

3rd Forum on the Climate-Energy Security Nexus: Electricity Sector Resilience

Exploring impacts of a changing climate on the electricity sector and options for resilience-building

Friday, 25 October 2013, International Energy Agency, Paris

Agenda

8:45- 9:15	Registration/ Coffee
9:15-9:30	<p>Welcome and Opening Remarks</p> <p>Maria van der Hoeven, Executive Director, IEA</p>
9:30-10:30	<p>Redrawing the Climate Change Map: What should we be preparing for? <i>Discussion of analysis contained in the IEA World Energy Outlook Special Report released in June 2013, based on modelling of the impacts of changing climate on generation capacity, will be expanded on with an overview of the latest conclusions about impacts from the IPCC, as well as an assessment by Munich Re of the economic impacts of the changing climate.</i></p> <p>Moderator: Nick Bridge, UK Ambassador for the UK Delegation to the OECD</p> <p>Panellists: Laura Cozzi, Deputy Head of Global Energy Economics, IEA Ferenc Toth, Working Group II on Impacts, Adaptation & Vulnerability, IPCC Ernst Rauch, Head of Corporate Climate Centre, Munich Re</p> <p>Discussion Questions:</p> <ul style="list-style-type: none"> • What is the implication of the latest climate science for the energy sector and what impacts can be expected, in physical, financial and political terms? • How does/could the latest climate science be integrated into risk assessments and resilience planning for the energy sector in the medium-term and long-term? • What could be done to respond to the longer-term climatic changes and their impact on energy supply and demand? • How might projected climate change feedbacks be integrated in IEA “business as usual” and “new policies” scenarios?
10:30-11:30	<p>Energy Sector Vulnerabilities to Climate Change and Extreme Weather <i>Presentation of results of an in-depth study carried out by the US Department of Energy, released in June 2013, investigating a range of possible future climate impacts across the US energy sector, followed by wider discussion about possible impacts on electricity and responses at national level.</i></p> <p>Moderator: Philippe Benoit, Head of Energy Efficiency and Environment Division, IEA</p> <p>Panellists: Craig Zamuda, Department of Energy, United States Government Richenda Connell, CTO & Co-Founder, Acclimatise Sebastien Henry, Director, Department of R&D and Innovation, RTE France</p> <p>Discussion Questions:</p> <ul style="list-style-type: none"> • Where are the key vulnerabilities, in operational and planning terms, to changing climate in the energy sector? • What are the most robust and cost-effective technology responses that could be applied to build resilience in those areas? • How can grid resilience be enhanced, both terms of physical security and to the implications of increasing renewable energy sources in the electricity mix? • At a policy level, what can national governments do to support the building of resilience in the energy sector? What special issues exist in the electricity sector?

11:30 -12:00

Coffee break

12:00 - 13:00

Special Issues for Electricity Generation in a Changing Climate: Nuclear, Renewables

Consideration of the particular issues arising for different electricity generation technologies, beginning with a review of findings from the study being completed by the Nuclear Energy Agency on issues for nuclear electricity generation, followed by perspectives from the renewables industry on emerging challenges and responses, and how technical imperatives can be reflected in policy.

Moderator: Didier Houssin, Director, Sustainable Energy Policy and Technology Directorate, IEA

Panellists: Henri Paillere, Nuclear Development Division, Nuclear Energy Agency
Marco Braun, Hydroclimatology Specialist, Ouranos Consortium / Hydro Québec
Hiromichi Moriyama, Director, Agency for Natural Resources & Energy, METI, Japan

Discussion Questions:

- What are the key challenges expected in different generation technologies (nuclear, other thermal, hydro, solar and wind) and electricity networks? What approaches can be recommended to address these?
- To what extent do new climate projections affect medium-term planning on the generation side, given that natural climate variability is already accounted for?
- To what extent are medium- and long-term climate impacts being factored into decision-making in electricity system planning?
- To what extent are long-term impacts on load (e.g. as a result of increased global average temperatures) being factored into electricity system planning?

13:00 -14:15

Lunch sponsored by IEA

14:15 -15:15

Addressing Security Challenges in the Electricity Sector

Presentation of the IEA's recent work on reinforcing the electricity sector through development of the Electricity Security Action Plan, followed by a discussion of opportunities to apply or adapt this approach for addressing climate change impacts on electricity, with perspectives from industry about the technological and market impacts and responses.

Moderator: Andrea Valcalda, Head of Environmental Policies and Climate Change, ENEL spa

Panellists: Laszlo Varro, Head of Gas, Coal and Power Markets Division, IEA
Claude Nahon, Senior Vice President for Sustainability, Électricité de France (EDF)
Jeanne Ng, Director - Group Environmental Affairs, CLP Holdings Ltd

Discussion Questions:

- What are the best policy options for enhancing resilience in the electricity sector in terms of generation, transmission and distribution?
- To what degree can climate change add additional volatility to energy markets?
- To what extent does current electricity security thinking respond to the threats imposed by climate change and how might approaches be adapted to better respond to climate impacts?
- How might we need to adapt the criteria used in risk assessment in order to support policy decisions that support the building of resilience to climate impacts?
- Can electricity market design support increased resilience in the electricity sector?
- How can national government best support investment in resilience building in the electricity sector through policy and regulation?

15:15 -15:45	Coffee break
15:45 -16:45	<p>Consideration of Adaptation Challenges for Electricity Utilities <i>Preview of findings from the upcoming study carried out by the World Business Council for Sustainable Development (WBCSD) investigating issues, options and opportunities for adaptation to a changing climate for electricity utilities, followed by a discussion of the drivers for resilience action in industry and in public governance, and review of work underway.</i></p> <p>Moderator: Mark Radka, Chief of Energy Branch, UNEP</p> <p>Panellists: Maria Mendiluce, Director, Electricity Utilities, WBCSD Gina Downes, Corporate Consultant: Environmental Economics, Eskom Mugurel George Paunescu, DG Climate Action, European Commission</p> <p>Discussion Questions:</p> <ul style="list-style-type: none"> • What are the drivers of resilience building action within the electricity industry? • How can resilience-building considerations be built into strategic thinking around adaptation planning and long-term business models? • What lessons have been learned so far and to what extent can these be transferred to other geographical, political and technical contexts? • What opportunities exist for industry and government representative's to work together to ensure the best possible conditions for resilience building are supported? • How might resilience building activities be financed?
16:45-17:00	<p>Closing Remarks</p> <p>Didier Houssin, Director, Sustainable Energy Policy and Technology Directorate, IEA</p>
17:00	Forum Closes