

## Experiencing the Future Power System.... Today

*International CIGRE Symposium organised by the Irish National Committee in cooperation with Study Committees C1 - C2 - C4 - C5 - C6 and B2*

*Trinity College Dublin – Ireland: 29<sup>th</sup> May – 2<sup>nd</sup> June 2017*

### Symposium Theme and Objectives

The key theme of the symposium is a holistic assessment of the Power System of the future encompassing transmission, distribution and markets that connect generation to customers. Papers should focus on experiences with the deployment of innovations in power system and market design, including lessons learned.

**The objective of the symposium is to give delegates a glimpse into the potential Future Power System by examining new and innovative technologies, practices and policies that are being deployed around the world TODAY and their contribution to the system's change.**

The electricity industry of the future is very different from the industry today. This evolution coupled with cost reductions in grids, generation and storage, the availability of “big data” and smart grids, and market integration bring enormous change to the system. In addition, December 2015's Paris Agreement created a strong global commitment towards decarbonisation. A range of innovative solutions are being employed and trialled in power systems around the world. Demand side response and public acceptance of infrastructure have put a focus on meeting the needs of the power customers and citizens. Field staff is working with increasingly complex and diverse technologies putting a focus on rapid skills development.

The Main Topics section below lists different aspects of technology, system planning, operations and markets but all relate to the evolution of the system in the face of rapidly changing energy policy and societal needs. The open discussions we aim to encourage in the symposium sessions are to enable us to learn from each other and progress into the future together.

### Symposium Venue

Trinity College is a centre of cultural and academic excellence and has been a centre of education for 425 years - a fitting location for the first CIGRE symposium ever to take place in Ireland. Trinity College is in the middle of the famous commercial and social activity districts of Dublin. In addition to on-site accommodation Trinity College is surrounded by a wide range of 3, 4, and 5 star hotels.



Trinity is approximately 16km from Dublin Airport, which is served by direct flights from over 170 locations. Its library contains over 4.5 million printed volumes and many manuscripts including the famous Book of Kells. Many beautiful and historic sights of the Emerald Isle are within easy driving distance from Dublin, in case you wish to explore beyond Dublin's outstanding cultural, sporting and social heritage.

### Programme

The main symposium sessions will take place on Wednesday 31<sup>st</sup> May & Thursday 1<sup>st</sup> June. A total of 14 sessions will be held with six papers presented in each. Sessions will run in 2 parallel tracks. A half day tutorial session will be held on the afternoon of Tuesday 30<sup>th</sup> May and a technical visit will take place on Friday 2<sup>nd</sup> June.

Study Committee meetings for C1, C2, C4, C5, C6 and B2, and several working group meetings, will take place between Saturday 27<sup>th</sup> May and Tuesday 30<sup>th</sup> May.

## Main Topics

The main topics for discussion will be:

1. Rules and standards for integrating a large number of distributed and small generation devices into the electricity system, including safety and operator training
2. Adaptable market designs that attract technology innovations and demand side participation
3. Maximizing the use of existing assets through innovative uses of HVDC, microgrids, smart grid devices, new materials, and conversion of lines to higher voltage or DC whilst retaining a high level of security of supply
4. Coordination between DSOs & TSOs – Operating active distribution networks and associated market impacts including regulatory coordination and structure
5. Meeting the needs of energy users and all citizens - including environmental impact mitigation, stakeholder engagement in new infrastructure and community-based participation in electricity projects and markets
6. Impacts on the power system and power system technical performance in light of the changing mix of resources and technologies such as interactions of the electricity system with batteries and other storage technologies as well as heat, gas and transportation developments of multi-energy systems
7. Using Big Data to improve network planning and operation for both TSOs and DSOs
8. Operational, planning, environmental and technical challenges in transmission and distribution networks including harmonics, inertia and inverter based generation

## Publication of Papers

Papers will be available for downloading from the CIGRE website before the Symposium for all registered participants. The Papers will also be available for purchase in electronic format from the CIGRE Central Office, after the Symposium. The 3 best papers will be published in CIGRE Science and Engineering. A report on the Symposium will be drafted after the Symposium. It will be published in ELECTRA and posted on the website.

## Registration & Further Information

Registration and detailed programme information are available at [www.cigreublin2017.com](http://www.cigreublin2017.com)

## Committees

### TECHNICAL COMMITTEE

The Technical Committee is made up of the following Study Committee Chairs:

C1 - System Development and Economics (Lead SC)

C2 - System Operation and Control

C4 - System Technical Performance

C5 - Electricity Markets and Regulation

C6 - Distribution Systems and Dispersed Generation

B2 - Overhead Lines

### ORGANISING COMMITTEES

- The Organising Committee is chaired by Marie Hayden, Chair Irish National Committee of CIGRE: [marie.hayden@eirgrid.com](mailto:marie.hayden@eirgrid.com)
- The Technical Committee is chaired by Konstantin Staschus - Chair C1: [konstantin.staschus@entsoe.eu](mailto:konstantin.staschus@entsoe.eu)
- The Local Organising Committee is chaired by Michael Mackey: [mj.mackey@live.com](mailto:mj.mackey@live.com)

## Student Participation

The symposium is focussed on new innovations deployed in power & market systems today. To provide an opportunity for students in full time education to share their research on any of the main topics, a dedicated poster session will be run in parallel with the symposium. Papers chosen to participate in the poster session will be included in the symposium proceedings.

## Submission of Abstracts

Participants wishing to present papers are invited to submit their abstract in ENGLISH (500 words) to the Central Office of CIGRE before 30<sup>th</sup> September 2016 to: <http://callforpapersdublin2017.cigre.org/> Please note authors must be available to present at the symposium.

Abstracts, papers and presentations must be in English.

## Deadlines

Authors are requested to note the following deadlines:

Receipt of abstracts: 30<sup>th</sup> September 2016

Notification of acceptance: 30<sup>th</sup> November 2016

Receipt of full papers: 28<sup>th</sup> February 2017

