

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 2025

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For power system expertise



SC C3 Overview

Study Committee Mission

To facilitate and promote the principles of sustainable development in the field of power system performance through the global exchange of information and knowledge, generating added value by identifying best practices and developing recommendations in line with global best practices.

C3 panel theme

- The scope of Study Group C3 covers the interactions between the natural and social environments and the end-to-end electricity system.
- It involves addressing environmental and social impacts such as land use, biodiversity; greenhouse gases; air, soil, and water pollution; natural resource consumption; waste generation; electromagnetic fields; noise or landscape. It also considers the prominent role and relevance of different stakeholder groups, with a special focus on local communities.
- The role of the power system in relation to the UN Sustainable Development Goals (**SDGs**) is also a field of work for SC3

Key focus areas

- **Local matters**

- Understanding implications of Scope 3 emission reporting and tools continues to be a challenge for Cigre members
- Battery adoption and challenges
- Innovation and regulatory hurdles (planning approvals, environmental considerations)
- WA Aboriginal heritage experience
- Essential Energy approach to Ospreys inhabiting electricity assets

- **Global matters**

- Reduction in working groups or relaunching working groups with revised terms of reference
- Methods for reducing electrocution of birds from powerlines
- Life cycle assessments across the asset base (e.g., transformers, batteries)

C3 Australian panel meeting in Adelaide



Update on JWGC3/B2/24

Methods for reducing electrocution of birds from powerline

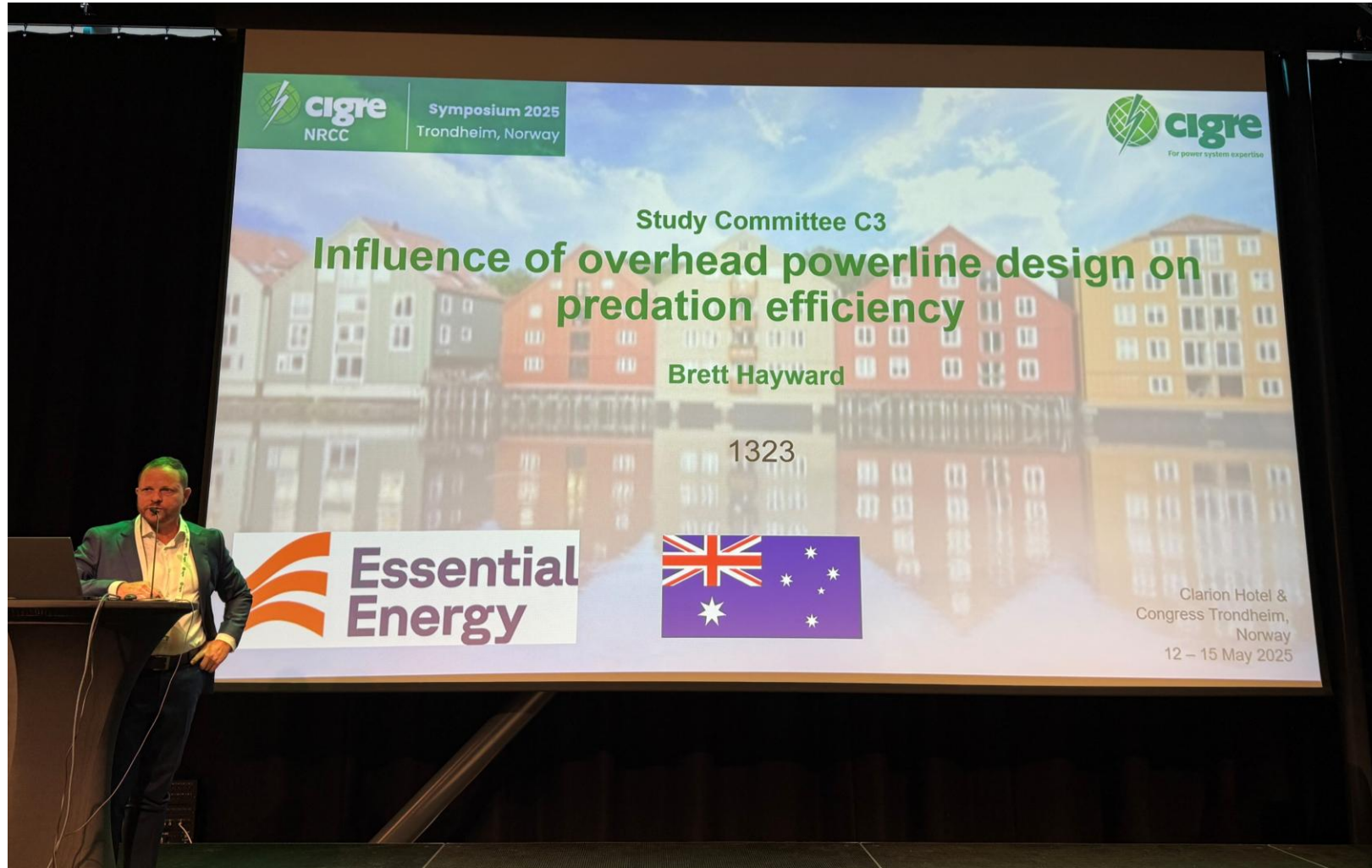
- Brian McGowen (Ire) provided an update and overview of the new working group to the Australian C3 panel
 - Build on previous work
 - 90% of effort on overhead powerlines up to 132kV (looking at distribution)
 - Electrocution and fire ignition
 - Considering a wide range of solutions

Trondheim Symposium 2025

- SC3 Regular Annual Meeting
- 16 papers presented, based on the following preferential subjects:
 - PS1 Integration of renewable energy resources to the grid
 - PS2 Technologies supporting the power grid for energy transition to carbon neutral energy production
- Paper 1323 Influence of overhead powerline design on predator efficiency



Trondheim Symposium 2025



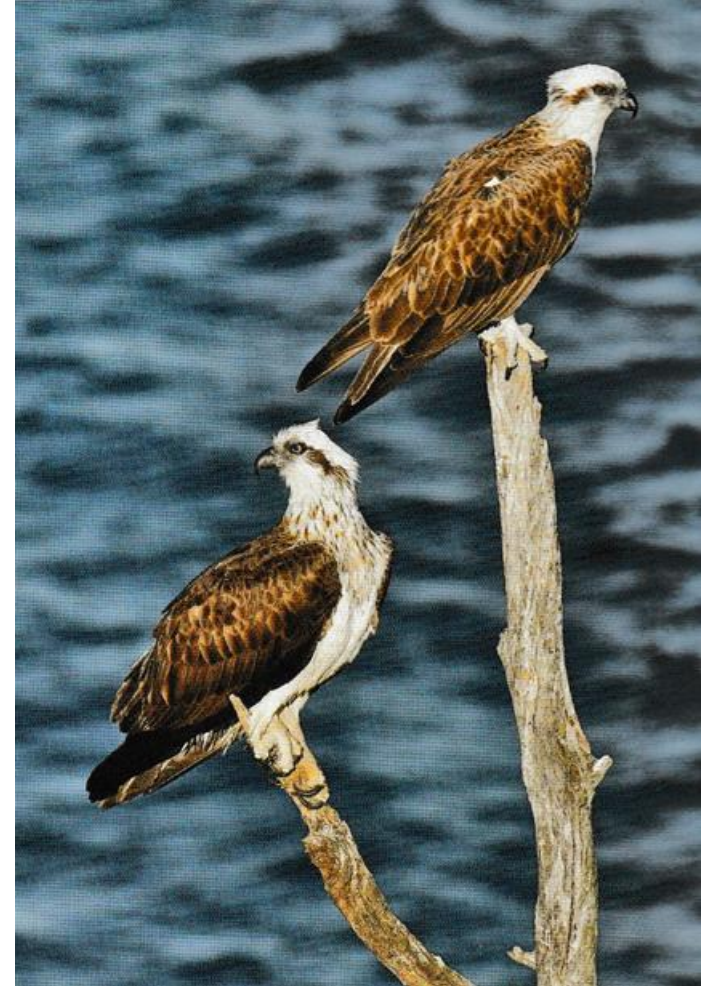
The presentation slide features a background image of colorful residential buildings. The slide content includes:

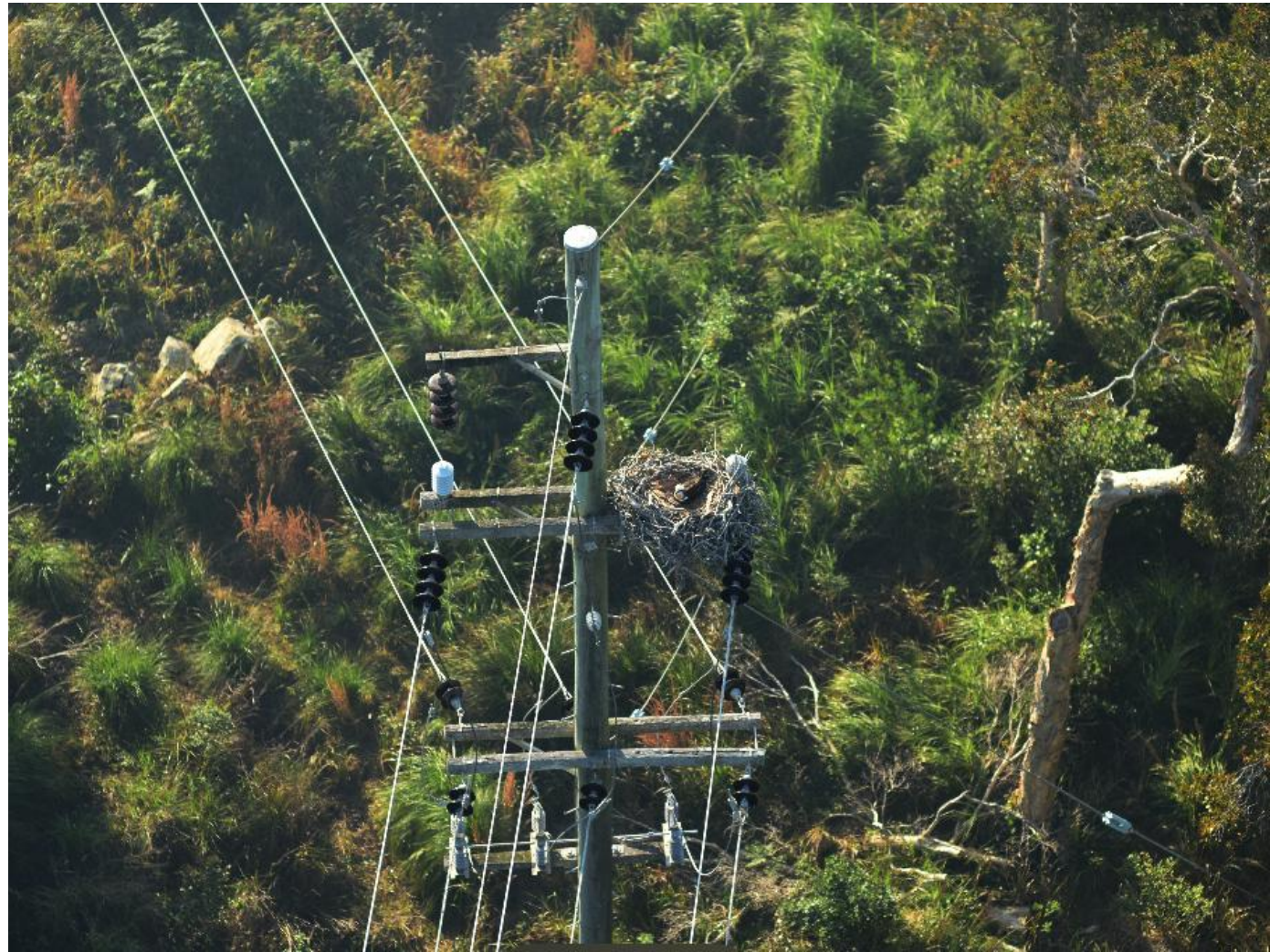
- Top Left:** CIGRE NRCC logo and "Symposium 2025 Trondheim, Norway".
- Top Right:** CIGRE logo with the tagline "For power system expertise".
- Center:** "Study Committee C3" followed by the title "Influence of overhead powerline design on predation efficiency" in green text.
- Below Title:** The name "Brett Hayward" in green text.
- Below Name:** The number "1323".
- Bottom Left:** Essential Energy logo.
- Bottom Center:** The flag of Australia.
- Bottom Right:** "Clarion Hotel & Congress Trondheim, Norway" and "12 – 15 May 2025".

Powerlines and Ospreys

The Eastern Osprey (*Pandion cristatus*)

- Large, water-dependent bird of prey
- Feeds almost exclusively on fish
- In NSW the species favours habitat adjacent to the mouths of large rivers, lagoons and lakes feeding on fish over clear, open water.
- Breeding generally occurs from July to September in nests made at the top of dead trees, or dead crowns of trees.
- Listed as vulnerable under the Biodiversity Conservation Act 2016 (BC Act) (NSW)
- Listed as a marine and migratory species under the Environment Protection and Biodiversity Conservation Act 1999 (EPBAC Act) (Cth)

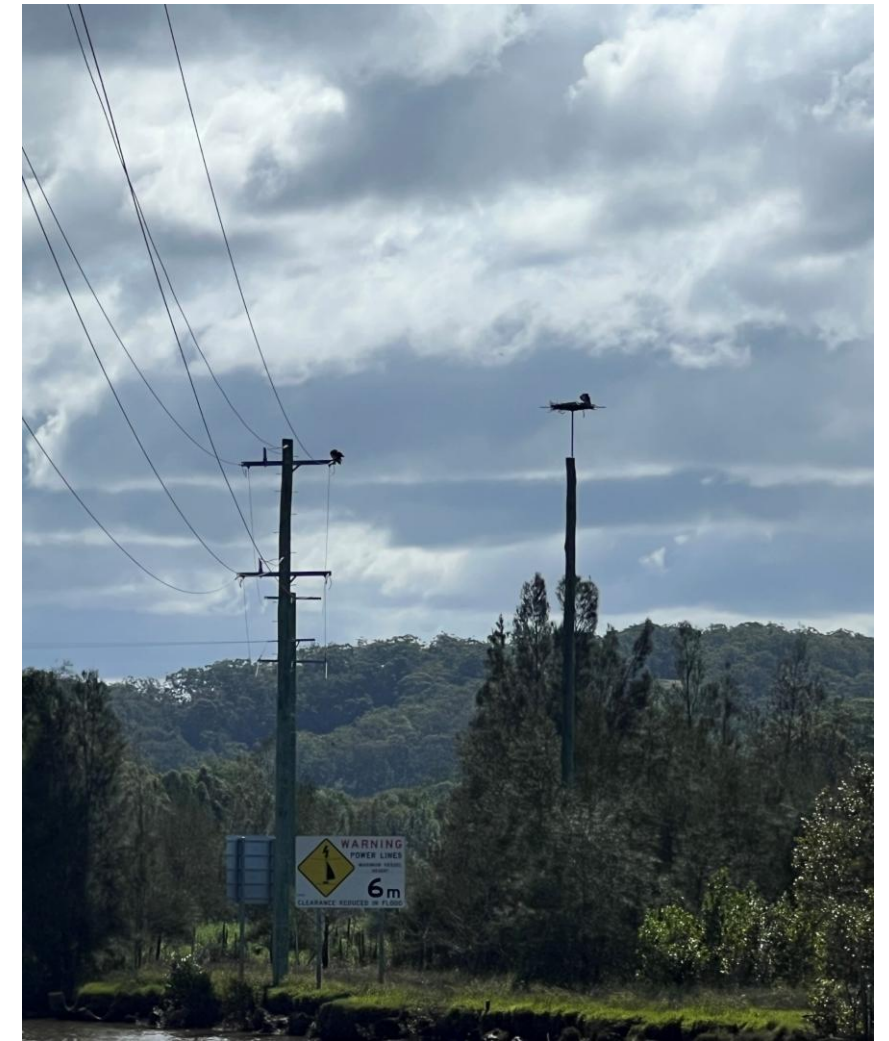




The issue



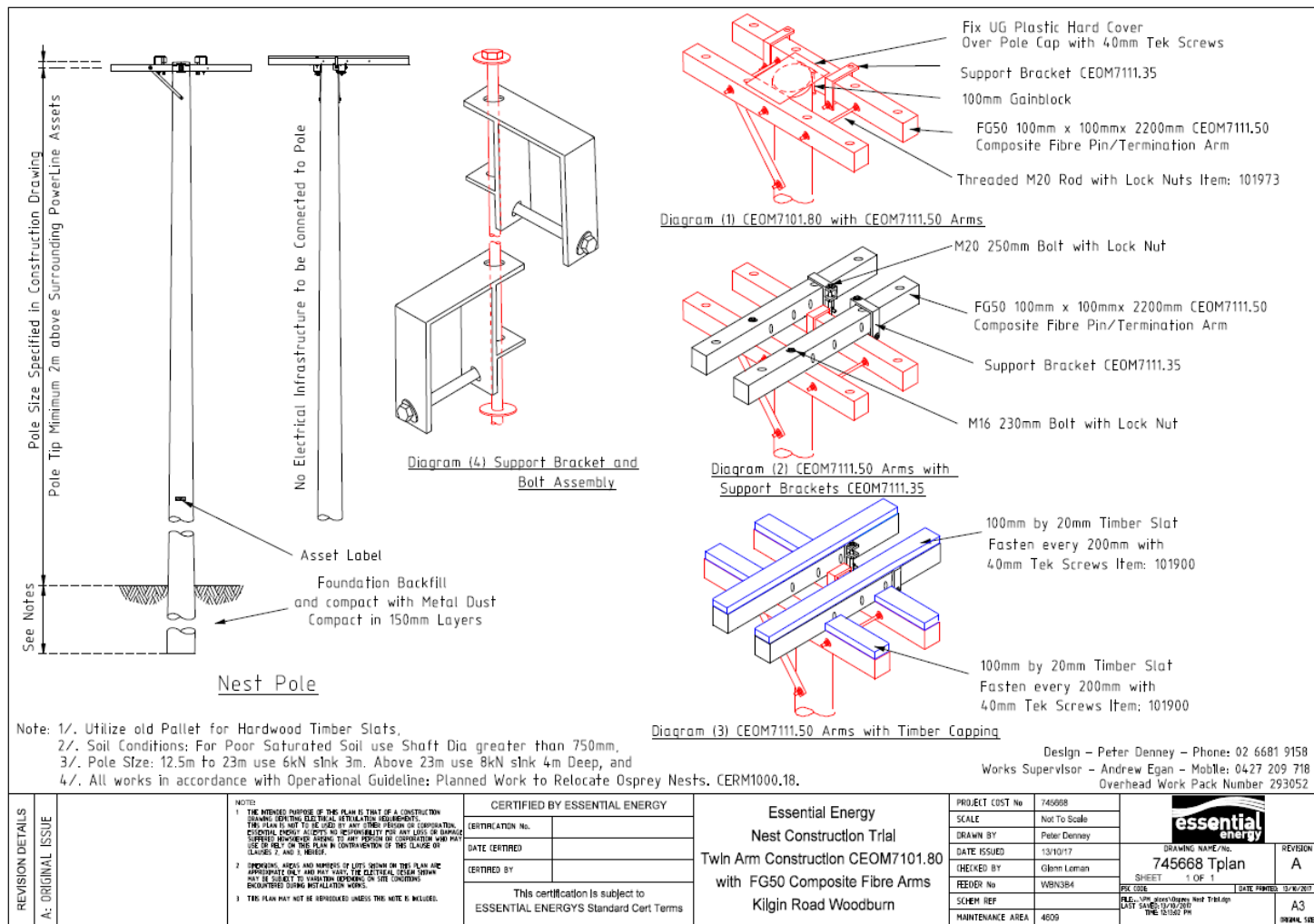
The issue



The solution



The solution



Standards and designs

Outcomes

- Relocation of nests generally a success, with breeding pairs, eggs and chicks observed at new structures
- Numbers generally thought to be increasing (qualitative data only - sparse quantitative data)
- Birds don't generally nest back on the original electricity infrastructure in the immediate vicinity of new pole / artificial nesting structure

Learnings

- Eastern Ospreys are resourceful – can work with most structures
- Important for new pole / structure to be mounted higher than nearby infrastructure



THANK YOU



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