CIGRE Study Committee B1

PROPOSAL FOR THE CREATION OF A NEW WORKING GROUP

JWG [1]N° B1/C3.85	**Name of Convenor:** Kieron Leeburn (SA) **E-mail address**: kieron.leeburn@cbi-electric.com
Strategic Directions #[2]: 3, 2	**Sustainable Development Goal #[3]: 14, 15**
The WG applies to distribution networks: ☒ Yes / ☐ No	
Potential Benefit of WG work #[4] : 2, 3	
Title of the Group: environmental impact of decommissioning of underground and submarine cables	

Scope, deliverables and proposed time schedule of the WG:

Background:

Underground and submarine cables are used more and more in the world, not only for short distances and distribution level, but also for longer distances and high voltage connections. On top of that, we see a growing number of windfarms at sea, which will be connected to the grid on land by cables.

At the same time, a lot of countries and companies are facing more and more need for paying attention to sustainability. That is shown on the one hand by more renewables (windfarms at sea), on the other hand by policies of governments and companies itself about a more sustainable construction, operation and decommissioning of cables.
And more companies need to have further knowledge about the environmental issues of cables, in order to get the needed licenses of permission.

The joint working group will focus on old and new cables. It will investigate the construction phase (how to incorporate the right measures to increase sustainability (i.e. recycling, LCA), the operation phase (how to collect biological/ecological data to address concerns) and the decommissioning strategy (leave it in or dig it up).

Scope:

The scope includes new and existing cable systems, AC and DC, underground and submarine.

The Joint Working Group will:

- Describe all phases (construction incl. permission, operation and decommissioning) relevant to life cycle of underground and submarine cables
- Describe the environmental issues relevant do decommissioning
- Make consideration on cost and cost factors of the different measures relevant to decommissioning
- Bring order in the use of species and habitat to simplify process and usability
- List the possible measures to increase the sustainability in the deconstruction phase
- Identify the best ways of collecting data needed for permissions and licences
- Give an advice about the possible strategies for decommissioning, e.g. if to abandon or recover a cable and when to do it

- Suggest possible tools e.g. check lists to be used to elaborate and apply possible strategies
- Describe Case Studies

The JWG will coordinate its work with WG C3.17 “Interactions between Wildlife and Emerging Renewable Energy Sources and associated Insulated Cables”

Focus of the JWG will be on decommissioning phase. Additional studies on other phases of the life cycle of underground and submarine cables may be identified by the JWG, proposing a potential ToR for future works.

Deliverables:

☒ Technical Brochure and Executive Summary in Electra
☐ Electra Report
☐ Future Connections
☐ CSE
☒ Tutorial
☐ Webinar

Time Schedule: start: June 2021 **Final Report**: June 2024

Approval by Technical Council Chairman:

Date: June 22nd, 2021

Notes: [1] Working Group (WG) or Joint WG (JWG), [2] See attached Table 1, [3]See attached Table 2 and CIGRE reference Paper: Sustainability – at the heart of CIGRE's work. [4] See attached Table 3

Table 1: Strategic directions of the Technical Council

1	The electrical power system of the future reinforcing the End-to-End nature of CIGRE: respond to speed of changes in the industry by preparing and disseminating state-of-the-art technological advances
2	Making the best use of the existing systems
3	Focus on the environment and sustainability (in case the WG shows a direct contribution to at least one SDG)
4	Preparation of material readable for non-technical audience

Table 2: Environmental requirements and sustainable development goals

	CIGRE selected the 7 SDGs that are the most relevant to CIGRE. In case the WG work refers to other SDGs or do not address any specific SDG, it will be quoted 0.
0	Other SDGs or not applied
7	**SDG 7: Affordable and clean energy** Increase share of renewable energy; e.g. expand infrastructure for supplying sustainable energy services; ensure universal access to affordable, reliable, and modern energy services; energy efficiency; facilitate access to clean energy research and technology
9	**SDG 9: Industry, innovation and infrastructure** Facilitate sustainable infrastructure development; facilitate technological and technical support
11	**SDG 11: Sustainable cities and communities** Increase attention on sustainable and resilient buildings utilizing local (raw) materials, power for electric vehicles, strengthening long-line transmission and distribution systems to import necessary power to cities, developing micro-grids to reinforce the sustainable nature of cities; protect and safeguard the world's cultural and natural heritage; reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and waste management
12	**SDG 12: Responsible consumption and production** E.g. Promote public procurement practices that are sustainable; address reducing use of SF6 and promote alternatives, encourage companies to adopt sustainable practices and to integrate sustainability information into their reporting cycle, address inefficient fossil-fuel subsidies that encourage wasteful consumption
13	**SDG 13: Climate action** E.g. Increase share of renewable or other CO_2-free energy; energy efficiency; expand infrastructure for supplying sustainable energy; strengthen resilience and adaptive capacity to climate-related hazards and natural disasters; integrate climate change measures into national policies, strategies and planning; improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning
14	**SDG 14: Life below water** E.g. Effects of offshore windfarms; effects of submarine cables on sea-life
15	**SDG 15: Life on land** E.g. Attention for vegetation management; bird collisions; integration of substations and lines into the landscape

Table 3: Potential benefit of work

1	Commercial, business, social and economic benefits for industry or the community can be identified as a direct result of this work
2	Existing or future high interest in the work from a wide range of stakeholders
3	Work is likely to contribute to new or revised industry standards or with other long term interest for the Electric Power Industry
4	State-of-the-art or innovative solutions or new technical directions
5	Guide or survey related to existing techniques; or an update on past work or previous Technical Brochures
6	Work likely to contribute to improved safety.