

# Appendix I-F4

## Project 2 CVA Statement of Qualifications

May 2024



# CVA Statement of Qualifications Atlantic Shores Project 2

Atlantic Shores Offshore Wind, LLC

**Customer Reference:** ASOW-363-RFP-01

**DNV doc No:** 236143\_ASOW2\_QUAL\_SPE\_COP

**Date of first issue:** 2022-08-19

**Date of this revision:** 2023-10-20





## Customer Details

Customer Name: Atlantic Shores Offshore Wind, LLC  
Customer Address: Brooklyn Navy Yard, Dock 72 (7th floor)  
Brooklyn, NY 11205  
Customer Reference: ASOW-363-RFP-01  
Contact Person: Renee Sotelo

## DNV Company Details

DNV Legal Entity: DNV Renewables Certification USA, LLC  
DNV Organisation Unit: DNV Renewables Certification - Energy  
DNV Address: 101 Station Landing  
Medford, MA 02155  
DNV Telephone: 781-393-7000  
DNV org. No.: E-RC  
DNV doc. No. : 236143\_ASOW2\_QUAL\_SPE\_COP

## About this document

Document Title: CVA Statement of Qualifications  
Atlantic Shores Project 2  
Date of first issue: 2022-08-19  
Date of this revision: 2023-10-20

## Confidentiality

This proposal contains information that is business sensitive to DNV. No part of the proposal or information received during the proposal process may be used, duplicated or disclosed for any other purpose. Any such use of DNV's information is regarded as an infringement of DNV intellectual property rights.

for DNV Renewables Certification USA, LLC

Prepared by:

Approved by:

Alex Wurst  
Engineer

Ole-Christian Ekeberg  
Project Manager, Principal Engineer

Rev. No.	Date	Reason for Issue	Prepared by	Approved by
0	2022-08-19	First issue	ARMMOH	DAMAL
1	2023-05-26	Transfer of authority, project roles	PHICRA	ARMMOH
2	2023-10-03	Revised project roles	OCEK	ARMMOH
3	2023-10-20	Updated ISO certificates ISO 45001 and ISO 14001 and minor editorial changes.	ALEWUR	OCEK



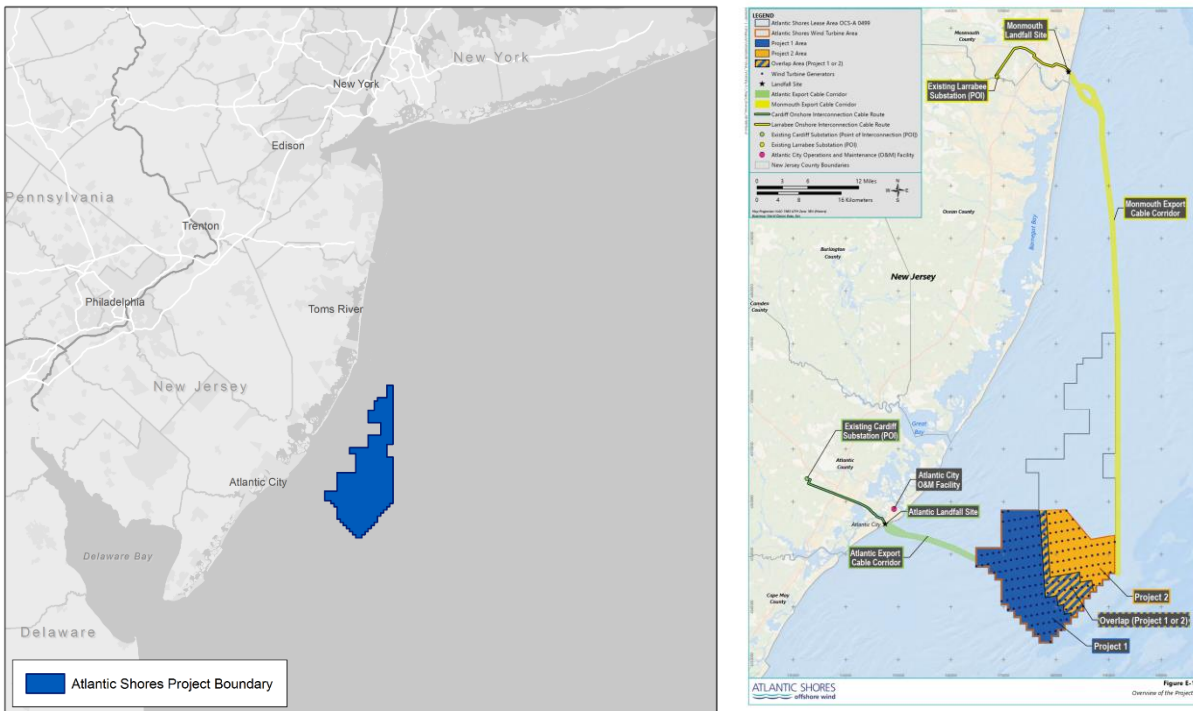
## Table of contents

1	INTRODUCTION.....	1
2	COMPANY INFORMATION.....	3
2.1	DNV in brief	3
2.2	In the energy industry	3
2.3	In offshore wind	3
3	CVA QUALIFICATIONS.....	4
3.1	General for Design Phase	4
3.2	Technical capabilities of staff	6
3.3	Size and type of organization	7
3.4	Technology	8
3.5	Ability to perform	8
3.6	Previous experience with BOEM/BSEE	9
3.7	Scope of work	9
3.8	Conflict of interest	9
3.9	Professional engineer supervision	9
4	PROJECT ORGANIZATION.....	11
4.1	Technical Resource Pools	11
4.2	Roles and responsibilities	14
4.3	Project Management	15
5	DNV MANAGEMENT SYSTEM.....	16
6	REFERENCES.....	17
	APPENDIX A.....	18
	APPENDIX B.....	1
	APPENDIX C.....	1
	ABOUT DNV.....	1
Appendix A	CV's for Key Personnel	
Appendix B	DNV Management System	
Appendix C	Accredited Certification Body	

# 1 INTRODUCTION

Atlantic Shores Offshore Wind, LLC (Atlantic Shores) has requested a Scope of Work (SoW) from DNV Renewables Certification USA, LLC (DNV) to provide CVA services for the Atlantic Shores Offshore Wind Project 2 (the Project). This SoW will be delivered as part of the Project CVA Nomination to BSEE, in accordance with the US Code of Federal Regulations, Title 30 – Mineral Resources, Chapter II – Bureau of Safety and Environmental Enforcement, Department of the Interior, Subchapter B – Offshore, Part 285 – Renewable Energy and Alternative Uses of Existing Facilities on the Outer Continental Shelf (30 CFR 285).

The Project is in the New Jersey Wind Energy Area approximately 9 miles east of the New Jersey coastline near Atlantic City, in the lease area OCS-A 0499, Figure 1-1. The complete lease area has the potential to generate 2.5 GW of clean, renewable energy. DNV understands this solicitation covers Project 2, in the southern portion of the lease area as shown in the figure below.



**Figure 1-1 Atlantic Shores Wind Lease Area OCS-A 0499, (Ref. Atlantic Shores COP)**

To gain approval for an offshore wind farm, United States (U.S.) regulations require that an independent third party is appointed to certify the design, fabrication, and installation. DNV’s Renewables Certification (RC) division has been active as a CVA from the very beginning of the U.S. offshore wind journey. The CVA is nominated by the offshore wind facility’s developer for approval by BSEE, on behalf of which the CVA performs its activities. The CVA duties outlined in the U.S. Code of Federal Regulations (CFR) match very well with the systems and schemes applied for the approval and certification of offshore wind farms in Europe. This is not a coincidence as the CFR and European regulations on offshore wind both evolved from the offshore oil and gas industry.

DNV has a strong presence across the U.S. with its RC group located in Boston, with offices on the east and west coasts, as well as a Houston office with experienced and trained offshore surveyors. These U.S. personnel are coordinated by the US RC office which is in turn strongly supported by DNV’s Global RC team in Europe, which



provides experience from project certification (CVA-like) activities performed for most offshore wind farms under design, fabrication, installation, operation, and other various stages of development globally.

DNV is staffed with a very large number of technical experts working with certification of offshore wind farms and is normally engaged in more than 30 offshore wind farms simultaneously. Hence, DNV can run multiple CVA projects simultaneously. A similar approach could be applied to the fabrication and execution phases as DNV also has a very large pool of surveyors spanning many countries.



## 2 COMPANY INFORMATION

### 2.1 DNV in brief

Driven by our purpose of safeguarding life, property, and the environment, DNV enables organizations to advance the safety and sustainability of their businesses. DNV provides classification and technical assurance along with software and independent expert advisory services to the maritime, oil & gas, and energy industries. We also provide certification services to customers across a wide range of industries.

DNV, whose origins date back to 1864, operates globally in more than 100 countries with our professionals dedicated to helping our customers make the world safer, smarter, and greener.

### 2.2 In the energy industry

In DNV we unite the strengths of legacy DNV, KEMA, Garrad Hassan, and GL Renewables Certification. DNV's 4,000 energy experts support customers around the globe in delivering a safe, reliable, efficient, and sustainable energy supply. We deliver world-renowned certification and advisory services to the energy value chain including renewables and energy efficiency. Our expertise spans onshore and offshore wind power, solar, conventional generation, transmission and distribution, smart grids, and sustainable energy use, as well as energy markets and regulations. Our testing, certification, and advisory services are delivered independent from each other.

Learn more at [www.dnv.com/energy](http://www.dnv.com/energy).

### 2.3 In offshore wind

With more than 35 years of experience in wind energy, DNV has been providing certification and verification services to the global offshore wind industry from the very beginning and to date has conducted certification or verification for more than 100+ offshore wind projects, representing well beyond 10 GW of installed offshore capacity. This experience includes offshore wind projects in numerous jurisdictions, each with unique regulatory and stakeholder requirements. As a leading certification body, DNV has conducted extensive work to establish standards for design, fabrication, installation, and operations of offshore energy projects. DNV also provides marine warranty survey for offshore wind transportation and installation activities which, when combined with our certification and verification services, can provide significant synergies and efficiency to the project.

DNV takes a leading role in developing and revising international standards through active involvement on several International Electrotechnical Commission (IEC) committees, as well as U.S., European, and national standards bodies. Additionally, DNV is actively establishing independent standards to cover gaps where no international standards exist or provide sufficient guidance.



### 3 CVA QUALIFICATIONS

#### 3.1 General for Design Phase

DNV has more than 40 years of experience verifying offshore structures for the oil and gas industry and more than 30 years of experience in the offshore wind industry which includes verification or certification of most of the offshore wind projects installed or under construction in both the US and globally. DNV was the CVA for Cape Wind, the first US Project to reach Department of Interior non-objection of FDR & FIR, as well as CVOW Pilot, the first Offshore Wind Project in Federal waters to achieve Commercial Operation. DNV is currently the approved CVA for 11 current projects, with additional nominations pending. A selection of seven projects have been listed below with the consideration of protecting Confidentiality Agreements for the ones that have not been publicly announced.

<b>Project Name: Vineyard Wind CVA</b>	
<b>Name and Address of Client:</b> Vineyard Wind LLC, 700 Pleasant Street, Suite 51, New Bedford, MA 02740	
<b>Client Contact Person:</b> Commercially Confidential	
<b>Start Date (Month/Year):</b> June 2018	<b>Completion Date (Month/Year):</b> Project Ongoing
<b>Description of Services Provided:</b> DNV is the approved CVA for the Vineyard Wind 01 offshore wind project currently being developed in Massachusetts. In this role, DNV is certifying that the design, fabrication and Installation of the facility is conducted per relevant standards and sound engineering practices. This includes ensuring that the wind turbines, support structures, electrical service platform, and subsea cabling for the project are designed, manufactured, and installed per certain standards and sound engineering practices, commonly referred to as Certification of the FDR and FIR. The verification activities include document reviews, independent analyses, and will include surveys of fabrication and installation activities.	
<b>Status and Comments:</b> The project is ongoing.	

<b>Project Name: Verification of the Design of the Cape Wind Offshore Wind Farm</b>	
<b>Name and Address of Client:</b> Cape Wind Associates, 20 Park Plaza #320, Boston, MA 02116, United States	
<b>Client Contact Person:</b> Name: Matthew Palmer, Project Manager – Engineering (no longer employed by Cape Wind Associates) Tel: (617) 960-4830; Email: <a href="mailto:map@woodthilsted.com">map@woodthilsted.com</a>	
<b>Start Date (Month/Year):</b> April 2011	<b>Completion Date (Month/Year):</b> Project cancelled
<b>Description of Services Provided:</b> DNV was the CVA for the Cape Wind offshore wind project being developed in Massachusetts. In this role, DNV certified that the design of the project was conducted per relevant standards and sound engineering practices. This included ensuring that the wind turbines, support structures, electrical service platform, and subsea cabling for the project are designed, manufactured, and installed per certain standards and sound engineering practices. The FDR and FIR for Cape Wind were approved by BOEM. The verification activities included document reviews, independent analyses, and would have included surveys of fabrication and installation activities.	
<b>Status and Comments:</b> The project has been canceled.	





**Project Name: Coastal Virginia Offshore Wind (CVOW) PILOT**

**Name and Address of Client:**

Dominion Resources Services, Inc., Insbrooke Technical Center, Glenn Allen, VA 23060

**Client Contact Person:**

Name: Grant T. Hollett, Tel: (804) 273-4545, Email: grant.t.hollett@dominionenergy.com

**Start Date (Month/Year):**

September 2014

**Completion Date (Month/Year):**

July 2021

**Description of Services Provided:**

DNV is the CVA for the CVOW Pilot offshore wind project being developed in Virginia. In this role, DNV is verifying that the design of the project is conducted per relevant standards and sound engineering practice. This includes ensuring that the wind turbines, support structures, and subsea cabling for the project are designed, manufactured, and installed per certain standards and sound engineering practices. This work also includes verification of the fabrication of major components and installation of the wind turbine support structures, turbines, and submarine cables. The verification activities include document reviews, independent analyses, and surveys of fabrication and installation activities. Through the verification process, DNV acts on behalf of the BOEM/BSEE, the leasing authority for energy projects in federal waters of the OCS, and to ensure the structural integrity and safety of the project.

**Status and Comments:**

Final FIR was successfully approved by BOEM and the project is currently in Operations.

**Project Name: US Offshore Wind 01**

**Name and Address of Client:**

Commercially confidential

**Client Contact Person:**

Commercially confidential

**Start Date (Month/Year):**

September 2020

**Completion Date (Month/Year):**

Ongoing

**Description of Services Provided:**

DNV is the CVA for this US offshore wind project being developed in the Commonwealth of Massachusetts. In this role, DNV is verifying that the design, manufacturing, installation and commissioning of the covered assets are in accordance with certain standards, US regulatory requirements and accepted engineering practices. The verification scheme covers wind turbine, support structure, Offshore Substation Platform (OSS) and subsea cables (Inter Array Cables and Offshore Export Cables). The verification activities include document reviews, independent analyses, and surveys of fabrication and installation activities. Through the verification process, DNV acts on behalf of the BOEM/BSEE, the leasing authority for energy projects in federal waters of the OCS and ensures the structural integrity and safety of the project.

**Status and Comments:**

The project is ongoing.



**Project Name: US Offshore Wind 02 and 03**

**Name and Address of Client:**

Commercially confidential

**Client Contact Person:**

Commercially confidential

**Start Date (Month/Year):**

December 2019

**Completion Date (Month/Year):**

Ongoing

**Description of Services Provided:**

DNV is the CVA for both phases of the US offshore wind project that is being developed in New York. The first phase of the project began at the end of 2019 followed by the second phase which started in 2020. In this role, DNV is verifying that the design, manufacturing, installation and commissioning of the covered assets are in accordance with certain standards, US regulatory requirements and accepted engineering practices. The verification scheme covers wind turbine, support structure, Offshore Substation Platform (OSS) and subsea cables (Inter Array Cables and Offshore Export Cables). The verification activities include document reviews, independent analyses, and surveys of fabrication and installation activities. Through the verification process, DNV acts on behalf of the BOEM/BSEE, the leasing authority for energy projects in federal waters of the OCS and ensures the structural integrity and safety of the project.

**Status and Comments:**

The project is ongoing.

**Project Name: US Offshore Wind 04**

**Name and Address of Client:**

Commercially confidential

**Client Contact Person:**

Commercially confidential

**Start Date (Month/Year):**

December 2019

**Completion Date (Month/Year):**

Ongoing

**Description of Services Provided:**

DNV is the CVA for this US offshore wind project being developed in New Jersey. In this role, DNV is verifying that the design, manufacturing, installation and commissioning of the covered assets are in accordance with certain standards, US regulatory requirements and accepted engineering practices. The verification scheme covers wind turbine, support structure, Offshore Service Platform (ESP) and subsea cables (Inter Array Cables and Offshore Export Cables). The verification activities include document reviews, independent analyses, and surveys of fabrication and installation activities. Through the verification process, DNV acts on behalf of the BOEM/BSEE, the leasing authority for energy projects in federal waters of the OCS and ensures the structural integrity and safety of the project.

**Status and Comments:**

The project is ongoing.

### 3.2 Technical capabilities of staff

DNV will draw from our broad pool of highly qualified staff to provide a team of leading experts with extensive experience in offshore wind, wind turbine technology, structural engineering, offshore engineering, maritime surveying, and other relevant disciplines. The project team will include personnel who have been actively involved in development of offshore standards and have participated in BOEM/BSEE workshops and industry discussions regarding application of the CVA process to offshore wind from a very early stage. DNV intends to manage the Project with U.S.-based staff

and the technical work will be conducted by a team consisting of staff from Europe and the U.S., providing local service while ensuring DNV's work is informed by our extensive experience from Europe.

DNV utilizes a staff qualification system to ensure that staff have the relevant education and experience necessary for conducting work associated with verification and certification of offshore wind projects. The qualification process includes training that covers the technical competence and the working processes and associated tools. The qualification process also includes periodic monitoring and evaluation after qualification in a discipline has been obtained. The team proposed to support the Work includes staff qualified in the range of disciplines that will be required for completing the work. The qualification system covers the following disciplines:

- A. Wind conditions and site assessment onshore
- B. Metocean conditions and hydrodynamic loads and scour
- C. Wind turbine wind loads and load cases, assessment and load validation, power performance testing, noise measurements
- D. Control and protection system
- E. Fiber reinforced plastic (FRP) structures (blades and hub and nacelle covers) incl. testing
- F. Main gear
- G. Mechanical systems
- H. Mechanical structural components
- I. Geotechnics
- J. Electrical system including testing of power quality, electromagnetic compatibility (EMC)
- K. Grid code compliance including testing
- L. Steel support structures including corrosion protection
- M. Concrete support structure
- N. Manufacturing evaluation / industrial process efficiency (IPE) and manufacturing surveillance
- O. Transportation and installation surveillance
- P. Commissioning surveillance incl. safety and function test
- Q. Inspection of wind turbines
- R. Offshore substation risk assessment, HAZID, fire protection and safety
- S. Project management level and manuals
- T. Condition monitoring systems, fire protection (wind turbine), training systems, service providers

Staff CVs are included in Appendix A.

### 3.3 Size and type of organization

DNV Group (the "Group") resulted from the merger in September 2013 of Det Norske Veritas (DNV) and Germanischer Lloyd (GL). The Group is headquartered in Høvik, Norway.

DNV Group AS, a Norwegian limited company, was established as the Group management company. The Group is owned by Det Norske Veritas Holding AS ("DNV Holding"). DNV Holding AS is fully owned by the Stiftelsen Det Norske Veritas, a Norwegian foundation (the "Foundation").

The combination of the two legacy groups was structured by DNV Group AS, a wholly owned subsidiary of DNV Holding, acquiring the group management company of the legacy GL group; Germanischer Lloyd SE. DNV Group AS changed its name and became DNV Group AS with the combination. The combined ownership of the DNV group was governed by a shareholders' agreement, until the Foundation bought the 36.5% of the shares in DNV that until 14 December 2017 were held by Mayfair, a German, family-owned investment firm.

DNV Group AS employs more than 12,000 people worldwide. Further, DNV has the largest global certification workforce and 4,000 experienced and highly educated experts working within the energy sector. Renewables Certification, a Global Service within DNV, employs more than 200 employees globally. DNV Renewables Certification USA LLC is a

unit within of our global RC organization, but regardless of which RC unit manages the work, the same experienced work force spanning both the U.S and Europe will perform the work. Broadly speaking, DNV is a global provider of services for managing risk, helping customers to safely and responsibly improve their business performance. As companies today are operating in an increasingly more complex and demanding risk environment, DNV’s core competence is to identify, assess, and advise on how to effectively manage risk, and to identify improvement opportunities. Our technology expertise and deep industry knowledge, combined with our risk management approach, have been used to manage the risks involved in numerous high-profile projects around the world.

DNV balances the needs of business and society, based on our independence and integrity. With the objective of safeguarding life, property, and the environment, DNV serves a range of industries, with a special focus on the maritime and energy sectors. DNV’s prime assets are the knowledge and expertise of its employees.

### 3.4 Technology

The DNV approach for independent analyses is based on the integrated systems comprising of the WTG and support structures, including soil modelling of offshore sites. This removes the interfaces by keeping as much as possible in the same model. The coupled model simultaneously accounts for aerodynamics, structural dynamics, control dynamics, hydrodynamics and structural damping in all simulations.

If necessary, super-elements are used e.g. for the transition piece, jacket nodes or pile-sleeve connection, allowing for the complete structural response of the substructure combined with WTG.

DNV utilizes a variety of tools such as SESAM, Abaqus, Bladed, HAWC2, and inhouse developed tools for undertaking the complex independent analysis of the support structure combined with the WTG.

In summary the following steps are carried out (Figure 3-1).

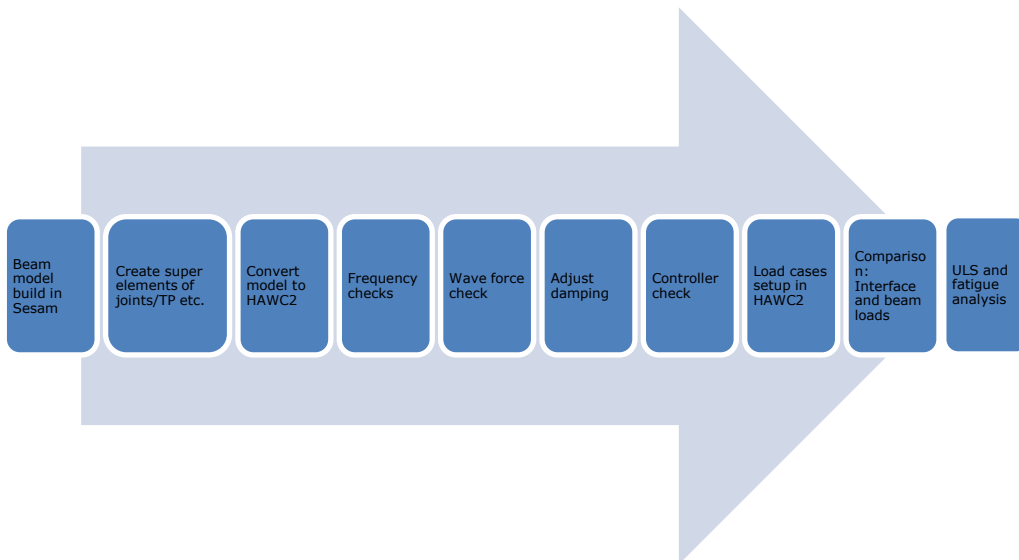


Figure 3-1 Schematics of the DNV approach for independent analyses.

### 3.5 Ability to perform

DNV is staffed with a very large number of technical experts working with certification of offshore wind farms and normally engages in more than 30 offshore wind farms simultaneously as a certification body. Further DNV has a very large pool of surveyors spanning many countries who can be available for the fabrication and execution phases.

DNV expects to be able to complete the work with in-house staff and does not anticipate hiring subcontractors.



Further, as detailed in 30 CFR 285.706, there are several items which must be demonstrated to serve as CVA. Broadly speaking, these can be summarized as the following (with corresponding section references for further detail).

- Experience with third-party verification of the design, fabrication, and installation of offshore wind farms (Sec. 3.1).
- The project team, i.e. primarily the discipline leads, shall have technical competence pertaining to the specifics of the project (Sec. 3.2).
- Access to appropriate technology necessary for the verification of the project (Sec. 3.4).
- Availability to perform the CVA services as required by the project (Sec. 3.5).
- Ability to develop a clear scope of work for the proposed CVA services (Sec. 3.7).
- Experience with BOEM/BSEE requirements and procedures (Sec. 3.6).
- The verification must be performed under the supervision of a registered Professional Engineer (Sec. 3.9).
- Individuals or organizations who serve as CVA shall not create conflict of interest, perceived or otherwise (Sec.3.8).

### **3.6 Previous experience with BOEM/BSEE**

DNV served as the CVA for the Cape Wind project and the CVOW Pilot and is currently the approved CVA for 11 current projects (as described in sect.3.1). As part of these projects, DNV gained valuable experience in the execution of Certifying both the Facility Design Report (FDR) and the Fabrication and Installation Report (FIR), both of which were successfully approved by BOEM, but also in the Final FIR. In addition, DNV has extensive experience providing CVA services to the offshore oil and gas industry in the U.S. Through this experience, DNV has developed a systematic approach to the CVA process that has been accepted and viewed favorably by BOEM/BSEE. Lastly, DNV has been actively involved in helping the industry shape the CVA process to best serve offshore wind projects in the U.S through our engagement with the ongoing standard update of OCRP 2012.

### **3.7 Scope of work**

The CVA SoW defines the specific activities that the CVA will undertake in accordance with 30 CFR 285 Subpart G, as well as reporting requirements to BSEE for the Project. The CVA SOW is further described in separate document /1/.

### **3.8 Conflict of interest**

DNV fully understands that our ability to manage risk with independence and an expert voice requires that we protect our integrity above all else. As such, Renewables Certification will not verify or certify DNV's own work. Further, given that we provide a wide range of services to the offshore wind market, DNV has created a cross-Business Area network to ensure that we do not enter into service agreements which result in a conflict of interest. This effort is further being reinforced by our Contract Review Process and by our internal DNV Management System, both of which require confirmation that potential conflicts of interest are investigated and confirmed irrelevant. Lastly, DNV has successfully met this requirement on all the past CVA projects executed under 30 CFR 250, 30 CFR 285, and 30 CFR 585.

### **3.9 Professional engineer supervision**

DNV utilizes a staff qualification system to ensure that staff have the relevant education and experience necessary for conducting work associated with verification and certification of offshore wind projects. The qualification process includes training that covers the technical competence and the working processes and associated tools. The qualification process also includes periodic monitoring and evaluation after qualification in a discipline has been



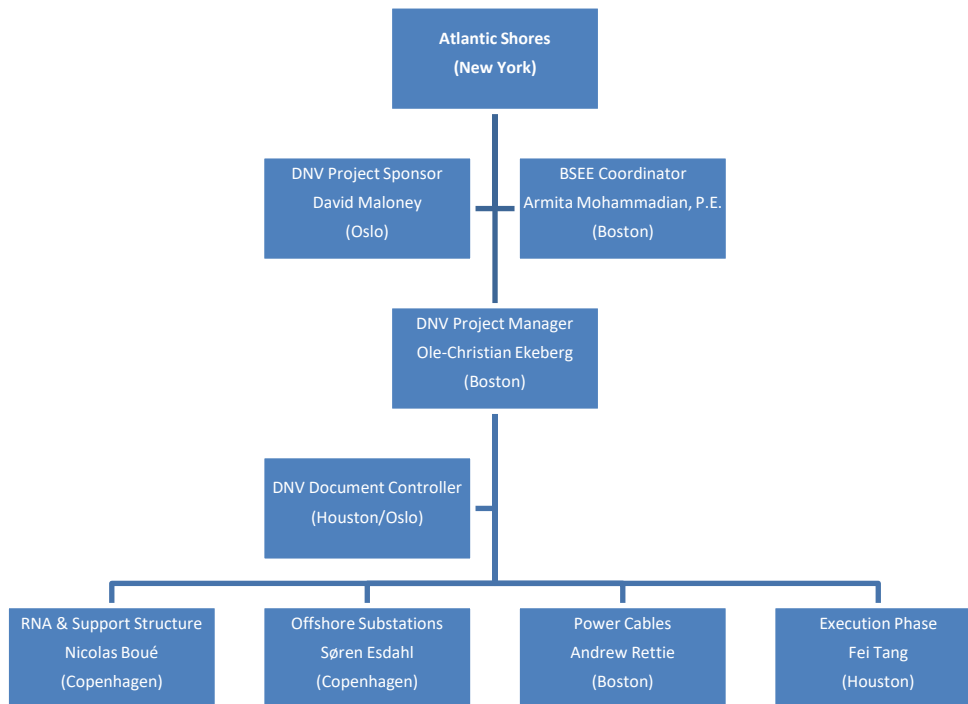
obtained. The team proposed to support the Work includes staff qualified in the range of disciplines that will be required for completing the work. Regarding “**Rule d) CFR §285.706 verification must be conducted by or under the direct supervision of registered professional engineers**”, it is noted that:

- DNV has met this requirement on all the past CVA projects executed under 30 CFR 285.
- The proposed CVA team includes several DNV employees who are registered professional engineers in the Civil, Structural, Mechanical and Electrical disciplines.
- DNV has its own quality system with strict requirement to assign only people with required competence to oversee and/or execute the project activities.
- Verification work will be performed as an accredited service with staff qualified through a qualification matrix. The requirement per §285.706 (d) for the verification to be conducted by or under direct supervision of a registered PE, will be executed in addition to the requirement by the accreditation.
- DNV professional engineers will review and approve all of the verification work performed prior to submission to BSEE. This includes review of the FDR or FIR documentation provided by the project as well as internal quality control check sheets, evaluation reports, and FDR/FIR letters. Supplementary background information will be provided to the PE if required and updates to the Evaluation Reports and verification will be made if deemed necessary.
- The following technical resources with professional engineering registration include:
  - A. Albert Ku, Structural Engineer, State of Texas
  - B. Armita Mohammadian, Structural Engineer, State of North Carolina
  - C. Doug Price, Electrical Engineer, State of California
  - D. John Price, Naval Architect-Marine Engineering, State of Texas
  - E. Debrin Saaijenga, Ocean Engineer, State of Texas

## 4 PROJECT ORGANIZATION

DNV’s project organization is shown in the organograms below (Figure 4-1). DNV’s organizational structure follows the structure of the project phases with a project organization for the Design phase and the Execution phase. In each of these phases there will be project teams for each of the four assets; where possible the same team members are involved in more than one asset to ensure information transfer between the assets.

There is a single project manager for the entire project to ensure coordination. Further, the project manager will work directly with the BSEE Coordinator, the primary contact to US authorities.



**Figure 4-1 The DNV project organization.**

Please note that package managers may be subject to change before start-up of packages depending on when the work will be performed. Any changes made to such key personnel, will be communicated, and confirmed with BSEE.

### 4.1 Technical Resource Pools

In addition to our detailed team above, DNV has identified the following technical resource pools for the main phases and assets of the project (Figure 4-2).

RNA & Support Structure

Site Conditions: Andreas G. Jensen, Iris Lohman & Erik R. Jørgensen

Loads: Helena Hunt & Matthew Nipper

Geotechnical: Alejandro Moreno, Liv Hamre & David Maloney

Structural, Corrosion & FIR: Nicolas Boué & Armita Mohammadian

OSS

Site Conditions: Andreas G. Jensen, Iris Lohman & Erik R. Jørgensen

Geotechnical: Alejandro Moreno, Liv Hamre & David Maloney

Structural, Corrosion & FIR: Morten Andersen, Tim Borcharding & Mads Højmark-Jensen

Safety: Tobias Bublat & Markus Kochman





**Figure 4-2 The DNV technical main resources per main phase and asset.**

With reference to the organograms above, the main duties are as listed below and reflects DNV's proposal for the organization of the manufacturing and installation parts of the surveillance work.

CV's will be updated, if necessary, when the fabrication site has been decided.

## 4.2 Roles and responsibilities

Main roles and responsibilities are as listed in Table 4-1 below and reflects DNV's proposal for the organization of all Project phases.

**Table 4-1 Roles and responsibilities.**

<b>Role/function</b>	<b>Description of responsibility and actions to be taken</b>
Project Sponsor	Overall responsible for the project on behalf of DNV's senior management and point of contact in case of significant changes to the SOW or contract.
BSEE Coordinator	Primary contact with the authority during the initiation, execution, and closeout of the work. Maintains close coordination with the Project Manager to ensure compliance with 30 CFR 285 Subpart G.
Project Manager	Primary contact with the developer during the initiation, execution, and closeout of the work and totally responsible for producing project deliverables to the right quality, meeting project milestones and staying within agreed budget frame set by developer.  A more detailed description of the project management tasks is included in section - Project Management and Coordination tasks.
Deputy Project Manager	Supports the project manager as needed.
Package Managers	Package managers with support the Project Manager by following up the day-to-day execution of the work scopes related to each of the five proposed facilities. These persons will work closely with their Project counterpart to ensure project documentation is distributed to the correct technical resource and that subsequent DNV deliverables are issued in accordance with the agreed turn-around times. Package managers will also be responsible for following up respective facility budgets.
Design Verification Team	Perform the design review activities across the various disciplines relevant to the contracted scope of work. These persons may be drawn from our technical resources pool depending on the specialist knowledge, schedule, and availability of resources.  One senior technical specialist will be dedicated as lead for each technical area.
Execution phase Surveillance Team	Surveillance includes actual review of submitted QA-QC documentation, performance of audits as relevant, performance initial and periodical inspections including inspection reporting and closing out of findings. Also included is final documentation reviews, and handling TQ and NCR.  Surveyors will maintain active contact with the developer's Site Fabrication Managers, and 2nd party inspectors, if any, engaged by the developer for the purposes of the inspections, and notify main contractor/subcontractor and the developer of findings before leaving site.  The same will apply to the transportation and installation phases.  The surveyor will participate in punch list (quality) meetings as requested by the developer. The same will apply to the transportation and installation phases.
Document Controllers	Manage incoming and outgoing documents and VCS.

### 4.3 Project Management

Main project management tasks during the execution of the scope of work shall include:

- Preparation and follow up on project management plans. A communication plan will be worked out with the developer and BSEE specifying communication lines between DNV project team and the counterpart project team of the developer and BSEE.
- DNV will provide the developer with an overview of the design verification and surveyor teams and key contact information. This facilitates efficient communication between the Projects office-based and on-site teams and DNV's office-based engineers and site surveyors.
- Establish internal agreements with DNV units.
- Facilitate lessons-learned workshop with team members in connection with project kick-off, based on previous learnings. This can ideally be organized in corporation with the Developer such that interaction and team spirit is established at the beginning.
- Ensure transfer of knowledge across the interfaces between the design and execution phases. A physical meeting between PM and Coordinators of the Design Phase and the Execution phases (manufacturing and installation) including relevant project personnel will be held.
- Assist the Designer and developer regarding CVA responsibilities if the as-built documentation is found to deviate from the certified design.
- The communication plan described above will include the requirement that all final and interim CVA reports will be submitted to both Customer and BSEE. All reports submitted to BSEE will comply with the requirements of 30 CFR 285.712(b). The CVA will confer with BSEE during the conduct of CVA activities regarding questions, novelties, irregularities, and/or omissions in existing design standards. Post-project wrap-up will be planned to capture lessons learned for improvements to the overall CVA program.
- Act as main point of contact for developer and receiver of response to QA-QC, TQ, and NCR documentation.
- Coordinate comments internally to ensure consistency before release to the developer. This will be done across the different platforms and in the perspective of the history of comments issued by DNV. The purpose is further to ensure that conclusions from earlier discussions are considered.
- Participate in kick-off meetings and progress meetings as requested by the developer.
- Review and issue project deliverables as detailed by the developer.
- Prepare payment requests, preparation, and issue of invoices to the developer.



## 5 DNV MANAGEMENT SYSTEM

The DNV Management System is an integrated quality, HSE (health, safety and environment) and business administration management system.

DNV's Management System is certified to ISO 9001, ISO 14001, ISO 27001 and ISO 45001. There is one ISO 9001 certificate for each of DNV's business areas, while Group wide certificates apply for the ISO 14001, ISO 27001 and ISO 45001 certification.

All certificates are issued by the Dutch accredited certification body DEKRA Certification B.V.

A description of DNV's quality and HSE policy and Management System is provided in Appendix B.

Copies of DNV's relevant ISO certificates are included in Appendix B; and a description of DNV's quality, health, safety and environment policy and management system is provided in Appendix B



## 6 REFERENCES

This statement of qualification has been developed on the basis of the documents referenced in the table below.

/1/ 236143\_1\_ASOW2\_SOW\_2022-08-19, CVA Scope of Work Atlantic Shores Project 2, rev. 2

/2/ 236143\_1\_ASOW2\_CVs\_2022-08-19/ CVs for Key Personnel



## **APPENDIX A**

### **CV's of Key Personnel**

---

Please refer to CV List 236143\_1\_ASOW2\_CVs\_2022-08-19 /2/.

## APPENDIX B

### DNV Management System

---

#### General

The DNV Management System (DMS) documents are sorted under 17 strategic areas as an index for the management system. The DMS seeks to be independent of the organisational structure, and able to show the main processes of the company.

The management system documentation consists of:

- The DMS – DNV’s Management System documentation. This is a 2-tier system. The top tier is owned, issued and maintained at DNV Group level and is valid for all in DNV. The ownership of the various groups of strategic areas has been assigned to DNV Group directors, to ensure anchoring with top management, focus and development.
- The second tier is owned, issued and maintained at DNV Business Area level and is valid for all in the respective DNV Business Area.
- Local Operating Procedures (OPs) which are specific for an operating unit, or part of the line organisation, i.e. Regional OPs.
- Country specific OPs which are valid for a country, typically covering employment items and general compliance with national legislation.

All management system documentation is available to all employees on the DNV Intranet.

DNV monitors, measures and improves the effectiveness of its management system on a continuous basis where opportunities for improvement are identified through internal and external audits, experience feedback, after-action reviews and, most importantly, through dialogue with and feedback received from our customers. The annual Management System Review is an important instrument in this regard.

DNV has a common tool for follow-up of all events such as audits, non-conformities, complaints and potential quality issues called Quality Event Tracker - QET. All quality events shall be registered in QET. QET facilitates the use of root cause analysis and ensures that events are handled and closed after proper actions have been taken.

#### Quality

##### DMSG-12-0 Quality Policy

DNV’s ambition is to have a leading position in all industries where we operate whilst never compromising on integrity and quality.

We commit ourselves to:

- Deliver in accordance with stakeholders’ expectations
- Continually improve our performance

This is achieved through:

- Serving our customers with a high degree of pro-activeness and responsiveness
- Complying with applicable standards and regulations
- Continually improving our services
- Continually improving our management system
- Continually investing in research and innovation



- Striving to be at the forefront of technology
- Striving to attract, develop and retain leading competence

## Quality Management System

The strategic areas most important in relation to quality of customer-facing activities and project deliverables are:

- Customer management
- Service lines
- Production
- Innovation, research and development
- IT and information management
- Quality and management system

Under the strategic area Production there are governing documents addressing:

- Project management
- Internal verification of project work and approval of deliverables
- Performance of various categories of services
- Requirements to certain types of deliverable documents
- Competence management and requirements

Further document types are:

- DNV Service Specifications
- Internal Service Instructions
- Internal Service Guidelines

## Quality Management System Certificate

The ISO 9001:2015 certificate is enclosed below.

## Health, Safety and Environment (HSE)

### HSE Policy

- We know that our work is never so urgent or important that we cannot take time to do it safely. We feel confident and empowered to stop work and to intervene where inappropriate behaviour or unacceptable conditions are encountered.
- We identify and assess risks to the health and safety of people, property or the environment in our work. We ensure they are effectively managed and that areas for improvement are prioritised.
- We foster a culture where everyone is actively involved in setting a good example and pursuing, adopting and sharing good HSE practice.
- We develop, resource and implement HSE plans to deliver continual improvement in HSE performance. We openly report and appraise our HSE performance and measure our achievements against our plans and goals and take action to address shortcomings.
- We treat incidents including near misses and hazards and feedback from employees and customers as an important learning opportunity.
- We select our sub-contractors and suppliers based on their ability to provide services which meet our safety, health and environmental requirements.





- We work to the principles of the UN's Global Compact and participate in the World Business Council for Sustainable Development.
- We will visibly demonstrate leadership and commitment to high standards of health, safety and environmental performance.

## HSE Management System

HSE is a separate strategic area, under which there are governing documents addressing:

- Environment aspects identification and management
- Emergency preparedness
- Implementation support and control processes, e.g. HSE risk assessment, HSE audits, incident reporting and investigation
- Health and Safety e.g. occupational health, substance abuse, field work, laboratory and test site, travelling and driving
- HSE Performance reporting and Management System Review

## HSE Management System Certificates

[DNV Management System](#).

The ISO 14001:2015 and ISO 45001:2018 certificates are enclosed below.

## Information Security Management

### Information Security Policy

- We know that our work is never so urgent or important that we cannot take time to do it safely. We feel confident and empowered to stop work and to intervene where inappropriate behaviour or unacceptable conditions are encountered.
- Have a holistic and integrated information security perspective across silos in everything we do.
- Have a risk-based approach to information security and prioritize resources accordingly.
- Assign ownership of critical business environments, processes, applications (including supporting systems/networks) and information to capable individuals, to achieve individual accountability for information and systems, and give their owners a stake in their protection.
- Have a group-wide information classification scheme, based on the confidentiality of information, to ensure that information is protected in line with its assigned level of classification.
- Protect personal data from unintentional disclosure, to prevent inappropriate use and ensure compliance with personal data protection, legal and regulatory requirements.
- Have processes in place to identify, report, and resolve information security incidents quickly and effectively, to minimize their business impact and reduce the risk of similar incidents occurring.
- Protect critical facilities against accidents, attacks or unauthorized physical access, to restrict access to authorized individuals, ensure that critical equipment is available when required and to prevent important services from being disrupted by loss of, or damage to, equipment or facilities.
- Creating a culture where security behavior is embedded, where all relevant individuals make effective risk-based decisions and protect critical and sensitive information from being compromised, by providing mandatory security awareness training to all DNV employees, sub-contractors/ non-employees who have access to VerIT



platforms and sub-contractors/ non- employees with no VerIT access and no information security policies of their own, but who have access to sensitive information.

- Configure all information systems and networks correctly and securely, and keep them updated, to ensure that they operate as intended and do not compromise security requirements.
- Develop and deploy information systems in accordance with a documented information system development methodology, to ensure that information systems (including those under development) meet business and information security requirements.
- Protect business critical information systems and networks, to ensure cyber security and thereby ensure availability, reduce the likelihood of information system disruptions, provide resilience against disruption, and minimize impact to the organization in the event of a disaster or emergency.
- Implement controls on information running over networks, to protect sensitive information in transit.
- Protect the exchange of information through all types of electronic communication, to ensure that we can interact securely with all stakeholders.
- Have enterprise-wide identity and access management arrangements that provide effective and consistent user administration, identification, authentication, and access control mechanisms, to restrict information system access to authorized users and protect the integrity of important user information.
- Have arrangements for detection of malware, to protect DNV against malicious software, to detect malicious intrusions and enable us to respond to malware infection within critical timescales.

## Information Management System Certificate

[DNV Management System](#).

The ISO 27001:2013 certificate is enclosed below.

# CERTIFICATE

Number: 2169389

The management system of the organizations and locations mentioned on the addendum belonging to:

## DNV AS Business Area Energy Systems

Veritasveien 1  
1363 Høvik  
Norway

including the implementation meets the requirements of the standard:

## ISO 9001:2015


### Scope:

Provision of advisory and testing services across the energy systems value chain, for renewable power and oil & gas production, energy transport, power transmission & distribution and energy use, including the development of software, monitoring systems and digital platforms.

Certificate expiry date: 1 January 2024  
Certificate effective date: 9 April 2021  
Certified since\*: 1 January 2015

This certificate is valid for the organizations and locations mentioned on the addendum.

DEKRA Certification B.V.



B.T.M. Holtus  
Managing Director



R.C. Verhagen  
Certification Manager

© Integral publication of this certificate and adjoining reports is allowed\* against this certifiable standard / possibly by another certification body



DEKRA Certification B.V. Meander 1051, 6825 MJ Arnhem P.O. Box 5185, 6802 ED Arnhem, The Netherlands  
T +31 88 96 83000 F +31 88 96 83100 www.dekra-certification.nl Company registration 09085396



# CERTIFICATE

Number: 2213711

The environmental management system of the organization(s) and locations mentioned on the addendum belonging to:

**DNV AS**

Veritasveien 1  
1363 Høvik  
Norway

including the implementation meets the requirements of the standard:

## ISO 14001:2015

Scope:

Classification of Ships and Offshore Units, Marine Warranty, Risk Management, Verification, Advisory, Certification (excluding Management System Certification), Laboratory Testing, Product Inspection, Systems Assessment, Independent Technical and Engineering Services, Development of Software Systems, Delivery of Training.

Certificate expiry date: 25 September 2026  
Certificate effective date: 25 September 2023  
Certified since\*: 25 September 2014

This certificate is valid for the organizations and locations mentioned on the addendum.

DEKRA Certification B.V.



B.T.M. Holtus  
Managing Director



R.C. Verhagen  
Certification Manager

© Integral publication of this certificate and adjoining reports is allowed.  
\* against this certifiable standard / possibly by another certification body.



DEKRA Certification B.V. - Meander 1051, 6825 MJ Arnhem P.O. Box 5185, 6802 ED Arnhem, Netherlands  
T +31 88 96 83000 F +31 88 96 83100 www.dekra.nl Company registration 09085396

# CERTIFICATE

Number: 2213712

The management system of the organization(s) and locations mentioned on the addendum belonging to:

**DNV AS**

Veritasveien 1  
1363 Høvik  
Norway

including the implementation meets the requirements of the standard:

## ISO 45001:2018

Scope:

Classification of Ships and Offshore Units, Marine Warranty, Risk Management, Verification, Advisory, Certification (excluding Management System Certification), Laboratory Testing, Product Inspection, Systems Assessment, Independent Technical and Engineering Services, Development of Software Systems, Delivery of Training.

Certificate expiry date: 25 September 2026

Certificate effective date: 25 September 2023

Certified since\*: 26 September 2014

This certificate is valid for the organizations and locations mentioned on the addendum.

DEKRA Certification B.V.



B.T.M. Holtus  
Managing Director



R.C. Verhagen  
Certification Manager

© Integral publication of this certificate and adjoining reports is allowed.  
\* against this certifiable standard / possibly by another certification body.



DEKRA Certification B.V. Meander 1051, 6825 MJ Arnhem P.O. Box 5185, 6802 ED Arnhem, Netherlands  
T +31 88 96 83000 F +31 88 96 83100 www.dekra.nl Company registration 09085396

# CERTIFICATE

Number: 2254773

The management system of the organizations and locations mentioned on the addendum belonging to:

## DNV AS

Veritasveien 1  
1363 Høvik  
Norway

including the implementation meets the requirements of the standard:

# ISO/IEC 27001:2013

With this certificate, the organization also complies with the conditions of NEN-EN-ISO/IEC 27001:2017.

### Scope:


Information security related to the provision of Classification, statutory, advisory, and product certification services; Verification, certification, laboratory testing, inspection, testing and non-destructive testing; Provision of products and tools, digital platforms and digital services; Development of software systems and Delivery of training.

The selection of the risk reducing measures is documented in the statement of applicability; version DMSG-9-10-A2, 2021-04-08, Rev 1

Certificate expiry date: 31 December 2023  
Certificate effective date: 7 June 2021  
Certified since\*: 7 June 2021

This certificate is valid for the organizations and locations mentioned on the addendum.

DEKRA Certification B.V.



B.T.M. Holtus  
Managing Director



R.C. Verhagen  
Certification Manager

© Integral publication of this certificate and adjoining reports is allowed  
\* against this certifiable standard / possibly by another certification body



DEKRA Certification B.V. Meander 1051, 6825 MJ Arnhem P.O. Box 5185, 6802 ED Arnhem, The Netherlands  
T +31 88 96 83000 F +31 88 96 83100 www.dekra-certification.nl Company registration 09085396



## APPENDIX C

### Accredited Certification Body

---

DNV Renewables Certification is an Accredited Certification Body according to ISO/IEC 17065, Ref. Accreditation Certificate D-ZE-22290-01-00. The accredited certification body is DNV Renewable Certification GmbH, while DNV Renewables Certification is the trading name of DNV's certification business in the renewable energy industry.

The lead accreditation body is the Deutsche Akkreditierungsstelle (DAkkS). To achieve the accreditation our management system, methods and technical competences have been and are continuously inspected and audited by this Accreditation Body.

DAkkS is the national Accreditation Body for the Federal Republic of Germany. Pursuant to Regulation (EC) No. 765/2008 and the Accreditation Body Act (AkkStelleG), it acts in the public interest and as the sole provider of accreditations in Germany. Germany is a member of the International Accreditation Forum (IAF). The German Accreditation Body DAkkS is signatory of the IAF Multilateral Agreement (MLA). The MLA supports the world-wide acceptance of certification deliverables issue by DNV.

Please find in the following our accreditation certificate displayed. The current valid accreditation certificate incl. annex with the details of the scope covered by the accreditation is available on request or at the DAkkS website following the link <https://www.dakks.de/en/accredited-body.html?id=D-ZE-22290-01-00>.



## Accreditation



The Deutsche Akkreditierungsstelle attests with this **Accreditation Certificate** that the certification body

**DNV Renewables Certification GmbH**  
**Brooktorkai 18, 20457 Hamburg**

meets the requirements according to DIN EN ISO/IEC 17065:2013 for the conformity assessment activities listed in the annex to this certificate. This includes additional existing legal and normative requirements for the certification body, including those in relevant sectoral schemes, provided they are explicitly confirmed in the annex to this certificate.

The management system requirements of DIN EN ISO/IEC 17065 are written in the language relevant to the operations of certification bodies and confirm generally with the principles of DIN EN ISO 9001.

This accreditation was issued in accordance with Art. 5 Para. 1 Sentence 2 of Regulation (EC) 765/2008, after an accreditation procedure was carried out in compliance with the minimum requirements of DIN EN ISO/IEC 17011 and on the basis of a review and decision of the appointed accreditation committees.

This accreditation certificate only applies in connection with the notices of 20.07.2023 with accreditation number D-ZE-22290-01.  
It consists of this cover sheet, the reverse side of the cover sheet and the following annex with a total of 20 pages.

Registration number of the accreditation certificate: **D-ZE-22290-01-00**



Berlin, 20.07.2023

B. Sc. Maik Kadraba  
Head of Technical Unit

*The certificate together with the annex reflects the status as indicated by the date of issue. The current status of any given scope of accreditation can be found in the directory of accredited bodies maintained by Deutsche Akkreditierungsstelle GmbH ([www.dakks.de](http://www.dakks.de)).*

See notes overleaf







## **About DNV**

We are the independent expert in risk management and quality assurance. Driven by our purpose, to safeguard life, property and the environment, we empower our customers and their stakeholders with facts and reliable insights so that critical decisions can be made with confidence. As a trusted voice for many of the world's most successful organizations, we use our knowledge to advance safety and performance, set industry benchmarks, and inspire and invent solutions to tackle global transformations.