SPENO INTERNATIONAL SA

CO_2 Communication Policy
Report 2024, audit-year 2023

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the sustainability consultants

Description of the organization

SPENO is an international company specialized in the design and operation of maintenance trains for reprofiling of railway tracks and turnouts. SPENO monitors the reprofiling by measuring profiles and surface defects and document the results. The company occupies gasless office in Rte du Nant-d'Avril 94, 1217 Meyrin, Switzerland. The company's activities include a full range of services from research and development to operating machines needed for:

- ✓ Grinding and re-profiling of tracks and points;
- ✓ Measuring rail surface faults and profiles;
- ✓ Checking for internal rail flaws with ultrasound.

SPENO biggest business is the maintaining and grinding of railway tracks in Europe and elsewhere for: conventional railways, underground railways, high speed lines, heavy-haul railroads, and tramways. The company applies all kinds of rail profiles to minimize maintenance costs over a railway's lifetime. For the maintenance work and the grinding of tracks in Europe, SPENO uses diesel powered trains to be able to circulate in every part of the network.

Recognizing the imperative of sustainability in today's world, SPENO is committed to integrating sustainability into our daily operations by conducting business in a CO_2-conscious manner. Our goal is to continuously enhance our emission reduction policy and foster a growing 'green consciousness' among our employees. With a focus on maximizing the efficiency of our machinery and assets, including buildings, we aim to minimize CO_2 emissions. The benefits of reduced energy consumption are twofold: it not only benefits the environment by lowering emissions but also leads to lower operational costs through more effective asset utilization.

In addition to our sustainability policy, we are implementing CO_2 reduction measures to decrease energy consumption in core business processes and activities. The overarching objective of our energy management system is to continually enhance energy efficiency and reduce emissions at SPENO.

The QHSE manager is the internal person responsible for managing the CO_2 Performance Ladder. This person is responsible for setting tasks, assigning responsibilities, and reporting to management. The organization is supported by the consultancy firm The Sustainability Consultants to prepare all associated documentation for maintaining level 3 on the CO_2 Performance Ladder.

Projects with award advantage

These are organisation projects where the CO_2 Performance Ladder played a role in the tender notice. Here it is not relevant whether the award advantage was or was not decisive when being awarded the assignment or which manner the Performance Ladder was requested in the tender notice.

With this definition in mind, there were no projects with award benefits in the reporting year.

SPENO INTERNATIONAL SA

Reporting of the CO_2 emission inventory

Reference year and reporting year

The year 2019 serves as a reference year for the CO_2 reduction targets and monitoring of CO_2 emissions. This report concerns reporting year 2023.

Significant changes and recalculations

There have been previous adjustments in the selection of the reference year and the calculations of CO_2 emissions for that year and subsequent years. As mentioned, 2019 is now used as the reference year (instead of 2012). In 2022, SPENO shifted from a preventive to a corrective grinding strategy. Additionally, it's important to note that fluctuations in the volume of work and the nature of activities (such as asset usage) can affect absolute energy consumption, even if relative consumption decreases.

Diesel consumption has varied and sometimes increased over the years. To ensure that the reduction goal aligns with service activities, SPENO has modified the relative goal from meters finished to total meters grinded. This new relative goal was approved by the auditor in 2022.

Quantification methods

To quantify CO_2 emissions, we use a custom-made model where all consumption data can be entered (see the CO_2 footprint/dashboard). The model calculates the corresponding CO_2 emissions and compares them to the reference year. It employs emission factors from the CO_2 Performance Ladder, which are available at www.co2emissiefactoren.nl. SPENO International will update its emission factors to align with any future changes in the CO_2 Performance Ladder certification schemes. For the 2023 CO_2 footprint calculation, we used the emission factors 2023. All documentations is prepared in order to comply with the CO_2 Performance Ladder version 3.1.

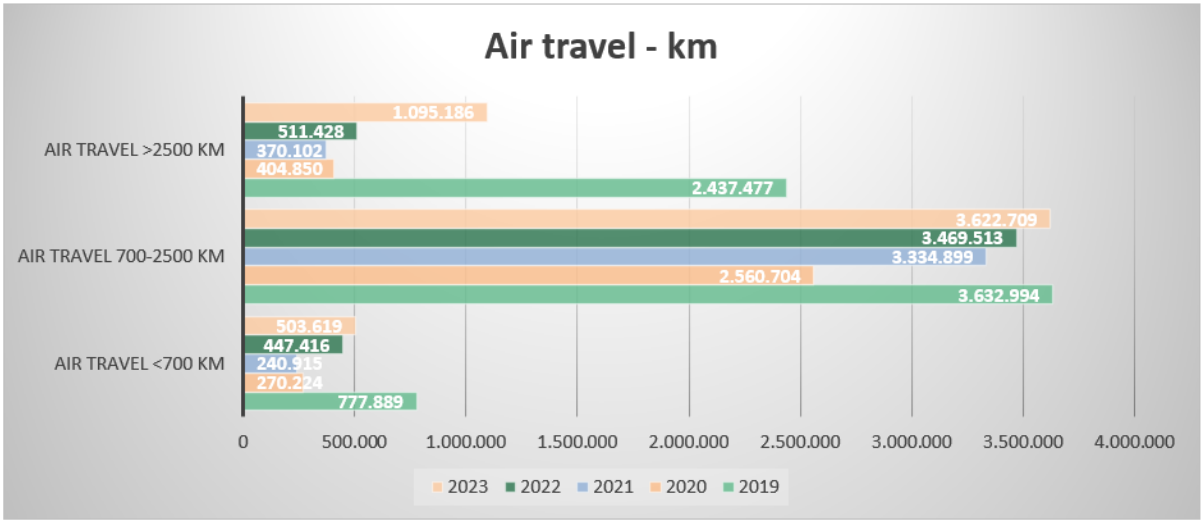
CO_2 emission calculation 2023

The table below shows the consumption and associated CO_2 emissions for scope 1, 2 and business travel. The direct and indirect GHG-emissions of SPENO International amounted to 19.280 tonnes of CO_2 in 2023. Of this amount, 18.367 tonnes were caused by direct GHG-emissions (scope 1) and 913 tonnes by business travel. There were no indirect GHG-emissions (scope 2). SPENO uses green electricity, and the office does not use any gas. The organizations head office in Geneva is one of the most sustainable buildings in the city! Additionally, SPENO International has excluded business travel by trains from the emissions inventory, as this emission flow is sporadic and not significant.

CO_2-EMISSIONS			2023 Whole year		
SCOPE 1	**AMOUNT**	**UNIT**	**CONVERSIONFACTOR** (g CO_2 per unit)	**TON CO2**	
Fuel consumption - lease cars	89.532	liter	3.256	291,5	2%
Fuel consumption - trains	5.551.480	liter	3.256	18.075,6	94%
			Total scope 1	**18.367,1**	
SCOPE 2	**AMOUNT**	**UNIT**	**CONVERSIONFACTOR** (g CO_2 per unit)	**TON CO2**	
Electricity - grey	0	kWh	456	-	0%
Electricity - green	193.572	kWh	0	-	0%
			Total scope 2	-	
BUSINESS TRAVEL	**AMOUNT**	**UNIT**	**CONVERSIONFACTOR** (g CO_2 per unit)	**TON CO2**	
Air travel <700 km	503.619	km	234	117,8	1%
Air travel 700-2500 km	3.622.709	km	172	623,1	3%
Air travel >2500 km	1.095.186	km	157	171,9	1%
			Total business travel	**913**	
TOTAL EMISSIONS SCOPE 1, 2 AND BUSINESS TRAVEL				**19.280**	

SPENO INTERNATIONAL SA

CO_2-EMISSIONS				2023 Half year	
SCOPE 1	**AMOUNT**	**UNIT**	**CONVERSIONFACTOR** (g CO_2 per unit)	**TON CO2**	
Fuel consumption - lease cars	44.946	liter	3.256	146,3	1%
Fuel consumption - trains	2.941.456	liter	3.256	9.577,4	94%
			Total scope 1	**9.723,7**	
SCOPE 2	**AMOUNT**	**UNIT**	**CONVERSIONFACTOR** (g CO_2 per unit)	**TON CO2**	
Electricity - grey	0	kWh	456	-	0%
Electricity - green	96.786	kWh	0	-	0%
			Total scope 2	**-**	
BUSINESS TRAVEL	**AMOUNT**	**UNIT**	**CONVERSIONFACTOR** (g CO_2 per unit)	**TON CO2**	
Air travel <700 km	239.294	km	234	56,0	1%
Air travel 700-2500 km	1.720.678	km	172	296,0	3%
Air travel >2500 km	548.074	km	157	86,0	1%
			Total business travel	**438**	
TOTAL EMISSIONS SCOPE 1, 2 AND BUSINESS TRAVEL				**10.162**	



kWh					
	2019	**2020**	**2021**	**2022**	**2023**
Green electricity	211.912	188.048	186.792	220.736	193.572

CO_2 reduction objectives and progress

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
2020	2,5%
2021	5%
2022	7,5%
2023	10%
2024	12,5%
2025	15%

SUB-OBJECTIVES		
	OBJECTIVE	**PROGRESS**
Scope 1	14% reduction in 2025 compared to 2019	Scope 1 increased by 11% in comparison to 2019. This is mainly due to an increase in train fuel consumption. However, there was a decrease of 3% compared to 2022.
Scope 2	0% reduction in 2025 compared to 2019	A 0% reduction in scope 2 is because there is no emission is this scope. The electricity is 100% green, thus there is no progress either.
Business travel	1% reduction in 2025 compared to 2019	Business travel saw a decrease of 31% measured from the reference year, this is mainly due to a decrease in long haul flights (>2500 km). However, there was an increase compared to 2022.
Green power	100%	A 0% reduction in scope 2 is because there is no emission is this scope. The electricity is 100% green.
Energy consumption	Reduce the energy consumption of offices by 0.5% in 2025 compared to 2019.	Electricity usage has decreased with approximately 9% since 2019.

PROGRESS CO2 EMISSIONS

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

	2019	2020	2021	2022	2023
	Whole year	**Whole year**	**Whole year**	**Whole year**	**Whole year**
Absolute progress compared to 2019	100%	89%	120%	113%	111%
Objective	100%	98%	95%	93%	90%
Total km grinded	68.864	68.993	79.732	74.407	70.062
Emission per kilometer	0,25	0,22	0,26	0,27	0,28
Relative progress compared to 2019	100%	89%	104%	105%	109%

Participation sector and branch initiatives

Railforum

Railforum is an independent knowledge network that consists of 200 companies and organisations that are active in the rail sector. The aim of Railforum is to exchange knowledge and experiences to increase the social and economic efficiency of rail transport. The focus is accelerating innovations. Railforum offers its services and ensures alignment with other sectors, politics and science.

The members look at Railforum as 'a safe haven' where one can share knowledge with each other openly. The association organizes regular meetings where important players from the rail sector meet, discuss and preferably show initiative and actions. By bringing parties together, Railforum stimulates cooperation within the rail sector.

With a membership of Railforum, SPENO International will have access to a network of more than 3000 professionals employed by all major players in the sector. SPENO can participate in knowledge circles about interesting topics, share knowledge and bring the sector a step further.

Stichting Positieve Impact

Our mission is to inspire organizations and individuals to make a positive impact in a fun, educational, and engaging way! Founded in 2014, we initially aimed to meet the participation requirements of the CO_2-Performance Ladder in the most enjoyable way possible. Since then, we have grown into so much more, and we are immensely proud of that. Our name has evolved to Stichting Positieve Impact. Today, we are a leading source of inspiration and motivation for those looking to make their organizations more sustainable. We organize three major and influential sustainability events each year in the Netherlands. Our regular venue is the Flint Theater in Amersfoort. Our events have a different theme every time and are designed to energize and inspire! The event are build up of workshops and lectures, to ensure interaction and knowledge sharing.

SPENO INTERNATIONAL SA

Management cycle

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

Support – S

Final authorization – A

Responsible for executing - R

Data collection

Emission flow	Unit	Source	Executor	Uncertainties and impact	Data quality improvement plan
Fuel consumption fleet					
Diesel cars	Liter	Fuel card reporting	Administration	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.	None
Diesel trains		Reporting	Production department		
Electricity					
Office	kWh	Read electricity meter	QSE- Yamine Guettari	The presented results are the actual values. 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.	Check if electricity can be digitalised
Air travel					
Air travel	km	Invoices	QSE- Yamine Guettari	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.	None

Plan of approach

CO2-reduction measures	Deadline	Planning/ frequency
Scope 1- gas consumption		
Gasless office	non applicable	non applicable
Scope 1 - Fuel consumption		
In case of replacing cars, select a car that is economic on fuel (BlueMotion) or electric	Continues	Continuously
Send a newsletter to the field personnel with cars about economic drive behaviour	Continues	Biannually
Limit maximum use of the engine - minimize time to warm up motor	Continues	Annually
Discuss reducing travel distance with client (RouteLint)	Continues	Continuously
Investigate the possibility to use electric trains (elocs) more regularly - to be towed for transit	2025	Annually
In case of changing the engine, choose an engine with the latest technology concerning energy usage and lower emissions	Continues	Continuously
When available/ purchase electrical hand tools	Continues	Continuously
Maintain equipment according to maintenance guide	Continues	Continuously
Optimize planning of train relocation, to reduce train passes and putting old trains out of order	Continues	Continuously
Electrification of our 5 depots in the Netherlands to avoid start of main engine to perform daily maintenance	2024	started
Scope 2 - Electricity consumption		
Optimization of use of air conditioning systems	Continues	Annually
Only purchase energy efficient hardware - Energy star label	Continues	Continuously
Purchase green electricity	Continues	Continuously
Business travel		
Reducing travels for HQ staff	Continues	Continuously
Promotion to use trains instead of flying	Continues	Continuously
Each employee receives 600 Swiss Francs for mobility and promotion of public transport	Continues	Continuously
Promote use of video conferencing system	Continues	Continuously
Energy assessment		
Investigate the use of HVO diesel	Q4 2024	To start
Investigate if it is possible to gather more data about flights (business travel,	Q4 2024	To start
Investigate the possibility to use electric cars or hydrogen	Q1 2025	To start
Other (organizational) measures without impact on the CO2 emissions		
Inform employees about economic behaviour at the office	continues	Quarterly
Instruct employees to limit use of air-conditioning by reducing the difference with the outside temperature (this will reduce illness as well)	continues	Dynamic
New employees are made aware of all certificates, including CO2	continues	Dynamic
When choosing suppliers having a CO2 certificate or a ISO 14001 certification weighs into the selection	continues	Continuously
Company parking policy encourages carsharing	continues	Continuously
Printers settings are by default black/white and recto/verso	continues	Continuously
Stimulate the use of public transport for commuter travel	continues	Continuously
Stimulate the use of the video conferencing system	continues	Continuously
Send a newsletter to the field personnel about economic drive behaviour	continues	Continuously
Send a newsletter to the field personnel about economic drive behaviour	continues	Continuously
Measures implemented		
Heat pump installed Paste posters at the printers. Inform people about two-sided printing/black-white printing/etc. Stimulate the use of public transport for commuter travel; There has been a switch to 100% hydraulic electricity produced by local produces. Yearly decision to use green energy for the office in Geneva. All cars have been replaced by BlueMotion cars, which are more fuel efficient.		

Plan of approach %

Measures gas consumption	Reduction on flow	Reduction total	Reduction in tonnes
Gasless office	0%	0%	-
Total on gas consumption	**0%**	**0%**	**-**

Measures fuel consumption	Reduction on flow	Reduction total	Reduction in tonnes
In case of replacing cars, select a car that is economic on fuel (Bluemotion) or electric	2%	0%	6,54
Send a newsletter to the field personnel with cars about economic drive behaviour	1%	0%	3,27
Limit maximum use of the engine - minimize time to warm up motor	6%	5%	948,28
Discuss reducing travel distance with client (RouteLint)	1%	1%	158,05
Investigate the possibility to use electric trains (elocs) more regularly - to be towed for transit /	4%	4%	632,19
In case of changing the engine, choose an engine with the latest technology concerning energy usage	2%	2%	316,09
When available - purchase electrical hand tools	0%	0%	-
Maintain 75% of equipment according maintanance guide	0%	0%	-
Optimize planning of train relocation, to reduce train passes and putting old trains out of order	1%	1%	126,44
Electrification of our 5 depots in the Netherlands to avoid start of main engine to perform daily	2%	1%	237,07
In case of changing the engine choose for an engine with the latest technology concerning energy usage.	0%	0%	0,82
Organizational measures	0%	0%	0,82
Investigate the possibility of HVO	1%	1%	158,05
Investigate the possibility of elektric/ hydrogren cars	1%	0%	3,27
Total on fuel consumption	**21%**	**15%**	**2.590,87**

SCOPE 2

Measures electricity consumption	Reduction on flow	Reduction total	Reduction in tonnes
Optimization air conditioning systems	3%	0%	-
Only purchase energy efficient hardware - Energy star label	3%	0%	-
Purchase green electricity	100%	100%	
Total on electricity consumption	**105%**	**100%**	**-**

BUSINESS TRAVEL

Measures business travel	Reduction on	Reduction total	Reduction
Reducing flights / Investigate flights economy / direct flight policy	1%	0,08%	13,16
Promotion to use trains instead of flying	3%	0,19%	32,90
New employees receive 500 Francks free public transport in Geneva	2%	0,15%	26,32
Promote use of video conferencing system	2%	0,15%	26,32
Total on business travel	**8%**	**0,57%**	**98,70**

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