

Report to the CIGRE Australian Technical Council

Study Committee SC 3 and Australian Panel AU C3 Activities

C3

Power system
environmental
performance



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AU C3 Report 2023

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For power system expertise

News from CIGRE C3 Power System Environmental Performance

Mercedes Vazquez, SC 3 Chair

27 November 2023



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SC C3 Overview

Study Committee Purpose

Responsible for the identification and assessment of the various impacts on the natural environment arising in electric power systems and the recommendation of appropriate monitoring, management and control measures.

Impacts addressed will include greenhouse gases, air and water pollution, electromagnetic fields, noise, visual, land use and flora and fauna impacts.



Cigre Sendai Colloquium - 2023

- SC3 Regular Annual Meeting
- 9 Papers presented
- Development of landscape simulation tools using 3D software
- Joint preferred-route finding: on stakeholder engagement and recommendations for effective route alternative comparison tools
- Experimental approaches for minimising bird-induced damage to transmission towers and overhead lines
- Managing critical habitat for threatened bird species during construction and operation of a 500kV transmission line*
- Comparative field study of benthic colonization on powered and unpowered subsea cables in a shallow coastal French ecosystem
- 5 papers on EMF covering various topics



* Removed from presentation group

Working group activity

- **AG C3.01** EMF and Human Health
- **WG C3.09A** Sustainable corridor management
- **WG C3.12** Methodologies for greenhouse gas inventory and reporting for T&D utilities
- **WG 3.15** Best environmental and socioeconomic practices for improving public acceptance of high voltage substations
- **WG C3.17** Interaction between wildlife and emerging renewable energy sources and submarine cables
- **WG C3.18** Eco-friendly approaches in transmission and distribution
- **WG C3.20** Sustainable development goals in the power sector
- **WG C3.21** Including stakeholder in the investment planning process
- **WG C3.22** Vegetation management in substations
- **WG C3.23** Eco-design methods for TSOs/DSOs under environmental transition
- **JWG B1/C3 85** Environmental impact of decommissioning of underground and submarine cables
- **WG C3.14** Impact of environmental liability on transmission and distribution activities

Proposed working group

- **Methods of reducing electrocution of birds from power lines: a focus on low voltage networks.**

Stakeholder engagement and recommendations for effective route alternative comparison tools

Energy transition on a global scale

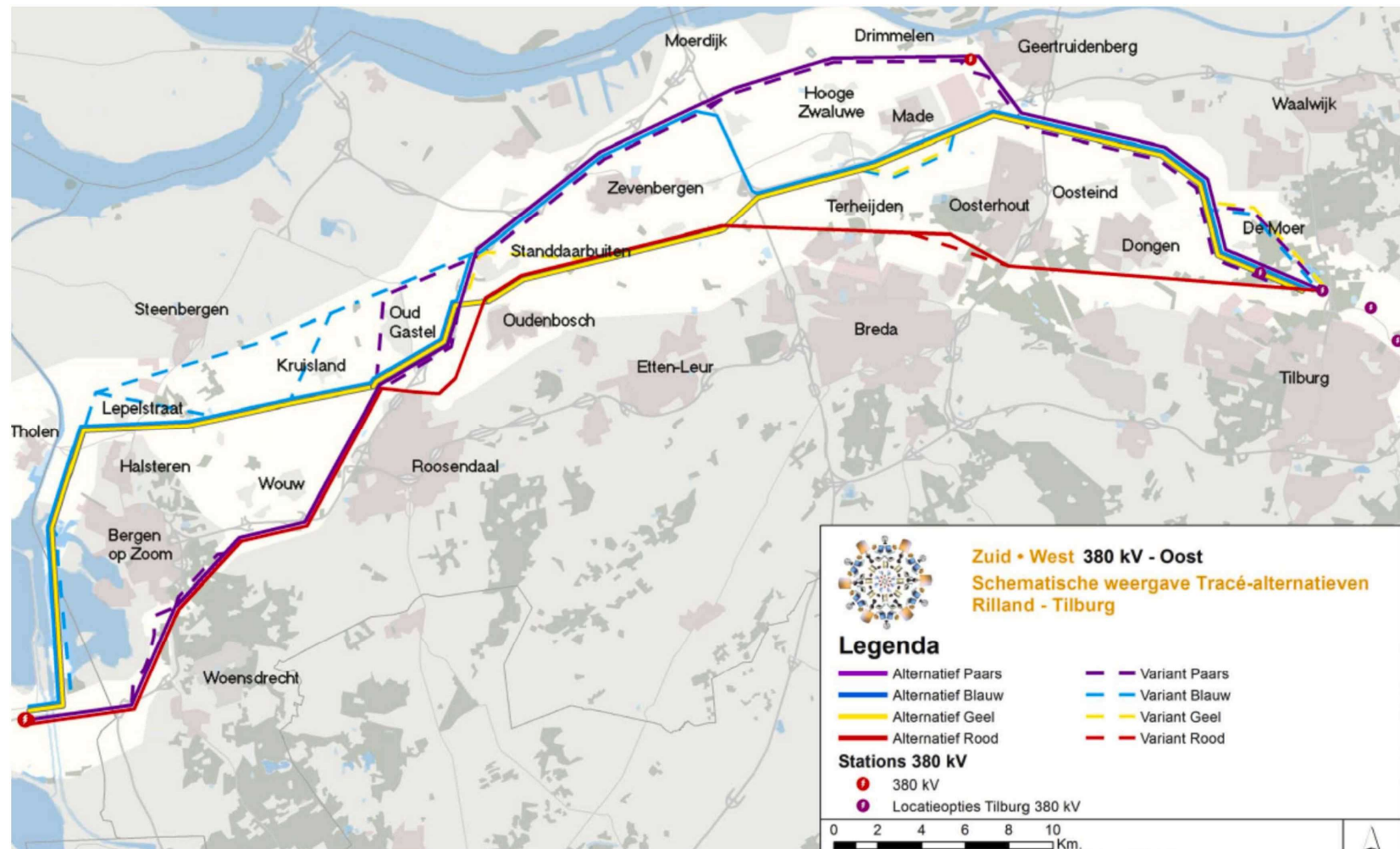
Global efforts to de-carbonise electricity supply networks as part of the energy transition.

Australia is not alone with land use conflicts.





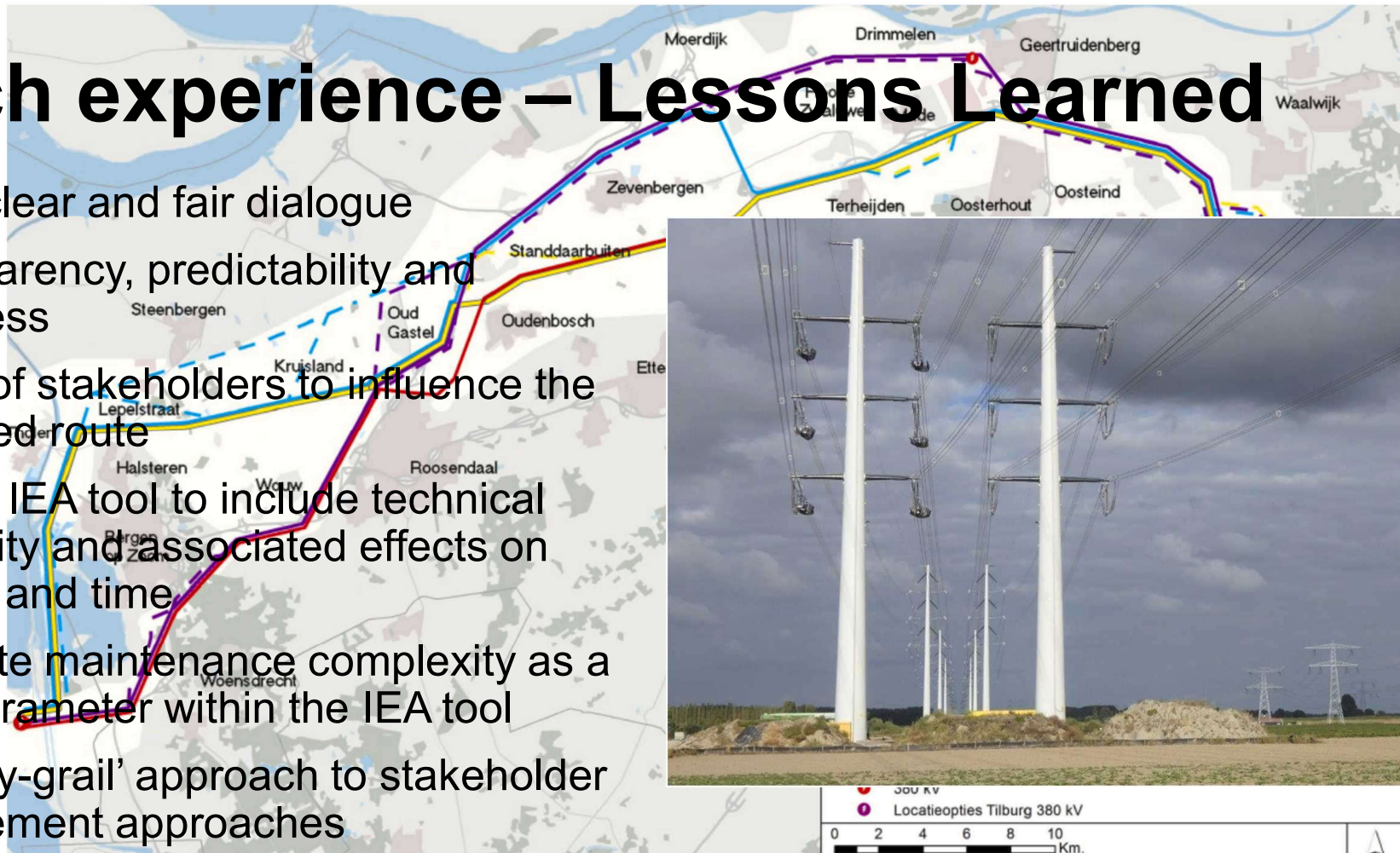
Dutch experience



Dutch experience

Dutch experience – Lessons Learned

- Early, clear and fair dialogue
- Transparency, predictability and openness
- Ability of stakeholders to influence the preferred route
- Extend IEA tool to include technical feasibility and associated effects on budget and time
- Integrate maintenance complexity as a new parameter within the IEA tool
- No 'holy-grail' approach to stakeholder engagement approaches



Dutch experience

C3 Australian panel meeting in Brisbane



C3 Australian panel meeting in Brisbane

- Transmission line land access issues and challenges
- Social licence to operate
- Sendai overview
- ESG / Sustainability goals
- Waste management – zero waste pathway -
- Impacts of the Commonwealth's "Nature positive plan" – emphasis on offset implications
- Training development and delivery
- Biosecurity
- Standard environmental clauses in contracts

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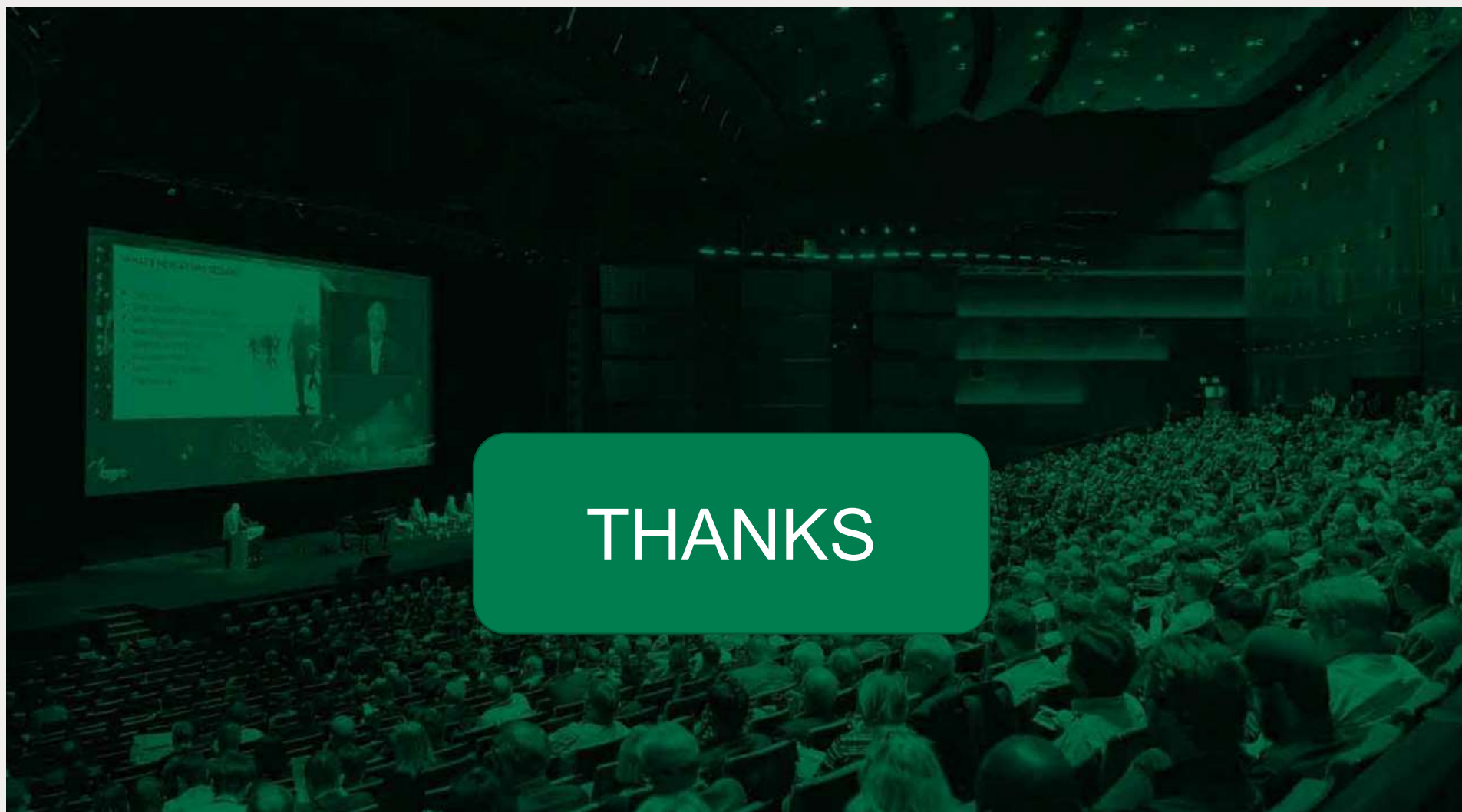


C3 Australian panel meeting in Brisbane



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THANKS