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Press release

TRANSMISSION SYSTEM OPERATORS SUBMIT SECOND DRAFT OF GRID DEVELOPMENT PLAN 2030, VERSION 2019

- **Comments from consultation have been taken into consideration for grid development plan**
- **Sensitivity for scenario “B 2035 – coal phase-out” confirms need for grid development**
- **Measures from BBP 2015 also robust in GDP 2030 (2019)**

Today, the transmission system operators (TSOs) 50Hertz, Amprion, TenneT and TransnetBW submitted the second draft of the Grid Development Plan (GDP) 2030, version 2019, to the Federal Network Agency (Bundesnetzagentur, BNetzA) and published it on www.netzentwicklungsplan.de. Suggestions and comments from the public consultation process on the first draft of the GDP, which took place from 4 February to 4 March 2019, have been taken into consideration for the second draft. A total of 906 comments on the onshore and offshore part of the GDP were received. In comparison, a total of 2,133 comments were received on the onshore and offshore GDP 2030 (2017) in 2017.

Consultation regarding first draft

Many contributions during the consultation process contained general comments on the parameters set out in the scenarios. The comments focused in particular on compliance with the Paris Agreement and the recommendations made by the Commission on Growth, Structural Change and Employment (Wachstum, Strukturwandel und Beschäftigung, WSB). Other topics included the results from the market simulation and the requirements for grid development. In addition, there were regional concerns about particular grid upgrade and expansion projects. The projects between Altenfeld and Grafenrheinfeld (P44 / P44mod), between Raitersaich and Altheim (P53) and between Pirach, Pleinting and St. Peter (P112) in Bavaria as well as the route of the three large HVDC connections from North

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Rhine-Westphalia to Baden-Württemberg (DC2), from Schleswig-Holstein to Bavaria and Baden-Württemberg (DC3/DC4) and from Saxony-Anhalt to Bavaria (DC5 with the DC20 extension) were the subject of many comments – however, to a far lesser extent than in the past.

Sensitivity “B 2035 – coal phase-out”

For the second draft of the GDP 2030 (2019) the TSOs have carried out an additional sensitivity calculation “B 2035 – coal phase-out”. In this way, they ensure that the identified grid development measures for 2030 and for 2035 are still required even in the case of a total exit from coal as recommended by the WSB commission. The results from this sensitivity calculation show that the national grid expansion requirement for 2030 and for 2035 also exists in this sensitivity and can thus be considered robust.

Requirement for modification and expansion of the ultra-high-voltage electricity grid.

The results from the grid calculations for scenarios A 2030 and C 2030 that have been integrated into the second GDP draft mostly match those for scenario B 2030. In addition to the measures set out in the Energy Line Extension Act (Energieleitungsausbaugesetz, EnLAG) and the Federal Requirements Plan (Bundesbedarfsplan, BBP), an extra of approximately 2,750 km of grid upgrades for existing routes (recabling or new, high-capacity lines in existing routes) have been identified for scenario A in order for the grid to meet requirements. For scenario B 2030 the length of existing routes that require upgrades is slightly longer, with approximately 2,800 km. In addition, approximately 1,600 km of new routes are required in both scenarios. In scenario C 2030 approximately 3,250 km of grid upgrades and around 1,700 km of new routes are required in addition to the measures set out on the BBP. The transmission capacity of the DC connections totals 12 GW in all scenarios for 2030. All measures in the BBP 2015 as well as the measures that have been confirmed by BNetzA have been shown to be robust in GDP 2030 (2019) with regard to the changed conditions.

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Cost-benefit analysis for interconnectors

In line with the requirements from BNetzA, the TSOs have carried out a cost-benefit analysis for a total of 8 interconnectors in the second draft of the GDP.

Evaluation of system stability

Based on the scenario B 2035, the TSOs have evaluated system stability including the proposed grid measures in the second draft of the GDP 2030 (2019). The analysis shows considerable need for reactive power compensation systems to cover stationary and controllable requirements with a total installed capacity of at least 38.1 - 74.3 Gvar (Giga-Volt-Amperes reactive).

Based on the parameters, the actual requirements for reactive power compensation systems could be even higher, due to the horizon of the analysis being in the far future.

Investment costs GDP 2030 (2019)

Compared to the first draft of the GDP 2030 (2019), which showed investment costs of 52 billion euros for grid upgrade measures, the costs for onshore measures in scenario B 2030 in the second draft have risen to 61 billion euros. This increase is due in large parts to including the extensive requirement for reactive power compensation systems from the analyses on system stability. Further cost-increasing aspects are additional horizontal point measures (in particular switchgear and switchgear panels) in the second draft as well as the correction of an erroneous value for a HVDC project in the first draft.

More information at www.netzentwicklungsplan.de

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