

# RGI Cable Workshop

## "Understanding Underground Cables"

13 and 14 February in Spreitenbach (near Zurich), Switzerland

Start: 13 Feb, 12:00, end: 14 Feb, 17:00

A workshop kindly hosted by Swissgrid

The impact of overhead power lines is a key trigger for public opposition against grid extension projects. Often local pressure groups demand that a new line shall be put underground. Expectations into undergrounding are high while actual experience is comparatively low. In Europe, first projects include some kilometres of highest voltage underground cables, but the integration of innovative cable solutions into an aging power grid remains a challenge.

As a consequence a lot of questions remain highly debated:

- **Technology:** How many kilometres of underground are technologically feasible while securing system stability? When, where, how?
- **Environment:** What are the impacts on the environment during the construction and the operation of underground electricity grids?
- **Costs:** How high are additional costs of underground solutions compared to overhead lines? And what are potential savings?
- **Regulation:** What criteria could be used to decide between underground and overhead solutions during planning and permitting procedures?
- **Policy:** And why do different countries take very different political approaches to regulate if and how many cables shall be built?

During a 1,5-day workshop we will discuss these questions, share recent experiences, identify knowledge gaps and gather as many answers as possible. At the first day we will receive valuable input about **state-of-the-art technology, environmental impacts, costs** and financial aspects and various **political approaches** in Europe. At the end of Day 1 we will have identified the most relevant open questions, which we will further explore on Day 2 in two working groups:

- 1) **Policy, Regulation & Costs**
- 2) **Technology & Environment**

Finally, the results of both working groups will be discussed, refined and consolidated in a panel discussion and open feedback session.

Please register online until 4 February 2013:  
<http://renewables-grid.eu/events/rgi-cable-workshop.html>

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## Agenda

### Wednesday, 13 Feb 2013 (Day 1)

- 12:00      *Networking Lunch*
- 13:00      Welcome
- **Bettina von Kupsch** (Swissgrid)
  - **Antonella Battaglini** (RGI)
  - **Elmar Grosse Ruse** (WWF)
- 13:45      Swiss Evaluation Model: Overhead or Underground?  
**Cornelia Gogel** (Swiss Federal Office of Energy)
- 14:15      *Coffee*
- 14:45      Cable Technology Update  
**Wilfried Fischer** (ENTSO-E/ 50Hz) & **Anders Jensen** (Europacable)
- 15:15      Environmental Impacts of Undergrounding Highest Voltage  
Transmission Lines  
**Prof. Peter Trüby** (University of Freiburg, Chair of Soil  
Ecology), tbc
- 15:45      Case Study "Randstad" of **TenneT** & Response Statement of  
**Katharina Schäfer** (German Ministry of Economics and Technology)
- 16:15      *Coffee*
- 16:45      Understanding the Costs of Undergrounding  
**Michael Ritzau** (BET)
- 17:15      Case Study "Experiences in France"  
**Martine Debiez** (RTE)
- 17:45      Danish Policy on Underground Cabling of Highest Voltage Lines  
**Anders Højgaard Kristensen** (Danish Energy Agency)
- 18:15      European Policy and Stakeholder Approaches on Undergrounding  
Transmission Lines  
**Antina Sander** (RGI)
- 19:30      *Aperitif & Networking Dinner*
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**Thursday, 14 February 2013 (Day 2)**

- 9:00 Swissgrid's Exhibition
- 10:00 **Key Questions of Day 1** to be discussed in two working groups:  
1. **Policy, Regulatory Issues & Costs** (chair: Antonella Battaglini)  
2. **Technology & Environment** (chair: Guido Axmann)
- 13:00 *Networking Lunch*
- 14:30 Panel discussion on outcome and next steps (chair: Antonella Battaglini):
  - **Paul Hawker** (Department of Energy and Climate Change, UK)
  - **Elke Bruns** (Bruns Environmental Assessment), tbc
  - **Raimund Rodewald** (Swiss Foundation for Landscape Conservation), tbc
  - **Bettina von Kupsch** (Swissgrid)
  - **Volker Wendt** (Europacable)
- 16:00 Conclusion & Outlook  
**Antonella Battaglini** (RGI)
- 17:00 *End*

