TenneT TSO GmbH

Proposal of Commitments under Article 9 of Council Regulation (EC) No. 1/2003

Case COMP/AT.40461 - DE-DK Interconnector -

- In accordance with Article 9 of Council Regulation (EC) No. 1/2003, TenneT TSO GmbH (*TenneT*) offers the following commitments (*Commitments*) to the European Commission (the *EU Commission*) with a view to remedying the EU Commission's competition concerns as expressed by the EU Commission in its preliminary assessment (*Preliminary Assessment*) dated 19 March 2018 in the context of its investigation in case COMP/AT.40461 and enabling the EU Commission to adopt a decision confirming that the Commitments meet its concerns (*Commitment Decision*).
- In line with Article 9 of Council Regulation (EC) No. 1/2003, the Commitments do not constitute an acknowledgement of liability by TenneT (whether direct or indirect, explicit or implicit) that there has been any infringement of Article 101 or Article 102 Treaty on the Functioning of the European Union (*TFEU*) or Article 53 or Article 54 of the EEA Agreement or the competition laws of any other jurisdiction (*Applicable Competition Law*), and nothing in the Commitments may be construed as implying that TenneT agrees with the preliminary concerns expressed by the EU Commission in the Preliminary Assessment.
- TenneT acts under the assumption that, when accepting the Commitments, the EU Commission will confirm that there are no longer grounds for action against TenneT, and the EU Commission will terminate the proceedings against TenneT without concluding whether or not there has been an infringement of Applicable Competition Law.
- The Commitments are without prejudice to TenneT's position should the EU Commission or any other party conduct proceedings or commence other legal actions against TenneT.
- This text shall be interpreted in the light of the Preliminary Assessment, the Commitment Decision, the general framework of Community law and in particular in the light of Articles 101 and 102 TFEU and Council Regulation (EC) No. 1/2003.

I. Objectives and Considerations

- In recent years changed market and power generation patterns led to a significant decrease of the NTC available at the border between Germany and Western Denmark (DE-DK1 Border). Pursuant to Article 16 (3) of the Electricity Regulation, TSOs shall make available the maximum capacity of the interconnections and/or the transmission networks affecting cross-border flows to market participants, complying with safety standards of secure network operation. To this effect TenneT has implemented certain measures at the DE-DK1 Border. In particular, after consultations since April 2016 with market participants, the Governments and competent regulatory authorities of Germany and Denmark and the EU Commission, TenneT started to provide guaranteed NTC in July 2017 which was stepwise increased up to the current level of 700 MW. This measure was based on a contractual cooperation on countertrading with ENDK and supported by a corresponding joint declaration between the Governments of Denmark and Germany which also included the general basis for certain exemptions from providing guaranteed NTC.
- In order to meet the concerns of the EU Commission as expressed in the Preliminary Assessment, TenneT will make available the maximum capacity at the DE-DK1 Border that is compatible with safety standards of secure network operation. In any event, TenneT will increase the guaranteed NTC to a minimum of 1 300 MW on the DE-DK1 Border in order to remove as much as possible limitations to cross-border trading. This TenneT Guaranteed Hourly NTC shall generally be offered to the spot markets in line with CACM Regulation or any future applicable European legislation, but a certain share may also be offered to the long-term market in order to allow sufficient hedging opportunities on the market in compliance with the FCA Regulation, and may be reserved for balancing capacity in compliance with Article 38 (1) and (2) Electricity Balancing Regulation.
- The TenneT Guaranteed Hourly NTC of 1 300 MW requires a Phase-in Period to allow TenneT in cooperation with ENDK to implement and apply an adequate countertrading process which requires in particular increased liquidity in the balancing and intraday markets to ensure overall security of supply.
- Based on the current German electricity grid planning regime, in particular the Federal Requirement Plan Act (*Bundesbedarfsplangesetz*), the Energy Line Extension Act (*Energieleitungsausbaugesetz*) and the German Network Development Plan (*Netzentwicklungsplan*), and provided that ENDK will also complete the adjacent grid extension on the Danish side of the DE-DK1 Border on time, TenneT expects that the East Coast Line and the West Coast line will be constructed and commissioned prior to the end of 2024, i.e. 2020 (East Coast Line) and 2022 (West Coast Line). In this case the TenneT Guaranteed Hourly NTC of 1 300 MW shall be sub-

ject to an additional overall increase of 1 325 MW by means of a linear trajectory until 1 January 2026, consisting of an increase of 575 MW following the commissioning of the East Coast Line, and, in addition, an increase of 750 MW following the commissioning of the West Coast Line. Thus, following a linear trajectory, on 1 January 2026 and for the remaining duration of the Commitments, the TenneT Guaranteed Hourly NTC shall increase to 2 625 MW, if both the East Coast Line and the West Coast Line are commissioned prior to 1 January 2025. In case the East Coast Line and the West Coast Line are commissioned in 2025 or 2026, TenneT shall increase the TenneT Guaranteed Hourly NTC at once on 1 January following the date of the respective commissioning by 575 MW and 750 MW, as the case may be.

- The increase and provision of the TenneT Guaranteed Hourly NTC shall primarily be based on the procedures laid down in the Countertrade Agreement between TenneT and ENDK. ENDK is neither addressee of the proceedings in case COMP/AT.40461, nor has ENDK consented to the Commitments. By consequence, the Commitments only apply to the TenneT Guaranteed Hourly NTC which can deviate from the actual Trading Capacity. This is the case if the minimum value of the NTC for the DE-DK1 Border determined by ENDK is lower than the TenneT Guaranteed Hourly NTC.
- TenneT will only reduce the TenneT Guaranteed Hourly NTC in exceptional cases if required to maintain system stability and security of supply as specified under Section III (cf. Paragraph 46) and Annexes 2 and 3 of the Commitments.
- The Commitments have no adverse effect on the calculation and availability of capacity on other borders to which TenneT is an adjacent TSO. Based on the decision by ACER dated 17 November 2016 (No 06/2016), while the DE-DK1 Border was assigned to the capacity calculation region "HANSA CCR", other borders of TenneT (i.e. Netherlands, Czech Republic and Austria) were assigned to the capacity calculation region "CORE CCR". To prevent conflicts in relation to the capacity calculation between different capacity calculation regions, in line with Article 21 CACM Regulation, individual capacity calculation methodologies are developed by the TSOs (including rules for sharing the power flows capabilities of critical grid elements among different capacity calculation regions) and approved by the competent national regulatory authorities for each capacity calculation region.
- TenneT aims at implementing the Commitments in an economically efficient way. The costs incurred by TenneT as a result of providing TenneT Guaranteed Hourly NTC will not be subject to a cost cap. Further, TenneT will implement the Commitments in compliance with safety standards of secure network operation and in compliance with the applicable national and European regulatory framework, most notably the Electricity Regulation, CACM Regulation, FCA

Regulation, SO Guideline Regulation, and other applicable legislation, and their implementation by regulatory authorities (including the BNetzA, DERA and ACER).

The Commitments may be subject to a review process as specified under Section V of the Commitments, in particular taking into account (i) the upcoming revised Electricity Regulation as part of the proposed European legislative package "Clean Energy for All Europeans", and (ii) certain circumstances which might affect the expected realization and operation of the East Coast Line and/or the West Coast Line and, thus, prevent TenneT from increasing the TenneT Guaranteed Hourly NTC linearly (cf. Paragraphs 42 through 44) or at once (cf. Paragraph 45).

II. Definitions

- For the purpose of the Commitments, unless the context otherwise requires, the subsequently listed terms shall have the following meaning:
- 16 ACER: Agency for the Cooperation of Energy Regulators.
- 17 **BNetzA**: German Federal Network Agency (Bundesnetzagentur).
- 18 *CACM Regulation*: Regulation (EU) 2015/1222 of 24 July 2015 establishing a Guideline on Capacity Allocation and Congestion Management.
- 19 *Countertrade*: Cross zonal exchange initiated by system operators between two bidding zones to relieve physical congestion.
- 20 Countertrade Agreement: The Agreement on Countertrading between ENDK and TenneT as concluded on 3 July 2017 and prolonged on 19 March 2018, and to be replaced by a new agreement subsequent to the Effective Date.
- DE-DK1 Border: DE-DK1 Border refers to the alternating current electrical connection between TenneT and ENDK, geographically located between Jutland in Denmark and Schleswig-Holstein in Germany and currently consisting of the following transmission lines: (i) Flensburg (Germany) Kassø (Denmark) (220 kV); (ii) Flensburg (Germany) Ensted (Denmark) (220 kV); (iii) Jardelund (Germany) Kassø (Denmark) (double circuit) (380 kV).
- 22 **DERA**: Danish Energy Regulatory Authority (*Energitilsynet*).

- 23 East Coast Line: Planned 380 kV upgrade of the 220 kV corridor between Germany and Denmark, i.e. from Kassø (Denmark) to Flensburg/Handewitt (Germany) (as part of project No 1 listed in the annex of the Energy Line Extension Act (Energieleitungsausbaugesetz), Federal Law Gazette 2009 I, p. 2 870 and 2016 I, p. 3 106) expected to result in an additional increase of TenneT Guaranteed Hourly NTC of 575 MW.
- 24 Effective Date: The date upon which TenneT receives the formal notification of the decision adopted by the EU Commission in Case COMP/AT.40461 pursuant to Article 9 of Council Regulation (EC) No. 1/2003.
- 25 *Electricity Balancing Regulation*: Commission Regulation (EU) No 2017/2195 of 23 November 2017 establishing a Guideline on Electricity Balancing.
- 26 Electricity Regulation: Council Regulation (EC) No 714/2009 of the European Parliament and the Council of 13 July 2009 on conditions for access to the network for cross-border exchanges in electricity and repealing Regulation (EC) No 1228/2003.
- 27 ENDK: Energinet, an Independent Public Enterprise (selvstaendig offentlig virksomhed) under the laws of Denmark registered in the central business register (centrale virk- somhedsregister) under CVR number 28980671, whose registered office is at Tonne Kjaersvej 65, Erritso, 7000 Fredericia, Denmark.
- FCA Regulation: Commission Regulation (EU) No 2016/1719 of 26 September 2016 establishing a Guideline on Forward Capacity Allocation.
- NTC: Net transfer capacity refers to the maximum admissible trade volume over a border determined by the adjacent TSOs taking into account the relevant grid constraints.
- *Phase-in Period*: Gradual increase of TenneT Guaranteed Hourly NTC up to 1 300 MW within six months after the Effective Date.
- Re-dispatch: Measure(s) activated by one or several system operators by altering the generation and/or load pattern in order to change physical flows in the transmission system and relieve a physical congestion.
- 32 **SO Guideline Regulation**: Commission Regulation (EU) No 2017/1485 of 2 August 2017 establishing a Guideline on Electricity Transmission System Operation.

33 **TenneT**: TenneT TSO GmbH, a limited liability company under the laws of Germany registered in the commercial register of the Local Court (*Amtsgericht*) of Bayreuth under number HRB 4923 whose registered office is at Bernecker Straße 70, 95448 Bayreuth, Germany.

.

- 34 TenneT Guaranteed Hourly NTC: The minimum value of NTC for the DE-DK1 Border determined by TenneT and valid for every hour of the year independent of the minimum value of NTC for the DE-DK1 Border determined by ENDK, and amounting to a minimum of 1 300 MW or a respective higher amount following the commissioning of the East Coast Line and West Coast Line.
- 35 *Trading Capacity*: Capacity actually made available to the market for the DE-DK1 Border equal to the lower of the two values of the NTC determined by TenneT (i.e. at least the TenneT Guaranteed Hourly NTC) on the one hand and determined by ENDK on the other hand.
- 36 **Transmission System Operator (TSO)**: Pursuant to Article 2 (4) of Directive 2009/72/EC, a natural or legal person responsible for operating, ensuring the maintenance of and, if necessary, developing the transmission system in a given area and, where applicable, its interconnections with other systems, and for ensuring the long-term ability of the system to meet reasonable demands for the transmission of electricity.
- West Coast Line: Planned 380 kV interconnection system on the Western coastline of the Federal State of Schleswig Holstein to Denmark, i.e. between Brunsbüttel-Niebüll (Germany) and Endrup (Denmark) (as part of project No 8 listed in the current annex of the Federal Requirement Plan Act (Bundesbedarfsplangesetz), Federal Law Gazette 2013 I, p. 2 543; 2014 I, p. 148, 271 and 2016 I, p. 1 786) expected to result in an additional increase of TenneT Guaranteed Hourly NTC of 750 MW (if both the East Coast Line and the West Coast Line are commissioned) or 785 MW (if only the West Coast Line is commissioned).

III. Commitments

- TenneT will make available the maximum capacity at the DE-DK1 Border that is compatible with safety standards of secure network operation. In any event, TenneT commits to provide a TenneT Guaranteed Hourly NTC of 1 300 MW at the DE-DK1 Border.
- The TenneT Guaranteed Hourly NTC of 1 300 MW will be phased-in over a period of 6 (six) months starting at the current level of 700 MW. To this effect TenneT shall increase the TenneT

Guaranteed Hourly NTC to 900 MW on 1 January 2019 and subsequently in 5 (five) monthly steps of 80 MW until the TenneT Guaranteed Hourly NTC equals 1 300 MW.

- Subsequent to the Phase-in Period a certain share of the TenneT Guaranteed Hourly NTC may be offered to the long-term market. The remaining share as well as any long-term capacities, which have not been nominated, will be offered to the spot markets in line with CACM Regulation or any future applicable European legislation and may be used to provide balancing capacity in compliance with Article 38 (1) and (2) Electricity Balancing Regulation.
- The TenneT Guaranteed Hourly NTC shall be valid for both directions at the DE-DK1 Border, i.e. from Denmark West (DK1) to Germany (DE) and from Germany (DE) to Denmark West (DK1).
- In the expected case that both the East Coast Line and the West Coast Line will be commissioned prior to the end of 2024, TenneT commits to increase the TenneT Guaranteed Hourly NTC to 2 625 MW on 1 January 2026 following a linear trajectory.
- Under the principle of a linear trajectory, the TenneT Guaranteed Hourly NTC shall be increased by equal yearly steps corresponding to the overall increase of both the East Coast Line (575 MW) and the West Coast Line (750 MW) divided by the number of calendar years between (i) 1 January following the commissioning of the East Coast Line and the West Coast Line, respectively, and (ii) 1 January 2026. Annex 1 illustrates the increase of TenneT Guaranteed Hourly NTC based on the principle of a linear trajectory.
- The TenneT Guaranteed Hourly NTC shall increase (i) by 575 MW to 1 875 MW on 1 January 2026 if only the East Coast Line is commissioned prior to 1 January 2025, or (ii) by 785 MW to 2 085 MW on 1 January 2026 if only the West Coast Line is commissioned prior to 1 January 2025. In both scenarios (i) and (ii) the principle of a linear trajectory (cf. paragraph 43) shall apply mutatis mutandis. Annex 1 also illustrates the increase of TenneT Guaranteed Hourly NTC in scenarios (i) and (ii).
- The principle of a linear trajectory (cf. Paragraph 43 and 44) shall not apply in case the East Coast Line and/or the West Coast Line are commissioned in 2025 or 2026. In such case, TenneT shall increase the TenneT Guaranteed Hourly NTC at once (i) by 575 MW on 1 January following the commissioning of the East Coast Line, and/or (ii) 750 MW or 785 MW, respectively, on 1 January following the commissioning of the West Coast Line.

- In the following exceptional cases, which are further specified in Annexes 2 and 3, TenneT may reduce the TenneT Guaranteed Hourly NTC to what is necessary and proportional to comply with safety standards of secure network operation:
 - (i) if critical grid elements are not available due to unplanned outages, construction or maintenance work; but even in these exceptional cases the TenneT Guaranteed Hourly NTC shall not be lower than 500 MW. This threshold will increase subject to an exact determination and publication no later than 1 January following the commissioning of the East Coast Line and/or West Coast Line (cf. Annex 2); or
 - (ii) to maintain operational safety of the electricity grid where TSOs (including TenneT) must act in an expeditious manner and Re-dispatch or Countertrade are not possible (cf. Annex 3).

IV. Monitoring Trustee

1. General

*

- TenneT shall appoint a monitoring trustee on the terms and in accordance with the below procedure (Monitoring Trustee), and once the Monitoring Trustee is approved by the EU Commission, the Monitoring Trustee shall monitor TenneT's fulfilment of the Commitments.
- The Monitoring Trustee shall, at the time of appointment, be independent of TenneT and its affiliated undertakings as well as of ENDK, and shall have the necessary expertise and experience in the electricity sector to adequately fulfil and comply with the mandate as Monitoring Trustee.

2. Proposal by TenneT

- No later than 2 (two) weeks following the Effective Date, TenneT shall submit a proposal of at least one person and/or institution TenneT considers adequate and qualified to fulfil the obligations of the Monitoring Trustee. The proposal shall contain sufficient information to enable the EU Commission to verify that the proposed person(s) and/or institution(s) fulfil the requirements set out in Paragraph 48 and shall include:
 - (i) the full terms of the proposed mandate, which shall include all provisions necessary to enable the Monitoring Trustee to fulfil its obligations under its mandate; and

(ii) the outline of a plan which describes how the Monitoring Trustee intends to carry out its assigned obligations and responsibilities under its mandate.

3. Approval or Rejection by the EU Commission

The EU Commission shall have the discretion to approve or reject the proposed person(s) and/or institution(s) as Monitoring Trustees and to approve the proposed mandate subject to any modifications it deems necessary for the Monitoring Trustee to fulfil its responsibilities. If only one person or institution is approved, TenneT shall appoint this individual as Monitoring Trustee. If more than one person and/or institution are approved by the EU Commission, TenneT shall be free to choose the respective Monitoring Trustee to be appointed among the approved persons. The Monitoring Trustee shall be appointed no later than 1 (one) week after the EU Commission's approval in accordance with the approved mandate.

4. New Proposal by TenneT

If the person(s) and/or institution(s) proposed by TenneT for the mandate as Monitoring Trustee are rejected by the EU Commission, TenneT shall propose at least one more person and/or institution within 2 (two) weeks after the rejection by the EU Commission in accordance with the above requirements and procedure.

5. Monitoring Trustee Nominated by the EU Commission

If also the person(s) and/or institution(s) proposed by TenneT under Paragraph 51 are rejected by the EU Commission, the EU Commission shall nominate a Monitoring Trustee to be appointed by TenneT in accordance with the approved mandate.

6. Mandate of the Monitoring Trustee

- The mandate of the Monitoring Trustee shall include, in particular, the following obligations and responsibilities:
 - (i) Monitor the satisfactory fulfilment of TenneT's obligations under the Commitments;
 - (ii) Propose to TenneT certain measures the Monitoring Trustee considers necessary to ensure compliance of TenneT with obligations under the Commitments;

- (iii) Provide every 3 (three) months during the Phase-in Period and thereafter every 6 (six) months written reports to the EU Commission on TenneT's compliance with the Commitments. The reports will contain in particular the following information:
 - TenneT Guaranteed Hourly NTC;
 - Actually offered cross-border Trading Capacities;
 - With respect to reductions of the TenneT Guaranteed Hourly NTC (cf. Paragraph 46), all relevant facts, in particular the reason for, and scope of, the reductions, as well as compliance with the minimum threshold of 500 MW (or the respective higher amount published by TenneT and provided to the Monitoring Trustee following the commissioning of the East Coast Line and/or West Coast Line) in case of unplanned outages, construction or maintenance work;
 - Data on use of countertrade based on the Countertrade Agreement between TenneT and ENDK including the ratio between the TenneT Guaranteed Hourly NTC offered to the long-term market and to the spot markets;
 - Costs of providing the TenneT Guaranteed Hourly NTCs as soon as the relevant invoices are available; and
 - Existing or expected conflicts with cross-zonal capacity allocation and calculation based on principles and methodologies under the CACM Regulation approved by the competent regulatory authorities (in particular the BNetzA), or on any European and national laws and regulation implementing the principles and methodologies of the CACM Regulation;
 - Existing or expected conflicts with applicable future European legislation once this legislation becomes effective and, if and to the extent required, it has been implemented on a national level.
- (iv) Provide a written report to the EU Commission with his/her opinion on the appropriateness of the increased minimum threshold of TenneT Guaranteed Hourly NTC as applicable under Paragraph 46 (i) following the commissioning of the East Coast Line and/or the West Coast Line.
- (v) Upon request by the EU Commission, provide additional oral or written reports to the EU Commission on any matters falling within the scope of the Commitments.

- (vi) The reports shall be in English and both TenneT and the BNetzA shall receive copies of the reports.
- The Monitoring Trustee shall not:
 - (i) participate or be involved in commercial or regulatory negotiations or discussions between TenneT and the BNetzA, other regulatory authorities or other third parties (e.g. other TSOs);
 - (ii) disclose any confidential information of TenneT to anyone other than the EU Commission.
- The Monitoring Trustee shall have access to TenneT's books, records, documents, management or other personnel, facilities, sites or technical or regulatory information only in so far as it is reasonably necessary for the performance if its duties as set out in Paragraph 53 of the Commitments.
- At the expense of TenneT, the Monitoring Trustee may appoint advisors subject to the EU Commission's prior approval and prior consultation with TenneT (including expected amount of fees), provided that the Monitoring Trustee reasonably considers the appointment of such advisors necessary for the fulfilment of its mandate, and that any fees incurred are reasonable.

7. Obligations of TenneT

- TenneT shall ensure that the Monitoring Trustee's remuneration is sufficient to guarantee the effective and independent compliance with its mandate.
- TenneT shall provide to the Monitoring Trustee all necessary assistance and information, including copies of all relevant documents, the Monitoring Trustee may reasonably require to adequately fulfil its obligations and responsibilities in accordance with its mandate.

8. Termination of Mandate

- If the Monitoring Trustee ceases to perform its functions under the Commitments or for any other good cause, including the exposure of the Monitoring Trustee to a conflict of interest,
 - (i) the EU Commission may, after hearing the Monitoring Trustee, require TenneT to replace the Monitoring Trustee; or

- (ii) TenneT, with the prior approval of the EU Commission, may replace the Monitoring Trustee.
- If the Monitoring Trustee is removed, the Monitoring Trustee may be required to continue its mandate until a new Monitoring Trustee is in place and has received all relevant information to carry out the mandate. The new Monitoring Trustee shall be appointed in accordance with the above procedure.
- The Monitoring Trustee shall cease to act as Monitoring Trustee only after the EU Commission has discharged it from its duties.

V. Duration and Review Process

1. Duration

The Commitments shall apply for a duration of 9 (nine) years from the Effective Date.

2. Review Process

- Pursuant to Article 9 (2) (a) of Council Regulation (EC) No. 1/2003, TenneT may request the EU Commission to reopen the proceedings with a view to modifying and/or terminating the Commitments in case of an important change of facts on which the EU Commission's Commitment Decision pursuant to Article 9 (1) of Council Regulation (EC) No. 1/2003 is based.
- The EU Commission may, upon a reasoned request by TenneT, review the Commitments if certain circumstances occur in respect of the realization or operation of the East Coast Line and/or the West Coast Line which prevent TenneT from fulfilling the commitments in Paragraphs 42 through 45.
- The EU Commission may, upon a reasoned request by TenneT, review the Commitments if the provision of TenneT Guaranteed Hourly NTC under the Commitments conflicts with
 - (i) cross-zonal capacity allocation and calculation based on principles and methodologies under the CACM Regulation approved by the competent regulatory authorities (in particular the BNetzA), or on any national laws and regulation implementing the principles and methodologies of the CACM Regulation; or

- (ii) applicable future European legislation once this legislation becomes effective and, if and to the extent required, it has been implemented on a national level.
- To this effect, the Monitoring Trustee will monitor and inform the EU Commission within his written reports (cf. Paragraph 53 (iii) above) if and to what extent such conflict already does or is expected to occur.
- In any event, TenneT may submit a reasoned request to review the Commitments as of the beginning of 2025 with a view that the revised Electricity Regulation as part of the proposed European legislative package "Clean Energy for All Europeans" may be implemented and may have become fully effective; Paragraphs 64 through 66 remain unaffected.

3. Extension of Time Periods

- Without prejudice to Article 9 (2) of Council Regulation (EC) No. 1/2003, the EU Commission may, should unforeseen difficulties occur with implementing the Commitments, upon reasonable request by TenneT,
 - (i) grant an extension of the time periods foreseen in the Commitments, in particular during the Phase-in Period, and/or
 - (ii) modify or substitute certain obligations in the Commitments.
- If TenneT requires an extension of certain time periods in the Commitments, TenneT shall submit its request, including reasonable grounds for such request, to the EU Commission no later than 1 (one) month before expiry of the respective time period. Within the last month of any period TenneT shall only be entitled to request an extension in exceptional circumstances.

Signed the 12. November 2018

Wilfried Breuer

on behalf of TenneT TSO GmbH

Otto Jager

on behalf of TenneT TSO GmbH

Annex 1

Exemplary Illustration of the Increase of TenneT Guaranteed Hourly NTC Following the Commissioning of the East Coast Line and the West Coast Line

1. <u>Scenario 1</u>: Commissioning of East Coast Line and West Coast Line before the end of 2024 (cf. Paragraphs 42 and 43 of the Commitments)

Premises:

- TenneT Guaranteed Hourly NTC on 1 January 2026: 2 625 MW
- Commissioning East Coast Line in 2020
- Increase of TenneT Guaranteed Hourly NTC after commissioning of the East Coast Line:
 575 MW
- Commissioning West Coast Line in 2022
- Additional increase of TenneT Guaranteed Hourly NTC after commissioning of the West Coast Line: 750 MW
- Principle of linear trajectory: Increase of TenneT Guaranteed Hourly NTC by equal yearly steps corresponding to the overall increase of both the East Coast Line (575 MW) and the West Coast Line (750 MW) divided by the number of calendar years between (i) commissioning of the East Coast Line and the West Coast Line, respectively and (ii) 1 January 2026.

<u>Illustration of Increase of TenneT Guaranteed Hourly NTC:</u>

Start Date	East Coast Line (MW)	West Coast Line (MW)	TenneT Guaranteed Hourly NTC (MW)
2019 (after Phase-in-	0	0	1 300
Period)			
1 Jan 2020	0	0	1 300
1 Jan 2021	96	0	1 396
1 Jan 2022	192	0	1 492
1 Jan 2023	288	187.5	1 775.5
1 Jan 2024	384	375	2 059
1 Jan 2025	480	562.5	2 342.5
1 Jan 2026	575	750	2 625

2. <u>Scenario 2</u>: Commissioning of only East Coast Line before the end of 2024 (cf. Paragraph 44 (i) of the Commitments)

Premises:

- TenneT Guaranteed Hourly NTC on 1 January 2026: 1 875 MW
- Commissioning East Coast Line in 2020
- Increase of TenneT Guaranteed Hourly NTC after commissioning of the East Coast Line:
 575 MW
- Principle of linear trajectory applies mutatis mutandis.

<u>Illustration of Increase of TenneT Guaranteed Hourly NTC:</u>

Start Date	East Coast Line (MW)	TenneT Guaranteed Hourly NTC (MW)
2019 (after Phase-in-Period)	0	1 300
1 Jan 2020	0	1 300
1 Jan 2021	96	1 396
1 Jan 2022	192	1 492
1 Jan 2023	288	1 588
1 Jan 2024	384	1 684
1 Jan 2025	480	1 780
1 Jan 2026	575	1 875

3. <u>Scenario 3</u>: Commissioning of only West Coast Line before the end of 2024 (cf. Paragraph 44 (ii) of the Commitments)

Premises:

- TenneT Guaranteed Hourly NTC on 1 January 2026: 2 085 MW
- Commissioning East Coast Line in 2022
- Increase of TenneT Guaranteed Hourly NTC after commissioning of the West Coast Line:
 785 MW
- Principle of linear trajectory applies *mutatis mutandis*.

<u>Illustration of Increase of TenneT Guaranteed Hourly NTC:</u>

Start Date	West Coast Line (MW)	TenneT Guaranteed Hourly NTC (MW)
2019 (after Phase-in-Period)	0	1 300
1 Jan 2020	0	1 300
1 Jan 2021	0	1 300
1 Jan 2022	0	1 300
1 Jan 2023	196.25	1 496.25
1 Jan 2024	392.50	1 692.50
1 Jan 2025	588.75	1 888.75
1 Jan 2026	785	2 085

Annex 2

Reduction of the TenneT Guaranteed Hourly NTC due to Unplanned Outages, Construction or Maintenance Work

TenneT's transmission grid North of Hamburg in the Federal State of Schleswig-Holstein is not meshed. Therefore, in case of a failure of a transmission line, no alternative supply can be made available. Therefore, TenneT has identified the below critical transmission lines, which are crucial for transmitting electricity across the DE-DK1 Border and, consequently, the failure of such critical transmission lines would have a significant effect on TenneT's ability to make the TenneT Guaranteed Hourly NTC on the DE-DK1 Border available.

In this respect, exceptional cases within the meaning of Paragraph 46 (i) of the Commitments correspond to situations where one or several of the below critical transmission lines are not available due to unplanned outages (i.e. an incident), or due to (planned) construction or maintenance work.

The Dollern-Wilster transmission line will presumably only be part of the below list until the middle of 2019 when the upgrade of the transmission line Hamburg/Nord-Stade from 220 kV to 380 kV is expected to be completed.

Following the construction and commissioning of the West Coast Line, which is scheduled for 2022, the West Coast Line will be added to the below list of critical transmission lines, because an outage of the West Coast Line will severely reduce the maximum NTC on the DE-DK1 Border and, thus, has also an effect on the TenneT Guaranteed Hourly NTC. This mainly stems from the fact that the level of a meshed transmission grid will not be increased in this area (i.e. Federal State of Schleswig Holstein and Hamburg). Rather, only another parallel transmission line section will be established showing the same technical characteristics.

Relevant critical transmission lines for the TenneT Guaranteed Hourly NTC
Jardelund – Kassø (ENDK) (380kV)
Flensburg – Kassø (ENDK) (220kV)
Flensburg – Ensted (ENDK) (220kV)
Audorf – Jardelund (380kV)
Audorf – Flensburg (220kV)
Hamburg/N – Audorf (380kV)
Wilster – Audorf (380kV)
Dollern – Wilster (380kV) (until mid-2019)
West Coast Line (380kV) (after commissioning; currently scheduled for 2022)

All outages, planned and unplanned, are published on TenneT's homepage (http://www.tennettso.de/site/de/Transparenz/veroeffentlichungen/berichteservice/marktrelevante-informationen). While planned outages are published in the autumn of the preceding year, unplanned outages are published no later than one hour after occurrence.

Under consideration of the above, in the exceptional cases where one or several of the critical transmission lines listed above are not available, TenneT may, after a careful analysis of the situation, reduce the TenneT Guaranteed Hourly NTC to what is necessary and proportional to comply with safety standards of a secure network in accordance with Paragraph 46 (i) of the Commitments.

However, even in these exceptional cases the TenneT Guaranteed Hourly NTC shall not be lower than 500 MW, which corresponds to the maximum NTC in case one interconnector section is switched off. The threshold of 500 MW will increase following the commissioning of the East Coast Line and/or West Coast Line. The exact amount of such increase will be determined by TenneT following the commissioning of the East Coast and/or the West Coast Line, and will subsequently be provided to the Monitoring Trustee and will also be published on the website of TenneT no later than 1 January following the commissioning of the East Coast Line and/or the West Coast Line. The Monitoring Trustee will provide a report to the EU Commission with his/her opinion on the appropriateness of the increased minimum threshold of TenneT Guaranteed Hourly NTC following the commissioning of the East Coast Line and/or the West Coast Line.

Annex 3

Reduction of the TenneT Guaranteed Hourly NTC to Maintain Operational Safety of the Electricity Grid

To maintain operational safety of the electricity grid where TSOs (including TenneT) must act in an expeditious manner and Re-dispatch or Countertrade are not possible, TenneT may reduce the TenneT Guaranteed Hourly NTC during the validation¹ of cross-zonal capacity as referred to in Article 26 (3) of the CACM Regulation².

The possibility to reduce the TenneT Guaranteed Hourly NTC to what is necessary and proportional to comply with safety standards of secure network operation within the meaning of Paragraph 46 (ii) of the Commitments may only occur in the following two cases:

- (1) Lack of technical countertrading or re-dispatch potential, or
- (2) Severe inter-TSO critical grid situation.

Concerning case (1):

In order to be able to deal with grid congestion caused by high transmission flows in Germany, every year the BNetzA and the German TSOs initiate and conduct a comprehensive capacity demand analysis (*Bedarfsanalyse*) pursuant to Section 13d of the German Energy Industry Act (*Energiewirtschaftsgesetz*) and the German Ordinance on Capacity Reserve (*Netzreserveverordnung*). The purpose of this capacity demand analysis is in particular to define the number of reserve power plants (*Reservekraftwerke*) needed for up-regulation to supply Southern Germany. Such identified reserve power plants will be included in the so-called network reserve (*Netzreserve*). This capacity demand analysis will also take into account the TenneT Guaranteed Hourly NTC.

Nevertheless, if during the validation of cross-zonal capacity TenneT foresees a critical situation caused by a technical lack of up- or down-regulation potential needed to relieve grid congestions, TenneT may reduce the TenneT Guaranteed Hourly NTC to maintain operation security and to ensure security of supply.

The validation of cross-zonal capacity should be understood as referred to in Article 30 of the CACM Regulation.

Regulation (EU) 2015/1222 of 24 July 2015 establishing a Guideline on Capacity Allocation and Congestion Management.

Concerning case (2):

Under the current European regulatory framework European TSOs have to mutually support each other to the best of their ability in order to maintain operational security and ensure security of supply in the European interconnected electricity grid system. In particular, operational security violations have to be managed in a coordinated way. Pursuant to Article 21 (1) (b) of the SO Guideline Regulation³, TSOs shall design, prepare and activate remedial actions in coordination with other concerned TSOs following the methodology for the preparation of remedial actions in a coordinated way under Article 76 (1) (b) of the SO Guideline Regulation, and thereby take into account the recommendation of a regional security coordinator in accordance with Article 78 (4) of the SO Guideline Regulation.

The activation of such remedial actions is initiated by a request of a concerned TSO and results in the coordinated application of topological remedial actions (e.g. switching operations, activation of phase shifting transformers), the provision of positive or negative balancing power across borders in case of system imbalances or lack of generation as well as crossborder re-dispatch to relieve grid congestions. However, it may ultimately also be necessary to reduce the capacity available on certain cross-border directions in order to reduce transmission flows on congested grid elements.

Hence, if TenneT receives a request for assistance from other TSOs on the basis of Article 21 (1) (b) of the SO Guideline Regulation, it may need to reduce the TenneT Guaranteed Hourly NTC to maintain operational security and ensure security of supply.

In result, in each of the above exceptional cases (1) and (2) TenneT may, after a careful analysis of the situation, reduce the TenneT Guaranteed Hourly NTC to what is necessary and proportional to comply with safety standards of secure network operation in accordance with Paragraph 46 (ii) of the Commitments.

Commission Regulation (EU) No 2017/1485 of 2 August 2017 establishing a Guideline on Electricity Transmission System Operation.