SPENO INTERNATIONAL SA

CO_2 Communication

Audit year 2025

the sustainability consultants

Responsibilities

Within the organization, an internal coordinator is responsible for managing the CO_2 Performance Ladder. This includes setting tasks, assigning responsibilities, and reporting progress to senior management. The organization is supported by an external sustainability consultancy, which assists with the documentation required to maintain Level 3 certification.

As the company operates internationally, it works with regional representatives to implement and support sustainability efforts locally. In the Netherlands, a local representative oversees the CO_2 Performance Ladder participation, collects relevant data, and manages projects that fall under sustainability-related tendering advantages. This role also includes maintaining contact with clients and contracting authorities.

Projects with Award Advantage

As of the current reporting period, no projects have involved a CO_2 award advantage. This aligns with current market agreements, where the CO_2 Performance Ladder was not included in tender requirements. These projects, when applicable, involve awarding points for sustainable practices, regardless of whether it influences the final awarding decision.

Reference and Reporting Year and Changes

The baseline year for CO_2 reduction targets is 2019. This report concerns the reporting year 2024, and all related data refer to this year unless otherwise specified.
In response to updated client requirements and technological developments, the company introduced a new grinding strategy in 2022. This approach involves more precise rail profile restoration using advanced measurement systems and longer train operations. As a result, diesel consumption—and associated Scope 1 emissions—has increased, though the new method enhances rail longevity and operational efficiency. Preventive grinding now allows for faster, more extensive coverage, while corrective grinding remains more resource-intensive. To better align emissions tracking with operational reality, the company revised its reduction metric in 2022—from "meters finished" to "total meters ground." This change was approved by an independent auditor.

Quantification Methods

CO_2 emissions are calculated using a customized model where all consumption data is entered. The model applies emission factors published by the CO_2 Performance Ladder initiative (www.co2emissiefactoren.nl). For 2024, the dataset co2-emissiefactoren2024.xlsx was used, in compliance with version 3.1 of the certification scheme. No changes were made to the quantification or calculation methodology during the reporting year.

CO_2 Emission Inventory 2024

In 2024, total emissions amounted to 19.651 tonnes of CO_2:

- Scope 1 (direct emissions): 18.716 tonnes
- Business travel: 935 tonnes
- Scope 2 (indirect emissions): 0 tonnes

The organization's facilities are powered by 100% green electricity, and no natural gas is used.

MAIN OBJECTIVE
SPENO International wants to emit 15% less CO_2 in 2025 compared to 2019*

*This objective is linked to total meters grinded.

ANNUAL OBJECTIVE	
2019	Reference year
2023	0%
2024	0,5%
2025	15%

SPENO estimates that approximately 4% of its total fleet fuel consumption in 2025 will consist of HVO100, amounting to roughly 225,000 litres. This calculation is based on the 2024 consumption data and train deployment plans. This is a reducing of about 655 tons of CO2.

SUB-OBJECTIVES		
	OBJECTIVE	**PROGRESS**
Scope 1	14% reduction in 2025 compared to 2019	16% increase
Scope 2	0% reduction in 2025	0%
Business travel	Achieve a 30% reduction in business by 2025 compared to 2019	29% reduction
Green power	100%	100%
Energy consumption	Achieve a 10% reduction in office energy consumption by 2025 compared to 2019	Electricity consumption has decreased with 9%

PROGRESS CO2 EMISSIONS IN TONESS CO2						
	2019	**2020**	**2021**	**2022**	**2023**	**2024**
SCOPE 1 EMISSION FLOWS	**Whole year**	**Whole year**	**Whole year**	**Whole year**	**Whole year**	**Whole year**
Gas consumption - office	-	-	-	-	-	-
Fuel consumption - lease cars	327	263	356	345	292	302
Fuel consumption - trains	15.805	14.562	19.791	18.632	18.076	18.414
TOTAL SCOPE 1	**16.132**	**14.825**	**20.147**	**18.977**	**18.367**	**18.716**
SCOPE 2						
Electricity - green	-	-	-	-	-	-
TOTAL SCOPE 2	**-**	**-**	**-**	**-**	**-**	**-**
BUSINESS TRAVEL						
Air travel <700 km	231	80	72	105	118	129
Air travel 700-2500 km	727	512	667	597	623	649
Air travel >2500 km	358	60	54	80	172	156
TOTAL BUSINESS TRAVEL	**1.316**	**652**	**793**	**782**	**913**	**935**
TOTAL EMISSIONS	**17.448**	**15.477**	**20.940**	**19.759**	**19.280**	**19.651**

	2019	**2020**	**2021**	**2022**	**2023**	**2024**
	Whole year	**Whole year**	**Whole year**	**Whole year**	**Whole year**	**Whole year**
Absolute progress compared to 2019	100%	89%	120%	113%	111%	113%
Total km grinded	68.864	68.993	79.732	74.407	70.062	70.101
Emission per kilometer	0,25	0,22	0,26	0,27	0,28	0,28
Relative progress compared to 2019	100%	89%	104%	105%	109%	111%

Steering cycle

Action	Frequency	Planning	CEO	QSE Manager	Communication	QSE employees	Webmaster	DDA ad
CROSS-PHASE								
Comply with continuous improvement according to the management cycle	Continuous	Continuous	A	R				S
Comply with mandatory internet publication on the SKAO website	Annual	May/June		A			R	S
Comply with contribution obligation to the SKAO	Annual	April	A	R				
PLAN								
Draw up and approve organizational boundaries	Annual	February	A	A				R
Update organization size	Annual	May		A				R
Schedule internal audit	Annual	March		A				R
Schedule an external audit with the certification body	Annual	March	S	A				R
Update list of energy flows for scope 1 and 2	Semi annual	March (whole) October (half)		A		S		R
Check for new options for CO2 reduction in scope 1 and 2	Annual	During management review/Conti	A	R				S
Make an inventory of relevant initiatives and discuss them with management	Annual	May	A	R				S
Collecting data from the energy flows in scope 1 and 2	Semi annual	February (whole) and September (half)		AR		S		S
Perform energy assessment	Annual	May		A				R
Qualitatively defined objective for scope 1 and 2 and approval	Annual	June	A	A		R		S
Draw up and approve a qualitatively defined objective for alternative fuels/use c	Annual	June	A	A		R		S
Establish an effective management cycle with assigned responsibilities	Annual	September		A		R		S
Identify internal and external stakeholders	Annual	September		A		R		S
Plan passive and limited active participation in at least one initiative	Annual	Continuous		A		R		S
Update CO2 emission factors	Annual	January						AR
Prepare emission inventory reporting for scope 1 and 2	Semi annual	March (whole) October (half)		A		S		R
Draw up/check and approve an action plan and quantitative objectives for scope	Semi-annual	April and December	A	R		R		S
Draw up, check and approve energy management action plan for scope 1 and 2	Semi-annual	April and December	A	R		R		S
Draw up SKAO list of measures and ambition definition	Annual	May		A				R
Draw up/check and approve a communication plan	Annual	April	A	R				S
Plan active participation in at least one initiative, including budget	Annual	Continuous, budget in manageme	A	A		R		S
DO								
Implement an action plan for scope 1 and 2	Continuous	Continuous	A	R				S
Attend initiatives	Semi-annual	Varied, biquarterly		A		R		
CHECK								
Ad hoc internal and external communication about the energy reduction policy	Ad hoc	Ad hoc		A	R			
Structural internal communication about energy policy and objectives	Semi-annual	June (whole) October (half)	A	A	R			S
Perform quality control on the emission inventory reporting	Semi annual	May and October		A				R
Evaluate progress on the action plan and objectives for scope 1 and 2	Semi-annual	May/June and September/Octobe	A	A				R
Execute communication plan for scope 1 and 2	Semi-annual	June (whole) October (half)		A	R			S
Evaluate implementation of the communication plan	Semi-annual	July and November		A	R			
Evaluate attendance at the initiatives	Annual	February and September		A		R		S
Include required budgets in the management review	Annual	May	A	R				
Conduct management review including recording outstanding action points	Annual	May	A	R		R		S
Conduct internal audit	Annual	May	A	R				RS
Conduct external audit	Annual	June			CI			
ACT								
Restore corrective actions from internal audit	Continuous	Continuous, May	A	R		R		S
Correct discrepancies from the external audit	Annual	Continuous, July/augustus	A	R		R		S
Adjust on points of interest from the "check" phase	Continuous	Continuous	A	R		R		S

Data gathering and quality

The data quality is high and no improvements are needed. The footprint is evaluated, filled in- and tested every 6 months. All information is provided to the project leader Y.G. (full year data is collected in March and half-year in September). A quality check is performed on the data after the assessment has been made, also during the internal audit.

Emission flow	Unit	Source	Uncertainties and impact
Fuel consumption fleet			
Diesel cars	Liter	Fuel card reporting	The presented results are the actual values. Almost all data used for the calculation of the CO2 footprint is based on invoices or measured quantities. This keeps the uncertainty margin to minimum. All emission flows were catalogued using the best available information. However, it is possible that while composing the CO2 footprint, a typing error was made.
Diesel trains		Reporting	
Electricity			
Office	kWh	Electricity provider	None, get the data directly from the website of the electricity provider.
Air travel			
Air travel	km	Invoices	Uncertainty margin is minimum. All emission flows were catalogued using the best available information, invoices. However, it is possible that while composing the CO2 footprint, a typing error was made.

Reduction measures

✅ Actions Completed

- All cars have been replaced by BlueMotion cars
- Sent newsletter to field personnel about economic driving behavior
- Switched to 100% hydraulic electricity (Scope 2 – since 2019)

🔄 Actions Currently Being Carried Out (Ongoing)

- Limit engine use – minimize warm-up time
- Purchase electric hand tools when available
- Maintain equipment as per the maintenance guide
- Optimize train relocation to reduce unnecessary passes and phase out older trains
- Encourage employees to reduce temperature differences in AC use
- Promote economic behaviour in the office
- Promote train travel over flights
- Increase the use of HVO100 diesel

📅 Planned Future Actions

- Choose electric vehicles when replacing cars
- Electrification of 5 Dutch depots to reduce main engine idling
- Research extension of HVO100 diesel to more countries
- Production of an electric train
- Explore collecting more flight-related data (to improve data quality)

The project leader, Y.G., is responsible for monitoring the implementation of these actions. The replacement of fossil fuel cars is scheduled for the end of 2025. As no vehicles have been ordered yet, the exact impact on emissions cannot be determined at this time. However, since fuel consumption from cars accounts for only about 2% of the organization's total CO_2 emissions, the expected reduction is estimated to be no more than 1% in the short term.

The use of HVO100 fuel is projected to result in approximately a 4% reduction in emissions, based on initial data from the first half of 2025. The majority of the remaining reduction is expected to come from the introduction of an electric train, which is anticipated to contribute around 10% to overall CO_2 reductions.

Disclaimer & Colophon

Exclusion of legal liability

Intellectual property protection

Signature

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Signed: 17-06-2025

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