

Smart Grid Testing Advances in DERlab Activity Report 2016/2017

The DERlab Association presents the [2016/2017 edition of its Activity Report](#). The publication demonstrates a vibrant community of laboratories, working on increasingly complex problems that are of strategic significance to the transformation of the energy sector with high shares of renewable generation. With a focus on power system testing, DERlab members showcase their recent developments and laboratory equipment, as well as infrastructure plans for 2017-2018. This data is extensively documented in DERlab's [Database of DER and Smart Grid Infrastructure](#), and the current Activity Report provides an overview of DERlab members' most significant infrastructure upgrades.

DERlab members are actively engaged in addressing many of the sector's key challenges, and in bringing robust experimental approaches to the development and appraisal of critical enabling technologies. In this edition of the Activity Report DERlab also highlights a number of significant projects that exemplify these research efforts. They demonstrate the advances that continue to emerge in systems and component testing, as well as a number of valuable findings.

One of these projects is [ERIGrid](#), which is developing a holistic, cyber-physical systems based approach by integrating 18 European research centres with outstanding research infrastructures. The DERlab Activity Report shows how ERIGrid integrates and enhances the necessary research services for analysing, validating and testing smart grid configurations.

The quality of this report is built upon the excellence of every one of the DERlab network's laboratory teams and their valuable efforts and contributions towards the decentralised power system. **The DERlab network sees it as their mission to address the power system stability and security challenges of interconnected grids as well as to propose and to test system services in order to overcome these challenges.** In this context, DERlab is coordinating the description and harmonisation of related testing procedures. The [Activity Report 2016/2017](#) demonstrates the scope of work that DERlab is committed to perform and how these issues are addressed.

Kassel, October 2017

DERlab started out as a network of excellence in 2005 and grew into an association of leading research institutes and companies worldwide in the field of distributed energy resources equipment and systems in 2008, with 33 members to date. Members of the DERlab Association hold a broad portfolio of testing services and perform collaborative research contributing to the transition to a low carbon energy future.