

AUC5 report to ATC 2019

Presented by Greg Thorpe
Brisbane, 21 November 2019



cigre

For power system expertise

C5 Scope

- C5 is one of 16 study committees within the overall organisation reporting to an international chairman who in turn reports to an international Technical Council comprising all study committees
- Australia is one of a number of countries with sufficient membership scale to have a local Technical Council
- To assess the operation of electricity markets and regulation and where appropriate to discuss potential amendments (my words)
- The brief is broad
- In line with CIGRE strategic directions our remit is extending into distribution networks
- Our work clearly overlaps with other study committees especially within the C family and must be ever vigilant to work together.

Summary

- Self assessment
 - **Doing OK**
 - 4 Paris 2020 papers
 - Leading 1 WG
 - Member 3 WGs
 - Coordinating Paris 2020 market disturbance workshop (with C2)
 - Montreal (C5 annual meeting, Symposium, CIGRE Canada)
 - **Can do better**
 - Additional working groups
 - Additional members
 - Sector diversity
 - Geographic diversity
 - Gender diversity
 - **Proposed actions**
 - Recruitment
 - Additional WG leads
- Annual meeting – 2019 Sydney (hosted by Deloitte)
- Annual meeting – 2020 Hobart (to be hosted by Tas Networks)

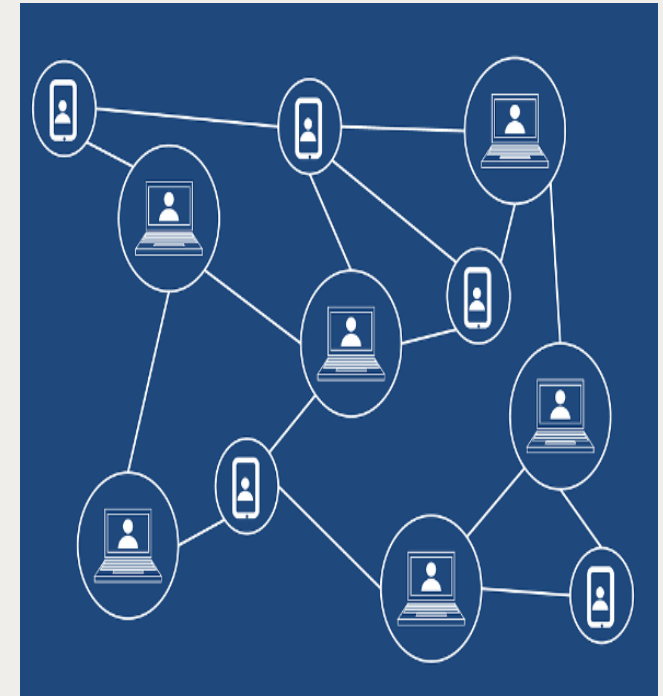
2020 Paris Papers

- Four C5 papers proposed and accepted from Australia
 - **Value of battery behaviour to customers**
 - **Impact of price signals on Demand Management and Distributed Energy Resources**
 - **System strength, inertia and network loss factors. A proponent perspective**
 - **Emerging Ancillary Service changes in the NEM**
- All topical. Australia at the leading and sometimes 'bleeding edge' so lots to contribute

C5 Working Groups with Australian participation

Working Group C5-31 on Block Chain applications Convenor David Bowker (Australia)

- Very pleasing participation from a range of countries.
- Responses highlight diverse stage of development in different countries but a strong interest in the topic
- Working Group has received numerous papers and presentations including a very valuable input from AEMO
 - (including an audio presentation to the recent Montreal meeting at a very uncivilised time in Australia)



Working Group C5-27 International review of market arrangements for sources of operating flexibility

- Convenor: Gerard Doorman (Norway)
- Australian contributors Gregor Verbic (Syd Uni), Greg Thorpe
- Addressing the question about what to do about international responses to manage increasing short term volatility, often from non-scheduled resources.
- What are the market (pricing) impacts and what market (pricing) options are available.

Working Group C5 28: Dispatch Price Formation

- Convenor Adam Keech (PJM)
- Australian contributor Greg Thorpe
- Very topical and relevant consideration of international practices for setting dispatch and (where different) Spot or Balancing Price
- In market design services and behaviours can be either mandated (e.g voltage performance, network constraint management) or commercially incentivised energy and some ancillary (essential services)
- Existing standards and pricing have not kept pace with system conditions – especially in the NEM.
- C5 28 is comparing and contrasting different approaches around the world.
- A number of challenges have emerged – for example how (if) to recognise the effect of day ahead and intra-day markets that operate in some markets

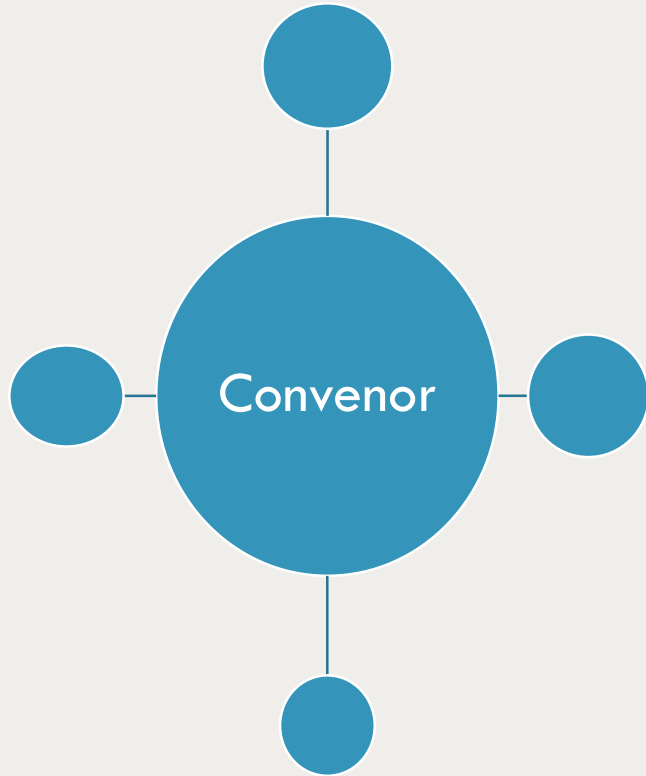
Other C5 working groups

- C5–24 Market based value of Smart Grid (finalising this quarter)
- C5-25 Work is complete but planning a webinar in November
- C5-26 Auction and other mechanisms for DR Services (TB near complete)
- Joint C5-C6.29 Local energy communities (just starting)
- C5-31 Cost impacts of flexible DR (just starting)
- C5-32 Carbon Pricing in Electricity Markets

Paris 2020 Market/System disturbance workshop preparation

- A joint C2/C5 activity – generally a well attended event in Paris
- Greg Thorpe is coordinating C5 input internationally
- ‘Spoilt’ for choice, across C2 and C5 related issues we have events in:
 - Australia
 - Argentina
 - US (PJM)
 - Germany
 - Indonesia
 - UK
 - Japan
- Work is stepping up to organise the workshop

Resourcing



- No surprise, but at present future actions rely heavily on the convenor.
- At this point acknowledge the great work also done by secretary (Victor Francisco)
- Core group of paper authors appreciated but - aim to broaden the base.
- Wishful thinking??

