

Sustainability Report 2024





Sustainability at Swissgrid

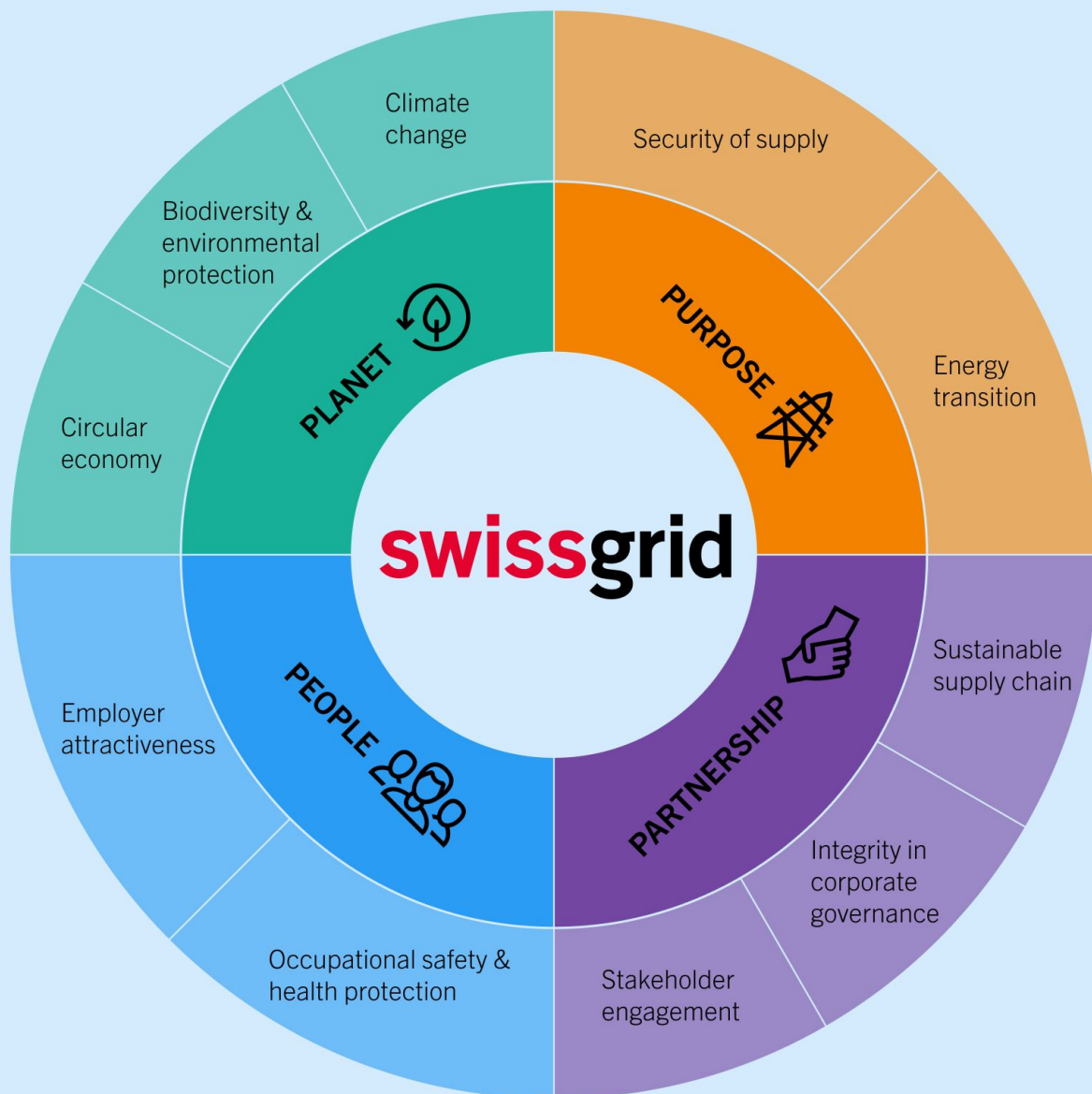
Swissgrid is helping to shape the future of energy in Switzerland – safely, innovatively and sustainably. As the transmission system operator, Swissgrid is the backbone of a reliable, stable and efficient supply of energy and is playing a key role in the transformation of the energy system on the grid side. Responsible behaviour towards people and the environment is an integral part of Swissgrid's corporate strategy. By firmly establishing ecological, social and economic aspects as part of its core mandate, Swissgrid is not only strengthening the sustainability of the company, but also making a vital contribution to the resilience and future viability of the supply of electricity in Switzerland.

GRI 3-3

Priorities of Swissgrid's commitment to sustainability

Swissgrid's Board of Directors has firmly established the company's commitment to sustainability in its Strategy 2027 as the «Corporate Social & Environmental Responsibility» (CSER) strategic focus area. The aim of the CSER approach is to enable Swissgrid to fulfil its social responsibility for people and the environment by actively and naturally implementing sustainable actions in all activities and areas of the company. Swissgrid divides its commitment to sustainability into four strategic areas of action: Purpose, Planet, People and Partnership. In January 2025, the Board of Directors defined ten priorities in these four strategic areas of action using the company's updated dual materiality analysis. These priorities form the basis for the strategic focus on CSER and for non-financial reporting.

Swissgrid's areas of action and priorities related to sustainability



GRI 2-23, 2-24, 3-3

Swissgrid's sustainability goals

In the 2024 reporting year, the Executive Board approved Swissgrid's guiding principles for sustainability and the CSER management concept. The guiding principles provide a framework for the further development of the company's commitment to sustainability. Detailed information on the objectives, the management approaches for handling social and environmental impacts, the measures being taken and the progress being made is given for all the priorities in the corresponding sections of the Annual Report. The following table provides an overview of Swissgrid's ambition and selected key figures for each of the ten priorities.

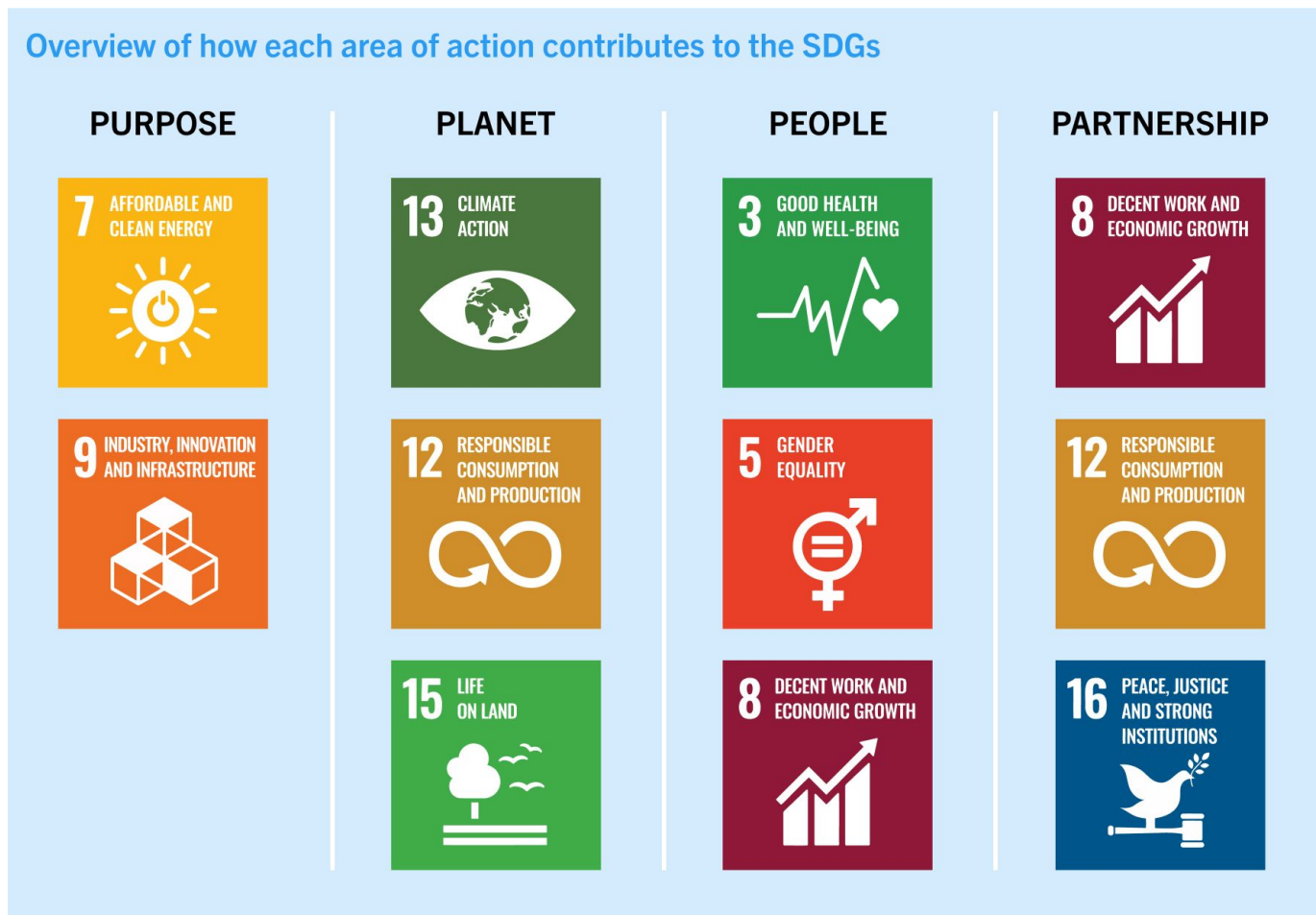
Priority	Ambition	Key figures for 2024
Purpose Security of supply Energy transition	Swissgrid guarantees grid-related security of supply. Swissgrid is supporting the transformation of the energy system on the grid side.	• Availability of the transmission grid > 99.9% • «Energy not supplied» of 0.002 GWh in the meshed grid • Use of positive control energy (944 GWh) and negative control energy (550 GWh) • Exported energy (39,175 GWh) and imported energy (25,262 GWh)

Planet	<u>Climate change</u>	Swissgrid intends to reduce its Scope 1 and Scope 2 greenhouse gas emissions by 50% by 2030 and by 90% by 2040 (in relation to 2023).	• Increase in Scope 1 and Scope 2 greenhouse gas emissions by 8.5% (compared with 2023)
	<u>Environmental protection and biodiversity</u>	Swissgrid is committed to preserving biodiversity and minimising harmful effects on land, air and water.	• 24 substations with small structures to preserve biodiversity • 3 events of environmental relevance in grid operations
	<u>Circular economy</u>	Swissgrid integrates the principles of the circular economy along its value chain.	• 58% of waste from grid projects is reused or recycled
People	<u>Occupational health and safety</u>	Swissgrid has set itself the goal of protecting the health and safety of employees, service providers and neighbours.	• 14 occupational accidents involving employees and service providers
	<u>Employer attractiveness</u>	Swissgrid is striving to establish its position as one of the best employers in Switzerland in order to successfully attract and retain new talent.	• Departure rate of 6.2% • Proportion of women of 22%
Partnership	<u>Sustainable supply chain</u>	Swissgrid fulfils its environmental, social and economic responsibility along the value chain.	• > 98% of tenders in open and invitation procedures take sustainability criteria into account
	<u>Integrity in corporate governance</u>	Swissgrid and its employees always act responsibly, professionally and credibly to ensure a secure and sustainable supply of electricity, both now and in the future.	• No material compliance violations of legal principles related to sustainability or the principles of Swissgrid's Code of Conduct
	<u>Stakeholder engagement</u>	Swissgrid creates a common basis for finding sustainable solutions by engaging in transparent dialogue and constructive cooperation with stakeholders.	

Contribution to the Sustainable Development Goals (SDGs)

Swissgrid is helping Switzerland to achieve the SDGs thanks to its commitment to sustainability. As the link between generation and consumption, Swissgrid is making a significant contribution to the energy transition (SDG 7), to climate protection (SDG 13) and to the provision of a resilient and innovative infrastructure (SDG 9). In addition, Swissgrid's commitment to sustainability contributes to the achievement of six other SDGs (see overview below). As a member of the UN Global Compact (UNGC), Swissgrid is also committed to integrating the ten principles of sustainability into its strategy, its activities and its culture.

Overview of how each area of action contributes to the SDGs



Principles and guidelines

The ambitions of Swissgrid's guiding principles for sustainability and the principles of the UNGC are supplemented by further sustainability-related declarations of commitment and internal directives:

- Swissgrid's Code of Conduct and Whistleblowing Policy approved by the Board of Directors (see the «Integrity in corporate governance» section)
- Sustainability Charter for Suppliers approved by the Executive Board (see the «Sustainable supply chain» section)
- Supply chain policy for exercising due diligence approved by the Board of Directors (see the «Sustainable supply chain» section)
- Occupational health and safety policy approved by the Executive Board (see the «Occupational health and safety» section)
- The organisational regulations (approved by the Board of Directors) and internal directives and regulations (approved by the Executive Board) in the areas of HR policy, anti-corruption, human rights, procurement, fair conduct and transparency in the wholesale energy market and the financial market, data protection, information security and cybersecurity, compliance, risk management, occupational safety, health protection and the environment
- Guidelines and handbooks for suppliers in areas including occupational safety, health protection, environmental protection and the safety culture

GRI 3-3

Sustainability management system

Swissgrid strengthened its cross-departmental management system in the 2024 financial year in order to integrate sustainable and responsible behaviour into all its activities and to continuously improve its commitment to sustainability. The sustainability management system is based on the specifications of ISO 26000 and the PDCA («Plan-Do-Check-Adjust») model. The guiding principles for sustainability establish the basis for putting the management model into practice in operations. In particular, this includes integrating sustainability into all relevant corporate processes, exercising due diligence with regard to environmental and social impacts along the value chain, actively involving employees and stakeholders by providing information, training and dialogue, and ensuring transparent and comprehensive reporting.

Sustainability management model



GRI 2-19

Sustainability targets for variable remuneration

Variable remuneration at Swissgrid is measured according to an individual performance assessment and the achievement of the strategic corporate objectives defined for the financial year. The Executive Board reviews target achievement on a quarterly basis and initiates measures if targets are not met. As part of its Strategy 2027, Swissgrid has also defined CSER targets and performance criteria. The extent of their achievement has an impact on the variable remuneration of members of the Executive Board and senior and specialist managers. For the 2024 financial year, progress in the following sustainability areas was relevant for variable remuneration: greenhouse gas emissions, occupational safety, sustainable procurement, the enhancement of employee skills and the further development of the sustainability strategy. Progress in these five areas

accounted for a total of 23% of the variable remuneration component linked to corporate objectives.

GRI 2-29

Collaboration with external stakeholders

Swissgrid works closely with external stakeholders in relation to sustainability, including authorities, industry partners, organisations, environmental protection associations, European transmission system operators and other groups. The objectives range from exchanging experience and developing and piloting joint sustainability projects to preparing industry-wide standards. Partnerships with stakeholders and the integration of the knowledge gained as a result provide Swissgrid with an important basis for continuously improving its management approaches in various areas of sustainability. For example, Swissgrid continued to work closely with other transmission system operators in Europe in the 2024 financial year to harmonise the environmental and social requirements for suppliers with regard to procurement. The aim is to increase the effectiveness and feasibility of the criteria used (see the [«Sustainable supply chain»](#) section). Swissgrid also incorporates the concerns and interests of the public, authorities and other interest groups into its grid projects. Their involvement and influence are described in detail in the [«Stakeholder engagement»](#) section.

GRI 2-14, 3-1, 3-2

Dual materiality analysis

Swissgrid identified its ten priorities using the dual materiality analysis. The materiality analysis is approved by the Board of Directors, reviewed once a year across all departments, and modified if necessary with the approval of the Board of Directors. When conducting its materiality analysis, Swissgrid refers to the guidelines of the Global Reporting Initiative (GRI) and the general requirements of the European Sustainability Reporting Standards (ESRS 1). In the 2024 financial year, Swissgrid carried out a two-stage evaluation and update of its materiality analysis.

Validation of the sustainability topics identified during the analysis

In an initial step, Swissgrid validated the list of relevant sustainability topics to be evaluated according to the following procedure:

- **Collection of possible sustainability topics:** Swissgrid compiled a list of potentially relevant topics. This was based on the corporate strategy, the 2022 materiality matrix, a benchmarking comparison with European and Swiss companies, relevant international and national standards, and the risk categories of Swissgrid's Enterprise Risk Management (ERM) system. National and international trends and developments in the electricity and sustainability sector were also taken into account.
- **Analysis of the corporate context:** Swissgrid's corporate context was analysed in order to validate the collection of topics. To do so, Swissgrid took into account its corporate activities, business relationships and impact chains, as well as the concerns of relevant stakeholders.
- **Internal and external consultations:** external (industry, investors, NGOs, academia and service providers) and internal stakeholders were consulted for further validation.

Evaluation of the identified sustainability topics according to the dual materiality principle

In a second step, Swissgrid evaluated the sustainability topics identified, including those listed in Art. 964b of the Swiss Code of Obligations, according to the dual materiality principle:

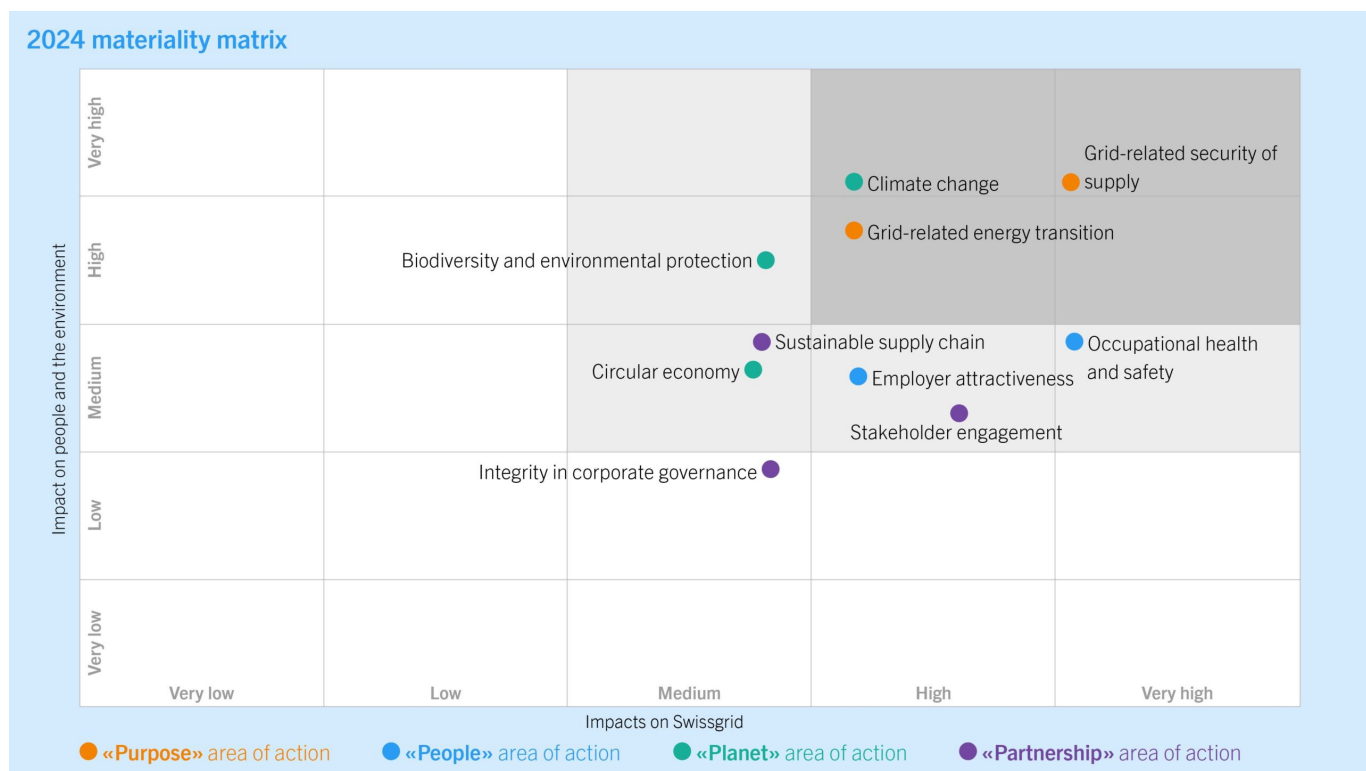
- **External impacts («inside-out» perspective):** Swissgrid evaluated the external negative and positive impacts of its business activities on people and the environment along the value chain. To do so,

assessment scenarios were defined for each topic in order to evaluate the extent, scope, irreversibility and probability of occurrence of the identified potential external impacts on people and the environment. Short, medium and long-term effects were taken into account.

- Impact on the inside («outside-in» perspective):** Swissgrid also evaluated the actual and potential sustainability-related risks and opportunities for the company. The corporate risks recorded in the ERM served as a basis for ensuring the consistency of the risk assessment. In accordance with the ERM, identified risks are evaluated on the basis of assessment scenarios to establish the probability of occurrence and the potential extent of damage. The extent of damage is determined in relation to nine risk categories: personal safety, security of supply, efficiency of the transmission system, financial situation, compliance, reputation, environmental and landscape protection, innovation and digitalisation and/or information security. Swissgrid adopted the highest-rated ERM risk or the highest-rated opportunity as a benchmark to evaluate (financial) materiality from an «outside-in» perspective.

Updated 2024 materiality matrix

The materiality matrix provides an overview of the ten material topics identified by Swissgrid. The company has set the following threshold value for defining the materiality of the topics analysed: Swissgrid considers an issue to be material if either the impact on people and the environment or the opportunities and risks for Swissgrid are assessed as «medium» (on a five-point scale, this corresponds to a threshold value of 2.6 points). Issues that were not considered material from a sustainability perspective (e.g. water or marine resources) are not listed in the materiality matrix.



These methodological changes have resulted in the further development of the analysis, the presentation and the main topics. The materiality matrix now shows ten instead of 14 areas that are of particular relevance to Swissgrid from a sustainability perspective. The most important changes were made for the following reasons:

- Methodological changes:** «Grid-related energy transition» is now identified as a material topic due to its

relevance for a climate-friendly energy transition, grid stability and Swissgrid's core business. «Healthy financial strength» remains an important basis for financing sustainable investments, and «transparency» is part of Swissgrid's sustainability reporting principles. However, in line with the dual materiality methodology, these issues are no longer managed as separate material topics.

- **Consolidation of topics:** «Diversity and inclusion» and «Attracting, retaining and developing skilled workers» have been consolidated under «Employer attractiveness», and «Innovation and digitalisation» has been integrated into «Grid-related energy transition» and «Grid-related security of supply».
- **Changes in terminology:** «Integrity in corporate governance» is now used instead of «Governance, compliance, anti-corruption and risk minimisation».

Governance and organisation

The responsibilities and organisation in relation to sustainability are part of Swissgrid's corporate governance structure. The responsibilities of the Board of Directors, the Executive Board and the operational business area are defined in the legal requirements, the Articles of Incorporation and the organisational regulations approved by the Board of Directors. The 2024 Corporate Governance Report gives details of the composition of the Board of Directors and the Executive Board, of provisions and processes relevant to corporate governance and of the corresponding areas of responsibility.

GRI 2-5, 2-9, 2-12, 2-13, 2-14, 2-17, 2-24

The role of the Board of Directors with regard to sustainability

As Swissgrid's highest supervisory body, the Board of Directors is responsible for the sustainability strategy (including long-term objectives), for annual non-financial reporting and for the due diligence and management processes for identifying and managing positive and negative impacts, risks and opportunities in relation to sustainability (sustainability issues).

The Board of Directors has various monitoring, control and audit functions, and can access tools to help it to fulfil its responsibilities:

- The Finance and Audit Committee (FPA) helps the Board of Directors to monitor the management of environmental and social impacts and risks that may arise from Swissgrid's business activities. In addition, the FPA reviews and approves the non-financial reporting for the attention of the Board of Directors.
- Internal Audit reports directly to the Board of Directors and carries out risk-oriented, independent audits and provides advisory services on its behalf. In particular, its tasks include regular auditing of internal supervision, control and risk management processes. In the 2024 financial year, Internal Audit validated and confirmed the implementation of two measures related to sustainability.
- The monitoring of sustainability issues represents an integral part of the ERM system. In the course of semi-annual risk assessments and regular risk updates, the FPA and the Board of Directors are informed about the main risks and their management.
- When submitting proposals, the Board of Directors considers the impact of Swissgrid's planned activities on the four areas of action Purpose, Planet, People and Partnership. This last area of action includes taking into account the concerns and interests of external stakeholders. Since 2023, the positive and/or negative effects must be presented in all proposals. This applies to strategic and operational activities, as well as to investments that are submitted to the Board of Directors for approval, acknowledgement or resolution.
- In order to ensure the integrity and credibility of sustainability reporting, the Board of Directors has instructed Swissgrid's Executive Board to implement an appropriate internal control system for non-

financial reporting and to have an annual audit of key figures carried out by an external auditor. The external auditor presents the results of the audit to the FPA and the Chairman of the Board of Directors. The measures implemented to strengthen the internal reporting processes were validated by Internal Audit in February 2024.

- In addition, the Board of Directors discusses current topics of relevance to the company in greater depth at ordinary meetings or at extraordinary events such as workshops and visits. It regularly consults with both internal and external experts for this purpose. New members of the Board of Directors are familiarised with company-specific topics in an onboarding session. All members of the Board of Directors completed training on the prevention of corruption in the 2024 financial year to enhance their knowledge of sustainability.

As part of Strategy 2027, the Board of Directors has delegated responsibility for the operational implementation of the sustainability strategy and cross-departmental management to the Executive Board.

GRI 2-12, 2-13, 2-23, 2-24, 3-3

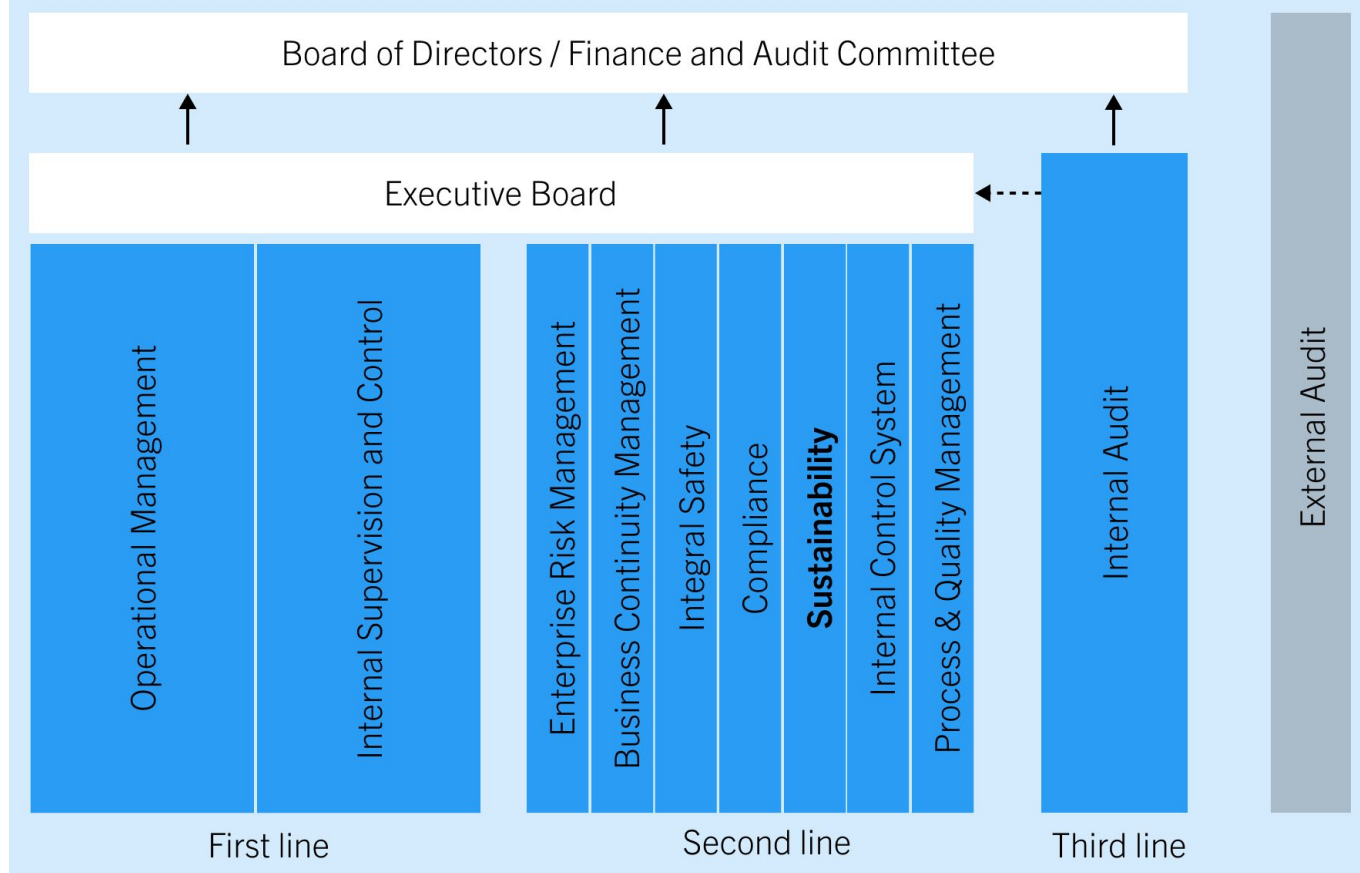
The role of the Executive Board with regard to sustainability

The Executive Board is responsible for Swissgrid's operational business activities. This includes implementing the sustainability strategy, achieving targets by drawing up and implementing action plans, and managing sustainability issues effectively along the value chain by means of suitable processes and control mechanisms. The Executive Board also encourages the integration of sustainability into the company's business and decision-making processes and ensures that a sustainable corporate culture is firmly established within Swissgrid. In order to fulfil this role, the Executive Board organises regular reviews of effectiveness and progress in the priority areas and defines responsibilities and competencies related to sustainability. The Executive Board uses established reporting processes to inform the Board of Directors at least once a year about risks, opportunities and implementation progress as far as sustainability is concerned.

The three-line governance model

Operational responsibilities in the area of sustainability are allocated based on the three-line governance model. This model serves as a framework for systematically managing sustainability issues and taking them into account in decision-making, ensuring the control of high-risk areas of responsibility, verifying compliance with legal and internal regulations, driving forward strategic development, and identifying, rectifying and learning from errors or irregularities. Sustainability is one of the second-line governance domains.

Swissgrid's three-line governance model



First-line responsibilities: the operating business units are responsible for the further development and implementation of sustainability measures and targets in their business areas, for compliance with accountability (for instance by means of controls and reporting) and for identifying and managing potential and actual risks to people and the environment arising from operating activities.

Second-line responsibilities: the Sustainability governance domain supports the operating business units, the Executive Board and the Board of Directors by performing the following tasks:

- Helping the Board of Directors and the Executive Board to identify, mitigate and manage sustainability issues;
- Developing and operating a cross-departmental sustainability and environmental management system;
- Driving the operational development of the sustainability strategy and the implementation of company-wide sustainability initiatives;
- Advising and helping the business units to conceptualise and implement strategies, measures and training in relation to sustainability.

Other second-line governance domains that are relevant to sustainability issues are ERM, compliance and integral security. These domains support the Board of Directors and the Executive Board by means of effective management systems to mitigate and control potential impacts and risks, to ensure compliance with the applicable legal framework and ethical principles, and to protect Swissgrid's employees, installations, systems and information from adverse effects.

Third-line responsibilities: Internal Audit supports the Board of Directors, its committees and the Executive

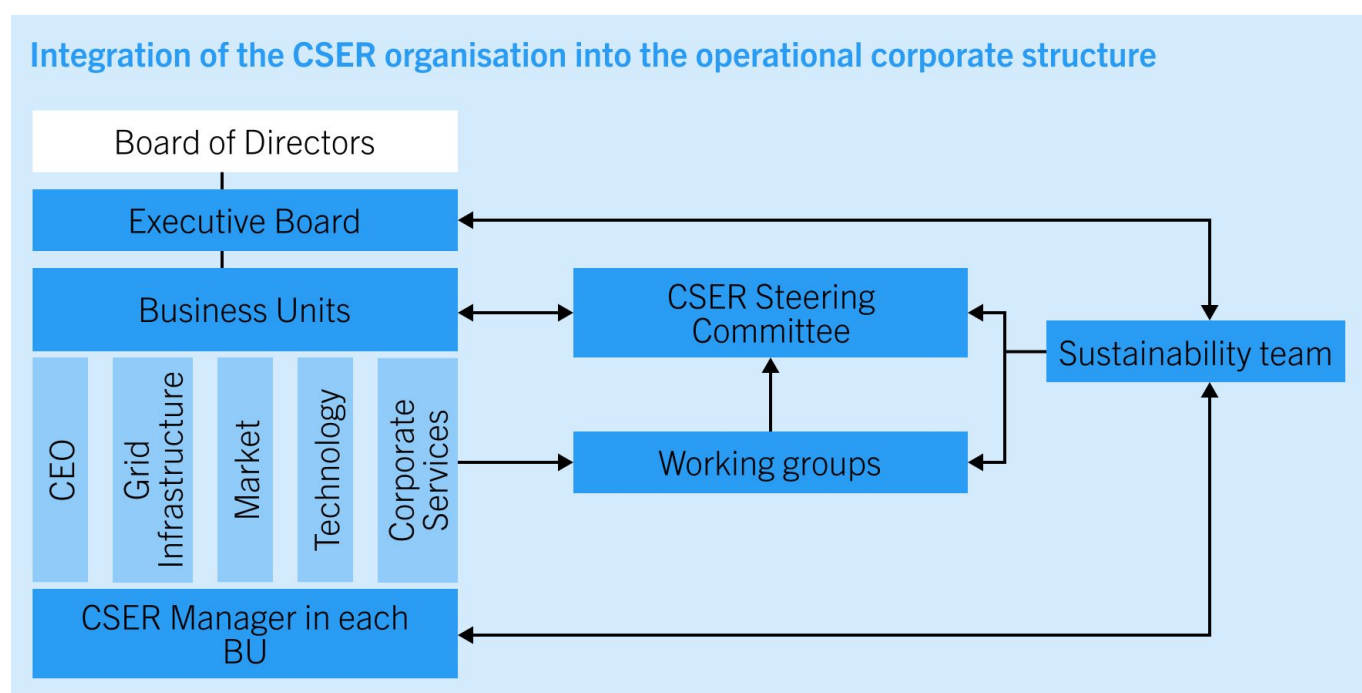
Board by providing independent and objective auditing and advisory services. Internal Audit gives these bodies the assurance that corporate supervision is guaranteed and processes are adhered to. The aim is to identify potential weak points and risks, thereby avoiding damage, optimising processes and creating added value.

GRI 2-13, 3-3

Cross-departmental CSER organisation

In October 2023, the Swissgrid Executive Board created a dedicated Sustainability team that reports directly to the CFO and Head of Corporate Services at Swissgrid. In the 2024 financial year, the Executive Board also approved the following CSER organisations in an effort to drive forward cross-departmental management and establish sustainability within all business areas:

- CSER Steering Committee, consisting of members of senior management, to support the further development of the sustainability commitment in an advisory and steering capacity;
- CSER managers, consisting of employees from each business unit, to coordinate and establish sustainability activities within the operational business units;
- CSER working groups, consisting of employees with expertise in the relevant priority subjects, to provide technical support for the development of strategies targeting specific topics.



GRI 2-1, 2-2, 2-3, 2-4, 2-5, 2-14

Context of non-financial reporting

The Board of Directors of Swissgrid Ltd approved the integrated Annual and Sustainability Report on 14 April 2025 for publication on 16 April 2025, and submitted it to the General Assembly on 20 May 2025 for acceptance. The integrated Annual Report is published electronically on the [Swissgrid website](#).

Non-financial reporting takes place once a year. This report covers the period from January to December 2024 and comprises the business activities of Swissgrid Ltd. The activities of Pronovo AG were excluded from

the financial and non-financial consolidation in accordance with Art. 64 Para. 5 of the Energy Act.

Swissgrid's non-financial reporting was prepared in accordance with the requirements set out in Article 964 of the Swiss Code of Obligations (CO) and the Ordinance on Climate Disclosures. This report therefore provides an account of sustainability issues in accordance with Art. 964b CO (environmental concerns, including climate concerns, social concerns, employee concerns, respect for human rights and combating corruption).

The Sustainability Report is structured according to the material topics identified in Swissgrid's materiality analysis. For transparent reporting purposes, Swissgrid reports in accordance with the standards of the Global Reporting Initiative (GRI), the recommendations of the Task Force on Climate-Related Financial Disclosures (TCFD) and the Ordinance on Due Diligence and Transparency in relation to Minerals and Metals from Conflict-Affected Areas and Child Labour (DDTrO). Swissgrid does not import or process any conflict minerals or metals as defined in the law and the ordinance and is therefore exempt from the reporting obligations regarding minerals and metals. Reporting on the exercise of due diligence with regard to child labour is integrated into the «Sustainable supply chain» section.

Swissgrid made methodological changes to selected key figures in the 2024 financial year to improve the quality and accuracy of the data collected. Where relevant and possible, the key figures for 2022 and 2023 were adjusted accordingly to ensure comparability. Any material adjustments (i.e. with an impact of +/- 5%) are shown for the relevant key figures in the corresponding sections of the Sustainability Report. The most important methodological change affecting the key figures for the financial years 2022 to 2024 concerns the limitation of Scope 2 and Scope 3 emissions in relation to the emission factors used for electricity, heating and cooling consumption. As a result of this adjustment, the greenhouse gas emissions reported for the 2022 and 2023 financial years have been reduced for Scope 2 emissions and increased for Scope 3 emissions.

Swissgrid has tasked PricewaterhouseCoopers with conducting a limited assurance audit of selected key figures in accordance with the «Independent Auditor's Report» in order to ensure the reliability of the most important key figures on greenhouse gas emissions, energy consumption, occupational safety, employees and diversity. The externally audited key figures are labelled accordingly in the report (✓) and relate to the 2024 financial year.

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Planet

This section covers the topics of climate change, biodiversity and environmental protection.

Climate change

Climate change is one of the most pressing challenges of our time and affects not only global ecosystems, but also security of supply and the resilience of the energy sector. As the link between production and consumption, Swissgrid is not only affected by the effects of climate change and emits greenhouse gases itself, but is also actively shaping the paradigm shift towards a climate-friendly and resilient electricity supply. By ensuring stable and efficient grid operations, the resilience of its grid infrastructure and the needs-based expansion of the grid, Swissgrid is making a decisive contribution to a climate-friendly energy transformation. This commitment is not only one of the priorities of Swissgrid's sustainability strategy, but also part of its social, legal and business responsibility.

GRI 3-3

Ambition and goals

Swissgrid is committed to reducing greenhouse gas (GHG) emissions along its value chain in line with Switzerland's net-zero target. At the beginning of 2025, Swissgrid therefore set itself the goal of reducing its direct and indirect GHG emissions (Scope 1 and Scope 2) by 50% by 2030 and by 90% by 2040 compared to the base year 2023. Swissgrid will offset the remaining emissions through the use of negative emission technologies so that the net-zero target can be achieved from 2040. In addition, Swissgrid plans to define a reduction target for its Scope 3 GHG emissions in the 2025 financial year in line with scientific and legal

requirements. This will be based on the Scope 3 emissions reported in this section, which were comprehensively recorded for the first time for the 2024 financial year.

GRI 3-3

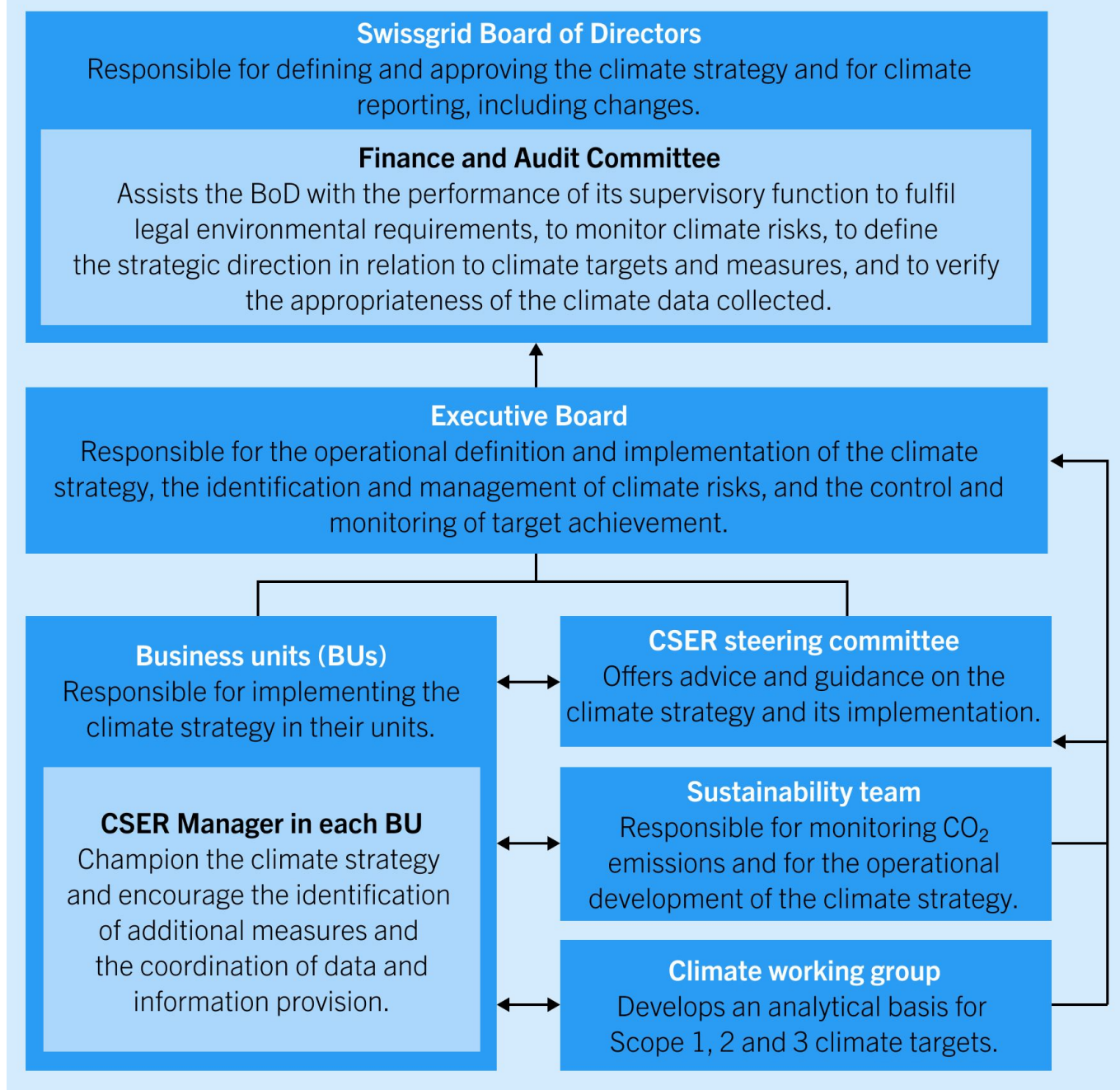
Management approach

Swissgrid's climate reporting complies with the provisions of the Swiss Code of Obligations and implements the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD).

Governance of climate-related risks and opportunities (TCFD Governance)

The responsibilities and supervisory functions with regard to climate-related impacts, risks and opportunities (climate issues), including the implementation of Swissgrid's climate strategy, are integrated into the corporate governance structure and shown in the following diagram.

Governance structure in the climate sector



Climate strategy: the Board of Directors is responsible for the long-term climate strategy and objectives, while the Executive Board is responsible for the operational design and implementation of the strategy. The Executive Board also ensures the regular verification of target achievement and the effectiveness of Swissgrid's climate strategy. Any necessary adjustments and control measures are developed by the cross-divisional CSER Committee for the attention of the Executive Board and are approved by the Board of Directors as required.

Risk and opportunity management: the Board of Directors is responsible for risk management and defines the risk strategy. Risk management is implemented by the CEO, who appoints a Head of ERM responsible for the management system. All relevant risks, including climate-related impacts, risks and opportunities, are assessed every six months as part of the ERM process and annually as part of the dual materiality analysis and submitted to the Executive Board and the Board of Directors for approval.

Strategic, operational and financial planning: all proposals to the Board of Directors and the Executive Board must include a qualitative assessment of the positive and/or negative impacts on the climate and the environment. This concerns investments, projects or operational implementation strategies. The costs of mitigation and adaptation measures must be submitted to the Executive Board and the Board of Directors for approval as part of the regular budget process. Swissgrid does not currently use an internal CO₂ price.

GRI 201-2

Procedure for identifying the impacts, risks and opportunities of climate change

Risk management system (TCFD Risk Management)

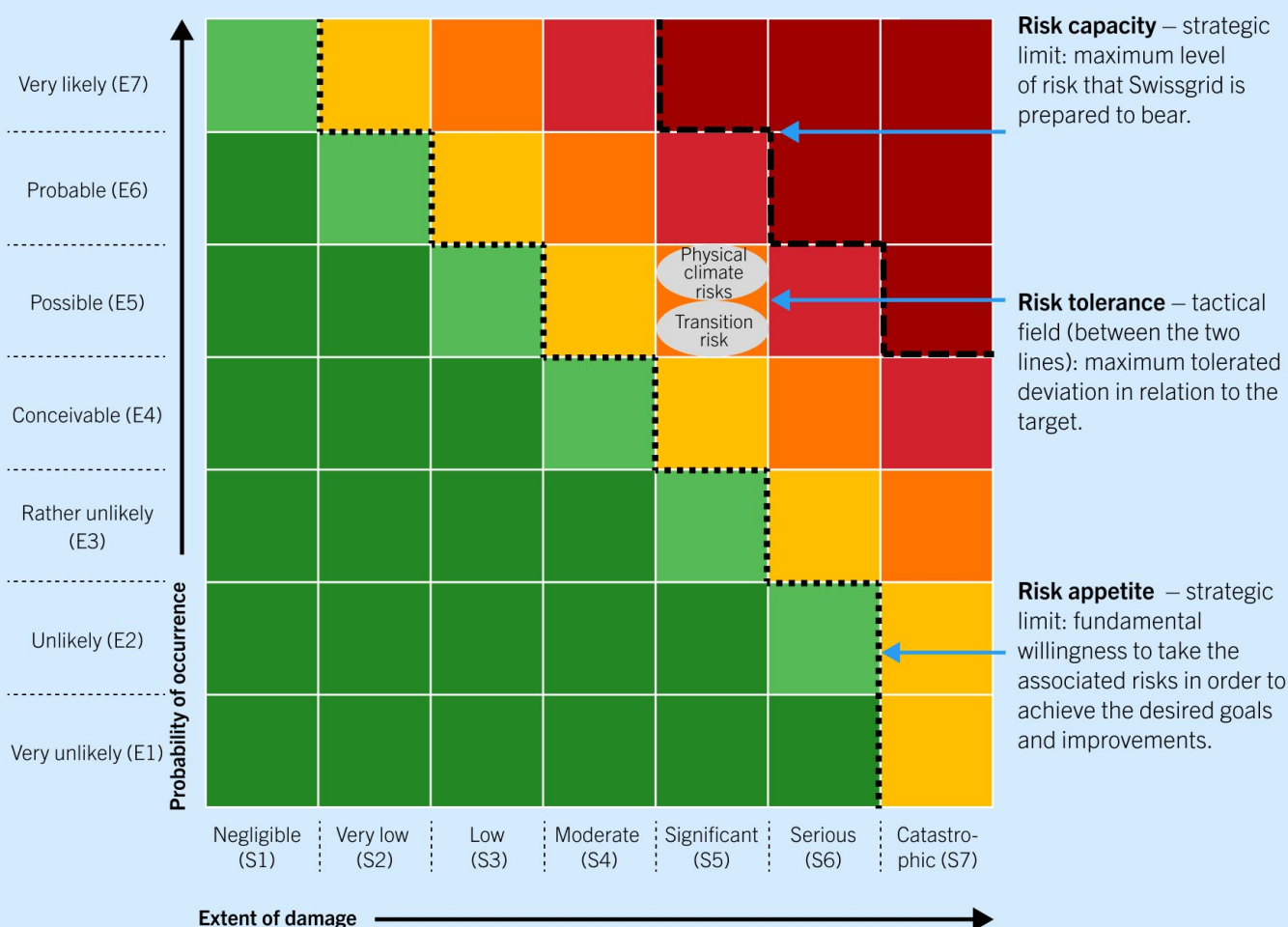
Swissgrid identifies and assesses climate issues as part of its ERM system and in the dual materiality analysis. The results are submitted in consolidated form to the FPA and the Board of Directors for discussion and approval.

Process for identifying and assessing climate-related risks in the ERM system: climate-related risks are identified and assessed from the company's perspective as part of the ERM process. Identified climate-related risks are assigned to a «risk owner», who is responsible for analysing the risk in detail. This includes describing the causes and consequences, assessing the impact on the corporate objectives (e.g. influence of climate-related natural hazards on security of supply), allocating the risk to one of the nine ERM categories (see «Sustainability at Swissgrid») and assessing the risk in terms of probability of occurrence and extent of damage. The assessment is carried out on the basis of one or more risk scenarios using standardised seven-point assessment scales. Overall, risk assessment is used to prioritise risks on the basis of their financial, strategic or operational materiality. As far as climate-related risks are concerned, the focus is primarily on the operational impact on the efficiency of the transmission grid.

The risk assessment also forms the basis for determining the risk strategy in line with the company's risk appetite. As part of the ERM process, the strategy and the associated risk management measures are defined by the risk owner, assigned to a «measure owner» and, depending on the assessment of the risk, include acceptance of the risk or measures to minimise, pass on or avoid the risk. The measure owner helps the risk owner to implement the risk strategy, which is reviewed and managed across different divisions as part of the ERM process.

The diagram «Aggregated climate-related risks according to the ERM process» shows the categorisation of the physical climate risks and transition risks that were identified and assessed as part of the company-wide ERM process in the 2024 financial year. The highest-rated risk is presented in each case: for physical climate risks, this is «damage to the grid infrastructure due to natural hazard events», which is categorised as a «high» business risk due to the considerable extent of damage and its potential probability of occurrence. The highest-rated transition risk is the «threat to system operation between forecast and real time» recorded in the ERM process, which is also categorised as a «high» business risk. This means that both climate-related risks are within the tactical risk tolerance range and are mitigated by means of suitable measures (see the «Overview of climate risks» and «Overview of transition risks» tables).

Aggregated climate-related risks according to ERM methodology



Climate-related impacts and risks according to the materiality analysis: in addition to climate-related risks from Swissgrid's perspective, the climate-related impacts on people and the environment are identified and assessed as part of the dual materiality analysis. To this end, Swissgrid considers the effects along its impact chain, which include the company's direct and indirect GHG emissions (Scope 1 to 3), as well as the socio-economic effects of power outages caused by weather- and climate-related natural hazards. Swissgrid assesses the materiality of climate issues according to the following procedure:

- Identification and classification of climate-related risks (positive or negative, potential or actual).
- Categorisation of the timeframe of climate-related impacts.
- Definition of risk scenarios.
- Assessment of the impact (inside-out) according to its extent, scope, irreversibility and probability of occurrence on the basis of a five-point scale. To assess the extent of the impact, Swissgrid relies on the RCP scenarios (RCP 2.6, 4.5, 6.0 and 8.5) of the Intergovernmental Panel on Climate Change for categorising the risk of climate and weather-related power outages. Whether global warming remains above or below 2°C plays a decisive role in assessing the risk of damage to infrastructure due to climate-related natural hazards. As part of the materiality analysis, Swissgrid used RCP scenario 4.5, i.e. global warming above 2°C, as the main scenario for determining the external impact.
- Assessment of the materiality of climate risks to Swissgrid (outside-in) on the basis of the highest climate-related ERM risk.
- Assessment of climate-related opportunities for Swissgrid (outside-in) according to opportunity scenarios and the ERM methodology.

Asset-specific risk assessment: in the 2024 financial year, Swissgrid carried out an asset-specific risk assessment of all its routes as part of its asset performance management. To do so, the company calculated a Risk Criticality Index (RCI) for around 12,000 electricity pylons, taking three aspects into account:

- Criticality of the route, influenced by the relevance of the lines running along the route.
- Potential hazards emanating from the pylon in relation to people, infrastructure, transport routes and location.
- Hazard potential acting on the pylons with regard to climate and weather-related risks.

The risk assessment of climate and weather-related risks takes into account ice load, avalanches, permafrost, rockfall, landslides, flooding and wind exposure. The calculation of climate-related risks is based on national and cantonal hazard maps and/or models by federal research institutions that include a risk-specific hazard assessment (e.g. frequency, hazard levels, loads, exposure, etc.) and takes place per pylon.

Identified climate-related risks and opportunities (TCFD Strategy)

On the basis of the risk management system described above, Swissgrid has identified various physical climate risks and transition risks, and defined corresponding measures. The time horizon of the risks considered includes short-term risks and opportunities whose effects materialise within one year, medium-term risks with a time horizon of 2027 to 2030, and long-term risks until 2040.

Physical climate risks: the transmission grid is already affected by a large number of physical climate risks. These include the increase in extreme weather events, the thawing of the permafrost and the increase in rockfalls and landslides, which have a significant impact on the structural requirements and protection measures to ensure the resilience of Swissgrid's infrastructure. The following table gives an overview of the physical climate risks and their operational and financial impact on Swissgrid.

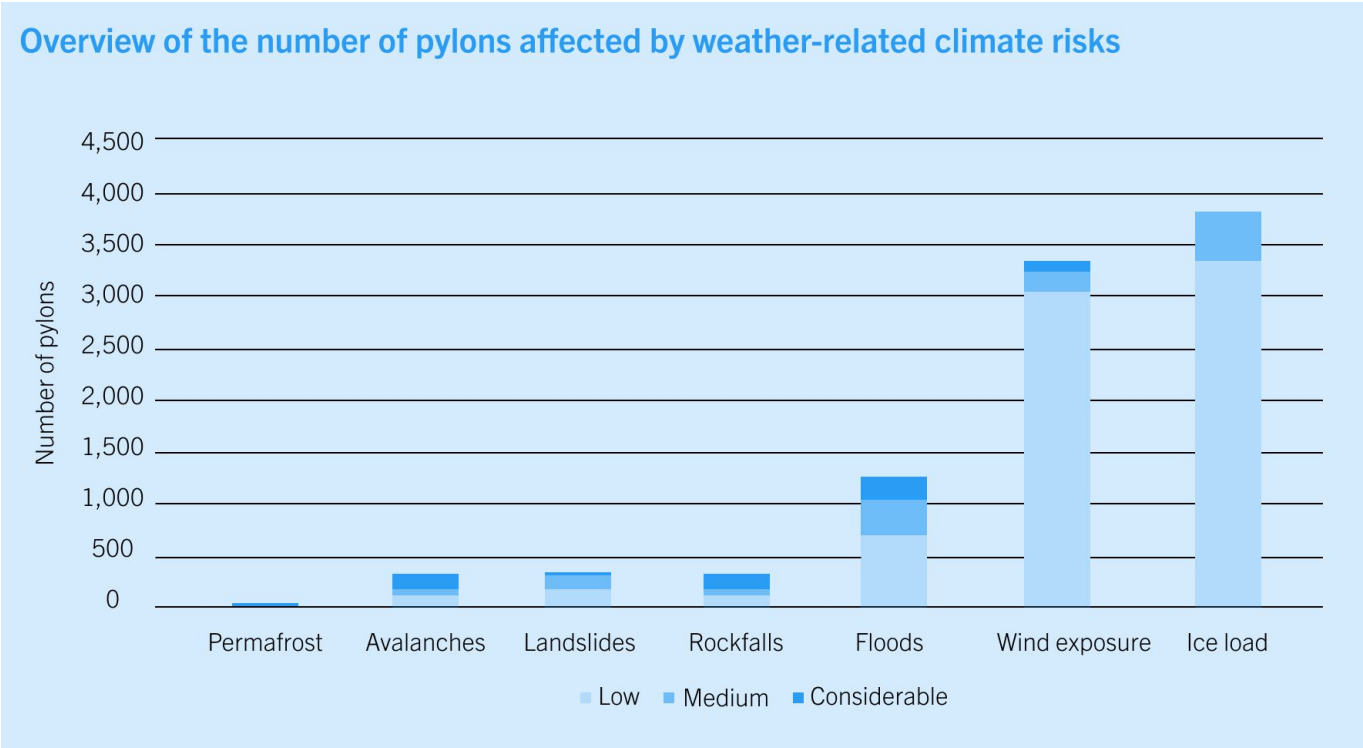
Due to Swissgrid's regulated business model, the costs of necessary climate-related adaptation measures to ensure resilient grid operation do not have a significant impact on Swissgrid's operating profit. Although the company has qualitatively identified the potential and actual financial impacts of climate-related risks and opportunities, and integrated them into the regular budget process, it has not quantified them in monetary terms separately from other operating and capital costs. Consequently, there is not yet a data basis for making a comprehensive and solid assessment of the financial impact of climate change on Swissgrid.

Overview of physical climate risks

		Risk	Potential operational impact	Adaptation measures	Timeframe	Classification	Potential financial impact
Physical climate risks	Acute	Increase in extreme weather events (e.g. storms and floods)	Damage to infrastructure with a potential impact on security of supply due to unexpected power outages	- Regular hazard assessment by means of updated hazard maps - Established processes in the area of business continuity management - Monitoring of lines, including the recording of weather data and its impact on the infrastructure	Short term	High	Additional costs due to repairs, reinforcements, relocations and/or maintenance work
	Chronic	Thawing of the permafrost	Influence on the stability of the 12 pylons located in permafrost areas	- Targeted monitoring of pylon stability due to changes in permafrost soils - Inclusion of risk in new planning	Long term	High	Additional costs due to relocations
		Increase in forest fires due to greater dryness	Threat to infrastructure from forest fires	- Targeted vegetation management - Specific use of operating facilities with increased fire resistance requirements	Short term	Moderate	Operating costs
		More rockfalls, landslides or avalanches	Damage to infrastructure (pylons and substations) with a potential impact on security of supply	- Regular hazard assessment by means of updated hazard maps - Selective erection of protective structures - Targeted real-time monitoring of pylons in landslide areas - Cooperation with cantons and municipalities for stabilisation measures (e.g. Brienzer landslide slope relief tunnel)	Short to long term	High	Additional costs due to repairs, reinforcements, relocations and/or maintenance work
		Change in snow and ice loads and shift in snow limits	Change in the static engineering requirements for overhead lines and structures in alpine areas; impact on the accessibility of installations in winter	Verifications and, if necessary, adaptation of static engineering requirements during the planning stage	Medium to long term	Moderate	Operating costs

Extent of the hazard potential due to physical climate risks: the evaluation of the climate and weather-

related hazard potential on routes as part of the RCI has shown that in terms of the number of pylons affected (i.e. extent of the risk), the greatest hazard potential (i.e. medium to considerable risk) is due to flooding (5% of pylons), ice load (4% of pylons), wind exposure (2.5% of pylons) and avalanches (2% of pylons).



Transition risks: in addition to physical climate risks, Swissgrid is also affected by the challenges of the transition to a climate-friendly future and the decarbonisation of the energy system. Examples of challenges include stricter legal requirements in the climate sector, technological and regulatory restrictions (e.g. the availability of alternative insulating gases at the highest voltage level or the use of photovoltaic plants to cover the company’s own requirements), the increasing dependence of electricity generation on supply, and the rising expectations of society, politicians and investors in terms of climate protection. The transition risks and their operational and financial impact on Swissgrid are summarised in the following table. Their financial impact has not yet been quantified due to a lack of data.

Overview of transition risks

		Risk	Potential operational impact	Measures	Timeframe	Classification	Potential financial impact
Transition risks	Legal and political	New regulatory requirements for the use of sulphur hexafluoride (SF6)	Impact on the planning and maintenance of operating facilities with SF6, including risks in terms of the availability of alternatives, cost increases and time horizons	• Measures to reduce SF6 emissions (see the «Measures» section) • Roadmap for the use of alternative insulating gases	Medium and long term	Moderate	Higher procurement costs
		Narrow regulatory scope for reducing GHG emissions	Effects on the type of emission reduction measures that can be used by Swissgrid	• Regular dialogue with the regulatory authority • Regular review of Swissgrid's climate strategy	Short to long term	Moderate	Opportunity costs associated with a lack of alternatives and the financial impact of no tariff reimbursement
		Lengthy procedures for the approval of grid projects	Slow expansion and modernisation of the grid with potential delays in the integration of renewable energy sources Economic and social impact of delays and potential impact on Swissgrid's reputation	• Transparent information and involvement of affected population groups • Commitment to more efficient approval processes to speed up grid renovation and expansion	Short to long term	High	Additional operational and legal expenses and costs due to delays
	Technological	Increasingly volatile electricity generation due to the growing proportion of renewable energies	More demanding planning and greater vulnerability / higher risks for grid stability	• Strategic measures related to «Grid transfer capacity» • Long-term planning for several years, «Strategic Grid 2040», and implementation of Swissgrid's voltage maintenance concept • Improvement of forecasts, including corresponding data processing and decision-making bases (e.g. via mathematical algorithms) • Closer cooperation and coordination with grid operators in Europe and Switzerland	Short to long term	Moderate	Costs of additional measures for voltage maintenance, investments in innovation and digitalisation, operational planning costs
		Market and reputation	Increasing requirements in terms of sustainability reporting and target-setting on issues including the climate	Further development of sustainability reporting standards (Swiss, EU and ESG rating agencies) placing increasing demands on Swissgrid's data and information management	• Optimisation of data collection processes • External and internal «health checks» on the maturity of non-financial reporting • Development of an internal control system for non-financial reporting • Exchange of experience and cooperation with industry partners and affected companies	Short to medium term	Low

Climate-related risks along the supply chain: climate-related risks also affect Swissgrid's supply chain. These include, in particular:

- Interruptions, delays or price fluctuations in the delivery of critical grid components due to extreme natural events and/or transition risks.
- Influence of climate-related hazards on the safety of service providers carrying out construction and repair work.
- Availability of climate-friendly alternatives.
- Reputational risks due to insufficient ambition or compliance of direct suppliers with climate-related regulations and expectations.

Swissgrid uses risk-based measures to mitigate material risks along its value chain as part of its sustainable procurement approach (see the [«Sustainable supply chain»](#) section).

Climate-related opportunities: the climate-related transition to a decarbonised supply of electricity is opening up new fields of action for Swissgrid. These include the industry-wide need to invest in grid-related innovation and digitalisation, the increasing availability and use of new and sustainable technologies for grid stability (see the [«Energy transition»](#) section) and the decarbonisation of electricity generation in Switzerland and Europe. This last trend has an impact on the ambition and feasibility of Swissgrid's climate targets: due to the exogenous decarbonisation of the transported electricity mix, Swissgrid's internal modelling shows that emissions caused by active power losses could be reduced by up to 58% by 2040.

Overview of climate-related opportunities

	Opportunity	Potential operational impact	Measures	Timeframe	Classification	Potential financial impact
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Climate-related opportunities	Resource and energy efficiency	Availability of products and buildings with higher energy efficiency	Lower active power losses and own consumption at plants and bases	• Energy efficiency criteria for the procurement of products	Short to medium term	Moderate	Lower energy costs Lower costs for compensation of active power losses
		Availability of recycling over the product life cycle	Higher proportion of recycled raw materials used for procured products and disposal	• Recycling criteria for the procurement and disposal of products	Short to medium term	Moderate	Lower procurement and disposal costs
	Products and services	Availability of innovative products and flexible solutions for grid stability	Additional tools for balancing out fluctuations in the transmission grid	• «Equigy» crowd balancing platform (www.equigy.com) • Innovative measures and projects for the digitalisation and automation of grid operations • PV4Balancing project	Medium to long-term	High	Positive impact on the costs of control energy
		Availability of products with a lower CO ₂ footprint	Positive impact on Swissgrid's greenhouse gas emissions (all scopes)	• CO ₂ criteria in the procurement of products • Performance of life cycle assessments when selecting variants at the planning stage	Medium to long-term	High	Potentially lower costs for the reduction of CO ₂ emissions
	Market	Decarbonisation of electricity generation	Positive impact on Swissgrid's Scope 2 greenhouse gas emissions and on active power losses in particular	• Swissgrid's climate strategy, taking into account decarbonisation scenarios	Medium to long-term	High	Lower costs of the compensation of active power losses with certified CO ₂ -free electricity

Climate scenarios and their inclusion in strategic, operational and financial planning (TCFD Strategy)

Swissgrid takes into account the identified impacts, risks and opportunities of climate change in its strategic, financial and operational planning from a short, medium and long-term perspective (see tables showing the overview of physical climate risks, transition risks and opportunities). The costs of climate-related mitigation and adaptation measures are submitted to the Executive Board and the Board of Directors as part of the regular budget process and grid planning. Swissgrid has also carried out a qualitative climate scenario analysis for the period up to 2040 to strategically classify and align its adaptation measures.

Scenario 1: net-zero target pathway (1.5°C – 2°C pathway)

Scenario assumption: the energy transition is implemented in line with the net-zero target pathway and the Federal Government's Energy Strategy 2050. According to the «ZERO Basis» scenario of Energy Perspectives 2050+, the proportion of electricity generation from new renewable energy sources will increase to 36% by 2040, while the proportion of nuclear power plants will fall to zero from 2034. Global GHG emissions are therefore reduced in line with the net-zero target pathway in this scenario.

Inclusion of the scenario in strategic and operational planning: grid-related support of the Federal Government's Energy Strategy 2050 and the efficient management of the effects of the energy transition on grid stability are core elements of Swissgrid's Strategy 2027. The company is meeting the challenges of the increasing volatility of electricity being fed in to the grid from renewable energies and unplanned electricity flows by making long-term investments in improved system controllability and resilience. In particular, these include investments in the digitalisation of system operation, as well as in the development and integration of new platforms for the use of decentralised flexibility. Additional information can be found in the «[Energy transition](#)» section. Swissgrid's long-term grid development plan, the «[Strategic Grid 2040](#)», represents another core strategic element in support of the energy transition in Switzerland. The «[Strategic Grid 2040](#)» identifies and plans the optimisation and enhancement requirements of the Swiss transmission grid for the target year 2040. Swissgrid completed the planning of the Strategic Grid in the summer of 2024 and submitted the final report, including the planned grid construction projects, to ElCom for a review of its relevance and appropriateness.

Inclusion of the scenario in variable remuneration: achieving the climate targets in line with the net-zero target pathway is one of the strategic priorities of Swissgrid's CSER commitment. The importance of climate issues is also reflected in the variable remuneration of the Executive Board and Swissgrid's specialist and management staff. As part of its corporate objectives for 2024, Swissgrid defined climate-related milestones with a direct impact on the amount of the variable salary component – which apply regardless of the climate scenario. They include key performance indicators on the reduction of GHG emissions, the application of criteria for the sustainable procurement of products, and the development of sourcing strategies such as the reduction of GHG emissions and the approval of the climate strategy for Scope 1 and Scope 2 GHG emissions as part of Swissgrid's CSER concept. In total, these three key performance indicators account for 10% of the variable remuneration of the Executive Board and management staff that is linked to the corporate objectives.

The Board of Directors' fees are fixed, irrespective of corporate targets.

Scenario 2: Moderate decarbonisation and greater need for adaptation (2°C – 3°C pathway)

Scenario assumption: the transition to renewable energies and the reduction of global GHG emissions is progressing more slowly in this scenario than in the net-zero target pathway (scenario 1). In the medium term (from 2030), this will lead to an increasing need for adaptation to ensure the resilience of the grid infrastructure due to an increase in climate-related natural hazards (see climate risk overview tables).

Inclusion of the scenario in asset management and monitoring: Swissgrid already plans, builds and operates its grid infrastructure on the basis of risk-based asset performance data. The risk factors taken into account include weather and climate-related natural hazards. In particular, potential natural hazards are considered during planning and operation on the basis of the Swiss hazard maps and the risk assessment of installations. Based on the results, real-time monitoring instruments are used and/or adaptation measures (e.g. protective structures) are introduced. In addition to geological measurement data, another example of an innovative real-time monitoring tool is «Pylonian», which uses Internet of Things (IoT) sensors on electricity pylons to constantly measure changes in potentially dangerous environmental influences over the entire life cycle of the electricity pylon. Additional information can be found on the Swissgrid website under [Pylonian: monitoring electricity pylons using IoT sensors](#). As shown in the «Overview of physical climate risks» table, the increase in climate-related natural hazards in this scenario leads to additional costs due to repairs, enhancements, relocations and/or maintenance work to ensure the resilience of the grid infrastructure.

Scenario 3: High emissions and exponential need for adaptation (> 3°C pathway)

Scenario assumption: the global concentration of greenhouse gases continues to rise in this scenario, leading to global warming well above 2°C (corresponds to IPCC scenarios RCP 6.0 and RCP 8.5). As a result, there is a significant increase in extreme weather events.

Inclusion of the scenario in the risk assessment: Swissgrid considers scenario 3 as part of the risk scenario assessment in its materiality analysis. According to the analysis, the risk of recurring potential impacts on grid-related security of supply is rising due to the increase in extreme weather events. More investment would then be needed in adaptation measures in the planning and operation of the grid infrastructure in order to ensure the long-term resilience of the transmission grid. Swissgrid plans to enhance the climate scenario analysis, including a change in accordance with IPCC scenarios RCP 6.0 and 8.5, over the next two to three years.

Greenhouse gas balance, measures and key figures (TCFD Metrics and Targets)

Swissgrid has set itself the goal of reducing its GHG emissions along the value chain in line with the net-zero target. This is based on a regular, comprehensive survey of GHG emissions, supplemented by specific key figures for the most important emission sources.

GRI 305-1, 305-2, 305-3, 305-4, 305-5

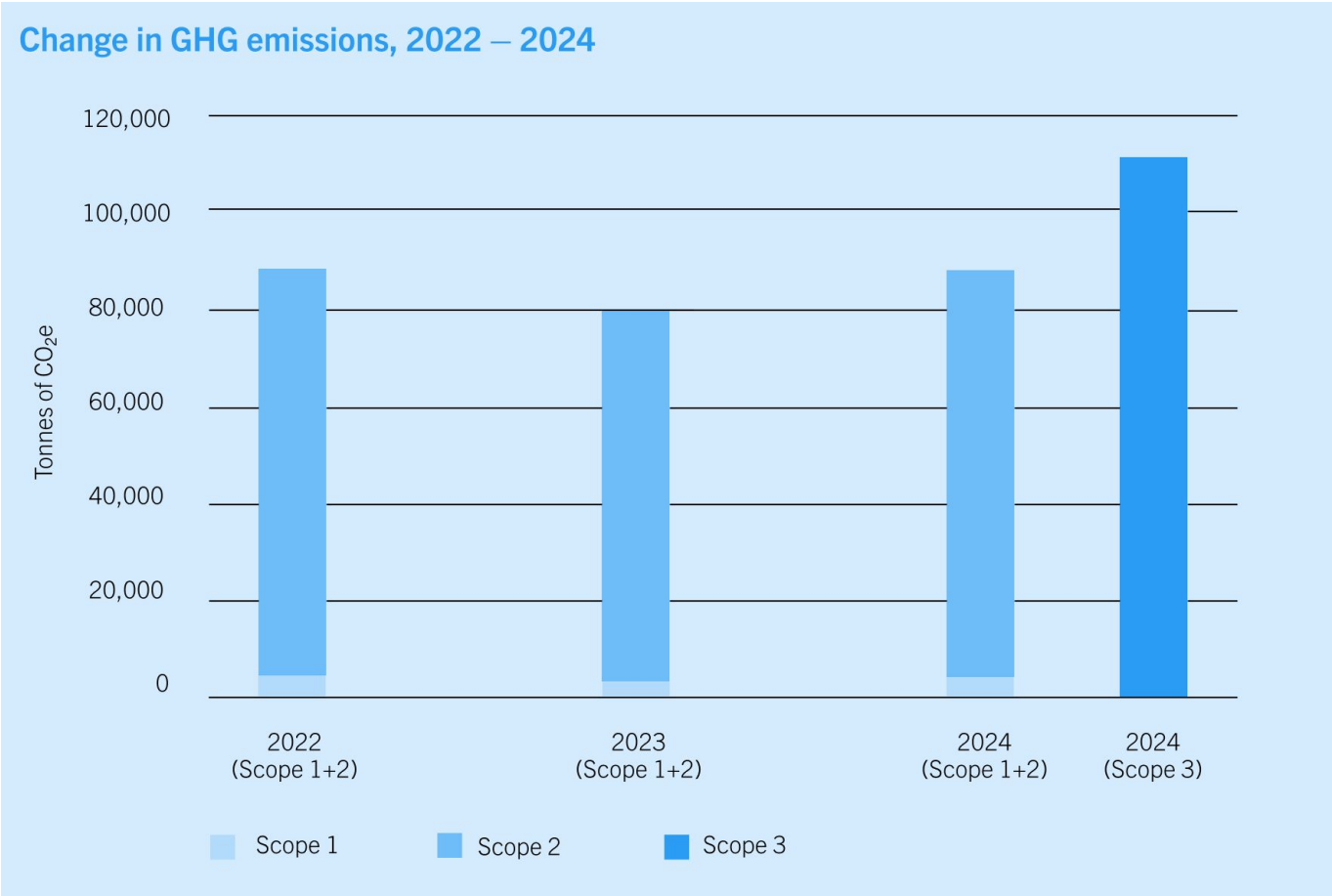
Greenhouse gas balance and emission intensity

Swissgrid collects figures on its direct and indirect GHG emissions in accordance with the requirements of the Greenhouse Gas Protocol (GHG Protocol) and has had this data audited by an external auditor since 2023 (see the «[Independent Auditor's Report](#)» in the Notes). Swissgrid is reporting Scope 2 emissions according to the location-based and market-based approach for the first time for the 2024 financial year, and has carried out a comprehensive survey of its indirect Scope 3 GHG emissions. The explanations and key figures in this

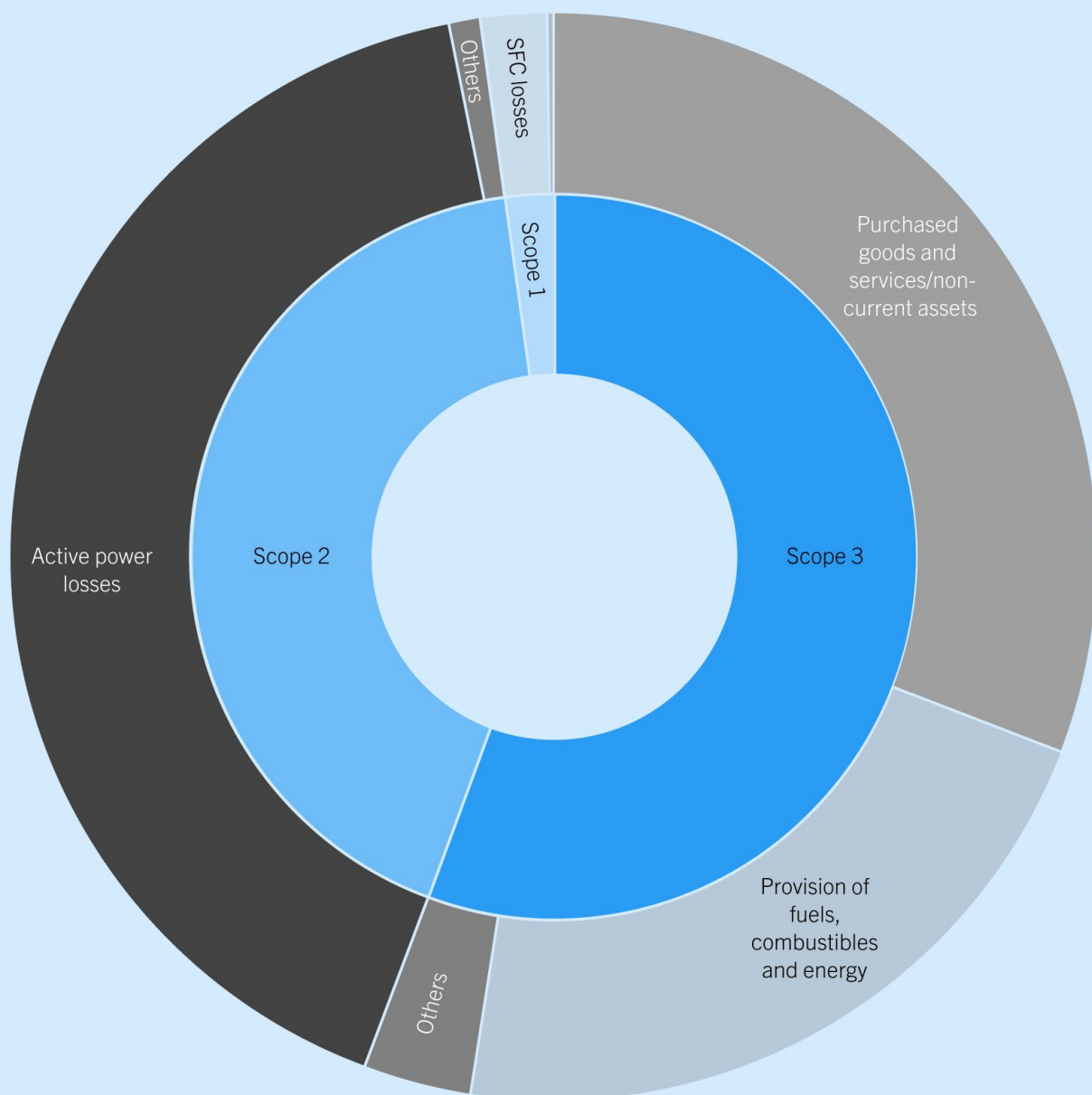
section are based on the location-based approach, unless they are explicitly indicated to be market-based.

A total of 197,453 tonnes of CO₂ equivalents (CO₂e) were generated across all three scopes in the 2024 financial year. Swissgrid’s direct and indirect Scope 1 and Scope 2 emissions accounted for 87,576 tonnes of CO₂e. This corresponds to 44% of GHG emissions across all three scopes. The largest sources of emissions in Scope 1 and Scope 2 are active power losses (93%), followed by sulphur hexafluoride (SF6) emissions (4.4%) and energy consumption in substations (1.6%). These three emission sources are responsible for 99% of Swissgrid’s total Scope 1 and Scope 2 GHG emissions. The indirect Scope 3 emissions in Swissgrid’s upstream and downstream value chain accounted for 56% of GHG emissions across all three scopes. Scope 3 is dominated by emissions from purchased (capital) goods and services (55%), followed by fuel and energy supply activities (39%). These two categories are responsible for 94% of total Scope 3 emissions.

In the 2024 financial year, Swissgrid’s Scope 1 and Scope 2 emissions increased by 8.5% in relation to the previous year. This was mainly driven by the 7.1% rise in Scope 2 emissions from active power losses and the increase in direct Scope 1 emissions due to the 46% higher GHG emissions from SF6 losses. The reasons are explained in more detail below.



Overview of emission sources in 2024



2024 greenhouse gas footprint in tonnes of CO ₂ e (✓ PwC Assurance)	2024	2023*	2022*	Change (2024 vs. 2023)
Total Scope 1 and 2	87,576	80,690	87,276	↗
Scope 1 (direct emissions)¹	4,264	2,999	4,011	↗
SF6 losses ²	3,865	2,643	3,688	↗
Fuel consumption of the Swissgrid vehicle fleet (diesel/petrol) ³	352	319*	302*	↗
Fuel consumption of emergency power systems (diesel) ⁴	47	37*	21*	↗
Scope 2 «location-based» (indirect emissions)¹	83,312	77,691	83,266	↗

2024 greenhouse gas footprint in tonnes of CO ₂ e (✓ PwC Assurance)	2024	2023*	2022*	Change (2024 vs. 2023)
Active power losses from energy transmission ⁵	81,477	76,061*	81' 643*	↗
Electricity consumption of substations ^{5,6}	1425	1,253*	1,253*	↗
Electricity consumption of locations, bases and data centres ⁵	357	325*	314*	↗
Electricity consumption of the Swissgrid communication network ^{5,7}	16	16*	16*	→
Electricity consumption of the Swissgrid vehicle fleet ⁵	1.3	1.1*	n/a	↗
District heating of locations and bases ^{8,9}	29	29*	30*	→
District cooling of locations and bases ^{8,10}	6	7*	10*	↘
Scope 2 «market-based» (indirect emissions)¹	82,785			
Active power losses from energy transmission ⁵	81,477	—	—	—
Electricity consumption of substations ^{6,11}	1,110	—	—	—
Electricity consumption of locations, bases and data centres ¹¹	162	—	—	—
Electricity consumption of the Swissgrid communication network ^{5,7}	16	—	—	—
Electricity consumption of the Swissgrid vehicle fleet ⁵	1.3	—	—	—
District heating of locations and bases ^{9,12}	17	—	—	—
District cooling of locations and bases ^{10,12}	0.18	—	—	—
Total Scope 3 (indirect emissions from the supply chain)¹³	109,877			
Goods and services / non-current assets ¹⁴	60,904	—	—	—
Activities for the provision of fuels, combustibles and energy ¹⁵	42,666	39,777*	42,593*	↗
Business trips ¹⁶	258	257*	221*	↗
Processing of waste and recyclable materials ¹⁷	1,114	—	—	—
Employee commuting ¹⁸	756	—	—	—
Investments ¹⁹	4,178	—	—	—
Total Scope 1, 2 and 3 (Scope 2 location-based)	197,453	—	—	—
Total Scope 1, 2 and 3 (Scope 2 market-based)	196,925	—	—	—

¹ Emissions are consolidated based on operational control in accordance with financial reporting.

² Calculated with a Global Warming Potential (GWP) of 23,500 according to IPCC.

³ Emission factors according to mobitool 3.0.

⁴ Emission factor according to DETEC life cycle assessment data DQRv2:202.

⁵ Emission factor according to DETEC life cycle assessment data DQRv2:2022 with a distinction between Scope 2 and Scope 3 emissions.

⁶ Emissions based on measured electricity consumption values, where available, and supplemented by extrapolations based on the technical design data of the substations.

⁷ Calculated per site using an efficiency calculation, taking into account the number and type of devices.

⁸ Emission factor according to DETEC life cycle assessment data DQRv2:2022 with a distinction between Scope 2 and Scope 3 emissions.

⁹ Based on measurements for the Aarau site and supplemented by extrapolations for other sites, taking into account the size and average heat requirements for office space in Switzerland according to the Applied Energy Journal (2021), Volume 288.

¹⁰ Based on measurements for the Aarau site; for the other sites, the cooling requirements are covered by the electricity consumption and reported accordingly.

¹¹ Emission factor according to DETEC life cycle assessment data DQRv2:2022 and treeze (2021): the life cycle inventories of Swiss electricity mixes 2018.

¹² Emission factor based on specific supplier data and DETEC life cycle assessment data DQRv2:2022 with a distinction between Scope 2 and Scope 3 emissions.

¹³ Emissions from upstream transport and distribution (Scope 3 category 4 according to the GHG Protocol) are included in the goods and services / capital goods category. Scope 3 categories 8 – 14 according to the GHG Protocol are not relevant for Swissgrid.

¹⁴ Emissions based on life cycle assessment data for grid components (where available) and expenditure-based emission factors according to the CEDA database.

¹⁵ Emission factors according to mobitool 3.0 and DETEC life cycle assessment data DQRv2:2022 with a distinction between Scope 2 and Scope 3 emissions.

¹⁶ Emission factors according to mobitool 3.0.

¹⁷ Emission factors according to DETEC life cycle assessment data DQRv2:2022. Office waste is not included as it is not material.

¹⁸ Emission factors according to mobitool 3.0 and commuter mobility statistics from the Federal Statistical Office.

¹⁹ Emission factors according to the CEDA database.

* Restatements of the years 2022 and 2023: in order to ensure comparability of the key figures, Swissgrid has recalculated the figures marked with an (*) for the financial years 2022 and 2023 to take into account changes to methodology. The most significant change concerns the differentiation of Scope 2 and Scope 3 emissions for the emission factors used for electricity, heating and cooling requirements under Scope 2 in accordance with the GHG Protocol. This has led to a reduction in the Scope 2 emissions reported in previous years, as the upstream proportion of GHG emissions must be recognised under Scope 3. Further adjustments were made to the values from 2022 and 2023 for the emission factors used for mobility, fuels and combustibles in order to ensure the consistency of the data sources and the data collection approach. These adjustments have led to a slight reduction in the Scope 1 emissions reported for fuels and an increase in GHG emissions for combustibles, as well as a rise in the Scope 3 emissions reported for business travel.

The increase in Scope 1 and Scope 2 emissions is also reflected in Swissgrid's emission intensity figures: in the 2024 financial year, Scope 1 and Scope 2 GHG emissions per MWh of transported electricity amounted to

1.26 kg CO₂e/ MWh. This corresponds to an increase of 16% due to the higher GHG emissions and a simultaneous reduction of 6% in the volume of electricity transported. In relation to Swissgrid's net turnover, the emission intensity decreased by 27% due to the growth in net turnover (see the «Financial Report»).

Emission intensity (✓ PwC Assurance)	2024	2023	2022
Scope 1 and Scope 2 emissions in relation to the volume of electricity transported (kg CO ₂ e/MWh) ¹	1.26	1.09	1.17
Scope 1, Scope 2 and Scope 3 emissions in relation to the volume of electricity transported (kg CO ₂ e/MWh) ¹	2.84	–	–
Scope 1 and Scope 2 emissions in relation to revenue (tCO ₂ e/CHF million) ¹	48	66.2	88.4
Scope 1, Scope 2 and Scope 3 emissions in relation to revenue (tCO ₂ e/CHF million) ¹	108	–	–

¹ Scope 2 emissions according to the location-based approach are used for the key figures on emission intensity.

GRI 2-25, 3-3, 305-4, 305-5

Emission reduction measures and key figures

Scope 1 GHG emissions

The most important source of Swissgrid's direct GHG emissions is SF₆ losses, which account for 91% of Scope 1 emissions. SF₆ is a highly insulating gas that is used by Swissgrid in switchgears in the extra-high-voltage range. The disadvantage of this insulating gas is that it has a high greenhouse gas potential: according to the IPCC, SF₆ is approx. 23,500 times more harmful than the greenhouse gas CO₂ and has a lifespan of 3,200 years in the earth's atmosphere. For applications above 220 kV, the availability of tested and marketable alternatives with SF₆-free insulating gas is currently very limited. Despite preventive measures, the risk of SF₆ escaping cannot be completely ruled out. Leaks in small quantities can occur due to sealing technology and gas handling.

Measures to reduce SF₆ emissions in the 2024 financial year

Preventive measures

In order to reduce SF₆ losses, Swissgrid monitors all gas rooms using leakage sensors, defines internal guidelines and trains the relevant persons to handle SF₆ gas. In addition, Swissgrid defines maximum permissible SF₆ loss requirements for the procurement of relevant operating equipment and ensures the proper refilling, recycling and disposal of SF₆ gas.

Cooperation with partners

Swissgrid is a member of the [SF6 industry solution](#). The aim is to limit aggregated SF6 emissions from the manufacture and operation of high- and medium-voltage installations to less than one tonne per year. This corresponds to a theoretical loss rate of 0.13% based on the amount of SF6 installed by Swissgrid. Swissgrid is also working closely with other European transmission system operators to drive forward the piloting and introduction of alternative insulating gases in switchgears at the highest voltage level.

Long-term reduction in the total amount of SF6

Since the beginning of the 2024 financial year, air-insulated switchgears have been given priority over gas-insulated switchgears in new grid construction projects wherever this is operationally possible. Swissgrid has also prepared a roadmap for the introduction of operating facilities with alternative insulating gases to ensure their efficient utilisation and availability.

Key figures on SF6 emissions

Swissgrid checks the effectiveness of the measures implemented by regularly collecting SF6 data from the substations. In the 2024 financial year, the company emitted a total of 164 kg of SF6, which corresponds to an increase in SF6 losses of 46%. This marked increase is mainly attributable to an accident in a switchgear system with SF6 leakage and increased losses from isolated leaking operating facilities, which could not be replaced promptly due to long delivery times, but could not be taken out of operation either. Despite the increase in SF6 losses, Swissgrid's SF6 loss rate of 0.07% is still well below the theoretical target value of the SF6 industry solution of < 0.13%.

SF6 key figures for Swissgrid (✓ PwC Assurance)	2024	2023	2022
Total amount of SF6 (kg)	230,952	232,420*	230,905*
SF6 losses (kg)	164	112	157
SF6 loss rate (%)	0.07	0.05	0.07
Greenhouse gas emissions due to SF6 losses in relation to the volume of electricity transported (kg CO ₂ e/MWh)	0.06	0.04	0.05

* The total SF6 amount for the years 2022 and 2023 was updated to include SF6 reserves to ensure data completeness and consistency.

Scope 2 GHG emissions

Active power losses, which totalled 985 GWh in the 2024 financial year, are by far the largest source of Scope 2 GHG emissions. This corresponds to an increase of 7% compared to the previous year. Active power losses in the high-voltage grid occur during electricity transmission due to the electrical resistance of the lines and losses in grid components. The level of active power losses is heavily dependent on the volume of energy transported, including transits through Switzerland. Other factors also play a role, such as the voltage and current, the design of the electrical conductor, the distance covered by the energy transported, the grid topology and climatic conditions. Swissgrid currently purchases grey electricity for 100% of its active power

losses, i.e. the required volume of electricity is procured on a non-discriminatory basis without quality requirements or guarantees of origin via tenders and the spot market. The average emission factor of the consumer electricity mix in Switzerland (including imports, less exports) is used to calculate the associated CO₂ emissions.

In the 2024 financial year, GHG emissions caused by active power losses increased by 7% to 81,477 tonnes of CO₂e in proportion to the volume of active power losses. Overall, compensation of active power losses was responsible for around 98% of Scope 2 emissions and around 93% of Swissgrid's aggregated Scope 1 and Scope 2 emissions. Electricity consumption in substations is the second most important indirect source of emissions, accounting for 1.7% of Scope 2 emissions.

Measures to reduce Scope 2 emissions

Reduction of active power losses

As part of the Strategic Grid, Swissgrid has planned a series of measures, some of which have already been implemented or initiated, which have a positive impact on the containment of active power losses. In particular, they include increasing the voltage of lines to 380 kV. As the active power losses of overhead lines are generally lower at higher voltage levels, there is an important synergy between climate measures and the planning of the Strategic Grid. Applying energy efficiency criteria in the procurement of critical grid components is another important measure which can have a significant influence on the level of electric system losses. For this reason, Swissgrid assesses the loss rate of the components offered when procuring new transformers and overhead lines and defines maximum consumption values for devices for the remote control of grid systems (Substation Automation System, SAS) (see the [«Sustainable supply chain»](#) section).

Reduction of electricity and energy consumption at substations, sites and bases

The main building in Aarau is [Minergie-P](#) certified, obtains its electricity from 100% hydropower and utilises waste heat from the waste incineration plant via the district heating system. Demand is also covered by 100% hydropower in 15 other substations and locations with the highest electricity consumption. Swissgrid also further expanded its equipment with LED lighting and electric charging stations for vehicles in the 2024 financial year and takes energy efficiency criteria into account when procuring system components and IT products.

Key figures on active power losses

The effectiveness of measures is monitored indirectly via the daily measurement of active power losses. Indirectly, because key aspects relating to the GHG emissions of active power losses are beyond Swissgrid's control – i.e. the volume of electricity demanded, the corresponding production mix and demand curves, as well as the import, export and transit of electricity.

Although Swissgrid transported less electricity in the 2024 financial year, active power losses and the associated GHG emissions increased by 7%. As active power losses depend on a variety of factors, the reasons for this increase cannot be clearly identified.

Active power losses at Swissgrid (✓ PwC Assurance)	2024	2023	2022
Active power losses (GWh)	985	919	987
Active power loss rate (%)	1.41	1.24	1.33
Greenhouse gas emissions from active power losses in relation to the volume of electricity transported (kg CO ₂ e/MWh)	1.17	1.03	1.10

GRI 302-1, 302-2, 302-3, 302-4

Key figures on energy and electricity consumption

Swissgrid records its energy and electricity consumption as well as key figures relating to energy intensity across all three scopes in order to obtain a comprehensive picture of the most important sources of consumption and potential savings. In the 2024 financial year, Swissgrid covered more than 99% of its energy losses and energy requirements with electricity. Compared to the previous year, Swissgrid's energy consumption increased by 7%, driven by higher active power losses.

Overview of energy consumption in MWh (✓ PwC Assurance)	2024	2023*	2022*	Change (2023 vs. 2024)
Total primary energy consumption within the organisation	2,655,435	2,476,175	2,653,641	↗
Total fuel consumption within the organisation from non-renewable resources	1,563	1399	1,271	↗
Fuel consumption of the Swissgrid vehicle fleet, diesel ¹	1,357	1,223*	1,147*	↗
Fuel consumption of the Swissgrid vehicle fleet, petrol ²	36	40*	48*	↘
Fuel consumption of emergency power systems (diesel) ¹	171	136*	76*	↗
Total fuel consumption within the organisation from renewable resources	0	0	0	→
Electricity consumption within the organisation (primary energy)³	2,653,298	2,474,198	2,651,680	↗
Active power losses from energy transmission	2,595,964	2,423,384	2,601,226	↗
Electricity consumption of substations ⁴	45,403	39,928	39,928	↗
Electricity consumption of locations, bases and data centres	11,383	10,344	10,010	↗
Electricity consumption of the Swissgrid communication network ⁵	508	508	515	→
Electricity consumption of the Swissgrid vehicle fleet ⁶	40	34	n/a	↗
Thermal energy consumption within the organisation (primary energy)³	371	369	379	↗
District heating ⁷	371	369	379	↗
Cooling energy consumption within the organisation (primary energy)³	203	209	311	↘
District cooling ⁸	203	209	311	↘

Overview of energy consumption in MWh (✓ PwC Assurance)	2024	2023*	2022*	Change (2023 vs. 2024)
Total primary energy consumption outside the organisation	10,541	n/a	n/a	
Preparation of fuels and combustibles ^{1,2}	1,592	1,426*	1,296*	
Waste ⁹	4,163	n/a	n/a	
Business trips ¹⁰	1,026	1,030*	876*	
Employee commuting ¹¹	3,760	n/a	n/a	
Total primary energy consumption (within and outside the organisation)	2,665,976	n/a	n/a	

¹ Diesel conversion factor according to mobitool 3.0.

² Petrol conversion factor according to mobitool 3.0.

³ Conversion factor for primary energy based on DETEC life cycle assessment data DQRv2:2022.

⁴ Electricity consumption based on measured values, where available, and supplemented by extrapolations based on the technical design data of the substations.

⁵ Electricity consumption is determined for each location using a power calculation, taking into account the number and type of devices.

⁶ Electricity consumption of electric vehicles according to mobitool 3.0.

⁷ Based on measurements for the Aarau site and supplemented by extrapolations for other sites based on their size and the average heat requirements for offices in Switzerland according to the Applied Energy Journal (2021), Volume 288.

⁸ Based on measurements for the Aarau site; for the other sites, the cooling requirements are covered by the electricity consumption.

⁹ Energy factors according to DETEC life cycle assessment data DQRv2:2022.

¹⁰ Based on energy factors from mobitool 3.0.

¹¹ Energy factors from mobitool and commuter mobility statistics from the Federal Statistical Office.

* Restatements for the years 2022 and 2023: in order to ensure comparability of the key figures, Swissgrid has recalculated the figures marked with an (*) for the financial years 2022 and 2023 to take into account changes to methodology. This affects the key figures for business trips due to an adjustment of the energy factor used from person-km to vehicle-km and the underlying data source (mobitool). For reasons of consistency, the same data source (mobitool) is now used for all data relating to fuels. Due to these adjustments, the energy consumption reported in connection with business travel has increased for 2022 and 2023.

Primary energy consumption within Swissgrid increased by 14% compared to the volume of electricity transported in the 2024 financial year and fell slightly by 1.32% in relation to the number of employees.

Key figures on energy intensity (✓ PwC Assurance)	2024	2023	2022
Primary energy consumption within the organisation per volume of electricity transported [MWh consumed/ MWh transported] ¹	0.038	0.033	0.036
Primary energy consumption within the organisation per employee (MWh/employee)	2,865	2,903	3,605

¹ Includes fuel, electricity, heating and cooling.

Scope 3 GHG emissions

Swissgrid carried out the comprehensive collection and reporting of its Scope 3 emissions for the first time for the 2024 financial year. Scope 3 emissions represent 56% of total emissions and therefore have a significant impact on Swissgrid's CO₂ footprint along its value chain. A combination of life cycle assessments and an expenditure-based approach is used to calculate GHG emissions.

Emissions from goods, services and capital goods procured represent 55% of total Scope 3 emissions, making them the largest source of Swissgrid's indirect emissions arising in the company's upstream and downstream value chain. In the 2024 financial year, the main drivers of GHG emissions in this category were conductors (15%), switchgears (4.3%), cables (2.5%) and pylons (1.8%). The second most important category comprises energy, fuel and fuel treatment, which accounts for around 39% of Scope 3 emissions. Upstream emissions in connection with active power losses play the largest role within this category.

Measures to reduce Scope 3 emissions in the financial year

When procuring goods and services, Swissgrid systematically takes into account ecological criteria that help to reduce the CO₂ footprint of the components. These criteria are described in the [«Sustainable supply chain»](#) section. In October 2024, the Executive Board commissioned the cross-divisional Climate working group to develop Scope 3 climate targets and a specific roadmap of measures in the 2025 financial year. This should be done in accordance with the legal obligations, taking into account the scientific requirements according to SBTi and the benchmark with comparable companies in Switzerland and Europe.

Scope 3 emission intensity (✓ PwC Assurance)	2024
Scope 3 emissions per km of conductors procured (t CO ₂ e/km of conductors)	156
Scope 3 emissions per material input flow (t CO ₂ /t material)	0.94

GRI 3-3

Outlook: climate targets and transition plan (TCFD Strategy)

Net-zero emissions target by 2040

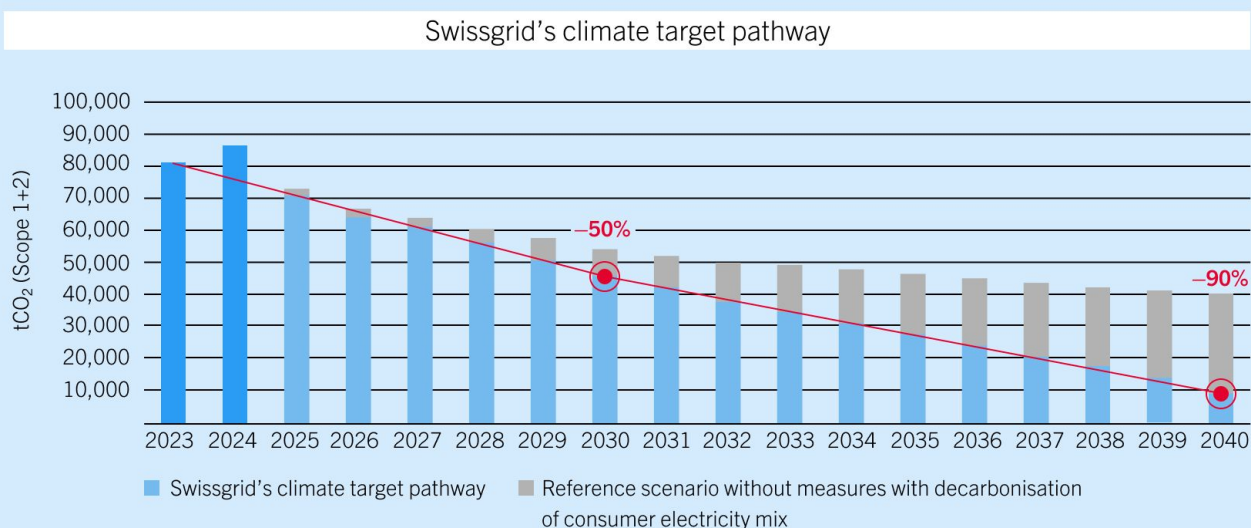
In line with the scientifically required goal of limiting the global temperature increase to 1.5°C compared to pre-industrial levels and in accordance with the legal requirements in force in Switzerland, the Swissgrid Board of Directors approved the following medium and long-term climate targets for Swissgrid's Scope 1 and Scope 2 GHG emissions in January 2025:

- 50% reduction target by 2030 (compared to 2023) with a linear reduction path of –6% per year from 2025

to 2030.

- 90% reduction target by 2040 (compared to 2023) with a linear reduction path of –4% per year from 2031 to 2040.
- From 2040, the remaining GHG emissions will be offset by the use of certified negative emission technologies in order to achieve the net-zero target.

Swissgrid's climate target: net zero by 2040 for Scope 1 and Scope 2 emissions



Roadmap of measures for achieving the set targets

The roadmap of measures for achieving the set targets focuses on Swissgrid's three main emission categories because together they are responsible for more than 98% of the combined Scope 1 and Scope 2 emissions for the reference year 2023.

Measures concerning active power losses

The roadmap for reducing and decarbonising active power losses builds on measures that have already been initiated, and combines them with new measures. Measures include technical measures to reduce active power losses by implementing the planned voltage increases in accordance with the Strategic Grid and the systematic application of efficiency criteria when procuring critical grid components. In addition, Swissgrid will cover a linearly increasing share of compensation of active power losses with certified low CO₂ electricity instead of grey electricity from 2025. Swissgrid is guided by the Swiss production mix in accordance with the criterion of non-discrimination for ancillary services.

Measures concerning SF6 emissions

The roadmap for reducing SF6 losses in switchgears takes advantage of the existing synergy, consisting of measures that have already been initiated and implemented as part of the strategic planning and operation of grid installations. Measures include the prevention of SF6 losses and the long-term reduction of SF6 thanks to the use of air-insulated switchgears and the gradual introduction of alternative insulating gases.

Measures concerning own consumption in substations

The measures adopted to reduce electricity consumption in substations include technical unbundling and the installation of smart measuring instruments, the use of efficient system components and the decarbonisation of electricity consumption with certified electricity from renewable energies, including hydropower.

Analysing the effectiveness of the timetable: Swissgrid's predicted emission trends and the effectiveness analysis take into account various emission and cost scenarios, different developments of exogenous influencing factors (e.g. sensitivity analysis of the speed and scope of decarbonisation of the production mix in Switzerland and abroad), as well as possible risk factors that could influence the implementation, efficiency or effectiveness of the planned measures. These include regulatory and technological risks, market and reputational risks and financial risks.

Implementation and monitoring: operational implementation takes place as part of the multi-year planning for grid projects and procurement planning in connection with active power losses. The climate target pathway will be managed as a top KPI within the strategic corporate objectives from 2025 onwards and will influence the variable remuneration of the Executive Board and Swissgrid's specialist and management staff. Regular, centrally managed monitoring and a comprehensive review of the climate strategy are carried out to check implementation progress. The monitoring and audit results and any modifications are submitted to the Board of Directors for discussion and/or decision.

Environmental protection

Protecting the environment is an integral part of Swissgrid's mission. As a sustainable company, Swissgrid not only ensures the safe and reliable operation of the transmission grid, but also takes responsibility for protecting the environment in which its grid infrastructure is embedded. This is both an integral part of Swissgrid's mission and legal responsibility and an essential basis for ensuring the social acceptance of grid projects.

GRI 3-3

Ambition and goals

Swissgrid has set itself the goal of systematically taking environmental interests into account in its activities and minimising potentially harmful effects on land, air and water. To this end, Swissgrid operates a comprehensive environmental management system and endeavours to continuously reduce wastewater, noise and other emissions.

GRI 3-3

Management approach

Swissgrid's integrated management system

In the 2024 reporting year, the Executive Board commissioned the Sustainability team with the management and further development of the environmental management system at Swissgrid. This organisational change is intended to further the integration and harnessing of synergies from the management systems for sustainability, environmental protection and occupational safety. The existing Health, Safety and Environment management system (HSE for short) continues to form the framework for the targeted implementation and continuous improvement of environmental protection at Swissgrid, compliance with legal requirements and the establishment of environmental protection within the corporate culture. The management system is based on the PDCA management model («plan-do-check-act») to support the continuous improvement of HSE performance.

The integrated management system is certified in accordance with the ISO 14001 and 45001 standards by an accredited auditing body. In the 2024 financial year, a monitoring audit was carried out in accordance with the standardised three-year audit cycle. The existing HSE management system was confirmed to be suitable, appropriate and effective. No deviations were identified in the area of environmental protection, and the external auditors underlined the extensive HSE expertise of the Swissgrid employees involved, some of whom have been with the company for many years.

Identified impacts, risks and opportunities

Swissgrid identifies and assesses the impacts and risks of its business activities on the environment as part of the dual materiality analysis and the environmental impact analysis. The environmental impact analysis determines the effects of operational activities and processes on materials/raw materials, water, energy consumption, emissions, soil, non-ionising radiation, waste, noise, nature conservation and the landscape, as well as other risk factors. On this basis, the materiality analysis assesses identified environmental impacts according to their extent, scope, the irreversibility of the impact and the probability of occurrence. In addition, Swissgrid conducts regular stakeholder analyses as part of its HSE management system and materiality analysis in order to determine and take into account the expectations and requirements of stakeholder groups. The materiality analysis and environmental impact analysis are updated annually. The results are incorporated into Swissgrid's ERM system and form the basis for deriving and implementing risk-based measures as part of the HSE management review.

The potential and actual environmental risks and impacts identified include the disturbance and damage of protected habitats, negative impacts on fauna and flora due to the construction and operation of installations, the release of environmentally hazardous substances, and environmental damage due to the incorrect handling of contaminated material. Furthermore, the visual impact on the landscape, electromagnetic fields and noise are among the most frequent concerns of the population with regard to extra-high-voltage lines. Swissgrid proactively addresses environmental risks, impacts and concerns with the aim of either eliminating them by taking adequate measures or minimising them to an acceptable residual risk.

GRI 2-25, 2-26, 413-1, 413-2

Systematic inclusion of environmental protection in grid construction projects

The potential and actual effects on the environment can be considerable, especially in grid construction projects. Swissgrid systematically considers and minimises the environmental impact when planning and implementing grid infrastructure. Compliance with environmental protection laws and ordinances is a matter of course for the company.

Compliance with environmental regulations is verified by the Federal Office for the Environment (FOEN) when approving grid construction projects. The process consists of several phases in which the concerns of various interest groups are also taken into account (see the «Stakeholder engagement» section). When major projects are being carried out, for instance to build a new extra-high-voltage line, all the phases must be complied with; when implementing smaller projects, relevant environmental protection measures are implemented in accordance with the legal requirements.

Overview of the inclusion of environmental aspects in the approval of grid construction projects

Phase	Activities	Inclusion of environmental aspects
Needs analysis	• Future grid development requirements are analysed as part of the planning for several years, known as the Strategic Grid. The planning of the Strategic Grid is based on the scenario framework for Switzerland, which is drawn up by the Swiss Federal Office of Energy (SFOE).	• The future grid is planned according to the NOVA principle (grid optimisation before grid enhancement before grid expansion). This means that the impact of grid expansion on the environment and the landscape can be kept to a minimum. • The environmental and landscape impact is optimised by bundling infrastructure such as transmission lines with national roads and railway lines. One example of this is the second tube of the Gotthard Road Tunnel, where the line from Göschenen to Airolo, which is approximately 18 km long, is combined with a national road.
Preparation	• In this phase of each relevant grid construction project, Swissgrid prepares various underground cable and overhead line corridors for the areas in which lines are planned.	• A preliminary <u>environmental impact assessment</u> is carried out taking into account the following impacts: air, noise and vibrations, non-ionising radiation, groundwater and springs, surface water and aquatic systems, drainage, soil, contaminated sites, waste, environmentally hazardous substances, environmentally hazardous organisms (neophytes), disturbances, forests, flora, fauna and habitats, landscape and townscape (incl. light emissions), cultural assets and archaeology.
Inclusion in the federal Transmission Lines sectoral plan (SÜL)	• Swissgrid submits the application for the SÜL procedure. This is the federal government's overarching planning and coordination tool for the expansion and new construction of transmission lines. At the end of this phase, the Federal Council determines the corridor for the line and the technology (overhead line, underground cable or a combination of the two).	• A support group appointed by the SFOE with representatives of the Swiss government, cantons, environmental protection organisations and Swissgrid discusses the proposed options and submits a recommendation. • The Swiss government's evaluation scheme for the transmission lines plays a key role in this respect. Regional development, the environment and economic viability are factors which are taken into consideration in addition to technical aspects. • A public consultation and participation procedure allows affected parties to make their views known (consultation and participation procedure in accordance with Art. 15 ff. of the Electricity Act).
Construction project	• Swissgrid prepares the specific construction project within the planning corridor defined by the Federal Council.	• In this phase, Swissgrid appoints a project advisory council for selected projects in order to integrate the concerns of the population and other stakeholder groups into project planning. • Swissgrid also carries out a detailed environmental impact assessment, taking into account the above-mentioned aspects. The environmental impact assessment is part of the planning application that Swissgrid submits for the planning approval procedure.
Planning approval procedure	• Swissgrid submits an application for planning permission to the relevant authorities. At the end of this phase, the authorities – either the Federal Inspectorate for Heavy Current Installations (ESTI) or the SFOE – issue Swissgrid with the planning approval decision, including the construction permit, and may impose additional conditions that must be included in the project planning.	• In this phase, the public presentation of the project takes place, if required by the procedural regulations, including the environmental impact assessment. • Directly affected parties, environmental organisations, cantons and municipalities have the opportunity to lodge objections and to appeal before the courts. • Approval is granted by the federal authorities and usually includes additional environmental requirements for the construction of the line.

Construction

- Once the legally binding construction permit has been granted, the construction work can begin. Swissgrid procures the necessary supplies and services in accordance with the provisions of public procurement law.
- Swissgrid procures materials and services taking environmental aspects into account (see the [«Sustainable supply chain»](#) section).
- Swissgrid implements ecological protection, restoration and/or alternative measures in accordance with the environmental impact report and the official requirements.
- Construction projects are subject to external environmental construction/ecological supervision and/or soil science construction supervision – on behalf of Swissgrid – in order to ensure the implementation of protective measures and environmental compliance.

GRI 2-26, 3-3, 416-1

Measures and key figures

Environmental protection measures

In accordance with the statutory national and cantonal requirements, Swissgrid consistently and systematically implements measures to avoid, minimise and compensate for the environmental impact of the planning, construction, maintenance and servicing of grid projects. Specific examples of environmental protection measures for ongoing grid projects are described on the Swissgrid website ([Project overview](#)).

Preventive measures

Swissgrid attaches great importance to preventive protective measures in an effort to avoid negative effects on the environment. These include:

- The systematic inclusion of environmental impacts in the preliminary project phase in order to compare the ecological impacts of different variants and to consider this aspect as part of the decision-making process. This is done by conducting an environmental conflict analysis, the results of which are incorporated into the subsequent project phases. Furthermore, since the beginning of 2024, Swissgrid has been using a data-based tool called «Pathfinder», which takes ecological and regional planning aspects into account in addition to technical criteria to help select optimal line routes (see the box on data-based route planning with «Pathfinder»).
- The implementation of measures to prevent the release of environmentally hazardous pollutants (e.g. insulating oils). This includes the implementation of safety precautions and monitoring systems to detect and prevent potential leaks or accidents at an early stage, as well as the establishment of special storage and disposal areas for contaminated materials to prevent improper handling.
- Building up capacity and expanding the expertise of local site managers to ensure full implementation of the laws, requirements and specific measures, including those relevant to the environment, in all implementation projects.
- Regular training of the relevant employees on the safe handling of hazardous materials and work equipment. In addition, employees and external parties have the opportunity to submit reports, indications and/or suggestions for improvement regarding environmental risks via the «RiskTalk» app.
- The implementation of prevention measures during the implementation of approved grid projects and work. Examples include prior vegetation surveys, the planning of material storage areas or construction slopes, the covering of green areas during corrosion protection work and/or strict compliance with regulations for the storage and use of hazardous substances and machinery.

Measures concerning noise emissions

Due to corona discharge, power lines can generate localised noise emissions in the form of crackling or humming, especially in damp weather conditions. In addition, there may be temporary noise pollution during the construction or maintenance of systems. Swissgrid is implementing the following measures to reduce noise emissions while complying with the statutory immission limit of 45 to 55 decibels in residential zones:

- Reduction of the strength of the electric field on the surface of the conductor by optimising the conductor arrangement.
- Inclusion of technical criteria for noise emissions in the procurement of conductors and transformers.
- Structural and operational measures to limit noise emissions (e.g. use of noise-reducing technologies and processes during the operation and maintenance of systems).

Measures concerning electromagnetic fields

Electric and magnetic fields are generated wherever electricity is produced, transported and used. Swissgrid adheres to the strict Swiss limits in this respect. Additional information is available on the Swissgrid website under [Emissions](#). Swissgrid implements technical measures to ensure that electromagnetic fields are kept as low as possible:

- Optimisation of the phase position in the grids in order to minimise electromagnetic fields.
- Implementation of protective measures (e.g. choice of route and pylon locations, height of lines) to minimise the exposure of people and the environment to electromagnetic fields.

Implementation of restoration and alternative measures

If protective measures to avoid negative environmental impacts are not possible, restoration measures are taken. These measures are designed to repair temporary interventions into nature. For example, a meadow that was used for an access track during the construction phase must be restored once the work has been completed. If this is not sufficient, Swissgrid will implement ecological alternative measures as a last resort. These measures ensure that the overall ecological balance of the region is preserved. One example is the reforestation of a comparable forest if permanent clearing is required under a new line.

Environmental supervision

Environmental supervision ensures that environmental issues are managed and monitored during construction projects and helps Swissgrid to guarantee the legally compliant and environmentally compatible implementation of projects. It ensures compliance with environmental laws, regulations, guidelines, instructions and requirements of the planning approval decision. It advises and supports the parties involved, observes and evaluates environmental problems at the construction site and ensures that the project is implemented in a legally compliant manner.

GRI 2-27

Key figures on environmental protection

The effectiveness of protection, restoration and alternative measures is assessed in detail during the approval process. The implementation of measures is also monitored by regular HSE inspections and external environmental construction supervision. Random checks can be carried out by the cantonal authorities once grid projects have been completed. In addition, specific control measurements are carried out, e.g. to ensure compliance with the imission limits for electromagnetic fields and noise, as well as ground measurements to determine pollution levels.

In the 2024 reporting year, there were no significant judgements or monetary fines against Swissgrid for compliance violations in relation to environmental protection. Swissgrid carried out a total of 396 HSE inspections, in the course of which no potential high-risk environmental deviations were identified.

Despite the preventive measures implemented, three incidents with a potentially negative impact on the environment occurred in grid operations during the 2024 financial year due to the leakage of oil in two cases and the loss of SF6 due to an accident in a switchgear in the third case. In all three instances, immediate measures were taken (removal and proper disposal of the contaminated soil, switching off of equipment) and internal investigations were initiated.

Key figures on environmental protection	2024	2023	2022
Significant ¹ violations of environmental protection laws and ordinances (including monetary and non-monetary sanctions)	0	0	0
Fines paid or deferred for significant ¹ environmental violations committed in previous years	0	0	0
Number of HSE inspections carried out	396	357	368
Number of HSE inspections with potential deviations in relation to environmental protection with medium risk	2	0	7
Number of HSE inspections with potential deviations in relation to environmental protection with high risk	0	1	0
Number of events with a potentially negative impact on the environment	3	n/a	n/a

¹ A penalty of CHF 10,000 was defined as the materiality threshold for reporting.

Data-based route planning with «Pathfinder»

Swissgrid uses «Pathfinder» to develop and analyse route variants for new high-voltage lines in the preliminary project phase (SIA 31). «Pathfinder» is a tool that facilitates planning by integrating technical, environmental and regional planning criteria and illustrating their interrelationships (see the illustration, «Fictitious example of route planning with Pathfinder»). Quantitative factors such as life cycle assessments and life cycle costs are calculated automatically. In terms of environmental and biodiversity protection, «Pathfinder» makes these aspects both visible and comparable.

How «Pathfinder» works

«Pathfinder» combines geodata with powerful algorithms to calculate optimal routes:

- **Resistance analysis:** criteria such as topography, protected areas and residential areas are evaluated and shown on a resistance map that highlights the routes that are more or less suitable.
- **Route suggestions:** based on the map, the tool creates specific routes, including pylon locations, thereby enabling precise and transparent planning.

Automatic analysis of costs and environmental impacts

The tool then analyses the costs and environmental impacts:

- **Cost analysis:** calculation of investment and life cycle costs (CAPEX and LLC).
- **Environmental assessment:** consideration of GHG emissions, the landscape, nature conservation areas, biodiversity protection and compatibility with regional planning objectives.

Planning advantages

The results from «Pathfinder» represent a data-based decision-making tool that helps Swissgrid to finalise the entire preliminary project phase and submit a well-founded route proposal.

Fictitious example of route planning with Pathfinder

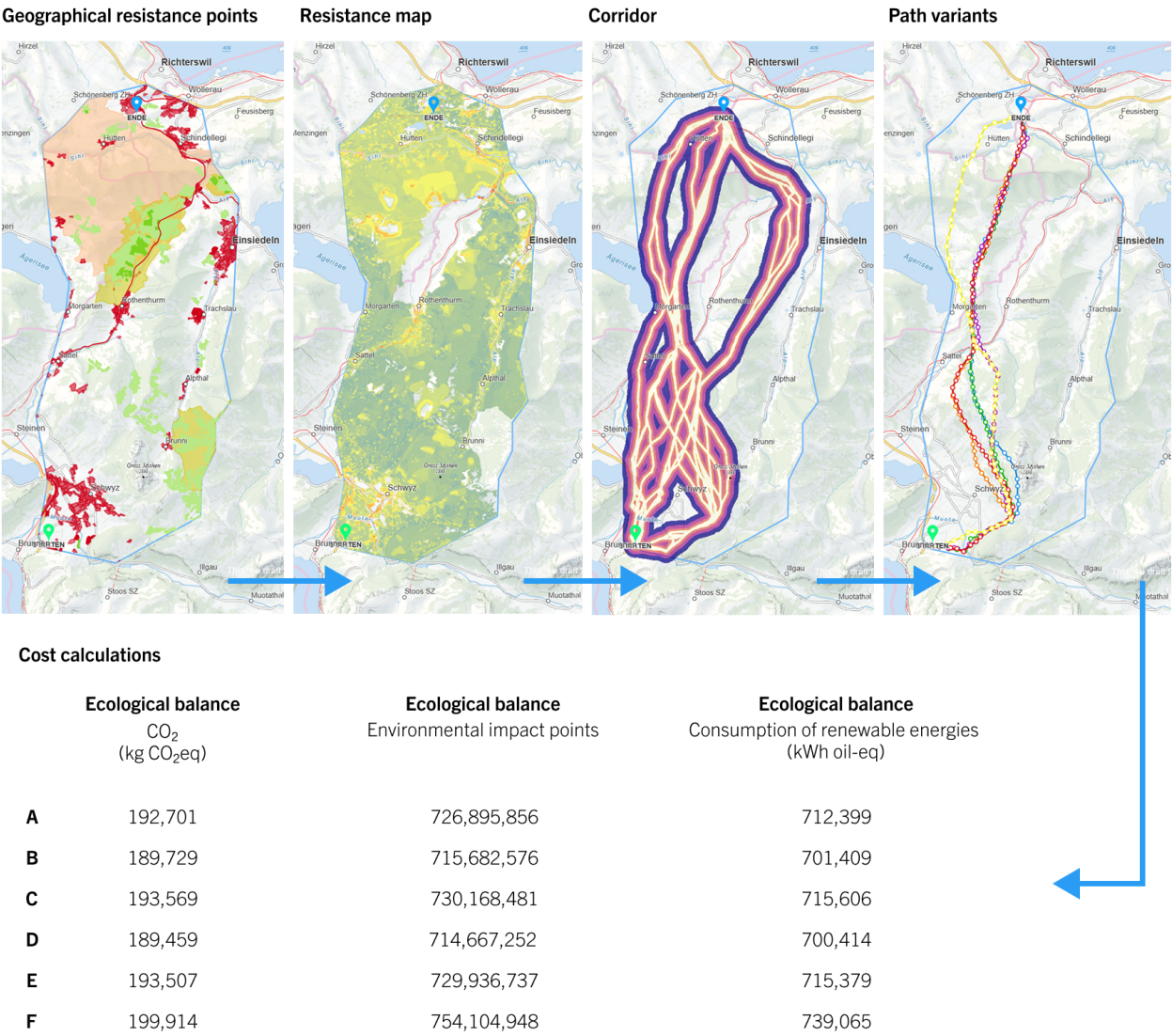


Figure: the five steps of route planning with «Pathfinder», illustrated using a fictitious project: analysis of geographical resistance, creation of a resistance map, definition of suitable corridors, development of route variants and calculation of costs.

Biodiversity

The health and resilience of nature and its biodiversity are important prerequisites for the well-being and resilience of society, the economy and infrastructure. This also applies to Swissgrid's transmission grid: its resilience is better protected against flooding and other extreme weather-related events by an intact ecosystem. As the operator of a national infrastructure, Swissgrid takes its duty to preserve biodiversity seriously as part of its legal and social responsibility.

GRI 3-3

Ambition and goals

Swissgrid is committed to the preservation of biodiversity. As required by law, Swissgrid applies the mitigation hierarchy according to the «no net loss» principle: avoid, minimise, restore and – where unavoidable – compensate.

GRI 3-3

Management approach

GRI 304-2

Identified impacts and risks

Swissgrid identifies and assesses the impacts and risks of its business activities on biodiversity as part of the dual materiality analysis and environmental impact analysis, as described in detail in the «Environmental protection» section. The expected impacts of specific grid projects and compliance with the legal provisions on the protection of the environment and biodiversity are analysed and presented as part of the environmental impact report and the environmental impact statement. As far as biodiversity is concerned, the effects on groundwater and springs, surface waters and aquatic systems, drainage, soil, environmentally harmful organisms (neophytes), forests, flora, fauna and habitats are analysed. The identification and mitigation of impacts on biodiversity are part of Swissgrid's legal obligation for the approval and implementation of a grid project.

The environmental impact analysis classes the planning and construction phase of routes as one of the activities with the highest relevance for biodiversity and ecosystems, in the same way as the maintenance of underground cables. As part of the materiality analysis, the impacts are considered to be largely local or regional, long-term (i.e. longer than five years) and to have a relatively high degree of irreversibility, partly due to the long service life of Swissgrid's infrastructure. However, the specific impacts on biodiversity are highly dependent on the location and the type of grid project or maintenance work, and can affect forests, flora and/or fauna. For example, keeping vegetation levels down can disturb the habitat of plants and animals. The same applies to clearing work near lines which is necessary for their safe operation, or keeping the ground above cable conduit blocks free of tall or deep-rooted trees. In addition, forest aisles for laying underground cabling or installing overhead lines can favour the spread of invasive neophytes, and lines can represent a collision risk for birds. When laying underground cables, the aisles in forests required for safe operation, access roads and additional compensation systems and transition structures leave their mark on the landscape (see «Technologies in the extra-high-voltage grid»).

GRI 304-1

Inventory of grid infrastructure in protected areas

According to the Transmission Lines sectoral plan, protected areas of national or cantonal importance are also taken into account when considering planning areas and analysing corridor variants. It is not always possible to completely avoid a protected area when planning and installing a line. In these cases, Swissgrid examines and implements protection, restoration and/or alternative measures.

In Switzerland, national protected areas cover around 6.2% of the total national territory. Of the extra-high-voltage infrastructure networked throughout Switzerland, a total of 2,806 pylons (24%) and 19 substations (15%) are located in one or more protected areas (without counting any elements twice).

Overview of protected areas and grid infrastructure¹

Protected areas	Type of protected area	Protection status	Pylons	Substations
Federal Inventory of Landscapes and Natural Monuments ²	Landscapes of national importance	National legislation	1,214	7
Moorlands	Landscapes of national importance	National legislation	186	1
Floodplains	Biotopes of national importance	National legislation	114	0
Raised and transitional bogs	Biotopes of national importance	National legislation	5	0
Low-moor bogs	Biotopes of national importance	National legislation	54	0
Amphibian spawning areas	Biotopes of national importance	National legislation	112	0
Dry meadows and pastures	Biotopes of national importance	National legislation	136	0
Emeralds	National protected areas	<u>Berne Convention</u> (international agreement)	208	3
Hunting ban areas	National protected areas	National legislation	346	2
Swiss parks	Landscapes of national importance	National legislation	1,204	10
Water and migratory bird reserves	National protected areas	National legislation	41	1
Biosphere reserves	Landscapes of national importance	<u>UNESCO</u> (international programme)	78	0
Ramsar	National protected areas	<u>Ramsar Convention</u> (international agreement)	52	1
Infrastructure in protected areas of national importance (number) ³			2,806	19
Infrastructure in protected areas of national importance (%) ³			24%	15%
Surface area of railway lines in protected areas of national importance ⁴ (km ²)			22	n/a
Surface area of pylons in protected areas of national importance ⁴ (km ²)			0.4	n/a

¹ To determine the locations of pylons and substations in protected areas, the 11,879 pylon locations and 126 substations were cross-referenced with the GIS data of the protected areas. The data shown includes pylons and substations within landscapes and biotopes of national importance and within national protected areas.

² According to the [Federal Inventory of Landscapes and Natural Monuments \(BLN\)](#).

³ Pylons and substations in the vicinity of protected areas are not included. Each pylon and substation is only counted once.

⁴ The area for routes and pylons was calculated based on average values. Due to the complexity of data collection in relation to substations, which are often shared with other partners and are less standardised, the area was not surveyed.

GRI 304-3

Measures and key figures

The Federal Act on the Protection of Nature and Cultural Heritage follows the zero-balance approach. This means that the ecological value after the intervention should be the same as before. Swissgrid consistently complies with the strict legal requirements for the conservation of biodiversity and implements measures in accordance with the principle of «avoidance – protection – restoration – replacement».

Measures in protected areas

Swissgrid consistently implements the measures for the protection and preservation of biodiversity defined in the approval processes for each grid project and complies with the relevant legal requirements. Examples of measures implemented in the main protection areas include:

Protected area	Measures
Measures in protected areas and preservation of livelihoods	• Choice of line corridors taking into account the consequences for biodiversity (see the box on data-based route planning with «Pathfinder») • Placement of installation areas outside special protection zones, such as biotopes of national importance • Minimisation of impact areas • Protection of existing earthworks, (small) bodies of water (amphibian habitats), hedges, trees and other habitat structures (e.g. dry stone walls and cairns) by marking, blocking off or covering them during construction • Determination of construction times with consideration for hoofed game
Measures to protect forests	• Restoration of temporarily required forest areas • Real replacement or equivalent measures in favour of nature and landscape conservation • Additional alternative measures if clearing affects habitats in need of special protection
Measures to protect flora	• Use of excavator mats to protect vegetation • Protection of rare and protected plants around pylons via coordinated development and construction site planning (including information for all the parties involved) • Professional control of neophytes at pylon sites and substations (see: Control of invasive neophytes). • Green space maintenance concepts at substations

Measures to protect • Bird protection measures (see: [What's all that chirping?](#))

fauna

- Routing to bypass highly sensitive areas (e.g. water and migratory bird reserves)
 - Line markings to reduce the risk of collision
 - Avoidance of disturbance by carrying out work outside breeding and setting phases
 - Partnership with external initiators to install nesting boxes for particularly endangered bird species (e.g. jackdaws or kestrels)
 - Minimisation of impact areas, in particular reptile priority areas
 - Creation of small structures in substations (piles of stones, deadwood, etc.)
 - Creation of new homes for cavity-nesting birds in suitable locations
 - Adaptation of the mowing frequency at substations
 - Promotion of structures at substations made of piles of sand and stones to protect species such as wild bees (see: [Wild bees under tension](#))
-

Route management measures

Route management on existing lines currently includes keeping down the trees under the lines, as regulated in the easements with the landowners, recorded in servitude agreements or ordered during the planning approval procedure. Vegetation does not need to be kept down under all lines, as many of them do not touch or span forest areas.

Swissgrid's internal foresters plan this work along the lines. This ensures that the lines can be operated safely at all times. The vegetation management carried out by Swissgrid's foresters is not only important for security of supply, but can also create ecological added value by encouraging greater biodiversity. One example of this is a Swissgrid pilot project in which the management of the extra-high-voltage line was adapted to keep down vegetation in an area where the Alpine longhorn beetle has found a suitable habitat in deadwood (see: [«New life in deadwood»](#)).

Cooperation with external partners

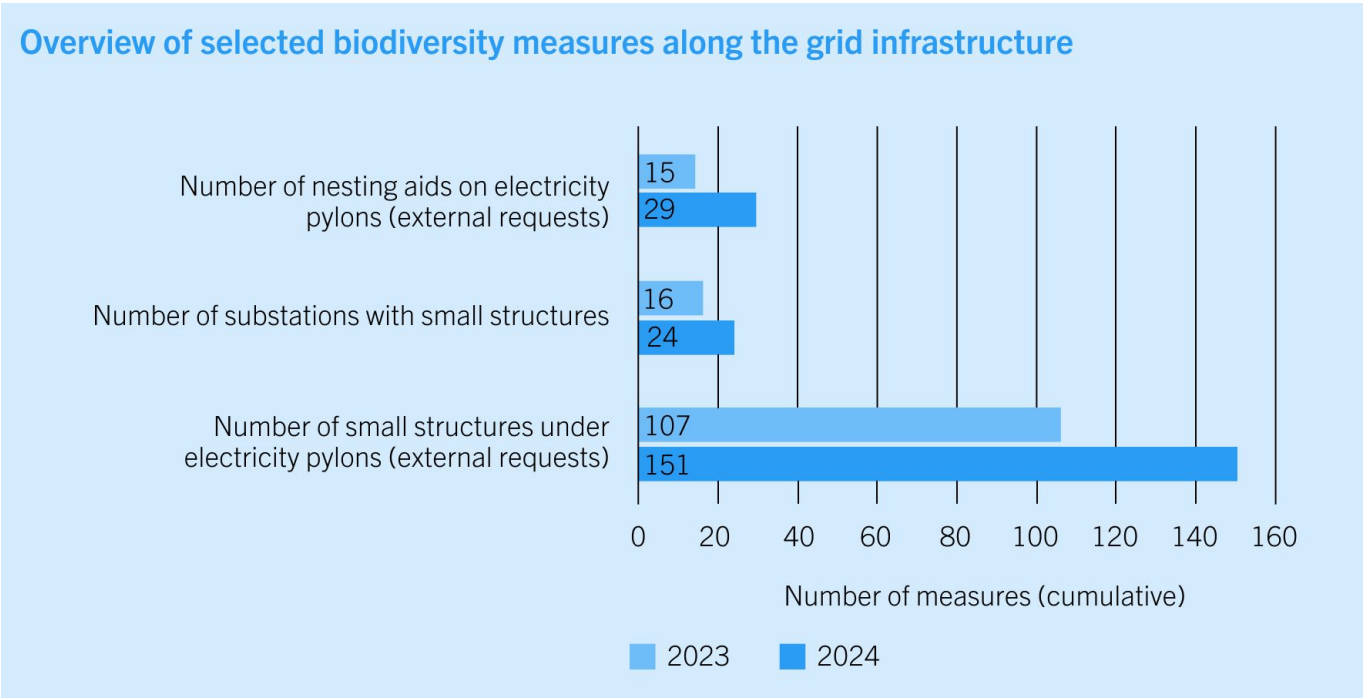
Swissgrid works with external partner organisations to protect, maintain and enhance the ecological infrastructure in Switzerland, above and beyond regulatory and official measures. The installation of small structures under pylons is an example of this cooperation work. Piles of branches and stones or small ponds are used to create habitats for amphibians, reptiles, insects or other invertebrates and small mammals. Swissgrid assists the nature conservation organisations that supervise these projects by providing the necessary geodata and specifying the conditions that must be met to ensure the safety of the lines.

To date, a total of 151 small structures have been built under electricity pylons thanks to partnerships of this kind. Nesting aids have also been installed on 29 pylons. The number of enquiries from nature conservation organisations has steadily increased in recent years. The figure for the installation of small structures under electricity pylons rose by 41% in 2024 in relation to the previous year.

Key figures on biodiversity

Environmental protection measures that also focus on the preservation of biodiversity are defined in the approval process. The means of monitoring the effectiveness of measures is explained in the [«Environmental protection»](#) section. Swissgrid strictly complies with the legal requirements in order to maintain the natural value of biodiversity in accordance with the overarching net-zero target. However, the effectiveness of measures is not analysed in detail by measuring species diversity or other biodiversity aspects. The following

diagram and key figures provide an overview of selected biodiversity measures that are being implemented along Swissgrid's grid infrastructure.



Circular economy

The circular economy is becoming increasingly important as a key concept for a resource-conserving and sustainable economy. This concept plays a major role for Swissgrid, as the construction, operation and maintenance of its infrastructure is associated with a high material input. The application of the circular economy approach along the value chain of its systems enables Swissgrid to utilise valuable resources efficiently and to reduce the environmental footprint over the life cycle of its infrastructure.

GRI 3-3

Ambition and goals

Swissgrid is committed to making responsible use of natural resources. To this end, it integrates the principles of the circular economy along the value chain in order to optimise resource efficiency, promote the reuse and recycling of materials, and reduce waste.

GRI 3-3, 306-1

Management approach

Identified impacts and risks

Swissgrid determines and assesses the impact of its business activities in relation to the circular economy as part of the dual materiality analysis and the environmental impact analysis (see the [«Environmental protection»](#) section). The main impacts occur along the value chain of grid projects. The planning and design phase in particular has a major influence on the type and quantity of materials, raw materials and auxiliary materials used. This affects both the environmental footprint of the grid components procured by Swissgrid and the extent of the potential environmental and social risks in the upstream value chain, particularly with regard to primary raw materials (see the [«Sustainable supply chain»](#) section). The waste-related impacts caused by dismantling systems dominate the end of the life cycle of Swissgrid's plants. In this respect, the proper handling and disposal of hazardous waste is a key concern for Swissgrid, for instance to avoid potential contamination of soil and water.

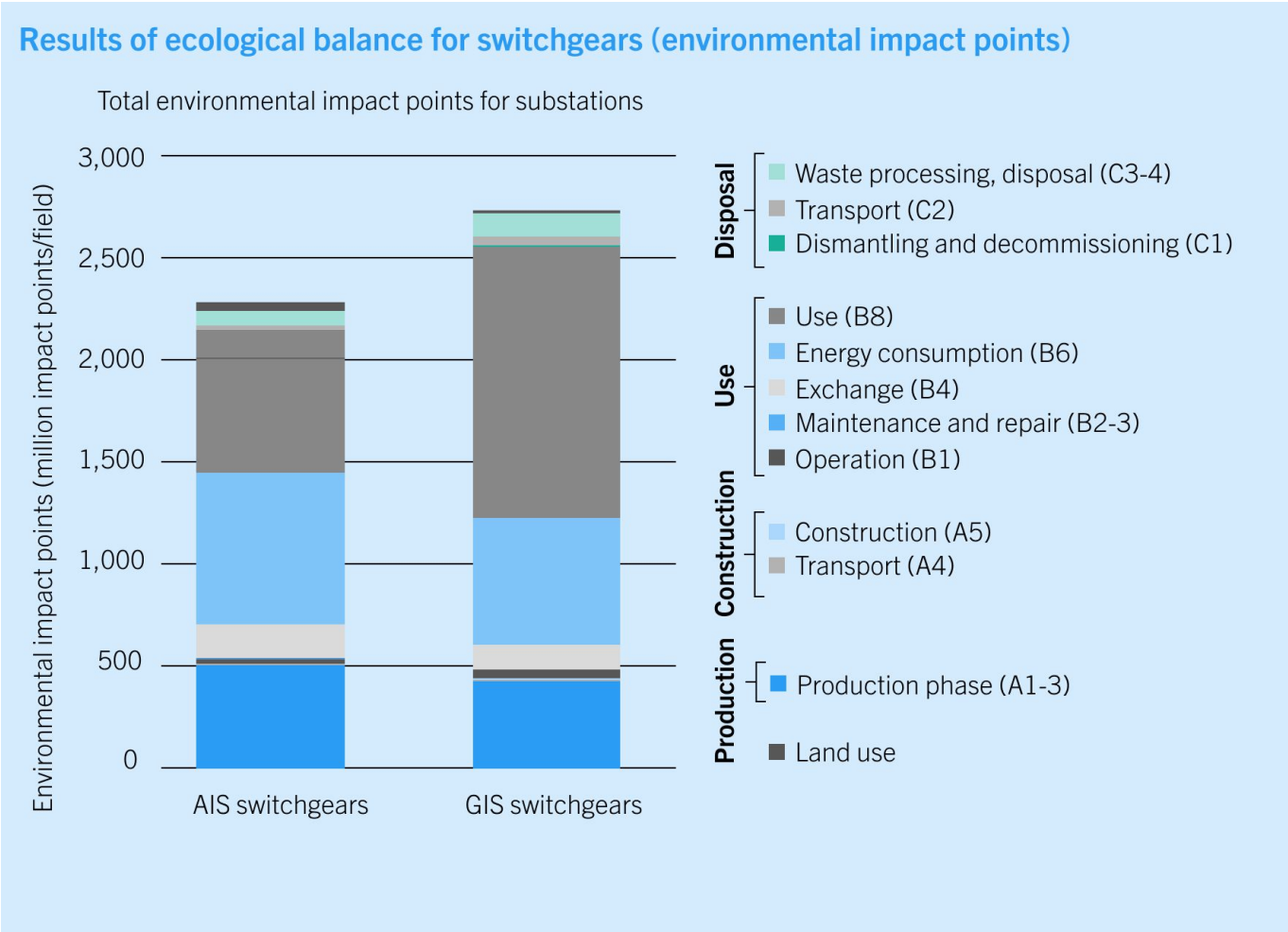
Procedure in the planning phase

Swissgrid uses various management approaches as early as the planning phase in order to promote and optimise the use of resources in support of the circular economy.

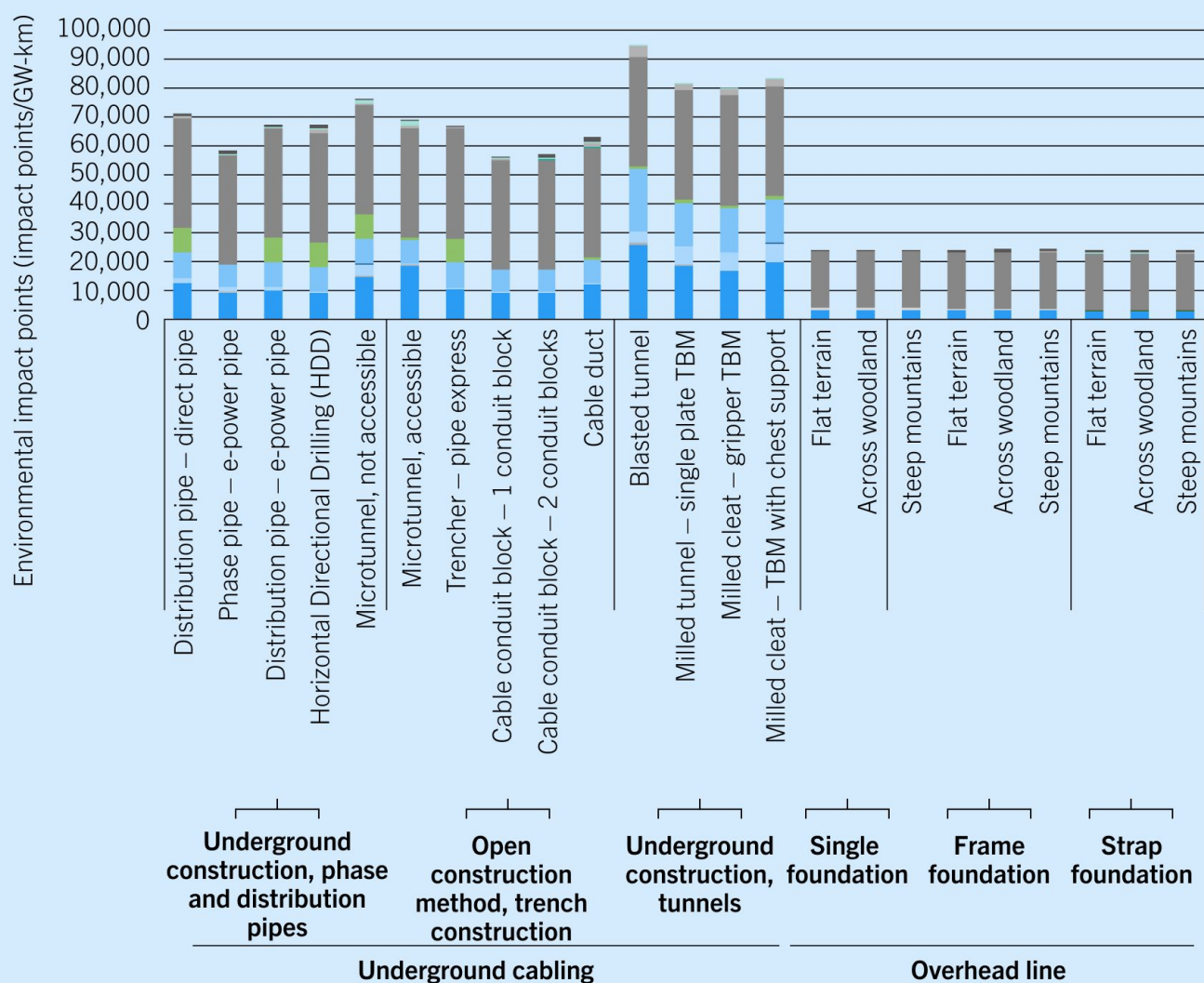
NOVA principle: Swissgrid pays attention to resource conservation and minimal environmental impact during grid planning. Swissgrid always applies the NOVA principle for this purpose. The NOVA principle stands for grid optimisation before grid enhancement before grid expansion. It aims to minimise the impacts of grid expansion on the environment and the landscape. If more efficient grid operations (e.g. topological measures, redispatching or use of flexibilities) are not sufficient to control the congestion identified, grid optimisation is carried out first and, if this is not effective, grid enhancement is used (e.g. more powerful conductors, higher voltage). The last option envisaged is material-intensive grid expansion (new route). Permanently unnecessary lines are dismantled wherever possible.

Life cycle assessments: if grid expansion is necessary, Swissgrid examines various options, taking into account the results of life cycle assessments. This means that Swissgrid analyses the environmental impact of key systems or individual system components over their entire life cycle and compares various alternatives. After analysing the environmental impact of transmission technologies in the previous year, Swissgrid prepared a life cycle assessment of substations in the 2024 financial year to evaluate the environmental aspects of air-insulated switchgears (AIS) and gas-insulated switchgears (GIS), among other things. The

results of life cycle assessments of this kind are incorporated into the decision-making process during the planning phase. The following illustrations of the results for switchgears and transmission lines show that, with the technologies currently available for extra-high-voltage systems, the environmental footprint is particularly important in the manufacturing phase and during utilisation. Assuming that, in the future, only alternative gases will be used for insulating and that the proportion of renewable energies in the electricity mix increases steadily at the same time, the production phase will become dominant in terms of the environmental impact of substations.



Results of ecological balance for lines and cables (380 kV)



Production

Production phase (A1-3)

Construction

Construction (A5)
Transport (A4)

Use

Use (B8)
Energy consumption (B6)
Exchange (B4)
Maintenance and repair (B2-3)

Disposal

Waste processing, disposal (C3-4)
Transport (C2)
Dismantling and decommissioning (C1)

Land use

Operation (B1)

Procedure in the procurement phase

As part of the procurement process, Swissgrid applies technical requirements/specifications and criteria to maximise the service life of the products and materials used and reduce the need for resource-intensive repairs and alternative measures. As part of a partnership with other transmission system operators, Swissgrid developed approaches to promote the circular economy in the procurement of key grid components in the 2024 financial year. The aim is to harmonise and raise the expectations of suppliers with regard to the environmental footprint of grid components and to strengthen the effectiveness of procedures

by adopting a coordinated approach.

Procedure when dealing with contaminated sites and waste

Swissgrid consistently implements legal requirements relating to contaminated sites and waste and puts them into practice by means of internal directives, manuals and operating instructions. The environmental impact assessment estimates the amount of construction waste such as excavated material, road debris and demolished concrete that will be produced by grid projects and defines methods for its further processing or disposal. Metals and materials such as ceramics are processed and remain in circulation. Around two thirds of demolished concrete is recycled in Switzerland, the rest is sent to landfill. Excavated material is reused on site or stored temporarily and utilised in other regional, mostly external projects. Contaminated materials are professionally disposed of and documented by the relevant service providers or specialised companies.

Swissgrid maintains a register of contaminated sites and pollutants for the professional handling of hazardous substances and contaminated sites. Excavated materials from contaminated sites and transformer oil represent significant volumes. Around 90% of transformer oil is recycled by external service providers. Problematic contaminated sites are cleaned up on an ongoing basis, at the latest when renovation work is carried out. For example, heavy metal contamination in the soil around pylon sites is treated during dismantling or disposed of and professionally replaced by a certified service provider.

Waste from sites and bases, mainly from office operations, is disposed of separately. An external facility management company takes care of professional disposal, which involves disposing of non-recyclable municipal waste in waste incineration plants with energy recovery.

GRI 301-1, 301-2, 306-2, 306-3, 306-4, 306-5

Measures and key figures

Application of the NOVA principle with innovative technologies

Swissgrid is examining the use of new technologies in order to reduce material consumption, meet the increased legal requirements and fulfil the growing demand for electricity. In the 2024 financial year, Swissgrid completed the test for the use of High Temperature Low Sag (HTLS) cables. Thanks to their characteristics, HTLS cables can help to optimise the grid in accordance with the NOVA principle and avoid more material-intensive enhancement or expansion work. The carbon-core conductors have a high current-carrying capacity, are lightweight and can therefore be installed with greater ground clearance and less impact on the pylons. This means that pylons can be made smaller and shorter, using less material. In renovation projects, HTLS cables can also help to reduce the need to replace pylons. Following the completion of the preliminary project investigation, Swissgrid is working on the specific application of HTLS technology in the current financial year.

Materials used in the 2024 financial year

In the 2024 financial year, Swissgrid prepared a comprehensive material flow analysis to assess the material turnover along its value chain. The material inputs and outputs of all ongoing grid projects, including dismantling, were taken into account. Material flows in other areas such as buildings, administration and mobility are of secondary importance. In total, Swissgrid installed around 117,000 tonnes of material in the 2024 financial year. The three most important materials were concrete (72%), gravel (22%) and steel (5%).

Materials used in 2024 (in tonnes)	2024*
Non-renewable materials	117,094
Normal/stainless steel	6,076

Materials used in 2024 (in tonnes)	2024*
Non-ferrous metals (Al, Cu, Zn)	561
Concrete	83,878
Gravel, aggregates	25,365
Asphalt, tar	596
Porcelain, glass	52
Thermoplastics, polymers, thermosetting plastics, elastomers and plastic packaging	133
Paint, protection against corrosion	21
Transformer oil/insulating oil	402
SF6 gas	3
Other materials	7
Renewable materials	104
Wood, paper, cardboard	104
Total weight of renewable and non-renewable materials	117,198

* Due to a change in methodology and enhancement of the material flow analysis compared to previous years, the values for previous years are not listed because they would not be comparable. For projects lasting longer than one year, the proportion for the 2024 financial year was calculated in relation to the project duration.

Based on the material flow analysis and average values for the market-compliant proportion of recycling of the materials used, the percentage of recycled raw materials/recyclable materials/metals used to manufacture Swissgrid's most important products and services is around 28%.

Procurement criteria used in the 2024 financial year

In the 2024 financial year, Swissgrid used various criteria to promote the circular economy, resource optimisation and sustainable waste management. For example, it demanded proof of the sustainable disposal and/or reuse and recycling of components, recyclable materials and/or construction waste during planning and dismantling work; (capitalised) transport optimisation for the delivery and/or acceptance of selected grid components; the availability of a life cycle assessment in accordance with ISO 14044:2006 or ISO 14040:2006 for the components offered (e.g. circuit breakers, transformers, disconnectors/earth electrodes, SAS); and requirements for the service life of components.

Composition of waste in the 2024 financial year

Based on the material flow analysis, Swissgrid compiled key figures on the waste generated from grid projects. With regard to materiality, regular municipal waste from office operations was not taken into account. In total, Swissgrid produced around 75,000 tonnes of waste from grid projects in the 2024 financial year, 42% of which was disposed of and 58% of which was reused or recycled. The most important waste categories are excavation (78%), building rubble/road debris (19%) and metals and ceramics (3%).

Composition of waste from grid projects in 2024* (in tonnes)	Total waste	Reuse/recycling	Disposal
Excavated material	58,123	32,192	25,931
Building rubble/road and track debris	13,821	8,677	5,144
Metals and ceramics	2,319	2,273	46
Plastics	48	0	48
Wood, cardboard and paper	87	0	87
Solids containing toxic substances and water-polluting liquids	163	148	17
Gases (SF6 etc.)	1	1	0
Total	74,563	43,289	31,274

* Due to a change in methodology and enhancement of the material flow analysis, the values for previous years are not listed because they would not be comparable.

Of approximately 43,000 tonnes of waste diverted from disposal, 16% is processed for reuse and 84% is recycled.

Total weight (tonnes) and category of reprocessed or recycled waste in 2024*

Category	Hazardous waste	Non-hazardous waste
Processing for reuse ¹	0	7,014
Recycling ¹	147	36,129
Total	147	43,143

* Due to a change in methodology and enhancement of the material flow analysis, the values for previous years are not listed because they would not be comparable.

¹ Reuse and recycling of all waste take place outside Swissgrid's sites and plants.

Of approximately 31,000 tonnes of waste sent for disposal, around 99.5% was sent to landfill, 0.4% was incinerated with energy recovery and 0.1% was disposed of using other processes.

Total weight (tonnes) and category of waste disposed of in 2024*

Category	Hazardous waste	Non-hazardous waste
Incineration (with energy recovery) ¹	0	135
Landfill ¹	0	31,122
Other disposal methods ¹	17	0

Category	Hazardous waste	Non-hazardous waste
Total	17	31,257

* Due to a change in methodology and enhancement of the material flow analysis, the values for previous years are not listed because they would not be comparable.

¹ All waste is disposed of outside Swissgrid's sites and plants.



People

The material topics for Swissgrid in relation to «People» are «Occupational health and safety», «Attracting, retaining and developing skilled workers» and «Diversity and inclusion». As the operator of a critical infrastructure, Swissgrid insists on a high level of safety and reliability, and consequently on the occupational health and safety of its employees. Furthermore, the company is dependent on highly qualified, diverse and motivated employees in order to develop into an innovative, highly digitalised and sustainable company.

Employer attractiveness

Swissgrid is dependent on highly qualified and motivated employees in order to successfully implement its complex mission and corporate strategy. In view of the shortage of skilled workers, particularly in the fields of IT and technology, it is essential for the company to position itself as an attractive employer on the competitive labour market. Diversity and inclusion are also important topics for Swissgrid in order to create a diverse and inclusive corporate culture.

GRI 3-3

Ambition and goals

Attracting, retaining and developing employees

As part of its Strategy 2027, Swissgrid is aiming to establish itself as one of the best employers in Switzerland in order to ensure that the company has the necessary skills to meet future challenges. To do so, Swissgrid creates a modern corporate culture, guarantees attractive working conditions and helps employees to develop their skills.

Diversity and inclusion

Swissgrid strives to be an innovative, diverse and inclusive company that all employees feel comfortable to work for and that allows them to develop their full potential regardless of their ethnic origin, sexual orientation, religion, age, gender, disability or other aspects of diversity.

Goals for the 2027 strategy period

This ambition is substantiated by quantitative targets that were updated and approved by the Personnel Committee of the Board of Directors in the 2024 financial year.

Area	2025 – 2027 target figures	2024 status*
Employee development	Two thirds of vacant management positions are filled internally	●
	Employee survey: increase of +2 points in relation to «Employee development»	●
Working conditions	Employee survey: increase of +2 points in relation to «Work and leisure»	●
	Departure rate < 7.5%	●
Diversity and inclusion	Employee survey: increase of at least +2 points in the approval rate with regard to «Diversity & inclusion»	●
	Increase in the proportion of women to 25% of the total number of employees	●
	Increase in the proportion of women in management positions to 20%	●
	Certified equal pay	●
	No confirmed cases of violation of personal integrity (bullying, discrimination or sexual harassment)	●

* Colour code: green = target met, orange = progress made but target not yet met.

GRI 3-3

Management approach

Organisation and responsibilities

The organisation and tasks in the area of Human Resources (HR) are based on national employment law, Swissgrid's human resources policy, the company-wide Code of Conduct and various internal directives and regulations.

The Human Resources department is responsible for the operational implementation of personnel development at Swissgrid. The Head of HR is a member of the extended Executive Board. The interests of employees in decision-making processes related to participation and personnel within Swissgrid and with regard to the Executive Board are safeguarded by seven staff representatives who are elected by the employees. They must represent the German, French and Italian-speaking regions of Switzerland and both

genders. Two of the seven representatives also represent the employees on the pension committee.

Management approach to attracting, retaining and developing employees

Swissgrid's human resources policy is geared towards attracting qualified employees, retaining them in the long term and developing their skills sustainably in order to meet Swissgrid's dynamically changing needs. Swissgrid is implementing three comprehensive packages of measures to achieve the goals defined in Strategy 2027:

- **Employer of Choice:** In order to retain employees and attract new recruits, Swissgrid wants to continue to establish itself as an attractive employer on the labour market and meet the expectations of employees in the areas that are important to them. Swissgrid's internal development prospects are identified by means of career planning for senior and specialist managers, and measures are implemented via succession planning.
- **Fit for Future:** Implementing the company's strategy will require new skills, some of which are not yet available in the organisation to the extent required. Competency management is used to define the required skills and develop them where necessary. Last but not least, the digital transformation and the associated pressure to innovate are increasingly demanding and promote agile and self-organised working principles.
- **Future of Work:** The changing demands that are placed on today's working environment must be taken into account. The company aims to achieve a flat hierarchy and to streamline processes. This type of decentralised self-management and organisation is reflected in the participation of employees in the decision-making process.

Principles in favour of diversity and inclusion

Swissgrid is convinced that diversity in perspectives, backgrounds, experiences and skills enriches the company, promotes innovation and strengthens social cohesion. In order to maximise the opportunities offered by diversity, Swissgrid has adopted the following principles as part of the Code of Conduct approved by the Board of Directors, the company-wide guiding and management principles, the diversity and inclusion strategy and the internal directive on the protection of personal integrity:

- Swissgrid recognises its responsibility to protect the personal integrity of all employees. It does not tolerate any endangerment, impairment or violation of personal integrity of any kind, such as discrimination, bullying or sexual and non-sexual harassment. The Executive Board has enshrined these principles in the Code of Conduct in a directive on the protection of personal integrity.
- Swissgrid guarantees non-discriminatory access to all roles and draws on a diverse talent pool when filling vacant positions. The development of all employees at Swissgrid is based on transparent and comprehensible criteria and is planned and implemented jointly by management and employees.
- By providing the best possible working conditions, Swissgrid employees develop their full potential and can carry out their work to the best of their ability and achieve the goals they have set.
- Leaders ensure an inclusive leadership culture in all areas and teams. The aim is to guarantee equal opportunities and the associated framework conditions and to create an atmosphere in which employees feel comfortable, contribute ideas, take responsibility and openly address challenges or conflicts. Inclusive management at Swissgrid is based on the guiding and management principles, which define aspects such as communication, a sense of responsibility and the actions of managers.

Identified risks and opportunities

The biggest challenge in terms of attracting, retaining and developing employees is the growing shortage of skilled workers, particularly in the fields of technology and IT. In this context, Swissgrid has identified two material risks as part of the ERM process: the first is a lack of expertise, which could result in Swissgrid not being able to meet future challenges or perform key tasks to the appropriate quality standard. If this lack of expertise has to be bridged by external resources, it could lead to additional costs. The second risk is insufficient innovation due to unsuitable framework conditions, and in particular a lack of expertise, motivation or talent pooling among employees and an unsuitable working environment. This can also have a potential impact on the secure and stable operation of the grid and lower competitiveness on the labour market. As part of the ERM process, Swissgrid has also categorised the risk of employee absences due to mental stress as material and has taken appropriate health protection measures to avoid and/or reduce factors that can lead to occupational illnesses as far as possible. Health protection measures are described in the [«Occupational health and safety»](#) section.

GRI 3-3

Measures and key figures

GRI 2-7, 2-8

Swissgrid employees

As at the reporting date on 31 December 2024, 927 people were employed by Swissgrid (207 women and 720 men). Compared to the previous year, the number of internal employees has risen by 9%. The continuous growth in the number of employees is driven by Swissgrid's increasing areas of responsibility, the internalisation of tasks previously performed by external service providers, the strengthening of critical functions to reduce the risk of failure, and the company's increasing need for digitalisation and innovation.

At the end of the year, 712 external employees were registered with Swissgrid. External employees with a contract via a staff leasing company or a service provider are usually employed for temporary projects that require technical competences that are only available to a limited extent within Swissgrid. The number of external employees has barely changed in relation to the previous year.

Overview of Swissgrid employees (✓ PwC Assurance)	2024				2023				2022			
	Women	Men	Total	Proportion	Women	Men	Total	Proportion	Women	Men	Total	Proportion
Total internal employees ¹	207	720	927	100%	180	673	853	100%	163	573	736	100%
Full-time employees	111	577	688	74%	93	555	648	76%	83	481	564	77%
Part-time employees	96	143	239	26%	87	118	205	24%	80	92	172	23%
Permanent employees	189	652	841	91%	161	622	783	92%	144	535	679	92%
Temporary employees ²	16	59	75	8%	18	41	59	7%	19	30	49	7%
Without guaranteed working hours ³	2	9	11	1%	1	10	11	1%	0	8	8	1%
< 30 years	36	93	129	14%	34	81	115	13%	27	57	84	11%
30–50 years	142	414	556	60%	122	397	519	61%	112	344	456	62%
> 50 years	29	213	242	26%	24	195	219	26%	24	172	196	27%
Executive Board (EB)	2	3	5	1%	2	3	5	1%	1	4	5	1%

Overview of Swissgrid employees (✓ PwC Assurance)	2024				2023				2022			
Managers excl. EB	17	97	114	12%	13	99	112	13%	12	81	93	13%
Employees without a management function	172	568	740	80%	149	532	681	80%	137	460	597	81%
Employees in training or paid by the hour	16	52	68	7%	16	39	55	6%	13	28	41	6%
Total external employees¹	127	585	712	100%	124	585	709	100%	113	530	643	100%
Contracts via staff leasing companies ⁴	23	115	138	19%	11	56	67	9%	8	34	42	7%
Contracts via service providers ⁴	104	470	574	81%	113	529	642	91%	105	496	601	93%

¹ Data is given as numbers of employees (headcount) and not as full-time equivalents. All employees work in Switzerland.

² The temporary positions are mainly internships, which form part of Swissgrid's recruitment efforts.

³ Employees without guaranteed working hours are employees who are on call for visitor tours or for specific temporary and support work.

⁴ External employees with a contract via a staff leasing company or service provider. One example is external employees who are not employed directly by Swissgrid, but who carry out specialised digitalisation and automation activities under contract via a service company.

GRI 401-1

Overview of new employees and employee turnover

In total, Swissgrid was able to recruit 168 new employees in the 2024 financial year, while 94 employees left the company in the same period. Of the vacant management positions in the 2024 financial year, 18% were filled by external candidates and 82% by internal candidates. The corresponding target value (internal employees taking on 66% of the management positions to be filled) was therefore exceeded. In terms of fluctuation, Swissgrid also achieved the target value of <10% in the 2024 financial year with a fluctuation rate of 6.2% (employees with a fixed, long-term contract only).

New employees and employee turnover (✓ PwC Assurance)	2024							2023			2022			
New employees and employee turnover	Women		Men		Total			Women	Men	Total	Women	Men	Total	
New hires														
< 30 years	17	10%	46	27%	63	38%		13	40	53	15	32	47	
30–50 years	30	18%	58	35%	88	52%		22	69	91	17	61	78	
> 50 years	2	1%	15	9%	17	10%		0	15	15	2	7	9	
Total	49	29%	119	71%	168	100%		35	124	159	34	100	134	
Fluctuations, including retirements														
< 30 years	11	12%	27	29%	38	40%		5	18	23	14	17	31	
30–50 years	11	12%	29	31%	40	43%		9	11	20	7	18	25	
> 50 years	1	1%	15	16%	16	17%		2	13	15	3	14	17	
Total	23	24%	71	76%	94	100%		16	42	58	24	49	73	

GRI 2-9, 405-1

Overview of employee diversity

Swissgrid's employees come from 39 different nations. The majority, 67%, are from Switzerland, and 17% are from Germany.

Country of origin ¹ of employees (✓ New employees and employee turnover (✓ PwC Assurance))	Number	%
Switzerland	623	67%
Germany	161	17%
France	27	3%
Italy	18	2%
Spain	12	1%
Austria	9	1%
Various (33 countries)	77	8%

¹ Multiple citizenships are not recorded.

At the end of the 2024 financial year, Swissgrid employed a total of 207 women (22% of employees including the Executive Board), 9% of whom have management responsibility, 83% of whom are in roles without management responsibility and 8% of whom are in training or are paid by the hour. The majority of corporate functions at Swissgrid are performed by women (57% of corporate functions), while 85% of technical functions continue to be carried out by men. In the 2024 financial year, 15% of management positions at Swissgrid were held by women, which represents a slight increase compared to the previous year but remains below the target value of 20%.

As at 31 December 2024, Swissgrid's Executive Board consisted of five members from Switzerland, three of whom were men and two women from German-speaking Switzerland, French-speaking Switzerland and Romansh-speaking Switzerland. The Board of Directors is the company's supreme supervisory body and has nine members, one of whom is a woman. Further information on the composition of the Board of Directors can be found in the [Corporate Governance Report](#).

Diversity in supervisory bodies and among employees in 2024 (✓ PwC Assurance)	Board of Directors		Executive Board		Employees with a management function		Employees without a management function		In training/paid by the hour	
	Number	%	Number	%	Number	%	Number	%	Number	%
Men	8	89%	3	60%	97	85%	568	77%	52	76%
Women	1	11%	2	40%	17	15%	172	23%	16	24%
< 30 years	0	0%	0	0%	1	1%	73	10%	55	81%
30–50 years	1	11%	1	20%	79	69%	471	64%	5	7%
> 50 years	8	89%	4	80%	34	30%	196	26%	8	12%
Total	9	100%	5	100%	5	100%	740	100%	68	100%

Diversity in supervisory bodies and among employees in 2024 (✓ PwC Assurance)	Board of Directors		Executive Board		Employees with a management function	Employees without a management function	In training/paid by the hour
German-speaking Switzerland	6	67%	2	40%			
French-speaking Switzerland	1	11%	2	40%			
Italian-speaking Switzerland	1	11%	0	0%			
Romansh-speaking Switzerland	1	11%	1	20%			

Diversity of employees per employee category in 2024 (✓ PwC Assurance)	Technical functions ¹		Corporate functions ²		Total	
	Number	%	Number	%	Number	%
Men	650	85%	70	43%	720	78%
Women	115	15%	92	57%	207	22%
Total	765	100%	162	100%	927	100%
< 30 years	112	15%	17	10%	129	14%
30–50 years	446	58%	110	68%	556	60%
> 50 years	207	27%	35	22%	242	26%

¹ This includes activities focussing on the planning, operation, use and maintenance of buildings, facilities and equipment, ICT infrastructure and applications, as well as business assurance and operations.

² This includes activities in the areas of administration, communication, corporate and business development, finance and accounting, HR, legal services and procurement.

Measures and key figures on attracting and retaining employees and diversity

Graduate programme

As well as continuing its employer branding measures, Swissgrid has expanded its presence at Swiss universities of applied sciences and universities, thereby seeking direct contact with students and graduates. A new channel for attracting talent was created by launching an 18-month graduate programme. Five talented young graduates took part in the programme in the 2024 financial year. There are also plans to offer participants in this programme a six-month exchange with a European transmission system operator.

The effectiveness of the measures to position Swissgrid as an attractive employer for graduates is reflected in the results of the 2024 Universum survey. In a survey of 8,745 students, Swissgrid was ranked 16th (+12 places compared to 2023) in the «Engineering» category and 40th (+33 places) in the «Natural Sciences» category. According to the survey, Swissgrid remains the best rated company in the energy sector.

Training of apprentices

Swissgrid offers various apprenticeships, such as computer scientist with a federal certificate of proficiency (EFZ) specialising in platform development EFZ, digital business developer EFZ or commercial clerk EFZ. Swissgrid has joined forces with the training partner libs (Industrielle Berufslehren Schweiz) in this area. Eight apprentices undertook training in 2024 and two graduated during the reporting year. Swissgrid took on both apprentices as employees after they graduated.

Fair remuneration

Swissgrid offers employees market-based, fair and industry-standard remuneration. A salary band system, which is regularly reviewed and adjusted, serves as the basis for remuneration. Swissgrid's remuneration model sets out conditions for individual and performance-related remuneration for the Executive Board and management staff (senior and specialist managers), which is based on the achievement of personal and corporate objectives (including sustainability targets). Employees without a management function may be awarded special remuneration, which is dependent on their personal target achievement. In addition, Swissgrid's remuneration policy provides for individual, performance-related salary increases as part of employees' annual salary reviews.

In 2024, the total annual remuneration, including performance-related remuneration, of the highest-earning person at Swissgrid was 5.76 times higher than the average total annual remuneration of all employees excluding the highest-paid person. In 2024, the average salary increase rate for all employees excluding the Executive Board was 1.6%. Due to the targeted and selective application of salary increases, the median annual remuneration of all employees (excluding the highest-paid person) has not changed in relation to the previous year.

Overview of key figures on remuneration (PwC Assurance)	2024	2023	2022
Ratio between the total annual remuneration ¹ of the highest-paid person and the median of all employees	5.76	5.89	5.55
Increase in total annual remuneration of the highest-paid person (%)	–2%	0%	6.38%
Average increase in total annual remuneration of all employees ² (%)	1.6%	0.8%	0.8%
Median increase in total annual remuneration of all employees ² (%)	0%	0%	0%
Ratio of the percentage increase in total annual remuneration of the highest-paid person in relation to the median increase of all employees ²	0	0	7.98

¹ The total annual remuneration comprises salaries, bonuses, share bonuses, option bonuses, remuneration under a non share-based bonus plan, changes in pension value and non-qualified retrospective remuneration, as well as all other remuneration.

² All employees excluding the highest paid person.

Equal pay

Equal pay for work of equal value is a matter of course for Swissgrid. Swissgrid ensures transparency on equal pay by means of role-based salary bands. In the 2024 financial year, the Swiss Association for Quality and Management Systems (SQS) once again audited wages at Swissgrid. SQS confirmed in this maintenance audit that Swissgrid continues to provide pay equity between women and men. With a deviation rate of 0.5%, the result of the audit remains well below the threshold of 5%. The remuneration of all employees was audited, with the exception of interns and employees paid by the hour. Swissgrid can therefore continue to use the SQS «Fair Compensation» certificate in accordance with the criteria of the Association of Compensation & Benefits Experts without any restrictions.

Deviation rate for equal pay based on gender according to Logip (PwC Assurance)

	2024	2023	2022
Deviation rate (%)	0.5	3.5	3.8

Flexible working models

Swissgrid provides working conditions that take account of the changing needs of employees. Ensuring employees' work-life balance (especially with regard to their families) is a cornerstone of Swissgrid's HR strategy. The company therefore offers various options for flexible and hybrid working, which are generally open to all employees. Swissgrid advertises all full-time positions as 80 to 100%. New and current employees can adjust and choose the percentage of working time that suits their needs. Alternative working models, such as job sharing, are also available. In the 2024 financial year, around 26% of Swissgrid employees worked part-time (see the «[Overview of Swissgrid employees](#)» table). The company also gives its employees the option of working for up to 50% of their working hours from home, at their second place of residence, abroad, in co-working spaces or other suitable remote locations, provided that this allows them to fulfil their function and is implemented in accordance with the legal framework and internal HR regulations. Swissgrid allows its employees to care for their children, spouses or life partners and relatives (e.g. parents or parents-in-law) in the event of illness according to conditions for care leave, workload adjustments and/or voluntary benefits set out in the employment regulations that go beyond the statutory framework. Swissgrid offers support and care services for children and family members with external partners such as Profawo. Swissgrid employees also have the opportunity to take sabbaticals.

The effectiveness of the various measures to enable employees to reconcile work with other aspects of their lives is reflected in the results of the 2024 employee survey: the average figure for «Work and leisure» increased by 8 points compared to the score obtained in the previous survey in 2022. The result is therefore above the target figure (+2 points).

Parental leave

Parental leave is granted in accordance with the statutory provisions (14 weeks) and, in the case of paternity leave, an extra week is granted on top of the statutory two weeks. The adoption of a child under the age of five is treated in the same way as a birth in terms of parental leave. These provisions apply irrespective of the employment relationship (i.e. full-time or part-time work, temporary or permanent contract). In the 2024 financial year, 8 female employees and 24 male employees became parents at Swissgrid. With one exception, all employees resumed their roles at the end of their parental leave. The retention rate of employees 12 months after resuming work was 88% during the 2024 reporting year. This corresponds to a reduction in the retention rate in relation to the two previous financial years.

Key figures on parental leave (PwC Assurance)

	2024			2023			2022		
	Women	Men	Total	Women	Men	Total	Women	Men	Total
Employees entitled to parental leave	8	24	32	4	20	24	5	19	24
Employees who have taken parental leave	8	23	31	4	20	24	5	19	24
Employees who are still on parental leave ¹	4	0	4	0	0	0	0	2	2
Employees resuming their function after agreed parental leave	4	23	27	4	20	24	4	17	21
Return rate	100%	100%	100%	100%	100%	100%	80%	100%	95%
Employees who were still employed twelve months after their return to work	2	19	21	4	17	21	6	16	22
Retention rate	50%	95%	88%	100%	100%	100%	100%	100%	100%

¹ As at the end of the relevant reporting year.

Women at Swissgrid

Women@swissgrid is an initiative by female employees for networking, inspiring each other and learning from each other. The committee organises annual lectures and workshops on topics such as «unconscious bias». Swissgrid's membership of «Women in Power» and «Women in Tech» has expanded the opportunity for female employees to connect with each other and exchange ideas in industry networks.

Employee satisfaction

Every two years, Swissgrid conducts a comprehensive employee survey to review the effectiveness and perception of strategic measures and to identify opportunities for improvement. The results of the survey conducted in the 2024 financial year show that employee satisfaction remains high, with an average score of 78 (see table). In addition, 85% of employees perceive Swissgrid as an attractive employer, and 89% would recommend the company as an employer. The targets for «Employee development» and «Diversity & inclusion» were met in the 2024 financial year with an improvement of 3 points in each area.

Overview of satisfaction according to a representative employee survey (📊✅ PwC Assurance)

Employee satisfaction ¹	2024	2023 ²	2022
Women	78	80	80
Men	79	78	78
Various	87	n/a	n/a
Total	78	78	78

¹ Employee satisfaction is assessed on a scale of 0 to 100 in comparison with the «Swiss Employer Award» benchmark using a questionnaire.

² As the employee survey is conducted every two years, the results are carried over from the previous year.

Measures and key figures on employee development

Regular performance appraisals

All employees with a permanent employment contract with Swissgrid receive regular performance appraisals. These meetings are mandatory and take place at least once a year. A performance management system is in place so that employee performance can be assessed in a consistent manner, and employees and line managers are given regular training. Performance appraisals are checked for consistency via a bottom-up calibration process (from department to company level). The aim is to ensure that individual performance and target achievement are assessed as objectively as possible.

Regular performance appraisals (PwC Assurance)	2024	2023	2022
Employees with regular performance appraisals	93%	94%	94%
Women	92%	91%	92%
Men	93%	94%	95%
Permanent employees	100%	100%	100%
Temporary employees	24%	25%	33%

Skills management

The further development of employees is a key concern for Swissgrid and is included in its Strategy 2027. The desired digital transformation of the company requires corresponding skills. For this reason, Swissgrid launched a skills management programme in 2023 with the aim of defining the skills that will be required in the company in the future and identifying gaps. In the 2024 financial year, 100% of employees (who had held a permanent position for at least six months before the start of the skills management cycle) were assessed to determine whether their current skills match the target skills that will be required in the future. Swissgrid has thereby created the basis for the systematic personal development of employees, tailored to their individual needs. Recognised development potential is addressed as part of individual development plans.

Specialist and management training

In the 2024 reporting year, specialist training hours (external and internal) were recorded primarily in the categories «Operator training» (32%), «Safety & security» (25%) and «IT and tool training» (14%). Other important topics include compliance, project management, processes and principles. Since the 2024 financial year, newly appointed managers have been prepared for their role as managers thanks to a special management development programme tailored to their needs. Peer coaching sessions are used to encourage the mutual exchange of ideas on management issues.

External training and further education opportunities

Whenever training needs cannot be covered internally, Swissgrid facilitates attendance of external training courses. In 2024, 41 employees completed further training at universities of applied sciences or universities. The majority obtained Certificates of Advanced Studies or Masters of Advanced Studies.

Promotion of language skills

Swissgrid's corporate languages are defined as German and French. Knowledge of several languages is required due to employees' activities throughout Switzerland and the country's multilingualism. In 2024, 82 people attended a language course in German, 94 in French, 28 in English and 18 in Italian.

Individual development

Since June 2023, Swissgrid has offered a comprehensive range of online training courses focusing on soft skills, health, digital skills and communication. All employees are given the opportunity to undertake a total of 12 hours of individual training per year, without there having to be any operational or functional necessity.

Average hours of training and further education

In the 2024 financial year, Swissgrid employees invested an average of 53 hours or around 1.5 weeks in their training and further education. Approximately 77% of training and development was carried out as part of internal programmes, while almost a quarter was completed externally. The quality of internal training and development is ensured through systematic feedback management and reviews, among other things. The internal training courses were rated as good or very good by 84% of those who provided feedback.

Overview of average hours invested in training and development in 2024 (PwC Assurance)

	Executive Board	Managers ¹	Employees without a management function	Employees in training/paid by the hour ²	Technical functions	Corporate functions	Total
Men	20	42	61	21	58	25	55
Women	15	49	47	20	55	29	44
Total	18	43	58	21	58	27	53

¹ Excluding the Executive Board

² This includes interns, doctoral students, apprentices and employees paid by the hour.

Transition arrangements

Swissgrid offers its employees early preparation for retirement via external courses and events. They also have the possibility to change career direction. This prepares employees for retirement through a targeted reduction in workload and responsibility, and can ease the transition. If Swissgrid is forced to part ways with employees, and believes that these individuals require assistance with their search for new employment, it offers outplacement counselling, an extension of the notice period or bridging benefits.

GRI 303, 405-1

Measures and key figures on the protection of personal integrity and inclusion

Protection of personal integrity

Swissgrid protects the personal integrity of its employees via suitable internal and external points of contact. In the event of breaches of personal integrity, employees can contact an external reporting centre, their line manager, an internal contact person from the HR department, a staff representative or the investigative body, the Compliance function. Swissgrid employees can obtain free expert assistance with personal and business difficulties from the consultancy firm Movis. Counselling is available to employees seven days a week, 24 hours a day in all parts of the country, and is treated confidentially. Whistleblowers (see [swissgrid.integrityline.app/](https://www.swissgrid.ch/integrityline)) who report serious compliance violations are protected by Swissgrid’s Code of Conduct and Whistleblowing Policy. This aims to encourage the reporting of misconduct and defines the confidentiality of reports and the protection of whistleblowers.

Swissgrid conducted an anonymous survey at the beginning of 2024 to determine the status of the protection of the personal integrity of its employees. This survey showed that no breaches had been officially reported and investigated in the last two years. At the same time, however, there have also been isolated cases in which employees have felt that their personal integrity has been breached. As a result, employees and managers were given special training on prevention, behaviour and procedures in relation to breaches of personal integrity in the reporting year. Special attention was paid to the personal responsibility of each individual.

Discrimination reports

In the 2024 financial year, no (potential) cases of discrimination were reported via the official internal and external reporting channels, including the «RiskTalk» app, the Compliance function or the whistleblower system.

Overview of official reports of cases of discrimination (PwC Assurance)

	2024	2023	2022
Reported cases of discrimination	0	0	0

Measures and key figures in other areas

Insurance benefits

The benefits Swissgrid provides to its employees as stipulated in the employment regulations are the same for all levels of employment. Life insurance and health insurance are privately organised in Switzerland. Unemployment insurance and disability insurance are covered by state social insurance, income compensation and disability insurance schemes. In the event of inability to work during the probation period as a result of illness or accident and through no fault of the employee, Swissgrid pays the employee 100% of the annual basic wages for a maximum of 30 days. In the event of inability to work as a result of illness or accident occasioned after the probation period and through no fault of the employee, Swissgrid pays the employee 100% of the annual basic wages for a maximum of 180 days. In the event of inability to work from the 181th day to the 720th day, Swissgrid has taken out a daily sickness benefits insurance which pays out 80% of the insured salary for a maximum of 550 days. In addition, all employees worldwide are privately insured for occupational and non-occupational accidents. The old-age pension scheme includes the AHV, which is also state-funded, as well as the pension fund, which is mandatory for all employees.

Pension plans

Swissgrid is affiliated with the PKE Vorsorgestiftung Energie pension fund. With assets of approximately CHF 12 billion and around 26,000 insured persons, PKE is one of the largest pension funds in Switzerland. Swissgrid's employees are insured according to the statutory provisions and the effective pension regulations. Entry into the pension fund is mandatory for all employees subject to the Federal Law on Occupational Retirement, Survivors' and Disability Pension Plans (BVG). The premiums consist of contributions by the employer and the employees.

Overview of key figures on pension provision at Swissgrid (PwC Assurance)

	2024	2023	2022
Cover ratio of PKE Vorsorgestiftung Energie as at 31.12.2023	120.7% ¹	113.9%	107.7%
Swissgrid risk contributions	0.24%	0.24%	0.24%
Employee risk contributions	0.16%	0.16%	0.16%
Swissgrid savings contributions (% of the insured salary)	7.2 – 22.7%	7.2 – 22.7%	7.2 – 22.7%
Employee savings contributions (% of the insured salary)	4.8 – 10.3%	4.8 – 10.3%	4.8 – 10.3%
Additional voluntary savings contributions by employees (% of the insured salary)	2 – 4%	2 – 4%	2 – 4%

¹ As at 29 September 2024.

Collective agreements and freedom of association

In Switzerland, the right to collective bargaining and freedom of association is enshrined in the constitution and in employment practice. Swissgrid recognises and respects these two fundamental rights of its employees. The interests of employees, including in terms of remuneration policy, are safeguarded by the staff representatives. Swissgrid is not subject to a collective labour agreement. In the event of reports or concerns regarding a potential violation of the right to collective bargaining or freedom of association, employees have access to various confidential and partially anonymised channels, including the Compliance function, the consultancy firm MOVIS, the staff representatives, the «RiskTalk» app or Swissgrid's whistleblower system. The relevant contact details and processes are made available to all employees as part of Swissgrid's Whistleblowing Policy and can be found on the dedicated internal HR and Compliance page.

Protection against mass redundancies

Swissgrid is a stable employer: since its foundation, there have been no mass redundancies in the company. In the event of a mass dismissal of 30 or more employees within 30 days and for reasons not related to their individual performance appraisal, Swissgrid would comply with the statutory provisions applicable in Switzerland. According to the Federal Act on Information and Consultation of Workers in Businesses (Participation Act), staff representatives have the right to information and special participation. This includes participation rights relating to occupational safety and employee protection, the transfer of companies in accordance with Articles 333 and 333a of the Swiss Code of Obligations, collective redundancies and affiliation to an occupational pension scheme. The staff representatives are therefore given a period of 14 days to be heard and have the opportunity to submit suggestions on how redundancies can be avoided.

Occupational health and safety

As the national grid company, Swissgrid is one of Switzerland's critical infrastructure operators according to the Federal Office for Civil Protection and strives to implement a correspondingly high level of security. Safety & Security is therefore a focus of Strategy 2027, has top priority in all activities at Swissgrid and is managed via an integral safety policy. Swissgrid's safety policy defines the framework for consistent and coordinated implementation in accordance with standardised rules. This integral approach comprises seven security domains: operational security, physical security, information security, integral risk management, crisis management/business continuity management, environmental protection, and health and safety. The subject of health and safety is examined in this section.

GRI 3-3, 403-1

Ambition and goals

Swissgrid has set itself the goal of protecting the health and safety of employees, contractors, visitors and neighbours to its infrastructure. In specific terms, Swissgrid has set itself the objective of reducing the number of occupational accidents involving absences of more than five days to zero. This target was achieved in 2024, as in 2023 and 2022.

GRI 2-25, 3-3

Management approach

The Executive Board has delegated the management and development of integral safety management to the Chief Safety & Security Officer (CSO) and the line-independent Integral Safety Committee (ISG), which comprises representatives of the seven security domains. The CSO heads the Integral Safety Committee and reports to the Executive Board on a regular basis. The Executive Board determines the framework for occupational health and safety at Swissgrid and is responsible for making sure that all employees implement and apply safety standards and the relevant laws and ordinances.

Swissgrid is obliged to comply with statutory and industry-standard provisions. In specific areas, these provisions are supplemented with additional corporate standards. The following principles apply at Swissgrid when it comes to occupational health and safety:

- Regardless of the activity, the risk must be minimised as effectively as possible. Safety-conscious behaviour is a basic requirement for employees. The high standard is maintained and continually improved by means of ongoing training.
- Occupational health and safety in the workplace is an important management task. By promoting the health, quality and safety awareness of employees, the line managers fulfil an important role model function and line responsibility.
- Swissgrid lays down occupational health and safety objectives in writing. Occupational safety inspections are carried out regularly to ensure the success of occupational health and safety measures and the fulfilment of legal requirements.
- When planning and introducing new procedures, Swissgrid is guided by the latest state of the art.
- Swissgrid structures workplace conditions in accordance with recognised health and safety principles. Special attention is paid to prevention and precaution.

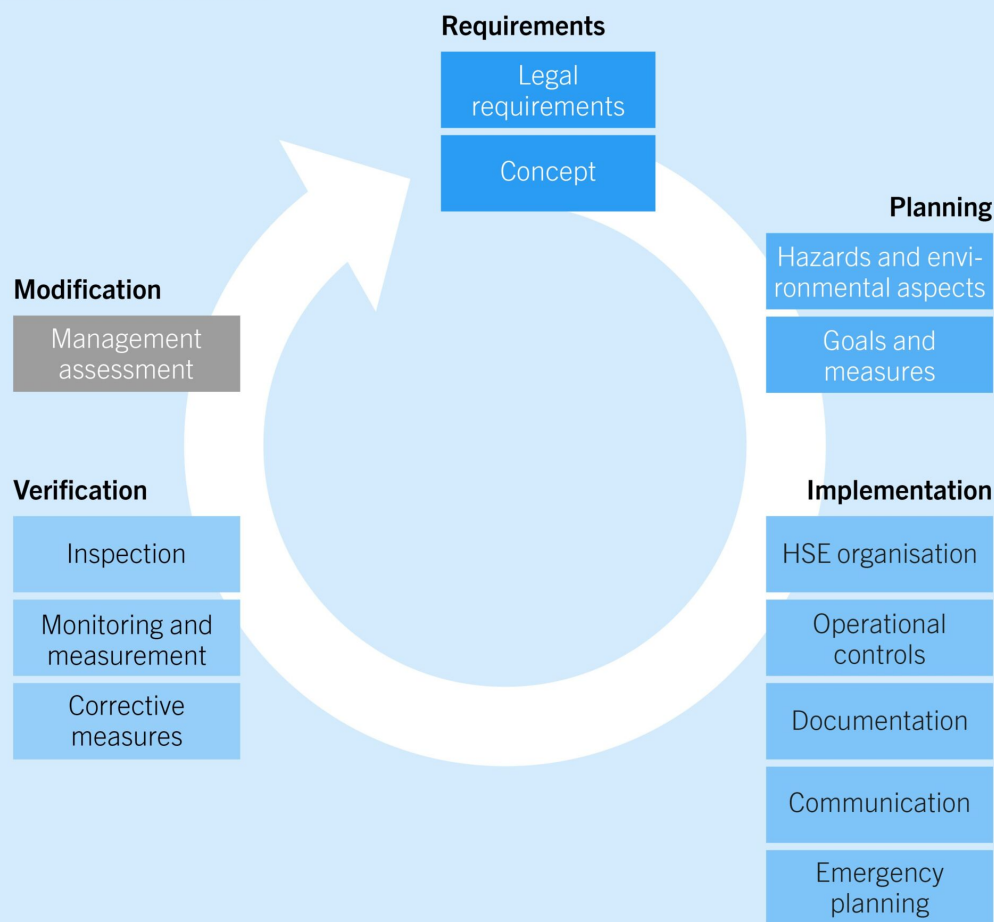
¹ Federal Act on Work in Industry, Trade and Commerce (ArG), Ordinances 1 – 5 to the Labour Act (ArGV 1 – 5), Federal Act on Accident Insurance (AIA), Ordinance on the Prevention of Accidents and Occupational Diseases (OPA), Electricity Act (EleG), Ordinance on High Voltage Systems (StV), Ordinance on the Safety and Health Protection of Workers during Construction Work (BauAV), ESTI Directive 245: Safe working on high-voltage power lines, ESTI Directive 407: Working on or in the vicinity of electrical systems.

GRI 403-1, 403-8

The HSE management system

Swissgrid operates an integrated HSE management system that is certified in accordance with ISO 45001:2018 and ISO 14001:2015. The aim of the HSE management system is to ensure continuous improvement and to promote the organisation's understanding of activities relevant to safety and the environment using a systematic approach, as well as complying with the legal requirements for occupational safety, health and environmental protection. The HSE management system follows the PDCA management model («plan-do-check-act»). This management model is based on continuous improvement in HSE performance.

Swissgrid's HSE management model



Proposals for possible improvement measures are derived from hazard assessments, recorded accidents and near misses, as well as the defined HSE targets. These measures are planned and implemented by Swissgrid's Safety and Environmental Protection Officers in collaboration with the managers and employees concerned. Swissgrid's operational business areas are responsible for implementing the measures.

The measures for achieving the HSE targets are set out in the operational development of the HSE security domain and, in particular, in the Safety Road Map, which is updated annually. Target achievement is continuously evaluated and reported via a key figure cockpit. The implementation of the HSE programme is monitored by the Head of Health & Safety or the Safety and Environmental Protection Officers.

Safety and environmentally relevant key figures for monitoring are defined in a corresponding directive. The accident statistics are integrated into the key figure cockpit and are presented once a year to employees and to the Executive Board in the annual HSE management review. Relevant key figures are summarised in the «Overview of key figures in the area of occupational health and safety».

The HSE management system applies to the entire company. Service providers are obliged by the Code of Conduct for Suppliers and by contractual provisions to ensure the occupational health and safety of their employees and of persons working on their behalf. Compliance is verified by Swissgrid in the course of inspections. See also the explanations in the [«Sustainable supply chain»](#) section.

Scope of Swissgrid's HSE management system (✓ PwC Assurance)	2024	2023	2022
Total Swissgrid employees	927	853	736
Proportion of internal employees covered by the ISO-certified/audited HSE management system	100%	100%	100%
Total external employees ¹	712	709	643
Proportion of external employees covered by the ISO-certified/audited HSE management system	100%	100%	100%
Total internal and external employees	1,639	1,562	1,379
Proportion of external and internal employees covered by the ISO-certified/audited HSE management system	100%	100%	100%

¹ External employees are not directly employed by Swissgrid, but have an employment relationship with a staff leasing company or a service provider. The external employees listed in this table usually carry out work at Swissgrid's office locations and are therefore recorded individually. External employees of suppliers who work on building construction or civil engineering projects for Swissgrid are not included, for example.

Recurring certification: Swissgrid's HSE management system is audited and certified by an accredited external auditor on the basis of ISO standards 14001:2015 and 45001:2018. An audit for recertification of the HSE management system takes place every three years. In the two years in between, a surveillance audit is carried out by the external auditor. In 2024, the Swiss Safety Center confirmed Swissgrid's integrated HSE management system as suitable, appropriate and effective. The result shows further progress compared to the previous year. Particular emphasis was placed on the establishment of regular «Safety & Security Days» within the company, the publication of a detailed and publicly accessible Sustainability Report, the commitment to improving industry-wide security measures for working at height, and the extensive expertise of the employees on construction sites, some of whom have been with the company for many years.

GRI 403-2, 403-3, 403-9, 403-10, 416-1

Risks and hazards

There is considerable potential for serious personal injury, environmental damage and damage to property in Swissgrid's area of activity. Swissgrid has therefore categorised the risks relating to personal safety as «high» to «very high» as part of its company-wide risk management. Swissgrid proactively identifies the relevant risks and hazards, assesses them and eliminates them by introducing adequate measures or at least minimises them to an acceptable residual risk.

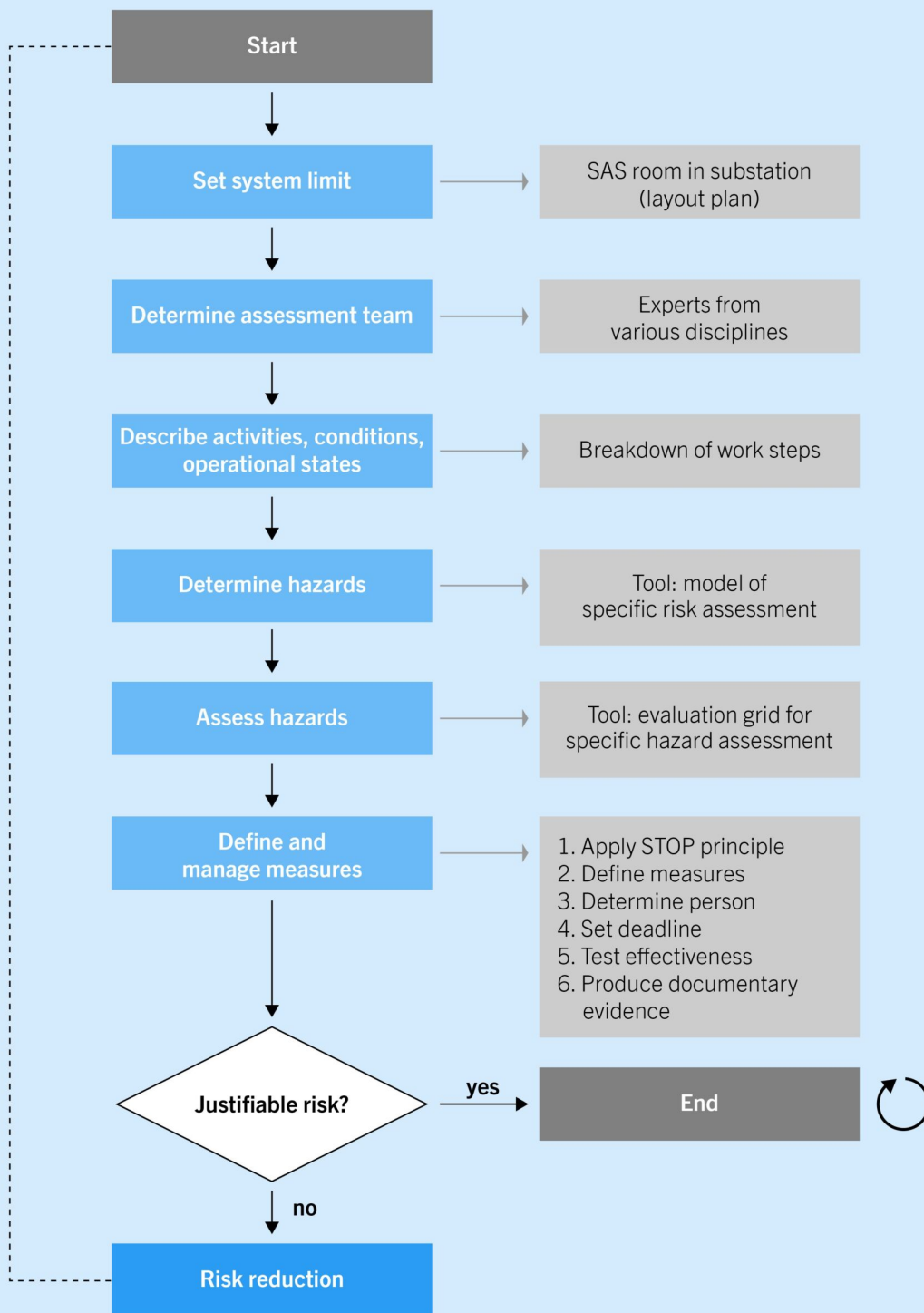
Swissgrid is aware of its responsibility as an employer and ensures the occupational safety and health protection of its employees in accordance with the Accident Insurance Act (AIA) and the Labour Act (ArG). In order to ensure that measures for the protection of its employees are as effective as possible, Swissgrid defines such measures according to the hierarchy of their effectiveness. They range from substitution/replacement measures, technical measures and organisational measures to person-related measures. Swissgrid also raises awareness among its employees and service providers about the application of the STOP principle: stop, think and assess the situation before you act. In this way, Swissgrid wants to ensure that all employees and service providers stop work if they have any safety concerns.

Risk assessment

Various risk assessments are carried out at Swissgrid. Firstly, the basic hazards and general activities at Swissgrid are systematically analysed, assessed and documented in the activity-related risk assessment based on the SUVA hazard portfolio (SUVA 66105). Furthermore, the company checks whether recognised rules are available for the hazards. If this is not the case, the rules must be formulated or, where the hazard potential is high, a risk assessment (SUVA 66099) must be carried out. Standardised measures are derived from the activity-related risk assessment and are valid throughout Swissgrid.

The activity-related risk assessment is regularly reviewed and updated if necessary. However, a review and update may also be necessary due to identified deviations, after an accident or near-miss event, or after a change in the law.

Risk assessment process flow



As well as conducting activity-related risk assessments, Swissgrid also performs project-specific, utilisation-related, order-related and system-specific risk assessments.

The safety specialists from the Health & Safety team are responsible for drawing up templates for risk assessments and for training employees. As coaches, they ensure that methodological expertise is available in the relevant line and provide technical support. If necessary, specialised external experts in the fields of occupational medicine, occupational hygiene and safety engineering are called in.

Incident analyses

In addition to hazard analyses, Swissgrid carries out incident analyses to examine events that had or could have had a significant negative impact on the safety of people and/or grid operations. The aim of these analyses is to identify the main factors that led to the event. They take into account technical, organisational and human aspects, as well as environmental conditions at the time of the event.

The findings form the basis for identifying risks that could increase the likelihood of new incidents or jeopardise Swissgrid's objectives. The way these risks are handled («risk strategy») is determined by the relevant specialist departments. The resulting measures can contribute to the safe operation of the transmission system and help to avoid future incidents outside Swissgrid's risk tolerance levels. They also make it possible to continuously improve grid, system and market operations with regard to the objectives set for operational safety and health and safety.

Occupational accidents involving Swissgrid's own employees whose work has no influence on grid operations are investigated by the Health & Safety team, which works with the operational business areas to define measures to prevent the same or similar cases from happening again and to put in place suitable communication measures. Occupational accidents involving service providers are investigated by their employers or by Swissgrid's Health & Safety team, depending on their severity. At least one analysis is required for each accident in order to examine the causes and the measures defined.

Potential hazards

Swissgrid has identified five potential hazards with a risk of serious injury (cf. table). In 2024, three occupational accidents were caused in one of the identified hazard areas. All accidents involved employees of service providers. One of the accidents occurred while working at height, the second while working near live high-voltage systems, and the third while working with helicopters. An overview of the type and consequences of occupational accidents in 2024 can be found in the «Overview of key figures in the area of occupational health and safety».

Overview of potential hazards, accidents and measures (✓ PwC Assurance)

Hazard potential	Accidents in the reporting period ¹	Measures
Work near live high-voltage systems	1	• Implementation of the legal requirements relating to plant equipment and employee training. • Use and application of equipment by service providers in accordance with the specifications of the Federal Inspectorate for Heavy Current Installations (ESTI). • All work is planned and instructed by means of a written work order. • Restrictive access. • Regular announced and unannounced inspections at the construction and work sites.
Working at height	1	• Promotion of training for authorised trainers in accordance with Directive No. 245 of the ESTI. • All work is planned and instructed by means of a written work order. • Regular announced and unannounced inspections at the construction and work sites.

Forestry work	None	• Use of specialised and experienced contractors.
		• In-house forestry specialists outsource work to specialised forestry companies and regularly instruct and monitor the forestry work carried out. • Regular announced and unannounced inspections at the construction and work sites.
Work with helicopters	1	• All work is planned and instructed by means of a written work order.
		• Restrictive use of helicopters, testing of alternative, lower-risk options. • Regular announced and unannounced inspections at the construction and work sites.
Handling hazardous substances (insulating oils, gases, cleaning agents and coolants)	None	• Implementation of the legal requirements relating to plant equipment and employee training.
		• Regular announced and unannounced inspections at the construction and work sites.

¹ The data includes employees of Swissgrid and of all service providers, including those who carry out work for Swissgrid on construction sites and outside office locations.

HSE inspections

The HSE inspections carried out regularly by Swissgrid are a key part of hazard and incident assessment, serve to mitigate risks, and are an important tool for fulfilling duty of care and compliance. In 2024, a total of 396 HSE inspections were carried out by project employees and the Health & Safety team. The inspections found 27 situations that were categorised as a medium safety risk, and 9 as a high safety risk. In all these cases, measures were agreed upon, documented and implemented to reduce the safety risk to an acceptable level.

Overview of potential hazards, accidents and measures (✓ PwC Assurance)	2024	2023	2022
Number of HSE inspections carried out	396	357	368
Number of HSE inspections with medium risk	27	22	36
Percentage of HSE inspections with medium risk	6.8%	6.2%	9.8%
Number of HSE inspections with high risk	9	8	1
Percentage of HSE inspections with high risk	2.3%	2.2%	0.3%

Measures and key figures

Measures to strengthen the safety culture

Safety Culture Ladder

Swissgrid attaches great importance to continuously strengthening its safety culture. That is why the company introduced the Safety Culture Ladder method in 2020. Swissgrid was successfully certified at level 3 in 2022. Annual recertification audits were carried out in 2023 and 2024, during which Swissgrid was shown to have developed its safety culture by implementing various measures. The introduction of the mandatory «Safety & Security Days» series of events for employees was again seen as particularly positive in the 2024 audit report. The focus of these events in the reporting year was on mental health. In addition, the development of guidelines to promote the safety culture and the organisation of management workshops were perceived as positive.

The team of auditors sees particular potential for improvement in strengthening the feedback culture. Progress needs to be made on promoting the safety culture among service providers. Since the beginning of 2022, Swissgrid has required service providers who carry out activities where occupational safety plays a central role to introduce the Safety Culture Ladder. This requirement is laid down in the relevant contracts. Swissgrid has therefore produced a «[Safety Culture Ladder](#)» guide for service providers. At the end of the 2024 financial year, 14 service providers with an active contract with Swissgrid (initial value of CHF 150,000) were certified in accordance with the Safety Culture Ladder.

Safety training

- **Onboarding of new employees:** All employees receive introductory training on health and safety when they join the company. This provides information on roles and responsibilities in the area of occupational safety, ergonomics in the workplace, Swissgrid's emergency organisation, important environmental protection requirements and insurance basics.
- **Safety & Security Days:** The mandatory «Safety & Security Days» introduced in 2022 were held for the third time in 2024. The aim of the 2024 event was to raise awareness of safety among all employees in the areas of safety culture, cybersecurity, road safety and stress management. Employees learnt about these topics and deepened their knowledge through theoretical lessons and practical exercises. In the area of targeted cultural development, a simulation in a medical context («Room of Horrors») was used to encourage employees to address mistakes and risks, give each other feedback and reflect on human behaviour.
- **Specific training courses:** Employees of the Grid Infrastructure business area who intend to become electrical experts complete a comprehensive training programme with nine training modules. In addition to basic knowledge about health and safety, the programme mainly focuses on electrical safety. The aim is for these experts to be able to manage risks in extra-high-voltage installations. In addition, selected employees also receive one-day training on safety inspections. This training course explains the aim of internal inspections, the duties and powers of inspectors, personal conduct during inspections and the key rules of the Swiss National Accident Insurance Fund (SUVA). A new «Safety on high-voltage pylons» course was launched in the 2024 financial year to strengthen employees' skills associated with working safely on pylons. Swissgrid employees do not usually climb pylons themselves, but must be able to assess the security measures and act appropriately.

Employee participation

Occupational safety and health protection affect the most fundamental interests of employees: their health and physical integrity. Swissgrid employees are therefore entitled by law to receive information and to have a say in all matters relating to health and safety (Art. 6 of the Labour Act and Art. 6a of the Ordinance on the Prevention of Accidents and Occupational Diseases). At Swissgrid, the right to have a say is effected through staff representation. When it comes to their health and safety, Swissgrid employees are allowed to say «STOP». Employees and line managers are made aware of this right at various briefing events. Swissgrid also grants this right to all service providers working on behalf of the company.

«RiskTalk» app

The «RiskTalk» app is a tool for reporting incidents, observations and ideas of any kind in connection with risks and hazards. The aim is to recognise potential hazards at an early stage and to prevent accidents. Every message is processed and answered. Those responsible for the «RiskTalk» app ensure that ideas are scrutinised and implemented if they are found to be suitable. A «RiskTalk» report can be made either by employees or by service providers. In 2024, 37 reports were submitted via the «RiskTalk» app, 24 of which related to safety and security. An investigation was launched for all 24 reports concerning safety and security, 19 of which had been completed by the end of the financial year.

Further measures for health protection

- **Behaviour near lines:** The transmission system partly crosses cultivated land or passes close to populated areas. Swissgrid is therefore very keen to protect not only its own employees and the employees of its service providers, but also the general public. For example, Swissgrid provides comprehensive information on its [website](#) about the safety regulations that need to be observed when planning activities and work near lines, as well as during any sports and leisure activities that are undertaken in these areas.
- **Actions in the event of an emergency:** Swissgrid has compiled a list of regulations and standards for the protection of people and the environment when working on and in the vicinity of its installations. This list is published in a [manual](#) available to the public. It includes a description of responsibilities and correct behaviour in the event of an emergency. Visitors are also provided with an information sheet, while employees can access information on the intranet. They also receive annual training on the correct way to behave in the event of an evacuation. If a hazardous situation arises, all employees of Swissgrid and of service providers are obliged to interrupt their work, to remedy the dangerous situation or, if they are unable to do so, to immediately inform their superiors.
- **First aid at Swissgrid:** Trained first responders and evacuation assistants work at all Swissgrid sites. 78 Swissgrid employees are currently trained as first aiders. This corresponds to 8% of all employees. Repeat courses are organised every two years. In addition, Swissgrid has taught all employees basic first aid and minimum firefighting skills at the «Safety & Security Days».

Completion of health checks

Swissgrid's night and shift workers undergo a compulsory annual health check by an independent, specialised and qualified body. To ensure data confidentiality, Swissgrid does not receive detailed results, but only confirmation of whether the employee is fit to work night shifts. In addition, those employees who have to climb pylons as part of their role also receive a health check. An annual stress test is conducted for employees in the roles mentioned as well as for other employees if required. Swissgrid's hazard portfolio includes the assessment of psychosocial risks, and appropriate measures are defined to protect or improve the health of employees.

Health Committee

A new Health Committee was formed in the 2024 financial year. The Health Committee establishes, operates and continuously develops the company's health management system according to recognised criteria (Friendly Workspace). It plans the annual programmes in consultation with the Integral Safety Committee. Members of all business areas are represented on the Health Committee. It is chaired by Health & Safety, with a deputy from HR. The members of the Health Committee are obliged to maintain confidentiality towards all persons in matters deemed to be confidential and with regard to the personal affairs of employees.

Insurance for occupational and non-occupational accidents

All permanent Swissgrid employees are covered by accident insurance in accordance with the Accident Insurance Act (AIA) and Swissgrid's supplementary accident insurance. These insurance policies include the following benefits to cover the risks of occupational accident and occupational illness: medical costs in a private ward during hospitalisation, daily allowance, disability benefits and costs for services such as rescue, transport and recovery. If they work at Swissgrid for at least eight hours per week, employees also have mandatory insurance for leisure-time accidents (non-occupational accidents), including accidents during the commute to and from work. Accidents during leisure time are excluded for employees who work fewer than eight hours per week. Accidents suffered by these employees on the way to and from work are covered by occupational accident insurance.

Further measures for health protection

Swissgrid covers the costs of the tick vaccination and the annual flu vaccination for its employees if these vaccinations are carried out by recognised health authorities. In addition, Swissgrid ensures that employees are provided with an ergonomic workplace. Various SUVA information sheets and an explanatory video on this subject are available to employees on the i-net. Swissgrid also has internal ergonomics instructors who can help employees to set up an ergonomic workplace on request. In addition, Swissgrid employees benefit from various services to promote their health, including fresh seasonal fruit provided free of charge every day, discounted fitness offers and free online training courses (e.g. on burnout, time management, vitality and resilience). All offers can be consulted via the internal web portal for employees, which includes a dedicated HSE page.

Key figures in the area of occupational health and safety

Occupational accidents: In the 2024 reporting year, there were no occupational accidents involving Swissgrid employees resulting in death or health impairments. One occupational accident resulted in four days of absence, and seven other occupational accidents occurred with no loss of working hours. Consequently, the objective of reducing the number of occupational accidents involving employee absences of more than five days during an operating year to zero was achieved in 2024 (as in the two previous years).

In the same period, six occupational accidents were registered among employees who were working at Swissgrid construction sites and workplaces on behalf of a service provider. One of the accidents had fatal consequences and another accident led to serious health impairments. Swissgrid regrets these accidents and will continue to make every effort to prevent such incidents in the future, insofar as they are within its sphere of influence.

A total of 14 occupational accidents involving employees and external service providers therefore occurred at Swissgrid installations and sites. Extrapolated to 200,000 hours worked, this corresponds to an aggregated occupational accident rate of 0.68.

Occupational accidents involving Swissgrid employees ¹ (✓ PwC Assurance)	2024	2023	2022
Number of hours worked ¹	1,801,199	1,512,785	1,231,256
Number of occupational accidents	8	4	2
Deaths due to occupational accidents	0	0	0
Number of occupational accidents resulting in absence from work and serious health impairments ²	0	0	0
Number of occupational accidents resulting in absence from work and minor health impairments ³	1	0	0
Number of occupational accidents without absence from work	7	4	2
Occupational accidents per 200,000 hours worked (TRIF)	0.89	0.53	0.32
Occupational accident fatality rate ⁴	0	0	0
Rate of occupational accidents resulting in absence from work and serious health impairments ⁴	0	0	0
Rate of occupational accidents resulting in absence from work and minor health impairments ⁴	0.11	0	0
Rate of occupational accidents without absence from work ⁴	0.78	0.53	0.32

¹ Data shown for 927 Swissgrid employees, i.e. 100%.

² No recovery within six months or permanent impairment.

³ Recovery within six months.

⁴ The rate is calculated per 200,000 working hours.

Occupational accidents involving external service providers ¹ (✓ PwC Assurance)	2024	2023	2022
Number of hours worked ¹	2,333,930	n/a	n/a
Number of occupational accidents	6	5	17
Deaths due to occupational accidents	1	0	0
Number of occupational accidents resulting in absence from work and serious health impairments ²	1	0	2
Number of occupational accidents resulting in absence from work and minor health impairments ³	4	5	15
Number of occupational accidents without absence from work	0	0	0
Occupational accidents per 200,000 hours worked (TRIF)	0.51	n/a	n/a
Occupational accident fatality rate	0.09	n/a	n/a
Rate of occupational accidents resulting in absence from work and serious health impairments	0.09	n/a	n/a
Rate of occupational accidents resulting in absence from work and minor health impairments	0.34	n/a	n/a
Rate of occupational accidents without absence from work ⁴	0	n/a	n/a

¹ Data includes all companies contacted by Swissgrid, as well as accidents that occurred during work at Swissgrid construction sites and workplaces. The number of hours worked is based on extrapolations taking into account the contract volume for relevant service categories and the average hourly wage for service activities on behalf of Swissgrid.

² No recovery within six months or permanent impairment.

³ Recovery within six months.

⁴ The rate is calculated per 200,000 working hours.

Causes of occupational accidents: The most common cause of the 14 occupational accidents is «falls» (21%), followed by «overexertion», «colliding with objects», «flying parts/foreign objects» and «stepping on or into something» (14% each).

Cause of accidents (employees and service providers) (✓ PwC Assurance)	2024		2023		2022	
	Number	%	Number	%	Number	%
Falls	3	21%	1	11%	1	5%
Overexertion	2	14%	0	0%	1	5%
Tripping	1	7%	0	0%	2	11%
Colliding with objects	2	14%	2	22%	4	21%
Falling objects	0	0%	1	11%	2	11%

Cause of accidents (employees and service providers) (✓ PwC Assurance)	2024		2023		2022	
Becoming trapped	0	0%	0	0%	3	16%
Flying parts	2	14%	0	0%	2	11%
Stepping on or into something	2	14%	1	11%	3	16%
Being bumped into	0	0%	0	0%	1	5%
Hot parts and fabrics	0	0%	0	0%	0	0%
Injuries caused by animals	0	0%	0	0%	0	0%
Cuts or pricks	0	0%	4	44%	0	0%
Others	2	14%	0	0%	0	0%
Total	14		9		19	

Work-related illnesses: In the last four years (2021 – 2024), there have been no known work-related illnesses among the employees of Swissgrid or of service providers due to the performance of work for Swissgrid.

Key figures on work-related illnesses (✓ PwC Assurance)	2024	2023	2022
Number of deaths due to work-related illnesses of employees	0	0	0
Number of documentable work-related illnesses of employees	0	0	0
Number of deaths due to work-related illnesses of service providers	0	0	0
Number of documentable work-related illnesses of service providers	0	0	0



Purpose

This section covers security of supply and the energy transition.

Security of supply

See the [«Security of supply»](#) section of the Annual Report.

Energy transition

Energy production in Europe is undergoing a rapid transition from large centralised power plants to decentralised, renewable energy resources. Transmission and distribution grids are playing a vital role in this transformation. Firstly, they form the backbone for locally consumed, decentrally produced energy, for example by photovoltaic and hydropower plants. Secondly, they make it possible to connect remote production sites to consumer centres.

What is more, energy production from wind power and photovoltaic plants fluctuates because it is directly dependent on the weather. This makes it difficult to ensure the secure operation of the transmission grid, as energy volumes may be fed into the grid unexpectedly or the electricity available in the grid may be insufficient. Reliable forecasts of the expected volumes of energy produced at all levels of grid operations and an efficient transmission system are key prerequisites for the success of the energy transition.

Swissgrid is affected by the transition to decentralised energy production both as the operator of the Swiss extra-high-voltage grid and as part of the European interconnected grid. Close cooperation between operators at all grid levels, energy producers and consumers is crucial, both nationally and internationally. As the

number of private photovoltaic systems increases, so does the importance of companies and households as energy producers. They feed the energy they have produced directly into the local distribution grid, which is often the responsibility of a regional distribution grid operator. These grid operators will play a much more active role in the future as a result of the energy transition. Greater requirements will be placed on them, particularly with regard to the accuracy of feed-in and consumption forecasts.

In addition to the photovoltaic systems already mentioned, the other components that will play an important role in future grid operations include heat pumps and electricity storage systems, e.g. for electric vehicles. Heat pumps could be programmed to heat buildings at appropriate times, for instance, with the building itself acting as a heat accumulator. The water storage tanks in heat pumps could also serve as buffers. The batteries in electric vehicles can be used both as storage reserves for surplus volumes of energy and as a source of control energy. However, this is subject to technical prerequisites and necessitates intelligent grids (smart grids). Swissgrid calls its strategy for an intelligent transmission grid the «Grid of the future».

Switzerland plays a central role in the European interconnected grid. Firstly, the transmission grid is an important transit axis that also benefits Switzerland. Secondly, Switzerland is dependent on energy exchange with Europe both as a consumer (electricity importer) and as a producer (electricity exporter). The shift towards decentralised energy production is politically desirable both in Switzerland (Energy Strategy 2050) and in Europe, and is a necessity in order to achieve the decarbonisation of the energy system. As the operator of the Swiss transmission system, Swissgrid is supporting this change.

GRI 3-3

Ambition and goals

Swissgrid's aim is to support the transformation of the energy system in Switzerland and to guarantee grid-related security of supply regardless of the degree of integration into EU processes.

GRI 3-3

Management approach

The energy system in Switzerland and Europe is undergoing radical change. The rapid expansion of production from solar power and, in the future, from wind power, poses additional challenges for ensuring the uninterrupted and efficient operation of the extra-high-voltage grid. The electricity market in Switzerland no longer consists of a few large centralised power plants on the supply side and a large number of customers on the demand side. Huge numbers of smaller photovoltaic plants are becoming a significant production factor. Swissgrid is backing this development towards renewable energy resources through its flexible, data-based operation of the transmission grid and is thereby making its contribution to the energy transition.

To help bring about the transition, Swissgrid is implementing tools and measures in the following four areas:

- **Flexibility:** Swissgrid is committed to developing products that provide incentives for making sufficient flexibility available for secure grid operations at all times. This flexibility can also increasingly be provided by small, decentralised producers and consumers.
- **Forecasting capability:** Energy from wind and photovoltaic production is subject to continuous fluctuations. Swissgrid is working with its industry partners to develop reliable forecasting tools based on the exchange of relevant measurement data so that the transmission grid can be controlled efficiently at all times.
- **Infrastructure:** Swissgrid provides an efficient transmission grid that creates the best possible framework conditions for achieving the Confederation's Energy Strategy 2050 and the pan-European energy

transition.

- **Integration into Europe:** Swissgrid's goal is to continue to operate the Swiss extra-high-voltage grid in a secure and stable manner as part of the European interconnected grid. To achieve this, Swissgrid believes that an electricity agreement with the EU is essential.

GRI 3-3, 203-2

Measures and key figures

In the 2024 financial year, Swissgrid initiated and continued to drive forward the following measures to support the grid-related energy transition in Switzerland:

Photovoltaic (PV) forecasting

While the expansion of electricity generation from photovoltaics in Switzerland is progressing, the availability of data on electricity production from photovoltaic plants and forecasts is still lagging behind. This has an impact on the stability of grid operations and may oblige Swissgrid to use more control energy at higher costs in the short term in order to compensate for the imbalance between production and consumption. As a proactive measure to counter this difficulty, Swissgrid developed a PV forecasting model in the 2024 financial year that provides a solid data base for forecasts, nowcasts and backcasts with regional resolution (see also the [«Year in review»](#) section).

PV4Balancing

The aim of the PV4Balancing project is to harness the flexibility potential of photovoltaic plants in Switzerland to stabilise the grid in the future. To this end, Swissgrid launched a project with industry partners in the 2024 financial year to develop a new control power product that will allow the energy produced by photovoltaics to be used as control energy. A pilot project with initial applications in grid operations is planned for the current year. In the long term, the project could help to integrate a larger proportion of photovoltaic electricity generation into the grid whilst mitigating the challenges that volatile electricity production poses to grid stability.

Coordinated use of decentralised energy resources

Cooperation within the electricity sector is a key basis for ensuring the efficient and successful implementation of the Energy Strategy 2050. In the 2024 financial year, Swissgrid worked with industry partners to drive forward the development of a joint market for grid and ancillary services. The aim is to allow the deployment of flexible resources for stable grid operations in a coordinated manner in the future (see also the [«Year in review»](#) and [«Media release»](#) sections).

Innovation and digitalisation

The energy transition requires a robust transmission grid with sufficient capacity, minimal downtimes and stable grid operations. Innovation and digitalisation are vital if Swissgrid is to take a proactive approach to tackling the associated challenges. In the 2024 financial year, the company continued to drive forward innovative digitalisation projects to support the energy transition. These include the Pylonian project with Internet-of-Things sensors on pylons (see the «Year in review» section), the use of drones and AI to efficiently assess the condition of pylons ([insert link after publication of blog post](#)) and the digitalisation of system and operating data (see the «Year in review» section.)

Strategic Grid 2040

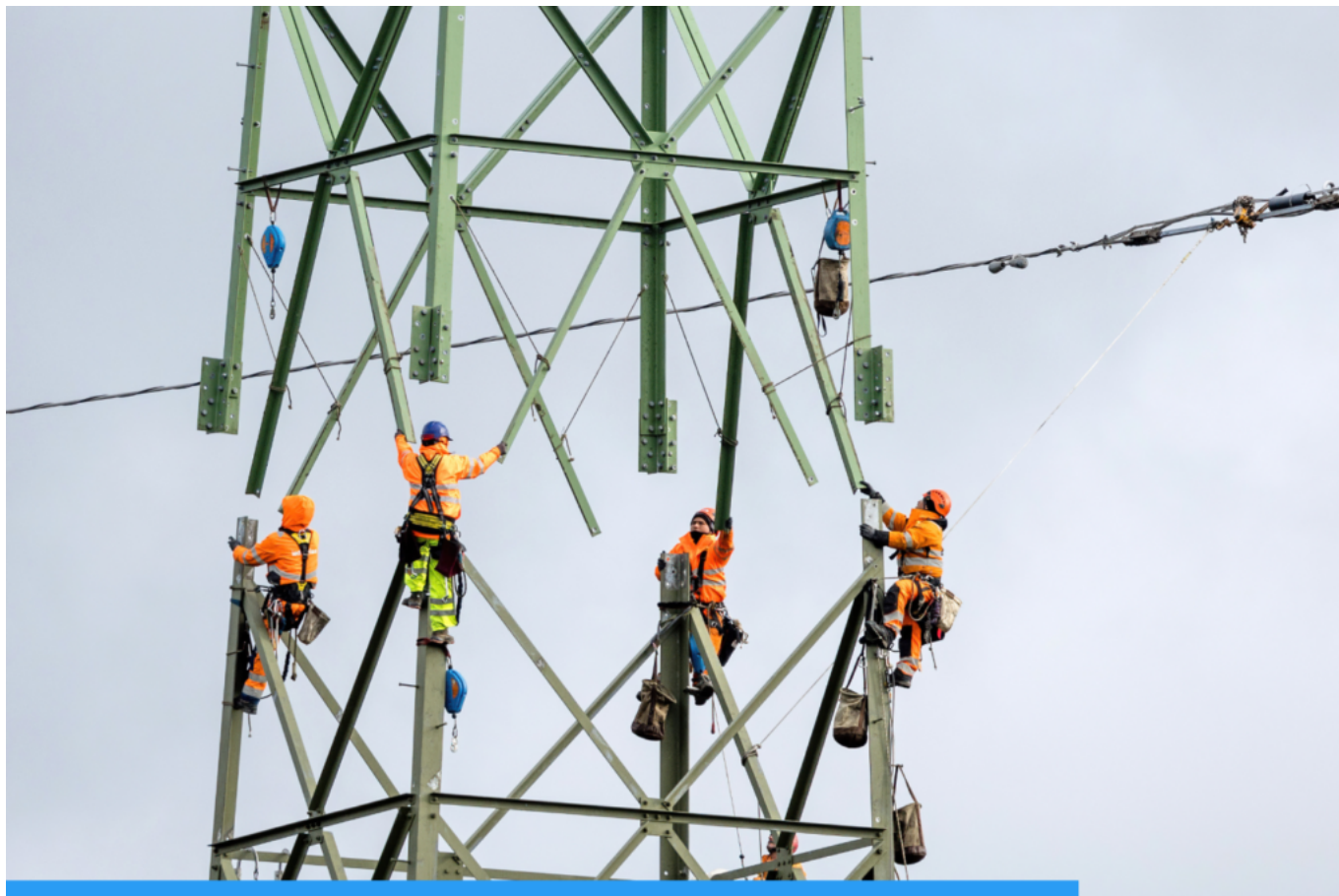
In the summer of 2024, Swissgrid finalised its planning of the Strategic Grid 2040 and submitted it to ElCom for review (see the «Year in review» section). One of the objectives of strategic grid planning is to identify the need for action on the grid side in order to transform the energy system. This will enable Swissgrid to make sure that the transmission grid continues to pave the way for the energy transition in the future.

Key figures for transported electricity volumes and control energy

The cross-border exchange of electricity plays a key role in ensuring security of supply and grid stability and in bringing about the energy transition. Swissgrid ensures the connection of the Swiss transmission grid with the European interconnected grid via 41 international interconnection lines and controls the exchange of electricity with neighbouring countries. In the 2024 financial year, the volume of imported electricity decreased slightly compared to the previous year, while export volumes increased by 19%.

In an energy landscape that is increasingly shaped by renewable production, the availability and use of control energy remain crucial for ensuring the stability and reliability of the supply of electricity. The control energy used by Swissgrid reflects the punctual imbalance between production and consumption. Real-time data and forecasting accuracy, especially in connection with photovoltaic production, are important factors for avoiding the use of large volumes of control energy at high costs. Although there were occasional peaks in the 2024 reporting year, the volumes of positive control energy (requests for production capacity) and negative control energy (reduction of production capacity) both decreased on average over the year.

Electricity volumes and control energy (GWh)	2024	2023	2022
Transported energy	69,609	74,134	74,414
Imported energy	25,262	27,017	32,695
Exported energy	39,175	32,888	28,762
Transit energy	22,155	21,591	23,134
Positive control energy	944	1,033	1,118
Negative control energy	550	694	754



Partnership

This section covers the topics of sustainable supply chain, integrity in corporate governance and stakeholder engagement.

Integrity in corporate governance

The operation of the transmission grid is of great social and economic importance. Ensuring responsible corporate governance, acting in accordance with ethical business practices and complying with legal obligations and internal standards are key concerns for Swissgrid. Behaving with integrity and fairness is the basis for dialogue between Swissgrid and its employees, business partners and the public.

GRI 3-3

Ambition and goals

The Code of Conduct sets out Swissgrid's ambition and principles of integrity in corporate governance. The aim is to ensure that Swissgrid and its employees always act responsibly, professionally and credibly to guarantee a secure and sustainable supply of electricity both now and in the future. To put this ambition into practice in operations, compliance with the Code of Conduct, the statutory provisions and the Articles of Incorporation, internal regulations and directives is crucial. Swissgrid has therefore set itself the goal of ensuring that all employees are familiar with and act according to the relevant principles, and that no significant compliance violations occur.

GRI 2-16, 2-24, 2-25, 2-26, 2-27, 3-3, 205-1

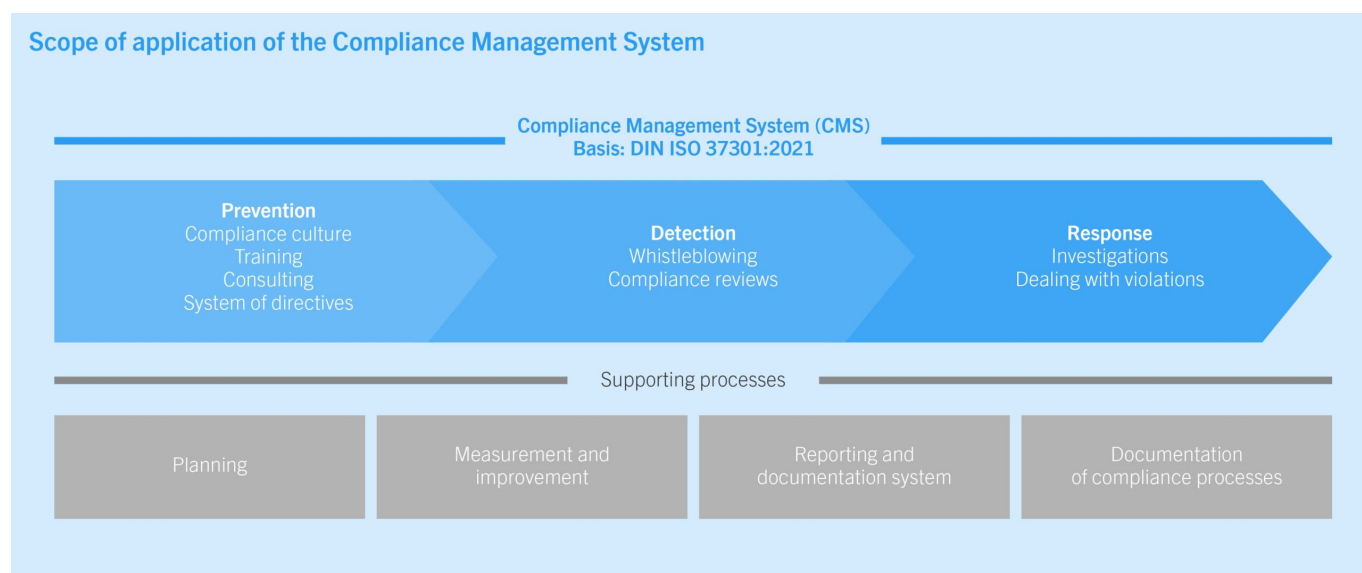
Management approach

As part of Swissgrid's dual materiality analysis, the following subtopics were considered and analysed within integrity in corporate governance: corporate governance, corruption and conflicts of interest, compliance, and political commitment and lobbying. The effects and risks associated with non-compliance with laws and corruption risks in the context of procurement were classified as material. This is due to the potential effects on the quality and costs of the grid infrastructure and ancillary services provided by Swissgrid, as well as to the legal, financial and/or reputational risks for the company.

Governance and responsibilities

Swissgrid's Board of Directors is responsible for overseeing integrity in corporate governance as part of its overall responsibility. As part of the corporate governance structure, it has various monitoring, control and audit functions to ensure compliance with regulatory and internal provisions (see the «[Sustainability at Swissgrid](#)» section). A functioning compliance system within the company is essential in order to monitor and ensure compliance with legal requirements, internal guidelines and ethical standards and to minimise the risks of legal or financial consequences and protect the company's reputation.

The responsibilities, structures and processes related to integrity in corporate governance and compliance are based on the «three-line model» (see the «[Sustainability at Swissgrid](#)» section). As a second-line governance domain, the Compliance function establishes and operates a compliance management system to help the Board of Directors and the Executive Board to ensure that the applicable legal framework is observed and ethical principles are adhered to. Swissgrid's compliance management system is based on ISO 37301:2021-11. It comprises activities and measures in the three main areas of prevention, detection and response. Based on a regular compliance risk assessment, the compliance concept defines the responsibilities and focal points (legal areas). The Compliance function also reports regularly on its activities and measures to the Executive Board and the Board of Directors' Finance and Audit Committee (FPA).



Swissgrid Code of Conduct

The [Code of Conduct](#) approved by the Board of Directors forms the basis for ethical corporate governance with integrity. It describes the key principles and values that guide the actions of Swissgrid and its employees in relation to the law. It also applies to the members of the Board of Directors and the Executive Board, as well

as to external employees of staff leasing companies.

The following principles and values set out in the Code of Conduct (current version dated 1 July 2023) form an integral part of Swissgrid's business culture:

- Ethical principles: protecting personal integrity, non-discrimination, fairness, professionalism and transparency to promote responsible and fair behaviour.
- Compliance with specifications: ensuring compliance with legal and internal regulations.
- Conflicts of interest: avoiding and dealing with conflicts between personal and business interests.
- Confidentiality of company information: protecting confidentiality and ensuring the responsible handling of sensitive and confidential data.
- Internal and external information: ensuring timely, transparent and responsible communication within the company and with external stakeholders.
- Professional and financial integrity: protecting and ensuring appropriate, professional use of company assets by employees.
- Bribery and corruption: adopting a clear position against any form of bribery, corrupt behaviour or incorrect handling of gifts and invitations, and an obligation to report breaches.
- Occupational health and safety: promoting a safe and healthy working environment, in particular by means of prevention, training and information.
- Sustainability and social responsibility: committing to energy efficiency and environmental protection, as well as social responsibility and dialogue with interest groups.
- Reporting and dealing with misconduct: applying processes for recognising, reporting and handling violations and protecting whistleblowers.

The Code of Conduct can be consulted by employees on a comprehensive information page that explains the importance of compliance and how it is organised at Swissgrid. All Swissgrid employees undergo training on the Code of Conduct and must confirm that they have read it. Violations of the principles of the Code of Conduct and the guidelines are not tolerated, are viewed as misconduct and are penalised by Swissgrid.

The Code of Conduct is supplemented by internal directives on specific topics, which are approved by the Swissgrid Executive Board. Directives relevant to integrity in corporate governance include the directive on gifts and invitations (see below), data protection (see below), procurement (see the [«Sustainable supply chain»](#) section), fair behaviour and transparency on the wholesale energy and financial markets (see below), protection of personal integrity in the workplace (see the [«Employer attractiveness»](#) section) and the internal control system for financial accounting (see the [«Corporate Governance Report»](#)).

Anti-corruption

As the owner of the Swiss transmission grid, Swissgrid awards significant contract volumes and attaches great importance to combating corruption. When assessing the risk of corruption, Swissgrid is guided by ISO 37001:2016 and takes into account the risks identified as part of the ERM process and risk-based reviews. The Executive Board has issued directives for all employees on «Gifts and invitations» and «Procurement of supplies, services and construction work» in order to reduce the risk of corruption. Compliance with anti-corruption requirements is verified annually by means of a compliance review. This was also the case in the 2024 financial year.

For the purposes of procurement, the awarding of high-value contracts (CHF 50,000 or more) is reviewed jointly by evaluation teams, and the parties involved must declare their impartiality. The members of the evaluation team must confirm that they are impartial, disclose any conflicts of interest and recuse themselves

if necessary. The awarding of high-value contracts is supervised by specially trained procurement managers, and support is provided by the internal legal service if required. In addition to price criteria, Swissgrid's tenders always include quality criteria. Price negotiations (bidding rounds) are not permitted under public procurement law. The signature regulations provide for the collective signature of the employees and also link the authority to sign to the order value. A dual control principle, at a minimum, applies to the placing of orders and the initiation of payments.

Insider trading and market manipulation

Swissgrid has access to sensitive business and market data from its own operations and from contractual partners. To prevent insider trading and market manipulation in the financial and electricity markets, Swissgrid has taken measures and regulated the handling of information and insider information in its Code of Conduct and in specific directives on the classification of information and on fair behaviour and transparency in the wholesale energy and financial markets. The employees concerned are trained in these requirements, and compliance controls are implemented. There are authorisation concepts, roles and information barriers in place. Swissgrid also reduces the amount of potential insider information by means of rapid publication and transparency.

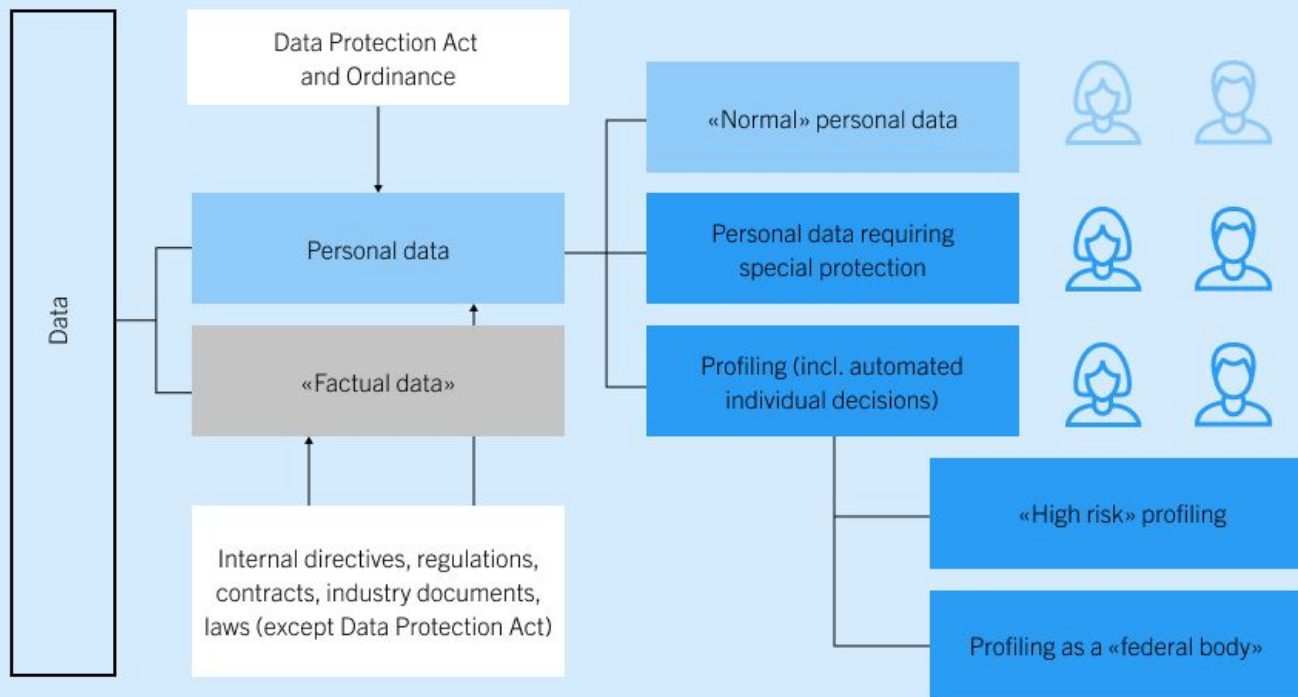
Furthermore, Swissgrid joined the FX Global Code in the 2024 financial year. The FX Global Code is an international code of conduct that sets principles for fairness, transparency and integrity in foreign exchange trading. Thanks to its membership, Swissgrid is undertaking to observe these standards and strengthening confidence in its trading practices. This will allow the company to contribute to a responsible and stable financial market.

Data protection

Swissgrid has various internal specifications on how to handle data (material and personal data), particularly the company directives on data governance, information security and cyber security, information classification and data protection. The directive on data protection forms the basis for the implementation of the new Federal Act on Data Protection (nFADP). The purpose of the nFADP is to protect the privacy and fundamental rights of natural persons whose personal data is processed. The following diagram gives an overview of the types of data and the applicable protection rules at Swissgrid.

Since August 2023, Swissgrid has had a dedicated data protection advisor who acts as a contact person for data protection issues and clarifications, and serves as a point of contact for data subjects (e.g. for requests for information, changes and deletion).

Data protection policy



Whistleblowing Policy

The Board of Directors of Swissgrid has issued a Whistleblowing Policy to enable reports of serious violations of external and internal regulations to be submitted. The Whistleblowing Policy is based on DIN ISO 37002:2021 in particular. The Whistleblowing Policy ensures that employees can report any serious offences to a confidential reporting office without fear of any negative consequences. It also stipulates that the investigative body that forms part of the Compliance department will follow up and investigate these leads in a structured and confidential manner. There is an external reporting channel that gives employees the opportunity to report violations anonymously. Since mid-2024, third parties/external persons have also been able to report misconduct via this [channel, which is available to the public](#).

Following up on reports or indications of breaches

The Compliance function is obliged to investigate all reports of serious breaches of internal or external regulations, including whistleblowing reports. It also examines indications of breaches obtained in the course of compliance reviews, which are conducted on an ongoing basis. Together with the Head of Legal, Regulatory & Compliance, it conducts a preliminary investigation to assess whether there is sufficient initial suspicion and whether the mandate for an investigation should be requested from the CEO or the Chairman of the Board of Directors. All information in connection with investigations must be treated confidentially, and the work carried out and the results of the investigation must be documented.

Processing of violations

Violations must be dealt with after an investigation. This encompasses two aspects:

- Violations have consequences that depend in particular on the seriousness of the offences and the degree of fault of the offender or the employee. The extent of the consequences is determined by the HR

department in consultation with the supervisor on a case-by-case basis.

- In order to prevent identical or similar violations, directives must be adapted, additional control measures introduced, processes revised and/or additional training carried out, depending on the case. In this way, compliance management is continuously developed and adapted to the latest needs and risks.

Reporting to the Board of Directors

Each year, the Compliance function prepares a comprehensive report for the CEO on its activities, significant observations and the resulting recommendations. The report also covers potentially critical matters that are brought to the attention of the Board of Directors' FPA in the annual compliance report.

The Head of Compliance is obliged to inform the CEO immediately if facts or circumstances are discovered that significantly jeopardise Swissgrid and/or the achievement of its objectives. The Head of Compliance reports to the CEO and the FPA on material misappropriations or cases of fraud. The Head of Compliance is also obliged to inform the Chairman of the Board of Directors immediately of any whistleblowing reports concerning the behaviour of the CEO and/or members of the Executive Board.

GRI 2-16, 2-27, 3-3, 205-1, 205-1, 205-2, 205-3, 206-1, 406-1, 416-2

Measures and key figures

Compliance review on corruption

A compliance review on corruption was carried out at Swissgrid's operating site (100%) again in the 2024 reporting year. There were no specific findings (i.e. no potential or confirmed incidents of corruption) and no follow-up measures, for example in the form of warnings or dismissals of employees or cancellations of contracts with business partners.

Directive on gifts

The revised directive on gifts and invitations, which has been adapted to current standards, came into force on 1 February 2024. A number of principles such as the value, timing and frequency of gifts must be taken into account. This directive represents a key measure for combating corruption.

Compliance training on corruption

In the 2024 financial year, all employees were given training on corruption prevention and the revised directive on gifts and invitations by means of a comprehensive e-learning programme. In addition, Swissgrid organised personal compliance training sessions for individual teams in which forms of corruption were discussed and the limits for gifts and invitations were explained using examples.

Awareness and training on corruption	2024		2023		2022	
	Number	%	Number	%	Number	%
Members of the Board of Directors and employees who have been informed of anti-corruption policies and procedures ¹	936	100%	862	100%	745	100%
Board of Directors	9	100%	9	100%	9	100%
Executive Board (EB)	5	100%	5	100%	5	100%
Managers excl. EB	114	100%	112	100%	93	100%
Employees without a management function	740	100%	681	100%	597	100%
Employees in training or paid by the hour	68	100%	55	100%	41	100%
Members of the Board of Directors and employees who have received anti-corruption training ²	925	99%	727	84%	119	16%
Board of Directors	9	100%	0	0%	2	22%
Executive Board (EB)	5	100%	0	0%	0	0%
Managers excl. EB	114	100%	97	87%	4	4%
Employees without a management function	740	100%	592	87%	106	18%
Employees in training or paid by the hour	57	84%	38	69%	7	17%

¹ This includes the total number of employees and members of the Board of Directors who were informed up to and including the reporting year. This means that the time of acknowledgement is not limited to the reporting year.

² The date of training relates to the reporting year; this is in contrast to the acknowledgement (see footnote ¹).

No reports or violations of corruption and data protection: in the 2024 financial year, there were no reports or judgements on cases of corruption at Swissgrid. Furthermore, no complaints about breaches of data protection or cases of data theft and loss in connection with customer data were reported to or identified by the data protection advisor.

No significant compliance violations: no significant judgements were brought against Swissgrid in the 2024 financial year for compliance violations. Nor were there any judgements in connection with violations due to negative environmental or social impacts or unfair business activities, including corruption. No significant monetary fines were paid out during this period. An amount of CHF 10,000 was defined as the materiality threshold for reporting. No critical matters due to legal judgements were identified in 2024 and therefore none were brought to the attention of the Board of Directors.

Compliance key figures	2024	2023	2022
Significant ¹ violations of laws and ordinances (including monetary and non-monetary sanctions)	0	0	0
Fines paid or deferred for significant ¹ violations committed in previous years	0	0	0
Whistleblowing reports	1	2	1

Compliance key figures	2024	2023	2022
Reports concerning discrimination	0	0	0
Reports concerning harassment	0	0	0
Reports concerning conflicts of interest	0	1	0
Reports concerning confidentiality of information	0	1	0
Reports concerning financial integrity	1	0	1
Reports concerning corruption	0	0	0
Reports concerning other issues	0	0	0
Number of cases in which an investigation was initiated	0 ²	0	0
Number of cases confirmed	0	0	0
Number of whistleblowing cases in which disciplinary measures were taken	0	0	0

¹ An amount of CHF 10,000 was defined as the materiality threshold for reporting. This includes significant violations in connection with environmental and social issues.

² Investigations were not initiated because it was a minor case without sufficient initial suspicion of a breach of the law by employees.

Sustainable supply chain

In today's globally networked economy, companies are increasingly obliged to ensure responsible treatment of people and the environment not only in their own operations, but along the entire value chain. The inclusion of social and ecological aspects in the procurement of goods and services is an important lever for fulfilling this responsibility. As a major issuer of contracts in Switzerland with a public mandate, Swissgrid is aware of its special economic and social responsibility and attaches great importance to a sustainable supply chain. Swissgrid therefore takes ecological and social criteria into account in its procurement process in addition to price and quality.

GRI 2-23, 2-24, 3-3

Ambition and goals

Establishment of sustainability in procurement

Swissgrid fulfils its environmental, social and economic responsibility along the value chain. To this end, Swissgrid integrates sustainability into its procurement processes and fulfils its duty of care to respect human rights and protect the environment along the supply chain. Swissgrid sets out this ambition in its annual corporate objectives: for the 2024 financial year, Swissgrid set itself the goal of incorporating sustainability into more than 80% of public procurement contracts for goods and services and developing new sourcing strategies that include greenhouse gas GHG reductions.

Respect for human rights at Swissgrid and along the supply chain

Swissgrid is committed to respecting human rights in all its business activities in accordance with Article 35 of the Swiss Federal Constitution and internationally recognised regulations. These include, in particular, the UN Universal Declaration of Human Rights, the UN Guiding Principles on Business and Human Rights, the ILO Declaration on Fundamental Principles and Rights at Work and the associated ILO core labour standards, as well as the ten principles of the UN Global Compact.

For Swissgrid, the obligation to respect human rights includes the following fundamental principles:

- Swissgrid rejects all forms of child labour, forced labour, human trafficking and illegal employment.
- Swissgrid recognises the right to freedom of assembly, collective bargaining and freedom of expression.
- Swissgrid is committed to fair and non-discriminatory remuneration. Swissgrid recognises the right to fair, healthy and safe working conditions.
- Swissgrid protects the personal integrity of its employees.
- Swissgrid rejects all forms of discrimination, bullying, sexual and non-sexual harassment.

Swissgrid expects this commitment to respect human rights to be upheld throughout the company and along the upstream value chain. It applies to all Swissgrid employees, members of the Executive Board and Board of Directors, external employees and suppliers. This means that Swissgrid also expects its suppliers to undertake to respect human rights and to fulfil their due diligence obligations along the upstream supply chain (see the [Swissgrid Sustainability Charter](#)).

Management approach

As the national grid company, Swissgrid is subject to the Federal Act and Ordinance on Public Procurement Law (PPA/PPO). The company therefore takes into account the objectives of public procurement in its tenders, and in particular the economically, environmentally and socially sustainable use of public funds. The legal provisions are put into practice in operations by means of internal directives and regulations on the implementation of procurement procedures, including specifications on avoiding conflicts of interest, unauthorised competition agreements and corruption (see the [«Integrity in corporate governance»](#) section).

Swissgrid has set out its sustainability expectations for suppliers and the management principles for the fulfilment of due diligence in the [Sustainability Charter](#), the supply chain policy for exercising due diligence in the area of [human rights](#) and the [guiding principles for sustainability](#).

GRI 2-23, 2-24, 205-2

Code of Conduct for Suppliers

Swissgrid requires providers in the qualification phase (i.e. prior to submitting an offer) to sign and commit to the principles set out in the Swissgrid Sustainability Charter. This is a prerequisite for being allowed to take part in a tender for contracts worth over CHF 150,000. This means that Swissgrid's suppliers undertake to respect human rights, protect health and safety, fairly compensate their employees, combat corruption and protect the environment. Suppliers also agree to reduce their GHG emissions and waste, and to strive to preserve biodiversity and natural resources. In addition, Swissgrid requires its suppliers to oblige their subcontractors to comply with the 13 sustainability principles set out in the charter. In the 2024 financial year, 97% of the 119 suppliers who entered into a contract during the reporting period signed the Sustainability Charter with binding effect. The remaining 3% of suppliers are expected to sign the charter at the beginning of the 2025 financial year.

The Sustainability Charter also stipulates that suppliers must report any incidents, behaviour or other circumstances that constitute, could be regarded as or could lead to a breach of the sustainability principles. Accidents, near-accidents and environmental incidents in connection with service fulfilment etc. must be reported to Swissgrid. Compliance with the Sustainability Charter can be verified by Swissgrid or by third parties commissioned by Swissgrid by various means, including on-site inspections. In the event of a breach of the principles of the Sustainability Charter, Swissgrid may also take steps as outlined in the contractual provisions.

GRI 2-23, 2-24, 406-1, 407-1, 408-1, 409-1

Due diligence in the area of human rights

To supplement the Sustainability Charter, the Board of Directors approved the supply chain policy for exercising due diligence in the area of human rights at the beginning of the 2025 financial year. The aim of the supply chain policy is to identify, assess, avoid and minimise potential and actual risks in relation to human rights along the value chain. The supply chain policy applies to Swissgrid and its main suppliers and will be introduced and made binding during the 2025 financial year.

The supply chain policy meets the requirements of the Swiss «Ordinance on Due Diligence and Transparency in relation to Minerals and Metals from Conflict-Affected Areas and Child Labour (DDTrO)». In accordance with Art. 11 para. 3 DDTrO, the supply chain policy is based on ILO Conventions 138 and 182, the ILO-IOE Child Labour Guidance Tool for Business of 15 December 2015, the OECD Due Diligence Guidance for Responsible Business Conduct of 30 May 2018 and the UN Guiding Principles on Business and Human Rights.

Swissgrid exercises due diligence in the area of human rights by following a risk-based management system with the following core elements:

Risk analysis

In accordance with the supply chain policy, Swissgrid conducts regular and ad hoc risk analyses to identify, assess, prioritise and review potential and actual human rights risks along its supply chain. Swissgrid assesses potential risks based on the severity of the potential extent of damage and the probability of occurrence. Risks are analysed and monitored taking into account several sources of information, including databases with relevant indicators, such as the UNICEF Children's Right in the Workplace Index, information from suppliers, independent assessments of commitment to sustainable supply chains by experts, internal or external indications or reports as part of the reporting process, specialist literature and information from the authorities, international organisations and civil society.

Risk-based measures for prevention and mitigation

Swissgrid implements risk-based measures to prevent, avoid or minimise negative impacts on human rights along its supply chain. These measures are designed based on the risk analysis, taking into account the effectiveness, efficiency, potential influence and level of involvement. Swissgrid focuses on both preventive and remedial measures. The tools that Swissgrid can use for eliminating or minimising potential risks include certifications, training, active supplier management, collaboration with suppliers, and partnerships with relevant stakeholders and technical experts. If human rights violations are identified along the supply chain, the business relationship in question may be suspended or terminated prematurely.

Reporting procedure

Suppliers, business partners, employees and other external persons have the opportunity to report concerns or suspicions relating to human rights, including child labour, within the supply chain via the publicly accessible «Swissgrid whistleblower system». Further information on the reporting procedure can be found in the «Integrity in corporate governance» section.

Regular review

The effectiveness of the management system will be regularly reviewed in the future and adapted if necessary. This includes documenting and checking the effectiveness of the measures implemented and incorporating empirical values into the regular risk analyses.

GRI 3-3, 308-2, 407-1, 408-1, 409-1

Potential impacts and risks identified along the supply chain

In the 2024 financial year, Swissgrid reviewed and updated the analysis of the potential direct and indirect impacts on people and the environment along its supply chain and the resulting risks for Swissgrid in its dual materiality analysis, the ERM process, and an analysis focussing on compliance with human rights. Although Swissgrid has identified various social and environmental risk areas along its supply chain, based on the due diligence checks carried out and the evaluation of the reports received by Swissgrid's whistleblower system, there is no reasonable suspicion of a violation of human rights (including child labour) in connection with

products or services procured by Swissgrid.

Potential negative impacts on the environment: as part of the dual materiality analysis (see the section on «Sustainability at Swissgrid»), the material flow analysis (see the section on the «Circular economy») and the survey of Scope 3 GHG emissions, Swissgrid has identified the most important product groups with regard to their environmental footprint along the entire life cycle. They include transformers, conductors, cables, switchgears, concrete and steel. In addition, Swissgrid has identified and evaluated potential negative externalities in relation to the upstream production process of the purchased products and services. The risk of inadequate environmental management systems of direct and indirect suppliers, which can lead to negative environmental externalities, was identified as material. Examples include the release of environmentally hazardous substances into the air, water or soil, high GHG emissions or energy consumption from non-renewable sources, the improper disposal of waste and the extraction of abiotic and biotic raw materials.

Potential negative impacts on people and society: as part of the ERM process, Swissgrid has classed the risk of personal accidents on installations as a very high business risk. This applies to employees of Swissgrid and of external service providers (see the «Occupational health and safety» section).

In the 2024 financial year, Swissgrid also updated its risk analysis with regard to compliance with human rights along its supply chain. This was based on the country risks of the production sites for Swissgrid's most important grid components and the major export countries for critical raw materials used in these components, including copper, aluminium, steel, zinc, nickel and cobalt. The risk analysis focused on child labour, forced labour, freedom of association, occupational health and safety, discrimination, remuneration and working hours, and was carried out using qualitative expert assessment and quantitative data.

The result shows that the potential risks in relation to Swissgrid's direct suppliers are low for the majority of grid components, with the exception of one production site in Latin America for one of the subcomponents. As part of the country risk analysis, potential risks in relation to working conditions (remuneration and working hours) were rated highest. Other sector-agnostic country risks were found relating to child labour, forced labour, freedom of association and occupational safety. The UNICEF Children's Rights Index recommends increased due diligence for the country concerned in order to analyse and mitigate the risks in greater depth. The potential risks are at least partially mitigated by the fact that the results of an external assessment showed that the supplier in question has advanced sustainability systems in place in various areas, including labour and human rights. Swissgrid is also planning to conduct a detailed risk analysis of its supply chain for the 2025 financial year in order to define further risk-based measures.

Overall, the environmental and social risks in relation to Swissgrid's direct suppliers were deemed to be lower than the potential risks from upstream, indirect suppliers. This is primarily due to the prevalence of suppliers from Switzerland and neighbouring EU countries with a high level of protection, strict regulatory framework and correspondingly lower country risks.

Measures and key figures

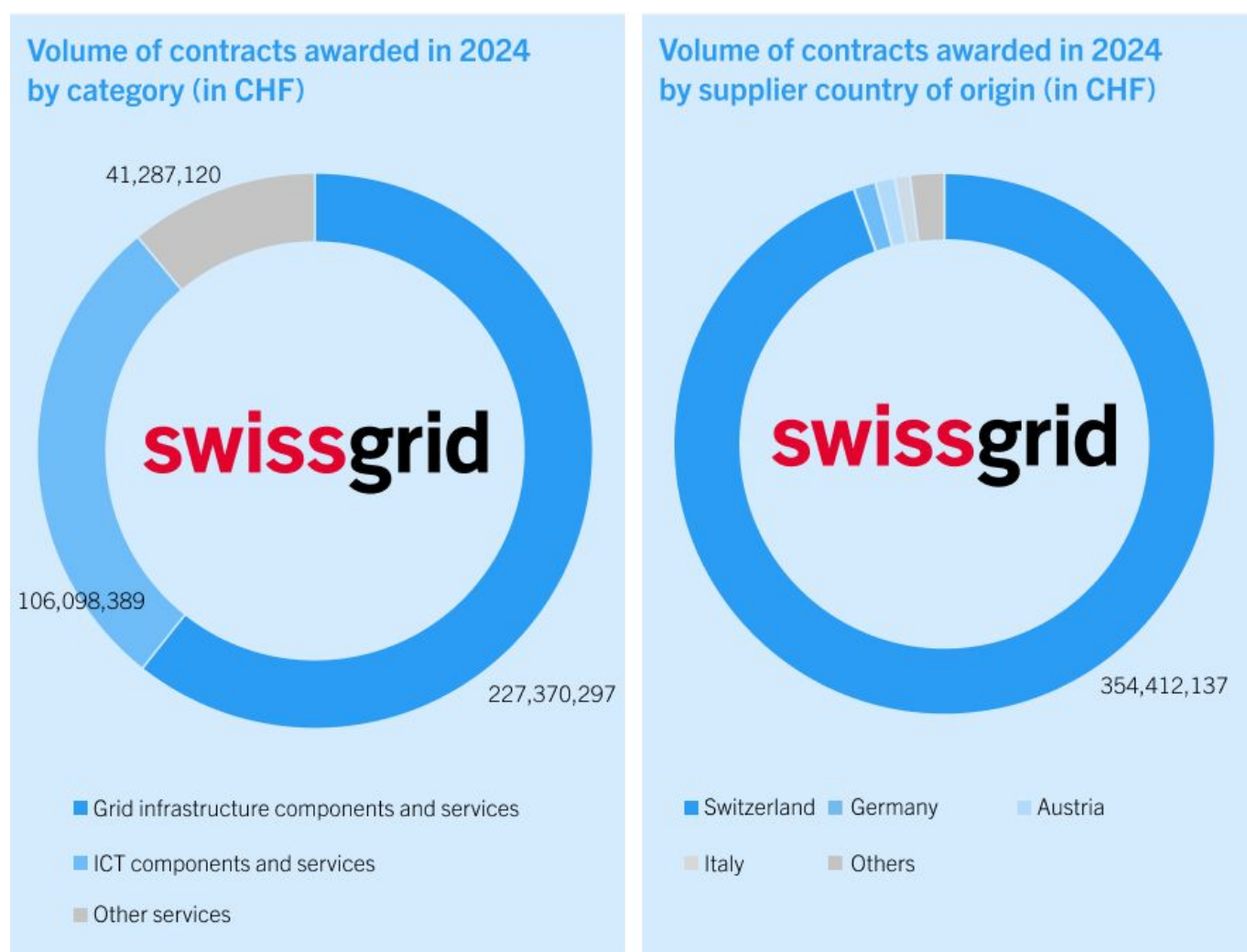
Swissgrid implements risk-based measures to prevent, avoid or minimise negative social and environmental impacts along its supply chain, with a focus on suppliers with a contract value of CHF 150,000 or more. These measures are designed based on the results of the risk analyses, taking into account the effectiveness, efficiency, potential influence and level of involvement of Swissgrid. Swissgrid implements risk-based preventive and remedial measures as well as measures to reduce the environmental footprint of the products purchased.

GRI 2-6, 203-1, 204-1, 308-1, 414-1

Swissgrid's supplier portfolio

To fulfil its statutory mandate, Swissgrid procured goods and services representing a contract volume of CHF 375 million in the 2024 financial year. New contracts were awarded to 119 suppliers, 22 of whom are working with Swissgrid for the first time. Services and components for the grid infrastructure accounted for around 61% of the volume of contracts awarded in 2024. Innovations in connection with the digitalisation and automation of processes and data are essential in order to meet the growing demands in relation to secure grid operation in an increasingly complex and volatile environment,. Consequently, contracts for services and components in the ICT sector accounted for around 28% of the procurement volume awarded in 2024. The remaining contracts concerned the various services necessary for the performance of Swissgrid's legal mandate.

Around 95% of the volume of contracts awarded, i.e. CHF 354 million, was accounted for by 105 local suppliers based in Switzerland, followed by suppliers from Germany, Austria and Italy (3% of the volume of contracts awarded).



Swissgrid has a qualification process in place to carry out an initial assessment of new suppliers. Swissgrid also carries out risk-based checks to ensure the availability of relevant certifications in the areas of quality management, environmental management, occupational health and safety and/or energy management (ISO 9001, ISO 14001, ISO 45001, ISO 50001, Safety Culture Ladder). The necessary certification depends on the

product group and may be a prerequisite for participation in Swissgrid's open tenders.

Audits of new suppliers according to environmental and/or social criteria in the 2024 financial year	Number	Proportion
Total new suppliers*	119	100%
of which were audited according to environmental criteria	65	55%
of which were audited according to social criteria	46	39%

* New suppliers are suppliers who concluded a contract with Swissgrid during the 2024 financial year.

GRI 308-2, 414-2

Screening of suppliers for potential negative environmental and social impacts

As part of its risk analysis, Swissgrid has tasked an independent, specialised agency with assessing the sustainability performance of its suppliers and providers since the beginning of 2023. Four areas are evaluated: the environment, labour and human rights, ethics, and sustainable procurement. Participation in this assessment process is voluntary, but is partly taken into account in the open selection procedure for suppliers. As of December 2024, a total of 127 suppliers have been subjected to a current sustainability assessment by Swissgrid. In the 2024 financial year, orders totalling CHF 153 million were placed with 98 of the 127 suppliers with a sustainability rating. This corresponds to around a third of the total order value from the 2024 financial year.

Of the 98 evaluated suppliers with whom orders were placed in the 2024 financial year, 56% have a good, advanced or above-average sustainability rating, while 35% have a partially satisfactory and 9% an unsatisfactory rating. The number and proportion of suppliers with an unsatisfactory environmental rating is higher than in relation to labour and human rights. An unsatisfactory rating does not mean that significant negative effects materialise. However, the risk of potential negative effects is significantly higher for these companies.

Examples of the identified environmental aspects that need to be addressed include the implementation of measures to reduce energy consumption and GHG emissions, reporting and/or documentation with regard to the management system for waste, materials and/or chemicals, or the preparation of environmental guidelines. Aspects that need to be improved on in labour and human rights include the publication of documented guidelines, measures and/or key figures on working conditions, human rights and/or diversity, equality and inclusion.

Key figures on environmental assessments carried out in the 2024 financial year:

Assessment of potential environmental impacts	Number of suppliers*	Proportion of suppliers evaluated
Suppliers assessed for environmental impacts	98	100%
of whom obtained a good, progressive or above-average environmental rating	76	78%
of whom obtained a partially satisfactory environmental rating	10	10%
of whom obtained an unsatisfactory environmental rating	12	12%
Suppliers identified as having significant actual negative environmental impacts	0	0%
Suppliers identified as having significant potential negative environmental impacts	12	12%
Suppliers asked to make improvements as a result of the evaluations	0	0%
Suppliers whose business relationship was terminated due to negative evaluations	0	0%

* Suppliers who received an order from Swissgrid in the 2024 financial year and have a current sustainability assessment.

Key figures on assessments carried out in the area of labour and human rights in the 2024 financial year

Assessment of potential social impacts	Number of suppliers*	Proportion of suppliers evaluated
Suppliers assessed for impacts with regard to labour and human rights	98	100%
of whom obtained a good, progressive or above-average labour and human rights rating	84	86%
of whom obtained a partially satisfactory assessment labour and human rights rating	11	11%
of whom obtained an unsatisfactory labour and human rights rating	3	3%
Suppliers identified as having significant actual negative impacts with regard to labour and human rights	0	0%
Suppliers identified as having significant potential negative impacts with regard to labour and human rights	3	3%
Suppliers asked to make improvements as a result of the evaluations	0	0%
Suppliers whose business relationship was terminated due to negative evaluations	0	0%

*Suppliers who received an order from Swissgrid in the 2024 financial year and have a current sustainability assessment.

GRI 308-2, 414-2

Risk-based inspections of supplier activities in the area of occupational safety and environmental protection

For contract management purposes, Swissgrid also carries out risk-based inspections of service providers who carry out work on Swissgrid systems. These inspections focus on compliance with occupational safety and environmental protection requirements in order to identify and eliminate the relevant risks. In addition, Swissgrid organises annual training courses on occupational safety for its external grid system operators.

HSE inspections and training of service providers on Swissgrid systems in the 2024 financial year	Number
HSE inspections of work carried out by suppliers/service providers	370
Service providers whose work was audited	103
Service providers with identified HSE violations	32
Service providers with whom corrective measures were agreed upon	32
Service providers whose contracts were cancelled due to violations	0

Dedicated training courses on occupational safety
carried out with external grid system operators
(service providers) of Swissgrid

3

Inclusion of sustainability criteria to improve the environmental and social footprint

In line with its ambition and goals, Swissgrid integrates environmental and social aspects as suitability and/or award criteria into tenders for the procurement of products and services. The specific criteria and their weighting are defined depending on the product group and taking into account the market situation, volume and potential risks. Examples of the criteria applied include:

Energy efficiency criteria

Swissgrid applies energy efficiency criteria in the procurement of selected components and operating equipment. These criteria include the capitalisation of active power losses in the selection of transformers, including the application of a bonus/malus incentive system, the assessment of losses in the procurement of overhead lines, the establishment of maximum loss rates for equipment with SF6 and of maximum permissible energy consumption values for SAS devices, as well as the availability of energy efficiency certificates when procuring IT products (e.g. Energy Star or Blue Angel). Wherever possible, compliance with the calculated energy efficiency specifications for grid components is checked on site by Swissgrid as part of factory acceptance tests.

Criteria with reference to GHG emissions

When assessing selected grid components, Swissgrid takes into account the availability of life cycle assessment calculations in accordance with recognised international standards. The aim is to systematically request the CO₂ footprint of the products offered by suppliers for key products in the future and to take this into account using a comparable assessment methodology. Other award criteria used by Swissgrid that are relevant to the GHG emissions along the supply chain include the proportion of renewable energy used in the manufacture of the product to be procured (conductors, underground cables or high-voltage cables); the existence of measures to reduce emissions; and the existence of calculations of GHG emissions and/or reduction targets.

Social criteria

Swissgrid took the following social criteria into account in procurements concluded in the 2024 financial year: number and severity of occupational accidents with lost working days, existence of guiding principles and risk assessments on occupational safety, and the implementation of measures to fulfil social responsibility and support employees. Copper Mark certification is also required as an additional criterion for the procurement of selected conductors. The aim of the certification is to ensure that suppliers of end products containing copper encourage and demand responsible social and environmental operating practices along their value chain.

Swissgrid has exceeded its corporate goal with regard to sustainable procurement: in the 2024 financial year,

Swissgrid took at least one sustainability criterion into account in more than 98% of open and invitation tender procedures in accordance with public procurement law. In 150 tenders, providers were evaluated according to environmental sustainability criteria, while social sustainability criteria were applied in 144 tenders. In several tenders, both environmental and social requirements were demanded as suitability and/or award criteria.

Use of sustainability criteria in tenders	Number
Total tenders carried out (contract value > CHF 150,000)	153
of which tenders* with environmental sustainability criteria	150
of which tenders* with social sustainability criteria	144

* Invitations to tender in open and invitation procedures.

Partnership with other transmission system operators

Along with nine European transmission system operators, Swissgrid is a member of an initiative to support the industrial strategy for a green and digital Europe. One of the strategic objectives of this partnership is to strengthen sustainable procurement practices and methods by adopting a harmonised approach. In this context, Swissgrid worked with the members of the initiative in the 2024 financial year to develop possible approaches for promoting the circular economy in procurements for critical grid components. To improve the effectiveness of sustainability criteria, several workshops were organised to share lessons learned, experience and recommendations.

Stakeholder engagement

Swissgrid endeavours to obtain broad acceptance of its construction projects for the Swiss transmission grid. To do so, Swissgrid engages in close dialogue not only with the authorities at federal, cantonal and municipal level, but also with the affected population, interest groups, associations and the media.

Swissgrid’s stakeholder engagement includes the management of industry stakeholders (see Swissgrid website: Stakeholder Management) and its stakeholder engagement as described above. The related ambitions, objectives and measures are explained in this section.

GRI 2-29

Ambition and goals

Swissgrid adopts an approach to the planning and implementation of grid expansion that involves comprehensive dialogue and participation. The involvement of the relevant stakeholder groups plays an important role in sustainable grid expansion, as construction projects can have an impact on the population, municipalities and cantons, as well as on the landscape, nature and biodiversity. Thanks to proactive grid project communication, Swissgrid ensures that the concerns of these stakeholders are incorporated into its planning processes. In this way, it can develop grid projects that minimise the impact on the environment and the population.

Swissgrid has set itself the following goals:

- Transparent communication of all relevant factors that influence the progress and dimension of the grid project, such as:
 - Technical limits and principles
 - Federal, cantonal and municipal requirements
 - Necessity of the project from the perspective of grid operations
- Active involvement of the population in order to recognise their needs and concerns, include them in communication measures and, as far as possible, consider them in the planning process.

GRI 2-12, 2-25, 2-29, 413-1

Management approach

Operational responsibility for the implementation of stakeholder management and stakeholder engagement lies with the Executive Board. The relevant framework is provided by Swissgrid's Strategy 2027, which was approved by the Board of Directors.

Public involvement: political participation

Swissgrid's business model is politically regulated. Swissgrid is therefore sometimes directly affected by political proposals. One example of this is the Federal Council's «Grid express» bill. Its aim is to shorten the planning procedures for grid projects. Another example is the electricity agreement with the EU, which is due to enter the parliamentary process in mid-2025. This approach ensures that the Swiss public is involved in the legislative process via parliament and the instruments of direct democracy.

Public involvement: Swissgrid's stakeholder engagement

Swissgrid has defined specific guidelines for stakeholder engagement, i.e. the involvement of the public in grid projects and grid project communication to ensure the systematic implementation of measures. Swissgrid places credible and active relationship management at the heart of its stakeholder engagement. This requires continuous communication to inform the public and other relevant stakeholders about upcoming grid projects as early as possible. In the vast majority of cases, this happens long before there is a real need for the technical project management to communicate any information.

Grid expansion follows a strict statutory procedure that consists of several phases (link to [Approval processes](#)). The requirements of grid projects are determined upstream in a separate process. Grid project communication is essential whenever an extra-high-voltage line is built or replaced. The authorities and the public are informed and involved in the process at every stage.

The decisive factor for stakeholder engagement activities is not the technical milestones of a project, but regular communication measures. This is primarily because the planning procedures (especially the transmission lines sectoral plan) often take several years. Swissgrid considers regular dialogue with the affected stakeholders to be crucial, particularly in planning phases in which only a few decisions are made with a mandatory need for communication. Generally Swissgrid implements a stakeholder engagement measure at least once a year.

The details of stakeholder involvement in all the different planning phases are summarised [here](#).

Swissgrid carries out a range of construction projects with different degrees of strategic importance, resource requirements, costs and complexity. From a technical point of view, a distinction is made between line and substation projects, as well as between new construction, enhancement and renovation projects. To ensure

that Swissgrid can reach the relevant stakeholders as effectively as possible with the available resources, it divides projects into the following categories: high, medium, low.

Measures and key figures

Swissgrid's measures for involving the public are based on the project classification described above. Possible measures are divided between the various project phases as follows:

«High» project category

The most important measures in the various project phases include:

- Preliminary project: prior notification of affected municipalities, stakeholder discussions, media releases, information brochures and information events.
- Construction project and approval process: project website, Infopoint, social media activities, media releases, project advisory council and trade fairs.
- Implementation: ground-breaking ceremony, inaugurations, pictures/videos, information boards and information events. Throughout all the phases: stakeholder meetings and media work to ensure transparent communication.

Low-category projects are not systematically integrated into the stakeholder engagement process. The necessary measures, such as construction site information or discussions with the authorities and landowners, are carried out independently by the project managers. However, situations or developments can also occur in low-category projects that increase the need for communication and make temporary involvement in the process necessary.

«Medium» project category

Measures include discussions with stakeholders in all project phases, as well as regular media releases/web news and information brochures. The affected municipalities are informed at an early stage of the preliminary project. During implementation, the focus is on information meetings, events and visual content such as images/videos and social media activities in order to ensure comprehensive and transparent communication.

Communication measure: project flyers

Project information brochures are used to provide all households and companies in the area close to a grid project with information. In the 2024 financial year, the public was informed about grid projects such as Niederwil – Obfelden, Marmorera – Tinizong, Nant de Drance, Oberwallis, Obfelden – Samstagern and Mörel – Ernen thanks to specific project flyers.

Communication measure: media information

As well as providing the population with direct information (e.g. via project flyers), communication with the national and local media is crucial for successful stakeholder engagement and continuous project communication. Swissgrid maintains active media relations. This means that direct contact with journalists (referred to here as media information) is used to supplement traditional media releases.

In the reporting year, Swissgrid sent out the following media releases on grid projects for stakeholder engagement purposes: Chamoson – Chippis grid project, Mörel – Ernen grid project, Thalwil – Sihlhalden grid project (line dismantling) and Morcote – Brusino grid project (Lago di Lugano underwater cable).

Project advisory council: direct involvement of the population in grid projects

The project advisory council is a voluntary body that Swissgrid appoints for certain projects during the construction project phase. The aim is to promote dialogue between the public, the authorities and Swissgrid. Swissgrid may invite representatives of municipalities, environmental organisations and interest groups to participate in project advisory councils, for example. Three meetings of the Niederwil – Obfelden project advisory council were held in the reporting year (more information can be found [here](#)). As no other grid project was in the construction phase in 2024, all meetings focussed on this grid project.



Notes

GRI Index

Application note: Swissgrid has reported the information specified in this GRI Index for the period from 1 January to 31 December 2024 with reference to the GRI standards.

GRI standards	Disclosure	Reference	Explanations
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GRI 2: General disclosures 2021	2-1 Organizational details	Annual Report (Company), Corporate Governance Report (Corporate structure and shareholders)	
	2-2 Entities included in the organization's sustainability reporting	Sustainability at Swissgrid (Context of non-financial reporting)	
	2-3 Reporting period, frequency and contact point	Sustainability at Swissgrid (Context of non-financial reporting)	
	2-4 Restatements of information	Sustainability at Swissgrid (Context of non-financial reporting)	
	2-5 External assurance	Notes (Independent Auditor's Report)	
	2-6 Activities, value chain and other business relationships	Annual Report (Company), Sustainable supply chain (Measures and key figures)	The description of the company in the Annual Report also fulfils the requirements of Art. 964b para. 2 (1) of the Swiss Code of Obligations (description of the business model).
	2-7 Employees	Employer attractiveness (Swissgrid employees)	As the national grid company, Swissgrid only employs staff in Switzerland. This eliminates the need for a regional breakdown.
	2-8 Workers who are not employees	Employer attractiveness (Swissgrid employees)	
	2-9 Governance structure and composition	Corporate Governance Report (Board of Directors), Sustainability at Swissgrid (The role of the Board of Directors), Employer attractiveness (Overview of employee diversity)	
	2-10 Nomination and selection of the highest governance body	Corporate Governance Report (Election and term of office)	
	2-11 Chair of the highest governance body	Corporate Governance Report (Board of Directors)	
	2-12 Role of the highest governance body in overseeing the management of impacts	Sustainability at Swissgrid (The role of the Board of Directors) Stakeholder engagement (Management approach)	
	2-13 Delegation of responsibility for managing impacts	Sustainability at Swissgrid (The role of the Board of Directors + The role of the Executive Board)	
	2-14 Role of the highest governance body in sustainability reporting	Sustainability at Swissgrid (The role of the Board of Directors + The role of the Executive Board)	
	2-15 Conflicts of interest	Corporate Governance Report (Board of Directors + Conflicts of interest)	
	2-16 Communication of critical concerns	Integrity in corporate governance (Measures and key figures)	
	2-17 Collective knowledge of the highest governance body	Sustainability at Swissgrid (The role of the Board of Directors)	
	2-18 Evaluation of the performance of the highest governance body	Corporate Governance Report (Internal organisation)	
	2-19 Remuneration policies	Corporate Governance Report (Remuneration), Financial Report (8. Personnel expenses + 9. Other operating expenses), Sustainability at Swissgrid (Sustainability targets for variable remuneration)	
	2-20 Process to determine remuneration	Corporate Governance Report (Board of Directors + Remuneration), Employer attractiveness (Measures and key figures on attracting and retaining employees and diversity)	Swissgrid does not consult any remuneration consultants.
	2-21 Annual total compensation ratio	Employer attractiveness (Measures and key figures on attracting and retaining employees and diversity)	
	2-22 Statement on sustainable development strategy	Annual Report (Editorial)	
	2-23 Policy commitments	Sustainability at Swissgrid (Sustainability targets + The role of the Executive Board), Sustainable supply chain (Ambition and goals + Management approach)	
	2-24 Embedding policy commitments	Sustainability at Swissgrid (Sustainability targets), Sustainable supply chain (Ambition and goals), Integrity in corporate governance (Management approach)	
	2-25 Processes to remediate negative impacts	Integrity in corporate governance (Management approach), Climate change (Measures and key figures), Occupational safety, Environmental protection and biodiversity (Management approach), Stakeholder engagement and Employer attractiveness (Management approach)	
	2-26 Mechanisms for seeking advice and raising concerns	Integrity in corporate governance (Management approach), Occupational health and safety (Measures and key figures), Environmental protection (Management approach)	
	2-27 Compliance with laws and regulations	Integrity in corporate governance (Measures and key figures + Management approach)	
	2-28 Membership associations	Stakeholder engagement (Introduction)	Website: Stakeholder management
	2-29 Approach to stakeholder engagement	Stakeholder engagement (Management approach)	
	2-30 Collective bargaining agreements	Employer attractiveness (Measures and key figures in other areas)	
Material topics			
GRI 3: Material topics 2021	3-1 Process to determine material topics	Sustainability at Swissgrid (Dual materiality analysis)	
	3-2 List of material topics	Sustainability at Swissgrid (Dual materiality analysis)	
Sustainability in general	3-3 Management of material topics	Sustainability Report	The aspects in accordance with GRI 3-3 are addressed in the sections on each key topic.
Economy			
GRI 201: Economic performance 2016	201-1 Direct economic value generated and distributed	Financial Report	
	201-2 Financial implications and other risks and opportunities due to climate change	Climate change (Procedure for identifying the impacts, risks and opportunities of climate change)	
	201-3 Defined benefit plan obligations and other retirement plans	Financial Report, Employer attractiveness (Measures and key figures in other areas)	The defined benefit plan obligations and other retirement plans are not covered by Swissgrid's general funds.
	201-4 Financial assistance received from government	Annual Report (Business activities in a strictly regulated environment)	
GRI 202: Market Presence 2016	202-1 Ratios of standard entry level wage by gender compared to local minimum wage	Not material	Swissgrid operates exclusively in Switzerland.
	202-2 Proportion of senior management hired from the local community	Not material	Swissgrid operates exclusively in Switzerland.
GRI 203: Indirect economic impacts 2016	203-1 Infrastructure investments and services supported	Annual Report (Mission)	
	203-2 Significant indirect economic impacts	Energy transition (Measures and key figures), Annual Report (Mission)	
GRI 204: Procurement Practices 2016	204-1 Proportion of spending on local suppliers	Sustainable supply chain (Measures and key figures)	
GRI 205: Anti-corruption 2016	205-1 Operations assessed for risks related to corruption	Integrity in corporate governance (Management approach + Measures and key figures)	100% as part of the compliance review on corruption. The Swissgrid headquarters are located at an operating site in Aarau.
	205-2 Communication and training about anti-corruption policies and procedures	Integrity in corporate governance (Measures and key figures), Sustainable supply chain (Code of Conduct for suppliers)	
	205-3 Confirmed incidents of corruption and actions taken	Integrity in corporate governance (Measures and key figures)	
GRI 206: Anti-competitive Behaviour 2016	206-1 Legal actions for anti-competitive behavior, anti-trust, and monopoly practices	Integrity in corporate governance (Measures and key figures)	
GRI 207: Tax 2019	207-1 Approach to tax	Not material	Swissgrid operates exclusively in Switzerland. Due to its regulated business model, a tax strategy is not material.
	207-2 Tax governance, control, and risk management	Not material	Due to Swissgrid's regulated business model and localised, long-term investments, its tax expenses can be calculated accurately and at an early stage. The tax risks are therefore minimal and Swissgrid does not carry out a detailed risk assessment.
	207-3 Stakeholder engagement and management of concerns related to tax	Not material	Swissgrid remains constantly in contact with national, cantonal and municipal tax authorities. Swissgrid is currently liable for tax in 22 cantons and around 850 municipalities.
	207-4 Country-by-country reporting	Not material	Swissgrid Ltd is only liable for tax in Switzerland. Please refer to the Financial Report for the detailed tax figures.
Ecology			
GRI 301: Materials 2016	301-1 Materials used by weight or volume	Circular economy (Measures and key figures)	
	301-2 Recycled input materials used	Circular economy (Measures and key figures)	
	301-3 Reclaimed products and their packaging materials	Circular economy (Measures and key figures)	Data on the proportion of recycled products is not available. Swissgrid is working on requesting essential information from suppliers in the future.

GRI 302: Energy 2016	302-1 Energy consumption within the organization	Climate change (Key figures on energy and electricity consumption)	
	302-2 Energy consumption outside of the organization	Climate change (Key figures on energy and electricity consumption)	
	302-3 Energy intensity	Climate change (Key figures on energy and electricity consumption)	
	302-4 Reduction of energy consumption	Climate change (Emission reduction measures and key figures – Reduction in electricity and energy consumption)	As a result of the LED initiative, Swissgrid's energy consumption was reduced by 19.9 MWh in the 2024 financial year in relation to the previous year.
	302-5 Reductions in energy requirements of products and services	Not material	Swissgrid does not produce or market any products or services directly to end consumers.
GRI 303: Water and Effluents 2018	303-1 Interactions with water as a shared resource	Not material	According to the Swissgrid materiality analysis, water consumption is assessed as not material. Swissgrid is responsible for transporting electricity in the extra-high-voltage grid and not for electricity generation. Water is mainly used at Swissgrid locations, bases and substations for cleaning, or in the company restaurants. It comes from the normal drinking water supply.
	303-2 Management of water discharge-related impacts		
	303-3 Water withdrawal		
	303-4 Water discharge		
	303-5 Water consumption		
GRI 304: Biodiversity 2016	304-1 Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas	Biodiversity (Management approach)	
	304-2 Significant impacts of activities, products and services on biodiversity	Biodiversity (Management approach)	
	304-3 Habitats protected or restored	Biodiversity (Management approach)	Swissgrid does not restore and regenerate habitats. The company is guided by the net-zero principle and pursues the following mitigation hierarchy for its measures: avoidance, restoration or replacement. An effectiveness analysis with regard to biodiversity or other related aspects has not yet been carried out.
	304-4 IUCN Red List species and national conservation list species with habitats in areas affected by operations	Information not available/incomplete	Due to a lack of data on the overlap between species on the IUCN Red List and in national protected areas, it is currently not possible to make a statement on this GRI.
GRI 305: Emissions 2016	305-1 Direct (Scope 1) GHG emissions	Climate change (Measures and key figures)	Gases taken into account in the calculations: CO ₂ , CH ₄ , N ₂ O, SF ₆ , NF ₃ . Swissgrid does not cause any biogenic emissions from the incineration or biodegradation of biomass.
	305-2 Energy indirect (Scope 2) GHG emissions	Climate change (Measures and key figures)	Gases taken into account in the calculations: CO ₂ , CH ₄ , N ₂ O, FKW, PFKW, SF ₆ , NF ₃ .
	305-3 Other indirect (Scope 3) GHG emissions	Climate change (Measures and key figures)	Gases taken into account in the calculations: CO ₂ , CH ₄ , N ₂ O, FKW, PFKW, SF ₆ , NF ₃ .
	305-4 GHG emissions intensity	Climate change (Measures and key figures)	Gases taken into account in the calculations: CO ₂ , CH ₄ , N ₂ O, FKW, PFKW, SF ₆ , NF ₃ .
	305-5 Reduction of GHG emissions	Climate change (Measures and key figures)	Swissgrid's GHG emissions increased in the 2024 financial year.
	305-6 Emissions of ozone-depleting substances (ODS)	Not material	
	305-7 Nitrogen oxides (NOx), sulfur oxides (SOx), and other significant air emissions	Not material	Swissgrid does not produce electricity.
GRI 306: Waste 2020	306-1 Waste generation and significant waste-related impacts	Circular economy (Measures and key figures)	Data on waste includes the material flows generated by Swissgrid itself. Waste generated upstream or downstream is not included.
	306-2 Management of significant waste-related impacts	Circular economy (Management approach)	Environmental construction supervision helps Swissgrid to ensure that waste is handled in accordance with the legal obligations.
	306-3 Waste generated	Circular economy (Measures and key figures)	Data on waste includes the material flows generated by Swissgrid itself based on a three-year average. Waste generated upstream or downstream is not included.
GRI 308: Supplier Environmental Assessment 2016	308-1 New suppliers that were screened using environmental criteria	Sustainable supply chain (Measures and key figures)	
	308-2 Negative environmental impacts in the supply chain and actions taken	Sustainable supply chain (Measures and key figures)	
Social issues			
GRI 401: Employment 2016	401-1 New employee hires and employee turnover	Employer attractiveness (Swissgrid employees)	
	401-2 Benefits provided to full-time employees that are not provided to temporary or part-time employees	Employer attractiveness (Measures and key figures)	Swissgrid's basic benefits are generally available to all employees, regardless of their level of employment (e.g. full-time and part-time). Life insurance is not part of these basic benefits. Shareholdings for private individuals are prohibited by law.
	401-3 Parental leave	Employer attractiveness (Measures and key figures)	
GRI 402: Labour/Management Relations	402-1 Minimum notice periods regarding operational changes	Employer attractiveness (Measures and key figures in other areas)	
GRI 403: Occupational Health and Safety 2018	403-1 Occupational health and safety management system	Occupational health and safety (HSE management system)	
	403-2 Hazard identification, risk assessment, and incident investigation	Occupational health and safety (Management approach)	
	403-3 Occupational health services	Occupational health and safety (Measures for health protection)	Personal health data is classified as confidential at Swissgrid in accordance with internal directives and the Code of Conduct. The confidentiality of personal data is guaranteed by a restrictive data management system, provisions in internal directives and appropriate employee training, among other things.
	403-4 Worker participation, consultation, and communication on occupational health and safety	Occupational health and safety (Management approach + Measures for health protection)	The right of employees to have a say is effected through staff representation.
	403-5 Worker training on occupational health and safety	Occupational health and safety (Measures to strengthen the safety culture)	
	403-6 Promotion of worker health	Occupational health and safety (Measures for health protection)	
	403-7 Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	Occupational health and safety (Measures to strengthen the safety culture), Sustainable supply chain (Management approach + Measures and key figures)	
	403-8 Workers covered by an occupational health and safety management system	Occupational health and safety (Management approach)	
	403-9 Work-related injuries	Occupational health and safety (Measures and key figures)	
	403-10 Work-related ill health	Occupational health and safety (Measures and key figures)	
GRI 404: Training and Education	404-1 Average hours of training per year per employee	Employer attractiveness (Measures and key figures on employee development)	
	404-2 Programs for upgrading employee skills and transition assistance programs	Employer attractiveness (Measures and key figures on employee development)	
	404-3 Percentage of employees receiving regular performance and career development reviews	Employer attractiveness (Measures and key figures on employee development)	
GRI 405: Diversity and Equal Opportunity 2016	405-1 Diversity of governance bodies and employees	Employer attractiveness (Overview of employee diversity + Measures and key figures on the protection of personal integrity)	
	405-2 Ratio of basic salary and remuneration of women to men	Employer attractiveness (Measures and key figures on attracting and retaining employees and diversity)	Swissgrid operates exclusively in Switzerland. Data showing the breakdown per employee category is not available.
GRI 406: Non-discrimination 2015	406-1 Incidents of discrimination and corrective actions taken	Employer attractiveness (Measures and key figures on the protection of personal integrity)	
GRI 407: Freedom of Association and Collective Bargaining 2016	407-1 Operations and suppliers in which the right to freedom of association and collective bargaining may be at risk	Sustainable supply chain (Potential impacts and risks identified along the supply chain)	The risk analysis in relation to suppliers has shown that the right to freedom of association and collective bargaining is restricted, particularly at production sites outside Europe. Measures include the sustainability assessment of suppliers and inclusion of social criteria when selecting suppliers.
GRI 408: Child Labor 2016	408-1 Operations and suppliers at significant risk for incidents of child labor	Sustainable supply chain (Potential impacts and risks identified along the supply chain)	
GRI 409: Forced or Compulsory Labor	409-1 Operations and suppliers at significant risk for incidents of forced or compulsory labor	Sustainable supply chain (Potential impacts and risks identified along the supply chain)	
GRI 410: Security Practices 2016	410-1 Security personnel trained in human rights policies or procedures	See comment	100% of the security personnel employed by Swissgrid are trained in ethical principles and human rights. The training of additional security personnel deployed for selected events and provided by a third-party company on demand is the responsibility of the service provider and is not carried out by Swissgrid.
GRI 411: Rights of Indigenous peoples 2016	411-1 Incidents of violations involving rights of indigenous peoples	Not material	Swissgrid does not pursue any activities in areas with recognised indigenous populations whose rights may be violated.
GRI 413: Local Communities 2016	413-1 Operations with local community engagement, impact assessments, and development programs	Environmental protection (Management approach), Stakeholder engagement (Management approach)	Impacts on the population are analysed as part of the preparatory phases of grid projects (100%), but with no distinctions by gender, as this is not considered material for grid projects in Switzerland. Swissgrid does not implement any programmes to promote the community.
	413-2 Operations with significant actual and potential negative impacts on local communities	Environmental protection (Management approach)	

GRI 414: Supplier Social Assessment 2016	414-1 New suppliers that were screened using social criteria	Sustainable supply chain (Measures and key figures)	
	414-2 Negative social impacts in the supply chain and actions taken	Sustainable supply chain (Measures and key figures)	
GRI 415: Public Policy 2016	415-1 Political contributions	See comment	Swissgrid does not make party donations.
GRI 416: Customer Health and Safety	416-1 Assessment of the health and safety impacts of product and service categories	Environmental protection (Measures and key figures), Occupational safety (Risks and hazards)	Not material on the basis of Swissgrid's business model and activities
	416-2 Incidents of non-compliance concerning the health and safety impacts of products and services	Integrity in corporate governance (Measures and key figures)	
GRI 417: Marketing and Labelling 2016	417-1 Requirements for product and service information and labeling	Not material	
	417-2 Incidents of non-compliance concerning product and service information and labeling	Not material	
	417-3 Incidents of non-compliance concerning marketing communications	Not material	
GRI 418: Customer Privacy 2016	418-1 Substantiated complaints concerning breaches of customer privacy and losses of customer data	Integrity in corporate governance (Measures and key figures)	

Swissgrid AG

Aarau

Bericht des unabhängigen Wirtschaftsprüfers
mit begrenzter Sicherheit über ausgewählte
Aspekte im Nachhaltigkeitsbericht 2024
(einschliesslich der Aussagen zu den
Treibhausgasen)

an den Verwaltungsrat

