Technical Brochure (TB) 941, The Impact of Electricity Market Interventions by System Operators during Emergency Situations

Intervention by System Operators is the last line of defence against potential power system emergency conditions and an important tool to assist recovery from an emergency situation. The potential for an intervention under existing practices and procedure is increasing as regulators and operators seek greater operating efficiencies and manage the transition to low emission generating fleets and the volume of customer CER resources grows. Joint Working Group (JWG) C2 C5.06 has examined the market implications of System Operator interventions in electricity markets and has recently produced TB 941. The Australian member of the working group was Greg Thorpe.

Understanding the conditions under which System Operators may intervene and impact of those interventions during or to avoid emergency conditions is important for multiple stakeholders. The provisions for System Operators to intervene must strike a delicate balance between the need for immediate action to safeguard system security and the potential impacts on market participants and consumers. Market participants, including generators, traders, and consumers, need to comprehend how market interventions can affect their operations, pricing, and profitability. Policy makers must consider the broader implications of market interventions on market efficiency, investment decisions, and long-term energy policies. Consumers also require assurance that their electricity supply will not be interrupted or at worst restored promptly, even during emergency situations. In other words, while market interventions or suspension of different markets can help SOs to restore the system back to its normal state, market parties will be impacted by these interventions. There will often be a financial impact due to imbalances and/or missed trading opportunities. This in turn might impact the System Operators since such financial impacts on market parties might have to be compensated post event, depending on the market rules.

The JWG surveyed multiple System Operators. A number considered they never intervened and therefore had no experience to contribute to the work. Some of these, however, managed markets where the rules allowed unlimited recruitment of balancing capacity and in others it was simply understood that the System Operator would do what is needed in the circumstances.

The TB opens with a summary of typical conditions where intervention may be considered – generally emergency conditions. From this the JWG noted how differences in regional factors such as connections to neighboring markets, market design, market governance and structure, intervention triggers, communication, information sharing and dispute resolution can impact what is regarded as an intervention. For example, cross border purchases can sometimes be from one market to another and there are no fixed rules for this but in other situations the market rules may explicitly provide for this type of transaction. A situation may arise where the System Operator adjusts the transfer capacity of the network due to changing conditions – a situation that can be seen in Australian markets. Therefore an early task of the JWG was to establish a working definition of the term intervention. The JWG adopted the following definition: *An intervention is an action by the System Operator to maintain or improve the integrity of the power system, that obligates a party to act in a way other than they would otherwise do, under the prevailing system and market conditions, as established by the system and market operator under the market rules.*

The TB then applies the agreed definition to operational situations that would be regarded as interventions and those that would not be interventions – usually because there was no instruction to a participant or because the instruction is part of emergency dispatch and therefore already addressed under the market rules.

Finally, in summing up, the JWG notes that interventions should be a last resort and that generally speaking interventions can indicate a gap in the market rules or regulations that create incentives for market participants to act in ways that avoid the need for the intervention.

The TB is free for CIGRE members and 60€ for non-members.