

5th Forum on the Climate-Energy Security Nexus

Policies and Practices to Enhance Energy Sector Resilience

Tuesday, 4 November 2014

International Energy Agency,
Room 1, 9 rue de la Fédération
Paris, France

Background

Climate change could affect our energy systems, and thereby our energy security, in several ways: by altering energy demand, disrupting energy supply and damaging energy infrastructure.

Energy demand is expected to change, potentially dramatically in some areas, as a result of increasing temperatures, changing weather patterns, etc. with effects on heating and cooling demand and other end-uses. **Energy supply** will face changing conditions and production, including reduced efficiency of thermal plants, cooling constraints on thermal and nuclear plants, and pressure on transmission systems; electricity generation from hydro, wind and other renewable and biofuel production will also be affected. **Energy infrastructure** could be exposed to more frequent and intense extreme weather events including increased wind speeds and ocean storminess. These may threaten coastal power generation infrastructure, on-shore transmission and distribution infrastructure, as well as offshore installations and pipelines and could ultimately lead to various interruptions of energy delivery systems.

To deal with these threats, the energy sector will need to develop resilience through technological solutions, flexible management practices as well as preventive emergency preparedness and response measures. To facilitate these processes and enhance their effectiveness, policy and institutional responses will be needed. This meeting will focus on policy responses that could facilitate the resilience building of the energy systems. The meeting will consider the potential role for governments, regulations, guidelines, public/private partnerships, and international institutions in enhancing energy sector planning and resilience building. Policy development and implementation with respect to the following aspects could be considered in the meeting:

Risk identification and management:

- data and modelling approaches for long-term planning
- risk evaluation and monitoring
- insurance policies

Preparedness and emergency response planning:

- preparedness for threats to generation capability, peaks in demand, extreme events
- emergency response measures (load allocation; forced shut-downs) and recovery timelines
- building in flexibility to respond to long-term changes

Technological resilience and related standards and permits:

- Robustness of equipment and processes to withstand extreme weather events
- Flexibility of technologies and processes to adapt quickly to changes in supply and demand
- Diversity of response measures including back-up resources and demand-side measures

Institutional and regulatory support:

- Institutional structures, responsibilities and coordination
- Legislation, rules and standards
- Market arrangements
- Providing information to public and private stakeholders on the risks of a changing climate

Agenda

8:30 - 9:00	Registration - coffee
9:00 - 9:20	1. Welcome and opening remarks Maria van der Hoeven, Executive Director, International Energy Agency Nick Bridge, British Ambassador and Permanent Representative to the OECD & IEA
9:20 - 10:40	2. Emerging policy space: energy sector adaptation to climate change <i>This session will address the role of policy in building the energy sector's resilience to climate change. It will include examples of the ongoing work, approaches, and achievements in the area of enhancing the energy sector's resilience through policy.</i> Speakers: Alice C. Hill, Senior Advisor for Preparedness and Resilience to the Assistant to the President for Homeland Security and Counterterrorism, National Security Council Staff, United States White House Noé van Hulst, Ambassador, Permanent Representative of the Netherlands to the OECD & IEA Ding Ding, Director of Policy and Regulation Program, National Climate Change Strategy and International Cooperation Center, China Joan MacNaughton, Executive Chair of the World Energy Council Trilemma Discussion questions: <ul style="list-style-type: none">• What are current approaches by governments in addressing energy sector resilience?• Are there any lessons learnt so far?• What are current challenges?
10:40 - 11:00	3. Climate change science <i>A well-known French scientist, one of the authors of the IPCC 5thAR WG I report will explain latest findings on climate change and possible impacts on the energy sector.</i> Speaker: Jean Jouzel, lead author of IPCC WG I reports
11:00 - 11:30	Coffee break

11:30 - 13:00 4. Government policies and initiatives to enhance resilience of the energy system (demand, supply, infrastructure) to gradual and extreme changes in climate

National, regional and local governments may play different roles in securing resilience of the energy sector to climate change impacts. Speakers in this session, representing different levels of government, will share their experiences, approaches, and thoughts on policy interventions.

Speakers:

Yann Françoise, Head of Climate-Energy Division, City of Paris

Baltazar S. Tribunalo Jr., Head, Cebu Provincial Disaster Risk Reduction and Management Office and Coordinator to the Task Force Paglig-on (Resilience Task Force), Philippines

Mary-Ann Wilson, Energy Working Group Chair, Regional Adaptation Collaborative, Natural Resources Canada

Kazushige Tanaka, Counsellor, Permanent Delegation of Japan to the OECD & IEA

Andrew Robertson, Emergency Policy Division, International Energy Agency

Discussion Questions:

- What are some lessons that can be learned from on-the-ground experiences in enhancing resilience through policy and management practices?
- What are gap areas in policy development?
- How does the policy response for adapting to extreme events differ from that for gradual changes?
- What is the role of climate and energy modelling in developing energy resilience policy?
- What information is being used to develop policies and practices?

13:00 - 14:00 Lunch

14:00 - 15:20 5. Business and investment players' practices to improve climate change resilience of their assets, operations, and investments

This session will explore decision-making practices and guidelines that energy companies adopt to build resilience of their operations to climate change. It will also explore how companies and investors are incorporating future climate change risks into their decision-making. The session will also touch on the role of insurance in stimulating company-level decision-making that takes possible future climate impacts into account.

Speakers:

Djamila Amimer, CO₂ Market Development Manager, Shell

Jean-Yves Caneill, Head of Climate Policy, Électricité de France (EDF)

Craig Davies, Senior Manager, Climate Change Adaptation, European Bank for Reconstruction and Development

Rowan Douglas, CEO Capital Science & Policy Practice, Willis Group & Chairman, Willis Research Network

Discussion Questions:

- How do energy companies evaluate future climate risks?
- What does the energy sector require in terms of supportive policy?
- Are climate risks factored into insurance policies?
- Do investors take climate risks into account? Are there any specific guidelines?

15:20 - 15:45	Coffee break
15:45 - 17:15	<p>6. Role of international stakeholders and processes in developing resilience awareness, policies and approaches</p> <p><i>While climate change impacts are location specific and responses to them are best when developed on the ground, international stakeholders and processes play an important role in raising awareness, providing guidance and policy advice, and stimulating financing. Speakers from UNFCCC and other agencies will provide perspectives on the roles that international institutions play in developing resilience of the energy sector to climate change impacts. Speakers will share their work on the issue of the energy sector resilience at the international level and how they assist governments and other stakeholders with their work.</i></p> <p>Speakers:</p> <p>Yunus Arikan, Head of Global Policy and Advocacy, ICLEI</p> <p>Lijin Zhong, Senior Associate, China Water Lead, World Resources Institute</p> <p>John Harding, Programme Officer, UNISDR</p> <p>Matti Goldberg, Programme Officer, UNFCCC</p> <p>Discussion questions :</p> <ul style="list-style-type: none"> • What is the role of the international community in developing and implementing resilience policy? • What analytical support is needed and can be helpful for governments? Can the international level have a role in providing this? • How can companies, different levels of government and other stakeholders work together to ensure more cohesive policy responses?
17:15 - 17:30	<p>Closing remarks</p> <p>Didier Houssin, Director, Sustainable Energy Policy and Technology, International Energy Agency</p>
17:30	Forum closes
17:45 - 19:00	<p>Networking reception</p> <p><i>l'Atome, 29 boulevard de Grenelle (4 min walk from IEA)</i></p>