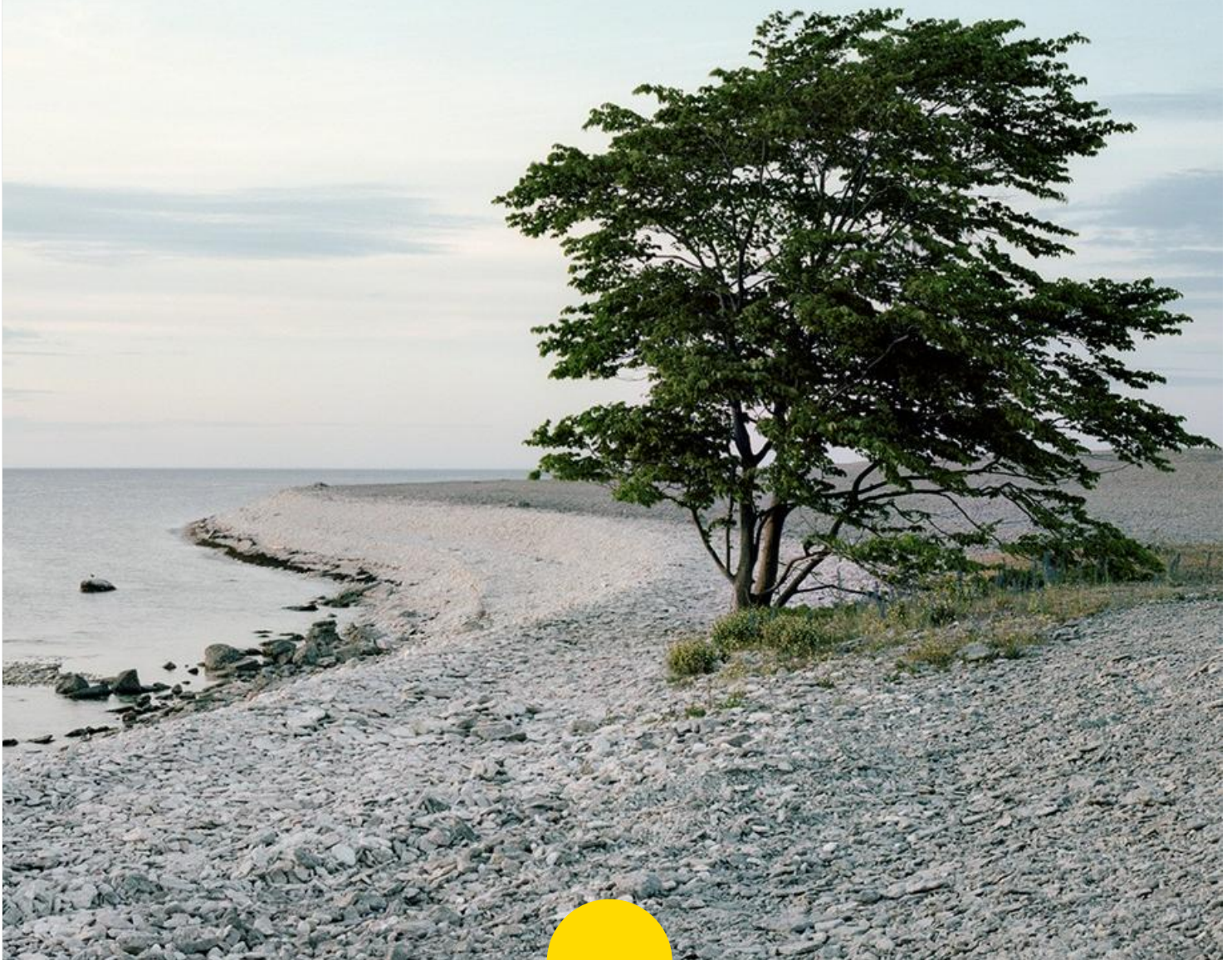


# Vattenfall Green Finance Framework

June 2025



**VATTENFALL**

# Vattenfall – Enabling the fossil freedom that drives society forward

Our world needs to change. Fast. Although we've taken big steps towards fossil-free living, society is still deeply dependent on fossil fuels, and this dependency endangers the environment, energy security and our way of life. But even as the effects of accelerating climate change are being felt more tangibly by people everywhere, the energy transition still isn't moving fast enough. Through all this, the direction to achieve net-zero is clear.

At Vattenfall, our promise is clear. We have a net-zero target for 2040, and every day we're working for a future where we can all move, make and live fossil free. This is not only our sustainability strategy, it's our business strategy. And even in these more challenging times, we're constantly seeking out the opportunities that fossil freedom presents – to drive society forward as a profitable energy company.

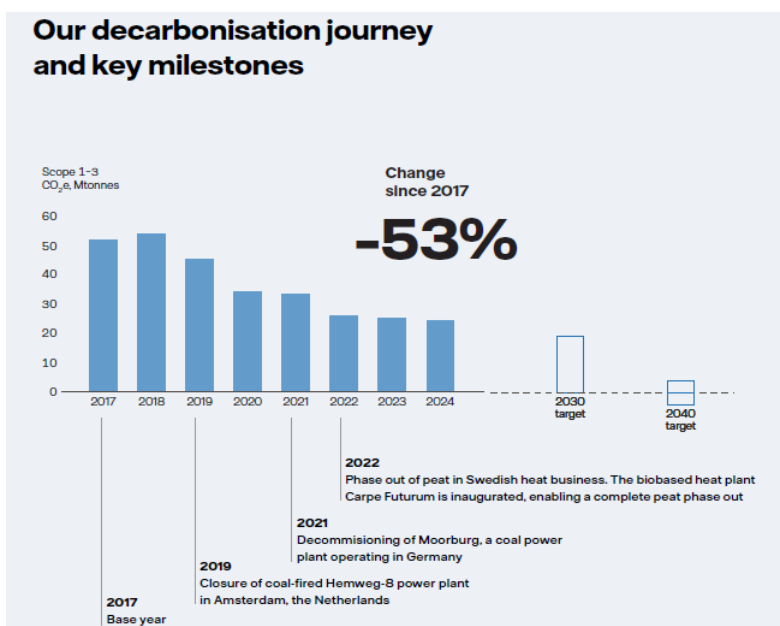
## Progress is rarely linear

Some stabilisation in European energy markets has occurred in recent years, even as we continue to navigate a world marked by growing geopolitical and economic uncertainties. Economic and supply chain challenges, political turbulence, and regulatory ambiguity remains. As a result, the energy transition has lost pace, although ambitious goals of reaching net-zero remain.

## Navigating complexity with strategic focus

To deliver on both our financial and sustainability targets, we prioritise efficiency and prudence in our operations. This includes being a trusted partner to our customers, investing in the right projects with strong fundamentals, optimising our business processes, and ensuring that we are positioned to act swiftly as conditions change. Our early commitment to a fossil-free business model and footprint, has made our business more competitive and resilient to the ever changing world we operate in while benefiting customers and climate alike.

In uncertain times it is easy to focus on what remains undone. But in doing so, meaningful progress and achievements are overlooked – important steps that collectively drive the energy transition forward. At the end of 2024, Vattenfall had decreased our CO<sub>2</sub> emissions across our full value chain with 53% compared to 2017. A proven and successful track record, a strong financial position, and a solid plan throughout the organisation puts us in a good position to achieve our goal towards net zero in 2040.



## Summary – Use of Proceeds categories

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### Green Finance – Use of Proceeds

Through this Framework, Vattenfall will continue to team up with global investors and invite them to contribute to actual changes on the ground that propel our joint journey towards net-zero by funding crucial investments within the following Eligible Green Project and Asset categories:

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#### Renewable energy

Solar power  
 Wind power  
 Hydro power  
 Manufacture of hydrogen  
 Storage of hydrogen  
 Manufacture of biomethane  
 Transmission and distribution of electricity  
 Storage of electricity  
 Storage of thermal energy

#### Energy efficiency

District heating and cooling  
 Electric heat pumps  
 Production of heat/cool from bioenergy  
 Industrial projects

#### Clean transportation

Charging stations for electrical vehicles

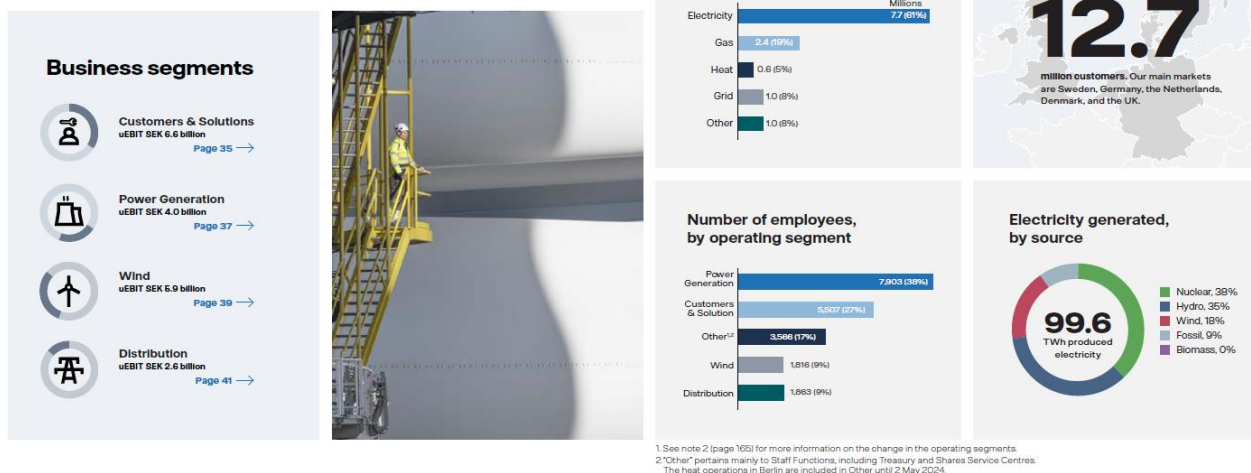
This is the third iteration of Vattenfall's Green Finance Framework. For the avoidance on doubt, every project approved under the previous frameworks have also been re-assessed by the Green Finance Committee and have been re-approved for alignment with this framework.

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# Vattenfall in brief<sup>1</sup>

Vattenfall is one of Europe's largest producers and retailers of electricity and heat, and has around 21,000 employees. The parent company, Vattenfall AB, is wholly owned by the Swedish state, and its headquarters are in Solna, Sweden.



## Strategy and business model

Fossil-free electricity is our core, and we believe that it will be the main energy carrier of the future, where everyone can choose affordable, fossil-free ways to move, make and live.

### Our purpose

Our purpose is to enable the fossil freedom that drives society forward, making it possible to move, make and live fossil-free, as a profitable energy business. We have set out to be a leader in the energy transition. That is both a responsibility and a business opportunity.

### Our foundation

We focus on carefully managing and growing our position in fossil-free electricity, as it is at the core of our company and we believe it will grow to be the main energy carrier of the future.

### Our business model

We believe in the business model of an integrated utility, as being active in generation, flexibility, distribution, sales, services, optimisation and trading. This mitigates risks on a portfolio level, which in turn improves our debt-bearing capacity. It also provides us with competitive advantages and enables us to capture additional value from synergies across the value chain.

### Our markets

We have and will further build a strong integrated utility position in Sweden, Germany and the Netherlands (with electricity distribution grids only included in Sweden).

We also have a presence in other geographical markets in northwestern Europe, such as the UK, Denmark, Finland, France, and Poland. Our presence in other markets is not as an integrated utility, but with specific business logic.



### Our portfolio

Our strategy of being active throughout the energy value chain in northwestern Europe has resulted in a diversified portfolio, especially along the electricity value chain. Sustainability is at the core of our portfolio, driving our commitment to the energy transition and enabling long-term value creation across the energy system.

<sup>1</sup> Refers to year end 2024



The Vattenfall strategy wheel illustrates our integrated business model and what is needed to succeed with our strategy.

-  **Driving decarbonisation** with customers and partners by enhancing customer centricity and promoting electrification and decarbonisation energy solutions where we excel.
-  **Connecting and optimising the energy system** by maximising flexibility value and promoting stable, cost-efficient grid infrastructure.

-  **Securing a fossil-free energy supply** by growing new power generation, maximizing existing assets' value, and implementing our CO<sub>2</sub> roadmap.
-  **Delivering high-performing operations** by being competitive and cost-effective, leveraging digitalisation, and taking social and environmental responsibility throughout the value chain.
-  **Empowering our people** by securing necessary competence, improving the employee journey, and ensuring a safe work environment.

# Sustainability governance

Vattenfall believes a sound corporate culture is not only a matter of basic legal compliance; rather, observing a high standard is essential for conducting successful business. This is explained in our Code of Conduct: "Expectations on Vattenfall are high, and so they should be. Our operations are crucial to society, and all we do reflect on our owner the Swedish State. We also have ambitious goals and need the right partners to achieve them. This puts high demands on what we do and how we do it. Living our values and always acting with integrity make us trustworthy – and a trusted brand opens doors".

Vattenfall's environmental matters are primarily governed by the company's Environmental Policy and Environmental Management System. These apply to the Vattenfall Group and encompass our own operations as well as our upstream and downstream value chain where relevant.

Vattenfall's Environmental Policy outlines the overall direction for how the company manages its impact on the environment, with special focus on our material environmental matters:

- Climate change
- Biodiversity and ecosystems
- Resource use and circular economy

The overall purpose of Vattenfall's Environmental Policy and Environmental Management System is to ensure the prevention, mitigation and remediation of actual and potential impacts, and to ensure that risks are addressed and opportunities pursued. Vattenfall's Environmental Policy is publicly available, while our Environmental Management System and related policies are internal steering documents. Vattenfall's Code of Conduct for Suppliers and Partners also sets requirements on the management of material environmental matters for our supply chain.

Vattenfall's CEO, together with the Executive Group Management, has the overall accountability for the environmental impact of Vattenfall. Legal accountability follows the organisational structure of legal entities. The Environmental Policy is approved by the Board of Directors, and implemented through the Environmental Management System. The Corporate Environmental Management System is implemented in local environmental management systems where applicable.

All business areas conduct an annual environmental management review to monitor adherence to the corporate environmental policy and management system. At the review, targets are also monitored and reviewed. At year-end 2024, nearly 100% of Vattenfall's production and distribution portfolios had certified environmental management systems in accordance with ISO 14001, with the exception of, for example, a small number of backup power units. The ISO14001 certifications are audited annually by a third party, with recertification occurring every three years. Vattenfall's environmental risks are an integrated part of the Enterprise Risk Management system, and opportunities are included in the yearly strategy and business planning process.

# Climate transition plan – a roadmap to fossil freedom

At Vattenfall, our goal is to help society break free from its dependency on fossil fuels, and we are committed to building a future where everyone can choose fossil-free ways to move, make and live. The climate crisis is one of the most pressing challenges of our time, with extreme weather events impacting people, ecosystems, and economies around the world. To prevent reaching critical tipping points, it is vital to limit global warming to 1.5°C. This requires halving global greenhouse gas emissions by 2030 and achieving net-zero emissions by 2050.

For Vattenfall, net-zero means at least a 90% reduction by 2040 in absolute emissions and neutralizing any outstanding emissions. We have set science-based targets for 2030 and 2040 to transition away from fossil fuels and align our business with the requirements to limit global warming to 1.5°C.

Meeting this goal demands collective efforts from all sectors of society. Moreover, it requires a fundamental transformation in the way we produce and consume energy – a journey we call the energy transition. Phasing out fossil fuels and accelerating the shift to fossil-free energy and electrification are key in this transition.

Decarbonising own operations and supporting our customers, while expanding fossil-free electricity generation and distribution at scale, are the most impactful ways we can contribute to the energy transition and combat climate change. At the same time, we are committed to ensuring that our transformation delivers benefits for society, local communities, and biodiversity.

Our SBTi validated targets on the road to net-zero:

## **Overall net-zero target:**

Vattenfall commits to reach net-zero greenhouse gas emissions across the value chain by 2040.

## **Near-term targets (2030):**

Vattenfall commits to reduce scope 1 and 2 GHG emissions 77.0% per kWh by 2030 from a 2017 base year.\* Vattenfall also commits to reduce scope 1 and 3 GHG emissions from all sold electricity 78.1% per kWh within the same timeframe.\*

Vattenfall further commits to reduce absolute scope 3 GHG emissions from use of sold products for sold fossil fuels 54.6% within the same timeframe.

## **Long-term targets:**

Vattenfall commits to reduce scope 1 and 2 GHG emissions 91.7% per kWh by 2040 from a 2017 base year.\* Vattenfall also commits to reduce scope 1 and 3 GHG emissions from all sold electricity 95.4% per kWh within the same timeframe.\*

Vattenfall further commits to reduce absolute scope 3 GHG emissions from use of sold products for sold fossil fuels 90.0% within the same timeframe. Vattenfall further commits to reduce all remaining absolute scope 3 GHG emissions 90.0% within the same timeframe.

\* The target boundary includes land-related emissions and removals from bioenergy feedstocks.

# Approach towards net zero 2040

For Vattenfall, the road towards net zero is based on a dual approach focusing on decarbonising our own operations and value chain, while simultaneously investing in solutions for a fossil-free energy system contributing to the decarbonisation of society.

**Securing a fossil-free energy supply:** Reducing own emissions in line with the 1.5°C-target trajectory, and operating as well as adding new fossil-free generation capacity to the market. New capacity comes both from capacity upgrades of existing fossil-free power plants as well as bringing new fossil-free generation capacity to the energy system via own investments or together with partners.

**Connecting and optimising the energy system.** Vattenfall owns, invests and operates critical infrastructure and flexibility assets in the energy system. As the decarbonisation of the energy system progresses, there is an increasing need to balance intermittent energy sources, such as wind and solar. The need to connect new consumption and generation as well as invest in the electricity grids are increasing due to the electrification of society.

**Driving decarbonisation with our customers and partners:** To move towards net zero, supplying fossil-free energy and supporting infrastructure is not enough. Therefore, we use our market position and our products to drive further decarbonisation in society through collaborating with suppliers, customers and partners.

The work is guided by verified and science-based climate targets, aiming for reductions to 2030 and ultimately net zero by 2040. Net Zero means at least a 90% emission reduction and any remaining emissions needs to be neutralised using carbon removals. Vattenfall require that carbon removals used in future should have high credibility and be approved for use by SBTi. Permanence of removed carbon and transparency of methods are cornerstones to our requirements for carbon removals.

To reach our targets, action is needed across all areas of Vattenfall's business, such as phasing out fossil gas in operations, investing in fossil-free energy and using our position to drive decarbonisation throughout our value chain. One example of improvements are the life cycle emissions of Vattenfall's wind power portfolio that have been reduced with 30 % over the last ten years. To date, Vattenfall has successfully reduced emissions in line with existing target trajectories.

Vattenfall's decarbonization levers:

Emission scopes	Key areas	Approach
<b>Scope 1 and 2 emissions</b>	Phased out of fossil gas used in power plants	Phase out of fossil gas in electricity by: <ul style="list-style-type: none"> <li>• Replacing fossil gas with biogas and/or hydrogen</li> <li>• Reduction of overall production volumes in fossil-based assets as more fossil-free electricity enters the system.</li> <li>• Capacity increases of fossil free assets and adding new fossil free generation to the market</li> </ul>
	Phase out of fossil fuels in district heating	Phase out of fossil fuels in district heating by: <ul style="list-style-type: none"> <li>• Integration of third-party waste heat</li> <li>• Replacing fossil fuels with biomass, bio-fuels</li> <li>• Heat pumps and heat storages</li> </ul>
<b>Scope 3</b>	Supply chain decarbonisation	Focus on decarbonising key emission drivers by circularity measures and the use of fossil free alternatives.
<b>Scope 3</b>	Customer decarbonisation – Electricity	Continued expansion of fossil free energy <ul style="list-style-type: none"> <li>• Increase share of fossil free electricity sales in core markets, target of 100% fossil free sales in 2030 in the Netherlands and 2040 for Germany.</li> <li>• Adding more fossil free capacity to the market</li> </ul>
<b>Scope 3</b>	Customer decarbonisation – gas	Transition fossil gas sold to end customers by: <ul style="list-style-type: none"> <li>• Introducing and offering fossil-free gas such as biomethane</li> <li>• Offering alternative heat sources such as heat pumps and district heating</li> </ul>
<b>Scope 4<sup>2</sup></b>	Creating climate benefits outside own value chain	Enable decarbonisation outside of our value chain: <ul style="list-style-type: none"> <li>• Connecting customers and new generation capacity.</li> </ul> Industry decarbonisation

<sup>2</sup> Scope 4 are emission reductions happening outside of the reporting boundaries for the company, not necessarily counted towards internally set reduction targets

# Investment plan

Our investment plan reflects Vattenfall's ambition to be a leader in the energy transition, enabling the fossil freedom that drives society forward. The focus of our investments is fossil-free electricity generation whilst being an integrated energy utility with a diversified portfolio. Other key investment areas are the development and extension of our electricity grids, the development and transition of our heating business, the maintenance and modernisation of our nuclear and hydro plants, alongside with increasing investments in electrification of transport.

## Total investments

In the investment plan, published 6th of Feb 2025 for 2025 until 2029 investments amount to SEK 170 billion. Gross investments amount to SEK 236 billion. The difference is mainly due to partnering related to offshore projects, namely the Nordlicht projects in Germany and Zeevonk in the Netherlands, as well as develop-to-sell assumptions for onshore wind, mainly Windplanblauw and Clashindarroch II, and solar projects. The following figures relate to net investments.

## Growth investments

Growth investments total to about 61 per cent (SEK 104 billion) of the total investment plan. Notably, final investment decisions (FIDs) for several projects are pending, making specifics subject to change. Around SEK 72 billion in investments are planned for the development and construction of new wind farms. Major investments include the further development and construction of the offshore wind farms Nordlicht I & II (together ~1,600 MW) and Zeevonk. The latter includes a 2,000 MW offshore wind farm, a 50 MWp floating offshore solar farm on site, and a new electrolyser at the Port of Rotterdam converting electricity to fossil-free hydrogen.

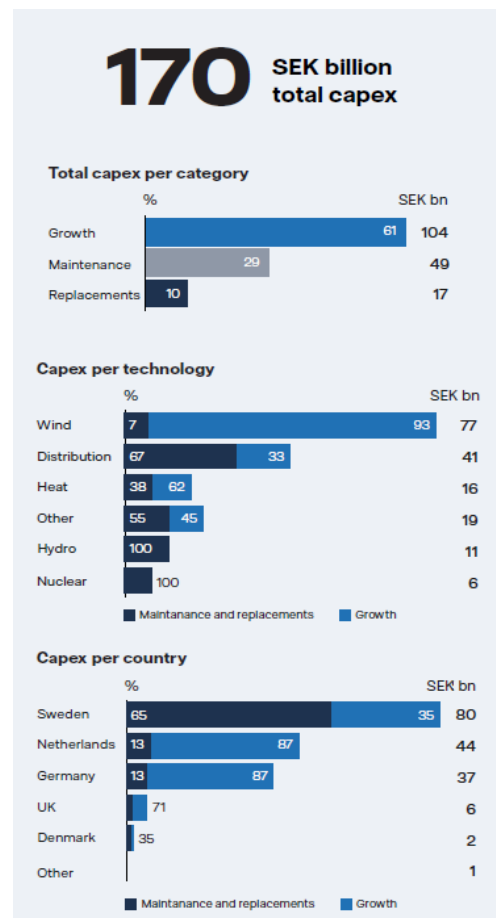
Growth investments also cover development costs for potential future wind power projects, such as Kattégatt Syd and the Kontiki projects in Sweden or Korsnäs in Finland. Potential construction spend for these projects is not yet included in the planning figures. In the onshore wind business, growth projects include the finalisation of the wind farms Bruzaholm (138 MW) and Velinga (60 MW) in Sweden, as well as new construction of the wind farms Stormyrberget (248 MW) in Sweden and Waidachswald (160 MW) in Germany.

Another major growth area is the development and extension of our electricity grids in Sweden with investments of about SEK 13 billion, primarily aimed at connecting new customers and areas to our electricity grids, as well as providing network solutions. Additional growth investments amounting to around SEK 10 bn are planned for our different heating businesses, with the aim to decarbonise the heat supply. Major heat activities include erecting new peak and back-up capacity in Leiden, development of several large, cityscale low carbon heat networks in the UK or connecting several data centres to existing heating grids in the Netherlands.

Additional growth activities, totalling to around SEK 9 billion, include investments in EV-charging stations and a capacity increase project in the Harsprånget hydro power plant.

## Maintenance and replacement investments

Vattenfall is also investing heavily in maintenance, modernisation and replacement in existing assets and businesses. Planned maintenance and replacement investments amount to about SEK 66 billion. This includes SEK 27 billion to reinforce our Swedish electricity grids and secure quality of supply. Additionally, we plan to invest around SEK 6 billion during the planning phase of extending the operating time of the nuclear power plants Forsmark and Ringhals reactors, from 60 to 80 years. Investments in dam safety as well as in maintenance and renewal of the Nordic hydro power plants are planned at about SEK 8 billion. In the heating business, we plan to invest at about SEK 6 billion to maintain and further develop our asset portfolio.



# Funding investments through green bonds

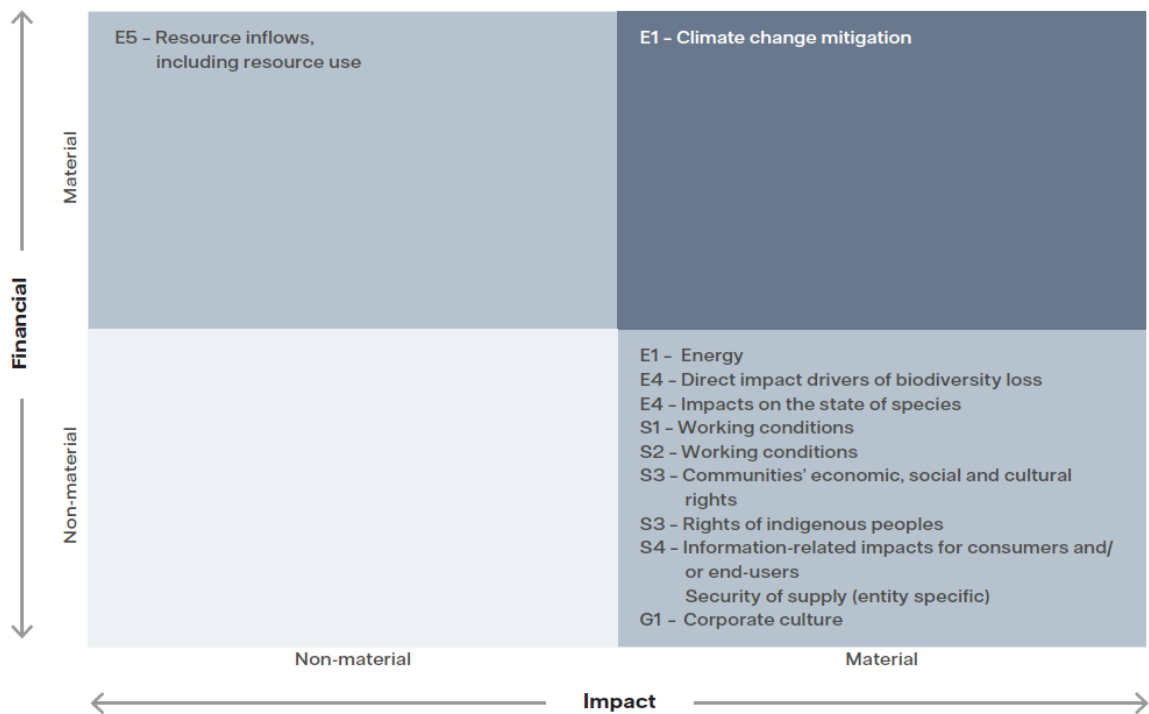
Since June 2019, Vattenfall has used green financing in our funding activities in support of implementing our strategy. The green bond framework was updated in 2022 making this the third framework. We expect all future long-term financing to be made under the Green Bond framework.

As per the end of 2024, the total amount of outstanding green bonds amounted to SEK 25.2bn. Meanwhile the total amount of investments approved stood at SEK 34.2bn. The Green Bond Investor Report is included in our Annual and Sustainability Report.

## Materiality

Vattenfall strives to openly and transparently report on its material sustainability topics. Transparent reporting we believe, serves to demonstrate our commitment to operating sustainably and forms the basis for dialogues with our stakeholders, building trust and ensuring accountability as we report on key issues and the steps we take to address them.

In 2024, Vattenfall conducted a Double Materiality Assessment, in accordance with the ESRS 1 guidelines. The DMA was executed by a dedicated project team comprising experts from various domains including Sustainability, Environment, Risk, Legal, and Finance, and supported by an extended team of representatives from all business areas. The outcome was as follows:



While there are plenty of very important topics falling in the right bottom corner of impact materiality, climate change mitigation is the single topic that makes it to the top right corner of materiality both from an impact and financial perspective. This framework aims to provide transparency to potential investors in order to bolster our opportunities to effectively fund and implement the investments needed to deliver on our strategy – in line with the top right corner.

# Biodiversity and ecosystems – A nature inclusive energy transition

At Vattenfall, we are committed to a nature-inclusive energy transition. Targets and key activities are outlined in our biodiversity transition plan for 2030, through which we show how we will contribute to the Kunming-Montreal framework in its efforts to halt and reverse biodiversity loss.

We continuously work to avoid and mitigating impacts by taking action to minimize impacts in own operations. Furthermore we invest heavily in R&D to secure a scientific foundation for our decisions and here we have extensive research programs ongoing focusing primarily on mitigating impacts from hydropower and building knowledge on wind power and biodiversity. When possible, opportunities for having a positive impact are also captured, examples include an inventory of the electricity distribution grids where we have identified over 250 km of biodiversity hotspots. Here, tailored maintenance plans have been developed for each identified hotspot with the aim to strengthen identified values.

# Resource use and circular economy – Transform to a more circular business

For Vattenfall, the transition to a circular economy is an opportunity, and renewable energy is an important piece of the puzzle in driving the circular economy forward. As an energy producer, we therefore have an important role to play in this transition. Circularity is a key enabler to reduce the environmental impact of building new assets. By reducing the use of virgin materials, circularity results in less mining and processing of raw materials and the associated CO<sub>2</sub> emissions and impacts on local biodiversity. We have developed a circular economy framework for 2030 based on circular sourcing, assets, innovation, and capabilities. Examples of actions can be linked to circularity targets set to the wind power business where we are aiming for 100% circular outflow of both wind blades and permanent magnets. On top of this, actions are taken in supply chains with the potential to reduce both GHG emissions and other aspects through actively sourcing recycled materials.

# Human rights

Vattenfall acknowledge that we have a responsibility to respect all internationally recognised human rights and that we are in a position to make a positive impact on human rights issues. At Vattenfall, we have the responsibility to identify, prevent, mitigate and remedy potential and actual negative impacts on human rights, throughout our whole value chain.

We base our work on the United Nations Global Compact (UNGC), the International Labour Organization's (ILO) core conventions, the OECD guidelines for Multinational Enterprises, the UN Guiding Principles for Business and Human Rights and the International Bill of Human Rights. Our commitment to respecting human rights is explicitly stated in our Code of Conduct and Integrity, Code of Conduct for Suppliers and Partners, Statement on slavery and human trafficking (in accordance with the UK Modern Slavery Act), and our Human Rights Policy. We yearly issue a Progress report showing how we are delivering on our human rights action plan.

# UN Sustainable Development Goals

Vattenfall creates value for customers and shareholder by pursuing sustainable business in attractive markets with favourable conditions for returns, and where we can leverage our competitive advantages. Vattenfall's strategy is well aligned with the UN's Agenda 2030 Sustainable Development Goals (SDG) and will drive Vattenfall to make an important contribution to the global sustainable development agenda.

Already in 2016, Vattenfall identified six SDGs as the most relevant to the company and to which it can provide the most meaningful global contribution. They continue to be our six prioritised UN sustainable development goals and remain essential for this framework. They are:

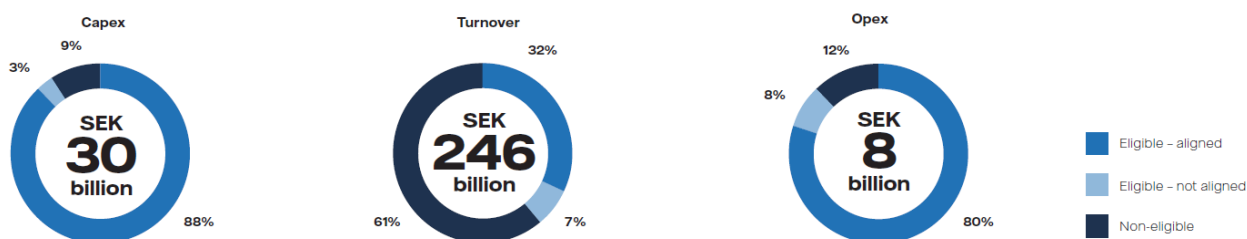
- **SDG 7** – Affordable and clean energy
- **SDG 9** – Industry, innovation and infrastructure
- **SDG 11** – Sustainable cities and communities
- **SDG 12** – Responsible consumption and production
- **SDG 13** – Climate action
- **SDG 17** – Partnership for the goals

# Vattenfall and the EU Taxonomy

The EU Taxonomy Regulation (EU 2020/825) establishes a common classification system that defines when an economic activity can be considered sustainable, also referred to as taxonomy-aligned. Its ultimate aim is to steer investments into activities that help achieve the ambitions of the EU Green Deal.

In 2024, the majority of Vattenfall's capex and opex were assessed as being eligible and aligned to the technical screening criteria set out in the taxonomy. 88% of Vattenfall's capex was aligned under the taxonomy, of which capex related to wind accounted for 31%, and transmission and distribution of electricity accounted for 35%. Other important investments were made in electricity generation from existing nuclear and district heating/cooling distribution grids. Investments in Vattenfall's generation of heat and electricity from gas represents the absolute majority of not aligned capex. Meanwhile, 39% of Vattenfall's turnover was eligible, of which 32% was aligned and 80% of opex in 2024 was aligned.

Important to note is that non-eligible activities according to the taxonomy regulation do not necessarily mean that they are not sustainable. It only indicates that the activity is not covered by, hence not assessed, under the taxonomy framework, like sales of electricity or trading.



# Green Finance Framework

Vattenfall's Green Finance Framework ("the Framework") has been developed as part of our continued commitment to integrate sustainability across the business. The Framework is structured in alignment with the Green Bond Principles (GBP) 2021 (with June 2022 Appendix I) established by the International Capital Markets Association (ICMA) and the Green Loan Principles (GLP) 2025 established by the Loan Market Association (LMA) and Asia Pacific Loan Market Association (APLMA).

These principles provide voluntary guidelines to support issuers in financing environmentally sound and sustainable projects, while providing transparency and insight into their estimated impact. The GBP further promote integrity in the development of the green bond market by clarifying the approach for issuing a Green Bond. In alignment with the GBP and GLP, the Framework consists of the four key components and recommended External Review. Vattenfall may under this framework issue Green Debt Instruments including green bonds, green hybrids and green loans.

The Green Finance Framework has been developed to be aligned with the core components of the GBP and GLP:

1. Use of Proceeds
2. Process for Project Evaluation and Selection
3. Management of Proceeds
4. Reporting
5. External Review

S&P Global Ratings will provide a Second Party Opinion on this Green Finance Framework, which will be made publicly available at Vattenfall's website. In accordance with the Green Bond Principles, Vattenfall will continue to provide an annual Green Finance Investor Report until the maturity of any issued Green Debt Instruments and will engage an independent external auditor to provide a limited assurance on both allocation and impact reporting.

# Use of proceeds

The proceeds from Vattenfall's issuances of Green Debt Instruments will exclusively be used to finance and/or refinance, in whole or in part, Eligible Green Projects and Assets within Vattenfall, its subsidiaries, Joint Ventures, or any acquired entities<sup>3</sup>. Proceeds from Green Debt Instruments will finance Eligible Green Projects and Assets according to this framework where Vattenfall has identified and manages environmental and societal risks. Vattenfall determines these environmental and societal risks and how to handle them within the Sustainability policy, Environmental policy, Human rights policy and the approach towards indigenous people in Sweden including other guidelines and instructions available on its company website.

The proceeds raised on the back of this Green Finance Framework can be applied towards new and existing capital expenditures, assets, R&D as well as selective operational expenditures such as maintenance costs related to Eligible Green Project and Assets that either increase the lifetime or the present or future value in accordance with the eligibility criteria in this framework.

Conscious of the importance of a common definition of sustainable activities, Vattenfall will ensure that the Eligibility Criteria of the Eligible Green Projects and Asset are consistent, where relevant, possible and on a best effort basis, with the substantial contribution part of the technical screening criteria of the EU Taxonomy Regulation adopted in June 2021 (the EU Taxonomy). Green Debt Instruments issued under this framework will be referenced in the associated legal document.

## Financing and refinancing

Financing is defined as allocation of proceeds from the issuance of Green Debt Instruments to fund Eligible Green Projects and Assets that were finalised and taken into operation up to one year before the approval by the Green Finance Committee. Refinancing is defined as allocation of proceeds from the issuance of Green Debt Instruments to Eligible Green Projects and Assets that were finalised and taken into operation more than one year before the approval in the Green Finance Committee. Capital expenditures, assets and related R&D are eligible without a defined look-back period. However, the Green Finance Committee evaluates, among other things, the nature of the Eligible Green Projects and Assets including their expected remaining lifetime and continued environmental benefits. Operational expenditures have a maximum look-back period of three years. For transparency reason, investors should notice that when investments take place over several years the total investment might not be fully reported at once. Eligible Green Projects and Assets are reviewed annually and will qualify for financing or refinancing subject to meeting the eligibility criteria. Vattenfall intends to allocate the proceeds from Green Debt Instrument at the earliest convenience and with the intention to reach full allocation within two years. Information about the split between financed and refinanced assets will be included in the annual Green Finance Investor Report.

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<sup>3</sup> For the avoidance of doubt, only the value of Green Assets and Projects (as defined in this framework) within the acquired company can be eligible for Green Debt Instruments.

## Exclusions

This framework will exclude investments directly related to activities associated with environmentally or socially harmful activities, such as use or generation of any form of fossil energy.



# Eligible green categories

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**Green Project Category: Renewable energy, UN SDG: 7.2, 9.1**

Environmental objective: Climate change mitigation

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Proceeds will be used to finance new and existing capital expenditures, replacements and upgrades, R&D and selective maintenance and operational expenditures that either increase the lifetime or value of assets as well as supportive infrastructure.

**Solar power:** Financing of electricity generation facilities that produce electricity from solar power.

**Wind power:** Financing of electricity generation facilities that produce electricity from wind power.

**Hydro power:** Financing of electricity generation from existing hydro power life-cycle GHG emissions from the generation of electricity from hydropower, are lower than 100 gCO<sub>2</sub>e/kWh.

**Manufacture of hydrogen:** Financing of manufacture of hydrogen and hydrogen-based synthetic fuels where the activity complies with a life-cycle GHG emissions savings requirement of 73.4 % for hydrogen, and 70 % for hydrogen-based synthetic fuels relative to a fossil fuel comparator of 94 gCO<sub>2</sub>e/MJ.

**Manufacture of biomethane:** Financing of manufacture of biomethane through either anaerobic digestion of bio-waste or sewage sludge through anaerobic digestion with the resulting production and utilisation of biogas and digestate and/or chemicals. The produced biogas is used directly for the generation of electricity, heat or upgrade to bio-methane for injection in the natural gas grid. The biomethane can also be used as vehicle fuel or as feedstock in chemical industry. In the dedicated bio-waste treatment plants, the share of food and feed crops used as input feedstock, measured in weight, as an annual average, is less than or equal to 10 % of the input feedstock.

**Storage of hydrogen:** Financing of storage of hydrogen including construction of facilities that store hydrogen with a life-cycle GHG emissions savings requirement of 73.4 % for hydrogen, and 70 % for hydrogen-based synthetic fuels relative to a fossil fuel comparator of 94 gCO<sub>2</sub>e/MJ.

The activity is one of the following:

- a. construction of hydrogen storage facilities;
- b. conversion of existing underground gas storage facilities into storage facilities dedicated to hydrogen-storage.

**Transmission and distribution of electricity:** Financing of transmission systems that transport the electricity on extra high-voltage and high-voltage interconnected system high-voltage, medium-voltage and low-voltage distribution systems.

Proceeds will finance Green Eligible Projects and Assets that align with one of the following scenarios:

- a. interconnected to the European system or,
- b. more than 67 % of newly enabled generation capacity in the system is below the generation threshold value of 100 gCO<sub>2</sub>e/kWh or,
- c. the average system grid emissions factor, calculated as the total annual emissions from power generation connected to the system, divided by the total annual net electricity production in that system, is below the threshold value of 100 gCO<sub>2</sub>e/kWh measured on a life cycle basis in accordance with electricity generation criteria, over a rolling five-year period.

**Storage of electricity:** Financing of construction and operation of facilities that store electricity and return it at a later time in the form of electricity. The activity includes pumped hydropower storage.

**Storage of thermal energy:** Financing of construction and operation of facilities that store thermal energy and return it at a later time.

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**Green Project Category: Energy efficiency, UN SDG: 7.3, 9.4**

Environmental objective: Climate change mitigation

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Proceeds will be used to finance new and existing capital expenditures, replacements and upgrades, R&D and selective maintenance and operational expenditures that either increase the lifetime or value of assets as well as supportive infrastructure.

**District heating and cooling distribution:** Financing of pipelines and associated infrastructure for distribution of heating and cooling, ending at the sub-station or heat exchanger.

The activity complies with one of the following criteria:

- a. for construction and operation of pipelines and associated infrastructure for distributing heating and cooling, the system meets the following criteria, at least 50% renewable energy, 50% waste heat, 75% cogenerated heat or 50 % of a combination of such energy and heat in alignment with the energy efficiency directive;
- b. for refurbishment of pipelines and associated infrastructure for distributing heating and cooling, the investment that makes the system meet the following: a district heating or cooling system using at least 50% renewable energy, 50% waste heat, 75% cogenerated heat or 50% of a combination of such energy and heat starts within a three year period as underpinned by a contractual obligation or an equivalent in case of operators in charge of both generation and the network or;
- c. modification to lower temperature regimes; advanced pilot systems (control and energy management systems, Internet of Things).

**Electric heat pumps:** Financing of electric heat pumps where the economic activity is an integral element of renewable energy technologies.

The installation and operation of electric heat pumps complies with both of the following criteria:

- a. refrigerant threshold: Global Warming Potential (GWP) does not exceed 675;
- b. energy efficiency performance and requirements in line with the EU Ecodesign Directive (2009/125/EC).

**Production of heat/cool from bioenergy:** Financing of facilities that produce heat/cool exclusively from biomass, biogas or bioliquids, and excluding production of heat/cool from blending of renewable fuels with biogas or bioliquids.

The activity complies with applicable sustainability and greenhouse gas emissions saving criteria for biofuels, bioliquids and biomass as set out in the EU Renewable Energy Directive (EU 2018/2001) including a greenhouse gas emission savings from the use of biomass of at least 80%.

**Industrial projects:** Financing of industrial collaborations such as Hybrit to support direct and indirect electrification in hard-to-abate sector of the society that ascertain the following:

- High absolute estimated reduction of greenhouse gas emissions in the targeted area
- Minimize long term negative environmental impacts and potential rebound

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**Green Project Category: Clean transportation, UN SDG: 7.2, 11.2**

Environmental objective: Climate change mitigation

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Proceeds will be used to finance new and existing capital expenditures, replacements and upgrades, R&D and selective maintenance and operational expenditures that either increase the lifetime or value of assets as well as supportive infrastructure.

**Charging stations for electric vehicles:** Financing of charging stations and infrastructure for electric vehicles.

# Process for Project Evaluation and Selection

Project evaluation and selection is a key process in ensuring that the Projects and Assets financed by Green Debt Instruments meet the Eligibility Criteria set out in the Use of Proceeds section.

To ensure that proceeds from Green Debt Instruments are allocated to Projects and Assets aligned with the criteria of this Green Finance Framework, Vattenfall has established a Green Finance Committee (“GFC”) to review, coordinate and validate the selection of Eligible Green Projects and Assets. The GFC has permanent members from the Group Control & Investor Relations, Treasury, Sustainability and Strategy departments and may consult other internal and external stakeholders when necessary.

The Eligible Green Projects and Assets will be selected through decisions in the GFC where representatives from the sustainability department holds a veto. The GFC meets at least semi-annually or when appropriate.

The main responsibilities of the Green Finance Committee include but are not limited to:

1. Reviewing and validating the Green Register of the Eligible Green Projects and Assets proposed by the investment or other relevant teams, based on the Eligibility Criteria.
2. Monitoring the Eligible Green Projects and Assets register during the lifetime of the Green Debt Instruments, and to remove Projects and Assets that do not meet the criteria from the Green Register.
3. Approving any changes or updates to the Framework.
4. Developing the Green Finance Investor Report.
5. Monitoring the changes related to the sustainable finance markets in terms of disclosure and reporting requirements.
6. Identifying and managing environmental and social risks.

The GFC follows the below process when selecting and evaluating projects for the Eligible Green Projects and Assets.

- Potential Eligible Green Projects and Assets are identified in connection with the investment planning process.
- The list of potential Eligible Green Projects and Assets is then submitted to the Green Finance Committee that verifies the eligibility of the potential Projects and Assets with the Eligibility Criteria.
- Eligible Green Projects and Assets added to the Green Register will be tracked and monitored by the GFC to make sure they remain aligned with the eligibility criteria in this Framework. In the case where an asset from the Green Register no longer meets the eligibility criteria outlined in this Framework (e.g. following divestment, liquidation, other concerns regarding alignment with eligibility criteria), the GFC will adjust the Eligible Green Asset Register accordingly.

# Management of Proceeds

Vattenfall maintains a Green Register with the purpose to monitor that proceeds from Green Debt Instruments will be entirely allocated to Eligible Green Projects and Assets. Vattenfall intends to allocate the proceeds from Green Debt Instrument at the earliest convenience and to the extent possible reach full allocation within two years. Information about the split between financed and refinanced assets will be included in the annual Green Finance Investor Report.

Unallocated proceeds may be temporarily placed in line with the liquidity reserves, taking the exclusion criteria into account and which is managed by the Treasury department. Relevant information regarding the issuance of Green Debt Instruments, as well as Assets and Projects financed or refinanced will be monitored and documented. The balance of the proceeds will be checked at least annually to account for any need to re-allocate proceeds which no longer fulfil the Eligibility Criteria. The Green Register will form the basis for the impact and allocation reporting.

## Reporting

Vattenfall is committed to transparent allocation and impact reporting on any relevant Green Debt Instrument. Vattenfall will publish a Green Finance Investor Report on the allocation and impact of the Green Debt Instruments issued under the Green Finance Framework. The Report will be published annually until full allocation of Green Debt Instruments. Where relevant, Vattenfall will seek to align the reporting with the latest standards and practices as identified by ICMA in the Handbook Harmonised Framework for Impact Reporting issued in June 2024.

The Green Finance Investor Report will provide information on the allocation of the proceeds of Green Debt Instruments and the environmental impacts of Eligible Green Projects and Assets financed by the instruments. The impact report will, to the extent feasible, also include methodologies used and relevant impact metrics. The information will be made publicly available on Vattenfall's website.

If confidentiality agreements, competitive considerations, or a large number of underlying Projects and Assets limit the amount of detail that can be made available Vattenfall may present information in generic terms or on an aggregated basis.

## Allocation Reporting

The allocation report will, to the extent feasible, include the following components:

1. A list of all Eligible Green Projects and Assets funded.
2. The relative share of new financing versus refinancing.
3. A closer description of some of the Eligible Green Projects and Assets financed.
4. Geographical distribution.
5. The amount of unallocated proceeds (if any).
6. The EU Taxonomy eligibility/alignment estimation (if feasible).

## Impact Reporting

Vattenfall recognises the importance of transparency and impact reporting and will strive to report on the actual or expected environmental impact of the investments financed by Green Debt Instruments according to the proposed metrics outlined in the below table.

These metrics may change over time subject to providing a relevant understanding of the impact. If the actual impact of an Eligible Green Projects and Asset cannot be systematically measured and reported (e.g. R&D), or proves unreasonably difficult to establish, Vattenfall will seek to provide information on the goals, estimated positive impact and results of the financed activities.

Green Category	Examples of impact indicators
<b>Renewable energy</b>	<b>Energy Source</b> Estimated CO <sub>2</sub> reduction (ktonnes) Installed fossil free production capacity (MW) Transmission and distribution of electricity Distribution cables installed (in km)
<b>Energy efficiency</b>	<b>District Heating</b> Estimated CO <sub>2</sub> reduction (ktonnes) <b>Power to Heat</b> Estimated CO <sub>2</sub> reduction (ktonnes)
<b>Clean transportation</b>	<b>Infrastructure for clean transportation</b> Number of installed units

## External Review

### Second Party Opinion (pre-issuance)

Vattenfall has appointed S&P Global Ratings as an external reviewer to provide, in accordance with the Guidelines for External Reviews developed by the Green and Social Bond Principles, an independent ex-ante Second Party Opinion on Vattenfall Green Finance Framework. The full Second Party Opinion and this Framework will be publicly available on Vattenfall's website.

### External verification (post issuance)

On an annual basis, Vattenfall will engage an independent external auditor to provide a limited assurance on both allocation and impact reporting, until the proceeds of the Green Debt Instruments have been fully allocated. This will confirm that the allocation has been carried out in all material respects in compliance with the Eligibility Criteria set forth in this Framework and that the impacts reported are in accordance with the applicable reporting criteria and free from material misstatement. The Green Finance Investor Report and the related limited assurance report will be available on Vattenfall website.

# Publicly available documents

The Green Finance Framework, Second Party Opinion and Green Finance Investor Report will be publicly available on Vattenfall's website.

[Annual and sustainability report](#)

[Sustainability policy](#)

[Environmental policy](#)

[Human rights policy](#)

[Approach towards indigenous people in Sweden](#)

[Guidelines and instructions relating to sustainability available on its company website](#)