

CHARGING METHODOLOGY FOR THE VIKING LINK INTERCONNECTOR

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Effective date - to be confirmed based on go-live preparations.

Document Location

National Grid Viking Link website:

http://viking-link.com/documents/

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1 Introduction

- 1.1 National Grid Viking Link Limited (NGVLL) and Energinet Systemansvar A/S will be jointly responsible for the transmission of electricity across the British-Danish Interconnector known as Viking Link. This interconnector is currently under development and is planned to enter into commercial operation at the end of 2023. Viking Link will connect the national electricity transmission systems of Denmark (owned and operated by Energinet Eltransmission A/S) and Great Britain (owned by three companies but operated by National Grid Electricity System Operator (NGESO)). NGVLL is a wholly-owned subsidiary of National Grid Plc holding an Interconnector Licence to operate Viking Link, and designated as a Transmission System Operator (TSO) under clause 10D of the Electricity Act 1989.
- 1.2 NGVLL will facilitate commercial access to Viking Link, whereby third parties will be able to gain rights to transfer electricity across the interconnector, between the power markets of GB and Denmark (DK1 bidding Zone). NGVLL's Licence requires it to publish a Charging Methodology Statement to set out the terms under which commercial access to Viking Link is made available.
- 1.3 All references to Access Rules within this Charging Methodology are to the Viking Link Access Rules in force, as amended from time to time, and as published on the NGVLL website. In the unlikely event of a discrepancy between this Charging Methodology Statement and the Access Rules in force, the terms of the relevant Access Rules shall apply.
- 1.4 Further information on NGVLL's activities and the information contained within this document can be obtained by contacting us by email or in writing:

E-mail: viking.customerenquiries@nationalgrid.com

Post: National Grid Interconnectors Limited, 35 Homer Road, Solihull, West Midlands, B91 3QJ

1.5 All references to NGVLL in this document relate to its role and participation in the administration of the third-party access arrangements for Viking Link and in relation to its obligations as an independent Interconnector Licensee for interconnector operation in Great Britain.

2 INTERCONNECTOR CHARGING METHODOLOGY

Introduction

2.1 Standard Licence Condition (SLC) 10 requires NGVLL to establish a methodology showing the methods and principles on which charges for the use of Viking Link are based. This charging methodology is required to be approved by the Gas and Electricity Markets Authority (Authority) before it takes effect. Subsequent to this it maybe modified from time to time in accordance with SLC 10 (Paras 11–14) of the Licence.

2.2 This publication sets out the use of interconnector charges, as notified to market participants.

Objectives of the charging methodology

- 2.3 As a minimum the interconnector charging methodology has to comply with the objectives set out in SLC 10(4) of the Licence ("relevant charging methodology objectives") which require that the charges and their underlying methodology are:
 - (a) Objective;
 - (b) Transparent;
 - (c) Non-discriminatory, and;
 - (d) Compliant with Retained EU Law and any relevant and legally binding decision of the European Commission and/or the Agency that continues to apply in the UK pursuant to UK legislation.
- 2.4 Where changes are proposed to this charging methodology these will be consulted upon with the industry in accordance with SLC 10(11). The Authority has the right to amend any proposed changes to the methodology before the changes would otherwise take effect.
- 2.5 NGVLL considers that the methodology it has prescribed for charges for using the interconnector satisfies the relevant objectives as set out above.

Explicit auction principles

- 2.6 All of Viking Link's capacity allocation (i.e. in Long Term, Day Ahead and Intraday timescales) will be via explicit auctions.
- 2.7 Under NGVLL's explicit auctions, participants may gain rights to nominate power transfers on Viking Link, with such nomination to be made in a subsequent step. In explicit auctions, participants declare how much capacity they want and how much they are willing to pay for Viking Link capacity, and place bids accordingly. These bidsare then ordered by price and, starting from the highest one, are awarded capacity until all the available capacity is allocated, whereupon the price for the capacity payable by all successful bidders is set to the bid price of the lowest allocated bid. Thismethodology thereby applies the principle of "marginal" pricing.
- 2.8 Upon its entry into commercial operation, Viking Link's capacity allocation and nomination processes will be conducted by the Joint Allocation Office (JAO) and the Regional Nomination Platform (RNP) respectively, the commencement date for which will be notified beforehand.

3 ACCESS RULES AND USE OF INTERCONNECTOR

Introduction

- 3.1 This Charging Methodology should be read in conjunction with the Viking Link Access Rules, which set out the conditions and processes for allocation and use of Viking Link capacity.
- 3.2 To the extent that changes in the Access Rules result in a requirement to modify this Charging Methodology Statement then this shall be carried out in accordance with SLC 10(11-14) of the Licence.

Eligibility to use the Interconnector

- 3.3 A summary of the registration and third-party access regime applicable to Viking Link in accordance with SLC 11 can be found via the following link: https://www.viking-link.com/trade-with-us/
- 3.4 A market participant wishing to become a Registered Participant on Viking Link, and thus be able to participate in explicit auctions, can apply via a non-discriminatory registration process administered jointly by JAO, and NGVLL. The eligibility requirements are set out in the relevant sections of the relevant Access Rules.
- 3.5 Parties are required to accede to the Access Rules via separate Participation Agreement for Viking Link are as follows:
 - i) JAO Participation Agreement for access to JAO auction platforms (Allocation Platform Participation Agreement);
 - ii) RNP Nomination Agreement for access to the Regional Nominations Platform (Nomination Participation Agreement).
- 3.6 In order to nominate explicit capacity via RNP, participants are required to accede to the relevant market codes in GB and Denmark including the Balancing & Settlement Code and Connection & Use of System Code in GB.

Interconnector access rights

3.7 Viking Link has the following maximum physical capability, measured at Receiving End:

Viking Link: 1400MW

- 3.8 NGVLL, in conjunction with the Danish transmission system operator Energinet Systemansvar A/S, instructs JAO to conduct explicit interconnector capacity Auctions on a non-discriminatory basis.
- 3.9 Registered Participants may acquire explicit interconnector capacity in accordance with the Access Rules. Obtaining explicit capacity permits the Registered Participant to nominate a transfer of electricity across Viking Link. ("the transmission right").

Transmission rights

3.10 All access rights (explicit capacity) relate to a particular product period and direction. Advance purchase of such transmission rights will be available in a series of capacity

product Auctions on a directional basis which initially will range from up to one year ahead to intraday. As such, capacity is offered in units of MW/product period and a minimum of 1MW/product period, where the product period is hourly for Day Ahead and Intraday Auctions, and weekend, month, quarter, season, year (as the case may be) in Long Term Auctions. Note the further criteria as described below in section 4.

- 3.11 The range of products available is reviewed periodically and changes may be made by providing notice to Registered Participants accordingly.
- 3.12 The capacities offered on Viking Link will be 100% (subject to any legitimate restriction of the interconnector by NGESO or Energinet Systemansvar A/S in order to preserve system security) of the physical Viking Link capabilities in all hours for any given day after taking into account any outage requirements, comprising both planned and unplanned outages. Details of planned outages will be published and made available via the following link: [to be inserted when link available].
- 3.13 In the event of an unplanned outage, curtailment will be applied where necessary in accordance with the Access Rules.
- 3.14 A timetable for Long Term Auctions is published in advance and can also be found via the following link: https://www.viking-link.com/trade-with-us/auction/
- 3.15 Transmission rights unsold in longer term and Day Ahead auctions will be returned to auctions and offered for sale again closer to the day/hours to which the transmission right applies as per the principles defined within the Access Rules, including, for the avoidance of doubt, the Day Ahead and Intraday Auctions. This ensures that the highest possible amount of capacity remains available to the market up to and on the day of use.

4 EXPLICIT AUCTIONS

Access (capacity) charges

- 4.1 The Access Rules describe the basis on which transmission rights are offered, allocated to and utilised by eligible Registered Participants, in each timescale. Bids will be accepted by the auction operator in strict accordance with the criteria set out in the Access Rules.
- 4.2 The price which all successful Registered Participants will pay for each transmission right in a given Auction is the price bid for the last accepted unit in descending order of price.
- 4.3 The charge payable by a market participant successful in an explicit auction will be the price of capacity (expressed in €/MW/hour) multiplied by the bid quantity (MW) and the product period (converted to hours).
- 4.4 Registered Participants who acquire explicit capacity will receive invoices from JAO. Payment for capacity will be in Euros only.

Secondary trading

- 4.5 A Registered Participant which holds Long Term transmission rights may relinquish its transmission rights for use by other eligible Registered Participants. There are two mechanisms for achieving this, namely Transfer of Transmission Rights and Return of Transmission Rights, both of which are described in the Access Rules.
- 4.6 Transfer of Transmission Rights involves the bilateral transfer of transmission rights to another eligible Registered Participant the financial transaction for which is conducted outside of the auction platforms. The involved market participants will reflect the MW transfer and change of ownership in the auction platform; however the original Registered Participant retains the obligation to pay the auction platform operator for the originally acquired capacity.
- 4.7 Long Term capacity may also be offered for Return via a subsequent Auction, and where that capacity is resold, JAO will pass through the proceeds to the Registered Participant who made the Return, whilst retaining the obligation to pay for the original capacity purchase. There is no charge for this Return facility.

Use of Transmission rights

- 4.8 A Registered Participant which holds explicit transmission rights on Viking Link is entitled to use such transmission rights provided it has entered into a relevant Nomination Participation Agreement for Viking Link, and has acceded to the GB and Danish market codes as described in Paragraph 3.6 and, and subject to any curtailment as described in the Access Rules. In order to exercise its entitlement to use transmission rights, a Registered Participant may make a cross-border nomination of one or more unit(s) up to the maximum amount which is available to it, i.e. those units which it has secured by successfully participating in Auctions and/or via the process of Transfer of Transmission Rights referred to above in 4.6.
- 4.9 In accordance with its entitlement as noted above, a Registered Participant may nominate transmission rights on Viking Link, these nominations are made as sending end values. Nominations are at a per hour granularity and the process is conducted on RNP separately for each of the following timescales: Long Term, Daily and Intraday.

Non-nominated transmission rights

- 4.10 If the Registered Participant does not nominate its transmission rights, they may subsequently be purchased by another (or the same) Registered Participant in accordance with the principles and criteria of Use It or Sell It ("UIOSI") and Use It or Lose It ("UIOLI") as described in the Access Rules.
- 4.11 The UIOSI provisions are designed in such a way that any portion of LT transmission rights which is not nominated for an hour cease to be reflected in a Registered Participant's Rights Documents and is made available to the Daily Auctions with the proceeds (if any) being returned to the Registered Participant.
- 4.12 The UIOLI provisions are designed in such a way that any capacity sold as part of the Daily Auction which is unused in any hour ceases to be reflected in a Registered Participant's Rights Documents and is made available to the Intraday auction process, with the proceeds (if any) not being returned to the Registered Participant.

Curtailment

- 4.13 In situations where more capacity rights have been sold than can be delivered, typically in the event of an unplanned outage, a process will be applied whereby the capacity rights and/or nominations are reduced to limit the surplus of Capacity/Nominations over interconnector capability. This process known as "Curtailment" is set out in the Access Rules.
- 4.14 Registered Participants will be compensated in accordance with the Access Rules for purchased capacity which NGVLL and Energinet Systemansvar A/S have not been able to deliver.

5 ANCILLARY SERVICES

5.1 Viking Link facilitates the provision of ancillary services between the national network operator TSOs Energinet Systemansvar A/S and NGESO, and which may include Emergency assistance, Constraint management, Intertrips. The facility to exchange other ancillary services may be agreed from time to time.