<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>10:30am - 11:15am</td>
<td>Conference Opening: Geopolitical dialogue</td>
</tr>
<tr>
<td></td>
<td>Geopolitical hot spots around the world could threaten regional and even global stability, with potentially far-reaching consequences for energy markets. How are US concerns over Russian engagement in US elections affecting American international diplomacy? Given tensions across Turkey, Iran, Saudi Arabia, Syria, Yemen—and links to the United States and Russia—is there any scenario for stability in the Middle East? How do tensions among great powers exacerbate the risk of crises unraveling?</td>
</tr>
<tr>
<td></td>
<td>Carlos Pascual, Senior Vice President, IHS Markit</td>
</tr>
<tr>
<td></td>
<td>Suzanne Maloney, Deputy Director of the Foreign Policy, The Brookings Institution</td>
</tr>
<tr>
<td></td>
<td>Sir John Scarlett, Senior Advisor, Morgan Stanley</td>
</tr>
<tr>
<td></td>
<td>Angela Stent, Author of Putin’s World: Russia against the West and with the Rest, Director, Center for Eurasian, Russian and East European Studies at Georgetown University</td>
</tr>
<tr>
<td></td>
<td>Michael Green, SVP for Asia and Japan Chair, Center for Strategic and International Studies (CSIS), Director of Asian Studies at Georgetown University</td>
</tr>
<tr>
<td>11:15am - 12:00pm</td>
<td>Fuels of the Future: The new rivalry</td>
</tr>
<tr>
<td></td>
<td>Daniel Yergin, Vice Chairman, IHS Markit</td>
</tr>
<tr>
<td></td>
<td>Arnaud Breuillac, President, Exploration and Production, TOTAL S.A.</td>
</tr>
<tr>
<td></td>
<td>Jack Fusco, President and Chief Executive Officer, Cheniere Energy</td>
</tr>
<tr>
<td></td>
<td>Maarten Wetselaar, Integrated Gas and New Energies Director, Royal Dutch Shell plc</td>
</tr>
<tr>
<td>12:00pm - 12:25pm</td>
<td>Technology Leadership Dialogue</td>
</tr>
<tr>
<td></td>
<td>Daniel Yergin, Vice Chairman, IHS Markit</td>
</tr>
<tr>
<td></td>
<td>Andrew R. Jassy, Chief Executive Officer, Amazon Web Services (AWS)</td>
</tr>
<tr>
<td>12:30pm - 01:15pm</td>
<td>Voices of Innovation with Ernest Moniz and Lord John Browne: What will it take to transform the global energy system?</td>
</tr>
<tr>
<td></td>
<td>Hear from a legendary energy expert on challenges of energy transition and the role of the United States as the engine of innovations. Interviewed by visionary leader Lord John Browne.</td>
</tr>
<tr>
<td></td>
<td>Lord Browne, Executive Chairman, L1 Energy</td>
</tr>
<tr>
<td></td>
<td>Dr. Ernest Moniz, President and Chief Executive Officer, Energy Futures Initiative</td>
</tr>
<tr>
<td>12:30pm - 03:30pm</td>
<td>Lyceum Workshop: Developing Unconventional Assets: A simulation workshop</td>
</tr>
<tr>
<td></td>
<td>Raoul LeBlanc, Vice President, North American Unconventionals, IHS Markit</td>
</tr>
<tr>
<td>12:40pm - 01:50pm</td>
<td>Luncheon and Dialogue</td>
</tr>
<tr>
<td></td>
<td>Daniel Yergin, Vice Chairman, IHS Markit</td>
</tr>
<tr>
<td></td>
<td>Andrew Wheeler, Administrator, US Environmental Protection Agency (EPA)</td>
</tr>
<tr>
<td>01:50pm - 02:15pm</td>
<td>Leadership Dialogue</td>
</tr>
<tr>
<td></td>
<td>Daniel Yergin, Vice Chairman, IHS Markit</td>
</tr>
<tr>
<td></td>
<td>Eldar Sætre, President and Chief Executive Officer, Equinor ASA</td>
</tr>
<tr>
<td>02:00pm - 06:00pm</td>
<td>Agora Pods: Afternoon Sessions</td>
</tr>
<tr>
<td></td>
<td>Innovate and transform fast in oil and gas 02:00pm - 02:30pm</td>
</tr>
<tr>
<td></td>
<td>Arno van den Haak, Head, Worldwide Business Development Oil and Gas, Amazon</td>
</tr>
<tr>
<td></td>
<td>AI Comes of Age 02:00pm - 02:30pm</td>
</tr>
<tr>
<td></td>
<td>Sammy Haroon, Founder and CEO, AlphaX Decision Sciences</td>
</tr>
<tr>
<td></td>
<td>Driving Profitability with Advanced Analytics 02:00pm - 02:30pm</td>
</tr>
<tr>
<td></td>
<td>Steven Sliwa, Chief Executive Officer and Founder, Seeq Corporation</td>
</tr>
<tr>
<td></td>
<td>The Arrival of Commercial Fusion Energy 02:30pm - 03:00pm</td>
</tr>
<tr>
<td></td>
<td>Bob Mumgaard, Chief Executive Officer, Commonwealth Fusion Systems</td>
</tr>
<tr>
<td></td>
<td>A Journey into Industrial Machine Learning: a case study 02:30pm - 03:00pm</td>
</tr>
<tr>
<td></td>
<td>Cedric Fraces, Lead Data Scientist, Oil and Gas, 2predict</td>
</tr>
</tbody>
</table>
How can you use oilfield water intelligence to achieve your goals? 03:00pm - 03:30pm
Josh Adler, Founding Chief Executive Officer, Sourcewater

Creating connected ecosystems in oil and gas 03:00pm - 03:30pm
Bobby Dombos, Principal Solution Engineer, Salesforce

Unlocking Methane Reductions through Virtual Reality 03:00pm - 03:30pm
Isabel Mogstad, Senior Manager, EDF+Business, Environmental Defense Fund
Erik Horn, Co-Founder and Chief Creative Officer, Fair Worlds

Harnessing data analytics to reduce risk for oil and gas operators and insurers 03:30pm - 04:00pm
William (Bill) Hahn, Software Solutions Consultant, Siemens PLM Software

REDD + (Reducing Emissions from Deforestation and Degradation) 101 03:30pm - 04:00pm
Gerald Prolman, President, Everland

Multi-party collaboration for more efficient shipping 03:30pm - 04:00pm
Matthew Costello, Chief Executive, Co-Founder, Voyager

Powering disruption 04:00pm - 04:30pm
Ben Bodishbaugh, Chief Executive Officer, Evolution Well Services

Designing Cities as Dynamic Systems and Interfaces 04:00pm - 04:30pm
Amy Korté, Principal, Arrowstreet Inc.

How do corporates and startups create value together? 04:00pm - 04:30pm
Audun Abelsnes, Managing Director, Techstars Energy
Jens Festervoll, Corporate Liaison, Equinor

Using robots for inspection when it is unsafe for humans 04:30pm - 05:00pm
Nick Tillmann, Co-Founder, President and CEO, inRobotics
Fathi Ghorbel, Co-Founder and CTO, inRobotics

Monitoring Cement Conditions in Real-Time with Smart Cement 04:30pm - 05:00pm
Ody De La Paz, Chief Executive Officer, Sensytec, Inc.

Using AI-based software to transform data into efficiency and cost savings 05:00pm - 05:30pm
John Lovell, VP Technology and Strategy, MicroSilicon

Diving deep in machine learning for your industry 05:00pm - 05:30pm
Dan Mbanga, Principal Business Development Manager, Amazon AI, Amazon Web Services (AWS)

Digital technology empowers the modern energy workforce: Case Studies 05:30pm - 06:00pm
Abhilash Nair, Senior Principal Technical Sales Consultant, Aveva

Beyond hype: Practical Roadmap to Digital Transformation 05:30pm - 06:00pm
Chris Hamlin, Director Operational Certainty Consulting, Emerson

02:00pm - 05:50pm
Lyceum Labs: Afternoon Labs

The 5 Defining Characteristics of Shales 02:00pm - 02:50pm
Morgen McGuire, Sr Research Analyst II, IHS Markit

What Does Digitalization Really Mean? 02:00pm - 02:50pm
Babur Ozden, Founder and Chief Executive Officer, Maana, Inc.

Predicting the Unpredictable 03:00pm - 03:50pm
John Gibson, Chairman, Energy Tech, Tudor, Pickering, Holt and Co.

Cost and Innovation: Changing upstream dynamics 03:00pm - 03:50pm
Pritesh Patel, Executive Director, Capital Costs Analysis Forum, IHS Markit
Basel Nashat Asmar, Director, Upstream Research, IHS Markit
Andrew Day, Consulting Director, IHS Markit

Deep dive into fusion energy 04:00pm - 04:50pm
Bob Mumgaard, Chief Executive Officer, Commonwealth Fusion Systems

Low emission pathways: Identifying and modeling plausible alternatives 04:00pm - 04:50pm
Steven Knell, Director, Energy Wide Perspectives, IHS Markit
Richard Vidal, Director, Global Energy Scenarios, IHS Markit
Andrew Ellis, R and A, Data and Technical Design Executive Director, IHS Markit

10 Trends Changing Our Lives 05:00pm - 05:50pm
Chris Luebkeman, Director for Global Foresight, Research and Innovation, ARUP

Competition between short and long cycle crude oil supply 05:00pm - 05:50pm
02:00pm - 02:30pm  
**Voices of Innovation with Andrew Jassy: Innovation at Scale**

Andy Jassy will share his insights and experiences leading one of the world’s fastest growing companies, how to innovate at scale, and his vision for what’s ahead in the cloud and some of the exciting applications for energy. Interviewed by Jamey Rosenfield, Founder and Co-Chairman of CERAWeek and the Innovation Agora, and SVP, IHS Markit.

James Rosenfield, Senior Vice President IHS Markit, CERAWeek Co-Chairman, IHS Markit  
Andrew R. Jassy, Chief Executive Officer, Amazon Web Services (AWS)

02:00pm - 03:30pm  
**Hydrogen as a Clean Energy Fuel**

The extent of the impact of environmental policies on energy businesses remains uncertain; the reach and depth of decarbonization is subject to continued political debate. However, prudent strategic planning for business must incorporate the possibility of economy-wide deep decarbonization policies. These policies could become a risk to a company’s current operations and the value of its assets—or can offer an opportunity for new, profitable areas of activity. The implementation of economy-wide decarbonization will require innovation that goes beyond established practices that promote renewable electricity, energy efficiency, and biofuels. Above all, a zero-carbon energy path will have to replicate the energy density, the ease of transport and storage, and flexibility in use that hydrocarbons deliver today. Hydrogen can deliver precisely this functionality.

02:30pm - 03:15pm  
**Company Strategies in a Time of Change**

Atul Arya, Senior Vice President and Chief Energy Strategist, IHS Markit  
Musabbeh Al Kaabi, Chief Executive Officer, Petroleum and Petrochemicals, Mubadala Investment Company  
Lisa Davis, Member of the Managing Board and CEO Gas and Power, Siemens AG  
John Hess, Chief Executive Officer, Hess Corporation  
Shunichi Miyanaga, President and Chief Executive Officer, Mitsubishi Heavy Industries

02:30pm - 03:15pm  
**Agora Studios**

**Driverless Technology: The real disruptor** 02:30pm - 03:15pm

Jeremy Carlson, Principal Analyst and Manager, IHS Markit  
Rebecca Yergin, Associate, Covington and Burling LLP  
Robbie Diamond, President and Chief Executive Officer, Securing America’s Future Energy (SAFE)  
Chris Luembke, Director for Global Foresight, Research and Innovation, ARUP

**Carbon Trading: Will blockchain change the game?** 02:30pm - 03:15pm

Andrew Fleeter, Product Head for the Environmental Registry, IHS Markit  
Kathy Benini, Managing Director, Pricing and Valuation and Reference Data, IHS Markit  
Ruben Lubowski, Chief Natural Resource Economist, Environmental Defense Fund  
Gerald Prolman, President, Everland  
Don D’Souza, Unit Head for Industrial Mitigation, British Columbia Ministry of Environment and Climate Change Strategy

02:30pm - 03:15pm  
**Energy: What do investors really want?**

With the advent of the shale era and the price volatility of the past few years, investors appear to be losing faith in an industry facing short- and long-term challenges. The challenge of the industry, requiring a high level of investments, appears to be on a collision course with investors looking for stronger capital discipline and higher shareholders return. This panel of shareholders will discuss the challenges ahead in investing in oil and gas.

Roger Diwan, Vice President, Financial Services, IHS Markit  
Osmar Abib, Chairman of Global Energy, Credit Suisse  
Marcel van Poecke, Head of Carlyle International Energy Fund, Carlyle International Energy Partners (CIEP)  
Nathan Strik, Portfolio Manager, Fidelity Management and Research Company

03:15pm - 04:00pm  
**Agora Studios**

**AI and the Energy System: Disruption or transformation?** 03:15pm - 04:00pm

Dan Mbanga, Principal Business Development Manager, Amazon AI, Amazon Web Services (AWS)  
Paul Orland, Co-Founder and CEO, Tachyus  
Merag Watson, Vice President, BP

**Agile + Additive = Manufacturing Without Borders** 03:15pm - 04:00pm

Jonah Myerberg, Co-founder and Chief Technology Officer, Desktop Metal
03:20pm - 04:05pm  | Special Dialogue on China
Daniel Yergin, Vice Chairman, IHS Markit
Hou Qijun, Group Vice President, China National Petroleum Corporation (CNPC)

03:20pm - 04:05pm  | Digital Transformation: Creating value
The oil and gas industry has embraced digitalization over the past few years as a means to effectively manage costs and raise efficiencies in a challenging oil price environment. As industry players seek the next wave of value they’re often finding that the best opportunities lie at the interfaces – leveraging digital capabilities to integrate across the oil and gas value chain and lifecycle, as well as across functional and organizational boundaries. Successfully navigating such pursuits will not only transform how companies develop and operate their oil and gas resources, but also how they engage their customers and business partners. This session will explore where value has been achieved thus far, where it will be created in the future, and what it will take to truly maximize returns.

David Hicks, Senior Vice President, Upstream Energy, IHS Markit
Ahmad O. Al-Khowaiter, Chief Technology Officer, Saudi Aramco
Lal Karsanbhai, Executive President, Automation Solutions, Emerson
Babur Ozden, Founder and Chief Executive Officer, Maana, Inc.
Yuri Sebregts, Executive Vice President Technology and Chief Technology Officer, Royal Dutch Shell plc

03:20pm - 04:05pm  | Climate Strategies in a World of Rivalry
COP24 achieved a rule book to implement the Paris Agreement but left a massive gap between pledged actions and Paris targets to limit increases in global temperature. How sure are we of what needs to be achieved? Where can we find the biggest gains for emissions reductions—from carbon sinks to carbon sequestration? What incentives are needed to stimulate private investment in solutions and R and D?

Carlos Pascual, Senior Vice President, IHS Markit
Mark Little, President and Chief Operating Officer, Suncor Energy
Dr. Ernest Moniz, President and Chief Executive Officer, Energy Futures Initiative
Jennifer Morris, President, Conservation International (CI)
Maria Zuber, Vice President for Research and E. A. Griswold Professor of Geophysics, MIT

04:00pm - 06:00pm  | Lyceum Workshop: Blockchain for the Boardroom: An interactive workshop
Energy leaders will get hands-on experience with a live distributed ledger platform. This Lyceum Workshop will use an energy supply chain example to demonstrate the relationship between human-readable contracts, live data and their implementation in smart contracts on blockchain. You will walk step-by-step through the automated contract execution process.

William Fox, Chief Product Officer, Data Gumbo
Lisa M. Smith, Chief Corporate Development Officer, Data Gumbo

04:00pm - 04:30pm  | Book Signing with Angela Stent
Join world-renowned expert on Russia and geopolitics Angela Stent and receive a signed copy of her book, Russia Against the West and with the Rest.

Angela Stent, Author of Putin’s World: Russia against the West and with the Rest, Director, Center for Eurasian, Russian and East European Studies at Georgetown University

04:20pm - 04:45pm  | Leadership Dialogue
Daniel Yergin, Vice Chairman, IHS Markit
Vagit Alekperov, President of PJSC, LUKOIL

04:30pm - 05:15pm  | Agora Studios
Oil and Gas: Realizing value from digital transformation
Judson Jacobs, Executive Director, Upstream Technology, Energy, IHS Markit
Nick Farrant, Senior Vice President, Industry - Oil and Gas, Uptake Technologies
Michelle Pflueger, General Manager, Digital Innovation and Acceleration, Chevron Corporation
Justin Rounce, EVP and Chief Technology Officer, TechnipFMC
Arno van den Haak, Head, Worldwide Business Development Oil and Gas, Amazon
04:30pm - 05:15pm
Voices of Innovation with Fatih Birol: Solving Energy and Climate Puzzle
Atul Arya, Senior Vice President and Chief Energy Strategist, IHS Markit
Dr. Fatih Birol, Executive Director, International Energy Agency (IEA)

04:45pm - 05:10pm
Carbon Management Strategies
Daniel Yergin, Vice Chairman, IHS Markit
Vicki Hollub, President and Chief Executive Officer, Occidental Petroleum

05:10pm - 05:50pm
Daniel Yergin, Vice Chairman, IHS Markit
Hon. Lisa Murkowski, Chairman, U.S. Senate Energy and Natural Resources Committee
Hon. Joe Manchin, United States Senator for West Virginia, U.S. Senate Energy and Natural Resources Committee

05:45pm - 05:50pm
Innovative Pathways to Affordable Hydrogen Production
Significant progress is being made in reducing the cost of hydrogen. But it still is not economically competitive, both in terms of money and energy, to produce, store, and then convert hydrogen back to useful energy. Many innovative approaches are being tested; most are not at scale. What are the most promising technologies and what are the roadblocks to scale hydrogen production?
Shankari Srinivasan, Vice President, Energy, IHS Markit
Enass Abo-Hamed, CEO and Co-Founder, H2GO Power
Sam French, Business Development Manager, Johnson Matthey
R. K. Malhotra, Director General, Federation of Indian Petroleum Industry (FIPI)
Erevert Anderson, Vice President, Advanced Product Development, Nel Hydrogen

05:45pm - 06:30pm
Voices of Innovation: Ashok Belani and Blake Moret
Join Ashok Belani and Blake Moret as they share their vision to create end-to-end solutions and technology platform to automate entire upstream operations from drilling to production, well to terminal, conventional and unconventional, onshore and offshore. Will this be the answer to provide complete lifecycle and process automation solutions? Interviewed by Atul Arya, SVP and Chief Energy Strategist, IHS Markit.
Atul Arya, Senior Vice President and Chief Energy Strategist, IHS Markit
Ashok Belani, Executive Vice President, Technology, Schlumberger Ltd.
Blake Moret, Chairman and Chief Executive Officer, Rockwell Automation

05:50pm - 06:30pm
Global Oil Markets Dialogue
Daniel Yergin, Vice Chairman, IHS Markit
HE Mohammad Sanusi Barkindo, Secretary General, Organization of the Petroleum Exporting Countries (OPEC)
Dr. Fatih Birol, Executive Director, International Energy Agency (IEA)

06:30pm - 07:30pm
Conference-wide Reception

07:30pm - 09:00pm
Insight Dinners (view more +)
Crossing the Digital Divide: Company strategies for a new world
Susan Farrell, Vice President, Energy-Wide Perspectives, IHS Markit
Ahmed Hashmi, Chief Digital and Technology Officer, Upstream Technology, Energy, IHS Markit
Sanjay Paranji, Vice President and Chief Technology Officer, Anadarko Petroleum Corporation
Bill Vass, Vice President of Technology, Amazon Web Services (AWS)

Driving Change: Cities as the new frontier of mobility
Katherine Hardin, Vice President, IHS Markit
David Sandalow, Inaugural Fellow, Center on Global Energy Policy, Columbia University, Columbia University Center on Global Energy Policy
Dr. V. Sumantran, Chairman, Celeris Technologies
Stanley Young, Advanced Transportation and Urban Scientist, National Renewable Energy Laboratory (NREL)
Tom De Vleeschauwer, Vice President, Automotive, IHS Markit

Investment Strategies in a Low-Carbon World
Atul Arya, Senior Vice President and Chief Energy Strategist, IHS Markit
Al Cook, EVP, Global Strategy and Business Development (GSB), Equinor ASA
Bashir Dabbousi, Managing Partner, Emerson Collective
Dr. Ernest Moniz, President and Chief Executive Officer, Energy Futures Initiative
North Sea: The revival continues 07:30pm - 09:00pm
Jon Story, Senior Director, Energy, IHS Markit
Alex Grant, Head of Business Development Origination and Execution, Equinor ASA
Maria Moræus Hanssen, Chief Executive Officer, DEA Deutsche Erdoel AG
Karl Johnny Hersvik, Chief Executive Officer, Aker BP
Bente Nyland, Director General, Norwegian Petroleum Directorate
Stuart Payne, Director of HR and Supply Chain, UK Oil and Gas Authority
Sam Laidlaw, Chairman, Neptune Energy
Bob Maguire, Managing Director, Carlyle International Energy Partners (CIEP)

Plastics Sustainability: Meeting the challenge 07:30pm - 09:00pm
Dewey Johnson, VP, Research and Analysis, Chemical, IHS Markit
Paul Augustowski, Senior Vice President of Olefins and Polyolefins, Americas, LyondellBasell
Robert Barbieri, Vice President for Global Sustainability, PepsiCo
Anne Womack Kolton, Executive Vice President, Communications, Sustainability and Market Outreach, American Chemistry Council
Mike Witt, Vice President, Plastics Circular Economy, The Dow Chemical Company

The Outlook for the Global Economy: A reversion to trend growth—or worse? 07:30pm - 09:00pm
Nariman Behravesh, IHS Markit, Chief Economist
Kairat Kelimbetov, Governor, Astana International Financial Centre (AIFC)
Antony Phillipson, Her Majesty’s Trade Commissioner (HMTC) for North America, British Consulate General New York
Joel Prakken, Chief US Economist and co-head of US Economics, Macroeconomic Advisers, IHS Markit
Eirik Wærness, Senior Vice President and Chief Economist, and Head of Strategy MPM, Equinor

US Energy Abundance and Geopolitics 07:30pm - 09:00pm
Carlos Pascual, Senior Vice President, IHS Markit
Dr. Fatih Birol, Executive Director, International Energy Agency (IEA)
Jason Bordoff, Professor of Professional Practice and Founding Director, Center on Global Energy Policy Columbia University
Francis R. Fannon, Assistant Secretary for the Bureau of Energy Resources (ENR), US Department of State
Richard G. Newell, President and CEO, Resources for the Future (RFF)
Meghan O’Sullivan, Jeane Kirkpatrick Prof., Practice of International Affairs, Director - Geopolitics of Energy Project, Harvard University’s Kennedy School

Workforce of the Future 07:30pm - 09:00pm
Ronnie West, Chief People Officer, IHS Markit
Tasnim Al Mzaini, Head of Value Chain Optimization and Analytics, Abu Dhabi National Oil Company (ADNOC)
Megan Bloomgren, Vice President of Communications, American Petroleum Institute (API)
Jim Nyquist, Group President Systems and Solutions, Emerson
Dr. Antonio Merlo, George A. Peterkin Professor of Economics and Dean of the School of Social Sciences, Rice University

Tuesday March, 12

07:30am - 08:40am
Strategic Dialogues (Breakfast) (view more+)

National Oil Companies: Repositioning portfolios for growth 07:30am - 08:40am
Nick Sharma, Executive Director, Asia Pacific, Upstream Oil and Gas Insight, IHS Markit
Omar Al Suwaidi, Director, Executive Office, Abu Dhabi National Oil Company (ADNOC)
Azman Aziz, Senior General Manager, Strategy and Commercial, Upstream Business, PETRONAS
Xiansheng Sun, Secretary General, International Energy Forum (IEF)

Carbon Price: How critical for decarbonization? 07:30am - 08:40am
Steven Knell, Director, Energy Wide Perspectives, IHS Markit
Raymond J. Kopp, President, Energy and Climate Program, Resources for the Future
Sarah Ladislaw, Senior Vice President and Director, Energy and National Security Program, Center for Strategic and International Studies (CSIS)
Katie Sullivan, Managing Director, International Emissions Trading Association (IETA)
Bjorn Otto Sverdrup, Senior Vice President, Sustainability, Equinor

Competing for Upstream Investment: Rewriting Africa’s story 07:30am - 08:40am
Daniel Berkove, Senior Associate, Energy, IHS Markit
Timothy Kabba, Director General, Sierra Leone Petroleum Directorate – Office of the President
Andrew Kamau, Principal Secretary, State Department of Petroleum, Ministry of Petroleum and Mining, Kenya
H.E. Gabriel M. Obiang Lima, Equatorial Guinea Minister, Ministry of Mines and Hydrocarbons
Hon. Dr. Mohammed Amin Adam, Deputy Minister of Energy for Petroleum, Ministry of Energy, Ghana

Digitalization: Innovating for lowest costs 07:30am - 08:40am
Pritesh Patel, Executive Director, Capital Costs Analysis Forum, IHS Markit
André Luyckx, Upstream Digital Transformation Manager, ExxonMobil
Karl Johnny Hersvik, Chief Executive Officer, Aker BP
Peter Herweck, EVP, Industrial Automation, Schneider Electric
Latin Energy: Aiming for competitiveness  07:30am - 08:40am
Bob Fryklund, Chief Upstream Strategist, Energy, IHS Markit
Felipe Arbelaez, Regional President, Latin America, BP
Enrique Hidalgo, President, ExxonMobil Exploracion y Produccion Mexico, ExxonMobil

North American Refining: Will it remain an export powerhouse?  07:30am - 08:40am
Kevin Lindemer, Managing Director, Downstream Consulting, Energy, IHS Markit
Keith Chiasson, Executive Vice-President, Downstream, Cenovus
Robert Kreider, Head of Strategic Management and Development Group, North America, Trafigura

Overcoming the constraints: Unlocking Canada’s oil and gas potential  07:30am - 08:40am
Kevin Birn, Vice President, North American Crude Oil Market, IHS Markit
Janet Annesley, Senior Vice President, Corporate Affairs, Husky Energy
Steve Reynish, Executive Vice President, Strategy and Operations Services, Suncor Energy

Realigning the Global Oil Order  07:30am - 08:40am
Bhushan Bahree, Executive Director, Global Oil, IHS Markit
Christof Rühl, Economist, Crystol Energy
Matthew Sagers, Executive Director, Energy, IHS Markit
Vera de Ladoucette, Distinguished Expert in International Relations and the Energy Industry, IHS Markit

Voices of Innovation with Jason Zander: Cloud meets energy
Join this conversation with a leader of one of the world's most successful technology companies on how the cloud is changing the energy system. Interviewed by Atul Arya, SVP and Chief Energy Strategist, IHS Markit.
Atul Arya, Senior Vice President and Chief Energy Strategist, IHS Markit
Jason Zander, Executive Vice President, Microsoft Corporation
Jim Green, GM IT Service Delivery, Chevron Corporation

Welcome and Special Address
Daniel Yergin, Vice Chairman, IHS Markit
William Clay Ford, Jr., Executive Chairman, Ford Motor Company

Agora Pods: Morning Sessions
From Carbon to Cash: New Models for Energy Resource Efficiency  09:00am - 09:30am
Ana Gonzalez Hernandez, Resource Efficiency Consultant and Commercialization Manager, Emerson

Application of Blockchain to Industry  09:00am - 09:30am
Andrew Bruce, Chief Executive Officer, Data Gumbo

Silicon Valley Disruptive Approaches  09:00am - 09:30am
Amit Mehta, Chief Executive, Mobilize
A Knowledge Integration Perspective on Major Capital Projects and Operations 09:30am - 10:00am
Javier Canon, Director of Customer Delivery, MAANA

Going Digital: Managing Data in Oil and Gas 09:30am - 10:00am
Gregory Servos, President and Chief Executive Officer, OvationData

Digitalization in Oil and Gas: case studies 09:30am - 10:00am
Semen Budenny, Head of Department of Digital Technologies in Industry, MIPT Center for Engineering and Technology, MIPT Centre of Engineering and Technology

Deep Dive on Machine Learning for Energy Outcomes 10:00am - 10:30am
Adam McElhinney, Chief of Machine Learning and AI Strategy, Uptake

The Changing Geopolitical Landscape for Minerals and Metals in the Energy Transition 10:00am - 10:30am
Morgan D. Bazilian, Ph.D., Director, Payne Institute and Professor of Public Policy, Colorado School of Mines

What is the OOC Blockchain Consortium? 10:00am - 10:30am
Rebecca Hofmann, US Blockchain Strategy and Innovation, Equinor US

Understanding Unconventional Oil and Gas Productivity: Challenges and opportunities 10:30am - 11:00am
Justin Montgomery, PhD Candidate, Computational Science and Engineering, MIT

Seeq: Advanced Analytics for Oil and Gas 10:30am - 11:00am
Hossein Rokhsare, Partner, Darcy Partners

A Robotic Wellbore Intervention Technology Development Project 11:00am - 11:30am
Henning Hansen, R and D Manager, Aarbakke Innovation AS

The Engine: How a new venture model empowers tough tech startups 11:00am - 11:30am
Reed Stuntevant, General Partner, The Engine

Mobility as an Amenity 11:00am - 11:30am
Aric Ohana, Co-Founder, Envoy Technologies

Data residency perspectives 11:30am - 12:00pm
Bill Vass, Vice President of Technology, Amazon Web Services (AWS)

How to Build a Holistic Cyber Security Approach for your Enterprise 11:30am - 12:00pm
Susan Peterson Sturm, Digital Lead, Energy Industries, ABB

09:00am - 05:30pm
Agora Pods: Afternoon Sessions

Decarbonization vs. Profit: Eliminating the Rivalry Through Exergy 09:00am - 09:30am
Ana Gonzalez Hernandez, Resource Efficiency Consultant and Commercialization Manager, Emerson

Subsea Electrification: The Gateway for Industry 4.0 02:00pm - 02:30pm
Per Erik Holsten, Vice President, Hub BU Manager for North Europe, ABB AS
Katrine Hilmen, Head of Engineering and Technology Studies, IA Energy, ABB

Enabling digital transformation and data sovereignty through the intelligent edge 02:00pm - 02:30pm
Guarang Chandrakant, Principal Program Manager, Azure Stack, Microsoft

Dramatically Increase Recovery with World’s Most Autonomous Boosting System 02:30pm - 03:00pm
Alexander Fuglesang, Founder and CEO, FSubsea AS

 Improving Production Efficiency and Debottlenecking with Filtration Technologies 02:30pm - 03:00pm
Shreya Dave, Co-founder and CEO, Via Separations

Organizational Analytics 02:30pm - 03:00pm
Ben Waber, Chief Executive Officer, Humanyze

Unlocking the Economic Potential of Digital Twins 03:00pm - 03:30pm
Thomas Leurent, Chief Executive Officer, Akselos

AI-aided Digital Technologies for Exploration and Production of Hydrocarbons 03:00pm - 03:30pm
Dmitry Koroteev, Founder, Digital Petroleum and Associate Professor, Skoltech

Unlocking Methane Reductions through Virtual Reality 03:00pm - 03:30pm
Isabel Mogstad, Senior Manager, EDF+Business, Environmental Defense Fund
Erik Horn, Co-Founder and Chief Creative Officer, Fair Worlds

AI-Driven Well Timelines for Well Optimization 03:30pm - 04:00pm
Jeff Dalgleish, Director, Oil Field Digital Transformation, Maana, Inc.

Intelligent Control for a Dynamic World 03:30pm - 04:00pm
Peter Harding, Chief Executive Officer, Kelvin

Beyond hype: Practical Roadmap to Digital Transformation 04:00pm - 04:30pm
Chris Hamlin, Director Operational Certainty Consulting, Emerson

New security systems to enable tomorrow’s innovations 04:00pm - 04:30pm
Duncan Greatwood, Chief Executive Office, Xage Security

Science vs Engineering in Oilfield Practice: A Case study 04:00pm - 04:30pm
Aleksandr Bochkarev, Chief Executive Officer, Phystech Geoservice, LLC

Enabling sub-surface intelligence in the Cloud 04:30pm - 05:00pm
Hussein Shel, Azure Global, Principal Program Manager, Microsoft Corporation

Drones, Analytics and the Future of Utilities 04:30pm - 05:00pm
Michael Chasen, Chief Executive Officer, PrecisionHawk
Dave Culler, Head of Energy, Precision Hawk

Shortening the learning curve for hydraulic fracture simulation 05:00pm - 05:30pm
Garrett Fowler, Vice President of Operations, ResFrac Corporation

09:00am - 11:50am
Lyceum Labs: Morning Labs

Vehicle Electrification - Understanding the Basics 09:00am - 09:50am
Andrew Fulbrook, Executive Director of Powertrain and Compliance Forecasting, IHS Markit

Advanced Manufacturing and Drilling Technology in Industry 4.0 09:00am - 09:50am
C. Fred Higgs III, Professor of Mechanical Engineering, Rice University

Digitalization Deployed, from Advanced Analytics to Artificial Intelligence 10:00am - 10:50am
Ben Bishop, Digital Innovation Specialist, Siemens
Stig Olav Settemsdal, CTO Offshore Solutions, Siemens

Defining Autonomous Operations 10:00am - 10:50am
Guido Jouret, Chief Digital Officer, ABB
Susan Peterson Sturm, Digital Lead, Energy Industries, ABB

Will Retail Fuel Price Populism Freeze Downstream Investment in Mexico and Brazil 11:00am - 11:50am
Tom Kloza, Global Head of Energy Analysis, Oil Price Information Service (OPIS), IHS Markit
Felipe Perez, Consulting Director, Oil Markets, Midstream and Downstream, Energy, IHS Markit

09:15am - 09:40am
Leadership Dialogue
Daniel Yergin, Vice Chairman, IHS Markit
Mike Wirth, Chairman of the Board and Chief Executive Officer, Chevron

09:15am - 10:00am
Agora Studios

Renaissance of Biofuels: Opportunities for scale 09:15am - 10:00am
Gauri Jauhar, Executive Director, Integrated Solutions, Energy Wide Perspectives, IHS Markit
Dr. SSV Ramakumar, Director of Research and Development, Indian Oil Corporation
Dr. Vijay Swarup, Vice President of Research and Development, ExxonMobil Research and Engineering Company

Sea Change: Autonomy, automation, offshore and the ocean 09:15am - 10:00am
James Bellingham, Director, Center for Marine Robotics, Woods Hole Oceanographic Institution
Nicolaus Radford, Chief Technology Officer, Houston Mechatronics
Dr. Patrick Sobalvarro, President and Chief Executive Officer, Veo Robotics
Josh Broussard, Technical Director, Ocean Infinity

09:15am - 10:00am
Voices of Innovation with United States Department of Energy National Labs: New frontiers of research

What will be the most transformative technologies as we look back 20 years from now? Hon. Paul Dabbar, U.S. Department of Energy Under Secretary for Science, will lead a dialogue with the heads of three US National Laboratories on their role in tackling energy’s hardest challenges.

Hon. Paul Dabbar, Under Secretary for Science, United States Department of Energy (DOE)
Brian J. Anderson, Director, National Energy Technology Laboratory (NETL)
Doon Gibbs, Laboratory Director, Brookhaven National Laboratory
Thomas Zacharia, Laboratory Director, Oak Ridge National Laboratory
<table>
<thead>
<tr>
<th>Time</th>
<th>Event Description</th>
<th>Speakers</th>
</tr>
</thead>
<tbody>
<tr>
<td>09:40am - 10:05am</td>
<td>Leadership Dialogue</td>
<td>Daniel Yergin, Vice Chairman, IHS Markit H.E. Suhail Mohamed Al Mazrouei, Minister of Energy and Industry, Ministry of Energy and Industry, UAE</td>
</tr>
<tr>
<td>10:05am - 10:30am</td>
<td>Leadership Dialogue</td>
<td>Daniel Yergin, Vice Chairman, IHS Markit Gary Heminger, Chairman and Chief Executive Officer, Marathon Petroleum Corporation</td>
</tr>
<tr>
<td>10:30am - 10:55am</td>
<td>Leadership Dialogue</td>
<td>Daniel Yergin, Vice Chairman, IHS Markit Jason Zander, Executive Vice President, Microsoft Corporation</td>
</tr>
<tr>
<td>10:30am - 11:15am</td>
<td>Agora Studios</td>
<td>Energy Infrastructure: How vulnerable to cyber attack?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Jeff Wilson, Research Director and Advisor, Cybersecurity Technology, IHS Markit</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Benjamin Bebenness, VP and Global Head, Oil and Gas Business Industry Unit, SAP</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Taher Elgamal, Chief Technology Officer, Security, Salesforce</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Gary Freburger, President Process Automation, Schneider Electric</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Michael Lester, Director - Cybersecurity Strategy, Governance and Architecture, Emerson</td>
</tr>
<tr>
<td></td>
<td>The Quiet ICE Revolution: New tech driving new directions</td>
<td>Fellipe Balieiro, Director of Energy and Mobility, Refining and Marketing, IHS Markit</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Ahmad O. Al-Khowaiter, Chief Technology Officer, Saudi Aramco</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Bill Green, Hoyt C. Hotell Professor in Chemical Engineering, MIT</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Dr. SSV Ramakumar, Director of Research and Development, Indian Oil Corporation</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Michael Buhr, Chief Executive Officer, Filld</td>
</tr>
<tr>
<td>10:30am - 12:30pm</td>
<td>Mapping the energy transition with scenarios--an interactive workshop</td>
<td>Mark Griffith, Senior Research Director, IHS Markit</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Steven Knell, Director, Energy Wide Perspectives, IHS Markit</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Catherine Robinson, Executive Director, IHS Markit</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Richard Vidal, Director, Global Energy Scenarios, IHS Markit</td>
</tr>
<tr>
<td>10:55am - 11:20am</td>
<td>Leadership Dialogue</td>
<td>Roberto Castello Branco, Chief Executive Officer, Petrobras</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Carlos Pascual, Senior Vice President, IHS Markit</td>
</tr>
<tr>
<td>11:35am - 12:35pm</td>
<td>Agora Studios</td>
<td>Collaborative Robots: Robots and humans in the future workplace</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Ian Weightman, Senior Vice President, Technology, IHS Markit</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Roger Barga, General Manager, Robotics and Autonomous Services, Amazon Web Services</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Nicolas De Keijser, Manager, Sales and Marketing, ABB</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Michael Chasen, Chief Executive Officer, PrecisionHawk</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Dave Culler, Head of Energy, Precision Hawk</td>
</tr>
<tr>
<td></td>
<td>Is Data the New Oil?</td>
<td>Carolyn Seto, Director, Upstream Technology and Innovation, IHS Markit</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Colette Cohen, Chief Executive Officer, The Oil and Gas Technology Centre</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Craig Hayman, Chief Executive Officer, AVEVA</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Hussein Shel, Azure Global, Principal Program Manager, Microsoft Corporation</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Kentaro Kawamori, Vice President and Chief Digital Officer, Chesapeake Energy Corporation</td>
</tr>
<tr>
<td></td>
<td></td>
<td>David Mabee, Innovation Manager, ConocoPhillips</td>
</tr>
</tbody>
</table>
11:35am - 12:35pm  
**Strategic Dialogues (view more +)**

**Cars and Oil: Reshaping demand**  11:35am - 12:35pm
- Daniel Evans, Vice President, Global Refining and Marketing Research, IHS Markit
- Ayed S. Al-Qahtani, Director of Research Division, Organization of the Petroleum Exporting Countries (OPEC)
- Liu ChaoQuan, Vice President, CNPC Economics and Technology Research Institute
- Marianne Kah, Adjunct Senior Research Scholar and Advisory Board Member, Columbia University Center on Global Energy Policy

**Company Strategies for the Energy Transition**  11:35am - 12:35pm
- Atul Arya, Senior Vice President and Chief Energy Strategist, IHS Markit
- Tomás García, Executive Managing Director of Exploration and Production, Repsol
- Anuar Taib, Executive Vice President and CEO Upstream, PETRONAS

**Eurasian Upstream and the New World Oil Order**  11:35am - 12:35pm
- Matthew Sagers, Executive Director, Energy, IHS Markit
- Iskaziyev Kurmangazy Oryngaziyevich, Deputy Chairman of the Management Board for Geology and Exploration, JSC “National Company “KazMunayGas”
- Philip Vorobyov, Senior Associate, Brussels Energy Club
- Kuanysh Kudaibergenov, Director, Oil Industry Development Department, Ministry of Energy, Republic of Kazakhstan

**Global Hot Spots and Policy Challenges**  11:35am - 12:35pm
- Carlos Pascual, Senior Vice President, IHS Markit
- Dan Dorner, Head of BEIS-FCO International Energy Unit, Department for Business, Energy and Industrial Strategy, Oil and Gas Council
- Francis R. Fannon, Assistant Secretary for the Bureau of Energy Resources (ENR), US Department of State
- Karen Harbert, President and Chief Executive Officer, Global Energy Institute, US Chamber of Commerce
- Elizabeth Rosenberg, Sr. Fellow and Program Director, Center for a New American Security (CNAS)

**Global Upstream Strategies: Diversification versus specialization**  11:35am - 12:35pm
- Paul Markwell, Vice President, Global Upstream Oil and Gas Insight, IHS Markit
- Gordon Birrell, Chief Operating Officer, Production, Transformation and Carbon, BP
- Katie Jackson, Executive Vice President, Global Strategy and Business Development, Shell
- Maria Moraeus Hanssen, Chief Executive Officer, DEA Deutsche Erdöl AG
- Geraldine Slattery, President Operations Petroleum, BHP

**Oil Markets: Riding the wild roller coaster**  11:35am - 12:35pm
- James Burkhard, Vice President, Oil Markets, Energy and Mobility, IHS Markit
- Helen Currie, Chief Economist, ConocoPhillips
- Spencer Dale, Group Chief Economist, BP p.l.c.
- Ben Luckock, Co-Head of Oil Trading, Trafigura Pte Ltd
- Hon. Linda Capuano, Ph.D., Administrator, U.S. Energy Information Administration

**Retail Fuels Marketing: Back in fashion**  11:35am - 12:35pm
- Denton Cinquegrana, Chief Oil Analyst, OPIS, IHS Markit
- Bob Espey, President and Chief Executive Officer, Parkland Fuel Corporation
- Alex Jensen, SVP Global Retail, BP
- Rob Smith, Director, Refining and Marketing, IHS Markit

**Returns versus Growth: Finance and the challenge for US shale**  11:35am - 12:35pm
- Roger Diwan, Vice President, Financial Services, IHS Markit
- Osmar Abib, Chairman of Global Energy, Credit Suisse
- David Foley, Sr. Managing Director and Chief Executive Officer, Blackstone Energy Partners
- Steve Pattyn, Managing Partner, Yuapon Capital Management
- Matt Portillo, Managing Director, E and P Equity Research, Tudor, Pickering, Holt and Co.
- Nate Walton, Partner, Co-Head of North American Private Equity, Ares

**Sustainability in the Oil and Gas Industry**  11:35am - 12:35pm
- Susan Farrell, Vice President, Energy-Wide Perspectives, IHS Markit
- Mark Brownstein, Senior Vice President, Energy, Environmental Defense Fund
- Steve Thomas, Chairman and CEO, Climate Leadership Council
- Mike Sommers, President and CEO, American Petroleum Institute (API)
- Dr. V.P. Joy, Director General, Directorate General of Hydrocarbons

**The Growing North American Resource Base: How high and how long?**  11:35am - 12:35pm
- Raoul LeBlanc, Vice President, North American Unconventionals, IHS Markit
- Mark G. Papa, Chairman and Chief Executive Officer, Centennial Resource Development, Inc.
- Timothy E. Penny, Global Co-Head of Oil and Gas Investment Banking, Credit Suisse
- Brian Falk, Chief Investment Officer, Mercuria Energy Trading
- Greg Powers, Vice President of Innovation, Halliburton

**The IMO Scramble: How big a disruption?**  11:35am - 12:35pm
- Sandeep Sayal, Vice President, Downstream Energy Research, IHS Markit
Luncheon and Dialogue: New world of rivalries
Carlos Pascual, Senior Vice President, IHS Markit
Daniel Yergin, Vice Chairman, IHS Markit
Joe Kaeser, President and Chief Executive Officer, Siemens AG

What's New at Rice: A conversation
Rice University started its second century as a leading research and education institution. School leaders will share insights on the research agenda ahead, from the future of the workforce to creating and sustaining an innovation ecosystem, ensuring data integrity and privacy in the age of dark web and cyber espionage and more.
Kenneth B. Medlock, Senior Director, Center for Energy Studies, Baker Institute for Public Policy
Reginald DesRoches, Dean, George R. Brown School of Engineering, Rice University
Dr. Antonio Merlo, George A. Peterkin Professor of Economics and Dean of the School of Social Sciences, Rice University
Peter Rossky, Dean, Wiess School of Natural Sciences, Rice University
Brad Burke, Managing Director, Rice Alliance for Technology and Entrepreneurship, Rice University

Voices of Innovation with Andy Karsner: Disrupting the global energy system
Thought leader and leading expert on technology innovation, Andy Karsner talks about how entrepreneurs are transforming the global energy system and how he would design a sustainable energy system. Interviewed by Atul Arya, SVP and Chief Energy Strategist, IHS Markit.
Atul Arya, Senior Vice President and Chief Energy Strategist, IHS Markit
Andy Karsner, Managing Partner, Emerson Collective

Lyceum Labs: Afternoon Labs
C-Suite: What should you be asking about data science? 02:00pm - 02:50pm
Shale Performance: A Look Under the Hood 03:00pm - 03:50pm
Raoul LeBlanc, Vice President, North American Unconventionals, IHS Markit
Crude Oil Quality Trends: Too light and too sweet? 03:00pm - 03:50pm
Ha Nguyen, Director Oil Markets Research, IHS Markit
Premasish Das, Senior Director, Energy, IHS Markit
Stephen Jew, Associate Director, Energy Downstream Research and Consulting group, IHS Markit
China's Future Gas Supply: Competition for a growing market 04:00pm - 04:50pm
Xizhou Zhou, Managing Director, IHS Markit
Anna Galtsova, Research and Analysis Associate Director, IHS Markit
Jenny Yang, Director, China Power, Gas, Coal and Renewables, IHS Markit
Future Transit of Russian Gas Through Ukraine: To the brink—and beyond? 04:00pm - 04:50pm
Philippe Frangules, Vice President, Energy, IHS Markit
Laurent Ruseckas, Executive Director, Gas Power and Renewables, EMEA, IHS Markit
Decarbonization of Liquid Fuel: Are the programs working? 05:00pm - 05:50pm
Blake Eskew, Vice President, Oil Markets, Midstream, Downstream and Chemicals, IHS
Denton Cinquegrana, Chief Oil Analyst, OPIS, IHS Markit
Kevin Lindemer, Managing Director, Downstream Consulting, Energy, IHS Markit
Steven Knell, Director, Energy Wide Perspectives, IHS Markit
The Future of Exploration and Whole Basin Strategies 05:00pm - 05:50pm
Gerald Kepes, Executive Director, Plays and Basins, Upstream Oil and Gas Insight, IHS Markit
Keith King, Senior Advisor, North America Plays and Basins, IHS Markit
Kareemah Mohamed, Principal Research Analyst, IHS Markit

The Future of Mobility: A regulatory perspective
Daniel Yergin, Vice Chairman, IHS Markit
Derek Kan, Under Secretary of Transportation for Policy, United States Department of Transportation

The Future of Mobility: An industry perspective
Daniel Yergin, Vice Chairman, IHS Markit
Ulrich Spiesshofer, President and Chief Executive Officer, ABB Ltd.
02:45pm - 03:30pm  Voices of Innovation with Michael Chasen: Drones, Disruption, and Energy
Pioneering entrepreneur Michael Chasen describes his vision around smart drones and on-demand aerial intelligence, utilizing AI and sophisticated geospatial capabilities, will provide unexpected benefits. Michael will share his insights on innovation as a serial successful entrepreneur, including his prior role as co-founder and CEO of Blackboard, an early leader in global eLearning.

Michael Chasen, Chief Executive Officer, PrecisionHawk

02:45pm - 03:45pm  Agora Studios
Digital Ledgers: Oil and gas supply chain  
Tomich Tillemann, Chairman, Global Blockchain Business Council
Andrew Bruce, Chief Executive Officer, Data Gumbo
Rebecca Hofmann, US Blockchain Strategy and Innovation, Equinor US
John Kingston, FreightWaves Editor at Large; Community Engagement, Blockchain in Transport Alliance, FreightWaves
Manas Satapathy, Managing Director – Accenture Strategy, Energy, Accenture

Models of Innovation: Today and tomorrow  
Nick Lowes, President, Oil and Gas Consulting, Energy, IHS Markit
Barbara Burger, President, Technology Ventures, Chevron
Nicoletta Giadrossi, Member of the Board, IHS Markit
John Gibson, Chairman, Energy Tech, Tudor, Pickering, Holt and Co.
Amit Mehta, Chief Executive, Mobilize
Reed Stuntevant, General Partner, The Engine

03:15pm - 04:00pm  Downstream: Competing through the cycles
The downstream business of refining crude oil and marketing products to end-users has long been a valuable, if occasionally out of fashion, part of the oil company portfolio. Today, the downstream business is attractive to a range of different types of owners. These companies seek out downstream profits from processing new low-cost crude oils, capturing product growth in emerging markets, and integrating further into petrochemical. Still, there is the ever-present concern that increasingly stringent policies aimed at decarbonization and local air quality will affect the downstream pillar of the oil business.

Kurt Barrow, Vice President, Oil Markets, Midstream and Downstream Insights, IHS Markit
Tufan Erginbilgic, Chief Executive, Downstream, BP p.l.c.
Arif Mahmood, Executive Vice President and CEO, Downstream, PETRONAS
Sanjiv Singh, Chairman, Indian Oil Corporation Ltd. (IOCL)

03:15pm - 04:00pm  Future of the Global Upstream
Atul Arya, Senior Vice President and Chief Energy Strategist, IHS Markit
Al Cook, EVP, Global Strategy and Business Development (GSD), Equinor ASA
Daniel Gonzalez, Chief Executive Officer, YPF
Gretchen Watkins, President, Shell Oil Company, Executive Vice President, Shell Upstream Unconventionals, Shell Oil Company
Matt Fox, Executive Vice President and Chief Operating Officer, ConocoPhillips

04:00pm - 04:45pm  Voices of Innovation: H.E. Suhail Al-Mazrouei
Get personal insights into UAE’s journey from a nation rich in oil resources to one that will lead The Middle East into the next technological revolution. Interviewed by Atul Arya, SVP and Chief Energy Strategist, IHS Markit.

H.E. Suhail Mohamed Al Mazrouei, Minister of Energy and Industry, Ministry of Energy and Industry, UAE
Atul Arya, Senior Vice President and Chief Energy Strategist, IHS Markit

04:00pm - 05:00pm  Agora Studios
EV Battery Supply Chain: Scale, geography and recycling  
Henning Wicht, Executive Director Consulting, IHS Markit
Morgan D. Bazilian, Ph.D., Director, Payne Institute and Professor of Public Policy, Colorado School of Mines
Jonas Moberg, Global Head of Corporate Affairs, Trafigura
Marlin Pérez de Solay, CEO and Managing Director, Crocobre Limited
Paul K. Kears, Laboratory Director, Argonne National Laboratory

Transforming the Upstream Business through Digital Twins  
Oscar Abbink, Director Upstream Research Group, IHS Markit
Jim Claunch, Vice President, Business Efficiency, Equinor
John Markus Lervik, Co-Founder and Chief Executive Officer, Cognite AS
Amish Sabharwal, Global Head of Engineering Business, Aveva
04:10pm - 04:55pm  Global Oil Ministerial Dialogue
Policy decisions on oil and gas supply and energy diversification are reshaping oil and gas markets. How are these decisions affecting the price environment, investment incentives, international partnerships, and the pace of innovation and diversification?
Carlos Pascual, Senior Vice President, IHS Markit
Hon. Kanat Bozumbayev, Minister of Energy, Republic of Kazakhstan
Secretary Gustavo Lopetegui, Secretary of Energy, Ministry of Finance, Argentina
Luis Miguel Morelli, President, National Hydrocarbon Agency

04:10pm - 04:55pm  North American Shale: Taking on the world
Shale oil and gas is arguably a “disruptive technology” transforming the oil and gas world, even though it still represents a small slice of the industry. What do companies see in the shale resource? How will shale interact with the global opportunity set? What will it take to deliver success?
Raoul LeBlanc, Vice President, North American Unconventionals, IHS Markit
Mark Gunnin, President, Hunt Oil Company
Doug Suttles, President and CEO, Encana
Lee Tillman, President and CEO, Marathon Oil Corporation
Corey Prologo, Head of Oil Trading North America, Trafigura Trading LLC

05:00pm - 05:50pm  Special Dialogue on Venezuela
Chair: Carlos Pascual, Senior Vice President, IHS Markit
Part I: Interim Government Vision for Venezuela
- Ambassador Carlos Vecchio, Ambassador of the Government of Venezuela to the United States
- Ricardo Hausmann, Director of Harvard’s Center for International Development, Harvard Kennedy School, Professor of the Practice of Economic Development

Part II: Industry and Investment Perspectives
- Luisa Palacios, Chairwoman, CITGO Petroleum Corporation
- Maynard Holt, Chief Executive Officer, Tudor, Pickering, Holt and Co.
- Ashok Belani, Executive Vice President of Technology, Schlumberger Limited

05:00pm - 05:45pm  Agora Studios
Industrial Energy Efficiencies: The path to decarbonization 05:00pm - 05:45pm
Catherine Robinson, Executive Director, IHS Markit
Dr. Pratima Rangarajan, Chief Executive Officer, OGCI Climate Investments
Paolo Bertuzzi, Chief Executive Officer, Turboden - MHI Group
Peter Zornio, Chief Technology Officer, Emerson
Christopher Knittel, George P. Shultz Professor of Applied Economics, MIT

Trading and Risk Management: Blockchain and beyond 05:00pm - 05:45pm
Brad Levy, Senior Vice President, Global Head of Loans at IHS Markit and Chief Executive Officer of MarkitSERV, IHS Markit
Rana Basu, Chief Operating Officer, Ondilco
Dan Berkovitz, Commissioner, U.S. Commodity Futures Trading Commission (CFTC)
Alistair Cross, Chief Operations Officer, Mercuria Energy Group
Lyon Hardgrave, Vice President, Business and Product Development, VAKT Global Ltd.

05:00pm - 05:50pm  Game-changing Technologies for Oil and Gas
The oil and gas industry is witnessing a new era of progress in digital and related technologies that are
transforming operational performance and efficiency and creating renewed opportunity to secure sustainable growth. The industry has a history of developing technical and operational innovations that have forged game-changing growth into new segments such as deep water and shale. This panel will explore the prospects for the next game-changers and what they might look like. Which areas of technological progress offer the most promise to become game-changers for the industry? What form of impact might a game-changer have, for example, in unlocking resources, reducing costs, or changing the nature of work? Would we know a game-changer if we saw one? Could a series of incremental gains over time also constitute a game-changer? Is the industry structured to unlock innovations? Which types of players and partnerships would hold the key?

Paul Markwell, Vice President, Global Upstream Oil and Gas Insight, IHS Markit
Peter Herweck, EVP, Industrial Automation, Schneider Electric
Dr. Vijay Swarup, Vice President of Research and Development, ExxonMobil Research and Engineering Company
Darryl Willis, Vice President - Energy Industry, Microsoft Corporation
John Gibson, Chairman, Energy Tech, Tudor, Pickering, Holt and Co.

06:00pm - 06:30pm  CERAWeek Special Keynote Address
Daniel Yergin, Vice Chairman, IHS Markit
Michael R. Pompeo, Secretary of State, United States of America

06:30pm - 07:30pm  Conference-wide Reception

06:30pm - 07:30pm  Innovation Agora Reception and Open House
An opportunity for the community to visit the Agora with hors d'oeuvres served in the Agora Houses.

07:30pm - 09:00pm  Dinner and Dialogue
Daniel Yergin, Vice Chairman, IHS Markit
Bob Dudley, Group Chief Executive, BP plc

Wednesday March, 13

07:30am - 08:35am  Strategic Dialogues (Breakfast) (view more +)
CCUS for EOR: What is the potential?  07:30am - 08:35am
Atul Arya, Senior Vice President and Chief Energy Strategist, IHS Markit
Prof. Dr. Nasir Darman, Chief Technology Officer, PETRONAS
Charlene Russell, Vice President Low Carbon Strategies, Occidental Petroleum
Yoshiaki Ueda, Chief Technical Officer, JX Nippon Oil and Gas Exploration Corporation
Hon. Steven Winberg, Assistant Secretary for Fossil Energy, United States Department of Energy

European Gas: Competition for markets  07:30am - 08:35am
Laurent Ruseckas, Executive Director, Gas Power and Renewables, EMEA, IHS Markit
Paul Corcoran, Chief Financial Officer, Nord Stream 2 AG
Thomas Earl, Chief Commercial Officer, Venture Global Marketing LLC
Paula Pinho, Head, Energy Policy Coordination Unit, European Commission
Jan Willem van Hoogstraten, Chief Executive Officer, EBN B.V.

LNG: Reaching project sanction through cost management and innovation  07:30am - 08:35am
Robert Ineson, Managing Director, Energy, IHS Markit
Hiroyuki Osaki, President, Oil and Gas Division, Mitsubishi Heavy Industries America (MHIA)
Iain Ross, Chief Executive Officer, Golar LNG Limited
Andrew Walker, Vice President, Strategy and Communication, Cheniere Energy
Marcos Browne, Executive Vice President Gas and Power, YPF

North America Unconventionals: New value equation  07:30am - 08:35am
Raoul LeBlanc, Vice President, North American Unconventionals, IHS Markit
Bob Edwards, Partner, NGP
Bob Gwin, President, Anadarko Petroleum Corporation
Bobby Tudor, Chairman, Tudor, Pickering, Holt and Co.
Tarigh Yusufi, Financial Analyst, Steadfast Capital Management

North American Gas Market: Prospects for 2019  07:30am - 08:35am
Samuel Andrus, Executive Director, Energy, IHS Markit
Renewables and Gas Integration: Is there an efficient frontier? 07:30am - 08:35am
Timothy Gardner, Vice President, Power and Gas Consulting, IHS Markit
Joe M. Kang, President, President, Center for Energy Studies, Baker Institute for Public Policy
Claudia Squeglia, Vice President, Positioning Strategies and Legislative Analysis, ENI
Robert Yeager, President, Power and Water Solutions, Emerson
Sonny Garg, Global Lead, Energy Solutions, Uptake Technologies

South American Gas in Search of Demand 07:30am - 08:35am
Roberto Ferreira da Cunha, Associate Director, Latin America Gas and Power, Energy, IHS Markit
Marcio Felix, Secretary of Oil, Gas and Biofuels, Ministry of Mines and Energy, Brazil

The Rise of Low Carbon Intensity Biofuels? 07:30am - 08:35am
Kevin Lindemer, Managing Director, Downstream Consulting, Energy, IHS Markit
Dan Szezil, Lead Sales Specialist at Envergent Technologies, Honeywell UOP
Lina Hanke, Director, Government Affairs, Enerkem
Cynthia (CJ) Warner, President and CEO, EIG Global Energy Partners
Fernanda Delgado, Research Coordinator, Centro de Estudo de Energia

Special Breakfast: The U.S. Administration’s Policy Goals in Iran 07:30am - 08:35am
Carlos Pascual, Senior Vice President, IHS Markit
Brian Hook, Special Representative for Iran and Senior Policy Advisor to the Secretary of State, United States Department of State

Domestic Gas Pricing in Asia: How to accommodate new supply? 07:30am - 08:35am
Jenny Yang, Director, China Power, Gas, Coal and Renewables, IHS Markit
Gang Chen, Chairman and CEO Assistant, Shanghai Petroleum and Natural Gas Exchange
Kunio Nohata, Member of the Board and Senior Executive Officer, Tokyo Gas
Parulian Sihotang, Deputy of Finance and Monetization, SKK Migas

07:30am - 08:30am  
Energy Innovation Pioneers: Reshaping Upstream Oil and Gas
Digital transformation is reshaping the upstream oil and gas industry in multiple ways—creating new rivalries among energy supplies, companies, and industries; altering technology sourcing and development activities; and recasting the nature of work. Startups play a key role in this next phase of industry transformation. This panel will explore how startups are enabling digitalization to reshape the energy future.

Carolyn Seto, Director, Upstream Technology and Innovation, IHS Markit
Stephane Germain, President and CEO, GHGSat
Matt Ondler, President / CEO, Houston Mechatronics
John van Pol, Chief Executive Officer and Co-Founder, Ingu Solutions

07:30am - 08:30am  
Arab Energy Innovation
Mohsen Almajnouni, Chief Executive Officer, Research Products Development Company (RPDC)
Erass Abo-Hamed, CEO and Co-Founder, H2GO Power
Khalil El Shafei, Chief Executive Officer, Aramco Entrepreneurship Center: Wa’ed
Paddy Padmanathan, Chief Executive Officer and President, ACWA Power International
Dr. Emily Reichert, Chief Executive Officer, Greentown Labs

07:30am - 08:30am  
Voices of Innovation with Lord John Browne and Lance Ugglia: The story of the glass closet
Come hear this visionary industrialist talk about his personal story of coming out of the closet — and how it changed his life and career. Interviewed by Lance Ugglia, Chairman and CEO, IHS Markit.

Lord Browne, Executive Chairman, L1 Energy
Lance Ugglia, Chairman of the Board and Chief Executive Officer, IHS Markit

08:30am - 11:50am  
Lyceum Labs: Morning Labs

New Mobility: Reshaping the City of the Future - an interactive workshop 08:30am - 10:00am
Katherine Hardin, Vice President, IHS Markit
Tom De Vleesschauwer, Vice President, Automotive, IHS Markit
Satellite Imagery Exploitation  09:00am - 09:50am
Sean O'Connor, Principal Research Analyst, IHS Markit

What’s right and wrong with CCS: a political and economic perspective  09:00am - 09:50am
David Victor, Co-Director, Deep Decarbonization Initiative, University of California, San Diego
Ahmed Abdulla, Research Scientist, University of California, San Diego

Key Transformations Driving Development of Cybersecurity Technology  10:00am - 10:50am
Jeff Wilson, Research Director and Advisor, Cybersecurity Technology, IHS Markit

EV Charging Primer  10:00am - 10:50am
Heather Flanagan, Marketing Manager, EV Infrastructure, ABB
Erin Galiger, EV Infrastructure Product Manager, ABB

Robotics in the cloud: The autonomous future of oil and gas  11:00am - 11:50am
Roger Barga, General Manager, Robotics and Autonomous Services, Amazon Web Services

Shale Growth Drivers and Limits  11:00am - 11:50am
Raoul LeBlanc, Vice President, North American Unconventionals, IHS Markit

Book Signing with Lord John Browne  08:30am - 09:15am
Lord Browne, Executive Chairman, L1 Energy

The Energy Company of the Future  08:40am - 09:20am
Energy companies are looking to reinvent themselves to take advantage of fast-changing technologies and the shift toward more clean energy. Innovations offer the prospect to increase the productivity of existing oil, gas, and power activities, and to reduce their environmental impact. New opportunities are emerging more widely across the clean tech space whether in the production and transportation of energy or in the way companies interact with the consumer.
Michael Stoppard, Chief Strategist, Global Gas, Energy; CERAWeek Vice Chairman, IHS Markit
Iain Conn, Chief Executive Officer, Centrica
Tan Sri Wan Zulkiflee, President and Group Chief Executive Officer, PETRONAS

Agora Pods: Morning Sessions  09:00am - 12:00pm
Early detection of methane and GHG emissions  09:00am - 09:30am
Robert Kester, Chief Executive Officer and Co-Founder, Rebellion Photonics

Projecting Energy and Climate for the 21st Century  09:00am - 09:30am
Sergey Paltsev, Deputy Director, MIT Joint Program on the Science and Policy of Global Change, MIT

Accelerating the growth of the PV industry through wafer production efficiency  09:30am - 10:00am
Frank Siebke, CFO, NexWafe

Perovskite PV Solar Cell Development  09:30am - 10:00am
Michael Irwin, Chief Technology Officer, HEE Solar

A New Reality: Augmented, Virtual and Mixed Reality for Energy Applications  09:30am - 10:00am
Ben Bishop, Digital Innovation Specialist, Siemens

Satellite-based greenhouse and air quality monitoring  10:00am - 10:30am
Stephane Germain, President and CEO, GHGSat

System Value of Energy Storage in Low Carbon Grids  10:00am - 10:30am
Dhark Mallapragada, Postdoctoral Associate, MIT Energy Initiative

Long Range Electric Trucks. The cheapest and greenest solution is not enormous batteries and chargers.  10:00am - 10:30am
Asher Bennett, Founder and CEO, Tevva Motors

Houston’s Technology Ecosystem: An update on Station Houston  10:00am - 10:30am
Gabriella Rowe, Chief Executive Officer, Station Houston

Real-time, in-line hydrocarbon analysis for process control and custody transfer  10:30am - 11:00am
Matt Thomas, Chief Executive Officer, JP3

How Being Customer-Centric Is Disrupting Utilities  10:30am - 11:00am
H. Cody Girod, Principal Solution Engineer, Salesforce
Building a CO2 Marketplace at Gigaton Scale  10:30am - 11:00am
Claude Letourneau, President and CEO, Inventys
Electric vehicles in China: Road to where?  11:00am - 11:30am
Valerie Karplus, Assistant Professor, Global Economics and Management Group, Sloan School of Management, MIT
Robotics-as-a-service technology development  11:00am - 11:30am
Matt Ondler, President / CEO, Houston Mechatronics
In-line sensors for pipeline inspection  11:30am - 12:00pm
John van Pol, Chief Executive Officer and Co-Founder, Ingu Solutions
Technology Offerings Toward Decarbonization  11:30am - 12:00pm
Dr. SSV Ramakumar, Director of Research and Development, Indian Oil Corporation
Clarke Valve, an OGCI portfolio company  11:30am - 12:00pm
Kyle Daniels, Director, President and CEO, Clarke Valve

09:00am - 10:00am  Agora Studios
EV Charging: Business Models and Players of the Future  09:00am - 10:00am
Egil Juliussen, Research and Analysis Director, R and A, IHS Markit
Michael Ableson, Vice President of Global Strategy, General Motors Corporation
Sergei Mahnovski, Director, Growth and Innovation, Edison International
Cathy Zoi, Chief Executive Officer, EVgo
Jordan Ramer, Founder and CEO, EV Connect
Bob Stojarovic, EV Charging Infrastructure North America, ABB
Life on the Edge: The Next Computing Revolution  09:00am - 10:00am
Cliff Grossner, Senior Research Director, IHS Markit
Sujit Kumar, President, Agora, a Schlumberger Startup
Casey Coleman, Senior Vice President of Global Government Solutions, Salesforce
Bill Vass, Vice President of Technology, Amazon Web Services (AWS)

09:00am - 09:45am  Voices of Innovation with Lal Karsanbhai: Making digital transformation real
How will digital technologies shape the future? Lal Karsanbhai talks about how Emerson places itself in a global context, and why they have chosen to focus on energy as one of its strategic priorities. Interviewed by Atul Arya, SVP and Chief Energy Strategist, IHS Markit.

Atul Arya, Senior Vice President and Chief Energy Strategist, IHS Markit
Lal Karsanbhai, Executive President, Automation Solutions, Emerson

09:20am - 10:00am  Eastern Mediterranean Gas Renaissance
Offshore gas discoveries in Cyprus, Egypt, and Israel are transforming perspectives for the Eastern Mediterranean. What are the export options, whether by pipeline or LNG? What role will the Eastern Mediterranean come to play in the new global gas map?

Michael Stoppard, Chief Strategist, Global Gas, Energy; CERAWeek Vice Chairman, IHS Markit
Yiorgos Lakkotrypis, Minister of Energy, Commerce and Industry, Republic of Cyprus
HE Minister George Stathakis, Minister of Environment and Energy, Greece
HE Dr. Yuval Steinitz, Minister of Energy, Israel

10:00am - 10:40am  Global Gas Innovators
The next generation of gas projects are harnessing both technological and commercial innovation. Technology advances and new procurement practices are helping to keep costs competitive. Business models are emerging to meet changing buyer and investor requirements.

Shankari Srinivasan, Vice President, Energy, IHS Markit
Mark Gyetvay, Chief Financial Officer and Deputy Chairman of the Management Board, PAO NOVATEK
Charif Souki, Chairman of the Board, Tellurian
Lorenzo Simonelli, Chairman and Chief Executive Officer, Baker Hughes, a GE company (BHGE)

10:30am - 11:15am  Agora Studios
Decarbonization of Power: Which Technologies Will Make a Difference?  10:30am - 11:15am
Philippe Frangules, Vice President, Energy, IHS Markit
Fatima Al Shamsi, Assistant Undersecretary for Electricity and Future Energy, United Arab Emirates Ministry of Energy and Industry
Charles Cameron, Director of Technology, Engineering and Centrica Innovations, Centrica
### 10:30am - 11:15am

**Voices of Innovation with Ray and Hunter Hunt with Dan Yergin: A father and son dialogue**

Daniel Yergin, Vice Chairman, IHS Markit  
Hunter Hunt, Chief Executive Officer, Hunt Consolidated, Inc.  
Ray Hunt, Executive Chairman, Hunt Consolidated, Inc.

### 10:40am - 11:20am

**Future of Global Gas**

New developers and a changing profile among buyers are changing the global gas industry. On the supply side, US LNG exports are set to have a transformative impact on global trading patterns. On the demand side, buyers are looking for more flexible supply and opportunities for new applications.

Simon Blakey, Advisor, Global Gas, IHS Markit  
Robert Pender, Co-CEO, Co-Chairman and Founder, Venture Global LNG  
Michael Smith, Chairman, Chief Executive Officer and Founder, Freeport LNG  
Shri B. C. Tripathi, Chairman and Managing Director, GAIL India Limited

### 11:30am - 12:30pm

**Strategic Dialogues (view more +)**

- **Developing Gas-to-Power and the LNG Value Chain in Asia**  
  Xizhou Zhou, Managing Director, IHS Markit  
  Danielle Guccione, Global Director, Business Development, LNG, Siemens  
  Seng Wai Lee, Director, Policy and Planning Department, EMA  
  Didik Sasongko Widi, President Director and CEO, PT Badak NGL  
  Gaku Takagi, Senior Vice President, Value Chain Business Development, JERA Co.  
  Zhi Xin Chong, Associate Director, IHS Markit

- **Development in the Arctic: Opportunities and challenges**  
  Gautam Sudhakar, Senior Director, Global LNG, IHS Markit  
  Schlumberger Limited  
  Sergey Vakulenko, Head of Strategy and Innovations, Gazprom Neft PJSC  
  Mark Gyetvay, Chief Financial Officer and Deputy Chairman of the Management Board, PAO NOVATEK  
  Nina Koch, Vice President Operation Canada, Equinor

- **The Future of EV Adoption, Investment and Innovation**  
  James Burkhard, Vice President, Oil Markets, Energy and Mobility, IHS Markit  
  Adam Jonas, Managing Director, Morgan Stanley  
  Asaf Nagler, Senior Director, Government Relations, ABB  
  Cathy Zoi, Chief Executive Officer, EVgo  
  Daniel Simmons, Assistant Secretary, Office of Energy Efficiency and Renewable Energy, U.S. Department of Energy

- **Global LNG: Seeking producer and buyer alignment**  
  Terrell Benke, Executive Director, Global Gas and LNG Group, Energy, IHS Markit  
  Jane Liao, Chief Executive Officer, CPC Corporation, Taiwan  
  Hiroki Sato, Senior Executive Vice President, Chief LNG Transaction Officer, JERA Co.  
  Alessandro Della Zoppa, Executive Vice President LNG, Eni

- **How Will LNG Infrastructure Be Financed?**  
  Andy Barrett, Senior Advisor, Global Gas and Power, Energy, IHS Markit  
  Salim G. Samaha, Partner, Global Infrastructure Partners  
  Roberto Simon, Managing Director, Head of Natural Resources and Infrastructure, Americas, Société Générale  
  Lisa Cohen, VP of Finance and Treasurer, Cheniere Energy  
  Alok Sinha, Managing Director and Global Head of Oil and Gas, Global Industries Group, Standard Chartered Bank

- **New Applications for Gas: Marine and road transport**  
  Andres Rojas, Research and Analysis Associate Director, IHS Markit  
  Stephen Cadden, Chief Operating Officer, SEA LNG  
  Dick Brown, Chief Executive Officer, Eagle LNG Partners  
  Zackarie Fortin-Brazeau, Business Development Manager, Avenir LNG  
  Thomas Hardy, Director (Acting), United States Trade and Development Agency

- **North American Gas Infrastructure: Keeping pace with gas production in the Permian?**  
  Matthew Palmer, Research and Analysis Manager, Global Gas, IHS Markit  
  Cynthia Walker, Senior Vice President, Marketing and Midstream, Occidental Petroleum Corporation  
  Dave Tredinnick, Group President, Flow Solutions, Emerson
Tom Martin, President Natural Gas Pipelines Group, Kinder Morgan
Matt Schatzman, President and Chief Executive Officer, NextDecade Corporation

**The Case for Hydrogen in the Energy Transition**  
11:30am - 12:30pm

Shankari Srivivasan, Vice President, Energy, IHS Markit
Simon Blakey, Advisor, Global Gas, IHS Markit
Bill Ettick, Executive Director, CA Fuel Cell Partnership (CaFCP)
Yuri Freedman, Senior Director of Business Development, Southern California Gas Company
Sam French, Business Development Manager, Johnson Matthey

**The New Energy Transition: Opportunities in clean tech?**  
11:30am - 12:30pm

Edurne Zoco, Research and Analysis Director, Solar and Energy Storage, Energy Technology, IHS Markit
Mohamed Firooz, Senior Vice President, Corporate Strategy, PETRONAS
Bashir Dabbousi, Director, Technology Strategy and Planning, Saudi Aramco
Andrew (Drew) Murphy, Senior Vice President, Strategy and Corporate Development, Edison International
Eink Warness, Senior Vice President and Chief Economist, and Head of Strategy MMP, Equinor

**Changing World of LNG Trading and Marketing**  
11:30am - 12:30pm

Leigh Thomas, Director, LNG and Gas, IHS Markit
Andree Stracke, Chief Commercial Officer (Origination), RWE Supply and Trading GmbH
Jonathan Westby, Co-Managing Director EM and T and Global Head of LNG, Centrica
Rajeev Kumar Mathur, Executive Director, Corporate Affairs, Risk Management and OSD to CMD, GAIL India Limited
Fatema Al Nuaimi, Acting Chief Executive Officer, ADNOC LNG, Abu Dhabi National Oil Company
Laurent Vivier, President, Gas, TOTAL S.A.

**India’s Energy Security: Choices in affordability and sustainability**  
11:30am - 12:30pm

Gauri Jauhar, Executive Director, Integrated Solutions, Energy Wide Perspectives, IHS Markit
Dr. M. M. Kutty, Secretary, Ministry of Petroleum and Natural Gas, Government of India
Mike Train, President, Emerson; Chairman, Automation Solutions, Emerson
Kartikeya Singh, Deputy Director and Senior Fellow, Energy and National Security Program, Center for Strategic and International Studies
Sanjiv Singh, Chairman, Indian Oil Corporation Ltd. (IOCL)

**11:30am - 12:00pm**

**Special Address: Collaboration for Energy Innovation: The case for Denmark's green transition**

James Rosenfield, Senior Vice President IHS Markit, CERAWeek Co-Chairman, IHS Markit
Her Royal Highness Crown Princess Mary Elizabeth of Denmark, , Thomas Brostrøm, President, Ørsted North America
Chris Brown, President, North America, Vestas

**11:30am - 12:30pm**

**Agora Studios**

**Storm over Plastics: Innovative technology solutions**  
11:30am - 12:30pm

Dewey Johnson, VP, Research and Analysis, Chemical, IHS Markit
B. Ashok, Chief Executive Officer, Ratnakar Refinery and Petrochemicals Limited
Mircea Dinc, Associate Professor of Chemistry, MIT
Scott M. Gallager, Associate Scientist, Woods Hole Oceanographic Institution
Rachel A. Medl, Fellow in Energy and Environment, Rice University, Baker Institute

**Planes, Trucks and Ships: Reinventing transportation**  
11:30am - 12:30pm

Daniel Evans, Vice President, Global Refining and Marketing Research, IHS Markit
Erin Galiger, EV Infrastructure Product Manager, ABB
Asher Bennett, Founder and CEO, Tevva Motors
Stig Settemsdal, Global Head, Portfolio Management and Innovation, Offshore Solutions, Siemens

**12:00pm - 12:45pm**

**Voices of Innovation with Iain Conn: Shaping the Energy Transition**

Jason Bordoff, Professor of Professional Practice and Founding Director, Center on Global Energy Policy Columbia University
Iain Conn, Chief Executive Officer, Centrica

**12:40pm - 01:50pm**

**Luncheon and Dialogue**

Daniel Yergin, Vice Chairman, IHS Markit
Rick Perry, Secretary of Energy, United States Department of Energy

**12:45pm - 01:30pm**

**What’s New at MIT: A Conversation**

Susan Kish, Agora Curator, IHS Markit
Dr. Robert Armstrong, Director, MIT Energy Initiative, Chevron Professor of Chemical Engineering, MIT
Christoph Reinhart, Professor and Director, Building Technology Program, MIT
Kripa Varanasi, Chairman, Infinite Cooling, Professor, MIT
Karthish Manthiram, Professor in Chemical Engineering, MIT

**12:45pm - 01:30pm**

**Voices of Innovation with Vaclav Smil: Reconciling slow transition and fast climate change**
01:30pm - 02:00pm

Book Signing with Vaclav Smil
Dr. Vaclav Smil, Distinguished Professor Emeritus, University of Manitoba

02:00pm - 05:30pm

Agora Pods: Afternoon Sessions

Energy Storage Systems and Electrified Vehicles  02:00pm - 02:30pm
Simona Onori, Assistant Professor, Energy Resources Engineering, Stanford University

Impact of Digitalization on Emissions  02:00pm - 02:30pm
Brian Forbes, Managing Director – Accenture Consulting, Accenture
Isabel Mogstad, Senior Manager, EDF+Business, Environmental Defense Fund
Sylvain Vaquier, Manager – Accenture Strategy, Energy, Accenture

Investment in Colombia and the new Permanent Allocation of Areas Process (PPAA)  02:00pm - 02:30pm
Luis Miguel Morelli, President, National Hydrocarbon Agency

The Science of Marine Microplastics: what do we know/need to know?  02:30pm - 03:00pm
Scott M. Gallager, Associate Scientist, Woods Hole Oceanographic Institution

Decarbonization - From All Electric Ferries to Offshore Rigs  02:30pm - 03:00pm
Stig Olav Settemsdal, CTO Offshore Solutions, Siemens

Cloud - Virtually Unlimited Compute Power for Infinite Possibilities  02:30pm - 03:00pm
Franz Deimbacher, Worldwide Technical Leader for Energy, Amazon Web Services (AWS)

Maximizing Value from Gas and Coal Plants  03:00pm - 03:30pm
Ted Miller, Energy Industry Director, Uptake

Capturing fugitive methane gas from landfills  03:00pm - 03:30pm
Peter Quigley, Chief Executive Officer/Chairman, Loci Controls

Using digital knowledge to create new opportunities in transport and logistic*  03:00pm - 03:30pm
Almir Alemic, Head of Knowledge Architecture, Maana

The Inexcusable Great Divide  03:30pm - 04:00pm
Tyler Hufstetler, Global Project Manager, Parsable

Democratizing Geothermal Power  03:30pm - 04:00pm
Ammar Alali, Co-Founder, Eden GeoPower

Driving Intelligence to the Edge  03:30pm - 04:00pm
Sujit Kumar, President, Agora, a Schlumberger Startup

Next-generation separation, purification and catalyst technologies  04:00pm - 04:30pm
Patrick Fuller, Director of Engineering, NuMat Technologies

Cost-effective multilateral completions of sidetracks and wells  04:00pm - 04:30pm
Alexander Kashlev, Chief Executive Officer, ADL Completions

How does diversity and inclusion improve innovation?  04:00pm - 04:30pm
Bob Karschner, VP, GM, Wireless, Emerson
Laura Schaefer, VP Sales, Precision Fluid Control | Fluid and Motion Control, Emerson

Demand Response: energy efficiency in the power sector  04:30pm - 05:00pm
Ian Schneider, Research Assistant, Laboratory for Information and Decision Systems, PhD Candidate, MIT

Methane emissions in the New Mexico Permian  04:30pm - 05:00pm
Steven Deiker, Chief Executive Officer, Kairos Aerospace

Open Data Universe in Oil and Gas  04:30pm - 05:00pm
Kadri Umay, Director of Industry Technology Strategy, Microsoft

Autonomous Shipping and the Future of Maritime Transportation  05:00pm - 05:30pm
Mikko Lepistö, Digital Lead, Marine and Ports, ABB

Creating the largest clean technology incubator in the US  05:00pm - 05:30pm
Dr. Emily Reichert, Chief Executive Officer, Greentown Labs

The Surprising AI Future of Renewables  05:00pm - 05:30pm
Atanu Basu, Chief Executive Officer and Founder, Ayata
Wensu Wang, Director of Applied Science, Ayata
<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Speakers/Details</th>
</tr>
</thead>
</table>
| 02:00pm - 02:30pm | Lyceum Labs: Afternoon Labs                                                                     | Mobility: The 5 levels of Automation 02:00pm - 02:50pm
Jeremy Carlson, Principal Analyst and Manager, IHS Markit  
US Shale Play Review 02:00pm - 02:50pm
Cliff Grossner, Senior Research Director, IHS Markit  
How Cloud Delivered AI- and ML-Based Services Are Set to Disrupt the Energy Sector. 03:00pm - 03:50pm
Cliff Grossner, Senior Research Director, IHS Markit  
Assessing LNG Potential in South and Southeast Asia 04:00pm - 04:50pm
Zhi Xin Chong, Associate Director, IHS Markit  
Geena Chatterji, Sr. Research Analyst II, IHS Markit  
Rashika Gupta, Director Power, Gas, Coal and Renewables, IHS Markit  
Vidur Singh, Senior Gas Analyst, South Asia Power, Gas Coal and Renewables – Gurgaon, India, IHS Markit  
Transformation and Disruption in the Ocean Energy Sector 04:00pm - 04:50pm
Leslie-Ann McGee, Assistant Director, Center for Marine Robotics, Woods Hole Oceanographic Institution  
James Bellingham, Director, Center for Marine Robotics, Woods Hole Oceanographic Institution  
Decarbonization vs. Profit: A Workshop in reality 04:30pm - 06:30pm
Chris Hamlin, Director Operational Certainty Consulting, Emerson  
Ana Gonzalez Hernandez, Resource Efficiency Consultant and Commercialization Manager, Emerson  
NGLs and the Global Chemical Market 05:00pm - 05:50pm
Darryl Rogers, Vice President, Midstream Oil and NGL Research and Consulting, Energy, IHS Markit  
Vivek Mehta, Senior Consultant, Midstream Oil and NGLs, IHS Markit  
Steve Lewandowski, Vice President, Global Olefins, IHS Markit  
Outlook for North American Shale Gas 05:00pm - 05:50pm
Matthew Palmer, Research and Analysis Manager, Global Gas, IHS Markit  
Reed Olmstead, Director, North America Plays and Basins, Upstream Oil and Gas Insight, IHS Markit |
| 02:00pm - 02:45pm | Voices of Innovation with David Keith: Exploring new avenues to tackle climate change            | Abul Arya, Senior Vice President and Chief Energy Strategist, IHS Markit  
David W. Keith, Professor of Applied Physics, Professor of Public Policy; Founder, Carbon Engineering, Harvard University |
| 02:00pm - 02:45pm | Special Session on Africa: Foundations for New Investment                                       | Daniel Berkove, Senior Associate, Energy, IHS Markit  
HE Mme Lelenta Hawa Baba Ba, Minister, Ministry of Mines and Petroleum, Mali  
Dr. Maikanti K. Baru, Group Managing Director, Nigerian National Petroleum Corporation (NNPC)  
Immanuel Mulunga, Managing Director, National Petroleum Corporation of Namibia (NAMCOR)  
Ernest Rubondo, Executive Director, Petroleum Authority of Uganda  
Abdirashid Mohamed Ahmed, Minister, Ministry of Petroleum and Mineral Resources, Somalia |
| 02:00pm - 02:45pm | Next Wave of LNG                                                                                | Michael Stoppard, Chief Strategist, Global Gas, Energy; CERAWeek Vice Chairman, IHS Markit  
Andy Calitz, Chief Executive Officer, LNG Canada  
Peter Coleman, CEO and Managing Director, Woodside Energy Ltd  
Philippe Saquet, President, Gas, Renewables and Power and President, Strategy-Innovation, TOTAL  
Shin Hosaka, Deputy Commissioner for Agency for Natural Resources and Energy, Ministry of Economy, Trade and Industry (METI) |
| 02:00pm - 03:00pm | Agora Studios                                                                                   | Andrew Fulbrook, Executive Director of Powertrain and Compliance Forecasting, IHS Markit  
Barney Crockett, Lord Provost of Aberdeen City, Aberdeen City Council  
Bashir Dabbousi, Director, Technology Strategy and Planning, Saudi Aramco  
Bill Elrick, Executive Director, CA Fuel Cell Partnership (CaFCP)  
Ian Weightman, Senior Vice President, Technology, IHS Markit  
Leonardo Dueñas-Osorio, Associate Professor, Civil and Environmental Engineering, Rice University  
Ben Porter, Director of Business Development - Quantum Computing, Microsoft Corporation  
Marco Fiorentino, Distinguished Technologist, Hewlett Packard Enterprises |
| 02:50pm - 03:30pm | Americas Ministerial Dialogue                                                                    |                                                                                                      |
Resource availability, technology, declining costs of renewables, and climate change are driving nations to rethink and diversify energy strategies. Oil and gas producers are seeking to diversify revenue sources. Energy consumers everywhere are seeking cheaper and lower carbon solutions. Learn from ministers at the center of the transition of how they manage policy choices.

Carlos Pascual, Senior Vice President, IHS Markit
Minister Bento Albuquerque, Minister of Mines and Energy, Brazil
Minister María Fernanda Suárez, Minister of Mines and Energy, Colombia
H.E. Rocío Nahle García, Secretary of Energy, Ministry of Energy Mexico
Hon. Amarjeet Sohi, Minister of Natural Resources, Government of Canada

02:50pm - 03:30pm
Methane Emissions: Getting to zero
Fugitive methane emissions offer a practical and quick route to reduce global greenhouse emissions. What are the policies and technologies that can be brought to bear?

Daniel Yergin, Vice Chairman, IHS Markit
Staale Gjervik, President, XTO Energy
Fred Krupp, President, Environmental Defense Fund (EDF)
Bernard Looney, Chief Executive, Upstream, BP plc

03:30pm - 04:30pm
Agora Studios
Financing Innovation Across the Energy System 03:30pm - 04:30pm
Timothy Gardner, Vice President, Power and Gas Consulting, IHS Markit
Rhea Hamilton, Ventures Director, OGCI Climate Investments
Dr. Emily Reichert, Chief Executive Officer, Greentown Labs

Digital Skills and the Workforce 03:30pm - 04:30pm
Susan Kish, Agora Curator, IHS Markit
Tasnim Al Mzaini, Head of Value Chain Optimization and Analytics, Abu Dhabi National Oil Company (ADNOC)
Biswajit Roy, Director (HR and BD) and CEO, Hydrocarbon Sector Skill Council, Oil India Ltd.
Mike Train, President, Emerson; Chairman, Automation Solutions, Emerson
Leah McGowen-Hare, Trailhead Evangelist and Senior Director, Salesforce

03:35pm - 04:15pm
Future of Renewables in the Power Mix
Power generation is critical to the growth prospects of natural gas. But natural gas faces strong competition from competitively priced coal and the declining cost of renewable power. And yet natural gas offers unique benefits to help enable and support the power industry’s shift to a lower carbon future. How will this play out in different markets?

Philippe Frangules, Vice President, Energy, IHS Markit
Chris Brown, President, North America, Vestas
Georgios Papadimitriou, Chief Executive Officer, North America, Enel Green Power
Thomas Brostrøm, President, Ørsted North America
Tim Holt, CEO, Power Generation Services, Siemens Energy

03:35pm - 04:15pm
Pathways to Technology Transformation
Atul Arya, Senior Vice President and Chief Energy Strategist, IHS Markit
Caglayan Arkan, Senior Vice President for Manufacturing and Resources Industry, Microsoft Corporation
Greg Leveille, Chief Technology Officer, ConocoPhillips
Shashi Shanker, Chairman and Managing Director, Oil and Natural Gas Corporation Limited
Peter Terwiesch, President, Industrial Automation Division and Member of the Group Executive Committee, ABB Ltd

04:20pm - 05:00pm
CCUS Strategies and Business Models
Carbon capture, use, and storage is recognized as a vital option in the quest to reduce carbon emissions. The technology exists and is proven, but deployment needs to accelerate. How can policymakers and industry participants work together to provide the necessary incentives to spur activity and gain public trust?

Atul Arya, Senior Vice President and Chief Energy Strategist, IHS Markit
Sally M. Benson, Co-Director of Precourt Institute for Energy, Professor of Energy Resources Engineering, Stanford University
Mark W. Menezes, Under Secretary of Energy, United States Department of Energy
John Mingé, Former Chairman and President, BP America
Dr. Pratima Rangarajan, Chief Executive Officer, OGCI Climate Investments

04:20pm - 05:00pm
Plastics Growth: Opportunities and Risks in Sustainability
Plastics has been one of the world’s great growth stories. Through more than 50 years of
uninterrupted growth, plastics are now one of the foundations of modern life. Everyday items – from eyeglasses and bike helmets and cellphones to shoes – are made more durable and lighter thanks to plastics. The growing demand for plastics, however, has created an unexpected and serious waste problem that now threatens that growth. As much as 8 million metric tons of plastics waste ends up in the oceans every year. As a result, consumers and governments are raising the bar on expectations on plastics, often supporting bans and de-selection initiatives that impact its potential growth. What are the real risks and opportunities the industry faces?

David Witte, Senior Vice President; Division Head, Energy and Chemicals, IHS Markit
Jim Fitterling, Chief Executive Officer, The Dow Chemical Company

04:30pm - 05:15pm

Voices of Innovation with Vijay Swarup: Solving the world's challenges through research
Dr. Robert Armstrong, Director, MIT Energy Initiative, Chevron Professor of Chemical Engineering, MIT
Dr. Vijay Swarup, Vice President of Research and Development, ExxonMobil Research and Engineering Company

04:30pm - 05:30pm

Agora Studios
New Energy Technology Pathways for China  04:30pm - 05:30pm
Xizhou Zhou, Managing Director, IHS Markit
Valerie Karplus, Assistant Professor, Global Economics and Management Group, Sloan School of Management, MIT
Sarah Ladislaw, Senior Vice President and Director, Energy and National Security Program, Center for Strategic and International Studies (CSIS)
David Victor, Co-Director, Deep Decarbonization Initiative, University of California, San Diego

Voice of Mayors: The energy city of the future  04:30pm - 05:30pm
Carlos Pasquali, Senior Vice President, IHS Markit
Barney Crockett, Lord Provost of Aberdeen City, Aberdeen City Council
Christine Sagen Helga, Mayor, City Of Stavanger
Michael Savage, Mayor, Halifax Regional Municipality
Mayor Sylvester Turner, Mayor, City of Houston

05:05pm - 05:45pm

European Gas Transit: A tangled knot
Record flows of pipeline natural gas from Russia to Europe have occurred in 2018. Meanwhile the European Union presses on with completion of the Single Energy Market. The future will see new pipelines come into operation and new commercial terms for some core transit routes. All parties—sellers, importers, and transit routes—will want to establish the new basis for reliable and secure flows of natural gas to continue.

Simon Blakey, Advisor, Global Gas, IHS Markit
Grethe Kristin Moen, President and CEO, Petoro AS
Thilo Wieland, Executive Director, Exploration and Production in Russia, North Africa and South America, Wintershall
Amos Hochstein, SVP, Tellurian
Maria Rita Galli, Executive Vice President Business Development, Snam S.p.A

05:05pm - 05:45pm

How Technology is Creating Business Value
Atul Arya, Senior Vice President and Chief Energy Strategist, IHS Markit
Mike Train, President, Emerson; Chairman, Automation Solutions, Emerson
Simon Mulcahy, Chief Innovation Officer, Salesforce
Bill Vass, Vice President of Technology, Amazon Web Services (AWS)
Ahmed Hashmi, Chief Digital and Technology Officer, Upstream, BP plc.

05:45pm - 06:30pm

Nuclear Fission: New pathways
New studies suggest nuclear is vital to decarbonization. What are the new policies and business models in place to reintroduce nuclear energy as a viable option?

Robert Stoner, Deputy Director for Science and Technology, MIT Energy Initiative
Rita Baranwal, Director, Gateway for Accelerated Innovation in Nuclear (GAIN), Idaho National Laboratory
Professor Jacopo Buongiorno, Professor, Nuclear Science and Engineering; Director, CANES, Massachusetts Institute of Technology
Robert (Bob) Ethier, Vice President, Market Operations, ISO New England
J. Clay Sell, Chief Executive Officer, X-energy

05:50pm - 06:30pm

Building Tomorrow’s North American Infrastructure
Daniel Yergin, Vice Chairman, IHS Markit
David Farr, Chairman and Chief Executive Officer, Emerson
Bernard L. McNamee, Commissioner, Federal Energy Regulatory Commission
Jim Teague, Director and Chief Executive Officer, Enterprise Products Partners L.P.
06:00pm - 06:30pm  Voices of Innovation with Simon Mulcahy: Continuous innovation
Atul Arya, Senior Vice President and Chief Energy Strategist, IHS Markit
Simon Mulcahy, Chief Innovation Officer, Salesforce

06:30pm - 07:30pm  Conference-wide Reception

07:15pm - 09:00pm  Special Dinner: India’s Exploration and Production Opportunities—A paradigm shift
Atul Arya, Senior Vice President and Chief Energy Strategist, IHS Markit
Daniel Yergin, Vice Chairman, IHS Markit
Ranajit Banerjee, Adviser, Strategic Planning and Finance, Directorate General of Hydrocarbons (DGH)
Dr. V.P. Joy, Director General, Directorate General of Hydrocarbons
Dr. M. M. Kutty, Secretary, Ministry of Petroleum and Natural Gas, Government of India

07:30pm - 09:00pm  Dinner and Dialogue: Women in Energy
CERAWeek’s Women in Energy program promotes camaraderie, informal dialogue and networking in support of the growing community of women in energy.

Thursday March, 14

07:30am - 08:30am  Nature Based Solutions
Nature Based Solutions (NBS) is the use of nature for tackling variety of socio-environmental challenges including climate change. NBS may present a short-term opportunity to mitigate emissions and may be able to deliver about a third of GHG reductions required. What are some of these solutions? What is the cost? How are some of the challenges such as verification being addressed?

07:30am - 08:30am  Energy Innovation Pioneers: The Future of Electric Power
7:30 AM Energy Innovation Pioneers: The future of electric power In an environment of technological change and ambitious public policy requirements, the electric power sector has the monumental task of discovering the technologies and business models that achieve society’s goals at the lowest cost to consumers. New innovations, spanning generation and storage to engaging the end consumer, are necessary to meet the challenge. This panel discusses how startups foster innovation and their vision for the future of electric power. Agora Studio

07:30am - 08:45am  Strategic Dialogues (Breakfast) (view more +)
Distributed Energy Resources: New opportunities and challenges at the grid edge
Meg McIntosh, Senior Director, Energy, IHS Markit
Frank DeMaile, President and CEO, ENGIE North America
Mark Hedges, Head of Distributed Power Systems North America, Centrica
Steven Martin, Acting CEO, GE Digital and Chief Digital Officer, GE Power, GE Power
Matthew Croucher, Director of Business Analytics, Enertgy

Grid Interconnectivity and Cities
Wade Shafer, Associate Director, Power, Gas, Coal, and Renewables, IHS Markit
Jay Allardyce, Executive Vice President - Industry, Product and Partnerships, Uptake Technologies
Anders Spjelk, Lead Division Manager Power Grids Division, North America, ABB
Amit Narayan, Founder and CEO, AutoGrid Systems

**Investment Opportunities in a Decarbonized Europe** 07:30am - 08:45am
Coralie Laurencin, Research and Analysis Director, Global Gas, IHS Markit
Kunal Chandra, Vice President, New Energy Businesses, Siemens Power and Gas
Holger Lösch, Deputy Director General, German Industry Association (BDI)
Paula Pinho, Head, Energy Policy Coordination Unit, European Commission
Maxim Timchenko, Chief Executive Officer, DTEK, LLC

**Latin American Power Auctions: Optimizing for sustainability and reliability?** 07:30am - 08:45am
Lisa Pearl, Managing Director, Americas Power, Gas, Coal and Renewables, IHS Markit
Adrián Katzew, Chief Executive Officer, Zuma Energía
Justin DeAngelis, Partner, Denham Capital
Agustin Delgado Martin, Chief Innovation and Sustainability Officer, Iberdrola
Diego Mesa, Vice Minister of Energy, Ministry of Energy and Mines of Colombia

**Offshore Wind: The new frontier** 07:30am - 08:45am
Eduard Sala de Vedruna, Executive Director, Global Power and Renewables, Energy, IHS Markit
Christer Af Geijerstam, President, US Offshore Wind, Equinor
Enrique Alvarez-Uria, Offshore Wind Business Development Director, North America, EDP Renewables
Philippe Kavalyan, Chief Executive Officer, MHI Vestas Offshore Wind

**Positioning Renewables in Asia: Finding the right policy mix** 07:30am - 08:45am
Zhi Xin Chong, Associate Director, IHS Markit
Toshiro Kudama, Senior EVP, Chief Power Development Officer, JERA Co.
Bernard Nee, Deputy Chief Executive, Energy Market Authority of Singapore
Xizhou Zhou, Managing Director, IHS Markit

**Texas: Passing the stress test?** 07:30am - 08:45am
Michael Pickens, Associate Director, Energy, IHS Markit
Sara Graziano, EVP of Corporate Development, Vistra Energy
Jim Greer, Executive Vice President and Chief Operating Officer, Oncor
Bill Magness, President and Chief Executive Officer, Electric Reliability Council of Texas (ERCOT)
Sid Sachdeva, Chief Executive Officer, Innovatts

**Meeting the World’s Growing Appetite for Coal: Future supply sources?** 07:30am - 08:45am
James Stevenson, Senior Director, Global Coal, Energy, IHS Markit
John W. Hanekamp, US Thermal Coal Sourcing Consultant, Carbonairo, LLC
Jack Porco, President and Chief Commercial Officer, Xcoal Energy and Resources
David Lawson, Vice President, Norfolk Southern

---

**08:30am - 10:30am**

**Lyceum Workshop: Blockchain for the Boardroom – An Interactive Workshop for Executives**
Energy leaders will get hands-on experience with a live distributed ledger platform. The Lyceum Workshop will use an energy supply chain example to demonstrate the relationship between human-readable contracts, live data and their implementation in smart contracts on blockchain. You will walk step-by-step through the automated contract execution process.

William Fox, Chief Product Officer, Data Gumbo
Lisa M. Smith, Chief Corporate Development Officer, Data Gumbo

---

**09:00am - 12:00pm**

**Agora Pods: Morning Sessions**

**Customer Rewards for Residential Energy Savings** 09:00am - 09:30am
Matt Duesterberg, Chief Executive Officer, OhmConnect

**E.ON - Solar/Storage case study** 09:00am - 09:30am
Nathanali Esposito, President Solar PV and Storage, NA, E.ON Climate and Renewables North America

**Solar plus storage equals powerful solutions** 09:00am - 09:30am
Nathanali Esposito, President Solar PV and Storage, NA, E.ON Climate and Renewables North America

**Storm Readiness** 09:00am - 09:30am
Morris Kemper, Enterprise Architect, GE Power

**Tidal Turbine Technology** 09:30am - 10:00am
Andrew Scott, Chief Executive Officer, Orbital Marine Power Ltd

**Artificial Intelligence for Smart Energy** 09:30am - 10:00am
Amit Narayan, Founder and CEO, AutoGrid Systems

**Energy Storage in Stacked Concrete Blocks** 10:00am - 10:30am
Merrick Kerr, Chief Commercial Officer, Energy Vault
Catalyzing the sustainable production of fuels and chemicals  10:00am - 10:30am
Thomas Jaramillo, Associate Professor of Chemical Engineering, Senior Fellow, Precourt Institute for Energy, Director, SUNCAT Center, Stanford University

A Bright New Future: The Rise of Hydrogen and Photocatalysis  10:00am - 10:30am
Trevor Best, Chief Executive Officer, Syzygy Plasmonics, a TPH Disruptor Company

Microgrids-as-a-service  10:30am - 11:00am
Thomas McAndrew, President and Chief Executive Officer, Enchanted Rock

Digital Twins  10:30am - 11:00am
Guido Jouret, Chief Digital Officer, ABB

Energy - Web 100+ Affiliates  10:30am - 11:00am
Hervé Touati, Chief Executive Officer, Energy Web Foundation

Exploring the Role of CCUS in a Rapidly Changing Energy System  11:00am - 11:30am
Emre Gençer, Research Scientist, MIT Energy Initiative, MIT

Wind Power: Broaden Your Optionality with Digital  11:00am - 11:30am
Jay Allardyce, Executive Vice President - Industry, Product and Partnerships, Uptake Technologies

Leveraging Machine Learning and Artificial Intelligence to Transform Tomorrow's Digital Utility  11:30am - 12:00pm
Sid Sachdeva, Chief Executive Officer, Innowatts

Distributed Energy Resources: Economics and Distributional Impacts  11:30am - 12:00pm
Scott Burger, PhD Candidate, Research Associate and MITei Energy Fellow, MIT Energy Initiative

Transforming Air Travel  11:30am - 12:00pm
Susan Ying, VP, Global Partnerships, AMPAIRE

Lyceum Labs: Morning Labs
What is TCFD and where is it going?  09:00am - 09:50am
Fiona Wild, Vice President Sustainability and Climate Change, BHP

What is the future of batteries in the power sector?  09:00am - 09:50am
Sam Wilkinson, Associate Director, Solar and Energy Storage Research, IHS Markit

Data, Governance, and Security | The foundations of rapid innovation in the cloud  10:00am - 10:50am
Rohan Mathews, Worldwide Technical Leader, Storage Solutions, Amazon Web Services (AWS)

Fuel Economy and Compliance Forecasting – Current Prognosis  10:00am - 10:50am
Andrew Fulbrook, Executive Director of Powertrain and Compliance Forecasting, IHS Markit

Business Case for Microgrids  11:00am - 11:50am
David Victor, Co-Director, Deep Decarbonization Initiative, University of California, San Diego
Ryan Hanna, Post-doctoral Researcher, University of California, San Diego

Myths and Realities: energy, environment, economy  11:00am - 11:50am
Dr. Vaclav Smil, Distinguished Professor Emeritus, University of Manitoba

State of the North America Power Business
This CEO discussion considers the changing electricity sector business landscape, including trends in consumer demand and the evolving electricity supply portfolio that reflects the evolving state of technology, wholesale market rules, and public policies. Key questions focus on how to align business models, respond to increasing climate change concerns, and reshape electricity infrastructure across the next investment cycle.

Lawrence Makovich, Vice President and Senior Advisor, Energy; CERAWeek Vice Chairman, IHS Markit
Mauricio Gutierrez, Chief Executive Officer, NRG Energy
Curtis A. Morgan, President and Chief Executive Officer, Vistra Energy
Eric E. Silagy, President and Chief Executive Officer, Florida Power and Light Company

Agora Studios
Integrated Transport Systems for the Future City  09:00am - 10:00am
Katherine Hardin, Vice President, IHS Markit
Mohd Najib Mohd, Executive Director, Project Management, Kuala Lumpur City Hall
Aric Ohana, Co-Founder, Envoy Technologies
09:30am - 04:30pm

Agora Pods: Afternoon Sessions

Decarbonization vs. Profit: Eliminating the Rivalry Through Exergy 09:30am - 10:00am
Ana Gonzalez Hernandez, Resource Efficiency Consultant and Commercialization Manager, Emerson

Case Study: Technology Innovation Drives Integrated Asset Analytics 11:00am - 11:30am
CarbonHouse: A new paradigm of global building production 02:00pm - 02:30pm
Mark Goulthorpe, Associate Professor Department of Architecture, MIT

Lessons Learned Developing Sub-Saharan Africa’s First and Fastest Utility-Scale Solar Project 02:00pm - 02:30pm
Chaim Motzen, Founder, Izuba Energy; Co-Founder and former Managing Director, Gigawatt Global

What Can a City Learn from the University of California’s Path to Carbon-Neutrality? 02:30pm - 03:00pm
Wendell Brase, Associate Chancellor - Sustainability, University of California - Irvine

Network Connectivity 02:30pm - 03:00pm
Morris Kemper, Enterprise Architect, GE Power

Recovering Cooling Water Using Electric Fields 03:00pm - 03:30pm
Maher Damak, Infinite Cooling, Co-Founder and Chief Executive Officer
Kripa Varanasi, Chairman, Infinite Cooling, Professor, MIT

Renewables and New Energy Solutions 03:30pm - 04:00pm
Per Christian Honningsvåg, Director WW Power and Utilities Industry, Microsoft Corporation

Creating the largest clean technology incubator in the US 03:30pm - 04:00pm
Dr. Emily Reichert, Chief Executive Officer, Greentown Labs

How improved computing is affecting the future of AI: Applications for energy and mobility 04:00pm - 04:30pm
Hassan Toorabally, Chief Operating Officer, Chief Technology Officer, ArchiTek

09:50am - 10:20am

Leadership Dialogue

Daniel Yergin, Vice Chairman, IHS Markit
Hendrik Gordenker, Executive Chairman, JERA Co. Inc.

10:20am - 11:05am

Gas and Renewables: Partners or Competitors?

Michael Stoppard, Chief Strategist, Global Gas, Energy; CERAWeek Vice Chairman, IHS Markit
Paddy Padmanathan, Chief Executive Officer and President, ACWA Power International
Emrie Thrasher, CEO and Chief Marketing Officer, Xcoal Energy and Resources
Prabhhat Singh, Managing Director and CEO, Petronet LNG Ltd.

10:30am - 11:15am

Agora Studios

The Quest for Better Batteries 10:30am - 11:15am
Sam Wilkinson, Associate Director, Solar and Energy Storage Research, IHS Markit
Khalil Amine, Sr. Materials, GL/Argonne Distinguished Fellow, Argonne National Laboratory
Henrik Fisker, Founder, Chairman and CEO, Fisker
Mateo Jaramillo, CEO and Co-Founder, Form Energy
Elsa Olivetti, Associate Professor of Energy Studies, Department of Materials Science and Engineering, MIT

Urban Resilience in a Changing Climate 10:30am - 11:15am
Susan Farrell, Vice President, Energy-Wide Perspectives, IHS Markit
John Berger, Chief Executive Officer, Sunnova Energy Corporation
Lara Cottingham, Chief Sustainability Officer, City of Houston, Office of Sustainability
Gil Quiniones, President and Chief Executive Officer, New York Power Authority (NYPģ
Naheed Nenshi, Mayor, The City of Calgary
10:30am - 11:15am  
**Voices of Innovation with Dr. Venkat Sumantran: Faster, Smarter, Greener**
Envision a new world of mobility that is connected, heterogeneous, intelligent, and personalized. Come hear from Dr. Venkat Sumantran about how the world is moving from the century of the automobile to the century of mobility. Interviewed by Atul Arya, SVP and Chief Energy Strategist, IHS Markit.

Atul Arya, Senior Vice President and Chief Energy Strategist, IHS Markit  
Dr. V. Sumantran, Chairman, Celeris Technologies

11:15am - 11:45am  
**Book Signing with Dr. Venkat Sumantran**
Join Dr. Venkat Sumantran to receive a signed copy of his book, Faster, Smarter, Greener: The Future of the Car and Urban Mobility.

Dr. V. Sumantran, Chairman, Celeris Technologies

11:30am - 12:15pm  
**Voices of Innovation: Dr. Arun Majumdar : Scaling up energy innovations: promises and pitfalls**
Join an energy expert and Stanford professor and the founding Director of the Advanced Research Projects Agency - Energy (ARPA-E) on what it will take to scale energy innovations and the role of public policy in transforming global energy systems. Interviewed by Atul Arya, SVP and Chief Energy Strategist, IHS Markit.

Atul Arya, Senior Vice President and Chief Energy Strategist, IHS Markit  
Arun Majumdar, Co-Director of Precourt Institute for Energy, Professor of Mechanical Engineering and Photon Science, Stanford University

11:30am - 12:30pm  
**Strategic Dialogues (view more +)**

- **Battery Storage for the Grid: Climbing the growth curve**  
  11:30am - 12:30pm
  
  Sam Huntington, Senior Research Analyst, PGCR, IHS Markit  
  Jim Hughes, CEO and Managing Director, Prisma Energy Capital  
  Roger Kraneburg, Vice President, Energy Strategy and Policy, Everseource Energy  
  Doug Arent, Deputy Associate Laboratory Director, Scientific Computing and Energy Analysis, National Renewable Energy Laboratory  
  Kiran Kumaraswamy, VP Market Applications, Fluence

- **Emerging Economies: Reinventing the power sector in Africa**  
  11:30am - 12:30pm
  
  Andy Barrett, Senior Advisor, Global Gas and Power, Energy, IHS Markit  
  Jonathan Hoffman, Managing Director Business Development, Head of Southern Africa, Globeleq  
  Ricardo Puliti, Senior Director, Energy and Extractive Industries Global Practice, The World Bank  
  Saidu Mohammed, Chief Operating Officer Gas and Power, Nigerian National Petroleum Corporation (NNPC)  
  Anna Shpitsberg, Director, Global Power and Renewables, IHS Markit

- **EV Charging Infrastructure: How will it develop?**  
  11:30am - 12:30pm
  
  Katherine Hardin, Senior Analyst, IHS Markit  
  Alex Gruzen, Chief Executive Officer, WiTricity  
  Vic Shao, Chief Executive Officer, AMPLY Power  
  Katie Sloan, Director of eMobility, Southern California Edison  
  Eric Ernst, President and CEO, Formula E  
  Brendan Jones, Chief Operating Officer, Electrify America

- **Financing Power: Adjusting to the new risk profile**  
  11:30am - 12:30pm
  
  Timothy Gardner, Vice President, Power and Gas Consulting, IHS Markit  
  Jeff Holzschuh, Chairman, Institutional Securities Group, Morgan Stanley  
  Johnathon Kaufman, Co-Head of Power and Renewables Group - Americas, Credit Suisse  
  Steven Winn, Chief Development Officer, JERA Americas  
  Adi Blum, Managing Director, Energy and Power Infrastructure, BlackRock

- **Global Solar: Shifting the focus from cost to value**  
  11:30am - 12:30pm
  
  Francesco d’Avack, Senior Analyst, Global Renewables, IHS Markit  
  John Berger, Chief Executive Officer, Sunnova Energy Corporation  
  Emily Heitman, Vice President, US and Canada, Schneider Electric  
  Nathanabi Esposito, President Solar PV and Storage, NA, E.ON Climate and Renewables North America  
  Francis O’Sullivan, Senior Vice President, Strategy, Lincoln Clean Energy (LCE)

- **Powering South and Southeast Asia’s Growth: Coal, gas, renewables?**  
  11:30am - 12:30pm
  
  Ilke Karayigitoglu, Research and Analysis Director, Marina View, IHS Markit  
  Nick Cron, General Manager, Portfolio Optimization and Marketing, Xcoal Energy and Resources  
  Rashika Gupta, Director Power, Gas, Coal and Renewables, IHS Markit  
  Kian Min Low, Chief Development Officer, JERA Energy Development Asia, JERA Co.  
  Ginanjar Sofyan, President Director, Pertamina Power Indonesia
### Wholesale Power Market Evolution  11:30am - 12:30pm
- **Douglas Giuffre**, Director, Energy, IHS Markit
- **Robert (Bob) Ethier**, Vice President, Market Operations, ISO New England
- **Bill Magness**, President and Chief Executive Officer, Electric Reliability Council of Texas (ERCOT)
- **Andy Ott**, President and Chief Executive Officer, PJM Interconnection
- **Clair J Moeller**, President and Chief Operating Officer, Midcontinent Independent System Operator (MISO)

### Coal’s Capital Challenges: Cost, availability and investment horizons  11:30am - 12:30pm
- **Ted O’Brien**, Capital Markets and Marketing, Xcoal Energy and Resources
- **Jeremy Sussman**, Managing Director, Clarkson’s Platts Securities
- **Jesse Parrish**, Chief Financial Officer, Blackhawk Mining
- **Mark Morey**, Senior Director, IHS Markit

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
</tr>
</thead>
<tbody>
<tr>
<td>11:30am - 12:30pm</td>
<td>Hydrogen: What role in heat and power?  11:30am - 12:30pm</td>
</tr>
<tr>
<td></td>
<td><strong>Catherine Robinson</strong>, Executive Director, IHS Markit</td>
</tr>
<tr>
<td></td>
<td><strong>Kunal Chandra</strong>, Vice President, New Energy Businesses, Siemens Power and Gas</td>
</tr>
<tr>
<td></td>
<td><strong>Didier Holleaux</strong>, Executive Vice President, ENGIE</td>
</tr>
<tr>
<td></td>
<td><strong>Jan Willem van Hoogstraten</strong>, Chief Executive Officer, EBN B.V.</td>
</tr>
<tr>
<td></td>
<td>Carbon Buildings: A scalable market for hydrocarbons  11:30am - 12:30pm</td>
</tr>
<tr>
<td></td>
<td><strong>Dewey Johnson</strong>, VP, Research and Analysis, Chemical, IHS Markit</td>
</tr>
<tr>
<td></td>
<td><strong>Mark Goulthorpe</strong>, Associate Professor Department of Architecture, MIT</td>
</tr>
<tr>
<td></td>
<td><strong>Carl Mesters</strong>, Chief Scientist Chemistry and Catalysis, Shell</td>
</tr>
<tr>
<td></td>
<td><strong>Marc Van Keist</strong>, Program Manager, ARPA-e Research Inc</td>
</tr>
<tr>
<td></td>
<td><strong>Matteo Pasquali</strong>, Professor, Chemistry, Materials Science and NanoEngineering</td>
</tr>
<tr>
<td></td>
<td>Department Chair, Chemistry, Rice University</td>
</tr>
<tr>
<td></td>
<td><strong>Michael Lepech</strong>, Senior Fellow, Stanford Woods Institute for the Environment, Associate Professor, Civil and Environmental Engineering, Stanford University</td>
</tr>
</tbody>
</table>

### 12:45pm - 02:00pm  Luncheon and Dialogue
- **Daniel Yergin**, Vice Chairman, IHS Markit
- **Neil Chatterjee**, Chairman, Federal Energy Regulatory Commission (FERC)

### 12:45pm - 01:30pm  Voices of Innovation with Henrik Fisker: Designing the next car, from the inside out
- Henrik Fisker's designs have been synonymous with creativity, innovation and entrepreneurship. Today, Fisker is designing and developing a fully connected electric car with autonomous driving features, longer range and lower cost batteries, set to be the "spiritual successor" to the Fisker Karma luxury electric car.

### 12:45pm - 01:30pm  What's New at Stanford: A Conversation
- Stanford is recognized as a leader in technology and engineering, and its location in the heart of Silicon Valley has solidified its position as being at the forefront of that ecosystem. Hear from Stanford leaders on their agenda for energy technology, sustainability, digitalization and policy.

### 02:00pm - 03:00pm  Blockchain and the Power Consumer: Myth or reality?  02:00pm - 03:00pm
- **Eduard Sala de Vedruna**, Executive Director, Global Power and Renewables, Energy, IHS Markit
- **Hervé Touati**, Chief Executive Officer, Energy Web Foundation
- **Ben Bishop**, Digital Innovation Specialist, Siemens
- **Sam Salisbury**, Centrica Innovations Director – Labs, Centrica
- **Rich Meszaros**, Managing Director – Accenture Digital, Accenture

### Powering the Cities of the Future  02:00pm - 03:00pm
- **Roger Kranenburg**, Vice President, Energy Strategy and Policy, Eversource Energy
- **Steven Koonin**, University Professor, New York University
- **Naheed Nenshi**, Mayor, The City of Calgary
- **Barbara Humpton**, CEO, Siemens US
02:00pm - 02:45pm  
**Voices of Innovation with Eric Ernst: ABB Formula-E driving future EV technology**

Eric Ernst has to ensure that the Formula E championship series remains at the forefront of innovation in motorsport. How does that translate to innovation for the next generation of passenger cars or batteries? Hear an inside take from Eric Ernst, Head of Technology at Formula E.

Ian Weightman, Senior Vice President, Technology, IHS Markit
Eric Ernst, Head of Technology, Formula E

02:10pm - 02:55pm  
**Deep Decarbonization: What does it mean?**

Atul Arya, Senior Vice President and Chief Energy Strategist, IHS Markit
Didier Holleaux, Executive Vice President, ENGIE
Artur Runge-Metzger, Director, Directorate General for Climate Action, European Commission, EU
Dr. Vaclav Smil, Distinguished Professor Emeritus, University of Manitoba
David Victor, Co-Director, Deep Decarbonization Initiative, University of California, San Diego

02:55pm - 03:40pm  
**New Frontiers for Power: Serving the customer of the future**

This CEO discussion focuses on the current and future electricity customer experience and the intersection of changing consumer preferences and emerging technological innovations. Key questions focus on new ways to analyze consumer segments, apply software and digital technologies, manage green energy offerings, and anticipate the impact of electrification trends.

Lawrence Makovich, Vice President and Senior Advisor, Energy; CERAWeek Vice Chairman, IHS Markit
Anne Parmaggiore, Senior Executive Vice President and CEO of Exelon Utilities, Exelon Corporation
Scott Prochazka, President and Chief Executive Officer, CenterPoint Energy
Rolf Gibbels, Head of Worldwide Business Development, Power and Utilities Industry, Amazon Web Services (AWS)

03:00pm - 03:50pm  
**Lyceum Labs: Afternoon Labs**

**An Ethical Crisis in Computing?** 03:00pm - 03:50pm
Moshe Vardi, Director, Ken Kennedy Institute for Information Technology (K2I), Rice University

**Direct Air Capture + Cheap Solar - Carbon-neutral Hydrocarbon Fuels** 03:00pm - 03:50pm

03:30pm - 04:15pm  
**Voices of Innovation with Ganesh Bell: Real impact of artificial intelligence on power**

How can companies move beyond the buzzwords of technology, beyond the hype curve of disruption, into the real areas of impact around growth and efficiency? Hear insights from Ganesh Bell, President of Uptake, an industrial artificial intelligence and software leader.

Ganesh Bell, President, Uptake
Nate Connors, CERAWeek Program Manager, IHS Markit
Roger Kranenburg, Vice President, Energy Strategy and Policy, Eversource Energy

03:30pm - 04:30pm  
**Power: Realizing value from digital transformation**

The power sector is experiencing a confluence of major technological shifts: growing penetration of renewables; use of digital technologies to help predict, manage, and control complex power networks; and increasing concerns for security of power networks from cyber-attacks. How will the power sector navigate through these changes while continuing to meet demands of customers? How are new entrants disrupting the sector? What will be the role of regulation in the face of fast changing digital technologies?

Mark Griffith, Senior Research Director, IHS Markit
Larry Cochrane, Managing Director and CTO, Azure Global Energy Industry, Microsoft Corporation
Sonny Garg, Global Lead, Energy Solutions, Uptake Technologies
Robert Yeager, President, Power and Water Solutions, Emerson
Laiq Ahmad, Chief Technology Officer, GE Power Digital

04:00pm - 04:40pm  
**Electrifying Transportation: How far, how fast?**

Shifting transportation from oil to electricity is critical for curbing climate change. What scope and scale are needed to meet climate objectives? Is the electric grid ready for the transition? How can the consumer experience be enhanced? What are viable pathways for infrastructure development? Power utility and technology leaders will discuss hands-on experience and plans in electrifying transportation, including passenger cars, heavy trucks, fleet vehicles, port operations, and enabling infrastructure.

Jone-Lin Wang, Vice President, Power and Renewables, IHS Markit
Pedro Pizarro, President and CEO, Edison International
Patti Poppe, President and Chief Executive Officer, CMS Energy
<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Panelists</th>
</tr>
</thead>
</table>
| 04:00pm - 04:40pm | European Energy Security Dialogue                                    | Carlos Pascual, Senior Vice President, IHS Markit  
Emily Haber, German Ambassador to the United States, German Embassy Washington  
Dan Brouillette, Deputy Secretary of Energy, United States Department of Energy  
Tomasz Dabrowski, Under Secretary of Energy of the Republic of Poland, Secretary of Energy |
| 04:40pm - 05:20pm | Digital Transformation and the Future of Power                       | Jone-Lin Wang, Vice President, Power and Renewables, IHS Markit  
Ganesh Bell, President, Uptake  
Paul Browning, President and CEO, Mitsubishi Hitachi Power Systems Americas (MHPSA)  
Gil Quiniones, President and Chief Executive Officer, New York Power Authority (NYPA)  
Agustín Delgado Martín, Chief Innovation and Sustainability Officer, Iberdrola |
| 04:40pm - 05:20pm | Coal’s Grand Challenges and Opportunities                           | Jim Thompson, Senior Director, Coal, Energy, IHS Markit  
Howard Gatiss, Chief Executive Officer, CMC Coal Marketing Company  
Glenn Kellow, President and Chief Executive Officer, Peabody  
Garold Spindler, Chief Executive Officer, Coronado Global Resources  
George Bethelsen, Chief Executive Officer, Corsa Coal |
| 05:30pm - 06:05pm | Special Policy and Leadership Dialogue                              | Daniel Yergin, Vice Chairman, IHS Markit  
John Hickenlooper, Former Governor, State of Colorado |
| 06:10pm - 06:40pm | Expert Dialogues (view more +)                                       | Samuel Andrus, Executive Director, Energy, IHS Markit  
Roger Diwan, Vice President, Financial Services, IHS Markit  
James Stevenson, Senior Director, Global Coal, Energy, IHS Markit  
Gautam Sudhakar, Senior Director, Global LNG, IHS Markit  
Charles Neve, Vice President of Production, PointLogic Energy, OPIS by IHS Markit |
| 06:10pm - 06:40pm | Outlook for Global Fuels in 2019                                   | Samuel Andrus, Executive Director, Energy, IHS Markit  
Roger Diwan, Vice President, Financial Services, IHS Markit  
James Stevenson, Senior Director, Global Coal, Energy, IHS Markit  
Gautam Sudhakar, Senior Director, Global LNG, IHS Markit  
Charles Neve, Vice President of Production, PointLogic Energy, OPIS by IHS Markit |
| 06:10pm - 06:40pm | Reducing CO2 in North American Power: Emerging technologies         | Mark Griffith, Senior Research Director, IHS Markit  
Alex Klaessig, Director, Power and Renewables, IHS Markit  
Patrick Luckow, Associate Director, IHS Markit  
Wade Shafer, Associate Director, Power, Gas, Coal, and Renewables, IHS Markit |
| 06:10pm - 06:40pm | Solar and Storage: Exploring cost trends and business models        | Edurne Zoco, Research and Analysis Director, Solar and Energy Storage, Energy Technology, IHS Markit  
Francesco d’Avack, Senior Analyst, Global Renewables, IHS Markit  
Sam Huntington, Senior Research Analyst, P6CR, IHS Markit  
Sam Wilkinson, Associate Director, Solar and Energy Storage Research, IHS Markit |
| 06:10pm - 06:40pm | Why Power Costs Vary Globally: Technologies and fuels               | Xizhou Zhou, Managing Director, IHS Markit  
Rafael McDonald, Director, Global Gas and Global LNG, IHS Markit  
Anna Shpitsberg, Director, Global Power and Renewables, IHS Markit  
Isabella Ni, Senior Analyst, IHS Markit  
Emanuel Simon, Associate Director, IHS Energy, IHS Markit |
| 06:30pm - 07:30pm | Conference-wide Reception                                            | Daniel Yergin, Vice Chairman, IHS Markit  
General (Ret) Keith Alexander, Founder, Chairman and Co-CEO, IronNet Cybersecurity  
Taher Elgamal, Chief Technology Officer, Security, Salesforce |
| 07:30pm - 09:00pm | New World of Cyber Rivalries: Securing the Future                  | Daniel Yergin, Vice Chairman, IHS Markit  
General (Ret) Keith Alexander, Founder, Chairman and Co-CEO, IronNet Cybersecurity  
Taher Elgamal, Chief Technology Officer, Security, Salesforce |
Friday March, 15

07:30am - 08:45am  CERAWeek 2019: What lies ahead?
Atul Arya, Senior Vice President and Chief Energy Strategist, IHS Markit
James Burkhard, Vice President, Oil Markets, Energy and Mobility, IHS Markit
Susan Farrell, Vice President, Energy-Wide Perspectives, IHS Markit
Raoul LeBlanc, Vice President, North American Unconventionals, IHS Markit
Shankari Srinivasan, Vice President, Energy, IHS Markit
Jone-Lin Wang, Vice President, Power and Renewables, IHS Markit

08:45am - 09:10am  Special Dialogue
Daniel Yergin, Vice Chairman, IHS Markit
Governor Michael J. Dunleavy, Governor, Alaska

09:30am - 10:00am  What's Ahead in Washington?
Daniel Yergin, Vice Chairman, IHS Markit
Hon. John Cornyn, United States Senator for Texas, U.S. Senate

10:00am - 11:00am  Competitiveness, Trade and the Future of Global Markets
Carlos Pascual, Senior Vice President, IHS Markit
Makan Delrahim, Assistant Attorney General, U.S. Department of Justice, Antitrust Division
Nicholas N. Eberstadt, Henry Wendt Chair in Political Economy, American Enterprise Institute
Christof Rühl, Economist, Crystol Energy
Ambassador Susan C. Schwab, Former U.S. Trade Representative, Professor at the University of Maryland and Strategic Advisor on International Trade at Mayer Brown

11:15am - 11:45am  Creating Resilient Cities for the Future
Cities are playing prominent and profound roles in changes underway in energy and mobility. They are focal points of innovation—both technologically and for policy. We will discuss how city leaders are shaping the future landscape for how people move around cities—and what powers them.
Daniel Yergin, Vice Chairman, IHS Markit
Mayor Sylvester Turner, Mayor, City of Houston

11:45am - 12:45pm  Energizing Energy Innovation: The long view
Carlos Pascual, Senior Vice President, IHS Markit
Dr. Robert Armstrong, Director, MIT Energy Initiative, Chevron Professor of Chemical Engineering, MIT
Jim Goldinger, Managing Director, ClearSky Power and Technology Fund
Steven Koonin, University Professor, New York University
Connor Prochaska, Chief Commercialization Officer and Director, Office of Technology Transitions, U.S. Department of Energy
Dr. Vijay Swarup, Vice President of Research and Development, ExxonMobil Research and Engineering Company

12:45pm - 01:00pm  Concluding Thoughts
Daniel Yergin, Vice Chairman, IHS Markit
James Rosenfield, Senior Vice President IHS Markit, CERAWeek Co-Chairman, IHS Markit

01:00pm - 01:45pm  Networking Lunch