, to the development of EV charging infrastructure in some areas, various factors may help catalyze this trend. However, many also remain skeptical of the long-term affordability and feasibility of EVs. On this panel, three experts with experience in EV charging infrastructure and finance, market analytics and energy efficiency, and oil and gas will discuss the future of electric vehicles and the transportation sector.	**Dave Tuttle, UT Research Associate and Professor (Moderator)** Brandy Brown, Senior Evaluation Consultant at CLEAResult In Progress In Progress
1015 - 1030	Break		
1030 - 1130	Panel 2 - Future of Building Energy Efficiency: Smart Building or Building Smart?	Buildings account for 40% of energy consumption in the United States. In the growing age of 'smart' technologies and sustainable design, how do these influence energy usage in commercial buildings? This panel will assess current design and technology-based solutions for their energy saving capabilities in existing and new commercial buildings and project the future of the industry. Discussion will also touch on the following questions: What does 'smart building' look like now, and in the future? What are barriers to adoption and challenges to implement tech-based solutions? How will standards and certifications (e.g., AEGB, ASHRAE, LEED, WELL, Living Building) evolve to make way for these changes?	**Zoltan Nagy, Assistant Professor Civil Architectural and Environmental Engineering (Moderator)** Michael Sweeney, Principal Existing Buildings Practice Leader Richard Morgan, Senior Energy Code Compliance Program Manager, South-Central Partnership for Energy Efficiency as a Resource (SPEER) Allison Wilson, Sustainability Director, Ayers Saint Gross
1130-1300	Lunch and Keynote Interview	Japan's Energy Future: A Case Study	**Fred Beach (Moderator), UT Energy Institute, and Hisanori Nei, National Graduate Institute For Policy studies**
1300 - 1415	Panel 3 - Technological Pathways to Decarbonization	The most recent IPCC report suggests that immediate action is necessary to reduce greenhouse gas emissions and minimize the impacts of climate change. What remains unclear is the path towards achieving this goal. Can the electric grid be comprised of 100% renewable energy sources or will other clean energy sources be needed for this transition? This panel will discuss which energy technologies are vital for this transition as the penetration of intermittent renewables continues to increase. The panel will also discuss the opportunities and challenges associated with rapidly scaling up new emerging technologies such as battery storage, small modular reactors and carbon capture and storage.	**Asher Price, Reporter, *Austin American-Statesman* (Moderator)** Dave Petti, Chief Scientist Nuclear Science and Technology Division, Idaho National Laboratory Mike Jacobs, Senior Energy Analyst, Union of Concerned Scientists Vanessa Nunez-Lopez, Gulf Coast Carbon Center, Bureau of Economic Geology
1415-1430	Break		
1430-1530	Panel 4 - Sustainability and Economic Pressures in the	To maintain competitiveness in international markets, the chemical industry must continuously seek to promote sustainability while reducing costs, especially to improve public brand perception in light of growing concern over the environmental impact of plastics. In	**Dr. Thomas Edgar, The George T. and Gladys H. Abell Chair in Engineering, UT Austin (Moderator)** Jack Broodo, President Feedstocks and Energy, Dow Chemical Business

	Petrochemical Industry	meeting this sustainability challenge, feedstock and process energy sourcing has become increasingly important with the advent of cheap shale gas drilling and advances in other non-traditional feedstocks such as biomass and CO2. This panel seeks to address how these emerging feedstock and process energy technologies compare in cradle-to-grave environmental footprint and overall economic viability with regards to governmental policy.	In Progress In Progress
1530 - 1545	Break		
1545 - 1700	Panel 4 - Unconventional Oil and Gas	The United States has seen resurgence in petroleum production, mainly driven by improved hydraulic fracturing and directional drilling techniques for natural gas production from shale formations. Application of these technologies enabled natural gas to be economically produced from shale and other unconventional formations and contributed to the United States becoming the world's largest natural gas producer in 2009. However, the rapid expansion of tight oil and shale gas extraction using high-volume hydraulic fracturing has raised concerns about its potential environmental and health impacts. These concerns include potential direct impacts to groundwater and surface water quality, water supplies, and air quality. In addition, some have raised concerns about potential long-term and indirect impacts from reliance on fossil fuels and resulting greenhouse gas emissions and influence on broader energy economics. This panel will examine the broader view of developing unconventional oil and gas. Can the success in the US be replicated elsewhere in the world? What is the most likely course of future shale gas? What are the externalities related to shale gas that we can be further managed to minimize its impacts?	**Bill Fairhurst, Project Manager, The Bureau of Economic Geology (Moderator)** Charles Sternbach, President, Star Creek Energy In Progress In Progress
1700	Adjourn	GAIN networking event	

Wednesday, February 6: Market Focus

Keynote Address; Panel Discussions; Energy Tours

Time	Topic	Description	Panelists (Keynotes / Moderators in Bold)
0800 - 0845	Registration		
0845 - 0900	Opening Remarks		LEC Master of Ceremony
0900 - 1000	Keynote Address		**Commissioner Arthur C. D'Andrea, Texas Public Utility Commission**
1000 -1100	Panel 1: Energy-Only Market Design for Resource Adequacy: Stakeholder Perspectives	As an energy-only market, ERCOT's market rules are designed to ensure resource adequacy primarily through price signals. In this session, ERCOT stakeholders will first discuss recent successes and challenges maintaining reserve margins in an energy-only market and then move into a forward-looking discussion about potential market or policy changes that may promote resource adequacy in the next decade. Panelists will address questions such as, does current market design adequately incentivize	**Dr. David Spence, Baker Botts Chair in Law, UT Austin (Moderator)** Connie Corona, Division Director of Competitive Markets, Texas Public Utilities Commission Bob Helton, Sr. Director of Regulatory Affairs, Engie In Progress

		investment? Which fuels and technologies will be used to maintain reserve margins in the next ten years, and what are the associated challenges?	
1100 - 1115	Break		
1115 - 1215	Panel 2: Re-thinking Market and Policy Designs for Energy Storage	The panel will focus on the unique functions of energy storage and why electricity markets are increasingly valuing 'flexibility.' FERC and the Texas PUC are currently re-considering market design for storage. Panelists will discuss why, despite the multiple value propositions of storage, the technology doesn't fit neatly into current market design. For example, to fully capture the value of storage, should transmission and distribution utilities be able to own these assets, or do other ownership models make more sense? What might new market products for energy storage look like?	**Alison Silverstein (Moderator)** Judith Talavera, President and COO, AEP Dean Tuel, VP of Sales, Younicos/Aggrekop In Progress, Texas Public Utility Commission
1215 -1330	Lunch		
1330 - 1445	Panel 3: Funding Infrastructure in Africa	Globalization has given room for growth, development, fair trade and economic development. Renewable energy is at the fore front due to the 2015 Paris Agreement on climate change. What role will distributed solar generation play in evening the distribution of generation through Sub-Saharan Africa? The panel will focus on trying to evaluate the bankability of main-grid and microgrid solar PV and what this means for the future of financing structures. Panelists will tell their opinions on how current initiatives such as the USTDA's Power Africa and the US's Africa Clean Energy Finance Initiative are drawing investors eager to turn a profit, how main-grid versus Micro-grid funding structures may differ and possible future trajectories of private investors and funding banks such as Credit Suisse.	**Richard Amato, GCG Program Manager, IC^2 Institute (Moderator)** Arsh Sharma, Energy Finance Specialist - Africa Region, World Bank Hind Farag, Energy Analytics Leader, Wood Mackenzie Bako Ambianda, Labracorp Group Omeed Badkoobeh, CEO Yotta Solar
1445 - 1500	Break		
1500 - 1600	Panel 4 - Managing Uncertainty in Upstream Oil and Gas Investment	The financial markets are currently facing an energy ecosystem in transition. This introduces uncertainties, risks and opportunities with regards to future investment opportunities. While fossil fuels are likely to comprise a dominant share of the energy supply for decades, we see significant changes in that arena. Coal's declining future is clear as it is marginalized by natural gas, renewables are capturing a significant share of the growing demand for power locally displacing natural gas and burgeoning natural gas supply from shale oil and gas is being pushed overseas as LNG. Many car manufacturers and jurisdictions have committed to all electric light duty vehicle fleets. Shale resources have not entirely delivered on their financial promise with little to no free cash flow being generated by the industry as a whole. The backdrop is volatile oil prices and growing concern about rising CO2 emissions from combustion of fossil fuels.	**Richard Chuchla, Director, Energy & Earth Resources Program at UT Austin (Moderator)** Arash Nazhad, Energy Investment Banking VP, Citigroup Billy Prather, UTIMCO In Progress
1600 - 1615	Closing Remarks		LEC Master of Ceremony
1630 - 1830	Tours	1) ExxonMobil Historical Collection at the Briscoe Center 2) UT Power Plant Tour	