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Factsheet
International Grid Control Cooperation (IGCC)

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1 Current situation

The European Union (EU) is pursuing the goal of completely liberalising the European internal market in electricity in order to provide end customers with secure, sustainable, competitive and affordable energy. Since 1996 the internal market in electricity has gradually been established with a total of four «energy packages» to date. Among other things, the intention is to support the transnational electricity trade in order to target efficiency gains, competitive prices and a higher service quality, while also contributing to greater security of supply and sustainability. The third EU internal market package led to the creation of «Network Codes». These are legally binding regulations that the EU Commission enacted as EU regulations and are based on the drafts of the European Network of Transmission System Operators for Electricity (ENTSO-E).

One of Swissgrid's key responsibilities is to ensure and maintain the balance between electricity generation and consumption. For this purpose, Swissgrid uses the primary, secondary and tertiary control reserve (mFRR). Several transmission system operators (TSOs) coordinate and optimise this activation of balancing power as part of various collaborations. One possible optimisation is the balancing of the secondary control power demand of several control areas («Imbalance Netting»).

Swissgrid has been a member of the «International Grid Control Cooperation (IGCC)» imbalance netting cooperation since 2012.

The Electricity Balancing Guideline (EB GL) has been a binding guideline for EU TSOs since November 2017. Among other things, this states (Art. 22 EB GL) that EU TSOs are required to cover the netting for their demand for secondary control power via a European platform (imbalance netting platform). IGCC is the implementation project for this European platform, selected by ENTSO-E in February 2016 and «legally established» by the ACER (Agency for the Cooperation of Energy Regulators) through its formal decision on 24 June 2020.

2 What is the purpose of the International Grid Control Cooperation (IGCC)?

The aim of the IGCC, which consists of 24 European TSOs, (cf. Figure 1) is to prevent the simultaneous activation of balancing power in opposite directions («imbalance netting»). Any opposing demand for secondary control power is netted between the involved TSOs to reduce the sum of activated balancing power. For example, if Switzerland needs 100 MW of positive secondary control power (additional supply) and Germany needs 80 MW of negative secondary control power (reduction of supply) at a certain point in time, 80 MW are first netted and only the remaining 20 MW of secondary control power is activated at Swiss power plants. Activation always takes place in the country of origin of the original demand. The described netting is naturally only possible when the necessary cross-border capacities for the cross-border exchange of 80 MW are available.

Since the establishment of the international cooperation (October 2011), cumulative energy of around 40 TWh has been saved, which is equivalent to over 0.75 billion euros in monetary terms. Translated to

Switzerland, this equates to around 70% of Switzerland's annual consumption. This highlights the extent of the potential efficiencies made possible by the International Grid Control Cooperation.

The plan is to integrate netting into the European balancing power collaboration «PICASSO», while continuing the IGCC as a separate project. The operation of the platform will be ensured by the German TSO TransnetBW. Swissgrid has been managing the European IGCC project (Expert Group Convener and Steering Committee Chairman) since 2015. This leading role was reconfirmed in June 2021 with the consent of all IGCC TSOs.

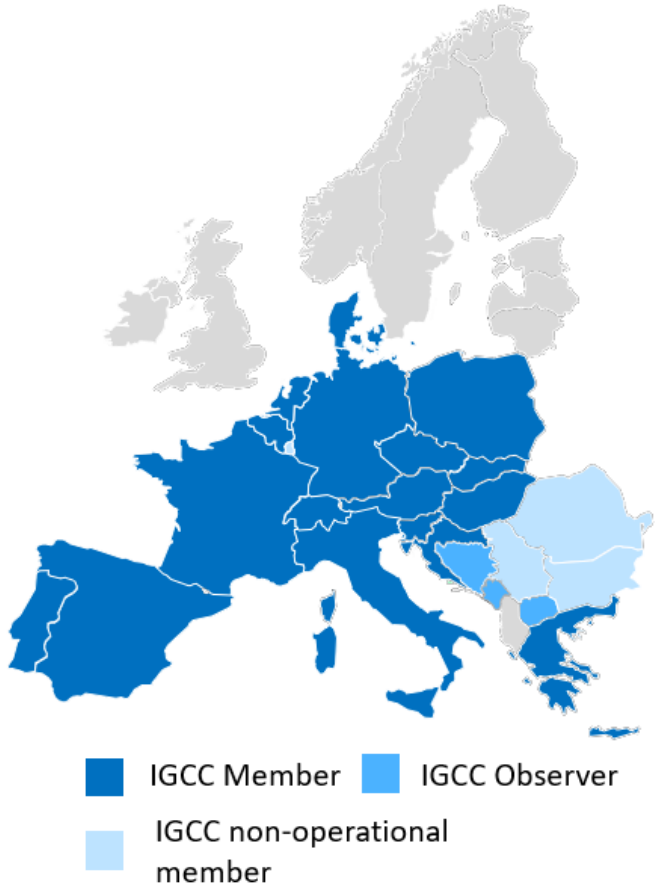

Figure 1: Overview of member status

Source: ENTSO-E IGCC merger «IGCC membership status»

3 Benefits for Switzerland

The participation in IGCC allows Swissgrid to avoid the use of around 35 GWh per month. Without this participation, Switzerland would have to cover this energy using secondary control power. The monetary value of the activations avoided by netting for Switzerland is around four to five million euros per year.