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ENERGINET

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Date:
10 April 2024

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SUD

GRID CONNECTION AGREEMENT – [SYSTEM USER NAME] – [FACILITY NAME] [FACILITY TYPE] – SUBSTATION [SUBSTATION NAME] AT [VOLTAGE LEVEL] KV

This grid connection agreement is entered into between:

[System user name]

[Street name and no.]

[Postcode and town/city]

CVR no.: [CVR no.]

(Hereinafter "the system user")

and

Energinet Eltransmission A/S

Tonne Kjærvej 65
DK-7000 Fredericia
CVR no.: 39314878

and

Energinet System Operator A/S

Tonne Kjærvej 65
DK-7000 Fredericia
CVR no.: 39314959

Energinet Eltransmission A/S and Energinet Systemansvar A/S constitute one joint party referred to as "Energinet" in relation to the system user.

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1. Background, purpose, and documents

1.1 Background

- 1.1.1 The system user wants to connect [facility type(s)] near [location]. The system user establishes the facility as a [facility capacity] MW [generation facility/demand facility/energy storage facility] at [geographic location].
- 1.1.2 In order to meet the system user's request for connection to the transmission system, it is necessary to [establish a new substation or expand] substation [substation name]. The system user's facility is connected at [voltage level] kV.
- 1.1.3 Energinet expect to have established the grid connection for the system user's facility by [month, year], after which the facility can be connected to the transmission system.

1.2 Purpose

- 1.2.1 The purpose of the grid connection agreement is lay down and specify the general and specific terms and principles that apply to the connection of the system user's facility to Energinet's transmission system.
- 1.2.2 This agreement determines specific aspects of the grid connection agreement.
- 1.2.3 The grid connection terms stipulate Energinet's general terms and must be seen as an integrated part of the grid connection agreement between the system user and Energinet.

1.3 Documents

- 1.3.1 The complete grid connection agreement consists of this agreement and the following appendices:
- Appendix 1: Grid connection terms – April 2024 (doc. 22/06619-13)
 - Appendix 1.1: Short-circuit levels (doc. XX/XXXXX-X)
 - Appendix 1.2: Power quality requirements (doc. XX/XXXXX-X)
 - Appendix 1.3: Specific technical requirements, settings, and aspects (doc. XX/XXXXX-X)
 - Appendix 2.1: Design and layout (doc. XX/XXXXX-X)
 - Appendix 2.2: Hardwired signal exchange (doc. XX/XXXXX-X)
 - Appendix 2.3: Connection contribution, establishment time schedule, and contact persons (doc. XX/XXXXX-X)
 - Appendix 2.4: Health, Safety and Environment (HSE) (doc. XX/XXXXX-X)
 - Appendix 2.5: Provision of security (doc. XX/XXXXX-X)

- Appendix 3.1: EON (energisation operational notification) (doc. XX/XXXXX-X)
- Appendix 3.2: ION (interim operational notification) (doc. XX/XXXXX-X)
- Appendix 3.3: FON (final operational notification) (doc. XX/XXXXX-X)

- Appendix 4: The system user's chosen services, products, etc. [optional]

1.3.2 In case of discrepancies between the documents in the grid connection agreement, the documents are prioritised as follows, starting with the highest priority:

- a) The agreement, excluding appendices
- b) Appendix 1 of the grid connection agreement (grid connection terms)
- c) Appendices 1.1-1.3 of the grid connection agreement (technical requirements and aspects)
- d) Appendices 3.1-3.3 of the grid connection agreement (grid connection notifications)
- e) Appendices 2.1-2.5 of the grid connection agreement (aspects related to the establishment project)
- f) Appendix 4 of the grid connection agreement (chosen services and products).

2. Specific conditions

2.1 Exchange capacity

2.1.1 Based on maximum active power available in the transmission system, the system user is limited to the following exchange capacity:

- a) Generation capacity: [generation capacity] MW
- b) Demand capacity: [demand capacity incl. auxiliary load] MW.

2.2 Facility capacity

2.2.1 The system user's facility is based on the following facility capacity: [deleted and added according to specific circumstances, listing only facilities connected]

- a) PV facility (generation facility):
 - Generation capacity: [generation capacity] MW
 - Demand capacity: [demand capacity] MW
 - The specific technical aspects and requirements are stipulated in Appendix 1.3.

- b) Wind turbine facility (generation facility):
 - Generation capacity: [generation capacity] MW
 - Demand capacity: [demand capacity] MW
 - The specific technical aspects and requirements are stipulated in Appendix 1.3.

- c) Synchronous generator facility (generation facility):
- Generation capacity: [generation capacity] MW
 - Demand capacity: [demand capacity] MW
 - The specific technical aspects and requirements are stipulated in Appendix 1.3.
- d) Electric boiler facility (demand facility):
- Demand capacity: [demand capacity] MW
 - The specific technical aspects and requirements are stipulated in Appendix 1.3.
- e) Power-to-X facility (demand facility):
- Demand capacity: [demand capacity] MW
 - The specific technical aspects and requirements are stipulated in Appendix 1.3.
- f) Two-phase third rail current facility for railway (demand facility):
- Demand capacity: [demand capacity] MW
 - The specific technical aspects and requirements are stipulated in Appendix 1.3.
- g) Three-phase third rail current systems for railway (demand facility):
- Demand capacity: [demand capacity] MW
 - The specific technical aspects and requirements are stipulated in Appendix 1.3.
- h) Electric Road Systems (ERS) (demand facility):
- Demand capacity: [demand capacity] MW
 - The specific technical aspects and requirements are stipulated in Appendix 1.3.
- i) Data centre facility (demand facility):
- Demand capacity: [demand capacity] MW
 - The specific technical aspects and requirements are stipulated in Appendix 1.3.
- j) Heat pump facility (demand facility):
- Demand capacity: [demand capacity] MW
 - The specific technical aspects and requirements are stipulated in Appendix 1.3.

- k) Non-synchronous energy storage facility (energy storage facility):
- Generation capacity: [generation capacity] MW
 - Demand capacity: [demand capacity] MW
 - The specific technical aspects and requirements are stipulated in Appendix 1.3.
- l) Non-synchronous energy storage facility (energy storage facility):
- Generation capacity: [generation capacity] MW
 - Demand capacity: [demand capacity] MW
 - The specific technical aspects and requirements are stipulated in Appendix 1.3.
- m) DC connection facility (HVDC facility):
- Generation capacity: [generation capacity] MW
 - Demand capacity: [demand capacity] MW
 - The specific technical aspects and requirements are stipulated in Appendix 1.3.
- n) DC-connected generation facility (HVDC facility):
- Generation capacity: [generation capacity] MW
 - Demand capacity: [demand capacity] MW
 - The specific technical aspects and requirements are stipulated in Appendix 1.3.
- o) [Other industrial-type facility]:
- Generation capacity: [generation capacity] MW
 - Demand capacity: [demand capacity] MW
 - The specific technical aspects and requirements are stipulated in Appendix 1.3.

2.3 Exchange capacity limitations

2.3.1 [Any specific limitations to the exchange capacity stated in section 2.1, including in case of insufficient grid from the time of connection].

[With an intact grid where inconvenient generation and demand situations occur, the transmission system cannot absorb the facility's full generation capacity. Energinet is currently planning and implementing the necessary measures to expand and reinforce the transmission system so that the facility's full output can be absorbed with the same degree of security that Energinet normally plan for similar transmission-connected facilities. The expansion and reinforcement are [specific expansion and reinforcement]. At the time of entering into this grid connection agreement, the expansion and reinforcement are expected to be established by [time], but involve significant uncertainties, including [specific uncertainties].

Consequently, the facility cannot be guaranteed regular supply of energy until the necessary expansion and reinforcement of the transmission system have been completed. The Producer can expect significantly reduced available generation exchange capacity with the transmission system for considerable periods of time until the transmission system has been expanded and reinforced in accordance with the security of delivery requirements of equivalent transmission-connected facilities applicable at any time. Until expansion and reinforcement of the transmission system have been completed, the facility's available generation capacity is based on the given operating situation in the transmission system in keeping with Energinet's current handling of this.

Energinet will specify to the system user the practical handling of the facility's limitation as described above, including in Energinet's terms for grid connection with temporarily limited grid access for generation facilities etc. in the transmission system.

Once Energinet have established and finally commissioned the necessary expansion and reinforcement of the transmission system as described above, the facility's available generation capacity is set at the value specified in section 2.1.]

2.4 Point of connection and compliance with requirements

2.4.1 The point of connection is in substation [substation name] at [voltage level] kV.

2.4.2 The facility must comply with the technical requirements for the [voltage level] kV bus-bar.

2.5 Ownership, operation, and maintenance

2.5.1 The ownership boundary is in the connection bay [bay initials] in substation [substation name] and lies on connection to [surge arrester and connection to cable end connector, respectively] in the bay. The system user owns the surge arrester, termination, and termination support as well as the foundation for the surge arrester and termination support in the bay.

2.5.2 The operation and maintenance boundaries follow the ownership boundary.

2.6 Connection payment

2.6.1 [The system user connects a generation facility covered by the producer payment method, which results in a total connection contribution of DKK [amount] excluding VAT. Calculation of the connection contribution is explained in detail in Appendix 2.3. The connection contribution for generation facilities covered by the producer payment method falls due by the time of issue of an ION.]

[The system user connects a demand facility which is not covered the producer payment method and is thus connected according to the demand facility method, where Energinet estimates a connection contribution of DKK [amount] excluding VAT. The calculation of the expected and estimated connection contribution is explained in detail in Appendix 2.3.]

2.7 Other specific aspects

2.7.1 [State any specific aspects of the connection].

3. Signatures

3.1 Energinet's acceptance

3.1.1 By signing this agreement, Energinet confirm that the establishment project will be initiated and that Energinet's obligations will be performed in accordance with the requirements, terms, and principles of this grid connection agreement, including grid connection terms and the legislation and other regulations applicable at any time.

3.2 The system user's acceptance

3.2.1 By signing this agreement, the system user confirms that the establishment of the system user's facility will be started and that it will be ensured that the system user's facility uses the transmission system in accordance with the requirements, terms, and principles of the grid connection agreement, including the grid connection terms and the legislation and regulations applicable at any time.

Location:

Date:

Place:

Date:

[Company name]

First name, last name

[Title]

[Company name]

First name, last name

[Title]

Place:

Date:

Place:

Date:

Energinet Eltransmission A/S

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