

Application Provisions for Connection Fees for Connection of Electricity Production Facilities to Vattenfall Eldistribution AB's Electricity Networks

1. Connection fee for electricity production facilities

In conjunction with a new connection of electricity production facilities to Vattenfall's network, the following rules shall apply. The stated provisions apply in respect of all electricity production facilities irrespective of whether the installed power is greater or less than 1,500 kW.

Each connection to Vattenfall's network is regarded as a separate connection.

In conjunction with the connection of electricity production facilities, irrespective of size, the connection fee shall be established as the higher of:

- either the actual cost for measures in Vattenfall's network for connection of input from the electricity production facility. Please refer to Section 3 regarding the determination of the actual cost. As regards measures in facilities involving several new or expected connections, Vattenfall shall thereupon be entitled to distribute the costs between the expected new connections equally.
- or the connection fee in accordance with Vattenfall's normal terms and conditions for connection of any periodic withdrawal from the connection point and which shall be priced in accordance with the normal network tariff for withdrawals.

Where a customer who has an agreement for electricity production facilities desires to increase the scope of the connection, the customer shall pay a connection fee in accordance with the aforementioned rules for the power by which the connection increases. Unless otherwise agreed with the customer, the connection fee shall be determined in accordance with the terms and conditions applicable at the time of the increase.

2. Special technical limitations in conjunction with the connection of wind power plants

In addition to the provisions in the General Agreement Terms and Conditions, NAT2009H, and standard provisions for installation of electricity facilities, the following special technical limitations shall apply.

The customer shall be responsible for ensuring that generator voltage is transformed to the voltage at which the connection is to take place.

Wind power plants with power in excess of 300 kW shall be connected to local high-voltage networks or higher voltage, i.e. not less than 10 or 20 kV voltage. For wind power plants with lower power, the following alternatives are available:

- A wind power plant may be connected to the customer's own facility at 400 volts provided that the customer has a normal subscription for the withdrawal to the customer's facility

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and the customer's connection fuse for withdrawals is equal to not less than the same power as the connected power for wind power.

- The largest wind power plant which may be connected to a 400 volt line from a network station and which also serves other customers is 150 kW.

The combined connected power for wind power per network station which also serves other customers may not exceed 150 kW.

- The largest wind power plant which may be connected to 400 volt lines from network stations and which only serve the relevant electricity production facility is 300 kW.

Simultaneous connection of several wind power plants with combined power exceeding 300 kW within one area which is served by one network station shall be connected to local high-voltage networks or higher voltage, i.e. not less than 10 or 20 kV voltage.

3. Determination of actual cost

The actual cost is defined as the customer's share of the total investment cost for measures in Vattenfall's network as a consequence of the new or modified connection.

3.1 Cost basis

Calculations for the determination of the actual cost for a new or modified connection shall be based on suitable connection alternatives taking into account the scope of the connection and the customer's wishes and in compliance with a long-term network development plan for the area.

The calculation shall cover calculated investment costs for new construction and upgrading/conversion of facilities caused by the new or modified connection.

The calculation shall be carried out in accordance with EBR's P2 calculation, whereupon regard shall be given, to the extent possible, to the actual design of the facilities through the use of applicable EBR codes. No general addition for expenses or profit shall be added to the EBR costs. In those cases in which EBR is not suitable, the calculation shall be based on relevant budget bids or suchlike.

The calculation for the actual cost shall also take into account costs for depreciation of remaining book values for facilities demolished and costs for demolishing such facilities and returnable materials in conjunction with the exchange or upgrading of facilities. The value of the returned materials shall be calculated in accordance with the EBR cost catalogue taking into account the age of the facility.

The actual cost shall also cover the calculated and reported shares of any connection and one-time fees to the network or networks reported as overlying networks to Vattenfall's regional network incurred as a consequence of the new or modified connection.

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At the point of connection, Vattenfall shall be responsible for electricity meters and related equipment and the installation thereof. The investment costs for electricity meters shall not be included in the connection fee.

The actual cost shall not cover costs for operation and maintenance and shall not, furthermore, cover normal network tariffs which Vattenfall pays for Vattenfall's overlying network.

3.2 Determination of the actual cost

New customer-specific facilities

100% of the costs for new facilities which will be utilised only by individual customers (e.g. service cables) shall be included in the actual cost.

100% of the costs for facilities which are clearly established for the sole purpose of handling special circumstances in new or modified connections shall be included in the actual cost. Examples of such conditions may be the need to achieve increased short-circuit power at the connection of the electricity production facility.

In the event a line is built in parallel to an existing line, such line shall be regarded as though the existing line had been upgraded/converted when dividing the costs for the line. Please see below. However, the aforementioned shall not apply where the measure is necessary for technical reasons, e.g. in conjunction with the connection of a wind power plant in order to obtain sufficient short-circuit power and in order to reduce disruptions on neighbouring networks. In such cases, 100% of the cost shall be included in the actual cost.

For other new facilities, Vattenfall shall make an assessment of the utilisation based on existing customers and known/planned new connections in upcoming years.

Where the assessment concludes that existing customers and expected new connections will not utilise the new facilities, the entire cost for the facility shall be included in the actual cost.

New facilities with shared utilisation

Where the assessment is that existing customers or anticipated new connections will utilise the new facilities, the division of the cost for the relevant facilities shall be carried out between the affected existing customers and known/planned new connections within the upcoming years. The estimated share of the cost for the facility of the relevant connections shall be included in the actual cost. Calculated share means the proportional share of the total rated power of the new electricity production facilities for the existing and known/planned new connections within the upcoming years which will utilise the new facilities.

Subsequent repayment of paid connection fees divided in this manner will not occur.

Upgraded/converted facilities

Investment costs for upgrading/conversion of facilities shall be considered in the calculation in two respects:

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- The new investment value (*sw: NUAK*) of the increased capacity in the facility shall be taken into account by calculating the difference between the facility value of the converted facility and the existing facility, i.e. the difference between the new investment value (*NUAK*) prior to and after conversion. The conversion of the facility without an increase in capacity shall thereby not result in an increase in the facility value.
- The cost for carrying out the conversion at an earlier time shall be taken into account. Such cost is comprised of the calculated new value difference between performing the conversion now instead of at some point in the future. The determination to carry out the conversion at an earlier time shall be taken on the basis of the planned time for conversion if such time has been determined or on the basis of the normal calculation of the remaining period of usefulness which is used in the calculation of the technical current value.

As regards upgraded/converted facilities, the allocation of the costs for relevant facilities shall be made between known/planned new connections. The calculated share of the cost for the facilities for the relevant connection shall be included in the actual cost.

Connection and one-time fees payable to the overlying network

A share of the connection or one-time fees payable to the overlying network shall be calculated as the share of the electricity production facility's total rated power for the known/planned future connections which together give rise to the connection or one-time fee.

Totalling the actual cost

The actual cost is calculated as the sum of the share of the costs calculated in the various subsections above, i.e. costs for new, customer-specific facilities, new facilities which are utilised jointly, upgraded/converted facilities and any connection or one-time fees payable to overlying networks.

Vattenfall shall be entitled to reduce the calculated connection fee under certain circumstances.

4. Information

In conjunction with connections in which the connection fee is based on the actual cost, Vattenfall shall, upon request by the customer, provide the customer with the relevant calculation and the data and the assessments regarding future connections forming the basis for the calculation.

5. Review of terms and conditions

A request for a review of Vattenfall's Application Provisions, Agreement Terms and Conditions and charges may, pursuant to the Swedish Electricity Act, be made to the Swedish Network Authority. The address is **Energy Markets Inspectorate, Box 155, 631 03 Eskilstuna.**