# VATTENFALL ELDISTRIBUTION AB

## Application Provisions - Regional Network Tariffs

Applicable commencing **1 January 2012**

2012 version

**NOTE**: This translation does not constitute a legally binding document. In the event of any dispute between the provisions of this translation and the original Swedish-language version, the original Swedish-language version shall have precedence.

# Pricing of network services on Vattenfall's regional networks

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## 1. Connection

### 1.1 Definitions

Set forth herein are the Application Provisions applicable commencing 1 January 2012 in respect of pricing network services on regional networks belonging to Vattenfall Eldistribution AB, hereinafter referred to as "Vattenfall". The Application Provisions constitute Vattenfall's rules and regulations for the network service and contain, among other things, terms and conditions and provisions regarding new and modified connections and the transmission of electricity.

Point of connection is defined in these Application Provisions as a collective term for the customer's physical connections to Vattenfall's regional network at the same system voltage and within a limited area. Normally, the limited area consists of a property on which Vattenfall's relevant facility (transformer or distributing station) is located. Examples of a point of connection include seven outgoing lines from a switchyard, several incoming lines to a switchyard, a branching point or a bus-bar. Connections to an A- and B-bar with the same voltage in a switchyard is normally counted as one point of connection, while connections to different voltage levels in the same transformer station are regarded as different points of connection.

Network service is defined in these Application Provisions as the connection of the customer's facilities to Vattenfall's network and Vattenfall's transmission of electricity to or from the customer's point of connection to the extent agreed. Withdrawal in these Application Provisions means transmission of electricity from Vattenfall's network, while input means the transmission of electricity into Vattenfall's network. Scope of connection means the customer's subscription for active and reactive power and any purchase by the customer of additional services at the point of connection.

The regional network tariff includes the costs for the overlying national grid. Customers on the regional network thus need only to have an agreement with Vattenfall regarding network issues and need not execute an agreement for transmission on the national grid level.

### 1.2 Special terms and conditions for connection - compensation of capacitive earth fault currents

Where the customer is a network company (i.e. holder of a network concession) and desires that Vattenfall assume responsibility for central compensation of capacitive earth fault currents, the customer's facilities should meet the following recommendations at points of connection to Vattenfall's network at 10 kV and 20 kV:

- The customer's facilities should be dimensioned such that the need for the central compensation of capacitive earth fault currents at the neutral point of Vattenfall's feeding transformer normally does not exceed 14 A per subscribed MW at 10 kV or 7 A per subscribed MW at 20 kV subject to the maximum levels set forth below.

- The high-voltage line connected to the point of connection should normally not require compensation exceeding 25 A at 10 kV or at 20 kV.

The aforementioned values are conditional upon Vattenfall's feeding transformer being designed in a particular manner. More precise checks must be carried out in the event additional compensation is desired. In the event the aforementioned values stated by Vattenfall are exceeded, the possibility of secure selectivity and detection of high-ohmic faults declines.

Central compensation of capacitive earth fault currents up to the stated levels can normally be effected at Vattenfall's neutral point. If additional compensation of capacitive earth fault currents is necessary in order to comply with these recommendations, compensation should take place at distributed neutral point reactors established at neutral points in network stations in the customer's high-voltage network.

Normally, distribution networks connected to Vattenfall's regional networks should not generate total (gross) capacitive earth fault currents exceeding 200 A at 10 kV or 300 A at 20 kV. Following a more precise analysis, larger currents may be allowed.

The customer shall in due time provide such information as is necessary for ensuring that total compensation of capacitive earth fault currents in the relevant network from time to time can be carried out in an appropriate way and in accordance with generally accepted technical practices.

### 1.3 Connection voltage

Normal voltage at the customer's connection to Vattenfall's network is stated as a nominal voltage in connection and transmission agreements. Frequently, normal operating voltage and, consequently, also construction voltage may deviate from the stated nominal voltage. It is the responsibility of the customer to obtain information regarding construction voltage at the connection point for the proper dimensioning of devices at the customer's site.

## 2. Pricing of network services on Vattenfall's regional networks

### 2.1 Customer

Vattenfall's customer is a legal person who, as licensee, owns or manages the facility which is connected to Vattenfall's regional network. Pricing is applied to circumstances at each individual point of connection and is based on the physical exchange of electricity at the point of connection.

### 2.2 Withdrawal

At a point of connection at which withdrawals of electricity are made from the regional network, the network service shall be priced subject to fees in accordance with tariff for withdrawals, commonly referred to as normal tariffs. Please refer to Section 3.

At a point of connection at which all or part of the withdrawal pertains to a disconnectable electric boiler connected directly to the regional network or connected to a neighbouring network owner's network, such part of the withdrawal may be priced by means of a special tariff for disconnectable electric boilers, commonly referred to as an electric boiler tariff. Please refer to Section 4.

## 2.3 Input

At a point of connection at which electricity is fed into the regional network, the network service shall be priced in accordance with the special rules formulated for costs relating to input. Please refer to Section 5.

## 2.4 Periodic input, periodic withdrawal

At a point of connection with periodic input of electricity and periodic withdrawal of electricity from the regional network, the network service shall be priced at the highest of the regional network-based capacitive fees:

- either the fee for the capacity in the regional network in accordance with the price for the input of electricity
- or the power fee (reduced for power costs for Svenska Kraftnät) and the fixed fee according to the normal tariff for the withdrawal from the regional network

To the aforementioned shall be added a share of the power fees payable to overlying networks with respect to both input and withdrawal, and transmission fees in accordance with normal tariffs in conjunction with the customer's withdrawals from Vattenfall's network, and in accordance with pricing for input in conjunction with the customer's input of electricity into Vattenfall's network.

For connections with periodic input, subscribed power shall be determined for the input.

For connections with periodic withdrawals, subscribed power shall be determined for the withdrawal.

## 2.5 Pricing of modified network services, connection fees

Connection fees are normally not charged since Vattenfall provides a connection for withdrawals which is suitably designed from an overall economic perspective. The aforementioned applies both to new connections and to changes in subscribed power. However, a connection fee is charged, for example, when:

- the customer desires a new or modified connection for input;
- the customer desires a connection which involves costs for Vattenfall which exceeds the costs which may be covered by the tariff-based fees;
- the customer causes Vattenfall to incur expenses which are not capacity related;
- the customer desires temporary network services which entail additional costs for Vattenfall which are not covered by other fees.

For more detailed account of the rules regarding connection fees, please refer to Section 6.

## 2.6 Compensation for outages to electricity users

The Swedish Electricity Act has rules regarding the payment of compensation for outages upon the occurrence of outages during which the outage time exceeds a consecutive period of 12 hours. An outage is deemed to have terminated when the outage ceases, provided that transmission continues thereafter uninterrupted for the immediately following two-hour period. The rules in the Swedish Electricity Act are formulated such that they apply to electricity users, i.e. those persons previously referred to as end electricity users or end customers. The rules in the Swedish Electricity Act regarding compensation for outages thus do not apply from the regional network *vis-à-vis* local

networks or other regional network companies or to the input of electricity into Vattenfall's network.

According to the network agreement, it must be possible to disconnect disconnectable electric boilers connected directly to Vattenfall's network within 2 hours following a request therefor from Vattenfall. This applies, among other things, in the event there is a risk of limitation in Vattenfall's facilities. A disconnectable electric boiler in respect of which notice of disconnection has not been given is covered by compensation for outages.

Input points of connection or power stations are not regarded as electricity users within the context of the Swedish Electricity Act. No compensation for outages is paid for any power the customer could not input into the network during the outage.

However, withdrawals of electricity at the input points of connection in Vattenfall's network may occur during parts of the year, for example, for local power in power stations or for points of connection with periodic input and periodic withdrawal. Compensation for outages to input points of connection is limited only to the customer's withdrawal of electricity.

Vattenfall shall document the date and time of the commencement of the outage and its cessation. In stating this time information, consideration shall be given to the fact that the outage period is deemed to be terminated only when the transmission of electricity has thereafter occurred for a consecutive period of not less than two hours.

The Swedish Electricity Act states that the customer is not entitled to compensation for outages in the event the outage is due to the negligence of the customer, or the outage occurred as a consequence of measures relating to electrical power safety, or to maintain good operational and supply security, or where the outage is outside the network company's control responsibility or where the outage is due to faults in the national grid.

The obligation to pay compensation may be adjusted according to what is reasonable where efforts to reinitiate transmission of electricity have been delayed to avoid exposing workers to substantial risk.

Compensation shall not be paid to customers who, at the time of the outage, were disconnected from the electricity network. In the event Vattenfall has due and payable claims against the customer, such claims shall be set off against the compensation for outages and the compensation paid shall be reduced.

Compensation for outages shall, according to the Swedish Electricity Act, be set off against damages which are paid for the same outage in accordance with other provisions in the Swedish Electricity Act or other act. Accordingly, if the customer has already received damages from Vattenfall for the same outage, the compensation for outages shall be reduced by the amount of the damages received, however not less than SEK 0.

On 28 June 2007 the Swedish Supreme Administrative Court decided that compensation for outages is not subject to value added taxation.

The compensation amount is calculated as a percentage multiplied by the customer's calculated annual network costs including fees imposed by governmental authorities and value added tax, however not less than a minimum amount which is a percentage of the price base amount pursuant to the Swedish National Insurance Act (Swedish Code of Statutes 1962:381) rounded up to the nearest SEK 100. In respect of 2011, the price base amount is SEK 42,800. The maximum amount is 300% of the customer's calculated annual network costs including fees imposed by governmental

authorities and valued added tax. The legal requirements provide for the following compensation for various outage periods:

| Period of outage | | Compensation (% of calculated annual network costs including fees payable to governmental authorities and VAT) | Minimum amount (% of price base amount and SEK) | |
|---|---|---|---|---|
| 12 -24 hours | (> 0.5 24-hour period) | 12.5% | 2% | SEK 900 |
| 24 - 48 hours | (> 1 24-hour period) | 37.5% | 4% | SEK 1,800 |
| 48 - 72 hours | (> 2 24-hour periods) | 62.5% | 6% | SEK 2,700 |
| 72 - 96 hours | (> 3 24-hour periods) | 87.5% | 8% | SEK 3,600 |
| 96 - 120 hours | (> 4 24-hour periods) | 112.5% | 10% | SEK 4,500 |
| 120 -144 hours | (> 5 24-hour periods) | 137.5% | 12% | SEK 5,400 |
| 144 - 168 hours | (> 6 24-hour periods) | 162.5% | 14% | SEK 6,300 |
| 168 - 192 hours | (> 7 24-hour periods) | 187.5% | 16% | SEK 7,200 |
| 192 -216 hours | (> 8 24-hour periods) | 212.5% | 18% | SEK 8,100 |
| 216 -240 hours | (> 9 24-hour periods) | 237.5% | 20% | SEK 9,000 |
| 240 -264 hours | (> 10 24-hour periods) | 262.5% | 22% | SEK 9,900 |
| 264 -288 hours | (> 11 24-hour periods) | 287.5% | 24% | SEK 10,800 |
| More than 288 hours | (> 12 24-hour periods) | 300.0% | 26% | SEK 11,700 |

Compensation for outages shall be paid without unreasonable delay and at no time later than six months following the expiry of the month in which Vattenfall knew or should have known of the outage. In the event Vattenfall does not pay compensation for outages in due time, Vattenfall shall pay penalty interest in accordance with section 6 of the Swedish Interest Act (Swedish Code of Statutes 1975:635). Penalty interest shall be payable at an annual rate equal to the Swedish Central Bank's reference rate plus eight percentage points.

In the event the customer, notwithstanding the aforementioned rules regarding payment, has not received compensation for outages, the customer must make a claim for compensation for outages within a period of two years of the date on which the outage terminated on penalty of forfeiture of the right to compensation.

### 2.7 Right of recourse for customers who are network companies

Local networks or other network companies are not regarded as electricity users within the context of the Swedish Electricity Act and thus are not covered by the Swedish Electricity Act's rules regarding compensation for outages. The Swedish Electricity Act has a rule which provides network owners, local networks or regional networks with a right of recourse (forward by claim) to compensation for outages paid to their electricity users of Vattenfall where the cause for the outage is due to Vattenfall's regional network.

Network companies which have forwarded their costs to Vattenfall shall not be entitled to compensation where the outage is due to the negligence of the customer, where the outage is intentional due to measures relating to electrical power safety or to maintain good operational and supply security, where the outage is due to circumstances outside Vattenfall's control responsibility or where the outage is due to faults in the national grid.

As regards customers in respect of whom Vattenfall has due and payable claims, such claims may be set off against such compensation and the manually paid compensation may be reduced.

Compensation for outages shall, according to the Swedish Electricity Act, be set off against damages which are paid for the same outage in accordance with other provisions in the Swedish Electricity Act or other act. Accordingly, if the customer has already received damages from Vattenfall for the same outage, the compensation for outages shall be reduced by the amount of the damages received, however not less than SEK 0. The aforementioned also applies to claims pursuant to a right of recourse.

### 2.8 Fees payable to governmental authorities

Fees in Vattenfall's regional network tariffs are stated exclusive of value added tax (VAT).

Vattenfall's regional network tariffs do not include the electricity safety fee which electricity users are obligated to pay the Swedish National Electrical Safety Board (preliminarily, SEK 500 per year), which fee Vattenfall must collect and pay. Vattenfall's tariff also does not include the network monitoring fee payable to the Swedish Network Authority (preliminarily, SEK 600 per year) or the electricity preparedness fee payable to the Electricity Preparedness Unit (*sw: elberedskapsenhet*) at Svenska Kraftnät (preliminarily, SEK 2,477 per year), which fee Vattenfall must pay to the respective authority according to law. These fees are reported separately on standard invoices for the network service.

### 2.9 Invoicing and payment

All fees shall be paid in arrears against an invoice issued by Vattenfall. The customer's payment must be received by Vattenfall on the designated bank account or plus giro account not later than the due date set forth on the invoice, which date shall fall not earlier than 30 days after Vattenfall has issued the invoice.

After the end of the year, Vattenfall shall issue a final invoice with respect to fees for the year, whereupon the preliminarily invoiced fees shall be finally settled.

In addition to the applicable tariff-based fees, the customer shall pay any taxes and other government charges which Vattenfall must, by law, charge the customer.

Upon delay in payment, the customer shall be obligated to pay penalty interest commencing on the due date until the day on which Vattenfall has received payment. Penalty interest shall be calculated in accordance with the Swedish Interest Act, i.e., an interest rate equal to the reference rate applied by the Swedish Central Bank plus eight percentage points, during the period of delay. In the event the aforementioned interest is no longer published, Vattenfall shall be entitled to apply an equivalent penalty interest rate.

### 2.10 Extended payment period

As regards customers who wish to extend the payment period, the due date for monthly invoices may be postponed by Y days relative to Vattenfall's normal payment terms and conditions. In conjunction with monthly invoicing, the due date shall then fall not earlier than 30 + Y days after Vattenfall has issued the invoice. The fee for the extended payment period is invoiced on the relevant monthly invoice. The fee is calculated as interest on the invoiced amount per day during Y days. Such interest is established in accordance with the reference interest rate of the Swedish Central Bank plus 3 percentage points during the relevant Y days.

## 2.11 General Agreement Terms and Conditions

The network service shall be subject to the industry General Agreement Terms and Conditions, NÄT2009H, for connection of electrical high-voltage facilities to the electrical network and transmission of electricity to or from such facilities.

Connected customers who are local network owners or other regional network owners are subject to the General Agreement Terms and Conditions, NÄT2009H, with the exception of sections 1.3, 2.10, 2.11, 2.13, 2.14, 2.15, 2.16, 2.17, 2.18, 2.19, 3.14, 4.6 third paragraph, 5.2, 6.1, 6.2, 6.3, 6.4, 6.5, 8.1, 8.2, 8.3, 8.4 and the text of section 4.8, first paragraph, first sentence should be concluded as follows, "…the amount of electricity transmitted will be estimated by the electricity network company in consultation with the relevant parties".

## 2.12 Term of agreement

The agreement governing network services, connection and transmission of electricity shall be executed with a term of agreement subject to further notice. Special cause must exist in order for Vattenfall to terminate the network service agreement.

Any change to the customer's company registration number shall be notified to Vattenfall not later than one month prior to such change.

## 2.13 Amendments of terms and conditions

In the event the General Agreement Terms and Conditions are amended by industry agreement, Vattenfall shall effect a comparable amendment *vis-à-vis* the customer. The amendment shall apply to the customer three months after the customer has been notified by Vattenfall of such amendment.

On or about the end of calendar year, Vattenfall shall be entitled to amend relevant application provisions and fees and terms and conditions and shall, in such context, be obliged to notify the customer regarding such amendments not later than six weeks prior to the entry into force thereof.

In the event Svenska Kraftnät amends its tariff *vis-à-vis* Vattenfall during a current calendar year, Vattenfall shall be entitled, with immediate effect, to effect a comparable change in fees *vis-à-vis* the customer. In this context, Vattenfall shall immediately notify the customer regarding the change.

## 2.14 Review of terms and conditions

According to the Swedish Electricity Act, the Network Authority exercises supervisory powers over Vattenfall's application provisions, terms and conditions and fees. The address of the Swedish Energy Markets Inspectorate is Box 155, 631 03 Eskilstuna.

## 3. Normal tariff for withdrawals of electricity from the regional network

Pricing of withdrawals from the regional network takes place in accordance with the normal tariff. The tariff is based on the point tariff principle and covers fixed fees, annual power fees and transmission fees.

Each point of connection is priced in accordance with the tariff alternative which corresponds to the structural connection of the respective point of connection to the regional network. The structure of Vattenfall's normal tariff is set forth schematically in appendix 1.

Vattenfall's regional network is divided into three tariff areas with separate, normal tariffs applicable in each area. Vattenfall's regional network in Norrbotten constitutes one tariff area, Vattenfall's regional network in middle Norrland constitutes one tariff area and Vattenfall's regional network in South and Middle Sweden constitutes one tariff area. Differences in fees amongst the three different tariff areas are due only to Svenska Kraftnät's north-south differentiated fees throughout Sweden for network services on the grid. These fees for Vattenfall's regional network are included in Vattenfall's normal tariff. Vattenfall's normal tariffs are set forth in their entirety in appendix 2.

### 3.1 Determination of tariff

"Regional transmission network" refers to lines with a voltage interval of 130-70 kV.
"Regional distribution network" refers to lines with a voltage interval of 50-20 kV.

Tariff level L1 refers to points of connection connected directly to the regional transmission network.

Tariff level T1 refers to points of connection at 50-30 kV in stations with step-down transformation from regional transmission networks. In the 220-70-20 kV voltage chain, tariff T1 also refers to points of connection at 20 kV.

Tariff level L2 refers to other points of connection connected directly to the regional distribution network.

Tariff level T2 refers to points of connection at 20-6 kV in stations with step-down transformation from the regional distribution network.

Tariff level T12 refers to points of connection at 20-6 kV in stations with step-down transformation from the regional transmission network in which the connection does not utilise the regional distribution network. In the 220-70-20 kV voltage chain, tariff T12 refers only to 10-6 kV connections.

Tariff level T13 refers to points of connection at 50-30 kV in stations with step-down transformation from the grid. In the 220-70-20 kV voltage chain, tariff T13 refers also to points of connection at 20 kV.

Tariff level X is a tariff formulated especially to constitute high-cost protection, i.e. in order to limit network costs for smaller customers.

Vattenfall establishes a tariff per point of connection. The tariff level is determined on the basis of the primary feeding rout to the point of connection and the customer's use of the network service.

However, the following rules apply to smaller customers:

- Customers at tariff level L1 may choose tariff L2 or X without paying a separate fee.
- Customers at tariff level T1 may choose tariff L2 or X without paying a separate fee.
- Customers at tariff level L2 may choose tariff X without paying a separate fee.
- Customers at tariff level T2 may choose tariff X without paying a separate fee.
- Customers at tariff level T12 may choose tariff T2 or X without paying a separate fee.
- Customers at tariff level T13 may choose tariff T1, L2 or X without paying a separate fee.

And the following rules apply to larger customers with lower voltage:

- Customers at tariff level L2 may choose tariff T1 against payment of a fixed annual supplement in the amount of **SEK 1,000,000 plus SEK 25/kW** annual power fee.
- Customers at tariff level T2 may choose tariff T12 against payment of a fixed annual supplement in the amount of **SEK 1,400,000 plus SEK 34/kW** annual power fee.

### 3.2 Fixed fee

A fixed fee shall be paid in the amount of one-twelfth per month. The fixed fee includes costs for metering, reporting and invoicing in the amount of SEK 25,000 in tariffs L2, T2 and X and in the amount of SEK 35,000 in tariffs L1, T1, T12 and T13.

### 3.3 Switchgear bay fee

The switchgear bay fee shall be paid per utilised switchgear bay for outgoing lines in the amount of one-twelfth per month.

### 3.4 Annual power fee

Subscribed annual power is normally purchased on a calendar-year basis and must be notified in writing in advance per point of connection not later than 1 December prior to the new calendar year.

Used annual power is defined as the average of the two highest values, taken from different months, of the average power withdrawn per hour during the year (i.e. 2 of 12). However, in the event the subscribed power applied for a period of less than 6 months, the used annual active power during the period shall be deemed to be the highest value of the mean power withdrawn per hour during the period.

The annual power fee for subscribed annual power shall be paid in the amount of one-twelfth per month.

### 3.5 Jointly subscribed annual power

Jointly subscribed annual power may be offered to customers with several points of connection, commonly referred to as a multiple point of connection. The possibilities for simultaneity are

conditional on the customer having a contiguous underlying high-voltage network which can transmit a significant portion of the withdrawn power between the relevant points of connection.

For the relevant points of connection, the customer shall subscribe for annual power linked to the respective points of connection and joint annual power for the relevant points of connection. Each relevant point of connection shall be priced in the normal manner subject to tariff-based fees with the exception of the annual power fee. SEK 30/kW of the annual power fee per point of connection shall be applied to subscribed annual power for the relevant connection and the remaining part of the annual power fee shall be integrated into one annual power fee for jointly subscribed annual power for the points of connection.

Jointly subscribed annual power is normally subscribed on a calendar-year basis and shall be notified in writing in advance per multiple point of connection not later than 1 December of the year prior to the new calendar year.

Used joint annual power is defined as the average value of the two highest values, taken from different months, of withdrawn average power per hour during the year (i.e. 2 of 12) of the simultaneously summed withdrawal in relevant points of connection. However, where jointly subscribed annual power has applied for a period of less than 6 months, used joint annual power during the period shall be deemed to be the highest value of the all of simultaneously summed withdrawals of average power per hour during the period for the relevant points of connection.

The power fee for jointly subscribed annual power shall be determined as the power-weighted average value of the annual power fee per relevant point of connection (reduced by SEK 30/kW) where the normal annual power fee shall be applied per point of connection. The subscribed annual power in the respective point of connection shall be used in determining this average.

Vattenfall shall be entitled to change the power fee for jointly subscribed annual power in accordance with the method in the preceding paragraph:

- in conjunction with a change to subscribed annual power in individual point of connection;
- when exceeding subscribed annual power in an individual point of connection, whereupon the new subscribed annual power in individual connection points shall be deemed to include the excess power.

The power fee for jointly subscribed annual power shall, in conjunction with final invoicing per calendar year, be corrected in accordance with the previous paragraph by the relevant subscribed annual power at the end of the year.

The power fee for jointly subscribed annual power shall be paid in an amount of one-twelfth per month.

As regards points of connection covered by jointly subscribed annual power, the right to withdraw reactive power is primarily determined as the right of withdraw which the respective point of connection would have had upon pricing in accordance with the ordinary tariff. The withdrawal right may be integrated into one summed withdrawal right following Vattenfall's consent.

### 3.6 Changes of subscribed power

Changes of subscribed power are conditional on a written agreement regarding the change and the terms and conditions being agreed upon in advance. Any such change shall normally take place on or about the end of the calendar year and a written request therefor shall be submitted not less than one month in advance.

Changes of subscribed powers - increases or reductions - may take place during a current calendar year provided that, in the opinion of Vattenfall, sufficient capacity is available on the network and where the change is required due to permanent changes in the customer's use of the network service. Examples of such changes may include new investments, test runs of new facilities or winding-up of a facility, in whole or in part, which affects the use of the network service. These changes must normally be notified in writing with subject to not less than two-months' notice.

### 3.7 Temporary power subscriptions

In the event Vattenfall is of the opinion that sufficient power is available on the regional network, a temporary subscription for withdrawals over and above the subscribed annual power may be subscribed for April, May, June, July, August, September and October subject to the following conditions:

* for individual weeks commencing at 00:00
* for whole, four-week periods commencing at 00:00

The application applies both to subscribed annual power per point of connection and/or for jointly subscribed annual power independently.

The fee for temporary subscriptions during individual weeks is **1/50** of the ordinary annual power fee, and the fee for whole, four-week periods is **1/15** of the ordinary annual power fee. The fees shall be rounded upwards to the nearest whole Swedish krona per kW.

The fees in accordance with the above shall be calculated on the power quantity at which the temporary subscription is executed. The fee shall be paid monthly with the first invoice after the temporary subscription. All tariff-based fees and other terms and conditions shall otherwise apply to the network service.

In addition to the obligation of Vattenfall to terminate or restrict transmission according to law, Vattenfall shall be entitled, subject to a period of notice of 8 hours, to terminate the temporary subscription in the event Vattenfall is of the opinion that there is a risk that the transmission capacity will be limited. After Vattenfall has notified the customer that it can resume the temporary subscription, the customer shall be entitled to choose whether to reinstate the temporary subscription. In the event the temporary subscription is terminated by Vattenfall, the fee for the temporary subscription shall be reduced to correspond to the actual time during which the temporary subscription was used.

Requests for temporary subscriptions shall be submitted to Vattenfall in writing not later than 9:00 on the last work day (normally a Friday) prior to the commencement of the subscription.

### 3.8 Exceeding subscribed power

Vattenfall shall be entitled to charge a separate fee when subscribed annual power or joint subscribed annual power is exceeded, meaning that the used active power exceeds the subscribed annual power. The fee is one and a half times the annual power fee for the quantity of power by which the subscribed annual power is exceeded.

The subscription exceeding fee can be invoiced monthly after the excess withdrawal is detected, but is normally invoiced in the final invoice per calendar year.

In the event Vattenfall is of the opinion that the technical conditions so allow, the customer shall be entitled, during the remaining portion of the calendar year, to make withdrawals in excess of the subscribed power up to the level for which the fee was paid in accordance with the preceding paragraph without incurring an additional subscription exceeding fee.

Withdrawals in excess of subscribed power due to or related to faults or auxiliary operation status in Vattenfall's regional network shall not be regarded as excess of the subscription.

### 3.9 Customer with own production

A customer (local network or end customer) with production connected to their facilities receives compensation provided that the production facility or facilities are capable of maintaining production which reduces the withdrawal during weekdays from 06:00-22:00 during the periods January-March and November-December, referred to as guaranteed minimum production.

Weekdays are normally Monday-Friday. The following days, which may fall on any day Monday to Friday, are not considered weekdays: New Year's Day, Epiphany, Maundy Thursday, Good Friday, Easter Monday, Christmas Eve, Christmas Day, the day after Christmas, and New Year's Eve. The stated times pertain to Sweden national time according to which Vattenfall follows the official times in Sweden when transitioning from normal time to summer time and *vice versa*.

For the guaranteed minimum production, the compensation is comprised of the public utility's, Svenska Kraftnät, power fee for withdrawals from the national grid in a national grid node situated in proximity to the relevant customer.

For 80 hours per calendar year during weekdays, 06:00-22:00, during the periods, January-March and November-December, the customer's withdrawals may exceed a power quantity defined as the subscribed annual power (or jointly subscribed annual power) less the guaranteed minimum production. When withdrawals exceed such limit for more than 80 hours per calendar year during the aforementioned period of time, the guaranteed minimum production during the current calendar year shall be reduced by a comparable amount. Changes in guaranteed minimum production shall, in such cases, apply to the entire calendar year, i.e. retroactively.

In conjunction with such reduction of the guaranteed minimum production, the compensation paid to the Customer for guaranteed minimum production during the current calendar year shall be reduced. The amount of the reduction is 150% of the compensation in SEK/kW for the quantity of power by which the aforementioned power quantity has been exceeded. This means that the new compensation (SEK/kW) is calculated in accordance with the following formula in which $GM_1$ is the previously guaranteed minimum production (kW) and $GM_2$ is the new guaranteed minimum production (kW).

New compensation (SEK/kW) = Compensation (SEK/kW) x $(3 \times GM_2 - GM_1) / (2 \times GM_2)$.

However, compensation for guaranteed minimum production shall not be less than zero.

### 3.10 Temporary reduction of guaranteed minimum production

In the event Vattenfall is of the opinion that there is sufficient capacity in the regional network, the customer (local network customer or end customer) with production connected to its facilities may subscribe for a temporary reduction of the guaranteed minimum production subject to the following conditions:

Norrbotten
* for individual weeks commencing Mondays, 00:00 hours, for a fee of **SEK 8/kW**.
* for whole, four-week periods commencing Mondays, 00:00 hours, for a fee of **SEK 21/kW**.

Middle Norrland
* for individual weeks commencing Mondays, 00:00 hours, for a fee of **SEK 8/kW**.
* for whole, four-week periods commencing Mondays, 00:00 hours, for a fee of **SEK 23/kW**.

Southern tariff area
* for individual weeks commencing Mondays, 00:00 hours, for a fee of **SEK 10/kW**.
* for whole, four-week periods commencing Mondays, 00:00 hours, for a fee of **SEK 28/kW**.

Fees in accordance with the above shall be calculated on the power quantity by which the guaranteed minimum production is temporarily reduced. The fees shall be paid with the first invoice after the temporary reduction. All tariff-based fees and terms and conditions shall otherwise apply to the network service.

In addition to the obligation of Vattenfall to terminate or limit transmission according to law, Vattenfall shall be entitled, subject to a period of notice of 8 hours, to terminate the temporary reduction in the event Vattenfall is of the opinion that there is a risk that the transmission capacity will be limited. After Vattenfall has notified the customer that it can resume the temporary reduction, the customer shall be entitled to choose whether to reinstate the temporary reduction. In the event the temporary reduction is terminated by Vattenfall, the fee for the temporary reduction shall be reduced to correspond to the actual time during which the temporary reduction was used.

A request for a temporary reduction of the guaranteed minimum production must be requested in writing to Vattenfall not later than 09:00 on the last work day (normally a Friday) prior to the commencement of the temporary reduction.

### 3.11 Transmission fees

Transmitted energy is measured and transmission fees shall be paid monthly for transmitted energy.

### 3.12 Free annual reactive power

The free annual reactive power is expressed as a percentage of subscribed annual power for withdrawals and is linked to the respective tariff level in the normal tariff.

- Customers with tariff L1 and T13 are entitled to 15% free reactive power
- Customers with tariff T1 or T12 are entitled to 25% free reactive power
- Customers with tariff L2, T2 or X are entitled to 50% free reactive power
- Customers with tariff T1 with a special supplement are entitled to 25% free reactive power
- Customers with tariff T12 with special supplement are entitled to 25% free reactive power

For points of connection with periodic input of electricity into Vattenfall's network during parts of the year, the right to make withdrawals of reactive power in conjunction with feeding of active power is the same (calculated in kVA) as in conjunction with the withdrawal of active power.

Used annual reactive power is defined as the average value of the two highest values, taken from different months, of withdrawn reactive average power per hour during the year (i.e. 2 of 12). However, where subscribed annual power has applied for a period of less than 6 months, used

annual reactive power during the period shall be deemed to be the highest value of the withdrawn reactive average power per hour during the period.

### 3.13 Input of reactive power

Input of reactive power into Vattenfall's network at points of connection is normally not permitted unless otherwise agreed with Vattenfall.

In respect of future years, Vattenfall may implement a separate fee to be applied to the customer's input of reactive power.

### 3.14 The customer's purchase of reactive power

To the extent that Vattenfall, taking into account access to reactive power and transmission possibilities, deems it possible to provide reactive power in addition to the normal undertaking in accordance with the above, Vattenfall may grant increased withdrawals of reactive power for an annual fee for the power quantity by which the provision of power increases. The fee is determined on the basis of the following table.

| | |
|---|---|
| Tariff L1 and T13 | SEK 20/kVAr |
| Tariff T1, L2 and T12 | SEK 30/kVAr |
| Tariff T2 and X | SEK 35/kVAr |

The fee for increased withdrawals (purchases) of reactive power over and above the free reactive power shall be paid in an amount of one-twelfth per month.

### 3.15 Excess withdrawal of reactive power

In conjunction with exceeding the agreed reactive power at the connection, meaning that the used reactive power exceeds the total free annual reactive power and any agreed purchase of reactive power, Vattenfall shall be entitled to charge a separate fee. The fee is determined on the basis of the following table.

| | |
|---|---|
| Tariff L1 and T13 | SEK 40/kVAr |
| Tariff T1, L2 and T12 | SEK 60/kVAr |
| Tariff T2 and X | SEK 70/kVAr |

The subscription exceeding fee can be invoiced in the month after the excess withdrawal is detected, but is normally invoiced upon final invoicing per calendar year. Vattenfall may reduce or waive the fee in the event the excess withdrawal occurred outside the period of time during which the reactive power balance was strained.

In the event Vattenfall is of the opinion that the technical conditions so allow, the customer shall be entitled, during the remaining portion of the calendar year, to withdraw reactive power in excess of the scope of the connection up to the level for which the fee was paid in accordance with the preceding paragraph without incurring an additional subscription exceeding fee.

Withdrawals in excess of subscribed power due to or related to faults or auxiliary operation status in Vattenfall's regional network shall not be regarded as excess withdraw. Furthermore, a subscription exceeding fee shall not be charged for excess withdrawals as a consequence of the customer's participation, at Vattenfall's request, in voltage regulation on Vattenfall's network.

# 4. Electric boiler tariff

## 4.1 Conditions

The electric boiler tariff is granted for withdrawals from the regional network to disconnectable electric boilers. The electric boiler tariff is conditional upon being able to provide for heating requirements during the period of time in which the electric boiler is not in use. The customer, or local network owner where the electric boiler is connected to a local network, shall, upon request from Vattenfall, be able to terminate the transmission to the electric boiler. Normally, such disconnection shall be able to be carried out within two hours after a request from Vattenfall, including outside normal office hours. In conjunction with operational interruptions on the network, electric boilers must be able to be disconnected without unnecessary delay.

Commencing 1 January 2013, the electric boiler tariff shall apply only in respect of electric boilers connected directly to Vattenfall's regional network. It will longer be possible for a customer to be able to utilize the electric boiler tariff for electric boilers connected to the customer's electrical network. No renewal of such agreements will be granted in 2012.

## 4.2 Determination of tariff

As with the normal tariff, the electric boiler tariff is subject to the following principles:

- The tariff is formulated in accordance with the point tariff principle.
- The tariff covers metering fees and transmission fees.
- Vattenfall's regional network is divided into three tariff areas, with separate electric boiler tariffs applicable in each area.

The structure of Vattenfall's electric boiler tariff is presented schematically in appendix 1 and in the tariff schedule in appendix 3.

As regards electric boilers which are connected directly to regional networks, the tariff level shall be determined based on the structural tariff level of the corresponding point of connection.

Customers who desire to have part of an electric boiler be treated as a normal connection and not as a disconnectable electrical boiler can, under certain circumstances, execute an agreement for network services with terms and conditions in accordance with the normal tariff for withdrawals for such part. The terms and conditions with respect to disconnection which apply to disconnectable electric boilers do not apply, in such case, to that part which is regarded as a normal connection. The terms and conditions described herein with respect to disconnectable electric boilers apply, in such case, only to that part of the respective electric boiler which is not regarded as a normal connection.

The remaining paragraphs in this section will cease to apply 1 January 2013.

As regards electric boilers which are connected to another network owner's connected network (local network or industrial network), such network owner has the possibility to execute an agreement with Vattenfall for the disconnectable electric boilers which are connected to such owner's network. In such cases, the tariff level shall be set so as to be equal to the tariff level which the network owner (i.e. the customer) has for its normal agreement regarding network services with Vattenfall.

Customers who desire to have part of an electric boiler treated as a normal connection and not as a disconnectable electric boiler can, under certain circumstances, execute an agreement for network services with terms and conditions in accordance with the normal tariff for withdrawals for such

part. The terms and conditions with respect to disconnection which apply to disconnectable electric boilers do not apply, in such case, to that part which is regarded as a normal connection. The terms and conditions described herein with respect to disconnectable electric boilers apply, in such case, only to that part of the respective electric boiler which is not regarded as a normal connection.

The metering fees in the tariff relate to situations in which Vattenfall is responsible for all metering of the electric boilers, i.e. when Vattenfall owns the meters, metering terminals and any other communications equipment and collects the meter values for each individual electric boiler. In the event the local network owner owns and is responsible for metering of the electric boilers within the owner's network area, a lower metering fee is imposed. In such cases, the local network owner shall, each day, provide Vattenfall with meter value series via data media for the preceding 24-hour period. The meter results shall be arranged such that there is a meter value series per point of connection to Vattenfall's network and per tariff alternative. In each meter value series, all electric boilers with transmissions from the points of connection in question and which have the same tariff alternative *vis-à-vis* Vattenfall shall be totalled. The fee for each such meter value series shall be **SEK 2,400** per year.

At the end of the month, the meter values necessary for invoicing the network service shall be provided to Vattenfall via EDIEL, or any system which replaces such system, not later than two work days following the end of the month.

### 4.3 Fees for failure to disconnect electric boilers

In the event the customer fails to disconnect electric boilers following a request from Vattenfall therefor or where the customer connects the electric boiler prior to obtaining Vattenfall's consent for such connection, Vattenfall shall be entitled to invoice a separate fee which Vattenfall shall determine for the electricity transmitted during such period of time.

The separate fee shall be determined, equal to one year's annual power fee in accordance with the regional network tariff for normal transmission applied by Vattenfall from time to time, for the tariff level corresponding to the customer's agreed tariff level for the electric boiler.

Repeated failures to disconnect or violations relating to connection of the electric boiler shall constitute special grounds for termination of the agreement by Vattenfall.

### 4.4 Other provisions regarding the electric boiler tariff

In addition to the aforementioned provisions regarding the electric boiler tariff, the conditions previously described in sections 3.2, 3.3, 3.4, 3.6, 3.8, 3.11 regarding the normal tariff shall apply to the appropriate extent. As regards electric boilers connected directly to Vattenfall's network, sections 3.7 and 3.12-3.15 shall also apply to the appropriate extent.

## 5. Tariffs for input of electricity into the regional network

Input or production transmission entails the transmission of power-station production to a point in the network at which the power is balanced with transmission to consuming customers. Pricing takes place based on the principle that the customer shall pay the customer's share of the network costs for the facilities which are used and necessary for the connection (averaged into one tariff), individually calculated fees for transmission, and the costs paid by the regional network to Svenska Kraftnät for such connections.

### 5.1 Small power stations

Pursuant to the Swedish Energy Act, power stations connected directly to the regional network with a production capacity of less than 1,500 kW shall only pay a metering fee and receive compensation for energy and compensation for power.

A point of connection with input requirements of less than 1,500 kW at which the input does not take place from a power station which is directly connected is not covered by this exemption.

Exceeding the power allowance of 1,500 kW on repeated occasions shall entitle Vattenfall to charge fees for the network service as apply to input points of connection with subscribed annual power exceeding 1,500 kW.

### 5.2 Metering fee

A metering fee is determined in accordance with the metering fee applicable to a comparable network level in the normal tariff for withdrawals (see section 3.2). A metering fee shall be paid in the amount of one-twelfth per month.

### 5.3 Annual power

Subscribed annual power is normally purchased on a calendar-year basis and notified in writing in advance per point of connection not later than 1 December prior to the new calendar year.

Subscribed power should be active maximum power, Pmax, measured in MW, which is not to be confused with the total apparent power, Sn, measured in MVA. Pmax is often lower than the apparent power in a power station since the active power capacity of the station may be limited by waterways, turbines or generators.

Input into the regional network may also occur at connections with other network owners at which a power station connected to another network owner causes input into Vattenfall's regional network.

Used annual power is defined as the average of the two highest values, taken from different months, of the average power input per hour during the year (i.e. 2 of 12). However, in the event the subscribed power has applied for a period of less than 6 months, the used annual active power during the period shall be deemed to be the highest value of the average power input per hour during the period.

### 5.4 Capacity fees

Vattenfall shall apply an averaged tariff for capacity-related costs on the regional network The tariff may be described as standard channel pricing in which the fees are comprised of a fixed fee and a distance-dependent power fee.

In addition to the tariff, which pertains only to capacity fees relating to the regional network, individually calculated fees for other components are applied in the pricing.

Tariff level PL1 pertains to connections to transmission lines within a voltage interval of 130-70 kV.

Connections with voltage intervals of 40-10 kV immediately after transformation from 130-70 kV are subject to tariff PT1 which is comprised of tariff PL1 with a supplement for step-down transformation.

Tariff level PL2 pertains to connections to transmission lines within a voltage interval of 50-20 kV.

Tariff level PT2 pertains to points of connection for 20-6 kV in stations after stepdown transformation from 50-20 kV.

Tariff level PT12 pertains to points of connection for 20-10 kV in stations after stepdown transformation from 130-700 kV.

Vattenfall establishes a tariff per point of connection. The tariff level is determined on the basis of the primary feeding route to the point of connection. As regards connections made directly to national grid stations, Vattenfall formulates prices depending on the circumstances relating to the connection.

| | **PL1** | **PT1** | **PL2** | **PT2** | **PT12** | |
|---|---|---|---|---|---|---|
| Metering fee | 35 | 35 | 25 | 25 | 35 | SEK '000/year |
| Fixed fee | 350 | 1050 | 50 | 235 | 1080 | SEK '000/year |
| Power fee | | 15 | | 5 | 15 | SEK /kW |
| Distance-dependent fee | 0.98 | 0.98 | 1.77 | 1.77 | 0.98 | SEK/kW, km, year |

The metering fee, fixed fee and annual power fee shall be paid in the amount of one-twelfth per month.

The annual power fee is determined on the basis of the distance-dependent fee component in the established tariff by multiplying it by a distance. "Distance" means the straight-line distance from the point of connection to the closest national grid node connected to Vattenfall's regional network. Any power fee shall be added in the established tariff.

### 5.5 Fee for a power collection network for wind power

Where Vattenfall's regional network owns the power collection network (cable network) for wind power or other small-scale production, the tariff for the capacity fees on the regional network shall apply in the central point of the power collection network. As regards the power collection network, Vattenfall establishes a supplementary fee in SEK/kW based on the investment value and the connected power in the power collection network.

The annual power fee for the power collection network shall be paid in the amount of one-twelfth per month for subscribed annual power.

### 5.6 Switchgear bay fee

The switchgear bay fee shall be paid per utilised switchgear bay for outgoing lines in the amount of one-twelfth per month.

### 5.7 Reduction of the fee for previously paid connection fees

As regards customers with subscribed power exceeding 1,500 kW who have paid connection fees in conjunction with a new connection or an increase in the scope of a connection, the following rules shall apply.

Over a period of 30 years, the customer shall be subject to a reduction of fees relating to annual capital costs for part of paid connection fees which are repayable in accordance with section 6.6.

A reduction of a fee shall not be applied to any other costs.

In the event the customer's connection is terminated, connection fees paid shall no longer continue to be repaid.

### 5.8 Change in subscribed power

Changes in subscribed power may be effected in accordance with the provisions of section 3.6.

### 5.9 Exceeding subscribed power

The provisions of section 3.8 shall apply when the subscribed annual power is exceeded, i.e. the used active power exceeds the subscribed annual power.

### 5.10 Transmission fee for increased losses in the regional network

The effect of the production on energy losses on Vattenfall's regional network are calculated by means of computer programs. Normally, the calculation is carried out individually per input point of connection. In certain cases in which there are two or more input points of connection within a defined network area in which the individual effect cannot be determined, the calculation is carried out with respect to several input points of connection simultaneously. The calculated effect on the energy losses on Vattenfall's regional network is valued at the current value. The cost is divided by a normal annual production at the respective input points of connection, which results in a transmission fee in öre/kWh.

Transmitted energy is measured and transmission fees are to be paid monthly for transmitted energy.

### 5.11 Compensation for reduced losses in the regional network

In the event the calculation of the effect of the input point of connection on the energy losses on Vattenfall's regional network in accordance with the above results in a negative value (the input reduces the losses on the regional network) the customer shall, in accordance with the Swedish Electricity Act, receive compensation equal to the value of the reduction in energy losses. The calculated effect on the energy losses in Vattenfall's regional network is valued at the current value. The cost reduction is divided by normal annual production at the respective input points of connection, which generates a negative transmission fee in öre/kwH.

Transmitted energy is measured and transmission fees are paid monthly for the transmitted energy.

### 5.12 Power fees paid to Svenska Kraftnät

Capacity fees for the input of power into Vattenfall's overlying network shall be divided in accordance with the netting principle between parties who caused the input of power. This means that the cost for input of power into the overlying network shall be divided proportionately between the participants on the regional network who input electricity into the regional network. For each input point of connection on the regional network, a percentage share of the regional network's capacity costs for the overlying network at one or more national grid node connected to Vattenfall's electricity network is calculated. The input points of connection shall bear a share of Vattenfall's fees paid to Svenska Kraftnät or other overlying network at the relevant national grid node or nodes.

The customer's annual power fee for the national grid corresponds to a given percentage of Vattenfall's provisional power fees paid to Svenska Kraftnät for input into the relevant national grid node or nodes. In conjunction with final invoicing, the annual power fee for the national grid shall be adjusted such that the customer's share of Vattenfall's costs known at that time for power fees for the input of power into the respective national grid nodes during a calendar year rise to the level of the given percentage for each national grid node.

The calculation of Vattenfall's costs for power fees paid to Svenska Kraftnät for the input of power shall thereupon cover costs incurred for power fees for the input of power in accordance with regular subscriptions and the costs of any increase in subscriptions, temporary subscriptions and exceeding subscriptions which are not related to individual customers.

The annual power fee for the national grid shall be paid in an amount of one-twelfth per month for subscribed annual power.

### 5.13 Transmission fees paid to Svenska Kraftnät

Vattenfall's transmission fees paid to the overlying network shall be divided between the parties in accordance with the gross principle. This applies both to consuming and input customers. This means that each kWh input into, or kWh withdrawn from, the regional network shall be subject to a transmission fee in accordance with Svenska Kraftnät's current fees for the input of power into, or the withdrawal of power from, the overlying national grid in accordance with previously established national grid node or nodes.

Transmitted energy is measured and transmission fees are paid monthly for the transmitted energy.

### 5.14 Compensation for power

Compensation is paid for the input point of connection provided that the production facility can maintain a minimum production during weekdays, 06:00-22:00, during the periods, January-March and November-December, generally referred to as guaranteed minimum production.

Weekdays are normally Monday-Friday. The following days, which may fall on any day Monday to Friday, are not considered weekdays: New Year's Day, Epiphany, Maundy Thursday, Good Friday, Easter Monday, Christmas Eve, Christmas Day, the day after Christmas, and New Year's Eve. The stated times pertain to Sweden national time according to which Vattenfall follows the official times in Sweden when transitioning from normal time to summer time and *vice versa*.

For the guaranteed minimum production, the compensation is comprised of the public utility, Svenska Kraftnät's, power fee for withdrawals from the national grid in a national grid node situated in proximity to the relevant customer.

The customer is allowed to fall below the guaranteed minimum production level during a period of 80 hours per year during weekdays, 06:00-22:00, during the periods, January-March and November-December. When production falls below the guaranteed minimum production by more than 80 hours per calendar year during the aforementioned period, the guaranteed minimum production during the current calendar year shall be reduced by a comparable amount. Changes in guaranteed minimum production shall, in such cases, apply to the entire calendar year.

In conjunction with such reduction of the guaranteed minimum production, the compensation paid to the Customer for guaranteed minimum production during the current calendar year shall be reduced. The amount of the reduction is 150% of the compensation for the amount of power by which the production falls below the minimum guaranteed production. This means that the new compensation (SEK/kW) is calculated in accordance with the following formula in which $GM_1$ is the previously guaranteed minimum production (kW) and $GM_2$ is the new guaranteed minimum production (kW).

New compensation (SEK/kW) = Compensation (SEK/kW) x $(3 \times GM_2 - GM_1) / (2 \times GM_2)$.

However, compensation for guaranteed minimum production shall not be less than zero.

### 5.15 Rules regarding input/withdrawals of reactive power at input points of connection

The following rules apply to the input/withdrawal of reactive power into/from the regional network at points of connection which are priced in accordance with the Application Provisions for Input. The rules are linked to comparable rules for power stations connected to the national grid.

* The connected power station shall, when necessary, be able to produce reactive power equal to 1/3 of the synchronised maximum power in MW. ($Q<1/3P$)
* A connected water power station shall, when necessary, be able to consume reactive power equal to 1/6 of the synchronised maximum power in MW. ($Q>-1/6P$)
* A connected thermal power station shall, when necessary, be able to achieve zero reactive input. ($Q>0$)
* Wind power plants shall be designed such that the reactive exchange can be adjusted to zero.

In addition, connected power stations shall cooperate in maintaining the voltage within reasonable limits. This means that the station may produce more reactive power than the above-stated quantity provided that it does not disrupt the network. The aforementioned rules are to be regarded as minimum requirements in conjunction with interrupted conditions.

Vattenfall shall be entitled to request a voltage setpoint for the station's magnetising equipment such that Vattenfall may utilise, to a certain extent, the station's reactive capacity in order to maintain a voltage profile on the network and thereby reduce the active energy losses on the network. Considerable regard shall be given to the time aspect and the customer's possibility to comply with these requirements.

Vattenfall shall be afforded the opportunity to influence mechanical performance in conjunction with new construction and conversions of power stations. Vattenfall can thereby obtain additional economic "regulatory strength" within certain limits for the purpose of minimising the network's total costs.

## 6. Connection fees

### 6.1 Normal quality

Vattenfall provides connection and transmission to each point of connection in Vattenfall's network. Vattenfall's costs normally fall within the framework of the tariff-based fees. In the event the delivery quality is deemed insufficient, negotiations shall be commenced for the purpose of achieving the contemplated quality.

### 6.2 New connection

In conjunction with new connections to Vattenfall's network, Vattenfall shall offer and, within a reasonable period of time, implement a technically adequate and economically justified connection alternative, whereupon Vattenfall shall determine the voltage at the point of connection.

At the new point of connection, which will be priced according to Vattenfall's normal tariff or electric boiler tariff, the customer shall pay a connection fee in the event Vattenfall's costs for the connection exceed future tariff-based revenues.

At new points of connection for input, Vattenfall shall impose a connection fee in accordance with section 6.6 below.

In the event a connection other than that offered by Vattenfall is desired, please refer to section 6.5 below.

### 6.3 Increase in the scope of the connection

In conjunction with an increase in the scope of the connection, Vattenfall shall, within a reasonable time, provide for the increased capacity need with a technically adequate and economically justified connection alternative.

As regards points of connection priced in accordance with Vattenfall's normal tariff or electric boiler tariff, the customer shall pay a connection fee in the event Vattenfall's costs for the modification exceed future tariff-based revenues.

As regards points of connection for input, Vattenfall imposes a connection fee in accordance with section 6.6 below.

### 6.4 Reduced scope or termination of the connection

In conjunction with a reduction of the scope or termination of the connection which is due only to the customer's reallocation of the use of the network service between different points of connection, a connection fee shall be paid by the customer. The connection fee shall equal the estimated residual value of the facilities which become redundant following the reduction of the scope or termination of the connection and other direct costs entailed by the modification.

### 6.5 Connection other than the alternative offered

Where a connection alternative other than that offered by Vattenfall is desired, an connection fee shall be paid by the customer equal to the current value of the difference between Vattenfall's future costs and revenues between the offered and the desired alternative.

In the event Vattenfall is to carry out the conversion work in its network and the customer wishes to influence the design or scope of Vattenfall's conversion, a connection fee shall be paid by the customer equal to the current value of Vattenfall's additional costs as a result thereof.

### 6.6 Point of connection with input

In conjunction with establishing a point of connection with input and in conjunction with the increase of input in the point of connection with input, a connection fee shall be paid by the customer equal to Vattenfall's direct costs for the new or increased input. The connection fee shall be determined in accordance with Vattenfall's special Application Provisions for connection fees for connection of power stations to Vattenfall's network. Please refer to Section 7.

In the event Vattenfall's additional costs for a new connection or modification of the scope of the connection exceed the additional tariff-based revenues, Vattenfall shall be entitled, for its own part, to retain part of the paid connection fee. This part shall be designated as the 'one-time fee'. The remaining part of the paid connection fee shall be repaid as follows:

As regards points of connection which pay for the network service in accordance with the network tariff for input of subscribed power for input of 1,500 kW or higher, the customer's network fee shall be reduced during a period of 30 years taking into account the annual capital costs for the remaining part of the paid connection fee.

As regards points of connection with input of subscribed power of less than 1,500 kW, the aforementioned reduction of network fees shall not be carried out since such connections, according to the Swedish Electricity Act, are not subject to the payment of network fees for capacity in the network.

### 6.7 Switchgear bays for outgoing lines

In the event the customer, as a consequence of a reduction of withdrawals, desires to reduce the number of utilised switchgear bays for outgoing lines at the point of connection, Vattenfall shall meet the request without charging a connection fee.

In the event the customer desires to increase the number of utilised switchgear bays for outgoing lines at the point of connection, and where the customer desires that Vattenfall assume responsibility for this service, Vattenfall shall, within a reasonable period of time, meet the request. A connection fee may be imposed on the customer where Vattenfall's costs for future switchgear bays for outgoing lines exceed future tariff-based revenues.

### 6.8 Indirect costs in Vattenfall's network caused by the customer

Where, as a consequence of the characteristics of the facility, the customer gives rise to the need for measures in Vattenfall's network which are not capacity-related, a connection fee shall be paid by the customer equal to the current value of Vattenfall's additional costs as a consequence thereof.

### 6.9 Customers with agreement for disconnectable electric boilers

In conjunction with a new connection of disconnectable electric boilers, a connection fee shall be paid by the customer equal to Vattenfall's direct costs for the connection.

In the event a customer with an agreement for disconnectable electric boilers desires to increase the scope of the connection, a connection fee shall be payable equal to Vattenfall's additional costs incurred as a consequence of the increase.

### 6.10 Customers with temporary use of the network service

As regards connections which may be reasonably assumed to entail a temporary use of the network service (e.g. construction or smaller mining operations) the following shall apply:

* either a connection fee shall be paid by the customer equal to Vattenfall's additional costs incurred as a consequence of the connection. This provision shall apply in those cases in which the network service is expected to be utilised for a period of less than three years.
* or a deposit shall be paid by the customer equal to Vattenfall's additional costs incurred as a consequence of the connection. The customer shall thereafter receive annually 1/25th of the deposited capital which shall accrue annual interest calculated on five-year government bonds until such time as the deposited capital is repaid or the customer's connection has been terminated. Any remaining capital upon termination of the connection shall be retained by Vattenfall.

### 6.11 Payment of connection fees

Established connection fees shall be paid to Vattenfall in accordance with Vattenfall's instructions. In this context, Vattenfall may, following consideration of the circumstances in each individual case, allow a connection fee to be paid gradually over a period of several years. During such extended payment period for established connection fees, the fee shall be subject to interest for the duration of the payment period. The interest shall be determined on the basis of the reference rate applied by the Swedish Central Bank plus 3 percentage points during the relevant period.

In respect of high connection fees, Vattenfall shall be entitled to request a bank guarantee from the Customer during the period of time the necessary facilities are being constructed.

### 6.12 Miscellaneous

The need for measures in Vattenfall’s network which are due to changes in circumstances in conjunction with new or modified connection of a customer but which were not identified or regulated prior to the implementation of new or modified connection shall not be paid for by the customer with the connection fee. The connection fee shall cover only costs which are foreseeable in conjunction with new or modified connections or which are due to subsequent modifications in the customer's use of the network service.

## 7. Determination of connection fee for electricity production facilities

### 7.1 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, a connection fee shall be established as the actual cost for measures in Vattenfall's network for connection of input from the electricity production facility. Please refer to Section 7.2 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.

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.

### 7.2 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.

#### 7.2.1 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 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.

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.

### 7.2.2 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 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 such a manner will not occur.

Upgraded/converted facilities

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

- 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 in lieu 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 fees payable to the overlying network

A share of the connection 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 fee.

Totalling the actual cost

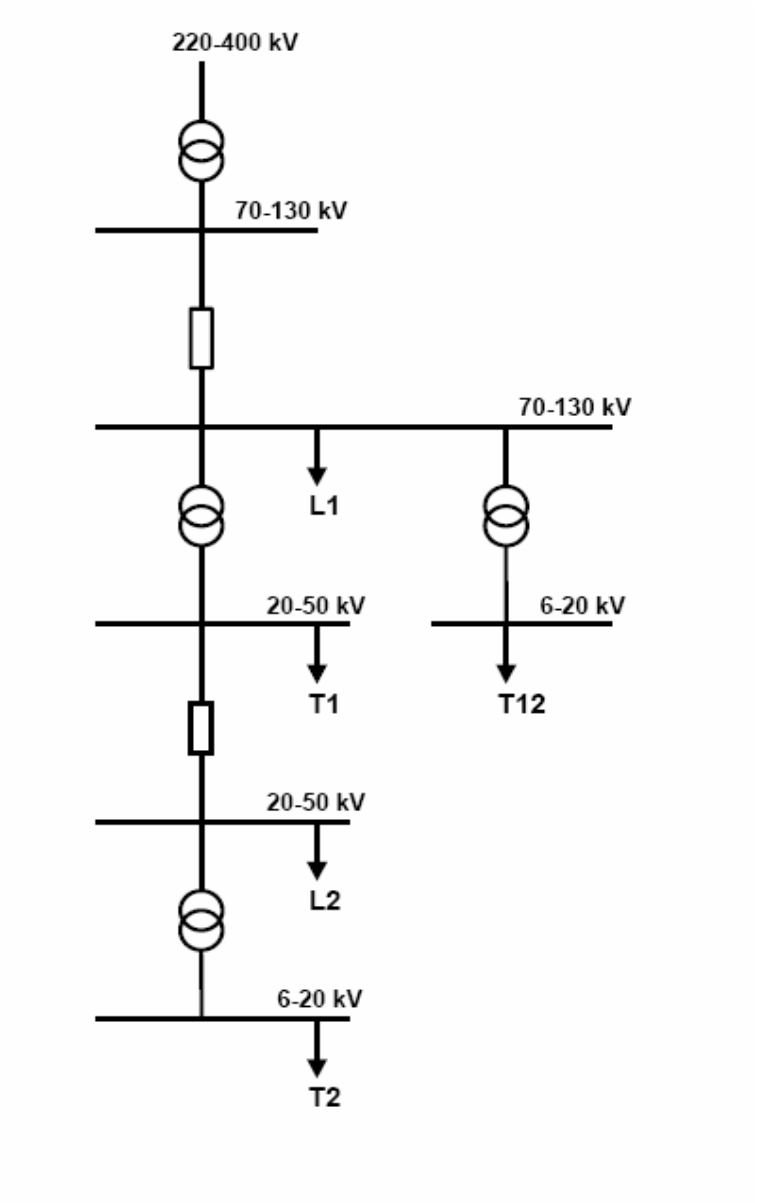
The actual cost is calculated as the sum of the share of the costs calculated in the various sub-sections above, i.e. costs for new, customer-specific facilities, new facilities which are utilised jointly, upgraded/converted facilities and any connection fees payable to overlying networks.

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

### 7.3 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.

# Segmented tariff structure




2012 version

# Vattenfall Eldistribution AB's regional network tariff 2012

## Normal tariff

### Switchgear bay fee

| 130 kV | 70 kV | 40 kV | 20 -30 kV | 10kv | |
|---|---|---|---|---|---|
| 230 | 200 | 120 | 30 | 25 | SEK '000/year |

**Special rules**
Customers at L2 may subscribe for tariff T1 for a supplement of SEK 1,000,000/year plus SEK 25/kW annual power fee.
Customers at T2 may subscribe for tariff T12 for a supplement of SEK 1,400,000/year plus SEK 34/kW annual power fee.

## Norrbotten

| Tariff | L1 | T1 | L2 | T2 | T12 | T13 | X | |
|---|---|---|---|---|---|---|---|---|
| Fixed fee | 385 | 1085 | 75 | 260 | 1115 | | 25 | SEK '000/year |
| Annual power fee | 141 | 156 | 298 | 321 | 156 | | 321 | SEK/kW, year |
| Transmission fee | -1.7 | - 1.4 | -0.5 | 0.1 | -1.0 | | + 3.0 | öre/kWh |

## Middle Norrland

| Tariff | L1 | T1 | L2 | T2 | T12 | T13 | X | |
|---|---|---|---|---|---|---|---|---|
| Fixed fee | 385 | 1085 | 75 | 260 | 1115 | 1650 | 25 | SEK '000/year |
| Annual power fee | 146 | 161 | 302 | 327 | 161 | 60 | 327 | SEK/kW, year |
| Transmission fee | -0.7 | -0.4 | +0.4 | + 1.0 | -0.1 | - 1.0 | + 3.9 | öre/kWh |

## Southern tariff area

| Tariff | L1 | T1 | L2 | T2 | T12 | T13 | X | |
|---|---|---|---|---|---|---|---|---|
| Fixed fee | 385 | 1085 | 75 | 260 | 1115 | 1650 | 25 | SEK '000/year |
| Annual power fee | 167 | 182 | 323 | 347 | 182 | 82 | 347 | SEK/kW, year |
| Transmission fee | 1.9 | 2.2 | 3.1 | 3.6 | 2.5 | 1.6 | 6.5 | öre/kWh |

# Vattenfall Eldistribution AB's regional network tariff 2012

## Disconnectable electric boilers

| | <10 MW | >10MW |
|---|---|---|
| **Metering fee** | 10,000 SEK/year | 15,000 SEK/year |

## Norrbotten

| | **L1** | **T1** | **L2** | **T2** | **T12** | **T13** | |
|---|---|---|---|---|---|---|---|
| Annual power fee | 0 | 0 | 0 | 0 | 0 | | SEK/kW, year |
| Transmission fee | - 1.0 | - 0.3 | +1.4 | + 2.7 | +0.7 | | öre/kWh |

## Middle Norrland

| | **L1** | **T1** | **L2** | **T2** | **T12** | **T13** | |
|---|---|---|---|---|---|---|---|
| Annual power fee | 0 | 0 | 0 | 0 | 0 | 0 | SEK/kW, year |
| Transmission fee | 0.0 | +0.7 | +2.3 | +3.6 | +1.6 | -0.5 | öre/kWh |

## Southern tariff area

| | **L1** | **T1** | **L2** | **T2** | **T12** | **T13** | |
|---|---|---|---|---|---|---|---|
| Annual power fee | 0 | 0 | 0 | 0 | 0 | 0 | SEK/kW, year |
| Transmission fee | 2.6 | 3.3 | 5.0 | 6.2 | 4.2 | 2.1 | öre/kWh |