



Press Release

13.04.2016

Milestone for improved power flow regulation between German and Polish electricity systems

Transmission System Operators PSE and 50Hertz start operation of Phase Shifting Transformers on southern German-Polish interconnection / Northern interconnection between Vierraden (Germany) and Krajnik (Poland) to be disconnected temporarily until 2018 for necessary construction works in Vierraden and Krajnik substations and efficient load flow regulation / Cross-border trading possibilities expected to increase

Warsaw/Berlin – Polish Transmission System Operator PSE is planning the commissioning of the first stage of Phase Shifting Transformers (PST) Investment project between the German and Polish electricity systems in May 2016. These four PST have been installed at the Polish substation in Mikulowa, on the southern German-Polish interconnection between Hagenwerder and Mikulowa. PST are potentiometers whose effect is analogous to a valve for regulation of the waterflow in a waterpipeline. Their use enables power flows on a particular transmission line to be reduced or increased to some extent which, in a meshed network, leads to corresponding changes in the power flows on other lines.

The planned start of operation of the PST at Mikulowa substation will mark the completion of the first stage of a coordinated PST Investment project agreed between PSE and the German Transmission System Operator 50Hertz. The second stage involves the commissioning of further PST at the German substation Vierraden, together with the upgrade of the Vierraden-Krajnik line from the current 220 kV voltage level to 380 kV. The PST on the German-Polish border will be operated in a bilaterally coordinated way.

Due to a claim against the granting of the permit to build the 50Hertz Uckermark line needed to upgrade the Vierraden-Krajnik interconnection, the second stage of the PST Investment project carried out by 50Hertz is experiencing delays. Whilst the Uckermark line is not built, 50Hertz will apply a temporary solution to allow the first two of planned four PST at Vierraden to be used. This consists of combining the currently incoming 220 kV lines on the 50Hertz' side with the upgraded 380 kV Vierraden-Krajnik line via two 380/220 kV transformers. At the same time PSE will upgrade the Krajnik substation to 380 kV. 50Hertz and PSE will therefore temporarily shut down the 220 kV Vierraden-Krajnik line until it becomes possible to switch it to 380 kV. The current investment schedule foresees the shutdown of the Vierraden-Krajnik line at the beginning of June 2016 for a duration of about two years. Exact disconnection date will depend on the PST commissioning process and shall be communicated in due course. Reconnection of Vierraden-Krajnik line together with the first two PST in Vierraden is expected in 2018.

The temporary disconnection of the Vierraden-Krajnik interconnector will help to maintain secure operation of both transmission grids even in case of high load flows through

the German-Polish interconnection. This is needed for effective utilisation of the PST in Mikułowa, which allows to avoid high volumes of costly redispatch measures that may not always be available as shown by the experience gained during summer 2015. Steering the physical flow on the remaining Hagenwerder-Mikułowa line by PST operation is expected to increase commercial transmission capacities in direction to Poland. After commissioning of the PST in Mikułowa and disconnection of the Vierraden-Krajnik line, both TSOs intend to offer some cross-border capacity to the market in the Day-Ahead timeframe, based on technical analyses and operational experience.

The final mode of operation with all four PST in Vierraden and a connection to the Uckermark line is expected for 2020, although this depends on the permit proceedings regarding the Uckermark line. This last milestone will mark the completion of the PST Investment project agreed between PSE and 50Hertz. Until completion of the PST Investment project the temporary solution outlined above will help power flows between Germany and Poland to be regulated and trading capacities to be offered taking into account a secure operation of the interconnected transmission grids. High unscheduled flows on the German-Polish border have prevented both TSOs from offering trading capacities in direction to Poland so far.

For further information, please contact:

Volker Kamm, 50Hertz Transmission GmbH, Telephone +4930-5150-3417,
Fax +4930-5150-2199, Mobile +49172-3232-759, volker.kamm@50hertz.com

Beata Jarosz, PSE S.A., Telephone +48 22 242 19 27,
Mobile +48 783 401 171, e-mail: beata.jarosz@pse.pl