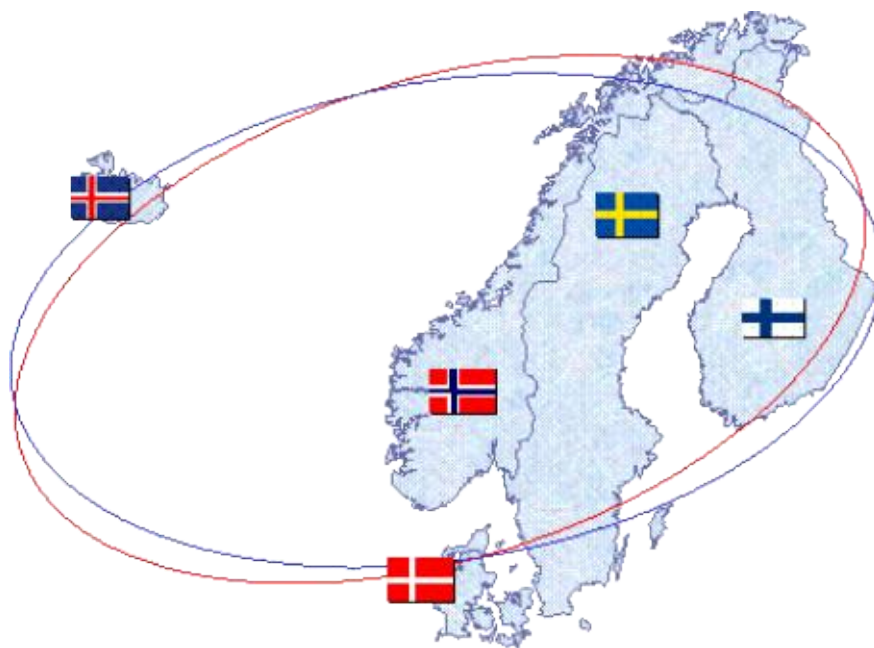


Report on
**Proposed principles for
Common Balance Management**



2007-11-16

Contents

1.	INTRODUCTION AND BACKGROUND.....	3
2.	COMMON COST ALLOCATION.....	3
3.	FEE STRUCTURE	4
4.	NEW MODEL FOR ENCOMPASSING TWO BALANCES	5
5.	OTHER ISSUES.....	7

1. Introduction and Background

In order to take a step towards fulfilling the Nordic Council of Ministers vision of a common end-user market, Nordel presented a proposal for harmonising parts of the balance management in April 2006 which in a modified form was approved by the Nordel board in February 2007. Since then some further issues have been added to this proposal. This short report aims to summarize the changes in the balance management that Nordel would like to introduce from 2009. It is important to keep in mind that the proposed changes will not lead to a fully harmonised balance management. This has been considered too complicated to achieve in one single step. To introduce a common end user market there are several authorities and organisations which need to be involved. The Nordel proposal is subject to approval by the national regulators.

About Balance Management

The TSOs¹ are in need of a mechanism for balancing the amount of power fed into and taken out of the system at all times. This mechanism is called balance management and contains two different functions:

- Balance regulation/control; continuously surveying the balance between consumption and production within each price area
- Economical settlement through calculation of imbalances; the settlement procedure is regulated within the national balance agreements which is an agreement between the TSOs and the BRPs².

Proposal and how to read the report

The proposed harmonisation mainly applies to:

- Principles for cost allocation, i.e. which part of the costs for balance management including availability payments shall be paid by BRPs
- Calculation and pricing of balance power and common fee structure
- Introduction of intra-day trading in the Nordic exchange area

This report aims at presenting the Nordel proposal but will not give the whole background as this has been given in the previous report, *Harmonising the Balance Management – common cost allocation and principles*, which can be found at the Nordel web site. The reader is referred to the mentioned report for the background, motives etc.

2. Common cost allocation

One of the difficulties when harmonising the balance management is different views on which cost elements that should be included in the cost basis for balance management and thereby financed by the BRPs.

The main cost elements are the reserves which is why they have been given most attention. Only those types of reserves for which all TSOs pay availability payment have been taken into account. For this reason, e.g. slow reserves have not been considered.

As explained in the previous report, Nordel lacks good statistics on the use of the reserves; hence the approach has been more pragmatic than "scientific". Nordel intends to improve the statistics and will after max three years examine if there are reasons to make adjustments in the recommendations. An adjusted cost allocation will subsequently lead to adjusted national fees. Nordel advocates that the Nordic TSOs in the meantime should keep the cost allocation of certain types of reserves within a predefined span.

¹ Transmission System Operator

² Balance Responsible Party

The common cost basis for the balance management shall include the following shares of the reserve costs (availability payment):

- 100 % for Frequency Controlled Normal Operation Reserve (FCNOR)
- 10-33 % for Frequency Controlled Disturbance Reserve (FCDR)
- 10–33% for Fast Active Disturbance Reserve (FADR)

The common cost base should also include:

- 100% of administrative costs³ (staff, IT-systems etc) for balance settlement and control.

In spite of the described cost allocation above there still exists some discrepancies regarding what costs are included in the balance management and they are subject to harmonisation in the future.

	Denmark	Finland	Norway	Sweden
Shares	10 %	10 %	10 %	33 %

Table 1: Shares of reserves that will be part of the cost basis for balance management.

The table above shows the cost allocations, i.e. the shares actually used for FCDR and FADR that will apply from 1st of January 2009 until further notice. Due to high costs for reserves in Denmark, Energinet.dk have been granted a transitional period. Energinet.dk s view is that a transitional period of 2 years will suffice subject to approval for the national regulator.

3. Fee structure

The costs to be paid by the BRPs as mentioned above will be financed by the two-price income from the production balance and fees on BRPs in accordance with a common fee structure presented in the table below. Approximate calculations show *preliminary* fee levels that might need some later adjustments. In addition, the fee levels are subject to approval by the regulators. The fees are presented in Euros, to facilitate comparisons between the countries, and the national currency, which will be the currency used for invoicing. Nordel has agreed that one third of the costs should be covered by the fee on production and the remaining two thirds of the costs by the fee on consumption.

Fee	Denmark	Finland	Norway	Sweden
Fee on actual consumption	0.08 €/MWh 0,6 DKK/MWh	0.07 €/MWh	0.035 €/MWh 0.28 NOK/MWh	0,097 €/MWh 0,9 SEK/MWh
Fee on actual production	0.04 €/MWh 0,3 DKK/MWh	0.03 €/MWh	0.0175 €/MWh 0.14 NOK/MWh	0,049 €/MWh 0,45 SEK/MWh
Volume fee	0.13 €/MWh 1 DKK/MWh	0.5 €/MWh	0.1 €/MWh 0.80 NOK/MWh	0.11 €/MWh 1 SEK/MWh
Monthly fee	200 €/month 1500 DKK	200 €/month	60 €/month 500 NOK	200 €/month 1850 SEK

Table 2: Fee structure and preliminary fee levels

The consumption and the production fees are allowed to vary in accordance with the national need for financing. The production and consumption fees are higher for Svenska Kraftnät than for the other TSOs since Svenska Kraftnät applies the 33 % cost allocation of the reserves and in addition includes some other costs related to balance management.

The volume fee has to be kept within the span 0.1-0.5 €/MWh and the monthly fee is set to

³ The way of calculating the administrative costs will not be completely harmonized between the countries by 2009.

200 €/MWh for all countries with the exception for Norway who will set it to 60 €/MWh. Due to the large number of balance responsible parties in Norway, Statnett will charge a lower monthly fee.

The meaning of “actual” consumption and actual production is explained below.

4. New model for encompassing two balances

Calculation of balances

Nordel proposes to introduce two balances, one for production and one for consumption & trade, which for convenience is called the consumption balance. The balances are defined as below, are to be calculated per price area and are settled with the balance power prices in that area.

1. Production balance = actual production – planned production
2. Consumption balance = planned production + actual trade + actual consumption

Where

- consumption & sales = negative sign; production & purchase = positive sign
- and purchase and sales are defined from the BRPs point of view

And

- actual production is metered production per hour or estimated production pr. hour using load profiles (small plants)
- planned production equals the approved production plan before the operating hour plus any subsequent changes in this plan agreed between the TSO and BRP due to activation of regulation (payment for automatic reserves differs within Nordel)
- actual trade within Nordel always equals the approved trade plan before the operating hour. However this is not always the case on “external” inter-connectors where counter-trade is not always used and the BRPs’ trade consequently can be curtailed
- Actual consumption is metered consumption per hour or estimated consumption per hour using load profiles (small customers)

Negative imbalance implies that the TSO sells balance power to the BRP (i.e. the BRP buys balance power from the TSO) and vice versa.

The definition of the two balances ensures that the sum of the two imbalances always equal the total imbalance in the present systems.

Settlement of imbalances

The settlement of the two balances differs. The two price system applies to the production balance while the consumption balance is priced in accordance with the one price system.

The difference in the price system is illustrated in the table below, where the so called “RK-prices” are the marginal prices for up- and down-regulation as determined on the common Nordic regulating power market. Just like Elspot the RK-prices can be different in the El-spot-areas.

	Up-regulation hours	Down-regulation hours
Two price system		
Negative imbalance	RK-price (up)	Elspot
Positive imbalance	Elspot	RK-price (down)
One price system		
Negative imbalance	RK-price (up)	RK-price (down)
Positive imbalance	RK-price (up)	RK-price (down)

Price for regulating power in hours with both up- and down regulation
Manual regulation bids used for balancing in both directions shall be priced with the RK-prices (cf. above), no matter what direction the main regulation has been. So far RK-prices have only been used in the main direction, e.g. for up-regulation bids in up-regulation hours. Regulation bids that have been activated in the opposite direction within the same hour have been compensated differently depending on the national solution (pay-as-bid in Norway and Denmark or a local marginal price in Finland and Sweden).

The proposed solution entails that two RK- prices are calculated in hours with both up and down regulation.

Bids used for special regulations will still be priced according to the pay-as-bid principle.

Harmonising gate closures for reporting

Day ahead plans

Discussions regarding harmonising the deadline for reporting day ahead production plans have lead to the decision that the deadline will be decided nationally, at least for the time being. The following day ahead reporting times, CET, will be used 1.1.2009:

	Denmark	Finland	Norway	Sweden
Time (CET)	D-1, 15:00	D-1,16:30	D-1, 19:00 (today) earlier deadline under discussion	D-1, 16:00

Intraday production plans and bids to the regulating power market

Nordel has decided to harmonize the gate closure times for intraday production plans and bids in the regulating power market. The goal of the decision is to offer common rules to all market players in the Nordel area and at the same time ensure TSOs a reasonable time to plan the balancing of the power system. This is a part of the harmonization of the whole Nordel area and seen as a compromise solution between TSOs and market players needs. The harmonized gate closure time will be implemented in connection with the harmonization of the Nordic balance management rules, e.g. in the beginning of 2009 at latest.

Economically binding production plans and bids in the regulating power market shall be submitted to TSOs 45 minutes before the operating hour at latest. This will allow the Elbas market a closing time of one hour before the operating hour in all Nordic countries.

Nordel will monitor experiences from the new procedures and, after the first year, evaluate possibilities to reduce closing times.

Intraday trade plans

Nordel would like the reporting of intraday trade plans to be harmonised with the reporting of production plans i.e. 45 minutes before the operating hour. However, it is likely that the following partial harmonisation will apply during a transitional period.

	Denmark	Finland	Norway	Sweden
Time (CET)	Operational hour -45 min	Operational hour – 20 min,	Operational hour -45 min	Operational hour -45 min

The main argument for using a 45 min deadline is the future regime for intraday cross border trade between Nordel and CWE (i.e. France, Germany, Belgium, Holland and Luxemburg). There are ongoing discussions on intraday cross border trade on the Danish-German border and parallel discussions in CWE. Sweden and Norway might before long encounter the same question at issue on NordNed and Baltic Cable.

However, the deadline of 45 minutes is hard to implement in Finland at the moment. Some Finnish BRPs have announced that they need more time between receiving the result from the Elbas trade and the proposed 45 minutes deadline (i.e. when trade plans to the TSO should be submitted). Also, current Finnish legislation addresses the deadline for trade plans so it would have to be altered. Nordel is aware of today's problems with late results from Nord Pool Spot regarding Elbas trade but the IT-system at Nord Pool Spot will be replaced during Q1 2008. The results will then be sent within 5 minutes after closing.

5. Other issues

Definition of production and so called hidden production

Nordel has been working on a definition of production and on how to handle so called hidden production (production which is netted by consumption). The problem occurs mainly in Sweden and Finland and the aim is to harmonise before 1.1.2009. Nordel advocates that no netting should be allowed and Svenska Kraftnät and Fingrid are currently working on this issue to ensure equal treatment in both countries.

Pricing of balance power in critical situations

Within Nordel different pricing applies to imbalances during extreme situations. No suitable solution has been found yet, but Nordel will continue to work for a proper solution.

€ on the regulation market

Nordel has agreed that the main currency on the regulation power market should be Euro. The proposal implies using the same principles as Nord Pool Spot apply, i.e. players have the option to submit their bids in either Euros or the national currency.

The settlement with BRPs will still be carried out using the national currency unless anything else has been agreed.

Monitoring of imbalances

After implementation of the new balances there will be an extra focus on monitoring the imbalances to detect and avoid speculation. This will be done nationally by the TSO.

Common balance agreement

Nordel has considered having a common balance agreement. Due to big differences between the models applied and national legislations, there will not be a common agreement from 2009. Each country will implement the agreed issues and include them in the national agreements. Nordel intends to include an appendix in the Nordic grid code that will specify what the Nordic TSOs have agreed upon in terms of harmonisation of the balance management.