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UNOFFICIEL TRANSLATION by Global-Denmark, December 2020

Executive Order on technical certification and servicing of wind turbines etc.¹

Pursuant to section 33, section 58b(1), section 60 and section 73(1) of the Act on promotion of renewable energy, cf. Consolidating Act no. 125 of 7 February 2020, as amended by Act no. 738 of 30 May 2020 on amendments to the Act on promotion of renewable energy, the Act on electricity supply, the Assessment Act and the Personal Taxation Act, the following is laid down by authority under section 4(1) of Executive Order no. 1068 of 25 October 2019 on the tasks and powers of the Danish Energy Agency:

Part 1

Purpose

1. The purpose of the Executive Order is to ensure that wind turbines that are constructed on land, in territorial water and in the exclusive economic zone and which are used for the production of electrical energy do not carry a risk to the safety and health of persons and livestock, as well as the security of property when wind turbines are installed, maintained or used, and that they comply with the requirements laid down for noise emission.

Scope

2.(1) The Executive Order covers wind turbines used for electrical energy production with a view to automatic operation, including the utilised tower, foundation, internal electro-technical systems and transformer up to and including wind turbines' connecting terminals to the electrical grid, including components to run cables from wind turbines.

(2) The Executive Order does not cover the electricity grid in a wind farm, the transformer station of the farm or the farm control system.

(3) The Executive Order does not apply to wind turbines erected on ships.

¹ The 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 in Directive 98/48/EC.

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3. The Executive Order does not affect provisions following from other legislation relating to wind turbines.

Definitions

4. The following definitions apply for the purposes of this Executive Order:

- 1) Prototype wind turbine: The first, not serially manufactured, wind turbine(s) of a new type.
- 2) GSRN number: The unique 18-digit identification number for the wind turbine in the core data register for installations producing electricity etc. of the Danish Energy Agency.
- 3) Prototype certificate: A third-party statement declaring that a specific wind turbine has been designed and dimensioned in compliance with specified standards and regulations for the performance of a prototype test at a particular geographical location.
- 4) Type certificate: A third-party statement declaring that a wind turbine type complies with specified standards and regulations.
- 5) Project certificate: A third-party statement or statement from an approved wind turbine manufacturer declaring that one or more type-certified wind turbines together with the foundation and tower used are dimensioned for the specific external conditions at a specific geographical location in accordance with specified standards.
- 6) Test plan: A description of the purpose of erecting the prototype and a description of the tests to be carried out within the period of validity of the certificate.
- 7) Structural safety: The level of safety for which a wind turbine is designed and dimensioned to withstand the loads to which it is expected to be exposed during its designed useful life.
- 8) Noise: Acoustic noise emission in accordance with the regulations in the Executive Order on noise from wind turbines.
- 9) Date of putting into service: The date of connection to the grid, cf. section 5(1), no. 4, in the Act on promotion of renewable energy, or for wind turbines that are not connected to the collective electricity supply grid, the point in time when the wind turbine is set into automatic operation.

5. Use of a wind turbine is conditional upon the wind turbine owner, at the date of putting into service, being able to document compliance with the requirements of sections 6–16 for the erected turbine.



Part 2

Type certification and provisional type certification of wind turbines

6.(1) A wind turbine with a rotor area exceeding 5 m² shall have a valid type certificate by no later than the date of putting into service, cf. however, sections 7–11 and sections 15 and 16.

(2) Type certification of a wind turbine with a rotor area exceeding 5 m² and up to 200 m² shall at least meet requirements corresponding to the requirements for type certification laid down in the international standard IEC 61400-22:2010 Wind turbines – Part 22: Conformity testing and certification, including the DS/EN, IEC and ISO standards specified therein, and which relate to health and safety, cf. Annex 1.

(3) The type certification of a wind turbine with a rotor area exceeding 200 m² shall at least meet requirements corresponding to the mandatory modules and requirements for type certification laid down in the international procedure IECRE OD-501:2018 Type and Component Certification Scheme, including the ISO and IEC standards specified therein and which relate to health and safety, cf. Annex 1.

(4) Type certification of a wind turbine, cf. subsection 1, shall further include a source noise measurement carried out in accordance with the Executive Order on noise from wind turbines.

(5) A type certificate covering several different variants of the same type of wind turbine or several different wind turbine types shall contain a unique identification of each variant or wind turbine type that the certificate covers. The source noise measurement, cf. subsection 4, for such a certificate shall at least be representative of the noisiest variant or wind turbine type covered by the certificate.

(6) A type certificate is issued to the manufacturer, importer or supplier of the wind turbine. When a wind turbine is sold, the purchaser shall be given a copy of the owner's certificate, cf. however, subsection 8.

(7) An application for type certification is submitted to the undertaking that is to certify the wind turbine, with the necessary documentation material attached.

(8) For wind turbines erected before 1 February 2013, the seller is not obliged to supply to the buyer a copy of the certificate for the wind turbines as stated in subsection 6 if the seller is not in possession of such a certificate and it has not been possible for the seller to obtain a copy of the certificate from the manufacturer, importer or supplier.

7.(1) A provisional type certificate can be issued for a wind turbine before the certification under section 6 is concluded, if there are no pending issues that are substantially important for safety.

(2) A provisional type certificate for wind turbines with a rotor area exceeding 5 m² and up to 200 m² shall at least meet requirements corresponding to the requirements for provisional type certification laid down in the international



procedure IEC 61400-22:2010 Wind turbines – Part 22: Conformity testing and certification, including the DS/EN, IEC and ISO standards specified therein, and which relate to health and safety, cf. Annex 1.

(3) A provisional type certificate for wind turbines with a rotor area exceeding 200 m² shall at least meet requirements corresponding to the mandatory modules and requirements for provisional type certification laid down in the international procedure IECRE OD-501:2018 Type and Component Certification Scheme, including the IEC and ISO standards specified therein and which relate to health and safety, cf. Annex 1.

(4) A provisional type certificate can be issued with a validity not exceeding one year at a time. A source noise measurement shall be carried out in accordance with the Executive Order on noise from wind turbines and shall be available by no later than the first extension, cf. section 6(4). If the certificate is extended, the last period of expiry shall not exceed three years from the first date of issue of the provisional certificate.

8.(1) Wind turbines that comply with conditions in 1–4 shall have a valid certificate by no later than the date of putting into service, issued on the basis of at least the requirements and procedures in Annex 2:

- 1) Wind turbines with a rotor area of more than 5 m² and up to and including 40 m²,
- 2) which are designed and built by the owner,
- 3) which are only manufactured as a single example, and
- 4) which are erected in specially delimited areas.

(2) Wind turbines covered by subsection 1 may not be transferred with a view to erection at a new location.

(3) Certification of a wind turbine, cf. subsection 1, shall further include a source noise measurement carried out in accordance with the Executive Order on noise from wind turbines.

9.(1) A provisional type certificate can be issued to a wind turbine before a certificate under section 8(1) is issued, if there are no pending issues that are substantially important for safety.

(2) A provisional certificate can be issued with a validity not exceeding one year at a time. No later than by the first extension, a source noise measurement shall be available that has been carried out in accordance with the Executive Order on noise from wind turbines, cf. section 8(3). If the certificate is extended, the last period of expiry shall not exceed three years from the first date of issue of the provisional certificate.

10.(1) A wind turbine with a rotor area of 5 m² or less does not need to be certified.

(2) The Danish Energy Agency may exempt wind turbines with a rotor area of 40 m² or less if:



- 1) documentation is available showing that the wind turbine is used for education, research or testing,
- 2) the usage is on specifically delimited areas designated for the purpose, to which there is no public access without special permission and
- 3) where special safety considerations have been taken in relation to the surroundings in order that the wind turbine cannot be considered to be a risk for the health and safety of persons and livestock.

Certification of prototype wind turbines

11.(1) A prototype wind turbine with a rotor area exceeding 5 m² shall have a valid prototype certificate by no later than the date of putting into service.

(2) A prototype certificate is issued for a fixed period not exceeding three years.

(3) Certification of a prototype wind turbine with a rotor area exceeding 5 m² and up to 200 m², cf. subsection 1, shall at least meet requirements corresponding to the requirements for prototype certification laid down in the international standard IEC 61400-22:2010 Wind turbines – Part 22: Conformity testing and certification, including the DS/EN, ISO and IEC standards specified therein, and which relate to health and safety, cf. Annex 1.

(4) The certification of a prototype wind turbine with a rotor area exceeding 200 m², cf. subsection 1, shall at least cover requirements corresponding to the mandatory modules and requirements for prototype certification laid down in the international procedure IECRE OD-501: 2018 Type and Conformity Certification Scheme, including the ISO and IEC standards specified therein and which relate to health and safety, cf. Annex 1.

(5) Documentation must be available on source noise in accordance with the Executive Order on noise from wind turbines.

(6) A prototype certificate is issued to the manufacturer, importer or supplier of the wind turbine.

(7) An application for prototype certification is submitted to the undertaking that is to certify the wind turbine, with the necessary documentation material attached.

(8) The certificate shall contain the GSRN number. If the GSRN number is not available at the time of issue, the certifying undertaking shall send it later together with a resubmission of the certificate, immediately after it becomes available.

(9) The prototype certificate can be extended for up to one year.

Project certification and provisional project certification of wind turbines

12.(1) Wind turbines with a rotor area exceeding 200 m² shall, in addition to type certification of the specific wind turbine, cf. sections 6 and 7 and sections 15 and 16, also be project-certified on erection.

(2) The owner is responsible for a valid project certificate being available by no later than three months after all wind turbines included in the project certification have been put into operation.



- (3)** A project certification, cf. subsection 1, shall at least meet requirements corresponding to the mandatory modules and requirements for project certification laid down in the international procedure IECRE OD-502:2018 Project Certification Scheme, including the ISO and IEC standards specified therein and which relate to health and safety, cf. Annex 1.
- (4)** If the project certificate includes several wind turbines, the project certificate shall show a unique link between the wind turbine type or variant and the GSRN number for each individual wind turbine.
- (5)** A project certificate is issued to the owner or owners of the wind turbine or wind turbine project.
- (6)** An application for a project certificate is submitted to the undertaking that is to certify the wind turbine project, with the necessary documentation material attached.
- (7)** Wind turbines listed on a prototype certificate are exempt from the requirement for project certification.
- (8)** Wind turbines that are relocated to be erected at a new location are exempt from the requirement for project certification. The requirement for a supplementary certificate for relocation, cf. section 15(1), no. 3, continues to apply.

13.(1) A provisional project certificate can be issued for wind turbines before the certification under section 12(1)–(3) is concluded, if there are no pending issues that are substantially important for safety.

(2) A provisional project certificate for wind turbines shall at least include requirements corresponding to the mandatory modules and requirements for provisional project certification laid down in the international procedure IECRE OD-502:2018 Project Certification Scheme, including the ISO and IEC standards specified therein and which relate to health and safety, cf. Annex 1.

(3) A provisional project certificate can be issued with a validity not exceeding one year at a time. If the certificate is extended, the last period of expiry shall not exceed three years from the first date of issue of the provisional certificate.

Expired fixed-term certificate

14.(1) A wind turbine that has been erected on the basis of the following fixed-term certificates may only be erected during the period of the certificate's validity:

- 1) Provisional type certificate, cf. section 7.
- 2) Provisional certificate issued in accordance with section 9
- 3) Prototype certificate, cf. section 11.
- 4) Provisional project certificate, cf. section 13.
- 5) Supplementary certificate for tests and demonstration, cf. section 15(1) no. 2.
- 6) Provisional supplementary certificate, cf. section 16.

(2) The obligation to ensure that the wind turbine is only erected during the period of validity of the fixed-term certificate, cf. subsection 1, rests upon the owner of the wind turbine.



(3) However, the wind turbine may remain erected if a new or renewed certificate has been issued before the expiry of the fixed-term certificate.

Supplementary certification and provisional supplementary certification for modification, modification for tests and demonstration, relocation or continued use after the expiry of a fixed-term certificate

15.(1) A wind turbine with a rotor area exceeding 5 m² which has been certified or approved in accordance with this or previous Executive Orders shall have a supplementary certificate if one or more of the following conditions arises:

- 1) The wind turbine is modified, cf. subsection 2.
- 2) The wind turbine is modified for tests and demonstration, cf. subsection 2.
- 3) The wind turbine is relocated.
- 4) The wind turbine is to be used after the expiry of a supplementary certificate for tests and demonstration or after the expiry of a prototype certificate.
- 5) The wind turbine is to be used after the expiry of a provisional type certificate in the event that no type certificate for the wind turbine type in question is issued, cf. section 6, or the wind turbine is not modified to correspond to a wind turbine with a valid type certificate.

(2) Modification, cf. subsection 1 nos. 1 and 2, means changes in relation to the original type certification or type approval, including changes or replacements, where the wind turbine is not brought back to its original design and which are significant for the safety of the wind turbine.

(3) In the case of modifications where there is no certificate in accordance with subsection 1 available, the owner of the wind turbine must be able to document that the modification is not one of those covered by subsection 2.

(4) The owner of the wind turbine is responsible for the availability of a valid supplementary certificate or provisional supplementary certificate when the operation of the wind turbine resumes or is continued.

(5) The supplementary certification, cf. subsection 1, including preparation of the certification report and certificate, is carried out in accordance with requirements and procedures in Annex 3. If several of the conditions listed in subsection 1, nos. 1–5, apply, a joint certificate can be issued for all the conditions. Certification, the certification report and the certificate shall meet all the requirements in Annex 3 for the conditions that are being certified.

(6) If it is considered that a condition under subsection 1 will lead to changes in the source noise from the wind turbine, the source noise measurement shall be carried out in accordance with the Executive Order on noise from wind turbines.

(7) Supplementary certificates, cf. subsection 1, are issued to the owner of the wind turbine, cf. however, subsection 8.

(8) A supplementary certificate for a modification of a wind turbine type can be issued to a manufacturer, importer or supplier in accordance with Annex 3, Section 2. If a modification of a wind turbine covered by a supplementary certificate



is sold, the purchaser shall be given a copy of the owner's supplementary certificate for modification of the wind turbine type.

(9) The following supplementary certificates are issued with the following periods of validity:

- 1) A supplementary certificate for modification for tests and demonstration, cf. subsection 1, no. 2, is issued with a validity of up to a maximum of three years. The certificate can be extended by up to one year.
- 2) A supplementary certificate for a modification of a wind turbine type, cf. subsection 8, is issued with a period of validity of five years, with the possibility of extension.

(10) An application for supplementary certification, cf. subsections 1 and 8, is submitted to the undertaking that is to certify the wind turbine or wind turbine type, accompanied by necessary documentation materials, cf. however, subsection 11.

(11) For wind turbines modified for tests and demonstration, cf. subsection 1, no. 2, there shall in addition to the documentation specified in no. 10 be a test plan available for the period for which the certificate is issued.

(12) If the supplementary certificate is issued for a wind turbine, cf. subsections 1 and 8, which is covered by a project certificate, the project certificate shall be updated on the basis of the information in the supplementary certificate.

16.(1) A provisional supplementary certificate can be issued to a wind turbine before the certification under Annex 3 is concluded, if there are no pending issues that are substantially important for safety, cf. however, subsection 2.

(2) Subsection 1 does not apply to certificates issued under section 15(8).

(3) A provisional supplementary certificate can be issued with a validity not exceeding one year at a time. No later than by the first extension, a source noise measurement shall be available that has been carried out in accordance with the Executive Order on noise from wind turbines, cf. section 15(6). If the certificate is extended, the last period of expiry shall not exceed three years from the first date of issue.

Part 3

Obligation of the owner to service the wind turbine

17.(1) The owner of a wind turbine has an obligation to ensure that the wind turbine is always serviced, repaired and maintained, so that the wind turbine does not constitute a risk to the health and safety of persons and livestock and the security of property.

(2) The owner of a wind turbine has an obligation to ensure that the wind turbine is serviced in accordance with the requirements of the service manual, as long as the wind turbine is connected to the grid and for a wind turbine that is not connected to the collective electricity supply grid, as long as the wind turbine is in automatic operation. Servicing of the wind turbine shall be carried out on the basis of



specifications laid down for ongoing service of the wind turbine in accordance with issued certificates or the latest version of the service manuals of the wind turbine supplier, as well as any updates to the service manual that are significant for the safety of the wind turbine, cf. however, subsections 3–5.

(3) The date of the next service visit shall be in accordance with the requirements of the service manual, cf. however, subsections 4 and 5.

(4) For wind turbines for which no fixed time intervals are specified in the service manual and which are not equipped with technical solutions that unambiguously indicate when the next service visit shall be carried out, the date of the next service visit may be no more than one year after the last service visit carried out.

(5) A wind turbine that has been erected for longer than the design life stated in the certificate issued in accordance with this or earlier Executive Orders shall, in addition go through an extended service inspection, cf. Annex 4.

(6) Wind turbines that are subject to requirements under the Executive Order on noise from wind turbines to operate with special noise-limiting measures shall have the noise setting of the wind turbine read at each service visit. The noise setting shall be noted in the report from the service, cf. section 21, cf. however, subsection 7.

(7) If the design of a wind turbine does not facilitate reading by the service undertaking, the owner of the wind turbine shall be able to document the current noise setting of the wind turbine in connection with the inspection by the competent authority.

18.(1) An owner taking a wind turbine out of service shall ensure that:

- 1) The wind turbine is correctly secured.
- 2) Service on the wind turbines is carried out at least once a year, unless a shorter time interval is stated in the service manual for the wind turbine that has been taken out of service.
- 3) A function and safety test is carried out before the wind turbine is put back into service, if the wind turbine has been out of service for a longer period.

(2) Service under subsection 1, no. 2, shall at least fulfil the requirements in Annex 4. unless otherwise stated in the service manual.

19.(1) Service, cf. sections 17 and 18 of wind turbines with a rotor area exceeding 40 m² shall be carried out by a certified or licensed undertaking, cf. section 25, cf. however, section 20.

(2) Other maintenance, repairs or improvements and similar on wind turbines with a rotor area exceeding 40 m² shall be carried out by, cf. however, subsection 3:

- 1) an undertaking that is either certified or licensed to carry out service on the wind turbine in question, or
- 2) an undertaking that is certified to stop, secure, start and test functionality and safety of wind turbines of the type in question.

(3) Other undertakings can carry out other maintenance, repairs or improvements and the like, if an undertaking fulfilling the conditions in subsection 2, no. 1 or no. 2, carries out stopping, securing, starting and testing of functionality and safety of the wind turbine in question during the work.



20.(1) Wind turbine owners, persons and undertakings that have a licence to carry out service under section 9(3) and (4) in Executive Order No 73 of 25 January 2013 on the technical certification scheme for wind turbines etc. can continue to service the wind turbines covered by their licence for the period of validity of the licence.

(2) Owners, persons and undertakings with a licence under subsection 1 shall apply for renewal of the licence before the expiry of the validity period of the current licence. An extension of the licence is given with a duration of three years. In connection with the renewal, the Danish Energy Agency can request that the owner, person or undertaking is still able to document:

- 1) relevant education and sufficient knowledge of service for the wind turbine in question,
- 2) that the wind turbine has been serviced during the previous licence period in accordance with the service manual of the wind turbine and the requirements of this Executive Order, and
- 3) a confirmation from the owner of the wind turbine in question, if a person or undertaking is applying for renewal of a licence to service a wind turbine that they do not themselves own.

(3) Licences for owners under subsection 2 are annulled if the wind turbine is sold.

21.(1) During each service, cf. sections 17 and 18, on wind turbines with a rotor area exceeding 40 m², a report shall be prepared to be sent to the owner of the wind turbine immediately after the service has been carried out.

(2) The undertaking carrying out the service shall retain the reports for five years.

(3) The owner of the wind turbine shall retain the reports received for ten years.

(4) Service carried out on a wind turbine with a rotor area exceeding 40 m² and the date of the next service of the wind turbine shall be reported digitally by the undertaking that carried out the service to the Danish Energy Agency on behalf of the owner of the wind turbine, immediately after the completion of the service, cf. however, subsection 5. For owners or persons with a licence to carry out service under section 20, the report can be made using a form made available on the website the Danish Energy Agency. The report shall fulfil the requirements stated in Annex 5.

(5) For wind turbines equipped with technical solutions which unambiguously indicate when the next service visit shall be carried out, the service undertaking shall at least once a year report that it has reviewed the need for service and date of the service visit indicated by the technical solution.

(6) Other maintenance, repair and improvements and the like need not be reported, cf. however, section 15(1), nos. 1 and 2, and section 24.

(7) The service shall be reported to the Danish Energy Agency, as long as the wind turbine has not been deregistered from the master data register of the Danish Energy Agency in accordance with the Executive Order on the master data register for installations producing electricity etc.



22. The owner of a wind turbine with a rotor area of 40 m² or less shall keep a log of service carried out on the wind turbine. The owner of the wind turbine shall retain the log for as long as the wind turbine is connected to the grid, and for wind turbines that are not connected to the collective electricity supply grid, for as long as the wind turbine is in automatic operation.

Service manuals

23.(1) The manufacturer, importer or supplier of the wind turbine shall provide the necessary service manuals to the wind turbine owner upon delivery of the wind turbine.

(2) The manufacturer, importer or supplier of the wind turbine shall send updates to the service manual that are significant for the safety of the wind turbine to the wind turbine owner. The updates shall be sent by no later than four weeks after the update has occurred and shall be sent without a request for payment. In the cases where the manufacturer, importer or supplier is not in possession of contact information of the owners of the wind turbine type in question, the manufacturer, importer or supplier of the wind turbine shall announce in public how the owners of the wind turbines can collect the updates.

(3) If a modification of a wind turbine is sold, cf. section 15(8), the purchaser shall be given the necessary updates of, or supplement to, the service manual relating to safety by the manufacturer, importer or supplier of the modification.

(4) The wind turbine owner is responsible for the specific wind turbine's service document being updated on the basis of the experience from operating the wind turbine.

(5) The undertakings carrying out service on the individual wind turbine, cf. sections 25 and 26, shall assist the owner with updates and maintenance of the service documentation of the wind turbine on the basis of the experience of the undertaking with both the specific wind turbine and the type of wind turbine.

Part 4

Reporting damage to the Danish Energy Agency

24.(1) In the event of an accident or damage to wind turbines which has constituted a risk for the health and safety of persons and livestock and the security of property, or where continued operation without repair of the damage will be a risk for the health and safety of persons and livestock and the security of property, the owner of the wind turbine has an obligation to send information on this to the Danish Energy Agency immediately, cf. Annex 6, including information on the suspected cause of the damage. If the cause of the damage or accident is finally determined, including by an accident or damage report, the owner shall send information on this to the Danish Energy Agency where it is available, if the owner has access to it.



(2) The owner of the wind turbine is obligated to repair the faults in the wind turbine which caused the damage and any consequential damage and to undertake a test of the functionality and safety of the wind turbine before it is put back into operation.

(3) The repair and the test of the functionality and safety of the wind turbine for damaged wind turbines with a rotor area exceeding 40 m² shall be carried out by an undertaking that is certified or licensed to work with the specific type of wind turbine, cf. sections 25 and 26, or jointly with such an undertaking.

(4) The owner of the wind turbine shall inform the Danish Energy Agency that repair and testing of functionality and safety have been carried out. The notification must be made before the wind turbine is put back into operation. The owner of the wind turbine can agree with the undertaking that has carried out the repair and testing of functionality and safety, cf. subsection 3, that this undertaking is to carry out this notification.

(5) The owner of the wind turbine shall, on request, provide the Danish Energy Agency with additional information on the accident or damage.

(6) If, on the basis of the information, the Danish Energy Agency suspects that a serial fault may be involved which may be due to original faults in construction or other manufacturing faults, the Danish Energy Agency will inform the Danish Safety Technology Authority.

Part 5

Requirements for undertakings that service, maintain, repair or carry out improvements and the like on wind turbines

25.(1) Undertakings that service wind turbines with a rotor area exceeding 40 m² shall be certified undertakings in accordance with section 28 or licensed by the Danish Energy Agency in accordance with section 26. The undertakings may only carry out service on those wind turbine types covered by the certification or licence of the undertaking.

(2) Undertakings that carry out other maintenance, repairs or improvements and similar on wind turbines with a rotor area exceeding 40 m² shall, cf. however, subsection 3:

- 1) be certified or licensed to carry out service on the wind turbine of the type in question, or
- 2) be certified at least to stop, secure, start and test functionality and safety of wind turbines of the type in question.

(3) Other undertakings can carry out other maintenance, repairs or improvements and the like, if an undertaking fulfilling the conditions in subsection 2, no 1 or no 2, carries out stopping, securing, starting and testing of functionality and safety of the wind turbine in question during the work.

(4) It must be stated by the certificate for an undertaking that is certified to carry out service or certified to stop, secure, start and test functionality and safety that this Executive Order is included in the certification of the undertaking.



- (5) All undertakings that are licensed or certified to carry out service and undertakings certified to stop, secure, start and test functionality and safety under this Executive Order shall be registered with the Danish Energy Agency.
- (6) The Danish Energy Agency publishes a list on the website of the Danish Energy Agency of undertakings that have a valid licence or a valid certificate to carry out service or to stop, secure, start and test functionality and safety. It shall be stated in the list which types of wind turbine are included in the licence or certificate of the undertaking.
- (7) If the Danish Energy Agency has not received a copy of the renewal of a certification or an application for renewal of a licence, cf. section 26(3), before the certificate or licence that was issued has expired, the Danish Energy Agency will remove the undertaking from the Danish Energy Agency list under subsection 5, and the undertaking cannot report service until a renewed certificate has been received or a renewed licence has been given.

- 26.(1)** The Danish Energy Agency can licence undertakings to carry out service on stall-regulated wind turbines with a nominal output of up to and including 600 kW.
- (2) Approval under subsection 1 can be issued with a validity of at most three years.
- (3) An application for a licence shall contain the documentation specified in Annex 7, Section 1 on licences. An application for renewal shall contain the documentation specified in Annex 7, Section 2 on renewal of a licence.

Part 6

Requirements for undertakings that certify service undertakings

- 27.(1)** Undertakings certifying service undertakings or certifying undertakings that are permitted to stop, secure, start and test functionality and safety for wind turbines in accordance with this Executive Order shall be
- 1) accredited by the Danish Accreditation Fund (DANAK) to certify service undertakings or
 - 2) accredited by a correspondingly recognised accreditation body which has signed the multilateral agreement of the European cooperation for Accreditation (EA) on mutual recognition to certify service undertakings.
- (2) It shall appear from the accreditation documentation for undertakings that are accredited to certify service undertakings that this Executive Order is covered by the accreditation.
- (3) All undertakings that carry out certification of service undertakings shall be registered with the Danish Energy Agency. Accredited undertakings shall attach valid documentation for accreditation during registration.
- (4) The Danish Energy Agency publishes a list on the website of the Danish Energy Agency of undertakings that are accredited to certify service undertakings.



(5) Undertakings accredited to certify service undertakings shall inform the Danish Energy Agency in the event of changes to the accreditation of the undertaking that are significant for the ability of the undertaking to certify service undertakings under this Executive Order.

28.(1) Certification of an undertaking that services wind turbines with a rotor area exceeding 40 m² or of an undertaking that is permitted to stop, secure, start and test functionality and safety of wind turbines with a rotor area exceeding 40 m² shall be carried out in accordance with the requirements in Annex 8.

(2) A certificate issued in accordance with subsection 1 shall include references to controls and assessments carried out by the undertaking, cf. Annex 8, as well as the name of the person issuing the certificate and the period of validity. The certificate shall be signed or, alternatively, electronically verified.

(3) The certificate with the related list of wind turbines shall be sent to the Danish Energy Agency by the undertaking that has issued the certificate. Updates of the certificate and related list of wind turbines shall also be sent to the Danish Energy Agency.

(4) The issuer shall retain documentation for the issued certificate for the entire period of validity of the certificate, as stated on the certificate.

29.(1) A certificate issued to an undertaking that services wind turbines or to an undertaking that is permitted to stop, secure, start and test functionality and safety of wind turbines in accordance with this Executive Order shall be recalled by the undertaking that issued the certificate if the undertaking that issued the certificate considers that the undertaking to which the certificate was issued no longer has the prerequisites to be able to service wind turbines or to stop, secure, start and test functionality and safety of wind turbines in a manner ensuring correct operation of the wind turbines with respect to safety.

(2) The assessment under subsection 1 shall include

- 1) serious faults in service undertaken on the wind turbine or
- 2) serious faults when stopping, securing or testing functionality and safety.

(3) The issuing undertaking shall inform the Danish Energy Agency that the certificate has been recalled.

Part 7

Requirements for undertakings that certify wind turbines or wind turbine projects

30.(1) Undertakings that certify wind turbines or wind turbine projects in accordance with this Executive Order shall be

- 1) accredited by the Danish Accreditation Fund (DANAK) to certify wind turbines and wind turbine projects,
- 2) accredited by a correspondingly recognised accreditation body which has signed the multilateral agreement of the European cooperation for



Accreditation (EA) on mutual recognition to certify wind turbines and wind turbine projects or

- 3) licensed by the Danish Energy Agency in accordance with section 31 to carry out the certifications listed in section 31(1) and (2).

(2) It shall appear from the accreditation documentation for undertakings that are accredited to certify wind turbines and wind turbine projects covered by subsection 1, nos. 1 and 2, that this Executive Order is covered by the accreditation.

(3) All undertakings that carry out certification of wind turbines or wind turbine projects shall be registered with the Danish Energy Agency. Accredited undertakings shall attach valid documentation for accreditation during registration.

(4) The Danish Energy Agency publishes a list on the website of the Danish Energy Agency of undertakings that are accredited or have a valid licence to certify wind turbines.

(5) Undertakings accredited to certify wind turbines or wind turbine projects shall inform the Danish Energy Agency in the event of changes to the accreditation of the undertaking that are significant for the ability of the undertaking to certify wind turbines or wind turbine projects under this Executive Order.

31.(1) The Danish Energy Agency can approve undertakings to carry out the following certifications:

- 1) Certification of wind turbines with a rotor area exceeding 5 m² and up to and including 200 m² in accordance with section 6(2), section 7(2), sections 8 and 9 and section 11(3).
- 2) Project certification in accordance with sections 12 and 13 of wind turbines on land with a rotor area exceeding 200 m².
- 3) Supplementary certification in accordance with sections 15 and 16.

(2) The Danish Energy Agency can also license the manufacturers of wind turbines to carry out project certification of the manufacturer's own wind turbines on land with a rotor area exceeding 200 m², cf. subsection 1 no. 2. The licence can only be given to certification of projects where the preconditions for the project are within the specifications of the underlying type certificate.

(3) Licenses under subsections 1 and 2 can be issued with a validity of at most three years.

(4) An application shall contain the documentation of knowledge for certification of wind turbines laid down in Annex 9. An application for renewal shall contain documentation that the undertaking continues to meet the requirements in Annex 9.

32.(1) A certificate issued to a wind turbine or a wind turbine project in accordance with this Executive Order, cf. sections 6–9 and sections 11–13 and sections 15 and 16, shall contain references to assessments and tests of the wind turbines carried out as well as the name of the issuer, the date of issue and the period of validity, if this is available. The certificate shall be signed or, alternatively, electronically verified. The certificate



shall state that the wind turbine or wind turbine project is certified in accordance with this Executive Order.

(2) The certificate shall be sent to the Danish Energy Agency by the undertaking that has issued the certificate. Updates of the certificate shall also be sent to the Danish Energy Agency.

(3) The issuer shall retain documentation for the issued certificate for the design lifetime of the wind turbine, as stated in the certificate.

33.(1) A certificate issued for a wind turbine or a wind turbine project in accordance with this Executive Order shall be recalled by the undertaking that has issued the certificate if the undertaking finds

- 1) serious faults in the erected wind turbine or the wind turbine project or
- 2) significant deviations from the preconditions for the certification.

(2) The issuing undertaking shall inform the Danish Energy Agency without unnecessary delay that the certificate has been recalled.

34. The Danish Energy Agency publishes a list on the website of the Danish Energy Agency of certificates for wind turbines and wind turbine projects that have been issued and have not yet expired.

Part 8

Inspections and administrative provisions

35. The international standards and procedures referred to in sections 6 and 7, sections 11–13 and Annexes 1, 8 and 9 are not published in the Official Gazette but the international standards in question will be accessible for inspection at the Danish Energy Agency.²

36.(1) The costs for certification of a wind turbine, a service undertaking or an undertaking permitted to stop, secure, start and test functionality and safety for wind turbines in accordance with this Executive Order are covered by the applicant.

(2) The costs for accreditation of undertakings to certify wind turbines, service undertakings and undertakings permitted to stop, secure, start and test functionality and safety for wind turbines in accordance with this Executive Order are also covered by the applicant.

37.(1) The Danish Energy Agency can, in connection with the processing of an application for approval under section 20, section 26 and section 31, request supplementary information from the applicant.

² The international procedures IECRE OD-501:2018 Type and Component Certification Scheme and IECRE OD-502:2018 Project Certification Scheme can be found on <https://www.iecre.org/documents/refdocs/> while the international standard IEC 61400-22:2010 Wind turbines – Part 22: Conformity testing and certification can be purchased on request from Dansk Standard. All the technical standards in Annex 1 can be purchased from Dansk Standard and from the IEC via their internet shops.



(2) The Danish Energy Agency can laid down a deadline for the provision of the information and notify that the application will be considered to have lapsed if the information is not received before the deadline expires.

(3) Licences under section 20, section 26 and section 31 can be notified on conditions that are specified in detail, including that the licence lapses if the conditions laid down are not met.

38.(1) The Danish Energy Agency can suspend or recall a licence issued pursuant to section 20, section 26 and section 31 in cases where the holder of the licence is guilty of gross or repeated infringement of the regulations in this Executive Order or the conditions in the licence.

(2) An owner, person or undertaking that has had its licence suspended or recalled under subsection 1 can request the Danish Energy Agency to reassess the case.

(3) If the new consideration of the case under subsection 2 does not lead to the complainant being fully upheld, the case can be taken to the Energy Board of Appeal, cf. section 42.

39.(1) Supervision and inspection of compliance with the regulations of this Executive Order is conducted by the Danish Energy Agency.

(2) For use in the administration or supervision of the provisions of the Executive Order, the Danish Energy Agency can request information from wind turbine owners; accredited, certified and licensed undertakings or persons; and manufacturers, importers and suppliers of wind turbines.

40. In special cases, the Danish Energy Agency may decide to waive the rules in the Executive Order or allow the rules to be waived.

Injunctions

41.(1) The Danish Energy Agency can issue an injunction ordering that conditions be corrected at once or within a stated time limit in cases where conditions breach the Executive Order, cf. section 71 of the Act on promotion of renewable energy, including:

- 1) the wind turbine or wind turbine project does not have a certificate or the correct certificate according to this or earlier Executive Orders,
- 2) the specified interval for service of a wind turbine has been overrun by more than three months, cf. section 17(2),
- 3) a windmill that has been taken out of service has not been properly secured and serviced, cf. section 18(1) and (2),
- 4) service of a wind turbine has not been reported to the Danish Energy Agency, cf. section 21(4), (5) and (7).
- 5) conditions for approval have been infringed, or



6) an undertaking or person carries out service on wind turbines for which the undertaking or person has not been licensed or certified to carry out service, cf. section 25(1).

(2) If the owner of the wind turbine does not comply with an injunction under subsection 1, the Danish Energy Agency can require the owner to stop and secure the wind turbine until the conditions have been corrected, so that it does not constitute a danger to the health and safety of persons and livestock or for the security of property. The Danish Energy Agency can furthermore require the owner of a wind turbine to immediately stop and secure a wind turbine that is considered to be hazardous, *inter alia* due to poor maintenance, damage, etc., and to repair the damage and carry out function and safety testing on the wind turbine, before it is returned to operation, cf. section 24(2)–(4).

(3) The Danish Energy Agency shall notify the accrediting undertaking of injunctions that relate to certifications by accredited undertakings.

Right of appeal

42.(1) Decisions by the Danish Energy Agency in relation to this Executive Order cannot be appealed to another administrative authority than the Energy Appeals Board, cf. section 66 in the Act on Promotion of Renewable Energy.

(2) Appeals shall be submitted in writing within four weeks of the decisions specified in subsection (1) being notified, cf. section 66(3) in the Act on Promotion of Renewable Energy.

Part 9

Penalties

43.(1) Unless higher penalties are incurred under other legislation, a fine is imposed on anyone who:

- 1) sends the Danish Energy Agency incorrect or misleading information or refuses to supply information on request or
- 2) fails to comply with injunctions issued in accordance with section 41.

(2) Undertakings etc. (legal persons) may be held criminally liable in accordance with the regulations in Part 5 of the Danish Penal Code.

Part 10

Entry into force and transitional provisions

44.(1) This Executive Order enters into force on 1 January 2021.

(2) Executive Order no. 73 of 25 January 2013 on a technical certification scheme for wind turbines etc. is repealed.



(3) Certificates and approvals issued in accordance with earlier Executive Orders are valid until they expire, or a new approval is given according to the regulations in this Executive Order.

(4) Applications for a licence to service wind turbines, cf. sections 20 and 26, or certify wind turbines, cf. section 31, received by the Danish Energy Agency before 1 January 2021 will be processed in accordance with Executive Order no. 73 of 25 January 2013 on a technical certification scheme for wind turbines etc.

(5) Certification of wind turbines and wind turbine projects, cf. sections 6–9, sections 11–13, sections 15 and 16 and service undertakings, cf. section 28, where a contract has been concluded with the certifying undertaking for certification before 1 January 2021, can be completed with a view to issuing certificates in accordance with Executive Order no. 73 of 25 January 2013 on a technical certification scheme for wind turbines etc.

(6) Updates, renewal and extension of certificates for wind turbines or wind turbine projects covered by sections 6–9, sections 11–13 and sections 15 and 16 can be carried out in accordance with the Executive Order on technical certification in force at the time of the original issue of the certificate.



Annex 1.

Technical standards relevant for safety and health, cf. section 6(2) and (3), section 7(2) and (3), section 11(3) and (4), section 12(3) and (4), section 13(2) and (3) and Annex 9, Section 1.

Type certificates, cf. section 6(2) and (3), provisional type certificates, cf. section 7(2) and (3), prototype certificates cf. section 11(3) and (4), project certificates, cf. section 12(3) and provisional project certificates, cf. section 13(2), shall state compliance with the following technical international standards relevant for safety and health for the wind turbine or wind turbine project being certified:

A	Technical standards relevant for safety and health
1	IEC 61400-1:2019 Wind energy generation systems – Part 1: Design requirements. Edition 4.0 (2019-02-08). Including: Correction sheet IEC 61400-1:2019/COR1:2019 Edition 4.0 (2019-09-16)
2	IEC 61400-2:2013 Wind turbines – Part 2: Small wind turbines. Edition 3.0 (12/12/2013). Including: Correction sheet IEC 61400-2:2013/COR1:2019 Edition 3.0 (2019-10-10)
3	IEC 61400-3-1:2019 Wind energy generation systems – Part 3-1: Design requirements for fixed offshore wind turbines. Edition 1.0 (2019-04-05)
4	IEC TS 61400-3-2:2019 Wind energy generation systems – Part 3-2: Design requirements for floating offshore wind turbines. Edition 1.0 (2019-04-05)
5	IEC 61400-4:2012 Wind turbines – Part 4: Design requirements for wind turbine gearboxes. Edition 1.0 (04/12/2012)
6	IEC 61400-5:2020 Wind energy generation systems – Part 5: Wind turbine blades2020 Edition 1.0 (2020-16-06)
7	IEC 61400-6:2019. Wind energy generation systems – Part 6: Tower and foundation design requirements. Edition 1. (2020-04-21)
8	IEC 61400-13:2015 Wind turbines – Part 13: Measurement of mechanical loads. Edition 1.0 (21/12/2015)
9	IEC 61400-23:2014 Wind turbines – Part 23: Full-scale structural testing of rotor blades. Edition 1.0 (08/04/2014).
10	IEC 61400-24:2010 Wind turbines – Part 24: Lightning protection. Edition 2.0 (03/07/2019)



Annex 2

Requirements and procedures for certification of wind turbines built by the owner, cf. sections 8 and 9

1.1 Requirements for certification

The certification shall, as a minimum, include a strength test of the tower and rotor components and a subsequent function and safety test. In addition, a strength verification shall be performed of the rotor and tower during the test. The test shall include the following, as a minimum:

- 1) Strength testing of an erected wind turbine tower subjected to a horizontal force of at least $N = 300 \text{ Pa} * A$, where:
N = the strength of the horizontal tension to which the wind turbine tower will be exposed at nacelle height in Newtons
Pa = Pascal
A = Rotor area described in m^2 .
- 2) A static test of the individual rotor components mounted on a test stand with at least $N = 300 \text{ Pa} * A$, where:
N = the strength with which each rotor component will be loaded, in Newtons
Pa = Pascal
A = Rotor area described in m^2 .
The rotor component is loaded at 2/3 radius from the base with tension in the flap direction. For vertical axle wind turbines, each rotor element is similarly loaded relative to the rotor blade attachment point (or points) on the axle, supplemented by the calculated centrifugal force calculated for the element.
- 3) A test of the wind turbine's device against runaway. The device shall be tested with a minimum wind speed of 8 m/s.
- 4) An operational test until power generation has reached an equivalent of at least 500 full load hours. However, the test period should be a minimum of three months under Danish wind conditions, and during the trial period there must be at least two occasions of mean wind speed over 12 m/s for a continuous six-hour period. As a minimum, measurements of wind speed, power and energy production shall be taken.
- 5) For use in wind turbine erection, the wind turbine's structural safety is evaluated in relation to the desired foundation construction.
- 6) Performance of source noise measurement in accordance with the Executive Order on noise from wind turbines.

1.2 Requirements for certification report

The certification report shall include the following, as a minimum:

- 1) A description of the wind turbine and the purpose of the certificate.
- 2) A safety assessment of the specific erection conditions, including whether the areas are specifically delimited, cf. section 8(1), no. 4.

- 3) A report on strength testing.
- 4) Operation and service manual.
- 5) A report on function and safety testing of the wind turbine.
- 6) A source noise measurement in accordance with the Executive Order on noise from wind turbines.

1.3 Requirements for certificates

The certificate shall as a minimum include:

- 1) Certificate number and version.
- 2) Information on whom the certificate is issued to.
- 3) GSRN number of the wind turbine.
- 4) Locality (physical positioning of the wind turbine, including coordinates).
- 5) Information on who has issued the certificate.
- 6) Date from which the certificate is valid.
- 7) Expiry date for the certificate, if it is a provisional certificate, cf. section 9.
- 8) Reference to underlying certification report.
- 9) Designed useful life.
- 10) Reference to source noise measurement, cf. section 8(3).
- 11) List of manuals.
- 12) Validity and precondition, including as a minimum that the certificate has been issued in accordance with this Executive Order, cf. section 32(1).
- 13) Dated signature or alternatively electronic verification, cf. section 32(1).



Annex 3

Requirements and procedure for supplementary certification in accordance with sections 15 and 16.

1. Requirements for supplementary certification for modification as well as modification for the purpose of tests and demonstration, cf. section 15(1), nos. 1 and 2

1.1 Requirements for certification

The certification shall be carried out on the basis of:

- 1) Original type certificate including specifications.
- 2) Documentation of any deviations from the original type certificate.
- 3) Documentation of intended changes.
- 4) Description of a function and safety test.
- 5) A technical report on the safety condition of the wind turbine.
- 6) Assessment of change in noise emissions due to intended changes.
- 7) Service manual and any supplements thereto.
- 8) Assessment of conditions significant for structural safety, including loads and designed useful lifetime for erection at the specific location.
- 9) For modification for tests and demonstration, cf. section 15(1), no. 2, also a presentation of the testing plan.

1.2 Requirements for certification report

The certification report shall include the following, as a minimum:

- 1) A description of the wind turbine and the purpose of the certificate.
- 2) A description of the modification and installation carried out.
- 3) A review of the technical documentation available for the wind turbine.
- 4) A review and assessment of documentation of deviations and changes compared with the original type certificate etc.
- 5) An assessment of conditions significant for structural safety, including loads and designed useful lifetime for erection at the specific location.
- 6) An assessment of compliance with the design standard on the basis of which the original wind turbine type was designed, if the original type certificate shows compliance with a specific design standard.
- 7) A report on safety and function testing of the wind turbine.
- 8) An overall assessment of the appropriateness of the modification carried out.
- 9) Supplements to operational and service manuals in relation to changes made to supplement the original manuals.
- 10) An assessment of whether the modification can lead to noise impacts and documentation showing that the Executive Order on noise from wind turbines is complied with, cf. section 15(6).



- 11) If it is assessed that there will be noise impacts, the source noise measurement shall be carried out in accordance with the Executive Order on noise from wind turbines.

1.3 Requirements for certificates

Supplementary certificates for modification or modification for tests and demonstration shall, as a minimum, include:

- 1) Certificate number and version.
- 2) Information on whom the certificate is issued to.
- 3) Wind turbine type.
- 4) ID number of the wind turbine.
- 5) GSRN number of the wind turbine.
- 6) Number of original type certificate and original type name.
- 7) Locality (physical positioning of the wind turbine, including coordinates).
- 8) Information on who has issued the certificate.
- 9) Date from which the certificate is valid.
- 10) Expiry date of certificate, if this is a certificate for modification for tests and demonstration, cf. section 15(1), no. 2, or a provisional supplementary certificate, cf. section 16.
- 11) Reference to underlying certification report.
- 12) Reference to list of changes.
- 13) Designed useful life, if it can be documented that changes have been made in this respect in comparison with the original type certificate.
- 14) Reference to source noise measurement, if this has been carried out, cf. section 15(6).
- 15) List of manuals.
- 16) Validity and prerequisites, including as a minimum that the certificate has been issued in accordance with this Executive Order, cf. section 32(1).
- 17) Dated signature or alternatively electronic verification, cf. section 32(1).

2. Supplementary certificates issued to manufacturers, importers or suppliers for modification of a wind turbine type, cf. section 15(8).

A supplementary certificate for modification of a wind turbine type can be issued to a manufacturer, importer or supplier who wishes to offer the same modification of the same wind turbine type which was previously type-certified or type-approved in accordance with this or earlier Executive Orders, and where a supplementary certificate has been issued for the first modified wind turbine of this type: section 15(1), no. 1, and Annex 3, Section 1.1–1.3

2.1 Requirements for certification

The certification is carried out in accordance with requirements and procedures in point 1.1 in this Annex.



2.2. Requirements for certification report

The certification report shall include the following, as a minimum:

- 1) A description of the wind turbine and the purpose of the certificate.
- 2) A description of the modification and installation.
- 3) A review of conditions significant for structural safety, including loads and designed useful life for erection at the specific location with reference to the GSRN numbers in question for those wind turbines that are erected in Denmark.
- 4) An assessment of compliance with the design standard on the basis of which the original wind turbine type was designed, if the original type certificate shows compliance with a specific design standard.
- 5) A report on a function and safety test of the wind turbine for the first modified wind turbine of the type.
- 6) An overall assessment of the appropriateness of the proposed modification.
- 7) Supplements to operational and service manuals in relation to changes made to supplement the original manuals.
- 8) An assessment of whether the modification can lead to noise impacts and documentation showing that the Executive Order on noise from wind turbines is complied with, cf. section 15(6).
- 9) If it is assessed that there will be noise impacts, the source noise measurement shall be carried out in accordance with the Executive Order on noise from wind turbines.

2.3. Requirements for certificates

Supplementary certificates issued to manufacturers, importers or suppliers shall as a minimum contain:

- 1) Certificate number and version.
- 2) Information on whom the certificate was issued to (manufacturer, importer or supplier).
- 3) Number of original type certificate and original type name.
- 4) List of the ID and GSRN numbers of the wind turbines included.
- 5) Information on who has issued the certificate.
- 6) Date from which the certificate is valid.
- 7) Expiry date of the certificate, cf. section 15(9), no. 2.
- 8) Reference to underlying certification report.
- 9) Reference to list of changes.
- 10) Designed useful life, if it can be documented that changes have been made in this respect in comparison with the original type certificate.
- 11) Reference to source noise measurement, if this has been carried out, cf. section 15(6).
- 12) List of manuals.
- 13) Validity and prerequisites, including as a minimum that the certificate has been issued in accordance with this Executive Order, cf. section 32(1).



- 14) Dated signature or alternatively electronic verification, cf. section 32(1).

3. Requirements for supplementary certification in connection with relocation of a wind turbine, cf. section 15(1), no. 3

3.1 Requirements for certification

The certification shall be carried out on the basis of:

- 1) Original prototype or type certificate including specifications.
- 2) Documentation of any deviations from the original prototype or type certificate.
- 3) Description of a function and safety test.
- 4) A technical report on the safety condition of the wind turbine.
- 5) A technical report on the safety condition of existing installations, including the foundation that it is proposed to reuse.
- 6) Service manual and any supplements thereto.
- 7) Assessment of conditions significant for structural safety, including loads and designed useful lifetime for erection with wind conditions, soil conditions and any climate issues at the specific location.
- 8) For wind turbines with a rotor area exceeding 200 m²:
 - a. Description of transport and assembly.
 - b. The original project certificate for the wind turbine, if such is available.

3.2. Requirements for certification report

The certification report shall include the following, as a minimum:

- 1) A description of the wind turbine and the purpose of the certificate.
- 2) A review of the available technical documentation for the wind turbine, including an assessment of the documentation of any deviations from the original prototype – or type certificate with documentation of the safety condition of the wind turbine.
- 3) Assessment of the design of the foundation compared with the wind turbine that has been relocated.
- 4) Assessment of the safety condition of the installation, including the foundation, that it is proposed to reuse.
- 5) A review of conditions significant for structural safety, including loads and designed useful lifetime for erection with wind conditions, soil conditions and any climate issues at the specific location.
- 6) Assessment of the design wind class of the wind turbine in relation to the place of erection.
- 7) An overall assessment of the appropriateness of the relocation.
- 8) A report on a function and safety test of the wind turbine.
- 9) Updated operation and service manuals, if the relocation gives rise to an update for these.
- 10) For wind turbines with a rotor area exceeding 200 m²: Review and possible update to the transport and assembly descriptions.



3.3 Requirements for certificates

Supplementary certificates for relocation shall as a minimum contain:

- 1) Certificate number and version.
- 2) Information on whom the certificate is issued to.
- 3) Wind turbine type.
- 4) ID number of the wind turbine.
- 5) GSRN number of the wind turbine.
- 6) Number of original prototype or type certificate.
- 7) Locality (physical location of the wind turbine, including coordinates).
- 8) Information on who has issued the certificate.
- 9) Date from which the certificate is valid.
- 10) Expiry date for the certificate, if it is a provisional certificate, cf. section 16.
- 11) Reference to underlying certification report.
- 12) List of manuals.
- 13) Validity and prerequisites, including as a minimum that the certificate has been issued in accordance with this Executive Order, cf. section 32(1).
- 14) Dated signature or alternatively electronic verification, cf. section 32(1).

4. Requirements for supplementary certification for use after tests and demonstration, use after expiry of prototype certificate and use after expiry of provisional type certificate, if the wind turbine type is not put into serial production, or the wind turbine is not modified, so it corresponds to a wind turbine type with a valid type certificate, cf. section 15(1), nos. 4 and 5.

4.1 Requirements for certification

The certification shall be carried out on the basis of:

- 1) Original prototype or type certificate including specifications.
- 2) Documentation of any deviations from the original prototype or type certificate.
- 3) Documentation of intended changes.
- 4) Test plan, if use after testing and demonstration or after expiry of a prototype certificate is involved.
- 5) Description of a function and safety test.
- 6) A technical report on the safety condition of the wind turbine.
- 7) Assessment of changes in noise emissions due to intended changes.
- 8) Deviations from design compared with the subsequent type-certified design.
- 9) Service manual, if changes are made to this.
- 10) Assessment of conditions significant for structural safety, including loads in the testing period or the period when the wind turbine has been erected, and designed useful lifetime for erection at the specific location.



4.2 Requirements for certification report

The certification report shall include the following, as a minimum:

- 1) A description of the wind turbine and the purpose of the certificate.
- 2) A review of the technical documentation available for the wind turbine.
- 3) A review and assessment of documentation of deviations and changes etc.
- 4) An assessment of conditions significant for structural safety, including loads and designed useful lifetime for erection at the specific location.
- 5) An assessment of compliance with the design standard on the basis of which the original wind turbine type was designed, if the original prototype or type certificate shows compliance with a specific design standard.
- 6) A report on a function and safety test of the wind turbine.
- 7) An overall assessment of the acceptability of continued use.
- 8) Supplements to operational and service manuals in relation to changes made to supplement the original manuals.
- 9) An assessment of any noise impacts resulting from any changes and documentation showing that the Executive Order on noise from wind turbines is complied with, cf. section 15(6).
- 10) If it is considered that there will be noise impacts, the source noise measurement shall be carried out in accordance with the Executive Order on noise from wind turbines.

4.3 Requirements for certificates

Supplementary certificates shall contain as a minimum:

- 1) Certificate number and version.
- 2) Information on whom the certificate is issued to.
- 3) Wind turbine type.
- 4) ID number of the wind turbine.
- 5) GSRN number of the wind turbine.
- 6) Number of original prototype or type certificate and original type name.
- 7) Locality (physical location of the wind turbine, including coordinates).
- 8) Information on who has issued the certificate.
- 9) Date from which the certificate is valid.
- 10) Reference to certification report.
- 11) Reference to changes.
- 12) Reference to source noise measurement, if this has been carried out, cf. section 15(6).
- 13) Designed useful life, if it can be documented that changes have been made in this respect in comparison with the original type certificate.
- 14) List of manuals.
- 15) Validity and prerequisites, including as a minimum that the certificate has been issued in accordance with this Executive Order, cf. section 32(1).
- 16) Dated signature or alternatively electronic verification, cf. section 32(1).



Annex 4

Requirement for extended service inspections after the expiry of the designed useful life, cf. section 17(5), and service for wind turbines that have been taken out of service, cf. section 18(2).

In the case of extended service inspections of wind turbines that have been erected for longer than the designed useful life as stated in the certificate of the wind turbine, as well as in cases where the wind turbine has been taken out of service, the following shall be carried out as a minimum:

Annually:

- The machine framework is to be examined for cracks at heavily-loaded places and in all welds and bolt connections.
- The main axle, including the area in front of the foremost main bearing is to be inspected for scratches, rust and signs of wear.
- The yaw bearing is to be inspected for wear and play in the bearing is to be measured. Important parts of the yaw control system are to be inspected.
- The tower is to be inspected for cracks in all welds.
- Bolts in joints are to be re-tightened according to the manual. It is particularly important to re-tighten the bolts in the joints to the blades.
- The foundation is to be inspected for cracks in the concrete. The sealing against the intrusion of water into the foundation is to be inspected.
- The bolts of the foundation are to be inspected for rust and corrosion.

The above inspection is to be carried out by visual inspection of the specified components and details.

Every third year:

- The blades are to be inspected by visual control at close quarters or by the use of a camera or tele-/photo-drone with subsequent assessments.

Documentation:

The above points shall also be added to the service manual of the wind turbine, cf. section 23(5).

The execution of the extended service inspection is registered in the report and sent with the associated checklist to the owner, cf. section 21(1) or registered in the log for wind turbines of 40 m² or less, cf. section 22.



Annex 5

Reporting service cf. section 21(4)

Reporting the regular service, cf. section 21(4), contains the following for each wind turbine:

- 1) The date of the service visit carried out, cf. however, no. 4.
- 2) Name of the undertaking or person certified or licensed to perform service on the wind turbine.
- 3) Date of the next regular service visit cf. however, no. 4.
- 4) For wind turbines equipped with technical solutions which unambiguously indicate when the next service visit shall be carried out, the report shall instead refer to the date for review of the indications from the technical solution on a need for service and the date of any service visit.

For wind turbines where service is carried out by certified or licensed service undertakings, cf. section 25, or undertakings licensed to carry out service on a specific wind turbine or their own wind turbine, cf. section 20, reporting shall be by this undertaking digitally. The undertaking shall apply for user access to the self-service portal of the Danish Energy Agency by submitting the form that can be found on the website of the Danish Energy Agency.

Wind turbine owners or persons licensed to carry out service on their own wind turbine or a specific wind turbine, cf. section 20, and who have no CVR number, can report a service carried out by submitting a completed form that can be found on the website of the Danish Energy Agency.

Annex 6

Reporting damage and accidents, cf. section 24(1)

Damage and accidents shall be reported to the Danish Energy Agency, cf. section 24(1).

The following types of damage are always considered to constitute a risk for the health and safety of persons and livestock and for the security of property and shall therefore always be reported:

- 1) Stopping the wind turbine due to a risk of accident.
- 2) Blades or parts of blades falling off.
- 3) Bolts falling off.
- 4) Other components falling off.
- 5) Damage resulting in fire, or that wind turbines run out of control.
- 6) Total destruction.

The reporting shall be to the Danish Energy Agency using the form that can be found on the website of the Danish Energy Agency, as well as any enclosed material.

The following shall be reported as a minimum:

- 1) Name of the owner.
- 2) GSRN number of the wind turbine.
- 3) Location of the wind turbine.
- 4) Date and time of the damage or accident.
- 5) Nature and extent of the damage and presumed cause.
- 6) Photographic documentation.
- 7) Information on plans to repair damage.

A damage or accident report shall be forwarded if one has been prepared and the owner has access to it, cf. section 24(1).



Annex 7

Licensing of service undertakings by the Danish Energy Agency, cf. section 26

1. Licensing

A licence under section 26(1) is given to service undertakings that can document expertise in service of wind turbines, including having personnel with documented, relevant competences and experience, as well as necessary procedures, manuals and any special tools.

The licence can be given on the basis of an application to the Danish Energy Agency, cf. section 26(3). The applicant shall use the form that the Danish Energy Agency provides on its website.

The application shall be accompanied by the following, as a minimum:

- 1) List of wind turbine types for which a service licence is desired. The wind turbine types shall be uniquely identifiable and shown by manufacturer, wind turbine type and wind turbine size.
- 2) List with numbers and names of manuals used and checklists for service of the individual wind turbine types with necessary information.
- 3) List of any special tools that the undertaking has available which are necessary to service the desired wind turbine types.
- 4) Documentation of the competences of the personnel, including educational background and experience of servicing the wind turbine types in question, relative to the tasks of the undertaking. If the undertaking trains apprentices, this shall be documented.
- 5) Procedure for carrying out regular service.
- 6) Procedure for extended service after the designed useful life of the wind turbine types covered by the application.
- 7) Stopping, securing, starting, function and safety testing, as well as putting into service procedures for the wind turbine types for which a licence is desired.
- 8) Procedure and template for preparing service reports to the customer.
- 9) Procedure for reporting service carried out.
- 10) Procedure for assistance to owners in reporting accidents or damage, cf. section 24(1).
- 11) If subcontractors are used, procedures in relation to use of subcontractors to carry out service visits.

If the undertaking wishes to add a wind turbine type to the existing licence of the undertaking, the documentation requirements set out in numbers 1–11 apply.



2. Renewal of licence

A renewed licence can be issued on the basis of an application to the Danish Energy Agency, cf. section 26(3). The applicant shall use the form that the Danish Energy Agency provides on its website.

The following shall be enclosed with the application, as a minimum:

- 1) Documentation of service carried out in the previous licence period, specified by wind turbine types.
- 2) Updated documentation of the competences of the personnel, including educational background and experience of service of the wind turbine types in question, in the event of any changes compared with the last licence period.
- 3) Updated procedures, if changes have been made compared with the last licence period.

In connection with the renewal application, if the undertaking wishes to add wind turbine types to the existing licence of the undertaking, the documentation requirements set out in Section 1 apply for licences for the wind turbine type in question.



Annex 8

Certification and auditing of service undertakings by accredited undertakings, cf. section 28

Certification and auditing of service undertakings, cf. section 28, shall be carried out on the basis of the following requirements and procedures.

With respect to undertakings that exclusively apply for certification for stopping, securing, starting, as well as function and safety testing wind turbines, however, only those requirements and procedures apply that are relevant for certification for stopping, securing, starting as well as function and safety testing wind turbines.

1. Certification

Certification of a service undertaking must, as a minimum, demonstrate that the undertaking has sufficient experience and expertise in wind turbine servicing and has implemented a quality management system according to DS/EN ISO 9001:2015 or equivalent. If the service undertaking uses subcontractors, the use of these shall be included in the certification of the quality management system of the service undertaking.

1.1 The certificate shall state:

- 1) That the service requirements of this Executive Order are included in the certification.
- 2) The scope of the certificate, including whether the certificate is limited to stopping, securing, starting, as well as function and safety testing of wind turbines.
- 3) That the undertaking has implemented a quality management system according to DS/EN ISO 9001:2015 or equivalent.
- 4) Which wind turbine types and wind turbine sizes the undertaking can service. These can be specified in an Annex to the certificate.

1.2 The certification shall ensure that the undertaking has:

- 1) Service manuals for the relevant turbine types as well as updates relevant for operation of the wind turbine. For wind turbines for which there are no specifications or service manuals prepared by the manufacturer, service may be on the basis of a service manual prepared by the service undertaking based on service performed thus far on the relevant wind turbine type.
- 2) Necessary tools to be able to service a turbine as described in specifications and service manuals, as stated in no. 1.



- 3) Qualified personnel in relation to the nature of the task according to the latest version of service manuals. The service undertaking shall be able to document that the personnel are sufficiently qualified for the wind turbine types that are desired to be included in the certification, including how it will be ensured that the level of competences will be maintained through subsequent training.

2. Auditing

The accredited undertaking shall ensure in each audit that the certification terms are met according to the method of quality assurance standards used. The audit shall be carried out as needed, but at least once per year.

In addition, the accredited undertaking shall ensure in each audit that:

- 1) there is a review of whether the quality management system of the undertaking meets the requirements in the current Executive Order and ISO 9001:2015 or equivalent.
- 2) the undertaking has updated service manuals for all turbine types on which the undertaking performs service.
- 3) if the manufacturer no longer updates service manuals, that the service undertaking itself provides the service manual with the amendments and improvements that the service undertaking finds necessary on the basis of the service carried out and experience with the wind turbine type.
- 4) there are service reports for each service visit in accordance with the service contract agreed between the wind turbine owner and the service undertaking.
- 5) the service has been carried out by personnel qualified for the wind turbine types in question and in accordance with the updated manuals and specified service intervals.
- 6) to the necessary extent, there is a completed checklist with documentation on the operating conditions of the wind turbine according to the manuals.

Finally, the certifying undertaking shall:

- 7) Carry out checks on a random sample basis of whether the service on the wind turbine has been carried out as described in the service reports, including as a minimum every third year, and as required, to supervise a demonstration of whether the service is being carried out in accordance with the service manual, on a representative wind turbine type on the undertaking's list of wind turbines. For first certification, however, this shall be done no later than one year after the certificate is issued.
- 8) On the basis of the annual audit, submit an updated list to the Danish Energy Agency of wind turbine types which the service undertaking is certified service, cf. section 28(3).



Annex 9

Licensing of non-accredited undertakings for certification of wind turbines or wind turbine projects, cf. section 31

A licence under section 31 can be issued to non-accredited undertakings for certification of wind turbines with a rotor area of 200 m² or less, cf. section 6(2), section 7(2), sections 8 and 9, section 11(3), project certification of wind turbines on land with a rotor area exceeding 200 m², cf. sections 12 and 13, and supplementary certification, cf. sections 15 and 16. The licence may be granted on the basis of an application to the Danish Energy Agency.

The undertaking has the option to use subcontractors to a limited extent and shall in this case document which relevant areas of competences are being used from these contractors and how cooperation is organised.

1. Licensing by the Danish Energy Agency of non-accredited undertakings to certify wind turbines with a rotor area of 200 m² or less; cf. section 6(2), section 7(2) and sections 8 and 9 and section 11(3).

A licence is granted to undertakings that can demonstrate expertise in wind turbine construction and certification, including personnel with documented qualifications and experience.

The application shall as a minimum have documentation attached showing competences and experience with:

- 1) Wind turbine types of 200 m² or less.
- 2) The control and safety systems of wind turbines and testing thereof.
- 3) Loads on wind turbines and specified load events.
- 4) Structural, mechanical and electrical components.
- 5) Tower and foundation constructions.
- 6) Static testing of blades and tower.
- 7) Testing of safety systems.
- 8) Measurement of loads.
- 9) Current standards for wind turbines of 200 m² or less, cf. Annex 1, Section A 2 and IEC 61400-22:2010 Wind turbines – Part 22: Conformity testing and certification.
- 10) Certification in accordance with Annex 2, if the application includes certification of wind turbines under sections 8 and 9.



2. Licensing by the Danish Energy Agency of non-accredited undertakings for project certification for wind turbines on land with a rotor area greater than 200 m²; cf. section 31(2)

A licence can be issued to undertakings that can document expertise related to project certification of wind turbines on land.

The application shall as a minimum have the following attached:

- 1) Documentation of knowledge and experience with project certification, including:
 - a) Wind turbine construction.
 - b) Wind conditions.
 - c) Geotechnical conditions such as soil characteristics and ground water.
 - d) Construction of foundations compared with construction of the wind turbine and type certificates issued.
 - e) Erection and entry into service.
- 2) Procedures for project certification in accordance with IECRE OD-502 Project Certification Scheme of 11 October 2018 or equivalent.
- 3) Documentation of implemented quality management systems according to DS/EN ISO 9001:2015 or equivalent for the delivery and erection of wind turbines.

3. Licensing by the Danish Energy Agency of non-accredited undertakings for supplementary certification for modification, modification for tests and demonstration, relocation or continued use after expiry of a fixed-term certificate, cf. sections 15 and 16 and for certification in accordance with sections 8 and 9

A licence is granted to undertakings that can document expertise relating to certification in connection with modification and relocation of wind turbines.

The application shall as a minimum have documentation attached showing competences and experience with:

- 1) Wind turbine constructions, including relevant design standards and technical standards, cf. Annex 1.
- 2) Type and prototype certification.
- 3) Erection conditions in Denmark.
- 4) Construction of foundations for wind turbines.
- 5) Erection and commissioning of wind turbines onshore.
- 6) Testing of safety systems.
- 7) Operation, maintenance and assessment of the condition of wind turbines.
- 8) Certification in accordance with Annex 2, if the application includes certification of wind turbines under sections 8 and 9.