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**Subject: State Aid SA.43751 (2016/N) – Denmark  
Design and construction of a 350 MW offshore wind capacity**

Sir,

## **1. PROCEDURE**

- (1) Following pre-notification contacts, by electronic notification of 4 August 2016, Denmark notified, pursuant to Article 108(3) of the Treaty on the Functioning of the European Union (TFEU), a tender for offshore wind power in nearshore areas in Denmark.

## **2. DESCRIPTION DE THE MEASURE**

### **2.1. Background and objectives of the notified project**

- (2) The notified measure consists of a tender for the design, construction and operation of 350 MW offshore wind capacity in five nearshore areas on the coast of Denmark (North Sea south, North Sea north, Sæby, Smålandsfarvandet and Bornholm). Each area can be developed with up to 200 MW, except for the area of Bornholm, which can be developed with up to 50 MW. The wind farms shall be connected to the power grid by 31 December 2020.
- (3) By 2020, Denmark is aiming to supply 30% of final energy consumption with energy from renewable sources. By 2050, Denmark aims to have phased out fossil fuel based energy production entirely.
- (4) According to Denmark, the construction of the 350 MW offshore wind capacity in nearshore areas on the coast of Denmark will make an important contribution

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to fulfilling the 2050 ambition, which under one scenario modelled by the Danish Energy Agency will require an additional 400MW of wind capacity to be built in Denmark each year between 2020 and 2050. The 350 MW offshore wind capacity in nearshore areas on the coast of Denmark will reduce CO<sub>2</sub> emissions in Denmark, since the electricity generated by the wind farm will displace electricity produced from fossil fuels.

## **2.2. National legal basis**

- (5) Once the tender process is complete, a bill will be introduced to the Danish Parliament authorising the amount of State aid, equal to the best and final offer to be paid to the producers operating the offshore wind farms for the electricity produced by the offshore wind farms in nearshore areas. A combination of this bill with operator licences, the tender specifications and the concession agreement, will form the legal basis for the measure. The concession is conditional to the bill being adopted by the Danish Parliament no later than 1 January 2017.

## **2.3. Beneficiaries**

- (6) In September 2013, a prior information notice was published and potential economic operators were invited to participate in a technical dialogue. The purpose of the prior information notice was to inform interested economic operators about the existence of the project and the possibility of participating in the technical dialogue.
- (7) The beneficiaries were selected through a tender process; the procedure chosen was a restricted procedure with negotiations. The tender was published in the Official Journal of the European Union on 25 February 2015<sup>1</sup>. Preliminary tender specifications were published on 4 May 2015. After negotiations with the tenderers, the final tender specifications were published on 29 April 2016 and updated on 20 June 2016. Final offers were received by 1 September 2016.
- (8) The tender is a multi-site tender. Tenderers can submit offers for five predefined areas, each of which can hold up to 200 MW with the exception of the area of Bornholm that can hold up to 50 MW. The Danish Energy Agency will use a formula in order to calculate all possible combinations of tenders which add up to 350 MW at the lowest average price. The contract will be awarded to the combination of tenders which add up to 350 MW at the lowest average price. If several incompatible best and final offers are submitted with the same lowest average price for the total development, the tenderers in question will be invited to submit a new offer with a lower price for the same development. The new tender must be available within five calendar days after the call for new tenders.

## **2.4. Form of aid and duration**

- (9) The beneficiary will be granted a premium on top of the electricity price for the electricity production. The premium will be calculated for each hour and will be the difference between the price per kWh bid in the tender process (the 'target price') and the Nord Pool spot price for electricity in the relevant electricity grid

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<sup>1</sup> Contract notice no. 2015/S 039-065965

price area in question (DK1 or DK2). In this context, the spot price is the day-ahead auction price.

- (10) This premium will be paid for the first 50,000 full load hours of production (Denmark estimates that the wind farm will receive a subsidy for approximately 11-12 years from the time of the connection to the power grid). The premium can only be granted for a maximum of 20 years from the connection of the wind farm to the power grid. The concession and the licence to exploit the wind power will allow the Concessionaire to exploit the wind energy for 25 years. According to Danish accounting rules, the plants will be fully depreciated after around 25 years.
- (11) The exact amount of the premium is determined by the final offers which are subject to a price cap of 0.70 DKK per kWh.
- (12) For hours in which the day-ahead auction price is higher than the target price, the premium will be negative. This amount will be deducted from the next positive premiums due to the beneficiary. There is no limit in the length of the period in which negative price supplements can be calculated.
- (13) No premium will be granted for production during hours when the spot price is zero or negative. In this context, the spot price is the day-ahead auction price.
- (14) The beneficiary will be responsible for finding a market for the electricity produced, and must cover any costs associated with selling its output into the market. The beneficiary will also face standard balancing responsibilities and be responsible for its balancing arrangements and costs.

## 2.5. Budget and financing

- (15) Denmark has estimated the expenditure for the premiums (see Figure 1):

Figure 1: Estimated PSO expenditures in 2016 prices, million DKK

2020	364
2021	682
2022	656
2023	623
2024	604
2025	579
2026	562
2027	546
2028	530
2029	514
2030	499
2031	384
2032	220
Total	6.762

*Source: Denmark*

- (16) The costs of the premiums paid to the beneficiary will be financed by electricity consumers, through a so-called PSO (public service obligation) tariff imposed on customers of transmission and distribution of electricity services. In principle, the

same PSO tariff is paid by all consumers and for all electricity supplied from the collective electricity grid<sup>2</sup>.

- (17) The tariff is collected by the distribution system operators (DSOs), but transferred to the TSO, Energinet.dk, which manages payments according to the relevant legislation and sets the future tariffs on a quarterly basis. The PSO tariff to a large extent finances measures aimed at promoting green energy production.

### **3. ASSESSMENT**

#### **3.1. Presence of State aid**

- (18) Article 107 (1) TFEU states that 'any aid granted by a Member State 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 Member States, be incompatible with the common market'.
- (19) The support will be financed through the PSO levy, i.e. through financial resources under the control of the State. The beneficiaries will receive an advantage in the form of direct grants (a premium) for generating electricity. Such support would normally not be available under market conditions. The notified measure favours the generation of electricity from offshore wind installations in nearshore areas operated by the beneficiaries and is therefore selective. Electricity is widely traded within the European Economic Area (EEA) and therefore the notified measure is likely to distort the competition on the electricity market and affect trade across the EEA. Therefore the notified measure constitutes State aid in the meaning of Article 107 TFEU.

#### **3.2. Legality**

- (20) The measure has not yet been put into effect. Thus, by notifying the measure, Denmark has complied with the standstill obligation set out in Article 108(3) TFEU.

#### **3.3. Compatibility under the Environmental and Energy Aid Guidelines**

- (21) The notified measure falls within the scope of the Guidelines on State aid for environmental protection and energy 2014-2020 (EEAG)<sup>3</sup>. The Commission has assessed the notified measure against the general compatibility provisions of the EEAG (EEAG Section 3.2) and against the specific compatibility criteria for operating aid granted for electricity from renewable energy sources (EEAG Sections 3.3.1 and 3.3.2.1) as required in point 120 for individual notified operating aid measures.

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<sup>2</sup> Reduced PSO tariffs apply for consumers with a consumption exceeding 100 GWh and for installations that generate electricity for their own consumption. These reductions are not dealt with in this decision.

<sup>3</sup> OJ C 200 of 28.06.2014.

### *3.3.1. Objective of common interest*

- (22) According to point 31 EEAG, a Member State needs to define the objective of common interest pursued by the measure and explain its contribution towards this objective. Denmark has explained that the measure will contribute to achieving its long term targets to decarbonise its energy sector.
- (23) The Commission considers that the notified aid measures are aimed at an objective of common interest in accordance with Article 107(3)(c) TFEU.

### *3.3.2. Need for State aid, incentive effect and appropriate instrument*

- (24) In EEAG point 107 the Commission acknowledges that 'under certain conditions State aid can be an appropriate instrument to contribute to the achievement of the EU objectives and related national targets'.
- (25) In principle, Member States need to demonstrate that State aid is necessary to remedy a market failure that otherwise would remain unaddressed (point 37 EEAG). However, the Commission presumes that such a market failure still exists in the field of renewable policy (point 115 EEAG).
- (26) According to point 116 EEAG, to allow Member States to achieve their targets in line with the EU 2020 objectives, the Commission presumes the appropriateness of aid provided all other conditions are met.
- (27) In line with EEAG point 49, the incentive effect occurs if the aid induces the beneficiary to change his behaviour towards reaching the objective of common interest which it would not do without the aid.
- (28) The Commission further notes that the applications were submitted before work on the project had started in line with point 50 EEAG.
- (29) The Commission notes that without the aid the notified project would not be financially viable, as, once construction costs are accounted for, the offshore wind farms in nearshore areas will generate electricity at a higher cost than the expected market price of electricity. Denmark has explained that the levelised cost of electricity (LCOE) for offshore wind power is higher the LCOE of electricity produced from onshore wind farms and from fossil fuel based power plants. The best and final price of 0.77 DKK per kWh offered in the competitive bidding process held in relation to the Horns Rev 3 project<sup>4</sup> is considerably higher than the wholesale prices for electricity which are approximately 0.25 DKK per kWh. The aid is therefore necessary to bring forward investment in offshore wind generation, and provides an incentive for this investment.
- (30) Consequently, the Commission considers that the aid for the notified project is necessary, provides the necessary incentive effect to address the objective of common interest, and is granted through an appropriate instrument.

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<sup>4</sup> SA.40305 (2015/N) – DK – Danish offshore wind farm Horns Rev 3.

### 3.3.3. *Proportionality*

- (31) According to point 69 EEAG, environmental aid is considered to be proportionate if the aid amount per beneficiary is limited to the minimum needed to achieve the environmental protection objective.
- (32) The EEAG recognise in point 126 that the proportionality of the aid can be ensured if the aid is granted through a competitive bidding process. As the tender provisions apply as of 2017 and the national legal basis shall be adopted before 1 January 2017, the EEAG allow the bidding process to be limited to specific technologies without further justification.
- (33) The Commission has assessed the compatibility of the tender process with the definition in point 19(43) EEAG and the extent to which this provides a sufficient safeguard against overcompensation.
- (34) The tender process will allow the bidders to compete to set the lowest level of aid required to bring forward the required investment, which will only be paid to the combination of tenders with the lowest average price. The selection of the combination of tenders with the lowest average price after a competitive process will ensure the proportionality of the measure.
- (35) Point 129 EEAG requires that aid is only granted until the beneficiary plant has been fully depreciated according to normal accounting rules and any investment aid is deducted.
- (36) Denmark has explained that the offshore wind farms will not be fully depreciated according to Danish accounting rules until after aid payments have ceased. The aid is limited to the first 50 000 full load hours of production by the wind farm, expected to be around 11-12 years' operation at typical load factors for Danish offshore wind. The depreciation period of the wind farms is around 25 years and the Danish authorities confirmed that it will not be less than the maximum period before aid payments cease (20 years). Moreover, no other aid will be granted to the project. The measure therefore satisfies this requirement.
- (37) Based on the information provided, the tendering process can be considered a competitive bidding process. Accordingly, the Commission considers that the aid granted for the notified projects will be proportional.

### 3.3.4. *Cumulation and transparency*

- (38) The premium payment determined under the tender process will be the only subsidy available to the beneficiary; therefore, there is no cumulation of aid.
- (39) Denmark has committed to comply with the transparency requirements in EEAG points 104 - 106.

### 3.3.5. *Distortion of competition and balancing test*

- (40) According to point 90 EEAG, the Commission considers that although aid for environmental purposes will tend to favour environmentally friendly technologies at the expense of other more polluting ones, the effect of the aid will in principle not be viewed as an undue distortion of competition since it is inherently linked to its objective of making the economy greener. The Commission must take into

account the overall environmental effect of the measure in relation to its negative impact on the market position and profits of non-aided firms.

- (41) Denmark has explained that the measure will provide an environmental benefit by displacing the production of electricity from burning fossil fuels, and therefore reducing CO<sub>2</sub> emissions and will contribute in the long term to reducing the costs of offshore farm wind technology.
- (42) Point 116 EEAG states that, to allow Member States to achieve their targets in line with the EU 2020 objectives, the Commission presumes the limited distortive effects of the aid provided all other conditions are met.
- (43) The Commission therefore considers that the measure will not have undue distortive effects on competition and trade so that the overall balance is positive.

### 3.3.6. *Compliance with other Treaty provisions*

- (44) In accordance with point 29 EEAG, as the PSO levy has the aim of financing the support for green electricity, the Commission has examined its compliance with Articles 30 and 110 TFEU.
- (45) According to the case-law, a charge which is imposed on domestic and imported products according to the same criteria may nevertheless be prohibited by the Treaty if the revenue from such a charge is intended to support activities which specifically benefit the taxed domestic products. If the advantages which those products enjoy wholly offset the burden imposed on them, the effects of that charge are apparent only with regard to imported products and that charge constitutes a charge having equivalent effect, contrary to Article 30 TFEU. If, on the other hand, those advantages only partly offset the burden borne by domestic products, the charge in question constitutes discriminatory taxation for the purposes of Article 110 TFEU and will be contrary to this provision as regards the proportion used to offset the burden borne by the domestic products.<sup>5</sup>
- (46) If domestic electricity production is supported by aid that is financed through a charge on all electricity consumption (including consumption of imported electricity), then the method of financing, which imposes a burden on imported electricity not benefitting from this financing, risks having a discriminatory effect on imported electricity from renewable energy sources and thereby violate Articles 30 and/or 110 TFEU<sup>6</sup>.
- (47) The aid measure subject to the present notification will be financed through a PSO tariff paid by electricity consumers. The tariff will be levied on electricity consumption, which may therefore also cover electricity imported from other EEA States. The Commission therefore is concerned that the financing mechanism could entail discrimination against imports within the meaning of Articles 30 and 110 TFEU.

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<sup>5</sup> Joined Cases C-128/03 and C-129/03 *AEM*, EU:C:2005:224, paragraphs 44 to 47; Case C-206/06 *Essent*, EU:C:2008:413, paragraph 42.

<sup>6</sup> Case 47/69 *France v Commission*, EU:C:1970:60, paragraph 20. See also Case SA.38632 (2014/N) *Germany – EEG 2014 – Reform of the Renewable Energy Law*.

- (48) In order to remedy the potential discrimination, Denmark has committed<sup>7</sup> to open up the RES pilot tenders<sup>8</sup> for producers established in other EEA States, up to a share of 6% of the tendered capacity or up to 2.4 MW during this two year period (the bigger of the two figures shall prevail)<sup>9</sup>. The percentage figure has been established as a function of Denmark's total imports of green electricity from the neighbouring countries (Norway, Sweden and Germany) divided by the total electricity supply in Denmark and multiplied by the yearly new installed green electricity capacity. The imports of green electricity have been calculated as the average share of imports (more specifically imports not due to transit, but for consumption in Denmark only) from each of the neighbouring countries multiplied with the renewables share of total electricity production in each of the respective countries. The chosen formula reflects Denmark's situation as a transit country for electricity from Scandinavia, by only taking into account the share of imported electricity actually consumed in Denmark (given that only this share is effectively subject to the PSO charge).
- (49) The opening of the tenders to producers in other EEA States is subject to the conclusion of cooperation agreements. This condition is in line with point 122 EEAG and the Renewable Energy Directive<sup>10</sup> which provides that Member States can set up cooperation mechanisms (Articles 6 to 11).
- (50) The participation in the tenders is further subject to evidence that the physical import of electricity from renewable sources will effectively take place, as far as the presentation of such evidence is feasible. This condition is in line with Articles 30 and 110 TFEU as without imports, no discrimination in the sense of Articles 30 and 110 TFEU would occur in the first place. In addition, Denmark needs to ensure that the electricity is indeed delivered to Denmark.
- (51) As the opening of the tenders removes the risk of discrimination against producers of green electricity in other Member States, the financing of the schemes through the PSO tariff will be compliant with Articles 30 and 110 TFEU until 31 December 2016.

### 3.3.7. *Conclusion with regard to the compatibility of the measure*

- (52) In light of the above, the Commission considers that the notified aid measure is compatible with the internal market.

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<sup>7</sup> See Commission decisions in cases SA.36204 – Aid to photovoltaic installations and other renewable energy installations, and SA.37122 – Aid to household wind turbines and to offshore wind turbines with an experimental aspect.

<sup>8</sup> In a transitional phase covering the years 2015 and 2016, aid for at least 5% of the planned new RES-e capacity should be granted in a competitive bidding process (See point 126 of the EEAG).

<sup>9</sup> Denmark notified a pilot tender for aid to solar PV that is open to producers established in Germany up to 2.4 MW (case SA. 44626). Denmark and Germany signed a cooperation agreement.

<sup>10</sup> Directive 2009/28/EC of 23 April 2009.

#### 4. CONCLUSION

- (53) The Commission has accordingly decided not to raise objections to the aid on the grounds that it is compatible with the internal market pursuant to Article 107(3)(c) of the Treaty on the Functioning of the European Union.

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Yours faithfully  
For the Commission

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