

ENERGY MANAGEMENT ACTION PLAN & PROGRESS REPORT 2022



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Reference documents

Reference	Title
JDN maintained documents	
CBF_2022_(GROUP MACRO-MANUAL-OPERATIONAL)_r2	Carbon footprint database containing all emission and energy data for 2022.
Financial year report 2022	Financial boundary and year report of 2022, verified by Grant Thornton.
JDN.QP.13.01	Bevindingenbeheer
JDN.GF.01.40	Gedragcode (Code of conduct)
Sustainability report 2021 - 2022	Sustainability report 2021 - 2022

Standards

ISO 14064 - 1	Greenhouse gases — Part 1: Specification with guidance at the organization level for quantification and reporting of greenhouse gas emissions and removals
ISO 50001	Energy management systems – Requirements with guidance for use §6.2.3
CO ₂ Performance ladder	CO ₂ Performance Ladder Handbook 3.1

Definitions

Definition	Meaning
Carbon dioxide equivalent	Unit for comparing the radiative forcing of a GHG to that of a carbon dioxide.
GHG emission	Greenhouse gas emission. Release of a GHG into the atmosphere.
GHG emission factor	Greenhouse gas emission factor. Coefficient relating GHG activity data with the GHG emission.
GHG removal	Greenhouse gas removal. Withdrawal of a GHG from the atmosphere by GHG Sinks.
GHG removal factor	Greenhouse gas removal. Coefficient relating GHG activity data with the GHG removal.
GHG Source	Greenhouse gas source. Process that releases a GHG in the atmosphere.
Global warming potential	Index, based on radiative properties of greenhouse gases, measuring the radiative forcing following a pulse emission of a unit mass of a given GHG in the present-day atmosphere integrated over a chosen time horizon, relative to that of carbon dioxide.

Abbreviations

Abbreviation	Meaning
CO _{2e}	Carbon dioxide equivalent
GHG	Greenhouse gas Gaseous constituent of the atmosphere, both natural and anthropogenic, that absorbs and emits radiation at specific wavelengths within the spectrum of infrared radiation emitted by the earth's surface, the atmosphere and clouds.
SBTi	Science Based Targets initiative
TTW	Tank To Wheel
WTT	Well To Tank
WTW	Well To Wheel

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Preface

Jan De Nul is a modern and innovative company that takes on today's complex challenges. Our talented people develop sustainable solutions that contribute to the energy transition and secure the future of the next generation.

Our expertise lies in five main activities: offshore energy, dredging and maritime services, civil construction, environmental projects and project development. We enable the production of offshore energy and keep waterways at depth. We are building new ports and creating additional land. We realize complex infrastructure works and install any type of building. We tackle pollution, in whatever form. From design and engineering to implementation and maintenance, we unburden our customers with total solutions that combine one, several or even all activities.

Our values as a cornerstone for sustainability

Challenge, Connect, Focus, Respect. Based on our values, Jan De Nul resolutely opts for a sustainable future. We are committed to people and the environment. We work as a team and share our knowledge and expertise. We are committed to the most sustainable solution for all parties involved. We take up the challenge to help build a better future.

Environment

As a civil, maritime and offshore contractor, Jan De Nul is in the perfect position to make a difference for a better environment. We actively contribute to the energy transition, clean up polluted sites and protect coasts from erosion. At the same time, we actively reduce our emissions, reuse as much material as possible and introduce sustainable solutions into our projects.

Energy management action plan

This periodic report contains the energy management Action Plan (EMAP) in accordance with ISO 50001 and CO₂ Performance Ladder.

ISO 50001	CO ₂ -Prestatieladder	Deming	Jan De Nul
§6.3 Energy audit	2A3	Plan	The emission inventory is included in the Greenhouse gas report and the and progress reports. New savings opportunities are examined following the (external) energy audits and (external) energy assessment, discussed in respective steering and working groups, discussed and established in the management review and the Energy Management Action Plan (EMAP)
§6.2 Energy targets, targets and action plans	B, 2C2	Plan/Do	JDN QHSSE policy statement, JDN CSR strategy as described in the sustainability report, JDN code of conduct, Energy Management Action Plan, List of measures Website SKAO
§6.3 Monitoring, measurement and analysis	3C1, 4B2, 5B2 in 5C3	Check	Semi-annual update of the CO ₂ footprint and the and progress reports. Performing Internal and external

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			(energy) audit, self-assessment, work and steering committee consultation, management review.
§6.3 Deviations, corrections, corrective and preventive measures	Continuous improvement	Act	If deviations are detected, the CO2PL advisor will coordinate adjustments through: - organized steering and working group meetings by coordinating the actions described in the action list; - drafting finding within the internal audit process; - the annual management review. If required, adjustments are made to <> and/or <> or relevant system documents of the CO2PL management system.

In this report, we also describe how Jan De Nul Group achieves CO₂ reduction targets and measures, as set by the management, as part of its CO₂ performance ladder certification.

1 Energy policy

Jan De Nul Group has sustainable ambitions. But how do we put this into practice? Our **Code Zero** business program unites all sustainability initiatives under four pillars: zero emissions, zero accidents, zero waste, zero breaches. The introduction of this program is a milestone, rather than a starting point.

Zero emissions

Global climate change threatens our way of life. By keeping our ecological footprint to an absolute minimum and setting clear goals, we want to contribute to a more sustainable world. At Jan De Nul, this is not a distant goal: we are fully committed to the use of bio- and other fuels and with our ULEv ships with extremely low emissions, we are an absolute trendsetter in our sector.

The ambitions of Jan De Nul Group were validated by the **Science Based Targets initiative** (SBTi). The SBTi encourages the private sector to both set climate ambitions and take climate action. They are the first NGO to examine and validate business climate ambitions. In this way, it is independently verified that business ambitions and actions are in line with the targets of the Paris climate agreement. The Science Based Targets initiative is a collaboration between CDP, the United Nations Global Compact, the World Resources Institute (WRI) and the World Wildlife Fund (WWF).

Through, among other things, the CO₂ performance ladder, we focus on "**Zero emissions**" in which we reduce our ecological footprint. All **dredging, civil and environmental works of Jan De Nul Group in the Benelux** are certified according to the **CO₂ performance ladder**, an instrument to stimulate CO₂ reductions. We still achieve the highest level 5.

As part of our **QHSSE policy statement**, signed by management, we are committed to protecting the environment and climate and preventing pollution. We constantly strive to **use less energy and emit fewer greenhouse gases**. Where possible, we opt for **green energy**.

The signed [QHSSE Policy Statement](#), the [sustainability report \(2021-2022\)](#) and the [annual report 2022](#) can be read via the website.

2 Boundary

Figure 1: Boundary CO₂ Performance Ladder Certificate 2022₂ Performance Ladder management system. This boundary includes all dredging, civil and environmental activities in the Benelux.

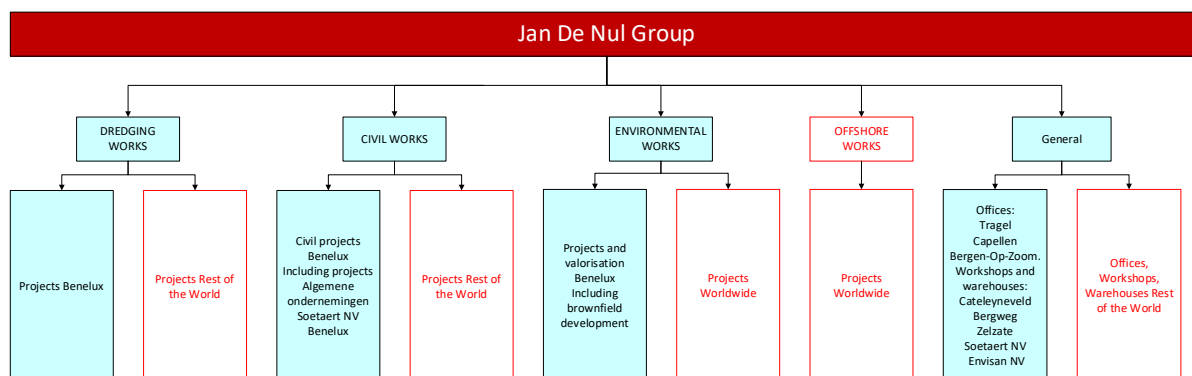


Figure 1: Boundary CO₂ Performance Ladder Certificate 2022

3 Energy audit

The actions resulting from the energy audits and energy assessments shall be monitored in the relevant working and steering groups. These assessments and audits include:

- The energy audit for large non-energy-intensive companies dated 20/11/2019, which will be updated in 2023Q4.
- Energy assessment by surveying all JDN Employees worldwide, reference is made to the energy cup that was organized in 2022.
- Energy assessment of the projects with award advantage.
- Engie photo scans organized in 2020.
- Heating audits on combustion plants carried out in the course of 2018;
- The Energy Roadmap: Jan De Nul NV Reference: 2016-P&S-3000436046 October 2016, which is still representative at the date of overhaul, and can also be applied in the other buildings within the scope of CO₂-PL;

4 Targets and measures

Our ambitions are focused on both direct (scope 1) and indirect (scope 2 and 3) emissions and have been validated by SBTi. Jan De Nul Group is committed to:

- Reduce absolute Scope 1 and 2 greenhouse gases by 40% by 2035 compared to base year 2019.
- Reduce the absolute Scope 3 greenhouse gases from purchased goods and services and fuel and energy-related activities by 20% within the same timeframe.

These validated climate ambitions are translated into 5 concrete targets for the activities within the boundary of the CO₂ Performance Ladder certificate. These targets are formulated on the basis of possible reductions that are determined in internal and external energy audits and determined in the management review.

For projects with an award advantage, project-specific targets and measures may be formulated within the respective project. These are documented at project level and bundled in the project file.

4.1 Targets, measures and progress 2022

4.1.1 Target 1: CO₂ e-reduction of fuel vessels during project realization (Scope 1)

Target:

30% absolute reduction of CO₂ e-emissions from dredgers in the Benelux in the period 2022-2030 compared to base year 2019.

Share of emissions in relation to the CO₂ footprint:

Emissions from ships account for 35% of all scope 1 and 2 emissions in the Benelux.

The main reduction measures taken to achieve this target:

- Increasing energy efficiency
- Optimisation of operational measures through continuous monitoring
- Use of renewable and low-carbon fuels
- Use of ship energy efficiency management plans (SEEMP)

Evaluation of the target: A 62% reduction was achieved compared to base year 2019.

4.1.2 Target 2: Reduction of fuel consumption of company cars personnel (Scope 1)

Target:

10% reduction in emissions from commercial vehicles by 2025 compared to 2018, with corresponding interim target:

- 2022: 8.24 tonnes of CO_{2e}/company car or 4.12 tonnes of CO_{2e}/company car per semester

Share of emissions in relation to the CO₂ footprint:

Emissions from commercial vehicles account for 12% of all scope 1 and 2 emissions in the Benelux.

The main reduction measures taken to achieve this target:

- Replacing fossil fuel cars with hybrid and electric vehicles
- Promoting bicycle use
- Sensitization

Evaluation of the target:

In 2022, the average emission per company car was 4.82T CO_{2e}.

4.1.3 Target 3: Renewable electricity in offices, workshops and warehouses

Target:

At least 98% renewable electricity used in all offices, workshops and warehouses by 2022

Share of emissions in relation to the CO₂ footprint:

Electricity emissions from offices, workshops and warehouses account for 0% of all scope 1 and 2 emissions in the Benelux. The emissions are 0 Tons CO_{2e} because local renewable electricity has an emission of 0 Tons CO_{2e} in the use phase. The electricity consumption of offices, workshops and warehouses accounts for 47% of all electricity consumption in the Benelux.

The main reduction measures taken to achieve this target:

- Reduce energy consumption
- Generating renewable electricity
- Purchasing renewable electricity from local origin

Evaluation of the target:

In 2022, 99.69% of all electricity purchased for offices, workshops and warehouses in the Benelux was green of local origin.

4.1.4 Target 4: Renewable electricity in civil and environmental projects

Target

At least 75% renewable electricity used in civil and environmental projects by 2022, with corresponding interim targets:

- 2020: minimum 20%
- 2021: minimum 50%
- 2022: minimum 75%

Share of emissions in relation to the CO₂ footprint:

Electricity emissions from civil and environmental projects account for 1% of all scope 1 and 2 emissions in the Benelux. The emissions are so low because local renewable electricity has an emission of 0 Tons of CO_{2e} in the use phase, and the emissions of grey electricity are quite low in the Benelux. The electricity consumption of civil and environmental projects accounts for 53% of all electricity consumption in the Benelux.

The main reduction measures taken to achieve this target:

- Reduce energy consumption
- Generating renewable electricity
- Purchasing renewable electricity from local origin
- Ecological site shack

Evaluation of the target: On all civil and environmental projects in 2022, 78% of the electricity used was green of local origin.

4.1.5 Target 5: Reduction of emissions in DBFM projects**Target**

50% of all design projects must reduce emissions from the purchase of steel, the purchase of concrete or ground transport by 2022, with corresponding interim targets:

- 50% of DBFM, DBM or DB projects, tendered in 2021-2022
- 20% of DBFM, DBM or DB projects, tendered in 2020-2021
- 1 DBFM, DBM or DB-project, tendered in 2019-2020

Share of emissions in relation to the CO₂ footprint:

Emissions from the purchase of steel, concrete and earthmoving account for 46% of all emissions in the Benelux (scope 1, 2 and 3), and 75% of all indirect emissions in the Benelux (scope 3).

The main reduction measures taken to achieve this target:

- Design: use less steel, concrete or transport
- Using low-carbon steel, concrete or transport

Evaluation of the target: CO_{2e} reduction was achieved on 100% of the DBFM projects tendered in 2021-2022.

4.2 Targets and measures 2023

4.2.1 Target 1: CO₂ e-reduction of fuel vessels during project realization (Scope 1)

Target:

30% absolute reduction of CO₂ e-emissions from dredgers in the Benelux in the period 2022-2030 compared to base year 2019.

The main reduction measures taken to achieve this target:

- Increasing energy efficiency
- Optimisation of operational measures through continuous monitoring
- Use of renewable and low-carbon fuels
- Use of ship energy efficiency management plans (SEEMP)

4.2.2 Target 2: Reduction of fuel consumption of company cars personnel (Scope 1)

Target:

50% reduction in emissions per kilometre of the personnel fleet by 2030 compared to the base year 2019.

The main reduction measures taken to achieve this target:

- Replacing fossil fuel cars with hybrid and electric vehicles
- If fossil fuel cars are still being purchased, purchase of fuel-efficient cars (< 80 gr CO₂/km)
- Promoting bicycle use
- Sensitization

4.2.3 Target 3: Renewable electricity in offices, workshops and warehouses

Target:

100% renewable electricity of local origin with at least 10% self-generated energy used in all offices, workshops and warehouses by 2030

The main reduction measures taken to achieve this target:

- Reduce energy consumption
- Generating renewable electricity
- Purchasing renewable electricity from local origin

4.2.4 Target 4: Reduction of emissions in DBFM projects

Target

Minimum 30% reduction on ECI* and 10% reduction on CO_{2e} impact by means of TOTEM** for one infrastructure and one building project respectively compared to standard design by 2025, with corresponding interim targets:

- Minimum 30% reduction on the ECI value* compared to standard design on 1 infrastructure project awarded or implemented in 2023
- Minimum 10% reduction on the CO₂ impact by means of TOTEM ** compared to standard design on 1 building project awarded or carried out in 2024
- Minimum 30% reduction on the ECI value* on 1 infrastructure project and minimum 10% reduction on the CO₂ impact by means of TOTEM** on 1 building project compared to standard design awarded or carried out in 2025

* Minimum 30% reduction on ECI value of concrete and steel used to carry out infrastructure works.

** Minimum 10% reduction on the CO₂ impact of the materials used for the exterior structure of the building will be realized, excluding the interior finish. This will be realized by means of a totem analysis compared to the standard design.

The main reduction measures taken to achieve this target:

- Design: use less steel, concrete or transport
- Using low-carbon steel, concrete or transport

5 Evolution of CO_{2e} emissions

The table below shows the evolution of CO₂ e-emissions for the activities in the Benelux of Jan De Nul. Previous years are recalculated annually under the influence of changing emission factors.

Table 1: Evolution of CO_{2e} emissions (Ton CO_{2e})

		2019	2020	2021	2022
Scope 1	Main floating equipment	28,004	39,757	38,019	10,823
	Land equipment	6,530	10,890	9,408	14,847
	Heating	1,279	1,207	1,348	1,160
	Vehicles	2,805	576	3,607	3,604
Scope 1 Total		38,617	52,430	52,382	30,434
Scope 2	Electricity	1,841	728	212	371
	Heat recovery	23	26	27	18
Scope 2 Total		1,864	754	240	389
Grand Total (s1+s2)		40,481	53,184	52,621	30,823
		2019	2020	2021	2022
Scope 3	Business Travel	1,076	2,152	2,364	2,323
	Purchased goods and services	/	/	/	36,487
	Fuel and energy related activities	/	/	/	8,268
	Employee commuting	603	1,207	1,369	1,688
	Fuel private vehicles	56	112	89	/
	Concrete	10,581	21,161	28,565	/
	Steel	4,687	9,374	27,437	/
	Earthmoving	4,208	8,415	8,418	/
Scope 3 Total		21,211	42,421	68,242	48,766
Grand Total (s1+s2+s3)		61,692	95,605	120,863	79,094

6 Findings, corrective and preventive measures

If deviations are identified, the focus group will coordinate energy, emissions and climate adjustment through:

- The periodically organised steering and working groups by coordinating specific actions
- Finding management (JDN.QP.13.01)
- The annual management review

If required, adjustments are made to the system documents of the CO₂ Performance Ladder Management System.

7 Emission-related initiatives

Jan De Nul actively participates in working groups and CO 2-related initiatives within the sector and thus stays informed of reduction possibilities. On the one hand, the company participates in initiatives, and on the other hand also initiates initiatives itself. Participation is described in "Overview of initiatives and reduction programmes".

In addition, Jan De Nul has also subscribed to various professional literature and social media in order to stay informed about CO 2-related initiatives. The status of the ongoing initiatives is discussed within the relevant operational steering and working groups. Decisions are also taken within these groups about possible new initiatives.