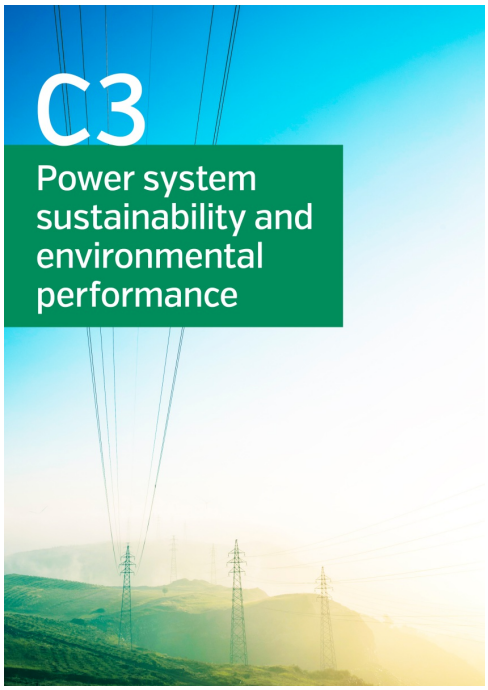
C3 - Power system sustainability and environmental performance



Mission

The mission of SC C3 is 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.

Scope

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.

Working groups
View a list of CIGRE's current working groups including for C3 here.

Publications

View all publications for Study Committee C3 on eCIGRE

Main areas of attention

- **Environmental & social impacts of power system development and operation with a life cycle approach** (from cradle to grave, from planning to decommissioning).
- Identification, assessment, monitoring, and management of impacts.
- Mitigation and offsetting measures.
- Procedures, methodologies, and tools for quantifying, controlling, and mitigating the environmental impact such as life-cycle assessment (LCA), environmental product declarations (EPD), global benchmarking, etc.
- Risks assessment.

- **Sustainability: role of the power system**. Anticipation to **new trends and challenges.**
- Impacts of relevant and emerging technologies (renewables, storage systems, hydrogen, new materials...);
- Climate change mitigation (decarbonization & Net Zero) and adaptation (risks & opportunities);
- New sustainability approaches: eco-design, eco-efficiency, circularity, supply chain management etc.

- **Stakeholders' engagement and public acceptance**
- Effective communication and cooperation with the public and regulatory authorities to improve public acceptance of power system infrastructure and decision-making processes.
- Tools and engagement strategies.

Keywords

Environment; sustainability; sustainable development, SDGs; LCA, EPD, stakeholders, acceptance, engagement; communities; climate change; decarbonization, Net-Zero; GHG; adaptation; biodiversity, wildlife, vegetation, EMF; landscape, waste; pollution; noise; eco-design, eco-efficiency, circularity.

Key contacts

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