



INTERNATIONAL ENERGY FORUM



FIRST IEF-IRENA SEMINAR ON RENEWABLES AND CLEAN ENERGY TECHNOLOGY OUTLOOKS

A CONVERSATION ON THE FUTURE OF ENERGY

In collaboration with



Thursday 20 February 2020
IEF Secretariat, Riyadh, Saudi Arabia

Invitation

The Secretary General of the International Energy Forum (IEF), the Director-General of the International Renewable Energy Agency, and the President of the King Abdullah Petroleum Studies and Research Center (KAPSARC) invite you to participate in the First IEF-IRENA Seminar on Renewables and Clean Energy Technology Outlooks; a conversation on the future of energy hosted in co-operation with KAPSARC.

Dialogue will deepen understanding of the role renewable and clean energy technology play in energy outlooks and advance the producer-consumer dialogue on energy security and orderly transitions towards a sustainable world.

The event will take place on 20 February 2020 at the IEF Headquarters in Riyadh and builds on the dialogue of the 4th IEF-EU Energy Day on the EU's Green New Deal and Circular Economy, and the 10th Anniversary Session of the IEA-IEF-OPEC Symposium on Energy Outlooks held the preceding days.

Discussion findings will help to inform the 17th International Energy Forum Ministerial that will be hosted by Saudi Arabia; with Morocco and Nigeria as co-host. Outcomes will also advise G20 Working Groups, and Ministerial Meetings held under the Saudi Presidency in 2020 to advance the global energy dialogue.

Attendance is by personal invitation only.

Roundtable discussions will be governed by Chatham House Rules

AGENDA

8:00 to 8:30	Welcome Coffee
8:30 to 9:00	<p>Opening Remarks</p> <p>Sun Xiansheng, Secretary General, IEF Francesco La Camera, Director General, IRENA Adam Sieminski, President, KAPSARC</p> <p>With as special guest: HE Aziz Rabbah, Minister of Energy, Mines, and Sustainable Development, Morocco</p>
9:00 - 10:30	<p>Session I</p> <p>Renewable and Clean Energy Technology Outlooks: What does the future hold?</p> <p>Renewable energy and clean energy technologies play a growing and mutually reinforcing role in making energy matrices more secure, sustainable, and inclusive. The objective of this session is to present outlooks prepared by IRENA, highlight the rise of renewables and clean energy technologies and explore pathways to secure, sustainable, and inclusive energy futures in producer and consumer countries.</p> <p>Session Moderator: Sun Xiansheng, Secretary General, IEF</p> <p>Presentations by panelists (7 minutes each) followed by roundtable discussion:</p> <ul style="list-style-type: none"> - Matar Hamed Al Neyadi, Undersecretary, Ministry of Energy Industry and Trade, UAE - Ajay Mathur, Director General, The Energy and Resources Institute, TERI* - Fahad Al Turki, Vice President, Head of Research, KAPSARC - Asami Miketa, Senior Programme Officer, Power Sector Investment Planning, IRENA - Christof van Agt, Senior Analyst, IEF
10:30 - 11:00	Coffee Break and Networking
11:00 - 12:30	<p>Session II</p> <p>Stakeholder views on current pathways and sustainable energy market outlooks</p> <p>How do renewable and clean technology projections compare to other stakeholder projections for energy demand growth? What policy assumptions and market trends set them apart from the main scenarios of other international organisations, agencies, and private sector stakeholders? How does policy help to overcome market hurdles for the reliable deployment of renewable and clean energy technologies at an affordable cost?</p> <p>Session Moderator: Francesco La Camera, Director General, IRENA</p> <p>Presentations by panelists (7 minutes each) followed by roundtable discussion:</p> <ul style="list-style-type: none"> - Keisuke Sadamori, Director, Energy Markets and Security Directorate, IEA - Ayed Al Qahtani, Director, Research Division, OPEC - Laurent Chevalier, Vice President Middle East Gas, Renewables, and Power, Total * - Ayad Al-Amri, Director Business Development, ACWA Power* - Pieter Boot, Head of Department, Climate, Air, and Energy, Netherlands Environmental Assessment Agency, PBL*

12:30 - 1:30	Networking Lunch
1:30 - 3:00	<p>Session III</p> <p>Whole energy system solutions: Options to bridge the mitigation gap</p> <p>The Paris Agreement’s goal of a balance between sources and sinks by 2050 will require all possible cost-effective mitigation options. The concept of the circular carbon economy, an extension of the idea of the circular economy, is a useful framework for understanding how all carbon mitigation options, from renewable energy to hydrogen, can be linked together in a system to achieve carbon reductions and empower sustainable growth. How do renewable energy technologies and the circular carbon economy reconcile rising energy demand in a climate constrained world? What synergies can bridge the gap between current and alternative pathways towards secure, sustainable, and inclusive energy futures?</p> <p>Session Moderator: Adam Sieminski, President, KAPSARC</p> <p>Presentations by panelists (7 minutes each) followed by roundtable discussion invited from:</p> <ul style="list-style-type: none"> – Angela Wilkinson, Secretary General and CEO, World Energy Council – Ahmad Al Khowaiter, Chief Technology Officer, Saudi Aramco – Carlos M. Duarte, Tarek Ahmed Juffali Research Chair in Red Sea Ecology, Red Sea Research Center (RSRC), KAUST – Fahad A Al-Sherehy, VP Energy Efficiency and Carbon Management, SABIC – Khalid Abuleif, Chief Negotiator for the Climate Agreements, Ministry of Energy
3.00 - 3:30	<p>Summing up and Closing Remarks</p> <p>Sun Xiansheng, Secretary General, IEF</p> <p>Francesco La Camera, Director General, IRENA</p> <p>Adam Sieminski, President, KAPSARC</p>

Key questions

1. *What are the social economic and resource constraints on renewable, and clean technology deployment?*
2. *How will energy producers and consumers ensure inclusive and secure delivery of modern and affordable energy services to all in a climate constrained world?*
3. *What are the main policy and technology pathways that can make energy markets more reliable, productive, and resilient to global challenges at an acceptable cost to societies?*
4. *What role do renewable and clean energy technology play in both energy consuming and producing countries?*
5. *Which technologies will deliver the secure and sustainable energy and carbon efficiency gains for growing world energy demand?*

Background

IEF ministers welcomed proposals to further complement the producer-consumer dialogue with greater inter-institutional dialogue and cooperation in light of the rapid pace of change in global energy markets. The first IEF-IRENA Seminar on renewable and clean energy technology outlooks, organised in collaboration with KAPSARC, aims to:

1. Highlight the rapid rise of renewable energy, and other clean energy technologies in energy producing and consuming countries,
2. Discuss their market potential from the perspective of institutional and private sector reference-, and alternative energy demand-supply outlooks,
3. Explore mutually reinforcing opportunities that renewable and clean energy technologies can offer to reduce the carbon intensity of hydrocarbon production and improve energy productivity, and
4. Facilitate productive interfaces between renewable energy and circular carbon economy models to balance energy security, climate policy, and sustainable development goals.

Most long-term scenarios show renewable energy technologies go from strength to strength. They range from solar, wind, hydro, and geothermal power, to bio-, and blue or green hydrogen fuels and are used to generate power rather than heat. Hydro-, solar photovoltaic-, and onshore wind power, have reached market parity in a growing number of energy markets. Other renewable and clean energy technologies still require policy support and research to overcome market hurdles or proof concepts to make market entry.

Current policy and reference scenarios of the IEA, OPEC, and US. EIA show the shares of renewable and hydrocarbon energy demand reach 20 and 75 percent respectively by 2040. The remaining balance is supplied by nuclear energy across main long-term scenarios. In alternative policy scenarios renewable energy technologies rise significantly faster while hydrocarbon demand growth slows as a consequence of far-reaching and sustained policy efforts. These include energy price reforms, the introduction of carbon price signals through trade, tax, or tariff mechanisms, as well as fuel quality, and energy efficiency standards alongside government directives on energy use for instance in urban transport or public buildings and households. The share of renewables in the global energy mix were projected to grow to above 45 percent in 2050 according to scenarios that the IEA and IRENA jointly released in 2016. This is notwithstanding that energy demand, including for hydrocarbons, will continue to grow in volumetric terms well into the 2030s.

While certain energy technologies and growth models will have obvious comparative advantages in any given market situation, these do not automatically balance energy security, climate policy, and sustainable development goals on the scale of highly diverse, densely integrated, and complex world energy markets. Bridging the widening gap between baseline and alternative energy outlooks scenarios will involve too high a cost for many societies if the global perspective is lost.

Exploiting synergies between renewable technologies with clean energy solutions in the hydrocarbon sector through policy dialogue and better market interfaces among all available options can open reliable and affordable pathway towards sustainability. This would accelerate the rise of renewable energy sources and increase carbon efficiency at a faster pace. Economies of scale obtained through trade and investment in renewable and clean energy technologies among energy producers and consumers can meet demand growth in a climate constrained world.