Climate-related financial disclosures

TCFD report 2024

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1 Governance
3 Strategy
5 Risk management
6 Metrics

Climate-related governance

Board's oversight and management's role

The Vitol Board sets our business strategy. Climate-related matters are carefully considered and are an integral part of the Board's deliberations when reviewing our overall strategy, endorsing budgets, challenging business plans, and overseeing major capital expenditures, acquisitions and divestments.

The Board also evaluates the effectiveness of our practices and systems to identify, mitigate or manage climate-related risks and opportunities across our trading activities and investment portfolio, ensuring they remain effective, up to date and consistent with good industry practice.

Finally, it monitors climate-related information through quarterly Board meetings and more frequently via Board members participating in the ESG Committee and working groups that are part of the Vitol energy transition initiative (VETI), as well as through open dialogue with the ESG department and other functions, which provide regular updates throughout the year.

The ESG Committee is responsible for reviewing and considering the ESG impacts of the business, and operates in line with formal terms of reference. It meets quarterly with direct reporting to the Board. Its members include the Group General Counsel, Head of Utilities of Vitol Inc., CEO of Vitol International Shipping, Head of ESG, Head of Compliance, Chief of Staff, Head of Communications, and Head of Treasury.

A broad range of management is also fully involved in these efforts, with representation in all governance bodies, across all regions (Americas, EMEA, APAC) **and major functions** (Origination, Investments, multiple trading matrices, Shipping, Research, IT, ESG, Compliance, Legal, Tax, HR, Communications, Treasury).

Cross-departmental collaboration supports the integration of climate related risks and opportunities into decision-making, with clear accountability and responsibility assignment:

- The Vitol CEO is accountable for ESG and energy transition strategy development and execution, in consultation and collaboration with the Board.
- The Chair of the ESG Committee is also the Vitol Group General Counsel, and responsible for ensuring that the ESG Committee's terms of reference are followed. The remit of the Committee also includes climate-related matters.
- The Vitol Head of ESG reports directly to the CFO, and is responsible for ensuring processes are in place to manage and mitigate risks relating to environmental and social governance topics, including climate-related matters.

Climate-related information processes are summarised in the chart on the next page, alongside the role, meeting frequency and composition of the main governance bodies.

This approach matches **VETI's** three objectives and eight workstreams as follows:

1. Grow low-carbon opportunities

- The alternative energy Working Group covers sustainable investments.
- The Vitol energy transition solutions group covers trading opportunities.
- The GHG trading group covers environmental products and solutions.

2. Manage climate-related risks and decarbonisation

- Vitol Investments, ESG, Operational Risk, Internal Audit and Legal departments coordinate with our investment portfolio.
- Our GHG shipping group covers shipping-related climate risks and opportunities including a dedicated Head of decarbonisation for shipping.
- Vitol green office champions cover offices and business travel.[1]

3. Provide transparency and take action through coordination of IT, ESG, Treasury and Communications departments to cover:

- Data and reporting;
- Energy transition planning;
- ESG communications.

Additionally, our Regulatory Working Group keeps abreast of policy and legal risks and opportunities potentially impacting Vitol in all the jurisdictions in which Vitol operates.

1. Office decarbonisation workstream was decentralised at the local level in 2024, and is no longer monitored under the VETI project management office

Climate-related governance

Information process and flow chart

Vitol Board of Directors

- Oversees climate-related risks and opportunities, and makes all material decisions in relation to the energy transition
- Meets quarterly and holds additional bespoke meetings

Vitol ESG Committee

- Advises the Board on defining and reviewing Vitol's ESG strategy and risk management, including climate-related matters.
- Comprises eight members of senior management and meets quarterly.

Vitol ESG Department

- Advises the Board, the ESG Committee, and the VETI working groups on ESG topics, providing expertise.
- Connects with Vitol business functions and investments on climate-related risks.
- Meets as needed with professionals covering topics including energy transition, human rights and supply chain risks, health and safety, environment, regulatory reporting.

Working groups discussing climate-related risks and opportunities

Alternative energy Working Group

- Discusses sustainable investment pipeline (e.g. solar, wind, biogas assets), market opportunities and trends, sharing knowledge and best practices across regions.
- Steering committee meets monthly with c. 10 senior employees across Investments and Origination functions.
- Full group includes c.50 employees across commercial and corporate functions and meets quarterly.

Vitol energy transition solutions

- Discusses trading opportunities related to low-carbon transition, activity diversification, and new carbon abatement service offerings (e.g. decarbonisation solutions for carbon intensive sectors, carbon-free power, carbon offset bundling with energy products).
- Includes c.10 senior employees across commercial and corporate functions and meets monthly.

GHG trading group

- Discusses environmental products and solutions (e.g. carbon credits on compliance and voluntary markets, renewable energy and fuel certificates), market opportunities and trends, sharing knowledge and providing updates to all Vitol traders.
- Includes c.10 senior employees across commercial and corporate functions and meets monthly.

GHG shipping group

- Discusses operational performance, energy efficiency, and carbon intensity of Vitol's owned and chartered vessels, GHG-related market activities, as well as results from operational, technical and fuel-based trials and joint studies (e.g. ammonia as marine fuel) across our fleet.
- Includes c.10 technical and commercial shipping experts and meets virtually as needed.

Regulatory Working Group

- Discusses current and upcoming laws and regulations (e.g. fuel legislation, corporate sustainability reporting, human rights and environmental due diligence), reviews their potential impact on Vitol globally, and agrees internal and external stakeholders to engage with.
- Includes c.10 senior employees across corporate functions (e.g. Compliance, ESG, Legal, Regulatory Affairs, Tax) and meets every two months.

Climate-related strategy

In evolving Vitol's energy transition strategy and overseeing its implementation, our Board and management consider climate-related risks and opportunities across three time horizons: short (up to one year), medium (from one to five years) and long-term (beyond five years).

As per TCFD's recommendation, we identified the principal climate-related risks and opportunities that could have potential financial impacts on our business, from disruption of global supply chains and trade flows to changes in resource availability and increased volatility in commodity prices. Findings are presented on the following page.

In order to determine and periodically update the materiality of these financial impacts, we review the findings of assessment processes performed by a range of different trading, investment, origination, technical, ESG and operational risk professionals, with a presence in all key geographies.

These processes are undertaken in the ordinary course of business, and integrated through joint working groups, to be fed back into our overall strategy and financial plans across business segments and geographies. This ensures focus and coordination between commercial and corporate teams, and allows to adjust the positioning of both our trading desks and our investment portfolio with regards to the energy transition.

Each assessment follows an analytical process to better understand our positioning with regards to certain businesses or asset classes (e.g. upstream, shipping, refining, renewable power, battery storage, electric mobility, low-carbon fuels, carbon certificates) by geography, down to product level. This typically involves a wide range of internal and external stakeholders to assess strategic fit, market dynamics, as well as economic, technological and risk management factors (which may include, among others, greenhouse gas emissions, energy efficiency, biodiversity, water consumption and other physical risk considerations).

For financial materiality determination purposes, the most appropriate metrics are selected based on the relevant risks and opportunities (e.g. revenue, trading margin, profit before tax from continuing operations) and are ranked using Vitol's in-house risk assessment matrix (see p. 5).

We acknowledge that identifying and quantifying these risks and opportunities is a difficult and dynamic exercise due to the uncertainty surrounding climate impacts, the changing policy and regulatory environment and the accuracy of predictive models, amongst other factors.

Trading is our core business, and assets in our investment portfolio are integrated with trading to help balance supply and demand. We believe that high levels of complementarity across different asset classes contribute to facilitate the energy transition.

Broadly speaking, we are increasingly eager to originate opportunities in the transitional and sustainable spaces as these areas develop. Nonetheless, we also continue to consider hydrocarbon assets that are a good strategic fit and have significant remaining asset life.

With renewable solar and wind assets, the opportunities for Vitol to benefit from trading synergies decline as operational assets become fully contracted to third parties. Hence divestments of assets at this stage of maturity are likely, over time, subject to external market conditions, with sale proceeds being recycled into new renewable assets and our origination platform being retained.

In matters of capital access, banks are important partners and stakeholders for Vitol, and a credible ESG strategy and energy transition plan is a key requirement of these relationships.

When considering the impact of climate-related risks on our business, decision-making processes rely on internal energy forecasts that comprise multiple scenarios and climate trajectories, and embed different policy, regulatory, technological, macro-economic, and social assumptions.

We retain a high degree of flexibility to reposition capital in order to address emerging climate-related risks, and closely follow capital expenditure planning to preserve infrastructure integrity and ensure operational continuity, for instance to address challenges posed by extreme heat or water scarcity.

Furthermore, we continuously optimise our product and asset exposure in relation to evolving risks, and deploy integrated solutions to hedge and manage them. We also carefully monitor the status of our supply chains and operations in real time, thanks to our trading and logistics expertise allowing both for short-term reactivity and long-term planning. This enables us to preserve the long-term value of our portfolio and enhance sustainability.

Climate-related risks and opportunities

S Short-term: up to one year M Medium-term: one to five years L Long-term: beyond five years

	Type				Material elements	Potential financial impacts
Transition risks	**Policy and legal**	S	M	L	• Rising price of GHG emissions and increased reporting obligations • Increased regulatory requirements on activities and traded products • Exposure to litigation	• Increased Opex (e.g. GHG and regulatory compliance costs) • Reduced demand for high-carbon products and asset impairments • Increased provisions for regulatory uncertainty and litigation costs
	Technology		M	L	• Costs to transition to lower carbon intensity technology • Substitution of existing products and services with lower carbon intensity • Failing new technology investments	• Additional Capex, write-offs and early retirement of high-carbon assets • Additional Opex to adopt and deploy new processes • Asset write-offs in unproven technologies
	Market	S	M	L	• Changing counterparty behaviour • Uncertainty in market signals and increased price volatility • Increased cost of raw materials and logistics	• Change in revenue mix (shifting counterparty demand from high to low-carbon products) • Increased Opex and commodity price hedging burden, margin pressure • Repricing of assets (e.g. fossil fuel reserves, land, securities and inventory valuations)
	Reputation	S	M	L	• Energy sector stigmatisation • Negative stakeholder feedback	• Reduced revenue and increased cost of doing business (e.g. due to difficulty to attract and retain talent, decreased willingness to engage from counterparts, lesser capital availability or higher cost of capital)
Physical risks	**Acute**	S	M	L	• Increased severity of extreme weather events (e.g. extreme temperatures, flooding, droughts, heavy snowfalls, hurricanes, wildfires)	• Increased Capex (e.g. property damage in exposed locations) and insurance premiums • Asset impairments (e.g. stranded assets) and difficulty to insure long-tail risks • Increased Opex (e.g. operational and environmental risks, incl. personal and process safety, personnel health and productivity, water supply for upstream and refining) • Reduced revenue from lower production output (e.g. wind for turbines) • Increased provisions for supply chain disruption and price/volume volatility
	Chronic	S	M	L	• Rising mean temperatures and impacts on population health • Extreme variability in weather patterns (e.g. precipitation, winds)	
				L	• Rising sea levels	
Opportunities	**Resource efficiency**	S	M	L	• More efficient modes of production, processing, transport and distribution • Reduced water usage, raw material consumptions	• Reduced Opex through efficiency gains (e.g. ship bunker optimisation) • Increased revenue from productivity gains (e.g. methane recovery for natural gas) • Longer asset lifetime value and capital gains through improved asset operations management
			M	L	• Increased recycling	
	Energy source	S	M	L	• Low-carbon energy usage • New technology development • Public incentives on energy supply	• Reduced Opex and exposure to GHG emissions (e.g. lower carbon abatement costs) • Capital gains and new revenue streams from successful investments in new tech • Increased capital availability for low-carbon investments
	Products and services	S	M	L	• Development of low-carbon products and services, and environmental solutions • Diversification in business activities in line with shifting consumer preferences • Increasing price of energy products	• Increased revenue from growing decarbonisation solutions (low CI products, offsets) • Enhanced competitivity through diversified product and solution offerings • Increased revenue from growing price of supply-constrained energy products
	Markets	S	M	L	• Access to new markets and geographies • Supportive policy incentives	• Increased revenue from launching into new markets • Enhanced financial resilience through geographic diversification • Increased revenue from supplying low-carbon products
	Resilience	S	M	L	• Redundancy and diversification in supply chains • Commodity flow diversification and substitution	• Increased revenue from demand driven by energy system redundancy • Reduced Opex from enhanced supply chain reliability and trading optionality • Capital gains from assets benefiting from favourable positions

Climate-related risk management

Vitol takes its climate change impacts into account when managing risks and we have deployed resources to build resilience to both transition and physical risks. This has been factored into our energy transition strategy and to turn some of them into opportunities.

As referenced in our **ESG framework**, we adopt a risk-based approach to ESG and operations management by identifying, monitoring, assessing and mitigating risks to an acceptable level, as determined by business requirements. Climate-related risks are therefore evaluated as part of our overall approach to risk management, as illustrated in the adjacent table.

Compliance with climate-related regulations is monitored by our Regulatory Working Group. We consider both existing and emerging regulatory requirements, including limits on emissions and environmental exceedances, new climate policies, reporting and transparency requirements.

Additionally, a number of our financing banks fall under the Bank of England's (BoE) and ECB (European Central Bank) regulatory supervision, which includes an expectation that they will assess the physical and transition risks associated with climate-related scenarios, and we have been working to support them in this requirement.[1]

Our risk processes are managed in two streams:

1. Risks to Vitol and trading operations

Climate-related risks are identified through the course of business activities and reviewed by working groups and internal committees, assisted by our Internal Audit and Operational Risk, ESG, and Legal departments.

When contemplating acquisitions, climate-related risks are investigated as part of the ESG due diligence process.[2] The size and scope of identified risks are then assessed by involving internal subject matter experts or external advisers, as materiality requires.

2. Risks to our investment portfolio

Each portfolio company retains the responsibility of managing climate-related risks related to its activities, and maintains frequent interactions and an open dialogue with Vitol teams. As investments have varying degrees of maturities in their approach, we have committed to engage with them to support the implementation of TCFD recommendations at their level, to share best practices for improving data availability and accuracy on climate-related risks, and to ensure that these have been assessed and that appropriate controls are in place to mitigate them.

Overall ESG risk findings are reviewed by the Vitol Operational Risk Committee, which meets every quarter to discuss risk controls, mitigation, transfer and acceptance, with risk oversight at Board level.

Climate-related risks' relative significance in relation to other risks is determined using Vitol's risk assessment matrix, comparing likelihood (from very likely to very unlikely) and severity (in terms of human, environmental, reputational and financial impacts, assessed qualitatively and quantitatively), and those which are material are recorded within our ESG risk register.

Dedicated approaches are also developed for transition and physical risk sub-types, as dictated by materiality. For instance, chronic and acute temperature variations and knock-on effects on freshwater supply availability to our businesses, or changes in sunlight and wind patterns impacting the capacity factors of our renewable power assets, have all been the subject of specific studies to inform decisions on matters of strategy, risk management, budgeting and capital management.

Enterprise risk management categories

View how we manage risks

✓ Climate-related risk integrated with Vitol risk controls

	Climate-related risks	Strategic & marketplace	Hazard	Operational	Financial	Transactional
Transition risks	Policy and legal	✓	✓	✓	✓	✓
	Technology	✓	✓	–	–	✓
	Market	✓	–	–	✓	✓
	Reputation	✓	–	–	–	–
Physical risks	Acute	–	✓	✓	✓	✓
	Chronic	✓	✓	✓	✓	–

1. In 2021, Vitol's physical risk profile was assessed as better than the regional sector average, following a vulnerability review of our 43 principal operating locations (across our main investments and five largest offices) that was conducted in the course of positive exchanges with Standard Chartered and their advisers, using S&P location data and Munich Re's physical risk assessment
2. For relevant acquisitions, such as upstream oil and gas, Vitol Investments teams include internal carbon price assumptions in their financial modelling to support investment decisions

Climate-related metrics and targets

Following TCFD principles, we use a variety of metrics and targets to assess Vitol's exposure to climate-related risks and opportunities, as well as the impacts of our activities on external stakeholders, the planet and society.

These metrics come from a range of internal and external data sources and third-party providers (e.g. ship captains, physical operators, investment managers, sustainability experts, analytics platforms).

Whilst these metrics and tools have their limitations, they are used to support business planning and decision-making processes, and we believe they provide valuable insights to guide our climate-related governance, strategy, and risk management. All updates are directly available to a range of internal stakeholders, including the Vitol Board and ESG Committee.

Over the past year, we have further progressed our water stress risk assessment by reviewing exposure across Vitol's investment portfolio. We compared actual volumes of freshwater withdrawal with a set of IPCC's climate change scenarios ranging from 1.3°C to 5.7°C average global rise in surface temperatures by 2080. Conclusions highlighted that despite half of freshwater volumes being withdrawn in areas with high water stress (i.e. areas of intense competition amongst users), all assets with high requirements or facing worsening conditions in adverse scenarios already have mitigation measures in place (including desalination plants, water recycling systems, reuse of process water, etc.).

We also renewed our assessment of avoided GHG emissions through product life cycle, which grew in line with our maturing portfolio of renewable power generation and carbon projects, from over 5 $mtCO_2e$ in 2023 to over 8 $mtCO_2e$ in 2024.[1]

1. Based on the WRI's framework on "Estimating and reporting the comparative emissions impacts of products (January 2019 working paper) following an attributional approach adjusted by geography over complete product life cycle, and using a mix of activity-based data and verified estimated data. These figures are not meant to be compared to Vitol's GHG footprint or netted against scope 1, 2 and 3 emissions, as the benefits of using these products have been transferred to buyers and end-users

Type	Metrics	Targets	Update process
Transition risks	Scope 1, 2, and 3 GHG emissions	• Improve data quality of scope 3 GHG emissions in line with organisational changes • Support portfolio companies' development of decarbonisation pathways	• Continuous update of carbon market prices • Daily update of shipping data • Quarterly update of other operational and investment data • Yearly consolidation with recalculation based on changes in organisation boundaries
	Carbon intensity of shipping activities	• Achieve IMO's 2030 target of -40% carbon intensity reduction as early as 2024 for Vitol ocean-going controlled fleet, and maintain progress over the following years • Optimise the operational, technical and fuel use performance of our controlled vessels to reduce emissions • Enhance tracking of chartered vessels' Annual Efficiency Ratio (AER) and Energy Efficiency Operational Indicator (EEOI)	
	Internal carbon prices	• Support the global implementation of carbon pricing mechanisms, and the adoption of a clear, regulatory framework enabling long-term investment in carbon avoidance and removal solutions across all markets • Refine internal carbon pricing mechanisms when undertaking relevant transactions, and run price sensitivity analyses on our investment portfolio and relevant M&A activities	
Physical risks	Freshwater withdrawal	• Optimise freshwater withdrawal management for assets operating in areas with high baseline water stress	• Quarterly update of freshwater extraction data across investment portfolio • Yearly water stress risk assessment using WRI's Aqueduct tools
Opportunities	Transitional energy products	• Increase the volume of transitional commodities traded year on year	• Daily update of energy products physically delivered • Monthly update of investment in sustainable projects and renewable power capacity • Yearly update of avoided GHG emissions through product life cycle across portfolio
	Sustainable capital expenditures and additional commitment	• Invest in sustainable assets and grow pipeline of new projects	
	Renewable power capacity	• Develop additional renewable power generation projects	
	Avoided GHG emissions through product life cycle[1]	• Continue to install renewable power capacity, and clean cooking and water devices	

Vitol