

Perspectives on the **Future of Oil and Gas**
presented by the Payne Institute for Public Policy
Tuesday, November 5, 2019
Colorado School of Mines

Day at a Glance

- 10:45am - Registration opens
- 10:50am - Welcome
- 11:00am - Scenarios: What is the Future of Energy?
- 11:45am - Networking Break
- 12:00pm - Implications for Geopolitics & Industry
- 12:45pm - Closing

As the world confronts an energy transition, the global energy system is being re-imagined and the role of oil and natural gas in that transition is not entirely clear. Governments are pursuing increasingly ambitious initiatives to reduce greenhouse gas emissions and diversify their energy economies. While the world is facing significant energy demand growth from emerging and developing economies, the dual pressures of reducing their carbon footprint, while also providing the necessary resources to fuel energy growth creates complexity for the oil and gas industry.

Agenda (to be held at the CO School of Mines Ben H. Parker Student Center Grand Ballroom - 1620 Maple Street, Golden, CO)

- 10:45am Registration Opens
- 10:50am Welcome by Morgan Bazilian, Director, Payne Institute for Public Policy
to
11:00am
- 11:00am Scenarios: What is the Future of Energy
to
Wim Thomas
11:45am Chief Energy Advisor at Shell
&
Eirik Wærness
Senior Vice President and Chief Economist, Equinor
- 11:45am Networking Break
to
12:00pm
- 12:00pm Implications for Geopolitics & Industry
to
Andreas Goldthau
12:45pm Professor, International Relations, Royal Holloway University of London
&
Amy M. Jaffe
David M. Rubenstein Senior Fellow for Energy and the Environment and Director of the Program on Energy Security and Climate Change, Council on Foreign Relations
&
Sarah Ladislav
Senior Vice President; Director and Senior Fellow, Energy and National Security Program, Center for Strategic and International Studies
- 12:45pm Closing Remarks - Morgan Bazilian, Director, Payne Institute for Public Policy
to
1:00pm
- Host Organizations

Speaker Biographies

11:00am Policy Scenarios: What is the Future of Energy
to
11:45am



Wim Thomas
Chief Energy Advisor, Shell

Wim is Chief Energy Advisor and leads the Energy Analysis practice in Shell. His team is also responsible for Shell's long-term global energy scenarios, informing Group Strategy.

He has been with the Shell Group for some 33 years, with prior positions in drilling operations, subsurface reservoir management and commercial and regulatory affairs in gas.

Wim is chairman of the UK national committee of the World Petroleum Council and is a former chairman of the British Institute of Energy Economics. He holds a postgraduate degree in Maritime Technology from Delft University in The Netherlands.

Wim has been in his current role for the past 14 years, and also heads up the Energy Analysis Team in Shell's Global Scenario Group. He leads a team responsible for worldwide energy analysis and long-term global energy scenarios, and advises Shell companies on a wide range of energy issues, including global supply and demand, regulations, energy policy, markets, pricing and industry structure.



Eirik Wærness
Senior Vice President and Chief Economist, Equinor

Eirik Wærness is senior vice president and chief economist at Equinor, group responsible for macroeconomics, energy and commodity market analyses. He is also head of strategy in mid- and downstream. He leads a group of ~55 analysts in four locations.

Wærness has broad experience, from government, academics and private sector companies, to an advisor in different leadership positions. In addition to his current role at Equinor, he is the leader of corporate strategy, corporate planning and analysis, economic analysis in upstream Norway, and energy market analysis.

His previous work experience includes the Centre for Applied Research at the Norwegian School of Economics, Norwegian Ministry of Finance, Total E&P Norway, and Pöyry Management Consulting/Econ Centre for economic analysis, as well as research experience from University of California, San Diego.

He is currently a non-executive member of the Board of Innovation, Norway, and a member of the Global Commission to examine Geopolitics of Energy Transformation, set up by the International Renewable Energy Agency, as well as non-executive member of the Board of Centre for applied research at the Norwegian School of Economics. From July 2016 until February 2018, he served as a non-executive member of the Board of the Norwegian Financial Supervisory Authority (Finanstilsynet).

He has served in different energy initiatives under the World Economic Forum, including special advisor for their work on energy architecture and member of the global council on the future of energy. From 2010-2013, he was a member of the executive board of the Central Bank of Norway.

He holds a master degree (cand.polit.) in economics from the University of Bergen, with a major in comparative politics. He has additional education from Concordia College in Minnesota, as well as executive management training from IMD, Lausanne, Switzerland, and Harvard University, Boston, Massachusetts.

[Speaker Biographies continued](#)

12:00pm Implications for Geopolitics & Industry
to
12:45pm



Andreas Goldthau
Professor, International Relations, Royal Holloway University of London

Dr. Andreas Goldthau is professor in international relations at Royal Holloway University of London where he also serves as the director of the Centre of International Public Policy, and associate with the Geopolitics of Energy Project at Harvard University's Belfer Center for Science and International Affairs. Prior to joining Royal Holloway, Goldthau worked as professor at Central European University's School of Public Policy, as adjunct professor at John Hopkins' MSc program in energy policy and climate, and as a transatlantic postdoc fellow in international relations and security with the Paul Nitze School of Advanced International Studies at Johns Hopkins University, the RAND Corporation and the German Institute for International and Security Affairs.

Goldthau's academic interests focus on energy security and global governance issues related to oil and gas. His publications include *The Politics of Shale Gas in Eastern Europe*, *Energy Security, Contested Technologies and the Social License to Frack* (Cambridge University Press, 2018), the *Handbook of the International Political Economy of Energy and Natural Resources* (Edward Elgar 2018), *Energy Union. Europe's new Liberal Mercantilism?* (Palgrave 2016), *A Liberal Actor in a Realist World: The EU Regulatory State and the Global Political Economy of Energy* (Oxford University Press, 2015), *The Global Energy Challenge: Environment, Development and Security* (Palgrave Macmillan, 2015), the *Wiley Handbook on Global Energy Policy* (Wiley Blackwell, 2013), *Dynamics of Energy Governance in Europe and Russia* (Palgrave, 2012), *Global Energy Governance: The New Rules of the Game* (Brookings Press, 2010), *Imported Oil and US National Security* (RAND, 2009) and *OPEC* (Hanser, 2009).



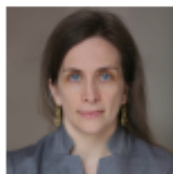
Amy M. Jaffe
David M. Rubenstein Senior Fellow for Energy and the Environment and Director of the Program on Energy Security and Climate Change

Amy Myers Jaffe is the David M. Rubenstein senior fellow for energy and the environment and director of the program on Energy Security and Climate Change at the Council on Foreign Relations. A leading expert on global energy policy, geopolitical risk and energy and sustainability, Jaffe previously served as executive director for energy and sustainability at the University of California, Davis and senior advisor for energy and sustainability at Office of the Chief Investment Officer of the University of California, Regents. She was also formerly a global fellow at the Woodrow Wilson International Center for Scholars. Prior to joining the University of California, Davis, Jaffe served as founding director of the Energy Forum at Rice University's James A. Baker III Institute for Public Policy and its Wallace S. Wilson fellow for energy studies. She has taught energy policy, business, and sustainability courses at Rice University, University of California, Davis, and Yale University.

Jaffe is widely published, including as co-author of *Oil, Dollars, Debt and Crises: The Global Curse of Black Gold* with Mahmoud El-Gamal and co-editor of *Natural Gas and Geopolitics from 1970 to 2040*. She is chair of the steering committee of the Women in Energy Initiative at Columbia University's Center for Global Energy Policy. A frequent media commentator on energy and climate change, Jaffe is President-Elect of the U.S. Association for Energy Economics and a member of the carbon capture and sequestration task group of the U.S. National Petroleum Council. She formerly served as a member of the World Economic Forum's (WEF) global future council on international security and chair of the Global Agenda Council on the Future of Oil and Gas, which published a study on implications of peak oil demand, at the WEF. Jaffe was awarded the Senior Fellow award from the United States Association for Energy Economics in 2015 for her career contributions to the organization and to the field of energy economics. Jaffe's blog "Energy Realpolitik" delves into the underlying forces shaping global energy.

Speaker Biographies continued

12:00pm Implications for Geopolitics & Industry (continued)
to
12:45pm



Sarah Ladislav
Director and Senior Fellow, Energy and National Security Program, CSIS

Sarah Ladislav is senior vice president and director and senior fellow of the Energy and National Security Program, where she leads CSIS's work in energy policy, market, and technology analysis. Ladislav is an expert in U.S. energy policy, global oil and natural gas markets, and climate change. She has authored numerous publications on the geopolitics of energy, energy security and climate change, low-carbon pathways, and a wide variety of issues on U.S. energy policy, regulation, and market dynamics. Her regional energy work includes publications on Chinese, European, African, and Western Hemisphere energy issues. She has spearheaded new work at CSIS on climate change, the electricity sector, and energy technology development.

Ladislav formerly worked in Office of the Americas in the Department of Energy's Office of Policy and International Affairs, where she covered a range of economic, political, and energy issues in North America, the Andean region, and Brazil. While at the department, she also worked on comparative investment frameworks and trade issues, as well as biofuels development and use both in the Western Hemisphere and around the world. She also spent a short period of time working Statoil as their senior director for international affairs in the Washington office. Ladislav is frequently invited to speak at public conferences, advise companies and policymakers, and testify before congress. She is a member of the National Renewable Energy Laboratory's Strategic Analysis Technical Review Panel, the Strategic Advisory Council for Georgia Tech's Strategic Energy Initiative, and a term member of the Council on Foreign Relations. She has taught graduate courses on energy security as an adjunct professor at the George Washington University and is a frequent guest lecturer at other universities. She also comments frequently in print, radio and television media outlets. Ladislav received her bachelor's degree in international affairs/East Asian studies and Japanese from the George Washington University and her master's degree in international affairs/international security from the George Washington University as part of the Presidential Administrative Fellows Program.