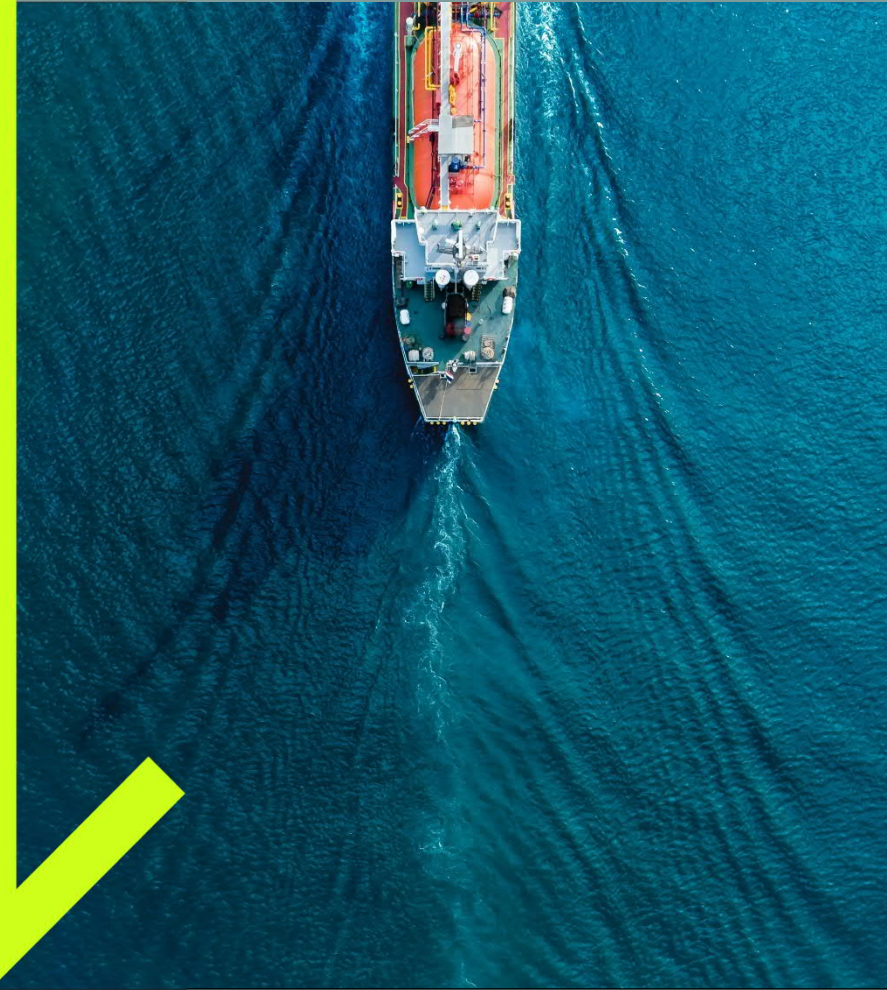


GREEN FINANCE FRAMEWORK



TOPSOE

2024

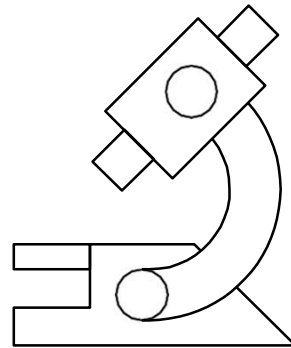
TOPSOE AT A GLANCE

Topsoe is a provider of technology and solutions for the energy transition. We combat climate change by helping our customers and partners achieve their decarbonization and emission reduction goals.

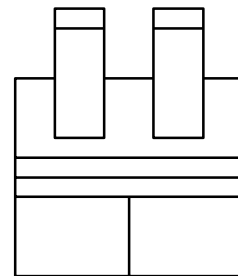
Based on decades of scientific research and innovation, we offer world-leading solutions for transforming renewable resources into fuels and chemicals for a sustainable world, and for efficient and low-carbon fuel production and clean air.

We are the how and now of decarbonization.

Driven by innovation, we invest in R&D



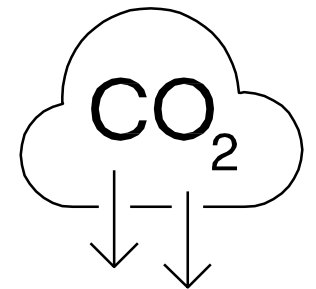
Building the first advanced industrial-scale SOEC factory



2,800

Headquartered in Denmark with more than 2,800 colleagues working across the globe

Our target for net zero by 2040 was approved by the Science Based Targets initiative in 2023



VALUE CREATION MODEL

VALUE CREATED FOR
Society Our Company Our People

CUSTOMER FEEDSTOCKS



Renewable energy



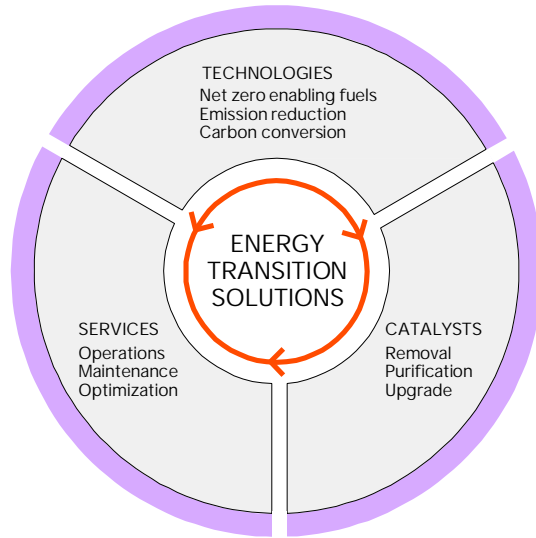
Biomass



Fossil energy



TOPSOE OFFERING



OUTPUT FOR OUR CUSTOMERS



E-fuels and chemicals



Clean Air



Low-carbon fuels and chemicals



Optimized conventional fuels and chemicals



Renewable fuels and chemicals

WE DEPEND ON

Resources Relationships

Resources

- **Intellectual capital:** Our operations and innovation are made possible by 2,800 diverse and engaged employees and more than 600 patent families
- **Financial capital:** Our growth and investments are reliant on access to financial capital from our owners and external partners
- **Natural resources:** Our business depends on access to raw materials and energy

Relationships

- **Partnerships:** We are engaged in scientific and commercial partnerships to help us innovate new solutions
- **Communities:** We are a part of and depend on local communities where we operate

Society

We enable a sustainable future fueled by science by helping our customers realize their emission reduction targets.

- Calculated avoided tonnes CO₂e emissions by customers, enabled by Topsoe designed technology for projects in operation.



Our company

We drive a healthy operation with high integrity which allows us to invest in solutions for enabling net zero.

- Profit
- Investment in technologies and solutions enabling net zero.



Our people

We strive for Topsoe to be a great place to work with highly engaged and safe people.

- People engagement survey score
- Total Recordable Injury Frequency (TRIF)



OUR NET ZERO ROADMAP

All businesses have a responsibility to mitigate climate change by lowering their emissions. As a company with pioneering technologies at the forefront of the global energy transition, we are even more committed to achieving ambitious emission reduction goals ourselves.

Our starting point

In 2020, Topsoe's total greenhouse gas emissions were 585,440 tonnes CO₂e across scope 1, 2 & 3.

- Main sources of emissions
- 70% Supply chain (scope 3, upstream)
 - 12% Chemical processes (scope 1)
 - 9% Fossil fuel combustion (scope 1)
 - 6% Electricity (scope 2)
 - 4% Investments & products (scope 3, downstream)

Operations



Address operations to reduce emissions by 30% in 2024 and at least 95% in 2030



Invest in renewable energy solutions



Transition to 80% renewable electricity by 2025



Implement digital performance monitoring and analytics

Supply chain



Supplier engagement strategy launched in 2022



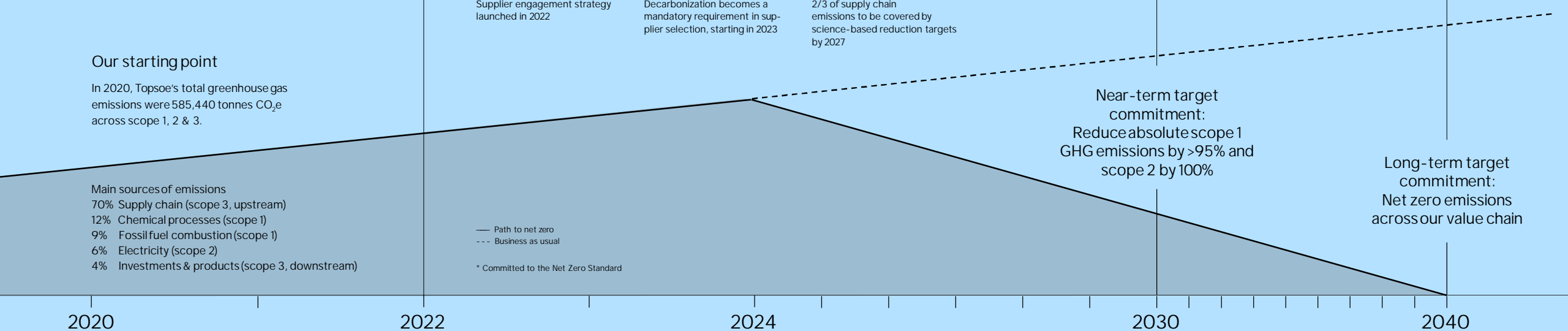
Decarbonization becomes a mandatory requirement in supplier selection, starting in 2023



2/3 of supply chain emissions to be covered by science-based reduction targets by 2027

Value chain

- Engage with suppliers on emission reduction progress
- Collaborate with customers and other business partners to reduce emissions
- Reduce emissions to at least 90% by 2040
- Neutralize residual emissions which cannot yet be eliminated by 2040 (off sets)



MAPPING OUR PATH TO NET ZERO

As Topsoe's Chief Sustainability & External Affairs Officer, Amy Chiang explains, "Topsoe aspires to continuously reduce the negative impact of global carbon emissions on the environment and human health. We play a pivotal role in developing breakthrough solutions that enable our customers to meet their own emissions targets, so it should be no surprise that we are leading by example in our own operations."

We have set an ambitious goal to achieve net zero emissions across our value chain by 2040. That is a challenging target. Our net zero roadmap lays out plans to bring down emissions in our direct operations, which include our plants, offices, and transport worldwide (Scope 1), the energy we buy and use (Scope 2), and our wider value chain, which includes our suppliers, customers and joint ventures (Scope 3). Our roadmap includes comprehensive plans to reduce our most material Scope 1 process emissions in 2024, on the path to reach 95% reduction by 2030. We are mobilizing the entire company to support those plans.

Each part of the roadmap has its own challenges. Our Scope 1 emissions are hard to abate, primarily because of the chemical processes behind the catalysts we produce. We are developing alternative processes to reduce N2O emissions, which will contribute significantly to our Scope 1 reduction. We originally set a target of 30% reduction by 2024. However, these alternative processes will be implemented in 2024, which means we will start reducing emissions through this technology in 2025. The delay has been driven by energy security measurements in Frederikssund.

"Topsoe aspires to continuously reduce the negative impact of global carbon emissions on the environment and human health. We play a pivotal role in developing breakthrough solutions that enable our customers to meet their own emissions targets, so it should be no surprise that we are leading by example in our own operations."

AMY CHIANG
CHIEF SUSTAINABILITY
& EXTERNAL AFFAIRS OFFICER

Reducing Scope 1 and 2 emissions has become a short-term challenge because we have had to invest in infrastructure to support switching to liquefied natural gas and petroleum gas to mitigate energy-supply challenges arisen from Russia's invasion of Ukraine. But we are committed to 80% renewable power by 2025 and 100% by 2030 as well as exploring biogas for plants.

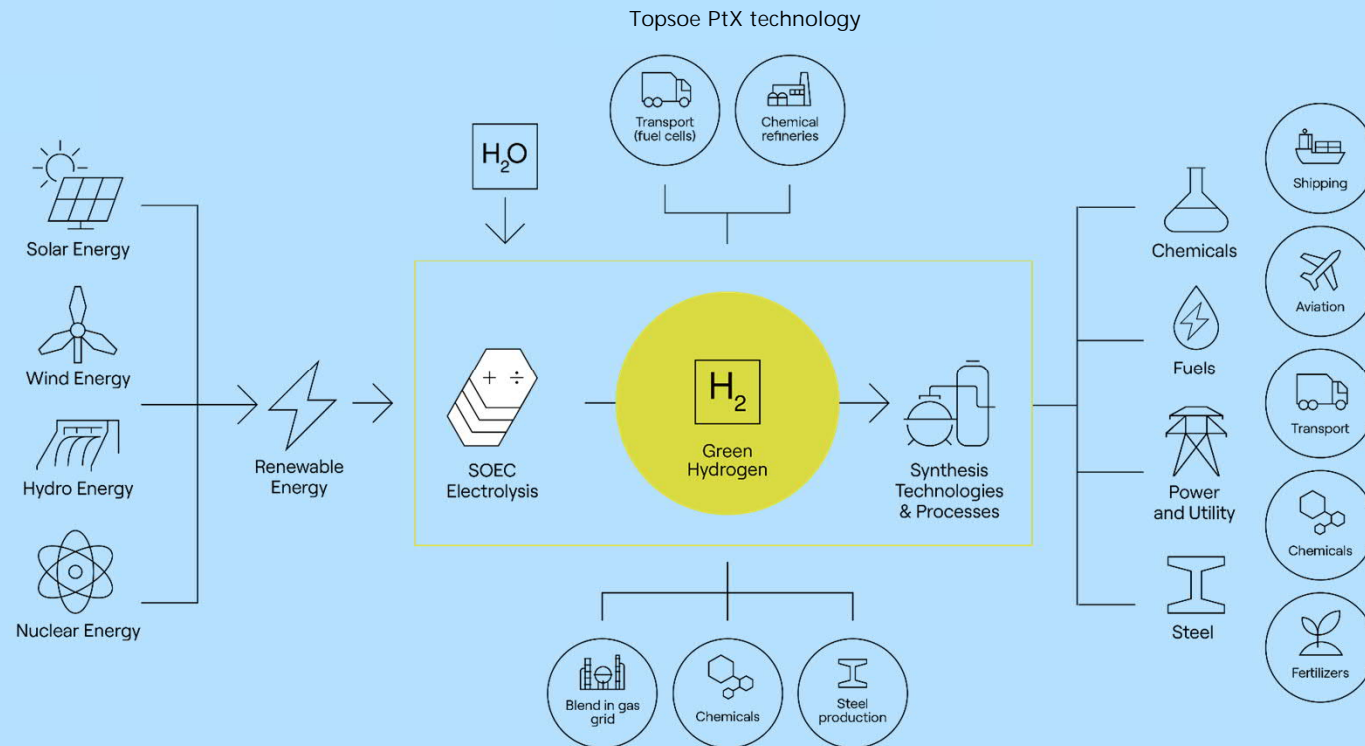
Over 70% of our emissions are in Scope 3. Reaching our target here depends on suppliers' own net zero plans. We have engaged with 80% of suppliers, based on spend, urging them to register with the Carbon Disclosure Project (CDP) to report on progress towards net zero. Our aim is that suppliers covering 74% of Scope 3 emissions will have science-based GHG reduction targets by 2027.

As reporting on net zero commitments becomes the industry standard, there will be new suppliers who will be ready to support these efforts, especially in growing areas like Power- to-X. Our procurement process plays a huge role in driving a net zero value chain and growing the market by supporting transparency through disclosures.

Building on our experience in technologies to produce chemicals and fuels more energy efficiently, we are able to connect our proven technologies with highly efficient electrolysis (SOEC), which is up to 30% more efficient compared to conventional technology.

We're one of a few companies that has the full PtX value proposition. We deliver PtX offerings that bring adaptable, tested and proven solutions to the market.

HYDROGEN VALUE CHAIN AND SOEC EXPLAINED



GREEN FINANCING

The most carbon-intensive industries like heavy transportation, steel, chemicals, cement, and mining are faced with a real challenge in the energy transition as they can't lower their carbon footprint through direct electrification. Power-to-X is the solution. From renewable electricity one can – with electrolysis – make green hydrogen. This can in turn be transformed into green ammonia and other e-fuels, so we can travel by air and sea as well as produce steel, chemicals, and cement without using fossil fuels.

However, electrolyzer production capacity is needed at scale, and the demand for that will only grow as the world closes in on the global net zero deadline in 2050, where the International Energy Agency (IEA) estimates the world will need 3,670 GW of electrolysis.

We are acting on this demand by investing significantly in R&D and in constructing an industrial scale solid oxide electrolyzer cell (SOEC) manufacturing facility in Herning, Denmark, with an expected initial annual capacity of 500MW and can be scaled to 5GW. This is a critical step to accelerate the global green energy transition and reducing dependence on fossil fuels.

This Framework enables Topsoe to mobilize Green loans and bonds ('green financing') to support the financing of our state-of-the-art facility to manufacture our SOEC electrolyzers which is a major milestone along the road to build a leadership position in Power-to-X technologies, as well as research and development activities related to enabling Net Zero and renewable energy solutions in own operations.

Topsoe Green Finance Framework is developed in alignment with the four core components of the Green Bond Principles¹ and Green Loan Principles² and seeks to comply with best market practice. The four core components of the principles, along with its recommendation of External Review, form the basis of the Green Finance Framework: 1) Use of Proceeds; 2) Process for Project Evaluation and Selection; 3) Management of Proceeds; 4) Reporting and 5) External Review.

The European Union taxonomy (Eu Taxonomy) is a classification framework designed to determine whether an economic activity is environmentally sustainable. To be fully aligned with the EU Taxonomy framework, Topsoe needs to qualify on the basis of i) Substantial Contribution to at least one of the six environmental objectives, ii) Do No Significant Harm (DNSH) to other environmental objectives and iii) Meet the Minimum Safeguards.

As of 2025, Topsoe will be in scope for reporting under the EU Corporate Sustainability Reporting Directive (CSRD) and the EU Taxonomy Regulation, and to make sure we're ready, a cross-functional task force has mapped our business activities and we have started to integrate select sustainability/ ESG parameters into our due diligence processes and risk matrices. This gives us a holistic view of third-party risks and enables us to comply with upcoming EU legislation, such as the EU Taxonomy.

As for green financing under the framework, Topsoe's SOEC electrolyzers are covered by the EU Taxonomy on Sustainable activities for Climate Mitigation listed in economic activity 3.2 *Manufacture of equipment for the production and use of hydrogen*. Topsoe follows the development of the EU Taxonomy closely and continue the work to comply with upcoming regulation. In the development of this framework, the EU taxonomy has been used as a guiding tool and Topsoe strives to align the investments under this Framework with the criteria in the EU taxonomy, on a best effort basis.

1) Green Bond Principles published in June 2021 (with June 2022 Appendix I) are voluntary process guidelines for issuing Green bonds established by International Capital Markets Association ('ICMA') <https://www.icmagroup.org/sustainable-finance/the-principles-guidelines-and-handbooks/green-bond-principles-gbp/>

2) Green Loan Principles published in February 2023 are voluntary process guidelines for issuing Green loans established by Loan Markets Association (LMA), <https://www.lsta.org/content/green-loan-principles/>

USE OF PROCEEDS

An amount equal to the net proceeds from green financing will finance or refinance, in whole or in part, investments undertaken by Topsoe or its subsidiaries that are in accordance with the green project categories and eligibility criteria defined in this framework (Eligible Projects). Eligible Projects may take the form of capital expenditures and operating expenditures, which together will form a portfolio of Eligible Projects eligible for financing and refinancing with green bonds. Capital expenditures shall qualify without a specific look-back period, while operating expenditures will qualify with a maximum three-year look-back period prior to the green finance issuance.

GREEN PROJECT CATEGORIES	ELIGIBILITY CRITERIA	IMPACT
RENEWABLE ENERGY	<ul style="list-style-type: none"> → Manufacturing of energy-efficient Solid Oxide Electrolyzer Cells (SOEC) to produce green hydrogen, including construction and modification of the plant manufacturing the Solid Oxide Electrolyzer Cells. → Research and development activities related to non-fossil-based technologies and solutions enabling net-zero. → Solar energy, waste heat recovery, heat pumps and energy storage installations. 	<p>SDG impact</p> <ul style="list-style-type: none"> → SDG 7 Affordable and Clean Energy → SDG 13 Climate Action <p>EU Environmental Objective Climate change mitigation Mapping of economic activities</p> <ul style="list-style-type: none"> → 3.2. Manufacture of equipment for the production and use of hydrogen → 4.10. Storage of electricity → 4.25. Production of heat/cool using waste heat → 7.6. Installation, maintenance and repair of renewable energy technologies

CONSTRUCTION OF OUR FIRST SOEC INDUSTRY-SCALE ELECTROLYZER FACTORY

The new factory will manufacture advanced, energy efficient Solid Oxide Electrolyzer Cells (SOEC) and stacks that are essential in the production of green hydrogen and its derivatives. Electrolyzers are key for decarbonizing energy-intensive industries like steel, mining, and long-distance transportation that account for approximately 30% of global greenhouse gas emissions and cannot easily be electrified, and here electrolyzers are a key part to achieve this. Our commitment to build a state-of-the-art facility to manufacture our SOEC electrolyzers is a major milestone along the road to being the leader in Power-to-X technologies that turn renewable electricity into green fuels.

TOPSOE'S STATE-OF-THE-ART SOEC ELECTROLYSIS TECHNOLOGY AND THE INNOVATION INHERENT IN BUILDING THIS FIRST OF ITS KIND SOEC FACTORY

The Topsoe SOEC electrolyzer is a compact stack built primarily from abundant, low-cost ceramic materials enclosed within a metal housing. To produce hydrogen, it utilizes electricity to split water molecules (H₂O) into hydrogen (H₂) and oxygen (O₂). This is accomplished by three components: an anode, a cathode, and an electrolyte. The cathode splits water molecules, via reduction, into hydrogen and oxide ions, after which the oxide ions are transported through the electrolyte to the anode and oxidized into oxygen.

When used to produce green hydrogen, electrolyzers from Topsoe's factory will reduce emissions by approximately 7.5 million tonnes of CO₂ equivalent over the first ten years of operation when compared to hydrogen produced from natural gas.

PROCESS FOR PROJECT EVALUATION AND SELECTION

Eligible projects to be financed with proceeds from Topsoe's green financing will be evaluated, selected, and prioritised by a Green Finance Committee (GFC) consisting of the CFO, representatives from Treasury and sustainability functions.

The GFC will ensure that the pool of Eligible Projects meet the eligibility criteria specified in the Framework, and if needed replacing Eligible Projects that may no longer meet the criteria.

The Green Bond Committee is responsible for:

- Evaluating the compliance of potential projects with the eligibility criteria set out in this framework, applicable laws and regulations, and Topsoe's sustainability strategy and policies.
- Replacing assets and projects that no longer meet the eligibility criteria (e.g. following divestment, liquidation, concerns regarding alignment of underlying activity/project characteristics with eligibility criteria, regulatory changes etc.)

MANAGEMENT OF ENVIRONMENTAL AND SOCIAL RISKS

Project evaluation and selection, including identifying and managing material environmental and social risks associated with the projects, comply with Topsoe's impact, risk and opportunity assessment framework and internal policies and procedure, as well as with applicable international and national laws, rules and regulations. Furthermore, we are building up a due diligence framework to assess impacts, risks and potential opportunities on people and the environment in accordance with the proposed Corporate Sustainability Due Diligence Directive. Climate-related risks aligned with TCFD are embedded in the existing Enterprise Risk Management (ERM) governance structure, ensuring adequate Board and management oversight.

We pursue a responsible and balanced approach to our supply base and seek to integrate commercial, risk and quality aspects as well as social, environmental and ethical responsibility. We expect our suppliers to commit to our standard of responsible business conduct. Crucial to this is Topsoe's Supplier Code of Conduct, which outlines what we expect from our suppliers when it comes to human rights and labor standards, health and safety, environment and climate, as well as ethics and integrity.

Topsoe ensures that its imported chemicals and finished products are developed, maintained, and documented in compliance with applicable international and national regulations and requirements. Our procurement policy guides our choices to ensure that we get the right value from our suppliers.

As a participant of the UN Global Compact, respect for human rights is embedded in our commitment to act as a responsible business. We conduct human rights due diligence in line with the United Nations Guiding Principles on Business and Human Rights.

MANAGEMENT OF PROCEEDS

Topsoe will establish a Green Register to monitor Eligible Projects financed and to provide an overview of the allocation of the net proceeds from green financing issued to the respective Eligible Projects. The balance of the tracked net proceeds will be periodically adjusted to match allocations to Eligible Projects made so long as the Green finance is outstanding. Topsoe will aim for the value of the Eligible Projects detailed in the Green Register to at least equal the aggregate net proceeds of all outstanding green financing. There may be periods when the total outstanding net proceeds exceed the value of the Eligible Projects in the Green Register. Proceeds yet to be allocated towards Eligible Projects will be held and managed in accordance with Topsoe's liquidity management policy. The Green Register will also form the basis for the impact reporting.



REPORTING

To enable the monitoring of performance and provide insight into prioritized areas, Topsoe will annually publish an allocation and impact report (“Green Finance Report”) until full allocation of the net proceeds, and in the event of any material changes, until the relevant maturity date of the green finance issued. The reporting can to some extent be aggregated, and based on Topsoe’s share of each project, where feasible and subject to data availability. The Green Finance Report will be available on Topsoe’s website.

ALLOCATION REPORTING

The allocation reporting will include:

- List of green financing and allocated amounts.
- A list of projects financed, including project descriptions and allocated amount
- Distribution between new financing and refinancing
- The amount of unallocated proceeds, if any.

IMPACT REPORTING

Impact reporting aims to disclose the environmental impact of the Eligible Projects financed under this Framework. The impact assessment is provided with the reservation that not all related data can be covered and that calculations therefore will be on a best effort basis. The reporting will, as applicable, be based on the impact indicators presented in the table, and include methodology, baselines, and assumptions used in the impact calculations.

INDICATIVE IMPACT INDICATORS

- Manufacturing capacity
 - Avoided emissions enabled by Topsoe’s technology
 - Type of R&D investment and description of positive environmental impacts
-
- Annual GHG emissions reduced/avoided (tCO₂e)
 - Annual renewable energy generation (GWh)
 - Capacity of renewable energy (MW)

EXTERNAL REVIEW

Topsoe has engaged S&P Global Ratings to act as a pre-issuance external reviewer by way of a Second Party Opinion of this Green Finance Framework, confirming, amongst other things, alignment of this Framework with the latest ICMA Green Bond Principles from 2021 and the LMA Green Loan Principles from 2023.

Topsoe will endeavor to provide a third-party verification on an annual basis until full allocation, verifying the internal tracking method and the allocation of funds from the net proceeds raised from green financing.

The Green Finance Framework and the second party opinion will be publicly available on Topsoe's website, together with the post-issuance review and the Green Finance Report once published.

