

Executive Order on a technical certification scheme for wind turbines¹⁾

Executive Order no. 73 of 25 January 2013

The following shall be laid down pursuant to section 33, section 60, section 68(1), no. 1, and section 73(1) of the Promotion of Renewable Energy Act, cf. Consolidating Act no. 1074 of 8 November 2011:

Purpose and scope, etc.

1.-(1) The purpose of this Executive Order is to ensure that wind turbines erected onshore, in Danish territorial waters and in the Exclusive Economic Zone, and which are used for the purpose of energy production, meet the requirements set out for energy production, safety and the environment, and that the wind turbines are serviced and maintained as prescribed.

(2) This Executive Order shall cover the individual wind turbine, including the tower, foundations, electro-technical installations, and transformers, up to and including turbine connection terminals to the electricity supply grid, including components for leading cables away from the wind turbine.

2. For the purpose of this Executive Order:

- 1) "Energy production" shall mean: Electricity which can fulfil other purposes than the wind turbine's own energy needs.
- 2) "Safety" shall mean: Safety as defined in nos. 3 and 4.
- 3) "Safety and health" shall mean: Conditions related to the design and manufacture of the wind turbine that may pose a risk to property and to the safety and health of persons and livestock during the installation, maintenance or use of the wind turbine.
- 4) "Structural safety" shall mean: The level of safety to which the wind turbine has been designed and dimensioned in order to withstand the loads to which it is likely to be subject and to function throughout its expected operational life.

3.-(1) Before the wind turbine is placed on the market or put into service, the producer or the supplier of the wind turbine shall carry out CE marking, as well as ensure that the wind turbine comes with an EC statement of compliance upon delivery in order to meet the requirements for safety and health, cf. the Executive Order on the design of technical equipment. The producer or the supplier shall be able to document to the Danish Working Environment Authority compliance with this Executive Order, as mentioned in the 1st clause.

(2) Documentation of compliance with requirements for wind turbines under other legislation, including the Building Act and the Environmental Protection Act, the Electricity Supply Act and the High Voltage Executive Order, shall be submitted to the competent authorities before the erection of the wind turbine.

1) This Executive Order has been notified in draft form in accordance with European Parliament and Council Directive 98/34/EC (the Information Procedure Directive), as amended by Directive 98/48/EC.

4.-(1) The use of a wind turbine shall be on the condition that the owner of the wind turbine can document that the requirements set out in sections 3 and 5-10 for the erected wind turbine have been met.

(2) The owner of a wind turbine which has been erected on the basis of a temporary approval for testing and demonstration in accordance with previous executive orders, or on the basis of prototype certification pursuant to this Executive Order, shall be responsible for decommissioning the wind turbine after expiry of the approval or certificate, or for the provision of a new certificate in accordance with section 8.

(3) The Danish Energy Agency may, within the purpose of this Executive Order, stipulate that specified wind turbines that are covered by this Executive Order shall be exempted in full or in part from the provisions of this Executive Order, cf. however section 3.

Certification of the wind turbine

5.-(1) Certification of wind turbines with a rotor area of more than 40m² shall, as a minimum, include requirements corresponding to the mandatory modules and requirements for type or prototype certification stipulated in European standard DS/EN 61400-22, including specified DS/EN, IEC and ISO standards, cf. however, subsection (2). If the standards mentioned above contain requirements for safety and health, such requirements shall not be subject to the requirement for certification pursuant to this Executive Order, cf. section 3.

(2) Certification of wind turbines with a rotor area of more than 5 m² and up to 40 m² shall, as a minimum, include requirements corresponding to the requirements mentioned in Annex 1, point 1.

(3) Certification as mentioned in subsections (1) and (2) shall also include a source noise measurement pursuant to the current Executive Order on noise from wind turbines.

(4) Following a recommendation from the Energy Agency's Secretariat for the Danish Wind Turbine Certification Scheme, the Danish Energy Agency may exempt wind turbines with a rotor area of 40 m² or less from certification, if they

- 1) are used for teaching purposes, research, or tests on specially demarcated areas allocated for the purpose;
- 2) are designed and built by the owner for own use on specially demarcated areas;
- 3) exclusively and without electricity production supply mechanical energy for heat pumping, heating, etc.; or
- 4) on the basis of a concrete assessment can be considered safe, including certain drag-type wind turbines.

(5) Wind turbines with a rotor area of 40 m² or less shall be exempted from certification, if they

- 1) are erected in Danish territorial waters and in the Exclusive Economic Zone; or
- 2) are erected on ships.

(6) Wind turbines with a rotor area of more than 1 m² and up to 5 m² shall be exempted from certification pursuant to subsections (1)-(5). The producer or the supplier may, however, choose to register the wind turbine with the Energy Agency's Secretariat for the Danish Wind Turbine Certification Scheme. This registration shall, as a minimum, include the information stated in Annex 1, point 2.

6. Applications for certification, including type and prototype certificates, shall be submitted to a certifying company, with the required documentation material. Type and prototype certificates for wind turbines may be issued to the producer or the supplier of the wind turbine. A prototype certificate shall be issued for a fixed period of no more than three years.

7.-(1) Wind turbines with a rotor area of more than 200 m² shall be project certified upon installation. Project certification shall, as a minimum, include requirements corresponding to the mandatory modules and requirements for project certification stipulated in European standard DS/EN 61400-22, including specified DS/EN, IEC and ISO standards. If the standards mentioned above contain requirements for safety and health, such requirements shall not be subject to the requirement for certification pursuant to this Executive Order, cf. section 3.

(2) Application for project certificates shall be submitted to a certifying company. Project certificates shall be issued to the owner of a wind turbine or a wind turbine project for a specified location. The owner shall be responsible for ensuring that a valid project certificate has been obtained before the wind turbine is put into service.

Certification for modification etc.

8.-(1) Wind turbines with a rotor area of more than 40 m² that have been certified, cf. sections 5 and 6, or which have obtained approval under previous executive orders, shall be certified on the basis of the requirements in subsections (2) and (3) in connection with modification, conversion into testing and demonstration, relocation and use after testing and demonstration, or following expiry of a prototype certificate. The same shall apply to wind turbines with a rotor area of 40 m² or less that have been certified pursuant to sections 5 and 6, or which have been approved for testing pursuant to previous executive orders.

(2) This certification shall be carried out on the basis of documentation from the previous certification or approval, functional and safety testing, and a technical report on the wind turbine's safety status including planned changes.

(3) The technical report mentioned in subsection (2) shall, as a minimum, include a

- 1) review of available technical documentation for the wind turbine;
- 2) assessment of the propriety of possible modification, relocation and continued use;
- 3) safety assessment of any new conditions following from relocation;
- 4) report on a functional and safety test of the wind turbine; and
- 5) assessment of whether the modification may have noise-related implications.

(4) For wind turbines that have been prototype-certified or approved for testing and demonstration pursuant to previous executive orders, the certification shall also include an evaluation of loads and the operational life of the turbine on the specific site.

(5) As documentation for source noise, cf. subsection (3), no. 5, the measurement and calculation methods set out in the Executive Order on noise from wind turbines shall be applied.

(6) Applications for certification for modification, relocation and continued use after expiry of a prototype certificate, cf. sections 5 and 6, or after testing and demonstration approved pursuant to previous executive orders, shall be submitted to a certifying company, with the required documentation material. Furthermore, for wind turbines that are to be converted into turbines for testing and demonstration, there shall be a test plan for the period for which the certificate is issued. The certificate shall be issued to the owner of the wind turbine. The certificate for conversion to testing and demonstration shall be issued for a fixed period of no more than three years. The owner of the wind turbine shall be responsible for ensuring that a valid certificate has been obtained before the wind turbine is put into service.

Maintenance, service and major damage

9.-(1) The owner of a wind turbine shall be responsible for ensuring that the wind turbine is maintained and serviced on a regular basis for as long as it is in operation. Maintenance and service of the wind turbine shall be performed on the basis of fixed specifications and time intervals for regular service of the turbine pursuant to the certificate issued or service

manuals. Furthermore, a wind turbine which has been in operation for longer than its design lifetime, as stated in the manufacturer's documentation or in the certificate issued pursuant to section 5(1) and (2), shall be subject to extended service, cf. Annex 2, point 4.

(2) For wind turbines with a rotor area of more than 40 m², maintenance and service shall be performed by a certified or approved company, cf. section 11(1), cf. however, subsection (3).

(3) In exceptional circumstances, the Energy Agency's Secretariat for the Danish Wind Turbine Certification Scheme may approve that maintenance and service are performed by the owner of a wind turbine or by a company or a person who has not been approved to carry out maintenance and service as stated in section 11(1), no. 4, and who can document compliance with the requirements set out in Annex 2, point 3.

(4) Approval pursuant to subsection (3) shall be granted for up to three years. The approval may be renewed on the basis of an application with documentation for the maintenance and service performed on wind turbines in the most recent approval period and documentation for compliance with the requirements in subsection (3).

10.-(1) The producer or the supplier shall deliver the necessary service manuals to the owner of the wind turbine upon delivery of the wind turbine itself. The producer or the supplier shall forward any updates that affect the safety of the wind turbine. Furthermore, upon request by the wind turbine owner, the producer or the supplier shall forward any updates that affect the operation of the wind turbine.

(2) For wind turbines that are assumed to operate with special noise reduction arrangements, the company that has been certified or approved to carry out maintenance and service on wind turbines, or the person that has been approved to carry out maintenance and service on a specific wind turbine, cf. section 9(3), shall read the noise setting of the wind turbine upon each service visit. The company mentioned in the 1st clause shall record the reading in the service report, cf. subsection (3).

(3) A service report shall be prepared at each service visit which shall be submitted to the owner of the wind turbine immediately after each service visit. The owner of the wind turbine shall store the service reports for as long as the wind turbine is in service. Furthermore, the owner of the wind turbine shall be responsible for reporting about the service completed and about the date of the next service to Energinet.dk, cf. Annex 2, point 5.

(4) In the event of major damage or damage affecting safety, the owner of the wind turbine shall immediately submit information about the event to the Energy Agency's Secretariat for the Danish Wind Turbine Certification Scheme.

Certifying and approved companies

11.-(1) Companies that certify wind turbines and wind turbine projects, including quality management systems for manufacture, erection, maintenance and service pursuant to this Executive Order shall be

- 1) accredited by the Danish Accreditation and Metrology Fund (DANAK);
- 2) accredited by a similar, recognised foreign accreditation company which is a signatory to the EA MLA (Multilateral Agreement of the European co-operation for Accreditation);
- 3) approved by the Danish Energy Agency pursuant to Annex 3 to carry out certain tasks as mentioned in subsection (3); or
- 4) approved by the Energy Agency's Secretariat for the Danish Wind Turbine Certification Scheme pursuant to Annex 2, point 2, to carry out maintenance and service of wind turbines as mentioned in subsection (4).

(2) It shall appear from the accreditation documentation for certifying companies that this Executive Order has been covered by the accreditation. Similarly, it shall appear from

certificates to companies that carry out maintenance and service that this Executive Order has been covered by the certification.

(3) Companies that have been approved by the Danish Energy Agency on the basis of documentation for the required qualifications may carry out

- 1) type and prototype certification of wind turbines with a rotor area of 200m² or less, cf. sections 5 and 6 and Annex 1;
- 2) project certification of wind turbines onshore with a rotor area of more than 200 m², cf. section 7; and
- 3) certification for modification, relocation and use for testing and demonstration of wind turbines onshore, cf. section 8.

(4) Companies that have been approved by the Energy Agency's Secretariat for the Danish Wind Turbine Certification Scheme may carry out maintenance and service on stall-controlled wind turbines with an installed capacity of up to 600 kW, cf. sections 10 and 11.

(5) Approvals issued by the Danish Energy Agency to carry out certification as mentioned in subsection (3), nos. 1-3, shall be granted for up to three years on the basis of an application with documentation for knowledge about the certification of wind turbines, cf. Annex 3, after which time they may be renewed on the basis of an application with documentation for certifications carried out in the most recent approval period. Approvals issued to carry out maintenance and service as mentioned in subsection (4), shall also be granted for up to three years on the basis of documentation as stipulated in Annex 2, points 2 and 3, after which time they may be renewed on the basis of an application with documentation for maintenance and service carried out on wind turbines in the most recent approval period.

(6) All companies that perform wind turbine certifications and maintenance and service, and wind turbine owners that have been approved to carry out maintenance and service on their own wind turbine pursuant to this Executive Order, shall be registered with the Energy Agency's Secretariat for the Danish Wind Turbine Certification Scheme. For accredited and certified companies, valid documentation for certification and renewal of certification shall be enclosed with the registration request.

(7) If the Energy Agency's Secretariat for the Danish Wind Turbine Certification Scheme has not received a copy of the certification renewal, cf. subsection (6), or an application for renewal of the approval, cf. section 9(4) or (5), 2nd clause, before expiry of the certification or the approval issued, access to register service and maintenance shall be denied, cf. Annex 2, point 5, and approval to carry out service and maintenance will have to be applied for anew.

12.-(1) Certificates issued pursuant to this Executive Order shall contain references to assessments and testing carried out.

(2) The certifying company shall

- 1) withdraw a certificate issued pursuant to this Executive Order if it is observed that the erected wind turbine or the wind turbine project, or the maintenance and service performed, are seriously flawed, or if it is observed that the prerequisites for certification have not been met;
- 2) regularly submit copies of certificates issued with associated certification reports and notifications on withdrawals of certificates to the Energy Agency's Secretariat for the Danish Wind Turbine Certification Scheme;
- 3) after each audit by a certified service company, sign and forward documentation for completion to the Energy Agency's Secretariat for the Danish Wind Turbine Certification Scheme, cf. Annex 2, point 1; and
- 4) store documentation for certificates issued, cf. sections 5, 7 and 8, throughout the wind turbine's design lifetime, as stated in the certificate.

(3) Approved companies that carry out maintenance and service shall, at least once a year, submit an updated list of wind turbine types that are being serviced to the Energy Agency's Secretariat for the Danish Wind Turbine Certification Scheme.

(4) Certified and approved companies that carry out maintenance and service shall store service reports, cf. section 10(3), for at least five years.

(5) The Energy Agency's Secretariat for the Danish Wind Turbine Certification Scheme shall update and publish a list of valid certifications, cf. sections 5-8, and registrations of wind turbines, cf. Annex 1, point 2.

Administrative provisions, supervision and control etc.

13.-(1) The Energy Agency's Secretariat for the Danish Wind Turbine Certification Scheme has been established by the Danish Energy Agency to administrate this Executive Order, including supervise compliance with the provisions of this Executive Order. Furthermore, the Energy Agency's Secretariat for the Danish Wind Turbine Certification Scheme is responsible for the technical certification basis, including coordination of standardisation work. The Secretariat also acts as the Danish Energy Agency's information and knowledge centre for the technical certification scheme.

(2) To assist with ongoing evaluation of the technical content and administration of the scheme, the Danish Energy Agency has appointed an advisory committee, the members of which include representatives of the wind turbine industry, wind turbine owners, Energinet.dk, grid and electricity supply companies, insurance companies, certifying companies and standardisation and research institutes etc. The Energy Agency's Secretariat for the Danish Wind Turbine Certification Scheme manages the practical tasks in connection with the meetings of the advisory committee.

(3) The Energy Agency's Secretariat for the Danish Wind Turbine Certification Scheme submits a report on its activities to the Danish Energy Agency once a year.

14.-(1) The Energy Agency's Secretariat for the Danish Wind Turbine Certification Scheme shall carry out ongoing supervision of the approvals issued pursuant to section 9(3), section 11(1), nos. 3 and 4. Furthermore, the Energy Agency's Secretariat for the Danish Wind Turbine Certification Scheme shall carry out supervision of the performance of maintenance and service, cf. sections 9 and 10.

(2) The Energy Agency's Secretariat for the Danish Wind Turbine Certification Scheme may, independently of accrediting companies' inspections of certifying companies, collect information from the certifying companies, the certified and approved companies, the manufacturers and suppliers of wind turbines, and the owners of wind turbines, for use in its administration of the technical certification scheme.

(3) If the prescribed interval for maintenance and service has been exceeded by more than three months, or if there are other matters which conflict with this Executive Order, the Danish Energy Agency may order that such matters be rectified immediately or within a given time limit. The Danish Energy Agency shall notify the accrediting company of orders that relate to the certifications of accredited certifying companies.

(4) If the owner of a wind turbine fails to comply with an order concerning a missing certification or missing service and maintenance within the time limit set out in the order pursuant to subsection (3), upon recommendation by the Energy Agency's Secretariat for the Danish Wind Turbine Certification Scheme, the Danish Energy Agency may order the owner of the wind turbine to stop operation of the wind turbine until matters have been rectified.

15.-(1) Costs of certification of wind turbines, including the related certification of quality management systems, necessary surveys, tests and inspections performed as part of the certification process shall be paid by the applicant.

(2) Costs of certification or approval of quality management systems for maintenance and service shall also be paid by the applicant.

Appeals

16.-(1) Appeals about decisions made by a certifying company and by the Energy Agency's Secretariat for the Danish Wind Turbine Certification Scheme pursuant to the provisions of this Executive Order may be lodged with the Danish Energy Agency. Appeals shall be lodged in writing within four weeks of notification of the decision.

(2) Decisions by the Danish Energy Agency pursuant to this Executive Order may not be appealed to the Energy Board of Appeal.

Penalties

17.-(1) Unless a more severe penalty is due under other legislation, fines shall be imposed on any person who:

- 1) gives incorrect or misleading information to a certifying company, a company carrying out maintenance and service, or the Danish Energy Agency, or fails to give information if so requested; or
- 2) fails to comply with an order, cf. section 14(3) and (4).

(2) Companies etc. (legal persons) may be subject to criminal liability in pursuance of the regulations in Chapter 5 of the Criminal Code.

Entry into force etc.

18.-(1) This Executive Order shall enter into force on 1 February 2013.

(2) Executive Order no. 651 of 26 June 2008 on the technical certification scheme for the design, manufacture, installation, maintenance and service of wind turbines shall be repealed, and the notification from the Danish Energy Agency of 19 March 2010 on approvals of wind turbines with an electricity output of 25kW or less and a rotor area of 200 m² or less shall elapse.

(3) The final processing of applications for approval to carry out service and maintenance on wind turbines received by the Energy Agency's Secretariat for the Danish Wind Turbine Certification Scheme before entry into force of this Executive Order shall be pursuant to this Executive Order.

(4) Certificates and approvals that have been issued pursuant to previous executive orders shall be valid until the expiry of these.

(5) The international standards mentioned in section 5(1), section 7(1) and Annexes 2 and 3 have not been announced in the Danish Legal Gazette but will be available for review at the Danish Energy Agency.

Ministry of Climate, Energy and Building, 25 January 2013

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Certification of wind turbines with a rotor area of 40 m² or less

1. Certification of wind turbines with a rotor area of more than 5 m² and up to 40 m²

For wind turbines with a rotor area of more than 5 m² and up to 40 m², as an alternative to certification pursuant to section 5(1), the producer or the supplier can opt for certification pursuant to the requirements below or similar requirements, cf. section 5(2).

A certificate for testing and demonstration, including prototype certificates, may be issued on the basis of an assessment of the structural safety of the wind turbine, cf. section 2, however, such certificate does not cover quality, performance and service. That is, the certification must cover the requirements mentioned in point 1.1, nos. 1-3, or similar requirements.

1.1

The certification must, as a minimum, comprise testing of the strength of the tower and rotor components (blades) and subsequent functional and operational testing. In addition, a calculation of rotors and tower using the loads used in the testing must be verified. The testing must, as a minimum, comprise:

- 1) Testing of the strength of an erected wind turbine tower subjected to a horizontal thrust of at least 300 Newton/m² rotor area at hub height.
- 2) Static testing of the individual rotor components mounted in a test stand with at least 300 Newton/m² rotor area/number of rotor components. The rotor components must be subjected to flapwise loads in a 2/3 radius from the root. For vertical axle wind turbines, the individual rotor components must be subjected to similar loads relative to the attachment point(s) of the blades on the axle, including the centrifugal force calculated for the rotor component.
- 3) Testing of the wind turbine device preventing runaway operation. This device must be tested at a wind speed of at least 25% above nominal wind speed, however, at least 12 m/s.
- 4) Guidelines must be drawn up informing users of the way the device works, and how ongoing inspection and testing are performed, cf. no. 3.
- 5) Operational testing of a single wind turbine example until electricity production has been achieved corresponding to at least 500 peak-load hours. However, the testing period must be of at least three months' duration under Danish wind conditions or similar foreign wind conditions, and it must include at least two occasions with mean wind speeds above 12 m/s for a period of six consecutive hours. As a minimum, wind speed, output and energy production must be measured.

1.2.

The certification must comprise a source noise measurement, cf. section 5(3) of this Executive Order.

1.3.

For use when erecting the wind turbine, the turbine's structural safety must be assessed relative to the desired foundation design.

2. Certification of wind turbines with a rotor area of 5 m² or less

Wind turbines with a rotor area of 5 m² or less are exempted from certification, however, they may be registered with the Energy Agency's Secretariat for the Danish Wind Turbine Certification Scheme, cf. section 5(6).

The registration must, as a minimum, comprise:

- 1) The name, postal address, telephone number and e-mail address of the manufacturer and possibly of the supplier.
- 2) A technical description of the turbine.
- 3) Technical data, including noise emission data.
- 4) A description of the turbine's safety systems.
- 5) Instructions for use and installation.
- 6) An operations manual.
- 7) Maintenance and service data.
- 8) Information about expected energy production.

Certification and approval of service companies, approval of owners to carry out maintenance and service of own wind turbines, and performance of maintenance and service.

Certification and approval of companies that carry out wind turbine maintenance and service, and approval of owners to carry out maintenance and service of own wind turbines, must be based on the requirements and procedures specified in points 1 or 2.

Point 3 specifies requirements and procedures for approval of the owner of a wind turbine to maintain and service his own wind turbine.

Point 4 specifies requirements for service inspections of wind turbines that have been in operation for longer than their design lifetime.

Finally, point 5 specifies requirements and procedures for reporting service inspections to Energinet.dk.

1. Certification of service companies by accredited companies

The certification of a service company must, as a minimum, provide documentation that the company has adequate experience and expertise within the field of wind turbine maintenance and service and has implemented a quality management system according to DS/EN ISO 9001:2008 or similar.

It must appear from the certificate that the requirements for maintenance and service of this Executive Order have been covered by the certification. Furthermore, a list of the wind turbine types and wind turbine sizes on which the company can perform maintenance and service must be specified in an annex to the certificate.

In connection with the certification, it must be ensured that the company has:

- 1) Service manuals for the relevant turbine types, as well as updates that affect the operation of the wind turbine. For existing wind turbines for which no specifications and service manuals prepared by the manufacturer are available, maintenance and service may be performed on the basis of a service manual prepared by the service company on the basis of the service performed so far on the relevant wind turbine type.
- 2) The required tools.
- 3) Personnel qualifying for the task at hand and according to the service manual.

1.1 Audits by the certifying company

In connection with each audit, the certifying company must ensure that the conditions for certification pursuant to the quality assurance standard used have been met.

Furthermore, at each audit, the certifying company must ensure that:

- 1) the company has up-to-date service manuals for all of the wind turbine types on which the company performs services;
- 2) service reports for each service visit are available in accordance with the service agreement entered into between the owner of the wind turbine and the service

- company;
- 3) maintenance and service are performed by qualified personnel in accordance with the up-to-date manuals and the specified intervals for maintenance and service;
 - 4) as required, a completed check list is available with documentation for the operational conditions of the wind turbine in accordance with the manuals for maintenance and service; and
 - 5) any repairs and changes to, and replacements of, components have been performed in accordance with current service manuals.

Finally, the certifying company must

- 6) submit documentation for completed audits to the Energy Agency's Secretariat for the Danish Wind Turbine Certification Scheme, which must include a list of the wind turbine types being serviced and the versions of relevant service manuals, dated and signed by the certifying company; and
- 7) perform random controls to check that maintenance and service of the turbine have been performed as described in the service reports.

2. Approval of service companies, cf. section 11(4)

An approval pursuant to section 11(4) of this Executive Order is granted to service companies that are able to document expertise in maintenance and service of wind turbines, including that they have personnel with documented experience.

The approval may also be granted on the basis of an application forwarded to the Energy Agency's Secretariat for the Danish Wind Turbine Certification Scheme.

The application must, as a minimum, include:

- 1) a list of the types of wind turbine for which the company wishes an approval to carry out service;
- 2) a list of the relevant manuals for maintenance and service of the individual turbine types, and necessary updates, including version no./name of the manual;
- 3) documentation for previous experience with maintenance and service of the wind turbine types concerned;
- 4) list of the training and formal qualifications of personnel;
- 5) documentation for an implemented quality management system for maintenance and service of the relevant turbine types with a rotor area of more than 200 m².

The Energy Agency's Secretariat for the Danish Wind Turbine Certification Scheme may request supplementary material for use in case processing.

3. Approval in exceptional circumstances to carry out service and maintenance

An approval pursuant to section 9(3) of this Executive Order is granted to the owners of wind turbines with a rotor area of 200m² or less, if the owner can provide documentation for relevant training and adequate knowledge of maintenance and service of the turbine in question.

Furthermore, an approval may be granted to owners of certain older wind turbines with a rotor area of more than 200 m² which the owner has been servicing himself since its erection.

Similarly, a company which does not meet the conditions under section 11(4), or a

person, may be approved pursuant to section 9(3) to carry out maintenance and service on a specific wind turbine with a rotor area of 200m² or less, if the company or the person can provide documentation for relevant training and adequate knowledge of maintenance and service of the turbine in question.

The approval may also be granted on the basis of an application forwarded to the Energy Agency's Secretariat for the Danish Wind Turbine Certification Scheme.

The application must, as a minimum, include:

- 1) The name, postal address, telephone number and possibly e-mail address of the owner.
- 2) Concrete information about the turbine to be serviced. Type (manufacture, size, etc.), location (siting), date of erection.
- 3) The GSRN registration number with Energinet.dk.
- 4) A detailed reason for applying to perform the service personally.
- 5) Documentation for training and knowledge about the relevant wind turbine.
- 6) A description of the scope and content of the regular maintenance (check lists), including information about the required service manuals.

The Energy Agency's Secretariat for the Danish Wind Turbine Certification Scheme may request supplementary material for use in case processing.

The approval elapses if the turbine is dismantled or sold.

4. Service inspection of wind turbines that have been in operation for longer than their design lifetime

Service inspection of wind turbines that have been in operation for longer than their design lifetime must, in addition to the service inspection performed in accordance with the service manual, as a minimum, cover an inspection and assessment of the wind turbine's structural parts in relation to the turbine's continued operation.

The extended inspection is explained in more detail in the guidelines to this Executive Order, including examples of the scope of the service inspection, as service inspection on wind turbines older than their design lifetime depends on the condition and design of the individual wind turbine.

5. Reporting of service

Pursuant to section 10(3), the owner of the wind turbine is responsible for reporting about the service completed and about the date of the next service to the master data register for wind turbines at Energinet.dk.

Reporting of regular maintenance and service must include the following for each wind turbine:

- 1) The date of the completed service visit.
- 2) The name of the company or person that has been certified or approved to carry out service and maintenance on the wind turbine.
- 3) The date for the next, regular service visit.

The date for the next service visit must be in accordance with the requirements of the service manual, however, no more than two years after the most recently completed service.

Certified and approved service companies must have access to register via

Energinet.dk's self-service system. Energinet.dk has prepared guidelines and a template for the reporting, which Energinet.dk will send to the certified or approved company.

Owners of wind turbines that have been approved to carry out service and maintenance of their own wind turbine, or persons that have been approved to carry out service and maintenance of a specific wind turbine, will receive a form from Energinet.dk for use when reporting about services completed.

Approval of companies that carry out certification of wind turbines

Points 1-3 specify requirements and procedures for approval of non-accredited companies and persons to carry out certification of wind turbines with a rotor area of 200 m² or less, project certification of wind turbines onshore with a rotor area of more than 200 m², and certification for modifications etc., cf. section 11(3), nos. 1-3.

The approval may also be granted on the basis of an application forwarded to the Energy Agency's Secretariat for the Danish Wind Turbine Certification Scheme.

1. Approval by the Danish Energy Agency of companies to carry out certification of wind turbines with a rotor area of 200 m² or less, cf. section 11(3), no. 1

An approval is granted to companies that are able to document their expertise in design and certification of wind turbines, including that they have personnel with documented experience.

The application must, as a minimum, include documentation of knowledge of:

- 1) Wind turbine types below 200 m².
- 2) The control and safety systems of wind turbines.
- 3) Wind turbine loads and specified load cases.
- 4) Structural, mechanical and electrical components.
- 5) Tower and foundation designs.
- 6) Static testing of blades and tower.
- 7) Testing safety systems.
- 8) Measurements of electricity output and energy production.
- 9) Measurement of loads.
- 10) Current standards for wind turbines below 200 m², including, in particular, DS/EN 61400-2.

2. Approval by the Danish Energy Agency of companies to carry out project certification of wind turbines onshore with a rotor area of more than 40 m², cf. section 11(3), no. 2

Approval is granted to companies that are able to document qualifications regarding project certification of wind turbines.

The application must, as a minimum, include:

- 1) Documentation for knowledge of, and experience with, project certification.
- 2) Instructions for project certification in accordance with DS/EN 61400-22.
- 3) Documentation for having implemented a quality management system in accordance with DS/EN ISO 9001:2008, or similar, for the delivery and erection of wind turbines.

3. Approval by the Danish Energy Agency of companies for modification, relocation and use after testing of wind turbines onshore, cf. section 11(3), no. 3

Approval is granted to companies that are able to document qualifications regarding

modification and relocation of wind turbines.

The application must, as a minimum, include documentation of knowledge of:

- 1) Wind turbine designs.
- 2) Type and prototype approvals.
- 3) The operational life of wind turbines and wind turbine components.
- 4) Conditions linked to the erection of wind turbines in Denmark.
- 5) Foundation design.
- 6) Erection and putting into service of wind turbines onshore.
- 7) Testing safety systems.