



**Joint workshops presented by the**  
**IEA ELECTRICITY SECURITY ADVISORY PANEL (ESAP)**  
**and the**  
**COUNCIL OF EUROPEAN ENERGY REGULATORS (CEER)**

**Expert Workshop VII**  
**ELECTRICITY SECURITY ACROSS BORDERS**

**Thursday, 28 April 2016**

**The International Energy Agency**

**9, rue de la Fédération**

**Paris 15**

# IEA ELECTRICITY SECURITY ADVISORY PANEL (ESAP)

## Expert Workshop VII

# ELECTRICITY SECURITY ACROSS BORDERS

28 April 2016

International Energy Agency, Room 1

9 rue de la Fédération, 75015, Paris, France

Across the globe, countries are reaping the benefits of more connected electricity markets. Greater integration, however, brings with it a set of new challenges to maintaining electricity security. Prior work at the IEA on this topic has focused at the national or sub-national level. This year the IEA is launching a new work stream that will focus on a regional and international perspective. Fostering regional cooperation to exploit the benefits of market integration is embedded in the constituency of the European integration process. ACER and CEER are tackling the challenges of regional and European integration to raise electricity security of supply and market efficiency from several perspectives: infrastructure planning, short-term markets coupling, efficient cross-border infrastructure usage, long-term signals coordination and integration.

This workshop joins together IEA and CEER efforts in order to delve deeper into those challenges and potentialities. It will bring together experts and practitioners to review regional experiences of highly integrated markets as well as challenges of new integration processes worldwide.

The IEA has traditionally identified three primary dimensions of electricity security: fuel security, resource adequacy, and system security. Each of these will be profoundly impacted by decarbonisation, and in interconnected systems will require at least some level of coordination to ensure security of supply. This workshop will focus on resource adequacy and system security:

- **Regional resource adequacy:** ensuring sufficient generation and network resources to meet load will become more challenging as coal generation is phased out, as the future of the aging nuclear fleet becomes more uncertain, and as investments in renewable generation requires greater cooperation on grid development.
- **Regional system security:** operating the system in real-time in order to “keep the lights on” will change as generation becomes more variable and more decentralised, and demand becomes more responsive. Smart grids and other technologies that increase flexibility may provide new solutions to address those challenges, but will require new roles for system operators and changes to electricity market design.

These dimensions of electricity security can also be thought of as having temporal components. **Long-term** electricity security will require more coordinated planning on investments, in particular on renewables. **Short-term** electricity security will require greater real-time cooperation and increased harmonisation – or even consolidation – of electricity markets.

This joint IEA-CEER workshop will cover the following questions:

- How are regions currently cooperating on electricity security across all of these dimensions?
- How can regulators work at the national and regional levels to address regional electricity security issues?
- How should the IEA’s Electricity Security Assessment Framework be extended to examine the topic from a regional and international perspective?

The results of this event workshop will provide an essential contribution to the IEA’s Electricity Security Across Borders publication, and work on electricity security more broadly. The meeting will be informal in nature and held under the Chatham House Rule. Attendance is by invitation only.

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**ELECTRICITY SECURITY ACROSS BORDERS**

Thursday, 28 April 2016

8:30 - 9:00     **Registration and coffee**

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9:00 - 9:15     **Welcome and opening remarks**

**Keisuke Sadamori**, Director Energy Markets and Security Directorate, **IEA**

TBD, **CEER**

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**Session 1     Electricity Security Across Borders: assessment tools**

The IEA's Electricity Security Assessment Framework focuses on electricity security at a national level. How countries (or sub-regions within countries) cooperate on electricity security remains an underexplored topic. This session will present the IEA's draft Regional Electricity Security Framework, which will form the basis for future work on this topic.

Moderator: **Manuel Baritaud**, Senior Electricity Analyst, **IEA**

9:15 - 10:45

- **The draft Regional Electricity Security Assessment Framework**  
*Matthew Wittenstein, IEA*
- **Cross-border electricity security: the role of FERC**  
*Mike Bardee, Director, Office of Electric Reliability, FERC*
- **Electricity assessment in Europe, ENTSO-E**  
*Daniel Huertas Hernando, ENTSO-E*

Followed by general discussion

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10:45 - 11:00     *Coffee break (15 minutes)*

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**Session 2     Examples from Europe**

The countries of Europe have extensive of experience on regional cooperation for electricity security. This session will focus on the role of regional institutions in fostering cooperation on electricity security, and the inherent tension between national electricity security goals and international goals.

Moderator: **Claude Turmes**, MEP, **European Parliament**

11:00 - 12:30

- **Electricity security and the Nordpool Market**  
*Simon-Erik Ollus, Fortum*
- **Cross border treatment of capacity in Europeans CRMs**  
*Fulvio Fontini, Autorita per l'Energia Elettrica il Gas*
- **Towards a new EU legal framework on risk preparedness in the electricity sector**  
*Amaryllis Verhoeven, EU Commission*

Followed by roundtable discussion

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12:30 – 13:45     *Lunch*

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## Examples from North America

### Session 3

Regional cooperation on electricity security in North America occurs both at a sub-national level (for example, between RTOs and ISOs within the United States) and at an international level, between Canada, the United States and Mexico. This session will explore how regional cooperation functions under both circumstances.

Moderator: **Fulvio Fontini**, *Autorita per l'Energia Elettrica il Gas*

- **Regional transmission planning: the Eastern Interconnection Planning Collaborative**  
*Craig Glazer, PJM*
- **Cross-border electricity security – the view from MISO**  
*Commissioner Ellen Nowak, Wisconsin Public Service Commission*
- **Cross-border electricity security – the view from ISO-NE**  
*Vice Chairman John W. Betkoski, Connecticut Public Utilities Regulatory Authority*

13:45 – 15:15

Followed by roundtable discussion

15:15 – 15:30

Coffee break (20 minutes)

## Examples from other regions

### Session 4

Many non-OECD economies are seeking to simultaneously meet growing demand and expand electricity access. In addition, many are also seeking to rapidly increase the penetration of variable renewables into their grids. This session will explore how key partner countries are using regional integration as a way of meeting these goals.

Moderator: **Matthew Wittenstein**, *Electricity Analyst, IEA*

- **Market mechanisms for security in the Australian National Electricity Market**  
*Jamie Carstairs, Linnfall Consulting*
- **Interconnections in Southeast Asia: Implications for Singapore and the region**  
*Eugene Toh, Director, Energy Planning and Development Division, Singapore Energy Market Authority*
- **Southern African Power Pool**  
*Elijah C. Sichone, Executive Director, RERA*

15:30 – 17:00

Followed by roundtable discussion

17:00 – 17:15

**Closing messages**