

How Distribution Grids Can Integrate More Renewable Energy: Lessons Learned from the GRID4EU Project

29 September 2015

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Agenda

1

Welcome & Introductory Remarks

2

Overview of the Clean Energy Solutions Center

- **Tim Reber**, National Renewable Energy Laboratory

3

Presentations

- **Rémy Gauraude Verdier**, Electricité Réseau Distribution France (ERDF)
- **Dr. Lars Jendernalik**, Westnetz
- **Daniele Stein**, ENEL Distribuzione S.p.A.
- **Thomas Drizard**, Electricité Réseau Distribution France (ERDF)

4

Question and Answer Session

5

Attendee Survey

Solutions Center Background and Vision

CleanEnergySolutions.org

The Clean Energy Ministerial (CEM) launched the Clean Energy Solutions Center in April 2011. The Solutions Center:

- Is one of 13 CEM Initiatives, which include:
 - Global Superior Energy Performance Partnership
 - Super-Efficient Equipment and Appliance Deployment initiative
 - Global Lighting and Energy Access Partnership
- Helps governments design and adopt policies and programs that support the deployment of clean energy technologies
- Has more than 35 partners, including IRENA, IEA, IPEEC, Sustainable Energy for All, Bloomberg New Energy Finance and Leonardo Energy
- Is co-chaired by the U.S. Department of Energy and the Australian Department of Industry.



Australia



Denmark



India



Indonesia



Italy



Japan



Mexico



South Africa



France



United Arab Emirates



United States

Clean Energy Solutions Center

CleanEnergySolutions.org

Goals

- **Serve** as the primary resource for clean energy policy information, assistance and peer learning for governments and government-affiliated practitioners.
- **Share** policy best practices, data, and analysis tools across countries.
- **Deliver** dynamic services that enable expert assistance, learning, and peer-to-peer sharing of experiences.
- **Foster** dialogue on emerging policy issues and innovation across the globe.

Primary

- Government Policy Makers
- Advisors

Secondary

- Private Sector Companies
- Energy Entrepreneurs and Investors
- Non-Governmental Organizations
- Civil Society
- Others Engaged in Clean Energy

Target Audiences

Ask-an-Expert: Our Experts in Action

CleanEnergySolutions.org

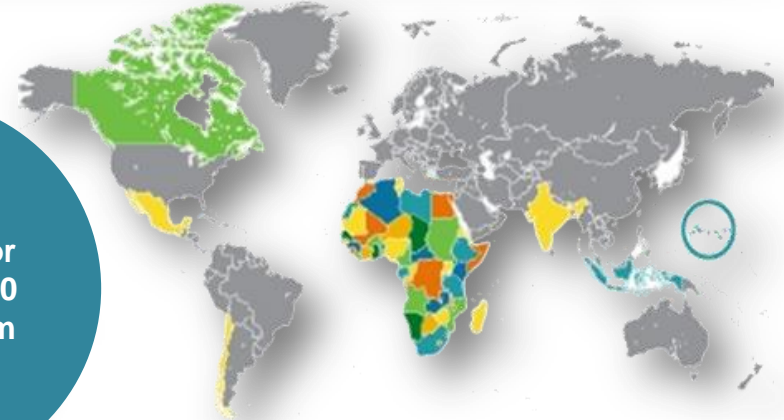


Connects policymakers to a global network of more than 30 energy experts for quick-response technical assistance on policies and programs relating to:



- Renewable Energy
- Energy Access
- Energy Efficiency
- Smart Grid
- Transportation
- Utilities

Delivered no-cost assistance for more than 160 requests from over 75 countries.



Please submit a question directly at
cleanenergysolutions.org/expert
Or contact me directly to find out how the Ask-an-Expert program can benefit your work:

Sean.Esterly@nrel.gov | 303-384-7436

Rémy Garaude Verdier, Electricité Réseau Distribution France (ERDF)



Rémy Garaude Verdier is a Smart Grids Project Manager within Electricité Réseau Distribution France (ERDF). He is a civil engineer with an MBA from Lausanne IMD (Switzerland). He has worked in a variety of jobs during a 10-year career at EDF Group. His previous roles include managing the integration of the EDF Group's SAP solution to its new nuclear build division in the UK and the US, and managing the purchase and engineering domains in the biggest SAP deployment completed to date (more than 80,000 users). Prior to joining EDF Group, he managed several large construction projects around the world for VINCI Group. Since 2011, Garaude Verdier has been GRID4EU project coordinator.

Dr. Lars Jendernalik, Westnetz



Dr. Lars Jendernalik is responsible for the regional grid operation of primary substations in the region of Ruhr-Niederrhein of Westnetz, the largest distribution system operator in Germany. Previously, he worked in different positions of asset management for more than ten years. He is engaged with questions of distribution systems, the grid integration of decentralized energy resources and especially the development of asset management, grid planning and grid operation for more than 15 years. Additionally, he is involved in the management of nationally and internationally funded research projects (smart grids, grid planning). Furthermore, he gives a lecture about "power networks" at the Technical University of Dortmund. Within GRID4EU, Dr. Jendernalik is operational leader of the German Demo (Demo1).

Daniele Stein, ENEL Distribuzione S.p.A.



Daniele Stein is a Smart Grids Project Manager for ENEL Distribuzione S.p.A. He graduated with a MSEE degree from the University of Pisa in 2006, also the year in which he started working at ENEL's Research Centre of Pisa. From the beginning of his experience with ENEL, Stein has worked in different network management areas, from network planning to operation and maintenance, and he has gained experience on network automation and control. In the last four years, he has been deeply involved in the development of European and international projects. Within GRID4EU, Stein is operational leader of the Italian Demo (Demo4).

Thomas Drizard, Electricité Réseau Distribution France (ERDF)



Thomas Drizard is a Smart Grids Project Engineer within Electricité Réseau Distribution France (ERDF). He graduated from Ecole Centrale Paris and Berlin Institute of Technology as an industrial engineer. He worked as an energy storage consultant at Clean Horizon in Paris, specialized in energy storage business cases. He joined ERDF within the GRID4EU French Demo (Demo6), also called NICE GRID, where he is in charge of grid storage operation, islanding tests and cost-benefits analysis.

Question and Answer Session

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Questions



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 - Sean.Esterly@nrel.gov or 303-384-7436