DC Dredging Group Energy Management Program

Periodic reporting 2022

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1 Introduction

1.1 Periodic reporting

As part of its implementation of the CO2 performance ladder, DC Dredging reports on its CO2 emissions, measures and progress towards reduction targets every six months.

This periodical report describes the following aspects:

- An analysis of 2022 CO2 emissions;
- The progress of reduction targets through trend analysis;

The preparation of periodic reporting is part of the energy management system introduced under the CO2 performance ladder. This system is described in the Energy Management Program.

The energy management program is based on the European Standard NEN-EN-ISO 50001 "Energy management systems - Requirements with guidance for use". This standard describes the requirements that an energy management program must meet.

The ISO 50001, like ISO 9001 and ISO 14001, is based on the plan-do-check-act (PDCA) cycle: define policies and objectives, plan actions, implement measures, monitor results and, on that basis, re-establish new objectives and possibly adjust policies. This cycle is the core of this standard and will also be used as a structure for this energy management program.

This report describes all the issues as described in the ISO standard

2 Basic information

2.1 Description of the organization

DC Dredging is a group of companies which are mainly involved in extracting granules at sea for the construction industry. This extraction takes place with sea-going vessels. The products are delivered either directly or via inland waterway vessels to the customer. We are also carrying out small dredging projects such as spraying beaches.

2.2 Operational boundaries

Contributions to CO_2 emissions are included in the ISO 14064-1 and the GHG protocol, divided into three scopes. DC Dredging inventorizes, analyzes and reports its energy consumption for its scope 1 and 2 emissions according to ISO 14064-1:

- Scope 1: consumption of fuel in operation
- Scope 2: indirect greenhouse gas emissions from the use of energy produced elsewhere from fossil fuels.
- Scope 3: indirect greenhouse gas emissions from activities elsewhere leading to CO2 emissions.

In order to inventorize and analyze energy consumption, DC Dredging uses its own transfer program based on the above scoping diagram and conversion factors for converting energy consumption into CO_2 emissions (Annex C Manual CO_2 Performance ladder).

2.3 Responsibilities

Document	Content	Responsible	Update
Energy management program (B1)	Energy policy	MT	Annual
Internal Audit (1.1)	Review of the Energy Management Program	Internal Auditor Mother DC Dredging (DC Industrial)	Annual
Communication plan (C1)	Target groups, methods and information to be transferred	Finance Manager	Annual
Periodic reporting (1.2a/b)	Progress and analysis	Finance Manager	Half-yearly
Action Plan (B2)	Reduction measures, responsibilities and initiatives	MT	Annual
Executive Board assessment 1.2	Management review of the CO2 performance ladder with input results from audits, follow-up actions from other management assessments and recommendation for improvement	MT	Annual

2.4 Base year

By clearly identifying areas of interest, reduction measures can be targeted and effectively implemented in the organization. Energy consumption analyses will be compared to a defined base year in order to assess the effects of measures, also over time. This initial energy consumption inventory was carried out for 2017, which is also a base year.

2.5 Reporting period

This periodical report describes the 2022 CO_2 emissions

2.6 Projects with award advantage

There have been no projects with an award advantage.

3 Analysis and Progress

3.1 Energy performance and emissions 2022

An energy performance overview for 2022 has been produced within the organization. The different power flows within DC Dredging have been mapped. An emission inventory looked at which forms of energy are purchased by the various companies under DC. They concern:

Organization Name	Ship/activity	Production of	Scope 1 [t CO_2]	Consumption [liters] fuel oil	Scope 2 [t CO_2] (Electra)	Total [t CO_2]
Ships:						
Interballast BV	DC Ostend	Sand and gravel	10,380	3 020 845		10,380
Interballast BV	Interballast III	Sand	3,871	1 126 520		3,871
DC Rio BV	RIO	Sand	6,680	1 944 207		6,680
DC Rio BV	RIO HVO	Sand	151	55,000		151
DC Vlaanderen	DC Vlaanderen	Sand	5,726	1 666 342		5,726
DC Rock BV	DC Brugge	Sand	5,729	1 667 485		5,729
DC River	DC Orisant	Gravel	31,875	9 276 731		31,875
DC River	Inland waterway vessels	Sand and gravel	4,162	1 211 148		4,162
		Subtotal:	68,573	19 968 278		68,573
Office and quay:						
DC River	Office Breskens	1.31% / 2*			na	449
DC River	Office and Kade Sluiskil	1.31% / 2*			na	449
		Subtotal:				898
		Total CO2 scope 1+2 :				69,472
				Total CO_2 scope 1		68,573
				Scope 2 share		652

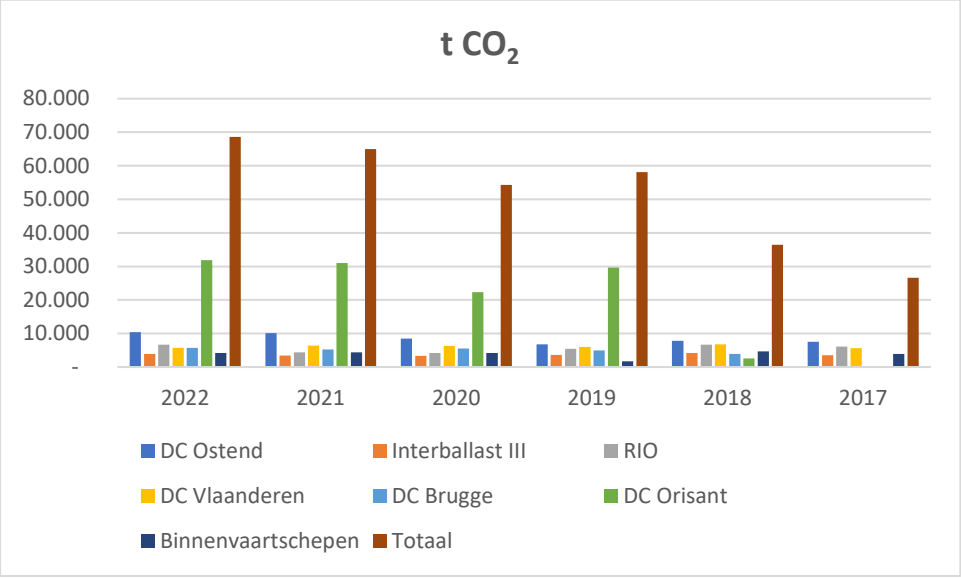
*As the 2018 CO_2 calculation showed that the scope 2 share is very marginal (1,31%) and its activities remained stable at 2018 (financial statements are similar), consumption was not verified for 2020, 2021 and 2022, but increased by 1,31% counted against total scope 2 consumption.

In the design of our CO_2, the system has concluded that almost 99% of our CO_2 consumption is determined by our Marine Gas Oil consumption of the ships. Our measures are therefore aimed in particular at reducing this consumption. In other words, although the scope 2 measures may have an advantage, this would be very marginal in overall terms.

The following are the previous year's emissions as reported:

Organization Name	Ship/activity	[t CO2]	[t CO2]	[t CO2]	[t CO2]	[t CO2]	[t CO2]
Ships:	**Ships**	**2022**	**2021**	**2020**	**2019**	**2018**	**2017**
Interballast BV	DC Ostend	10,380	10,133	8,515	6,758	7,848	7,489
Interballast BV	Interballast III	3,871	3,462	3,362	3,606	4,142	3,518
DC Rio BV	RIO	6,680	4,407	4,195	5,444	6,641	6,135
DC Rio BV	RIO HVO	151					
DC Vlaanderen	DC Vlaanderen	5,726	6,342	6 265	6,022	6,767	5,584
DC Rock BV	DC Brugge	5,729	5 280	5 500	4,972	3,904	N/A
DC River	DC Orisant	31,875	31,002	22,292	29,626	2,515	N/A
DC River	Inland waterway vessels	4,162	4,376	4,158	1 660	4,632	3,886
	Total	68,573	65,002	54,287	58,088	36,449	26,612
Office and quay:							
DC River	Office Breskens	449	426	375	339	171	171
DC River	Office and Kade Sluiskil	449	426	375	339	171	171
		898	852	750	678	342	342

The graphic looks like this:



We see an increase in emissions over the years. This is mainly due to the efforts of the DC Orisant. In 2018, this ship entered into operation. The ship was fully operational only in 2020 due to startup problems. We also see an increase in production in recent years through better ship maintenance and a major project in 2022.

3.2 Progress on reduction targets

Despite the increase in gas oil consumption, we have taken a number of measures in early 2022 to reduce the gas oil consumption of ships and CO_2 emissions. The main objective is to reduce fuel consumption by 2% per ton of turnover.

The following actions have already been taken:

- Investment in solar panels at our site of Sluiskil
- Research into the use of alternative fuels during projects
- Place LED lights wherever possible.
- Economic navigation (in particular DC Orisant, also driven by high fuel prices)

In addition to the above measures, the MT seeks to increase its knowledge in the field of CO_2 reduction by participating in various initiatives in this field:

- Member of the Association of Aquaculture Producers (participation in the group of seagoing vessels);
- Participation in NVLB (participation in the Western Scheldt Sands Working Group)
- Membership of Schuttevaer.en
- Participation in CO_2 Neutral events

4 Evaluation of the 2022 Action Plan

4.1 Progress on reduction targets

Our objective 1 (scope 1) is as follows:
Reduce overall fuel oil consumption per ton of turnover by 2%; by the end of 2021 (related to 2017).

The following actions have already been taken or will be taken in the second half of the year:

- Investment in solar panels at our site of Sluiskil
- Research into the use of alternative fuels during projects
- Place LED lights wherever possible.
- Economic navigation (in particular DC Orisant, also driven by high fuel prices)

In addition to the above measures, the MT seeks to increase its knowledge in the field of CO_2 reduction by participating in various initiatives in this field:

- Member of the Association of Aquaculture Producers (participation in the group of seagoing vessels);
- Participation in NVLB (participation in the Western Scheldt Sands Working Group)
- Membership of Schuttevaer.en
- Participation in CO_2 Neutral events
- Informing staff about developments in CO_2 reduction (through meetings and learning on the job)

4.2 Conclusion on progress and achievement

Reducing the CO_2 of our ships is difficult. On the basis of the high production in 2022, the target of reducing consumption per ton was met.

In order to take further steps in the future, in addition to emission-reduction measures, investments to improve understanding will also have to be considered.