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Annual Report 2021

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1 GENERAL PROJECT INFORMATION

C-Power's wind farm is located on the Thornton Bank, approximately 30 km off the coast of Zeebrugge. The project was constructed in three phases.

Phase 1 (2007-2009), the pilot phase, consisted of six 5M (5 MW) wind turbine generators (WTG) on gravity base foundations (GBF).
The 30 MW installed capacity is fully operational since end of June 2009.

Phase 2 (2011-2012) consisted of:

- the construction of 49 jacket foundations (JF);
- the installation of 30 WTGs of 6,15MW: 24 WTGs in sub area B and 6 WTGs in sub area A, mutually connected with 33/36 kV infield cables;
- the laying and connection of infield cables;
- the crossing of the 33/36kV infield cables with the Interconnector gas pipeline and the Concerto South telecom cable;
- the construction and installation of the offshore transformer station (OTS);
- disconnection works of 150/170kV cable A from D1 and connection to transformer station and the connection of a 33kV infield cable between OTS and D1;
- the installation of 2 subsoil 150kV onshore connections between the 150 kV offshore cables and the high voltage station "Sas Slijkens";
- the laying of the second 150kV offshore export cable B.

Phase 3 (2012-2013) consisted of:

- the installation of 18 WTGs (6,15MW) and the necessary connections with the offshore transformer station

The complete project comprises 54 WTGs with a total rated power of 325 MW plus the supporting infrastructure. Full operation was accomplished by end of September 2013.

The figure below shows the layout of the C-Power wind farm.

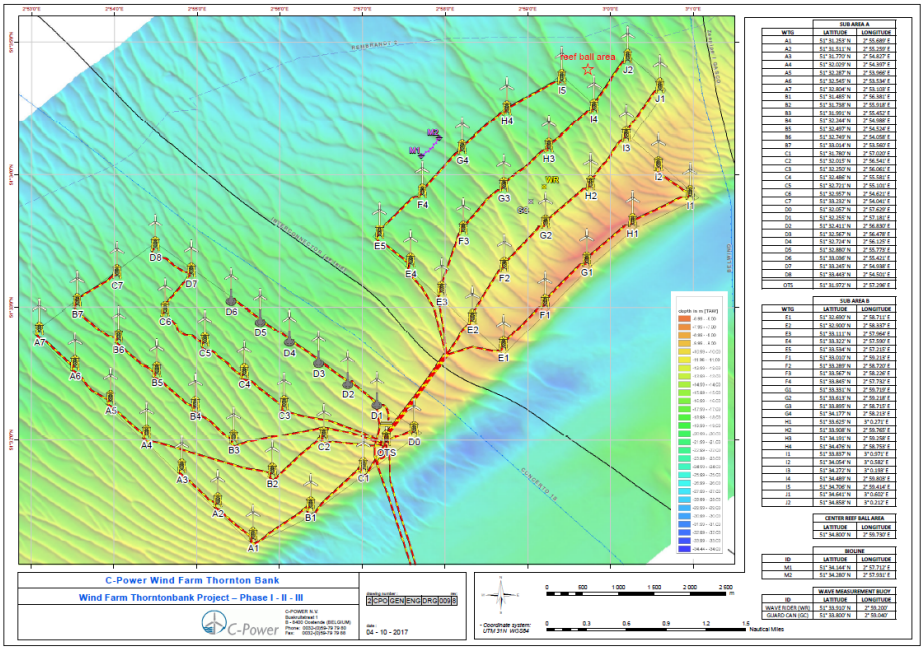

Figure 1: Layout of C-Power's wind farm

2 MAIN ACTIVITIES DURING 2021

In 2021, C-Power continued the "in house" organization of its turbine maintenance activities, meaning without reliance on an "all in" service contract, to the satisfaction of its shareholders and financing institutions. The C-Power subsidiary Thornton Bank Maintenance Services and the Belgian maintenance company John Cockerill (formerly CMI) continued to perform the major maintenance works on the wind farm (refer to the Annual reports of 2019 and 2020). For specific maintenance activities, requiring specialized knowledge, long-term agreements were concluded with a range of contractors, both from Belgium as abroad. C-Power took over the full responsibility for logistics, warehousing and sourcing of spare parts.

These changes had no big impact on the safety and environmental policy and management of C-Power.

2.1 MAJOR COMPONENT REPLACEMENTS

In 2021, many major component exchanges were performed on the wind farm:

- Gearbox exchanges on 8 turbines (A6, I4, F3, H3, A2, C4, C5 and D5)
- Generator exchanges on turbines I1, E1 and D5.
- Rotor shaft assembly (main shaft + main bearings) exchanges on A5 and A3
- Transformer exchange on E1

The exchanges were carried out in 4 campaigns: first half of May, between 8 and 26 July, begin October and mid-November with the Jack-Up Vessels Neptune and Adventure.

2.2 GEARBOX OIL EXCHANGE

In 2021, C-Power exchanged the oil on 2 main gearboxes. In all cases, we made use of containers placed on the platform or on the helideck. Nothing particular is to be reported on this activity.

2.3 LEADING EDGE PROTECTION EXCHANGE

In 2021, C-Power exchanged the leading edge protection (LEP) foil of the blades of in total 19 wind turbines. The LEP protects the leading edge of the blades against erosion from rain, airborne particles, etc. The foil initially had a lifetime of 7 years, so needed to be exchanged.

3 CONSTRUCTION & OPERATION PERMIT CONDITIONS

All permit obligations are integrated and implemented in the daily management of the activities offshore by C-Power and its contractors.

The annual institutionalized Follow-up Committee ("*Begeleidingscomité*") took place on 18/01/2022. During this Follow-up Committee, the progress of the project is discussed as well as the compliance of the operation and maintenance activities with the permit conditions. C-Power also provides the Committee with 3-monthly reports.

Next to this regular and official reporting to the authorities, C-Power informs the federal and nautical authorities about important events on a frequent, voluntary and transparent basis, including a regular dialogue with the relevant authorities. E.g. the gearbox oil exchanges were communicated upfront and methodologies were explained.

An overview of the main permit conditions is given below.

Drifting or sunken objects

A detailed track record of the drifted and sunken objects is kept by C-Power. 4 incidents with objects lost at sea were reported:

- 13/09/2021: lost tool bag at sea
- 13/04/2021: UHF radio fallen in water
- 25/10/2021: UHF radio fallen in water (2x)

In the following cases, fallen objects were retrieved from the water:

21/07/21: box fallen in water
24/07/21: reflector fallen in water
12/08/21: empty drum fallen in water

Additional tools (tethering lines, special pocket holders) have been distributed to everyone to avoid loss of objects. A dedicated workgroup has been established to raise environmental awareness. A specific toolbox on tool tethering will be drawn up and given to all people working offshore.

Cables

Infield and export cable surveys were performed in November 2021; the reports will be available in the course of March 2022 and will be distributed to the *Begeleidingscomité* as soon as available.

Monitoring

Monitoring activities BMM

Fish deterrence tests, seabird surveys, monitoring of sea mammals with C-pods, hard substrate sampling, sampling of fish fauna in the concession zone and water sampling were performed by BMM in the course of the year 2021. Next to that, there were various interventions on measurement equipment in or nearby the domain concession.

Meteorological parameters

Meteorological data (wind speed, wind direction, wave height, wave period, tide, pressure, temperature, visibility) measured in real time on C-Power's offshore transformer platform are available on "http://meteo.c-power.be".

The measurement buoy in Area B of the C-Power wind farm (see also Figure 1) installed by Vlaamse Hydrografie in August 2017 is still in operation; data of this wave buoy are visible in "Meetnet Vlaamse Banken".

Risks & Safety

Internal emergency plan
Was initially released May 2014. Latest revisions of the ERP are available on the C-Power management platform. No updates were needed in 2021.

Emergency response exercises:
24/06/2021: ERP on a WTG; with involvement MRCC
14/10/2021: ERP on a WTG; with involvement MRCC
22/12/2021: ERP on WTG; with involvement MRCC

There was no involvement of the 40th squadron.

Next to the overall ERP exercises, 21 smaller drills were performed, both off- and onshore, such as Man Overboard trainings, First Aid training, evacuation exercises using the Sked and Milan. The objective of these smaller drills is to train as many technicians as possible in rescue techniques.

For 2022, 4 ERP drills are planned together with MRCC. Similar to 2021; we plan 16 smaller exercises in this year.

One Polex (pollution exercise) was performed on 24 June 2021, with involvement of all relevant authorities and the windfarms of C-Power and Norther (common exercise).

Medevac
No medevac in 2021.

Spills

In 2021, we had a number of smaller environmental incidents:

- Gearbox oil leaks (March, June, September): in 2 cases due to human errors; in one case due to a sudden equipment failure (damaged hose). All personnel was instructed and reminded to follow the correct procedures, work instruction has been adapted in 1 case. In the case of the damaged hose, the hose was replaced by a more robust type.
- Freon leak on an HVAC unit: leaking condenser replaced, work instruction for cleaning adapted.

Harmful substances

Register updated with new substances and existing substances replaced by others or no longer used.

Permit compliance procedures

An overview of permit conditions and a full copy of all permits have been integrated in all contracts with third parties operating offshore. All contractors are consequently fully informed on the mandatory permit conditions. C-Power coordinates and supervises the permit conditions' compliance of the respective contractors.

All incident reports from contractors as well as from C-Power's staff are registered and kept on C-Power's internal server.

Wind Turbine data; Energy Production; Wind Turbine Availability: Confidential information

Data regarding energy production, availability and number of stop and maintenance hours can be found in Attachments 6.1 to 6.5. **These data are to be treated as confidential**.

4 ENVIRONMENTAL MONITORING ACTIVITIES

Bathymetric surveys

Bathymetric surveys of all foundations, infield cables and export cables were executed in November 2021 in order to monitor the burial depth of the cables, and the evolution of the morphology of the seabed around the foundations. Data analysis was still ongoing at the time of drafting this report. C-Power will communicate the results to the *Begeleidingscomité* as soon as available.

5 HEALTH, SAFETY AND ENVIRONMENT (HSE)

2021 was a very busy year with a very high workload. Over the year, we had +/- 260 offshore workdays; people from 60 companies performed +/- 10 000 person days on maintenance, servicing and repair (excluding major component replacements) representing over 100 FTEs. This was much higher than in 2020, when offshore operations were still hampered by Covid-19 restrictions.

In the framework of C-Power's SCHIC program (Safety Culture and Health Improvement Campaign) we organized 1 web-based safety day in March and 1 life safety day in October. This program will continue in 2022 to further stimulate the safety behaviour of all personnel and all (sub)contractors active in the windfarm. This will take the form of common toolboxes, newsletters, 2 safety days (real life or virtual) and a number of workgroups with service technicians to develop specific topics.

In 2021 we had 2 LTIs on the wind farm:

- On 19/04/21: slip and trip incident on the onshore pontoon
- On 22/08/21: trip incident on a crew transfer vessel

Corrective actions were identified and implemented (mainly repeating procedures related to housekeeping and vessel boarding).

Remote Monitoring system

C-Power has a 24-hour SCADA (Supervisory Control and Data Acquisition) surveillance system in operation. The SCADA system enables the operational management of C-Power to have a complete overview of all turbines. The SCADA data are sent to an external control room, staffed on a 24/7 basis. On each wind turbine, 2 cameras are installed at the height of the boat landings. The camera images are sent through in real time to the operational center in Ostend and are stored for 30 days. The Offshore transformer Station is equipped with 4 HD cameras covering the whole wind farm.

6 ANNEXES

6.1 AVAILABILITY PER PHASE ON MONTHLY BASE

6.2 PRODUCTION – LOW WIND – STOPS – MAINTENANCE HOURS

6.3 PRODUCTION PER MONTH PER PHASE

6.4 PRODUCTION PER YEAR PER TURBINE

6.5 WINDROSE