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networking
global know-how

Australian Technical Committee Report to the ANC CIGRÉ

Steve Jones

Sydney, November 2015

Introduction

- ATC membership
- ANC events in 2015
- Working Groups supported by the ANC
- International publications
- ANC involvement in international Working Groups
- International events in 2015
- Paris 2016
- Reports by the ATC
- Some thoughts on the future



ATC Membership

- Five ATC members have reached the end of their terms and replacements have been approved

Panel	Retiring Convener	New Convener
A2 Transformers	Peter Cole	Ross Willoughby
A3 High Voltage Equipment	Ankur Maheshwari	Wayne Pepper
B2 Overhead Lines	Robert Lake	John McCormack
C4 Technical Performance	Bob Adams	Andrew Halley
D2 Information and Telecommunications	Robert Evans	Victor Tan

All ATC members are listed in Attachment 1 of the ATC Report



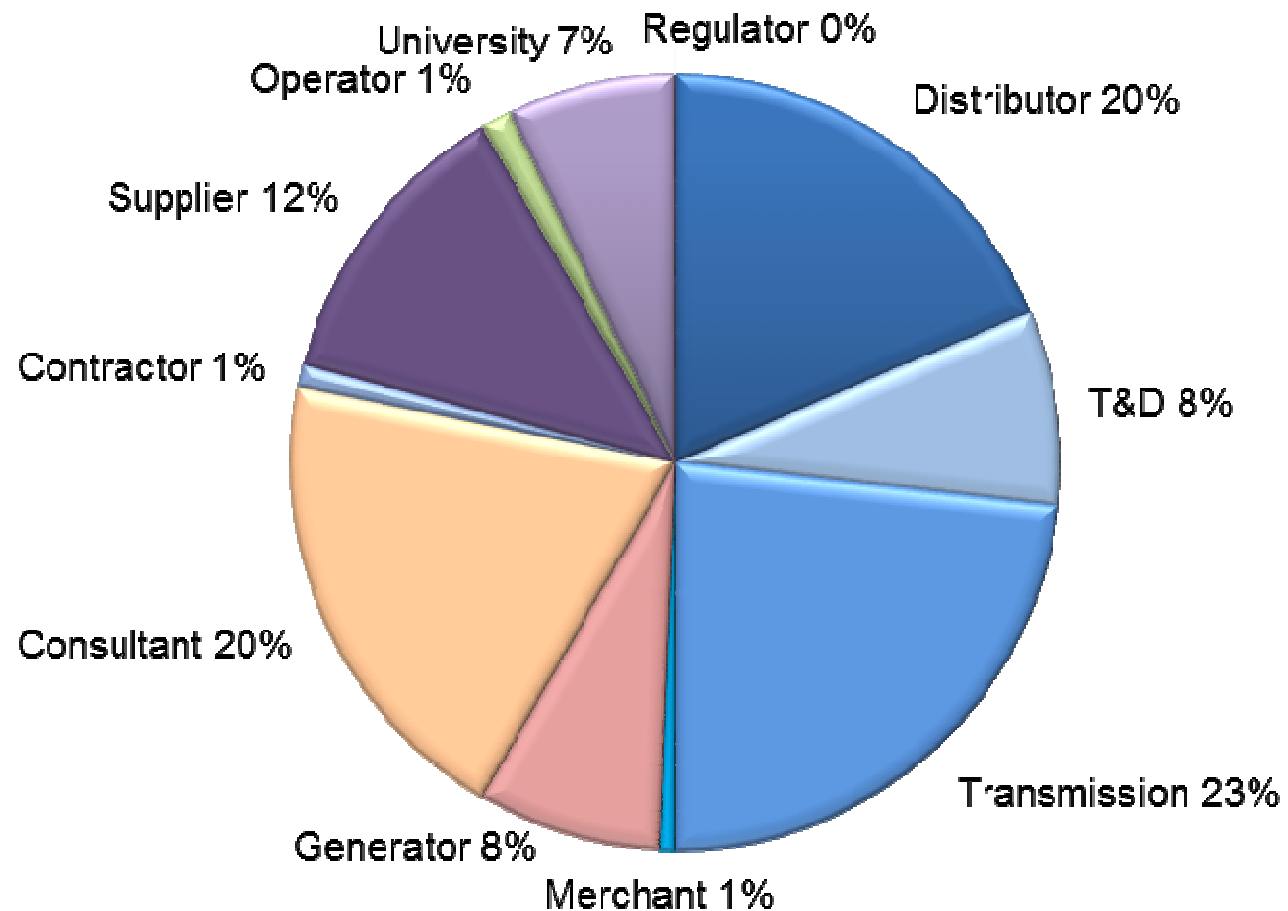
ATC Membership

- Terry Krieg remains Chairman of SC B3, Substations
- Peter Wiehe remains Secretary of SC A1, Rotating Machines
- Steve Jones has reached the end of his term as Chair of the ATC



ATC Membership

- Panel membership is 310 (313 in 2014)



ANC Events in 2015

- SEAPAC 2015
 - 17th and 18th March by Panel B5
 - 112 attendees and 41 presentations
- Transformer and Switchgear Seminar
 - 20th April by Panels A2, A3 and D1
 - about 110 delegates using CIGRE tutorials
- inaugural CIDER Conference
 - 19th and 20th August by Panel C6
 - 93 delegates and 23 papers



Thanks to the organising committees
for each of these events



Working Groups supported by the ANC

WG	Working Group Name	Convener
A2-49	Condition Assessment of Power Transformers	Peter Cole
A3-29	Deterioration of ageing substation equipment & possible mitigation techniques	Ankur Maheshwari
B1-37	Guide to the operation of fluid filled cable systems	Colin Peacock
B2-40	Calculations of the electrical distances between live parts and obstacles for ohl external clearances	Robert Lake
B3-35	Substation earthing system design optimisation through the application of quantified risk analysis	Bill Carman
B4-62	Connection of Wind Farms to Weak AC networks	Nalin Pahalawaththa
B4-63	Commissioning of VSC HVDC Systems	Les Brand
B5-39	Documentation requirements from design to operation to maintenance for digital substation automation systems	Rod Hughes
C1-32	Establishing best practice approaches for developing credible electricity demand & energy forecasts for network planning	Graeme Ancell
C3-09	Corridor management	Stephen Martin
C5-20	Drivers for Major Changes in Electricity Markets	Greg Thorpe
D2-01	Core business information systems and services	Robert Evans

By comparison, the ANC supported three Working Groups in 2009



Working Groups supported by the ANC

- Published in 2015

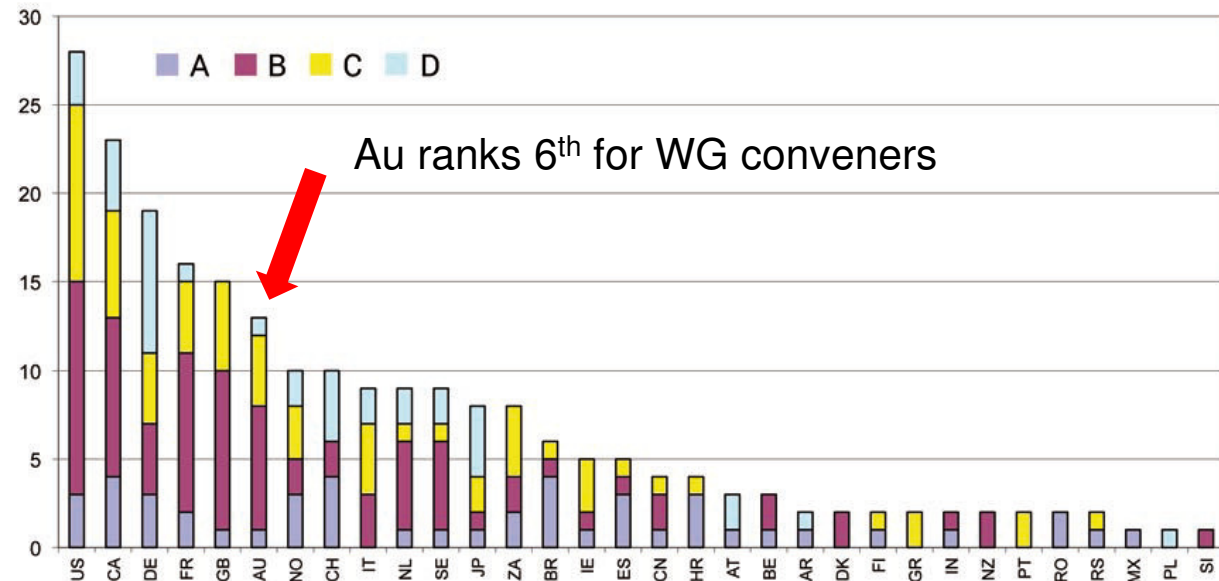
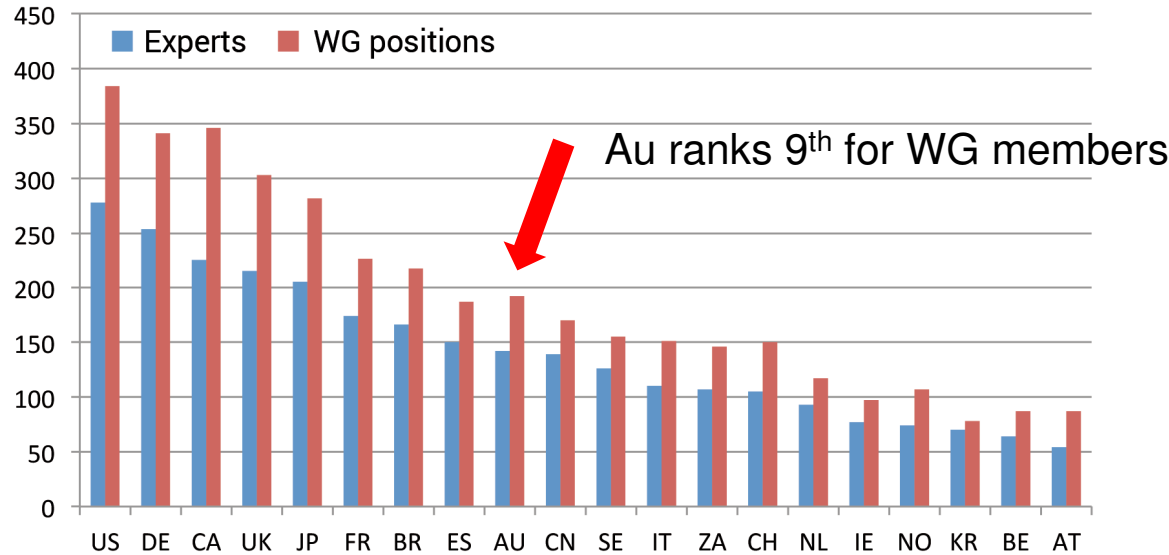
B5-39	Documentation requirements from design to operation to maintenance for digital substation automation systems	Rod Hughes
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- Approved for publication

B1-37	Guide to the operation of fluid filled cable systems	Colin Peacock
C3-09	Corridor management	Stephen Martin



ANC involvement in international Working Groups



International publication summary

- 632 -- Integration of electric vehicles in electric power systems
- 630 -- Guide on transformer intelligent condition monitoring (ticm) systems
- 628 -- Documentation requirements throughout the lifecycle of digital substation automation systems
- 627 -- Condition assessment for fluid-filled insulation in ac cables
- 626 -- Market operators – their evolution, current organisation and future structure
- 619 -- HVDC connection of offshore wind power plants
- 618 -- Scalable communication transport solutions over optical networks
- 616 -- Externalities of Overhead High Voltage Power Lines
- 615 -- Security architecture principles for digital systems in Electric Power Utilities
- 614 -- Air Insulated Substation Design for Severe Climate Conditions
- 608 -- Lessons Learnt from Recent Emergencies and Blackout Incidents
- 607 -- Contracts for outsourcing utility maintenance work
- 602 -- Tools for simulation of the internal arc effects in HV and MV switchgear
- 603 -- Application and management of cybersecurity measures for protection and control systems

Full list is in Attachment 3 of the ATC Report



International Events

- Reports on the following events are included in the ATC reports
 - C1, C2, C4, C5 and B4 Symposium in Lund, Sweden
 - A2 Colloquium in Shanghai, China
 - C3 Workshop in Stresa, Italy
 - B5 Colloquium in Nanjing, China
 - A1 Colloquium in Madrid, Spain
 - C6 Symposium in Vienna, Austria
 - B3 and A3 Colloquium in Nagoya, Japan



General Session 2016

- 23 synopses were submitted by the ANC
- 20 synopses have been selected
 - Compared to 13 in 2010
 - Another record number of papers from the ANC
- Several ATC members have key roles at the Session



Reports by the ATC

- ATC Chairman's Report
- Australian Panel Convener Reports
- Reports on Working Groups supported by the ANC
- 2015 International Event Reports



Australian National Committee
Symposium Report 2015

EDST 2015 Symposium on Smart Electric Distribution Systems & Technologies SC C6 Distribution Systems and Dispersed Generation

1. Theme

The CIGRE C6 Study Committees sponsored a Symposium in Vienna, Austria, and the C6 study committee used the opportunity to also hold their annual meeting, and selected working group meetings. The focus of the Symposium was "Smart Electric Distribution Systems & Technologies" and was a forum for bringing together delegates from a range of utilities, academic institutions and industry. Around 150 delegates attended from a wide range of countries. The conference was hosted by the Austrian Institute of Technology, Energy department.

2. Event

The C6 Study Committee meeting was held on 8th of September 2015, in Vienna, Austria, hosted by the Austrian Institute of Technology, at their Vienna Campus.

The following C6 Working Groups also organised meetings in Vienna:

- JWG C6.25/B5/CIRED: Control & Automation Systems for Electricity Distribution Networks of the Future
- WG C6.30: The impact of Battery Storage Systems on distribution networks
- WG C6.31: MVDC Grid Feasibility
- JWG C6.32/D2: Utilisation of data from smart meter systems

3. Reason for the Event

This event was a combined C6 Study Committee event and a Symposium organised by the Austrian C6 member.

The ANC was represented by: Ken Ash (APC6 Convenor), Michael Negnevetski, and James Hamilton.

Ken Ash (C6 Convenor) attended on behalf of the ANC to support the progression of various activities and working groups of the C6 study committee. Michael and James, both from University of Tasmania presented technical papers on off-grid systems and low load diesels.

4. Key Messages

The Symposium provided an opportunity for C6 international members to assess the current state of research and application of distribution system planning, operational, and technical issues.

Distributed Energy Resources are proliferating in many developed countries, and specific attention is now being paid to the growth of residential and commercial energy storage systems, and the consequent



ATC – some thoughts on the future

- Transitioning NGN members to panel members
- Further increasing the work supported by the ANC without putting further pressure on membership fees
- Leading all of CIGRE in the use of Confluence



Thank you



- All our meeting hosts across Australia and New Zealand
- ANC management team
- ANC of CIGRE Board
- Evan Lamplough for being the ATC Secretary for the last 6 years
- All 31 people who have been ATC members over the last 6 years

