

Monday March 6

OPIS Supply & Transportation Summit: Full agenda

7:30am - 11:45am

OPIS Supply & Transportation Summit Agenda7:30am **Continental breakfast**8:00am **Welcome and opening remarks**8:15am **What the price action tells us? An exclusive technical forecast for oil prices in 2017 and beyond**

This year may well be a trader's market in energy, currencies, equities, and even geo-politics where seasonal patterns could play a more pivotal role than usual. **Walter Zimmerman, Chief Technical Analyst, United-ICAP**, will detail why 2017 may deliver an environment where the petroleum complex searches for the upper edge of a wide swinging, multiyear trading range and suggest what previous years might be templates for the 2017 action. He'll comment on the unprecedented volume and open interest that makes it difficult to differentiate from clear signal and cacophonous noise.

9:00am **Energy trading challenges and opportunities**

Lots of companies exited the energy trading picture a few years ago, but others have expanded and prospered. Hartree Partners has found ways to distinguish between the signal and the noise in paper and physical trading for crude oil, refined products, and even gas liquids. **Jason Lemme, Managing Director, Hartree Partners**, will give attendees some insight into how individual traders and trading houses can maintain the necessary discipline in wildly volatile markets. He'll look at how the increase in global financial participation has and will impact futures and options' action, as well as what might lie in store for markets that now often see liquidity stacked in the near months.

9:45am Break

10:00am **The RFS outlook under a new administration**

Twice this decade, **Andy Lipow, President, Lipow Oil Associates**, has accurately predicted RIN spikes that have gone on to be known as "RINsanity" in the fuels' market. Perhaps no topic is more controversial in North American markets, thanks to the volatile prices for ethanol and biodiesel RINs, and the impact those price movements have for refiners, producers, and marketers. Now, there's even serious talk about moving the point of compliance to the terminal, but advocates and opponents of that action have barely thought about the consequences. Mr. Lipow will give an exclusive forecast as to what might happen to RINs' trading should EPA radically change or tweak policies, and elaborate on how refiners can stay ahead of an unpredictable EPA under President Trump.

10:45am **Master limited partnerships: The new and improved future?**

After a short hiatus, it now seems certain that Master Limited Partnerships (MLPs) have a bright future as the Trump administration puts US infrastructure, particularly in the energy sector, back on the front burner. But a robust build-out or restructuring of new pipelines, storage facilities, and other elements of the oil, gas, and renewables' segments is likely to coincide with a major overhaul of tax laws. **Tim Fenn, Partner, Latham & Watkins**, will take a look at the next stage in evolution for MLPs, and forecast what the landscape might look like for petroleum logistics. He'll detail where consolidation makes sense and where shifting back to a normal corporate structure might be a better choice.

11:30am **Q&A and closing remarks**

11:45am **CERAWeek luncheon, sessions, and reception**

7:30pm **OPIS Supply and Transportation Summit—Networking dinner**

Open to all attendees.

CERAWeek Welcome and Luncheon Dialogue

12:00pm - 1:20pm

Building tomorrow's infrastructure

- **Daniel Yergin**, Vice Chairman, IHS Markit (Chair), Chairman, CERAWeek
- **Al Monaco**, President & CEO, Enbridge
- **Hon. Daniel Sullivan**, United States Senator, Alaska

Break

1:20pm - 1:35pm

Plenary

1:35pm - 2:05pm

LIVE: Ministerial address

- [Watch now](#)
- **Daniel Yergin**, Vice Chairman, IHS Markit (Chair), Chairman, CERAWeek
- **HE Alexander Novak**, Minister of Energy, Ministry of Energy of the Russian Federation

Plenary

2:10pm - 2:40pm

LIVE: Global oil dialogue

- [Watch now](#)
- **Daniel Yergin**, Vice Chairman, IHS Markit (Chair), Chairman, CERAWeek
- **Darren Woods**, Chairman & CEO, ExxonMobil

Plenary

2:40pm - 3:20pm

Leadership dialogue

- [Watch now](#)
- **Daniel Yergin**, Vice Chairman, IHS Markit (Chair), Chairman, CERAWeek
- **Pedro Parente**, President, Petrobras
- **Eldar Sætre**, Chief Executive Officer, Statoil

Plenary

3:20pm - 3:45pm

Leadership dialogue

- **Daniel Yergin**, Vice Chairman, IHS Markit (Chair), Chairman, CERAWEEK
- **HE Sultan Ahmed Al Jaber**, Minister of State in the United Arab Emirates, CEO, Abu Dhabi National Oil Company (ADNOC)

Agora Studio

3:45pm - 4:45pm

⚙️ Models of innovation: Strategies for growth

As demands for energy technology expand and evolve, so too are the means by which energy producers are seeking to meet those needs. Recent developments are prompting companies to take a broader portfolio approach to technology development—shifting from a largely internal focus and toward more open forms of innovation.

- **Paul Markwell**, Vice President, Energy (Chair), IHS Markit
- **Lak Ananth**, Managing Partner, next47, Siemens
- **Guido Jouret**, Chief Digital Officer, ABB Group
- **Cory Steffek**, Managing Director, North America, Aramco Energy Ventures

Break

3:45pm - 4:00pm

Plenary

4:00pm - 4:50pm

Investing in an uncertain energy future: How to play the cycle

- **Roger Diwan**, Vice President, Financial Services (Chair), IHS Markit
- **Osmar Abib, Jr.**, Managing Director, Global Head of Oil & Gas, Credit Suisse
- **Keisuke Kuroki**, President, JOGMEC
- **Robert Lawler**, President, CEO & Director, Chesapeake Energy Corporation
- **Marcel van Poecke**, Managing Director & Head of Energy Partnership, Carlyle International Energy Partners (CIEP)

Plenary

4:50pm - 5:40pm

Adapting to the new energy era

- **Daniel Yergin**, Vice Chairman, IHS Markit (Chair), Chairman, CERAWEEK
- **Ashok Belani**, Executive Vice President Technology, Schlumberger Limited
- **John Hess**, Chief Executive Officer, Hess Corporation
- **Miguel Gutiérrez**, Chairman, YPF S.A.

Plenary

5:40pm - 6:30pm

The new equation for energy and the environment

- **Carlos Pascual**, Senior Vice President (Chair), IHS Markit

- **Patricia Espinosa**, Executive Secretary, United Nations Framework Convention on Climate Change (UNFCCC)
- **Hon. Rachel Notley**, Premier of Alberta, Government of Alberta
- **Hon. Maroš Šefcovic**, VP of the European Commission, Energy Union

CERAWeek Welcome Reception

6:30pm - 7:30pm

Conference-wide Welcome Reception

Sponsored by the Ministry of Petroleum & Natural Gas, Government of India

Ministry of Petroleum & Natural Gas
Government of India

Concurrent Dinners

7:30pm - 9:30pm

India's new hydrocarbon exploration and licensing policy—A prelude

Ministry of Petroleum & Natural Gas
Government of India

This dinner is open to media.

- **Atul Arya**, Senior Vice President and Chief Energy Strategist (Chair), IHS Markit
- **HE Dharmendra Pradhan**, Minister of State - Independent Charge, Ministry of Petroleum & Natural Gas, India
- **Atanu Chakraborty**, Director General, Directorate General of Hydrocarbons, Ministry of Petroleum & Natural Gas, India
- **Daniel Yergin**, Vice Chairman, IHS Markit, Chairman, CERAWeek

OPIS Supply & Transportation Dinner

Open to all attendees, excluding media.

- **Tom Kloza**, Global Head of Energy Analysis, Oil Price Information Service (OPIS) (Chair), IHS Markit

New eras for sustainability?

The world once looked to developed economies to chart a path to global sustainability. In 2017 that path looks more complex, with contribution levels determined nationally by emerging and developed economies; new leaders and policies elected in 2016 and 2017; and an increasingly active business community of energy consumers, producers, and financial players. Do these changes put the goal of sustainability at risk? Will these multiple new eras of sustainability bring faster and more robust change?

This session is closed to all media.

- **Antonia Bullard**, Vice President, Energy (Chair), IHS Markit
- **Marcene Broadwater**, Global Head, Strategy and Business Development, International Finance Corporation
- **Hon. Maroš Šefcovic**, VP of the European Commission, Energy Union
- **David Victor**, Professor; Co-director, Laboratory on International Law and Regulation, UC San Diego

Resilience and cybersecurity: Should we be worried?

Ensuring resilience of energy infrastructure is a growing strategic and policy priority for the energy industry and governments. Threats to critical infrastructure are on the rise, ranging from cyber to physical attacks. How resilient is the current energy infrastructure? What are the threats—and opportunities—of the rapid adoption of connected technologies and artificial intelligence? What initiatives and practices by the energy industry are being developed to safeguard infrastructure and ensure resilience?

This session is closed to all media.

- **Tate Nurkin**, Senior Director, Thought Leadership, Aerospace, Defense, and Security (AD&S) (Chair), IHS Markit
- **Tom Atkin**, Former Assistant Secretary of Defense for Homeland Defense and Global Security, The Atkin Group
- **Thomas Fanning**, Chairman, President & Chief Executive Officer, Southern Company
- **Vimal Kapur**, President, Honeywell Process Solutions

Technological innovation in energy sector—Evolution or revolution?

Global transitions in the energy sector usually take decades, with fossil fuels continuing to dominate the energy mix. The recent pace of technological change has surprised the industry—from unconventional resources to the rapid growth of solar PV. Technological innovation will be key to decarbonizing the global energy supply while also helping the energy industry remain profitable and competitive. This session will ask where will the next surprise innovations come from?



This session is closed to all media.

- **Robert Armstrong**, Director, MIT Energy Initiative, Chevron Professor of Chemical Engineering (Chair), MIT
- **Ashok Belani**, Executive Vice President Technology, Schlumberger Limited
- **Linda Capuano**, Energy Technology, Baker Institute Center for Energy Studies, Rice University
- **Yuri Sebregts**, EVP Innovation, Research and Development & Chief Technology Officer, Shell
- **Peter Zornio**, Chief Strategic Officer, Emerson

The global economic outlook: Pro-growth populism or protectionist populism

The political earthquakes of 2016 have upended conventional thinking about the global economy, while ironically brightening the outlook. With the expectation that the Trump administration will enact sizable fiscal stimulus, optimism has increased about US and global growth with recent improvements in the US stock indexes, interest rates, and US dollar. While IHS Markit believes that the balance of these trends will be moderately positive for global growth, political and policy uncertainties have also increased.

This session is closed to all media.

- **Jerre Stead**, Chairman & CEO (Chair), IHS Markit
- **Nariman Behraves**, Chief Economist, IHS Markit
- **Michael Klein**, Managing Partner, M. Klein and Company
- **Dambisa Moyo**, Global Economist, Author & Board Member, Barclays, Barrick Gold, Chevron, Seagate Technology
- **Christof Rühl**, Global Head of Research, EFD, Office of the Managing Director, Abu Dhabi Investment Authority (ADIA)

The race for knowledge: Risks, opportunities, and competitive advantage

Knowledge management is increasingly central to the competitive strategies of energy companies, and a key driver of growth, cost optimization, and risk management objectives. Competitive advantage in the energy industry will be driven by the ability to access, harness, and utilize knowledge—both internal and external. Leveraging knowledge is becoming ever more critical and strategic. How will companies grapple with looming demographic trends such as loss of knowledge through retirement of baby boomers, information overload, inefficiencies such as stove piping of critical content, and protecting information assets?

This session is closed to all media.

- **Chad Hawkinson**, Senior Vice President of Product Design & Engineering Solutions (Chair), IHS Markit
- **Nabilah Al-Tunisi**, Chief Engineer, Saudi Aramco
- **David Meza**, Chief Knowledge Architect, NASA - National Aeronautics and Space Administration
- **Jeff Patterson**, Chief Operating Officer, ASME
- **Michele Trogni**, Executive Vice President, Consolidated Markets and Solutions, IHS Markit

US energy policy: Post election?



How will the US energy policy change under the Trump administration, and how will these changes influence global energy markets and geopolitics? This dinner will cover a range of questions from regulations and infrastructure to federal and global politics.

This session is closed to all media.

- **Carlos Pascual**, Senior Vice President (Chair), IHS Markit
- **Jason Bordoff**, Professor of Professional Practice and Founding Director, Center on Global Energy Policy at Columbia University
- **Tom Kuhn**, President, Edison Electric Institute
- **Barry Smitherman**, Adjunct Professor of Energy Law, UT Law School
- **Russell Stokes**, SVP, GE; President & CEO, GE Energy Connections, GE
- **Frank Verrastro**, Senior Vice President, Center for Strategic & National Studies

Tuesday March 7

Breakfast and Dialogue

7:00am - 8:40am

Russia's energy future: Ministerial breakfast and dialogue

New projects and new technologies are driving Eurasian oil production to new heights. Will this continue or are changes on the horizon, either from administrative decisions to collaborate with OPEC or financial constraints?

- **Matthew Sagers**, Managing Director, Energy (Chair), IHS Markit
- **HE Alexander Novak**, Minister of Energy, Ministry of Energy of the Russian Federation
- **Dmitry Konov**, Chairman of the Management Board, SIBUR
- **Sergey Kudryashov**, General Director, Zarubezhneft
- **Mikhail Margelov**, Vice President, Transneft

Agora Studio

7:30am - 8:40am

 **Putting carbon to work: Leapfrogs for carbon capture, utilization, and storage**

Leveraging existing capabilities of E&P industry, CCUS has held promise as the bridge technology to a low carbon energy future for over a decade. However, only a handful of pilot projects are in operation. Several commercial deployments are anticipated to start up shortly—will the industry finally cross that bridge?

- **Atul Arya**, Senior Vice President and Chief Energy Strategist (Chair), IHS Markit
- **Dan Domeracki**, Vice President, Government and Industry Relations, Schlumberger Limited
- **Karthish Manthiram**, Assistant Professor in Chemical Engineering, MIT
- **Charles McConnell**, Executive Director, Energy and Environment Initiative (EEI), Rice University
- **David Victor**, Professor; Co-director, Laboratory on International Law and Regulation, UC San Diego

Breakfast & Strategic Dialogues

7:30am - 8:40am

Africa upstream: Renewal ahead—or not?

Sub-Saharan Africa has been a prolific region for industry-leading hydrocarbon discoveries, but with few projects being developed and low prices, exploration activity has sharply decreased. What strategies are upstream companies pursuing in response to the challenges they face? How are regional governments adjusting to today's reality in order to compete for tomorrow's investment?

- **Daniel Berkove**, Senior Associate, Energy (Chair), IHS Markit
- **Allen Burchett**, Global Head of Next Level Program- Oil, Gas and Chemicals (OGC), ABB Group
- **Tonye Cole**, Executive Director & Co-Founder, Sahara Group Limited
- **Andrew Kamau**, Principal Secretary, State Dept. of Petroleum, Ministry of Energy & Petroleum, Republic of Kenya
- **Geoffrey White**, Chief Executive Officer - Africa, Agility

Canada's changing energy policy landscape

Since 2014, the Canadian energy policy landscape has undergone dramatic transitions. Commodity prices have fallen, new governments have come to power, and a significant advancement of Canadian climate policy has occurred. This session will speak to these dramatic changes and what this may mean for the future of the Canadian energy and, specifically, the oil sector.

- **Kevin Birn**, Senior Director, Energy (Chair), IHS Markit
- **Hon. James Gordon Carr**, Minister of Natural Resources, Canada
- **Judy Fairburn**, Executive Vice President, Business Innovation, Cenovus Energy Inc.
- **Alex Pourbaix**, Chief Operating Officer, TransCanada Corporation
- **Ed Whittingham**, Executive Director, Pembina Institute

Disclosing carbon asset risk: The shape of things to come?

The Financial Stability Board's Task Force on Climate-Related Financial Disclosure (TCFD) issued its draft report in December 2016 and will submit its final report to the G-20 in June. TCFD recommends a framework of voluntary disclosures to quantify financial risks and opportunities arising from climate change. What would adoption of the framework mean for energy companies and financial institutions? Is it possible for companies in different sectors with widely differing business models to provide consistent, forward-looking, "decision-useful" information?

- **Nancy Meyer**, Associate Director, Energy (Chair), IHS Markit
- **Matt Arnold**, Managing Director & Global Head of Sustainable Finance, JPMorgan Chase & Co.
- **Malcolm Fawcett**, Director, Climate Change, ConocoPhillips
- **Andrew Logan**, Director, Oil & Gas Program, Ceres
- **Fiona Wild**, Vice President Sustainability & Climate Change, BHP Billiton

Future of oil and gas development in Asia

While Asian oil and gas demand has sharply increased over the last few years, the supply-side outlook is mixed. Local NOCs have decreased upstream investments because of low oil prices, while many IOCs have left Asia to focus on core assets closer to home. As oil price recovers, how will companies and countries respond to attract new investments and partnerships? What role will technology play?

- **Nick Lowes**, Vice President, Oil and Gas Consulting, Energy (Chair), IHS Markit
- **Datuk Mohd Anuar Taib**, Executive Vice President & CEO Upstream, Petrolia Nasional Berhad (PETRONAS)
- **Dinesh Sarraf**, Chairman & Managing Director, Oil and Natural Gas Corporation Ltd.
- **Hon. Chandima Weerakkody**, Minister of Petroleum Resources Development, Sri Lanka
- **Pinxian Zhang**, Vice President - Group Planning, CNPC

Latin America upstream: An exploration hot spot

Despite record cuts in exploration spending, operators have continued to add critical new supply for Latin America: Large, new discoveries have been made in Guyana, Mexico, and Chile, and both Brazil's presalt and Argentina's Vaca Muerta are continuing to gain scale. Moreover, a new wave of access is expected, with Mexico and Brazil, in particular, offering large opportunities. Where will the next major discoveries be and how will companies expand the existing ones?

- **Bob Fryklund**, Chief Upstream Strategist, Energy (Chair), IHS Markit
- **Gustavo Hernández**, Director of Resources, Reserves and Associations, PEMEX Exploration and Production



- **Michel Hourcard**, President & CEO, TOTAL E&P Americas, LLC
- **Décio Oddone**, Director-General, Brazilian National Agency of Petroleum, Natural Gas and Biofuels (ANP)
- **Orlando Velandia**, President, Agencia Nacional de Hidrocarburos (ANH)

North American refining: Evolving industry and regulations

What does the future hold for the North American refining industry? The vantage point of refiners is key—specifically their location and market reach. How will global market conditions and domestic regulations impact market dynamics in the years ahead?

- **Kevin Lindemer**, Managing Director, Downstream Consulting, Energy (Chair), IHS Markit
- **Horace Hobbs**, Chief Economist, Phillips 66
- **Tom Kloza**, Global Head of Energy Analysis, Oil Price Information Service (OPIS), IHS Markit
- **Mario Rodriguez**, Founder & President, NTR Partners LLC
- **Dan Romasko**, President & CEO, Motiva Enterprises LLC

The business of deep water in a new price era



Deepwater reserves were expected to provide a significant source of production growth. However, since the oil price collapse, deepwater projects have been cancelled, delayed, and redesigned, impacting future reserves additions. Still, the deep water will receive substantial investment and new supplies will come onstream. How does this future deep water compare with the last 15 years? Deepwater leaders will discuss the transformation of the deepwater portfolio, the sustainability of new models, the growth outlook, and the competitor landscape.

- **Susan Farrell**, Vice President, Energy-Wide Perspectives (Chair), IHS Markit
- **Jürgen Brandes**, CEO Process Industries & Drives Division, Siemens
- **Roger Jenkins**, President & CEO, Murphy Oil Corporation
- **Carri Lockhart**, SVP US Offshore, Development & Production USA, Statoil

The new geopolitics of oil: OPEC and non-OPEC




Non-OPEC participation was critical to sealing the supply agreement between OPEC members and a number of non-OPEC countries, particularly Russia. Was this a one-off agreement or a signpost for new, enduring dynamics between key OPEC and non-OPEC countries?

- **Bhushan Bahree**, Senior Director, Energy (Chair), IHS Markit
- **Ibrahim Al-Muhanna**, Adviser to the Oil Minister, Saudi Oil Ministry
- **Aldo Flores Quiroga**, Deputy Secretary of Energy for Hydrocarbons, Secretary of Energy, Mexico
- **David Goldwyn**, Chairman of the Advisory Group, Global Energy Center, Atlantic Council
- **Vera de Ladoucette**, Senior Associate, IHS Markit

Plenary

8:50am - 9:25am

LIVE: Welcome and ministerial address

-  **Watch now**
- **Daniel Yergin**, Vice Chairman, IHS Markit (Chair), Chairman, CERAWEEK
- **HE Khalid A. Al-Falih**, Minister of Energy, Industry and Mineral Resources, Kingdom of Saudi Arabia

Plenary

9:25am - 9:55am

Opening oil dialogue

- **Daniel Yergin**, Vice Chairman, IHS Markit (Chair), Chairman, CERAWEEK
- **Robert Dudley**, Group Chief Executive, BP plc

Plenary

9:55am - 10:20am

Ministerial dialogue

- **Daniel Yergin**, Vice Chairman, IHS Markit (Chair), Chairman, CERAWEEK
- **HE Dharmendra Pradhan**, Minister of State - Independent Charge, Ministry of Petroleum & Natural Gas, India

Agora Exploration Pods

10:00am - 6:30pm

⚙️ Exploration Pod Sessions

Visit Agora Exploration Pods on Level 4 for interactive sessions from a former NASA astronaut, sessions on next generation drones, additive manufacturing, artificial intelligence, and many more! For more information on the timing and topic of Exploration Pod sessions, please refer to the Agora Program Guide.

- **Michael Foreman**, Former Astronaut, NASA, Venturi Outcomes
- **Gary Simon**, President & CEO, Atrex Energy
- **James Bellingham**, Director, Center of Marine Robotics, Woods Hole Oceanographic Institution
- **Burt Hurlock**, Chief Executive Officer, Azima DLI
- **Edward Mills**, Vice President HSE, Honeywell Performance Materials and Technology, Honeywell
- **Adeeb Gharzouzi**, Principal, Digital Practice, Accenture Strategy Energy, Accenture
- **Tom Bonny**, Managing Director, Accenture Strategy, Energy, Accenture
- **Pedro Alvarez**, George R. Brown Professor of Civil & Environmental Engineering & Director, NSF ERC on Nanotechnology Enabled Water Treatment (NEWT), Rice University
- **Stig Settemsdal**, Global Head, Portfolio Management and Innovation, Offshore Solutions, Siemens
- **Guido Jouret**, Chief Digital Officer, ABB Group
- **Adam Boyle**, Director, Global Additive Manufacturing Operations (GAMC-Singapore), Emerson
- **Josh Adler**, Founder & CEO, Sourcewater
- **Aydin Babakhani**, Professor of Rice and Director of RISC Laboratory, Rice University
- **Jon Hirschtick**, Co-Founder & Chief Executive Officer, Onshape Inc.

Plenary

10:20am - 10:45am

Global oil dialogue

- **Daniel Yergin**, Vice Chairman, IHS Markit (Chair), Chairman, CERAWEEK
- **Ryan Lance**, Chairman & CEO, ConocoPhillips

Break

10:45am - 11:00am

⚙️ Ride hailing and driverless technology: Oil's friend or foe?

Ride hailing services like Uber, Didi, and Lyft are providing millions of new rides per day. This new "mobility as a service" market coupled with driverless technology could significantly impact the whole automotive ecosystem, and particularly oil demand. Will these new miles be gasoline or electric? How personal mobility changes and what powers this change will be critical to future oil and power demand.

- **Tom De Vleeschauwer**, Head of Transport & Mobility, Automotive (Chair), IHS Markit
- **Jeremy Carlson**, Principal Analyst & Manager, IHS Markit
- **Tiffany Groode**, Senior Director, Energy, IHS Markit
- **Mateo Jaramillo**, Former Vice President, Tesla Energy Products
- **Bill Morelli**, Senior Director, IT & Networks, Technology, IHS Markit

Strategic Dialogues

11:00am - 12:10pm

Financing the upstream: Recapitalization of upstream sector

Access to capital was an essential driver of the great revival of US oil production. In today's market, is access to capital changing? Who will provide the capital for upstream investment in the years ahead?

- **Roger Diwan**, Vice President, Financial Services (Chair), IHS Markit
- **Maynard Holt**, Chief Executive Officer, Tudor, Pickering, Holt & Co.
- **Steve Pattyn**, Managing Director, Och-Ziff Capital Management
- **Tim Perry**, Global Co-Head of Oil and Gas Investment Banking, Credit Suisse
- **Nathan Strik**, Sector Leader, Fidelity Management and Research Company
- **Nate Walton**, Partner, Ares Management

Global refining: Pressures and opportunities

Global oil demand has been buoyant because of lower prices. But big questions loom that will shape the fortunes of the refining industry in the years ahead. In addition to economic uncertainty, the future use of oil in transport is a big question. But there are also opportunities such as the upcoming change in bunker fuel specifications. What dynamics will influence success for refiners around the world?

- **Stephen Jones**, Vice President, Energy (Chair), IHS Markit
- **Bakheet Al-Rashidi**, President & CEO, Kuwait Petroleum International
- **Qasim Abdulrahman Hussein**, Director General of the North Refineries Company (NRC), Ministry of Oil - Iraqi
- **Daniel Jaeggi**, Co-Founder & President, Mercuria
- **Rebecca Liebert**, President & CEO, Honeywell UOP

International oil company strategies: Positioning for the future

IOCs have focused relentlessly on reconfiguring portfolios to be competitive in a lower-for-longer price environment. In some cases, IOCs have made wholesale changes in geographic focus, targeted asset types, and proffered return metrics and capital strategies. Many are also testing investments against carbon taxes at different levels. How much of the cost reduction is sustainable? How have portfolios changed? Where can larger E&P companies find scale? Are the new business models sustainable?

- **Paul Markwell**, Vice President, Energy (Chair), IHS Markit
- **Lars Christian Bacher**, Executive Vice President, Development & Production International (DPI), Statoil
- **Juan Carlos Echeverry**, Chief Executive Officer, Ecopetrol S.A.
- **Katie Jackson**, Vice President, Commercial & New Business Development, Europe/CIS, Shell
- **Matt Fox**, Executive Vice President, Strategy, Exploration & Technology, ConocoPhillips

National oil company strategies: Positioning for the future

After two years of significant price decline, loss of revenue, and cost cutting, NOCs are now reevaluating their strategies for the medium to long term. Although price outlook is bullish after the OPEC agreement, there are significant challenges for the future, including lack of capital investments, competition for customers, oversupply in LNG/gas markets, and uncertainty for oil demand. How will NOCs respond to these challenges? Where do they see opportunities? What are the avenues for partnerships between IOCs and NOCs?

- **Atul Arya**, Senior Vice President and Chief Energy Strategist (Chair), IHS Markit
- **Abdul Munim Saif Al Kindy**, Exploration, Development & Production Director, ADNOC
- **Nabil Bourisli**, Managing Director, International Marketing, Kuwait Petroleum Corporation
- **Narendra Verma**, Managing Director & CEO, ONGC Videsh Limited

Oil price cycles: What are they and where are we now?

Although the driving force of oil cycles is the same—the reaction of price to demand and supply—the form and timing of the reaction differs with each cycle. But it would be notable from a historical perspective if the current era of abundant supply lasted only several years. The average duration of the past two eras of surplus is 15 years. However, market conditions point to the possibility of an end to the current cycle in the next several years. Will this be a relatively short era of surplus—or not?

- **James Burkhard**, Chief Researcher, Global Oil Markets & Energy Scenarios, Energy; CERAWEEK Vice Chairman (Chair), IHS Markit
- **Falah Alamri**, General Director, Oil Marketing Company (SOMO), Ministry of Oil
- **Aaron Brady**, Senior Director, Energy, IHS Markit
- **Spencer Dale**, Group Chief Economist, BP plc
- **Keisuke Sadamori**, Director, International Energy Agency
- **Adam Sieminski**, James R. Schlesinger Chair for Energy and Geopolitics, Center for Strategic & International Studies (CSIS)

Rethinking sanctions in the new era

Do sanctions work as a diplomatic tool? US and European energy and financial sanctions on Iran contributed to an international agreement with Iran to restrain its nuclear program, but US discord over that deal may lead to its dissolution. Could a new deal or sanctions be achieved with international consensus? Alternatively, US and European sanctions on Russia for its actions in Ukraine have not succeeded in changing Russia's policies nor decreased its oil production. Have these sanctions failed? How might the Trump administration affect policy and US and European energy sanctions toward Russia and Iran?

- **Carlos Pascual**, Senior Vice President (Chair), IHS Markit
- **Bertrand Deroubaix**, Senior Vice President Public Affairs, TOTAL
- **Richard Nephew**, Senior Research Scholar, Center on Global Energy Policy, Columbia University
- **Thane Gustafson**, Senior Director and Advisor, Energy, IHS Markit
- **Elizabeth Rosenberg**, Sr. Fellow & Program Director, Center for a New American Security (CNAS)

Service company strategies: Positioning for the future

The extreme focus of IOCs and NOCs on reducing costs, simplifying designs, and improving operating efficiency has forced service sector companies to rethink their own business models. Many sectors face considerable overcapacity that must be rationalized; many are engaged in mergers and alliances; and others view the industry's structural changes as an opportunity to increase their energy footprint. What are service companies doing to increase competitiveness? Which changes are sustainable? What will the competitive landscape look like in five years?

- **Susan Farrell**, Vice President, Energy-Wide Perspectives (Chair), IHS Markit
- **Brian Cothran**, President, North America, GE Oil & Gas
- **Amerino Gatti**, President, Production Group, Schlumberger
- **Charles Leykum**, CEO & Founder, CSL Capital Management
- **Michael Train**, Executive President, Emerson Automation Solutions, Emerson

The Permian phoenix: Rising again

The Permian Basin is the world's original "super basin." It has produced billions of barrels of oil over its nearly 100 years. Now, after decades in decline, new technologies have rejuvenated the basin, but how far can it run? And how fast? This session explores the basin's potential from a number of angles—geologic, competitive, technological, and infrastructure—to consider when thinking about its oil and gas future to 2020.

- **Raoul LeBlanc**, Managing Director, Energy (Chair), IHS Markit
- **Jody Elliott**, President Oil and Gas, Domestic, Occidental Petroleum Corporation
- **Randy Foutch**, Chairman & CEO, Laredo Petroleum
- **Chris Gatjanis**, US Southern Area Vice President Permian Basin, Halliburton
- **Travis Nichols**, Managing Director, Investment Banking, Tudor, Pickering, Holt & Co.

Upstream performance trends: Enhancing operational efficiency


Upstream projects and assets struggling to meet economic hurdles in today's low price environment are, in many cases, turning to lower supply chain costs, leaner designs, and new development approaches to improve their viability. What role can technology play in enabling these new design concepts and operating models, what impact are they having on industry capital and operating efficiency today, and will these effects be sustained as prices start to rise?

- **Pritesh Patel**, Senior Director, Capital Costs Analysis Forum, Energy (Chair), IHS Markit
- **Nabilah Al-Tunisi**, Chief Engineer, Saudi Aramco
- **Judson Jacobs**, Senior Director, Upstream Technology and Innovation, Energy, IHS Markit
- **Gregory Leveille**, Chief Technology Officer, ConocoPhillips
- **Peter Terwiesch**, President, Industrial Automation, ABB Group
- **Guangfu Wang**, Vice President, Petroleum Exploration and Production Research Institute of Sinopec

Plenary and Luncheon

12:20pm - 1:30pm

LIVE: Oil industry in transition: Where are we in the cycle?

-  **Watch now**
Daniel Yergin, Vice Chairman, IHS Markit (Chair), Chairman, CERAWEEK
- **HE Mohammad Sanusi Barkindo**, Secretary General, OPEC
- **Fatih Birol**, Executive Director, International Energy Agency

Break

1:30pm - 1:40pm

Plenary

1:40pm - 2:05pm

Oil and gas leadership dialogue

- **Daniel Yergin**, Vice Chairman, IHS Markit (Chair), Chairman, CERAWEEK
- **Vicki Hollub**, President & CEO, Occidental Petroleum Corporation

Plenary

2:05pm - 2:25pm

Oil and gas leadership dialogue

- **Carlos Pascual**, Senior Vice President (Chair), IHS Markit
- **José Antonio González Anaya**, Chief Executive Officer, PEMEX

Plenary

2:25pm - 3:05pm

Promise and peril: The future of manufacturing, technology, and infrastructure

- **Daniel Yergin**, Vice Chairman, IHS Markit (Chair), Chairman, CERAWEEK
- **Thomas Fanning**, Chairman, President & Chief Executive Officer, Southern Company
- **Joe Kaeser**, President & CEO, Siemens AG

Plenary

3:05pm - 3:25pm

Ministerial dialogue

- **Carlos Pascual**, Senior Vice President (Chair), IHS Markit
- **HE Suhail Mohamed Al Mazrouei**, Minister of Energy, United Arab Emirates

Plenary

3:25pm - 3:45pm

Ministerial dialogue

- **Carlos Pascual**, Senior Vice President (Chair), IHS Markit
- **HE Jabbar Ali Al-Luiebi**, Minister of Oil, Republic of Iraq

Plenary

3:45pm - 4:05pm

Ministerial dialogue

- **Daniel Yergin**, Vice Chairman, IHS Markit (Chair), Chairman, CERAWEEK
- **HE Berat Albayrak**, Minister of Energy and Natural Resources, Turkey

Agora Studio

4:00pm - 5:15pm

⚙️ Agile, additive, autonomous—Technology and the reshaping of the energy supply chain

New technologies, such as autonomous intelligence, additive manufacturing, and block-chain are radically altering traditional supply chain concepts. The industry is still in early innings of deploying these transformative capabilities. How might these technologies finally tackle the persistent challenges around complexity, transparency, resiliency, speed, and efficiency in the supply chain system? Join us for a primer on these emerging technologies and structured group discussion to explore their impact.

- **John Larson**, Vice President, Advanced Analytics Group (Chair), IHS Markit
- **James Bellingham**, Director, Center of Marine Robotics, Woods Hole Oceanographic Institution
- **Paul Bonner**, Vice President of Consulting & Analytics, Honeywell Connected Plant Division
- **Ric Fulop**, Co-Founder & CEO, Desktop Metal
- **Jon Hirschtick**, Co-Founder & Chief Executive Officer, Onshape Inc.

Break

4:05pm - 4:10pm

Concurrent Plenaries

4:10pm - 4:50pm

Prolific Permian: Generational perspectives

- **Daniel Yergin**, Vice Chairman, IHS Markit (Chair), Chairman, CERAWEEK
- **Scott Sheffield**, Executive Chairman & CEO, Pioneer Natural Resources
- **Bryan Sheffield**, Chairman & CEO, Parsley Energy

LIVE: Transforming Global E&P



- **Atul Arya**, Senior Vice President and Chief Energy Strategist (Chair), IHS Markit
- **Musabbeh Al Kaabi**, Chief Executive Officer, Mubadala Petroleum
- **Isabel dos Santos**, Presidente do Conselho de Administracao da Sonangol (CEO), Sonangol Group
- **Vadim Yakovlev**, Deputy Chairman of the Management Board, First Deputy CEO Upstream, Gazprom Neft

Break

4:50pm - 4:55pm

Concurrent Plenaries

4:55pm - 5:45pm

Getting back to growth in the upstream

- **Atul Arya**, Senior Vice President and Chief Energy Strategist (Chair), IHS Markit

- **Bernard Looney**, Chief Executive, Upstream, BP plc
- **Mario Mehren**, Chairman of the Board of Executive Directors, Wintershall Holding GmbH
- **Steve Pastor**, President Operations, Petroleum, BHP Billiton

Oil markets and downstream

- **Kurt Barrow**, Vice President, Downstream Research and Consulting, Energy (Chair), IHS Markit
- **B. Ashok**, Chairman, Indian Oil Corporation Ltd. (IOCL)
- **Gregory Goff**, Chairman, President & CEO, Tesoro Corporation
- **Mike Loya**, President, Vitol Inc.; Director, Vitol Group, Vitol

Agora Studio

5:30pm - 6:30pm

Today's reality? The digital oil field

The digital oil field has not quite lived up to the promise the upstream industry laid out for it over a decade ago. How can (and is) the concept evolve to deliver on its full potential?

- **Judson Jacobs**, Senior Director, Upstream Technology and Innovation, Energy (Chair), IHS Markit
- **Qasem Al Kayoumi**, Manager, ADNOC Technical Centre, Abu Dhabi National Oil Company
- **Vivek Chidambaram**, Managing Director, Global Digital Lead, Accenture Strategy Energy
- **Lisa Davis**, CEO Global Energy & Member of the Managing Board, Siemens AG
- **Ahmed Hashmi**, Global Head of Upstream Technology, BP

Break

5:45pm - 5:50pm

IHS Markit Expert Discussions

5:50pm - 6:30pm

Border adjustment tax: Implications for oil prices and trade

The House Republican plan would transform the corporate income tax into a destination-based cash flow tax – also called a border adjustment tax (BAT) – that exempts the full value of exports but includes the full value of imports in the tax base. What are the potential price and trade impacts of the BAT on crude oil, refined products and other traded energy commodities? What are other potential consequences including from the resulting increase in the US dollar?

This session is closed to all media.

- **Kurt Barrow**, Vice President, Downstream Research and Consulting, Energy (Chair), IHS Markit
- **Sara Johnson**, Senior Research Director, Global Economics, IHS Markit
- **Ed Kelly**, Vice President, Energy, IHS Markit
- **David Witte**, Senior Vice President; General Manager, Chemical, IHS Markit

Changes in marine fuel specs and impact on refining margins

In less than three years, the International Maritime Organization will implement bunker fuel quality changes that could disrupt the refining, shipping, and bunker supply industries. How are companies and industries preparing for these changes? This session will explore the key issues surrounding this important industry topic and draw on extensive IHS Markit research.

This session is closed to all media.

- **Sandeep Sayal**, Director, Downstream Energy Research and Consulting, Energy (Chair), IHS Markit
- **Hédi Grati**, Senior Consultant, Energy, IHS Markit
- **Ravi Narayanaswamy**, Vice President, Oil Markets and Downstream Consulting, IHS Markit

Global energy scenarios: Reinventing the wheel

How will ride hailing, electric vehicles, and driverless cars shape the future? We will discuss ideas about how these new drivers of change could transform the automotive eco-system—and what it means for oil companies.

This session is closed to all media.

- **James Burkhard**, Chief Researcher, Global Oil Markets & Energy Scenarios, Energy; CERAWEEK Vice Chairman (Chair), IHS Markit
- **Tom De Vleeschauwer**, Head of Transport & Mobility, Automotive, IHS Markit
- **Tiffany Groode**, Senior Director, Energy, IHS Markit
- **Richard Vidal**, Director, Energy Scenarios, IHS Markit

Global liquids supply outlook

Projections for global liquids supply over the next five to ten years are being changed by multiple factors, including new investment deferrals, changes in base production decline rates, new upstream openings, and fiscal term adjustments. The need to forecast global liquids production in the near term to longer term, and accurately label and understand the underlying strategic assumptions, both below- and aboveground, is more critical than ever. IHS Markit experts will discuss our assumptions, methodologies, and outlook for key countries.

This session is closed to all media.

- **Mark Jelinek**, Managing Director (Chair), IHS Markit
- **Stephen Beck**, Head of North America Oil and Gas Supply Forecasting, IHS Markit
- **Jeff Meyer**, Associate Director, Energy, IHS Markit
- **Ha Nguyen**, Associate Director, Global Oil, Energy, IHS Markit

Latin America upstream

With most Latin American countries experiencing declining liquids production, the opening of several upstream sectors to exploration is accompanied by changes to the competitive landscape. For the first time in decades, Latin American NOCs are not driving E&P. With aboveground risk still a significant obstacle to increasing foreign direct investment, how will regional governments and IOCs, whether partnered with regional NOCs or not, manage risk? What is the 10-year forecast for E&P activity and growth? Do regional NOCs have the financial ability to drive overall investment and exploration activity?

This session is closed to all media.

- **Ricardo Bedregal**, Head, Upstream Research, Consulting, Cost & Technology Group, Latin America, Energy (Chair), IHS Markit
- **James Ellis**, Associate Director, Commercial Plays and Basins, Energy, IHS Markit
- **Claudia Pessagno**, Senior Oil & Gas Equity Analyst, Strategies and Transactions, Upstream Group, Energy, IHS Markit
- **Ford Tanner**, Principal Analyst, Country E&P Terms & Above-Ground Risk, IHS Markit

Natural Gas Liquids: Where will the market absorb supply growth?

Supply of NGLs is expanding—and at a much faster rate than crude oil. Indeed, nearly one-third of global liquids demand growth in 2017 and 2018 may come from LPG. What are the growth markets—and what does it mean for NGL market dynamics?

This session is closed to all media.

- **Debnil Chowdhury**, Director, Natural Gas Liquids Research, Energy (Chair), IHS Markit
- **Veeral Mehta**, Senior Consultant, Midstream Oil & NGLs, IHS Markit
- **Steve Lewandowski**, Global Business Director, Light Olefins, IHS Markit
- **Darryl Rogers**, Managing Director, Oil Markets and Downstream, Energy, IHS Markit

Outlook for E&P terms and other upstream investment conditions in 2017

Despite an expected additional modest price recovery in 2017, producer governments will remain under significant fiscal pressure in 2017, prompting further adjustments to fiscal and other E&P terms and conditions. These governments will also face competition from frontier countries now positioning themselves to capture new investment spending.

This session is closed to all media.

- **Michael Marinovic**, Vice President, Energy (Chair), IHS Markit
- **Irena Agalliu**, Managing Director of Consulting, Energy, IHS Markit
- **Mariam Al-Shamma**, Senior Manager, Petroleum Sector Risk, Energy, IHS Markit

RINS: Market impact of biofuels and blending requirements in the United States

Renewable Identification Numbers (RINS) are assigned to track a batch of biofuels from production to blending into gasoline and diesel. The value of RINS is volatile and can have a significant impact on wholesale and retail operations. What is current thinking about the value of RINS in 2017-18?

This session is closed to all media.

- **Tom Kloza**, Global Head of Energy Analysis, Oil Price Information Service (OPIS) (Chair), IHS Markit
- **Blake Eskew**, Vice President, Downstream Consulting, Energy, IHS Markit
- **Kevin Lindemer**, Managing Director, Downstream Consulting, Energy, IHS Markit
- **Rob Smith**, Director, Downstream, IHS Markit

Super basins outside the United States

The future of oil supply could be transformed if a number of “super basins” such as the US Permian were fully exploited around the world. There are significant challenges to achieving these sorts of results, chiefly aboveground risks and their mitigation. IHS Markit has identified super basins as those having already produced at least 5 billion boe with another 5 billion boe remaining, with multiple stacked plays, typically more than one source rock, available service sector, and infrastructure. We have identified 25 such global basins, plus an additional 24 “Tier Two” basins. IHS Markit experts will discuss methodology and results, and the implications for future investment.

This session is closed to all media.

- **Graham Bliss**, Senior Director, IHS Markit
- **Reed Olmstead**, Manager of North America Supply Analytics, Upstream Strategy and Competition, Energy (Chair), IHS Markit

The great cost reset: The new competitive dynamic in US unconventional, global deep water, and the Middle East

In the past two years, the oil and gas industry has made drastic changes to reset the cost structure to be competitive in a lower oil price world. Some of the changes are sustainable, others are not. The IHS Markit Costs and Technology team looks at the new competitive dynamic, costs, among the major sources of supply growth—the US onshore, deep water, and the Middle East—which will have important portfolio allocation implications going forward.

This session is closed to all media.

- **Pritesh Patel**, Senior Director, Capital Costs Analysis Forum, Energy (Chair), IHS Markit
- **Basel Nashat Asmar**, Director, Upstream Research, IHS Markit
- **Susan Farrell**, Vice President, Energy-Wide Perspectives, IHS Markit
- **Raoul LeBlanc**, Managing Director, Energy, IHS Markit

Upstream capital strategies in the wake of the reset

After enduring shock and paralysis caused by the dramatic and sustained drop in commodity prices, upstream companies are now shifting their focus toward the pursuit of growth. However, with limited economic opportunities at this new price paradigm, competition for quality assets will be intense. Having come out of this down cycle with historically high levels of debt, companies will be challenged to execute a winning strategy and must counterbalance their asset strategy with their capital strategy. During this session, companies and transactions experts will discuss the challenges facing Independents, IOCs, and NOCs and their emerging strategies, as well as which companies are in position to execute. We will also discuss our IHS Markit outlook for the 2017 upstream M&A market.

This session is closed to all media.

- **Daniel Pratt**, Senior Director, Company, Transaction and Valuation Research, Upstream Group, Energy (Chair), IHS Markit
- **Lysle Brinker**, Senior Director, Company Valuation and Transaction Research, Energy, IHS Markit

Conference-wide Reception

6:30pm - 7:30pm

Level 2 – Foyer

Dinner

7:30pm - 9:30pm

Keynote

- **Daniel Yergin**, Vice Chairman, IHS Markit (Chair), Chairman, CERAWEEK
- **Peter Thiel**, Investor and Entrepreneur, Founders Fund

Wednesday March 8

Breakfast & Strategic Dialogues

7:30am - 8:50am

Ministerial dialogue: Prospects for the Levant Basin

A wide-ranging discussion with Minister Steinitz on the changing regional dynamics and Israel's emerging role as a natural gas producer. Key topics include natural gas in the Levant: the changing dynamics and Israel's emerging role; new policies and investment opportunities in Israel's Exclusive Economic Zone in the Mediterranean Sea; and the shifting calculus of Middle Eastern geopolitics.

- **Simon Blakey**, Senior Associate, Energy Group (Chair), IHS Markit
- **HE Dr. Yuval Steinitz**, Minister of National Infrastructures, Energy & Water Resources, Israel

After the Permian: What's next for North America?

The Permian Basin is a magnet for E&P risk capital because of its cost reduction, performance enhancement, and robust overall production outlook. But with the cost of quality acreage climbing, industry players are looking beyond the Permian.

- **Bob Fryklund**, Chief Upstream Strategist, Energy (Chair), IHS Markit
- **Ronald Neal**, Co-Founder & Co-Owner, Houston Energy, L.P.
- **Frank Patterson**, Executive Vice President, Exploration and Production, Chesapeake Energy Corporation
- **Chandler Wilhelm**, VP, Emerging Basins for Unconventionals, Shell

Asian gas markets: Reforms, new players, and implications for LNG

As the global gas market enters a period of oversupply, the biggest buyers in Asia are adjusting their purchasing strategies. In addition to more aggressive price negotiations, many utilities that have been long-term customers of various national importers (e.g., NOCs) are looking to enter the global market and procure their own gas, creating new dynamics in a fast-changing market. How will domestic market reforms in areas such as infrastructure access and pricing impact future LNG procurement?

- **Xizhou Zhou**, Senior Director, Research (Chair), IHS Markit
- **Ronggo Kuncahyo**, Adviser, to the Minister, Ministry of Energy and Mineral Resources, Indonesia
- **Katsumi (Ken) Kuroda**, Senior Advisor, Cheniere Marketing Ltd.
- **Shenyuan Ma**, Vice President, ENN Group Co., Ltd.
- **Harry Park**, Head of LNG Business Div., SK E&S
- **Hiroki Sato**, Chief Fuel Transactions Officer, Senior Executive Vice President, JERA Co., Inc.

Does pricing carbon have a future

Despite the theoretical case for pricing CO2 emissions, carbon pricing regimes have not delivered strong results in practice. Going forward, China and Canada plan more use of carbon pricing, while the EU may be losing faith in the ETS and the future of US regional systems are also in question. What is the outlook for more effective pricing regimes and how might carbon pricing incentivize efficiency and new technology?

- **Steven Knell**, Director (Chair), IHS Markit
- **Kathy Benini**, Managing Director & Global Head of Environmental Registry & Auctions, IHS Markit
- **Dirk Forrister**, President & CEO, International Emissions Trading Association

- **Richard Newell**, President & CEO, Resources for the Future (RFF)
- **Arlene Strom**, Vice President, Sustainability and Communications, Suncor

The promise and challenge of growing LNG demand in a period of oversupply

LNG market fundamentals point to a sustained period of looseness in the coming years due to large capacity additions, coupled with demand weakness from many existing markets. However, a significant number of countries do not import—nor have plans to import—LNG. What key risks and factors need to be addressed to bring more of these countries into the LNG market? How can project developers actively support their development?

- **Terrell Benke**, Senior Director, Global Gas and LNG Group, Energy (Chair), IHS Markit
- **RK Garg**, Director (Finance), Petronet LNG Limited
- **Chris Holmes**, Managing Director, Research & Consulting, GPR EMEA & APAC, IHS Markit
- **Laurent Vivier**, Senior Vice President, Gas, TOTAL S.A.

LNG cost and innovation

An impending global LNG oversupply will lead to an ever-competitive market. New project developments will require a cost advantage in order to remain competitive against other fuels and other gas supplies. Can LNG survive? This session will explore some of the innovative solutions that have been proposed—from mini- and small-scale, traditional cost-control to novel approaches to liquefaction—their advantages, disadvantages, and likelihood of transforming the industry.

- **Rafael McDonald**, Director, Global Gas and Global LNG (Chair), IHS Markit
- **Dick Brown**, President & CEO, Ferus
- **Rod Christie**, President & CEO, Turbomachinery Solutions, GE Oil & Gas
- **Audie Setters**, Chief Executive Officer, LoneStar LNG
- **Grant Wattman**, President & CEO, Agility Project Logistics

North American gas: Going oily and arriving late

Low natural gas prices have largely restricted North American production growth to Appalachia and associated gas. Low oil prices subsequently reduced associated gas production. Concurrently, delays to pipeline infrastructure expansions out of Appalachia have driven a tighter and more volatile natural gas market. With oil activity disconnected from gas prices and pipeline project in-service dates increasingly uncertain, how do gas buyers, sellers, and transporters manage through a less predictable and increasingly volatile market?

- **Samuel Andrus**, Senior Director, Energy (Chair), IHS Markit
- **Alex Archila**, Asset President Shale, BHP Billiton
- **Blue Jenkins**, Chief Commercial Officer, EQT
- **Gregg Russell**, Sr. Vice President, Commercial Development, DTE Midstream
- **John Schultz**, President, Direct Energy

Solving Southern Cone's natural gas trade puzzle

Natural gas is a growing component of Southern Cone's energy mix. Significant and diverse supplies around the region remain constantly challenged with meeting rising demand. Recent changes in the regional energy landscape bring new challenges, requiring new strategies from countries and market participants. What is ahead for the regional gas markets following recent changes in Argentina and Brazil? What are the opportunities from the changing regional landscape? What role will LNG play and what are the signposts for future changes?

- **Roberto Ferreira da Cunha**, Associate Director, Latin America Gas & Power, Energy (Chair), IHS Markit
- **Marcos Browne**, Executive Vice President of Gas & Energy, YPF S.A.
- **Oscar Claros**, Chief Executive Officer, YPFB Chaco S.A.
- **Marcelo Tokman Ramos**, Chief Executive Officer, Empresa Nacional Del Petróleo (ENAP)

Supplying gas to Europe: Capitalizing on a growing, flexible market

Europe is a major traded gas market with a growing requirement for imports, but where will these imports come from? Russia will remain a major supplier and LNG supply will grow, but will there be space to absorb the coming surge in LNG supply? How will Russian gas be transported to Europe? What is the potential for new suppliers to enter the market?

- **Shankari Srinivasan**, Vice President, Energy (Chair), IHS Markit
- **Martin Houston**, Vice Chairman, Tellurian
- **Reinhard Ontyd**, Chief Commercial Officer, Nord Stream 2 AG
- **Elio Ruggeri**, SVP Gas Supply Origination & Infrastructures Department, Edison S.p.A
- **Jonathan Westby**, Co-Managing Director EM & T & Global Head of LNG, Centrica

The future of exploration



IHS Markit forecasts minimal growth in global exploration spending through 2020. While new discoveries outside onshore North America have been in decline since 2012, there are exploration “hot spots” and critical wells that will define the potential for new areas. As some companies pull back from conventional exploration, others see it as an opportunity. How are exploration strategies changing in the evolving business environment?

- **Gerald Kepes**, Head, Strategy & Competition Group, Upstream Research & Consulting Division, Energy Insight (Chair), IHS Markit
- **Federico Arisi Rota**, EVP Americas, Eni
- **Gregory Hebertson**, Vice President, Western Hemisphere Exploration & New Ventures, Murphy Oil Corporation
- **Howard Leach**, Head of Exploration, BP
- **Kevin McLachlan**, Senior Vice President Exploration, TOTAL S.A.

Energy Innovation Pioneers

7:30am - 8:50am

Leveraging startups to meet the challenges of the new energy landscape

As the oil and gas industry develops strategies to meet the challenges of the new energy landscape—competing energy supplies, changing hydrocarbon demand, and increasing climate concerns—new strategies for innovation are also needed. This panel explores how startups introducing new, rapidly scalable technologies are transforming the oil and gas industry. Meet members of the 2017 class of Energy Innovation Pioneers.

- **Carolyn Seto**, Director, Upstream Technology and Innovation (Chair), IHS Markit
- **Helen Greiner**, Founder & CTO, CyPhy Works
- **Idar Horstad**, Chief Executive Officer, Magseis
- **Murat Ocalan**, Founder & CEO, Rheidiant
- **Babur Ozden**, Founder & CEO, Maana

Agora Exploration Pods

9:00am - 5:30pm

Exploration Pod Sessions

Visit the Agora Exploration Pods on Level 4 for interactive presentations by Energy Innovation Pioneers and technology leaders. For more information on the timing and topic of Exploration Pod sessions, please refer to the Agora Program Guide.

- **Stig Settemsdal**, Global Head, Portfolio Management and Innovation, Offshore Solutions, Siemens
- **Babur Ozden**, Founder & CEO, Maana
- **Helen Greiner**, Founder & CTO, CyPhy Works
- **Murat Ocalan**, Founder & CEO, Rheidiant
- **Idar Horstad**, Chief Executive Officer, Magseis
- **Jeffrey Billingham**, Vice President, Financial Markets, IHS Markit
- **Adam Boyle**, Director, Global Additive Manufacturing Operations (GAMC-Singapore), Emerson
- **Matteo Pasquali**, Professor, Chemistry, Materials Science & NanoEngineering; Department Chair, Chemistry, Rice University
- **Mark Kingsley**, Chief Executive Officer, AlionEnergy
- **Bill Brown**, CEO & CO-Founder, NET Power / 8 Rivers
- **Francesco Coletti**, Chief Technology Officer, Hexxcell

Plenary

9:00am - 10:00am

Global gas plenary

- **Simon Blakey**, Senior Associate, Energy Group (Chair), IHS Markit
- **Datuk Wan Zulkiflee Wan Ariffin**, President & Group CEO, Petroliaam Nasional Berhad (PETRONAS)
- **Charif Souki**, Chairman of the Board, Tellurian
- **Michael Stoppard**, Chief Strategist, Global Gas, Energy; CERAWEEK Vice Chairman, IHS Markit

Plenary

10:00am - 11:00am

LIVE: Whatever happened to globalization?



- **Daniel Yergin**, Vice Chairman, IHS Markit (Chair), Chairman, CERAWEEK
- **David Farr**, Chairman & CEO, Emerson
- **Hon. Jesse Norman MP**, Parliamentary Under Secretary of State, Minister for Energy and Industry, United Kingdom
- **Ulrich Spiesshofer**, Chief Executive Officer, ABB Group

Break

11:00am - 11:30am

Agora Studio

11:30am - 12:40pm

Mans + machine: The changing workforce

Today, the changing role of robotics and the accelerating rate of adoption of emerging technologies like AI are changing work from the factory floor to the corner office. The energy industry has been facing the dual challenge of aging workforce and dwindling popularity—how will they deal with these new questions?

- **Susan Kish**, Agora Curator (Chair), IHS Markit
- **David Farr**, Chairman & CEO, Emerson
- **Antonio Merlo**, George A. Peterkin Professor of Economics; Dean of the School of Social Sciences; Director of RISE, Rice University
- **Jay Timmons**, President & CEO, National Association of Manufacturers

Strategic Dialogues

11:30am - 12:40pm

Economic reform in the Middle East: Opportunities and challenges

As oil and gas producers in the Middle East assess prospects for major shifts in demand, what are their strategies for economic diversification, and what are the prospects for success? How critical are changes in domestic policies to reflect global energy prices, incentivize efficiency measures, and align national spending patterns with resource constraints? What are the risks for political unrest? Do regional wars and conflicts constrain the capacity of nations to manage their own domestic reforms?

- **Carlos Pascual**, Senior Vice President (Chair), IHS Markit
- **Samer Al-Ashgar**, President, KAPSARC
- **Mahmoud El-Gamal**, Professor of Economics and Statistics; Chair in Islamic Economics, Finance, and Management, Rice University
- **Suzanne Maloney**, Deputy Director, Foreign Policy Program; Senior Fellow, Brookings Center for Middle East Policy, Energy Security & Climate Initiative, The Brookings Institution
- **David Scott**, President, IDG

Follow the money: How do coal producers meet demand?

What role will coal play in the global energy and steel production mix of the future? Recent events have driven renewed interest in the coal industry, highlighted by a wave of IPOs. Yet financing a coal project in today's environment is deeply complex and challenging. Markets remain volatile, highlighted by the recent unexpected dramatic price increases for premium coal. Meanwhile, removing regulatory constraints on coal is high on the agenda for the new Trump administration. What are the prospects ahead for coal markets, investment, and industry strategies?

- **Jim Thompson**, Senior Director, Coal, Energy (Chair), IHS Markit
- **Michael Dudas**, Partner, Vertical Research Partners
- **Jim Griffin**, Advisor, Griffin Mining Advisors (GMA)
- **Christopher Moravec**, President, Blackhawk Mining, LLC
- **Ted O'Brien**, Senior Director of Capital Markets & Marketing, Xcoal Energy & Resources

India: The emerging energy powerhouse?

India is one of the fastest growing economies in the world. Energy is key to this growth continuing. With aspirations to reduce dependence on imported oil and gas, provide 24/7 power to every citizen, and reduce carbon emissions, the Modi government is reducing bureaucracy and incentivizing international private investments in energy infrastructure. This panel will examine the entire value chain and ask what policies are needed to accelerate energy infrastructure investments. Can gas and renewables play a bigger role in India's energy mix? Where can international companies invest and earn competitive returns?

- **Gauri Jauhar**, Director, Consulting & Research (Chair), IHS Markit
- **Atanu Chakraborty**, Director General, Directorate General of Hydrocarbons, Ministry of Petroleum & Natural Gas, India

- **Charles Ebinger**, Senior Fellow, Atlantic Council
- **Sarah Ladislaw**, Director & Senior Fellow, Energy and National Security Program, Center for Strategic & International Studies (CSIS)

Is a global liquids supply gap looming?

In 2013–16 global exploration spend fell by over 60%, while new development projects were cancelled and delayed. While US activity is rising again in 2017, many regions anticipate lower investment. The lack of investment and projected shortfalls may result in lower production outlooks post-2020. What is the potential for a global liquids supply gap or a resurgence of US unconventional, continued growth in Middle East production, and the resilience of liquids supplies from Russia and other locales?

- **Atul Arya**, Senior Vice President and Chief Energy Strategist (Chair), IHS Markit
- **Edward Daniels**, Executive Vice President, Commercial & New Business Development, Shell International Exploration and Production B.V.
- **Raghdah Hasan**, Senior Vice President, Global Business Development, Statoil
- **Juan Carlos Zepeda**, President Commissioner, Mexican National Hydrocarbons Commission (CNH)

New gas supplies

In the second half of this decade, the global gas market is expanding significantly as a new wave of supply comes online: indigenous production, pipeline gas, and most notably LNG. Beyond this, many more projects are competing to supply new gas to meet expectations of rising long-term demand. However, there are a number of challenges to bringing these developments to FID, including oversupply concerns and financing challenges. This panel will explore the drivers behind successfully delivering major new international gas projects.

- **James Taverner**, Senior Principal Researcher, Energy (Chair), IHS Markit
- **Peter Botten**, Managing Director, Oil Search Limited
- **Augusto Macuvele**, Vice President, Exploration, National Institute of Petroleum (INP)
- **Michael Smith**, Chairman, CEO & Founder, Freeport LNG
- **Guillermo Turrent**, Chief Executive Officer, CFE International (Mexico Comisión Federal de Electricidad)

North American gas demand: Go abroad or go home?

North American gas supplies remain plentiful, and market development efforts remains critical in the face of competition from renewables in the power sector, potential of cyclical weakness in export markets, and longer-term efforts to limit carbon emissions from all sources. This panel will explore the prospects for demand development, and how companies are addressing these challenges.

- **Ed Kelly**, Vice President, Energy (Chair), IHS Markit
- **Helen Currie**, Senior Economist, ConocoPhillips
- **Corey Grindal**, Senior Vice President, Gas Supply, Cheniere
- **David Tudor**, CEO & General Manager, Associated Electric Cooperative

Prospects for LNG hubs

The Atlantic traded gas hubs took about 20 years to have sufficient liquidity and depth to be a price reference point for gas and LNG traded over various forward time horizons. However, a truly liquid traded gas or LNG hub in Asia has yet to be established that would create a truly global gas market. This session explores current initiatives for LNG hubs in Asia and elsewhere and asks, Is it possible to establish a truly global gas market?

- **Chris Holmes**, Managing Director, Research & Consulting, GPR EMEA & APAC (Chair), IHS Markit
- **Peter Hartley**, George and Cynthia Mitchell Professor of Economics, Rice University
- **Kunio Nohata**, Senior Executive Officer, Tokyo Gas
- **David Thomas**, Head of LNG Development, Vitol Group
- **Andrew Walker**, Vice President, Strategy, Cheniere

The role of gas in the low-carbon transition

Gas once seemed the bridge fuel of choice. But concerns about methane emissions, pipeline leaks, fracking, and infrastructure lock-in have brought regulation and mistrust. What should be the role of gas in the future energy mix, and what are the key enablers and constraints?

- **Mary Lashley Barcella**, Director, North American Natural Gas, Energy (Chair), IHS Markit
- **Mark Brownstein**, Vice President, Climate & Energy, Environmental Defense Fund (EDF)
- **Jeff Edwards**, General Manager, Global Gas & LNG Market Development, Shell Trading and Supply
- **Nancy Meyer**, Associate Director, Energy, IHS Markit
- **Dan Reicher**, Executive Director Stanford Steyer-Taylor Center for Energy Policy & Finance, Professor, Practice of Law & Lecturer, Stanford Graduate School of Business, Stanford University

Upstream and infrastructure finance

The current low oil and gas prices have introduced new financing challenges for oil and gas upstream and midstream projects while potentially creating new opportunities. Although domestic US gas prices rose somewhat in 2016, they remain low and LNG oversupply concerns affect prospective liquefaction projects globally. With gas capex budgets being slashed and the sovereign financing capability of key gas-producing countries being reduced, this low-price environment may allow investors to develop strategies that evolve to finance tomorrow's needs and take on higher levels of risk.

- **Andy Barrett**, Senior Advisor, Global Gas & Power, Energy (Chair), IHS Markit
- **Jin-Yong Cai**, Partner, TPG Capital
- **Salim Samaha**, Partner, Global Infrastructure Partners
- **Roberto Simon**, Managing Director, Société Générale
- **Haiying Zhao**, Chief Risk Officer, China Investment Corporation

Plenary and Luncheon

12:50pm - 2:00pm

Energy dialogue

- **Daniel Yergin**, Vice Chairman, IHS Markit (Chair), Chairman, CERAWEEK
- **Patrick Pouyanné**, Chairman of the Board & CEO, TOTAL S.A.

Break

2:00pm - 2:10pm

Plenary

2:10pm - 3:00pm

North America's E&P future

- **Daniel Yergin**, Vice Chairman, IHS Markit (Chair), Chairman, CERAWeek
- **Harold Hamm**, Chairman & CEO, Continental Resources, Inc.
- **Jeff Ventura**, Chairman, President & CEO, Range Resources
- **R.A. Walker**, Chairman, President & CEO, Anadarko

Plenary

3:00pm - 3:45pm

The global LNG future

- **Michael Stoppard**, Chief Strategist, Global Gas, Energy; CERAWeek Vice Chairman (Chair), IHS Markit
- **Anatol Feygin**, Executive Vice President & Chief Commercial Officer, Cheniere
- **Yuji Kakimi**, President, JERA Co., Inc.
- **B.C. Tripathi**, Chairman & Managing Director, GAIL (India) Limited

Plenary

3:45pm - 4:15pm

Leadership dialogue

- **Daniel Yergin**, Vice Chairman, IHS Markit (Chair), Chairman, CERAWeek
- **John Watson**, Chairman & CEO, Chevron

Plenary

4:15pm - 4:40pm

Ministerial dialogue

- **Carlos Pascual**, Senior Vice President (Chair), IHS Markit
- **Hon. James Gordon Carr**, Minister of Natural Resources, Canada

Plenary

4:40pm - 5:05pm

Ministerial dialogue

- **Carlos Pascual**, Senior Vice President (Chair), IHS Markit
- **Hirohide Hirai**, Director-General, Ministry of Economy, Trade and Industry (METI), Japan

Break

5:05pm - 5:30pm

Agora Studio

5:20pm - 6:20pm

⚙️ AI, machine learning, and energy: An explosive combination

In an increasingly complex world, generating nearly 50,000 GB of data per second, artificial intelligence (AI) and machine learning (ML) offer the mechanism by which data and complexity can be unraveled to gain insight. Join us for an interactive discussion to both demystify AI & ML and explore how they affect your world today and how they might affect your world tomorrow?

- **John Larson**, Vice President, Advanced Analytics Group (Chair), IHS Markit
- **Alec Gruss**, Principal Data Scientist, Digital Factory Division, Siemens
- **Yaacov Mutnikas**, Executive Vice President, Financial Market Technologies, IHS Markit

Concurrent Plenaries

5:30pm - 6:20pm

Natural gas and its markets

- **Robert Ineson**, Managing Director, Energy (Chair), IHS Markit
- **James Fitterling**, President & Chief Operating Officer, The Dow Chemical Company
- **Colette Honorable**, Commissioner, Federal Energy Regulatory Commission
- **Edward Monser**, President, Emerson

Energy and the future of mobility

- **James Burkhard**, Chief Researcher, Global Oil Markets & Energy Scenarios, Energy; CERAWEEK Vice Chairman (Chair), IHS Markit
- **Lawrence Burns**, Business Advisor; Former General Motors Corporate Vice President of R&D & Planning
- **Tiffany Groode**, Senior Director, Energy, IHS Markit
- **Greg Scheu**, President, Americas Region, ABB Group

Conference-wide Reception and Dinner

6:30pm - 9:00pm

Reception

Dinner

Thursday March 9

Agora Studio

7:30am - 8:40am

⚙️ Next door—The connected home of the future**centrica**

New devices and connected technologies are transforming how customers interact with energy. These technologies, in combination with artificial intelligence deep learning, are opening new possibilities for consumers to interact and control home appliances, as well as manage energy. These same devices also provide companies with unprecedented visibility in how their products interact with users, electricity providers, and other home appliances. Will this convergence of energy, hardware, and technology lead to the breakthrough that finally enables consumers to become active participants in the energy value chain? How will this impact traditional energy providers? What are the emerging strategies and changing relationships among retail energy, telecommunications, hardware, and technology service providers?

- **Roger Kranenburg**, Senior Director, Global Power and Innovation (Chair), IHS Markit
- **Mateo Jaramillo**, Former Vice President, Tesla Energy Products
- **Eric Krauss**, Global Product Director, Connected Home, Accenture
- **Roy Vella**, VP/GM, Connected Home North America, Centrica

Breakfast & Strategic Dialogues

7:30am - 8:40am

Coal's evolving role in Asia's power future

Economic development and expanding energy access are driving Asian power demand, while energy affordability remains paramount to fuel choices, causing many Asian countries to rely on coal-fired power additions to boost supply. Some markets that traditionally relied on natural gas or hydro face challenges ramping up these fuels, creating a large opening for coal in countries such as Vietnam, the Philippines, and Pakistan. Other coal-dependent markets, such as India, Indonesia, Malaysia, and China, continue to see coal as a critical fuel. What are the future drivers and challenges for coal use in power?

- **James Ooi**, Senior Director, Global Gas & Power (Chair), IHS Markit
- **Xiaodong Xu**, Vice President, EPPEI
- **Pham Quang Huy**, Deputy Director General, Electricity Regulatory Authority of Vietnam
- **Young Ju Kim**, General Manager Clean Power Generation Lab, Korea Electric Power Corporation (KEPCO)
- **Ernie Thrasher**, CEO & Chief Marketing Officer, Xcoal Energy & Resources

European power markets: The market design and climate imperative

Europe has transitioned further toward a lower carbon future than other developed economies. The power sector has seen the greatest transformation, adding over 130 GW of renewables and severely challenging the profitability of thermal assets. A number of governments are now implementing different forms of capacity support to ensure the security of power supply. Europe is also considering the options to meet the 2030 targets defined in 2015, but what are the options for Europe's new power market design? What design is best suited to the low demand, high renewable power market that is developing in Europe? What future investment will be required to meet Europe's climate goals and ensure security of supply?

- **Catherine Robinson**, Senior Director, Energy (Chair), IHS Markit
- **Frédéric Godemel**, SVP, Energy Business, Schneider Electric
- **Jesper Haarh**, Director, Head of Corporate Strategy, DONG Energy
- **Holger Lösch**, Member of the Executive Board, BDI e.V.
- **Thomas Pieper**, Head of Commercial Analysis & Global Strategies, RWE Supply & Trading GmbH

Texas power: The pace of change

Texas electricity markets are being transformed by technology, economics, and policy. The rapidly shifting landscape has broad implications for policymakers and stakeholders. This session will engage with energy leaders directly involved in shaping the future of the region's power market.

- **Michael Pickens**, Associate Director, Energy (Chair), IHS Markit
- **Manu Asthana**, President, Direct Energy Home
- **Toby Baker**, Commissioner, Texas Commission on Environmental Quality
- **Paula Gold-Williams**, President & CEO, CPS Energy
- **Barry Smitherman**, Adjunct Professor of Energy Law, UT Law School

The future of solar

Solar PV will account for nearly half of the over 3,000 GW of new gross renewables capacity to be added by 2040. With costs declining at a faster pace than other competing generation sources, solar PV emerges as a key technology for utility scale, distributed generation, self-consumption, and off-grid electrification. What opportunities will growth of solar PV bring to developers, owners, and consumers?

- **Eduard Sala de Vedruna**, Senior Director, Power and Renewables (Chair), IHS Markit
- **Sam Arons**, Lead, Energy & Infrastructure, Google Inc.
- **Jim Hughes**, Chairman of the Board of Directors, Eos Energy Storage
- **Mike O'Sullivan**, Senior VP, Development, NextEra Energy Resources
- **Tom Werner**, President & CEO, SunPower

The new panorama of Latin America power

Traditionally dependent on large hydro and thermal backup, Latin America has begun to diversify its generation mix. Renewables, including wind and solar, are becoming dominant in auctions across the region. Meanwhile fewer large hydro sites and their difficult development conditions mean the need for more flexible backup is becoming increasingly dire. New sources for dispatchable thermal, including shale, LNG, and offshore production, will play a key role. How will the region balance its vast potential for renewables with the need for additional stability and flexibility for its power grid?

- **Timothy Stephure**, Director, Latin American Energy (Chair), IHS Markit
- **Doris Capurro**, President & CEO, LUFT Energia
- **César Emiliano Hernández Ochoa**, Deputy Secretary of Energy for Electricity, Ministry of Energy of Mexico
- **Vincent Petit**, Energy Automation Senior Vice President, Schneider Electric

Energy Innovation Pioneers

7:30am - 8:40am

Powering lower costs through innovation

Innovations reducing the cost of renewables and storage are enabling their increased penetration into existing markets, such as the power sector, as well as new markets, such as transportation. Low fuel prices further underscore the critical importance of innovation enabling startups to compete against incumbents. This panel explores how entrepreneurs harness innovation to navigate these challenges and bring new technologies and applications to market. Meet members from the 2017 class of Energy Innovation Pioneers.

- **Alex Klaessig**, Associate Director, Energy (Chair), IHS Markit
- **Thomas Healy**, CEO & Founder, Hylilion
- **Mark Kingsley**, Chief Executive Officer, AlionEnergy
- **Steve Scharnhorst**, Chief Executive Officer, Fluidic Energy
- **Joshua Wong**, Founder & CEO, Opus One Solutions

Plenary

8:50am - 9:20am

LIVE: Opening dialogue

- **Daniel Yergin**, Vice Chairman, IHS Markit (Chair), Chairman, CERAWeek
- **Ben van Beurden**, Chief Executive Officer, Royal Dutch Shell plc

Plenary

9:20am - 10:15am

Shaping the electricity future

- **Lawrence Makovich**, Vice President and Senior Advisor, Energy; CERAWeek Vice Chairman (Chair), IHS Markit
- **Lynn Good**, Chairman, President & CEO, Duke Energy
- **Isabelle Kocher**, Chief Executive Officer, Engie
- **Pedro Pizarro**, President & CEO, Edison International

Plenary

10:15am - 11:00am

Electric power transition: Global strategies

- **Daniel Yergin**, Vice Chairman, IHS Markit (Chair), Chairman, CERAWeek
- **Jean-Bernard Lévy**, CEO & Chairman, Électricité de France (EDF)
- **Peter Terium**, Chief Executive Officer, innogy SE

Agora Exploration Pods

10:30am - 6:30pm

⚙️ Exploration Pod Sessions

Visit the Agora Exploration Pods on Level 4 for interactive presentations by Energy Innovation Pioneers and technology leaders. For more information on the timing and topic of Exploration Pod sessions, please refer to the Agora Program Guide.

- **Dae Young Kim**, General Manager, Korea Electric Power Corporation (KEPCO)
- **Joshua Wong**, Founder & CEO, Opus One Solutions
- **Thomas Healy**, CEO & Founder, Hylilion
- **Daniel Diehl**, Chief Executive Officer, Aircuity
- **Roy Vella**, VP/GM, Connected Home North America, Centrica
- **Steve Scharnhorst**, Chief Executive Officer, Fluidic Energy

- **Geoffroy Lacoïn**, Chief Executive Officer, Omnisens SA
- **Eugene Toh**, Director, Policy and Planning, Energy Market Authority of Singapore
- **Sudeep Maitra**, Global Director, Strategy, Centrica
- **Matt Wheatley**, Vice President, Sales & Commercial, NA Distributed Energy, Centrica plc
- **C. Fred Higgs**, Professor of Mechanical Engineering, Rice University

Break

11:00am - 11:25am

Agora Studio

11:25am - 12:35pm

⚙️ Next city—Power and mobility in the metropolis

Greater penetration of electric vehicles is transforming traditional paradigms for managing power demand. Because electric vehicles are mobile and have the ability to draw and inject power into the grid, utilities are being forced to rethink how they deliver power and the commercial mechanisms available to recover their costs. How will these technologies reshape the city of the future?

- **Roger Kranenburg**, Senior Director, Global Power and Innovation (Chair), IHS Markit
- **Bryan Cox**, Director of Transmission and Distribution Operations, Avista
- **Andy Icken**, Chief Development Officer, City of Houston
- **Anders Sjoelin**, Head of Power Grids Division USA and North America, ABB Group
- **Stephen Zoepf**, Executive Director, Center for Automotive Research at Stanford, Stanford University

Strategic Dialogues

11:25am - 12:35pm

Distributed resources: Generation, demand-side flexibility, and storage

Distributed energy resources (DERs)—including solar, battery storage, and load management technology—have been heralded as an inexorable evolution of the power grid, and a range of companies are experimenting with new business models built around these options. We are seeing the birth of a new wave of energy services companies (ESCOs) that have evolved substantially since the decades-old ESCO model. Still, most DER deployment remains dependent on policy support, such as net energy metering, leading to intensifying political debates over cost and value. What are the policy, technology, and economic factors shaping the distributed energy landscape?

- **Meg McIntosh**, Senior Director (Chair), IHS Markit
- **Eric Bradley**, Senior Vice President, Engie North America, Engie
- **Claudio Facchin**, President, Power Grids Division, ABB Group
- **Jesse Jenkins**, PhD Candidate and Researcher, MIT
- **Sergej Mahnovski**, Director, Strategic Planning, Edison International

Developing markets: Powering economic development

This Strategic Dialogue will examine the choices of approaches to drive power system development and electricity access in developing countries as a key facilitator of economic growth and poverty reduction. Government, developer, and donor stakeholders will discuss a range of issues, including making critical choices between state and private ownership along the supply chain, between fuels and technologies, and between grid-based and off-grid solutions. What are the changing roles for interconnections and joint country projects?

- **Andy Barrett**, Senior Advisor, Global Gas & Power, Energy (Chair), IHS Markit
- **Dev Jagadesan**, Acting President & CEO, OPIC
- **Hon. James Musoni**, Minister of Infrastructure, Rwanda
- **Robert Stoner**, Deputy Director for Science & Technology, MIT

Electric market structure: Balancing multiple objectives

North American power systems are responding in a variety of ways to the challenge of implementing the right mix of market forces and regulatory processes to shape power sector outcomes. What is ahead for the evolution of power industry structures in North America?

- **Douglas Giuffre**, Director, Energy (Chair), IHS Markit
- **Linda Blair**, President & CEO, ITC Holdings Corp.
- **Andrew Ott**, President & CEO, PJM Interconnection
- **Robert Powelson**, Commissioner, Pennsylvania Public Utility Commission, National Association of Regulatory Utility Commissioners (NARUC)
- **Gordon van Welie**, President & CEO, ISO New England Inc.

Competitive generation: Learning curve or winner's curse

The track record of building competitive electric generating plants involves financial losses and bankruptcy reorganizations. Over the past 18 months, competitive generators have lost half of their market value while power plants have been selling at a 50% discount to replacement costs. Yet, capital continues to flow into these businesses. Will the future be different based upon lessons learned, or is the winner's curse an ongoing characteristic of the competitive generation business?

- **Parker Littlehale**, Associate Director, Energy (Chair), IHS Markit
- **Carolyn Burke**, Executive Vice President, Strategy, Dynegy Inc.
- **Jonathon Kaufman**, Managing Director, Credit Suisse
- **Robert Mancini**, Partner-Managing Director & Co-Head, Carlyle Power Partners
- **Bill Mohl**, Retired President, Entergy Wholesale Commodities, Entergy Corporation
- **Ray Spitzley**, Managing Director, Head of Merchant Energy, Global Power & Utility Group, Morgan Stanley

Future of the global renewables market

Renewables are projected to be the fastest growing source of new power generating capacity through 2040, accounting for half of the net new generation capacity added globally. This growth will be driven by continued policy support at a global level and technology cost reductions resulting in an increasingly distributed opportunity. Which markets offer the greatest growth opportunities? What will be the role of distributed generation and off-grid electrification in different markets? How will players capture an increasingly atomized opportunity?

- **Eduard Sala de Vedruna**, Senior Director, Power and Renewables (Chair), IHS Markit
- **Laura Folse**, CEO BP Wind Energy, BP
- **Tristan Grimbert**, President & CEO, EDF Renewables Energy
- **Francesco Venturini**, Enel Green Power CEO, Enel Green Power Spa
- **Changjun Xie**, Executive Vice President, Guodian Group

The 2016 price boom: Does this change the outlook for global coal?

The international steam coal market's changing dynamics are moving closer to being in a position of rebalancing with higher prices. This session will focus on 2016's high prices and how the market responded. What conclusions can be drawn about the real proximity of a balanced market and on the market's ability to respond to it when it comes?

- **John Howland**, Senior Director, Publications and Indexes, Energy (Chair), IHS Markit
- **Howard Gatiss**, President (Chair), CMC - Coal Marketing
- **John Massey**, Head of US Coal and Natural Gas Trading, Engelhart Commodity Trading Partners
- **Ted O'Brien**, Senior Director of Capital Markets & Marketing, Xcoal Energy & Resources
- **James Stevenson**, Director, North American Coal, Energy, IHS Markit

Plenary and Luncheon

12:45pm - 2:00pm

Environmental policy dialogue

- **Daniel Yergin**, Vice Chairman, IHS Markit (Chair), Chairman, CERAWEEK
- **Scott Pruitt**, Administrator, U.S. Environmental Protection Agency

Break

2:00pm - 2:10pm

Plenary

2:10pm - 3:10pm

Powering a new energy future

- **Carlos Pascual**, Senior Vice President (Chair), IHS Markit
- **Ignacio S. Galán**, Chairman & CEO, Iberdrola
- **Jaime Francisco Hernández Martínez**, Chief Executive Officer, Comisión Federal de Electricidad
- **Jean-Pascal Tricoire**, Chairman & CEO, Schneider Electric

Plenary

3:10pm - 4:05pm

Global nuclear power: What lies ahead?

- **Jone-Lin Wang**, Vice President, Power and Renewables (Chair), IHS Markit
- **John Hopkins**, Chairman & Chief Executive Officer, NuScale Power, Chairman of the Board of Directors, U.S. Chamber of Commerce
- **Maria Korsnick**, President & CEO, Nuclear Energy Institute
- **Daniel Poneman**, President & CEO, Centrus Energy
- **Jay Wileman**, President & CEO, GE Hitachi Nuclear Energy, GE

Plenary

4:05pm - 4:50pm

Fuel choices and technologies for tomorrow's power business

- **Atul Arya**, Senior Vice President and Chief Energy Strategist (Chair), IHS Markit
- **Lord Browne of Madingley**, Executive Chairman, L1 Energy
- **Judy Marks**, CEO, Siemens USA, Siemens

Break

4:50pm - 5:15pm

Agora Studio

5:00pm - 6:15pm

⚙️ Next grid—Will the real digital power grid stand up?

Cost reductions in sensors, increased reliability in high performance networks, and advanced computational capability is enabling ubiquitous deployment of these technologies in the power sector. The potential for incredible opportunities to unlock and create new value for consumers, electricity providers, service companies, and OEMs is widely recognized. What will it take to capture these opportunities?

- **Roger Kranenburg**, Senior Director, Global Power and Innovation (Chair), IHS Markit
- **Claudio Facchin**, President, Power Grids Division, ABB Group
- **Jim Hughes**, Chairman of the Board of Directors, Eos Energy Storage
- **Dan Oginsky**, Executive Vice President & Chief Administrative Officer, ITC Holdings Corp.
- **Robert Powelson**, Commissioner, Pennsylvania Public Utility Commission, National Association of Regulatory Utility Commissioners (NARUC)

IHS Markit Expert Discussions

5:15pm - 6:15pm

IHS Markit outlook for fuel prices and interfuel competition

The end of the great commodity supercycle has left excess supply across the entire energy spectrum and set up a global race to the bottom featuring inter- and intrafuel rivalries with significant economic and geopolitical ramifications. IHS Markit experts will explore the key issues, rivalries, and price expectations for natural gas, oil, coal, and LNG globally.

This session is closed to the media.

- **Samuel Andrus**, Senior Director, Energy (Chair), IHS Markit
- **Catherine Robinson**, Senior Director, Energy, IHS Markit
- **James Stevenson**, Director, North American Coal, Energy, IHS Markit
- **Gautam Sudhakar**, Director, Global LNG, IHS Markit
- **Paul Tossetti**, Senior Director, Energy, IHS Markit
- **Jack Weixel**, Vice President, Analysis - PointLogic Energy, OPIS, IHS Markit

India and China: A tale of two power markets

China and India share many traits, including being the two most populated countries in the world, with economic growth outpacing the global average and large power markets undergoing market reforms to increase efficiency and address climate change. However, key differences include electrification levels, grid reliability, and approaches to controlling climate change, making it important to analyze each country's market fundamentals. In this session, IHS Markit experts will share their insights on the different drivers leading to divergent routes to power market development and outline key risks and opportunities for market participants along the value chain.

This session is closed to the media.

- **Jenny Yang**, Manager, China Oil and Gas Service (Chair), IHS Markit
- **Gauri Jauhar**, Director, Consulting & Research, IHS Markit
- **Xiaomin Liu**, Associate Director, China Coal and Power, Energy, IHS Markit
- **Xizhou Zhou**, Senior Director, Research, IHS Markit

Latin America gas and power markets: What's next?

Latin American faces several power market challenges, including weakening demand, meeting renewable energy targets, and advancing viable, new LNG-to-wire developments across the region. This session will focus on these issues and other emerging opportunities in the gas and power sectors across Latin America.

This session is closed to the media.

- **Timothy Stephure**, Director, Latin American Energy (Chair), IHS Markit
- **David Crisostomo**, Associate Director, Energy, IHS Markit
- **Gabriel Fernandes**, Associate, Latin America Gas & Power, IHS Markit
- **Roberto Ferreira da Cunha**, Associate Director, Latin America Gas & Power, Energy, IHS Markit
- **Etienne Gabel**, Director, Latin America Gas & Power, IHS Markit
- **Emanuel Simon**, Associate Director, Latin America, Energy, IHS Markit

North American power trends and scenarios

The US electric power sector's transformation is underway. The confluence of rapidly evolving renewable energy technology, low fuel prices, and uncertainty in environmental and energy policy is creating an incredible risk landscape in North America's power markets. IHS Markit's Energy experts will share their views on key federal and state policies and associated implications, technology advancements, and market fundamentals that will shape the power sector in the decade ahead.

This session is closed to the media.

- **Mark Griffith**, Senior Research Director, Energy, IHS Markit
- **Douglas Giuffre**, Director, Energy, IHS Markit
- **Ed Kelly**, Vice President, Energy, IHS Markit
- **Meg McIntosh**, Senior Director, IHS Markit

North American shale gas supply

The North American shale gas resource base continues to expand and drop in cost. Shale Gas Reloaded, IHS Markit Energy's reassessment of the North American resource base, concludes that 1,400 Tcf of natural gas is recoverable at a breakeven Henry Hub price of \$4/MMBtu or less. This represents a 66% increase from our 2010 estimate that more than 900 Tcf could be produced at a \$4/MMBtu breakeven price, after accounting for the 176 Tcf of gas produced during 2010-15. What are the long-term producer and consumer implications for North American and global natural gas markets?

This session is closed to the media.

- **Raoul LeBlanc**, Managing Director, Energy (Chair), IHS Markit
- **Stephen Beck**, Head of North America Oil and Gas Supply Forecasting, IHS Markit
- **Keith McWhorter**, Associate, Energy, IHS Markit
- **Matthew Piatek**, Associate Director, North American Natural Gas, IHS Markit
- **Curtis Smith**, Director Consulting, Energy, IHS Markit

Global renewables—Technology, policy, and market

Renewables are projected to be the fastest growing source of new power generating capacity through 2040, accounting for nearly half of the gross generation capacity added globally and 35% of all new electricity generated globally. Continued policy support and technology developments will play a key role in this process. What are the key policies, technology advancements, and market fundamentals that will shape the development of renewables globally?

This session is closed to the media.

- **Eduard Sala de Vedruna**, Senior Director, Power and Renewables (Chair), IHS Markit
- **Ankita Chauhan**, Analyst, Global Renewables Team, IHS Markit
- **Max Cohen**, Senior Research Analyst, Energy, IHS Markit
- **Magnus Dale**, Senior Analyst, Energy, IHS Markit
- **Gaël Hankus**, Senior Analyst, Power, Gas, Coal and Renewables, IHS Markit
- **Thomas Maslin**, Associate Director, Renewable Power, Energy, IHS Markit
- **Jing Wang**, Associate, China Gas, Power, Coal and Global Renewables, IHS Markit

Conference-wide Reception

6:20pm - 7:30pm

Level 2 – Foyer

Dinner and dialogue

7:30pm - 9:00pm

LIVE: Dialogue

- **Daniel Yergin**, Vice Chairman, IHS Markit (Chair), Chairman, CERAWEEK
- **Rt. Hon. Justin Trudeau**, Prime Minister, Minister of Intergovernmental Affairs & Minister of Youth, Canada

Friday March 10

Breakfast & Dialogue

7:30am - 8:30am

Reflections on CERAWeek 2017: Where do we go from here?

- **Atul Arya**, Senior Vice President and Chief Energy Strategist (Chair), IHS Markit
- **Antonia Bullard**, Vice President, Energy, IHS Markit
- **Roger Diwan**, Vice President, Financial Services, IHS Markit
- **Paul Markwell**, Vice President, Energy, IHS Markit
- **Shankari Srinivasan**, Vice President, Energy, IHS Markit
- **Jone-Lin Wang**, Vice President, Power and Renewables, IHS Markit

Plenary

8:30am - 9:20am

LIVE: The US and the world: The new geopolitics

- **Carlos Pascual**, Senior Vice President (Chair), IHS Markit
- **Nicholas Eberstadt**, Henry Wendt Chair in Political Economy, American Enterprise Institute
- **Evan Feigenbaum**, Vice Chairman, Paulson Institute
- **Meghan O'Sullivan**, Kirkpatrick Professor of the Practice of International Affairs; Director of the Geopolitics of Energy Project, Harvard University Kennedy School
- **Angela Stent**, Director of the Center for Eurasian, Russian and East European Studies; Professor of Government and Foreign Service, Georgetown School of Foreign Service

Break

9:20am - 9:35am

Plenary

9:35am - 10:20am

What's ahead in Washington?

- **Daniel Yergin**, Vice Chairman, IHS Markit (Chair), Chairman, CERAWeek
- **John Cornyn**, Majority Whip, United States Senate, Texas
- **Lisa Murkowski**, Chairman, US Senate Energy and Natural Resources Committee

Plenary

10:20am - 11:05am

Climate and energy strategies post-Paris

- **Carlos Pascual**, Senior Vice President (Chair), IHS Markit
- **Mohamed Jameel Al Ramahi**, Chief Executive Officer, Masdar
- **Rachel Kyte**, Chief Executive Officer and Special Representative of the UN Secretary-General, Sustainable Energy for All (SEforALL)

- **Laurence Tubiana**, President & CEO European Climate Foundation, ECF
- **Maria Zuber**, Vice President for Research, MIT

Plenary

11:05am - 11:45am

Envisioning the new energy economy

- **Atul Arya**, Senior Vice President and Chief Energy Strategist (Chair), IHS Markit
- **Gary Demasi**, Director, Data Center Energy and Location Strategy, Google Inc.
- **Jonah Goldman**, Senior Advisor, Public Affairs, Breakthrough Energy Ventures

Plenary

11:45am - 12:40pm

Frontiers of science and innovation: Future technologies to meet the energy and climate challenge

- **Daniel Yergin**, Vice Chairman, IHS Markit (Chair), Chairman, CERAWeek
- **Robert Armstrong**, Director, MIT Energy Initiative, Chevron Professor of Chemical Engineering, MIT
- **David Keith**, Mitsui Career Development Professor & Assistant Professor of System Dynamics, MIT Sloan School of Management
- **Michael Strano**, Carbon P. Dubbs Professor in Chemical Engineering, MIT
- **Troy Van Voorhis**, Haslam and Dewey Professor of Chemistry, MIT

Plenary

12:40pm - 1:15pm

LIVE: Where next for industrial America?

- **Daniel Yergin**, Vice Chairman, IHS Markit (Chair), Chairman, CERAWeek
- **Andrew Liveris**, Chairman & Chief Executive Officer, The Dow Chemical Company

Networking Lunch

1:15pm - 2:15pm

Luncheon