Vitol

Delivering energy solutions, safely and efficiently

Environmental, Social & Governance Report 2022

About this report, our boundaries and methodology

Reporting standards
This report has been prepared with reference to the GRI[1] Standards and the TCFD[2] recommendations. We also follow the IPIECA[3] sustainability and GHG reporting guidance, as well as the WRI and WBCSD[4] GHG Protocol corporate standard and supplementary guidance as closely as possible.

Work-related criteria for incidents are aligned with the IOGP[5] *Safety data reporting user guide*, whilst exposure hours in relation to shipping are recorded according to the OCIMF[6] *Marine Injury Reporting Guidelines*.

The human rights section addresses certain requirements of the UN Guiding Principles Reporting Framework, and we are making progress to meet the required minimum information thresholds.

Reporting boundaries
This report includes greenhouse gas (GHG) emissions and other Environmental and Social (E&S) key performance indicators (KPIs) for operationally controlled and non-controlled investments.

For GHG emissions consolidated reporting, we have set an organisational boundary according to the operational control approach, which aligns with our financial consolidation approach, and most closely reflects GHG emissions from assets that we can directly influence:

- Our (operationally) controlled scope includes all subsidiaries and consolidated associates, as well as associates and joint ventures where Vitol is the operating company, and accounts for 100% of the GHG emissions from these assets regardless of our actual equity share;
- Our non-controlled scope includes non-consolidated investments in which Vitol holds a non-controlling interest, as well as associates and joint ventures where Vitol is not the operating company, and accounts for our equity share of GHG emissions from these assets into scope 3 category 15.

For other E&S data, we report on a 100% basis for all investments in which we hold equity, no matter how small the stake, as long as we can maintain reasonable access to data of verifiable quality. For incident data specifically, we include data for both Vitol employees and contractors, as well as certain trucking operations, whilst incidents on vessels are reported where Vitol is the holder of the ISM-Code DOC.[7]

We endeavour to apply consistent reporting boundaries to our ESG disclosures across our operations and investment portfolio, but we are aware that this can be challenging due to the complexity of our business, the varying influence we hold over non-controlled investments, and their degree of maturity as regards to data management and sustainability reporting.

Calculation methodologies, adjustments, and restatements
Calculation methodologies for GHG and other E&S KPIs are further detailed in the Appendices. Historical data is sometimes adjusted or restated, e.g. due to a change in GHG measurement, reclassification of incidents after investigations or an internal data audit, which are also disclosed in the Appendices.

We have a comprehensive GHG emissions calculation methodology as well as a strict recalculation policy, applying Vitol's organisational boundary as of 31 December 2022 over the last three years of available data, to ensure transparent like-for-like comparability in line with the GHG Protocol recommendations.

Some small discrepancies in figures could be observed due to rounding of data.

As for other E&S KPI data, we generally aim to adjust the reporting boundary from the quarter in which a transaction closes, i.e. we start including data from new investments or stop reporting data from divested assets even midway through the year.

The United Nations Sustainable Development Goals (SDGs)
These are a set of 17 global goals and 169 targets that aim to achieve a more sustainable future for all. Where possible throughout this report we have mapped relevant SDGs against our business activities. The goals below are most aligned with our objectives:

1. Global Reporting Initiative.
2. Task Force on Climate-related Financial Disclosures.
3. International Petroleum Industry Environmental Conservation Association.
4. World Resource Institute and the World Business Council for Sustainable Development.
5. International Association of Oil & Gas Producers.
6. Oil Companies International Marine Forum.
7. International Safety Management Code Document of Compliance.

Front cover image: VPR Energy, Europoort-Rotterdam, Netherlands

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Overview

Meeting the world's energy needs

VPI Immingham, Immingham, UK

CEO LETTER

Russell Hardy, CEO

Investing in the energy transition

Whilst providing essential energy security

COMMITTED TO SUSTAINABLE INVESTMENTS

$2bn+

OPERATIONAL RENEWABLE POWER GENERATION

1.2 GW

Dear fellow stakeholder,

We are pleased to present our third annual ESG report as endorsed by the Board of Vitol. In it we explain our approach to ESG and, specifically, the energy transition, before detailing our Environmental and Social (E&S) performance and providing a short update on our governance structures.

Vitol is one of the world's largest distributors of energy, moving 8 mbpd.

Energy markets were dramatically affected by geopolitical events in 2022, which had a significant impact on our business and on the underlying dynamics that are driving change in the industry. Whilst many of our stakeholders remain primarily focused on the energy transition and our environmental performance and strategy, for others, recent events and the resulting higher costs, of and disruptions to, energy supply has led them to focus on more immediate and pragmatic considerations.

Unfortunately, the "energy crisis" of 2022 had undeniably negative short-term effects on the trajectory of the transition, as high LNG prices forced industry and governments to increase the use of more polluting alternative fuels such as coal, fuel oil and gasoil – leading to increased GHG emissions worldwide, despite all of the efforts and capital invested in sustainable assets in recent years.

However, the longer-term implications are likely to be more positive, with governments now more focused on the issue of energy security and how renewables can help deliver both security and lower emissions. At the same time, the events of 2022 reinforced the need for continued investment in hydrocarbons to meet nearer-term energy demand, particularly in less affluent economies.

Vitol's strategy is aligned with these parallel objectives.

We continue to deploy capital in the sustainable energy sector – to date, we have committed over $2 billion into sustainable investments and have 1.2 GW operational renewable power generation. In addition, we are actively leveraging our market expertise and trading capabilities to facilitate the further deployment of renewables, offering renewable producers stable and predictable revenue streams whilst providing certainty of supply without intermittency issues for companies looking to source renewable power. Vitol continues to invest in a range of sustainable energy and transport solutions, from gas for transport to electric vehicles (EVs) and low-carbon fuels. Transport accounts for ~60% of oil demand and decarbonising the transport sector will be key to reducing overall oil consumption.

CEO LETTER

Russell Hardy, CEO

We maintain our view that it will take time for the world to fully transition away from hydrocarbons, with oil demand peaking in the early 2030s. In this context, our priority is ensuring that our traditional energy assets perform as reliably and efficiently as possible. For example, our US upstream business, Vencer, has worked to minimise its GHG footprint by actively reducing its methane leakage and flaring. We are also planning to cut our shipping emissions significantly faster than regulatory targets require – shipping being our principal source of Scope 1 GHG emissions.

Finally, our transitional business, which complements the roll-out of renewables and allows the substitution of carbon-intensive energy sources, is expanding further – with investment in a range of largely gas-based assets such as power generation and an expansion of the underlying Vitol investment and trading teams.

Regrettably, there were three fatalities across our assets in 2022. This is clearly unacceptable. All incidents have been carefully reviewed, and lessons learnt have now been integrated into enhanced processes.

More broadly, we continue to monitor and map our business in the context of TCFD and have a clear plan of improvement in place for the coming years. We challenge all the assets in which we are invested to devise their own energy transition strategies. The manner and pace at which they transition will depend on the local and industrial context. Still, across the portfolio our companies are future proofing via such technologies as biofuels, gas-for-transport, EVs, carbon capture and renewables.

Our business depends on the professionalism of our people, whom we value immensely.

This is an annual report of our performance, but we continue with our ESG journey and must challenge ourselves to improve every single day.

We continue to deploy capital in the sustainable energy sector

VPI Rye House power station, UK

VITOL OVERVIEW

Solving the energy challenges of the world today

Investing in energy solutions for the future

FIND OUT MORE
TRADITIONAL ENERGY SOLUTIONS

FIND OUT MORE
TRANSITIONAL ENERGY SOLUTIONS

FIND OUT MORE
SUSTAINABLE ENERGY SOLUTIONS

Crude oil and products

A market leader in the efficient distribution of crude oil and products, facilitated by our extensive network of logistics and assets.

Driving efficiencies, we aim to serve the growing needs from developing markets.

~200 Mt
CRUDE*

~160 Mtoe
PRODUCTS*

Gas

A long-established trader of natural gas, LNG, and LPG, with dedicated infrastructure.

We are deploying these products as transitional fuels, displacing coal and other solid fuels, while investing in biogas solutions.

160+ Mtoe
NATURAL GAS, LNG & LPG*

Power

A strong and experienced power trading team across the world's largest markets, underpinned by investments in renewable and gas-fired power generation assets.

As energy is moving from hydrocarbons to electrons, we use our expertise to support our counterparties transitioning to more efficient and sustainable solutions.

150+ TWh
POWER*

Sustainable

A seasoned investor, developer and trader at the forefront of environmental products and sustainable energy solutions.

We have committed significant capital to innovative low-carbon projects and provide reliable routes to market for high-quality carbon credits.

$2bn+
CAPITAL COMMITTED

100+ Mt CO_2e
HIGH-QUALITY CARBON CREDITS

*Physically delivered annual volumes

The energy landscape

Using our capabilities to drive change

ETT, VTTI, Port of Rotterdam, Netherlands

ENERGY OUTLOOK

Balancing our approach to the energy transition in the context of our outlook

Vitol's transition strategy is shaped by our long-term view of energy demand. We have limited confidence in our view beyond 2030 as there are too many unknowns beyond this date, from regulatory uncertainty to the prospect of new transformational technologies.

Even in the nearer term, regulatory frameworks and government policy will be key to shaping the transition and we anticipate both the US's Inflation Reduction Act and RepowerEU to accelerate the transition in the US and Europe.

At the same time, the impact of the war in Ukraine, associated supply disruptions and sanctions have forced a short-term backward step. Throughout 2022, coal demand rebounded as developing economies were priced out of LNG markets, China and India burned record amounts of coal and price sensitive import markets, such as Pakistan, struggled to generate power.

These extreme market conditions highlighted the vulnerabilities of some economies and the need to balance the transition with access to affordable energy through a range of transitional solutions.

Global oil demand

We expect oil demand to keep growing until the end of the decade, from 100 mbpd in 2022 to around 107 mbpd.

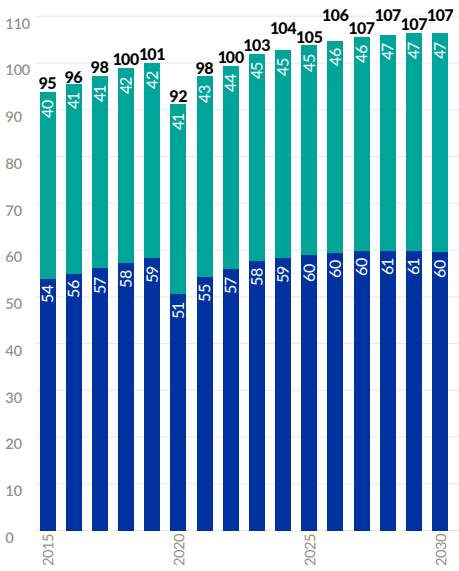
The total extra-demand may be driven by non-transport uses for almost half of the absolute growth, followed by aviation fuel for over a third, and finally motor fuels.

The rest of the barrel: short-term growth

44 mbpd of non-transport oil demand were spread across industrial, petrochemical and domestic uses in 2022.

Although we expect a large proportion of this demand to be destroyed over time as adoption of sustainable technologies increases (e.g. heat-pumps for domestic heating, deployment of renewables and process reengineering at industrial sites), we still anticipate an increase of 3 mbpd due to growing demand for plastics and heating oil across emerging markets.

Global oil demand[1]
mbpd

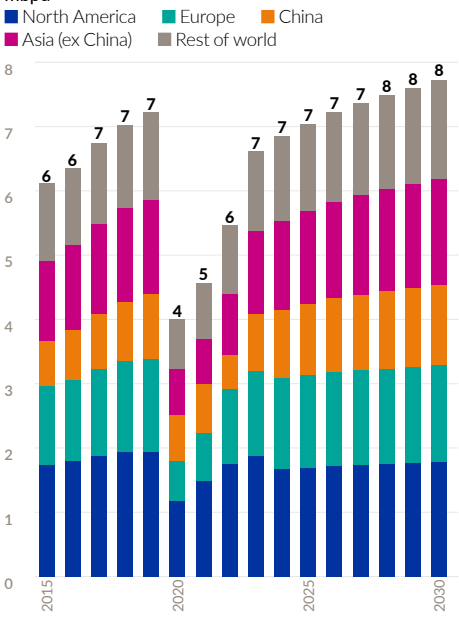


Aviation: a growth market

Today, jet demand remains below pre-pandemic levels under 6 mbpd, but we anticipate it will continue to grow through to 2030 to reach 8 mbpd.

Whilst the aviation industry remains enthusiastic about sustainable aviation fuel (SAF) and we expect a growing proportion to be blended with traditional jet fuel, it will not be until demand for other oil products such as gasoline and diesel falls, impacting the supply and cost of aviation fuel, that there will be a meaningful shift towards SAF.

Jet fuel demand[1]
mbpd

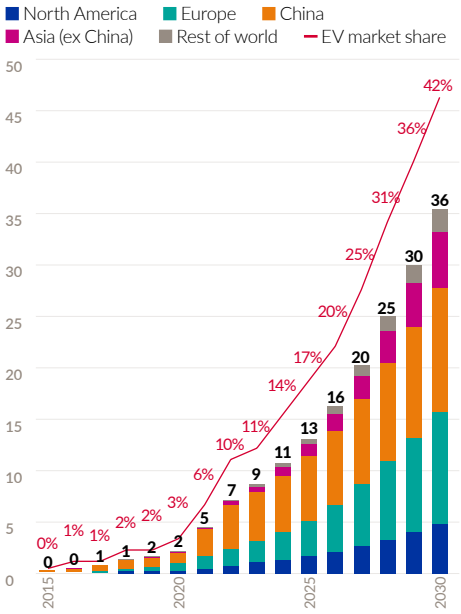


Road transportation: a divided outlook

Road transport accounts for just under half of global oil demand, consuming around 45 mbpd. Given the growth of developing economies and commensurate growth in car ownership, we expect oil demand for motor fuels to grow by another 1 mbpd by the end of the decade.

For cars, the world is likely to fall into two groups: China, Europe and the US quickly shifting to electric vehicles (EVs), and the rest of the world following with some delay.

EV annual car sales[1]
Million units



1. Numbers may not add up due to rounding.

ENERGY OUTLOOK

Balancing our approach to the energy transition in the context of our outlook

China is a leader in EV adoption, responsible for over 60% of all passenger car EV sales last year. In Europe sales are expected to total around 11 million units by 2030. US EV car sales are expected to approach 5 million units by 2030. Globally, we see EVs accounting for two-fifths of all new car sales by 2030.

The relatively high cost of EVs and manufacturing constraints means that the rest of the world is likely to lag and despite the global electric car fleet reaching 160 million units by 2030 (from less than 20 million in 2022), this will only equate to 10% of the global fleet.

EV van and truck sales will be slower than passenger cars due to limited availability and infrastructure constraints. Nonetheless, EV light commercial vehicles (LCVs) are expected to account for a third of global sales by 2030.

We also anticipate other fuel solutions, such as gas-for-transport to be adopted for heavy good vehicles (HGVs). As an already proven technology for HGVs in markets such as Germany, it may be adopted more swiftly by the haulage sector, once the infrastructure is in place.

It is also possible that new solutions, such as battery swapping for two and three wheeled vehicles, are deployed at sufficient scale to accelerate the take-up of small EVs in developing markets.

Gas and LNG

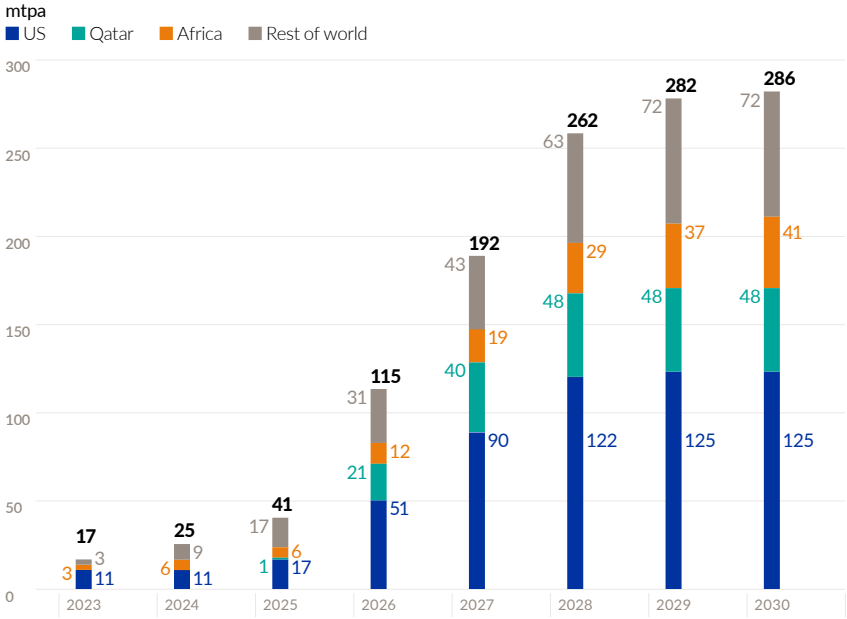
Gas and consequently LNG will be key to facilitating the energy transition.

Gas is a core displacement fuel to replace coal and an essential complement to the roll-out of intermittent renewable generation, particularly so in developing economies which will be unable to bear the initial higher cost of low-carbon generation. Even in developed economies this will only be achievable with government support. We therefore anticipate gas demand to peak around 2040.

There were severe dislocations to the global gas market in 2022, as Russian supplies diminished and Europe attracted LNG at prices unaffordable to many developing economies.

The market is likely to remain tight through to 2026, when significant amounts of new LNG supply, equivalent to 50% of 2022 supply, are expected online. This new supply which will originate in the US, Qatar and Africa, will primarily be consumed by developing Asian economies, enabling them to underpin economic growth and move away from coal.

New LNG supply: projects by location[1]



1. Numbers may not add up due to rounding.

A power-hungry world

Demand for power will be driven by two underlying trends:

- In developing economies, economic growth and increased wealth will enable the consumption of higher levels of power: over 700 million people still do not have access to electricity and utility generation per capita in the US is some 14 times greater than in Africa
- In developed economies, the displacement of hydrocarbons will increase the demand for power. Although in both Europe and the US, policymakers appear determined that a significant proportion of this power should be satisfied by renewables

Globally, significant growth in renewable generation is expected. Solar capacity is anticipated to increase from 850 GW in 2021 to 3,500 GW in 2030 and wind from 825 GW in 2021 to 1,900 GW in 2030.

This growth will also require considerable investment in the electricity infrastructure to enable power grids to manage the different profile of renewable generation.

CLIMATE CHANGE

Understanding climate-related risks and opportunities

Vitol considers climate change and how we address it to be one of the most complex and pressing issues facing society and businesses today. Unmitigated climate change will present societal and financial challenges in the coming decades. To combat this, global economies are shifting to a more sustainable energy model with many governments and companies focusing on more climate-centric policies. The speed and effectiveness of the energy transition will shape the context in which our business and the energy sector operates.

Vitol devotes resources to understanding and managing the risks and opportunities arising from climate change. As a major participant in energy markets worldwide, we are mindful of the need to realign our business and the important role we can play as part of this change, whilst ensuring that the energy needs of our counterparties continue to be met. Our expertise and global reach mean we are well placed to identify and establish opportunities to try and develop a long-term and sustainable business for our shareholders, counterparties, and society.

Vitol recognises the recommendations of the Financial Stability Board's Task Force on Climate-related Financial Disclosures (TCFD) that enable our stakeholders to understand the potential impacts of climate-related risks and opportunities on our business. Our stakeholders expect transparency and disclosures, yet the complexity and the uncertainty associated with climate change make it difficult to predict impacts on Vitol.

Our TCFD implementation roadmap[1] sets out our pathway, whilst recognising that this is a continual process, over the years to come. Since 2021, we have refined our previous disclosures and implemented additional recommendations on climate-related investee's engagement, risk process integration into overall risk management, key metrics and environmental targets.

TCFD RECOMMENDATIONS	DISCLOSURE	REFERENCE
Governance	Board's oversight and management role in managing and assessing climate-related risks and opportunities	p. 79, 81, 82
Strategy	Identified climate-related risks and opportunities	p. 83, 84
Risk	Climate-related risk identification and assessment processes, investee's engagement, and integration into overall risk management	p. 85
Metrics and targets	Capital committed to sustainable investments	p. 17, 31, 86
	Share of transitional energy products physically delivered	p. 28, 86
	Renewable power operational generation capacity	p. 33, 86
	Carbon intensity for shipping activities	p. 42, 86
	Scope 1, 2, and 3 GHG emissions	p. 48, 86
	Freshwater extraction	p. 51, 86

TCFD

Vitol is embedding the recommendations of the TCFD within its business. Detail to these recommendations can be found thoughout this report – specifically where the TCFD logo appears.

Solar project, Ramapo, New Jersey, US

1. See p. 80.

ENGAGING WITH STAKEHOLDERS

Informing our approach

We greatly value our international network of stakeholders for the insights they provide, and we seek to facilitate consistent, coordinated and meaningful engagements. We believe it not only strengthens relationships but introduces improvements to our approach. In line with IPIECA guidance, we conduct stakeholder mapping to identify key groups and prioritise our engagements. We engage stakeholders who hold both positive and negative perceptions of Vitol to inform our approach to E&S management. Sentiment and critical matters raised by stakeholders is collated and reported to the Board and to the ESG committee as appropriate.

STAKEHOLDER	WHY WE ENGAGE	HOW WE ENGAGE
Co-investors	We invest in many of our energy assets alongside a select group of investment partners, including private equity, family offices and sovereign wealth funds	We maintain active, year-round, open dialogue with co-investors through the portfolio-company Board and committee meetings
Customers and counterparties	We have business relationships with companies that produce, consume and move energy. Our counterparties include governments, national oil companies, manufacturers, and local and national power grids. We believe in partnership and look to invest in long-term relationships	Every day, we engage with parties through our commercial teams
Employees	Our employees are our most important stakeholder group. We rely on their expertise, commitment and professionalism for the business to function and succeed. As an employee-owned business, there are governance processes in place to ensure appropriate challenge and review of Board decisions. We believe this ownership model, unusual in a company of our size, engenders a culture of challenge and high performance	We communicate via email, virtual and face-to-face townhalls, intranet content, employee networks and events. Communication is led by senior management, directors and team leaders
Financial institutions	We are fortunate to work with over 100 banks worldwide on the financing of our core business and strategic investments. Equally, insurance is key to helping us manage the physical risks of our business and we have longstanding and strong relationships with our insurers. Increasingly, our banks and insurers are seeking not only insight into operational awareness of our assets and investments but longer-term strategic insights such as climate-related risk	Through corporate presentations and results meetings, and regular bilateral calls and meetings
Government	We seek to have an open and constructive relationship with governments in every jurisdiction in which we operate	Communications with governments are maintained through statutory representation and multilateral meetings
Impacted communities	We seek to develop two-way communication channels with relevant stakeholders to ensure Vitol and local E&S frameworks are understood and implemented. For exploration and production projects, we tailor our approach depending on the type of project, geography and commodity in question, as well as the requirements of local regulations, and our operating and financial partners. As part of any E&S impact assessment, we seek to engage and consult with all relevant impacted stakeholders, including disclosing information to affected communities throughout our operations	We seek to uphold positive relationships with communities via project and location specific engagements based on community impact and needs
Media	We regard free and independent media as an important part of society	We engage with the media on a regular and ongoing basis through our communications department
Non-governmental organisation (NGO)	We respect the role that NGOs play in society	We engage with NGOs as appropriate, either directly or through our portfolio companies
Portfolio companies	Our portfolio companies represent the breadth of the energy sector. As a shareholder, our responsibilities extend to them and their employees	In many instances, we hold Board positions in our investments and therefore conduct engagement through this channel. Our E&S team engages through its audit processes and via peer to peer meetings and workshops
Regulators	Our business requires us to operate across regulated and unregulated markets worldwide. We seek to have an open and ongoing dialogue with regulators wherever we operate	Engagements with regulators are maintained through bilateral meetings, regulatory filings and upon request

MATERIALITY

Understanding stakeholder interests

We engage with key stakeholders to identify and understand the topics most material to them and which have the potential to influence our business strategy. During the year, we conducted a formal materiality assessment process.

A materiality assessment enables effective governance and risk management by informing our policies, systems and procedures. A material issue is any topic that can affect a company's performance significantly. They tend to be issues that most affect value creation and the economic and reputational resilience of a company positively or negatively. We used the GRI G4 guidelines and IPIECA guidance as a basis for the assessment.

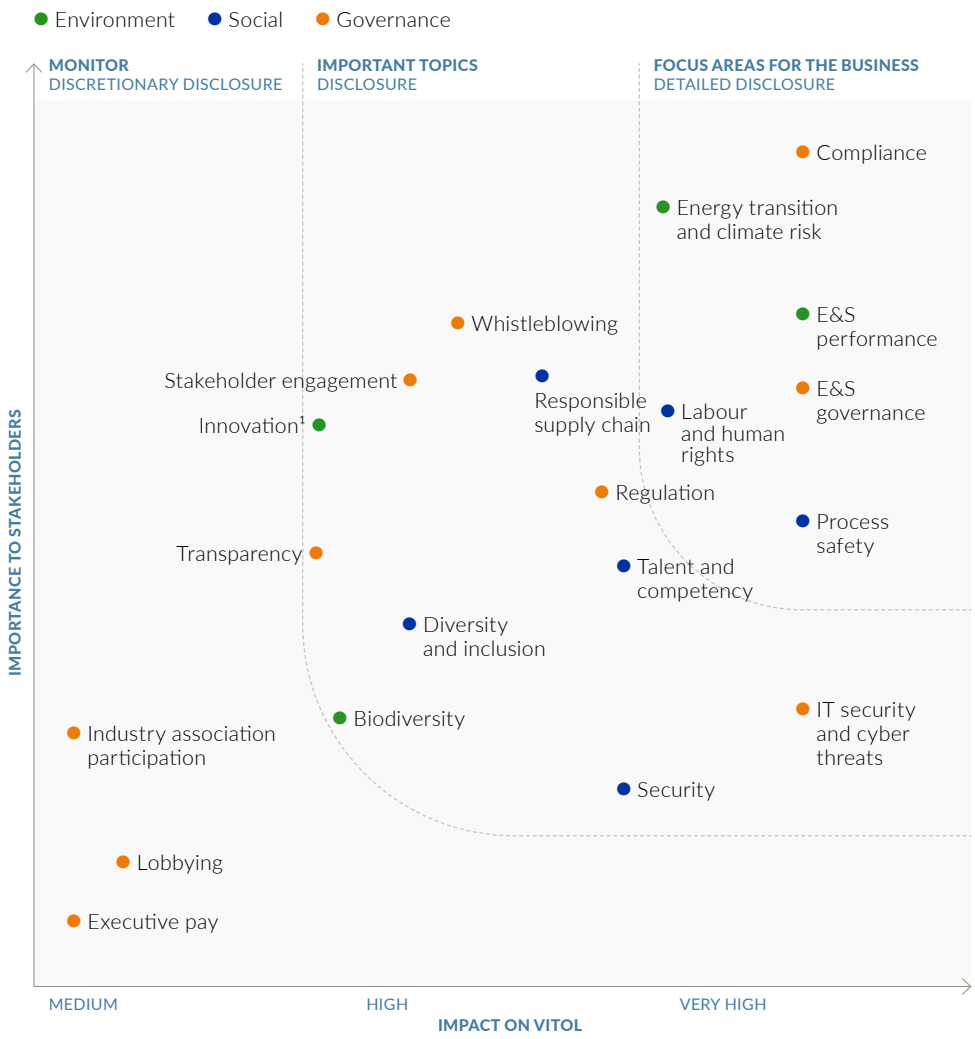
The external stakeholders engaged include our investments, counterparties, financial institutions and our co-investors. All discussions were led on an open and confidential basis via structured interviews using a list of potential material ESG topics. Internally, we received feedback at various levels, including from senior team leaders. We followed a two-step process.

Identification

Using the 2021 list of topics as a basis, we undertook a review to identify any new or emerging issues that might arise in 2022, and to understand the relevance of existing subjects based on their evolution in recent years. This enabled us to set a priority list of 20 topics that are directly or indirectly connected to Vitol's business and stakeholder interests.

Assessment and prioritisation

The interviews allowed us to manage and assess material issues and identify the top tier topics for Vitol. Each area was ranked based on its perceived impact on Vitol's business success and its perceived importance to external stakeholders. Subsequent sections of this report provide a transparent overview of our 2022 performance against these topics.



1. E.g. transitional and sustainable solutions.

Approach to E&S

Embedding E&S across our business

VPI Rye House power station, UK

HEAD OF E&S LETTER

Ben Winterton, Vitol Head of E&S

Assessing our performance and embedding ESG

This year, we set about understanding the opportunities and impacts across our business

Commodity trading is our core business. Every year we deliver over 500 Mtoe of energy products worldwide. As a leading organisation moving commodities around the globe to meet the world's energy needs, we have a significant role to play in the transition to a lower-carbon world. In this context, 2022 was a pivotal year for Vitol, with ESG playing a significant part in mitigating risk and capturing opportunity.

Embedding ESG into our business

We have revised our E&S strategy to make it more commercially relevant and drive support from our varied stakeholders. To ensure the success of this strategy and demonstrate our commitment to underpinning our business operations with ESG principles, we have grown Vitol's E&S department to six members across Geneva and Rotterdam. We have also appointed an E&S manager to specifically address the energy transition across our shipping activities that make up one of the most material environmental impacts of our business.

The team continued to support trading matrices to further embed ESG topics, with a focus on the energy transition and human rights. In particular our collaboration with the carbon matrix increased and we are currently trialling a third party to independently verify the ESG risks and co-benefits of the voluntary carbon projects we are developing. A unique approach that we believe will bring additional credibility and value to our projects.

We also progressed our energy transition agenda, improving our proprietary GHG footprint calculation engine, advancing the implementation of TCFD recommendations against our transition roadmap, as well as providing additional transparency on our E&S performance.

The business has met the human rights goals laid out in our third governance and reporting plan. We also delivered our second human rights impact assessment with V-Bunkers which we piloted in 2021 in Latvia. In addition we met all targets associated with embedding the Voluntary Principles on Security and Human Rights (VPSHR).

Following the alleviation of pandemic restrictions, we intensified on-site engagements at investments with over 15 visits across the world. These visits covered E&S reviews, human rights impact assessments, integration appraisals, and haulier audits, to ensure that adequate controls are in place and to share E&S best practices.

HEAD OF E&S LETTER

Ben Winterton, Vitol Head of E&S

Assessing our performance

In order to provide transparency around our approach, processes and policies, we have attempted to produce a clear performance update that presents a fair assessment of progress and outlines our future objectives. This report should be read in conjunction with previous reports and in reference to our website where static content and more details on processes are available.

Progress has been clouded by three fatalities that occurred at non-controlled investments and a contracted haulier. We consider these to be both tragic and unacceptable. We must learn from these sad events to prevent reoccurrence.

We set ourselves some challenging objectives for 2022 and met half of these. Over the last four years our performance has generally improved. Severe process safety events decreased by 30% across all companies in which we are invested, with zero experienced by Vitol-controlled companies. This is a solid achievement which we will continue to build upon. The volume arising from large spills decreased by over 40% to 253 m^3 versus the previous year which is also an improved performance. Our TRIR performance increased slightly, but is relatively strong when compared with recognised benchmarks.

Emissions from controlled sources covering scope 1 and 2 increased by 1.5% to 1.6 Mt CO_2e due to increased activities at an upstream investment and a refinery in Malaysia coming online. Those from the rest of the value chain increased by 3.6% to 23 Mt CO_2e. These increases were largely driven by volatile geopolitical circumstances disrupting previously established trade flows.

We continue to focus on data quality, which is understandably challenging given the many millions of data points contained within our GHG footprint calculation engine and E&S platform.

Stakeholder feedback during the year highlighted the expectation that Vitol commits to setting objectives and targets beyond one-year. We have subsequently agreed both short and medium-term measures related to environmental and social performance, as well as setting objectives relating to E&S governance.

I would like to extend my gratitude and thanks to the companies in which we are invested along with our business partners for their commitment, proactive and enthusiastic approach to E&S matters. We are improving year-on-year, but we still have a lot to accomplish. As ever, we welcome any feedback on this, our third ESG report.

SPILLED VOLUMES[1]

-43%

SEVERE PROCESS SAFETY EVENTS[2]

-30%

TOTAL RECORDABLE INJURY RATE[3]

1.32

SCOPE 1+2 EMISSIONS

1.6 Mt CO_2e

SCOPE 3 EMISSIONS

23 Mt CO_2e

VNT, Ventspils, Latvia

1. Volume of substances arising from large spills.
2. Tier 1 process safety events, i.e. unplanned or uncontrolled releases of material which result in severe consequences for a worker, the community, the company or the environment.
3. Number of recordable injuries, i.e. fatalities, lost time injuries (LTIs), restricted work injuries (RWI), and medical treatment cases (MTCs) per million hours worked.

E&S APPROACH

Vitol E&S strategy

Enabling sustainable progress

Without changing our overall approach, we have revamped our environmental and social strategy to make it more commercially relevant, contribute to value creation, and facilitate risk management. It links to our six principal work areas (governance, human rights, energy transition, risk management, education and training, and reporting), enhancing reputational and qualitative value, in addition to improving commercial success.

Our E&S strategy is made of seven building blocks, split across trading operations and our investment portfolio.

Trading operations

Refers to Vitol-led initiatives and activities such as trading and physical operations.

Increase earnings

E&S performance directly contributes to sustainable profits. The progress we have made under the Vitol Energy Transition Initiative (VETI) directly translates to increased earnings. For example, making ESG core to the voluntary carbon projects we are developing and generating over 50 Mt CO_2e of credits by 2030 helps counterparties to meet their energy transition and Net Zero aspirations.

Manage operational risks

Understanding and managing E&S risk across transactions helps us to carefully manage operational risks. During 2022, we undertook risk-based E&S due diligence on all companies in which we took equity and increased the breadth of our E&S KYC[1] activities.

Address legal & regulatory matters

Positive E&S performance helps to reduce Vitol's risk of adverse legal action. Shortcomings generally lead to downside risk. We continue to keep abreast of, and comply with E&S regulations across our activities.

Sustain talent & productivity

A strong E&S proposition helps to retain and attract talent. Our 2021 ESG report received positive feedback from stakeholders, particularly employees and new joiners, who appreciate transparency around our role as an energy trader and how we embed ESG across our business.

1. Know your counterparty.

THE SEVEN BUILDING BLOCKS OF OUR E&S STRATEGY

Investment portfolio

Refers to the companies in which Vitol is invested and where Vitol allocates capital.

Optimise resource use & cost efficiency

Optimising resources is better for the environment and makes economic sense. We continue to review resource consumption and encourage improved efficiency across our portfolio.

Preserve licence to operate

Strong E&S performance is an enabler and directly preserves our licence to operate. Undertaking more than 15 audits, reviews and integration visits, monitoring, analysing, and reporting lagging and leading E&S KPIs has facilitated an improved performance and acts as a precursor to negative events.

Rebalance capital allocation

Allocation of capital to transitional and sustainable business opportunities e.g. renewables, environmental products trading and LNG enhances the sustainability of Vitol's business. Highlights include achievements such as our acquisition of Vortex energy. Our committed capital now sits at $2bn+ into the sustainable solutions segment.

A business in transition

Solving today's challenges and investing for the future

Crude oil and products are the foundation of our business, but the breadth of energy products we trade has expanded and we have invested significantly in building transitional and renewable energy businesses over the last few years. Whilst climate change poses a financial risk to part of our business in the medium to long term, the transition to lower-carbon sources of energy provides opportunities.

Our ambition is to play an active role in delivering the energy transition, alongside our participation in crude oil and product markets.

Physically delivered volumes from our trading activities

~200 Mt crude, **50+ Mt** gasoil, **40+ Mt** gasoline, **30+ Mt** fuel, **10+ Mt** jet, **10+ Mt** naphtha

1,500+ TWh natural gas, **500m+ MMBtu** LNG, **~10 Mt** LPG, **150+ TWh** power

100+ MtCO_2e high-quality carbon compliance credits and voluntary offsets

UN SDGs

7 AFFORDABLE AND CLEAN ENERGY	TARGETS 7.1 7.2	We are the world's largest independent trader of energy. We have invested in a range of renewables projects and continue to seek new opportunities
12 RESPONSIBLE CONSUMPTION AND PRODUCTION	TARGET 12.2	With a growing portfolio of renewables around the world, we are well placed to adjust to the shift in energy demands
13 CLIMATE ACTION	TARGET 13.3	We are committed to reducing the impact of our operations and increasing the use of renewable energy

ETT, VTTI, Amsterdam, Netherlands

VITOL'S ENERGY TRANSITION STRATEGY

Delivering a business for the future

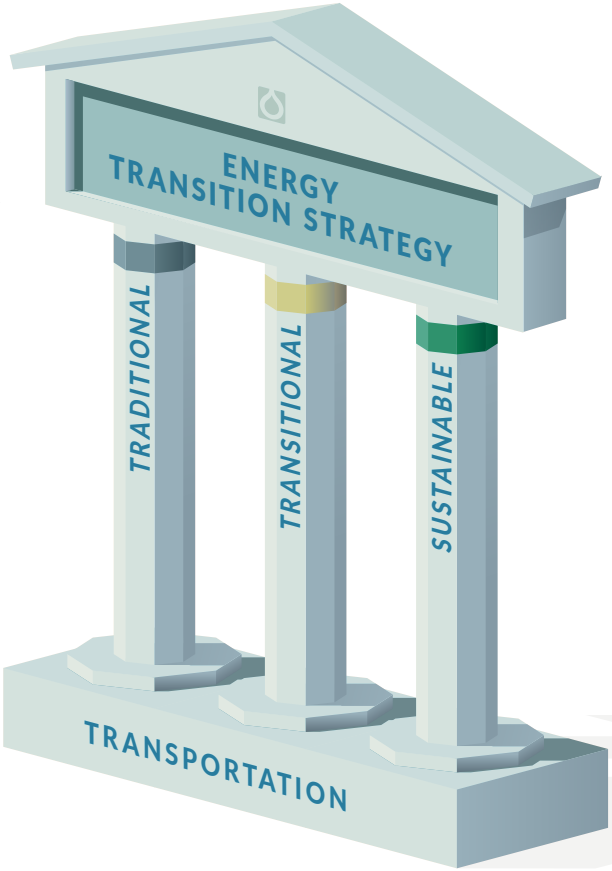
Our energy transition strategy is built on three pillars: traditional, transitional and sustainable energy solutions. Our expertise and organisational structure means we are well-positioned to deal with the evolving contexts and opportunities presented by these pillars. Transportation is the platform upon which these pillars rest, enabling us to deliver our solutions to counterparties across the world through our trading activities.

TRADITIONAL ENERGY SOLUTIONS
Crude oil and products trading supported by infrastructure such as upstream production, storage, refining and retail stations

TRANSITIONAL ENERGY SOLUTIONS
Gas, LNG, LPG, power and biofuels trading and associated assets, as well as solutions such as waste-to-energy or pyrolysis processes

SUSTAINABLE ENERGY SOLUTIONS
Environmental products trading and sustainable energy technologies, such as solar and wind power, and carbon projects

TRANSPORTATION
Owned, controlled and non-controlled vessels and barges, with critical support from our technical managers such as LSC and V-Bunkers, plus pipelines, railcars and trucking



TCFD

Capital employed across our three pillars

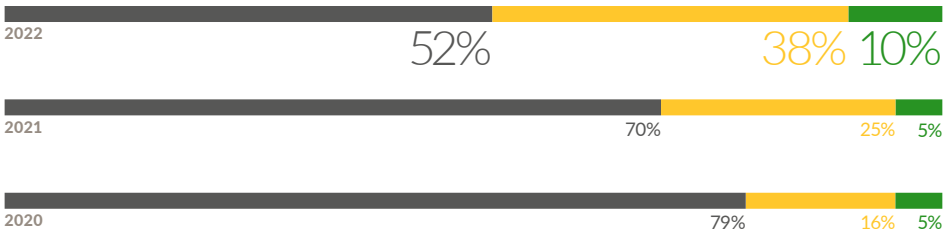
Since 2021, each of our Board meetings has included discussions on our sustainable capital commitments and the reallocation of our capital employed towards transitional and sustainable energy solutions.

To date, Vitol has committed **over $2 billion of capital to sustainable investments** in projects and assets such as solar and wind power farms, biogas plants, green hydrogen generation, and EV-charging.

By the end of 2022, 48% of Vitol's capital employed[1] was used for activities facilitating the energy transition and decarbonisation of our society:

- 10% in sustainable assets, growing from 5% in 2021 driven by investments in wind, solar and carbon projects
- 38% in transitional assets, growing from 25% in 2021 due to natural gas, LNG and power growth.

Adjusted capital employed across our three pillars



1. Total assets net of cash, short-term liabilities, lease and deferred tax liabilities.

VITOL'S APPROACH TO THE ENERGY TRANSITION

Vitol Energy Transition Initiative (VETI)

Implementing change

Launched in 2020 to evolve and implement our business strategy, we have structured our efforts through the VETI, which focuses on three core objectives underpinned by nine workstreams[1], involving over 100 employees to deliver on our key priorities.

The table on the right sets out the VETI structure and achievements accomplished throughout 2022.

OBJECTIVES	WORKSTREAMS	WORKSTREAM GOALS	2022 ACHIEVEMENTS
Grow low-carbon opportunities	Sustainable investments	Invest capital and acquire sustainable projects and assets	• Onboarded new solar & wind energy projects, growing our renewable power generation operational capacity to 1.2 GW (more than doubled since 2021) • Committed another $800 million to sustainable investments, exceeding $2bn+ in capital committed since 2018
	Trading opportunities	Structure innovative transitional and sustainable products and solutions,[2] educate the market, and provide access	• Broadened carbon dataset to improve counterparty understanding of product carbon footprint via Vitol Energy Transition Solutions (VETS) • Grew transitional share of delivered energy volumes to 32% from 26% in 2021
	Environmental products and solutions	Route to market for the highest quality compliance and voluntary carbon credits and offsets[3]	• Built new partnerships with state entities and developers across a range of projects (e.g., forestry, sustainable farming, water purification) supporting local communities • Traded over 100 Mt CO_2e carbon products in 2022
Manage climate-related risks and decarbonisation	Investment portfolio	Drive climate-risk management and decarbonisation across our assets	• Reviewed physical climate risk mitigation planning for key assets in upstream, power generation and downstream segments • Developed short- and mid-term GHG emissions forecast per investment
	Transportation	Reduce GHG footprint of our vessel fleet and optimise logistics	• Ordered energy-saving technologies for our tanker fleet • Disposed of older, less energy efficient ships
	Offices	Limit the environmental impact of our offices and business travel (e.g. power consumption, waste, flights)	• Drafted an office sustainable procurement policy, rolled out in our major offices • Reduced office waste by recycling and composting
Provide transparency and take action	Data capture and internal reporting	Measure our GHG footprint, and provide internal transparency on climate-related metrics and trends	• Improved our GHG footprint engine to cover additional scope 3 categories and increase data accuracy, and estimated our shipping black carbon emissions • Built out carbon intensity (CI) reporting across our business segments
	Energy transition planning	Adapt our approach to emerging trends and new science, and integrate climate change impacts into decision-making	• Streamlined VETI and further formalised our energy transition strategy • Reviewed climate-related risks and opportunities for our business • Aligned internal stakeholders on key metrics tracked to inform decisions
	ESG communications	Communicate with stakeholders on our ESG efforts	• Conducted stakeholder engagement and materiality assessment efforts • Enhanced our TCFD disclosures in line with the roadmap

1. Streamlined from 2021 VETI with four objectives and 11 workstreams where workstreams involving the same teams and overlaps were grouped together.
2. E.g. renewable power purchase agreements (PPAs), sustainable aviation fuels (SAF), carbon offset bundling with energy products.
3. Removals (carbon sinks, e.g. afforestation and reforestation projects), avoidance (e.g. energy-efficient cookstove and water purifier distribution projects).

VITOL'S APPROACH TO THE ENERGY TRANSITION

Our energy transition ambitions

Investments

Continue to increase investment in sustainable solutions.

Keep developing additional renewable power generation projects.

Trading

Continue to increase the volume of sustainable and transitional commodities traded year-on-year.

Grow our carbon trading volumes to reach a size that is comparable to our presence in crude oil and products trading.

Shipping

Optimise the operational, technical and fuel use performance of our controlled vessels to reduce emissions.

Continue to reduce the carbon intensity of our vessel portfolio and to introduce on-board efficiency programmes across the fleet.

Achieve IMO's 2030 carbon intensity reduction target of -40% from a 2008 baseline as early as the end of 2024.

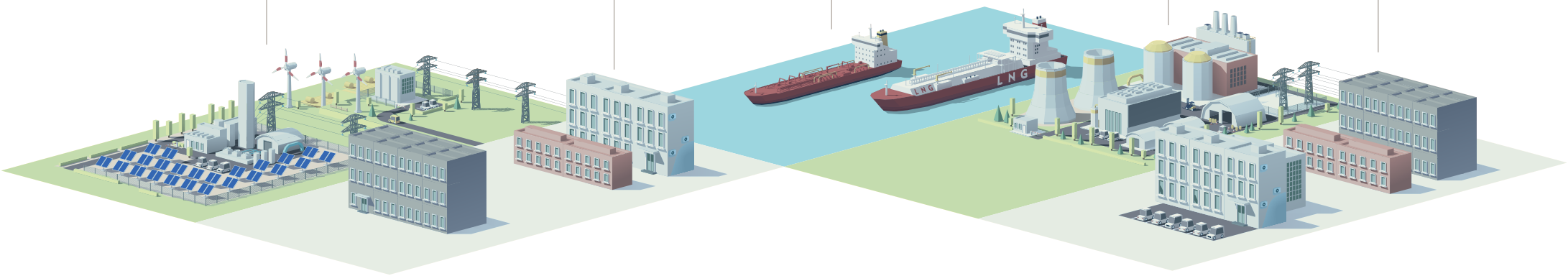
Decarbonisation

Monitor carbon intensity across shipping, upstream, power generation and refining. Report on this in future years.

Use our Board membership in companies in which we are invested to integrate decarbonisation into business plans.

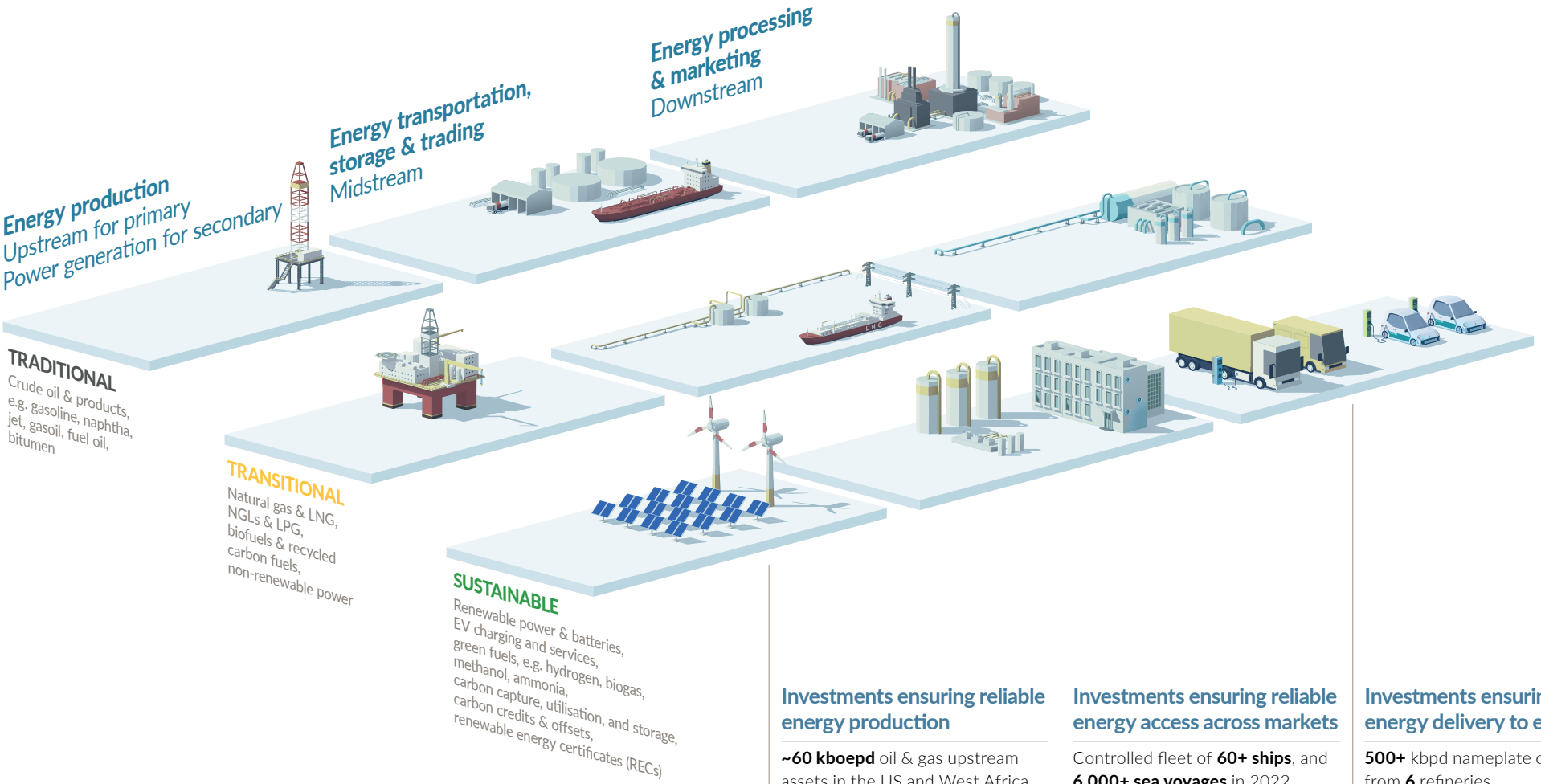
Governance

Keep embedding TCFD recommendations into our energy transition strategy, in line with our roadmap.



VITOL'S APPROACH TO THE ENERGY TRANSITION

The energy value chain



Investments ensuring reliable energy production

~60 kboepd oil & gas upstream assets in the US and West Africa

3.3 GW of gas-fired power generation capacity

1.2 GW of operational renewable power generation capacity

Investments ensuring reliable energy access across markets

Controlled fleet of **60+ ships**, and **6,000+ sea voyages** in 2022

17+ M m³ in oil & products storage including LNG and LPG

Investments ensuring reliable energy delivery to end-users

500+ kbpd nameplate capacity from **6** refineries

~7,000 service stations worldwide

Traditional energy solutions

We anticipate that the world will continue to require traditional energy sources, including hydrocarbons, for at least the next decade. This will ensure an affordable supply of energy is available to assist in the transition to a lower-carbon society. We will continue to selectively invest in certain hydrocarbon asset classes such as our upstream investments in the US and believe that a flexible and pragmatic strategy is the optimal way to manage the changing realities of the energy transition.

Vitol's crude oil and products operations encompass a range of products including gasoline, naphtha, distillates, fuel oil and bitumen. This business line will continue to grow modestly until the early 2030s and will still be part of the energy mix in the long term.

Our objectives:

Minimise emissions related to trading activities, e.g. transport and storage

Continually assess the performance of our investments in traditional energy infrastructure

Capture opportunities and deploy capital to fill near-term supply gaps.

FIND OUT MORE

FRCL, Fujairah, UAE

TRADITIONAL ENERGY SOLUTIONS

Ensuring reliable energy flows

Our traditional energy assets around the world*

vtti Operator of 17 terminals in 15 countries across 5 continents, providing over 10 M m³ of storage for liquid and gaseous products

VARO Energy Downstream European group, manufacturing, storing, and distributing conventional fuels, whilst developing sustainable offerings

LSC Latvia-based global partner to ship owners, offering full technical management of vessels, including crewing

VPR Vitol Processing Rotterdam Vitol-owned refinery in Rotterdam, processing crude oil and condensate to produce naphtha, jet fuel, gas oil, and residuals

Petrol Ofisi Downstream Turkish group, delivering fuel, lubricants, chemicals, and services to domestic and export markets for air, sea, and land vehicles

Vencer Energy Houston-based upstream oil and gas company, operating large producing assets in the Midland Basin of West Texas

Fujairah refinery Strategically positioned refinery near the Strait of Hormuz, processing crude oil into gasoline and other products

SANKOFA Offshore Cape Three Points (OCTP) upstream project in Ghana, developing oil and non-associated gas fields in partnership with ENI and GNPC

ATB Malaysian refinery located next to Asia's largest trading hub, producing bunker fuels

VBunkers Singapore-based bunker craft owner, manager, and operator, offering reliable barging services to global ship owners and charterers

VIVO ENERGY Pan-African retailer and distributor, marketing Shell and Engen-branded fuels and lubricants with 2,500+ service stations in 23 countries

VIVA Energy Australia Downstream Australian group, operating Geelong refinery and distributing Shell and Liberty-branded energy products

* This map includes both Vitol controlled and non-controlled businesses.

TRADITIONAL ENERGY SOLUTIONS

Helping our counterparties to decarbonise

Vitol's traditional business is underpinned and supported by upstream, midstream and downstream assets.

Crude oil and product solutions

Globally, we trade over 100 different grades of crude oil and a range of refined products accounting for over 7 mbpd; buying from producers and delivering high -quality products on time and of the right specification to refiners, wholesalers and distributors. Our counterparties are becoming increasingly cognisant of the carbon intensity (CI) profiles of molecules that we supply.

We develop innovative climate-related services and solutions for counterparts. Some solutions will only be needed in the short and medium-term as markets and technology evolve to meet energy transition requirements and decarbonisation activities accelerate throughout the value chain. To service the needs of the business and our counterparties, we established VETS that has developed tailored offerings for the commodities we trade for our clients.

Examples of how we are helping our counterparties to decarbonise and compensate for emissions include:

- Supplying low-CI naphtha to petrochemical manufacturers by sourcing crude grades from low-intensity fields, optimising sea transport with efficient vessels, and processing product through our VPR refinery in Rotterdam that is now leading global refining carbon intensity benchmarks (six times lower than the European average and nine times below the global average),[1] due to considerable investment from Vitol over the last seven years
- Providing GHG data to counterparties for parts of the hydrocarbon supply chain (e.g. transport legs) for them to include in their calculations and strategies, which has in part contributed to Vitol winning certain tenders
- Offering, via V-Bunkers, an offset bunker fuel to counterparts wishing to compensate for the combustion or lifecycle emissions generated from the fuel oil we supply to them. We supplement this by supplying high-quality carbon offsets and removals from our carbon matrix

Positively impacting our investments

Using our influence as a Board member and a shareholder, we actively encourage our traditional business investments to consider energy transition as both a risk and, more importantly, as an opportunity to make energy transition commitments:

- Varo Energy set a 40% absolute reduction target in scope 1 and 2 GHG emissions by 2030 vs. 2022 baseline and a Net Zero objective for scope 1, 2, and 3 emissions by 2040
- Viva Energy set a Net Zero scope 1 and 2 emissions target across retail, fuels, and marketing by 2030 and committed to a 10% reduction in Geelong refinery's emissions intensity by 2030 vs. 2019 baseline via energy efficiency and operational optimisation projects. It also committed to Net Zero scope 1 and 2 emissions across all operations by 2050
- VTTI set a 45% reduction target in operational GHG emissions by 2030 vs. 2019 baseline and a Net Zero objective by 2050. This has led to the development of energy management and GHG reduction plans for each terminal

Vivo Energy, Africa

1. Based on publicly available EU refinery production and emission data, and global crude oil refining benchmarks.

TRADITIONAL ENERGY SOLUTIONS

Q&A Eric Hasso, ESG Director, Vencer Energy

Vencer Energy, a responsible operator

Implementing Vitol's E&S framework

From inception, Vencer embraced sustainable and responsible operations

Where does Vencer Energy sit in the Vitol portfolio, how has it aligned itself to the company's ESG strategy and how do you fit into this?

Vencer Energy is an upstream exploration and production company with assets located in the heart of the Permian Basin, in the US. Vitol acquired these assets in June 2021 and assembled a very capable leadership team. From inception, Vencer embraced sustainable and responsible operations, adopting the Vitol E&S framework, creating relevant E&S procedures and ensuring that emergency response controls are in place, all of which I am responsible for implementing.

Given the importance of sustainability to both ourselves and Vitol, I sit on Vencer's ESG steering committee. With a background primarily focused on environmental compliance and sustainability I bring a significant amount of industry experience to our operational and corporate strategies. Utilising my experience and recognising the need to deliver energy more responsibly. I am completing my MBA in Energy and Sustainability from Franklin Pierce University.

Safety is the industry's number one priority. How does Vencer approach the issue?

Culture matters at Vencer. As John Kotter noted, "culture eats strategy for breakfast".[1] From the beginning, management recognised the need to enhance the safety culture in the field. Increased activity in the industry has led to a surge of inexperienced employees in the basin, presenting a risk for occupational safety. In 2022, we implemented an intensive safety transformation programme for our field staff. This included changes to how we handle medical cases, investigate incidents, document safe work practices, and improve our safety SPACs (standards, policies, and administrative controls). The transformation program concluded with a two-day "Life Critical Program Bootcamp," which focused on key safety topics relevant to upstream oil and gas operations, such as safe driving, hot work, confined spaces, hydrogen sulphide and lockout.

Climate-related risks are rising on both corporate and financial institution registers. How is Vencer addressing these risks at an operational level?

Firstly, we have focused on reducing routine flaring to limit our carbon emissions. During the second half of 2020, the previous owners of these assets flared 2.5% of the total produced gas. However, through careful planning, midstream contracts, and additional natural gas sales points, Vencer has been able to reduce its flare volumes to just 0.4% of total production in 2022. This not only reduces our greenhouse gas discharges, but also allows us to bring a valuable commodity, natural gas, to the market.

1. John Kotter, *Corporate Culture and Performance* (1992), pp. 4-8.

TRADITIONAL ENERGY SOLUTIONS

Q&A Eric Hasso, ESG Director, Vencer Energy

In addition, Vencer is committed to achieving a 1% flaring intensity target as well as aligning with the World Bank's goal of zero routine flaring by 2030.

Secondly, methane is a greenhouse gas that is 25 times more effective than carbon dioxide at trapping heat in the atmosphere, according to the US Environmental Protection Agency. At Vencer, we are committed to reducing our emissions of this harmful gas. Our methane management practices include low-emission completions, tank and equipment controls, low and no-bleed gas-driven pneumatic devices, and fugitive emission monitoring with leak detection cameras, LIDAR (laser imaging, detection, and ranging) flyovers, and other innovative technology.

In 2022, we introduced a number of new initiatives to further improve our methane management. We installed and retrofitted multiple tank batteries with instrument air systems, which allow us to run equipment using compressed atmospheric air instead of natural gas, resulting in zero greenhouse gas emissions. Additionally, in October, we conducted our first aerial fugitive emission survey using LIDAR technology from a low-flying aircraft across a material proportion of our battery asset base. This aerial approach enables us to survey sites much more quickly than using a "boots on the ground" method. Following its success, and to enhance our operational emissions management program, we plan to perform aerial LIDAR surveys across all our tank batteries from 2023.

Lastly, we also consider water management within the context of climate-related risk. Vencer operates in an arid region of West Texas, and therefore it is important for the company to address freshwater stress and availability. The company has a contract to use at least 30% recycled water in its completion activities next year which will preserve over 5.5 M barrels of fresh water.

What other bodies inform Vencer's approach to ESG risk management and the design of your programme?

In September, Vencer became the 100th energy company to join the American Petroleum Institute's Environmental Partnership. This partnership brings together companies in the US oil and natural gas industry that are committed to improving the industry's environmental performance. Members of the Environmental Partnership work to implement best practices and technologies, learn about new approaches, and collaborate to develop natural gas and oil resources in a responsible manner.

Together with our parent company Vitol, Vencer systematically addresses ESG-related risk across our operations. Executive and field leadership convene regularly, through the ESG steering committee, to identify risks that Vencer faces and continually devise mitigation strategies for those risks.

Vencer Energy, Permian Basin, US

Together with our parent company Vitol, Vencer systematically addresses ESG-related risk across our operations

Transitional energy solutions

Transitional energy solutions encompass a variety of energy sources, from those needed during the initial stages of the transition, to those that have a medium and long-term role in the energy mix. The transition to sustainable forms of energy will be a gradual process, as new technologies and infrastructure need to be developed and implemented on a large scale.

Our objectives

Gas, LNG and LPG

Expand our presence in natural gas, LNG and LPG, both as a displacement for solid fuels and as a near and medium-term complement to the intermittent nature of power generated from renewables

Power

Build on our expertise and understanding of power markets to support electrification of energy demand

Biofuels

Increase the volumes of bio-blended fuels delivered across all transport sectors, and repurpose existing infrastructure as appropriate

Recycled carbon fuels

Invest in established and development-stage recycled carbon fuels to facilitate the creation of new technologies and scale-up existing technologies, e.g. waste-to-energy.

LNG station, ViGo bioenergy, Mannheim, Germany

TRANSITIONAL ENERGY SOLUTIONS

Investing in lower-carbon solutions

Our transitional energy assets around the world*

WPU (Waste Plastic Upcycling): Waste plastic upcycling facility in Denmark, applying pyrolysis technology to treat wasted polymers and produce recycled plastic oils

VPI: UK-based power generation company, operating Immingham CHP[1] and four CCGTs[2], and part of the Humber Zero decarbonisation project

Vitol Biofuels Marketing: US downstream services, processing corn-based ethanol and blending and marketing biofuels

ViGo bioenergy: Germany-based network of truck LNG stations, supplying LIQUIND-branded LNG and bioLNG to heavy goods vehicles

vtti: Operator of 17 terminals in 15 countries across 5 continents, providing over 10 M m^3 of storage for liquid and gaseous products

Biofuel solutions

Vitol has a global biofuel footprint across all transport sectors.

Road

We supply biodiesel and ethanol as blending components to final fuel in Europe and the US.

Maritime

Our strong presence in major bunker ports allows us to deliver ready bio-blends for marine counterparties worldwide, including initial trial deliveries of biofuel blended very-low sulphur fuel oil (VLSFO) with the support of the Maritime and Port Authority of Singapore (MPA).

Aviation

Leveraging our strong competencies in aviation and as part of industry associations, we lead the development of sustainable aviation fuel (SAF) quality and distribution requirements to ensure the future sustainability of the sector.

* This map includes both Vitol controlled and non-controlled businesses.

1. Combined heat and power.
2. Combined cycle gas turbines.

TRANSITIONAL ENERGY SOLUTIONS

A growing segment of our business

The share of transitional energy products in our business increased to 32% from 26% driven by natural gas demand.

Natural gas & LNG solutions

Vitol is at the forefront of LNG trading. We have built up a long-standing network of counterparties and a significant portfolio of long-term, mid-term and spot contacts. Access to infrastructure plays a key role and having multi-year contracts with regasification terminals, time-charter and dedicated spot charter vessels, we offer reliability and flexibility to our counterparties.

As a leading participant in the two largest natural gas markets, North America and Europe, our gas trading offering is well integrated into our utility business to provide balanced supply and demand flows around the world. Our investment in gas generation in the UK also provides insights into power-driven demand for gas.

We continue to focus on climate-related solutions across the gas value chain, including the bundling of high-quality carbon offsets and removals to mitigate emissions associated with the production and transportation of LNG cargoes.

LPG solutions

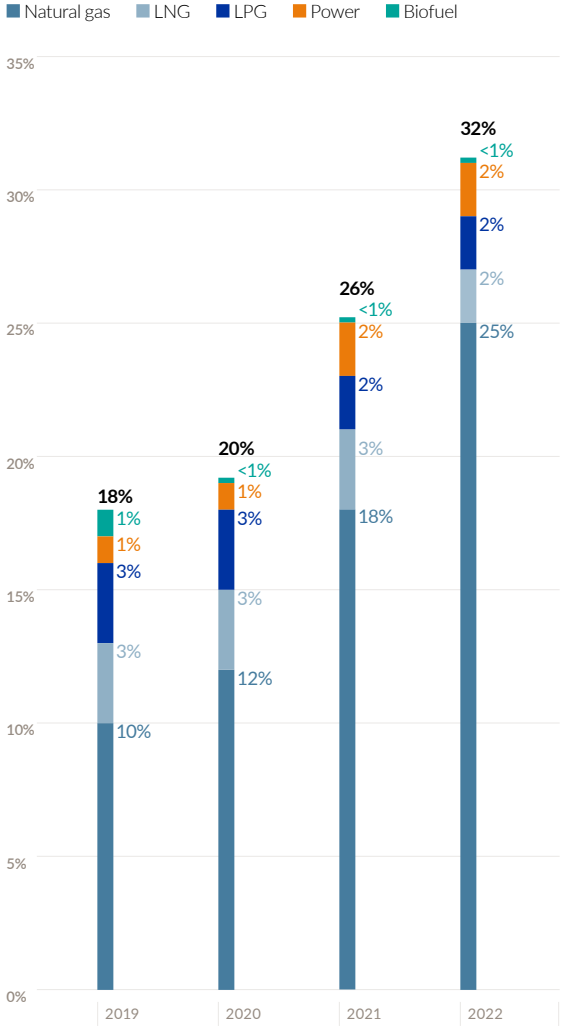
Through trading LPG worldwide, Vitol has a presence from wellhead to counterparty. Our trading is underpinned by our infrastructure, from dedicated LPG vessels to bespoke storage in Africa and Europe. In developing economies, our distribution networks are based on solid local partnerships, enabling us to benefit from the growing demand for fuel-efficient cooking solutions and other domestic uses, where the use of LPG is displacing more polluting fuels such as biomass or coal.

Power solutions

Through our strong and experienced power trading team, we leverage our expertise in the world's largest markets to enable counterparties to transition to more sustainable power solutions and support the development of renewable projects with financing and market access. We are investing in transitional gas-fired power to facilitate the roll out of renewables in the near term.

TCFD

Share of transitional energy products[1]
% total energy volume physically delivered



1. Numbers may not add up due to rounding.

TRANSITIONAL ENERGY SOLUTIONS

Case Study

VPI

Decarbonising power assets in the UK

VPI Immingham, UK

We're investing more than £2 billion in decarbonisation, which includes the Humber Zero project at Immingham

The UK government has committed to Net Zero targets which it must meet by 2050. This will require empowering businesses to play a greater role in addressing climate change, according to the Chair of the UK Net Zero Review, Chris Skidmore MP.

His report 'Mission Zero' highlights the historic opportunity offered by Net Zero through to 2037, and at VPI we are actively developing the economic opportunities presented by the energy transition to support those targets. In short, the benefits of investing in Net Zero today outweigh the costs.

VPI's Humber Zero carbon capture project is part of the regional effort to significantly reduce CO_2 emissions from the UK's largest region in terms of industrial emissions.

Capturing around 3 Mt CO_2e annually from our combined heat and power plant (CHP) in its first phase, the project is ideally positioned close to around 80% of the UK's licensed storage capacity beneath the bed of the North Sea.

With the primary objective of "keeping the lights on", decarbonisation of power generation will be a huge focus for the energy transition and abated gas generation provides flexible and dispatchable power which will remain important for years to come.

Renewable technology provides the majority of power in the right circumstances – and on one day in 2022 provided nearly 70% of Britain's power requirements – but is intermittent and weather dependent.

Mission Zero expects Net Zero to generate a global market opportunity of £1 trillion for UK business by 2030, with the potential for supporting 480,000 jobs. Humber Zero will be the trailblazer in that regard, investing around £1 billion in the south Humber bank and sustaining up to 20,000 jobs in industry that are hard to decarbonise but can see significant reductions in their power usage under the programme.

The Climate Change Committee estimates up to a £60 billion investment will be required annually from the private sector to meet Net Zero targets. The direct costs of decarbonisation will represent less than 1% of GDP over the next three decades if we start it now. The cost of stalling is likely to be considerably higher.

The report advocates a clear carbon capture, use and storage (CCUS) roadmap outlining near-term and longer-term actions, but Humber Zero has proceeded with planning for the project, with the front-end engineering and design (FEED) phase concluding soon and the engineer, procurement and construction phase due to start immediately afterwards.

Decarbonised power will be essential for the UK to meet its legal obligations. Abating gas generation is only the first step and VPI's strategy will look at how we could move into new areas of decarbonised power in the longer term that provides the flexibility both domestic and commercial users demand.

TRANSITIONAL ENERGY SOLUTIONS

Case Study

ViGo bioenergy

Working to decarbonise the haulage sector

Vitol acquired ViGo bioenergy, a market leader in Germany for the supply of LNG and bioLNG to the heavy goods vehicles (HGV) sector, in September 2021. ViGo has 23 LNG filling stations in operation and is a significant supplier of LNG sold to HGVs, currently marketed under the LIQUIND brand name.

The HGV sector is one of the hardest to decarbonise, with electrification possibilities limited due to the range and payload requirements to operate vehicles profitably. Compared to diesel, LNG fuel can reduce GHG lifecycle emissions by 10% to 30% depending on supply chain efficiency, whilst bioLNG can more than offset all of GHG lifecycle emissions as we primarily source biomethane derived from animal waste, preventing methane emissions from naturally decomposing manure and supporting abatement of agricultural sector emissions at the same time.

ViGo continues to invest in new infrastructure to maintain its market leadership position and will build a pan-European network of over 100 stations in the next five years to complement our core trading business and mitigating fuel supply chain risk. The company is in the process of converting 100% of the LNG it supplies to ultra-low GHG bioLNG, which is the most viable solution to decarbonise the haulage sector.

100+

LNG FILLING STATIONS OPERATIONAL IN THE NEXT FIVE YEARS

LNG filling station, Germany

Sustainable energy solutions

Vitol is building an energy business for the future. We are determined to stay at the forefront of the world's energy markets and play an active role in the energy transition. Our sustainable energy solutions encompass environmental products and renewable technologies. We continue to hire industry specialists across these new technologies to build out the business, where the breath of products traded and investments continue to evolve. We expect sustainable energy solutions to grow significantly in the coming years, well beyond 2050.

Our objectives

- Use our leading market position and energy infrastructure to support the development of nascent energy solutions enabling scale and commercialisation
- Deploy expertise and financial strength to develop end-to-end sustainable energy solutions to facilitate the transition
- Invest in assets to complement trading activities
- Explore and invest in innovative technology solutions
- Participate in hydrogen and carbon capture storage projects with a view to exploring future deployment
- Consolidate our market-leading position in environmental products, whilst focusing on high-quality offset and removal projects with ESG co-benefits
- Invest along the value chain to support development of biogas for transport.

TCFD TASK FORCE on CLIMATE-RELATED FINANCIAL DISCLOSURES

VITOL CAPITAL COMMITTED

$2bn+

TO SUSTAINABLE INVESTMENTS SINCE OCTOBER 2018

50% SOLAR

30% WIND

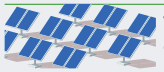
20% ELECTRIC VEHICLES, GREEN HYDROGEN, RENEWABLE GAS, CARBON PROJECTS

Ramapo College solar project, New Jersey, US

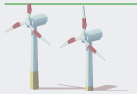
SUSTAINABLE ENERGY SOLUTIONS

Energy businesses for the future

Our sustainable energy assets around the world*



Vitol's US solar PV[1] park platform, financing and developing over 20 projects across the country



Vitol's US wind farm platform, repowering and operating large wind power generation assets in Illinois and Pennsylvania

West Point RNG Biogas power plant in Idaho, digesting animal manure into RNG[2], then converting it into power to charge electric vehicles

FLEXGEN US-based energy management and storage solutions platform, providing integrated hardware and software services to balance intermittent loads

VG Mobility Colombia-based EV fleet partner, expanding across Latin America to support public transport electrification and provide e-mobility solutions

VEV Vitol's fleet electrification business, offering turnkey corporate solutions from planning to operation and maintenance globally

WAGA ENERGY Innovative builder, owner and operator of landfill gas upgrading units, recovering RNG from waste across Western Europe and North America

Gen2 Energy Norwegian green hydrogen project developer, operating water electrolysis production facilities powered by wind and hydroelectric energy sources

vortex energy Polish renewable energy development platform, providing services to wind and solar farms in Central Europe, from planning to technical management

JUNIPER Green Energy Renewable energy independent power producer, developing and operating solar, wind, and hybrid power projects across India

SUN MOBILITY Pan-Indian quick interchange station network, providing EV battery-swapping solutions to 2- and 3-wheelers and e-buses

VSolar Vitol Middle Eastern solar development platform, structuring and financing solar PV generation projects from the Arabian Peninsula to Pakistan

* This map includes both Vitol controlled and non-controlled businesses.

1. Photovoltaics.
2. Renewable natural gas.

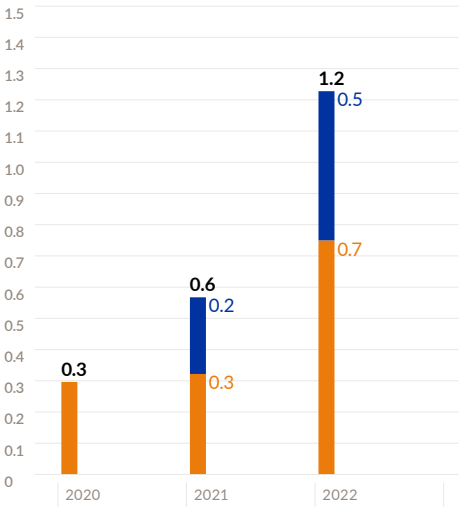
SUSTAINABLE ENERGY SOLUTIONS

Renewable power generation & storage solutions

TCFD

With a total of 1.2 GW of operational renewable generation capacity across wind and solar projects in the US, Europe, and Asia, we continue to look for projects where our capital, expertise and market understanding can add value.

Renewable power generation
GW$_{AC}$ of operational capacity[1]



1. Gigawatts of alternative current generation capacity in gross basis, i.e. non-adjusted for Vitol equity. Numbers may not add up due to rounding.

Case Study

FlexGen

Developing innovative storage solutions for renewable power

Critical technology will underpin the rollout of renewables globally. As electricity generation from wind and solar power is intermittent, sophisticated storage mechanisms will be critical in ensuring consumers have stable and reliable access to power, even as the proportion of generation from renewable resources increases.

Vitol has become an anchor investor in FlexGen, a leading integration services and software technology provider for energy storage solutions globally. FlexGen's energy management software platform, HybridOS, allows energy storage owners to deploy various market strategies and combine storage solutions with any form of power generation. The integration of energy storage requires software and technological solutions that play a critical role in the adoption of renewables at scale — counteracting the intermittency and reliability challenges that renewable power generation creates for the grid and enabling decarbonisation ambitions.

Vitol has become an anchor investor as part of FlexGen's latest $100 million Series C investment round

SUSTAINABLE ENERGY SOLUTIONS

Q&A Eric Winter, Environmental Products Trading & Energy Transition Solutions

Enabling energy transition in the US

Accelerating change

Even the most energy intensive sectors are committing to transition strategies

From your trading vantage point, what factors do you see shaping the renewables market in the US?
While there are federal and state level incentives encouraging a transition to renewable sources of energy, corporates have taken a leadership role in the US to decarbonize the electric grid. Climate Group's RE100, is an example of a global corporate initiative that is bringing together businesses committed to renewable energy. Their mission is to accelerate change towards zero carbon electricity grids and they aim to enable ~225 TWh of renewable power in 2023, increasing to ~430 TWh by 2030.

In support of this initiative US corporates have set targets totaling ~100 TWh in 2023, increasing to ~200 TWh by 2030, despite evident gaps in the development pipeline. To put this into perspective, total US electricity consumption in 2022 was ~4,100 TWh, so there is a yawning gap to fill which presents opportunity.

Long-term Power Purchase Agreements (PPAs) between renewable energy providers and sellers have been the pathway to provide the necessary returns to incentivize new builds and meet the buyer's renewable energy goals. The technology and consumer product sectors were among the first to embrace renewables and continue to be the largest buyers of PPAs, however, with global climate action pressure rising, even the most energy intensive sectors such as the fossil fuel industry, are committing to transition strategies and rapidly increasing their consumption of renewable energy.

Unit-contingent and 'virtual' PPAs have traditionally been a successful tool, but their drawbacks are increasingly outweighing their benefits as decarbonization of the electric grid presents new challenges. The intermittent generation profiles of renewable assets and the increasingly volatile power markets may expose energy buyers to risks that increase the cost of consumption and place renewable energy commitments in jeopardy.

Vitol is offering the market a 'next-generation' solution to address these issues.

What opportunities do you see in the market and how is Vitol capturing them?
We differentiate ourselves from other players by leveraging our deep understanding and broad access to global energy markets. Our renewable developments are closely linked to our utilities trading businesses, allowing us to make informed investment decisions across the sustainable energy spectrum.

Our renewables team has developed 1.2 GW of wind and solar projects globally. Our considerable capital base is the source of our competitive advantage, enabling us to accelerate project development and execute delivery without the need for external financing. Additionally, our power and environmental products trading businesses provide experienced guidance at each stage of the development process.

SUSTAINABLE ENERGY SOLUTIONS

Q&A Eric Winter, Environmental products trading & sustainability solutions

Vitol's core trading businesses have become natural partners to our renewables development team, helping us to maximize the value of our assets and client relationships. The trading teams provide valuable insights into relevant commodity and policy risks to inform the best locations and markets for our renewables teams to develop their assets. Next-generation hedging structures maximize returns, reduce risk and facilitate client origination. We have been successful in deploying our trading and risk management capabilities to provide these superior offtake structures for renewable energy developers seeking a similar partnership to turn opportunities into operating assets delivering renewable power to the grid.

This unique integration is key to the opportunities we have developed and our continued growth. The success of our development efforts in North America provide the model that we will look to replicate in other regions. The goal is to aid the responsible deployment of renewables in concert with providing a consumption pathway that addresses the challenges of today and the future. So, in many respects, Vitol's true impact and participation in the energy transition goes well beyond our own renewable investments and sustainable energy portfolio.

What role do renewables play in the energy solutions you are providing counterparties in this constantly evolving market?

Vitol understands the difficulties of the growing renewable energy industry and has taken a life-cycle approach to addressing these challenges by utilizing our core trading and risk-management expertise. We have developed a specialised upstream offtake agreement that guarantees a steady revenue stream that reduces production, economic and financing risks for renewable energy producers.

We bridge the gap that counterparties can typically experience between the intermittent availability of renewable energy and their demand profiles. We offer customized downstream offtake structures that eliminates commodity, basis, and covariance risks allowing our counterparties to align their renewable energy consumption with their corporate planning and budgeting objectives.

Ultimately, we can manage the entire generation-to-consumption process by integrating our world class trading ability to effectively manage risk across this life-cycle approach. This will ultimately allow renewable energy producers to focus on building and operating their assets and providing consumers with de-risked solutions and a clear path forward to achieving their sustainability ambitions.

We manage the entire dynamic renewable energy process by integrating our world class trading ability

Big Sky Wind, Illinois, US

How is Vitol helping to enable the energy transition?

The intermittent provision of renewable power carries a number of risks for both producers and consumers. These risks can lead the cost of generating and consuming renewables to be significantly higher and may manifest in financial losses under traditional offtake methods, especially in an increasingly volatile commodity environment.

Without a solution, achieving Net Zero emissions targets and making renewable energy more accessible for consumers may be difficult, ultimately threatening the viability of the ambitions for those who have already made them and a barrier to participation.

Vitol's integrated life-cycle approach offers unique solutions to these challenges, enabling the systemic change this sector requires to solve the challenges brought on by decarbonization. Our history of breaking the norm to overcome obstacles and achieve success has led us to where we are today, our participation in the energy transition is a continuation of that mindset.

We believe our trading capabilities can be just as much of an asset to the acceleration of decarbonzation as the underlying generation itself. It's the missing participant in the energy transition as it can provide an achievable pathway to make 'true' Net Zero a reality.

SUSTAINABLE ENERGY SOLUTIONS

Case Study

Vortex Energy

Supporting the energy transition in Poland

Vortex Energy Senior Leadership Team

Vortex Energy is a leading renewable energy developer in Poland and Vitol's first major investment in renewable power in Europe. Founded in 2004 in Germany, the company entered the Polish market in 2006, delivering over 400 MW of operational renewable generation capacity in wind and solar. Playing an active role in Europe's decarbonisation strategy, Vortex has a development pipeline of over 3 GW, which Vitol acquired in January 2023.

A pioneer in the renewables sector in Poland, the company is driven by a diverse team of experts offering a full suite of services through the lifecycle of the asset. This includes developing greenfield wind and solar projects through to providing construction and operational management services.

Our intention is to initiate the construction of over 120 MW of PV solar and onshore wind projects over the next 12 months. Poland is amongst the biggest emitters of carbon dioxide in Europe, the planned investments will help the county to cut its emissions and its reliance on coal. Vortex will ultimately enable the sustainable, continued delivery of affordable electricity to Polish counterparties, as well as the Central and Eastern Europe region.

SUSTAINABLE ENERGY SOLUTIONS

Electrified transport solutions

Transport has historically accounted for ~60% of oil demand, giving us a specialist insight into this sector. We are leveraging this expertise and our physical footprint to explore a range of fleet electrification opportunities including:

- Municipal transport e-solutions, e.g. with VG Mobility
- EV charging and fleet solutions in developed markets, e.g. with Vitol Electric Vehicles (VEV)
- Battery swapping for two and three-wheeler vehicles in developing markets, e.g. with SUN Mobility

The electrification of transport fleets will significantly contribute towards the speed and success of international decarbonisation objectives. Electric vehicle penetration of the global fleet is accelerating, which provides numerous commercial opportunities.

Case Study

VG Mobility

Accelerating electrification of transport fleets across the Americas

Perdomo depot, Bogotá, Colombia

VG Mobility provides e-mobility solutions across the Americas and has a proven track record of successfully executing large-scale projects. Established in 2020, the company provides turnkey electrification solutions for projects of any size, including electric fleet provision, charging infrastructure, depot design and construction, and asset management. It is uniquely placed to support the decarbonisation goals of counterparties and enable the shift to electromobility.

During 2022, VG Mobility's portfolio expanded as projects were delivered across Latin America. One of its flagship projects was the planning and provision of over 400 e-buses, as well as the implementation and delivery of the new state-of-the-art e-bus Perdomo depot in Bogotá, Colombia.

Partnering with municipal transport provider Transmileno, VG Mobility's new end-to-end energy solution provides a better passenger experience whilst displacing over 25 kt CO_2 per year.[1]

In the future, VG Mobility aims to develop e-mobility solutions for corporate and car-hailing transport segments such as projects including freight and the replacement of car-hailing fleets.

1. According to technical inputs across the entire bus operation and based on FECOC Calculator, a tool provided by the UPME (Colombia Mining and Energy Planning Unit) to calculate CO_2 emissions generated by fuels that are part of Colombia's energy grid.

SUSTAINABLE ENERGY SOLUTIONS

Facilitating the transition

Green hydrogen solutions

We anticipate hydrogen energy playing an important role in decarbonising both the domestic, industrial and transport sectors, presenting significant market opportunities. Vitol is working on potential projects across the hydrogen mobility value chain by bringing together power utility companies, hydrogen producers, fuel retailers, and trucking companies.

Biogas solutions

We anticipate a growing market share for biogas as a sustainable alternative to natural gas and are investing through the value chain.

- From production
  We are investing in innovative solutions to capture and process methane from landfill or animal waste by developing bespoke biodigesters (biogas production units) through a series of investments in companies present across Western Europe and North America (Waga Energy, Femogas, West Point RNG). Biogas recovered through these innovative approaches has a negative net effect on GHG emissions as it prevents the natural release of methane into the air from waste decomposition, and turns it into a usable source of sustainable energy.
- To end-users
  Biogas can be substituted for natural gas of mineral origin for heating or industrial uses (e.g. through biogas trading and distribution), directly converted into electricity (e.g. for sustainable EV charging with West Point RNG) or liquefied or compressed and used as transport fuel (e.g. for heavy goods vehicles with ViGo bioenergy).[1]

Environmental products and solutions

We view carbon removals or offsets as a valid strategic tool for companies to support decarbonisation beyond their own carbon footprint, and accelerate a broader transition to a lower carbon world. Removals and offsets can be used as part of a broader decarbonisation strategy, which can also include energy efficiency measures, production of low-carbon electricity, fuel switching and CCUS. We have been an active market participant for over 15 years. Price discovery and the formation of market infrastructure are key ingredients in enabling actionable, scalable investment into carbon abatement and removal projects.

Over the course of 2022, our transaction volumes grew steadily in both compliance and voluntary carbon markets around the globe, trading over 100 Mt CO_2e across a broad range of product classes, including carbon allowance credits, emissions offsets, low-carbon and renewable fuel standards.

- In EMEA, we continued to build on our well-established presence in compliance markets (e.g. EU ETS, UK ETS),[2] whilst also pursuing our expansion into newer markets such as South Africa and increasing our financial commitments in the voluntary space
- In the Americas, we have continued to grow our presence, offering a range of environmental products (e.g. CCAs, RECs, RINs, LCFS)[3] and proactively expanding into South America
- In Asia-Pacific, our carbon desks are active in compliance markets such as those in China, Australia and New Zealand, alongside building out a diversified voluntary project portfolio in the region

We are also developing our own high-quality carbon reduction and removal projects across the world, and already finance and support initiatives that will offset or remove more than 50 Mt CO_2e by 2030.

We understand the importance of collaboration and focus on meaningful partnerships with governments, private and public bodies to achieve global goals. Our experience enables us to bring together partners and innovative finance solutions to develop carbon projects and ultimately support countries' nationally determined contributions commitments, notably:

- By establishing a partnership with the Nigerian National Sovereign Investment Authority to develop carbon projects and structured solutions to meet corporate decarbonisation targets
- Working with the African Refiners & Distributors Association to reduce emissions along the supply chain and structure projects such as soil sequestration and landfill methane capture

Damhead Creek, VPI, UK

1. See case study p. 30.
2. European Union Emissions Trading System and United Kingdom Emissions Trading Scheme.
3. California Carbon Allowances, Renewable Energy Certificates, Renewable Identification Numbers, Low-Carbon Fuel Standards.

SUSTAINABLE ENERGY SOLUTIONS

Driving sustainable practices

Purer water for the Mekong Delta

Access to clean, potable water is a basic human right. Our Mekong Project provides clean water to rural communities along the Mekong River Delta, helping to avoid preventable illnesses. Supporting more than 2.7 million people across 12 provinces, the project provides ISO-certified purifiers to each of the 600,000 households in the region. It also removes the need to burn firewood to boil water for consumption which will prevent more than 11 Mt CO_2e emissions being emitted over the next 10 years.

FIND OUT MORE

Cleaner cooking in Kenya

Vitol is a proud infrastructure, fuel and carbon partner of KOKO Networks, a climate tech start-up that operates a renewable cooking fuel utility and provides low-cost, clean-burning ethanol to almost a million households across Kenya.

KOKO Fuel is stored in tanks underneath Vivo Energy fuel stations, where a fleet of Smart Micro Tankers manage the last-mile distribution to 1,900 corner shops in low-income neighbourhoods throughout the country. The renewable product is then purchased by customers at facilities known as KOKO Fuel ATMs. More than 30% of all homes in the greater Nairobi metro region now cook with KOKO Fuel, with 10,000 new homes joining the platform each week.

Deforestation-based charcoal and wood are the dominant forms of cooking energy in Kenya, and dirty cooking fuel causes more than 400 Kenyan deaths per week from indoor air pollution, the majority of which are children under 5-years old.

As a result of its success in Kenya, KOKO is now planning expansion to Rwanda, having signed an investment agreement in March 2022 with the Government to build a nationwide renewable fuel utility.

FIND OUT MORE

KOKO customer buying fuel at her local KOKO Agent

Last-mile distribution to Agent shops across the city

Transportation

Shipping is integral to our business, with over 6,000 voyages undertaken over the course of the past year. As of 31 December 2022, the Vitol fleet consisted of over 60 operationally controlled ships of varying sizes and types, backed by a number of ships chartered from third-party shipowners, enabling us to move hundreds of millions of tonnes of energy products around the world, safely and efficiently.

The majority of our owned vessels are managed by LSC, our technical manager, which successfully attained ISO50001 certification for energy management across our controlled vessels in 2022, supplementing the ISO9001 (quality), ISO14001 (environment), and ISO45001 (health and safety) certifications already in place.

Our shipping operation is supported by a large international crew of seafarers, to whom we have a strong duty of care. Their welfare is paramount to us, which is why Vitol became a signatory to the Neptune Declaration on Seafarer Wellbeing and Crew Change in 2021 (See human rights section p. 61).

FIND OUT MORE

MV Vivit Americas LNG

TRANSPORTATION

Setting bold maritime ambitions

Maritime shipping accounts for ~3% of global GHG emissions and numerous stakeholders have contributed to setting a decarbonisation pathway for the industry. Notably the International Maritime Organization (IMO), the European Union (EU), and groups of financial institutions, shipowners and charterers through the Poseidon Principles (PP) and the Sea Cargo Charter (SCC).

Shipping is one of our major sources of GHG emissions, emitting 1.0 Mt CO_2e directly through our own activities and 9.8 Mt CO_2e indirectly through our chartered fleet and overall well-to-wake emissions for all bunker fuel consumptions. The MARPOL[1] carbon intensity regulations primarily apply to larger tonnage ocean-going vessels, and therefore capture the majority of our shipping emissions reduction and energy transition efforts.

In 2021 we set the ambitious target to meet the IMO's 2030 carbon intensity reduction target of -40% (vs. 2008 baseline) as early as the end of 2024.[2]

We will continue to:

- Optimise the operational, technical and fuel use performance of our controlled vessels to reduce emissions
- Reduce the carbon intensity of our vessel portfolio and to introduce on-board efficiency programmes across the fleet
- Adopt energy efficient devices and technologies on the controlled fleet, including high-performance propellers, Mewis duct, Propeller Boss Cap Fin, Autopilot adaptive control, LED lights, high performance hull coating, etc
- Explore drop-in low-carbon fuels such as biofuels for existing fleet and invest in future fuels capable vessels
- Participate in joint studies into alternative fuels

CARBON INTENSITY REDUCTION TARGET[2]

-40%

by end-2024

vs. 2008 IMO baseline

MV Marine Zambezi, V-Bunkers, Port of Singapore

1. International Convention for the Prevention of Pollution from Ships, introduced by the IMO.
2. Based on Vitol controlled fleet's average Annual Efficiency Ratio (AER), which measures kilograms of CO_2 emissions per supply-side transport work (i.e. ship's deadweight tonnage multiplied by total distance sailed yearly in nautical miles).

TRANSPORTATION

Fleet performance and ongoing efforts

We measure our fleet performance using two carbon intensity (CI) metrics:

- The Annual Efficiency Ratio (AER), measures the CI of supply-side transport work[1]
- The Energy Efficiency Operational Index (EEOI), measures the CI of demand-side transport work[2]

We assess our fleet performance against three targets:

- The IMO targets, based on the AER, aim to reduce international shipping CI by at least 40% by 2030 and 70% by 2050, compared with 2008
- The Poseidon Principles (PP) targets, based on the AER, specific to financial institutions and shipowners, aims to support the decarbonisation of ship financing by aligning vessel portfolio performance with the IMO 2050 absolute reduction target
- The Sea Cargo Charter (SCC) targets, based on the EEOI, specific to ship charterers, aims to support the decarbonisation of ship chartering by aligning chartering activity performance with the IMO 2050 absolute reduction target

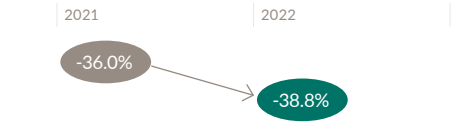
Vitol's fleet performance (energy efficiency and carbon intensity) is well ahead of global maritime energy efficiency targets. It is our intention to further improve on these results.

Both performance and emissions (scope 1) were verified by DNV Maritime Advisory, whilst scope 3 emissions data for our chartered fleet are collected with the support of a verified third party.[3]

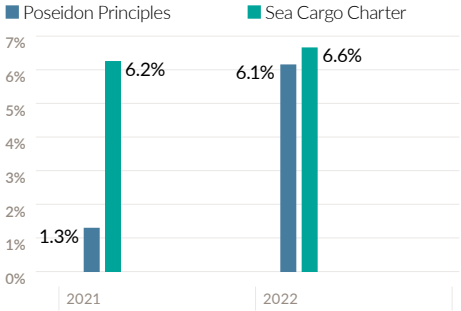
We will enhance the granularity of our internal analytics to ensure that we continue to meet our energy transition ambitions.

TCFD

Progress vs. ambition to meet the IMO's -40% AER reduction target by 2024[4]



Exceeding 2030 targets



Vitol remains on track to achieve its goals, thanks to:

- Designing an improved fleet renewal strategy, adding eco-efficient tonnage to the fleet by end 2024
- Disposing of several shipping assets over the past year, including older less-efficient tankers, and we will continue to seek opportunities to divest less efficient assets
- Maintaining onboard Ship Energy Efficiency Management Plans (SEEMP).[5] Vitol has set and will maintain targets to be in full compliance with these regulations on all controlled vessels, and it will continue to work with third party shipowners to operate chartered vessels in an efficient manner, supporting our partners to fulfil their targets
- Installing energy-saving technologies on our ships when dry-docking. For example, a number of vessels will have energy efficiency devices and technologies installed, such as new propeller technology planned for 2023. Additionally, we will fit engine power limitations (EPL) or shaft power limitations (ShaPoLi) required by MARPOL EEXI regulations[6]
- Continually exploring opportunities with biofuels to reduce our well-to-wake emissions, investigating future potential solutions such as green methanol, ammonia, and hydrogen, and remaining a member of the ITOCHU Joint Study Framework on Ammonia as an Alternative Marine Fuel
- Finally, all vessels on long-term charters, as well as owned vessels, will be put through an optimisation programme to assess performance and increase operational efficiencies, ensuring continued compliance with MARPOL carbon intensity regulations

1. Kg CO_2 emissions per ship's deadweight tonnage multiplied by total distance in nautical miles), expressed in kgCO_2/(DWT x nm).
2. Kg CO_2 emissions per ship's tons of cargo transported multiplied by laden distance in nautical miles), expressed in kg CO_2/(cargo t x nm).
3. Shipping emission data collection is already underpinned by a range of emissions reporting frameworks, notably the IMO DCS (Data Collection System, a global requirement since 2018) and the EU MRV (Monitoring, Reporting and Verification, a regional requirement mandatory since 2017).
4. Performance from vessels falling under the CII regulation (over 5,000 GT) totalling over 95% of Vitol's fleet emissions, unadjusted for latest IMO correction factors (effective since January 2023, under which Vitol fleet would already exceed 2030 requirements).
5. In accordance with MARPOL carbon intensity regulations.
6. Energy Efficiency Existing Ship Index, a one-off certification targeting design parameters for all vessels above 400 GT adopted by the IMO during Marine Environment Protection Committee (MEPC) 76 in June 2021. It determines the standardised CO_2 emissions related to installed engine power, transport capacity and ship speed.

E&S performance

Delivering energy solutions safely and efficiently

UN SDGs	TARGETS	
1 NO POVERTY	1.1 1.4	The Vitol Foundation was established independently of Vitol's business to support children and families to reach their potential in an existence free from poverty
2 ZERO HUNGER	2.1 2.3 2.4	Through our adjusted water management in rice cultivation project, we are improving the yield of rice for farmers in China
3 GOOD HEALTH AND WELL-BEING	3.6	We continuously monitor, evaluate and learn from our Road Traffic Incident Frequency (RTIF) across all Vitol investments
	3.9	Implementing environmental best practices across our portfolio. Deploying cleaner energy solutions across both industrial and domestic environments

UN SDGs	TARGETS	
4 QUALITY EDUCATION	4.4 4.6	The Vitol Foundation supports Early Childhood Development programmes and seeks to encourage transformation in education systems
6 CLEAN WATER AND SANITATION	6.1	Through our work at the Mekong River Delta, we supplied water purifiers to over 600,000 families
8 DECENT WORK AND ECONOMIC GROWTH	8.5	With a growing portfolio of renewables around the world, we are well placed to adjust to the shifts in energy demands
	8.7	The provision of fair wages, opportunities for personal development, safe working conditions and gender equality improves people's living standards whilst delivering responsible productivity and consumption

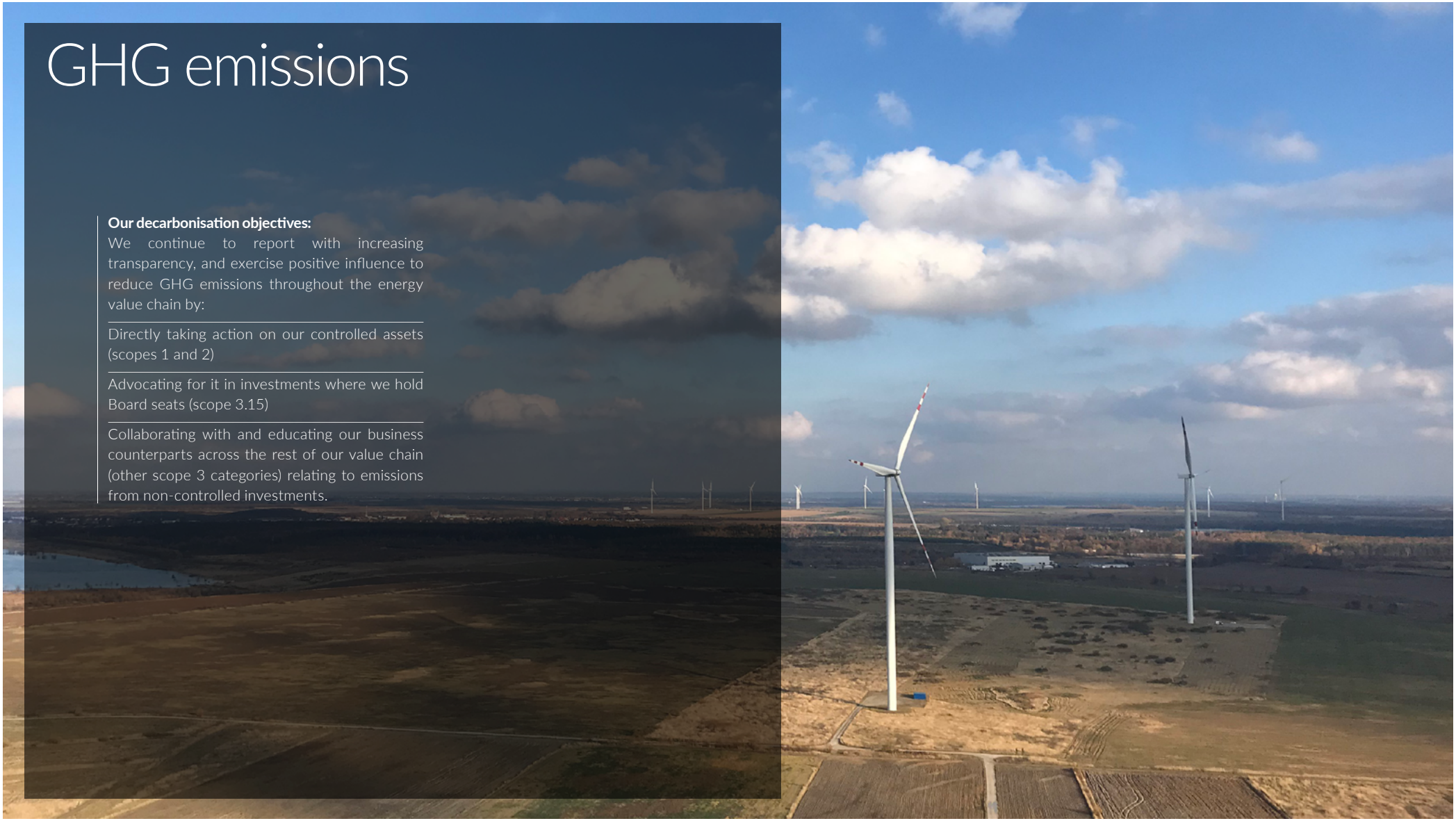
UN SDGs	TARGETS	
10 REDUCED INEQUALITIES	10.2	We are committed to building a diverse, inclusive culture in which differences are embraced and valued. Moreover, we believe that diversity of views, thinking and ideas contribute to improved decision-making and more robust business practices

Big Sky Wind, Illinois, US

GHG emissions

Our decarbonisation objectives:
We continue to report with increasing transparency, and exercise positive influence to reduce GHG emissions throughout the energy value chain by:

- Directly taking action on our controlled assets (scopes 1 and 2)
- Advocating for it in investments where we hold Board seats (scope 3.15)
- Collaborating with and educating our business counterparts across the rest of our value chain (other scope 3 categories) relating to emissions from non-controlled investments.



Vortex Energy, Nieswastow, Poland

GHG EMISSIONS

A progressive approach

To curtail our scope 1 and 2 emissions, we are continually studying opportunities and implementing initiatives to electrify equipment, limit flaring and venting, rely on sustainable energy sources, install modern technologies, and more generally, improve energy efficiency and decrease the carbon intensity of our upstream, power-generating, shipping, and refining assets.

We also engage with and support our business partners to carry out similar efforts, from GHG measurement (e.g. with shipowners from our chartered fleet) to decarbonisation planning and execution (e.g. with our investments).

We believe oil demand will keep growing for another decade in keeping with society's demand, and low-carbon energy sources are still insufficiently developed to service all of this growth.[1] We intend to play an increasing part in the energy transition by investing further in sustainable activities, yet also remaining active in traditional and transitional energy sources needed to preserve energy security.

This highlights the complexity of the task at hand, and the important roles of governments, industry and consumers, including our own, to create and utilise increasing volumes of low-carbon energy as well as improve energy efficiency. It also means GHG emissions related to sold products will remain significant as long as fossil fuels continue to be consumed.

We do not believe a credible decarbonisation strategy can solely be achieved through large-scale divestments, if sold assets keep operating unchanged under a new owner. We therefore apply a rigorous GHG recalculation policy, which negates these effects for any acquisitions or divestments exceeding a 250 kt CO_2e materiality threshold.[2]

Despite the uncertainty surrounding our future activities and portfolio, we continue to pursue the decarbonisation of assets under our control, to encourage and support our business partners and non-controlled investments to do the same, and keep supporting those of our investments that have already committed to Net Zero trajectories.

ATB Refinery, Malaysia

1. See p. 7 Energy outlook.
2. This threshold represents ~1% of our 2022 GHG footprint, well below the 5% recommended by the GHG Protocol and the SBTi.

GHG EMISSIONS

GHG footprint across Vitol's value chain

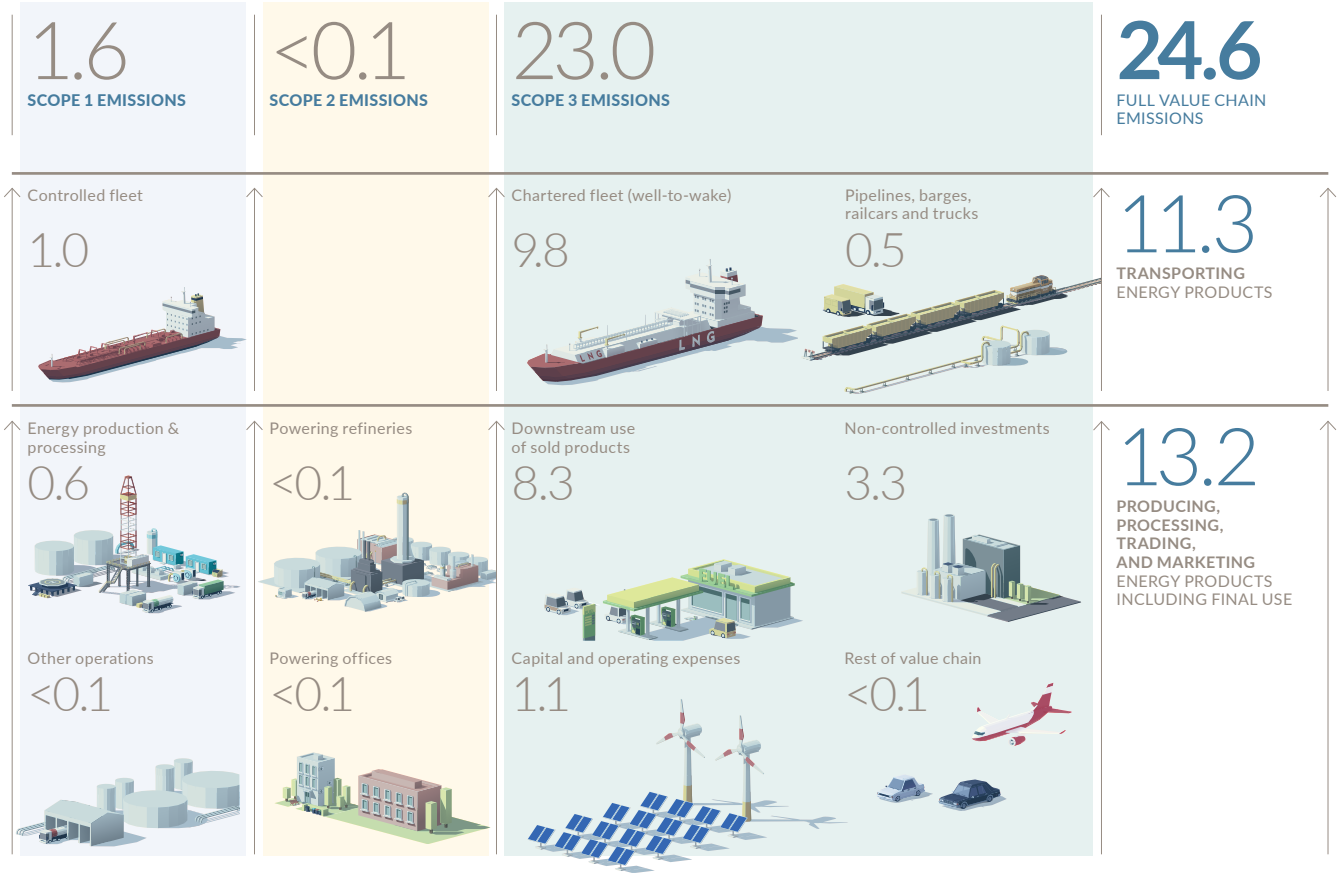
Vitol's operations in 2022 resulted in greenhouse gas (GHG) emissions of 1.6 Mt CO_2e from controlled sources (scopes 1 and 2) and 23.0 Mt CO_2e from the rest of our value chain (scope 3).

Looking across scopes, close to 80% of these GHG emissions arise from two main sources: transportation and distribution of energy products from and to our counterparts (11.3 Mt CO2e)[1] and downstream use of oil & gas that we produced and sold (8.3 Mt CO_2e).[2]

Other sources comprise a range of investments that we have made into companies across the energy value chain (5.0 Mt CO_2e),[3] for instance to develop renewable power generation assets, build modern eco-vessels, and optimise refineries.

In addition to GHG emissions, and for the first time this year, we have also estimated black carbon aerosol emissions arising from our shipping activities given their potential impact. In 2022, they were equivalent to 0.8 Mt CO_2e,[4] of which 0.1 directly arise from our controlled fleet and 0.7 indirectly from our chartered fleet.

GHG footprint across Vitol's value chain
Mt CO_2e



1. Emissions in scope 1 (Midstream segment) and scope 3 categories 3 (fuel and energy-related activities), 4 (upstream transportation and distribution) and 8 (upstream leased assets).
2. Emissions in scope 3 categories 9 (downstream transportation and distribution), 10 (processing of sold products), 11 (use of sold products), 12 (end-of-life treatment of sold products) and 15b (scope 3.9-12 of Vitol non-controlled upstream assets).
3. Emissions in scope 1 (across business segments) and scope 3 categories 1 (purchased goods and services), 2 (capital goods), 5 (waste generated in operations), 6 (business travel), 7 (employee commuting), and 15a (scopes 1 and 2 of Vitol non-controlled investments). Scope 3 categories 13 (downstream leased assets) and 14 (franchises) do not apply to Vitol's operations.
4. Disclosed separately from our GHG inventory, see p. 90.

GHG EMISSIONS

GHG emissions by business segment

Vitol's value chain GHG footprint is prepared using methodologies consistent with the GHG Protocol and additional guidance as appropriate.[1]

We have set an organisational boundary according to the operational control approach for consolidation, which most closely reflects GHG emissions from assets that Vitol can directly influence and reduce, and aligns to our financial consolidation approach.

For precise and consistent measurement, we continue to evolve our proprietary GHG footprint calculation engine, first developed in 2020 and integrated with our core commodity trading and risk management systems. It collects millions of data points in real-time, allocates emissions across scopes, categories, and business segments, and supports data accuracy verification and continuous improvement processes.

MV Elandra Maple, LSC

GHG emissions arise from our activities across four business segments: upstream, power generation, midstream, and downstream.

Scope 1 emissions amounted to 1.6 Mt CO_2e in 2022 and have remained mostly stable over the last three years:

- ~20% arise from our upstream activities, i.e. oil and gas production
- ~60% arise from our midstream activities, mostly from seaborne transport
- ~20% arise from our downstream activities, mostly from crude oil refining

Scope 2 emissions[2] are below 0.1 Mt CO_2e in 2022 and have also remained stable over the last three years.

They are almost evenly split between our upstream (~50%) and downstream (~45%) segments, with residual emissions programme). from midstream and trading offices (~5%).

Scope 3 emissions amounted to 23.0 Mt CO_2e in 2022, increasing by 0.8 Mt CO_2e (+3.6% vs. 2021) as geopolitical events disrupted trade routes, elongating voyage distances for chartering activities.

Lower hydrocarbon production was offset by new investments to build renewable power capacity, and modernise shipping and processing assets, for a neutral net effect on emissions.

Upstream

Primary energy production

This segment includes emissions from our assets that explore for, extract, or produce primary energy products such as crude oil, (dry) natural gas and natural gas liquids (NGLs), developing conventional and unconventional, on-shore and off-shore oil and gas reserves.

Scope 1 and 2 emissions (0.3 Mt CO_2e) are primarily driven by combustion equipment powering installations, and to a lesser degree by methane flaring and venting.

Scope 3 emissions (8.5 Mt CO_2e) are largely driven by the processing, distribution, and combustion of extracted hydrocarbons sold (as fuel or as waste when not stored).

Power generation

Secondary energy production

This segment includes emissions from our assets generating power from a number of different sources, notably solar, wind, and natural gas.

Scope 1 and 2 emissions are negligible as our controlled assets are renewables.

Scope 3 emissions (2.9 Mt CO_2e) are driven by capital expenditures to build additional renewable generation and by our non-controlled investments.

Midstream

Energy transportation, storage & trading

This segment includes emissions from our assets handling logistics of energy products.

Scope 1 emissions (1.0 Mt CO_2e) are primarily driven by fuel consumptions from our controlled fleet.

Scope 3 emissions (10.5 Mt CO_2e) are primarily driven by chartered tankers, barges, pipelines, railcars and trucks, and to a lesser extent by well-to-tank emissions of our purchased fuels and expenses to modernise our fleet.

Emissions from storage (e.g. tank terminals, liquefaction and regasification facilities, warehouses) and trading offices (scope 2) are minor (<0.1 Mt CO_2e).

Downstream

Energy processing & distribution

This segment includes emissions from assets that refine, process, and blend feedstock into usable energy products (e.g. refineries, dry mills, green hydrogen plants), as well as assets that market and distribute these products to end-users (e.g. service stations for refuelling and EV charging).

Scope 1 and 2 emissions (0.3 Mt CO_2e) are primarily driven by our controlled refineries, whilst our service stations' footprint is minor.

Scope 3 emissions (1.1 Mt CO_2e) are driven by capital expenditures to improve our refineries' efficiency and by our non-controlled investments.

1. Cf. GHG inventory calculation methodology in Appendix, p. 88.
2. Scope 2 emissions assessed with the location-based and market-based methods are not materially different, with the latter being slightly lower as we entered a growing number of power purchase agreements with carbon intensities below local grid averages.

GHG EMISSIONS

Vitol GHG footprint 2020–2022 (Mt CO_2e)

TCFD

		UPSTREAM PRIMARY ENERGY PRODUCTION			POWER GENERATION SECONDARY ENERGY PRODUCTION			MIDSTREAM TRANSPORT, STORAGE & TRADING			DOWNSTREAM PROCESSING & MARKETING			FULL VALUE CHAIN EMISSIONS		
SCOPE / CATEGORY	DESCRIPTION	2020	2021	2022	2020	2021	2022	2020	2021	2022	2020	2021	2022	2020	2021	2022
1	Controlled direct emissions	0.4	0.2	0.3	0.0	0.0	0.0	1.0	1.0	1.0	0.3	0.3	0.3	**1.6**	**1.5**	**1.6**
2	Controlled indirect emissions (location-based)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**0.0**	**0.0**	**0.0**
3	Non-controlled indirect emissions (categories 3.1 – 3.15 below)	11.0	9.0	8.5	2.3	2.7	2.9	9.6	9.7	10.5	0.8	0.8	1.1	**23.8**	**22.2**	**23.0**
3.1	Purchased goods and services	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	**0.1**	**0.1**	**0.1**
3.2	Capital goods	0.0	0.0	0.0	0.1	0.5	0.6	0.2	0.1	0.1	0.1	0.0	0.2	**0.4**	**0.6**	**1.0**
3.3	Fuel and energy-related activities	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.3	0.1	0.1	0.1	**0.3**	**0.3**	**0.4**
3.4+8	Upstream transportation and distribution, and leased assets	0.0	0.0	0.0	0.0	0.0	0.0	9.1	9.3	10.0	0.0	0.0	0.0	**9.1**	**9.3**	**10.0**
3.5	Waste generated in operations	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**0.0**	**0.0**	**0.0**
3.6	Business travel	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**0.0**	**0.0**	**0.0**
3.7	Employee commuting	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**0.0**	**0.0**	**0.0**
3.9	Downstream transportation and distribution	0.1	0.1	0.1	–	–	–	–	–	–	–	–	–	**0.1**	**0.1**	**0.1**
3.10	Processing of sold products	0.4	0.3	0.3	–	–	–	–	–	–	–	–	–	**0.4**	**0.3**	**0.3**
3.11+12	Use and end-of-life treatment of sold products	6.5	4.6	4.4	–	–	–	–	–	–	–	–	–	**6.5**	**4.6**	**4.4**
3.13+14	Downstream leased assets and franchises	–	–	–	–	–	–	–	–	–	–	–	–	**–**	**–**	**–**
3.15a	Investments (non-controlled scope 1 and 2)	0.2	0.2	0.3	2.2	2.2	2.2	0.0	0.0	0.0	0.7	0.7	0.8	**3.1**	**3.1**	**3.3**
3.15b	Investments (indirect emissions from sold products = scopes 3.9-12)	3.8	3.8	3.5	–	–	–	–	–	–	–	–	–	**3.8**	**3.8**	**3.5**
Total	**Scope 1,2 & 3 GHG emissions**	**11.4**	**9.2**	**8.8**	**2.3**	**2.7**	**2.9**	**10.6**	**10.7**	**11.5**	**1.2**	**1.1**	**1.5**	**25.4**	**23.8**	**24.6**

Environment

This section covers our environmental performance in relation to a suite of lagging and leading indicators such as the number and volume of spills, waste produced, freshwater extracted and environmental exceedances. It provides performance analysis for both controlled and non-controlled investments.

The data shown in the Appendix on p. 88 provides more details of the E&S key performance indicators collated over the last four years.

METRIC	2022 TARGET	2022 PERFORMANCE	2023 TARGETS
Total volume of substances arising from large spills (m^3)	-10% vs 440 in 2021	✓ -43% to 253 in 2022	-10% by 2025 vs last 4 years average (2019–22)
Number of large spills	-10% vs 46 in 2021	✗ +26% to 58 in 2022	-10% by 2025 vs last 4 years average (2019–22)
Environmental exceedances	-10% vs 54 in 2021	✗ +54% to 83 in 2022	-10% by 2025 vs last 4 years average (2019–22)
Prosecutions or enforcement actions by environmental regulatory authorities	Zero vs 5 in 2021	✗ -60% to 2 in 2022	Zero by 2023

✓ Achieved ✗ Not achieved

ENVIRONMENT

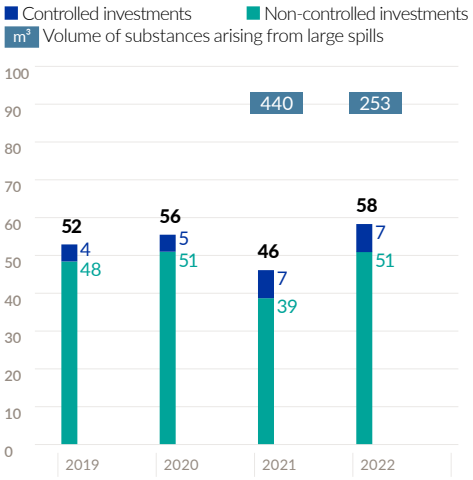
Monitoring our environmental impact

Loss of containment, spills and prevention

We track both large and small spills as well as losses of primary containment. The number of large spills increased by 26% in 2022 compared with 2021. Our non-controlled investments experienced a 31% increase in large spills, largely driven by road transportation incidents, while our controlled investments remained the same as last year. Unfortunately, we did not achieve our 10% reduction target for the number of large spills in 2022. Despite the increase in number, the volume of large spills[1] decreased by over 40% from approximately 440m³ in 2021 to 253m³ in 2022.

The number of small spills remained constant in 2022 compared with 2021, of which 98% arose from non-controlled investments. We aim to prevent all spills and have set a new target to reduce the number of large spills by 10% by the end of 2025. During 2023 we will undertake a thorough analysis of all large spills that occurred over the last four years, to understand trends in root causes and roll out programmes in conjunction with our investment companies to improve performance.

Number of large spills (> 100L)



Waste management

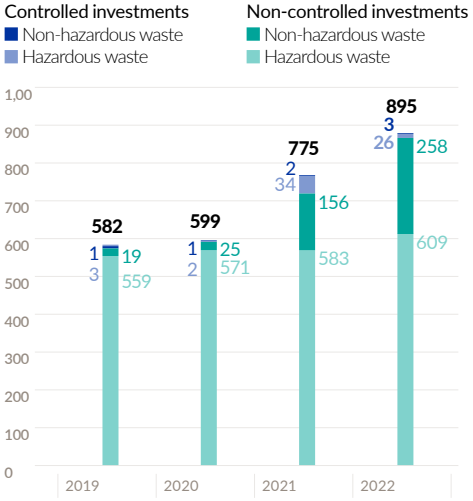
All relevant companies in which Vitol is invested report waste data. Vitol's portfolio comprises a diverse array of activities and therefore waste profiles. Through our E&S framework, we encourage investments to closely monitor and optimise resource use.

Total waste produced in 2022 was 895 kt, comprising 71% hazardous waste and 29% non-hazardous waste, an increase of 15% over the prior year. More than 97% of this arose from non-controlled investments.

The increase was driven by two factors:

- Covid-19 restrictions preventing investments from accessing frequent waste collection services
- A downstream investment in Asia disposed of a significant amount of off-specification product at one of their terminals

Total waste (kt)[2]



1. Restated due to Vitol internal audit of data. Please see Appendix 1.

2. Numbers may not add up due to rounding.

ENVIRONMENT

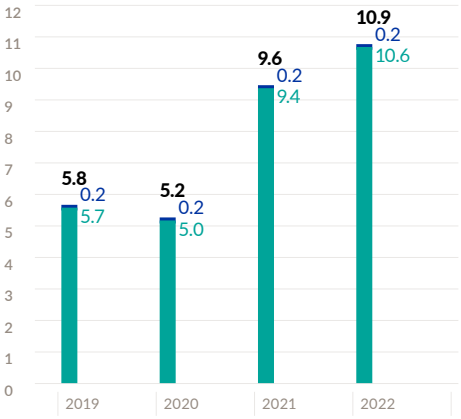
Monitoring our environmental impact

TCFD

Freshwater extraction

In 2022, the total freshwater extracted across our investments increased by 13% to 10.9 M m³ compared with 2021, mainly due to one asset from a non-controlled investment company which resumed operations. Non-controlled investments accounted for 98% of freshwater extracted and this was largely due to refinery processing and cooling activities.

Freshwater extraction[1]
million m³

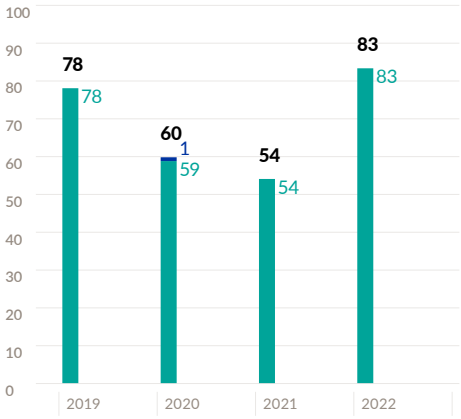


1. Numbers may not add up due to rounding.

Environmental exceedances

Vitol's aim is to have zero environmental exceedances. All 83 environmental exceedances in 2022 occurred at non-controlled investments. Controlled investments experienced zero exceedances in both 2021 and 2022. Over 50% of the environmental exceedances are linked to a single investment company. Vitol will work with this investment company to try to improve performance. Exceedances across non-controlled investments were due to shortcomings related to air emissions, wastewater parameters and non-timely communications with regulators.

Environmental exceedances
Count



Overall, we observed an increase of approximately 50% between 2021 and 2022. We will continue to review root causes and take on board lessons learned from these events and aim to reduce environmental exceedances by 10% in 2025 versus the average or the last four years (2019-2022).

Companies in which Vitol is invested were subject to two enforcement actions in 2022, which is a decrease of 60% versus 2021. One arose at a controlled and one at a non-controlled investment, due to non-timely implementation of regulatory measures and biodiversity shortcomings, respectively.

We will maintain a target of zero prosecutions or enforcement actions across all investments for 2023 and will continue to work with our investments to meet all regulatory standards.

Health and safety

This section covers our health, safety and process safety performance in relation to a suite of lagging and leading personal and process safety indicators such as occupational health, recordable incidents, injury rates, process safety events and road safety.

It provides performance analysis for both controlled and non-controlled investments. The data on p. 88 provides more details of the E&S KPIs collated over the last four years.

METRIC	2022 TARGET	2022 PERFORMANCE	2023 TARGETS
Fatalities	Zero vs 1 in 2021	✗ 3 Fatalities	Zero by 2023
Total recordable injury rate (TRIR)	-10% vs 1.17 in 2021	✗ +13% to 1.32 in 2022	-5% by 2025 vs last 4 years average (2019–22)
Lost time injury frequency (LTIF)	-10% vs 0.56 in 2021	✗ +9% to 0.61 in 2022	-10% by 2025 vs last 4 years average (2019–22)
Tier 1 process safety events (PSE1)	-10% vs. 10 in 2021	✓ -30% to 7 in 2022	-10% by 2025 vs last 4 years average (2019–22)

✓ Achieved ✗ Not achieved

ATPC, VTTI, Belgium

HEALTH AND SAFETY

Evaluating our safety performance

Personal safety

The safety of our workforce, contractors, visitors and the communities in which we operate is a top priority. Our E&S framework sets out our beliefs and requirements that we want everyone to work towards. Central to this is our overall philosophy of zero harm. We recognise that with our investments comes a level of environmental and social risk, which needs to be carefully managed. We primarily utilise monitoring and analysis of our E&S KPIs, supplemented with an on the ground audit programme and prevention efforts within our investments. We recognise incidents can occur and are committed to reporting, investigating and learning from these events and near misses.

Tragically, there were three contractor fatalities associated with our operations last year. One fatality occurred in a non-controlled investment in South Asia, where a contractor was impacted by a piece of heavy machinery. Two others occurred in Africa and Latin America as part of trucking operations. All incidents were rigorously investigated, with root causes identified and lessons learned.

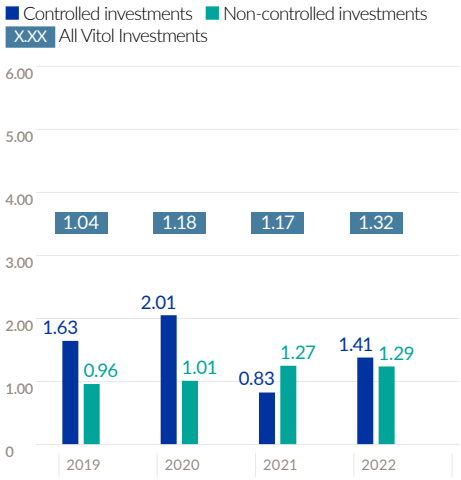
Total recordable injury rate (TRIR)

The TRIR across all investments increased slightly from 1.17 in 2021[1] to 1.32. Data quality has increasingly improved over recent years, coupled with Vitol's efforts to undertake quarterly checks and annual internal data audits, which could explain this slight upward trend.

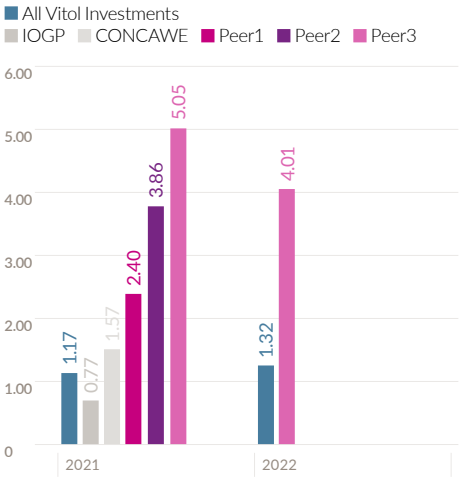
We believe it is important to track our safety performance against industry benchmarks as well as our peers. Vitol's 2022 TRIR compares favourably with the equivalent metric for Concawe[2] and also with industry peers. However, our performance was below that of the IOGP[3] benchmark and we did not meet our target to reduce our TRIR by 10%.

Consequently, through 2023, Vitol will conduct a comprehensive analysis of lost time incidents, focusing on root cause trending, to embed better practices and improve our safety performance. We have therefore set a new 5% reduction target for our TRIR for 2025 compared with the average of the last four years, and believe this extended timeframe will provide sufficient time to implement more effective safety management measures to reduce our incident rates further.

Total Recordable Injury Rate



Total Recordable Injury Rate Benchmark



1. Restated due to Vitol internal audit of data. Please see Appendices p. 88.
2. Concawe 2021 European downstream oil industry safety performance. Statistical summary of reported incidents 2021. Report No. 8/22. Brussels: Concawe. 'All Injury Frequency for all sectors'.
3. IOGP 2021 safety performance indicators.

HEALTH AND SAFETY

Evaluating our safety performance

Lost-time injury frequency (LTIF)

The LTIF across all Vitol investments increased by 9% from 0.56 in 2021 to 0.61 in 2022, we therefore missed our 10% reduction target.

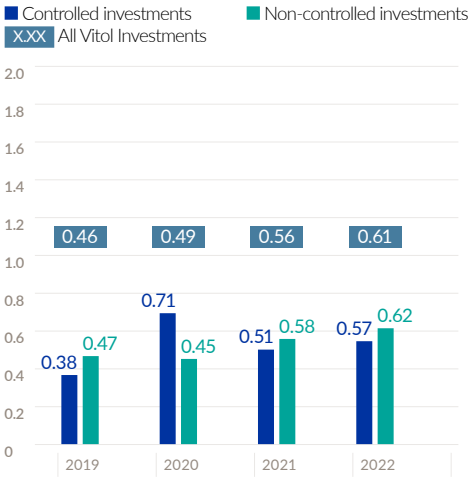
Consequently, through 2023, Vitol will conduct a comprehensive analysis of lost time incidents, focusing on root causes and set a new 10% reduction target for our LTIF for 2025 compared with the average of the last four years. Vitol's 2022 LTIF compares favourably when compared with Concawe[1] but was higher than the IOGP[2].

Road safety

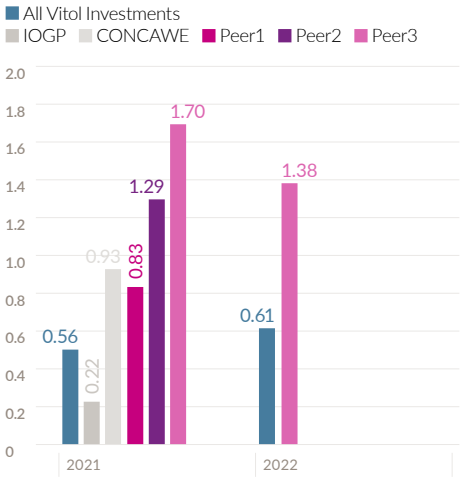
The 2022 Road Traffic Incident Frequency (RTIF) 2022 increased from 0.32[3] to 0.49 across all Vitol investments, primarily influenced by improved reporting practices and an increasing number of transporters across Latin America and Eastern Africa being included in the data. Our 2022 RTIF compares favourably with a blended average of our peers and one energy major, but exceeds the Concawe[4] benchmark.

We screen hauliers through compulsory supplier and contractor questionnaires provided by the compliance department, and supplement this with more detailed due diligence undertaken by the operations and E&S departments. Additionally, Vitol includes E&S clauses in all contracts with hauliers to ensure competent drivers, reliable inspection and maintenance is conducted on all hauliers working for Vitol. We will continue to include haulier data from different geographies in our KPIs and to improve the E&S controls across our controlled and non-controlled transporters.

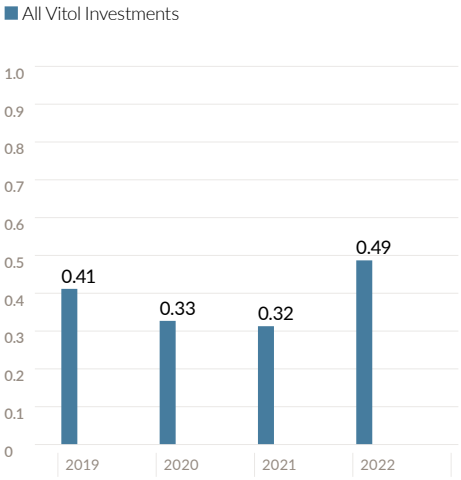
Lost Time Injury Frequency



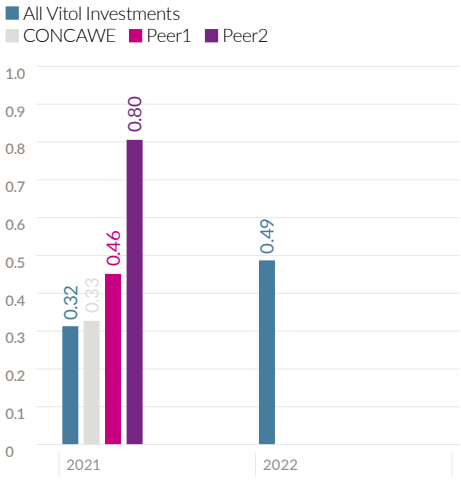
Lost Time Injury Frequency Benchmark



Road Traffic Incident Frequency



Road Traffic Incident Frequency Benchmark



1. Concawe (2021) European downstream oil industry safety performance. Statistical summary of reported incidents 2021. Report No. 8/22. Brussels: Concawe 'Lost Workday Injury Frequency for all workers'.
2. IOGP (2021) safety performance indicators.
3. Restated due to Vitol internal audit of data. Please see Appendix 1.
4. Concawe (2020) European downstream oil industry safety performance. Statistical summary of reported incidents 2020. Report No. 6/21. Brussels: Concawe. 'Road Accident Rate all sector').

HEALTH AND SAFETY

Tracking process safety

Process safety events

Tier 1 process safety events (PSE1) are unplanned or uncontrolled releases of material which result in severe consequences for a worker, the community, the company or the environment. A tier 2 process safety event (PSE2) results in less severe consequences.

In 2022, we recorded seven PSE1 across all companies in which Vitol is invested, all of which related to non-controlled investments.

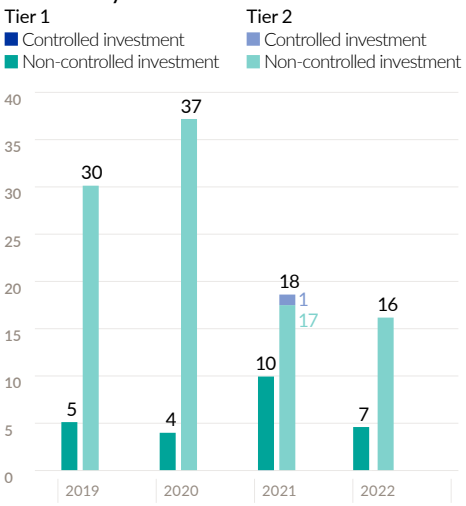
For our controlled investments we had zero events. This represents a reduction of 30% compared with 2021, therefore exceeding our target of a 10% reduction in PSE1 between 2021 and 2022.

For PSE2, we also experienced an improved performance, with a reduction of 6% in 2022 compared with 2021. Controlled investments reported zero PSE2 and our non-controlled investments reported 17 PSE2, a reduction of 47% when compared with 2019.

High potential incidents and near-miss reporting

All companies in which we are invested report near misses, unsafe acts or unsafe conditions on a regular basis. These are leading indicators for Vitol to monitor and we believe that by analysing these high-potential incidents (including significant near misses) they can be avoided. Ninety-nine incidents were reported in 2022, 33% less than 2021 and 19% less than the average from the last three years.

Process safety events



Human rights

This section covers updates with respect to human rights, highlighting progress against our governance and reporting plan, findings from our pioneering human rights impact assessment within controlled shipping, results of the Seafarer Happiness Index and information on aligning the security protocols of all operationally-controlled industrial sites with VPSHR.[1] The data in Appendix 1 provides more details of the E&S KPIs collated over the last four years.

METRIC	2022 TARGET	2022 PERFORMANCE	2023 TARGETS
Alignment with VPSHR	Align security protocols of all operationally-controlled sites with VPSHR by 31 December 2022	✓	Facilitate two virtual meetings for relevant staff at operationally controlled sites for VPSHR knowledge exchange
VPHSR training	100% of our directly hired security personnel trained at operationally-controlled sites	✓[3]	Ensure supervisors of contracted security forces at operationally controlled sites are VPSHR trained
Salient issues	Vitol activities assessed by 31 December 2023	→[4]	Finalise Vitol salient issues assessment by 31 December 2023
Governance and reporting	Implement third year of our group human rights governance and reporting plan	✓	Implement fourth year of our group human rights governance and reporting plan
Owned vessels[2]	Finalise human rights impact assessment and report on it in the 2022 ESG report	✓	Undertake continuous monitoring and develop further KPIs

✓ Achieved → On track

1. VPSHR: Voluntary Principles on Security and Human Rights.
2. Owned and operationally controlled vessels.
3. Nine of the directly hired security guards could not attend the training due to Covid-19 and floods but these were trained in January 2023.
4. Vitol will report on the results in subsequent ESG Report.

MV Elandra Maple

HUMAN RIGHTS

Delivering on our commitments

Our approach

Vitol respects and promotes human rights, recognising that our activities may positively or adversely impact people, and is committed to continuously improving our standards and procedures. Human rights risks vary according to business activities, geographies and other factors relevant to individual situations and different contexts. It is a complex and important matter for Vitol to manage.

Our E&S framework is aligned with the UN Guiding Principles on Business and Human Rights (UNGPs) and includes our commitment to respecting the International Labour Organization's (ILO) Declaration on Fundamental Principles and Rights at Work, the International Bill of Human Rights, and the Maritime Labour Convention. In the framework, we define our expectations on responsible business conduct for our own operations and business partners.

We acknowledge the importance of the private sector in promoting human rights, however, we also recognise its limitations and ability to influence change. Vitol therefore prioritises areas and activities within our own direct influence or considered to present the greatest risk to people (salient issues).

The UNGPs provide the overarching guidelines for Vitol's risk-based human rights governance and reporting plan created in 2019 and which sets out our priorities. Vitol's Human Rights Manager oversees the implementation of the plan and reports quarterly to the Board. Regularly reviewing due diligence measures to ensure we continuously improve is a key element of the plan. For example, we updated our E&S framework in 2022 to further embed human rights due diligence requirements. Updates were approved by the Vitol Board and all Vitol employees were informed about these. It is now available in 13 languages on our website. The E&S framework is an integral part of Vitol's new joiner training as well as E&S training for all relevant employees.

FIND OUT MORE

Vitol acts upon findings that are in violation of the E&S framework and engages where appropriate

Annik Bindler, Human Rights Manager

HUMAN RIGHTS

Following a risk-based approach

Human rights due diligence

To continuously assess actual and potential human rights impacts as well as to monitor the implementation of the framework in our operations, the E&S department works closely with other internal functions and with the companies in which Vitol is invested.

We follow a risk-based due diligence process as shown in the diagram on the right. When screening counterparts, we use international databases and internet searches, to identify whether any ESG shortcomings, e.g. child labour risks, have been identified. KYC occurs before we enter into business relationships. The E&S department may require additional controls, e.g. completion of questionnaires, insertion of E&S clauses, carrying out third-party audits, or other relevant certifications.

The compliance team periodically monitors approved counterparties for potential issues and escalates relevant cases to the E&S department. Vitol acts upon findings that are in violation of the E&S framework and engages where appropriate. Human rights reviews (HRRs) and human rights impact assessments (HRIAs) occur less frequently but go into more detail where we anticipate the presence of salient human rights issues. Senior management across Vitol and the relevant entity receive written HRR and HRIA reports.

DUE DILIGENCE	APPROACH	COVERAGE
Salient human rights issues	Overview of high-risk and priority areas for enhanced due diligence to prevent, avoid and mitigate adverse impacts	Covers all physical activities
Know your counterparty (KYC)	Counterparty screening based on risk or adverse media, potentially asking further due diligence questions and defining additional requirements	Covers all trading counterparties, high-risk service providers, joint ventures
Human rights reviews	On site assessment of human rights management and time-bound improvement plans	Covers Vitol investment companies
Human rights impact assessments	Deep dive assessment and rightsholder engagement	Covers activities that are core to Vitol where we anticipate the presence of salient issues

HIGHER FREQUENCY

DEEPER ANALYSIS

- Salient human rights issues define Vitol's human rights due diligence strategy
- Findings from KYC, human rights reviews, and human rights impact assessments are integrated into the salient human rights issues assessment

HUMAN RIGHTS

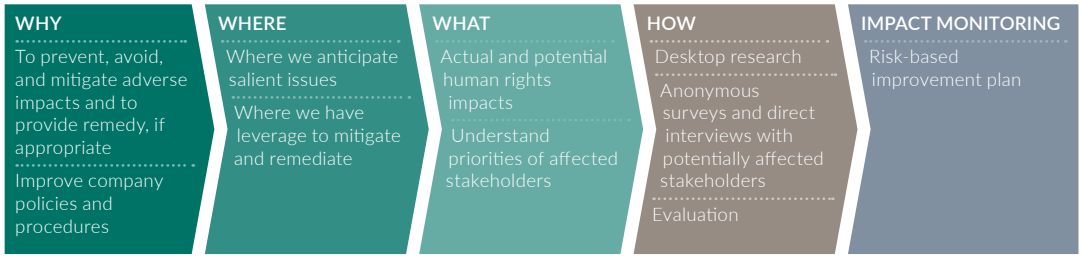
Establishing new approaches

Swiss Ordinance on due diligence and transparency in relation to child labour

Vitol complies with the Swiss Ordinance by implementing the UNGPs. Our commitment to prohibiting and preventing child labour is referenced in our E&S framework, citing the International Labour Organisation (ILO) Minimum Age Convention C138 and ILO Worst Forms of Child Labour Convention 1999 C182. By the end of 2023, we will have completed our salient issues assessment in line with the UNGPs, which includes child labour risks. Any findings will result in the implementation of enhanced due diligence measures.

A pioneering approach to human rights impact assessments in shipping

We undertake HRIAs in activities in which we anticipate salient issues to be present and where we have leverage to mitigate or remediate any adverse impact, where they occur. HRIAs complement existing audits and highlight the current human rights experience of relevant stakeholders and what is important to them. HRIAs strengthen our understanding of how we can improve our performance (see diagram below).



HUMAN RIGHTS

Case Study

Protecting seafarers' rights

Owned and operationally controlled barges in Singapore and United Arab Emirates

MV Marine Zambezi, V-Bunkers

Shipping is a priority area in Vitol's human rights strategy, as potential adverse impacts on seafarers can be severe and are likely to occur if appropriate mitigation measures are not in place. Scenarios that increase the risk of adverse impacts to seafarers include:

- Working under temporary contracts
- Recruitment by third party crewing firms (and sub-agent structures)
- Operating in high-risk and isolated work environments
- Inability to leave their work environment

We undertook HRIAs on the barges and vessels we own to investigate actual and potential human rights impacts, ascertain whether our procedures are sufficiently robust to prevent and mitigate adverse impacts and understand how we can improve our due diligence procedures by engaging extensively with seafarers.

In 2021, we piloted our first HRIA in shipping with LSC, Vitol's technical manager. In 2022, we undertook HRIAs in V-Bunkers (owner, manager and operator of barges) in Singapore and the United Arab Emirates (UAE).

The HRIAs with V-Bunkers included two steps:

- Completion of a third party managed, multi-lingual online, telephone and anonymous worker survey. 70% of the seafarers at sea at that time completed the questionnaire
- Interviews with seafarers on barges. 20% and 80% of the seafarers working on V-Bunkers barges at that time were interviewed in Singapore and UAE respectively

Seafarers were asked to prioritise the issues they raised. The results led to the following priority areas for continued improvement:

- Expanding regular communication between office staff and seagoing personnel to strengthen relationships and to build trust, including confidence to raise grievances. The crewing department revised how it reviews crew terms and conditions during the onboarding safety briefing, and encourages crew members to raise human rights and safety issues during their service period
- Phasing out third-party crewing services and strengthening due diligence in the recruitment process e.g. to prevent recruitment fee payments and to ensure just and favourable working conditions
- Avoiding long, continuous services onboard to mitigate the risk of fatigue and promote mental wellbeing. As with many other shipping companies, V-Bunkers crew changes were heavily impacted by the pandemic. V-Bunkers crewing department made great efforts to contravene long continuous service onboard due to Covid-19 and the situation has improved further, helped by the relaxation of port authority rules
- Boosting communication technologies to ensure daily contact of seafarers with family members and other stakeholders. V-Bunkers set the target to strengthen Wi-Fi connectivity for all barges by 2024. The enhancements will be gradually implemented during vessel surveys, dockings or during earlier repair periods

To monitor the effectiveness of our measures we will undertake a follow-up online, telephone, and anonymous worker survey in 2023. We also developed KPIs to monitor those areas considered most important to seafarers.

HUMAN RIGHTS

Benchmarking our performance

LSC Seafarer Happiness Index

The Seafarers Happiness Index (SHI) benchmarks seafarer satisfaction levels with life at sea and against peers. This anonymous survey covers a range of topics including mental health, wellbeing, working life and family contact, and is one tool LSC uses to measure satisfaction.

The survey was completed by 415 seafarers. The average LSC score improved compared to last year and is 5% above the industry average. The higher scores related to seafarers' satisfaction in relation to: overall happiness at sea, contact with family, ability to keep fit and healthy on board, and interaction with other crew members. The latter improved score is in-part likely due to LSC increasing the internet speed on its vessels and providing new professional gym equipment.

The only indicator that did not improve compared with last year was in relation to food on board. LSC has been addressing this since 2021, when cooks were trained to improve meal diversity, and to meet seafarers' food preferences and food allowances per vessel were increased by 10%. For 2022, LSC rolled out further training to kitchen staff and cooks. It is likely that higher inflation rates impacted the ability to buy high-quality food which led to decreased levels of satisfaction. To address the issue in 2023, LSC will increase the daily budget per person for seafarers and doubled the increase rate for seafarers who work in Brazilian waters since inflation rates have been especially high.

Industry average happiness performance is higher than LSC's in the area of wages, food, training received, and workload. To improve performance in these areas, LSC plans to increase the salary of junior officers and ratings, to migrate the learning materials online and conduct hybrid seminars with playback capability. Crew cabin and accommodation space upgrades were agreed in 2022 to improve seafarer wellbeing at sea. The initial refurbishments will be delivered in the second half of 2023.

Seafarers are still feeling the effects of Covid-19. For instance, seafarers face different port restrictions that can include limited or no shore leave. This continued to impact the repatriation of seafarers in the South East Asia and China regions in a timely manner, through 2022, but cases have decreased compared with last year. LSC management is now able to better anticipate Covid-19 related challenges than during the initial outbreak.

HUMAN RIGHTS

Case Study

Security and human rights

Embedding international standards

Fujairah, UAE

Security arrangements have been identified as a high-risk area for actual and potential human rights impacts. Vitol is committed to managing security arrangements in accordance with the United Nations Basic Principles for the Use of Force and Firearms by Law Enforcement Officials, and the Voluntary Principles on Security and Human Rights (VPSHR), where appropriate.

Our 2021 VPSHR gap analysis highlighted some gaps against the VPSHR and the International Code of Conduct for Security Service Providers (ICoC) requirements e.g. in terms of training site security personnel to ensure awareness of Vitol human rights expectations.

To address this gap, Vitol rolled out a 'train-the-trainer' programme for security managers at operationally controlled sites. The training covered topics such as the use of force, de-escalation strategies, and responsible conduct in situations of community unrest or when managing unauthorised intruders. Training also covered security risk analysis, which considers the impact on human rights of the security arrangements, e.g. on employees, adjacent communities and the security personnel themselves. Over 40 global managers attended the training, which was delivered by an expert security management firm.

These managers then trained the security personnel deployed at their sites on the same principles, either directly or by training the supervisors of the contracted security personnel who then delivered the training to their staff. Sites that involve public security forces invited the police and military to knowledge sharing sessions on security and human rights.

To evaluate the impact of the training, attendees were asked to complete an evaluation form before and after the training, which revealed the knowledge level at the respective sites, whether key principles are understood, and where we need to focus further.

Vitol has taken all steps to ensure alignment with the VPSHR. We exceeded the 2022 target by training all directly hired, but also some contracted security personnel and facilitated knowledge-sharing sessions with public security forces. For 2023, we will continue with training on security and human rights for managers and security providers at operationally controlled sites and host two virtual conferences to facilitate learning between managers. Since not all contracted security supervisors were VPSHR trained in 2022, we will achieve this in 2023.

We are finalising a high-level VPSHR implementation guide, detailing good practice examples, templates, and instruments to be tailored to security operations across all companies in which Vitol is invested.

HUMAN RIGHTS

Building trust through dialogue

Complaints and grievances

We track the number and types of complaints and grievances raised, resolved, or found to be unsubstantiated.

In 2022, 31[1] complaints and grievances were raised in relation to companies in which we are invested:

- 27 had been resolved by the end of the year
- 3 were classified as unsubstantiated
- 1 case is still open

Among these complaints and grievances, 22 were related to human rights, including the open case, on topics such as verbal harassment, property, noise, road safety, pay and benefits, and employment.

Our ambition is to operate and undertake business in such a way that we do not receive complaints from stakeholders. However, we are also cognisant that it is a positive sign if grievances are raised, since this indicates that stakeholders are aware of the channels to report any shortcomings and feel confident in using them.

VPI Rye House, UK

Number of complaints and grievances (Resolved / Unsubstantiated / Open)	Of which relate to human rights	Topics
Community: 13 (11 Resolved, 1 Unsubstantiated, 1 Open)	**10**	4 noise, 3 health & safety, 2 property, 1 human rights, 3 community project complaints
Contractor employee: 6 (6 Resolved)	**6**	6 labour complaints
Employee: 5 (3 Resolved, 2 Unsubstantiated)	**4**	3 labour, 1 health & safety, 1 disclosure complaints
Customer: 4 (4 Resolved)	**2**	2 product quality, 1 health & safety, 1 labour complaints
Landowner: 2 (2 Resolved)	**0**	2 property complaints
Government: 1 (1 Resolved)	**0**	1 noise complaint
Total: 31 (27 Resolved, 3 Unsubstantiated, 1 Open)	**22**	

1. 5 complaints are still under investigation and not included in the total.

Our people

Vitol's workforce comprises approximately 1,600 people at the end of 2022.[1] Our success relies on our ability to attract, develop and retain the best talent, at every level. We have a highly capable, entrepreneurial and engaged workforce that brings a diverse range of experience and perspectives to the organisation.

1. Vitol staff, excluding employees of companies in which we are invested.

OUR PEOPLE

A culture defined by integrity

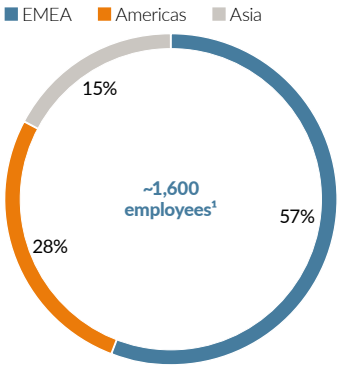
Culture

Vitol's culture is integral to the business and, we believe, a positive differentiator. It characterises the way we work, creates an optimal working environment and underpins our success. The origins of our culture go back over 50 years to our founders and their combination of entrepreneurship, determination to succeed, integrity, hard work and humility. As Vitol has grown, its leadership has worked hard to preserve and evolve the elements it believes to be both the foundations of a successful business and conducive to a pleasant and constructive working environment.

A commitment to integrity and ethical behaviour is a critical factor in determining career advancement and compensation. Our limited hierarchy enables the leadership team to have a good understanding of who our people are, how they work, as well as what they achieve. We regard every Vitol employee as a steward of our culture and values. Our code of conduct outlines the explicit articulation of how we are expected to conduct ourselves in given circumstances and the leadership team's commitment to these standards.

Our culture is defined by a combination of entrepreneurship, determination to succeed, integrity, hard work and humility

Vitol employee headcount by region



1. Vitol staff, excluding employees of companies in which we are invested.

OUR PEOPLE

Q&A Nonye Adebanjo, Head of Human Resources, EMEA

A workforce for the future

Maximising our employees' potential

What were your objectives for 2022?

Emerging from the global pandemic restrictions and responding to energy market demands, we have embarked upon a programme of capacity building. Our headcount has materially increased by 7% since 2021, as we welcomed many new colleagues to our business.

It was essential to ensure an effective onboarding process, particularly for those unfamiliar with the energy sector. We set up several new joiner events including company training at our offices that introduced Vitol's approach and culture. We established in-person business briefing presentations with our Board members, resulting in many networking events across our business, that brought together various teams from trading to legal and finance, and we also set up online programmes for industry training. The overarching goal was to get people back together and we intend to continue these forums in 2023.

We hosted our bi-annual global integration programme (GIP), a five-month career development initiative targeted primarily at rising commercial talent worldwide. The programme aims to increase participants' knowledge of Vitol's commercial objectives, expand their internal network and, in turn, enhance their leadership and commercial capability and contribution.

We also expanded leadership and personal development coaching to provide individuals across our global organisation with the necessary training to execute their objectives and maximise their potential. Whether supporting a new manager with increased responsibility or a functional lead with new people to manage, the three-month coaching programme consisted of six sessions tailored to each role. Subsequently, each participant received 360-degree feedback from their colleagues to provide a holistic view of their performance and enable an important two-way review process.

In addition, we have piloted a performance coaching initiative aimed at enabling those in commercially focused roles to understand and focus on the factors that drive and sustain high performance whilst building resilience, so people can continue to perform at their best. The quality of our people is a key differentiator for us, and we are dedicated to ensuring that we get the best from them while fostering an enabling environment.

OUR PEOPLE

Q&A Nonye Adebanjo, Head of Human Resources, EMEA

What trends shape your recruitment strategy?

As our industry evolves, we are cognisant that we will require new competencies to support our expanding energy solutions. We will require more new skillsets in data and technology development, which places us in competition with a variety of other sectors. Whether within hydrocarbons or clean energy, the need for tech-enabled talent will increase and we must remain an attractive employer of choice, if we are to continue to be an industry leader.

To keep pace, our recruitment strategies will need to evolve to ensure we attract the leading candidates. We have boosted our internal capabilities to allow us to more directly engage with potential candidates through external online content that showcase the various career paths and opportunities we have within Vitol. We recently expanded our entry-level hiring efforts with specific university outreach events in some hub offices with the aim of enhancing the diversity of our candidate pool by reaching candidates in the first quarter of their careers.

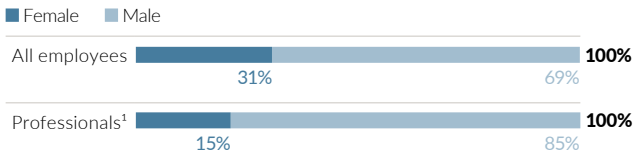
FIND OUT MORE

What is your main focus for 2023?

As we look to grow more in the coming year, we are focused on progressing our efforts with onboarding and training for new joiners, providing more structure and accessible content for continuous learning as they integrate into our culture and organisation.

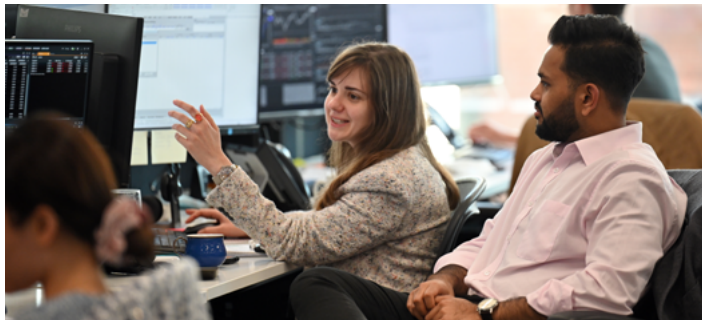
Diversity is good for business and has been a core area of focus for us. We have seen a want and a need for further engagement within diverse groups at Vitol. Throughout the training and personal development programmes, we have ensured that we have a good representation of diverse individuals within our selection, and this is something that will certainly continue in 2023. Following the insights we have gained from equality themed round-table sessions, we will be looking at how we can help women and minorities to achieve and maximise their potential, extending our efforts to providing external networks and opportunities for example, through forums such as our internal Women in Energy event that took place during International Energy week amongst others.

Vitol gender split (global)



1. Professionals are employees who have risk and/or decision-making discretion, significant impact on commercial outcomes, or require a professional qualification to perform their roles. We now include business and research analysts, increasing the overall number defined as professionals from 2021. This has impacted our gender split.

The quality of our people is a key differentiator for us, and we are dedicated to ensuring that we get the best from them while fostering an enabling environment



The need for tech-enabled talent will increase and we must remain an attractive employer of choice

Working with our communities

Our people frequently seek to engage and support the communities in which they operate. Along with our stakeholders, we work to assess initiatives, develop solutions and realise shared benefits. We are committed to using the strength and the scale of our company to expand socio-economic opportunity and improve the financial health of businesses and individuals around the world.

Muso

WORKING WITH OUR COMMUNITIES

Supporting local communities

Juniper Green Energy's clean water drive

Juniper is a renewable energy producer and operator of solar projects in India. Since 2018, it has developed a portfolio of over 0.6 GW of operating solar capacity and a pipeline of growth opportunities.

In addition to providing cleaner energy solutions to the communities of India, Juniper is committed to tackling poor and inadequate clean water supplies that have a severely detrimental effect on society, and specifically children.

Through its interactions with village stakeholders and the community, Juniper was made aware of this issue and has responded by installing reverse osmosis units at various schools in the communities where it operates. These units not only improve water quality but also reduce waterborne illnesses and ensure a regular supply of clean water. In addition to improving healthcare outcomes and strengthening community relations, the scheme has supported education by reducing illness-related absenteeism at the local schools.

Embracing advanced human rights practices in Malaysia

ATB refinery employees work closely with the community and the local Enforcement Authority to continually enhance security and safety for all those concerned. Recently, ATB introduced the VPSHR to the local Enforcement Authority through tailored engagement to not only raise greater awareness of security and human rights, but also to explain Vitol's position on the matter and how knowledge can be shared and human rights embedded in local operating practices. The session allowed for the Enforcement Authority to assess the requirements and acknowledge their implementation.

Supporting local communities during Ramadan

With assistance from Community Leaders, ATB established a welfare programme to support households during the month of Ramadhan with basic goods and provisions. In total, 18 ATB employees volunteered, committing their personal time to support the rollout of this programme, which received a warm reception from local communities.

Community project, ATB, Malaysia

Community project, Juniper's Green Energy, India

The Vitol Foundation

INDEPENDENT OF VITOL'S BUSINESS

DLA Kano

158 ACTIVE PROJECTS

97 NEW GRANTS APPROVED IN 2022

56 COUNTRIES

$250m+ DONATED

The Vitol Foundation has a small core team, dedicated to supporting charities and NGOs working in the field of poverty reduction and rapid deployment of philanthropic funding where it is most needed in humanitarian crises – all in ways that resonate with the entire Vitol community

GÉRARD DELSAD
CHAIRMAN OF THE VITOL FOUNDATION

THE VITOL FOUNDATION AT WORK

Developing sustainable solutions for long-term change

During 2022 the Vitol Foundation passed the landmark of $250M+ donated for charitable purposes since formal registration in 2006.

Working with charities, NGOs and social enterprises around the world, the Foundation was formed to address five principal themes (Education, Health, Humanitarian/Emergencies, Livelihoods and WASH – water, sanitation and hygiene) and aligned with the UN SDGs. The Foundation supports partners to address the systemic social and economic barriers that trap people in multi-dimensional poverty. Following is a sample of the highly varied work that the Foundation funds.

Education

The Foundation is supporting the work of Impact(ed) in Kano State, Nigeria, to improve the social and emotional wellbeing of adolescent girls. In many countries, adolescents do not receive appropriate social and emotional learning (SEL) support and this can lead to barriers to educational access, for girls in particular. These are heightened for those living in economically disadvantaged, conflict-prone regions such as Northern Nigeria: in Kano State nearly one-third of girls are married before the age of 16, carrying the burden of household tasks, and only 58% of girls transition to junior high school. Impact(ed)'s programme is run in partnership with the Kano State Universal Basic Education Board and will operate in 50 schools. By concentrating on this neglected topic, Impact(ed) expects to reach up to 300,000 direct beneficiaries, improving the attitudes of parents and communities to girls' education, increasing enrolment and attendance and raising girls' aspirations.

Health

The work of Muso is defined by the organisation's publicly stated commitment that "no one should die waiting for health care". Muso's approach is built around three pillars: community health workers (CHW) providing care at home; rapid access clinics; and the principle of no fees at the point of care. The Vitol Foundation has worked with Muso since 2012, witnessing impressive expansion of their work in Mali and now scaling up in Côte d'Ivoire. The latest funding is to support further recruitment of up to 8,000 CHWs in Mali, and 144 CHW supervisors in Cote d'Ivoire, reaching 715,000 potential beneficiaries. In spite of the serious operational and security challenges of working in a conflict-affected country like Mali, Muso is unapologetic about the high standards it seeks to deliver, aiming to treat 65% of sick children within 24 hours of the onset of symptoms.

Humanitarian/Emergencies

Health Equity International (HEI) runs a 230-bed hospital as well as providing community healthcare in remote villages in Haiti. When a major earthquake struck South West Haiti in 2021, followed two days later by a serious tropical depression (causing flooding in earthquake-affected areas where almost half the population were already suffering acute food insecurity), the Foundation supported HEI's immediate response. In 2022, as HEI continued the vital work of helping communities recover and build resilience, by setting up and operating mobile health clinics – the only healthcare services available to tens of thousands of people – the Foundation provided further funding towards five mobile health clinics as well as disaster-response training for 50+ clinicians and community health workers. This illustrates the Foundation's strategy of continuing funding during the recovery phase after an emergency when global attention has moved on but the needs of communities remain.

Muso

SHRI Dundibagh

THE VITOL FOUNDATION AT WORK

Developing sustainable solutions for long-term change

Livelihoods

The Near East Foundation (NEF) traces its roots back 100 years and has been a consistent presence in countries afflicted by civil war, providing support for economic, educational and social development. A longstanding partner of the Vitol Foundation, NEF's focus on economic recovery reduces reliance on humanitarian aid. NEF is currently working on the provision of critical support for small enterprises in North East Syria. By establishing an impact investment facility, combining philanthropic and return-seeking capital, NEF has been able to give credit to SMEs, whether as seed funding for asset purchases or working capital, at a crucial point in their development. To improve the chances of survival for start-up businesses, NEF backs up its financing with technical assistance and other non-financial support. Working across a variety of sectors and helping to create sustainable jobs against a very challenging background, NEF anticipates reaching more than 23,000 borrowers with full repayment rates above 90%.

WASH

40% of the estimated 500 million people worldwide who practise open defecation live in rural India. SHRI, an Indian social enterprise, headquartered in Delhi, was set up in 2012 with the aim of ending the practice of open defecation throughout the country. SHRI builds new toilets or rehabilitates poorly maintained public toilets in partnership with local governments. Letting people use the toilets free of charge, SHRI also treats the human waste locally, turning it ultimately into power to run water treatment stations and producing high-quality drinking water, which can then be sold at a subsidised price. The Foundation has been funding the work of SHRI since 2021 and the latest grant will contribute to 45 new facilities, serving 27,500 people, at an annual cost of $4 per beneficiary. SHRI's model is on the path to sustainability with up to 90% of operational costs covered by revenue generated.

FIND OUT MORE ABOUT THE VITOL FOUNDATION

DLA Kano

SHRI Azadnagar

DLA Kano

Governance

Embedding governance, risk and compliance frameworks

Vitol has developed robust frameworks to ensure high standards of corporate governance in all our operations. We have sought to embed relevant controls for our business model and ownership structure.

METRIC	2023 TARGETS
E&S audits and human rights reviews	Deliver 10 on-the-ground E&S audits or human rights reviews across investment companies
Risk findings	Close out 50% of findings from E&S audits or human rights reviews in line with agreed deadlines
ESG knowledge sharing	Hold a face-to-face E&S networking and knowledge sharing event for relevant companies in which Vitol is invested

UN SDGs	TARGETS	RELEVANCE TO VITOL
16 PEACE, JUSTICE AND STRONG INSTITUTIONS	16.5 16.6	We require our employees and suppliers to meet high ethical and environmental standards

CORPORATE GOVERNANCE

Committed to robust governance

Ownership

Vitol's holding company is incorporated in the Netherlands where Vitol was founded in 1966. Since its inception, Vitol has been employee-owned and today no single shareholder holds more than 5%. Vitol believes that this broad employee ownership ensures that the interests of key employees are aligned with its long-term interests, fostering a responsible and cautious approach to risk.

Corporate governance

Vitol is led by a Board and management team, headed up by our Chief Executive Officer (CEO), Russell Hardy. Its members are responsible for both the commercial business and core business critical functions. In addition to the business's financial performance, the Board is responsible for setting purpose, ethos and strategy. Major decisions, such as investments or participation in a financing arrangement where Vitol's capital is put at risk, are governed by established protocols that assess the financial implications, as well as considering broader issues such as reputational risk and ESG impact. To ensure proper governance Vitol has elected shareholder representatives who participate in Board meetings and communicate decisions to the wider company.

Committees

Compliance, ESG and investment committees oversee the mitigation of key risks across the business and report regularly to the Board. Committee members are drawn from the company's most experienced employees, many of whom built their expertise in major financial institutions and energy companies before joining Vitol. To ensure the committees' oversight is aligned with our strategy, at least one member of the Board is a member of each committee.

The Board is responsible for ESG risk and approves all material ESG decisions, but day-to-day oversight has been delegated to the ESG committee. 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 every six to eight weeks, with quarterly reporting to the board. The committee met seven times in 2022. Its members comprise the Chief Financial Officer (CFO), the Chief Information Officer (CIO), the Head of Utilities of Vitol Inc., the Head of Asia, the Chief Operating Officer (COO) of Vitol Inc., the Head of E&S, the Head of Compliance, the Chief of Staff, the Head of Communications, and the Head of Treasury. All employees are expected to consider the ESG implications of the business's activities and to raise any queries or concerns with the Head of E&S or the committee.

ENTERPRISE RISK MANAGEMENT

Managing risk across our business

Vitol has a careful and considered approach to risk. We split risks into the five main categories described in the table opposite. A number of functions exist in Vitol to mitigate these risks. The heads of these functions report directly to a Board member and provide quarterly updates at Board meetings. Environmental and Social risks can occur across strategic, hazard and operational risk categories. E&S controls are embedded across Vitol, as appropriate, to control these risks.

Vitol believes its ownership structure encourages a long-term outlook and that the proprietary systems which underpin the business and are developed and built in its Geneva hub, enable it to manage enterprise and market risk across its global operations.

Creating a resilient environment is vital in mitigating risk across these five main categories. The cyber security programme's objectives are to protect Vitol and facilitate new opportunities, while reducing the risk of exposure to cyber-attacks or data privacy incidents. The cyber strategy is driven by industry best practice objectives of *Confidentiality, Integrity and Availability*, delivered via the three pillars of governance, technology and employees. The management of cyber risk is led by the Head of Cybersecurity (CISO) who presents metrics on exposure and consolidation every quarter to the Board. The programme covers not only Vitol cyber risks but also supply chain and third party risk management.

RISK		DESCRIPTION
Strategic and Marketplace risks	Potential negative impacts on Vitol resulting from external factors impacting overall strategy and competitive environment	These risks include ***Talent risk***, which can arise due to employee attrition or a skills gap; ***Margin and volume risk***, from price volatility or fluctuating demand; ***Joint venture risk***, which may stem from conflicting goals or cultural differences; ***Sanctions risk***, resulting from trade restrictions or financial penalties; ***Business continuity risk***, occurs when there is a natural disaster or supply chain disruption; ***Competition risk***, which may include price wars or lost market share; ***Technology risk***, arise due to cyber attacks or data breaches; and ***Reputational risk***, from negative publicity or counterparty complaints
Hazard risks	Potential harm or damage to people, property, or the environment resulting from natural disasters, accidents, or other unforeseen events	Hazard risks are split into ***Regulatory risk***, which may arise from changes in laws or regulations, which could impair Vitol's ability to operate or comply with relevant standards and ***Environmental risk***, which may stem from pollution, natural disasters, or other environmental factors that can harm Vitol's assets, operations or reputation
Operational risks	Potential losses or disruptions resulting from internal processes, systems, human error, or external events beyond Vitol's control	Operational risks can have significant negative impacts on Vitol operations including: ***Storage and freight risk***, which refers to the possibility of loss or damage of goods during transportation and warehousing; ***Inflation risk***, unexpected increase in expenses and operating costs; ***Control failure risk***, could occur when there is a failure to enforce policies and regulations leading to non-compliance and potential legal repercussions; ***Fraud and corruption risk***, involves individuals engaging in intentional deception or dishonesty for personal gain; and ***Litigation risk***, stems from exposure of Vitol to legal action or lawsuits
Financial risks	Potential losses or negative impacts on a company's financial position resulting from fluctuations in financial markets, interest rates, credit ratings, or other financial factors	Financial risks include ***Country risk***, i.e. political and economic instability in a country; ***Counterparty risk***, arises from the risk of default or non-payment by a business partner; ***Liquidity/cash risk***, threat from insufficient cash or liquidity to meet financial obligations, ***Currency exchange risk***, involves fluctuations in exchange rates that can result in significant financial losses; ***Interest rate risk***, arise due to changes in interest rates, which could impact profitability and financial stability; and ***Insurance coverage risk***, refers to the risk of inadequate or loss of insurance coverage
Transactional risks	Potential financial loss resulting from errors, fraud, or other issues that may arise during a transaction or business deal	Transactional risks are those associated with day-to-day operations such as ***Trading strategy risk***, result from potential losses due to poor trading strategies; ***Sourcing risk***, stem from poor supplier selection or performance; ***Price risk***, arises from fluctuating commodity prices; ***Basis risk***, occurs when there is a discrepancy between related commodity prices; ***Structural risk***, arises from changes in the market structure, ***Market liquidity risk***, arises due to a lack of liquidity; and ***Rogue trader risk***, associated with fraudulent trading activities by an individual

COMPLIANCE

Q&A Odile Roy de Puyfontaine, Global Head of Compliance

Embedding a culture of compliance

Evaluating our progress

Odile, Vitol's Global Head of Compliance, describes the last 18 months as the most complex of her career. Implementing Russian sanctions, the impact of the DPA (Deferred Prosecution Agreement) and Vitol's expansion into new markets have positioned Compliance as a critical supporter of the business. By working with other functions including E&S, Risk and Legal, Compliance has been at the forefront of ensuring the company and our colleagues are equipped to deal with geopolitical and market volatility.

A year on since our last E&S report, we spoke to Odile to assess how far Vitol's approach to Compliance has evolved and what our priorities are for the coming year.

What have been your highlights since last year's report?

The last 12 months have seen a significant evolution of our team. We've seen first-hand the tangible impact of our robust compliance culture on our ability to respond quickly to extreme uncertainty. The shock of the Russian war in Ukraine and the corresponding sanctions were integrated far more efficiently into our trading procedures because our due diligence frameworks have been in place for over a decade. This meant we could focus on building mechanised controls into our trading workflows and immediately help mitigate the risk inherent in such unpredictable circumstances.

We've been able to extrapolate these processes into our dealings with other high-risk businesses and jurisdictions, significantly improving our understanding of risk mitigation in these areas.

Increasingly complex regulatory landscapes have also seen a shift in the composition of the Compliance team. Our growth has accelerated with the team expanding to 21 compliance professionals and 40 'Compliance Champions' located worldwide. These are colleagues identified in offices with no Compliance team members present to promote compliance culture and best practice. It used to be the case that each Compliance team member was expected to be a generalist, but now we are increasingly hiring people with specialist skills to focus on narrower areas of compliance, and even specific product markets.

We have also worked to further embed environmental and social controls, checks and balances within our KYC processes, working in close collaboration with the E&S team. These enhanced controls and processes position us well for upcoming legislation, particularly in Europe, in relation to environmental and human rights supply chain due diligence.

COMPLIANCE

Q&A Odile Roy de Puyfontaine, Global Head of Compliance

What has been the single most effective development for the team?

This year we've tried hard to integrate technology into our processes to improve our efficiencies. Working closely with our in-house IT and agile tech teams, we've created either bespoke compliance applications or integrated compliance processes in front office systems to help the business manage its risk.

Given the volatile conditions we are operating within, being able to respond to problems with rapidly rolled out tech solutions means we can stay on top of change. For instance, being able to quickly build out an approvals process into a business communication platform rather than using email at the start of the Russian war in Ukraine was a game changer. Going forward, I'd like to explore further how we can develop technology to shore up our controls, mitigate risk and support the business.

What has been the measurable impact of the DPA?

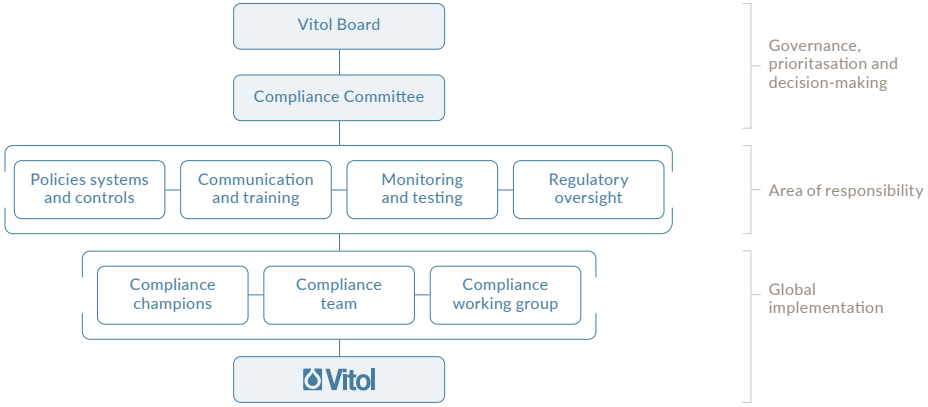
A DPA is never something that a compliance team wants to deal with but it does have some positives. It helped reinforce the importance of a strong compliance programme and encouraged us to think about what was necessary to improve further. Our executive team has been engaged right from the start, which has accelerated how quickly we have been able to grow our presence and emphasise the role of Compliance as an important business function, at the same time as strengthening the understanding of ethical business practices.

This is reflected in the enthusiasm and support from our colleagues to get involved in schemes such as our Compliance Champion programme, which ensures that all offices outside of our key hubs have in-person access to compliance advice.

What are the priorities for 2023?

This is a critical year for both the business and the Compliance team. The DPA is due to expire at the end of the year, with everything we have implemented over the last three years to be assessed. After the DPA, our compliance programme will be continuously reviewed, building further on the strong foundations we've put in place and delivering the company's commitment to a Compliance culture. Our industry is changing with new business lines opening up as a result of the energy transition. This is really exciting for Vitol but it also means, as a team, we need to be continuously upskilling in order to make sure our colleagues feel sufficiently supported to make informed decisions. This includes keeping track of a constantly shifting regulatory landscape as different political bodies prioritise and incentivise new energy solutions.

FIND OUT MORE ABOUT COMPLIANCE AT VITOL



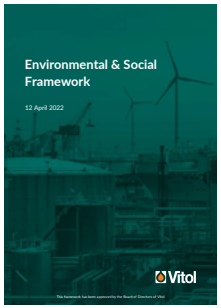
E&S GOVERNANCE

Our approach to Environmental & Social governance

Vitol's E&S framework

Vitol has always been focused on the safety and environmental risks associated with its operations. We continue to invest in physical assets with diverse E&S standards. Some of which are majority-owned and controlled and others via partnerships or minority stakes. Vitol's E&S framework covers all business activities and sets out Vitol's beliefs and requirements. Vitol expects companies in which we have a shareholding to follow these or similar standards, but recognises our influence will be commensurate with our shareholding. During 2022 we continued to work with current and newly acquired businesses to implement and embed the requirements of the E&S framework, and provide general ESG support in an ongoing process.

VIEW OUR E&S FRAMEWORK



E&S performance monitoring

The E&S framework sets out the requirement for investments to submit E&S KPIs via Vitol's web-based platform. Vitol has over 40 E&S KPIs aligned with relevant industry-accepted definitions. Monitoring KPIs enables Vitol to understand performance, take appropriate action and is one element underpinning our audit programme.

Vitol treats both operationally and non-operationally controlled investments the same in terms of KPI reporting. We need to monitor the performance of any investment in which we hold shares. All investments with operational activities (e.g. a refinery, a windfarm or solar infrastructure) where Vitol holds an equity interest must report the relevant E&S KPIs regardless of how small the percentage of equity ownership. Over 50 businesses and Vitol offices are currently reporting data. During 2022 we continued to include KPIs from some Vitol operations (e.g. truck and rail movements) across different geographies such as the Americas and Africa, and this will continue during 2023.

E&S audit programme

Vitol runs a risk-based on the ground E&S audit programme. Each year investment companies are appraised against the E&S framework and a bespoke audit protocol. The duration of each audit depends on factors such as location, asset complexity, geographic profile and asset risk score. Third party advisers or guest auditors are engaged where required to bring an independent or specialist perspective to these reviews.

Each audit follows the same process, observations are ranked against the Vitol risk matrix, discussed with local and Vitol management, recommendations for improvements made and timelines agreed upon. E&S findings of particular concern are reported to the Board and the E&S department will work with the relevant company to implement the required changes. 2020 and 2021 were severely hindered by the Covid-19 pandemic. We have set two targets for 2023. First, to undertake 10 E&S audits or human rights reviews and second, to close out 50% of findings from E&S or human rights reviews in line with agreed deadlines.

Vitol's E&S department provides additional ad hoc support to matrices and operations, e.g. for new business activities or when entering into new jurisdictions.

E&S due diligence

Vitol undertakes E&S due diligence in close collaboration with our investments and origination teams on all potential acquisitions, and uses external consultants as necessary. Due diligence scope will depend on various risk factors: location, previous owners, operating partners, the risk to rightsholders, as well as business activities and other factors.

Incident management

Vitol has an incident management process covering major incidents. It also includes links to function-specific response plans for areas such as IT security and cyber risk, or physical assets, e.g. shipping or upstream. Vitol's incident management system ensures any incident outside of the E&S KPI platform is captured in real time. Typically, these relate to minor and common shipping incidents. Reported incidents are communicated to the incident management committee immediately. This system provides 24-hour, 365-day coverage.

Training

The Vitol E&S and operations departments continue to develop tailored training to relevant internal stakeholders. In addition to the other training detailed in this report, over 20% of our current global employees and EMEA new joiners were trained in incident management, E&S topics, emergency response, and US port security regulations in 2022.

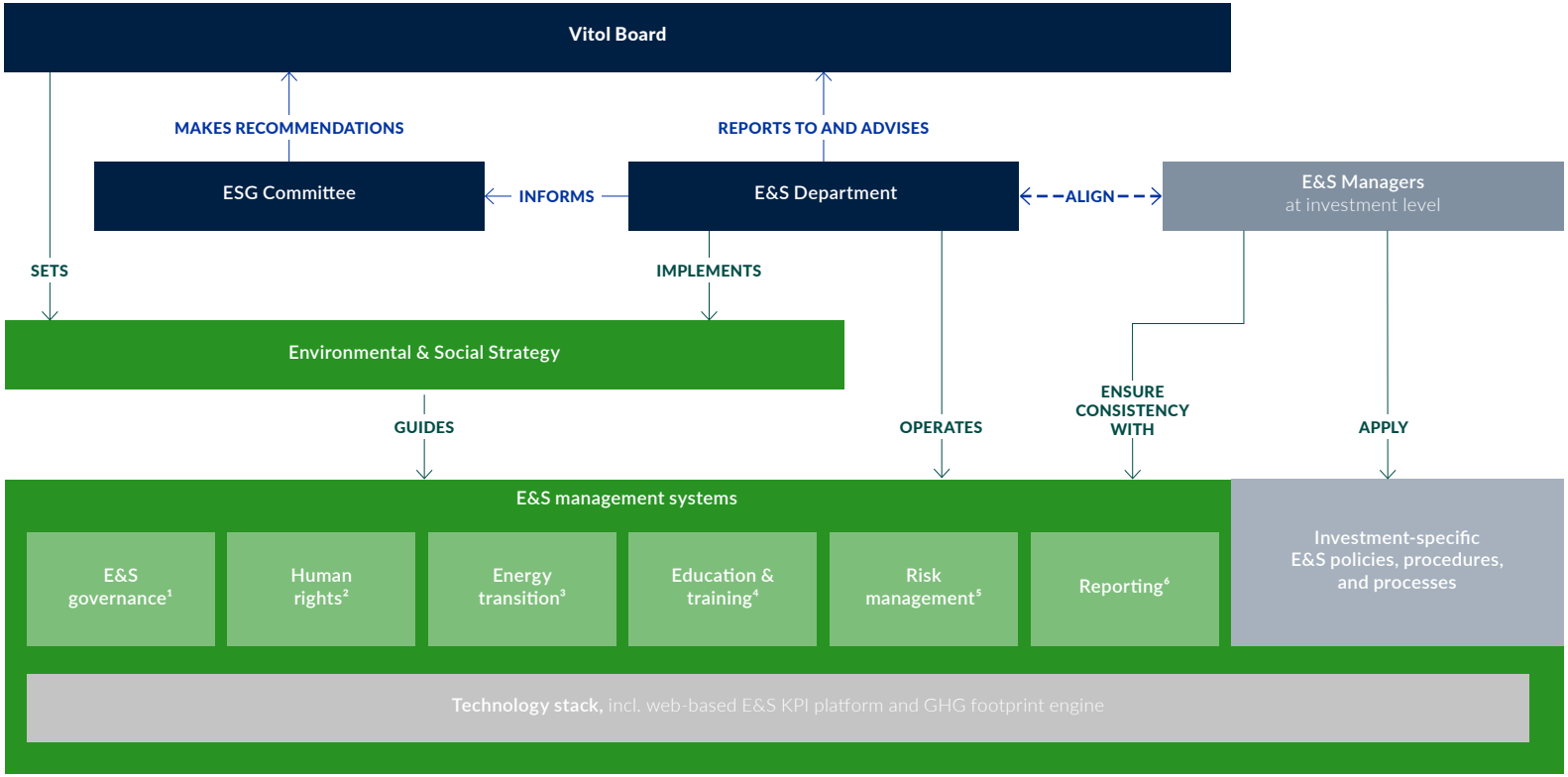
E&S network

The Vitol E&S network was established in 2020 as a support mechanism for managers from the investment companies. They can seek advice from peers, raise concerns and share results from incident investigations. In 2023 we intend to focus more on this network to enhance knowledge sharing, to this end we will also hold a face-to-face E&S networking event for relevant companies in which Vitol is invested.

E&S GOVERNANCE

Our approach to Environmental & Social governance

TCFD



1. E&S governance includes the E&S Framework, E&S guidance, procedures, and standards, KPI development & monitoring, annual audit plan, incident management, E&S due diligence.
2. Human rights includes UNGP implementation, human rights regulations, salient issues, reporting & DD requirements.
3. Energy transition includes VETI objectives & workstreams, GHG objectives & performance, TCFD implementation.
4. Education & training includes director training, bespoke training, E&S network for investments.
5. Risk management includes E&S risk register & assessment matrix, ad hoc reviews.
6. Reporting includes coordination & structure, KPI input, ESG rating, stakeholder engagement.

CLIMATE-RELATED DISCLOSURES

Implementation of climate-related financial disclosures: Vitol's TCFD roadmap

TCFD

Vitol supports the recommendations of the Financial Stability Board's Task Force on Climate-related Financial Disclosures (TCFD)[1] to provide the necessary transparency for our stakeholders to understand the potential impacts of climate-related risks and opportunities (CRR&O) on our business.

Our TCFD roadmap below sets out the timeline we plan to follow to implement all recommended disclosures, a multi-year process given the complexity and uncertainty associated with climate change.

Planned additional disclosures for 2023 23

Planned additional disclosures for 2024+ 24+

1 Governance

a) Board's oversight of CRR&O.
- CR issues consideration within strategy, risk management, budgeting & planning, capital management, and objectives
- Performance monitoring vs CR goals and targets
- Information processes and discussion frequency around CR risks

b) Management's role in managing & assessing CRR&O.
- CR issues monitoring
- CR responsibility assignment, incl. managers' reporting lines and committees created
- Associated org. structure(s)
- Management information processes

2 Strategy

a) Identified CRR&O over the short, medium, and long term
- Relevant short, medium, and long-term horizons to our business for principal CRR&O with potential financial impact
- Specific CR issues by segment and geography 23
- CR financial impact materiality determination processes 24+

b) Impact of CRR&O on Vitol's businesses, strategy and financial planning 23
- By segment and geography: products and services, supply chain and value chain, adaptation and mitigation activities,operations
- Overall: investments, M&A and divestments, access to capital

b suppl.) CRR&O integration into current decision-making and strategy formulation 24+
- R&D and new tech adoption
- Capital management and strategies to lower carbon-, energy and/or water use in legacy assets
- Physical risks considerations in capital planning and allocation
- Flexibility in capital (re)positioning to address emerging CRR&O

c) Strategy resilience vs. different CR scenarios, incl. ≤2°C 24+
- Where strategies are impacted by CRR&O and how they need to adapt
- CR issues impact on P&L and balance sheet
- CR scenarios and associated time horizons

c suppl.) Robust scenario analysis
- Critical inputs in policies, macro-economic trends, energy and tech deployment pathways, and timing assumptions
- Potential financial implications

3 Risk management

a) CR risk identification & assessment processes
- Risk terminology and framework
- Regulatory requirements
- Assessment process of potential size and scope
- Determination of relative significance of CR risks vs. others

a suppl.) Investees' engagement
- Activities to encourage better disclosures from investees
- Practices to improve data availability on CR risk

b) CR risk management process 23
- CR risk mitigation, transfer, acceptance, and control processes
- Approaches specific to transition and physical risk sub-categories

b suppl.) Portfolio positioning 24+
- Investee positioning consideration vs. energy transition
- Active portfolio management

c) CR risk processes integration into overall risk management

4 Metrics and targets

a) Key metrics to assess CRR&O
- CR environmental KPIs, e.g. freshwater extraction
- CRR&O metrics, e.g. internal carbon prices 23

a suppl.) Key metrics for energy and transportation groups,and asset owners
- Carbon intensity metrics, e.g. for shipping activities
- Capital committed to sustainable investments
- Renewable power generation operational capacity
- Share of transitional energy products physically delivered
- Percentage of freshwater withdrawn in regions with high baseline water stress 24+
- Metrics used to assess CRR&O as part of asset investment decisions and monitoring

b) GHG emissions.
- Scope 1, 2, and 3 GHG emissions in line with GHG Protocol
- Trend analyses and methodologies used

c) Targets to manage CRR&O and performance.
- CR targets
- Avoided GHG emissions through product life cycle 23
- Efficiency and commercial goals for products and services in a low-carbon economy 24+

1. See p. 9.

CR: Climate-related.

CRR&O: Climate-related risks and opportunities.

CLIMATE-RELATED DISCLOSURES

Climate-related governance

TCFD

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

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 [cf p. 76] and working groups that are part of the Vitol energy transition initiative (VETI), [cf p. 19] as well as through open dialogue with the E&S department [cf p. 76] and other functions, which provide regular updates throughout the year.

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, E&S, compliance, HR, communications, treasury). Cross-department collaboration supports the integration of climate-related risks and opportunities into decision-making both on the ground and at a corporate level, with clear accountability and responsibility assignment:

- The Vitol CEO is accountable for strategy development and execution, including ESG and energy transition, in consultation and collaboration with the board
- The chairman of the ESG committee is a Board member and responsible for ensuring that the ESG committee's terms of reference are followed. The remit of the committee also includes climate-related matters
- Vitol's head of E&S reports directly to the board, 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 and flows are summarised in the following diagram, alongside role, meeting frequency and composition of the main governance bodies. This organisation matches VETI's three objectives and nine workstreams:

Grow low-carbon opportunities

Addresses climate-related opportunities, with the Alternative energy working group covering sustainable investments, VETS covering trading opportunities, and GHG trading group covering environmental products and solutions

Manage climate-related risks & decarbonisation

Addresses climate-related risks, with origination, investments and E&S departments coordinating our current investment portfolio, GHG shipping group covering the transportation workstream, and our green office champions[1] covering offices and business travel

Provide transparency and take action

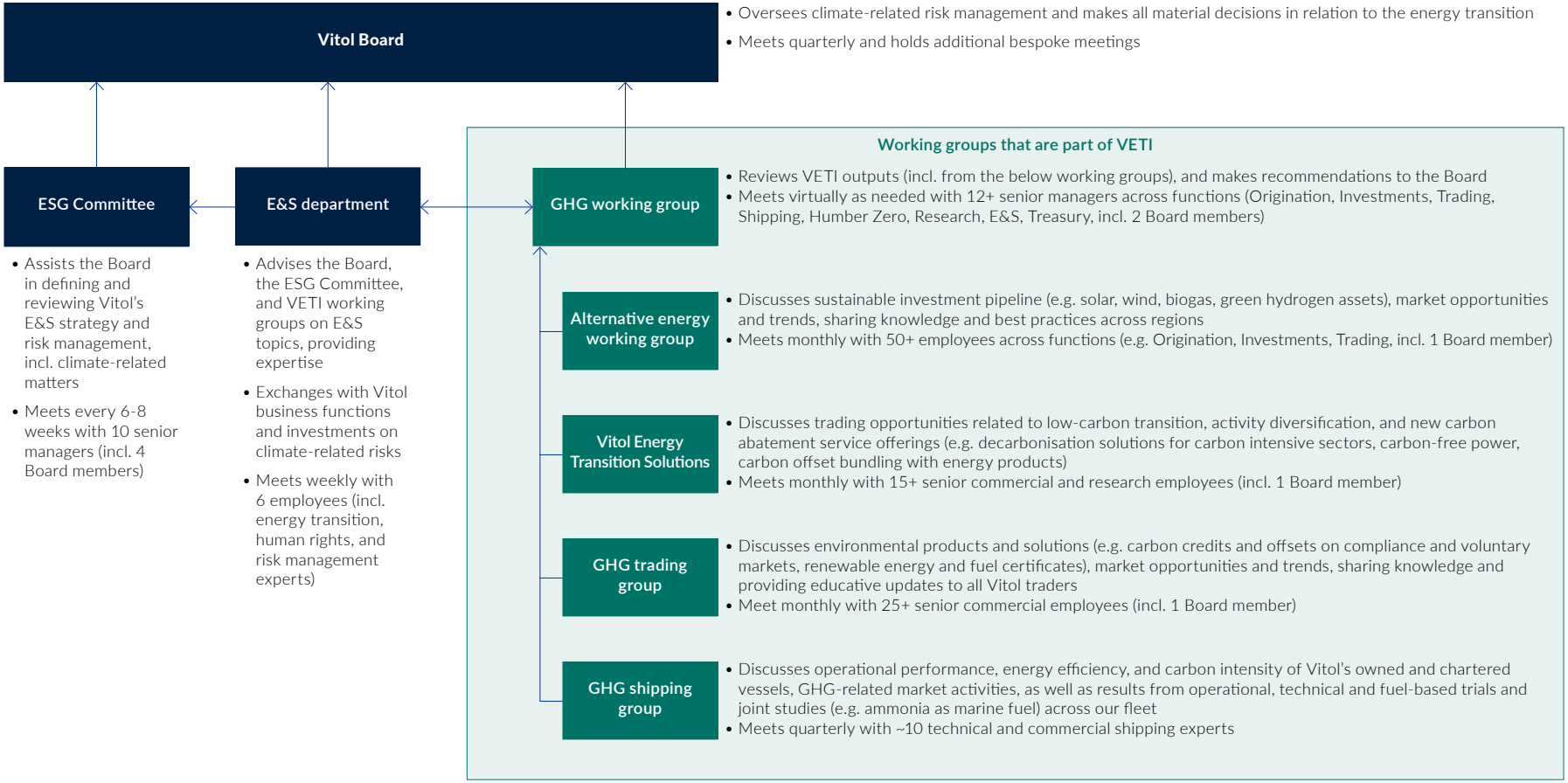
Addresses enablers to climate-related decision-making with IT, E&S, and communications departments coordinating to cover data capture and internal reporting, energy transition planning, and ESG communications

1. 25 employees across Vitol main offices meeting quarterly.

CLIMATE-RELATED DISCLOSURES

Climate-related governance

TCFD



CLIMATE-RELATED DISCLOSURES

Climate-related strategy: identified risks and opportunities

TCFD

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-term:** up to 3 years
- **Medium term:** 3 to 10 years
- **Long-term:** beyond 10 years.

In line with TCFD's recommendations, we identified below 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.

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

Transition risks

TYPE	MATERIAL ELEMENTS	POTENTIAL FINANCIAL IMPACTS
Policy and legal	S M L Rising price of GHG emissions and increased reporting obligations S M L Increased regulatory requirements on activities and traded products S M L 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	S M L Costs to transition to lower carbon intensity technology M L Substitution of existing products and services with lower carbon intensity M L 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 S M L Uncertainty in market signals and increased price volatility S M L 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 S M L 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

TYPE	MATERIAL ELEMENTS	POTENTIAL FINANCIAL IMPACTS
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 & environmental risks, incl. personal & process safety, personnel health and productivity, water supply for upstream & 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 S M L Extreme variability in weather patterns (e.g. precipitation, winds) L Rising sea levels	

CLIMATE-RELATED DISCLOSURES

Climate-related strategy: identified risks and opportunities

TCFD

■ **Short term:** up to 3 years ■ **Medium term:** 3 to 10 years ■ **Long term:** beyond 10 years

Opportunities

TYPE	MATERIAL ELEMENTS	POTENTIAL FINANCIAL IMPACTS
Resource efficiency	S M L More efficient modes of production, processing, transport and distribution S M L Reduced water usage, raw material consumptions M L Increased recycling	• 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
Energy source	S M L Low-carbon energy usage S M L New technology development S M L 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 & services	S M L Development of low-carbon products & services, and environmental solutions S M L Diversification in business activities in line with shifting consumer preferences S M L 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 S M L 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 S M L 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 DISCLOSURES

Climate-related risk management

TCFD

Vitol considers climate change to be one of the most material risks to our business activities, today and increasingly so in the coming years. Our risk management has therefore already been adapted to take its impacts into account and we have deployed resources to build resilience to both transition and physical risks, to factor these into our energy transition strategy and turn some of them into opportunities.

We employ a rigorous and consistent risk-based approach across activities that drives the identification, assessment, reporting, and management of risks to which our business is or could be exposed to. This includes climate-related risks. These are notably impacting credit risk for our counterparts, ESG risk for our own businesses and counterparts, financial risk in relation to our banks and insurers, legal risk from regulations and litigation, and operational risk in connection with our global activities. Climate-related risk processes are therefore integrated into our overall risk management processes.

Compliance with climate-related regulations is jointly monitored by our Legal and E&S departments, and considers both existing and emerging regulatory requirements, e.g. 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) 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. In 2021, Vitol's physical risk profile was assessed better than the regional sector average, following a vulnerability review of our 43 principal operating locations.[1]

Our risk identification and assessment processes are managed in two streams:

- Risks to Vitol directly and to our trading operations
  Risks are identified through the course of business activities or as part of discussions in the working groups described in our climate-related governance.[2] Identified risks' size and scope are then assessed through exposure analysis, involving internal subject matter experts or external advisers, as materiality to the group requires.

  When contemplating acquisitions, climate-related risks are investigated as part of the E&S due diligence process.[3] 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.

- Risks to our investment portfolio (both controlled and non-controlled entities)
  Each company retains the responsibility to manage its respective transition and physical risks, and maintains frequent interactions and open dialogue with the Vitol E&S department. 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.

  Over the course of 2022, we have engaged with a large number of our investments to achieve this and have conducted detailed reviews of physical risk assessments made by Vencer, VPI, and Vivo Energy. These assessments covered a breadth of risks such as chronic and acute flooding and droughts (e.g. high or low river levels, coastal or surface water flooding, restricted freshwater supply), high and low temperatures (e.g. affecting water discharge compliance, impacting employees' health and performance), heavy snowfalls, extreme winds and hurricanes, as well as mitigation plans (e.g. use of available produced water that can be recycled if lacking freshwater, installation set-up to be resilient to extreme events).

Overall risk findings are overseen by the Vitol E&S department and reported to the Board and the ESG committee.

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 recorded within our ESG risk register.

The results of these analyses then dictate the prioritisation for management decisions and actions to mitigate, transfer, accept or control such risks.

1. The review consisted of Vitol main investments and five largest offices, and 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. See p. 82.
3. See p. 83-84.

CLIMATE-RELATED DISCLOSURES

Climate-related metrics & targets

TCFD

We use a variety of metrics to inform our Board and management on our business' exposure to climate-related risks and opportunities and the impact of our activities, based on a range of internal and external data sources and third-party providers (from ship captains and physical operators, to sustainability, plant, and investment managers, as well as analytics platforms).

Whilst recognising these metrics and tools have their limitations, they are used internally to support various business planning and decision-making processes, and we believe they provide valuable insights to guide our climate-related governance, strategy, and risk management.

CLIMATE METRIC CATEGORY	TYPE	UPDATE PROCESS	METRICS TRACKED	REFERENCE	TARGETS
GHG emissions and carbon intensity	Transition risks	• Daily update of shipping data • Quarterly update of other operational & investment data • Yearly consolidation with recalculation based on changes in organisation boundaries	Scope 1, 2, and 3 GHG emissions	GHG performance p. 48	• Enhance measurement accuracy of our two most material emission sources: sold products & shipping
			Carbon intensity for shipping activities (AER and EEOI)	Fleet performance and ongoing efforts p. 42	• Achieve IMO's 2030 carbon intensity reduction target of -40% from a 2008 baseline as early as the end of 2024 • Continue to reduce the carbon intensity of our vessel portfolio and to introduce on-board efficiency programmes across the fleet • Improve tracking of AER and EEOI for chartered vessels
Water	Physical risks	• Quarterly update of water data • Yearly water risk vulnerability assessment using World Resources Institute's (WRI) Aqueduct tools	Freshwater extraction	E&S performance p. 51	• Enhance our disclosures on freshwater withdrawal in areas with high baseline water stress
Transitional and sustainable activities	Opportunities	• Monthly update of investment and renewable power data • Daily update of energy products physically delivered • All updates are directly available to a range of internal stakeholders, including Board and ESG committee members	Capital committed to sustainable investments	Vitol's energy transition strategy p. 17	• Continue to increase investmants in sustainable solutions
			Renewable power operational generation capacity	Sustainable energy solutions p. 33	• Keep developing additional renewable power generation projects
			Share of transitional energy products physically delivered	Transitional energy solutions p. 28	• Continue to increase the volume of transitional commodities traded year-on-year

Appendices

APPENDIX 1

E&S performance KPIs

	KEY PERFORMANCE INDICATOR	UNIT	2019	2020	2021	2022
Environment	Volume of substances arising from large spills[1]	m³ (cubic metres)	n.a.	n.a.	440	253
	Number of large spills (>100 litres)	count	52	56	46	58
	Number of small spills (<100 litres)[2]	count	109	153	160	160
	Loss of primary containment	count	385	335	331	283
	Total waste	kt (thousand metric tonnes)	582	599	775	895
	Hazardous waste	kt (thousand metric tonnes)	562	573	617	635
	Freshwater extraction	Mm³ (million cubic metres)	5.8	5.2	9.6	10.9
	Environmental exceedances	count	78	60	54	83
	Prosecutions or enforcement actions by environmental regulatory authorities	count	3	2	5	2
Personal safety	Work-related employee fatalities	count	0	1	0	0
	Work-related contractor fatalities	count	0	1	1	3
	Total Recordable Injury Rate (TRIR)[3,4,5]	rate per million working hours	1.04	1.18	1.17	1.32
	Lost Time Injury Frequency (LTIF)[4,6]	rate per million working hours	0.46	0.49	0.56	0.61
	Road Traffic Incident Frequency (RTIF)[4,7]	rate per million kilometres travelled	0.41	0.33	0.32	0.49
	Occupational Illness Frequency Rate (OIFR)[4]	rate per million working hours	n.a.	n.a.	0.06	0.13
	First Aid Cases (FAC)[4]	count	178	175	200	358
Process safety	Near misses, unsafe acts and unsafe conditions	count in thousands	24	19	37	58
	High potential incidents & significant near misses	count	140	78	148	99
	Tier 1 Process Safety Events (PSE1)	count	5	4	10	7
	Tier 2 Process Safety Events (PSE2)	count	30	37	18	17
	Process Safety Event Rate	rate per million working hours	0.39	0.45	0.28	0.24
Human rights	Grievances and complaints[8]	count	21	17	23	31

1. Additional information received from third-party incident investigations, 2021 volume restated from 300 m³ to 440 m³.
2. Vitol internal data audit resulted in restatement of the number of small spills from 159 to 160 in 2021.
3. Includes Fatalities, Lost Time Injuries (LTI), Restricted Workday Injuries (RWI) and Medical Treatment Cases (MTC).
4. Includes incidents for both employees and contractors.
5. Additional information from investment companies and Vitol internal data audit resulted in minor restatements of TRIR from 1.05 to 1.04 in 2019, and 1.18 to 1.17 in 2021.
6. Additional information from investment companies and Vitol internal data audit resulted in minor restatements of LTIF from 0.48 to 0.49 in 2020, and 0.57 to 0.56 in 2021.
7. Additional information from investment companies and Vitol internal data audit resulted in minor restatement of RTIF from 0.33 to 0.32 in 2021.
8. We adjusted this KPI to include the total number of grievances and complaints, including human rights complaints.

APPENDIX 2

GHG emissions calculation methodology

Vitol's GHG inventory is prepared using methodologies consistent with the GHG Protocol,[1] the IPIECA[2] guidelines, as well as additional guidance from the IPCC, the IMO, the GLEC, the ISO and the SASB standards.[3]

Organisational boundary

We have set an organisational boundary according to the operational control approach for consolidation, which most closely reflects GHG emissions from assets that Vitol can directly influence and reduce, and aligns to our financial consolidation approach.

Base year and recalculation policy

To allow for meaningful comparisons of "like with like" GHG emissions data over time, we use a rolling base year approach of current year minus two (Y-2). We believe this provides a reasonable 3-year time frame over which to assess changes in our GHG footprint, whilst ensuring reliable and consistent data can be collected

We have therefore recalculated our emissions from 2020 (current base year) to 2022 based on Vitol's operational control boundary as of 31 December 2022. This has led to GHG baseline changes (higher in 2020 yet lower in 2021) due to acquisitions and divestments in our upstream segment.

We have also aligned GHG emissions reporting with our four business segments,[4] added estimates of 2020 scope 3 emissions and improved measurement and reporting accuracy.

Greenhouse gases in scope

Our GHG inventory includes the following greenhouse gases covered by the Kyoto Protocol: carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N2O) and sulphur hexafluoride (SF_6).

Our activities do not result in any material emissions of hydrofluorocarbons (HFCs), perfluorocarbons (PFCs) and nitrogen trifluoride (NF_3), which are therefore not included.

Calculation approach

We combine direct measurements and estimations of activity data based on materiality, accuracy, availability, and consistency criteria.[4]

We then apply emission factors from a range of reliable sources: IMO, UK BEIS, IEA, U.S. EPA,[5] Quantis and others as applicable.

All emissions are then converted into metric tonnes of carbon dioxide equivalent (tCO_2e) based on 100-year global warming potential (GWP) rates from the IPCC Fourth Assessment Report (AR4) and the IMO Fourth Greenhouse Gas Study (4th GHG study).[6]

Scope 1 emissions

Scope 1 refers to direct GHG emissions from assets controlled by Vitol, from stationary (e.g, boilers, furnaces, heaters, stationary turbines and engines, waste incinerators and flares) and mobile combustion (e.g. ship and truck internal combustion engines) sources, as well as vented (or process) and fugitive emissions.

We use emission factors from the IMO for CO_2 emissions from shipping activities, and from the UK BEIS for all others (including CH_4 and N_2O emissions from shipping activities).

Scope 2 emissions

Scope 2 refers to indirect GHG emissions from assets controlled by Vitol, arising from the generation of purchased or acquired electricity, steam, heat, and cooling, notably at processing plants and retail stations, and in Vitol offices.

We use emission factors from the IEA for location-based carbon intensity of power consumption, and use specific factors from selected power providers for market-based carbon intensity when applicable.

Scope 3 emissions

Scope 3 refers to other indirect GHG emissions arising across Vitol's value chain as a consequence of our activities, but occurring at sources controlled by other companies.

It is subdivided into 15 categories, covering both upstream emissions (categories 1 to 8, related to purchased or acquired goods and services) and downstream emissions (categories 3.9 to 3.15, related to sold goods and services) relative to Vitol's position in the value chain (not to be confused with upstream and downstream business segments as per oil & gas industry terminology).

For additional transparency, we have detailed our approach to calculating each of these categories on the following page.

1. GHG Protocol: A Corporate Accounting and Reporting Standard published in 2004 by the World Resource Institute (WRI) and the World Business Council for Sustainable Development (WBCSD), and additional technical guidance on recalculation methodologies for structural change (2005), leased assets (2006), scope 2 (2015) and scope 3 calculations (2011 and 2013).
2. International Petroleum Industry Environmental Conservation Association guidelines for reporting greenhouse gas emissions (2011) and supplementary methodologies on value chain (scope 3) GHG emissions (2016).
3. Respectively the Intergovernmental Panel on Climate Change, the International Maritime Organization, the Global Logistics Emissions Council, the International Organization for Standardization, and the Sustainability Accounting Standards Board.
4. E.g. fuel and power consumptions for the most material sources of emissions such as shipping activities, distance-based for flights, time-based for hotel nights, spend-based for service purchases.
5. Respectively the International Maritime Organization, the UK Department for Business, Energy and Industrial Strategy (formerly DEFRA, Department for Environment Food and Rural Affairs), the International Energy Agency, the United States Environmental Protection Agency.
6. Respectively 25 for CH_4, 298 for N_2O, 22,800 for SF_6, and 900 for black carbon (BC).

APPENDIX 2

GHG emissions calculation methodology

Calculation approach of Scope 3 categories

Categories 1 (purchased goods and services) and 2 (capital goods) are calculated by applying Quantis spend-based emission factors to operational and capital expenditures from our consolidated financial statements.

Category 3 (fuel and energy-related activities) is calculated by applying UK BEIS well-to-tank emission factors to actual fuel consumption from our controlled fleet.

Categories 4 (upstream transportation and distribution) and 8 (upstream leased assets) are calculated together by applying IMO CO_2 emission factors and UK BEIS CH_4 and N_2O emission factors to actual fuel consumption from our chartered vessels for sea transport, and Quantis spend-based emission factors to our freight contracts for pipeline, smaller barges, railcars, and trucks.

We treat these two categories as one for practical purposes, as specific contractual arrangements to charter ships (on a time charter or a spot charter basis) may vary and influence the categorisation of a given vessel as a contracted transportation service or as leased asset, yet without affecting the overall GHG footprint.

Category 5 (waste generated in operations) is calculated by applying UK BEIS emission factors to waste metrics.

Category 6 (business travel) is calculated by applying UK BEIS emission factors to flying distances, and Greenview Hotel Footprint Tool factors to hotel nights.

Category 7 (employee commuting) is calculated by applying UK BEIS emission factors to estimated distances travelled.

Categories 9 to 12 are calculated for products sold in our upstream business segment, as they relate to hydrocarbons, i.e. crude oil, (dry) natural gas and natural gas liquids (NGLs), that are effectively extracted from assets we control then transported, processed and largely used as combustible fuel or incinerated as waste at end-of-life.

These products' downstream emissions are therefore not counted a second and third time over in the midstream and downstream segments.

Categories 9 (downstream transportation and distribution) and 10 (processing of sold products) are calculated by applying measured or estimated carbon intensity factors for each segment of the value chain to hydrocarbon net sales volumes (equity production) from our controlled upstream assets.

Categories 11 (use of sold products) and 12 (end-of-life treatment of sold products) are calculated together by applying U.S. EPA combustion emission factors to hydrocarbon net sales volume (equity production) from our controlled upstream assets.

Approximately 8% of crude oil and NGL volumes and 1.9% of (dry) natural gas volumes have been excluded to account for non-energy uses and net carbon storage.[1]

Categories 13 (downstream leased assets) and 14 (franchises) are not applicable as Vitol does not lease non-controlled assets in which it holds equity nor operate franchises in the course of its normal activities, whilst emissions from leased controlled assets are already capture in scope 1.

Category 15 (investments) has been split into two subcategories for transparency, and calculated consistently with our methodology used for scopes 1, 2, and 3:

- **3.15a** includes scope 1 and 2 emissions reported by all of Vitol's non-controlled investments across business segments, adjusted for our equity share
- **3.15b** includes scope 3 categories 9, 10, 11 and 12 applied to hydrocarbon net sales volumes (equity production) from our non-controlled upstream assets.

In line with IPIECA guidance, we acknowledge potential double counting of oil- and gas-related emissions across scope 3 categories, especially as fuel and industrial feedstock combustion emissions captured in categories 11 and 12 may overlap with categories 3, 4, 6, 7, 8, 9, 10 and 15.

Black carbon

Below is an estimate of black carbon (BC) aerosol emissions arising from our shipping activities over the last three years in million tonnes of CO_2e, based on IMO 4th GHG study 100-year GWP applied to actual fuel consumptions.

CATEGORY	2020	2021	2022
Controlled fleet, Direct emissions (Mt CO_2e)	0.1	0.1	0.1
Chartered fleet, Indirect emissions (Mt CO_2e)	0.6	0.7	0.7
Total black carbon aerosol emissions (Mt CO_2e)[2]	**0.7**	**0.7**	**0.8**

1. Reflecting carbon not returned or only partially returned to atmosphere, e.g. bitumen, lubricants, plastics, etc. Based on Transition Pathway Initiative, Carbon Performance assessment of oil & gas produces: note on methodology (2021), and R. Heede (Climate Accountability Institute), Carbon Majors: Updating activity data, adding entities, & calculating emissions: A Training Manual" (2019).
2. Numbers may not add up due to rounding.

APPENDIX 3

UN SDG Indexation

SDG	TARGET		RELEVANCE TO VITOL
1 NO POVERTY	1.1	By 2030, eradicate extreme poverty for all people everywhere, currently measured as people living on less than $1.25 a day	The Vitol Foundation was established independently of Vitol's business to support children and families to reach their potential in an existence free from poverty
	1.4	By 2030, ensure that all men and women, in particular the poor and the vulnerable, have equal rights to economic resources, as well as access to basic services, ownership and control over land and other forms of property, inheritance, natural resources, appropriate new technology and financial services, including microfinance	
2 ZERO HUNGER	2.1	By 2030, end hunger and ensure access by all people, in particular the poor and people in vulnerable situations, including infants, to safe, nutritious and sufficient food all year round	Through our adjusted water management in rice cultivation project, we are improving the yield of rice for farmers in China
	2.3	By 2030, double the agricultural productivity and incomes of small-scale food producers, in particular women, indigenous peoples, family farmers, pastoralists and fishers, including through secure and equal access to land, other productive resources and inputs, knowledge, financial services, markets and opportunities for value addition and non-farm employment	
	2.4	By 2030, ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems, that strengthen capacity for adaptation to climate change, extreme weather, drought, flooding and other disasters and that progressively improve land and soil quality	
3 GOOD HEALTH AND WELL-BEING	3.6	By 2020, halve the number of global deaths and injuries from road traffic accidents	We continuously monitor, evaluate and learn from our Road Traffic Incident Frequency (RTIF) across all Vitol investments
	3.9	By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination	Implementing environmental best practices across our portfolio. Deploying cleaner energy solutions across both industrial and domestic environments
4 QUALITY EDUCATION	4.4	By 2030, substantially increase the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship	The Vitol Foundation supports Early Childhood Development programmes and seeks to encourage transformation in education systems
	4.6	By 2030, ensure that all youth and a substantial proportion of adults, both men and women, achieve literacy and numeracy	
6 CLEAN WATER AND SANITATION	6.1	By 2030, achieve universal and equitable access to safe and affordable drinking water for all	Through our work at the Mekong River Delta, we supplied water purifiers to over 600,000 families

APPENDIX 3

UN SDG Indexation

SDG	TARGET		RELEVANCE TO VITOL
7 AFFORDABLE AND CLEAN ENERGY	7.1	By 2030, ensure universal access to affordable, reliable and modern energy services	We are the world's largest independent trader of energy. We have invested in a range of renewables projects and continue to seek new opportunities
	7.2	By 2030, increase substantially the share of renewable energy in the global energy mix	
8 DECENT WORK AND ECONOMIC GROWTH	8.5	By 2030, achieve full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value	
	8.7	Take immediate and effective measures to eradicate forced labour, end modern slavery and human trafficking and secure the prohibition and elimination of the worst forms of child labour, including recruitment and use of child soldiers, and by 2025 end child labour in all its forms	
10 REDUCED INEQUALITIES	10.2	By 2030, empower and promote the social, economic and political inclusion of all, irrespective of age, sex, disability, race, ethnicity, origin, religion or economic or other status	We are committed to building a diverse, inclusive culture in which differences are embraced and valued. Moreover, we believe that diversity of views, thinking and ideas contribute to improved decision-making and more robust business practices
12 RESPONSIBLE CONSUMPTION AND PRODUCTION	12.2	By 2030, achieve the sustainable management and efficient use of natural resources	With a growing portfolio of renewables around the world, we are well placed to adjust to the shift in energy demands
13 CLIMATE ACTION	13.3	Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning	We are committed to reducing the impact of our operations and increasing the use of renewable energy
16 PEACE, JUSTICE AND STRONG INSTITUTIONS	16.5	Substantially reduce corruption and bribery in all their forms	We require our employees and suppliers to meet high ethical and environmental standards
	16.6	Develop effective, accountable and transparent institutions at all levels	

APPENDIX 4

Glossary

AER	Annual efficiency ratio
BoE	Bank of England
BEIS	UK Department for Business, Energy and Industrial Strategy
Capex	Capital expenditure
CCGT	Combined cycle gas turbine (gas-fired power station)
CEO	Chief executive officer
CFO	Chief financial officer
CH_4	Methane
CHP	Combined heat and power (gas-fired power station with thermal steam recovery)
CIO	Chief information officer
CO_2	Carbon dioxide
COO	Chief operating officer
CR	Climate risk
DCS	IMO data collection system
DEFRA	UK Department for Environment, Food & Rural Affairs
EEOI	Energy efficiency operational indicator
EEXI	Energy Efficiency Existing Ship Index
EMEA	Europe, Middle East and Africa
EPA	US Environmental Protection Agency
EPL	Engine power limitations
E&P	Exploration and production
E&S	Environmental and Social
ESG	Environmental, Social and Governance
EV	Electric vehicle
FECOC	Colombian Fuel Combustion Emission Factors
GDP	Gross domestic product
GHG	Greenhouse gas
GLEC	Global Logistics Emissions Council
GRI	The global standards for sustainability reporting
GT	Gross tonnage
GW	Gigawatt
GWP	Global warming potential
HRIA	Human rights impact assessment
ICoC	International code of conduct for security service providers
IEA	International Energy Agency
ILO	International Labour Organization
IMO	International Maritime Organization
IOGP	The International Association of Oil & Gas Producers
IPCC	Intergovernmental Panel on Climate Change
IPIECA	International Petroleum Industry Environmental Conservation Association
ISM	International safety management code
ISO	International Organization for Standardization
kboepd	Thousand barrels of oil equivalent per day
kbpd	Thousand barrels per day
KPI	Key performance indicator
kt	kilotonnes (thousand metric tonnes)
KWh	Kilowatt hour
KYC	Know your counterparty
L	Litre
LNG	Liquefied natural gas
LPG	Liquefied petroleum gas
LTI	Lost time injury
LTIF	Lost time injury frequency
M&A	Mergers and acquisitions
MARPOL	International Convention for the Prevention of Pollution from Ships
mbpd	Million barrels per day
MEPC	Marine Environment Protection Committee
M m^3	Million cubic metres
MMBtu	Million British thermal units
MRV	Monitoring, reporting and verification
MTC	Medical treatment case
Mtoe	Million tonnes of oil equivalent
mtpa	Million metric tonnes per annum
Mt CO_2e	Million metric tonnes of carbon dioxide equivalent
N_2O	Nitrous oxide
NGLs	Natural gas liquids
NGO	Non-Governmental Organisation
OCIMF	Oil Companies International Marine Forum
OIFR	Occupational illness frequency rate
Opex	Operating expenditure
PP	Poseidon principles
PPA	Power purchase agreement
PV	Photovoltaics
REC	Renewable energy certificates
RINs	Renewable identification numbers
RNG	Renewable natural gas
RTIF	Road traffic incident frequency
RWI	Restricted work injury
SAF	Sustainable aviation fuels
SBTi	Science Based Targets initiative
SASB	Sustainability Accounting Standards Board
SCC	Sea Cargo Charter
SDG	The United Nations Sustainable Development Goals
SEEMP	Ship energy efficiency management plans
SF_6	Sulphur hexafluoride
SHI	Seafarers Happiness Index
ShaPoLi	Shaft Power Limitations
TCFD	Task Force on Climate-related Financial Disclosures
TRIR	Total recordable injury rate
TWh	Terawatt hour
UNGPs	UN Guiding Principles on Business and Human Rights
VETI	Vitol Energy Transition Initiative
VETS	Vitol Energy Transition Solutions
VLSFO	Very-low sulphur fuel oil
VPSHR	The Voluntary Principles on Security and Human Rights
WASH	Water, Sanitation and Hygiene
WBCSD	World Business Council for Sustainable Development
WRI	World Resource Institute

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