

ATC Technical Seminar



Angela Klepac – ATC Chair Person

November 2023

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cigre

For power system expertise

Welcome and background

- Welcome to our 2023 ATC Presentation Day
- The AIM of today is:
 - To provide interested parties an overview of the technical activities undertaken by CIGRE Australia
 - It is also an opportunity to promote the technical work of CIGRE and inform our members of technical highlights achieved across 2023
 - For those interested individuals who are in attendance and listening to provide better visibility and avenues/pathways on how to get involved and participate
- Founded in Paris France in 1921
- Not for profit association, sharing and developing knowledge has been intrinsic to our culture.
- Today CIGRE is present in over 90 countries with more than 17000 professionals collaborating and sharing their expertise in power systems.



Structure of CIGRE



Panel	Scope	Convenor
A1	Rotating electrical machines	Tri Tran→ Len Gunn
A2	Power transformers and reactors	Matthew Gibson
A3	Transmission and distribution equipment	David Pita
B1	Insulated cables	Russel Wheatland→ Rob Bradley
B2	Overhead lines	Asif Bhangor
B3	Substations and electrical installations	Crina Costan→ Andreas Laubi
B4	DC systems and power electronics	John Wright-Smith
B5	Protection and automation	Peter Bishop→ Rob Coggan
C1	Power system development and economics	Christian Schaefer
C2	Power system operations and control	Greg Hesse→ Tjaart der Walt
C3	Power system environmental performance	Brett Hayward
C4	Power system technical performance	Babak Badzadek
C5	Electricity markets and regulation	Greg Thorpe
C6	Active distribution systems and distributed energy resources	Ray Brown→ Jennifer Gannon
D1	Materials and emerging test techniques	Yi Li
D2	Information systems and telecommunication	Lousie Watts

Benefits of CIGRE

- The opportunity to collaborate and “brain-storm” with experts from around the globe to identify potential for groundbreaking initiatives
- Easy access and the development of understanding of the industry “state of the art” and “best practice”
- Opportunity to problem-solve in a non-competitive environment
- Shared experience in major disasters and accidents that have occurred around the globe to assist in avoiding such events in own organisation or country
- Work with others to benefit the organisation and the whole community tackling big industry problems
- Ability to influence and build linkages with external organisations and standards bodies such as IEC, IEEE, etc
- Provide technical information for standardization – In cases when technical knowledge is missing to write standards in IEC or IEEE, the knowledge basis is often developed by CIGRE expertise and experience of members
- From a more global perspective, providing relevant guidelines for electrification of developing economies and remote areas.

Benefits of CIGRE

- Sharing of information, experience and knowledge to allow organisations to informally benchmark against world best practice
- Members have access to unlimited technical information using the e-cigre online database for Technical Brochures, Electra articles and Session papers
- Opportunity to participate in working groups that bring together, technical, commercial and management expertise from different global backgrounds



Ways to participate with CIGRE

- Becoming a CIGRE Australia member - immediate access to e-cigre
- Apply to join and become an Australian Panel member
- Apply and join the NGN - Next Generation Network (<33 years)
- Write a paper for any local/international events including CIGRE Paris sessions and come along and present
- Attend the many Colloquiums, Symposiums or local events that the Study Committees organise
- Attend webinars/tutorials
- Apply to join a working group and contribute as a representative or convenor

CIGRE resources

Stay connected with our CIGRE publications via :

1. E-CIGRE – over 14k technical documents and publications
2. Green Books and Technical Brochures produced by CIGRE Study Committees and their Working Groups
3. Papers produced by CIGRE Technical Working Groups
4. Paris Session papers and proceedings
5. Symposia papers and proceedings
6. Colloquia papers
7. CIGRE Science and Engineering
8. Electra and In the Loop publications
9. More recently, papers produced by non-CIGRE experts

Some recently produced Technical Brochures



TECHNICAL BROCHURES

Wide Area Monitoring Protection and Control Systems – Decision Support for System Operators

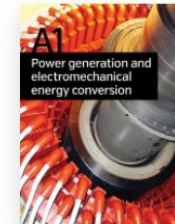
Published in 2023



TECHNICAL BROCHURES

Correct handling of fittings and conductors for overhead lines

Published in 2023



TECHNICAL BROCHURES

Survey on industry practices and effects associated with the cutting out of stator coils in hydrogenerators

Published in 2023



TECHNICAL BROCHURES

Guidelines for SF6 end-of-life treatment of T&D equipment (>1 kV) in substations

Published in 2023

Agenda

AGENDA - ATC PRESENTATION DAY 27TH November 2023

Facilitator - Angela Klepac - Australian Technical Committee (ATC) Chairperson

TIME	DESCRIPTION	PRESENTER
0930 – 1000	Arrival and Registrations	
1000 – 1010	Opening	Angela Klepac - ATC Chair
1010 – 1015	Introductory Comments	Peter McIntyre – CIGRE Australia CEO
1015 – 1030	International Technical Committee Update on new CIGRE Strategic Plan et al	Alex Cruickshank SC Convenors C5 & on behalf of D2
1030 - 1130	Presentations A1, A2, A3, D1, D2	Panel Convenors
1130 – 1140	Questions	
20-minute Break		
1200 – 1300	Presentations B1, B2, B3, B4, B5	Panel Convenors
1300 – 1310	Questions	
45-minute Lunch Break		
1355 – 1410	Events Update - Cairns 2023 Symposium - Paris 2024 Session	Angela Klepac - ATC Chair
1410 – 1520	Presentations C1, C2, C3, C4, C5, C6	Panel Convenors
1520 – 1530	Questions	
1530 – 1550	Technical Recognition and Convenor Reflections	Convenors who have reached 6-year term
1550 – 1600	Closing comments	Angela Klepac

Panel Convenor Presentations

- Summary for each of the 16 Panel Convenors
 - Overview of SC area of focus
 - Key items most relevant to Australia
 - Activities coordinated by the Australian Panel
 - Insights from the 2023 Cairns Symposium
 - Technical brochures published
 - Active, new and proposed working groups
 - Opportunities to get involved

CIGRE Australia - EVENTS Update Cairns Symposium 2023 and Paris Session 2024



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Cairns International Symposium 2023

Debrief

Cairns Symposium 2023



Cairns International Symposium 2023

Cairns Convention Centre Cairns Australia - 4-7th September 2023

- Hosted by the C2 and C5 Study Committees
- **Key Theme** : The end to end electricity system: transition , development, operation and integration
- Eleven of the Sixteen global Study Committees supported and attended the Symposium
 - ✓ A3 Transmission & Distribution Equipment
 - ✓ B1 Insulated cables
 - ✓ B3 Substations and electrical installations
 - ✓ B5 Protection and automation
 - ✓ C1 Power system development and economics
 - ✓ C2 Power system operation and control
 - ✓ C4 Power system technical performance
 - ✓ C5 Electricity markets and regulation
 - ✓ C6 Active distribution systems and distributed energy resources
 - ✓ D1 Materials and emerging test techniques
 - ✓ D2 Information systems and telecommunication



SEAPAC (South East Asia Protection Automation Conference) and CIDER (Conference on the Integration of Distributed Energy Resources) held at the same time and venue

Cairns International Symposium 2023 – Planning

Planning for the event was over a 5 year period

- 2017
 - ✓ A case was put forward to the board seeking support to host a Symposium Board.
 - ✓ It was approved and a suitable location and venue were found.
- 2018 Paris Session
 - ✓ Technical convenors presented to their SC and selected members of the combined NC Council lobbied for support. Presented to the Combined NC and won the hosting rights
- 2018-2020
 - ✓ Early planning and promotion aimed to encourage as many SC's to attend as possible including all companies that had previously sponsored at CIGRE Australia events
- 2020-2022
 - ✓ ongoing promotional and development work resulting in x10 SC committing to attend.
- 2022
 - ✓ Panel convenors provided with marketing video and presentation to share at their SC meetings.
 - ✓ SC A3 joined, bringing total SC to x11
 - ✓ Promotional booth at the Paris Session was established and proved to be successful, with photobooth, brochures info including sponsor/exhibitor brochures, etc.
 - ✓ Super Early bird registrations open and website finalised prior to the Session.

Cairns International Symposium 2023 – Planning

Planning for the event was over a 5 year period

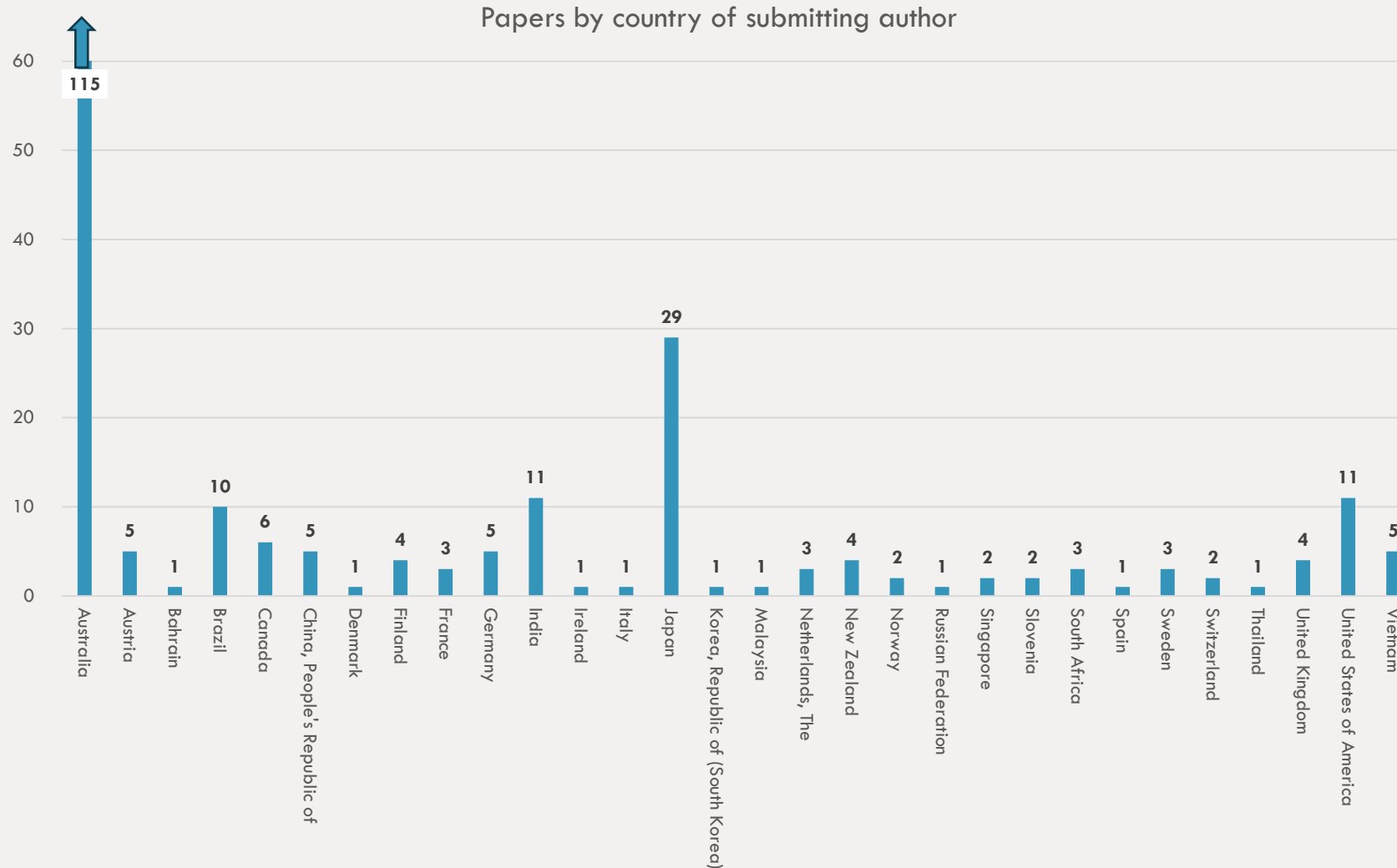
- 2023
 - ✓ Registrations began to climb early in the year with, promotion and marketing via linkedin, direct mail out and social media continued.
 - ✓ Sponsors and exhibitor numbers also began to come on board and take up the sponsor and exhibitor offerings.
 - ✓ In April 2023 with numbers around 500 decided to hire the whole of the Convention Centre to ensure that we had sufficient space. Then focused on trying to get at least 800 delegates
 - ✓ In July 2023 – Delegate numbers were near to 1000 so wound back advertising so as not to overcrowd the event
 - ✓ In August 2023 – ongoing planning and Final Team meeting to run through detail of the Symposium.
 - ✓ In September 2023 – Team arrived early in Cairns to produce name tags and pack 1300 event tote bags.
 - ✓ NUMEROUS Technical meetings and workshops to coordinate the technical work including papers, presentations, workshops, etc.

Thank you to the many volunteers.

Cairns International Symposium 2023 – Statistics

- Over 1,300 attendees — the conference was over-subscribed with about 1240 registrants for the whole 4 days and daily tickets between 40 and 100 per day.
 - 40% were international delegates
 - 30 countries were represented by the papers
- 11 Study Committees
 - 240 paper presentations — 986 authors, 243 published papers from 339 synopses.
 - 10 tutorials and two workshops
 - 51 meetings — the TC, Study Committees, Strategic Advisory Groups and Working groups (across seven days from the Saturday before to the Friday after the Symposium)
- ConfTool proved a success again gathering synopses, papers and the presentations
 - 184 reviewers
 - 1,561 reviews entered into ConfTool
 - Papers and presentations were downloaded from ConfTool to the website.
- Proceedings to be published in November, including all papers and presentations
- Top papers from each SC to be published in CIGRE Science and Engineering Journal (CSE)

Cairns International Symposium 2023 – Statistics



Cairns International Symposium 2023

Opening ceremony :

Dr Sean McGoldrick – CIGRE Australia Chairman

Opening ceremony Keynote Speakers:

Mr David Shankey, Deputy Director-General of the Energy Division in the Department of Energy and Public Works, Queensland.

Topic: “Renewable Energy Transformation in Queensland”



Mr Adam Middleton, Vice President - Western Europe, Siemens Energy

Topic: “Industrialisation of the Energy Transition” - How do we make it happen ?



Women In Energy – Keynote Speaker

Ms Merryn York - Executive General Manager, System Design AEMO

Topic: ” Women in Energy – Supporting the transition”



Cairns International Symposium 2023 – Delegate Numbers

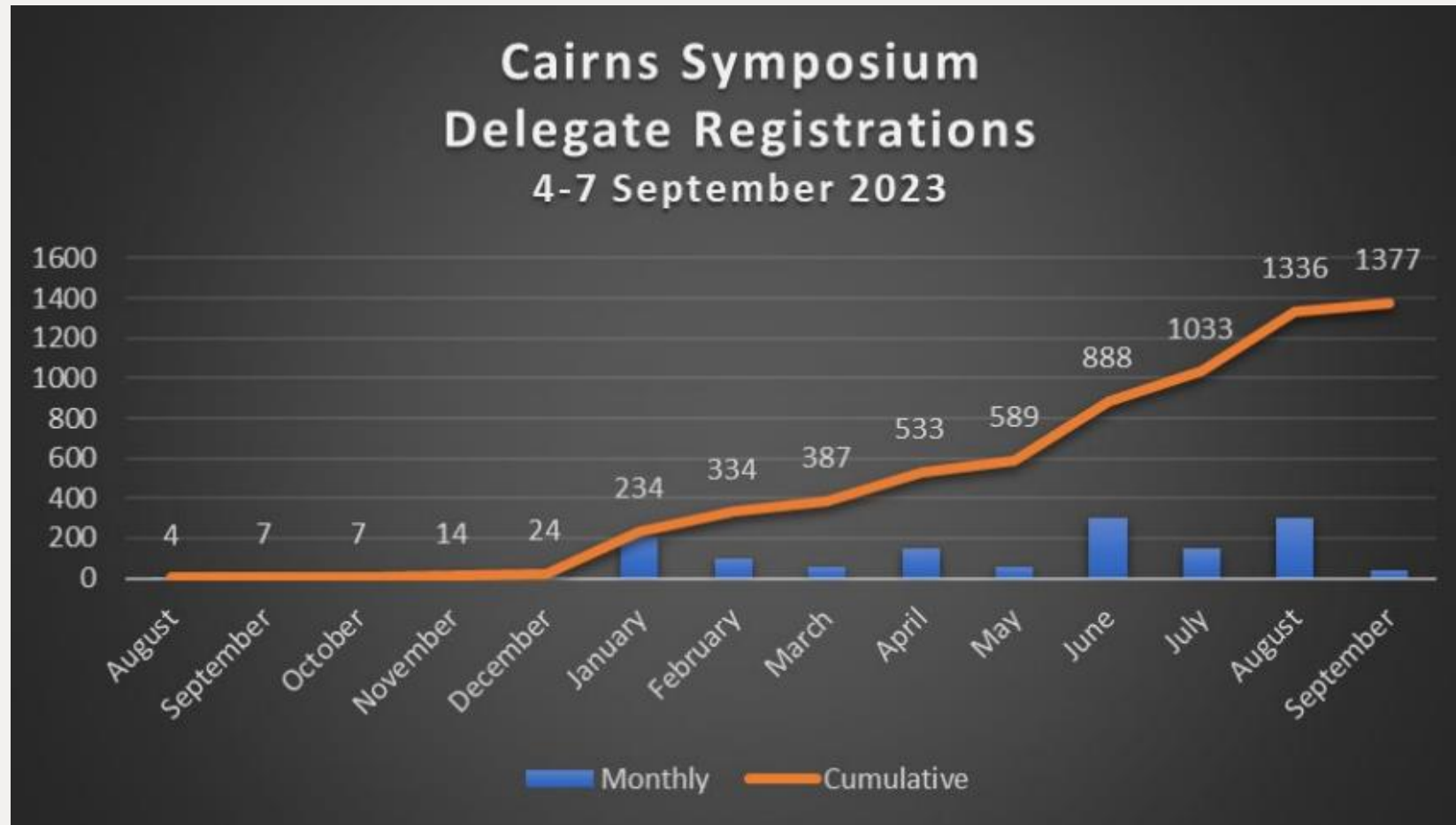
DELEGATES		
Country	Percentage Split	Numbers
Aust/NZ	73%	1004
USA /Canada Sth America	6%	87
UK & Europe	9%	10
Asia	9%	129
Other	2%	27
TOTAL		1377
% non AUST/NZ	27%	

Note :

We had delegates from x35 countries

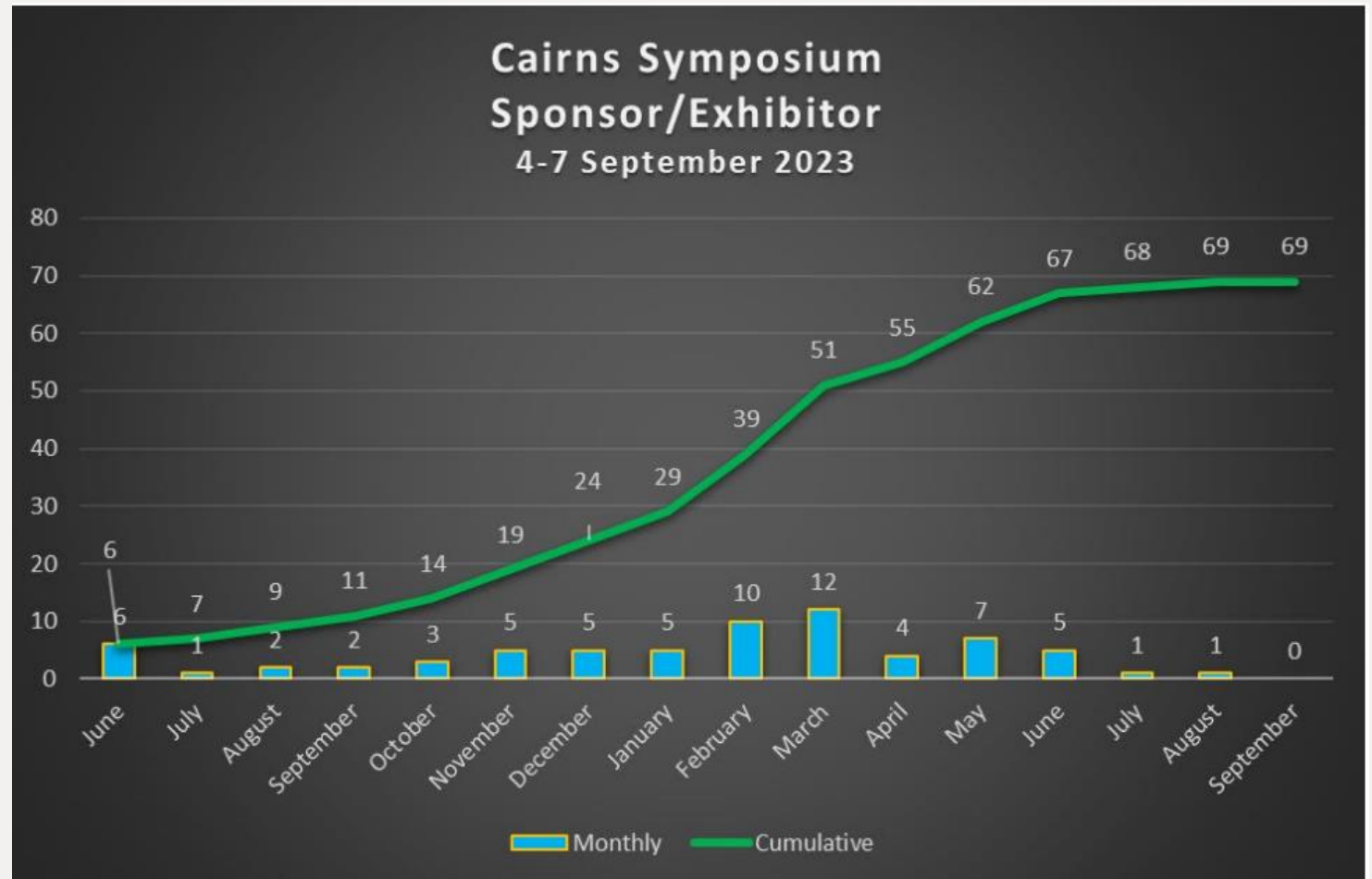
Female attendees 111 equating to 8.06% of total numbers

Cairns International Symposium 2023 – Delegate Numbers



Cairns International Symposium 2023 – Sponsor/Exhibitor Numbers

Sponsors/Exhibitors		
Company		Total
Aust/NZ	80%	55
USA/Canada	6%	4
UK & Europe	6%	4
Asia	9%	6
Total		69



Cairns International Symposium 2023 – Core Team

- Local Organising Committee Chair - [Phil Southwell](#)
- Technical Committee Chair - [Alex Cruickshank](#)
- Technical Tour Coordinator - [Andrew Halley](#)
- Administrative and Business Support - [Terry Killen](#)
- Sponsorship contact and Event Co-Ordinator - [Debbie Haddock](#)
- AV and technical - [Brendan Watterson](#)
- Graphic and Design - [Linda Gleeson](#)
- Symposium Oversight and Audit subcommittee Chair - [David Bones](#) with members: Jennifer Crisp, Les Brand, Angela Klepac
- Sponsor liaison and Project Management - [Terry Killen](#)
- Women In Energy Breakfast - [Nicola Falcon](#), [Natasha D'Silva](#), [Jennifer Crisp](#), [Tara-Lee Macarthur](#)

Thank you to the many volunteers



Cairns International Symposium 2023 – Student Award Recipients

The free student scheme that was run attracted 41 applicants.

The winners of the free registration, accommodation and \$500 spending money to the Symposium were:

1. **Susan Licha**

Master of Engineering degree in Electrical and Renewable Energy Engineering at Edith Cowan University in Western Australia

2. **Jack Burgemeister**

Fourth year Bachelor's Degree in Electrical Engineering at the University of Adelaide, with a major in Renewable Energy and minor in Entrepreneurship

Both Susan and Jack have expressed their appreciation and enjoyment of the Symposium

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Thank you to all our Exhibitors



Upcoming Paris 2024 Session

Biennial Session to be held
25th to 30th August 2024
Palais des Congres, Paris, France



Paris 2024 – About the Session

- Event is held on a two yearly cycle
- Throughout the event, CIGRE's focus is to operate the world's foremost collaborative knowledge development and sharing programs
- Face to Face event held in Paris , France at the 'Palais des Congres'
- Attracts over 8000 power and energy industry participants from over 120 countries, including over 3600 international experts and other decision makers
- Over 160 working group meetings
- Over 30 Study Committee sessions
- Over 800 technical papers
- Over 300 technical exhibitions providing international companies to share and exhibit the latest in innovation, products and services

Paris 2024 – About the Session

- Presentations and discussions held throughout the week via :
- Study Committee Group discussion meetings
- Poster Sessions
- Tutorials via the x16 Panels
- Workshops
- WiE - Women In Energy Forum
- NGN - Next Generation Network
- Technical exhibition
- Networking
- CIGRE TV
- Social program



Paris 2024 – About the Session – Key Themes

The 2024 Session will prioritise all relevant topics related to the “End to End Power System”

- the further development of digitalisation,
- the proliferation of Active Distribution Networks combined with the dramatic need for increasing the utilisation of renewable energy sources towards reaching a carbon-free network,
- the critical need for keeping the resilience, stability and security of power systems,
- the new edge developments on Hydrogen and Storage technologies

Paris 2024 – About the Session – Why attend ?



- Immerse yourself in CIGRE's world-leading technical programme expecting to cover more than 800 papers

- Help lead the energy transition



Paris 2024 – About the Session – Why attend ?

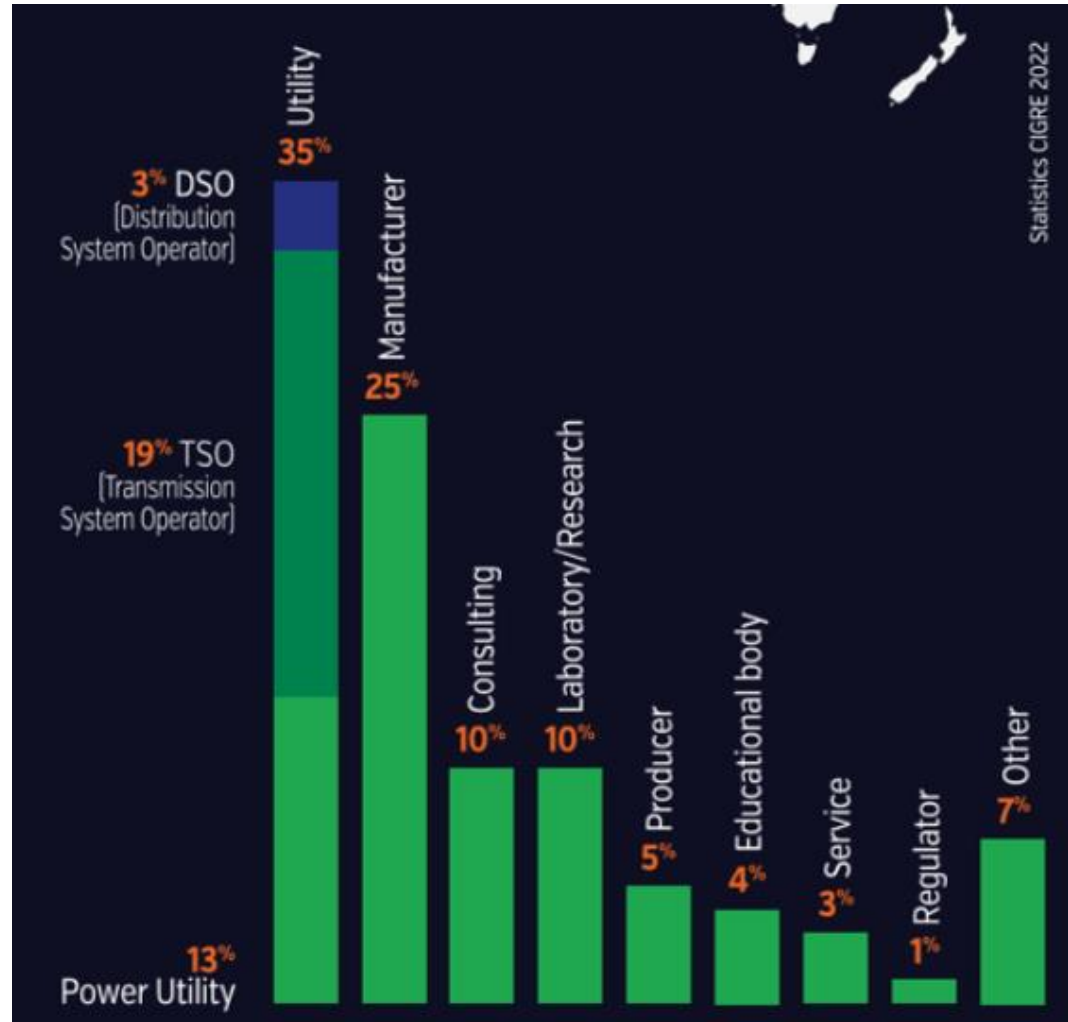
- Learn about the global power system industry latest innovations at the massive technical exhibition
- Expand your professional contacts with extensive networking opportunities
- Connect with your colleagues, friends and the CIGRE community



Paris 2024 – About the Session – Who attends ?

(CIGRE 2022 statistics)

- 35 % Utility (3% DSO Distribution System Operator + 19% TSO Transmission System Operator + 13% Power Utility)
 - 25 % Manufacturer
 - 10 % Consulting
 - 10 % Laboratory / Research
 - 5 % Producer
 - 4 % Educational Body
 - 3 % Service
 - 1 % Regulator
 - 7 % Other
- (CIGRE 2022 statistics)



Paris Session 2024 – Paper Submissions Timetable

DATE	YEAR	ACTIVITY	COMPLETE
7 th August	2023	Synopses to CIGRE Australia office	Yes
21 st August	2023	Sponsors checked/reviewed by Australian Convenors	Yes
26 th August	2023	Synopses lodged by CIGRE Australia to the CIGRE Paris Office	Yes
6 th November	2023	Paris Office notify of accepted Synopses	Yes
19th February	2024	Sponsors checked/reviewed by Australian Convenors	DUE
6th February	2024	Final Papers Submitted to Paris Office	DUE
6th May	2024	Notification to Authors	DUE
25-30th August	2024	PARIS Session	DUE

Questions ?

