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# DERRI: Distributed Energy Resources Research Infrastructure

**Distributed energy resources are a key element of Smart Energy Networks – energy networks that are sustainable, flexible, safer and reliable. With growing concern over climate change and shrinking supplies of fossil fuels, research into distributed energy resources is as important today as ever. Researchers for the DERRI project understand this fact and are working to connect researchers and facilities across Europe to develop distributed energy resource components but, above all, make improvements to Smart Energy Network grids.**

## ● LINKING UP FOR RENEWABLE ENERGY

Research in the field of distributed energy resources can be complex, often requiring large amounts of capital, time and experience to be effective and produce useful results. This makes research into specific sub-themes more challenging as finding adequate facilities can be problematic.

With this in mind, DERRI will create a network of excellence, connecting well-equipped laboratories. This will support the sustainable integration of renewable energy sources as distributed energy resources in electricity supply through the development of common requirements and quality criteria, the support to international standards and the definition of testing and certification procedures. DERRI will focus on improving the system and architectural aspects of research facilities in 12 European countries.

Moreover, DERRI will upgrade the existing distributed energy resources network and make it into an integrated infrastructure. The new infrastructure will particularly



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target the interfaces between different types of distributed energy resource. This will include upgrading and harmonising grid structure, interfaces among equipment and taking into account the different actors in grid management.

## ● RENEWED EFFORTS FOR ENERGY NETWORKS

DERRI will give access to European researchers to a unique portfolio of important laboratories in the field of distributed energy resources. As such, researchers will have unprecedented access to distributed energy equipment, storage technologies and demand-side management strategies.

In addition, three joint research activities will test smart energy networks and distributed energy resources, fill the gaps in testing and characterisation methods for distributed energy resources power components and provide a real-time simulation environment for power systems. Together these activities will improve user access to research platforms as well as create partnerships and complementary capabilities between project partners.

DERRI's networking activities are aimed at strengthening the engagement between researcher and practitioner communities, public officials and the general public. Transnational access to the project's network will be given to the European user group by reinforcing the existing network and creating a centralised access mode which will direct researchers to the facilities best suited to their needs.

Progress in this area will be measured through the use of verifiable indicators, such as the number of testing and research services offered by DERRI facilities and the scientific and technological relevance of the research performed using these facilities. A scientific board and external advisory panel will be appointed to verify these measurements.

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Overall, DERRI is working to ensure all researchers in the field of distributed energy resources have access to a state-of-the-art infrastructure where ideas, data and resources can be shared and improved upon.



**Project acronym:** DERRI

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**EU project officer:** Brigitte Weiss

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**Partners:**

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Österreichisches Forschungs- und Prüfzentrum Arsenal Ges.m.b.H (AT)

Commissariat à l'Énergie Atomique (FR)

Centre for Renewable Energy Sources (EL)

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Fundación Labein (ES)

National Technical University of Athens (EL)

RISØ National Laboratory (DK)

Technical University of Lodz,

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Technical University of Sofia - Research and Development Sector (BG)

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