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Harmonisation of Balance Regulation in the Nordic Countries



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Executive summary

In March 2008 Nordel published a report “Description of balance regulation in the Nordic countries” describing the prevailing national differences in the balance regulation. Many of these differences will be removed early 2009 in conjunction with harmonisation already agreed upon mainly for balance settlement but also balance regulation.

This second step of the Nordel work largely uses the above report as a starting point. It presents an analysis of reasons for remaining differences and suggests some further improvements in harmonisation.

A third part of the work, which will be treated separately, concerns monitoring of the balance market including a description of the current monitoring in the Nordic countries and an analysis of the benefits of a common Nordic monitoring and of the actions needed to introduce a common monitoring.

In this report some recommendations are made for relatively quick harmonisation. In addition to harmonisation already decided and entering into force early 2009 according to the report “Proposed principles for Common Balance Management”, the following will also apply from early 2009:

- Maximum activation time of 15 minutes for balance-regulation bids.
- Special regulation bids compensated with pay-as-bid in all countries in order to eliminate any direct effect of special regulation on the balance regulation price. Bids used for special regulation receive marginal regulation price if this price is more favourable for the bidders.
- Free pricing of bids up to a maximum of 5000 €/MWh (or equivalent). Bids for up-regulation lower than the spot price, and bids for down-regulation higher than the spot price, will be adjusted to the spot price.
- All TSOs will be allowed to activate part of the bid after agreement with the bidder.
- Bid size will be partly harmonised as Norway will introduce a general exception where bids down to 10 MW are allowed for small market players.

The following issues are planned to be harmonised in the near future (2010):

- A minimum running time of 10 minutes before the price for an activated bid affects the final regulating power price for the actual hour.
- Improved information to the market (via Nord Pool Spot):
 - regulating power prices published maximum 1 hour after the end of the trading hour.
 - reasons for taking bids out of price order for special regulation.

Some issues will still remain for discussion. Some of these have to be dealt with nationally and require national investments. Nordel prioritises to start up monitoring of balance regulation and how the common regulating function works in operation before the remaining issues are discussed.

In conclusion, the balance regulation in the Nordic countries in most ways can be regarded as well harmonised and be considered as a more or less common regulating market. However there will still be some national differences in some of the details. However it may be preferable not to harmonise absolutely everything, if the differences can be motivated and where harmonisation serves no practical purpose.

1 Focus of this report

A Nordel report "Description of balance regulation in the Nordic countries" was published in March 2008. The report describes the differences of the existing rules and operations in balance regulation in the Nordic countries. It has been used as the starting point for this second report that includes a further analysis of the differences and suggestions for further harmonisation.

Nordel has earlier decided to move towards a more harmonised balance settlement on 1 January 2009. In connection with these steps some aspects of balance regulation will also be harmonised. In addition, the Nordel Operations Committee has decided to harmonise some technical means (e.g. ramping, quarter-hourly plans and monitoring) to improve frequency control.

2 Further harmonisation of balance regulation in the Nordic countries

2.1 Harmonisation status from early 2009

Appendix 1 contains an updated version of the differences to reflect the situation from early also in some aspects for balance regulation from that date.

The Appendix 1 is structured according to the following categories:

- General (G)
- Bid requirements (BR)
- Bid schedule (BS)
- TSO management (TSO)
- Pricing and settlement (P&S)
- Reserves (R)

Aspects that are already harmonised early 2009 are marked in green in the table. No further comments on those are included in this report unless necessary.

Yellow fields in the table show the remaining differences and are commented below.

2.2 General

G.1 Real time measurement

All TSOs have requirements on real time measurement and in principle all have real time measurement on generating units larger than the minimum bid size (see BR.5 below).

However in Norway real-time measurement is not required today for the many small units (sometimes below 200 kW) which in aggregated form can be combined to create bidding units of the required total bid size. In Denmark where there are very many small units, real-time measurement is required for all units delivering system services regardless of their size.

A possible reason for this is that, until now, one-price balance settlement has been applied in Norway and there has been no distinction between regulating power and balance power. Perhaps the introduction of two-price settlement for generation throughout the Nordic region in 2009 will create a need for more real time measurement in Norway. Generally it can be discussed, from the aspect of competition, whether it is suitable (or permissible) to allow different requirements for generators competing on the same market. The Nordel Operations Committee has also paid attention to this issue in the report "Improved balance and frequency control of the Nordic power system".

An alternative to real-time measurement for very small units could be that units below a certain size need to produce documentation afterwards to verify that regulation has taken place. On the other hand, with the development of new communication solutions to measure and control even small loads and production units, it could be reasonable to specify real-time measurement for at least all new units that can be considered for balance regulation. This should be further discussed.

2.3 Bid requirements

BR.4 Required bid information

Required bid information in all countries is volume and price. In addition identification of the regulated object or location is required with the exception of Denmark. In Denmark the IT-system allows the bidder to send in bids stating regulated object if there is only one object. If the bid is pooled from several objects by the bidder, it is currently not possible to state the objects. Quite a lot of the bids in Denmark are pooled bids from many objects situated on diverse locations in either bid area DK1 or DK2.

Activation time is also required in Sweden, but this is only relevant for bids that are faster or slower than normal regulation bids, and which are used for so-called special regulation (e.g. counter trade.). In Denmark start/stop gradients are also stated. These describe the activation time together with the lead time for regulation (See definitions in fig 1 below).

It can therefore be argued that harmonisation already exists on this point. However it should also be discussed whether the possibility for other (faster or slower) bids should be included to obtain a harmonisation of total resources. The faster bids could be earmarked in the NOIS list presented in price order, and the slower ones presented in a separate list for special regulation. (see BR.8 below)

BR.5 Bid size

The minimum volume is 10 MWh/h except in Norway, where 25 MWh/h is normally used, and exceptions can be made by the TSO. From January 2009 it will be a general exception in Norway that allows bids down to 10 MWh/h for smaller players.

The argument for a higher limit in Norway is that many small bids can lead to an inefficient regulation. However the limit has successively been reduced in order to encourage for smaller players (generation but above all flexible demand) to participate in balance regulation and increase the volume of the available resources in balance regulation.

Automation of calling for bid activation would remove any disadvantages that small bids might have on the quality of regulation. In Denmark such automation was introduced in May 2008 and in Sweden work will commence soon to introduce it (through the new TRANS system) although it could take about two years to realize. In Norway automation will be handled in a separate project that has not started yet. Automation everywhere would make it possible to further reduce the minimum volume under 10 MWh/h, if it is considered that this would promote demand-side bidding.

In Denmark there is a maximum limit for bids of 50 MW. This is motivated in Denmark, partly because the two Danish subsystems are relatively small, and partly to avoid partial activation of bids.

BR.6 Pricing of bids

From January 2009 a harmonized pricing will be applied. This means that the pricing is free up to a maximum of around 5000 €/MWh though the Elspot price is the lowest price for up-regulation bids and the highest price for down-regulation bids.

This is based on a previous recommendation from Nordel's Market Committee to the Operation Committee (based on a report from MG of 26 March 2007) that the ceiling price for balance regulation should be 5000 €/MWh only, as this was considered to correspond to the value of lost load (VOLL). No consideration to the Elspot price should be taken when setting the ceiling price.

It will however be important to define the rules for dealing with bids on the "wrong" side of the Elspot price, e.g. an up-regulation bid with a lower price. Reasonably such a bid should be lifted up to the Elspot price. However the lower bids should not receive priority over bids submitted at Elspot price as this could lead to strategic action with respect to the bidding behaviour.

Until 31 December 2008 there are however still national variations.

In Norway the maximum price is the largest of 5000 NOK/MWh or twice the Elspot price. Further only in Norway and Denmark the relation between up- and down-regulation bids and the spot price is specified. In Denmark bids for up-regulation lower than the Elspot price, and bids for down-regulation higher than the Elspot price are rejected. In Norway they are sent back to the market player, and then the market player is able to give an adjusted bid.

In Norway there is also a requirement that bid prices must be evenly divisible by 5 NOK and this will probably remain even in 2009. It should be possible to agree on full harmonisation even on this point along with harmonisation to Euro.

In the future, if the intra-day market (Elbas) develops as a reliable liquid market in the whole region (from early 2009 Elbas will be introduced in Norway), it could be discussed whether the Elbas price will be a more relevant reference price to use in balance settlement, instead of the Elspot price. However this is not suitable today as the Elbas liquidity is very low, approximately 0,5% of the Elspot trade. Also, there is no unique Elbas-price per hour, and rules for fixing the Elbas prices ex post must be developed if the Elbas-price were to define the imbalance price. Monitoring of the respective prices on Elspot, Elbas and for regulating power possibly will provide information on their relative efficiencies.

BR.7 Bid price unit

The bids are normally given in the local currency. However, Nordel has as a part of a Nordic harmonisation proposed to give the BRPs the option to submit bids either in Euros or the local currency in the future. Harmonisation to Euros should be inevitable within a few years.

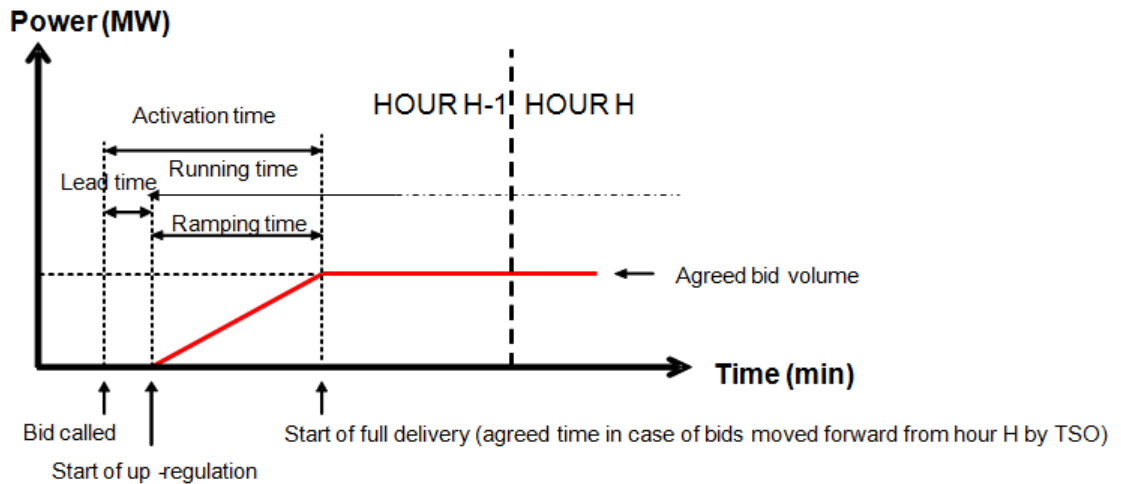
BR.8 Activation time

Today the TSOs require that normal regulating bids should be activated to the stated amount within 10 minutes (Sweden and Finland), or 15 minutes (Denmark and Norway), after the bidder receives the order (see fig. 1).

There are no strong arguments for the differences for normal operations. Therefore, in the progress of this analysis, a harmonisation to maximum 15 minutes from 1 January 2009 has already been agreed, as this could encourage demand-side bids.

However, it is preferable to allow objects with faster activation times (5 or 10 minutes) to be earmarked in the bid list for possible use as special regulation for emergency situations (see BR.4 above and TSO.2 below). The faster time should not give these bids priority when they are used for normal balance regulation. However priority criteria should be further discussed by DUG. Faster bids can, however, be needed for system security reasons and will then be priced as special regulation if taken out of price order. All slower bids should also be presented in a separate list in the NOIS system to be used for special regulation if there are no normal bids left.

**Fig. 1 Activation time and running time
(example for upregulation, see BR.4, BR.8 and P&S.5)**



Activation time is defined as lead time plus ramping time.
Lead time is defined as the time after the order is sent by the TSO until regulation is started by the bidder. In Denmark, the lead time is default one minute for directly activated bids (DK2) and five minutes for bids ordered through plans (DK1).
Ramping time is the time between start of regulation and start of full delivery according to bid.
Running time is normally defined as the time between the (agreed) starting time for according to bid and the end of the hour.

2.4 Bid schedule

This will be fully harmonised from early 2009.

2.5 TSO management

TSO.1 TSO allowed to activate part of bid

In all countries except Denmark (DK2) the TSO is already allowed to activate part of the bid after agreement with the bidder. From January 2009 this will be allowed in DK2 as well, consequently harmonisation will be achieved.

TSO.2 Possible priority for large-volume, small volume or fast-activation bids

For all countries bids are included in the common bidding list and normally activated in price order if there is no congestion. In Norway, Sweden and Finland, however, TSOs can today prioritize large bids and/or bids with fast activation when needed to control the frequency.

For normal regulation any disadvantages with small bids will be removed by automatic activation (see BR.5 above). Otherwise out-of-order activation of fast bids can always be classed as special regulation. If regulating bids are taken out of price order it is important that the reason is recorded and as soon as possible made public to market players. The Transparency group will discuss how this can be implemented in their further work.

2.6 Pricing and settlement

P&S.4 Price in case of lacking competition (“monopoly prices”)

In Norway the TSO can suspend bids where it is considered obvious that the price is too high, i.e. not in line with expected socioeconomic principles. This can be relevant within small areas where players have a monopoly situation. The TSO can instead activate the bid at the Elspot area price. This is a responsibility delegated to Statnett by the Norwegian Regulator.

The other TSOs do not and cannot apply such principles as competition or regulating authorities in the other Nordic countries have not delegated this responsibility to the TSOs. Therefore Nordel cannot recommend harmonisation of this.

P&S.5 Minimum running time to be price defining

Denmark and Norway define a minimum running time of 10 minutes for an activated balance regulation object for the price to be used in calculating the regulating power price. Sweden and Finland have no restriction.

It would be preferable to harmonise this time to 10 minutes for all countries. Further discussions are necessary on this point, but it is planned to be implemented in the Balance Management Agreements of 2010 in Sweden and Finland.

The running time is the time between the agreed starting time according to bid and the end of the hour (see figure 1 above). A typical application for this concept is when bids for one hour (H) are moved by the system operator to start a few minutes before the end of the previous hour (H-1) to avoid too many starts at the hour-change. Such bids shall primarily be price-defining in hour H, and only be price-defining also in H-1 if the agreed start time was before ten minutes to the hour.

P&S.6 Pricing of Special regulation

Bids used for special regulation, e.g. for congestion management (counter trade) or testing of reserve suppliers, are normally compensated with pay-as-bid, except in Finland where marginal pricing is used. Special regulation has therefore normally no effect on the balance regulating power price. The balance regulating power price will only be affected indirectly if bids used for special regulation otherwise would have been called for balance regulation during the same hour.

In January 2009 this will be harmonised as Finland will adopt the same method as the other countries.

Pay-as-bid in this context should be defined as follows. Bids used for special regulation normally receive pay-as-bid. However if this would mean a price less than the marginal regulating power price for up-regulation bids, or more than the marginal regulating power price for down-regulation bids, the price is adjusted to the marginal regulating power price for the respective hour.

2.7 Reserves

R.1 Peak load reserves made available for balance regulation

In Sweden and Finland peak load reserves can be bid as balance regulation, but the bids in both countries (from winter 2008/2009) will first be offered to the day-ahead spot market. Discussions between concerned TSOs and Nord Pool Spot are underway with the aim at arriving at a harmonised way of pricing these bids both in the spot market and the balancing market.

There are no peak-power reserves as such in Denmark or Norway. However, in DK2 there are some manually activated disturbance reserves which in their reserve contracts with Energinet.dk have specified activation prices based on predefined formulae. Those contracts are to expire on 31 December 2010.

In DK1 all reserves bid into the balancing market are market based, that is, the bid prices are determined by the bidder short term before activation (no later than 45 minutes before the operational hour from 1 January 2009), not by an agreement between the TSO and the bidder.

R.2 Disturbance reserves made available for balance regulation

In Finland, Sweden and Denmark (DK2) fast disturbance reserves which receive an availability payment as fast disturbance reserves, or are owned by the TSO (in the case of Finland and Sweden) are presented in the NOIS list to give an overview of what total resources are available. However these reserves are not used until all commercial bids have been used. Commercial bids are bids (price and volume) received from the market participants for the actual period.

Denmark (DK1) and Norway do not distinguish between the disturbance reserves and normal operational reserves. In Denmark bids that receive availability payments are bid in as is the case for RKOM (also availability payments) in Norway, and are activated in price order.

Harmonisation of pricing and activation routines is being discussed in Nordel working groups.

3 Improved market information

3.1 Background

Today information on regulating volumes and marginal regulating prices is published on Nord Pool's website with (at least) two hours' delay. Market players who are active on the regulating market obtain direct information on the current situation when their regulating bids are activated. Other market players do not have this online information. It can be argued that the active players have an unfair information advantage over more passive players and that this asymmetry is undesirable and should be eliminated.

Nordel has often expressed a wish for increased participation from the consumption side on the balancing market, both actively (bidding regulation) and passively (becoming a BRP). Bids from large consumers are rare. Consumers often place a high value on loss of supply and consequently their regulation bids are seldom activated. However they may be more motivated to bid if they received better information on when regulation prices are such that consumption bids could be called.

Nordel is concerned about being in front when it comes to transparency and data availability, and has therefore established a Transparency working group which is working entirely on this issue. The improvements regarding market information that are recommended in this report are implemented or further discussed in this group.

3.2 Possible improvements

Quicker and harmonized publishing of regulating prices and volumes

Technically it would be possible to eliminate the information asymmetry between players by publishing online information on the last activated bid for the Nordic area each time a bid is activated. It is, however, not possible to say in real time which bid-areas this activation will affect. Instant publication of information on bids and bid prices must therefore be considered carefully.

The value to the market of online information can be questioned owing to the quality of such information. Firstly, prices are not stable until after the operation hour as congestion occurring during the operation hour may cause differences in regulating prices between geographical areas. Secondly, there is today no distinction in the present system routines between activation for balance regulation and activation for special regulation and this may also result in price differences.

Consequently it is better to wait until the end of the operating hour when the prices have been secured and then publish the data for the whole region in a harmonized way.

The new NOIS system, which will be operative at the end of 2008, should make it possible to publish a secure regulating price sooner after the end of the trading hour than today. However, it will still be necessary to calculate the correct prices ex post with regard to area net imbalance and to any congestion between two bidding areas. As a first step it should be possible to publish max 1 hour after the operating hour. The Nordel transparency working group has already taken up this point in their work regarding compliance with EU regulations and guidelines.

Better information on bids used for special regulation

As suggested above (TSO.2), if regulating bids are taken out of price order, it is important that the reason is recorded and as soon as possible made public to market players. This will increase transparency and hopefully lead to a better understanding by market players of the different uses for bids other than for normal balance regulation. If this is a frequent occurrence, as it already is in some subsystems, categorization and automation of this process (e.g. via NOIS) should be considered.

The use of special regulations in the different countries should be included as a part of the future market surveillance.

Common signal for shortage of regulating power

Another improvement in market information could be achieved by developing a common signal, both before and after gate-closure, to indicate a shortage of bids for the regulating power market. There are today different procedures in the Nordic countries.

It would be an improvement to communicate such information to the market players in a common non-discriminatory way via Nord Pool Spot. Alternatives could be to publish the available volume of unused or totally available bids for

up- and down regulation for each bidding area, or to warn about the state of the system, when there is a lack of up-regulation bids and therefore a risk for power shortage, or a lack of down regulation bids owing to high wind-power production.

Possible improved demand response in balance regulation

Most consumers with flexible consumption, which can be reduced at relatively short notice, find it too expensive to make continuous bids for balance regulation. The bids will often in normal operating circumstances be too expensive to be activated. However, given better information on the state of the system, consumers could be more likely to bid in their resources in strained circumstances when they see that it is probable that their bids will be activated. Another possible improvement could be that small players could be allowed to have standing bids over periods of several days.

Channel for information

As operating the regulating power market is a core activity for TSOs, the TSOs "own" and are responsible for the accuracy of the relevant data. Logically however, this information should be communicated through Nord Pool Spot which already is established as the natural source of market information in the Nordic electricity market. The Transparency group is in tight co-operation with Nord Pool Spot about improved information in many areas, and information about balance regulation market is included in this work.

4 Recommendations

On the basis of discussions presented in chapters 2 and 3 above we make the following recommendations.

Relatively quick harmonisation

In addition to harmonisation decided from early 2009 according to the report "Proposed principles for Common Balance Management", the following will also be harmonised from early 2009:

- Maximum activation time for balance-regulation bids of 15 minutes after order is received by bidder.
- Special regulation bids compensated with pay-as-bid, even in Finland where marginal pricing is used today. Special regulation will then have no direct effect on the regulating power price. Bids used for special regulation receive the marginal regulating power price if this is more favourable for the bidders.
- Free pricing of bids up to a maximum of 5000 €/MWh (or equivalent in local currency) independent of the Elspot price. Bids for up-regulation lower than the spot price, and bids for down-regulation higher than the spot price, will be adjusted to the spot price (BR.6)
- All TSOs will be allowed to activate part of the bid after agreement with the bidder.
- Bid size will be partly harmonised as Norway will introduce a general exception where bids down to 10 MW are allowed for small market players.

The following are also planned to harmonise relatively quickly (2010)

- A minimum running time of 10 minutes before the price for an activated bid affects the final regulating power price for the actual hour. (This is e.g. for bids intended for hour H which are activated at the end of hour H-1 to avoid problems at hour-change.)
- Improved information via Nord Pool on:
 - regulating power prices closer to the end of the operating hour (max 1 hour after)
 - reasons for taking bids out of price order for special regulation.

More discussion needed

Some issues will still remain for discussion. Some of these have to be dealt with nationally and requires national investments. Nordel prioritises to start up monitoring of balance regulation and how the common regulating function works in operation before the remaining issues are discussed.

The following issues remains for further discussions before harmonisation:

- Automatic calling of bids (already introduced in Denmark and introduction in Sweden planned).
- Real time measurement of small units aggregated to form regulating objects.
- €/MWh as the normal bid price unit. From 2009 the BRPs will have the option to submit bids either in Euros or the local currency. Harmonisation to Euros should be inevitable within a few years.
- An improvement in market information could be achieved by developing a common signal, both before and after gate-closure, to indicate a shortage of bids for the regulating power market. Various features regarding special regulation and the NOIS system:
 - Separation of bids activated for balance regulation and bids activated for special regulation when calculating the regulating power price.
 - General inclusion of other activation times than the normal maximum (15 minutes) for special regulation bids to allow for faster and slower bids than the normal ones. The faster bids could be earmarked in the common list but be presented in price order, and the slower ones presented in a separate list for special regulation for use if no normal bids are available.
- Methods to increase demand-side bidding in addition to those already specified, e.g. by special rules for smaller players, increased communication and automation etc.
- Standard rules for pricing and activation of disturbance reserves etc (reserves with availability payments in Sweden, Finland and DK2) included in the common bidding list.

5 Conclusions

After the changes which will be introduced from 2009, it is considered that the balance regulation in the Nordic countries in most ways can be regarded as well harmonised and be considered as a more or less common regulating market.

However there will still be some national differences in some of the details. Some of these can be dealt with by further harmonisation. However it may be preferable not to harmonise absolutely everything, if the differences can be motivated and where harmonisation serves no practical purpose.

Appendix The Harmonisation situation from early 2009

Category	Code	Item	Denmark	Norway	Sweden	Finland	Comments
General	G.1	Real time measurement of regulating objects	Yes	Yes, except for small units aggregated to form larger bidding units.	Yes	Yes	<i>Should be further harmonised</i>
	G.2	Regulation areas	Elspot areas				
Bid requirements	BR.1	Who is able to bid in regulating power	BRPs		BRPs and entities with three part agreement		
	BR.2	Block bids allowed	No				<i>However being discussed in DUG (Operations group)</i>
	BR.3	Ways of communication	XML via closed net or on-line self-service portal. E-mail and phone as fallback. (EDIEL Quotes until May 2008)	EDIEL Quotes or extranet normally	EDIEL Quotes, e-mail for power reserves, fax as fallback	EDIEL Quotes or extranet normally	
	BR.4	Required bid information	Volume, price, (regulated object if poss)	Volume, price, regulated object	Volume, price, regulated object, (activation time for special regulation bids).	Volume, price, location (object on a voluntary basis)	

	BR.5	Bid size	Min 10 MWh/h, max 50 MWh/h	Min 25 MW normally, but 10 MW for small players	Min 10 MWh/h	<i>Almost harmonisation</i>
	BR.6	Pricing of bids	Free pricing except - 1) Elspot price = min price for upregulation and max price for downregulation. 2) Max price = about 5000 €/MWh. 3) In Norway the price must be divisible by 5 NOK.			<i>OK 2009</i>
	BR.7	Bid price unit	EUR (or local currency)/MWh			<i>OK 2009</i>
	BR.8	Activation time	Latest 15 min after order received			<i>OK 2009</i>
	BR.9	Duration capability	Bids must be capable of being supplied during the whole operating hour			
	BR.10	Repeatability	No			
Bid schedule	BS.1	Time interval to submit bids	Until 45 minutes before hour of operation.			<i>OK 2009</i>
	BS.2	Adjustment and removal of bids	Until 45 minutes before hour of operation.			<i>OK 2009</i>
TSO management	TSO.1	TSO allowed to activate part of bid	Yes, in agreement with the bidder			<i>OK 2009</i>

	TSO.2	Possible priority for large volume or fast activation bids	No	Yes	Yes, possible but avoided	Yes, but seldom during disturbances. Larger volumes handled as special regulation.	<i>Harmonised by using special regulation</i>
Pricing and settlement	P&S.1	Pricing principles (main direction)	Marginal pricing within the internal Nordic market. Separate treatments for external connections				
	P&S.2	Determination of up or down regulation hour	Net volume decides.				
	P&S.3	Pricing principles in hours of both up or down regulation	Two marginal prices, one for up and one for down regulation.				OK 2009
	P&S.4	Price in case of lacking competition ("Monopoly prices")	No	Governed by national regulation. TSO can suspend bids, not in line with expected "socioeconomic price" and apply Elspot price.	No		
	P&S.5	Minimum running time to be price defining	10 consecutive minutes		No limit		<i>Harmonisation to 10 min recommended</i>

	P&S.6	Pricing of Special regulation (congestion management or test of reserve suppliers)	Pay as bid, no effect on RPM			OK 2009
Reserves	R.1	Peak load reserve made available for balance regulation	N/A	N/A	Yes, but will be bid to Elspot first according to a new harmonized Swedish-Finnish solution applying from November 2008	
	R.2	Operational reserves made available for balance regulation	Yes, are contracted to bid in for all hours they receive capacity payments for	Yes – RKOM is required to make bids for balance regulation	Included in the NOIS list but not activated until all commercial up-regulation bids have been used.	