Case No: 68550
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Dec. No: 487/10/COL

[non confidential version]

EFTA SURVEILLANCE AUTHORITY DECISION
of 15 December 2010
on aid to Kvalheim Kraft DA for Mehuken II wind park
Norway

The EFTA Surveillance Authority ("the Authority")

HAVING REGARD to the Agreement on the European Economic Area ("the EEA Agreement"), in particular to Articles 61 to 63 and Protocol 26 thereof,

HAVING REGARD to the Agreement between the EFTA States on the Establishment of a Surveillance Authority and a Court of Justice ("the Surveillance and Court Agreement"), in particular to Article 24,

HAVING REGARD to Protocol 3 to the Surveillance and Court Agreement ("Protocol 3"), in particular to Article 1(3) of Part I and Article 4(3) of Part II,

HAVING REGARD to the Authority's State Aid Guidelines on the protection of the environment referenced in this Decision,[1]

Whereas:

I. FACTS

1 Procedure

The Norwegian authorities notified the grant of funding to Kvalheim Kraft DA, pursuant to Article 1(3) of Part I of Protocol 3 by letter submitted on 8 July 2010 (Event No. 563584).

By letter submitted on 24 August 2010 (Event No. 564306), the Authority requested additional information. By letter submitted on 24 September 2010 (Event No. 570727), the Norwegian authorities replied to the information request.

By letter submitted on 17 November 2010 (Event No. 577081), the Authority requested further information. By letter submitted on 25 November 2010 (Event No. 578378), the Norwegian authorities replied to the information request.

2. Description of the measure

[1] OJ L <reference> and EEA Supplement No <reference>, also available at: http://www.eftasurv.int/state-aid/legal-framework/state-aid-guidelines/

2.1 The notified project

Kvalheim Kraft DA holds a concession to construct and operate a wind park at Mehuken in the municipality of Vågsøy which is in the county of Sogn and Fjordane, Norway (the "Mehuken I wind park").[2] Mehuken I wind park started production in December 2001 and includes five Vestas 850 KWh wind turbines with a total capacity of 4,25 MW and average annual energy production of about 13 GWh.

Kvalheim Kraft DA was granted a new concession on 24 June 2008 (with an expansion on 12 September 2008) to operate a second wind park, Mehuken II wind park, located closely to the Mehuken I wind park. The Mehuken II wind park will have a capacity of about 18.4 MW (based on 8 Enercon 2,3 MW turbines). The annual electricity production of the wind park is expected to be about 50.1 GWh[3] and over its life time approximately 1002 GWh.

Kvalheim Kraft DA intends to sell the electricity produced on the Nord Pool spot market although sales via bilateral over-the-counter ("OTC") contracts are not excluded.

2.2 The recipient – Kvalheim Kraft DA

The recipient of the aid is Kvalheim Kraft DA. Kvalheim Kraft DA is a wind power producer established in 1997 initially as a limited liability company (Kvalheim Kraft AS). In the spring of 2001 Kvalheim Kraft AS was acquired by Vardar AS and Østfold Energi Produksjon AS (50/50). With effect from 15 December 2009 Kvalheim Kraft AS was changed into an unlimited liability company,[4] Kvalheim Kraft DA. In April 2010 DONG Energy Power A/S acquired 1/3 of Kvalheim Kraft DA. Hence Kvalheim Kraft DA is currently owned by Østfold Energi AS (via wholly owned subsidiaries), Vardar AS and DONG Energy Power A/S with 1/3 each.[5]

Vardar AS is a holding company owned by the county of Buskerud and the municipalities in Buskerud. Vardar AS attends to the business interests of its owners, namely hydropower, wind power, bio energy/district heating and real estate. The group produces approximately 1900 GWh annually.

Østfold Energi Produksjon AS is owned 100% by Østfold Energi AS, which, in turn, is owned by the county of Østfold and 13 municipalities in Østfold, Norway. Østfold Energi Produksjon AS is an energy producer with annual hydro power production of 1750 GWh. The company owns hydropower plants in the counties of Indre Sogn and Østfold as well as two waste-to-energy plants in Østfold.

DONG Energy Power A/S belongs to DONG Energy A/S, a Danish energy company in which the Danish State is the majority shareholder. DONG Energy Power's core activity is the production of power and heat[6] with a strong focus on wind power in Norway. DONG

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[2] The concession for Mehuken I was awarded on 23 December 1999.
[3] In a normal operational year.
[4] The Norwegian term is *"ansvarlig selskap med delt ansvar"*.
[5] Enova verified that the recipient companies are not in financial difficulties. Since Kvalheim Kraft DA is a newly established undertaking the financial situation of both Vardar AS and Østfold Energi AS have also been checked.
[6] Production takes place at thermal power stations in Denmark as well as in wind parks in Denmark, the UK, Poland, Norway, Sweden and France. Wind parks account for an increasing proportion of the capacity. In

Energy Power is in partnerships with (i) Fitjar Kraftlag SA on the project Midtfjellet Vindkraft AS; and (ii) Østfold Energi AS, Vardar AS, and EB Kraft produksjon AS on the projects of Zephyr AS and Kvalheim Kraft DA.[7]

3 Energy production in Norway

Norwegian power companies supply electricity to the transmission or distribution network. Once delivery has been made, it is no longer possible to distinguish between supplies from different producers. In December 2008 the overall installed power capacity (including hydro, wind and thermal power) in Norway was about 30 807 MW of which 430 MW was wind power capacity based on 200 turbines.[8] The wind power capacity corresponds to electricity consumption of about 66 000 households in Norway. In 2008 the volume of overall power produced in Norway was 142 667 GWh of which 98,5% was hydro power and less than 1% wind power.

4 The Energy Fund scheme

The notified funding to Kvalheim Kraft DA is granted on the basis of the Norwegian Energy Fund scheme which was approved by the Authority Decision No 125/06/COL on 3 May 2006 on the basis of Article 61(3)c of the EEA Agreement. The Energy Fund scheme is a financing mechanism with the objective of encouraging energy saving measures and the production of environmentally sound energy.[9] Enova SF ("Enova") is the body established to administer the Energy Fund scheme.

Grants under the Energy Fund scheme are disbursed under programmes. The funding in the present case is granted on the basis of the Renewable Energy Programme and more specifically under the Wind Power Chapter. Enova makes calls for project proposals, at least biannually, which are announced in major national and regional newspapers in Norway.

4.1 The NPV method within the framework of the Authority's guidelines on state aid for environmental protection ("EAG")

In its Decision No 125/06/COL the Authority set out its interpretation of the relevant provisions in the EAG as well as its considerations underlying the approval of the Energy Fund scheme.

The EAG contains separate provisions on renewable energy production for

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August 2010 DONG Energy Power's total wind power production was 1.096 MW. An additional capacity of 1.076 MW is under construction.

[7] Via its share in Kvalheim Kraft DA, DONG Energy Power owns 33,3 % of the wind parks Mehuken I (4,3 MW) and Mehuken II (18,4 MW) under construction. DONG Energy Power was previously in partnership with Nordkraft Produksjon AS and owned (via Nordkraft Vind AS) 50 % of the wind parks Nygardsfjellet I (6.9 MW) and Nygardsfjell II (25.3 MW) under construction. However, its 50% share was sold on 22 October 2010.

[8] 95,7 is hydropower.

[9] Decision of Parliament 5 April 2001: Odelstingets vedtak til lov om endringar i lov 29. juni 1990 nr. 50 om produksjon, omforming, overføring, omsetning og fordeling av energi m.m (energilova). (Besl.O.75 (2000-2001), jf. Innst.O.nr 59 (2000-2001) og Ot.prp.nr.35 (2000-2001).

(i) "investment aid" which covers investments in assets (e.g., machinery, land and equipment) and is based on identifying the investment eligible costs (either directly or on the basis of a counterfactual);[10] and

(ii) "operating aid" which covers operating costs such as salary, taxes, water/energy use etc.[11]

Investment aid must be deducted from operating aid.[12] The Authority therefore reasoned that the maximum amount of aid which can be granted for renewable energy is fixed in the operating aid provision, namely section 54 of the previous EAG.[13] On the basis of section 54 of the EAG the Authority approved the grant of state aid covering "*the difference between the production costs* [initial investment costs and operating costs] *and the market price* [operating income]. The requirement that operating aid may be granted until the plant has been "*fully depreciated*" was considered to be equivalent to the life time of the plant. Account was also taken of the fact that section 54 states that "*The aid may cover a fair return on capital"*.[14]

The Authority considered that the provision on operating aid does, in fact, indirectly include investment costs due to the fact that operating costs can include depreciation costs for the life time of the plant.[15]

On the basis of those premises, the Authority accepted in its decision to calculate the maximum amount of aid on the basis of a Net Present Value ("NPV") calculation based on a discount rate which provides a fair return on capital. Funding would then only be granted for investments in renewable energy production which would otherwise not take place, due to the fact that the energy price obtainable in the market does not cover the costs and thus makes the net present value of a renewable investment project negative.

Applicants shall calculate and submit to Enova an NPV based on a discount rate which provides a fair return. The maximum aid amount is then determined by the result of the NPV. If the NPV is negative, state aid may be granted up to the amount which is necessary to bring the NPV to zero. In order to ensure that the return on capital would be fair, the discount rate is established by external, independent experts, the Professors Gjølberg and Johnsen. The report (recently updated in 2009) is based on the Capital Asset Pricing Model and best practice financial methodologies. The report establishes that a fair rate of return for renewable energy investments is 8%.[16] Enova has explained that, in practice, a discount rate lower than 8% can be accepted where the overall economic strength and capacity of the bidder ensures that there are realistic prospects that the bidder's project is viable.

Finally, the use of the NPV method is coupled to a requirement that the discounted cash flow must remain positive which means that projects with a negative discounted cash flow

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[10] A counterfactual means a conventional power plant with the same capacity in terms of the effective production of energy. See point 32 of the previous EAG and point 105 of the new EAG.
[11] Point 54 of the previous EAG and point 109 of the new EAG.
[12] Point 54 of the previous EAG and point 109 of the new EAG provides that "*Where aid is granted in accordance with point (a) any investment aid granted to the undertaking in question in respect of the new plant must be deducted from production costs when determining the amount of operating aid."*
[13] Point 54 of the previous EAG corresponds to point 109 of the new EAG.
[14] Extracts from points 54 of the previous EAG and 109(1) of the new EAG .
[15] Both point 54 of the previous EAG and point 109 of the new EAG explicitly states that operating costs includes "*depreciation"* costs.
[16] The report further concludes that wind projects in general require a higher rate of return in comparison to investments in energy production from other renewable sources such as hydro.

are not eligible for any aid.[17] This requirement also implies that the aid amount will not exceed the total investment costs. In other words, the maximum amount of aid is limited to the total investment costs.

A project has to comply with the following criteria under the NPV method:

- The amount of aid is based on the difference between the production costs and the market price. The production costs include construction costs and operating costs. The market price is based on the six month average of three year forward contracts on Nord Pool.

- The discount rate cannot exceed the rate of return established by independent experts.

- No aid in excess of the amount necessary to trigger the project will be given. In other words, state support is only offered to the extent it brings a negative net present value to zero. A project with a net present value of zero, without aid, will not be eligible for support.

- The maximum amount of aid is limited to the total investment costs.

- Projects generating a negative discounted cash flow under normal operating conditions (as expected at the time of the investment), will not be eligible to receive aid.

The NPV method is coupled to a tender to ensure that the amount of aid is limited to the minimum necessary.

4.2 The tender procedure

4.2.1 General explanation

In order to ensure that aid is granted only to the most efficient projects, the acceptance of the NPV method is coupled to a public tender where bidders compete on being in the least need of aid (in relation to production volume). The aid amount is determined by the result of the NPV and hence the parameters for calculating the NPV are important for winning the tender.

An important input in the NPV is the discount rate. The maximum level of the discount rate is established on the basis of independent experts' assessments.[18] On this basis Enova determines and announces the maximum discount rate to be used in each tender. The lower level of the discount rate is determined by Enova depending on whether the overall financial and production capacity of the bidders ensures that the projects are still viable.[19]

Apart from the discount rate, important inputs in the NPV method are the price of electricity (which determines the level of the income) and the costs. The price of electricity is collected by Enova from Nord Pool, based on the six month average of three year forward

[17] In addition the project generating a negative EBITDA under normal operating conditions, at the time of the investment, will not be in a position to receive aid. EBITDA is Earnings Before Interest, Taxes, Depreciation and Amortization. This comprises net cash inflow from operating activities, before working capital movements.
[18] See Gjølberg and Johnsen report.
[19] Enova has refused discount rates as low as 1%.

contracts,[20] and announced publicly a couple of weeks in advance of the time limit for submission of bids in tenders. The electricity price is therefore the same for all bidders. The project's potential of electricity production has to be verified by an external expert and is hence independently confirmed. Finally, the construction costs are estimates based on the available market price when the bids are submitted. Enova announces what the expected lifetime of the project should be.

The winner is the bidder(s) with the highest volume of electricity produced per NOK requested as aid.[21]

The payment and monitoring of the funding is the responsibility of Enova on the basis of the rules laid down in the General Conditions for grants from the Energy Fund.[22] Payments are made in instalments based on the actual costs of the investments. 20% of the total award is withheld until Enova has received and approved a final report on the project, which must be submitted two or three months following production start.[23] The aid amount may be reduced if, on the basis of the report, it appears that actual investment costs are lower than first assumed. However, if the investment turns out to be more costly than assumed the risk is on the bidder as no additional grants are awarded by Enova.

4.2.2 The 2008 Wind Power Tender

In 2008 Enova launched one tender for wind power projects published on 23 April 2008. The tender resulted in the submission of seven bids of which Kvalheim Kraft DA was one.

The 2008 Wind Power Tender was based on the submission by each bidder of an NPV calculation and the requested aid amount. The NPV calculation had to be based on the following predetermined conditions:

- The price of electricity is the six month average of three year forward contracts on Nord Pool. Enova announced this to be NOK 0.46.

- The lifetime of the project is 20 years plus the construction phase.

- The discount rate in the NPV is maximum 8%.

4.2.3 The bid submitted by Kvalheim Kraft DA

The following tables show the total cost of the Mehuken II wind park, based on estimates of the market prices at the time of the application:

<u>Investment costs (in million NOK)</u>

Turbine cost	[…]
Foundation costs	[…]
Internal network	[…]
External network	[…]

[20] In accordance with the NPV method approved by the Authority in Decision No 125/06/COL, see further explanations below.
[21] The expected volume of electricity produced in a normal production year is divided with the amount requested as aid. This shows how many NOKs of aid are spent per KWh of electricity produced.
[22] The present General Conditions for the Energy Fund grants are in line with the Norwegian Government's Economic Regulations and stipulates the rights and obligations of Enova and the recipient of funding. In addition a letter of award to each recipient of funding specifies further conditions.
[23] The time limit for submission of the report is stated in the letter of award.

Project management	[…]
Sum	**[…]**

Operating cost (in NOK pr. KWh produced)

Operation and maintenance	[…]
Salary and social costs	[…]
Feed in costs	[…][24]
Rent	[…]
Other operational cost	[…]
Sum	**[…]**

The lifetime of the Mehuken II wind park is 22 years and the construction phase is 2 years. The Mehuken wind park is expected to be operational and produce electricity from January 2011 through 2030.[25]

In the NPV calculation, Kvalheim Kraft DA used a lower discount rate than 8 %, namely [...]%. On this basis the project had a negative net present value and an internal rate of return ([…]%) without aid. Kvalheim Kraft DA requested aid for an amount of NOK 92 879 953 million. Enova verified whether the requested aid amount was limited to the amount necessary to ensure a profitable project, i.e. that the NPV, based on […]%, resulted in zero. Enova found that the requested aid of NOK 92.8 million was indeed the amount necessary to ensure that an, otherwise negative, NPV based on […]% discount rate, would result in zero.

Enova also verified the cash flow and annual production. The Mehuken II wind park is set to generate a positive cash flow starting in 2011. The annual production is estimated to be 50.1 GWh for the period 2011 through 2030. The sale of electricity is expected to generate NOK 23 million in sales annually based on a sales price of NOK 0.46/KWh.

On 16 December 2008, Enova selected the most cost-efficient projects[26] measured by electricity volume generated (in KWh) per NOK granted as aid (referred to as "NOK aid/efficiency ratio") as winners of the tender. [27] Of the seven projects Enova selected the following two most efficient:

Rank	Project	Applicant	GWh[28]	Aid million NOK[29]	Efficiency ratio (NOK/KWh)[30]
1	Jæren	Høg Jæren	228	352.0	0.65
2	Kvalheim Kraft DA	Mehuken II wind park	50.1	92.8	0.54

[24] […]
[25] 31 December 2030
[26] The number of winners is dependent on the amount available under the tender.
[27] The expected volume of electricity produced per KWh is divided with the amount requested as aid. This shows the electricity produced per NOK requested as aid.
[28] Expected production verified by an independent third party.
[29] The aid amount requested.
[30] This shows how much electricity is produced per NOK granted in aid.

The Mehuken II wind park submitted by Kvalheim Kraft DA was considered to be the most efficient based on an annual production of 50.1 GWh and assuming an aid amount of NOK 92.8 million which is equivalent to 0.54 KWh per NOK.

Enova has paid out aid totalling NOK 23 209 033 in four instalments to Kvalheim Kraft DA: On 13 July 2009 it paid out NOK 13 424 369; 19 November 2009 NOK 1 111 116; 19 February 2010 NOK 7 165 573; and 12 May 2010 NOK 1 507 975.

II. ASSESSMENT

1 The presence of state aid

State aid within the meaning of Article 61(1) EEA

Agreement Article 61(1) of the EEA Agreement reads as follows:

"Save as otherwise provided in this Agreement, any aid granted by EC Member States, EFTA States or through State resources in any form whatsoever which distorts or threatens to distort competition by favouring certain undertakings or the production of certain goods shall, in so far as it affects trade between Contracting Parties, be incompatible with the functioning of this Agreement."

In its Decision No 125/06/COL, the Authority concluded that disbursements to undertakings under the Energy Fund scheme constitute state aid within the meaning of Article 61(1) of the EEA Agreement. There is nothing in the present notification to alter that conclusion:

It is recalled that Kvalheim Kraft DA has received aid under the Wind Power Chapter of the Energy Fund. First, the funding under the Wind Power Chapter is coming from various sources controlled by the State and therefore constitutes state resources. Secondly, financial grants are awarded to undertakings which thus receive an economic advantage they would not have received in their normal course of business. Thirdly, under the Wind Power Chapter, grants are awarded to undertakings in the wind power sector and favour therefore only undertakings within this sector to the exclusion of other sectors. They are hence selective.[31] Finally, the grant of financial support to undertakings under this Chapter distorts competition and affects trade: The Norwegian energy producers sell electricity (i) at Nord Pool - which implies that some of the energy is exported to other EEA countries; and (ii) on the basis of bilateral contracts to customers in Norway and other EEA countries, such as Sweden or Finland.[32] It affects trade between the Contracting Parties to the EEA Agreement and distorts competition in the EEA because the beneficiary is active in a sector where trade between Contracting Parties takes place.

[31] The Energy Fund Scheme also funds other renewable energy production and energy saving measures. The EFTA Court has held that a measure may be selective even if it covers (undertakings in) an entire sector: Joined Cases E-5/04, E-6/04 and E-7/04 *Fesil and Finnfjord* [2005] EFTA Court Report p. 117, paragraph 77. This judgment confirms the case law of the European Court of Justice as laid down in Case C-75/97 *Belgium* v *Commission* [1999] ECR I-3671, paragraph 33. See also Case C-66/02 *Italy* v *Commission* [2005] ECR I-10901, paragraph 95.

[32] See in this respect Case 730/79 *Philip Morris* v *Commission* [1989] ECR p. 2671, paragraph 11, where it is stated that "*When State financial aid strengthens the position of an undertaking compared with other undertakings competing in intra-Community trade the latter must be regarded as affected by that aid.*"

For these reasons, the funding to Kvalheim Kraft DA constitutes state aid within the meaning of Article 61(1) of the EEA Agreement.

2 Procedural requirements

Pursuant to Article 1(3) of Part I of Protocol 3, "the EFTA Surveillance Authority shall be informed, in sufficient time to enable it to submit its comments, of any plans to grant or alter aid (…). The State concerned shall not put its proposed measures into effect until the procedure has resulted in a final decision".

The aid to Kvalheim Kraft DA is granted under the Energy Fund scheme which was approved on the basis of the previous EAG. On 16 July 2008 the Authority adopted the new EAG. According to the new EAG, investment grants which exceed the threshold set out in 160(b)(i) of EUR 7.5 million must be individually notified.[33] The aid of NOK 92 879 953 million (EUR 11 683 013 million)[34] to Kvalheim Kraft DA was therefore notified on the basis of Section 160(b)(i) EAG.

On 8 July 2010 the Norwegian authorities notified the aid to Kvalheim Kraft DA. The Norwegian authorities paid out aid before notifying the project, and before the Authority had adopted a final decision. The Authority concludes therefore that the obligations pursuant to Article 1(3) of Part I of Protocol 3 have not been respected.

3 Compatibility of the aid

The Authority has examined the aid to Kvalheim Kraft DA under the EAG and the Energy Fund scheme. As set out above, the Authority approved in its Decision No 125/06/COL the NPV method which limits the maximum aid to the amount necessary to bring an, otherwise negative, NPV up to zero. The NPV method is coupled to a public tender where bidders compete on being the most efficient wind power project (i.e. with the highest volume of electricity produced per NOK granted as aid; NOK/KWh ratio) to ensure that aid is granted only to efficient projects.

As explained above, since the grant of aid to Kvalheim Kraft DA exceeds the threshold set out in Section 160(b)(i) EAG the project must be individually notified. Section 160(b)(i) EAG provides that the Authority has to carry out a detailed assessment under Chapter 5 of the EAG for purposes of verifying compatibility with the EEA Agreement. The detailed assessment requires a balancing of the positive and negative elements of the aid measure. As regards the positive elements, the Authority must assess whether the aid addresses a market failure; it is the appropriate instrument to achieve this objective; gives an incentive to the beneficiary and is proportionate. Secondly, the negative elements, that is, the impact of the aid on trade and competition, must be limited. Finally, it must be verified that the overall balance is positive.

The Authority notes that the detailed assessment is a "proportionate assessment", that is, it should be proportionate to the extent to which competition is distorted in individual cases.[35] As will be clear from Section II.3.2 below, the distortion of competition in the present case is very limited and the following assessment is therefore based on this premise.

[33] Point 200(ii) EAG provides that the thresholds set out in point 160 apply as of the first day following the adoption of the EAG.
[34] Based on the Authority's exchange rate for 2008.
[35] Point 164 of the EAG.

3.1 Positive effects of the aid

The main positive element to be taken into consideration when assessing the compatibility of the aid is that it induces undertakings to pursue environmental protection which they would not otherwise have pursued.[36]

3.1.1 Existence of a market failure

The environmental objective of the project is twofold; to reduce production of conventional energy and to meet expected increased demand for electricity with renewable energy.

The Norwegian authorities have indicated that on average 98,5% of the electricity consumed in Norway today is generated by hydropower. The remaining part of the demand is covered by conventional energy and other renewable energies than hydropower. The intention is to further increase the share of renewable energy in the Norwegian energy mix.

The Authority notes that there is a commonly acknowledged market failure consisting of undertakings acting in their own interest without incentives to take into account the costs of negative externalities (pollution) arising from their production. An essential step on the way to achieve the aim of reducing the emission of CO2 is to increase the production of renewable energy. Investments in renewable energy production is, however, expensive compared to the investment costs of producing conventional energy. Moreover, since the sales price of electricity remains the same irrespective of whether the energy is green, renewable electricity producers cannot recuperate the extra costs of investing in green energy. Indeed, the Norwegian authorities have stated that no wind parks would be established in Norway without aid. The objective of the Energy Fund scheme is aimed at this market failure by contributing to the costs of producing greener energy in order to encourage the establishment of green energy producers.

The EAG requires that state aid is targeted at the market failure (consisting of a lack of investments in renewable energy production) by having a substantial impact on environmental protection in quantifiable terms.

The Authority considers that in view of the fact that the Mehuken II wind park will have a total capacity of about 18.4 MW (and annual energy production of 50.1 GWh) and thereby increase energy production from renewable energy sources, the state aid to Kvalheim Kraft DA contributes to environmental protection in quantifiable terms.

Moreover, the operating costs related to the production of wind power are generally lower than that of conventional energy production (such as coal and natural gas). Because the operating costs are cheaper, wind power is well-suited to replace the production of conventional energy during those periods where electricity demand can be met by renewable energy.

For the reasons set out above, the Authority considers the aid to be targeted at the market failure consisting of the lack of investments in renewable energy.[37]

[36] Point 166 of the EAG.
[37] Point 167 of the EAG.

3.1.2 Appropriate instrument

In the present case, the Authority considers that state aid is the appropriate policy instrument for purposes of addressing the market failure of protecting the environment by increased production of renewable energy.

Due to the fact that 98.5 % of Norwegian power production is already environmentally friendly, restrictive regulatory requirements or standards (such as ceasing the grant of concessions to conventional power production), will not be effective for purposes of furthering the establishment of alternative renewable energy sources in the market place. Therefore, in line with other EEA States, the Norwegian authorities have considered to encourage investments in renewable energy by introducing other measures than state aid, such as green certificates. However, the Norwegian authorities have explained that such a scheme will not be adopted before 2012 at the earliest. In such circumstances the Authority accepts that positive encouraging incentives, such as state aid, are appropriate to achieve the aim of increased renewable energy production.

3.1.3 Incentive effect and necessity of aid

According to point 143 of the EAG, "(t)he Authority considers that aid does not present an incentive effect for the beneficiary in all cases in which the project has already started prior to the aid application by the beneficiary to the national authorities." Kvalheim Kraft DA submitted its application/bid for aid to Enova on 15 September 2008, i.e. before the start-up of the construction of the Mehuken II wind park. Therefore, the incentive effect referred to in point 143 of the EAG is met.

Under the detailed assessment, the Authority must further assess the incentive effect and necessity of aid in accordance with points 171-173 of the EAG.

Point 171 stipulates that the aid "must result in the recipient changing its behaviour to increase the level of environmental protection". Normally, this can be demonstrated by showing that the project realised with aid has an increased environmental benefit compared to the credible counterfactual (point 172 (a) of the EAG). The Authority notes that the reference to a counterfactual situation is linked to the method in the EAG for determining eligible investment costs. Due to the fact that the NPV method has been accepted as the basis for determining the maximum aid amount, the appropriate manner to examine the incentive effect is not a comparison with an alternative behaviour, but rather whether the use of the NPV method is evidence that Kvalheim Kraft DA would not, without the aid, have engaged in the same activity because of its intrinsic benefits.[38] Such an approach will equally show whether the aid has changed the behaviour of the recipient. This approach is indirectly expressed in point 172(g) which states that where the project is not profitable (without the aid) aid will normally have an incentive effect.[39]

The Authority notes that the NPV method consists of determining the amount required to bring an, otherwise negative, NPV up to zero. As stated in Decision No 125/06/COL, no rational investor can be expected to launch a project with a negative NPV and for this reason the NPV calculation can serve as a demonstration of the indispensability of the aid granted.

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[38] Point 27 of the EAG in the chapter on *"Incentive effect and necessity of the aid"* states that "*investments which increase the level of environmental protection may at the same time increase revenues and/or decrease costs and thus be economically attractive in their own right."*

[39] Point 172(g) of the EAG which states that where the profitability level is negative over the life time of the project (*i.e.* full depreciation) aid will normally have an incentive effect.

In the case of the grant to Kvalheim Kraft DA, the discount rate was […]%, thus below the maximum of 8%. Furthermore, the NPV, without the aid, and, based on discount rate of […]%, is negative (with an IRR of […]%). However, the NPV, with the aid, and, based on a discount rate of […]%, is zero. The Norwegian authorities have explained that the investment strategies of two of the parent companies of Kvalheim Kraft DA, namely Vardar AS and DONG Energy Power A/S require a pre-tax rate of return between […]% and […]% for investments in onshore wind projects. Vardar has stated that […]%, is just slightly below the standard requirement and therefore acceptable. The third parent, Østfold Energi AS, requires a pre-tax rate of return between […]% and […]% and […]% is therefore clearly acceptable. On this basis the Authority considers that the Mehuken II wind park is generally in line with the investment strategies of the parent companies of Kvalheim Kraft DA.

The Authority further considers that the expected environmental effect is linked to the change in behaviour as required by point 172(b) of the EAG: Kvalheim Kraft DA would not, without the aid, have undertaken the investment in the Mehuken II wind park which increases renewable energy production with about 50.1 GWh annually. Moreover, the fact that Kvalheim Kraft DA was chosen in a public tender shows that the investment in this wind park increases environmental protection to a higher degree than investments in other wind power projects. In this regard Kvalheim Kraft DA was selected as a winner of the public tender because the Mehuken II wind park generates more renewable electricity per NOK of aid than other wind power projects.

In sum, with the NPV method aid is only granted where the project is not profitable. Therefore Kvalheim Kraft DA would not, without the aid, have engaged in the same activity (i.e., the Mehuken II wind park) because of its intrinsic benefits. Consequently, the Authority considers that the aid has the necessary incentive effect.

3.1.4 Proportionality of the aid

Point 174 of the EAG requires that the state aid amount must be limited to the minimum to bring about the investment. In making this assessment account shall be taken (i) of an accurate cost calculation (limiting the costs to the necessary); (ii) of the presence of a non-discriminatory selection process; and (iii) that the aid should not exceed the lack of profitability (including a normal return over the life time).

For reasons of simplicity, the second criterion is dealt with first. Kvalheim Kraft DA was chosen in a non-discriminatory, open and transparent selection process: The 2008 Wind Power Tender is open and transparent because it was announced in major national and regional newspapers. The tender criteria, which require that all the bidders were subject to (i) the same electricity price set by Enova; (ii) confirmation of energy production volume by an independent expert; (iii) a maximum discount rate of 8%; (iv) a maximum aid amount (defined by the amount required to bring the NPV up to zero); and (v) a project lifetime of 20 years (plus the construction period), are objective and non-discriminatory and applied in the same manner to all bidders.

The Norwegian authorities have provided a detailed description of the costs and their calculation. The calculation of eligible cost seems accurate. This, however, does not ensure that the costs are limited to the minimum necessary. The criterion that costs are kept to the minimum can be verified by examining the NPV method coupled to the public tender. In the same context, the question of whether the aid exceeds the lack of profitability can be answered.

As regards the requirement that the aid does not exceed the lack of profitability, this is exactly the objective of the NPV method. The calculation of the aid under the NPV method[40] is designed to limit the aid to the minimum necessary to trigger the project. Only aid granted to bring the NPV to zero (with a reasonable return on capital) is allowed.

Furthermore, as regards the limitation of the costs to the minimum necessary, the Authority notes that only the most efficient projects are selected in a tender procedure. The winner of the tender is selected on the basis of the highest volume of electricity produced per NOK granted as aid. This means that bidders compete on being in the need of the lowest aid amount possible. The aid amount is determined by the amount required to bring a negative NPV to zero. Important parameters for the result of the NPV (and therefore also the aid amount) are income and costs. Income is composed of the electricity price and production volume. As is clear from the above, in the tender procedure, the electricity price is set by Enova. The parameters for setting the income in the NPV are therefore the same for all bidders.[41] Hence bidders can compete in the NPV on costs and the rate of return required for the project.

As explained above, the maximum rate of return is 8 %. The competition on a lower level of rate of return is limited by two elements: (i) Enova will refuse a discount rate which, based on the overall financial and production capacity of the bidder, indicates that the project is not viable[42]; and (ii) investors will not accept a discount rate which does not provide a minimum return in view of the fact that they have also contributed own capital.

Costs are therefore the parameter fully open to competition. The higher the cost, the higher the aid amount. Since the winner of the tender is chosen by reference to the lowest aid amount, bidders with higher costs risk losing the bid. This serves to press the costs downwards. On this basis, costs are kept to the minimum.

In conclusion, the Authority considers that the NPV coupled to a public tender ensures both that costs are kept to a minimum and that the overall aid amount is limited to cover unprofitability. In light of this, the aid to Kvalheim Kraft DA is proportionate.

3.2 Analysis of the distortion of competition and trade

The Authority has examined the distortion of competition in light of the impact of the aid on competition and trade between undertakings in the relevant product markets.

The relevant product market is the market for electricity.

With regard to the relevant geographical market, the Mehuken II wind park will produce electricity for sale on the Nord Pool power exchange. The fact that the major trading pool to which Norway is connected, i.e., Nord Pool combines several national Nordic electricity markets (i.e., Danish, Swedish) could be an indication that the electricity market is wider than just the national market. However, based on the Authority's 2007 Energy Sector Inquiry, it appears that the finding of a pan-Nordic market is not justified for three main reasons.[43]

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[40] The NPV method is based on the fact that the provisions in the EAG on operating aid for the production of energy from renewable sources fixes the upper limit for the maximum aid that can be granted.
[41] Or at least independently fixed.
[42] Enova has refused discount rates as low as 1%.
[43] Energy Sector Inquiry of 10 January 2007; http://www.eftasurv.int/?1=1&showLinkID=10775&1=1

Firstly, the mere fact that there is congestion of interconnectors means that there are a certain number of hours during which the behaviour of a hypothetical dominant firm within a certain Nord Pool area would be insufficiently constrained by the competitive dynamics of neighbouring areas.

Secondly, the percentage of congested hours, and consequently the level of price differences, is significant between any two pairs of areas and over time. Furthermore, congestion levels and directions over time vary during the day. At night the flow of electricity tends to be from the South East to the North-West, as hydropower plants hold back their generation capacity for the more lucrative daytime hours. At the same time, less flexible south-eastern coal and nuclear power plants keep producing, even at lower night-time prices.

Thirdly, it appears that congestion can be foreseen (and might even be influenced) by market participants, and that congested periods between two areas are not a transitory but rather a recurrent theme.[44]

Irrespective of whether there is a pan-Nordic market, the fact that the national market share of Kvalheim Kraft DA (following the investment in Mehuken II wind park) will be 0.04% (based on the annual overall production of 63.1 GWh), means that the effect on competition and trade will be minimal. Even if account is taken of the market power of the parent companies of Kvalheim Kraft DA, namely Østfold Energi AS, Vardar AS and DONG Energy Power A/S on the Norwegian power market, the market share of Kvalheim Kraft DA (of 0.05%) remains minimal. The effects on competition and trade are therefore very limited.

This conclusion is further confirmed by the Authority's examination of whether the aid (i) provides Kvalheim Kraft DA with a first mover advantage (i.e., crowding out); (ii) maintains an inefficient company afloat; and (iii) strengthens the market power of Kvalheim Kraft DA to an extent which is detrimental for competition. The conclusion of this examination is set out in the following.

3.2.1 Dynamic incentives/crowding out

The Authority considers that the aid will not crowd out investments in other EEA States or distort dynamic incentives for investing in wind power technology.[45] On the basis of the information provided by the Norwegian authorities, the Mehuken wind park cannot be considered innovative. Kvalheim Kraft DA will invest in standard turbines (2.3 MW 93 m) which are available in the market. On this basis, the Mehuken II wind park does not provide Kvalheim Kraft DA with a first mover advantage.

3.2.2 Maintaining inefficient firms afloat

The Authority considers that the aid will not keep an inefficient firm afloat. Enova has examined the financial statements of Kvalheim Kraft DA for the last five years to ensure that the undertaking is not experiencing financial difficulties. On the basis of the information provided by the Norwegian authorities, there is no evidence that the beneficiary is in financial difficulties.

The electricity produced will be sold on the Nord Pool exchange. The Norwegian market is not characterised by overcapacities and inefficient market structures.

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[44] See Section 3.3.3 of the Energy Sector Inquiry.
[45] Point 178 of the EAG.

Kvalheim Kraft DA was selected as one of the winners in the 2008 Wind Power Tender. Hence, Kvalheim Kraft DA was chosen in a non-discriminatory and transparent manner. According to the EAG, the deployment of such a selection process lowers the risk that the aid artificially maintains the undertaking in the market.

3.2.3 Market power/exclusionary behaviour

The Authority considers that the aid will not significantly strengthen or maintain market power of Kvalheim Kraft DA.[46]

On the Norwegian market relatively small players will not realistically be able to neither dictate nor substantially influence prices. The national market power of Kvalheim Kraft DA is less than 1% (0.04 %) and hence the structure of the market for electricity production is not likely to be altered by the grant of aid to Kvalheim Kraft DA. Even if the market share of the owners is taken into account, it only represents 0.05 %. By comparison, the largest operator, Statskraft Energi AS, has a market share of 37.66% owning facilities with a total capacity of 12 351 MW producing an annual 49 496 GWh.

3.2.4 Effects on trade and location

The Authority considers that the aid will not have a significant effect on trade and location.[47] The aid is only granted to one beneficiary. All the electricity generated is intended to be sold at the Nord Pool power exchange at spot price. Because of this, the Authority considers unlikely that the aid will attract more investments in the region where Kvalheim Kraft DA is located.

3.3 Balancing

On the basis of the above, the Authority considers that the positive effects of the aid to Kvalheim Kraft DA, namely the fact that the aid is aimed at increasing renewable energy production, outweigh the limited negative potential impact which the aid might have on competition and trade.

3.4 Adjustment of aid amount

The Authority draws the attention to the fact that the Norwegian authorities have, in their notification, made reference to the “extra costs” method set forth in the EAG. The extra costs method provides that eligible costs shall be calculated by reference to a counterfactual. On this basis an aid intensity of 60% is permitted. The Norwegian authorities have stated that based on the extra costs method the aid amount of NOK 92.8 million to Kvalheim Kraft DA represents 39% of total investment costs.

However, as pointed out above the Authority has approved the Energy Fund Scheme on the basis of the premise that disbursements of aid are calculated on the basis of the NPV method coupled to a public tender. The Authority considers therefore that a calculation of the eligible costs and aid intensity by reference to the extra costs method is irrelevant for the present purposes. In any event, the Authority notes that the calculation of 39% in the notification is based on a premise that there is no counterfactual - which is not in line with the wording of the EAG.

[46] Points 181-182 of the EAG.
[47] Points 183-185 of the EAG.

Furthermore, the Authority notes that in case the investment costs turns out to be lower than initially estimated (when first calculating the NPV) Enova can adjust the aid amount by withholding up to 20% of the total award. Such adjustments are assumed to be made on the basis of the NPV method. Hence final calculations and adjustments made in the aid amount are to be based on the NPV method and references to the aid intensity expressed as a share solely of the investment costs are not relevant.

4 Conclusion

On the basis of the foregoing assessment, the Authority considers that the aid to Kvalheim Kraft DA for the Mehuken II wind park which the Norwegian authorities are planning to implement is compatible with the functioning of the EEA Agreement within the meaning of Article 61 of the EEA Agreement.

The Authority regrets that the Norwegian authorities have not respected their obligations pursuant to Article 1(3) of Part I of Protocol 3.

HAS ADOPTED THIS DECISION:

Article 1

The EFTA Surveillance Authority raises no objections to the aid to Kvalheim Kraft DA for the establishment of the Mehuken II wind park amounting to NOK 92 879 953 million because it is compatible with the EEA Agreement within the meaning of its Article 61(3)(c).

Article 2

The implementation of the measure is authorised accordingly.

Article 3

This Decision is addressed to the Kingdom of Norway.

Article 4

Only the English language version of this decision is authentic.

Decision made in Brussels, on 15 December 2010

For the EFTA Surveillance Authority

Per Sanderud	Sverrir Haukur Gunnlaugsson
President	*College Member*