**GUIDANCE FOR THE MANAGEMENT OF BILATERAL CORRECTION**

**OF HOURLY SETTLED AND PROFILED   
ELECTRICITY SUPPLY**

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**APPENDICES**

Appendix 1 Correction of falsely settled energy (ordinary method) - basis

Under Appendix 1a Calculation (ordinary method)

Appendix 2 Correction of falsely settled energy (simplified method) - basis

Under Appendix 2a Calculation (simplified method)

Appendix 3 Bilateral correction - charges

Electricity Market Development recommends that bilateral correction of hourly settled and profiled electricity supply is performed as follows.

1. BACKGROUND

## 1.1 Bilateral correction

Sometimes errors occur in normal settlement procedures. There can be many reasons for these errors, such as measurement errors, structural errors, errors in reporting by the distribution system operator ("DSO"), incorrect information from retailers etc.

These errors can lead to a market participant (retailer and / or balance responsible party) facing costs for electricity supply that another market participant gets the proceeds of. For example, measurement errors can have consequences for the balance responsible parties, retailers, DSOs and customers (both electricity consumers and electricity producers). The term "electricity supply" in this guidance either refers to consumption or production.

A settlement between the parties (this may include retailers, balance responsible parties and DSOs) must be seen as a neutral adjustment afterwards and should emulate the real settlement at large, but still be simplified to reduce the administrative burden of the market participants involved.

The main purpose of bilateral correction is to financially offset the errors that occurred. In some cases it is, according to law or general terms and conditions, not possible to completely neutralize the economic consequences that the error caused. In these cases the party that caused the error then bears any costs incurred.

## 1.2 Purpose of the guidance

The aim of this guidance is to facilitate the market participants in the handling of errors in settlement routines. It must be noted that this guidance represents only a recommendation. Parties wishing to do so may agree among themselves that the content of the guidance is to be binding between them.

## 1.3 Introduction of Nordic imbalance settlement

The guidance contains recommendations of both hourly settled as well as profiled electricity supplies. With the introduction of the Nordic imbalance settlement the need for bilateral correction of hourly settled electricity supply, however, is expected to increase. The guidance has been supplemented with a new simplified method for the correction of hourly settled electricity supply whose purpose is to facilitate the handling of the type of error that is expected to increase the most with the introduction of the Nordic imbalance settlement. The new simplified method is described in section 3.2.2 below. After the introduction of the Nordic imbalance settlement, the Finnish company eSett Oy ("eSett") will perform imbalance settlement on behalf of Svenska kraftnät.

## 1.4 The guidance comes into effect

The guidance comes into effect when the Nordic imbalance settlement is applied.

1. principles

The DSO must map improperly settled amounts of energy and inform the market participants (retailers and / or balance responsible parties) who have been wrongly settled. Detailed rules on the reporting of measurement errors and reporting after corrections are issued by the Swedish Energy Markets Inspectorate.

The principles for how corrections must be handled can be seen below. They can be summarized in the following steps:

#### Step 1 – Error identified

**Market participant (+)**

**Market participant (-)**

**DSO**

All parties have a responsibility to continuously ensure the right structure and identify any errors.

#### Step 2 – Investigation

The DSO must, together with stakeholders, investigate who bore balance as well as supply responsibility for the relevant installation.

#### Step 3 - Notification and basis for calculation

The DSO must fill in the standard form "Correction of falsely settled energy (ordinary method) - basis", Appendix 1 or "Correction of falsely settled energy (simplified method) - basis", Appendix 2. Appendix 1 must be used for both 24 hours wise hourly settled electricity supply corrected according to the ordinary method (section 3.2.1) and for profiled electricity supply (section 3.3.1).   
Appendix 2 must be used for 24 hours wise hourly settled electricity supply that is corrected under the simplified method (section 3.2.2). Appendix 1 and 2 are used for both consumption and production. The results of the investigation in step 2 above must be described in the form. Furthermore, the amount of energy to be corrected is to be specified in the manner set forth in the respective form. The DSO must send the completed form to the affected parties for review and approval.

#### Step 4 – Invoicing of corrected amount of energy

The market participant (retailer and / or balance responsible party) who has falsely borne the costs before correction must invoice affected parties in accordance with the approved investigation, see step 3 above.

1. ROUTINES

## 3.1 General

An agreement must be made between the market participants (the retailer and / or balance responsible party) who are directly affected.

The DSO has, however, a central role since it is the DSO who must provide relevant measurements for the deal to take place.

Bilateral correction aims to financially offset the errors that occurred. In some cases it is, according to law or general terms and conditions, not possible to completely neutralize the economic consequences that the error caused. In these cases the party that caused the error then bears any costs incurred. This means, for example, when the DSO is responsible for the error, and the cost cannot be passed on to the customer, the DSO must bear the cost of the error via grid losses.

Routines for how the DSO manages corrections in connection to its supplier of grid losses are not within the scope of this guidance.

### 3.1.1 The regulatory framework for measurement errors and user errors

One must be aware of the difference between "measurement errors" and "user errors":

* measurement errors can be classified as errors in meters, measuring equipment or collection infrastructure that causes the incorrect amount of energy to be measured and collected and therefore means that the amount of energy must be estimated.
* user errors can be classified as errors where the right amount of energy was measured and gathered by the DSO but where errors occurred later in the DSO's management. This can be, for example, a constant error or where wrong measurements are reported. The correct measurements are somewhere and can be used.

The difference is important because different rules apply to measurement errors and user errors.

#### Case 1 - measurement errors where measured values are not available or are not correct and must be estimated:

According to measurement regulations, within a reasonable time (14 days), the DSO must state the cause, time period, the estimated amount of energy as well as the stakeholders concerned and inform stakeholders (customer, retailer and balance responsible party).

The time period which can be corrected relating to the customer is governed by the general terms that apply to the current customer:

* High voltage customers must not be corrected more than 12 months from when the error became known (unless otherwise agreed)
* Low voltage customers must not be corrected more than 36 months from when the error became known

The time period which can be corrected between market participants, according to the general statutes of limitation is 10 years.

#### Case 2 - user errors where measured values are available:

#### The time period which can be corrected in this case is governed by the general statutes of limitation:

* In relation to the consumer, the time period is 3 years if it is to the detriment of the consumer, 10 years if it is to the consumer's advantage.
* In relation to other customers and market participants the time period is 10 years.

### 3.1.2 Customer regulation

The right to require an additional payment from a customer for an unbilled amount of electricity distributed can, according to general principles of law in practice, in some cases, have been lost, even though the statute of limitations does not expire. This may be the case if the customer in good faith paid the invoice which can reasonably be regarded as final for the given time period. However, the customer is entitled to recover the credit even for such a period.

Furthermore, it should be noted that there are additional restrictions on the right to require a consumer to additional payment for an unbilled amount of electricity distributed. If consumer billing is completely absent for some time, and this depends on circumstances which are within the retailer's control, the retailer under the General Conditions (EL 2012 K (rev)) is not entitled to claim compensation for receivables older than 12 months. The corresponding limitation applies to DSOs (according to NET 2012 K (rev)). Finally, it should be noted that when the contractual relationship ceases, the consumer must receive the final bill within 6 weeks from the date that supply ceased. After the final invoice has been sent, no further billing can occur (according to EL 2012 K (rev) and NET 2012 K (rev)). However, the customer is entitled to recover credit even for such a period.

### 3.1.3 Time point for correction

Bilateral correction according to the ordinary method (section 3.2.1 and 3.3.1) must be conducted as soon as possible after the reporting of errors in measurement and reporting for correction occurred.

During correction according to the simplified method (section 3.2.2), the periods specified in that section apply instead.

### 3.1.4 Minimum limit for correction

The recommendation is that corrections under the ordinary method (section 3.2.1 and 3.3.1) must not be made if the amount of energy is less than 5 MWh per correction.

For corrections under the simplified method (section 3.2.2) it is recommended that they will not occur if the amount of energy is less than 5 MWh per market balance area, market participant and correction period.

Market participants who still want to settle small amounts of energy must notify in writing the other party, e.g. via e-mail.

## 3.2 Correction of 24 hours wise hourly settled electricity supply

### 3.2.1 Ordinary method

When errors persist after the closure of eSett's imbalance settlement and which are not to be dealt with under the simplified method (section 3.2.2 below), the DSO must:

1. inform the market participants affected by the error,
2. provide data for correction under section 2, stage 3, Appendix 1, above, and
3. send this to those involved for review and approval.

The market participants who have incorrectly carried the costs before the correction must invoice affected parties in accordance with the approved investigation under section 2 step 4 above.

### 3.2.2 Simplified method

When errors persist after the closure of eSett's imbalance settlement, which relate to missing values or corrected measurements that are not caused by errors in structural data, the DSO must:

1. continuously report corrected or former missing data per outtake point / entry point,
2. provide data for correction under section 2, step 3, Appendix 2, above, and
3. send this to those involved for review and approval.

All other types of errors than those referring to the absence of measurements or corrected measurements that are not caused by errors in structural data must be managed according to the ordinary method (section 3.2.1). This means for example that the corrected measurements caused by errors in structural data must be managed according to the ordinary method.

The market participants who have incorrectly carried the costs before the correction are to invoice affected parties in accordance with the approved investigation under section 2 step 4 above.

When there is a change in the previously reported valid measurement the DSO must inform affected parties not only through the reporting referred to in paragraph a. above but otherwise in accordance with applicable regulations.

The basis according to point b. above must include correction series to be based on the following formula:

C = B-A, where

A = series reported to eSett and included in the imbalance settlement (closed 13 days after the delivery day)

B = series according to A containing the measurements that have been updated during the correction period (all measurements must be included regardless of whether they were updated or not)

C = correction series for the correction period

The basis must be reported in Excel format or in another way agreed by the parties. The basis must be specified per retailer, market balance area, network area and energy type. Production and consumption must be separated in the basis.

The corrections must be made every six months with a lag of a quarter:

* In October errors relating to Q1 and Q2 are corrected
* In April errors relating to Q3 and Q4 are corrected

Q1 and Q2 2017, are thus corrected in October 2017. Errors relating to older periods than Q1 and Q2 2017, are not to be included in this correction, but must be handled in accordance with the ordinary method.

Example: In the event you discover errors relating to Q4 2016 and Q1 2017 then Q4 2016 must be handled separately.

The retailer which is responsible for grid losses will correct against other retailers.

Regarding large deviations, the market participant who shall receive compensation determines if the deviation is so large that you cannot wait for the simplified correction. In that case, the deviation is to be corrected earlier in accordance with the ordinary method.

After eSetts closure of the imbalance settlement, the DSO is to continue to send accurate measurements per outtake and entry point. However, series reported to eSett may not change after eSett's closure.

### 3.2.3 Economic regulation

Economic regulation must occur in the following way.

#### Price

Hourly spot price, the current market balance area (Luleå, Sundsvall, Stockholm, Malmo), Nord Pool's listing LULSEK, SUNSEK, STOSEK, MALSEK must be used to price the amount of energy (consumption or production) to be corrected.

#### Time zone

Correction must be done in the same time zone as eSett's settlement (i.e. CET - current time).

#### Additions for installations with consumption

In addition to the spot price a supplement must be made for installations with consumption in accordance with the "Bilateral corrections charges", the "hourly settled consumption", tab “Hourly consumption” Appendix 3.

#### Deductions for installations with production

From the spot price, deduction must be made for installations with production in accordance with the "Bilateral corrections - charges", tab "Production", Appendix 3.

The stated deduction for installations with production will only be made in the correction relative to other balance responsible parties (i.e. when the production installation has been on the wrong balance responsible party). During correction in relation to the provider of grid losses (i.e. measurement error / grid settlement error which affects grid losses) designated supplements for installations with consumption will instead be applied.

#### Interest

*Ordinary method - correction according to section 3.2.1*

Yield interest amounting to the Riksbank prevailing reference rate plus 2 percentage points must be paid on the correction amount from 30 days after the error occurred until payment of the correction amount occurs.

Interest calculation must be based on a traditional method used in the Swedish banking system in which the interest is calculated from day to day, where every month has 30 days and the banking year has 360 days.

*Simplified method - correction according to section 3.2.2*

Yield interest rate amounting to the Riksbank reference rate the day after the correction period plus 2 percentage points must be paid on the correction amount from the end of the correction period until payment of the correction amount occurs.

Interest calculation must be based on a traditional method used in the Swedish banking system in which the interest is calculated from day to day, every month has 30 days and the banking year thus has 360 days.

## 3.3 Correction of profiled electricity supply

This Section 3.3 is relevant only for the correction of consumption. All production must be 24 hours wise hourly settled and must therefore be corrected under section 3.2 above.

So-called "profiled hourly settled" electricity supply is included in the profiled electricity supply and must be corrected in accordance with this section 3.3.

### 3.3.1 Ordinary method

When there is an error relating to profiled electricity supply which was discovered after Svenska kraftnät's reconciliation the DSO must:

1. inform the parties concerned of the correction
2. provide data under section 2 step 3 Appendix 1 above and
3. send this to those involved for review and approval.

The market participants who have incorrectly carried the costs before the correction must invoice affected parties in accordance with the approved investigation under section 2 step 4 above.

### 3.3.2 Economic regulation

Economic Regulation must occur in the following way.

#### Price

The price used in the reconciliation is to be used even in corrections, i.e. Svenska kraftnät's profiled settlement price for the current market balance area. The price is to be posted on the Svenska kraftnät website Mimer (http://mimer.svk.se).

**Interest**

An interest yield amounting to the Riksbank's reference interest rate applicable at the time plus 2 percentage points must be paid on the correction amount from 30 days after the error occurred until payment of the correction amount occurs.

Interest calculation must be based on a traditional method used in the Swedish banking system according to which the interest is calculated from day to day, every month has 30 days and a banking year of 360 days.

1. damages

If a party does not by bilateral correction according to section 2-3 above receive compensation for the costs it incurred in connection with the incorrect settlement, the party has the right to compensation from the party who caused the error to an amount corresponding to a reasonable substantiated damage. Compensation for loss of profits is not possible. The injured party is required to mitigate its loss under tort law principles.