

CIGRE Study Committee C5

PROPOSAL FOR THE CREATION OF A NEW WORKING GROUP

WG C5.33	Name of Convenor: David Bowker (Australia) E-mail address: dgbowker@gmail.com
Strategic Directions #²: 1 and 4	Sustainable Development Goal #³: 7 and 13
The WG applies to distribution networks: <input type="checkbox"/> Yes / <input checked="" type="checkbox"/> No	
Potential Benefit of WG work #⁴ : 2 and 4	
Title of the Group: Trading Electricity with Blockchain Systems	
Scope, deliverables and proposed time schedule of the WG: Background: <p>The use of blockchain has the potential to be a significant disruptor in the electricity industry. It also offers a channel to allow prosumers better access to trading electricity.</p> <p>When the working group C5.30 assessed many projects, which have been implemented using blockchain technology, they found that Trading and Marketing was the most common function which blockchain was applied to.</p> <p>This working group will build on the work of C5.30 and drill down into the actual use of blockchain for trading and marketing in operational systems including the contribution which can be made to balancing the power system.</p> <p>The analysis will include an assessment of where the technology is used, which implementations of blockchain are used, the tools which have been developed using blockchain and a description of how they work. The key issue will be what benefits blockchain brings which cannot be achieved with other technologies.</p> <p>It is proposed that the Technical Brochure will be accessible to industry professionals to educate them on the true attributes of blockchain technology in trading and marketing. Like WG C5.30, this group will liaise with SC D2.</p> Scope: <ol style="list-style-type: none"> 1. Literature review of potential trading and marketing applications 2. Develop criteria for selecting operational projects 3. Review literature and other sources to identify potential projects for assessment 4. Undertake an assessment of all selected projects which meet the criteria including where blockchain is used and the benefits of blockchain over other approaches 5. Analyse the results of the assessment 6. Develop a Technical Brochure and other deliverables Deliverables: <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Technical Brochure and Executive Summary in Electra <input checked="" type="checkbox"/> Electra Report <input checked="" type="checkbox"/> Future Connections <input type="checkbox"/> CSE 	

- Tutorial
 Webinar

Time Schedule: start: January 2021

Final Report: March 2023

Approval by Technical Council Chairman:



Date: November 2nd, 2020

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.