

SOLID-DER: Need for more DER integration in the power system and key RTD issues

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Definitions

- DER: Distributed Energy Resources
- DER = DG + Storage + DSM
 - **DG**: Distributed generation → Renewable Energy Sources (RES)+ cogeneration (CHP: Combined Heat and Power)
 - **Storage**
 - **DSM/DR**: Demand Side Integration/Demand Response

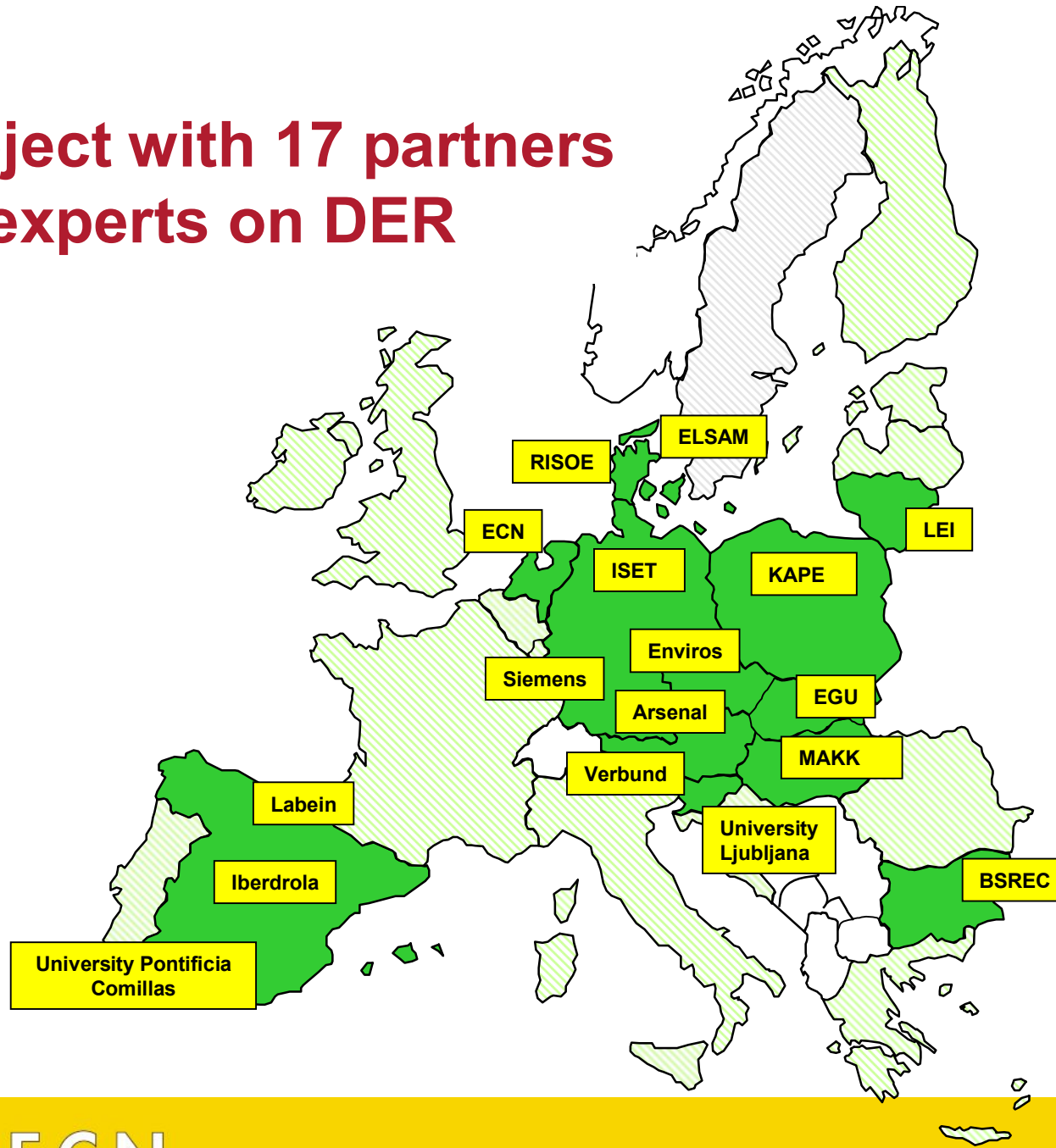
Background to the project

- The energy market and sustainability **objectives of the EU**:
 - Liberalisation of power markets: competence
 - Energy supply security: fuel dependence
 - Environmental protection: greenhouse gas emission reduction, energy efficiency, RES targets...
- **Key role** for renewables and CHP in reaching more **sustainability and security of supply**
- **Many RES & DG studies** and experiences in EU → need for a common vision among stakeholders on and awareness of the benefits, role, and technical solutions for integrating more DER in the system → **SOLID-DER**

Objectives and scope project

- Unite **RTD forces** for **tackling key issues and barriers** to more DER (RES & DG) integration in energy supply by:
 - Increasing the common EU and system wide understanding of possible DER solutions
 - Explain and convince market players, technical & regulatory bodies and decision makers of benefits of solutions for DER barriers
 - Establish and consolidate an EU wide DER integration R&D community, by including particularly new MS stakeholders, i.e. DSOs, generators, etc.
- Specific **objectives** → identification and assessment of critical issues, developments, innovations and RTD solutions in areas as:
 - Legislation, regulation, market access, business and policy support
 - Breakthroughs in DER and network control technologies
 - Interconnections requirements, system solutions and interfaces
- **Dissemination** of knowledge and experiences (seminars & conferences & publications) to stakeholders for:
 - Overcoming great diversity in opinions
 - Enhance awareness of different DER solutions and benefits

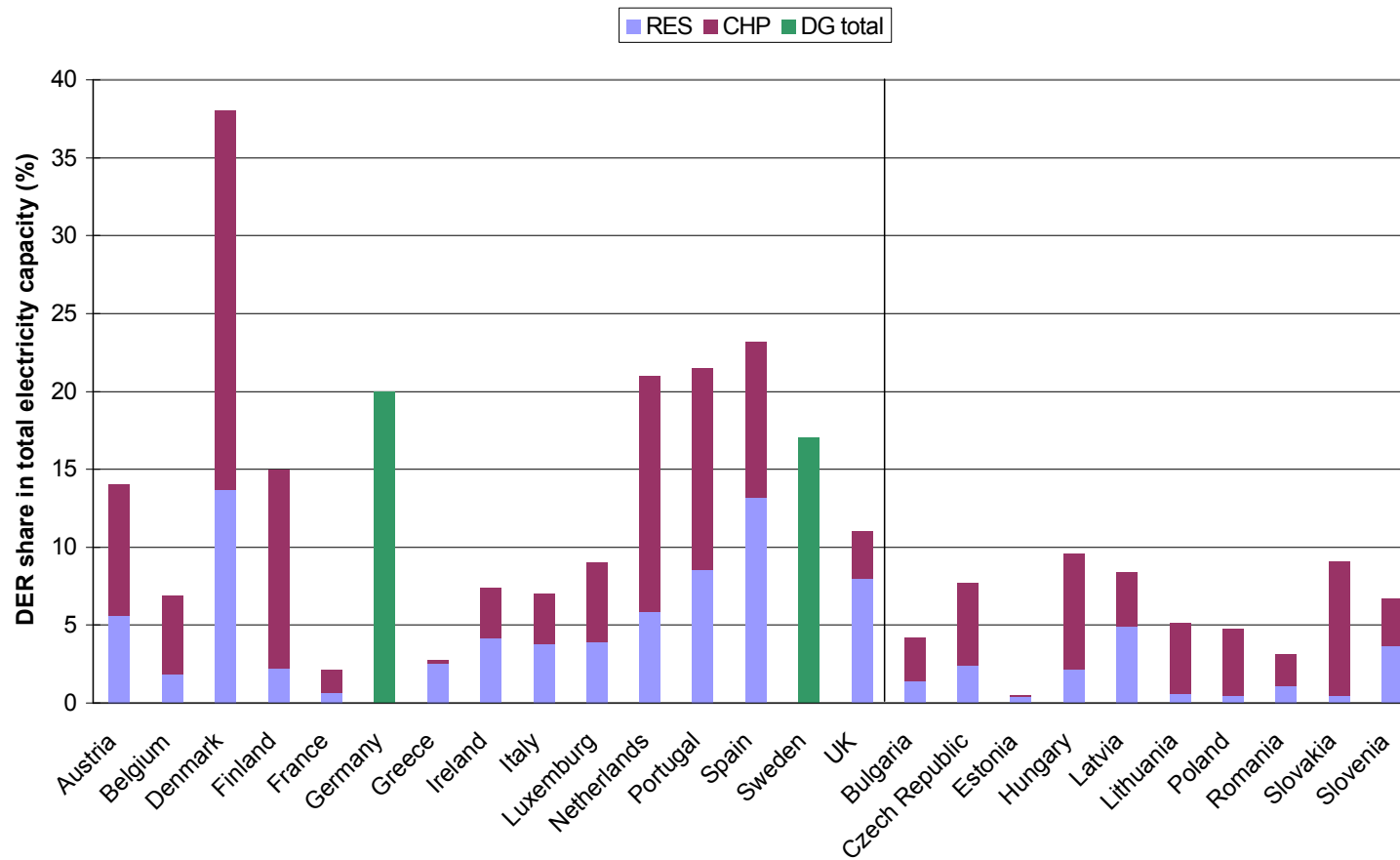
Project with 17 partners all experts on DER



Results

- Two phases of the project: phase I (2007), phase II (2008)
- **WP1 - Reports on:**
 - **Assessment of DER Barriers, benefits and solutions to tackle barriers for more DER in all 25 Member States (2007)**
 - **Assessment of “RTD and Role and interactions of Support schemes and (changes in) Regulatory framework in EU MS for more DER integration” (2008)**
- **WP2 - Reports on Technical constraints (2007 & 2008):**
 - **Interconnection requirements for DER in Europe**
 - **Techniques for DER integration and active network management**
 - **Demand response and DSM**
 - **DER Market introduction and Innovation RTD**
- In 2007 a series of **National Seminars** in new MS
- In 2008 a series of **National Seminars** in EU MS
- **Final conference in 25/26 September 2008 in Warsaw**

Current state of DER presence in EU-25





Thanks and note final conference

- **Final SOLID-DER conference on 25/26 September 2008**
Warsaw, contact/register konferencja@kape.gov.pl

- **References see SOLID-DER**
www.solid-der.org