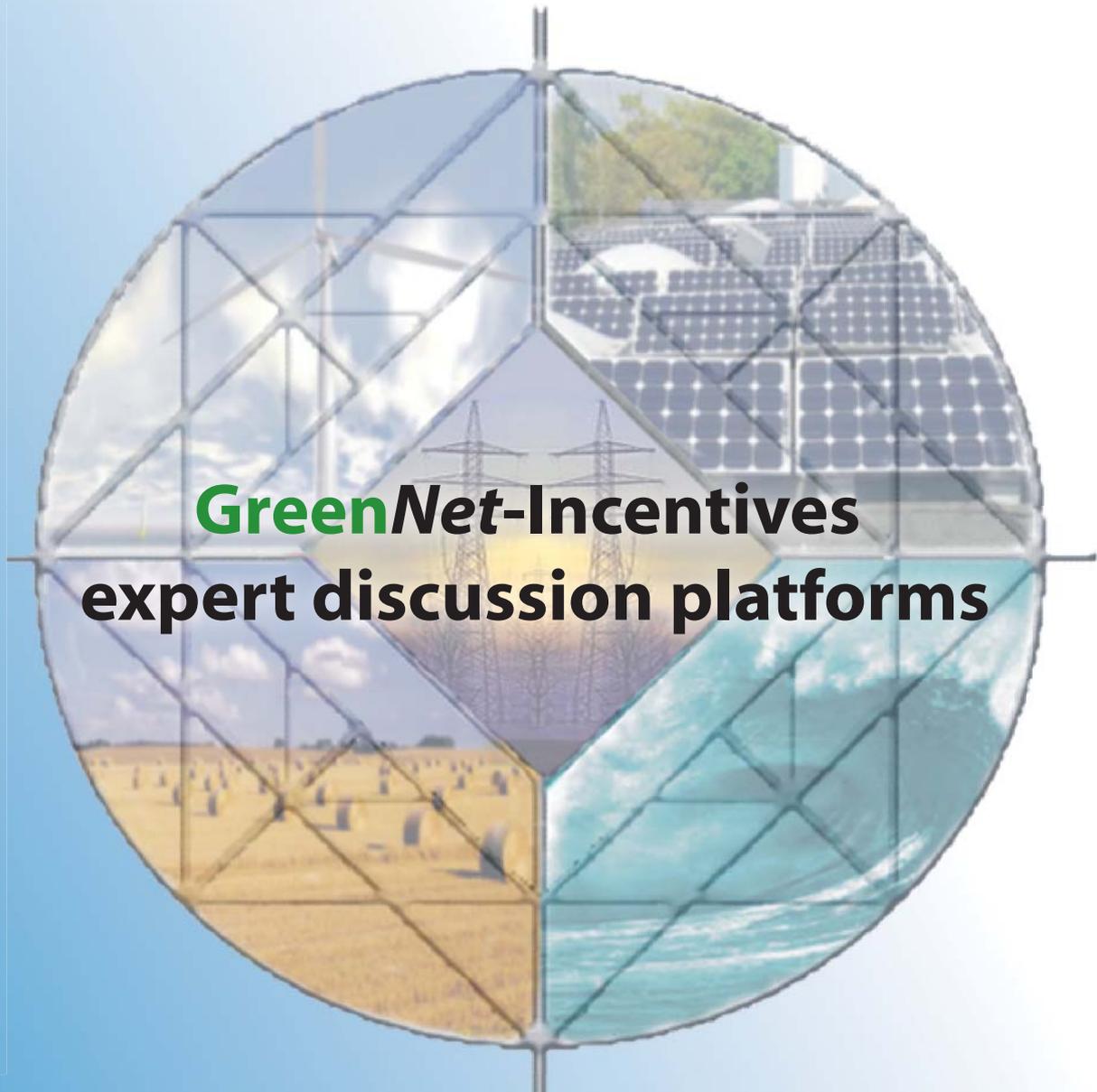


# Promoting grid-related incentives for large scale RES-E integration into the different European electricity systems



## **GreenNet – Incentives**

**[www.greennet-europe.org](http://www.greennet-europe.org)**

## **Experts' views on RES-E grid integration in different European regions**

The objective of setting up 5 expert discussion platforms has been to bring together market actors and stakeholders in order to identify best practises and criteria of large scale RES-E integration against the background of observed barriers and gained experiences.

Each of the five expert discussion platforms has been organised as two-day events taking place in different European regions. These individual expert discussion platforms concentrated on several main topics with regard to the European region in question. Main topics have been:

- RES-E grid integration in different European system configurations and individual countries
- System stability issues in the context of intermittent RES-E generation incl. intelligent grid management
- Regulatory issues
- Case studies on different successful RES-E projects

Primarily addressed stakeholders and participants comprised transmission system operators, distribution system operators, regulatory authorities, utilities and RES-E investors/plant operators. With the broad variety of presenting and participating stakeholders, an exhaustive range of recommendations and experiences on practices and criteria for RES-E integration has been obtained. In order to summarize the individual conclusions derived, one wrap-up presentation has been compiled and published on the **GreenNet-Incentives** homepage for each expert discussion platform.

The following expert discussion platforms have been taken place:

### **Power system stability and wind power integration in the Nordel system**

11 – 12 October 2007 in Oslo, Norway; organised and invited by Sintef

- Views of the Norwegian system operator on challenges due to large scale wind power
- System and market integration of wind power
- Power system stability and large scale wind power (transient, dampening / small signal analysis)
- Voltage control and reactive power compensation
- Panel debate: Best practice – grid codes and standardization

## **Wind energy integration in Germany and Europe**

18 – 19 October 2007 in Stuttgart, Germany; organised and invited by EnBW Energie Baden-Württemberg and by the Institute of Energy Economics and the Rational Use of Energy, Universität Stuttgart

- Wind power integration studies
- Forecast, reserves and refinement
- Grid aspects
- Promotion of RES
- Wind energy management in practice
- Future integration options of wind energy

## **RES-E grid integration in Poland**

8 – 9 April 2008 in Gdansk, Poland; organised and invited by Poszanowanie Energii i Środowiska (SAPE Polska) and Baltic Energy Conservation Agency (BAPE)

- RES-E grid connection regulation in Poland, Czech Republic, United Kingdom and Austria
- Possibilities of large scale wind power grid connection in Poland
- Available sources of co-financing for RES-E projects in Poland

## **Technical and regulatory aspects of network integration of RES in Romania**

21 – 22 April 2008 in Bucharest, Romania; organised and invited by Autoritatea Națională de Reglementarea în domeniul Energiei (ANRE) and by Centrul pentru Promovarea Energiei Curate și Eficiente în România (ENERO)

- Legal framework of network connection – the Romanian experience
- Romanian green certificates market
- Wind farm connection to distribution networks
- Implementation of the Romanian strategy in the field of RES – actual state of art and perspectives
- RES potential in Romania

## **Integration of large-scale RES projects to the electricity system – experience and perspectives for Greece**

6 – 7 May 2008 in Athens, Greece; organised and invited by the Regulatory Authority for Energy of the Hellenic Republic (PAERAE)

- Integration of large-scale RES projects into the electricity system
- RES projects and the electricity system – the Greek context
- Analyses of the operation of Greek electricity system and stability and dynamic studies under high wind penetration conditions
- Special issues of island systems

All related material of these expert discussion platforms like the agenda, presentations and wrap-up presentation is available for download at the **GreenNet-Incentives** project website

[www.greennet-europe.org](http://www.greennet-europe.org) → Downloads → Presentations

The full report on the topic of this brochure, summary presentations and the documentation of a broad range of events dedicated to large scale RES-E grid and system integration as well as a report on energy policy recommendations and action plans towards "green" electricity grid policies can be downloaded from the project website:

[www.greennet-europe.org](http://www.greennet-europe.org)

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Guiding Large Scale and Least Cost Grid and Market Integration of RES-Electricity in Europe

**News**

16 April 2009  
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**WELCOME**

Welcome to the project website **GreenNet-Europe: Guiding Large Scale and Least Cost Grid and Market Integration of RES-Electricity in Europe**.

**GreenNet-Europe** incorporates a series of different projects having been supported in different programmes of the European Commission in recent years (**GreenNet** (2003-2004); **GreenNet-EU27** (2005-2006); **GreenNet-Incentives** (2006-2009)). Several of these projects have been coordinated by Energy Economics Group (EEG) at Vienna University of Technology, Austria.

Energy Economics Group (EEG), together with several partners of the consortia in the different projects, tries to establish a common understanding on large scale and least cost grid and market integration of RES-Electricity in Europe under a variety of different constraints (e.g. technical, economical, legal, societal) and energy policy settings. In particular, **GreenNet-Europe** emphasises the necessity of a convergence of different coexisting policies of RES-Electricity grid and market integration (e.g. renewable technology support policy, grid regulation policy, unbundling implementation policy) as well as comprehensively addresses also the grid operator's and system operator's point-of-view in this context.

In **GreenNet-Europe** a variety of different products have been developed, e.g. simulation software tools, empirical data bases, policy recommendation reports, presentations, and brochures. The portfolio of outputs of **GreenNet-Europe** is continuously extended and several of these products and materials are available on this website free of charge. In **GreenNet-Europe** also comprehensive dissemination activities are conducted in order to reach several key decision makers and stakeholders (incl. their associations) in the field of large scale RES-Electricity grid and market integration, as there are e.g. policy makers, regulatory authorities, RES-E generators, system operators, grid operators and end-users.

23 March 2009  
Dissemination Conference Vienna  
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