

To the Points of Contact for the Espoo Convention in Sweden, Finland, Latvia and Lithuania

Our ref 9 July 2020 No 7-12/20/2555-2

Notification in accordance with Article 3 of the Convention on Environmental Impact Assessment in a Transboundary Context concerning the Saare Wind Energy OÜ offshore windfarm project in the west coast of Saare county

As the Party of origin, Estonia is hereby sending a notification in accordance with Article 3 of the Environmental Impact Assessment in a Transboundary Context (Espoo Convention) of the project plan by the developer, Saare Wind Energy OÜ, to construct an offshore windfarm in the west coast of Saare county.

## Description of the project

The developer plans to construct an offshore windfarm consisting of 100 wind turbines with a total capacity 600 MW. The project includes an offshore substation and cables connected to the substation and an electricity transmission system up to the land-based connection point. The planned area of the windfarm is 154,4 km². The developer is also considering the possibility of co-operation on the connection of the windfarm with an additional electricity connection between Estonia and Latvia. A schematic map illustrating the location of the project can be found in Annex 1 to this letter.

The proposed activity potentially results in significant environmental impact which may be transboundary. Therefore, the Consumer Protection and Technical Regulatory Authority has asked the Ministry of the Environment to notify the potential affected Parties.

## EIA procedure

The decision-maker (i.e. issuer of development consent) is the Government of the Republic of Estonia. On April 9, 2015 the developer submitted an application for superficies licence (see Annex 2) to the Ministry of Economic Affairs and Communications (i.e. authority carrying out the proceedings regarding the application). After an amendment in the respective legislation, proceedings regarding this application have been transferred to the Consumer Protection and Technical Regulatory Authority. Pursuant to the Water Act, superficies licence is the right to encumber a delimited part of a public water body with construction works that are permanently connected to the bottom of the water body and are not permanently connected to the shore, for a specified term. The developer is applying for the superficies licence for 50 years.

According to the Environmental Impact Assessment and Environmental Management System Act (hereinafter *the Act*), the decision-maker will make a decision to initiate or refuse to initiate environmental impact assessment (EIA) on the basis of an application for development consent. The Government of the Republic of Estonia initiated EIA of the project on May 28, 2020, order no 183 (see Annex 3).

In this particular case, a specification stipulated in the Act must be followed. Therefore, in terms of the EIA procedure of the project, the version of the Act that was in force at the time of submission of the application

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for development consent must be applied. Please be informed that compared to the present EIA procedure some important differences exist in the former redaction of the Act.

According to respective former redaction of the Act, after the initiation of EIA the expert or, an expert group under the supervision of the expert, will, jointly with the developer, prepare an EIA programme (scoping document). The decision-maker will organize the publication of the EIA programme (i.e. public display and public hearing). After the publication stage and taking account of results of the publication, the developer submits the programme to the supervisor of EIA for making the decision to approve or refuse approval of the EIA programme.

On the basis of the approved EIA programme, the EIA report is prepared. The EIA report stage includes similar proceedings as described as regards the EIA programme stage.

Upon making a decision to grant or refuse to grant development consent, the decision-maker will take account of the results of EIA and the environmental requirements appended to the report. This also includes, where relevant, the results of transboundary consultations.

If the affected Party intends to participate in the EIA procedure, the draft EIA programme and report are forwarded to the affected state. Consultations are commenced concerning environmental impact resulting from the proposed activity and environmental measures to be taken.

## Answer to the notification

Kindly send the answer to this notification to the Ministry of the Environment (keskkonnaministeerium@envir.ee) by September 7, 2020 and:

- acknowledge the receipt of the notification;
- indicate whether your country intends to participate in the transboundary EIA procedure;
- provide possible comments concerning the scope for the assessment of the environmental impacts of the project affecting your country.

## Contacts information

Developer: Saare Wind Energy OÜ – Mr Kuido Kartau, info@swe.ee.

Decision-maker: Consumer Protection and Technical Regulatory Authority (i.e. authority carrying out the proceedings regarding the application) – Mrs Liis Piper, <u>his.piper@ttja.ee</u>.

Supervisor of EIA and transboundary EIA procedure: Ministry of the Environment of Estonia – Mr Rainer Persidski, rainer.persidski@envir.ee.

Sincerely Yours,

Kaupo Heinma

Point of Contact for the Espoo Convention

## Enclosures:

Annex 1 - map of the location of the proposed project

Annex 2 – application of the developer

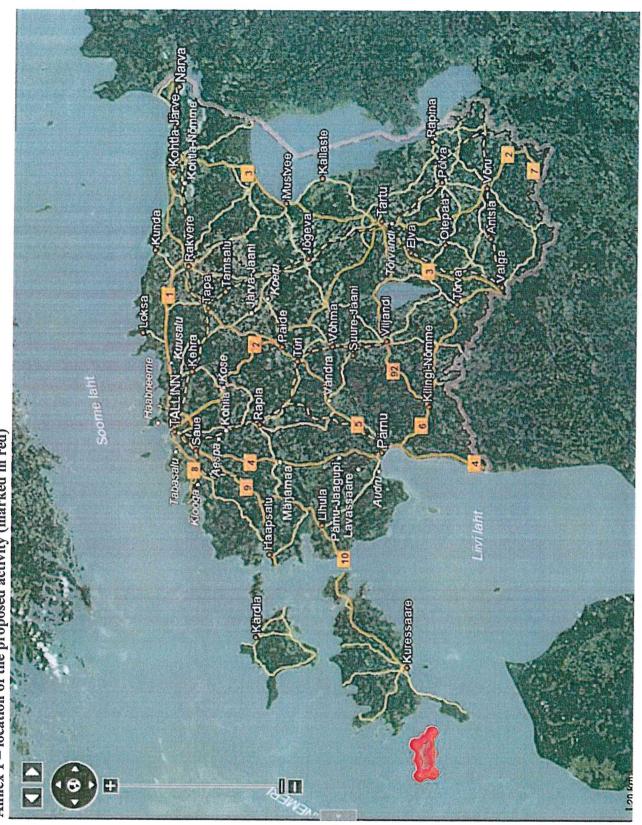
Annex 3 – EIA initiation decision (unofficial translation)

## List of recipients (Points of Contact):

Finland: Ms Seija Rantakallio, seija rantakalho@ym.fi Latvia: Ms Sandija Balka, sandija balka@yaram.gov.ly Lithuania: Mr Vitalijus Auglys, yitalijus auglys@am.lt

Sweden: Mr Richard Kristoffersson, richard kristoffersson@swedishepa.se

For information:
Saare Wind Energy OÜ, info@swe.ee
Consumer Protection and Technical Regulatory Authority, info@ttia.ee



Annex 1 - location of the proposed activity (marked in red)



Ministry of Economic Affairs and Communications Harju 11, Tallinn 15072

Technical Regulatory Authority Sõle 23A, Tallinn 10614

> 07.04.2015 Updated 15.10.2015<sup>1</sup>

## Application for superficies licence for encumbering public water body with wind power plant

Hereby we submit an application for a superficies licence for the establishment of a wind power plant<sup>2</sup> in the territorial sea of the western coast of Saaremaa.

The application has been drawn based on the requirements provided for in the Water Act (§ 22<sup>6</sup>) and Electricity Market Act (§ 92<sup>1</sup> lg 2).

### **General information**

Saare Wind Energy OÜ (hereinafter also as SWE OÜ) is planning the development of an offshore wind farm in the territorial sea of the western coast of Saaremaa.

The location of the offshore wind farm is generally in the preferred region for the establishment of wind farms set out in the national spatial plan of Estonia 2030+. The existing nature reserves, fairways, sufficient distance from the coast etc have also been taken into account. The depth of the sea in that area is approximately 20-35 metres.

General overview of the planned offshore wind farm has been given on figure 1 in annex 1.

The planned capacity of the wind farm is 600 MW and according to the initial production calculations (confidential in details) the total production volume is approximately 2.8 TWh per year.

In the presently drawn up solution the plan is to use 100 Siemens SWT-6.0-154 (<a href="http://www.energy.siemens.com/hq/en/renewable-energy/wind-power/platforms/d6-platform/">http://www.energy.siemens.com/hq/en/renewable-energy/wind-power/platforms/d6-platform/</a>) wind turbines, each with the power of 6 MW.

Saare Wind Energy OÜ Tartu mnt. 24-20, Tallinn 10115 Registry code: 12747106

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<sup>&</sup>lt;sup>1</sup> Amendments to the Water Act as of 1.07.2015 entered into force after submission of the application for superficies licence and therefore the proceeding of the superficies licence has been transferred to Technical Regulatory Authority and some of the aspects of requirements for the superficies licence application have changed. This update includes the necessary corrections.

<sup>&</sup>lt;sup>2</sup> Hereinafter in this application the planned wind power plant encumbering a public water body has also been referred to as an offshore wind farm.



The developer has entered into a cooperation contract with Siemens Wind Power A/S (Denmark) but due to the confidentiality agreement the specific content of the agreement cannot be disclosed in the present document.

Connection with the Estonian transmission network takes place according to the technical requirements issued by Elering AS to SWE OÜ in Lihula – Sindi – Kilingi-Nõmme area either in Sindi or Lihula substation.

A solution including the submarine power cable and mainland electricity transmission system shall be erected from the offshore wind farm to the connection point, which shall be specified and supplemented with additional works separately from this application for superficies licence (including spatial plans on mainland).

In terms of connection of the offshore wind farm, cooperation possibilities with a potential additional electricity connection between Estonia and Latvia shall be analysed.

Taking into account the time spent on official procedures (incl procedure of the superficies licence and the EIA<sup>3</sup> being part thereof with studies), the construction period and launch phase, the forecast time of commissioning of the wind power plant and connection with network is 2022.

The cost of the planned wind power plant (including the connection fees and erection of submarine power cables) according to the calculations made within the business plan is in the scale of 1.7 billion euros. It is a large-scale investment object and its development includes the involvement of additional capital and the organisation's growth in stages according to the development stages of the project.

According to the financial calculations the investments cannot only be covered with equity and loans, therefore the development of the offshore wind farm project also accounts for participation in the flexible mechanisms of Kyoto protocol of the UN climate convention, joint implementation and emission trading and possibility of selling the emission reduction units as a result of the project. Depending on the developments of quota trade the sale of millions of quotas on the international market provides a significant addition for investments.

According to the Electricity Market Act (§ 92<sup>2</sup>) a superficies licence to build a wind power plant on a public water body may only be granted to an electricity undertaking within the meaning of the Electricity Market Act or to an undertaking which belongs to the same group with an electricity undertaking within the meaning of section 2(3) of the Competition Act.

SWE OÜ is presently an electricity undertaking (producer and seller) producing electricity with solar panels in Jüri, Harju County and selling it to other companies. The share capital of SWE OÜ is more than the 31 950 € required by law.

By the time of issue of the superficies licence for the developed project (i.e the requirement of the Electricity Market Act) SWE OÜ shall be transformed into a company corresponding to the scale of the project through the involvement of additional energy companies, cooperation partners and investors.

In this stage many experts of the field and professionals have been engaged, e.g Hendrikson & Ko OÜ who has big experiences in the area of environment management and sea planning in Estonia has also participated as a consultant in the preparation of this application.

According to the calculations of the business plan, the wind farm is not economically profitable if the developed project did not participate in Kyoto flexible mechanisms and it would not be possible to sell the emission reduction units at the international greenhouse gases emissions trading.

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<sup>&</sup>lt;sup>3</sup> EIA – environmental impact assessment



The project does not put a price pressure on Estonian electricity consumers through the increase of renewable energy fee because the annual total amount of the fee is limited.

## Purpose of use of the structure

Above all, erection of an offshore wind farm is an important step in the gradual transfer to renewable energy sources in the production of electricity. Taking into account the objectives established by the EU for 2030, the emission of greenhouse gases must be decreased by 40% compared to the 1990s, production of electricity with renewable sources must be taken to 27% and in a longer-run reach a carbon-free economy, the planned wind farm contributes significantly to the achievement of the objectives. Considering the annual electricity production of 2 800 GWh the emission of nearly 2.5 million tons of CO2 in the atmosphere is avoided. The planned electricity production would make 21% of Estonia's annual electricity production for 2014 (13 274 GWh).

The purpose of using the offshore wind farm is the <u>production of electricity and transfer thereof to the transmission network</u>. The work of the wind power plant is planned as continuous work during the entire operation period (2 x 20-25 years) and the production volume thereof mainly depends on the offshore wind speed and the service quality of wind turbines.

## Maximum height and depth of the structure and other significant technical data

The offshore wind farm is composed of wind turbines, power cables connected therefrom to the offshore substation, offshore substation and electricity transmission system to the mainland connection point (transmission network's substation).

Wind turbines. According to the present solution the plan is to use Siemens SWT-6.0-154 (<a href="http://www.energy.siemens.com/hq/en/renewable-energy/wind-power/platforms/d6-platform/">http://www.energy.siemens.com/hq/en/renewable-energy/wind-power/platforms/d6-platform/</a>) wind turbines.

Some of the most important technical data of the wind turbines are as follows:

0	power	6 MW;
0	rotor's diameter	154 m;
0	height of the tower to be specified but approx.	102 m;
0	suitable wind speed for production of electricity	3-25 m/s;
0	weight of gondola and blades	360 tons.

Therefore the maximum height of the structures from ground is 180 metres from sea level.

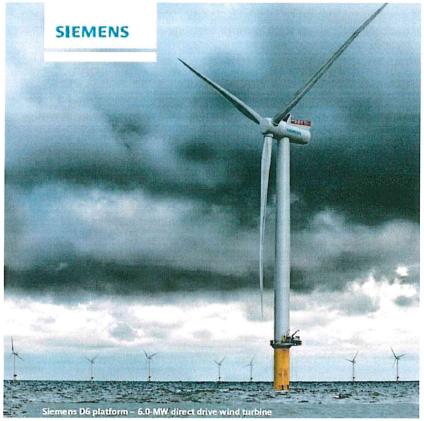
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http://www.energy.siemens.com/hq/pool/hq/power-generation/renewables/wind-power/platform%20brochures/D6%20Offshore%20brochure English Apr2014 WEB.pdf

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In general, one of the three principal foundation types shown on the following drawing are used for the positioning of wind turbines (Diagram 1), of which the first and second one are most common.



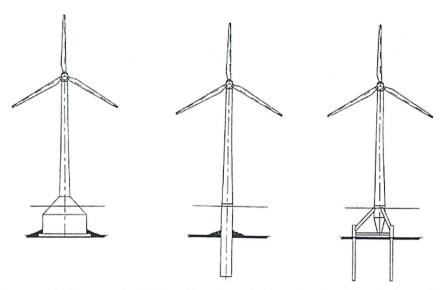


Diagram 1. Types of wind turbine foundations (gravity foundation, pile foundation, tripod foundation)

Above all, the specific type of wind turbine foundation depends on the seabed geology. In case of hard sediments (basement rocks, limestone etc), ramming a pile foundation in the ground may not be possible. In case of soft sediments (soft clay, sea mud etc) the concrete foundation may sink into sediments with decreased controllability (slanted).

The depth of dredging a pile into the ground depends on the geological situation and may be up to 15-20 metres in seabed sediments.

Taking into account the potential ice conditions of the Baltic Sea, the solution used in the offshore wind farm according to the present prerequisites is the gravity foundation.

Gravity foundation is positioned on seabed without dredging. It may be necessary to remove soft sediments to the depth of up to few metres (mud etc) and to level the seabed (including rocks). Therefore the depth of gravity foundation is up to 3 metres in seabed sediments.

The depth of installing the wind turbines is 20-35 metres.

Therefore if the pile foundation or tripod foundation with piles is used, the depth of the structure from the surface to the bottom of the sea is 20-35 metres and additionally up to 20 metres in seabed sediments. The maximum total depth of the structure measured from the surface of the sea is up to 55 metres.

In case of the gravity foundation the relevant maximum depth is 38 metres from the surface of the sea (up to 35 metres water layer + 3 metres substratum).

The surface area of each foundation is up to 500 m<sup>2</sup>.

According to the present knowledge the seabed is mainly sandy and rocky.

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In addition to the wind turbines, a substation shall also be established in the offshore wind farm and an internal submarine power cable system shall be erected from the wind turbines to the substation. A power cable is guided from every wind turbine for the transmission of produced electricity. These cables shall be aggregated/joined and directed to the offshore substation of the wind farm. In the so-called electricity "collection" system of wind farm, the voltage applied is up to 33 kilovolts (kV). These cables are installed in the seabed or buried relatively shallow in the seabed surface (up to 1 metre deep).

Offshore substation. The substation established in the offshore wind farm is a platform based on an analogous foundation as the wind turbines and on which the substation is located where the electricity produced in wind turbines and collected with the internal cables of the wind farm is raised to a higher voltage (presumably 110-150 kV) and the transmission system begins here (offshore cable + mainland cables or overhead lines) up to the connection point located on mainland substation (e.g Sindi).



Photo 1. Illustrative example of a substation of Nysted offshore wind farm in Denmark.

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A solution including the submarine power cable from the wind farm to the connection point and the mainland transmission system shall be established and which shall be specified and supplemented with additional works separate from this superficies licence application (including mainland spatial plans).

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Electricity transmission on mainland shall be solved with other relevant plans and projects and these are not part of the present application.

Submarine power cable has been planned from the offshore wind farm in the direction of Saaremaa but the exact location thereof shall be specified in the subsequent process based on the mainland solution, conditions to be specified in the sea (incl. EIA) and other circumstances.

In terms of the connection of the offshore wind park, cooperation possibilities regarding a potential additional electricity connection between Estonia and Latvia shall be analysed.

Presently, the initial conceptual solution of the transmission system has been drawn as well as the spatial location thereof, see figure 2 in annex 1.

In terms of the connection of the offshore wind park, cooperation possibilities regarding a potential additional electricity connection between Estonia and Latvia shall be analysed, however this solution has not been added to this document in detail.

Upon installation of the transmission system it has been considered that it would be safe and could be implemented technically, takes into account nature protection restrictions (passes through protected areas and the valuable parts thereof as little as possible), socioeconomic interests (e.g fisheries, land use) and would be economically expedient.

The length of the transmission system from the substation located in the offshore wind farm to the transmission network' transmission line is 186 kilometres (see figure 2). The mainland part thereof is 33 kilometres long and the part in sea i.e submarine power cable is 153 kilometres long.

Regardless of the large transmission capacity (600 MW) the diameter of the submarine power cable is in the scale of a couple dozen centimetres (we assume up to 30 cm). Therefore the area of seabed directly used by submarine power cable is 45 900 square metres.

The submarine power cable is installed with the help of specific cable installation ships. The cable can also be ploughed into seabed with a plough-like device which firstly opens a furrow in the seabed, installs the cable and the same device also closes the furrow thereafter. It is also possible to create a dredge in the seabed, install the cable from another ship and cover the cable with the seabed surface as the third work operation. The specific work technology shall be chosen taking into account the circumstances of the final utility line and the technical capacity of cable installation companies.

Upon installing the cable the width of the work corridor extends from a couple of metres up to a couple dozen metres. In this stage the assumed width of the work corridor is approximately 30 metres. In this case the construction area of the submarine power cable is 4 590 000 square metres i.e  $4.6 \text{ km}^2$ .

According to Regulation No 19 by the Minister of Economic Affairs and Communications of 2007 Extent of protected zone of an electrical installation and operating procedure in protected zone, the protected zone of a water power cable is 100 metres on both sides of the cable i.e a corridor with the width of ca 200 metres. Therefore, the area of the protected zone is 30.6 million square metres i.e 30.6 km².

The area under construction of the water power cable depends on the choice of technology specified in the subsequent development of the project, the specific choice of the utility line and the opinion of the decision-maker on how the area under construction is specified (cable width, width of the construction works corridor or width of protected zone).

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Photo 2. Illustrative photo of the plough which can be used for dredging the cable in the seabed.

Coordinates of the encumbered area of public water body and size of the encumbered area in square metres and the number of structures on the encumbered area and area under construction of the structure

The offshore wind farm is planned at the distance of 10-27 km from the western coast of Saaremaa. The maximum area encumbered with the offshore wind park superficies licence is 154.4 million  $m^2$  (154.4 km²) and the coordinates of most important extreme points are:

1)	21°28,646′ E	58° 9,466′ N
2)	21°46,115′ E	58°11,080′N
3)	21°53,362´E	58° 6,386′ N
4)	21°30 178′ F	58° 5 669′ N

100 wind turbines are planned in the offshore wind farm. The specific location thereof shall be determined in the subsequent course of superficies licence procedure taking into account the conditions of different participants in proceeding and conditions specified in the course of environmental impact assessment and technical-economic circumstances also specified in the subsequent process.

In the optimal solution of the offshore wind farm the wind turbines with the planned size are located at the distance of approx. 800-1100 metres from each other. Therefore the sea territory encompassed by 100 wind turbines together with the area between turbines is in the scale of 100  $\rm km^2$  (100 million  $\rm m^2$ ).

The foundation of each wind turbine is in the scale of up to 500 m<sup>2</sup>. Therefore the seabed area of 100 wind turbines is approx. 50 000 m<sup>2</sup>. If we consider the projection of the maximum reach

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(diameter 154 m) of the wind generator's blades/rotor on ground/sea as the construction area, the area of one wind turbine is approx. 19 000 m<sup>2</sup> and the area of 100 wind turbines is 1 900 000 m<sup>2</sup> i.e 1.9 km<sup>2</sup>.

One 1 substation shall be erected in the offshore wind farm which is a platform based on an analogous foundation as the wind turbine and the area of such structure is in the scale of 500 m<sup>2</sup>.

The length of the electricity transmission system from the substation of the wind farm to the transmission network's transmission line is 186-km, -of which 153-km- is submarine power cable. The area of seabed directly used by the submarine power cable is  $45\,900\,\text{m}^2$ . -Taking into account also the corridor of construction works among the area under construction and encumbered area (width up to  $30\,\text{metres}$ ) the area is  $4\,590\,000\,\text{m}^2$  ( $4.6\,\text{km}^2$ ) and if we also account for the protected zone for the submarine power cable among the area under construction and encumbered area (width  $200\,\text{metres}$ ), the area is  $30.6\,\text{million}\,\text{m}^2$  ( $30.6\,\text{km}^2$ ).

Depending on the spatial solution to be specified in the further development of the project and choice of technology, the decision-maker's opinion on how the area under construction is exactly defined, the maximum <u>area of public water body to be encumbered</u> (offshore wind farm together with substation and internal cables of the wind farm ca 100 km<sup>2</sup> + submarine power cable in maximum interpretation ca 30.6 km<sup>2</sup>) is approximately <u>130 million square metres</u> i.e 130 km<sup>2</sup>.

## Description of studies conducted before the issue of a superficies licence

Environmental impact assessment (EIA) needs to be conducted within the superficies licence procedure. EIA also includes environmental studies for specifying the existing situation.

EIA shall be conducted according to the relevant law (Environmental Impact Assessment and Environmental Management System Act) which sets out the procedure as well as the theme of substantive assessment.

The specific need of studies conducted within EIA shall be established in the EIA programme phase but taking into account the former analogous situations, the most labour-intensive are the studies of wild birds and marine biota (seabed, fish fauna, marine mammals).

Additional works need to be performed in terms of a specific technical solution (design, specific modification and installation of the wind turbine etc) (these are also of assistance in the EIA). Before the issue of a superficies licence, studies are conducted regarding all themes and accounting for the needs of the specific stage, but in some cases even more detailed, specific and substantial studies/analyses are made after the issue of a superficies licence. Necessary studies:

- Detailed study of bathymetry
- Geotechnical study of seabed
- Detailed study of wind conditions, waves and ice conditions (incl also 1 year measuring)
- Organisation concept of logistics and works during construction

## Duration applied for in the superficies licence

SWE OÜ applies for a superficies licence for 50 years.

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Potential output of the wind power plant and approval of the transmission network operator on the technical requirements for connection with the transmission network

The output of the offshore wind farm is 600 MW.

Connection with the Estonian transmission network takes place according to the technical requirements issued by Elering AS to SWE OÜ (letter 05.02.2015 No 2-7/2015/1-2, see Annex 2) either in Sindi or Lihula substation.

A solution including the submarine power cable from the wind farm to the connection point and the mainland transmission system shall be established and which shall be specified and supplemented with additional works separate from this superficies licence application (including mainland spatial plans).

Taking into account the time of preparation (including applying for a superficies licence), construction period and commissioning phase, the forecast time of connection of the wind power plant with the network is 2022.

Veiko Väli Member of the management board /digitally signed/ Valery Makushin Member of the management board /digitally signed/

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## Annexes:

- 1. Figures 1 and 2 with the location area of planned wind power plant.
- 2. Elering AS technical requirements for connection in Lihula or Sindi substation.

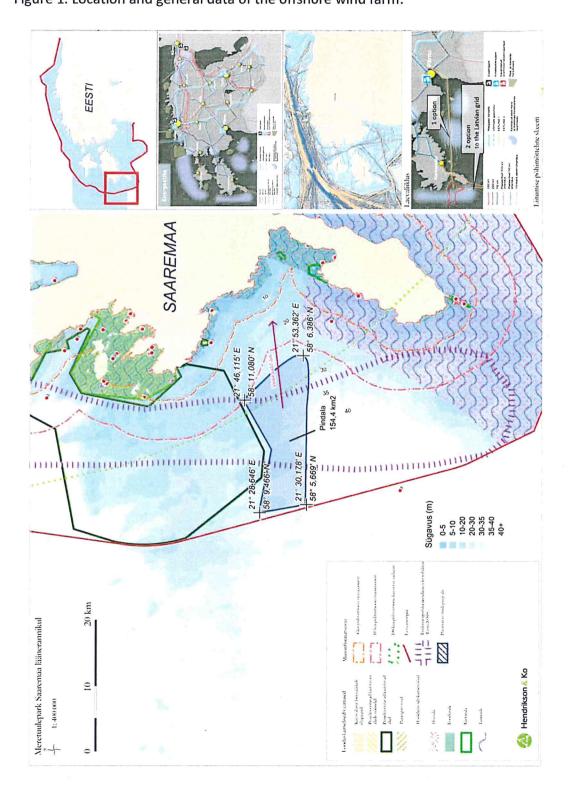
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3. Environmental and spatial plan expert opinion, Hendrikson&Ko (not included to this document).



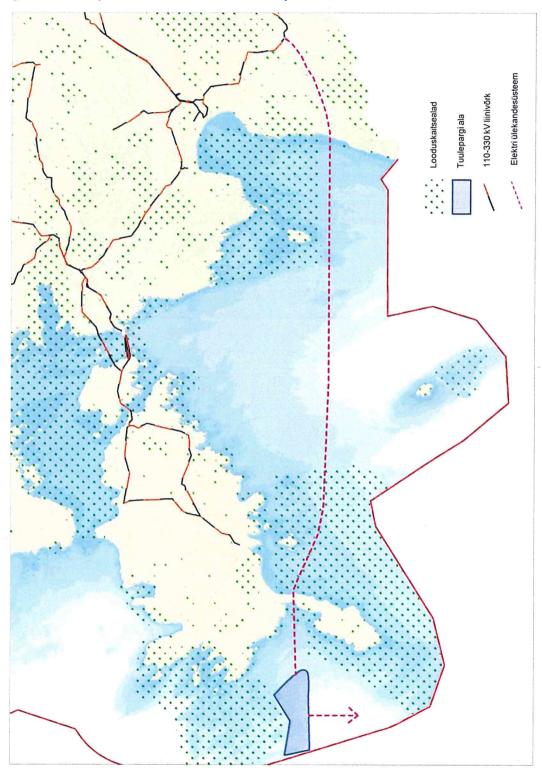
Annex 1. Figure 1. Location and general data of the offshore wind farm.



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Figure 2. Conceptual solution of the electricity transmission line.





## Annex 2. Elering AS technical requirements for connection in Lihula or Sindi substation

elering

Hr Valery Makushin Saare Wind Energy OÜ Tartu mnt 24-20 10115 Tallinn

Teie 21.11.2014 e-kiri Meie 05.02.2015 nr 2-7/2015/1-2

Tehnilised tingimused Saare Wind Energy OÜ 600 MW tuuleelektrijaama ühendamiseks Lihula - Sindi - Kilingi-Nõmme piirkonnas.

## Lp Valery Makushin

Käesolevad tehnilised tingimused on mittesiduvad ning koostatud arvestades nende väljastamise ajal Elering AS poolt sõlmitud liitumislepinguid ning Eleringi poolt esitatud liitumislepingu pakkumisi. Tehniliste tingimuste koostamisel aluseks võetud asjaolude muutumisel peate arvestama, et Eleringil on õigus vastavalt muuta ka tehnilisi tingimusi.

Liitumise eelduseks on Harku-Lihula- Sindi 330 kV õhuliini valmimine, mis on planeeritud aastasse 2020.

Arvestades prognoositavat 600 MW tuuleelektrijaama liitumise tähtaega 2022. aastaks, on võimalik planeeritav elektrijaam Lihula - Sindi - Kilingi-Nõmme piirkonnas elektrivõrguga ühendada kas Lihula või Sindi alajaamas.

Liitumine Kilingi-Nõmme alajaamas ei ole tuulelektrijaama ühendamine võimalik maa-ala kitsenduste tõttu.

## Liitumine Lihula alajaamas

Aastaks 2020 valmib Harku - Lihula - Sindi 330 kV õhuliin, mis on üle 50 MW tootmisvõimsuse liitumise eeldus Lihula alajaamas. 600 MW tuuleelektrijaama liitumiseks tuleb rajada Lihula alajaama kahe latisüsteemiga ja nelja lahtriga 330 kV jaotla koos juhtimishoone, releekaitse ja omatarbesüsteemidega. Eeldatav liitumistasu on ligikaudu 4 650 000 €.

Tuleb tähele panna, et liituja lahtrid on arvestatud kui simpleks-lahtrid (ühe võimsuslülitiga, ühendatud ühele alajaama latile), mis on küll odavamad, kuid väiksema töökindlusega. Soovi korral võib liituda ka dupleks-lahtritega (kahe võimsuslülitiga, ühendatud mõlemale alajaama latile), mis on kallimad, kuid suurema töökindlusega. Dupleks-lahtritega liitumise korral oleks liitumistasu ligikaudu 5 500 000 €.

## Liitumine Sindi alajaamas

Aastaks 2020 ühendatakse Sindi 330 kV alajaamaga 330 kV õhuliinid Harku –Sindi ja Tartu – Sindi, mis võimaldavad suuremate tootmisvõimsuste ühendamist Sindi alajaamaga. 600 MW tuuleelektrijaama liitumiseks tuleb rajada Sindi alajaama 330 kV jaotlasse kaks liituja lahtrit

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(kalkulatsioonis eeldatud simpleks-lahtreid) koos releekaitsega. Eeldatav liitumistasu on toodud tehnilise lahenduse puhul ligikaudu 2 000 000 €, dupleks-lahtritega liitumise korral oleks liitumistasu ligikaudu 2 850 000 €.

Eeltoodud orienteeruvad liitumistasud jäävad täies mahus liituja kanda. Täpne liitumistasu selgub liitumuspakkumuse väljastamisel, mille Elering edastab 90 päeva jooksul alates korrektse liitumistaotluse esitamisest ning menetlustasu laekumisest.

Liitumispunkte ehitustähtaeg on 30 kuud alates liitumislepingu järgse I osamakse tasumisest. Juhul kui soovite liituda aastal 2022 siis soovitame Teil esitada liitumistaotlus Eleringile hiljemalt aastal 2019.

Kirjeldatud liitumise tehniliste lahenduste puhul asuksid liitumispunktid mõlemal juhul 330 kV lahtrite kommertsmõõtepunktide klemmidel, kusjuures klemm jääks kuuluma Eleringile, liinipoolne juhe aga liitujale. Liitujal tuleb arvestada, et liituja peab oma liinide kaitsmiseks paigaldama liini mõlemasse otsa kaks põhikaitset (diferentsiaalkaitse ja distantskaitse). liituja seadmed peavad paiknema väljaspool Eleringi territooriumi. Elering eraldab liituja releekaitse tarbeks pinge- ja voolusignaalid liituja lahtrite pinge- ja voolutrafodelt. Pinge- ja vooluahelate ühendused Eleringi jaotlast oma seadmeteni peab teostama liituja, kooskõlastades kõik tegevused Eleringi territooriumil Eleringi alajaamade käidu talitusega.

Liitumistaotluse leiate Eleringi kodulehelt: <a href="http://elering.ee/taotlusvormid-ja-kooskolastused/">http://elering.ee/taotlusvormid-ja-kooskolastused/</a>. Lisaks soovitame Teil tutvuda põhivõrguga liitumuse tingimustega ja nende lisaga 1 - Tehnilised nõuded ja eeskirjad. Nimetatud dokumendid on leitavad Eleringi kodulehelt: <a href="http://elering.ee/vorguga-liitumise-tingimused-5/">http://elering.ee/vorguga-liitumise-tingimused-5/</a>.

Peale liitumispunkti valmimist on vajalik sõlmida Eleringiga võrguleping. Võrgulepingu kehtivuse ajal reguleerivad pooltevahelisi suhteid muuhulgas ka Eleringi võrgulepingu tüüptingimused, mis on leitavad Eleringi kodulehelt: <a href="http://elering.ee/public/Teenused/Vorguteenus/Elering">http://elering.ee/public/Teenused/Vorguteenus/Elering</a> AS vorgulepingu tuuptingimused al ates 10.08.2014.pdf.

Lugupidamisega

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Bank account:

Issued by Type of instrument: Type of text: Entry into force of wording: Expiry of wording:

Publication citation

The Government of the Republic original text-consolidated text 28.05.2020

## Commencement of procedure for the issue of a superficies licence and environmental impact assessment

Passed 28.05.2020 No. 183

The order is established based on subsections 22<sup>7</sup>(1) and (7) of the Water Act in force until 9 April 2015 and based on clauses 6 (1) 5) and 17) and subsection 11 (3) of the Environmental Impact Assessment and Environmental Management System Act and in compliance with subsection 25 (1) of the Building Code and Planning Act Implementation Act and subsection 56 (12) of the Environmental Impact Assessment and Environmental Management System Act.

### 1. Circumstances and procedures

Saare Wind Energy OÜ (registry code 12747106, seat at Mõisa St 10, Jüri small town, Rae rural municipality, 75301 Harju County, hereinafter the *applicant*) submitted an application to the Ministry of Economic Affairs and Communications on 9 April 2015 for a superficies licence accompanied with an expert opinion for encumbering a public water body with a wind power plant. The applicant is the developer of the project, the consultant of the project is OÜ Hendrikson&Ko (registry code 10269950). The applicant's principal area of activity according to the commercial register is the production of other electric energy (Classification of economic activities code 35119, NACE international classification 35.11). According to the applicant he produces electricity with HL Solar and Hyundai solar panels and is a small producer for the purposes of subsection 7 (2) of the Electricity Market Act (hereinafter EMA). Therefore, the applicant complies with the requirements provided for in § 92<sup>2</sup> of the EMA according to which a superficies licence for building a wind power plant on a public water body may only be granted to an electricity undertaking within the meaning of the EMA or to an undertaking which belongs to the same group with an electricity undertaking within the meaning of section 2(3) of the Competition Act.

According to the application an offshore wind farm with 100 wind turbines is planned at the distance of 10-27 km from the western coast of Saaremaa, with the total output of 600 MW. The annual planned electricity production of the wind farm is 2800 GWh.

The offshore wind farm is composed of the following parts:

- 1) 100 offshore wind turbines, each with the power of 6 MW;
- 2) offshore substation:
- 3) power cables connected to the offshore substation;
- 4) electricity transmission system up to the mainland connection point (transmission network's substation).

The maximum area encompassed with the application for an offshore wind farm superficies licence is 154.4 million m<sup>2</sup> (154.4 km<sup>2</sup>) and the coordinates of vertexes are as follows: X 6449098.6 Y: 351529.2 X 6451485.7 Y: 368758.4

X 6442546.7 Y: 375585.7 X 6441998.9 Y: 352769.

The submarine power cable has been planned in the direction of Saaremaa from the offshore wind farm and from there to the mainland. In addition, the applicant is considering the landing of the submarine power cable both in Häädemeeste and Virtsu regions. The exact location of the wind turbines and the final location of the transmission system line shall be established as a result of the environmental impact assessment and studies. Additionally, upon choosing the location of wind turbines and the cable, the conditions of the spatial plan of marine areas bordering Pärnu County must be taken into account as well as the conditions of national spatial plan of Estonian marine areas initiated with order No 157 by the Government of the Republic on 25 May 2017.

In order to decide on the commencement of superficies licence procedure, opinions were asked on 25 April 2015 according to subsection 22<sup>7</sup> (2) of the Water Act (hereinafter WA) from the Ministry of the Environment, Ministry of Defence, Ministry of the Interior, Estonian Maritime Administration, Estonian Civil Aviation Administration, National Heritage Board, Ministry of Finance and Ministry of Economic Affairs and Communications.

The Technical Regulatory Authority (since 1 January 2019 Consumer Protection and Technical Regulatory Authority) published according to subsection 22<sup>7</sup>(3) of the Water Act a notice on the intention to commence superficies licence procedure in the official publication *Ametlikud Teadaanded* on 3 February 2016, in national newspaper *Eesti Päevaleht* on 4 February 2016 and on its website.

No other applications were submitted for applying for a superficies licence for the sea area set out in the application within the term of 20 days specified in subsection 22<sup>7</sup> (4) of the WA as of publication of a notice.

The content of the order, including the conditions for the commencement of superficies licence procedure, has been introduced to the applicant on 6 October 2016 and on 26 May 2020 and the applicant did not have any objections.

With order No 99 as of 5 April 2019 the Government of the Republic refused to commence the superficies licence procedure based on the additionally submitted information. Tallinn administrative court heard the complaint of Saare Wind Energy OÜ for revocation of order No 99 as of 5 April 2019 of the Government of the Republic (hereinafter GR) and for obliging the GR to initiate the resumption of the superficies licence procedure. Saare Wind Energy OÜ submitted a compromise proposal which the GR approved in a cabinet meeting on 9 April 2020 and which the court approved on 21 April 2020. The court order entered into force on 6 May 2020.

#### 2. Legal conclusions

The opinions asked from the Ministry of the Environment, Ministry of Defence, Ministry of the Interior, Estonian Maritime Administration, Estonian Civil Aviation Administration, National Heritage Board, Ministry of Finance and Ministry of Economic Affairs and Communications according to subsection  $22^7(2)$  of the Water Act in order to decide on the commencement of procedure for the issue of a superficies licence did not include any circumstances precluding the commencement of procedure. No other persons have submitted an application for the issue of a superficies licence for encumbering the same part of the public water body with a structure.

According to subsection 22<sup>8</sup> (1) of the Water Act the competent authority shall refuse to commence the procedure for the issue of a superficies licence if the issue of the superficies licence is clearly impossible and according to subsection (2) if procedure for the issue of another superficies licence has already been commenced in the applied area or if a county plan has been commenced in the applied area and the procedure for drawing up the plan has not been completed. Subsection 22<sup>8</sup> (1) of the WA includes the cases where upon submission of an application for a superficies licence it is clear without a longer procedure that granting the application is not possible. Such circumstances have not been identified. Neither has a procedure for the issue of another superficies licence been commenced with regard to the applied area nor a county plan. The national plan commenced with order No 157 by the Government of the Republic on 25 May 2017 concerning Estonian marine areas and the adjacent coastal areas and the economic area thematic plan is not a county plan. Therefore, in this case it is not a situation where the Government of the Republic should refuse to commence the procedure for the issue of a superficies licence based on subsection 22<sup>8</sup> (2) of the Water Act. Therefore the commencement of superficies licence procedure upon the application of Saare Wind Energy OÜ is justified.

Pursuant to clauses 6 (1) 5) and 17) and subsection 11 (3) of the Environmental Impact Assessment and Environmental Management System Act in force at the time of submission of the application the assessment of environmental impact must be commenced with the commencement of superficies licence procedure.

Resulting from the assessment of environmental impact, the procedure of activity licence application is suspended according to subsection 11 (11) of the Environmental Impact Assessment and Environmental Management System Act until approval of the environmental impact assessment report.

As in terms of connection of the offshore wind farm the applicant is also considering cooperation possibilities for a potential additional electricity connection between Estonia and Latvia, the planned activity is accompanied with significant transboundary environmental impact. Therefore, in addition to the Environmental Impact Assessment and Environmental Management System Act, the environmental impact assessment must also be based on the Convention on Environmental Impact Assessment in Transboundary Context (Espoo convention) and the agreement between the Government of the Republic of Estonia and the Government of the Republic of Latvia on environmental impact assessment in a transboundary context.

Upon commencement of the superficies licence procedure, the Government of the Republic shall determine the studies according to clause  $22^7$  (7) 3) of the Water Act which the applicant must perform in order to decide on the issue of the superficies licence and the term of the studies. Taking into account the fact that the exact scope and content of environmental impact assessment, including the assessment method, is not yet known upon commencement of superficies licence procedure and it is determined in the environmental impact assessment programme, the final list of studies cannot be determined in this decision. The specific need for the conduct of studies shall be determined in the environmental impact assessment programme. In practice different circumstances may appear upon environmental impact assessment which may affect the term for the conduct of studies. Therefore studies must be conducted in the course of environmental impact assessment and the results of studies must be taken as one of the bases for preparing the environmental impact assessment report.

#### 3. Decision

- 3.1. To commence the superficies licence procedure based on the application submitted by Saare Wind Energy OÜ for the erection of a planned offshore wind farm on the western coast of Saaremaa.
- 3.2. For the erection of an offshore wind farm in a public water body, to commence environmental impact assessment to ascertain potential long- and short-term, indirect and direct impacts, and also potential transboundary impacts during the construction and commissioning of the wind farm.
- 3.3. In the course of environmental impact assessment to ascertain the impacts accompanying the erection, commissioning and decommissioning of the wind power plant, to analyse them and to conduct relevant studies regarding the sea area encumbered with the wind farm as a whole.
- 3.4. To conduct at least the following studies on the encumbered sea area:
- 1) Impact on sea surveillance and ESTER communication systems;
- 2) Impact on the distinguishing of navigation signs or lights by participants in water traffic;
- 3) Underwater archaeological studies;
- 4) Study specifying the bathymetry of the surroundings of structures and cable lines;

5) Geotechnical study of seabed;

- 6) Visualisation from different mainland points;
- 7) Detailed study of wind conditions, waves and ice conditions;
- 8) Seawater quality studies in the area of wind farm and in the estimated impact sphere of construction activities on the sea area;
  9) Description of plankton communities;
- 10) Seabed biota ascertaining the qualitative and quantitative parameters of phytobenthos and zoobenthos in the development area and potential impact area;
- 11) Study on potential impact of wind farm and submarine cable electromagnetic field on the fish fauna;

12) Study on the migration and feeding of wild birds and bats;

- 13) Study on fish fauna and spawning areas;
- 14) Impact on seals on local level, including potential impacts of breaking ice, and to determine necessary mitigating environmental measures regarding the impact of the wind farm and cable connections on fisheries:
- 15) Socioeconomic analysis preceding the establishment of the need to assess and improve the quality of electricity;
- 16) Study of social and cultural impacts, including the impact on local governments and coastal communities;
- 17) In cooperation with the Ministry of Defence to ascertain the probability of finding historical explosives and other dangerous objects;
- 18) Other studies determined in the environmental impact assessment programme.

The studies shall be conducted within five years as of approval of the environmental impact assessment programme.

- 3.5. To develop the organisation concept of logistics and works during construction.
- 3.6. To involve at least the Ministry of Finance, the Ministry of Economic Affairs and Communications, Ministry of the Environment, Environmental Board, Ministry of Defence, Ministry of the Interior, Maritime Administration, Civil Aviation Administration, National Heritage Board and local governments of the region in the preparation of the environmental impact assessment programme and report.
- 3.7. In choosing the specific locations of wind turbines to cooperate with the Police and Border Guard Board, Ministry of the Interior, Ministry of Defence, Maritime Administration and the Environmental Board.
- 3.8. To proceed from the prescribed height restrictions in the design of wind turbines.
- 3.9. To cooperate with other developers of wind farms planned in the same area in the environmental impact assessment, conduct of studies and choosing the transmission line.
- 3.10. Due to potential transboundary environmental impact, the environmental impact assessment must be additionally based on the Convention on Environmental Impact Assessment in Transboundary Context (Espoo convention) and the agreement between the Government of the Republic of Estonia and the Government of the Republic of Latvia on environmental impact assessment in a transboundary context.
- 3.11. In the procedure of the superficies licence and environmental impact assessment, the conditions of the spatial plan of marine areas bordering Pärnu County must be taken into account as well as the conditions of national spatial plan of Estonian marine areas initiated by the Government of the Republic on 25 May 2017.
- 3.12. To revoke order No 99 by the Government of the Republic as of 5 April 2019 "Refusal from commencing the procedure for the issue of a superficies licence".

## 4. Contestation of the order

The order may be contested pursuant to the procedure provided for in the Code of Administrative Court Procedure within 30 days after publication of the order in *Riigi Teataja*.

## 5. Communication of the order

The Consumer Protection and Technical Regulatory Authority shall communicate the order to Saare Wind Energy OÜ, notify of the commencement of environmental impact assessment in the official publication *Ametlikud Teadaanded* within 14 days as of making this decision and notify the persons concerned and other participants in proceeding with a separate letter.

Jüri Ratas Prime Minister

Taimar Peterkop State Secretary