

# TCFD REPORT 2023

## VOW



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## Vow as an enabler

With a mission to maximise environmental impact, Vow act as an important enabler for climate change mitigation through the various solutions and technologies provided by the group to its customers. To be able to pursue Vow's mission, the company also needs to develop an increased understanding of how climate-related risks can affect Vow. That is why Vow reports on climate risks and opportunities according to the Task Force on Climate Related Financial Disclosure (TCFD) framework. Vow recognises that reporting according to the TCFD recommendations can enhance both internal and external understanding and capabilities that support the green transition, promote transparency, and contribute to climate action.

We acknowledge that our existence matters, and as a growing company we have an important role and a responsibility for how we manage our resources and run our business. Vow knows that it is important to measure what matters. The implementation of the TCFD framework is part of the process to critically evaluate our climate strategy and KPIs.

Vow's TCFD report follows 10 out of 11 disclosure recommendations. We aim to include a scenario analysis within the next few years, and hence report according to all recommendations.

This report describes identified climate risks and opportunities for Vow and outlines how Vow will work on climate-related issues going forward.

## The TCFD recommendations and index

### Recommendations

The Task Force on Climate Related Financial Disclosure (TCFD) developed the TCFD disclosure recommendations to enhance market transparency and stability. TCFD encourages standardised reporting of financially material climate-related risks and opportunities to provide investors, creditors, and insurers with comparability when assessing and pricing companies.

The TCFD recommendations are categorised into four areas of disclosure that represent core elements of how organisations operate: governance, strategy, risk management, and metrics and targets. Furthermore, the framework separates recommended disclosures into three main categories: risks related to the transition to a lower-carbon economy, risks related to the physical impacts of climate change, and climate-related opportunities. The TCFD has also incorporated potential financial impact as an integral part of its disclosure recommendations.





### Governance

The organisation's governance around climate-related risks and opportunities

### Strategy

The actual and potential impacts of climate-related risks and opportunities on the organisation's business, strategy, and financial planning

### Risk management

The process used by the organisation to identify, assess, and manage climate-related risks

### Metrics and targets

The metrics and targets used to assess and manage relevant climate-related risks and opportunities

## TCFD content index

Governance	Strategy	Risk management	Metrics and targets
Disclose the organisation's governance around climate-related risks and opportunities	Disclose the actual and potential impacts of climate related risks and opportunities on the organisation's business, strategy, and financial planning where such information is material	Disclose how the organisation identifies, assesses, and manages climate-related risks.	Disclose the metrics and targets used to assess and manage relevant climate-related risks and opportunities where such information is material.
Recommended disclosures			
<p>a) Describe the board's oversight of climate-related risks and opportunities</p> <p>b) Describe management's role in assessing and managing climate-related risks and opportunities</p>	<p>a) Describe the climate-related risks and opportunities the organisation has identified over the short, medium, and long-term</p> <p>b) Describe the impact of climate-related risks and opportunities on the organisation's business, strategy, and financial planning</p> <p>c) Describe the resilience of the organisation's strategy, taking into consideration different climate-related scenarios, including a 2-degree or lower scenario</p>	<p>a) Describe the organisation's process for identifying and assessing climate-related risks</p> <p>b) Describe the organisation's process for managing climate-related risks</p> <p>c) Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the organisation's overall risk management.</p>	<p>a) Disclose the metrics used by the organisation to assess climate-related risks and opportunities in line with its strategy and risk management process.</p> <p>b) Disclose Scope 1, Scope 2, and if appropriate, Scope 3 greenhouse (GHG) emissions, and the related risks</p> <p>c) Describe the targets used by the organisation to manage climate-related risks and opportunities and performance against targets</p>

## TCFD disclosure summary

### Governance

- a) The highest level of responsibility in managing climate related issues belong to the board of directors. Climate-related issues are integrated into Vow's overall business strategy. All climate-related risks and opportunities (R&Os) are thoroughly discussed and reviewed by the board and its sustainability committee.
- b) In Vow, the executive management group is led by the CEO, who is responsible for the overall assessment and management of climate-related R&Os. The CFO and Sustainability Director collaborates closely to map out optimal strategy and risk reporting path and practices.

### Strategy

- a) Vow has identified several potential climate-related R&Os, over both the short, medium, and long term. These R&Os have the potential to broadly affect the financial strategies and R&D. Most risks are linked to the value chain, while most opportunities are identified within the policy and regulation sphere.
- b) Climate-related R&Os have the potential to impact the company's balance sheet in different ways, and it is also driving much of the R&D.
- c) Vow aims to conduct a scenario analysis within the next few years.

### Risk management

- a) The risk management process is driven by the sustainability director working across subsidiaries and business areas to ensure full integration of climate risk reporting throughout the organisation. After the risk management process, the sustainability director reports to and confers with the CFO before the CFO presents the same information to the executive management group.
- b) Vow analyses macro trends, policy changes and the state of the climate. Vow follows and monitors news and international organisations and institutions such as, but not limited to, the UN, EU, OECD, IMO, IMF and relevant central banks. Communication with stakeholders, such as investors and customers, is also valuable for managing climate risk. Assessment of different risks is first done across different parts of the organisation by the sustainability director and CFO before management conducts a holistic risk assessment along with the board.
- c) The responsibility for climate-related risk reporting is part of the responsibility of the CFO and the sustainability director. Vow's climate-related risk review is a risk table illustrating all key risks with corresponding potential financial and reputational outcomes. The sustainability director compiles this table before it is reported to the CFO and executive management group. Thereafter it is presented to the board.

### Metrics and targets

- a) Different key metrics are used to measure and manage climate-related R&O.
- b) Vow's carbon footprint accounting is in accordance with the Greenhouse Gas Protocol. The carbon footprint accounting for 2022 includes Scope 1 and Scope 2 reporting as well as reporting on four Scope 3 categories.
- c) Vow aims for full Scope 3 reporting by 2025 and will set an emission reduction target once the objective is reached. In 2021, Vow set a net zero target for Scope 1 and Scope 2 emissions that we aim to reach by 2025.

## **Governance**

### **Board level**

The highest level of responsibility in managing climate-related issues is under to the board of directors. Climate-related risks and opportunities are a scheduled with a frequency at the agenda three to four times per year, and addressed in relation with topics such as strategy, risk management policies, business plans and financial planning. Awareness and the importance of climate risk and opportunities is integrated in the mission statement of the company. The board monitors and overlooks the company's risk exposure and progress towards target obtainment.

The sustainability committee established in 2021 has strengthened board oversight and integration on climate-related issues. The sustainability committee consists of two board members. These board members hold a professional qualification or experience within the sustainability field which contributes to informed risk decisions. The committee assess' updates reported from the executive management group and what issues to address further as well as what measures that are to be implemented.

Vow recognizes that managing and reporting on climate risk is increasingly important, and as an ongoing process, the board is continuously working to improve risk management processes, strategy on climate-related issues as well as climate risk reporting practices.

### **Executive management level**

The highest management-level position responsible for climate-related issues is the CEO. The CEO's responsibility includes overall assessment and management of climate risks and opportunities. The sustainability director is responsible for the day-to-day work on sustainability and climate-related issues. This includes the process of identifying and assessing climate-related risks and opportunities as well as mapping out mandatory ESG-related requirements to ensure compliance.

The sustainability director reports to the CFO as the management find it imperative that climate-related risks and opportunities are closely tied with financial performance and reporting. As this work is an ongoing process, there is close cooperation between the sustainability director and the CFO, to navigate and map out optimal strategy as well as reporting path throughout company and the value chain. The CFO address' relevant matters with the executive management group quarterly and the CEO reports directly to the sustainability committee 3-4 times per year.



## Strategy

In terms of managing climate risk, Vow analyses macro trends, policy changes and the state of the climate. Vow follows and monitors news and international organisations and institutions such as, but not limited to, the UN, EU, OECD, IMO, and relevant central banks. Communication with stakeholders, such as investors and customers, is also valuable for managing climate risk. Assessment of different risks is first done across different parts of the organisation before management conducts a holistic risk assessment along with the board.

In order for Vow to contribute to the Paris Agreement, the SDG's and the EU fit for 55 plan, Vow is continuously assessing and managing climate-related risks and opportunities. An important part of this work is to determine what Vow defines as short-term, medium-term, and long-term. Below are estimated time frames:

Short term (ST): 0-1 years  
 Medium term (MT): 1-5 years  
 Long term (LT): 5+ years

Vow identifies short-, medium- and long-term climate-related risks and opportunities. For each short-, medium- and long-term risk and opportunity, an impact assessment is performed, and a mitigation strategy is planned.

## Climate risks

### Physical and transition risks

Type of risk	ST climate risk	MT climate risk	LT climate risk	Impact assessment	Mitigation strategy
<b>Physical</b>	Extreme weather happenings	Increasing extreme weather happenings	Changing weather patterns and more frequent extreme weather conditions	<b>ST/MT:</b> Can disrupt power supply, affect operations (increase cost, halt production), damage PP&E, cause delays in the supply chain. <b>LT:</b> Can impact power supply, increase price of electricity (increased cost of production), increase supply chain costs.	<b>ST/MT:</b> Make sure to have a rapid response strategy linked to extreme weather damage. Stress-testing. Solid insurances. <b>LT:</b> Prepare for periods of heightened electricity prices. Make sure to have alternatives for long term power disruptions.
	Environmental damage or delays in supply chain	Serious environmental damage or delays in supply chain	Catastrophic environmental damage or delays in supply chain	<b>ST:</b> Delays to customers and/or from suppliers. Potentially impact sales and/or delivery schedule. <b>MT/LT:</b> Could significantly delay or distort deliveries, impacting sales and potentially distort contracts, in addition to increased inflation and pressure on margins.	<b>ST:</b> Ensure continuous communication throughout the supply chain to avoid potential damage or delays due to climate factors. <b>MT/LT:</b> Ensure continuous communication throughout the supply chain to avoid potential damage or delays due to climate factors. Set up strategic plans for environmental damage or delays.



<b>Transition</b>	Increased competition	More sophisticated competition in Vow's business segment	More sophisticated competition within waste valorisation	<p><b>ST:</b> At present unlikely. Could potentially increase competition for projects.</p> <p><b>MT/LT:</b> Could take market shares affecting revenues and increase competition in terms of access to capital.</p>	<p><b>ST:</b> Keep track of Vow's market share and competitive advantage.</p> <p><b>MT/LT:</b> Ensure and emphasise Vow's competitive advantage. Continuous communication with investors, creditors, and other stakeholders.</p>
	Lag in predicted climate regulation	Lag in/slow implementation of predicted climate regulation	Inefficient climate regulations	<p><b>ST/MT:</b> Lack of willingness to pay for environmentally friendly solutions. Vow's solutions are not considered cost-efficient for carbon-intensive and polluting industries.</p> <p><b>LT:</b> Vow's solutions and business model do not reach optimal value creation and market valuation.</p>	<p><b>ST/MT:</b> Keep track on current and emerging policies and policy discussions locally and globally.</p> <p><b>LT:</b> Keep track on current and emerging policies and policy discussions locally and globally.</p>

## Climate opportunities

Type of opportunity	ST climate opportunity	MT climate opportunity	LT climate opportunity	Impact assessment	Mitigation strategy
<b>Market</b>	Diversified portfolio for maritime and industrial solutions	Increased diversification of portfolio across maritime and industrial solutions	Become a catalyst for diversified waste valorisation and decarbonisation technology	<p><b>ST:</b> Solid revenue streams from maritime and industrial solutions.</p> <p><b>MT:</b> More diversified revenue streams, new market access, increased investor attractiveness.</p> <p><b>LT:</b> Increased revenue streams, new market access, increased market shares, increased investor attractiveness, becoming a global leader in waste valorisation and industry decarbonisation.</p>	<p><b>ST:</b> Keep regular dialogue with current and potential clients across Vow's geographic presence. Investing time and resources into the R&amp;D department.</p> <p><b>MT:</b> Following up on short-term strategy and consider different strategic investments in technology and human capital.</p> <p><b>LT:</b> Keep emphasis on Vow's mission to mitigate climate change and prevent pollution. Invest in innovative technologies and human capital. Ensure strong communication with all stakeholders.</p>
<b>Products and services</b>	Profitable sustainable technology	Profitable sustainable technology and innovation	Climate resilient technology and innovation	<p><b>ST/MT/LT:</b> Increased sales and diversified revenue streams, attractive products for customers that could secure more attractive loan terms and grants.</p>	<p><b>ST/MT/LT:</b> Continue strong focus on strategic partnerships and R&amp;D investments. Continuously communicate with investors, creditors, and other stakeholders. Continue investments in developing Vow's technologies. Actively use relevant media to promote Vow's solutions for</p>

					climate change mitigation.
<b>Market</b>	Carbon tax	Carbon taxation in line with net-zero by 2050	Extra stringent carbon taxation to <i>ensure</i> net-zero by 2050	<p><b>ST:</b> Increased interest and revenues from current and potential customers in need of decarbonisation. Further enhance Vow's position as a strategic business partner.</p> <p><b>MT/LT:</b> Increased revenues from multiple industries looking for efficient decarbonisation. Capture larger market shares within waste valorisation and decarbonisation. Can further increase in-house innovation and enhance Vow as a desired research and strategic business partner.</p>	<p><b>ST:</b> Clearly communicate the potential Vow's solutions can have for customers through various channels.</p> <p><b>MT/LT:</b> Continue clear and efficient communication on the different solutions Vow can offer in terms of climate change mitigation technologies. Invest time and resources in R&amp;D.</p>

<b>Resilience</b>	Strategic partnerships with multiple research environments and key clients	Strategic partnerships with more companies	Strategic partnerships with sectors and sector leaders within heavy industry	<b>ST:</b> Increased innovation. <b>MT/LT:</b> Increased market share regionally and globally.	<b>ST:</b> Ensure active and well-funded R&D. <b>MT/LT:</b> Ensure well-funded and innovative R&D. Communicate opportunities with relevant stakeholders.
	Increased interest from potential Employees who cares about climate change (particularly engineers)	Increased interest from the new generation (Millennials/ Gen-z) of employees across fields (particularly engineers)	Increased interest and reputation as an attractive and desired employer across generations and across fields such as STEM-backgrounds, engineers, business backgrounds, etc.	<b>ST:</b> Attract and retain talented and motivated employees across nations who care about climate change and innovation. <b>MT/LT:</b> Automatically attract the best and brightest across nations, generations (especially Millennials and Gen-Z) and backgrounds. Lead to continuous innovation of both the company and solutions. Secure LT sustainable development of the company.	<b>ST:</b> Communicate in relevant channels the Opportunities within Vow and Vow's mission of mitigating climate change. <b>MT/LT:</b> Communicate opportunities within Vow through relevant channels. Increase visibility in universities and research institutions.

### Climate-related R&O's influencing our strategy

Climate risks and opportunities are getting increasingly important as part of the overall strategy work for the company. Vow's mission of climate change mitigation and pollution prevention can be said to be well-aligned with the green transition that is under way. Therefore, climate related risks and opportunities have always been important factors in the company's strategy work, yet today Vow is working on making this even more clear.

Business area influenced by climate-related R&O's	Description	Actions taken and planned
<b>Products and services</b>	The demand for Vow's solutions is driven by global megatrends such as decarbonisation and circular economy. The increasing cost of carbon constitutes a potential risk for Vow's customers. Both the maritime and industrial segments demand efficient solutions for decarbonisation and waste valorisation.	Be a leading provider of technology and solutions, and a partner of choice for decarbonising of industrial processes, production of CO <sub>2</sub> neutral energy, and for cleaner oceans.
<b>Investments in R&amp;D</b>	For Vow it is important to have a strong R&D department. Investing time and resources in R&D is key to keep developing and improving technological solutions for climate change mitigation.	Ensure to put efforts on the R&D projects that create the highest value and continue fostering close cooperation between the R&D department and the overall organisation.
<b>Operations and supply chain</b>	Vow is working to improve its sustainability performance and to reduce its climate footprint in all operations and phases of a project. This includes setting requirements for suppliers and accelerate green purchasing.	Accelerate green purchasing to reduce the climate footprint in Vow's supply chain.

### Scenario analysis

As of today, Vow has not had the capacity to conduct a scenario analysis for climate-related risks and opportunities. Vow aims to report according to all TCFD recommendations and is planning to conduct a scenario analysis within the next few years. Still, Vow is keeping track on publications from the IPCC to stay up to date on the latest information regarding the climate.

## Risk management

Physical/ transition	Risk type	Relevance in risk assessment	Description
<b>Transition risks</b>	Technology	Relevant, always included	In terms of technology, one risk identified is the development of potential competitors that: <ul style="list-style-type: none"> <li>• May result in lower market shares</li> <li>• Could affect revenue</li> <li>• Could affect access to capital</li> </ul>
	Current and emerging regulations	Relevant, always included	Vow works to align well with upcoming regulations and aims to be an important contributor to the green transition, providing cost-efficient solutions for industry. Thus, a lag in predicted climate regulation is seen as a relevant risk. This could lead to: <ul style="list-style-type: none"> <li>• Vow's solutions are not seen as cost-efficient for polluting and carbon-intensive industries</li> <li>• Vow's solutions and business model do not reach optimal value creation and market valuation</li> </ul>
	Legal	Relevant, sometimes included	Vow makes sure to comply with all relevant laws and regulations across geographical locations. As Vow is helping its customers with compliance of environmental regulations, the group considers slow development of environmental regulations as a potential risk.
	Market	Relevant, always included	The connection between climate risk and economic development may influence access to and cost of capital. A climate-related market risk is competitors' advancement in alternative technologies, potentially impacting revenue streams and lower market shares.
	Reputation	Relevant, sometimes included	Vow continuously works on making sure that the company is behaving as a serious actor in the green transition. <ul style="list-style-type: none"> <li>• A damaged reputation could affect access to capital.</li> <li>• It could also affect credibility among stakeholders</li> </ul>
<b>Physical</b>	Acute	Relevant, sometimes included	More extreme weather such as heavy rain and hurricanes on a more frequent basis can affect both Vow's operations and supply chain in all Vow's locations. <ul style="list-style-type: none"> <li>• May disrupt power supply and affect operations (increase cost, halt production).</li> <li>• Could damage PP&amp;E</li> <li>• Delays to customers or from suppliers. Potentially impact sales and/or delivery Schedule</li> </ul>

	Chronic	Relevant, sometimes included	<ul style="list-style-type: none"> <li>• Within Vow's current operations, the risk of sea-level rise, temperature rise stress or wind are not yet defined as substantive risks. Today these risks are not classified as chronic for Vow but could have the potential to become chronic events in the future due to climate change.</li> <li>• In the future this could impact power supply, increase price of electricity, and fundamentally shift the production cost curve.</li> </ul>
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## Metrics and targets

With a business model grounded in a mission to mitigate climate change, Vow recognises the importance of taking responsibility for own emissions. It is an important part of the company's work to map out emissions and set measurable and reachable targets as a part of Vow's climate strategy. Vow's emissions reduction target was set in 2021, aiming to achieve net zero in Scope 1 and 2 by 2025. Once the target of complete Scope 3 reporting is accomplished by the end of 2025, an emissions reduction target will be set for Scope 3. Vow is progressing as planned to achieve complete Scope 3 reporting by 2025.

## Emissions metrics

Vow has calculated the company's GHG emissions within Scope 1 and 2 and is working on calculations for Scope 3 emissions.

- Scope 1 covers all direct emissions sources, including all use of fossil fuels for stationary combustion and transportation.
- Scope 2 includes indirect emissions related to Vow's purchased energy (i.e., electricity and heating/cooling). This includes purchased energy for Vow's offices and sites globally.
- Scope 3 comprises indirect emissions resulting from the company's value chain activities.

(tCO <sub>2</sub> e)	2023	2022
<b>Scope 1</b>		
Propane	4.4	3.2
Diesel	29.8	44.2
LPG	0.0	6.4
Natural gas	11.4	9.2
<b>Stationary combustion total</b>	<b>45.7</b>	<b>63.0</b>
Diesel	124.8	107.5
Petrol	41.1	23.9
<b>Transportation total</b>	<b>165.9</b>	<b>131.4</b>
Refrigerants	11.7	0.0
<b>Refrigerants total</b>	<b>11.7</b>	<b>0.0</b>
<b>Scope 1 total</b>	<b>223.3</b>	<b>194.4</b>
<b>Scope 2</b>		
Electricity buildings	32.6	32.9
Electric vehicles	0.4	0.003
<b>Electricity total (location-based)</b>	<b>33.0</b>	<b>32.9</b>
District heating	1.6	0.0
<b>District heating total</b>	<b>1.6</b>	<b>0.0</b>
<b>Scope 2 total</b>	<b>34.7</b>	<b>32.9</b>
<b>Scope 1 and 2 total</b>	<b>258.0</b>	<b>227.3</b>

<b>Scope 3*</b>	<b>2023</b>	<b>2022</b>
Fuel-and-energy-related activities	63.0	54.3
Upstream transportation and distribution	1 237.7	Not calculated
Waste generated in operations	8.2	47.4
Business travel	617.4	522.7
Employee commuting	260.4	274.0
Downstream transportation and distribution	51.2	Not calculated
<b>Scope 3 total</b>	<b>2 237.2</b>	<b>898.4</b>
<b>Scope 1, 2, and 3 total</b>	<b>2 495.2</b>	<b>1 125.7</b>

\*More categories to be included

## Emissions reduction target

Vow's emissions reduction target was set in 2021, aiming to achieve net zero in Scope 1 and 2 by 2025. To reach this target, Vow will:

1. replace fossil fuel cars with electric cars,
2. replace fossil fuels with renewables in development activities,
3. obtain certificates of origin for electricity, and
4. buy carbon offsets to reduce the rest of the emissions to net zero.

The group has started the process of replacing fossil fuels in R&D testing with biofuels and aims to source electric company cars onwards. Vow operated 20 company cars in 2023. Of these 7 were electric and 2 hybrid. Moreover, Vow is looking into energy-saving measures and is currently purchasing RECs for a share of its energy consumption in Norway and offsets for a share of its air travels.