

Memorandum

To: Board of Directors in Nord Pool Spot AS
From: Market Surveillance
Date: 13. April 2011

STATKRAFT ENERGI AS - BREACH OF MARKET CONDUCT RULES

1. EXECUTIVE SUMMARY

<i>Market participant</i>	Statkraft Energi AS
<i>Affected markets</i>	Nordic power market
<i>Incident description</i>	On 27 October 2010 Statkraft Energi AS sent erroneous Elspot nominations to Nord Pool Spot AS due to technical problems. The nominations resulted in approximately 4000 MW too much sale in each hour at any given price in Norway, and significant price movements both in the physical and the financial market.
<i>Rulebook reference:</i>	MCR section 4.1 as per October 2010 (prohibition on market manipulation)
<i>Recommendation:</i>	Violation Charge NOK 250.000.

2. MATTERS OF FACT

2.1 General

Nord Pool Spot AS ("NPS") operates the Nordic electricity market with delivery of physical electricity (the "Physical Market"). The Physical Market consists of the "Elspot" auction and the "Elbas" continuous intra-day market used mainly for adjustment purposes. Elspot auctions are held for each calendar day of the year, on the immediate preceding trading day, and participants in the Elspot market submit orders to sell or buy electricity through Elspot nominations for each hour of the applicable day and for each price area. Participants in the Elspot market are required under the Elspot rules issued by NPS to structure their bids as to achieve balance between energy inflow and energy demand in each price area, ref section 2.11 of the Elspot Market regulations as per October 2010. NPS has amended the Market Conduct Rules ("MCR") with effect from 1 January 2011. However, all references in this memo refers to the MCR as per October 2010.

The Elspot auction generates a system price for the Nordic electricity market as a whole and an area price for each underlying price area. The system price is used as a reference price for the Financial Market, as basis for settlement of the relevant derivatives contracts traded in the Financial Market.

Statkraft Energi AS ("Statkraft") is a direct participant at NPS Physical Market and is under an obligation to act in accordance with the MCR issued by NPS.

2.2 The Nominations

On 27 October 2010 Statkraft sent Elspot nominations (the "Nominations") to NPS for the auction with delivery on the 28 October 2010 (the "Auction"). The Nominations were erroneous, in that they were not

compliant with Statkraft's intended nominations due to a technical error in Statkraft's nomination tool, and resulted in Statkraft selling approximately 4000 MW too much price independent electricity across the different price areas in Norway for each hour in the Auction. Market Surveillance ("MS") has investigated the circumstances prior to and succeeding the Nominations with the aim of establishing whether Statkraft was in breach of the MCR at NPS.

MS has conducted two meetings with Statkraft and received two memos from Statkraft further detailing the events prior to and succeeding the Nominations. MS has also received information from the trading desk at NPS regarding the event.

Attachment 1: Memo from Statkraft dated 12 November 2010

Attachment 2: Memo from Statkraft dated 11 February 2011

Based on the information acquired from Statkraft and NPS as well as information derived from the Electronic Trading System at NPS (the "ETS"), MS has established that the following events took place on 27 October 2010:

- The Nominations were sent to NPS at 11:35. When submitting the Nominations, Statkraft received an alert from their internal nomination system. The alert was triggered by the fact that large order volumes had been nominated compared with the nominations to the auction for the previous day. Statkraft was expecting an alert since the company had estimated new water values prior to the Nominations, which in turn were expected to result in larger nominated volumes in the Auction than the previous day. Responsible personnel at Statkraft thought that this was the cause of the alert, and did not pursue this alert any further.
- At 12:00, in connection with the closure time of the Auction, the trading desk at NPS contacted Statkraft via telephone to inquire about the large order volumes as compared to the previous day. Statkraft confirmed to NPS that the Nominations were correct. It has later been established that Statkraft assumed that this was also due to the updated water values, and that no efforts were made by Statkraft to check the correctness of this assumption.
- At 13:08 the system price was published on NPS' website and immediately to all NPS's participants in the Auction through the ETS, in addition to various other forms of publication.
- At 13:25 Statkraft received the trading results of the Auction. Statkraft received a new alert when uploading the results of the Auction into its "production plan" system. However, Statkraft thought this alert was due to internal IT problems, and did not immediately understand that the alert was due to erroneous Elspot nominations.
- After having investigated further, Statkraft's "Power Central" in Oslo ("**Statkraft Oslo**") became aware that Statkraft had sold approximately 4000 MW too much for each hour in Norway at approximately 14:20.
- At 14:34 Statkraft Oslo contacted the trading desk at NPS via telephone. The NPS trading desk advised that in their view this information was not required to be disclosed in an Urgent Market Message ("**UMM**"), but also advised that this was up to Statkraft to decide.
- At 14:37 Statkraft Oslo contacted MS via telephone. MS advised Statkraft to publish an UMM concerning the incident.
- At 14:54:20 a UMM regarding the incident was published by Statkraft (the "**Initial UMM**"). The substantive information about the incident was conveyed by the Initial UMM, however the Initial UMM was irregular in one respect: UMMs are published with a heading identifying the affected power production or consumption unit and with hyperlink to the actual UMM, based on the same input field in the UMM application. The Initial UMM did not have a heading identifying "Statkraft" as the affected unit but instead only "..." was stated in that information field. It should be noted however that this was probably due to how the UMM application is constructed, and was not caused by any error by Statkraft when submitting the UMM.

Attachment 3: UMM published 27 October 2010 at 14:54 CET

- NPS updated the UMM at approximately 15:00 identifying “Statkraft” as the affected unit instead of only “...”

2.3 Subsequent Events

Both the system price and the area prices from the Auction remained unchanged, and were used for settlement of transactions in both the Physical Market and the Financial Market. Statkraft honoured their obligations in the Physical Market by delivering the additional volumes from the Auction. To cover their obligations in the Physical Market Statkraft increased their own production and also bought and sold energy volumes in Elbas or as regulating power.

On the 28 October 2010 at 09:13 CET Statkraft published a new UMM with updated information concerning the event.

Attachment 4: UMM published 28 October 2010 at 09:13 CET

2.4 NASDAQ OMX Oslo ASA’s Reaction to the Event

MS have conducted a parallel investigation into the matter on behalf of NASDAQ OMX Oslo ASA (“NASDAQ”). In this respect it should be noted that there are factual differences in how the event affected the Physical Market and the Financial Market respectively, which makes the considerations slightly different.

MS has recommended that NASDAQ support the sanction of NPS and in addition issue a monetary sanction in the amount of NOK 150.000 for breach of the prohibition against insider trading. A final decision by the Board of NASDAQ has not yet been made.

3. LEGAL DELIBERATION

3.1 Legal Basis

MS deems that the relevant sections of the MCR are section 4.1 regarding market manipulation.

3.2 Achieving balance in each Elspot bidding area

Section 2.11 of Elspot Market Regulations of October 2010 of NPS reads:

“The participant shall use the Bidding in Elspot to achieve balance between energy inflow and energy demand in each Elspot Area. In order to control that this is done, NPS may require documentation for the Participant’s basis for Bidding.”

According to the Elspot Regulations section 2.11 the market participants shall use the bidding at Elspot to achieve balance between energy inflow and energy demand in each area. The purpose of this provision is to secure that the offers submitted are in accordance with the physical rights and obligations of each market participant. For example, a market participant cannot offer to sell a volume in the market if he does not have access to a power station or otherwise have access to the resources required to fulfill the obligations undertaken by the participant. This is regardless of the price level.

To decide whether Statkraft’s offers on 27 October 2010 were in breach with this provision, it should be considered if Statkraft offered volumes to the market which there might be a risk that they could not deliver.

To cover their obligations in the Elspot market due to the erroneous nominations, Statkraft up regulated their own production units in the relevant bidding areas where the excess obligations had occurred. The remaining obligations were either bought in Elbas or in the balancing market.

There will always be a risk that producers are not able to deliver the power offered to the Elspot market, for example due to a risk of outages. In this case however Statkraft sold more power than their available production capacities, with the result that Statkraft was not able to deliver the power they sold in the Elspot market.

MS deems that the possibility to buy imbalances in the market is not sufficient to state that Statkraft had the necessary access to the resources required to fulfill its obligations as section 2.11 requires. On this background it is MS conclusion that Statkraft Nominations on 27 October 2010 represented a breach of section 2.11 of the Elspot Market Regulations.

3.3 Market Manipulation

3.3.1 General

It must be assessed whether the Nominations were in breach of the prohibition against market manipulation. Pursuant to MCR section 4.1

“Participants and Clearing Customers shall not engage in Market Manipulation as defined in Enclosure 1”.

We will first discuss whether the objective criteria for market manipulation in the Physical Market are fulfilled, and then discuss the subjective elements applicable to Statkraft’s relevant actions.

3.3.2 Objective Criteria

The prohibition against market manipulation in MCR generally establishes a purely effect-based regime, as it is the potential effect of the applicable conduct which is decisive in whether market manipulation has occurred. One of the key purposes of the market manipulation prohibition and the way it is drafted is to preserve the integrity of the market as such, and to facilitate an orderly price discovery and determination by the market.

Pursuant to the MCR Enclosure 1, section 1.1 a) the prohibition against market manipulation applies to any “Transactions or Orders to trade”, where MCR enclosure 1, section 4.1 letter b), defines “Orders to trade” as

“orders for Exchange Trading in Listed Products, other orders relating to Listed Products, and orders to trade electricity in the Nordic electricity market.”

It is clear that the Nominations qualifies as “Order[s] to trade [...] electricity in the Nordic electricity market” and thus can trigger the prohibition against market manipulation.

The next question is whether market manipulation has actually taken place. MCR Enclosure 1, section 1.1 a) defines what constitutes market manipulation, whereby the Nominations would have to

“(i) [...] give, or are likely to give, false or misleading signals as to the supply of, demand for or price of a Listed Product; or

(ii) secure the price of one or several Products at an abnormal or artificial level”

MS notes that whereas alternative (i) only requires a potential effect caused by “manipulative signals”, alternative (ii) requires that an actual effect of securing [...] at an abnormal or artificial level is achieved. Other than this the two alternatives overlap, and MS deems that it is difficult to imagine any scenario where alternative (ii) could have any independent application where the criteria of alternative (i) are fulfilled. In the discussion below main emphasis will be made on alternative (i).

In relation to MCR section 1.1. a) it must be considered whether Statkraft’s Nominations gave or was like to give “false or misleading signals” to the market as to the supply of electricity in the market.

The actual Nominations did not give the market any direct “signals”, as Elspot nominations are only known by NPS and the individual participant. However the result of Elspot nominations are given to the market through

the distribution of the trading results of the auctions, i.e. through the system price, the area prices and volumes for the Auction. MS is however of the opinion that there is no requirement under the market manipulation prohibition that the actual Nominations are visible as direct signals to the market as long as the Nominations had the effect, or potential effect, of causing false or misleading signals through affecting the system price, area prices and/or volumes. Whether such effect materializes directly e.g. by the publication of the actual Nominations, or indirectly e.g. by impacting the system price, area prices or volumes of the Auction, is in other words without relevance to whether market manipulation has occurred.¹

MS deems that the Nominations as such were “false or misleading” because they did not signal an actual intent by Statkraft to sell electricity volumes at the applicable prices for which Statkraft was awarded transaction volumes in the Auction. In this respect, MS deems that it is not relevant that the obligations resulting from the Nominations were actually fulfilled by Statkraft by increasing their production capacity and buying capacity from others in the Elbas and balancing markets, with the effect that the Nominations therefore – and in this particular matter – resulted in conveying only information about “real” transactions. MS deems that in order to not be false or misleading, the Nominations would have to reflect an actual intention by Statkraft to sell the applicable electricity volumes at the prices indicated by the Nominations at the time when they were given (i.e. submitted).²

As for alternative (ii) of the market manipulation prohibition, MS deems that the Nominations also resulted in “[securing] the price of [the Applicable Products] at an abnormal or artificial level”, by causing the system price from the Auction to be lower than what it would have been had the Nominations been correct, and thereby also on an “artificial” level. In this respect, MS deems that there is no requirement for the price to remain at an artificial level, and that the relatively short period of time during which the prices were “artificial” was sufficient for the application of alternative (ii) in this matter. MS therefore deems that the criteria for market manipulation under alternative (ii) are also fulfilled.

MS concludes that the Nominations fulfil the objective criteria for market manipulations as it was likely to give false or misleading signals to the market as to the supply of electricity.

3.3.3 The Relevance of Subjective Elements

A purely effect-based regime as assumed above means that subjective elements such as intent or negligence of the person(s) responsible are irrelevant. Furthermore, there is not any requirement that the manipulative conduct had any illegitimate purpose as long as a potentially manipulative effect *per se* is created. Also it is strictly speaking not relevant for the application of the market manipulation provisions whether a manipulative conduct causes the person responsible to benefit from the conduct, or whether it causes one or more other participants losses or gains.

The market manipulation prohibition seeks to protect the integrity of the market as such and not individual positions. To this respect, MS notes that the purpose of the market manipulation prohibition is to prevent other participants from receiving and acting on false or misleading information. The cause of the signals and whether there is intent or not is normally not visible to the market, and the integrity of the market is therefore threatened by all false or misleading signals regardless of whether they have been caused by intentional, negligent or excusable behaviour.

A pure effect-based approach without consideration of subjective elements or the actual consequences of the conduct may nevertheless result in situations that are unfortunate from a due process perspective, and where it is furthermore questionable whether such actions should indeed be unlawful or that a sanction for market manipulation would be appropriate.

¹ It should be noted that MS has found no specific legal theory or case law addressing this issue, or which supports (nor rejects) this interpretation.

² Whether an order or nomination which in conveys a real desire to sell, but where the seller does not have sufficient production capacity to sell the applicable volume at the time of the order (i.e. a “naked” short sale), could also represent a misleading signal of electricity supply is outside the scope of this particular matter but in MS’ view this cannot be excluded; especially in relation to large order volumes. In this respect it is important to note that the electricity market, unlike other markets, must have a balance between production and consumption at all times and that electricity cannot be stored effectively, thereby making a discrepancy between actual supply and demand at any time particularly critical.

There is limited legal theory on the subject, however the issue has been discussed in legal theory in relation to the Market Abuse Directive and the Norwegian Securities Trading Act. At least one author seem to advocate a view that it would be sound practice to give some importance to subjective elements when applying the prohibition against market manipulation³, and MS have not seen anyone advocating a view that such elements are totally irrelevant. In the preparatory work of the Norwegian Securities Trading Act, the Norwegian Ministry of Finance states that the degree of guilt may be of relevance for the assessment of whether a transaction or order to trade is considered to be market manipulation or not. However, the Ministry of Finance also states that negligent market manipulation may be sanctioned and that the decisive factor then would be the effect resulting from the participant's behavior and the fact that the behavior could disrupt the market in an inappropriate way.⁴ The market manipulation provisions of the Market Abuse Directive and the Norwegian Securities Trading Act are materially similar to the provisions of the MCR, and the MCR were clearly also construed based on these provisions; in particular the Market Abuse Directive. These discussions should therefore be of general relevance also when applying the provision of market manipulation set forth in the MCR.

MS agrees that subjective elements, and the degree of guilt and negligence, are of relevance when applying the prohibition against market manipulation in the MCR, and that in determining whether there is cause for disciplinary actions such elements are both of relevance and importance.

3.3.4 MS' Assessment of Subjective Elements

MS has investigated how erroneous trades have been treated earlier, but has not found any directly similar incident to this matter.

Participants with nomination of large volumes in the Elspot market must in MS' view seek to be extra careful and exercise a high degree of caution in controlling whether their nominations to the auctions are correct. Larger order volumes will generally entail that a participant will have an elevated requirement of attention and due care when submitting such orders in all markets. This is not because of the participant's size or open position in the market, but due to the fact that large volumes as such have a great impact potential on the prices. Since the larger volumes generally have greater impact potential on the price, submitting large volumes also entails an elevated risk that erroneous orders may send false or misleading signals to the market.

Statkraft is a significant participant on the Elspot market in terms of electricity volume, and Statkraft's order volumes are such that the volumes regularly have a clear potential of affecting the Elspot price. A volume of 4000 MW per hour for Norway clearly in itself has the potential of affecting the system price. The placement of large orders is not by itself manipulative, nor is Statkraft in any way to criticize for submitting large volumes *per se*.

MS deems that the initial cause of the erroneous Nominations, namely the error made when calculating the Nominations internally within Statkraft, was caused by a technical error which Statkraft could not reasonably have foreseen or prevented. Such an error, when seen in isolation, potentially could be excusable and not give grounds for any sanctions if handled correctly, even when such error results in a manipulative effect which again could fall within the (substantive) prohibition against market manipulation.

The actions of Statkraft in connection with the erroneous Nominations can, at least partly, be explained by the fact that Statkraft expected error alerts due to the change in water values. MS has not found indications that Statkraft was seeking to intentionally manipulate the Physical Market through the Nominations, nor that Statkraft had any illegitimate reasons for the Nominations or for their other actions, nor that Statkraft has had any actual or potential financial benefit of the incident in this matter. MS deems it likely that the incident has caused Statkraft significant direct and indirect losses.

MS is of the opinion that the existence of a technical error as the initial cause of the erroneous Nominations is not sufficient for the actions of Statkraft to be excusable in this matter, and that Statkraft has displayed negligence both when submitting the actual orders and in the subsequent events following the submission of the orders.

³ Odd-Harald B. Wassenden, *Energimarkedets rett* (2007) and Odd-Harald B. Wassenden, *EU Market Abuse Regulation in Energy Markets* (2008).

⁴ Ot.prp. nr. 12 (2004-2005) Om lov om endringer i verdipapirhandelloven og enkelte andre lover (gjennomføring av markedsmisbruksdirektivet mv.), see page 68.

MS is of the opinion that a market participant must have procedures that ensures that the Elspot nominations are correct. MS is further of the opinion that Statkraft cannot justifiably rely on knowing the cause for alerts and warnings without further investigations in each case, and that one cannot justifiably assume that a known cause of a potential error is the only factor of the alert. Participants who choose to ignore such alerts and warnings do so on their own risk. In this respect, MS is of the opinion that Statkraft failed to respond properly to the warnings received both when submitting the Nominations initially and when receiving the inquiry from NPS. Statkraft could and should have responded differently to the alarm and warning they received. Their choice to ignore these signals was a display of negligence.

On this background MS concludes that Statkraft's negligence has caused a manipulative effect in relation to the applicable products.

4. RECOMMENDATION

MS has concluded that Statkraft has breached the prohibition against market manipulation mandated by the MCR. MS is of the opinion that the matter necessitates disciplinary actions from NPS.

In the event a participant is in breach of the MCR, NPS may give the participant either (a) an oral warning or (b) a written warning or (c) a violation charge, cf. MCR section 7.1.

In relation to the market manipulation, MS deems it to be mitigating that the Nominations were a result of a technical error and that Statkraft has not displayed any intent or had any illegitimate purpose by the Nominations. Furthermore, Statkraft has proactively worked to explain the error and has publicly admitted its error and taken steps to prevent such error from reoccurring. Still, MS finds it aggravating that Statkraft did not detect the erroneous Nominations by failing to respond properly to the warnings received. Statkraft should have made further investigations both when receiving alarm in their own nomination system and when NPS called to inquire about the large order volumes as compared to the previous day.

Based on an overall assessment MS recommends that Statkraft is given a violation charge of NOK 250.000 for breach of section 4.1 in the MCR.