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First REGIONAL generation adequacy assessment report published

- A **new methodology** developed by the Transmission System Operators in the Pentalateral Energy Forum makes it possible to better assess generation adequacy together on a regional scale (Austria, Belgium, France, Germany, Luxembourg, the Netherlands, Switzerland,)
- **Regional cooperation** helps to **ease national adequacy problems** by sharing national forecasts
- **Existing infrastructure** already contributes significantly to regional Security of Supply, however, new infrastructure is welcome to allow additional regional exchanges between markets in order to improve the adequacy situation

The seven electricity transmission system operators (TSO's) in the Pentalateral Energy Forum (an inter-governmental initiative designed to promote collaboration on cross-border exchange of electricity in Austria, Belgium, France, Germany, Luxembourg, the Netherlands, Switzerland) have been committed to develop a new methodology to make an assessment on future generation adequacy. It is the first time in Europe that this has been accomplished on a regional scale.

Improved harmonized methodology

The methodology focuses on a common regional assessment with key security of supply indicators and is based on harmonised and detailed input data. This data includes the use of climate sensitivity to improve the assessment of renewable energy sources contributions, the use of temperature sensitive load and different hydro conditions.

Results

TSOs of the Pentalateral Energy Forum cooperated and published a common regional adequacy assessment using a probabilistic approach with an hourly resolution for the year 2015/2016 and 2020/2021.

Results of the study indicate a consistency with national studies at regional perimeter as already implemented by France and Belgium for their own national studies. Potential problems are identified for France and Belgium for the year 2015/2016 due to decommissioning of older conventional units and gas fired power plants. Adequacy issues will improve in 2020/2021 with additional grid infrastructure put in place and under the hypothesis of commissioning of new units.

- Sensitivity analyses with different combinations of operational and strategic reserves show that additional strategic reserves have a positive impact on adequacy situation in a short term. Improvement of demand side response (DSR) is a key issue in countries expecting adequacy problems, but cross border DSR does not necessarily improve adequacy constraints if cross-border capacity is already fully used.
- Regional cooperation may help to ease national adequacy problems by sharing available national capacity
- Existing infrastructure already contributes significantly to regional security of supply, however, new infrastructure allowing additional regional exchanges between markets is likely needed to improve adequacy situation.

Follow-up

The study bridges the gap between the yearly published ENTSO-E Outlook reports (summer and winter outlook reports) and the ENTSO-E system outlook and long term adequacy forecast (SO&AF). The methodology currently has been applied on a regional level and might advance to be applied within the association of European electricity TSO's in ENTSO-E.

Disclaimer:

It must be noted that the conclusions in the report are inseparable to the hypotheses described and can only be read in this reference framework. The hypotheses were gathered by the TSOs according to their best knowledge at the moment of the data collection and validated by ministries and regulators. The TSOs emphasise that the TSOs involved in this study are not responsible in case the hypotheses taken in this report or the estimations based on these hypotheses are not realised in the future.