



2nd Annual Conference on

GRID-SCALE ENERGY STORAGE

Regulatory and Market Structures

July 3, 2012, Conrad Hotel, Brussels, Belgium

Hosted by:

Global **Transmission** Report

Information and analysis on the global electricity transmission industry

www.globaltransmission.info

MISSION

The crucial role of energy storage in the transition towards a low-carbon and sustainable energy system is now widely acknowledged. However, the uptake and success of energy storage projects rely heavily on the regulatory environment. Regulators and legislators in the United States are already moving ahead on this matter. Stakeholders in Europe are also looking to the European Commission and regulators to adopt mechanisms that would allow energy storage to be used on a large scale.

The European Commission is soon expected to issue a communiqué reviewing the current environment and defining the future strategy for energy storage based on best practices as well as the most suitable way forward for an integrated and energy efficient Europe by 2020.

In this context, **Global Transmission** will host its second conference on **Grid-Scale Energy Storage** on **July 3, 2012** at **Conrad Hotel** in **Brussels, Belgium**. The objective of the conference is to examine and review European regulatory and market conditions for large-scale deployment of energy storage.

The conference will provide a forum to explore different regulatory issues, understand market structures, assess future requirements, and identify potential solutions to make grid-scale energy storage economically viable. It will offer an exclusive opportunity to interact closely with the European Commission's energy directorate, and present a platform for advocating regulatory and market changes that can create economic value for storage applications for the electricity grid.

Our last conference:

Global Transmission organised its first conference on "Grid-Scale Energy Storage" in June 2011 at Hotel Metropole in Brussels, Belgium. The conference was attended by over 70 senior-level executives from leading organisations from 15 countries across the world. The participating organisations included: ABB, Alliander, Alstom Grid, Ansaldo, Balfour Beatty, BAE Batterien, Beacon Power, CSIRO, Elia Group, Elia Engineering, Emerald Technology Ventures, Enrichment Technology Company, ENTSO-E, Eos Energy Storage, European Commission, Evonik Degussa GmbH, Fefer Peterson & Cie, Frontier Economics, Gravity Power, Isentropic, Kintech Synergy, LUX Research, Maschinenfabrik Reinhausen, OmniCompete, Oracle Capital, Parker Hannifin Europe, REE, Robert Bosch, RTE, Siemens, Toshiba, Tractebel Engineering, Terna SpA, VERBUND, the World Bank, ZBB Energy, etc.

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KEY ISSUES TO BE EXPLORED

The conference will have sessions and discussions attempting to address issues such as:

- ❖ Is there a defined role for energy storage in the creation of the European Union's (EU) single energy market?
- ❖ How are regulators and policymakers dealing with different applications of energy storage?
- ❖ Do we need special regulatory (and thus market) frameworks for storage?
- ❖ What can the European Commission and regulators do to further the cause of energy storage in Europe?
- ❖ What are the lessons from the US?
- ❖ How can the benefits of storage be quantified for maintaining grid efficiency, reliability, and security of supply?
- ❖ How can the benefits of distributed energy storage be maximised for bulk power systems?
- ❖ How do we determine the economic value of energy storage in regulated and deregulated energy storage environments?
- ❖ What are the different payment models and their impacts on financing arrangements for energy storage?

AGENDA (Tentative)

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Session	Time	Topics
	8:30-9:00	Registration and Tea/Coffee
Introduction	9:00-9:15	The need for energy storage in Europe
Special Session with the European Commission's (EC) Energy Directorate	9:15-11:00	<ul style="list-style-type: none"> - Close interaction with the EC - Review of the EC's latest communication on energy storage - Strategy for energy storage in meeting European energy objectives - Is there a defined role for energy storage in the creation of the EU single energy market? - What are the different stakeholder suggestions for the EC?
Break	11:00-11:15	Tea/Coffee break
European and North American Regulatory and Policy Review	11:15-12:45	<ul style="list-style-type: none"> - Do we need special regulatory (and thus market) frameworks for storage? How are regulators and policymakers dealing with different applications of energy storage? - A review of new developments in regulations on energy storage in the EU member states. - What more can the European Commission and regulators do to further the cause of energy storage in Europe? - Review of the US regulatory environment for energy storage and initiatives that can be applied to the European markets
	12:40-13:00	- Q&A and discussion with the panel
Break	13:00-14:00	Lunch
Storage for Renewable Integration	14:00-14:45	<ul style="list-style-type: none"> - Relevance of storage for integrating renewable energy into the transmission grid - What are the technical and cost benefits of integrated renewable energy generation and energy storage projects? - Emerging market models for energy storage in grids with high penetration of renewable energy. - Case for energy storage for offshore renewable energy projects
Storage from the Transmission System Operator (TSO) Perspective	14:45-15:30	<ul style="list-style-type: none"> - What challenges do TSOs face in the implementation of energy storage projects? - How can ownership and tariff issues be resolved if energy storage is to be incorporated into the grid? Should energy storage investment be included in the TSO asset base? - How can the benefits of storage be quantified for maintaining grid efficiency, reliability, and security of supply (the three main business objectives of the EU TSOs)? - What are the specific network requirements for energy storage facilities? - How does distributed energy storage affect transmission grid operations and planning? How can the benefits of distributed energy storage be maximised for bulk power systems?
	15:30-15:45	- Q&A and discussion with the panel
Break	15:45-16:00	Tea/Coffee break
Valuing and Financing Energy Storage	16:00-17:15	<ul style="list-style-type: none"> - How do we determine the economic value of energy storage in regulated and deregulated environments? - How will the new energy market structures and frameworks (especially capacity markets) impact the value of energy storage? - Should a market-based approach or a cost-based approach be used to value energy storage facilities? - Can an energy storage project be economically and financially viable for a single application? - How can project developers benefit from the multiple value streams? - What are the different payment models and their impacts on financing arrangements for energy storage? - Emerging sources of financing energy storage and lenders' perspectives
	17:15-17:30	Open floor and wrap-up
	17:30	Close

WHO SHOULD ATTEND?

The event is expected to draw participation from a wide array of stakeholders and experts from the energy sector:

- ❖ Policymakers, regulators and legislators
- ❖ Transmission utilities/companies/system operators
- ❖ Generation and distribution utilities
- ❖ Renewable energy developers
- ❖ Energy storage technology providers
- ❖ Equipment manufacturers
- ❖ Research and development organisations, and individuals
- ❖ Technical institutions
- ❖ Financiers and venture capitalists
- ❖ Specialist consultants
- ❖ Industry lawyers

KEY BENEFITS TO PARTICIPANTS

The conference will feature speakers representing a wide spectrum of expertise, opinion and perspectives. The sessions and plenary discussions will provide an opportunity to:

- ❖ Interact with the European Commission's energy directorate
- ❖ Learn about the future prospects of grid-scale energy storage from the European Commission, regulators, utilities, financiers and consultants
- ❖ Review the regulatory and policy developments concerning energy storage, and assess their impact on the industry
- ❖ Identify the economic drivers for energy storage
- ❖ Examine the key challenges, and assess the future requirements and market opportunities for grid-scale energy storage
- ❖ Learn from the US experience in implementing utility-scale energy storage
- ❖ Understand the relevance of storage for grid integration of renewable energy
- ❖ Recognise the value of energy storage for TSOs
- ❖ Analyse viable market and business strategies for deploying grid-scale energy storage
- ❖ Examine efficient ways of connecting storage to the grid
- ❖ Gain insight into the valuation process of energy storage
- ❖ Examine payment models and their impact on financing arrangements
- ❖ Review the financing models for energy storage and understand the lenders' perspectives

ABOUT THE ORGANISERS

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Global Transmission is a leading provider of information and analysis on the global electricity transmission industry. We publish newsletters and reports. We also organise conferences on crucial issues and topical themes relevant to the transmission industry.

We publish the **Global Transmission Report** (a monthly newsletter) and **Global Transmission Weekly** (a weekly update). We also operate the website www.globaltransmission.info. These products and services provide information on all the key developments, trends and issues in the sector. They track major projects, contracts and investments. They also profile leading transmission system operators and report on regulatory initiatives. In addition, they provide the latest data and statistics on the sector.

We recently published a report titled **Global Electricity Transmission Report**, which profiles the electricity generation and transmission sectors of the top 101 countries. This report describes the existing state of and the expected growth in the electricity industries of these countries in terms of generation and transmission capacity. It briefly examines the major regulatory, technological, and financing developments and trends over the past few years. It also analyses the key growth drivers and challenges, and assesses the outlook for the global transmission industry.

Our clients include leading organisations across the world such as EU GIG OÜ, ABB, Siemens, Alstom, GE Energy, Tractebel Engineering, ESB International, State Grid International Development, International Energy Agency, European Investment Bank, Nexans, Bechtel, Mott MacDonald, Balfour Beatty, Pöyry, Nexant, SNC-Lavallin, MidAmerican Energy Holdings Company, Maxwell Technologies, Power Grid Corporation of India Limited, Red Eléctrica de España, Terna, Elia, Reliance Energy, KEC International, Swissgrid, Brookfield, Statnett, Boston Consulting Group, El Sewedy Cables, National Contracting Company, Energinet, Energostroyaladka, CTEEP, EdF, Hyosung, AltaLink, Suez-Tractebel, MWB Shanghai, Xcel, Teshmont, Vattenfall, Dow Chemicals, Alberta Electric System Operator, AIC-USA, Hubbel Power Systems, Efacec Energia, ISA Interconexion Electrica, Israel Electric Co., Trade Wind, Hythro Power, BHP Billiton, Eskom, EFACEC, UB Engineering, PJM Interconnection, BKW FMB Energie AG, Thomas & Betts Corp, Fraunhofer-Institut für Umwelt-, Sicherheits- und Energietechnik UMSICHT, Cardiff University, ABEINSA, European Commission, KEMA, Volta River Authority, etc.

SPONSORSHIP (Limited to four organisations)*

This conference will provide an excellent opportunity for organisations to showcase their products and services. The deliverables include:

- *Two delegate registrations (full conference)*
- *Table space at the conference*
- *Distribution of sponsor promotional material to each delegate*
- *Logo presence at the conference*
- *Acknowledgement on conference website*
- *A hyperlink to the organisation's website*
- *Speaker slot (If relevant, subject to approval of organisers)*

** Available on a first come, first served basis.*

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DELEGATE FEES

The delegate fee is EUR950 (USD1,260) for one participant, EUR1,550 (USD2,060) for two, EUR2,150 (USD2,860) for three and EUR2,750 (USD3,660) for four.

There is a 10 per cent for those registering before June 15, 2012. The delegate fee is inclusive of VAT.

HOTEL INFORMATION

Conrad Brussels

Avenue Louise 71
Brussels, BRU 1050
Belgium
Tel: +32 2 5424242

DELEGATE FEES

Delegates	Price <i>(inclusive of VAT)</i>
One delegate	€950 or \$1,260
Two delegates	€1,550 or \$2,060
Three delegates	€2,150 or \$2,860
Four delegates	€2,750 or \$3,660

(Conference fee includes tea/coffee and lunch for both days of the conference.)

* VAT - The VAT rate in Belgium is 21 per cent and is applicable to all registration fees.

REGISTRATION FORM

I would like to register for the conference

Please send me more information

NAME/DESIGNATION _____ COMPANY _____

MAILING ADDRESS _____

PHONE _____ MOBILE _____

FAX _____ EMAIL _____

PAYMENT OPTIONS

1. Credit Card: To make payments by credit card, please visit http://www.globaltransmission.info/shopping_cart.php

All credit card payments will be subject to standard credit card charges

2. Wire Transfer:

Beneficiary: India Infrastructure Publishing Private Limited
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To register, email us to: registration@globaltransmission.info or visit us at www.globaltransmission.info

TERMS AND CONDITIONS

Payment Policy

Full payment must be received prior to the conference. Payment can be made in Euro (€) or US dollars (\$). VAT (21%) is included in the conference fees. VAT may be reclaimed by the delegates from the tax authorities after the event.

Cancellations

- Cancellations received in writing 30 days (June 3) before the date of the conference will receive a full refund, minus a service charge/administration fee of €150 or \$210. **We regret that no refunds will be made for any cancellations received less than 30 days prior to the conference.**
- Substitutions/name changes are welcome at no extra charge. Please send these in writing at least two days prior to the conference.
- **Disclaimer:** Global Transmission shall assume no liability whatsoever in case the event is postponed or cancelled due to a fortuitous event or unforeseen occurrence that renders the performance of this conference impracticable, illegal or impossible. For purpose of this clause, a fortuitous event shall include, but not be limited to: war, fire, labour strike, extreme weather or other emergency. Global Transmission's responsibility is limited to return of the registration fee only and is not liable for any cost in relation to travel and accommodation.
- Please note that it may become necessary for reasons beyond the control of the organisers to make alterations to the content and timing of the programme or speakers.