



REQUEST FOR PROPOSALS

For the provision of wind turbines of Ojaküla Wind Farm

Oceanside OÜ

April, 2011

PREFACE

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SUMMARY

For the purpose of building a wind farm near the town of Ojaküla, Estonia, Freenergy AS has established a subsidiary called Oceanside OÜ. Oceanside OÜ is owned 100% by Freenergy AS and operated by the renewable energy operating company Nelja Energia OÜ.

The planned wind farm will be located in Ojaküla village, Viru-Nigula parish, near the city of Kunda, northern Estonia. The nominal capacity of the wind farm is 6 900 kW. There will be 4 (four) separate requests for proposals held in order to finalize the project:

- Turnkey supply of turbines with construction
- Owner's supervision
- Roads and construction sites
- Installation of cables

An environmental impact assessment (Appendix 8) has been carried out and a detailed plan (Appendix 1) has been issued for the wind farm project. Building permits for all the necessary components except power cables have been issued.

A submitted proposal should include information on all the necessary components and activities to construct and start up the Ojaküla wind farm. In other words, a turnkey delivery of the wind turbines together with auxiliary equipment and foundations is expected. Specific requirements and expectations are detailed in this document. The purchase contract will be made with Oceanside OÜ.

The proposals should be delivered to the client latest on 16th May 2011 and should be valid until 31st September 2011.

The project activities will be carried out during 14 months from April 2011 to May 2012.

The language of the tenders and related documents is English.

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1. GENERAL

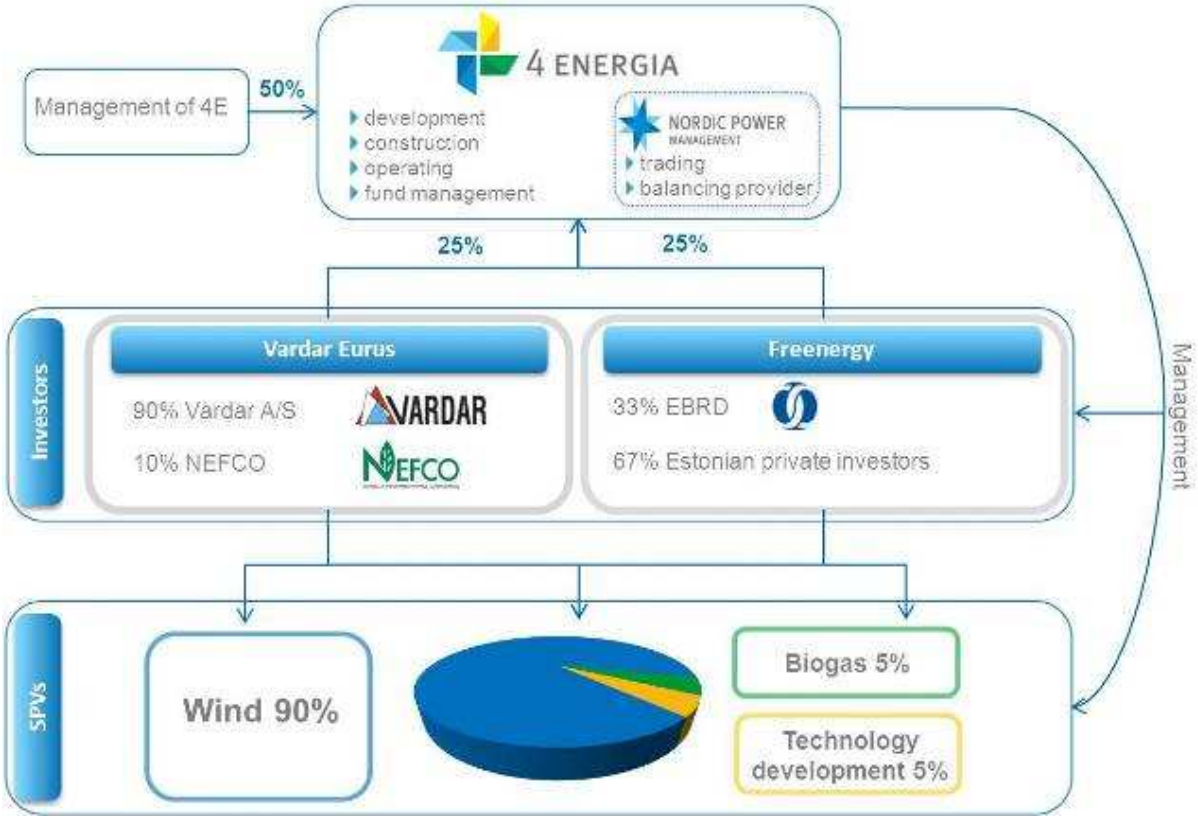
1.1 COMPANY INFORMATION AND BACKGROUND

Oceanside OÜ is a subsidiary of Freenergy AS, who owns 100% of Oceanside OÜ. Freenergy AS is an investment fund registered in Estonia, which was created for investing into the renewable energy sector in the Baltic States. Freenergy AS consists of two main owner entities: European Bank of Reconstruction and Development (EBRD) with 33% and Estonian private investors with 67%.

Oceanside OÜ's activities are operated through a managing contract by Nelja Energia OÜ, whose main area of operation is developing renewable energy projects and operating electricity production. Nelja Energia OÜ's portfolio consists of 116 MW of wind farms throughout the Baltic States, of which 90 MW is located in Estonia. Currently there are 3 wind farms under construction with 78 MW and 5 wind farms under development with 190 MW.

Nelja Energia's owner structure is:

- 50% owned by the management of Nelja Energia OÜ
- 25% owned by Vardar Eurus AS
- 25% owned by Freenergy AS



1.2 PURPOSE

Oceanside OÜ is requesting proposals for the following services: the engineering, supply and erection of wind turbines together with auxiliary equipment and foundations (a wind generating facility on the whole) with a nominal summary capacity of 6,9 MW. The requested equipment should be in service by January 2012.

1.3 APPLICABLE LAWS, DIRECTIVES AND GUIDELINES

Due to the fact that Oceanside OÜ has applied for public subsidies for the wind farm, the company has to comply with the following guidelines given by the Estonian law. In addition, there are multiple EU directives which the supplier must comply with.

General rules of public procurement

The contracting authority is obliged to comply with the following principles in organising public procurements:

- 1) The contracting authority should use financial resources economically and expediently and achieve the objective of the public procurement with the reasonable price by ensuring the best price and quality ratio by comparing different tenders in case of existing competition;
- 2) The contracting authority should guarantee the transparency and verifiability of the public procurement;
- 3) The contracting authority should treat all persons whose place of residence or location is in Estonia, in some other Member State of the European Union, in other state which is a contracting party to the EEA Agreement or in the country having joined the WTO Agreement on Government Procurement (GPA), equally and non-discriminatorily and follow that setting the restrictions and criteria for all persons comply with the proportionality, relevance and justification principles in relation to the object of the public procurement;
- 4) The contracting authority should ensure effective use of the existing competition in public procurements, whereas the participation of the legal person governed by public law or the person governed by private law using the public means in the public procurement should not distort competition due to its use of public means;
- 5) The contracting authority should avoid the conflict of interests distorting the competition;
- 6) Where possible, the contracting authority has to prefer environmentally safe solutions.

2. OVERVIEW

2.1 SITE LOCATION AND BASICS

The wind turbines will be installed in Ojaküla Village, Viru-Nigula Parish, Estonia. The parish center, Viru-Nigula, is located about 11 km away from the wind farm and the county center – Rakvere – is located approximately 15 km away from the wind farm. The turbines shall be situated onto three land plots:

- Propelleri 90202:001:0160
- Särtsu 90201:001:0187
- Sirtsu 90201:001:0186

The coordinates of the wind turbines are:

Wind turbine T-1 coordinates

L-Est 97		WGS-84	
X	Y	E	N
6597476.00	642482.00	59°29`27.35``	26°30`55,45``

Wind turbine T-2 coordinates

L-Est 97		WGS-84	
X	Y	E	N
6596789.10	641815.84	59°29`5.97``	26°30`11.53``

Wind turbine T-3 coordinates

L-Est 97		WGS-84	
X	Y	E	N
6596826.00	641492.00	59°29`7.55``	26°29`51.05``

Tower base installation heights in Baltic 77 a system:

Tuulik 1: $\pm 0,000 = 54,70\text{m}$

Tuulik 2: $\pm 0,000 = 50,50\text{m}$

Tuulik 3 $\pm 0,000 = 50,40\text{m}$

The planned wind farm area landscape is fairly flat. Absolute altitudes are between 48 and 52 meters. Under the roads and construction sites there are a variety of land types: fallow agricultural land, grassland, shrub and also forest.

The basis of parameters for the planned equipment is the detailed plan compiled by OÜ Hendrikson & Ko, Work No. 1037/08 ordered by the Viru-Nigula municipality (Appendix 1).

All proposals must use EURO (€) as the currency. All defined units must be in the SI system.

2.2 EQUIPMENT TASK

The function of the equipment under request is a turnkey supply of a wind turbine meaning a device converting the kinetic energy of first into mechanical energy and then converting mechanical energy into electric energy through series of devices. The wind turbine with its auxiliary devices under request must be a brand new product.

The wind energy converting turbine together with its foundation and including all the auxiliary equipment and SCADA must be designed and constructed according to all applicable regulatory agreements, criteria, protocols and standards. Oceanside OÜ will accept only serial production models into consideration. No prototypes are accepted.

2.3 EQUIPMENT TO BE PURCHASED

2.3.1 Safety

The following directives and standards (or the equivalents) must be applied in production of the equipment:

- Directive 2006/42/EC of the European Parliament and of the Council on machinery
- Directive 2004/108/EU on electromagnetic compatibility
- Low voltage directive 2006/95/EU
- EN 614-1:2006+A1:2009 Safety of machinery – Ergonomic design principles – Part 1: Technology and general principles
- EN ISO 12100-2:2003 Safety of machinery – Basic concepts, general principles in design – Part 2: Technical principles
- EN ISO 13849-1:2008 Safety of machinery – Safety-related parts of control systems – Part 1: General principles for design
- EN ISO 13850:2008 Safety of machinery – Emergency stop – Principles for design

- EN ISO 13857:2008 Safety of machinery – Safety distances to prevent hazard zones being reached by upper and lower limbs
- EN ISO 14121-1:2007 Safety of machinery – Risk of assessment – Part 1: Principles
- EN 55011:2007/A2:2007 Industrial, scientific and medical (ISM) radio-frequency equipment – Electromagnetic disturbance characteristics – Limits and methods of measurement
- EN 60204-1:2006/A1:2009 Safety of machinery - Electrical equipment of machines -- Part 1: General requirements
- EN ISO 14122-1:2002 Safety of machinery - Permanent means of access to machinery - Part 1: Choice of fixed means of access between two levels
- EN ISO 14122-2:2002 Safety of machinery - Permanent means of access to machinery - Part 2: Working platforms and walkways
- EN ISO 14122-3:2001 Safety of machinery - Permanent means of access to machinery - Part 3: Stairs, stepladders and guard-rails
- EN 50308:2005 + par 1:2008 Wind turbines - Protective measures - Requirements for design, operation and maintenance
- EN 50178:2001 Electronic equipment for use in power installations
- EN 60034-1:2005 + par 1:2007 Rotating electrical machines - Part 1: Rating and performance
- EN 61400-1:2006 + par 1:2007 Wind turbines Part 1: Design requirements
- EN 61400-21:2008 Wind turbines - Part 21: Measurement and assessment of power quality characteristics of grid connected wind turbines

The safety system of the wind turbine and all auxiliary equipment must guarantee a safe turbine operation both mechanically and electrically, presenting no danger to human beings, and at the same time being in accordance with respective applicable international standards, directives and regulations.

2.3.2 Specification

The Viru-Nigula Municipality has issued a strategic environmental impact assessment (Appendix 7) on the land plots of the Ojaküla Wind Farm. The assessment is a basis of the specification at hand and its parameters are derived from the assessment.

Bidders should base their proposals on site specific wind data (Appendix 3) and site layout (Appendix 2). The wind turbine wind class must be in accordance with the wind speed

measurements. The number of wind turbines is 3 with a nominal power of 2 300 kW per turbine adding up to a total of 6 900 kW.

2.3.2.1 Environmental conditions

The noise levels in the residential areas which are neighbouring the wind turbine land plots must be no higher than 40 dB during nighttime (23:00-07:00) and not higher than 50 dB during daytime (7:00-23:00) as defined in the Minister of Social Affairs Regulation No. 42: „Noise reference levels of residential and recreational areas, residential and public buildings, and noise measurement methods.“ The maximum of height of the wind turbine can be no more than 140 meters from the ground measured from the 90 degrees upward pointing tip of the blade to the ground level.

2.3.2.2 Technical conditions

According to the request of the local population, the equipment requested in the proposal at hand can only be direct-drive technology machine meaning that the wind turbine must not include a gearbox. This ensures a quiet operation of the wind turbine and least disturbance to the local population.

The turbine must be designed for a nominal lifetime of 20 years.

Other technical and dimensional conditions which are defined in the detailed plan:

Rated power	2 300 kW
Hub height	98 m
Diameter of the three-bladed rotor	82 m
Rotational speed of the rotor	6-19,5 rpm
Cut-in speed of wind turbine	2,5 m/s
Cut-out speed of wind turbine	28 m/s
Wind speed of nominal power production	12 m/s
Lifespan	> 20 years
Normal ambient temperature	-10° to +40° C

Ice detection system

The equipment under request must be supplied with a ice detection system, which stops the operation of the wind turbine in case there is ice on the blades or if the anemometer is covered

with ice. This is done to ensure the safety of people and ensure the proper work of the wind turbine.

Lightning protection system

The equipment under request must include a lightning protection system which must comprise of subsystems fully capable of protecting the wind turbine and its internal and external devices in case of a lightning hit. The lightning protection system must be designed in accordance (but not limited to) with the following standards or their equivalents:

- IEC 61936-1:2002 INTERNATIONAL STANDARD – Power installations exceeding 1 kV a.c.
- IEC 62305:2006-01 INTERNATIONAL STANDARD – Lightning protection
- IEC 61400-1:2005 INTERNATIONAL STANDARD - Wind turbines - Part 1: Design requirements;
- IEC 60364-5-54:2002-06 - INTERNATIONAL STANDARD - Electrical installations of buildings

2.3.2.3 Grid requirements

The proposals must be in accordance with the following local state regulations:

- “Grid Code”, Regulation Nr. 184 adopted by the Estonian Government on 26/07/2003; Entered into a force on 01/07/2003 (<https://www.riigiteataja.ee/ert/act.jsp?id=13305334>)
- “Electricity Market Act”, Passed on 2/11/2003; Entered into a force by a law (RT I 2003, 25, 153, §119), <https://www.riigiteataja.ee/ert/act.jsp?id=13279771>
- Elering OÜ (TSO) requirements
- EVS-EN 50160:2007, “Voltage characteristics of electricity supplied by public distribution networks.”
- EVS-HD 637 S1:2002, “Power installations exceeding 1 kV a.c.”
- EN 50522:2008, “Earthing of power installations exceeding 1 kV a.c.”
- EN 61936-1:2008. “Power installations exceeding 1 kV a.c Part 1: Common rules“.
- IEC 61400 series standards

NB! Compliance with all the regulations and standards above is completely the responsibility of the bidder. Oceanside OÜ will not carry any responsibility in case the bidder's equipment does not comply with the mentioned standards.

3. PROPOSAL CONTENT

The submitted proposal shall contain the following sections:

- Proposal Summary

In the summary, an overall description of the projects must be defined along with the main characteristics, parameters, costs, construction, project management and schedules.

- Contract documents

This section should include the draft of the engineering, procurement and construction (EPC) agreement with Oceanside OÜ which comprises the main details and key figures of the future contract which will be signed between the supplier and Oceanside OÜ. Other general conditions or detailed particular aspects of the main turnkey contract should also be included in this section.

- Contractual service and maintenance agreement

The bidder should include here a draft of the agreement for servicing and maintaining the turbines. The draft must include the costs for a servicing period which would cover all service and maintenance work on the wind turbine package plus all equipment related to the wind turbine package. The contractual service and maintenance agreement draft must also propose an availability standard and consequences which will apply when this availability standard is not met. The draft should also include a maintenance plan.

- Requested equipment description and overview

This section must include the model and the make of the equipment, hub height, capacities and dimensions of all the key elements of the wind turbine.

- Production analysis

Based on site and wind measurement data, the bidder must present a production analysis data unit, which has to include the following aspects: wind turbine model, layout on the site, nominal wind turbine data values, gross monthly and annual energy production, energy losses calculation grouped by their origin, net monthly and annual energy production, capacity factor calculation, a guaranteed availability figure taking into account the regular maintenance specifications.

- Noise analysis

The bidder must include a comprehensive noise analysis based on the source data given by Oceanside OÜ proving that the noise levels will not exceed the permissible levels in the critical surrounding areas of the wind farm.

- Schedule of the project

The bidder must include a detailed project schedule to the proposal which defines and connects activities of the project into a logical timeline. The schedule must clearly show when each activity will be carried out, how long is the duration of certain activities, who manages them and which are the important milestones of the project.

- SCADA (Supervisory control and Data Acquisition)

The bidder must specify strictly what kind of SCADA system will the wind turbines use for data communication, giving information about, but not limited to – type of SCADA, what type of data will be forwarded, which data protocol will be used to communicate between the wind farm and the network operator. The bidder is responsible for supplying all the necessary equipment in order for the SCADA system to work as required.

- Project costs

All costs related to supplying the requested equipment and finalizing the project must be broken down to specify the costs of different parts of the equipment. The minimum division of costs must be broken down to three parts: manufacturing and supplying of the equipment, construction, maintenance and service.

- References

The bidder must prove their ability of completing to the project by presenting to Oceanside OÜ at least two (2) commercially operated wind farms in Europe which are using the proposed equipment models.

4. CRITERIA FOR EVALUATING THE WINNING BIDS

The qualification process consists of a two-step process. In the first stage, after receiving the proposals, they are evaluated and compared to the request of proposal requirements. After the evaluation, a maximum of three bidders are chosen for further negotiations. In case there are less bids than three, all of the proposals are taken forward into the negotiations phase.

The basis of selecting the best proposal is the best possible alternative economically and technically.

The criteria for the selection consists of the following points:

- Investment cost 50%
- Maintenance and operating cost 20%
- Technical quality of the proposed solution 20%
- Performance and references of the supplier 10%
 - References
 - Audited quality management system
 - Audited environmental policy
 - Capable of delivering the equipment

Oceanside OÜ reserves the right to reject all proposals. The grounds for rejecting the proposals can be found in the section „Reservation of Rights.“

5. ADDITIONAL INFORMATION AND DELIVERY OF PROPOSALS

The bidder must take into account that due to public procurement, the proposal and related documents may be considered as public documents. The parts containing information, which is confidential or contains trade secrets of supplier, are to be marked clearly.

Additional information about the project can be obtained by contacting Mr. Erkki Kallas from Nelja Energia OÜ. Options are by email: Erkki@4energia.ee or by telephone +372 50 74 940.

The proposals should be sent to Mr. Erkki Kallas to Erkki@4energia.ee. If additional time for preparing the proposal is required, the supplier is advised to contact before the deadline of the proposals.

RESERVATION OF RIGHTS

Oceanside OÜ reserves the right to reject any proposals for any reason whatsoever including, without limitation, by reason of any failure to comply with any requirements of this request for proposals, including proposals that contain omissions, erasures, alterations or additions not called for or that are incomplete or irregular in any manner. Oceanside OÜ also reserves the right to reject or cancel any or all proposals, reject any portion(s) of a proposal, reissue the request for proposals with or without modification and/or negotiate all tender elements.

APPENDICES

- 1. Detailed plan of Ojaküla Village, Linnanurga, Eha, Hansunaabri land plots and state owned land plots AT040112090 and AT040112093 segments (Hendrikson & Ko. Work No. 1037/08)**
- 2. Ojaküla wind farm layout together with wind turbine coordinates**
- 3. Site-specific wind data (EMD International A/S)**
- 4. Elering OÜ (Estonian transmission system operator) requirements**
- 5. Electric scheme of the wind farm's grid connection (Silvander OÜ, Work no. 09-06)**
- 6. Grid code, Regulation No. 184 adopted by the Estonian Government on 26/07/2003; Entered into force on 01/01/2010 (informal translation)**
- 7. Environmental impact assessment report for the detailed plan of building a wind farm in Ojaküla Village, Viru Nigula Parish onto Linnanurga, Eha and Hansunaabri land plots (Hendrikson & Ko. Work No. 1037/08)**