A Guide to Registration Options for the CIGRE Dublin 2017 Symposium

Dear Delegate,

We are delighted that you are planning to register for the CIGRE Dublin 2017 Symposium. Registration can be completed online at the following link: https://abbey.eventsair.com/cigre-dublin-2017/registration

We have prepared this guide to help make the registration process as smooth as possible. We strongly recommend you read it prior to commencing the registration process.

Section 1 – High Level Programme
Section 2 – Options you will be given as you step through the registration process
Section 3 – Summary of Fees
Section 4 - Cancellation and substitution, Invoicing, Payment and Taxes

If you need assistance during the registration process please contact us: cigredublin2017@abbey.ie

Section 1 High Level Programme

<table>
<thead>
<tr>
<th>Date / Time (approximate)</th>
<th>Event</th>
<th>Location</th>
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<tr>
<td>Tuesday 30/5</td>
<td>14:00 – 18:00 Tutorials</td>
<td>Trinity College Dublin</td>
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<td></td>
<td>18:30- 20:00 Welcome Drinks Reception</td>
<td>Trinity College Dublin</td>
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<tr>
<td>Wednesday 31/5</td>
<td>08:30-18:00 Symposium Day 1</td>
<td>Trinity College Dublin</td>
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<td></td>
<td>10:00 – 14:00 Partners Half Day Tour</td>
<td>Dublin City</td>
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<td></td>
<td>19.30-23.00 Gala Dinner (The Mansion House)</td>
<td>The Mansion House, Dawson Street, Dublin</td>
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<td>Thursday 1/6</td>
<td>08:30-18:00 Symposium Day 2</td>
<td>Trinity College Dublin</td>
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<td></td>
<td>09:00-17:00 Partners Full Day Tour</td>
<td>Dublin &amp; Wicklow</td>
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<tr>
<td>Friday 2/6</td>
<td>09:00-11:30 Technical Visit</td>
<td>Ballsbridge, Dublin</td>
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<tr>
<td>Thursday 25/5 – Tuesday 30/5</td>
<td>Study Committee and Working Group Meetings. These are not covered by the registration process</td>
<td>Camden Court Hotel &amp; Trinity College Dublin</td>
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Section 2 – Options will you be given with as you step through the registration process

1. **Create an account** – we are not using the CIGRE registration tool so you will need to create a new account by providing your email and a password.

2. **How many people are you registering?** You can register a single delegate or multiple delegates under a single log in. If you are registering multiple delegates you will go through the entire process for each delegate in turn.

3. **Personal details** – you will be asked to fill in your personal details and CIGRE membership if you are a member of CIGRE * (see important note below in relation to CIGRE members discount)

4. **CIGRE Membership and Student Status** - You will be asked if you are a CIGRE Member, Non-CIGRE Member, Student CIGRE Member or Student Non-CIGRE Member. NB: CIGRE members will be asked to provide their CIGRE Membership Number.*

5. **Accompanying Persons (€35)** – You will be given the option to register an accompanying person; you will be given options for your accompanying person to book a space on two tours provided, attend the Welcome Drinks and/or buy a ticket for the gala dinner. More information on the tours is provided below (click HERE).

6. **Tutorial Sessions (€75)** - You will be given the option to register for the Tutorial Sessions. More information on the tutorials is provided below (click HERE).

7. **Technical Visit (€40)** - You will be given the option to attend the Technical Visit. More information on the technical visit is provided below (click HERE).

8. **Lunch (€20 per day)** – you will be given the option to have a hot buffet sit down lunch on site in Trinity College on each of the two Symposium days. In order to effectively manage numbers and provide an efficient service, those wishing to avail of this service must select it as part of this registration process. It will not be possible to register for lunch during the symposium.

9. **Welcome Reception** - You will be asked if you wish to attend the welcome drinks reception - you must choose Yes or No. The Welcome Reception is included in Registration fee but in order to assist with planning the event we request that you tick the boxes provided.

10. **Gala Dinner (€75)** – You will be given the option to purchase one ticket for the Gala Dinner. The Gala Dinner event takes place on Wednesday 31st May from 19:30-23:00 in the Round Room in the Mansion House on Dawson Street, adjacent to Trinity College. A second ticket for an accompanying person can only be purchased if the person is registered as an accompanying person.

11. **Accommodation** You will be provided with an option to book accommodation. More information on accommodation is provided below (click HERE).

* **Important note on CIGRE membership**. We are opening registration ahead of the annual membership renewal process, however, to qualify for member discount rates members must be members in 2017. Hence, in March 2017 we will review all members who have availed of this discount to ensure that their membership has been renewed. If it has not then we will have to send a further invoice for the difference between member and non-member rates.
Accompanying Persons

Cost of registration €35.00.

Payment of the accompanying person’s fee covers the cost of attendance at the welcome drinks and entitles you to purchase an additional ticket for the gala dinner and to purchase places on the two tours described below:

Dublin City Tour 31st May 2017 - Half Day Tour (10:00-14:00hrs approximately) €25.00

Enjoy a panoramic tour of Dublin, discovering the north side of the River Liffey. This area offers great striking monuments such as the GPO (General Post Office) on the city’s main thoroughfare, O’Connell Street, or the Custom House along the quays, as well as the Phoenix Park, the largest public park in Europe.

The south side appears more sophisticated with its vast Georgian squares, such as Merrion Square, where Oscar Wilde’s House can still be found (today owned by an American College), its colourful doors, along with Grafton Street and its quality shops. Not so far from St. Stephen’s Green, in Kildare St., you will see the house of Bram Stoker, the author of Dracula. This part of the city is also dominated by the students of Trinity College, where the famous book of Kells is permanently exhibited in its library. The university is facing the medieval district where Dublin Castle and the two Anglican Cathedrals can be found.

South Coast and Gardens 1st June 2017 - Full Day Tour (09:00-17:00hrs approximately) €40.00

Dublin’s beautiful south coast is seen at its best from a touring bus. Along the great sweep of Dublin Bay, past Dun Laoghaire’s elegant promenade and yacht-filled harbour, to James Joyce’s Tower at Sandycove, the sea views are unsurpassed. Turning inland, the tour climbs into the beautiful Wicklow Mountains and continues through the enchanting old-world village of Enniskerry to Powerscourt House & Gardens. The estate, in its spectacular mountain setting, is among the finest in Europe and has featured in many films including Mel Gibson’s ‘Braveheart’. You'll have lots of time to explore the grounds to see the Italian, Japanese and walled gardens and the unusual pet cemetery. Take some time to browse the renowned Avoca Hand weavers shop and café. Before returning to Dublin the tour passes through the dramatic geographical fault known as The Scalp and the ever-changing scenery of the Wicklow and Dublin mountains.

Tutorials

Cost of attendance €75.00.

Tutorials will be provided to delegates by five of the Study Committees involved in the Symposium. They will be run on Tuesday 30th May from 2-6pm. Two parallel tutorial sessions will be available and delegates can move freely between the two tutorial rooms. The purpose of the tutorials is to provide in-depth technical information explaining the underlying issues covered by many of the papers being presented at the symposium. These tutorials are intended to give delegates an opportunity to learn more about the technical issues many of the authors are addressing in their papers. The tutorial themes are as follows:
Tutorial Room 1: Study Committees C4 and C2

Power Quality Analysis, Design and Management
This tutorial looks at increasing challenges of analysing and managing power quality due to the changing nature of grid connected devices and the technology changes employed in the building of new grid infrastructure. Changes are being driven by the connection of generation with power-electronic interfaces, the use of power electronic consumer equipment and the increased use of HV and MV cables causing low order harmonic resonances. Based on the research of working groups from Study Committees C4 and C2 this tutorial will be broken into 3 sessions as shown below. The technical organising committee feel these topics will of great interest to delegates. A significant number of papers have been received on the topic of power quality and this tutorial gives delegates an opportunity to understand the subject matter in more depth prior to the papers being presented and discussed during the symposium.

SC C4 - Changes in the power system impacting on power quality (Francisc Zavoda)
- Moving from large conventional synchronous machines to generation sources utilising power-electronic interfaces.
- Changes in consumption: replacement of existing types of equipment with more energy-efficient alternatives, the proliferation of small devices and the almost complete shift to active power-electronic interfaces.
- Changes in the power system networks: Increased use of underground cables, power-electronic equipment and power line communication.

SC C4 - Demand Side Management (Francisc Zavoda)
- Volt &amp, VAR control.
- Feeder reconfiguration.
- The complexity of smart grid and requirements for new measurement techniques that will comply with national and international standards.

- Classification of power system stability control
- Role features, functional orientation and interrelations of various types of control
- Functional structure and essential techniques of a systematic framework for enhancing control adaptability and coordination

Tutorial Room 2: Study Committees C1, B2 and C6

Building for the Future:
This topic investigates how TSOs and DSOs are contemplating the future with a view to investing in appropriate networks. This is especially important in the context of societal concerns about new infrastructure. The topic will be examined from three different perspectives and presented by internationally acclaimed experts from Study Committees C1, B2 and C6:

1. Understanding what is possible in terms of optimising the use of existing overhead line assets;
2. Examining the basis for investment decisions in a changing and uncertain environment;
3. Assessing the impact of battery storage on distribution networks; many papers have been received on these topics and this tutorial aims to give delegates a deeper understanding of them prior to the symposium sessions.
SC C1 - Investment decisions in a changing and uncertain environment (speaker to be confirmed)
WG C1.22 has reviewed current and emerging practices that identify the need for new system facilities, the factors that influence the choice of appropriate investments and the ways in which TSOs are able to make progress. Building on the work of WG C1.22, the tutorial addresses:

- New drivers for network investment and new options
- Organisational and institutional issues
- Market issues
- Economic issues

SC B2 – Quo Vadis Overhead Lines (Konstantin Papailiou)
SC B2 will present on issues associated with “The Overhead Line dilemma”

- Public acceptance issues
- Upgrading & uprating techniques
- Dynamic line rating & monitoring
- Multi-circuit lines & AC to DC conversion

SC C6 - Impact of Battery Energy Storage Systems (BESS) on Distribution Networks (Geza Joos)
The tutorial will present the main findings of WG C6.30 'Impact of Battery Energy Storage Systems (BESS) on Distribution Networks'. It covers different aspects such as:

- Battery energy storage systems in operation, planning and design of distribution systems
- Use cases and business cases
- Standardization issues and grid codes
- International experiences with practical installations (pilots, projects, and studies) and provides some best practice recommendations for the installation of battery systems.

Technical Visit – EirGrid National Control Centre
Cost of attendance €40.00.

In the world of electric power systems Ireland is probably best known for the work it has done to integrate high levels of renewable non-synchronous generation into its power system. As a small island power system with no AC interconnection to Great Britain or Continental Europe, integrating large amounts of non-synchronous generation poses a number of technical challenges in areas such as voltage, frequency and transient stability. As of October 2016 Ireland is trialling operating the power system with up to 60% of the generation coming from non-synchronous sources at any point in time.

The technical visit takes us to the offices of EirGrid, the Transmission System Operator in Ireland and Northern Ireland. During the visit delegates will meet the engineers behind the transformation of the power system and will visit the National Control Centre. EirGrid staff will provide detailed presentations on the technical challenges posed by high levels of non-synchronous generation and the solutions identified to manage these challenges. This will include a presentation on the performance of the power system during Storm Darwin in 2014. The presentations will be followed by a 30 minute guided visit to the National Control Centre to see the operation of the power system
in real time and witness first-hand the tools, processes and systems used by the control centre engineers.

The technical visit will last approximately 2-2.5 hours including presentations, the visit to the control centre and an opportunity to talk in a “poster session” environment with the EirGrid engineers. Transport and light snacks will be provided. Depending on numbers seeking to register for this visit the tour may operate twice; The first scheduled tour will depart from Trinity College at 09:00 and return to Trinity College at approximately 11:30, the second tour will depart from Trinity College at 11:00 and return at approximately 13:30.

Please note that for security reasons participants registering for the technical visit must provide national identification to gain admission.

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**Accommodation**

We have reserved rooms in a number of 3, 4 and 5 star hotels around Dublin in close proximity to Trinity College. You will have the option to book these rooms as part of your registration process and will be required to pay a deposit equivalent to one night’s stay. The prices below are per night for a single room bed and breakfast, additional options for double / twin rooms are available during the registration process.

Please note that for most of these hotels you can only book nights between Sunday 28th May and Friday 2nd June. The Camden Court hotel can be booked from Thursday 25th May. If you wish to reserve accommodation for nights outside of this range please email the conference organiser directly with your dates at cigredublin2017@abbey.ie

**5 Star Hotels**
The Westin Hotel - €335
The Westbury Hotel - €390

**4 Star Hotels**
Camden Court Hotel - €185

**3 Star Hotels**
Jury’s Inn Parnell Street - €180
Jury’s Inn Christchurch - €185
Fleet Street Hotel - €169
Buswells Hotel - €155
Trinity College Apartments - €78.50
Section 3 Summary of Fees

Registration for the Symposium covers access to the 2-day symposium, the technical exhibition, the student poster session and the welcome drinks reception.

The technical exhibition, student poster session and symposium will take place in Trinity College Dublin on Wednesday 31st May and Thursday 1st June. The symposium opens with a key note address on Day 1. After this address technical papers will be presented and discussed in sessions. A total of 14 sessions will take place over the two days; Six (6) sessions on Day 1 and Eight (8) on Day 2. Sessions will run in parallel i.e. there will always be two sessions on at the same time. Each session will include up to 6 papers on a central theme and will last 1 hour and 45 minutes.

### Symposium*

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<tr>
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<th>Early Bird Registration Rate - available until 1st March 2017</th>
<th>Late Registration Rate after 1st March 2017</th>
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<tbody>
<tr>
<td>Member</td>
<td>€ 495.00</td>
<td>€ 595.00</td>
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<tr>
<td>Non-Member</td>
<td>€ 600.00</td>
<td>€ 715.00</td>
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<tr>
<td>Student Member</td>
<td>€ 395.00</td>
<td>€ 475.00</td>
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<tr>
<td>Non Member Student**</td>
<td>€ 480.00</td>
<td>€ 570.00</td>
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* exempt from Value Added Tax (VAT)

**Non Member Students must provide proof of student status to cigredublin2017@abbey.ie after registration

### Optional Extras

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<tr>
<td>Tutorials</td>
<td>€75.00 per delegate</td>
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<tr>
<td>Gala Dinner</td>
<td>€75.00 per delegate</td>
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<tr>
<td>Lunch on site</td>
<td>€20.00 per day</td>
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<tr>
<td>Technical Visit</td>
<td>€40.00 per delegate</td>
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<tr>
<td>Accompanying Person</td>
<td>€35.00 per person</td>
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Section 4 Payment Terms

Terms and Conditions

Symposium Registration Cancellation
- Notice of cancellation must be sent in writing or by email to Abbey Conference & Events at the address below.
- For cancellations received before 1st March 2017 a full refund minus a €25.00 administration fee will be given.
- For cancellation between 2nd March and 31st March 2017, 50% of the registration fee will be refunded.
- No refund can be made after 1st April 2017.
- Please allow up to 3 weeks to receive the refund.

Registration Substitution
- Delegates who cannot attend and wish to be substituted by an employee from the same organisation may be facilitated at the discretion of the Conference Committee. Please note that new invoices cannot be issued and payments cannot be refunded and re-charged

Accommodation Cancellation
- Please note the first night’s deposit is non-refundable. The balance for your accommodation is due 6 weeks prior to arrival and we will contact you then.

Payment Policy
- For registrations received without payment a provisional booking will be held for 14 days.
- All registrations will be acknowledged within 7 days of receipt.
- Bank Transfers should be made using the following details (please state name & ID of attendee):
  Account Name: Abbey Tours - CIGRE 2017
  Bank: AIB 100/101 Grafton St, Dublin 2
  Sort Code: 93-10-47 Account Number: 09401-929
  IBAN: IE70 AIBK 93104709401929
  BIC: AIBKIE2D
- If you pay by credit card your details will be encrypted and securely forwarded to the conference organiser.
- If you wish to pay by purchase order, please click on the bank transfer option below. The system will automatically send you a confirmation email including an invoice. Please then email us your Purchase Order number and we will amend the invoice accordingly and resend it to you.