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1. Introduction and justification

In this report, we report on progress against targets for our company. This half-year report provides an incentive to continuously work towards achieving the CO2 reduction targets for scope 1,2 and 3. Given DHME's strong growth ambitions, it is within expectations that emissions will increase in absolute terms in the coming years. Therefore, parallel to the absolute emissions, the relative emissions, related to the number of square meters produced, have also been looked at. This report will only look at absolute emissions because we do want to assess where the (possibly) higher emissions come from.

2. Progress reduction targets

In this document, scope 1, 2 and 3 CO2 reduction objectives are presented. For each target, the business activity is presented with target, emissions, responsibility, improvement methods and status.

Scope 1:

Scope 1	
Company activity	Gas usage for heating, fuel usage for transportation, generator and equipment
CO_2-emission per kg/ m2	58,77 kg-CO_2/m²
Goal	25% reduction, (target value h1: 2025 T-CO2) in 2025 vs 2019
Responsible	Board
Measure	► making fleet more sustainable; ► managing driving behavior; ► monitor fuel consumption; ► replace gas-fired heaters; ► apply hybrid generators; ► purchase electric loading crane; ► purchase electric/hydrogen-powered truck;

Analysis status 2023 H1:

General
- Goal scope 1: 25% reduction in 2025 towards 2019 (20% of total)
  - o Duration of 6 years: 25/6= 4.17% per year
  - o CO_2-emission 2019 H1: 2701 T-CO_2
  - o CO_2-emission 2023 H1: 2480 T-CO_2
  - o Decrease of 8%
- H1 2022: 1977 T-CO_2/ H1 2023: 2480 T-CO_2 (gain of 25%)

Specific

Topic	T-CO$_2$ H1 2019	T- CO$_2$ H1 2023	% gain
Natural gas business premises	161	336	109%
Diesel project sites	251	899	259%
Petrol business travel	27	297	1000%
Diesel business travel	335	398	19%
Diesel transportation trucks	1928	541	-72%

Notable here is that the first four items all increased. This is mainly explained by growth in production and business. Bottom line, scope 1 is down 8% in H1 2023 compared to H1 2019. This is due to the large effect of the sale of the transport division, this partially offsets the growth of the company.

Natural gas business premises
Since 2019, this emission post continues to grow; compared to H1 2022, this emission post also grew 15%. The common factor over the years is the addition of 2 leased new halls. Compared to H1 2022, the gain can be explained by the commissioning of an additional part of the rented halls. These halls are still gas-fired. To reduce most of the gas consumption (Montfoort), an agreement has been made with a party specialized in making industrial halls more sustainable. This party is currently working out a plan of action.

In Montfoort, two new production halls were built in 2022. A highly sustainable installation was chosen. The halls are well insulated, equipped with underfloor heating, a heat pump and with solar panels on the roof. These halls generate more electricity than they consume; the remaining energy is used in other halls.

Degree-days h1 2022: 1455,63
Degree-days h1 2023: 1491,34
Gain of 2,5% (more gas used than expected)

planned activities:
- Create a plan with an external party to make production sites more sustainable

Diesel project sites
The earthquake-proof houses in Groningen are responsible for much of the diesel increase at project sites. Because the houses are built urgently and grid connection cannot usually be realized, they have to be powered by hybrid generators.

In H1 2023 compared to H1 2022, 62% more diesel was consumed. In the summer of 2022, several large projects were commissioned, which significantly increased consumption.

Since by far the most consumption occurs on residential sites, as opposed to construction sites, ways to reduce this have been investigated. To this end, several solutions were examined for feasibility/ CO2 reduction and cost. These solutions were presented to the client, unfortunately

the solutions turned out not to suit the client. With this, DHME has made every effort to reduce CO2 on residential sites.

Diesel is also used on our construction sites. For this, a study is underway to apply batteries that will significantly reduce diesel consumption. The ultimate goal for 2030 is an emission-free construction site.

Planned activities:
- Decrease of NCG projects using generators because of permanent power connection.

Petrol and Diesel business travel
Petrol and Diesel business travel is rising steadily. This is due to the rapid growth of the company and the increase in the number of employees and lease cars this entails.

In H1 2023, emissions were 2% lower than the most recent report (H1 2022)
The number of leased cars increased by 17% in this period.

There is already the option to lease an electric car, however, this is not yet affordable for everyone and therefore not (yet) mandatory. It is, however, encouraged by an increasing choice in electric and a decreasing choice in petrol and diesel cars.

In addition, it is less attractive for German colleagues to choose an electric car as the charging infrastructure in Germany is not as good.

Nevertheless, this item is expected to continue to grow in the short term as long as petrol cars are offered in the lease package. In the medium to long term, we expect it to decline sharply.

Planned activities:
- Apply research HVO / Premium fuel for passenger cars and commercial buses

Diesel transportation trucks
As of 1 January 2022, Jan Snel's transport department has been sold, only a few trucks remain to transport modules. The decrease in diesel usage in 2022 was entirely within expectations. A number of trucks were added at the end of 2022 and in H1 2023: from 9 to 12 (33% gain). Diesel consumption increased by 31% in H1 2023 compared to H2 2022, fully within expectation. These emissions were also there before, however, the required transport movements were chartered at the time and thus fell under scope 3.

Planned activities:
- Apply research HVO for trucks

Scope 2:

Scope 2 + Business travel	
Company activity	Non-direct emissions: electricity generation and air travel
CO_2-emission per kg/ m2	01,38 kg-CO_2/m²
Goal	80% reduction, (target value h1: 112,2 T-CO2) in 2025 vs 2019
Responsible	Board
Measure	► replace halogen lightbulbs with LED; ► travelling by train as an alternative to short flight; ► install PV systems on (new) halls; ► continue to buy 100% Dutch green electricity. ► continue to investigate possibility of charging electric cars with green electricity, off-site

Analyze status 2022 H1:

General
- Goal scope 2: 80% reduction in 2025 towards 2019
  - o H1 2019= 561 T-CO_2
  - o H1 2022= 62 T-CO_2
  - o Decrease of 89%
- H1 2022: 17 / H1 2023: 62 (gain of 256%)

Specific

Topic	T-CO_2 H1 2019	T-CO_2 H1 2023	% gain
Electricity	556	0	-100%
Charging during travel	0	12	n.v.t.
Air travel	5	50	869%

Electricity
Because all the electricity we buy is green, the current calculation method dictates that no CO2 impact can be calculated for this. Electricity consumption is expected to continue to rise in the coming years. This is due to the electrification of existing properties, building and renting new halls/offices and electrifying the vehicle fleet.

Charging during travel
The emission post 'charging during travel' was added in 2021. We are getting more and more electric vehicles, which also charge outside our production sites. In doing so, we have no control over the origin of the electricity. We have therefore chosen to assume that this is grey electricity and therefore has CO2 emissions. In fact, this is a positive development, as electricity is used as opposed to petrol or diesel.
Consultations have been held with the supplier of the charging cards, however, it remains impossible to charge with green electricity. As soon as a solution to this is found, DHME will be contacted.

Planned actions:
- Inquire again with supplier for charging with green electricity (GVOs)

Air travel
Emissions from air travel are 2.5 times more than H1 2022, however, this development can be explained. Jan Snel was acquired in 2021 by Daiwa House Industry Co., Ltd. DHME's strategy envisaged strong growth internationally, resulting in an increase in flights.

In particular, the addition of flights from German and English colleagues explain this increase. During the period when factories and departments are being set up, a lot of consultation and explanation is needed. Initially, this is done as much as possible through MS Teams, however, especially in the primary process, this cannot be done remotely.
In addition, the data collection has been improved, resulting in more flights being identified.

Planned actions:
- The Company Policy states that trips under 700 km will be made by train, provided this can be done in a realistic timeframe.

Scope 3:
Supply chain analysis has not changed compared to last year and therefore the same dominance is maintained (materials and waste). Should business operations change to such an extent that changes can be expected here, the dominance analysis will be carried out again.

Scope 3 - Materials	
Company activity	Emissions in the supply chain by use of materials
CO_2-emission per kg/ m2	171.7
Goal	20% reduction, (target value h1: 5020 T-CO2) in 2026 vs 2021
Responsible	Board
Measure	► explore and deploy alternative materials to replace high-impact (top 3) materials. ► continue development of new floor

Analyse status 2023 H1:
- Goal: 20% reduction in 2026 vs 2021
- H1 2022: 6275 T-CO_2 total
- H1 2023: 7248 T-CO_2 total
- Gain of 16%

The gain is caused by increasing production. We are constantly looking for ways to reduce CO2 emissions per m2 produced. We follow the various developments in the market such as bio-based or recycled materials, but finding materials that meet the requirements remains a challenge. Bio-based materials do not always meet the required fire-resistant properties, for example. It is a challenge to find suitable materials with lower emissions that also meet both our and the client's requirements. We keep talking to various parties about this, so we always stay abreast of developments.

We are also working on various development projects. For instance, we are working on the further development of our floor, looking at the possibility of working with wood or alternative types of concrete.

Scope 3 - Waste	
Company activity	Waste emissions in supply chain
CO_2-emission per kg/ m2	62
Goal	10% reduction, (target value h1: 2285,1 T-CO2 in 2026) vs 2021
Responsible	Board
Measure	► Further subdivide waste streams into mono streams, identify processors to optimally process streams and initiate processes to ensure proper splitting.

- H1 2021: 2539 T-CO2
- H1 2023: 2628 T-CO2
- Gain of 3%

Specific

Topic	T-CO$_2$ H1 2021	T-CO$_2$ H1 2023	% gain
Mono	994	1288	9%
Mixed	1538	1337	-2%
KCA	7	3	-21%

The ratio of mono to mixed has improved compared to H1 2022 (52% vs 48% mono streams). This is a positive development as it means better separation. In H2 2022, a study was conducted with an external party on how we can separate better. This led to a number of conclusions, which will be taken up in a project to further reduce and separate waste. This project will be carried out in H2 2023 and its effects are expected to emerge by the end of 2023.

3. Measures

For H1 2023 no measures where planned.

For H2 2023 the following measures are planned:

Selection of SKAO list of measures:

Between 5% and 25% of electricity use is covered by own generation of renewable electricity (via own investment or lease) (07/2023)
At least 5% of the electricity consumption of all business premises is covered by own generation of renewable electricity (via own investment or lease) (07/2023)
The company can demonstrate that it operates at least one mobile tool based on zero CO2 emission technology. (07/2023)

At least 100% electricity for consumption at work (construction site) is green electricity and/or covered by national GVOs. (12/2023)
In projects where the company as main contractor provides fuel on the construction site, the company ensures that at least 10% of the total fuel refueled on the construction sites is demonstrably renewable fuel. (12/2023)

Own initiative (follwing year):

Proactively assess and address suppliers on sustainability aspects (12/2023)
Create a plan with an external party to make production sites more sustainable. (04/2024)
Phase out NCG projects (natural attrition) (04/2024)
Apply research HVO / Premium fuel for passenger cars and company buses (04/2024)
Apply research HVO for trucks (04/2024)
Inquire again with supplier of charging passes for green electricity (GVOs) (12/2023)
The Company Policy will include that trips under 700 km will be made by train, provided this can be done in a realistic timeframe. (01/2024)
Explore and deploy alternative materials to replace high-impact materials (top 3). (04/2024)
Continue new floor development process (12/2023)
Further subdivide waste streams into mono streams, identify buyers to optimally process streams and initiate processes to ensure proper splitting. (ongoing)

4. Progress uncertainties and estimates

The results presented should be seen as the best estimate of the actual values. Virtually all data used to calculate the carbon footprint are based on invoices, data from insight portals or supplied by the supplier. As a result, the margin of uncertainty is small.

An uncertainty lies in the possible human errors that can be made. First, the supplier may, for example, transmit the wrong time period, which will quickly be noticed because certain months will remain blank, for example.

Secondly, typos can be made in copying the data, however, this chance is small as DHME works with a 4-eye principle. Copied data and references are (randomly) checked by another employee than the one copying the data.

Forecast

For H2 2023, there are a number of expectations that may impact CO_2 emissions:
- ► Strong employee growth may impact fuel/electricity consumption;
- ► Start production of new halls/locations will impact on gas and electricity consumption.