Fact Sheet

Berlin, 4 November 2014

THE OFFSHORE GRID DEVELOPMENT PLAN 2014 2ND DRAFT
CONTENTS, CONSULTATION, FACTORS INFLUENCING GRID DEVELOPMENT

The Offshore Grid Development Plan 2014
The Offshore Grid Development Plan 2014 (O-GDP) is based on the scenario framework approved by the German Federal Network Agency on 30 August 2013. At the same time as the O-GDP 2014 was being prepared, fundamental framework conditions for the energy industry were redefined by German legislative authorities as part of the amendment of the German Renewable Energy Act (*Erneuerbare-Energien-Gesetz* or *EEG*). The amended Renewable Energy Act came into effect on 1 August 2014.

Taking this legislative framework into consideration, the Offshore Grid Development Plan draws together the development of the overland transmission network, the spatial planning at sea and the basic technical conditions to create a basis for sustainable planning, including detailed information on the properties, time scheduling, execution times and costs of the measures necessary for the next ten and twenty years respectively. The Offshore Grid Development Plan investigates the demand on the grid connection system and determines the start and end points of grid connection systems, taking into account the expected geographic distribution of the offshore wind farms and the network connection capacities available at the grid connection points in the transmission network. Specific line corridors are not identified within the scope of the O-GDP, but are determined as part of federal sectoral planning by the Federal Maritime and Hydrographic Agency (Bundesamt für Seeschifffahrt und Hydrographie) for the exclusive economic zone and by the Federal Network Agency in cooperation with the respective German states for German coastal waters.

The volume of offshore grid expansion needed is calculated at 1,055 km in Scenario A 2024, 1,525 km in Scenario B 2024 and up to 2,555 km in Scenario C 2024. The total transmission capacity of these extensions to the offshore grid would be sufficient for an additional 2.95 GW in Scenario A 2024, 4.35 GW in Scenario B 2024 and for 7.4 GW in Scenario C 2024.

The investment costs for the network measures are calculated in the Offshore Grid Development Plan on the basis of specific cost estimations and are of a provisional nature. Depending on the scenario, the total volume of investments over the next ten years totals between 17 and 23 billion euro. This already accounts for investments of approximately thirteen billion euro in the expansion of the starting grid offshore.

Offshore Grid Development Plan 2014 Public Consultation
Together with the first draft of the Electricity Grid Development Plan (GDP), the first draft of the Offshore Grid Development Plan 2014 (O-GDP) was made available for public consultation between 16 April and 28 May 2014. During this period, all

stakeholders had the opportunity to express their opinion about the plans. All responses for which publication consent has been given, were successively published online at www.netzentwicklungsplan.de/stellungnahmen-2014. The content of all submitted responses was assessed by the transmission system operators and appropriate revisions were then made to the Offshore Grid Development Plan 2014.

Most of the 23 responses received regarding the first draft of the Offshore Grid Development Plan were submitted by institutions. The majority of the statements submitted made reference to a number of different topics. In this year many of the comments again focussed on the issues of grid connection point selection, the legislative framework for the O-GDP and the extent and the schedule of progress for the expansion of the offshore grid.

Results of the second draft of the Offshore Grid Development Plan 2014
The Offshore Grid Development Plan describes measures that have been made available for public consultation and are based on the scenario framework approved by the Federal Network Agency on 30 August 2013; these measures fulfil all the requirements imposed by the German legislative and regulatory authorities. Due to the scope of three different scenarios, the grid expansion measures investigated cover a wide range of possible future developments.

A comparison with the resultant networks of the Offshore Grid Development Plans for 2013 and 2014 shows that, even when the target values are reduced in the scenario framework, the need for expansion measures in the long-term is not diminished in any way, but simply stretched out over a longer period of time. The adjustments to the Renewable Energy Act that are currently being discussed do not mean a fundamental reversal in policy, but rather a simple extension of the time given to develop individual generation methods, such as offshore wind power. This means that certain network development measures will also be postponed slightly, without becoming obsolete.

Next steps – continuing along the road to grid expansion
The German Federal Network Agency will now check through the revised draft and once again make it available for public consultation together with an environmental report. The Federal Network Agency takes the results of the participation by the public and authorities into consideration when approving the Offshore Grid Development Plan.

Together with the Power Grid Development Plan, the approved O-GDP is used as a foundation for creating the draft of the Federal Requirements Plan at least every three years. The Federal Requirements Plan Law (*Bundesbedarfsplangesetz* or *BBPlG*) was enacted by the lower house of the German Federal Parliament (*Bundestag*) on 25 April 2013 and was approved by the Parliament's upper house (*Bundesrat*) on 7 June 2013. The next Federal Requirements Plan is to be presented based on the two Grid Development Plans for 2015 at the very latest.

Report on factors influencing grid development 2014
The transmission system operators have investigated the impact of three factors influencing the grid development on the measures included in the Grid Development Plan 2014. These factors are as follows:

- offshore capping (Factor 1)
- injection management (Factor 2)
- CO_2 prices (Factor 3)

These provide additional findings about the influence of certain defined parameters on the demand for grid development and are to be considered vital contributions to the discussion regarding the configuration of dimensioning factors on grid expansion. Alongside the Grid Development Plan 2014, the transmission system operators also published the report on factors influencing grid development 2014 (Part I and II) on April 16 2014 and July 14 2014 respectively, available online at www.netzentwicklungsplan.de.

Results of analysing factors which influence grid development
The factor analysis indicates that all HVDC connection lines are still required for the long-distance transport of offshore and onshore wind power from coastal areas directly to the south. Even under changed basic conditions, the measures contained in the Federal Requirements Plan still continue to constitute a robust core for the grid expansion required over the next ten years.

Legal basis
Since 2012, based on the amended German Energy Management Act, the four transmission system operators 50Hertz, Amprion, TenneT and TransnetBW have shared the annual task of drawing up a Power Grid Development Plan for the expansion of the overland German transmission networks over the next ten and twenty years. Wind power from the North Sea and Baltic Sea is set to make a significant contribution to the energy supply from renewable sources. In 2014, the O-GDP was published for the second time so as to facilitate an efficient and sustainable expansion of the grid within the statutory framework. Like the GDP, this is prepared annually and presented to the German Federal Network Agency as the regulatory authority responsible. Prior to the preparation of the O-GDP, a so-called scenario framework is created, which uses three scenarios to describe the range of possible developments in energy consumption and generation as well as the regional distribution of these; this forms both the foundation for the GDP and the targets of the German government.