

**Session: System integration of renewable energy from a regional perspective**

**Organizers: IEA**

**Target group: Open to all participants**

Accelerated deployment of renewable power sources offers many benefits such as increased energy security, decarbonisation and cost-effectiveness. Wind and solar PV technologies have seen rapid cost reductions and can now provide electricity at or below the cost of traditional sources in a growing number of countries.

Since variable renewable energy (VRE) technologies have certain unique properties, integrating them into power systems means understanding how they relate to other parts of the grid. The level of adaptation needed to effectively integrate VRE changes as more low-carbon resources are built. At initial deployment, power systems require very little change, while at higher shares of variable renewables (VRE) generation, measures may be needed to encourage system-friendly generation from VRE, as well as greater overall system flexibility. Making the right changes when they are needed avoids both overspending, delays and protects security of supply.

In this session, the IEA will present examples of international best practice, based on its new manual for getting wind and sun onto the grid<sup>1</sup>. Regional, country experts and the EBRD will give their perspective on the challenges and opportunities for system integration in the region.

**Guiding questions:**

- *What are the immediate benefits of system integration policies? What are the effects of not acting towards system integration?*
- *What specific examples are there of policies and measures dedicated to promote system friendly VRE?*
- *What possible practices may be needed in liberalised and regulated systems to increase system flexibility?*

<b>Time</b>	<b>Content</b>	<b>Resource person</b>
11.00 -11.05	<i>Introduction</i>	Chair: Martin Hullin, Project Manager, REN 21
11.05 - 11.20	<i>Presentation</i> Getting wind and sun onto the grid – international experience	Dr Paolo Frankl, Head Renewable Energy Division, IEA
11.20 – 11.35	<i>Presentation</i> System integration – regional perspectives	Dr Ilka Lewington, Principal Consultant, Markets/Regulation and Renewables in CEE and FSU, DNV GL Energy
11.35	<i>Discussion panel</i>	Chair: Martin Hullin, REN 21
11.35 -11.50	<i>Introductory comments by panellists (max. 5 minutes each)</i>	Nurzhan Isenov, Head National Grid Development Department, KEGOC, Kazakhstan Nazir Ramazanov, State Agency on Alternative and Renewable Energy Sources, Azerbaijan (tbc) Marat Yelibayev, Principal Banker, Energy, Russia, Caucasus and Central Asia team, EBRD
11.50 – 12.20	<i>Q&amp;As from audience &amp; discussion</i>	All participants
12.20 – 12.30	<i>Closing statements</i>	Panellists and moderator

<sup>1</sup> [http://www.iea.org/publications/insights/insightpublications/Getting\\_Wind\\_and\\_Sun.pdf](http://www.iea.org/publications/insights/insightpublications/Getting_Wind_and_Sun.pdf)