

CIGRE Study Committee C2/C5

PROPOSAL FOR THE CREATION OF A NEW JOINT WORKING GROUP

JWG¹ N° C2/C5.06	Name of Convenor: Jan van Putten (NL)	
Strategic Directions #²: 1, 2		Sustainable Development Goal #³: 0, 9
The JWG applies to distribution networks: <input checked="" type="checkbox"/> Yes / <input type="checkbox"/> No		
Potential Benefit of JWG work #⁴: 5, 6		
Title of the Group: The Impact of Electricity Market Interventions by System Operators during Emergency Situations		
<p>Scope, deliverables and proposed time schedule of the JWG:</p> <p>Background:</p> <p>Apart from all the technical possibilities to remedy emergency situations and execute restoration processes after blackouts, intervening in electricity market processes to avoid a blackout is an option for System Operators. There is often a lack of attention for the impact of these measures that are of non-technical nature and can have serious consequences.</p> <p>It is common practice for System Operators to have possibilities to intervene in markets during emergency situations. Main reason for that is to prevent ongoing market activities to further deteriorate an emergency situation or adversely impact the restoration process. Market activities might be suspended, both in the energy markets and in reserve markets.</p> <p>The Joint Working Group aims to clarify the impact of such market interventions. On one hand the suspension of markets can help System Operators restoring the system back to normal state, but on the other hand Market Parties will be impacted by interventions. To a large extent this will be a financial impact due to imbalances and/or missed trading opportunities. This in turn impacts the System Operator since such financial impacts on Market Parties should be compensated post event. It is of the most importance to investigate the impact for both System Operators and Market Parties.</p> <p>Due to the fact that many System Operators have no or limited experience with intervening in markets it is important to learn which national and cross-border practises exist world-wide and what can be learned from situations where it was actually used. Therefore, the Joint Working Group will identify existing practices, methodologies and procedures, and how they work in real life, describing the effects/impacts, degrees of freedom and investigate lessons learned and recommendations. This will include the question whether the market intervention actually did support system restoration. Proposal(s) will be prepared on:</p> <ul style="list-style-type: none"> • how best to implement and use the possibilities for market intervention • when to not intervene in the market. <p>The outcome is expected to support rule/policy makers in making their decisions while designing the rules for market intervention during emergency situations.</p> <p>Scope:</p> <p>The objective of the Joint Working Group is to investigate:</p> <ul style="list-style-type: none"> • whether System Operators have authority to intervene in market activities • which are the exact trigger points for market intervention • which practices exist • what are lessons learnt in practical examples • how the restoration process is affected 		

- how is market affected
- how is price formation affected
- if scarcity pricing is suppressed
- review existing agreements between system and market operators for such intervention
- how shall the market be gradually restored after serious power system events?

The integration of the knowledge gained in a concise and compact Technical Brochure should help stakeholders decide how to handle market interventions in future situations.

The activities will focus on:

1. Reviewing previous CIGRE (e.g. SC C2, SC C5 in particular JWG C2/C5.5) and other organization's work (for instance from ENTSO-E) in this domain
2. Survey the worldwide experiences with market interventions prior to and during emergency situations, e.g. South Australia blackout in 2016
3. Practices regarding information dissemination about market intervention during real time operation and handling of possible consequential disputes, if any
4. Describe the impacts experienced in real-life cases
5. Identify and describe best practices and suggestions for implementation
6. Investigate possible strategies for implementing and using market intervention.

Deliverables:

- Technical Brochure and Executive Summary in Electra
- Electra article
- Future Connections newsletter
- CSE
- Tutorial
- Webinar

Time Schedule: start: April 2021

- Prepare TB structure
- Preparing survey
- Collecting survey results
- Analysing survey results
- Future Connections article
- Electra article
- Review first draft for TB
- Develop revised draft of TB
- Final TB (executive summary in Electra)
- Webinar

Final Report: April 2023

July 2021
 August 2021
 November 2021
 January 2022
 August 2022
 October 2022
 December 2022
 February 2023
 April 2023
 2023

Approval by Technical Council Chairman:

Date: April 2nd, 2021



Notes: ¹Working Group (WG) or Joint WG (JWG), ²See attached Table 1, ³See 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

<i>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.</i>	
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.