

Annual, Financial and Sustainability Report



Ein Unternehmen
der Stadt Zürich

ewz
— —

The year at a glance

Key financial figures

Total operating income		2022	2023
Total operating income	CHF m	1,712	1,571 →

Operating income		2022	2023
EBITDA	CHF m	195	444 ↗
EBIT/total operating income	in %	11.4	28.2 ↗
EBIT	CHF m	126	367 ↗
EBIT/total operating income	in %	7.4	23.4 ↗

Company result		2022	2023
Net profit	CHF m	129	370 ↗
Net profit/total operating income	in %	7.6	23.6 ↗

Balance sheet		31/12/2022	31/12/2023
Total assets	CHF m	2,537	2,727 →
Non-current assets	CHF m	1,857	1,925 →
Equity capital	CHF m	1,932	2,222 ↗
Asset coverage ratio	in %	104	115 ↗



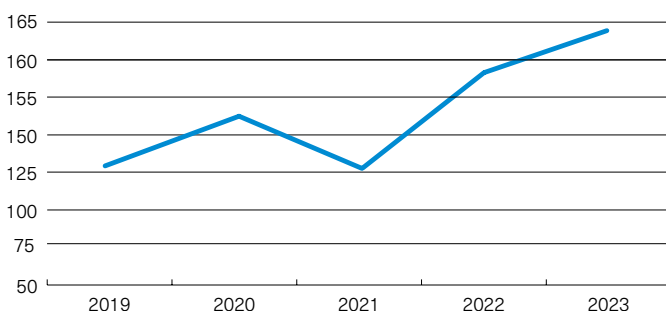
CHF 80 million

Profit transfer to the city of Zurich



CHF 164 million

Capital expenditure



1,244 employees*

*including apprentices and interns

240 Women

1004 Men



236,670 customers

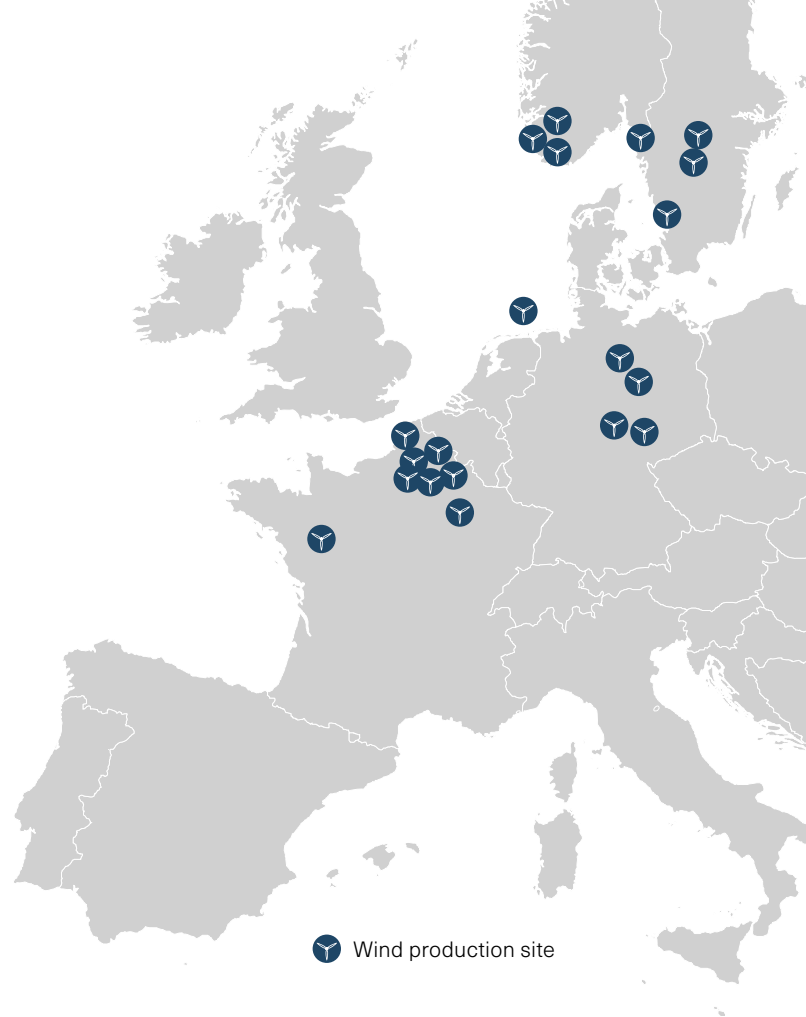
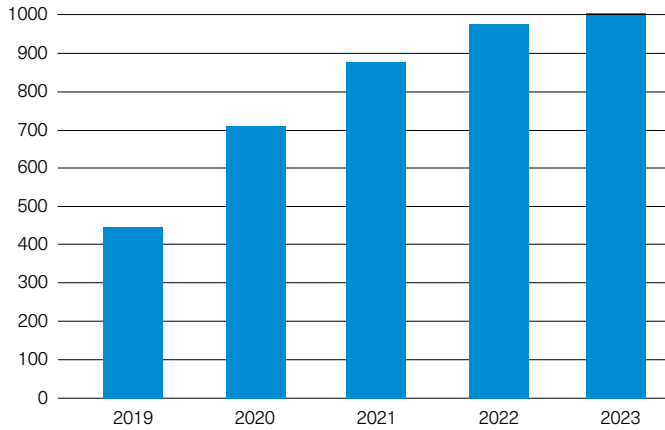
212,288 Residential customers

24,382 Commercial and business customers



1,003 GWh

Wind power production



Wind production site



444 GWh

heating and cooling sales, of which 75% carbon-neutral



0.9 g CO₂-eq

direct emissions per kWh of electricity supplied

43 g CO₂-eq

direct emissions per kWh of thermal energy supplied

66,591 t CO₂-eq

Reduced or avoided for customers

1,401.7 MW

installed electricity generation capacity renewable energy sources



1,009.0 MW

hydropower



363.4 MW

wind power



25.5 MW

solar power



3.8 MW

biomass

Foreword by the CEO

With revenues of 1,571.1 million Swiss francs and a net profit of 370.5 million Swiss francs, ewz can point to a strong annual result thanks to higher prices on the power market. This provides a good basis for the very high yet necessary investments in renewable energies, electricity and heating in the coming years. In recent years we have managed to transfer 80 million Swiss francs in profit to the Zurich city treasury. In addition, the population of the city of Zurich benefits from highly cost-effective electricity tariffs, as they pay for the production costs from ewz power plants and are not exposed to market fluctuations. The Federal Council and parliament have enshrined highly ambitious targets for the expansion of renewable energy in the Energy Act. Under the 'Hydropower Round Table', 15 projects were defined with the aim of increasing security of supply in winter. They include the raising of the Marmorera reservoir as well as projects involving Lake Grimsel, Lake Oberaar and the Trift power plants, part of the Oberhasli power plants, in which ewz has an investment. We remain committed to the expansion of renewable energy and the retention of hydropower concessions.

Heating for Zurich

To reach its net-zero target, the city of Zurich will connect around 60 per cent of residential areas to the district heating network. To increase security of supply and benefit from synergies in heating supply, ewz will construct and operate all major urban heating networks in the future, provided the City Parliament approves its plans. All equity and liabilities in the district heating network would be transferred from Entsorgung + Recycling Zürich (Disposal + Recycling Zurich; ERZ) to ewz in 2025. The relevant employees would also transfer to ewz. In addition, ewz would assume control of the heating networks Altstetten West, Wollishofen-Manegg and Binz Nord from Energie 360° effective 1 April 2024, with the Tiefenbrunnen energy network expected to follow in 2028. The energy centre for the CoolCity energy network is being created in the ewz Selnau substation, with the associated lake water system to be situated in the Kurt Guggenheim plant; work is already under way on construction of the first microtunnel in the city centre. Overall, the expansion of thermal networks is expected to require a total investment of 1.3 million Swiss francs from ewz over the next ten years.

Solar for Zurich

Together with our subsidiary SunTechnics Fabrisolar we managed to add an additional 12,287 kilowatt peak (kWp) in solar power, with 4,304 kWp of that in the city of Zurich. ewz now owns 159 PV systems throughout Switzerland with a combined output of 22,476 kWp. Last year these systems produced around 17.34 gigawatt hours of solar power, which equates to the electricity demand of around 7,000 households. We aim to make greater use of the untapped potential of roofs in the city of Zurich. We lease roofs for 25 years and look after the planning, construction, operation and maintenance, and marketing of the solar power. Above Savognin, in Val Nandro,

ewz hoped to erect a high-alpine solar power plant with an installed capacity of 38 megawatt peak. Unfortunately, the electorate of the Surses municipality rejected the plan on 29 January 2024, following a year of planning. With expected high yields and existing infrastructure, the site in Val Nandro, adjacent to the ski resort, would have been ideal. Switzerland needs to expand its renewable energy production to reduce dependence on other countries and increase security of supply, particularly in winter months.

Wind for Zurich

With our 20 wind farms and wind investments in Germany, France, Norway and Sweden, we produced around 1 terawatt hour (TWh) in wind power, which equates to around 20% of ewz's overall electricity production. And with the acquisition of the Ånglarna wind farm in Sweden, the annual electricity production following its establishment is set to increase to around 1.3 TWh. According to Zurich's Government Council, wind power is expected to contribute to the security of supply with renewable energy. Consequently, we are planning to establish a cooperation with the Stadtwerk Winterthur (Winterthur municipal utility) for the use of wind energy in the canton of Zurich. There is still a chance that the first Swiss wind farm with ewz investment in the Vaud Jura will go ahead, even though appeals have been lodged against the construction permit. Once again, this clearly demonstrates that the expansion of renewable energy facilities we so desperately need will only succeed if the approval process is streamlined and accelerated.

Sustainability Board for ewz

ewz recognises its responsibility for the environment and for society. In November 2023, a Sustainability Board was set up to support ewz in this area, comprising external experts from business and science. The Sustainability Board summarised its impressions from various discussions in an independent panel statement, which is published for the first time in this year's Annual and Sustainability Report. This body helps ewz set ambitious sustainability targets and improve our performance to meet our responsibility for the environment and society.

On behalf of the Management Board, I would like to thank the public and our customers for their trust in 2023, and all our employees for their commitment. I look forward to working with our stakeholder groups to make a key contribution to the future of renewable energy and the target of net zero in 2040, and to boost security of supply, particularly in the winter months.

Benedikt Loeffe,
CEO, ewz

Strategy

Our vision

New energy for a better tomorrow

We aim to create a world with renewable energy for future generations. But there is still much to do before we reach this goal. And it will take all of us: energy providers, industry, society at large. We are already working, day in, day out, to ensure our customers have a reliable supply of renewable electricity and renewable heating and cooling.

Our mission

If you want a brighter future, you have to commit to it today – and that's exactly what we're doing. We are already the most sustainable energy company in Switzerland, and we enable everyone to make their contribution to a future of renewable energy. To do this we invest in new research, use state-of-the-art technology and ensure reliable supply.

Our strategy

The 2023–2030 strategy sets out our position on the market, in competition and as an employer. To ensure we can perform effectively we have defined five areas of operation: grids, heating/cooling, electricity, asset-driven services and municipal services. Together with our customers we are making a major contribution to the expansion of local power production, from photovoltaics in the city of Zurich to the city's climate targets (Net zero strategy) and to the federal government's Energy Strategy 2050.

Grids

As a service provider and platform operator, we provide secure, optimised electricity and telecom grids with high availability, and we are a reliable, attractive partner. Basic supply to our customers under attractive conditions will remain one of our central concerns in the future. Our planning efficiently integrates photovoltaics, electric charging stations and heat pumps for long-term sustainability. We ensure security of supply by investing in our plants, maintaining them and operating them efficiently.

Heating/cooling

We are a reliable supplier, partner and specialist for the technical design and execution of tailored, climate-friendly and economically viable energy supply systems for fossil-free heating and cooling, in Zurich and throughout Switzerland. Together with our customers we make a major contribution to the implementation of climate targets.

Electricity

We are constantly expanding our production of electricity from renewable sources (wind, water, sun) both domestically and internationally. Throughout Switzerland, we supply our customers with 100 per cent green electricity. Our trading and portfolio strategy helps to increase the value of production, optimise revenues and ensure efficient deployment of power plants.

Asset-driven services

We offer simple energy solutions while serving as a partner and service provider for owners of sites and real estate. As a complement to fossil-free heating and cooling supply, we offer electricity, planning, construction and operation of photovoltaic systems, billing solutions and electromobility infrastructure.






Municipal services

For municipal service departments we are a reliable service provider and partner offering modern, innovative solutions in the areas of communications, photovoltaics and e-mobility. For the general public we are qualified energy efficiency consultants for issues around replacement heating, renovations, solar power plants, energy conservation and electromobility.

ewz – 130 years of consistent sustainability

For users of our services and our business partners alike – as Switzerland's largest municipal utility, we are a competent point of contact for all residential and commercial customers. The city of Zurich is a strong owner which generates trust and lays the foundation for long-term collaboration among customers, partners and political bodies. As an energy company with our own power production, we can offer customers solutions from a single source, adapted to their requirements. We make our customers part of the energy transition, share our expertise with them and offer them integrated solutions that help them realise lucrative investments. For 130 years now we have positioned ourselves as a sustainable, innovative company. We are a top employer with a staff of highly qualified employees in the city of Zurich and the canton of the Grisons whose consolidated expertise covers the entire value chain.

Sustainability

UN Sustainable Development Goals, SDGs	ewz's commitment	Strategic goals	2023 status	Progress
 5 Promote gender equality	Increase the share of women working in the company	Women to make up 25 per cent of management and the company as a whole by 2025	Share of women in management positions: 15.9%; share of women working throughout the company: 19.3%	→
 7 Production of reliable, safe and sustainable energy	Expansion of renewables energy	Expansion of electricity production from sun, wind and water from average 100 GWh of per year from 2020 to 2024	New investments in scope of 346 GWh.	↗
 8 Promote decent work and economic growth	Contribution to the economic development of the city of Zurich	Risk-sensitive provision of appropriate annual profits	Profit transfer to the city of Zurich: CHF 80 million	→
 9 Build innovative and resilient infrastructure	Creation of a smart city infrastructure the city of Zurich	Deployment of 144,000 smart meters by 2024	Smart meters installed: 29,585	→
 13 Combat climate change and its impact	Reduction of carbon emissions for customers and ewz	ewz is net zero by 2040. Savings of at least 79,000 t CO ₂ -eq through energy networks and energy contracting in 2024	Roadmap for net zero by 2040 created and measures defined. savings Carbon emissions saved: 66,591 t CO ₂ -eq	→

Sustainability is a central component of our vision, mission and strategy. To ensure the continued sustainable orientation of our business activities, we set focal points that are reviewed annually by internal and external stakeholders.

See: → GRI 3-2 List of material topics, page 39

The key focal points encompass sustainable products and services, investments in renewable energies, and security of supply. These enable energy supply in harmony with the city of Zurich's net zero targets without sacrificing profitability. ewz offers an energy-efficient, low-carbon portfolio of products and services which provides social, environmental and economical added value for our customers, employees and other stakeholders on a regional, national and international level. The United Nations has formulated 17 Sustainable Development Goals (SDGs). Of these, ewz has identified five that are of particular relevance to itself and its stakeholders. Our commitment to the quest for sustainable development yielded results in the reporting year.

Fulfilment of SDGs, 2023

SDG 5 – In the interests of social sustainability, one of the central SDGs we have identified is gender equality. Our long-term goal is to increase the share of women working in the company to 25 per cent through appropriate measures. In the reporting year the share of women working in the company increased by 0.5 percentage points

SDG 7 – To continue offering customers a reliable, secure supply of sustainable energy, ewz is expanding its renewable electricity production portfolio (wind, water, sun, biomass, geothermal) by 100 GWh per year. In the previous year, ewz put three wind farms into operation which are expected to supply an annual electricity production of around 88 GWh.

SDG 8 – Annual profit transfers to the city of Zurich are aligned with the goal of sustainable economic development. With a profit transfer in the amount of 80 million Swiss francs, ewz makes a consistent contribution to the financial stability of the city of Zurich.

SDG 9 – The deployment of 144,000 smart meters by 2024 and 270,000 smart meters by 2027 represents an innovative, robust expansion of smart city infrastructure that promotes long-term quality of life in the city of Zurich. While supply chain issues have slowed the rollout of meter devices in the past, ewz is confident that it will meet its long-term target.

SDG 13 – The city of Zurich has enshrined the climate target of net zero by 2040 in the Municipal Code. By 2040 ewz will be at net zero. ewz is already sustainably combating climate change and its impacts with numerous products that help reduce the greenhouse gas emissions of its customers. In the previous year, a total of 66,591 t CO₂ was saved through energy networks and energy contracting solutions. In 2023 ewz also developed a roadmap for net zero by 2040, under which all measures for meeting the climate target of net zero by 2040 will be defined and implemented.

Annual Report 2023

Responsibilities	8
Annual focal points	8
Nature and environment	10
Awards and innovation	10
Infrastructure	11
Partnerships and investments	12
Benefits for customers and employees	13

Annual Report 2023

Responsibilities

ewz ensures that the city of Zurich and supply areas of the canton of the Grisons have energy in sufficient volumes, right round the clock. Throughout Switzerland, ewz is building tailored, climate-friendly, economically viable energy supply systems for individual buildings and sites, as well as thermal networks for neighbourhoods and municipalities. Together with its partners from the real estate industry, ewz ensures the implementation of real estate projects under completely economic, climate-neutral and environmentally friendly conditions while generating added value through new sustainable energy, monitoring and mobility solutions. In addition, ewz assists companies with the construction and operation of electrical systems and energy distribution at all voltage levels. ewz produces electricity in its own power plants and those of its partners, both domestic and international. The share of renewable sources such as sun, wind and water is growing continuously. With these activities, ewz makes a significant contribution to the energy transition, to environmental and climate protection, as well as the net zero targets of the City of Zurich.

Since 2015, ewz has been supplying households and companies with 100 per cent green electricity while also offering individual electricity supply to qualifying companies. ewz operates a comprehensive fibre-optic network in the city of Zurich and implements tailor-made telecom solutions for companies and for the business location of Zurich as a whole. ewz has an official mandate to manage municipal levies of the city of Zurich and selected municipalities in the Grisons. ewz is also responsible for public lighting and around 340 public clocks in the city of Zurich.

Annual focal points

Restructuring of district heating supply

To reach the target of net zero, the city of Zurich will connect around 60 per cent of residential areas to the district heating network. At the same time, the City Council will increase security of supply and exploit synergies in district heating supply. It has therefore decided to restructure heating supply in the urban area. This new structure will see ewz operating the city's major heating networks. Under the implementation plan issued in late 2023, the City council tasked the City Parliament with concrete implementation of this restructuring. This will see all assets and liabilities of the district heating network and relevant employees of ERZ transferred to ewz effective 1 January 2025. By contributing their knowledge and years of experience, they will have a decisive influence on the new structure. In addition, ewz is assuming control of the heating networks Altstetten West, Wollishofen-Manegg and Binz Nord from Energie 360° effective 1 April 2024, with the Tiefenbrunnen energy network expected to follow in 2028.

Heat networks

On 27 November 2022, the electorate of the city of Zurich approved a credit facility of 573 million Swiss francs for the expansion of thermal grids. The planning of energy networks in Albisrieden, Altstetten, Aussersihl, City, Enge and Höngg has advanced to varying degrees. The City Council has already approved property credit for the energy networks Altstetten Ost and Höngg centre, with the other projects expected to follow throughout 2024. The CoolCity energy network will require the ewz substation Selnau as an energy centre. The tenant Haus Konstruktiv announced in July 2023 that the museum would move out of the ewz substation, Selnau, and exhibit in the Löwenbräukunst site in future. A location for the associated lake water system has been found in the Kurt Guggenheim plant, and work is already under way on construction of the first microtunnel for CoolCity in Talstrasse.

Early reconcessioning in the Bregaglia Valley

The ewz concession for the use of hydroelectric power in the Bregaglia valley expires in 2039. Early reconcessioning has been the subject of talks between ewz and the Bregaglia municipality for years now. The shared goal is early granting of a concession to ewz in 2026, to come into effect in 2035. The Bregaglia electorate confirmed this shared goal in a consultative municipal referendum on 26 October 2023. This consolidates the years of partnership between the Bregaglia Valley and the city of Zurich. The Bregaglia municipality and the canton of the Grisons are working together to clarify issues relating to the concessioning. ewz will support this work and take part in concrete negotiations.

Reconcessing in Surses

On 24 April 2020, ewz requested that the Surses municipal council resume concession negotiations for the usage of the Julia and the Ava da Nandrò for the Tinizong power plant. However, on 7 November 2023 the municipal council proposed to the municipal assembly that it not meet ewz's request and to reply in the negative. As a reliable long-term partner, the City Council is very disappointed that the Surses municipal council did not offer the city of Zurich an opportunity to share its thoughts on the reconcessing to the municipal assembly. From the City Council's perspective, the municipal council has greatly and prematurely curtailed the range of variants for economic, cooperative collaboration. However, it welcomes the fact that the reconcessing with ewz was retrospectively included as an option in the referendum of 21 January 2024. The City Parliament remains ready to conduct constructive dialogue and negotiations on early reconcessing with the Surses municipality and the canton of the Grisons.

Refurbishment of the Bondo power plant

The Bregaglia power plant Bondo has been inoperative since the Piz Cengalo landslide in summer 2017. The Prä water intake was completely submerged by the debris. In the ensuing years, safety concerns prevented work from being carried out on the water intake and the penstock, with the first investigations only carried out in 2022. This work revealed that the Prä water intake would have to be completely restored before the power plant could resume operations. The plant will receive a new water intake that can meet the major geological challenges of the site, and which can quickly return to operations following further falls of debris. At the same time, the mechanical plant in the energy centre (turbine and generator) and the corrosion protection in the pressure pipeline will be upgraded. The power plant is expected to resume operations in 2025.

High-alpine large-scale solar power plants in the Grisons

ewz is hoping to install two high-alpine photovoltaic installations in the municipalities of Surses and Rheinwald. The projected annual output of around 79 gigawatt hours (GWh) would be able to supply up to 31,600 households with renewable energy. The two large-scale solar installations would occupy sites that are already connected up to infrastructure. The affected areas are not located in any national or local conservation area. The plans foresee dual use with alpine farming and electricity generation. A test installation was erected in Savognin prior to the onset of winter. Once all permits have been obtained and negotiations with landowners and the municipality have concluded, construction on the large-scale solar installation in Savognin is expected to begin in summer 2025. With works only possible in the summer months, construction is scheduled to take around three years.

Expansion of photovoltaic systems

In 2023 ewz managed to install around 4,3000 kWp in photovoltaics in the city of Zurich with the construction of its own PV systems, new installations by its subsidiary Sun Technics Fabrisolar as well as energy efficiency consulting. Across Switzerland, ewz and its subsidiary SunTechnics Fabrisolar succeeded in increasing PV system capacities by 11,853 kWp to 57,798 kWp. On municipal properties, around 130 PV systems with an output of approximately 10,600 kWp produced 9.2 GWh of solar energy in 2023. In the city of Zurich, a total of 1,799 PV systems with an output of 58,400 kWp (2022: 46,000 kWp) are connected to the grid.

Wind production: more than 1 terawatt hour

In the 2023 financial year, ewz produced 1 terawatt hour (TWh) from its 20 wind farms and investments for the first time. This represents around 20 per cent of ewz's overall electricity production. And with the acquisition of the Ånglarna wind farm in Sweden, the annual electricity production is set to increase to around 1.3 TWh. This wind farm represents a major step forward in the expansion of energy production from renewable sources, although its wind power plans in Switzerland are still in the approval phase.

Security of supply and grid reinforcements

The strained electricity supply conditions in Switzerland in winter 2022–2023 highlighted the need for massive acceleration in expansion of renewable energy, particularly winter production. However, public discussions to date have ignored the issue of how energy produced in decentralised locations can be reliably transported from production sites to consumption sites. Expansion projects and the refurbishment and expansion of the grid infrastructure have to be conceived in tandem. In the Grisons, along with the increase of decentralised PV systems, it is primarily PV systems that boast levels of production never before seen in this country, later to be joined by wind power plants, that are set to quadruple the production output from renewable energy. This acceleration of energy projects will also require reinforcements to the grid along with connections, earlier than previously assumed. As such, ewz welcomes the Federal Council's decision in late March 2024 to launch consultations on further measures to accelerate approval processes for the refurbishment and expansion of electricity grids.

Federal Act on a Secure Electricity Supply from Renewable Energy Sources (consolidated act)

The federal parliament passed the 'Federal Law on a Secure Electricity Supply from Renewable Energy Sources' on 29 September 2023. A referendum was launched in opposition to the law, which is likely to be held on 9 June 2024.

The federal law clears the way for expansion of domestic electricity production from solar, wind and hydroelectric power installations. This is intended to prevent electricity shortages in winter. In future, electricity suppliers will be responsible for measures to increase efficiency in existing electric devices, plants and vehicles operated by Swiss end consumers. Local electricity communities may also be formed which allow electricity produced within the community to also be sold within the community. In early February 2024 the Federal Council will launch the consultation the ordinances. ewz will review this for possible impact on its activities and apply for changes to municipal implementation rules if required.

Nature and environment

naturemade star fund

This year ewz also provided 2.2 million Swiss francs to support revitalisation and environmental upgrade through the naturemade star fund. Projects are set to continue in the coming years. Funding of over 30 new rewilding projects was approved in cooperation with the steering committee. In Dielsdorf, the fund has contributed 120,000 Swiss francs to the 800-metre revitalisation of the Fischbach. The shaping and greening of the stream promote natural flow dynamics and biodiversity. The revitalisation began in 2023 and will conclude in 2024. The Bünz river near Othmarsingen will be revitalised to become an ecological hotspot. The naturemade fund financed the project with a contribution of CHF 200,000. In Altried on the Glatt river, the fund is contributing 400,000 Swiss francs to support a diverse habitat for various species of animals and plants as well as a valuable recreation area for the local population. The projects supported by the naturemade star fund are aimed at improving and protecting dwindling habitats for various animals and plants, and promoting biodiversity.

Longitudinal connections of the Beverin, near Spinass

Across gorges and through the wild natural environment of the Upper Engadine winds the mountain stream Beverin, officially designated a 'Water Pearl' by WWF Switzerland, flowing through the expansive, relatively untouched mountain valley of Val Bever. Until it reaches the Albula tunnel, the Beverin is an entirely natural, free-flowing stream without human intervention, and an important habitat for brook trout. But as the stream passes under the Rhaetian Railway at Spinass station, the trout's progress is interrupted and the fish are unable to reach the stretch of water above Spinass. Now, with a bypass channel around 300 metres in length, the longitudinal connection has been recreated, and after 100 years, the brook trout can once again reach the valuable stretch of water in the upper part of Val Bever.

Awards and innovation

Highest ranking energy service provider in Switzerland

The 2021/22 benchmarking study issued by the Swiss Federal Office of Energy (SFOE) in early 2023 put ewz in first place in the categories in the categories of 'multi-utility electricity' and 'heating'. This makes it the highest ranking energy service provider in Switzerland. As with the previous study, ewz is one of the few energy providers who met at least 90 per cent of targets in all eight action areas in the electricity sector. The average of all participating energy providers was just 51 per cent. Here, again, ewz is ahead of the competition. The SFOE uses this study to evaluate activities designed to increase the proportion of renewable energy and energy efficiency among Swiss energy providers.

Sustainability certified gold

EcoVadis, the worldwide industry leader in sustainability evaluation, assessed the environmental, social, ethical and economic sustainability performance of ewz. With 75 out of 100 points (three more than the previous year), ewz is once again among the top five per cent of all evaluated companies throughout the world that received gold awards from EcoVadis for sustainability management this year. ewz once again took concerted action, particularly in the sustainability dimension of ecology, to continually reduce the unavoidable environmental footprint caused by the company's activities.

Integration of decentralised energy resources

In December 2022, Swissgrid and ewz successfully completed a pilot project aimed at coordination between transmission and distribution grid operations in the use of decentralised energy resources. The energy transition is increasing the number of flexible energy resources in the grid. The pilot project is based on a simple, rule-based coordination mechanism which was suited to small-scale demonstration mode. The next step is to assess the scalability and efficiency of the concept, and to further refine and improve the concept. Consequently, Swissgrid, ewz and six other energy companies launched 'phase B' of the project in summer 2023. The goal is to develop an advanced coordination mechanism by the end of 2024 and to configure a market for grid and system services.

Funding of e-mobility charging infrastructure

ewz has been promoting charging infrastructure for electric vehicles since 2018, which has contributed to the successful expansion of e-mobility. In 2018 around 10 per cent of new vehicle registrations in the Canton of Zurich were plug-in vehicles (hybrid and fully electric); by 2022 this figure had risen to around 50 per cent. The funding concept was streamlined on 1 July 2023 and, along with the new cantonal funding programme, covers around 30 per cent of the investment costs for charging infrastructure. In future there will be a flat-rate contribution per parking space fitted with charging infrastructure.

4,800 ewz charging stations

The introduction of 1,800 more charging stations in 2023 brings the figure of charging points for electrically operated vehicles installed by ewz in the city of Zurich to around 4,800. This includes large-scale residential developments by private companies in which ewz was able to erect photovoltaic installations and intelligent solutions for self-consumption optimisation. Around 10 per cent of the charging stations are for municipal service departments which are committed to non-fossil vehicles with the aim of helping the city reach its internal target of net zero by 2035. That includes the city police at the 'Amtshaus I' location with its modern fast-charging station and two connections to ensure their vehicles are always ready for active duty.

Public lighting with LED

ewz maintains around 49,085 public lights in the city of Zurich. Around 51.1 per cent are already fitted with the latest LED technology. LED lights require around 70 per cent less energy than sodium vapour lamps or fluorescent tubes. ewz has also deployed dynamic lighting controls which further reduces electricity consumption. In 2023, ewz fitted VBZ (the Zurich public transport authority) bus stops with new LED lighting which dims when no one is waiting at the bus stop.

ewz and the robot dog

Zurich is the Silicon Valley for robotics, and ANYbotics AG is one of the leading start-ups in this scene. ANYbotics robots have long been used in industry. The area around ewz's Auwiesen substation, which includes strong magnetic fields, is the new area of application for the ANYmal. The substation, located around one kilometre from ANYbotics as the (cybernetic) crow flies, emerged as the ideal testing ground. One of the goals was to test how well the ANYmal did its rounds four times a day. It uses visual, thermal and acoustic sensors to inspect defined points of the substation and transfers the data, or raises the alarm in the event of discrepancies. A further goal for ANYbotics is a long-term test focused on precision and reliability that guarantees full functionality in wet and dirty areas and with strong rain and snow.

Infrastructure

Energy Services

ewz succeeded in putting 14 new energy service centres into operation and now manages a total of 356 plants throughout Switzerland, which together represent a reduction in carbon emissions of around 66,600 million tonnes per year. In 2023, the City Council approved expansion in various areas. This includes the Falckenstrasse lake heat network in Zurich, the Escherwiese energy network and the Bergün heating network which were expanded in response to demand.

Further credit facility for energy service providers

The current credit facility from 2017 for the provision of energy services in German-and French-speaking Switzerland is largely used up. Ensuring ewz can continue providing services throughout Switzerland will require a new credit facility to the amount of 200 million Swiss francs. According to current projections, this should safeguard provision of energy services for larger projects for the next five to seven years. Six credit facilities and a property credit for the provision of energy services have been approved for ewz since 2003, together totalling 643.7 million Swiss francs. The electorate is expected to vote on the credit facility in a referendum in June 2024.

Renovation and expansion of Herdern maintenance depot

After almost two years of construction, the new central maintenance depot went into operation in May 2023. The new building, fitted with over 5,000 different items, is the logistics hub for the construction and maintenance of the city of Zurich's electricity and fibre-optic grid. The storage facilities in the old bobbin hall and the administration building, which dated from 1974, provided around double the space of the new storeroom. The logistical challenge was solved with a new logistics concept with optimal usage of height and density with three automatic storage systems: four storage lifts with around 5,400 storage places, a mobile shelving facility with around 1,200 palette places and a paternoster lift for bobbins (large cable reels) with 282 storage places. A steel construction was fitted to the eastern facade to allow intensive greening of the facade and roof and improve biodiversity and the city's climate. ewz received the Prix Acier 2023, an award issued by the Swiss steel and metal construction industry, for this innovation.

Crisis infrastructure in the Auwiesen/Aufbrugg substation

In the event of a major disaster such as flooding, earthquake or fire, the assumption is that major parts of ewz's infrastructure will be destroyed or rendered inoperable. To ensure security of supply for the city of Zurich and supply areas in central Grisons in this case, temporary short-term workstations for the crisis team, operational management, support functions and emergency crews have to be made available.

The required crisis infrastructure will form part of a replacement for an infrastructure building on Aubruggweg dating from the 1960s. With the temporary workstations only required in the event of crisis, ewz uses these areas as a grid base and for the training and education of employees in the field of safety technology.

Refurbishment of ewz substation, Frohalp

The Frohalp substation was commissioned in 1968, and in 2004 it was expanded and upgraded for the voltage switch to 22 kV. The facility aids in the transformation and distribution of energy to the transformer and rectifier stations in the area as well as companies that run on high voltage in districts 2 and 3. Some of the systems and facilities in the substation have come to the end of their useful lifespan. To ensure security of supply over the coming decades, the high-voltage and transformer systems, the control and protection technology have to be replaced, and the medium-voltage system has to be expanded and made earthquake-proof.

Sale of residential properties in Wettingen

When ewz constructed the Wettingen power plant between 1930 and 1933, it also created a residential development with 12 terrace houses. At the time, the power plant employees had to be provided with affordable living space close to their place of work. The demand for this kind of residence has fallen in recent years, and the houses are no longer occupied by ewz employees. Consequently, ewz has decided to sell the properties to the Wettingen municipality, which has expressed an interest in the homes.

Tiefencastel West power plant

ewz uses the force of the Julia river for production of hydroelectric power in the Tiefencastel West power plant. The concession for this usage was issued in 1944, and expired on 2 July 2022. On 22 December 2021, the municipalities of Albula/Alvra and Surseres, and ewz, signed contracts to extend the concession for the Tiefencastel West power station until 30 September 2050. The cantonal government of the Grisons approved the new concession on 12 December 2023. The City Council also approved the new concession and approved expenditure of 6.3 million Swiss francs associated with revision work.

Partnerships and investments

Zürich Wind

EKZ, Stadtwerk Winterthur and ewz are planning a joint cooperation for the usage of wind energy in the canton of Zurich. The three partners aim to jointly carry out wind energy projects in the potential regions designated by the canton of Zurich. According to the Zurich governing council, wind power plants within the canton could contribute to future power supply with renewable energy. Security of supply is becoming more important, and there is a particular need for solutions that meet electricity demand in winter. The aim is that Zürich Wind will secure the development as well as the funding, construction and operation of wind power plants in the canton of Zurich. Zürich Wind is committed to dialogue and will only carry out wind projects with the support of the local population and in a location to be determined by the canton. With Zürich Wind, the three partners aim to send a clear signal for power supply with renewable energy in the canton of Zurich and to create the foundation for using regional projects within the region.

ewz Deutschland GmbH

The wholly owned subsidiary encompasses investments in 18 production companies and 14 project development companies, as well as one construction company. The 124 wind farms in Germany, France, Norway and Sweden produced around 1 TWh of electricity (+3 per cent compared to 2022), around double the production of the Bregaglia power plant group. The ewz Deutschland Group has a consolidated balance sheet of around 533 million euros.

Three more wind farms in France

Since the first quarter of 2023, the ewz wind farms Fontaine Le Sec, Le Groseiller and Des Noues in northern France have been connected to the grid with a total of 14 wind energy facilities. The two wind farms Fontaine Le Sec and Le Groseiller in the Hauts-de-France region have seven turbines and a total output of 17 megawatt (MW). The annual energy output is forecast to be around 51 GWh. In the Grand-Est region, ewz completed the Des Noues wind farm, which has an output of 15.4 MW, with electricity production expected to total around 37 GWh per year.

Ground-mounted solar installations in Sweden

Through ewz (Deutschland) GmbH, ewz has a 51 per cent stake in the Swedish solar development company Solare Nordic AB. In addition, ewz entered into a cooperation with its shareholder EnergiEngagemang Sverige AB and the management of Solare Nordic AB to develop ground-mounted solar installations in Sweden. The ewz production portfolio is being expanded in other countries to include a technology that represents the ideal complement in Sweden. Wind and solar power plants produce electricity at different times of the day and year, and together constantly feed electricity into the grid.

The combination of wind and solar energy evens out fluctuations in electricity production, enables greater security in long-term revenue planning, and helps create an optimised production portfolio.

Ånglarna wind farm in Sweden

ewz acquired the Swedish project company SSB Vind AB and will build the Ånglarna wind farm in central Sweden in cooperation with established partners. With 18 turbines, the wind farm will have an installed capacity of 115 MW, with an expected annual power production of around 346 GWh. The project development company OX2 AB has already developed the project to the construction-ready phase, gathered the necessary permits and secured the requisite land usage rights. ewz expects the wind farm to be commissioned in 2026. The acquisition of this wind farm contributes to the diversification of ewz's portfolio in the focus country of Sweden.

Sale of investment in Butendiek wind farm

ewz has sold its indirect 5 per cent stake in the Butendiek offshore wind farm in Germany to Octopus Energy Generation. ewz had maintained an indirect investment in the Butendiek offshore wind farm via wpd Butendiek Beteiligungs GmbH since 2013. Seeking to optimise its wind farm portfolio, ewz decided to sell its minority stake in the Butendiek offshore wind farm.

Mollendruz wind farm

In September 2023, Energie Naturelle Mollendruz SA submitted a building application for the Mollendruz wind farm, which was subject to appeals. ewz expects the canton to issue the construction permit in mid-2024, and that due to a change in federal legislation ('Wind Express'), objections can only be heard in the administrative court of the canton of Vaud. The wind farm, which will be located on the ridge to the east of the Col du Mollendruz, will have 12 wind turbines and is expected to produce around 100 to 112 GWh of electricity from renewable energy per year starting in 2027.

Benefits for customers and employees

Cheapest basic supply in the canton of Zurich in 2024

Electricity tariffs for basic supply in the city of Zurich and for the supply area of the Grisons have been subject to noticeable increases due to the federal electricity reserve and higher fees for the national transmission company. Because ewz has enough of its own hydropower plants, wind power plants and photovoltaic systems to produce the electricity it needs and has accounted for yield from the electricity reserve, only minimal changes to the tariff component of energy supply were required. This means ewz is the cheapest electricity provider in the canton of Zurich in 2024, and among the most attractive suppliers in national comparison.

Complete revision of the ewz tariff for alternative energy

Since the partial market liberalisation in 2009, large-scale electricity consumers can procure their energy on the market. In the absence of a valid supply contract, the distribution grid operator steps in and supplies the required alternative energy. This might be the case if, for example, if the contract cannot be extended or if an energy supplier refuses to enter into a contract due to payment default. As the distribution network operator, ewz must make alternative energy available to secure supply, for which it charges an alternative energy tariff. Due to sharp fluctuations in energy prices, in future prices will be determined retrospectively to the end of the month, with the mean value for the month determined from the spot price, exchange rate and price of certificates of origin for the energy. This means the costs for supplying alternative energy can be charged on based on consumption.

Energy concept for the SBB Werkstadt site

The SBB (Swiss national railways) is transforming the former Werkstadt site in Zurich-Altstetten into a vibrant space for urban production, circular economy and culture, to be completed by 2035. ewz has developed a climate-friendly energy concept. Work on the main Q building started in early 2021. Since 2023, ewz has supplied the building and other parts of the site with renewable electricity and climate-friendly heating and cooling. Groundwater, which is collected in four wells on the site, serves as a source of heating and cooling. From these wells, the water flows to the energy centres in the larger buildings, which house heat pumps and cooling machines that bring the water to the required temperature.

Consolidation of emergency power aggregates

Since 2023, ewz has offered the option of consolidating emergency power aggregates across Switzerland. Emergency power aggregates with a minimum output of 750 kilowatt can be integrated into ewz's existing plant pool and be consolidated each year from mid-February to the end of April, exclusively for winter reserves. ewz assumes responsibility for all technical evaluations and any required installations to directly control the aggregates if required. Together with the federal hydroelectric power reserve, ewz is making a further contribution to boosting electricity supply in winter months.

Solar power investment model

In 2023, ewz continued the success story of ewz.solarzüri. A total of around 7,600 m² of solar installations on roofs of seven public buildings are ready for operation under a citizens' investment model. This includes around 1,100 m² on the ewz power plants in Letten, Zurich and the same amount in Tinizong, the Grisons, as well as four school plants, a community centre and a tennis facility. Around 7,800 people have invested in 44 PV systems covering around 53,000 m² of space in Zurich and the Grisons, of which eight plants are still under construction.

Solar potential on the roofs of Zurich

According to ewz's calculations, there are around 1,900 unused roofs on private properties in the city of Zurich that are ideally suited to the production of solar power. They represent around 1 million m² of space – around 140 football fields. ewz aims to make use of this potential. For roofs of 1,200 m² or larger, ewz will lease the roof for 25 years at an attractive rate and will take care of planning, construction, operation and maintenance, as well as marketing of the electricity. For anyone who wishes to use part of the solar power for their own consumption, but is unwilling or unable to invest in a solar power plant, ewz offers an attractive contracting model.

100 real estate projects – 100 per cent climate-neutral

By 2030, ewz aims to execute 100 real estate projects throughout Switzerland with 100 per cent climate neutral and environmentally friendly energy supply from electricity, heating and cooling, photovoltaics, as well as e-mobility. There are 21 projects already in the execution phase, with another 12 in the bid phase. The properties must be sites or property portfolios that involve new construction or refurbishment, with a minimum energy reference area of 4,000 square metres. Energy-efficient buildings and climate-neutral energy supply are among the most important levers we have for reducing greenhouse gas emissions. The combination of heat pumps, solar power, storage systems and electromobility will result in the greatest degree of self-supply with low consumption of resources. There is also a consistent focus on local renewable energy sources.

XGS-PON technology in the fibre-optic network

In 2023, ewz launched new XGS-PON technology in its fibre-optic network. This means it can offer service providers bandwidth of 10 Gbit/s, with even higher bandwidth (e.g. 25 Gbit/s) planned for the future. XGS-PON can be used to further reduce ewz's long-term operational and investment costs. Three service providers currently offer XGS-PON-based services.

Cloud solutions with ewz.multicloud access

ewz offers companies in the city of Zurich access to a dedicated, direct fibre-optic connection to the largest and most important cloud providers with no detour via the internet, and with the utmost quality, performance and security. Geo-redundancy can also be offered for the whole connection. This enhances fail-safety even further and guarantees an availability of 99.99%. Like all of ewz's connectivity products, this service can be supplied with a climate contribution. This improves the customer's carbon footprint by removing some of the atmospheric carbon dioxide that comes with building fibre optic infrastructure.

eCity maps

In collaboration with the Office for Urban Planning, ewz has connected 13 digital eCity maps/advertising panels in the city of Zurich with fibre-optic cables and electricity. For these advertising panels ewz operates a publicly accessible wireless network (PWLAN) and a business internet as a connectivity solution, and also supplies it with green electricity. Goldbach Neo OOH AG operates and markets the advertising panels.

Züri Fäscht

For Züri Fäscht, Zurich's summer fair, ewz laid an additional 13,000 metres of electric cable and several kilometres of fibre-optic cable. This ensured that 1,200 connection points such as catering providers, market stands and cooling trucks were supplied with electricity and 22 connections for the Züri Fäscht organising committee's data communications were secured. In addition, ewz sent 300 lighted drones up into the night sky for 13-minute routines set to pop music – a breathtaking light spectacle over Lake Zurich. Around 65 ewz specialists were on the job prior to and during Züri Fäscht to guarantee secure, reliable electricity supply and data communications at all times.

Employees

At year-end, ewz employed a staff of 1,198 employees (not including apprentices and interns), or 1,122.5 full-time equivalents (FTEs). The share of women was 19.3 per cent, and 15.9 per cent in management positions. There were 280 employees on part-time contracts, representing 14.3 per cent of men and 56.7 per cent of women. Employees at ewz represent 33 nationalities, and 34 apprentices are undergoing training.

The labour shortage has also been felt at ewz, and in future it will be even harder to find skilled workers. On top of that, long-term employees are heading into retirement, and their knowledge must be retained in the company. ewz recognised this problem early on. One solution has been to offer internships to students who are looking to kick off their careers gain practical experience alongside their studies. They bring new knowledge into the company, learn to take responsibility, are motivated and get to undertake varied and exciting university internships at ewz. Ideally there would be the opportunity of further employment following the internship. Internally, ewz is also furthering the development of its employees. This is based on the career model as well as the performance process with the development matrix, with talent management and succession complementing each other. In 2023, 69 employees benefited internally from professional development opportunities.

The reporting year saw the publication of the results of the municipal employee survey that was held in autumn 2022. ewz employees enjoy working for ewz and the city of Zurich, and are satisfied with their working conditions overall. Various action areas became apparent in the survey, for which ewz has derived measures. For example, potential for improvement was identified in cross-departmental collaboration. ewz has picked up on this topic and has conducted a future dialogue with all divisions on the subject of 'shaping interdisciplinary collaboration'. Two measures were prioritised and have already been implemented. First, employees can use workstations independently of division or location to gain an insight into the activities of their colleagues and to form new connections. While the first phase will only see office locations made available, the following phase will incorporate manual labour workstations and external locations. The second measure is cross-team retrospectives. This involves two teams with crossover who meet to discuss past cross-team collaboration, identify any challenges and jointly determining measures for ongoing collaboration.

Financial report

Annual and management report 2023	17
Income statement	20
Balance sheet	21
Cash flow statement	22
Notes	23
Electricity balance sheet	25

Annual and management report 2023

Economic environment

As one of the five most important energy producers in Switzerland, ewz was severely affected by turbulence in electricity prices over the last two years. The electricity shortages that were expected for winter 2022/23 prompted ewz to configure its management of reservoirs more in line with security of supply. ewz made its own capacities available to Swissgrid for the hydroelectric power reserves created by the Federal Council. Around two thirds of ewz's power production is entirely subject to market prices. In 2023 benefited from high futures market prices in previous years as well as high electricity market prices on the spot market, which led to this outstanding annual result. However, futures market prices have receded sharply over recent months, with prices of CHF 80 to 90/MWh for delivery in 2024 to 2026. One third of ewz's total production is required for provision of electricity to basic supply customers. These customers were not exposed to the sharp fluctuation in prices on the electricity market as they only pay the production costs of the ewz portfolio. ewz incorporated the additional revenues from hydroelectric power reserves into the pricing of energy tariffs. By participating directly in the production portfolio, ewz customers can expect tariffs for 2024 that compare very favourably in national comparison.

The increased demand for goods and services following the coronavirus crisis, along with higher energy prices, greatly increased inflation rates in Europe. Switzerland saw inflation for 2022 climbing to 2.8 per cent, with around 2.1 per cent expected for 2023. To counter this increase, central banks decided on a restrictive monetary policy. These same tendencies were apparent in Switzerland, albeit less pronounced. The Swiss National Bank lifted base rates three times in 2023 to the current level of 1.75 per cent. The European Central Bank lifted its based rates by a full 2 per cent in 2023 to the current level of 4.5 per cent. The long phase of ultra-low rates is over. Price rises and supply shortages were also an issue for ewz's ongoing construction projects. Despite fixed prices, individual supplier and service providers sought to pass on costs through negotiations. In tender bids, higher prices than originally planned had to be accepted. Thanks to ewz's sound, healthy funding, the increased rates did not have an impact on interest expenses.

The federal parliament passed the 'Federal Law on a Secure Electricity Supply from Renewable Energy Sources' on 29 September 2023. A referendum was launched in opposition to the law, and is scheduled to be held on 9 June 2024. The federal law clears the way for expansion of domestic electricity production from solar, wind and hydroelectric power installations. This is intended to prevent electricity shortages in winter. In future, electricity suppliers will be responsible for measures to increase efficiency in existing electric devices, plants and vehicles operated by Swiss end consumers. In early February 2024, the Federal Council will launch the consultation on the ordinances.

To reach the target of net zero, the city of Zurich will connect around 60 per cent of residential areas to the district heating network. On 27 November 2022, the electorate of the city of Zurich approved a credit facility of 573 million Swiss francs for the expansion of the thermal networks Albisrieden, Altstetten, Aussersihl, City, Enge and Höngg. At the same time, the City Council will increase security of supply and exploit synergies in district heating supply. Therefore, in December 2023 it decided to restructure heating supply in the urban area. This new structure will see ewz operating all of the city's major heating networks. With the implementation plan, the City Council will propose the concrete implementation of the restructuring to the City Parliament. Under this plan the existing district heating network with all requisite assets and liabilities and all necessary employees will be transferred from ERZ-Fernwärme to ewz effective 1 January 2025. In addition, ewz is assuming control of the heating networks Altstetten West, Wollishofen-Manegg and Binz Nord from Energie 360° effective 1 April 2024, with the Tiefenbrunnen energy network expected to follow in 2028.

Voters of the city of Zurich decided in 2016 to allow investment in nuclear power plants and the purchase of nuclear energy up to the year 2034. Selling efforts stopped in 2020 after the City Council approached more than 100 potential buyers due to a lack of suitable offers. The chances of a sale did not improve significantly in 2023, and selling efforts were not resumed. Due to current electricity supply conditions, sale of the investment to foreign investors can also be ruled out. Potential Swiss investors are well aware of the city of Zurich's intention to sell. The City Council and ewz continue to observe the market closely and are aware that they remain obliged to sell their investments in the nuclear power plants by 2034.

Income statement

Operating income for ewz in the reporting year was around 1,571.1 million Swiss francs, some 141.2 million Swiss francs or 8.2 per cent below the previous year. Operating expenses fell by 389.6 million Swiss francs in total. In the previous year, lack of electricity production from hydropower meant additional electricity volumes had to be acquired on the market, which led to a massive increase in operating costs. Personnel costs increased by 9.1 million Swiss francs in 2023, or 5.9 per cent compared to the previous year due in particular to additional positions created and the salary adjustments decided by the City Council as of 1 April 2023 in particular.

Earnings before interest, taxes, depreciation and amortisation (EBITDA) improved by 248.3 million Swiss francs or 127.1 per cent compared with the previous year. The main reason for the exceptional operating result was a massive improvement in the gross margin in the sale of ewz's own power production on the open market and increased production from hydropower. There was also gratifying developments in the marketing of power production from ewz's own wind power plants in Norway and France. The performance of the decommissioning and disposal fund was also above average in the previous year, which was an additional positive influence on the 2023 results.

Compared to the previous year, depreciation and amortisation including impairment losses increased by 7.3 million Swiss francs or 10.5 per cent due to the higher level of investment activity in recent years. ewz is exempt from taxes in the Canton of Zurich and at federal level as a service department of the city of Zurich. The tax expenses shown are for intercantonal operating facilities primarily located in the Canton of Grisons. Net profit increased by 241.0 million Swiss francs to 370.5 million Swiss francs (previous year: 129.5 million Swiss francs). A profit transfer of 80 million Swiss francs was made to the city treasury in accordance with the Ordinance on the Profit Transfer of the Zurich Municipal Electric Utility.

Balance sheet

Current assets amounted to 29.4 per cent of total assets, increasing by around 121.7 million Swiss francs compared with the previous year. Non-current assets increased by 68.4 million Swiss francs as a result of the investments made. ewz invested around 164.4 million Swiss francs in plants and investments in the 2023 financial year. In addition to investing in network facilities and conventional energy production plants, ewz also spent significant amounts on renewable energy and on equipment in the Energy Services field of business. Short-term liabilities rose by 98.9 million Swiss francs. Overall, provisions for onerous contracts fell by around 1.6 million Swiss francs.

Cash flow statement

Cash flow from business activities rose compared with the previous year to 342.4 million Swiss francs (previous year: 161.8 million Swiss francs). This increase was primarily driven by the improved situation in the marketing of ewz's own electricity production and the increased production from hydropower plants. Lower expenses for the decommissioning and disposal fund do not, however, become cash expenses until next year.

All financing activities are handled by the city of Zurich, ewz has a current account with the city accounts department for this purpose. The balance of the current account increased by 109.7 million Swiss francs compared with the previous year.

Performance of a risk assessment

As a dependent institution under public law, ewz is part of the city of Zurich risk assessment. The ewz Management Board has additionally defined its own risk management principles and risk policy based on those of the city of Zurich. The systematically recorded, analysed and prioritised risks were summarised in a risk report for the attention of the city of Zurich. Specific measures for dealing with the identified risks were assessed and then discussed and adopted by the Management Board on 14 November 2023.

Extraordinary events

ewz is directly linked to the Gösgen nuclear power plant and is indirectly linked to the Leibstadt nuclear power plant through AKEB (Aktiengesellschaft für Kernenergie-Beteiligungen). The money paid into the decommissioning and disposal fund (STENFO) is accounted for at market value in both companies. In the past financial year, STENFO achieved above-average returns, which reduced proportionate costs for ewz by around 23 million Swiss francs compared to the standard returns expected.

Outlook

The outlook for ewz over the next two years remains positive. In particular, ewz expects to profit in 2024 and 2025 from the high market prices for electricity in recent years. The electricity supply situation and the trend for restructuring the energy market towards renewable energy sources, accelerated by climate change, come as resounding confirmation of the strategy that ewz adopted back in 2008. Since 2008, ewz has been pushing the restructuring of its own power production portfolio, and will pursue this path consistently over the coming years.

The decision of the City Council to consolidate district heating for the city of Zurich with ewz will bring long-term change to the ewz business model. The successful implementation of defined expansion targets for district heating will require investments of around 1.3 billion Swiss francs over the next ten years.

The expansion of district heating also requires additional investment in the area of grids, which will greatly increase ewz's overall investment in the coming years.

ewz's capital requirements will increase significantly over the next ten years. The current positive financial conditions will help ewz achieve these huge investments and reach the city of Zurich's net zero target. Despite these high investments, ewz intends to remain largely self-funding. In the long-term, broader diversification will reduce dependence on electricity market prices somewhat.

Accounting principles

ewz is a service division of the Department of Public Utilities and Transport of the city of Zurich. As such, it manages its own accounts and is a separate accounting entity within the accounts of the city of Zurich, ewz is an in-house business and is required to finance its business activities itself without taxpayers' money. The statement of accounts and the budget are approved by the City Parliament together with the accounts of the city of Zurich on a yearly basis.

The accounts of the city of Zurich were restated in accordance with accounting standard HRM2 effective 1 January 2019. The overarching accounting principles are based on the Municipalities Act (Gemeindengesetz) and the Municipalities Ordinance (Gemeindeverordnung) of the Canton of Zurich. The accounting principles are based on the cantonal Municipalities Act (LS 131.1) and the Ordinance on the Municipal Budget (Gemeindehaushalt, LS 133.1). The Municipalities Act provides for ewz to value and depreciate its non-current assets according to industry rules. The industry rules are determined by the Association of Swiss Electricity Companies and are based on the principles of Swiss GAAP FER.

The numbers used in the financial report are taken without change from the ewz accounting entity of the city of Zurich and are presented in a way that is typical of the industry and market.

Income statement

	Notes (from page 23)	2022 in CHF	2023 in CHF
Net revenues from goods and services	1)	1,680,638,214	1,540,882,950
Capitalised own services		26,423,664	24,807,911
Other operating revenue		5,266,697	5,408,006
Total operating income (overall performance)		1,712,328,575	1,571,098,867
Energy procurement	2)	- 1,102,868,876	- 687,205,039
Costs of upstream grids, system services and surcharges	3)	- 109,063,459	- 122,572,668
Material and third-party services		- 70,977,240	- 82,455,005
Personnel		- 154,062,711	- 163,171,948
Levies	4)	- 23,837,973	- 28,931,257
Other operating expenses		- 56,201,146	- 43,118,292
Total operating expenses		- 1,517,011,405	- 1,127,454,209
Earnings before interest, taxes, depreciation and amortisation (EBITDA)		195,317,170	443,644,658
Depreciation, amortisation and impairment losses		- 69,365,055	- 76,621,303
Earnings before interest and taxes (EBIT)		125,952,115	367,023,355
Financial result		11,141,905	10,020,471
Earnings before taxes (EBT)		137,094,020	377,043,826
Taxes		- 7,598,026	- 6,555,557
Net profit		129,495,994	370,488,269
Contribution to special reserve		- 49,495,994	- 290,488,269
Profit transfer to city treasury		80,000,000	80,000,000

Balance sheet

Assets			
	Notes (from page 23)	31/12/2022 in CHF	31/12/2023 in CHF
Cash and cash equivalents		13,150,370	20,770,529
Current account with the city accounts department		329,786,003	439,528,667
Trade accounts receivable		274,251,192	263,066,232
Inventories		9,209,839	12,485,864
Prepaid expenses and deferred charges		53,792,588	66,012,310
Current assets		680,189,992	801,863,602
Financial assets	6)	466,031,816	461,570,131
Property, plant and equipment and intangible assets	7)	1,391,024,315	1,463,862,759
Non-current assets		1,857,056,131	1,925,432,890
Total assets		2,537,246,123	2,727,296,492

Equity and liabilities			
	Notes (from page 23)	31/12/2022 in CHF	31/12/2023 in CHF
Trade accounts payable		214,522,424	103,191,496
Other liabilities		37,779,151	33,820,249
Down payments and instalments from customers		106,031,298	114,303,592
Accrued expenses and deferred income		130,143,901	138,708,998
Short-term liabilities		488,476,774	389,606,348
Provisions	5)	116,925,431	115,357,957
Long-term liabilities		116,925,431	115,357,957
Special reserve		1,882,347,924	1,931,843,918
Net profit		129,495,994	370,488,269
Profit transfer to city treasury		- 80,000,000	- 80,000,000
Equity capital		1,931,843,918	2,222,332,187
Total equity and liabilities		2,537,246,123	2,727,296,492

Cash flow statement

	2022 in CHF	2023 in CHF
Net profit	129,495,994	370,488,269
Depreciation and amortisation	69,365,055	76,621,303
Change in provisions	- 173,762,650	- 1,567,474
Change in inventories	- 1,308,131	- 3,276,025
Change in accounts receivable	- 88,151,492	11,184,960
Change in prepaid expenses and deferred charges	41,996,037	- 12,219,722
Change in liabilities	119,465,293	- 115,289,830
Change in down payments and instalments from customers	- 4,095,943	8,272,294
Change in accrued expenses and deferred income	68,800,446	8,147,110
Cash flow from business activities	161,804,609	342,360,885
Investments in property, plant and equipment	- 124,598,609	- 145,462,680
Investments in financial assets	- 34,222,654	- 18,903,068
Divestment of property, plant and equipment and financial assets	19,336,788	19,367,686
Cash flow from investment activities	- 139,484,475	- 144,998,062
Change in liabilities due to city's accounts	53,343,794	- 109,742,664
Profit transfer to the city of Zurich	- 80,000,000	- 80,000,000
Cash flow from financial activities	- 26,656,206	- 189,742,664
Net change in cash and cash equivalents at end of accounting period	- 4,336,072	7,620,159
Cash and cash equivalents at beginning of accounting period	17,486,442	13,150,370
Cash and cash equivalents at end of accounting period	13,150,370	20,770,529

Notes

1) Net revenues from goods and services

	2022 in CHF	2023 in CHF
Energy sales	1,194,942,211	1,017,363,848
Grid usage	231,693,376	246,563,821
Surcharges for transmission grid	60,521,418	59,056,735
Goods and services sold to communities	49,137,196	56,402,879
Energy services	75,570,322	87,372,486
Telecom	30,240,849	30,464,547
Other operating supplies and services	38,532,842	43,658,634
Total	1,680,638,214	1,540,882,950

2) Energy procurement

	2022 in CHF	2023 in CHF
Energy procurement from partner plants	- 62,979,444	- 145,498,766
Energy procurement from the market	- 1,019,777,629	- 516,671,349
Fuels, energy for energy service facilities	- 20,111,803	- 25,034,924
Total	- 1,102,868,876	- 687,205,039

3) Costs of upstream grids, system services and surcharges

	2022 in CHF	2023 in CHF
Upstream grids	- 42,040,586	- 48,994,094
System services	- 4,375,544	- 12,174,831
Surcharge for transmission grid	- 62,647,329	- 61,403,743
Total	- 109,063,459	- 122,572,668

4) Levies

	2022 in CHF	2023 in CHF
Hydropower plant taxes	- 7,073,669	- 8,988,467
Water rates	- 10,993,505	- 11,357,610
Concession fees and services	- 4,854,661	- 7,211,100
Other levies	- 916,138	- 1,374,080
Total	- 23,837,973	- 28,931,257

5) Provisions

	31/12/2022 in CHF	31/12/2023 in CHF
Onerous contracts	99,354,005	93,854,516
naturemade star fund	11,401,148	13,030,580
Other operational activity	6,170,278	8,472,861
Total	116,925,431	115,357,957

Notes

6) Financial assets

		ewz share in %		Share capital of company	ewz share of share capital	Carrying amount as at 31/12/2023 in CHF
Investments						
ewz (Deutschland) GmbH	DE-Konstanz	100.0	EUR	180,025,000	EUR180,025,000	173,680,323
SunTechnics Fabrisolar AG	Küsnacht	100.0	CHF	2,400,000	CHF 2,400,000	3,947,678
Energie Naturelle Mollendruz SA	La Praz	89.5	CHF	8,300,000	CHF 7,430,000	3,321,578
LaZur Energie SA	Lausanne	51.0	CHF	2,900,000	CHF 1,479,000	1,479,000
AG Kraftwerk Wägital	Siebnen	50.0	CHF	15,000,000	CHF 7,500,000	7,500,000
Eoliennes de Provence SA	Provence	40.0	CHF	6,000,000	CHF 2,400,000	2,400,000
Energiepark Sisslerfeld AG	Sisseln	40.0	CHF	4,000,000	CHF 1,600,000	2,400,000
Geo-Energie Jura SA	Haute-Sorne	25.8	CHF	3,960,000	CHF 1,020,000	0
Swisseldex AG	Bern	24.1	CHF	1,000,000	CHF 241,000	241,000
EVUllution AG	Landquart	22.0	CHF	2,692,308	CHF 592,308	811,900
AKEB Aktiengesellschaft für Kernenergie-Beteiligungen	Lucerne	20.5	CHF	90,000,000	CHF 18,450,000	18,450,000
Kraftwerke Hinterrhein AG	Thusis	19.5	CHF	100,000,000	CHF 19,500,000	19,500,000
Blenio Kraftwerke AG	Blenio	17.0	CHF	60,000,000	CHF 10,200,000	10,200,000
Kraftwerke Oberhasli AG	Innertkirchen	16.7	CHF	120,000,000	CHF 20,000,000	20,000,000
Geo-Energie Suisse AG	Zurich	17.2	CHF	2,270,000	CHF 390,000	0
Kernkraftwerk Gösgen-Däniken AG	Däniken	15.0	CHF	350,000,000	CHF 52,500,000	52,500,000
Etrans AG	Baden	12.9	CHF	7,500,000	CHF 963,000	963,000
Maggia Kraftwerke AG	Locarno	10.0	CHF	100,000,000	CHF 10,000,000	10,000,000
Swissgrid AG	Aarau	9.7	CHF	334,495,151	CHF 32,396,060	70,705,321
Certum Sicherheit AG	Dietikon	9.1	CHF	110,000	CHF 10,000	120,000
Total investments					Nominal value	398,219,800
						Carrying amount as at 31/12/2023 in CHF

Loans						
ewz (Deutschland) GmbH	DE-Konstanz			EUR	34,000,000	31,609,800
Swissgrid AG	Aarau			CHF	17,146,711	17,146,711
Energiepark Sisslerfeld AG	Sisseln			CHF	12,670,400	11,779,671
EVUllution AG	Landquart			CHF	1,369,000	1,369,000
LaZur Energie SA	Lausanne			CHF	645,150	645,150
Eoliennes de Provence SA	Provence			CHF	800,000	800,000
Geo-Energie Suisse AG	Zurich			CHF	3,510,000	0
Total loans						63,350,332
Total financial assets						461,570,131

7) Property, plant and equipment and intangible assets

	Status as of 01/01/2023	Additions	Disposals	Reclassification	Status as of 31/12/2023
Acquisition values in CHF					
Power plants	830,334,099	609,022	- 2,593,966	5,285,396	833,634,551
Energy distribution facilities	2,700,627,478	11,026,580	- 7,111,865	52,717,466	2,757,259,659
Public lighting	47,810,326	-	- 1,196,467	2,972,108	49,585,967
Energy solutions and grid services	431,162,535	23,900,063	-	13,171,708	468,234,306
Telecom systems	259,298,276	119,454	-	6,161,883	265,579,613
General facilities, properties, grounds	138,708,998	12,579,826	- 691,711	31,747,606	182,344,719
Software	2,801,691	390,130	- 148,840	736,055	3,779,036
Facilities under construction	169,053,836	96,837,607	-	- 112,792,222	153,099,221
Total	4,579,797,239	145,462,682	- 11,742,849	-	4,713,517,072
	Status as of 01/01/2023	Additions	Disposals	Reclassification	Status as of 31/12/2023
Cumulative amortisation in CHF					
Power plants	- 633,176,460	- 9,766,247	2,593,966	-	- 640,348,741
Energy distribution facilities	- 2,018,914,856	- 31,481,998	7,111,865	-	- 2,043,284,989
Public lighting	- 21,309,673	- 2,691,614	1,196,467	-	- 22,804,820
Energy solutions and grid services	- 183,407,407	- 19,328,947	-	-	- 202,736,354
Telecom systems	- 217,958,094	- 5,052,465	-	-	- 223,010,559
General facilities, properties, grounds	- 112,761,388	- 3,770,409	691,711	-	- 115,840,087
Software	- 1,245,046	- 532,557	148,840	-	- 1,628,763
Total	- 3,188,772,924	- 72,624,237	11,742,849	-	- 3,249,654,313
Total property, plant and equipment and intangible assets	1,391,024,315				1,463,862,759

Electricity balance sheet

Installed electricity generation capacity				
		2022	2023	
Hydropower plants	MW	1,009.0	1,009.0	→
Nuclear power plants	MW	295.8	295.8	→
Wind power plants	MW	331.0	363.4	→
Photovoltaic and solar thermal energy	MW	23.6	25.5	→
Biomass power plants	MW	3.8	3.8	→
Total	MW	1,663.2	1,697.5	→

Electricity generation				
		2022	2023	
Hydropower	GWh	1,713.2	2,139.0	↗
Nuclear power	GWh	2,021.4	2,134.2	→
Wind power	GWh	981.9	958.1	→
Waste incineration	GWh	25.6	47.5	↗
Biomass*	GWh	82.9	100.1	↗
Photovoltaic and solar thermal energy	GWh	39.8	41.5	→
Various generating plants	GWh	0.1	0.1	→
Total	GWh	4,864.9	5,420.5	↗

Electricity procurement				
		2022	2023	
Procurement from own plants	GWh	980.4	1,379.7	↗
Procurement from partner plants	GWh	2,713.2	2,992.9	↗
Procurement from third parties	GWh	193.6	221.4	↗
Trading	GWh	4,161.7	2,558.0	↘
Total	GWh	8,048.9	7,152.0	↘

Electricity supply				
		2022	2023	
Electricity supply Switzerland	GWh	3,265.0	3,419.6	↗
Trading	GWh	4,600.8	3,580.2	↘
Pumped storage	GWh	183.1	152.2	↘
Total	GWh	8,048.9	7,152.0	↘

Subsidy systems, etc.				
		2022	2023	
Procurement	GWh	977.6	826.5	↘
Supply	GWh	977.6	826.5	↘

Energy solutions				
		2022	2023	
Heating sales	GWh	333.5	355.9	→
Cooling sales	GWh	90.6	88.5	→
CO ₂ reduction or avoidance	Tonnen	64,503	66,591	→

Telecom				
		2022	2023	
Buildings with broadband connections	Anzahl	40,667	40,926	→
Available broadband connections	Anzahl	284,089	287,430	→

* incl. share of biomass in waste incineration

Sustainability Report

in accordance with GRI Standards

The organisation and its reporting practices	27
Activities and workers	28
Governance	30
Strategy, policies and practices	33
Stakeholder engagement	35
Material topics	38
Other important topics	65
GRI Content Index 2023	68

The organisation and its reporting practices

GRI 2-1

Organisational details

Legal name: Elektrizitätswerk der Stadt Zürich (ewz; Zurich Municipal Electric Utility)

Ownership and legal form: ewz is a service department of the city of Zurich and is part of the Department of Public Utilities and Transport. As a dependent institution under public law, ewz maintains its own accounts within the accounts of the city of Zurich and is not a legal entity of its own. All activities are subject to the responsibilities set out in the Organisational Regulations of the Department of Public Utilities and Transport. As a public-sector company, ewz observes the constitutions of the Swiss Confederation and the canton of Zurich, and the Municipal Code of the city of Zurich, as binding standards. As such, the company must act in the public interest and is obliged to comply with the principle of proportionality and the principle of public proceedings. The Management Board is comprised of the CEO and the division heads.

Headquarters: The headquarters is located in Oerlikon, Zurich, Switzerland.
The postal address is: ewz, Tramstrasse 35, P.O. Box, 8050 Zurich

Countries of operation: ewz operates in Switzerland and in other European countries. In Switzerland, ewz controls infrastructure for production of electricity, heating and cooling, as well as electricity grids, energy networks and – in the city of Zurich – a fibre optic network. In the five European countries of Germany, France, Norway, Sweden and Spain, the company operates power production plants for new renewable energies or holds shares therein.

See:

- [ewz contacts](#)
- [Department of Public Utilities and Transport](#)
- [Annex 2 'Zurich Municipal Electric Utility' of the Organisational Regulations of the Department of Public Utilities and Transport \(Annex 2 OrgR DIB\)](#)

GRI 2-2

Entities included in the organisation's sustainability reporting

The sustainability reporting includes all companies in which ewz holds an investment of 50 per cent or more: ewz (Deutschland) GmbH, SunTechnics Fabrisolar AG, Energie Naturelle Mollendruz SA, LaZur Energie SA. Subsidiaries and minority shareholdings are included in production disclosures.

See: → Financial assets, page 24

GRI 2-3

Reporting period, frequency and contact point

The Annual, Financial and Sustainability Report is produced annually and covers the period 1 January to 31 December of the financial year in question. The publication date of the Annual, Financial and Sustainability Report 2023 is March 2024.

Contact: nachhaltigkeit@ewz.ch

GRI 2-4

Restatements of information

ewz did not undertake any restatements of information concerning its sustainability performance in 2023.

GRI 2-5

External assurance

There was no external audit of the Annual, Financial and Sustainability Report 2023 carried out by independent third parties.

Activities and workers

GRI 2-6

Activities, value chain and other business relationships

Activities: ewz is a Swiss energy provider that places a great deal of importance on sustainability. ewz is responsible for secure, reliable power supply in the city of Zurich and partner municipalities in the canton of the Grisons. ewz distributes and sells its green electricity products through its own electricity grid. For qualifying companies, ewz offers individual electricity supply through the whole of Switzerland. Business customers as well as public institutions in the city of Zurich can increase their security of supply with a second connection. ewz produces electricity from renewable sources, generated in its own power plants and partner plants both domestically and in other European countries. The electricity trading business assists in optimisation of procurement and sale.

Throughout Switzerland, ewz establishes and operates environmentally viable and economical energy supply facilities for complex sites and major projects through its energy contracting and facility management services. In addition, ewz establishes and operates energy networks for neighbourhoods and municipalities that draw energy for heating and cooling exclusively from up to 75 per cent renewable energies. In line with the city of Zurich's climate and energy policy targets, ewz promotes systems and devices that generate electricity from renewable energy sources, that are particularly sparing in their use of electricity, or that reduce electricity consumption. Energy efficiency consulting is an additional pillar in the responsible handling of energy. The energy portfolio incorporates solutions for solar energy and electromobility. ewz manages the public lighting and the public clocks of the city of Zurich. ewz operates a comprehensive, non-discriminatory fibre-optic network in the city of Zurich and creates cross-regional digital network connection structures for such uses as networking of company sites.

The key data for ewz:

- 1,244 workers
- CHF 1,571 million total operating income
- 5,421 GWh electricity production
- 20 wholly owned hydropower plants and 5 investments in partner plants
- 14 wholly owned wind farms and 6 wind farm investments in operation
- 5,264 km of cable
- 413 km of overhead lines
- 29 substations
- 3,420 GWh electricity sold in Switzerland
- 237,000 electricity consumers
- 356 GWh heating sold
- 89 GWh cooling sold
- 287,000 fibre optic connections to ewz.zürinet

Value chain: As a vertically integrated energy provider, ewz covers almost the entire value chain of heating, cooling and electricity supply based on renewable energy.

The key products groups for procurement at ewz comprise:

- Machinery and technical equipment for energy production and distribution
- Systems for heating and ventilation technology
- Hydraulic steelwork, pipes, cables
- Technical equipment for the fibre optic network
- Vehicles
- Work and protective clothing

The size of procurement partners ranges from small and medium-sized companies to international corporations. ewz has around 2,000 active suppliers. The volume of orders issued each year varies according to the size of ongoing projects. In 2023 it was between 200 and 250 million Swiss francs. This does not include the energy trading business or public procurement for partner plants. The proportion of suppliers that are from Switzerland or that have a Swiss subsidiary was over 95 per cent in the previous year. The procurement mission statement of the city of Zurich sets out criteria for ensuring economic, environmental, social and fair trading. It forms the foundation for ewz's activities on the procurement market.

Changes: There were no organisational changes in 2023 regarding the size, structure or ownership structure of the company.

See:

- [Private customers](#)
- [Business solutions](#)

GRI 2-7

Employees

All workers are employed in Switzerland. Employees are engaged under public-sector conditions as set out in ordinances and implementation rules. There is no seasonal fluctuation in the number of workers. ewz does not use worker-on-demand models. All workers have guaranteed working hours.

	Einheit	2019	2020	2021	2022	2023
Total workers*	Number**	1,212	1,230	1,213	1,221	1,244
Workers, female	Number	232	238	232	229	240
Workers, male	Number	980	992	981	992	1,004
Workers on open-ended contracts	Number	1,116	1,133	1,125	1,119	1,139
Workers on open-ended contracts, female	Number	203	201	198	194	215
Workers on open-ended contracts, male	Number	913	932	927	925	924
Workers on fixed contracts	Number	40	42	34	48	53
Workers on fixed contracts, female	Number	15	20	13	23	14
Workers on fixed contracts,	Number	25	22	21	25	39
Full-time workers	Number	973	970	946	940	964
Full-time workers, female	Number	115	113	114	98	104
Full-time workers, male	Number	858	857	832	842	860
Part-time workers	Number	239	260	267	281	280
Part-time workers, female	Number	117	125	118	131	136
Part-time workers, male	Number	122	135	149	150	144
Workers in Zurich and Aargau	Number	1,099	1,116	1,102	1,108	1,129
Workers in central Grisons and the Bregaglia	Number	113	114	111	113	115
Workers in management	Number	273	288	297	301	320
Women in management	Number	46	44	42	43	51
Men in management	Number	227	244	255	258	269
Men and women in apprenticeships or internships	Number	51	55	54	48	46
Coverage of the municipal pension fund	%	116.3	117.3	122.2	114.0	119.7
Employer savings contribution (of coordinated wage)	%	62	60	60	60	59.9

* including apprentices and interns

** individuals on 31 December of the respective year

GRI 2-8Workers who are not employees

Staff who are bound by instructions are workers from third-party companies who work for ewz. This includes fixed-term workers from recruitment and temp agencies as well as civil engineering workers.

	Unit	2019	2020	2021	2022	2023
Workers bound by instructions	Number	50	43	29	42	64

Governance

GRI 2-9Governance structure and composition

ewz is a service department of the city of Zurich in the form of a dependent institution under public law. 'Dependent' refers to the fact that ewz operates on its own behalf yet is not a legal entity of its own. All business conducted by ewz is subject to the general responsibilities defined in the Municipal Code of the city of Zurich. The political supervisory body is the City Parliament of the city of Zurich. It is responsible for oversight of the authorities and administration. The committees of the City Parliament support it in thematic areas such as auditing, and health and environment.

The City Council is responsible for management, oversight and political planning. It bears responsibility for the municipal budget and for the remit conferred upon it by federal and cantonal law and by authorities of the federal administration, the canton or the borough. It arranges all its own affairs where responsibility is not assigned to another body under cantonal law or the Municipal Code.

As department heads, the members of the City Council guide and supervise the departments assigned to them. They are responsible for implementing the resolutions of the City Council, the City Parliament and the electorate. The departments are subdivided into service departments, each of which has a director of service.

At ewz, the Management Board is made up of the CEO and the division heads. They head up the six divisions of Energy, Grids, Energy Solutions, Sales and Marketing, Finance and Controlling, and Digitalisation and IT. The Management Board is responsible for the corporate strategy and for defining and monitoring associated corporate objectives, which are updated each year. The sustainability focal points are also reviewed annually by the Management Board, and feed into the corporate objectives.

In addition, the members of the Management Board assume roles as representatives for:

- Environmental and energy management
- Health and safety management
- Process and quality management
- Risk management
- Data protection

See:

- [Municipal Code of the city of Zurich](#)
- [Committees of the City Parliament](#)
- [Regulation on the Organisation, Responsibilities and Powers of the Municipal Authorities \(ROAB\)](#)
- [Annex 2 'Zurich Municipal Electric Utility' of the Organisational Regulations of the Department of Public Utilities and Transport \(Annex 2 OrgR DIB\)](#)
- [Organisation ewz](#)

GRI 2-10Nomination and selection of the highest governance body

The members of the City Council and City Parliament are elected by the electorate. The heads of department are selected from among the members of the City Council by the City Council itself.

See:

- [Municipal Code of the city of Zurich](#)
- [Regulation on the Organisation, Responsibilities and Powers of the Municipal Authorities \(ROAB\)](#)

GRI 2-11

Chair of the highest governance body

Members of the City Parliament, and the Chair, disclose their vested interests and professional activities. Members whose personal interests are directly affected by an item under discussion in an individual case indicate their vested interest when they appear in the City Parliament or one of its bodies. The Mayor of the city of Zurich cannot be an executive member of the administration.

See:

- [Municipal Code of the city of Zurich](#)
- [Implementation Rules on the Bylaws of the City Parliament \(AB GeschO GR\)](#)

GRI 2-12

Role of the highest governance body in overseeing the management of impacts

It is the responsibility of the City Parliament and the City Council to monitor impacts of the authorities in environmental, social and economic spheres. This is set out in the Municipal Code of the city of Zurich. For example: the municipality must actively promote the protection and retention of natural living conditions. Sustainable development efforts, including the strategy and objectives, are within the purview of the service departments.

Adherence with due diligence and efficacy are reviewed within the framework of democratic processes and the implementation rules, directives and orders.

See: ➤ [Municipal Code of the city of Zurich](#)

GRI 2-13

Delegation of responsibility for managing impacts

The CEO and the other members of the Management Team assume responsibility for managing the environmental, social and economic impacts of the divisions and of the company as a whole. The Management Board communicates sustainability issues at least once a year in the context of its strategy review.

GRI 2-14

Role of the highest governance body in sustainability reporting

The Management Board reviews and approves sustainability reporting and the focal points of ewz on an annual basis. Political processes do not provide for approval of sustainability reporting by the City Parliament or the City Council.

GRI 2-15

Conflicts of interest

Under the Municipal Code, members of the City Council may not pursue any other paid employment, nor are they permitted to join the supervisory or management bodies of profit-oriented legal entities. Members of the City Parliament disclose their vested interests, which are reviewed through political processes.

GRI 2-16

Communication of critical concerns

The City Parliament deliberates on bills and personal motions from the City Council. A bill from the City Council to the City Parliament is a directive. The City Council may use a directive to request funds for a certain purpose, for example, or to solicit acknowledgement of a report. In general, directives are initially deliberated by committees of the City Parliament. Motions are issues that are submitted by members or factions of the City Parliament. They may use a motion to request information from the City Council or, if the motion is carried by a majority of the Council, issue instructions to the City Council. These are processed by the service departments responsible and submitted to the City Parliament in the form of a directive. The Ombudsperson's Office of the city of Zurich informs the committees of any conflicts within the municipal administration from an independent perspective, which it summarises in an annual report.

See:

- [Procedures](#)
- [Ombudsperson's Office of the city of Zurich](#)

GRI 2-17

[Collective knowledge of the highest governance body](#)

There are no explicit measures for expanding collective knowledge and experience concerning sustainability at the City Parliament and City Council level. Nonetheless, resolutions of the two councils that concern environmental and social issues in the city contribute to the expansion of knowledge.

See: ↗ [Municipal Code of the city of Zurich](#)

GRI 2-18

[Evaluation of the performance of the highest governance body](#)

The performance of the City Parliament and the City Council, and how they address their impacts on the economy, nature and people, are evaluated through political processes such as elections.

GRI 2-19

[Remuneration policies](#)

The municipal wage system includes the elements of basic wage, experience and performance. The Personnel Law sets out the functional levels that determine all wages for all municipal employees, including members of the City Parliament and City Council. Wage rates for the functional levels are defined in wage tables which are updated every year. The Personnel Law also sets out information on amounts for severance payment and wage continuations.

See:

↗ [Personnel Law of the city of Zurich](#)

↗ [Wage tables](#)

GRI 2-20

[Process to determine remuneration](#)

Wages and bonuses are legally binding and adjusted for inflation where necessary. They are changed through political processes.

See: ↗ [Wages and bonuses](#)

GRI 2-21

[Annual total compensation ratio](#)

The ratio of wages from the lowest (functional level 1) to the highest (functional level 18) is capped at 1:4.5. The current maximum wage is CHF 252,133, the lowest wage is CHF 56,301.

Strategies, policies and practices

GRI 2-22

Statement on sustainable development strategy

See:

- Foreword by the CEO, page 4,
- Strategy, page 5
- Sustainability, page 6

GRI 2-23

Policy commitments

In 2022, the Management Board defined a new vision to make its long-term objective even clearer. ewz aims to create a future of renewable energy for all in line with its motto of 'new energy for a better tomorrow'. There is still much to be done before we reach this goal, and everyone needs to get involved: energy suppliers, industry and society. ewz is already hard at work with unwavering commitment. The company works day in, day out, to ensure our customers have a reliable supply of renewable electricity and renewable heating and cooling. Strategy 2030 is based on this vision, and includes corporate sustainability based on economic, environmental, social and political criteria. Utilising opportunities and employing forward-looking risk management results in added value for ewz, for the city of Zurich as owner, and for society.

Sustainability is an overarching objective of municipal policy as a whole, and the central guiding principle for the activities of the city of Zurich. The Municipal Code of the city of Zurich (Art. 2ter) mandates that the municipality take an active role in protecting and maintaining natural living conditions and in responsible handling of natural resources. The city is also committed to implementation of sustainable development. It has set itself the target of net zero, which was further confirmed by referendums, and continues to pursue the targets of the 2000-watt society. Based on this, ewz is aiming to achieve net zero by 2040, an ambition it has enshrined in its environmental strategy.

These targets have an influence on the energy and resource requirements of buildings, mobility and consumption. Renewable energy and a sustainable lifestyle serve as the foundation. As an energy company, ewz is part of the solution: it secures supply of renewable energies and helps reduce CO₂ emissions among the population. Strategy 2030 takes the city of Zurich's net zero target into account, and strengthens its contribution to achievement of that target. Along with opportunity and risk management, the strategy also reflects sustainability aspects and the precautionary principle. This ensures that the environmental impact of business activities is minimised through systematic sustainability management and that physical safety of people is guaranteed.

ewz is an enterprise of the city of Zurich. Along with its subsidiaries, it operates renewable energy plants throughout Switzerland and Europe. Its workforce is employed in accordance with the 'Ordinance on the Employment of Municipal Personnel' or contracts under Swiss law. ewz is committed to strict ethical principles and aligns its actions with local and national laws and provisions. This also includes the eight core labour standards of the International Labour Organization (ILO), which were ratified by Switzerland and which address the abolition of child labour, the elimination of discrimination in employment and occupation, elimination of forced labour, freedom of association and the right to collective bargaining.

The city of Zurich recognises the 'European Charter for Equality of Women and Men in Local Life', issued by the Council of European Municipalities and Regions (CEMR). The goal of the charter is to accelerate the attainment of equality between men and women at the local level throughout Europe. The signatories of the charter are European cities and municipalities.

See:

- ↗ [Sustainable Municipal Policy](#)
- ↗ [ewz sustainability policy](#)
- ↗ [Charter for Equality of Women and Men](#)
- Highest-ranking energy service provider in Switzerland, page 10
- Gold-standard sustainability, page 10
- Climate protection and energy efficiency for the city of Zurich, page 47

GRI 2-24

[Embedding policy commitments](#)

Overarching policies and commitments are decided upon and introduced by the Management Board. Implementation is monitored by the divisions responsible and reported centrally.

GRI 2-25

[Processes to remediate negative impacts](#)

In the event of conflicts or problems with the municipal administration, private individuals and legal entities may consult the Ombudsperson's Office of the city of Zurich. This option is also available to ewz stakeholders. The Ombudsperson's Office provides free, neutral, independent assistance. It can provide advice, review complaints and offer mediation, with low thresholds for accessibility.

See: [➤ Ombudsperson's Office of the city of Zurich](#)

GRI 2-26

[Mechanisms for seeking advice and raising concerns](#)

In the event of suspected grievances or criminal acts, employees have a number of options for redress. They can share their suspicions with internal authorities such as supervisors, the heads of HR or Legal Services, or the CEO through official channels. If they suspect bias in these internal authorities, they may approach higher authorities or the legal consultants of the City Council. Should the employee wish to approach an independent authority, they can consult the Ombudsperson's Office or the Financial Controller of the city of Zurich. Employees, customers, suppliers, members of the general public and any other ewz stakeholders may provide anonymous notification of irregularities on the whistleblowing platform of the city of Zurich.

See:

[➤ Ombudsperson's Office of the city of Zurich](#)

[➤ Whistleblowing](#)

GRI 2-27

[Compliance with laws and regulations](#)

There were no significant penalties or fines imposed for non-compliance with laws and regulations in the reporting period.

GRI 2-28

[Membership associations](#)

ewz is well connected and involved in numerous industry and specialist organisations. It maintains strategic memberships and invests funds in a number of associations. These include, in alphabetical order:

- AEE Suisse, umbrella organisation of the renewable energy and energy efficiency industry
- asut, Swiss Telecommunication Association
- CIGRE, the International Council on Large Electric Systems (France)
- Electrosuisse, Swiss association for the electricity industry
- European Power Network, the network of experts at the European level
- Glasfasernetz Schweiz, special interest group for fibre optic infrastructure
- GREE, special interest group for wind farm developers in western Switzerland
- öbu, association for environmentally aware governance in Swiss companies
- procure.ch, the national trade association for procurement management
- RegioGrid, the interest group of regional energy suppliers
- Suisse-Eole, association for promotion of wind energy in Switzerland
- Swissolar, solar power industry association
- SWV, the Swiss Water Industry Association
- VFS, Swiss District Heating Association
- VSE, Swiss Electrical Company Association
- VSGS, Swiss Smart Grid Association
- VUE, Association for Environmentally Sound Energy

Stakeholder engagement

GRI 2-29

Approach to stakeholder engagement

ewz is in constant dialogue with representatives of organisations that have direct contact with ewz or that are affected by its business activities. The relevant stakeholder groups of ewz are, in alphabetical order:

- Public authorities
- Investments
- General public
- Educational and research institutions
- Owners
- Business partners
- Unions
- Customers
- Suppliers
- Media
- Employees
- Competitors
- Politics
- Associations and NGOs

Involvement at the strategic level

ewz Sustainability Board

In the past, ewz invited representatives of relevant stakeholder groups to an annual stakeholder forum. To ensure consistent integration of local factors and demands in our business activities, ewz formed a Sustainability Board in the reporting year, which replaces the ewz Stakeholder Forum. The Board consists of external individuals who have sound expertise in sustainability topics that exert a significant influence on our business activities.

The experts on the Sustainability Board are:

- Prof. Ulrike Zika, Professor in the Development in the Alpine region department, University of Applied Sciences of the Grisons
- Nadia von Veltheim, CEO of Post Immobilien
- Prof. Matthias Sulzer, Senior Scientist Urban Energy Systems Lab Empa
- Dr. Stephan Sigrist, founder and head of W.I.R.E. think tank
- Prof. David Bresch, Professor of Weather and Climate Risks, ETH Zurich

The Sustainability Board joins with the ewz Management Board to evaluate the sustainability performance of ewz once a year, and to share ideas and concerns. It maintains dialogue with the Management Board with the goal of improving ewz's sustainability performance. The Board gains a profound insight into the vision, strategy and goal-setting of ewz and functions as a sounding board and challenger. During the year, the members of the Sustainability Board meet with the Management Board to discuss progress and measures.

The key findings from the annual ewz Sustainability Board meeting flow into the strategic field analysis for discussion with the Management Board, and are also made available to relevant internal individuals for further processing. In addition, the members of the Sustainability Board formulate an independent panel statement which records their findings which are made available to external ewz stakeholders. With this, the Management Board underscores the relevance of discussions with the Sustainability Board.

2023 panel statement of the ewz Sustainability Board

Introductory remarks

The members of the Sustainability Board valued the in-depth insight into ewz's strategic planning and open dialogue with the ewz Management Board at the first Sustainability Panel in November 2023.

By establishing the Sustainability Board as a corporate body with recurring panels and interactions, ewz aims to enable tracking of its progress over the years as it puts its sustainability strategy into action. Challenges will be openly discussed, recommendations for potential improvements put forward.

This will sharpen ewz's overall profile as a leading, proactive player in the field of sustainability. In the panel discussions, the focus was on how ewz can further advance in its pioneering role. Along with general issues, for ewz itself the focus is on the topics of climate protection and biodiversity.

Basic expectations of ewz

This inaugural panel discussion began by examining the basic expectations that the board members have of ewz. They want to see ewz taking a pioneering role, supporting developments that point the way forward for Switzerland – as they do with hydropower usage, for example. Because in supporting decarbonisation with its products and services, ewz makes a key contribution as a trailblazer for the energy transition and for other companies. Here ewz can play an important part that goes beyond discussions, which tend to be fragmented.

The board believes ewz should be open to new business models (for example, incorporating trading in negative emissions), which are based on a top-down view of systems. And because ewz uses public goods such as water, it also needs to consider the internalisation of external costs.

The board values the pragmatism in ewz's implementation, a quality with broad appeal that deserves to be more widely communicated in the interests of building trust. For example, it would be worth communicating – to the younger generation in particular – why and how ewz makes a profit, and how this flows back into society both directly and indirectly. ewz can credibly defend the profitability of solutions, because sustainability also means solutions that are financially feasible for customers.

In general, it will take a degree of courage in dialogue to get the general public involved in the energy transition. The basis is genuine transparency around the relevant facts, which can often get lost in communications from companies.

Climate protection

For ewz, climate protection with a goal of net zero by 2040 is a focal point of its strategy. The Sustainability Board welcomes this strategic approach and believes ewz is generally on track when it comes to the expansion of renewable energy and the development of additional decarbonisation initiatives for customers, for instance. Along with obvious challenges like the conflicting interests around the expansion of hydropower versus protected areas, the Sustainability Board sees particular opportunities arising from ewz's role in the overall context of energy transition. So it would be good to see ewz making greater use of its pragmatic competencies and innovation to test forward-looking approaches in real-life settings which could be groundbreaking for actors throughout Switzerland. But to do this, it requires greater regulatory scope. The interaction of energy systems with urban planning, the role of the urban mobility system in an ageing society – these are areas that also require urgent solutions. The key question here is how to boost ewz in its pioneering role.

From a customer perspective, the main factors are concrete, affordable solutions. It will take courage to better involve customers in new business models. For individual members, other important issues include renewable energy 'as a service' and the participation of customers, for example in resident profit-sharing. Overall, it is important to bring the customer along on the journey and to create a better understanding for the concrete challenges of net zero.

Biodiversity

ewz aims to give more space to the issue of biodiversity in its environmental strategy. The Sustainability Board welcomes this, as this topic is rightly attracting greater attention in the business world. Here ewz is primarily concerned with doing the right thing and making it measurable. Strategically, ewz needs to declare what it aims to achieve in terms of biodiversity. The focus should be on optimising the ecological functions of land. In this area in particular it is important to take a systematic approach and to think and act holistically. This means considering the connectivity of ecosystem functions and promoting interconnected habitats. In general the use of earth resources needs to be considered from the perspective of overall value increase. New conditions can be addressed as opportunities and not just as risks. This is especially true of the consequences of climate warming. For example, if mountain slopes are destabilised due to the shrinking of glaciers in ewz catchment areas, a sophisticated concept for optimisation of ecological functions could assist in stabilisation.

Focus on the big picture

The Sustainability Board found the focus on climate protection and biodiversity in the first panel reasonable, but for future interactions it would also like to see issues like the social impact of ewz on the agenda – in relation to price movements in energy or empowerment of customers, for example.

One key concern of the Sustainability Board which arose in almost every discussion is how to discuss ewz's development and contribution to the overall system. The members would like to see ewz helping to define visions of the future, for example: What should the Zurich of the future look like? What is our contribution? How do we make the general public part of the energy transition?

The fact that the public is part of the 'our ewz' approach is often forgotten, yet there is great potential here. So it would be good to see user groups closely integrated and to showcase ewz as a partner that creates added value in cooperation with the population, to the benefit of the communities it serves. This also represents an attractive target image as a contrast to the large-scale energy corporations and their motive of profit maximisation.

Closing comments

It is the Sustainability Board's hope that some of the results of the first panel will flow into ewz's strategy and target-setting process. It would therefore welcome an exchange of information between the annual panel discussions. The five members of the Sustainability Board wish the ewz Management Board every success in implementing its sustainability strategy and would be happy to continue offering suggestions as a sounding board for the further development of ewz in the future.

The panel statement was put together by the members of the Sustainability Board in January 2024 with the support of Stephan Lienin, Sustainserv GmbH, who moderated the panel in November 2023.

Involvement at the operational level

A range of stakeholders, who are supported by employees, exert a high degree of influence over ewz. Representatives of these groups may come from the political sphere, from the general public or from associations and NGOs.

Examples of their involvement include:

- Exchange and dialogue with representatives of municipalities and cantons both domestically and internationally where ewz maintains operating facilities
- Cooperation with other municipal service departments, for example on environmental issues and smart city
- Cooperation with varying stakeholders in rewilding projects of the ewz naturemade star fund
- Active, stakeholder-specific communication on environmental issues
- Involvement of customers in project development and satisfaction analysis
- Personal discussions with business customers on individual wishes

GRI 2-30

Collective bargaining agreements

The employees of ewz do not fall under a collective bargaining agreement. Employees are engaged under public-sector conditions based on an order. The employment conditions are uniformly set out in the Ordinance on the Employment of Municipal Personnel (Personnel Law) and in personnel law decrees. These statutory provisions are essentially mandatory.

See:

- [Personnel Law of the city of Zurich](#)
- [Employment Conditions of the city of Zurich](#)

Material topics

GRI 3-1

Process to determine material topics

Reporting reflects key sustainability issues that are relevant for the development of ewz and its management. ewz considers it important that ewz sustainability management incorporate not just the perspective of the Management Board but also the external perspective of stakeholders.

The main impacts of sustainability focal points on internal and external stakeholders were assessed to allow demarcation of issues. The contents of the report were determined by applying the four principles of reporting set out by the GRI standards.

Stakeholder engagement:

ewz regularly involves internal and external stakeholders in determining its materiality matrix. Sustainability focal points are validated for relative importance by representatives of stakeholder groups. The Management Board provides relevance from a strategic perspective.

Sustainability context:

ewz is directly affected by global developments. New technologies, digitalisation, the national and municipal energy strategy, climate change and societal changes harbour risks and offer opportunities. ewz orients its strategy towards sustainably meeting the needs of its customers, who are also affected by these changes.

Materiality:

The foundation for identifying sustainability focal points comes from 46 potential sustainability focal points from the areas of economy, environment, social affairs and politics that have been identified using internal expertise, literature and industry standards. The key issues are re-evaluated regularly, and new ones added as necessary, on the basis of dialogue with stakeholders and current sustainability trends.

Completeness:

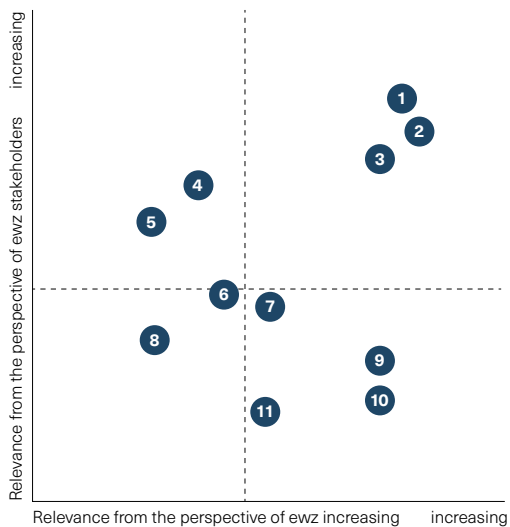
ewz is particularly focused on advancing sustainability issues in areas where the company can exert a direct influence. The key issues that lie 'beyond' the organisation are regularly examined, and are included in this report. The sustainability performance of minority shareholdings, for example partner plants and nuclear power plant investments, cannot be directly influenced and is not included.

See: → GRI 2-29 Approach to stakeholder engagement, page 35

The material sustainability topics at ewz are:

- 1 Sustainable products and services
- 2 Investments in renewable energies
- 3 Security of supply
- 4 Climate protection and energy efficiency for the city of Zurich
- 5 Sustainable procurement
- 6 Biodiversity
- 7 Smart city infrastructure
- 8 Dialogue with shareholders
- 9 Occupational health and safety
- 10 Employee development
- 11 Diversity and inclusion

Materiality matrix:



This diagram shows the sustainability focal points by relevance to ewz stakeholders (y axis) and from a strategic corporate perspective (x axis). The position of an individual topic reflects its importance relative to other issues.

ewz has decided to validate and update the materiality matrix regularly, if not every year as previously. The materiality matrix from 2022 therefore served as the basis for sustainability management in the 2023 financial year.

Management system

GRI 3-3

Management of material topics: Management system

The management system encompasses all management tools including planning, execution, monitoring and improvement of activities. It is designed to ensure that objectives are fulfilled, freedom of action preserved, and assets and expertise protected. The focal points of the management system are set out in the sustainability policy. The management process includes annual evaluation of the effectiveness of the management system by an external specialist.

ewz certifies its process and quality management in accordance with ISO 9001, environmental management in accordance with ISO 14001, energy management in accordance with ISO 50001 and health and safety management in accordance with ISO 45001. The management system was recertified by external auditors from the Swiss Safety Center in August 2021, with validity until 2024. The management systems of ewz (Deutschland) GmbH and its five German wind farm companies are regularly certified in accordance with ISO 9001:2015. Recommendations for further development by external auditors are implemented incrementally.

The corporate strategy is based on service orders from the city of Zurich and is backed up by successful referendum outcomes, for example on the target of net zero by 2024, on the credit facility for the expansion of renewable energy, and on the construction of energy networks that use renewable energy sources.

Sustainability is part of the corporate strategy. The Management Board defines the direction for the sustainability dimensions of economy, environment and social affairs, and defines the associated objectives on an annual basis. These objectives are reviewed every quarter, with measures introduced in the event of discrepancies.

See: [ewz sustainability policy](#)

Internal control system

The internal control system (ICS) is designed to aid early detection of operational, financial or legal risks in workflows and systems, and to address them as appropriate. All processes and workflows are systematically checked and monitored. Mandatory rules of conduct for upholding compliance with laws are set out in company directives and the Personnel Law of the city of Zurich. This includes compliance with anti-trust law and avoidance of corruption, bribery and insider trading.

ewz's internal control system is reviewed by the Financial Controller of the city of Zurich. This is an independent office with responsibility for financial oversight. Through its reviews, the Financial Controller of the city of Zurich ensures that the city – and thus ewz as well – is complying with standards and is acting in the best interest of the public at every level and in every area.

Opportunity and risk management

For ewz, risk management is a tool for implementing strategy and ensuring the company achieves its objectives. ewz uses dedicated opportunity and risk management to bridge the gap between the company's present situation and the changing framework conditions and anticipated challenges of the future. Current geopolitical conditions have a significant impact on business activities. The opportunities and risks are regularly updated by the various divisions. The Management Board reviews them and introduces specific measures. The risk and opportunity analysis that is conducted each year considers environmental aspects, including:

- the influence of climate change on production facilities
- combating of compliance infringements of corporate guidelines, in such areas as corruption, bribery, antitrust law and discrimination of employees

Sustainability performance is disclosed annually in the Annual, Financial and Sustainability Report in accordance with GRI standards for sustainability reporting.

See: [Performance of a risk assessment, page 18](#)

Environmental management

In November last year, the Management Board approved the ewz environmental strategy. It sets focal points in the field of the environment and enables the effective, target-oriented development of the company's environmental performance. The environmental programme is derived from the environmental strategy.

ewz boasts a certified environmental management system which, along with its environmental programme, is managed by a member of the Management Team – the environmental representative – and guided by the Head of Environmental Management. The environmental programme is implemented in collaboration with delegates from the divisions and other specialists. There are ten employees with environmental functions who support environmental management.

A wide range of resources are deployed in the provision of electricity, heating, cooling and communications and other services. Construction and maintenance of infrastructures require concrete and metals including steel, copper and aluminium. Renewable resources such as heat from groundwater are used to generate energy, combined with fossil fuels where necessary.

ewz is committed to the continual reduction of the environmental footprint that arises as an unavoidable consequence of its activities. Therefore, its environmental programme includes:

- reduction of energy consumption
- increase in energy efficiency
- reduction of greenhouse gas emissions from burning of combustibles and fuels
- increase in resource efficiency
- increase in biodiversity in water and land ecosystems
- reduction of emissions
 - from hazardous substances
 - from contaminated sites
 - from sources of noise
 - from electrical and magnetic fields

The environmental management purview also includes internal and external communication of stakeholder-specific information, in particular raising awareness of environmental issues among employees.

Sustainable products and services

GRI 3-3

Management of material topics: Sustainable products and services

All customers covered by basic supply and on the open market receive electricity products from 100 per cent renewable energy. Customers with basic supply can choose between cost-effective green electricity, green electricity from ewz's own production, and environmentally valuable electricity from naturemade star-certified products. Electricity products are reviewed annually for their environmental footprint, using environmental accounting, and for greenhouse gas emissions.

The availability of electricity products is secured by ewz through its own plants, long term offtake agreements and short-term procurement on the market. The production volume exceeds the actual amount of electricity sold to ensure that any production fluctuations caused by weather conditions can be absorbed. ewz optimises its production by trading physical electricity. Certificates of origin serve as proof of the environmental quality of electricity products. These certificates are mandatory under Swiss law. ewz looks after the development, marketing and sale of products and services connected with electricity and advises its customers.

ewz pursues the strategy of retaining and developing its sustainable products and services. To further drive the expansion of PV in the city of Zurich, ewz launched new services in the last year. Its ewz.solarcomplete services allows building owners to outsource the financing, planning, construction and operation of a PV installation on their roof. In return, they commit to using the solar power produced throughout the entire term of the contract. Under the ewz.solarbenefit service, ewz allows building owners to lease unused land for the operation of solar power plants.

In the previous year, ewz experienced increased demand for the products charging solutions, self-consumption association (ZEV) and ewz.solarsplit. This was driven by the increasing number of electric vehicles in operation and the desire for self-produced, sustainable energy at stable prices.

Throughout Switzerland, ewz constructs and operates environmentally and economically viable energy supply facilities for complex sites and major projects in addition to energy networks for neighbourhoods and municipalities. By replacing or removing fossil-based heating in favour of a heating network based on renewable energy, owners of these systems can reduce the direct CO₂ emissions. The energy for heating and cooling used for the base load consists entirely of renewable energies. However, fossil fuels may still be used at peak times when exceptional levels of heating or cooling are required.

ewz also seeks to secure competitive solutions based on renewable energies in its energy contracting business. In the past year, the proportion of carbon-neutral or carbon-free energy was 75 per cent. Renewable energy sources used by ewz include waste heat from data centres, lake water, wood chips and treated wastewater.

In 2023, the City Council decided to consolidate all of the city of Zurich's thermal networks under the control of ewz. An implementation plan is currently being developed.

Under national framework conditions, the Swiss property market is expected to reach net zero by 2050. The Municipal Code of the city of Zurich has determined that within its purview, this target should be reached by 2040. The transformation from fossil to sustainable renewable energy sources is a major challenge for professional managers of property portfolios. ewz aims to help them implement innovative energy solutions for 100 property projects throughout Switzerland by 2030, for which it will offer 100 per cent climate-neutral energy and heating supply. These include PV installations and charging solutions for electromobility. To date 21 projects have been completed or are in progress.

See:

- Restructuring of district heating supply, page 8
- Thermal networks, page 8
- Energy Services, page 11
- Further credit facility for energy service providers, page 11
- Cheapest basic supply in the canton of Zurich in 2024, page 13
- Energy concept for the SBB Werkstadt site, page 13
- Solar power investment model, page 14
- Solar potential on the roofs of Zurich, page 14
- 100 real estate projects – 100 per cent climate-neutral, page 14

GRI 302

GRI 302-1

Energy**Energy consumption within the organisation**

Energy consumption covered by renewable energies*	Unit	2022	2023
Heating required	MWh	1,100	759
Power consumption	MWh	2,370	2,374
Fuel consumption	MWh	5	10
Total energy consumption of renewable energies	MWh	3,474	3,143
Energy consumption covered by non-renewable energies**	Unit	2022	2023
Heating required	MWh	375	666
Power consumption	MWh	–	–
Fuel consumption	MWh	1,952	1,860
Total energy consumption with renewable energies	MWh	2,327	2,526
Total energy consumption within the organisation	MWh	5,802	5,669

* Biogas, district heating (proportion of renewable energies), electricity from renewable energies

** heating oil, district heating (fossil proportion), petrol, diesel

See: → Renovation and expansion of Herdern maintenance depot, page 11

GRI 302-2

Energy consumption outside of the organisation

Stromabgabe	Einheit	2019	2020	2021	2022	2023
Electricity supply, Switzerland	GWh	3,638.5	3,332.6	3,580.0	3,265.0	3,419.6
Electricity supply, subsidy systems and other	GWh	443.7	707.7	889.2	977.6	826.5
Electricity supply to end customers, Switzerland	GWh	3,055.6	2,692.7	2,787.9	2,589.0	*2,580.1
Electricity supply from renewable energies to end customers	GWh	2,899.8	2,692.7	2,787.9	2,551.9	*2,486.5
Proportion of renewable energies in electricity supply to end customers	%	94.9	100.0	100.0	98.6%	*96.4
Electricity consumption in the city of Zurich	GWh	2,873.5	2,762.4	2,735.3	2,723.9	2,693.0

* deferred value as at 31/12

Heating and cooling sales	Unit	2019	2020	2021	2022	2023
Heating sales	GWh	281.3	302.4	358.9	333.5	355.9
Cooling sales	GWh	79.2	76.7	78.0	90.6	88.5
Heating and cooling sales	GWh	360.5	379.1	436.9	424.1	444.5
City of Zurich heating degree days	Kelvin days	3,112	2,933	3,401	2,775	2,908
Proportion of heating and cooling from renewable energies or unused waste heat	%	76.8	78.5	74.5	76.3	75.0
Number of energy networks	Number	42	46	47	51	52
Number of individual systems	Number	303	318	328	342	356

See:

→ Energy Services, page 11

→ Electricity balance sheet, page 25

Investment in renewable energies

GRI 3-3

Management of material topics: Investment in renewable energies

Energy production in Europe is increasingly shifting to renewable energies. This change is driven by national and international efforts to reduce greenhouse gas emissions. In Europe, this results in political support in the area of renewable energy through subsidies, regulation and market reforms. Another driver is the competitiveness of plants; the production costs for renewable energy are already cheaper than conventional power generation plants in some cases. Experts believe that this dynamic will continue.

ewz is expanding power production from renewable energy sources. This is intended to replace electricity drawn from investments in nuclear power plant investments and associated electricity procurement rights, which are to be phased out by 2034 at the latest. Expansion projects will be carried out either unilaterally or with partners. ewz sits on the management boards of all the plants that it owns or in which it has investments. In these plants, ewz is either partially or solely responsible for commercial management.

All ewz power plants and investments are part of the ewz production portfolio, regardless of their location or technology. Investments in renewable energies are made where there is optimal availability of natural resources for the technology in question and where standards related to efficiency, environmental impact and acceptance can best be fulfilled. Currently, the framework conditions are often more attractive in other countries. For example, more electricity can be produced from renewable energy sources per franc invested than in Switzerland.

For the construction of wind farms, ewz is primarily active in Germany, France, Sweden and Norway. It is evaluating the possibility of investments in large-scale photovoltaic systems in other European countries. In Switzerland, ewz strives to both retain electricity production from hydropower and expand electricity production from photovoltaics and wind.

Along with hydropower and wind, photovoltaics will be the third pillar of the ewz production portfolio. ewz has set itself the long-term objective of increasing the output of its own PV plants from 23.6 MWp in 2022 to 255 MWp in 2030. The systems will be erected both within the supply area and beyond, in residential areas, industrial, commercial and infrastructure areas as well as high alpine regions.

ewz is aiming to increase the production of electricity from sun, wind and water by an average 100 GWh per year by 2024

See:

- Investment in renewable energies, page 44
- [Energy strategy 2050](#)
- [Energy Perspectives 2050+](#)

GRI EU1

Installed capacity

The expansion of renewable energies can be seen in the increase in overall output of ewz power production plants between 2013 and 2023. In 2013 there was 1,003 MW renewable energy capacity in operation, rising to 1,367 MW in the previous year. This represents an increase of 36 per cent since 2013, largely attributable to wind farms in other European countries.

See:

- Electricity balance sheet, page 25
- High-alpine large-scale solar power plants in the Grisons, page 9
- Expansion of photovoltaic systems, page 9
- Zürich Wind, page 12
- ewz (Deutschland) GmbH, page 12
- Three more wind farms in France, page 12
- Ground-mounted solar installations in Sweden, page 12
- Ånglarna wind farm in Sweden, page 13
- Sale of investment in Butendiek wind farm, page 13
- Mollendruz wind farm, page 13
- Solar potential on the roofs of Zurich, page 14

After very dry conditions in the previous year, total inflows for 2023 were in line with the long-term average. Following average inflows in the first months, summer brought very low inflow (due to below-average snow melt and precipitation). In autumn and the remainder of the year, catchment areas of ewz power plants saw above-average precipitation levels, which led to higher inflow.

Electricity production and electricity drawn from ewz's own power plants, partner plants and procurement rights increased from 4,865 GWh in the previous year to 5,421 GWh. Of this, 3,239 GWh came from power plants that use renewable energy sources. This represents a share of renewable energy in electricity production of around 60 per cent.

The annual production from all wind farms, both wholly owned wind farms and 20 investments, was around 1,003 GWh in 2023. Following an optimisation of its wind farm portfolio in the previous year, ewz sold its 5 per cent stake in the Butendiek offshore wind farm.

See:

- Electricity balance sheet, page 25
- Wind production: more than 1 terawatt hour, page 9
- Expansion of photovoltaic systems, page 9

Security of supply

Electricity is the backbone of business and society. An outage in Switzerland would result in daily economic losses in the nine-figure range. Secure power supply means the least amount of end customers affected by the least amount of disruptions or voltage fluctuations of the least duration. The duration of the average disruption per customer should not exceed 10 minutes per year over five years.

ewz is responsible for the safe, efficient operation of the distribution grid in the city of Zurich and in parts of the Grisons. ewz maintains the infrastructure and develops it, taking economic and environmental factors into consideration. Civil engineering projects are coordinated in collaboration with other service departments of the city to ensure harmonisation of fibre optic, water, gas and electrical networks. The goal is for streets to be opened up as little as possible.

The importance of security of supply continues to increase with the introduction of new technologies and applications that require electricity. Key drivers are the transformation of the energy system and the digitalisation of business and society.

Future networks

The expansion of photovoltaic systems and other renewable energy sources means that feed-in of electricity to the distribution grid is increasingly decentralised and volatile. The rapid expansion of energy centres, heat pumps and vehicles that run on electricity places increased demand on the distribution grid. The consequences affect every grid level in Zurich and central Grisons, from low voltage to high voltage. To ensure future viability, problems are analysed throughout the entire system. Extensive measures are required, including:

- Forecasting of demand development and energy requirements in supply areas
- Changes to conception and planning as well as to construction and operation of the corresponding grid infrastructure at every grid level in accordance with the NOVA principle*
- Technical and organisational innovations in grid concepts, particularly those that allow monitoring and control of grids (smart grid)

Smart Grid

The smart grid will be installed on the basic infrastructure of the distribution grid. The combination of intelligent solutions and conventional grid expansion is the key to success – both have to be developed further. The smart grid affects grid levels 5, 6 and 7 in particular – the medium-to-low voltage levels.

The main elements of this work are:

- Replacement of around 300,000 conventional electricity meters with intelligent metering devices. By the end of 2027, the 80 per cent of electricity meters mandated by the Electricity Supply Act will be replaced.
- Continuous upgrading of 250 ewz transformer stations with intelligent measuring instruments by 2030
- Ancillary systems that are required for optimal interaction of metering, communication and control systems

There will be a facility for evaluating, displaying and interpreting meter data, automatically and promptly, including factors such as faults, grid quality and power demand. This will help, for example, in the intelligent coordination of feed-in and consumption of electrical energy from different power generation plants and consumers.

High-voltage networks

The high-voltage networks in Zurich and central Grisons are the connection to the distribution grid of Swissgrid. Transporting the additional demand as well as the additional production will require further development fit for the future. This will further require a range of grid expansion measures in ewz's high-voltage network.

See:

- GRI EU29 Average power outage duration, page 46
 - Security of supply and grid reinforcements, page 9
 - Federal Act for a Secure Electricity Supply ..., page 9
 - Crisis infrastructure in the Auwiesen/Aubrugg substation, page 11
 - Consolidation of emergency electricity aggregates, page 14
- * Grid optimisation prior to grid reinforcement, prior to grid expansion

GRI EU29

Average power outage duration

System Average Interruption Duration Index (SAIDI)

ewz uses the internationally recognised SAIDI for measuring security of supply. This index measures the reliability of the distribution grid and returns the average interruption duration per customer and year. The interruption duration for the city of Zurich grid was lower in 2023 than in the previous period – 7.4 minutes. The goal of keeping the average below 10 minutes over the last five years was met.

	Unit	average 2018 to 2022	Average 2019 to 2023
Average interruption duration (SAIDI)	minutes per capita and annum	7.6	7.4

As a rule, damage caused by third parties, such as construction companies, is the main cause of power outages. Over the last five years, they were responsible for an average of 30 per cent of outages in the city of Zurich.

Electricity grid

Plans for the generational electricity grid strategy 2050 are progressing well. An increase in solar power, decentralised battery storage systems, electromobility and load management options place new demands on the grid. A model of the electricity grid is used to map these flexible flows of electricity. This creates transparency for planning and indicates where the grid has to be reinforced.

ewz is not just driving the expansion of the conventional grid. In urban settings, expansion of this kind can be expensive, and execution can be particularly time-consuming. Researchers are therefore looking into options for controlling flows of electricity. There are currently pilot projects being conducted into the bi-directional charging of electric vehicles at charging stations. This approach uses the vehicle's battery to maintain grid reliability. In collaboration with the private sector, other grid operators and universities, ewz is researching the potential for flattening peak loads in the grid.

In 2023, 72 km of the electricity grid was upgraded. This equates to 1.4 per cent of the entire cable length of around 5,300 km.

See:

- Crisis infrastructure in the Auwiesen/Aubrugg substation, page 11
- Refurbishment of Frohalp substation, page 12

Climate protection and energy efficiency for the city of Zurich

GRI 3-3

Management of material topics: Climate protection and energy efficiency for the city of Zurich

Climate protection

ewz welcomes the federal government's Energy Strategy 2050 which provides for phasing out of nuclear power, expansion targets for renewable energies, increased energy efficiency, and a high-performance electricity grid. In 2017 Switzerland ratified the Paris Climate Agreement and committed to reducing greenhouse gas emissions by 50 per cent of 1990 values by 2030. ewz supports the target vision of a climate-neutral Switzerland that the federal government set out in its Energy Perspectives 2050+.

ewz aims to achieve net zero in 2040 – ten years earlier than the overall target for Switzerland. In 2022, the population of the city of Zurich approved the city's net zero target for greenhouse gases, to be achieved by 2040. The City Council resolved that the municipal administration should meet its net zero target by 2035. The targets in detail:

- The city of Zurich is reducing direct greenhouse gas emissions in the urban area to net zero by 2040. By 2030, the aim is for emissions to be no more than half of what they were in 1990.
- The municipal administration aims to achieve net zero in direct greenhouse gas emissions by 2035.
- By 2040, the city's indirect greenhouse gas emissions are to be reduced by 30 per cent per person and year compared to 1990 values.
- By 2050, the aim is to reduce energy consumption to 2,000 watt continuous output per resident and year.
- Energy efficiency efforts and electricity, heating and cooling from renewable energy sources will be boosted further.

For ewz as a company, this means:

- reduction of direct greenhouse gas emissions throughout the entire company to net zero by 2040
- reduction of indirect greenhouse gas emissions up and down the ewz value chain by 30 per cent compared to 1990 values, by 2040

For net zero 2040, activity areas are being identified and required measures defined, with a roadmap used to track progress toward meeting these goals.

Energy efficiency

In its supply areas, ewz offers its customers measures for increasing energy efficiency and reducing CO₂ emissions. These measures are funded through municipal levies in electricity tariffs and include:

- Energy efficiency consulting
- Energy courses
- Financial support for plants that generate electricity from renewable energy sources
- Financial support for efficient electrical systems and household appliances
- Subsidies for systems that contribute to reduction of greenhouse gases, such as heat pumps and connection to a heating network
- Subsidies for electromobility charging infrastructure
- Efficiency bonus in electricity bills for companies that succeed in increasing their energy efficiency

Access to information around climate protection and energy efficiency and corresponding services of the municipal administration – including ewz services – are consolidated in a municipal energy platform.

Increased efficiency and reduction of direct greenhouse gases from ewz operations are achieved through cantonal target agreements. The vehicle fleet is to be run on 100 per cent renewable energy by 2035.

Awareness raising

Climate protection and energy was one of the three focal points of the internal event programme 'Wir handeln JETZT!' (We're acting NOW!). There was a panel discussion with internal and external specialists which drew a large number of interested employees..

See:

→ 4,800 ewz charging stations, page 11

➤ [City of Zurich energy platform](#)

GRI 305

GRI 305-1

Emissionen**Direct (Scope 1) GHG emissions**

Greenhouse gases are emitted through the burning of biogenic and fossil heating and motor fuel, as well as through losses of SF6 and refrigerants. Another source is methane emissions from reservoirs where organic material is broken down by methane-producing bacteria.

Scope 1 greenhouse gas (GHG) emissions	Einheit	2019	2020	2021	2022	**2023
from power production	t CO ₂ -eq*	1,821	1,388	1,240	1,446	1,018
from energy contracting	t CO ₂ -eq	18,700	17,510	22,826	18,254	20,055
from other activities	t CO ₂ -eq	143	34	34	36	17
from investments	t CO ₂ -eq	661	871	8,787	8,113	7,309
Direct GHG from all activities	t CO₂-eq	21,325	19,803	32,886	27,849	28,398
GHG of biogenic origin	t CO ₂ -eq	3,204	3,196	52,325	92,397	112,750

* CO₂ equivalent

** provisional values; definitive values only available after close of Swiss guarantee of origin accounting on 31 May

The majority of GHG emissions at ewz come from the energy contracting business. Use of fossil fuels for heating production at peak consumption times leads to particularly high emissions. In some cases, solutions that are entirely based on renewable energies are not yet competitive. This meant that in the past, the expansion of the energy contracting business and changing weather conditions increased ewz's GHG emissions. However, GHG emissions from fossil-based heating for energy contracting customers are eliminated entirely. Consequently there is a significant decline in overall GHG emissions for ewz and its customers.

The city of Zurich's heating supply will be restructured starting 1 January 2025. An overall concept for the city of Zurich's thermal networks is being formulated in collaboration with Wärme Zürich and the energy suppliers Energie 360° AG and ERZ. The goal of this restructuring is optimal utilisation of waste and ambient heat sources in the city of Zurich within the individual networks. The source of the Altstetten energy network will play a key role here, and will need to be expanded in the future.

With the refurbishment of the buildings in the Herdern maintenance depot, the last fossil heating for ewz properties was decommissioned. The new central warehouse, which is already complete, will be heated by a groundwater heat pump in future. Until this is installed, heating will be provided by a temporary air-to-water heat pump.

Calculation basis for the Scope 1 GHG footprint:

- GHG emissions are calculated by multiplying GHG-related activity figures by the corresponding GHG emission factor. The figures are consolidated in line with the equity capital concept defined in the GHG Protocol, which incorporates emissions from investments on a proportional basis.
- - The emissions included are CO₂, SF₆, CH₄, N₂O, HFCs, PFCs und NF₃ in accordance with the GHG Protocol, and ODS in accordance with the
- GHG emission factors from the UVEK LCI database DQRv2:2022 and KBOB 2022
- Methane emissions from reservoirs: The GHG Risk Assessment Tool, UNESCO/IHA

See:

→ [Restructuring of heating supply, page 8](#)

GRI 305-2

Energy indirect (Scope 2) GHG emissions

Energy-related, indirect GHG emissions come from the purchase of district heating from waste-to-energy plants and from the procurement of electricity for internal use and for storage pump losses. The majority of Scope 2 emissions come from distribution grid losses from electricity sales in the ewz grid area. The GHG balance sheet also incorporates proportional losses from the swissgrid transmission grid, of which ewz is a part owner.

Scope 2 greenhouse gas (GHG) emissions	Unit	2019	2020	2021	2022	**2023
from district heating purchase	t CO ₂ -eq*	322	320	353	396	510
from electricity purchased for internal use and pump operation	t CO ₂ -eq	714	773	41	21	20
Indirect GHG	t CO ₂ -eq	34,336	32,661	16,061	25,077	24,077
		35,372	33,753	16,455	25,494	24,608

* CO₂ equivalent

** provisional values; definitive values only available after close of Swiss guarantee of origin accounting on 31 May

In 2022, ewz increased its stake in Swissgrid from 8.37 per cent to 9.7 per cent, which also increased the grid losses allocated to ewz.

Calculation basis for the Scope 2 GHG footprint:

- Consolidation based on the equity capital concept defined in the GHG Protocol, which incorporates emissions from investments on a proportional basis
- The emissions included are CO₂, SF₆, CH₄, N₂O, HFCs, PFCs und NF₃ in accordance with the GHG Protocol, and ODS in accordance with the
- GHG emission factors from the UVEK LCI database DQRv2:2022 and KBOB 2022
- GHG emission factors for district heating purchases: City of Zurich Public Works Office, 201

GRI 305-3

Other indirect (Scope 3) GHG emissions

Other indirect GHG emissions come primarily from ewz investments in infrastructure for generating and distributing electricity and heating/cooling, from plant operations, as well as GHG emissions from energy consumption by partner plants and third parties.

Scope 3 greenhouse gas (GHG) emissions	Einheit	2021	2022
Structural installations	t CO ₂ -eq*	9,298	10,616
Electrical installations	t CO ₂ -eq	22,141	18,353
Services	t CO ₂ -eq	12,403	12,125
Goods	t CO ₂ -eq	8,440	8,688
Energy consumption	t CO ₂ -eq	65,037	65,962
from other activities	t CO ₂ -eq	2,412	2,861
from investments	t CO ₂ -eq	7,964	57
Indirect GHG	t CO₂-eq	127,695	118,663

* CO₂ equivalent

The amount of other indirect greenhouse gas emissions depends on the intensity of the company's construction activities. The chosen methodology makes it difficult to separate greenhouse gas emissions into fossil and biogenic sources. The most recent values relate to the 2022 financial year.

Calculation basis for the Scope 3 GHG footprint:

- Consolidation based on the equity capital concept defined in the GHG Protocol, which incorporates emissions from investments and partner plants on a proportional basis
- The emissions included are CO₂, SF₆, CH₄, N₂O, HFCs, PFCs und NF₃ in accordance with the GHG Protocol, and ODS in accordance with the
- Based on cost-type accounting, plant accounting and balance of certificates of origin for sector-specific emissions factors in accordance with Environment IOT 2008
- GHG emission factors from the UVEK LCI database DQRv2:2022 and KBOB 2022

Customer emissions savings

In the past year, ewz customers saved a total of 118,255 t CO₂-eq in CO₂ emissions and greenhouse gases by replacing private fossil-based heating and through financial support for technologies that replace fossil heating and motor fuel.

ewz customer emissions savings	Unit	2019	2020	2021	2022	2023
CO ₂ savings through energy contracting	t CO ₂ -eq*	54,889	56,854	66,227	64,503	66,591
GHG savings from subsidies in the context of klima- und climate and energy policy targets	t CO ₂ -eq	54,502	52,115	52,814	53,987	51,664

GRI 302

GRI 302-5

Energy

Reductions in energy requirements of products and services

Public lighting

ewz is responsible for public lighting in the city of Zurich. The company aims to minimise undesirable light emissions wherever possible, and to reduce electricity consumption. The city's public lighting concept was amended to help achieve these aims. Conventional lighting elements are being continually upgraded to LED, with half of the city's public lighting fitted with LED lamps to date. LED technology is also used in road traffic. Depending on traffic conditions, street lighting is set via a communication module to one of three levels to achieve the necessary degree of illumination based on based on the applicable standards. Radar is used to measure traffic. Lowering illumination levels has led to significant savings. Transport stops on VBZ (Zurich Public Transport) routes will also be incrementally switched over to LED lighting by the end of 2024. Use of motion detectors, which allow night-time dimming, mean power requirements can be reduced by up to 90 per cent, although the safety of all passengers must be guaranteed at all times.

	Unit	2023
Total lights	Number	49,085
Proportion of LED	%	51.1%
Energy savings	%	7.6%

LED public lighting will need to be expanded further to help the city of Zurich achieve its climate and energy policy goals – net zero by 2040 and 2000-watt targets. In 2023, the electricity consumed by public lighting was reduced by a total of 7.6 per cent, to 13.1 GWh.

See: → Public lighting with LED, page 11

Energy efficiency consulting

ewz energy efficiency consulting specialists carry out around 300 consultations and in-depth energy analysis for companies in the supply areas each year. There was unusually high demand for energy efficiency consulting in the past two years. High electricity prices on the liberalised market and the prospect of electricity shortages in the second half of winter 2022/2023 prompted many companies – large-scale consumers in particular – to review their energy requirements.

Energy efficiency consultants identify potential, recommend measures and support their implementation, using intelligent technologies such as smart meters and a modern energy data management system. Where required, they follow this up with awareness-raising measures for employees and monitoring of the energy situation. Energy efficiency consultants develop target agreements for increasing efficiency and assist with ISO 50001 certification where necessary. Companies have a huge savings potential of up to 25 per cent in their cooling, heating and IT.

Companies set binding targets for reduction of their energy consumption on a voluntary basis. This usually involves a target of increasing energy efficiency by 1 to 2 per cent per year over ten years as set out in an agreement between the company or organisation and the federal or cantonal authorities. Companies and organisations in the ewz supply area that fulfil the defined efficiency targets benefit from an efficiency bonus that reduces their electricity costs. This programme is the only one of its kind in Switzerland. Figures on the impact of the programme are only available a year after implementation; Taking all assumptions into consideration, in 2022 ewz.effizienzbonus achieved savings of 6.9 GWh in electricity and 5.2 GWh in heating.

In the past, ewz has carried out hundreds of individual energy efficiency consultations in the gastronomy sector. Now ewz is aiming to expand its impact through a new consulting approach. Targeted training for operational managers will enable high-quality consulting for large-scale customers and customers with multiple locations. They can then pass this knowledge directly on to their employees. Following a successful pilot phase in 2023, this concept will now be advanced.

Along with consulting for companies, consulting services for private customers has also produced numerous benefits. In 2023, a pilot project for digital energy consulting based on smart meter data and artificial intelligence was launched for private customers. And there were over 500 in-depth consultations regarding PV – a record in the field of solar power.

Financial support

	Unit	2019	2020	2021	2022	2023
Payment of subsidies	CHF m	3.09	5.70	11.02	10.45	20.94
Efficiency bonus refunds	CHF m	15.3	15.0	14.8	15.0	14.4

Subsidies for climate and energy policy targets represent financial compensation for municipal levies that fund measures such as the target of reaching net zero by 2040. These subsidies aim to promote the efficient utilisation of energy, the use of renewable energy sources and the reduction of greenhouse gases in the city of Zurich and eligible municipalities in the canton of the Grisons. Subsidised facilities include:

- Photovoltaic and solar power plants
- Charging infrastructure for electromobility
- Heat pump facilities that replace fossil fuel-driven heating
- Connections to heating networks

In 2023, 59 per cent of grants went toward funding electromobility. Around 15 per cent of contributions went to construction of photovoltaic systems, 11 per cent to the construction of heat pumps and 10 percent to the construction of district heating connections.

A sum of 13.8 million Swiss francs went toward the electrification of public transport. This helped to advance the replacement of diesel buses with electrically operated vehicles. Funding of 3.8 million Swiss francs went to the associated charging infrastructure. These investments – a step toward the city of Zurich's net-zero goal – serve to reduce transport emissions, which benefits the entire population of the city.

The rate of subsidy applications has remained high since 2021, testament to a consistently high willingness among the population and companies to invest in a carbon-neutral future. To continue meeting this great demand, the tariff component 'Municipal levies' will be increased by CHF 0.04 to CHF 0.0255/kWh in the city of Zurich, and by the same amount for a total of CHF 0.021/kWh in eligible localities in the Grisons.

Under the cantonal energy law, oil and gas heating systems must be replaced by climate-friendly solutions at the end of their lifespan. The city of Zurich is supporting building owners on the path to net zero and speeding up the switch to climate-friendly heating solutions, thus reducing the energy requirements of existing heating systems as well.

Levies for energy efficiency consulting and funding will be raised through the 'Municipal levies' component of the electricity tariff.

Sustainable procurement

GRI 3-3

Management of material topics: Sustainable procurement

The quality and availability of products and services procured depend on the costs, resources, innovation potential and reputation of the suppliers. In procuring goods, ewz considers economic aspects but also length of service life, energy efficiency and environmental and social issues. The companies in the supply chain share responsibility for the impact of the production of their goods on labour and the environment. The procurement mission statement of the city of Zurich sets out criteria for ensuring economic, environmental, social and fair trading. It forms the foundation for ewz's activities on the procurement market. Public-sector procurement pursues the goal of procuring goods and services from qualified providers at an optimal price and in the requisite quality. In the previous year, the Inter-Cantonal Agreement on Public Procurement came into effect in the canton of Zurich. The principle of sustainability was expressly enshrined in the new legislation covering public procurement. ewz is seizing this opportunity and focusing on procurement that prioritises climate and energy targets. Above a certain volume, ewz is obligated to put orders out to tender.

Environmental delegates of all divisions have a supporting role as experts in sustainable procurement. They are tasked with assisting and project managers in the divisions to define sustainability criteria. The environmental delegates are responsible for the specific product groups that are allocated to them. Project managers (users) integrate sustainability issues into their procurement.

There is regular for the members of the environment and purchase teams. Training in project procurement and operational purchasing helps raise awareness of sustainable procurement among new employees. Since last year, the principles of sustainability have been expressly incorporated into the General Terms & Conditions (GTCs) of ewz, with reference to the Code of Conduct for Contractual Partners of the city of Zurich. This flows into training.

ewz does not import metals, mineral ores or concentrates thereof into Switzerland, nor does it process these materials.

ewz has had no concrete indications that it acquires goods or services created or provided with the use of child labour. With every order acceptance and submission, suppliers are obligated to observe the GTCs of ewz and the Code of Conduct for Contractual Partners of the city of Zurich. They undertake to observe core labour standards of the ILO* and guarantee adherence from their subcontractors as well; this includes the prohibition on child labour. They also promise to undertake any measures required to prevent corruption. Anticompetitive conduct and infringements of the Code of Conduct can result in exclusion from tender bids, withdrawal of awards, or contractual penalties.

In the previous year, ewz conducted a risk analysis of procured goods throughout the value chain. The analysis considered environmental and social aspects throughout the entire lifecycle of products and services purchased by ewz, including upstream chains and allowing for geographical discrepancies.

It considered environmental criteria, including:

- Emissions of greenhouse gases and air pollutants
- Waste volumes
- Consumption of non-renewable raw materials
- Impairment of eco-systems
- Water consumption

The social criteria considered included:

- Child labour and forced labour
- Restrictions on freedom of association
- Poor working conditions, including discrimination
- Poor workplace health and safety conditions

Throughout the value chain, raw material extraction and the manufacture of goods acquired by ewz may be subject to enhanced environmental and social risks. The transportation, usage and disposal phases have a comparatively low risk profile.

Based on findings from the value chain risk analysis, the criteria catalogue for the procurement of battery systems was updated along with the evaluation criteria for tenders in this area.

In the previous year, ewz invited energy providers and suppliers of electrical cables to a round table. The aim was to jointly facilitate responsible procurement of copper cables. The key issue was how environmental footprint reviews, certificates and closed material life cycle loops can help minimise environmental and social risks.

Since 2016, the city of Zurich has been reviewing wage equality compliance of companies with which the city (including ewz) enters into contracts or service agreements. There are around twelve scheduled random checks of the city's service providers every year.

* International Labour Organization

GRI 204

Procurement practices

GRI 204-1

Proportion of spending on local suppliers

Of the products and services that ewz procured in 2023, 99 per cent of the purchase value was sourced from Swiss companies or companies with Swiss subsidiaries.

GRI 308

Supplier environmental assessment

GRI 308-1

New suppliers that were screened using environmental criteria

All new suppliers must recognise the General Terms & Conditions of ewz and the Code of Conduct of the city of Zurich and submit a self-declaration on economic, environmental and social issues. This includes confirming that they comply with applicable environmental protection legislation, for example.

Around 60 per cent of tenders were carried out with the support of environmental delegates in the previous year, which equates to around 75 per cent of the tendered order volume.

See: [↗ City of Zurich Procurement](#)

GRI 414

Supplier social assessment

GRI 414-1

New suppliers that were screened using social criteria

All new suppliers must recognise the General Terms & Conditions of ewz and the Code of Conduct of the city of Zurich and submit a self-declaration on economic, environmental and social issues. They confirm, among other things, that they adhere to the provisions of labour protection legislation and the principle of non-discrimination.

See: [City of Zurich Procurement](#)

Biodiversity

GRI 3-3

Management of material topics: Biodiversity

The generation of electricity with hydropower plants has an impact on our aquatic ecosystems. Around half of the electricity produced by ewz comes from hydropower plants. By certifying hydropower plants with the Swiss 'naturemade star' quality seal, ewz is helping to ensure that aquatic ecosystems suffer little or no impact. For example, fish passability is guaranteed by fish bypasses and bed-load discharge. ewz is also committed to minimising the impact of hydro-peaking.

Through the naturemade star fund, ewz promotes renaturation of wetlands and thus biodiversity, in the catchment areas of hydropower plants but also well beyond.

Valuable ecological habitats are promoted on green areas in operational sites, for instance on ruderal surfaces. The goal is that every operational site will consist of at least 30 per cent ecologically valuable habitats by 2030. This is achieved through targeted measures aimed at promoting biodiversity, and an ecological care and maintenance plan. The next step will be to link up ecologically valuable habitats in ewz sites and those of surrounding areas. To review the success of measures, biodiversity monitoring will be carried out every five years.

GRI 304

Biodiversity

GRI 304-3

Habitats protected or restored

The retention and promotion of biodiversity was enshrined in the environmental strategy produced in 2023.

naturemade star certification

Around one third of the electricity produced by ewz hydropower plants comes from five naturemade star-certified power plants located in the cantons of Aargau, the Grisons and Zurich. These power plants produce electricity under strict ecological regulations. The condition of ecosystems impacted by these power plants is regularly checked and further measures are introduced where necessary. The ecological requirements relate to fish, aquatic invertebrates, aquatic plants, solid deposits and habitat diversity. The foundation for evaluating water catchment areas is the EAWAG greenhydro process (2000). ewz operates a total of four fish ladders, in Wettingen, Höngg, Letten and the Schanzen-graben in Zurich. In 2023, the Lizun power plant was once again unconditionally recertified with the 'naturemade star' green electricity label.

ewz's naturemade star fund

ewz maintains a number of funds for ecological improvement measures. For every kilowatt-hour of naturemade star-certified green hydroelectricity that ewz sells, CHF 0.007 goes to the naturemade star fund. This support measures for restoring the functioning of habitats such as flowing water and wetlands, to promote local biodiversity. Alongside projects in the hydrological catchment area of the certified power plant, there is now an option for supporting greening projects based near end customers. In 2023, the ewz naturemade star fund invested a total of 2.2 million Swiss francs in improvement measures.

Green space management

For the 14 large-scale operational sites in the Canton of Zurich with a total area of around 156,000 square metres, there is a property-specific green space concept in place. This covers the promotion of ecologically valuable habitats in line with biotope mapping of the city of Zurich. Examples of these valuable habitats include unimproved grasslands, ruderal spaces and valuable tree populations. Currently, 56 per cent % of all ewz operating sites within the Canton and city of Zurich are defined as ecologically valuable habitats. However, figures varied widely across the different sites – from 3 per cent to 86 per cent. The goal is that by 2030, every ewz operational site will consist of at least 30 per cent ecologically valuable habitats. Consequently, further measures for promoting biodiversity are scheduled for 2024. In its efforts to promote biodiversity, ewz is greening around not only its operational buildings but also facades and roofs as well, wherever possible. Green spaces and open areas are maintained naturally without fertilisers or pesticides to protect native animals and plants.

At the central warehouse in Herdern, which was completed in 2023, biodiversity is promoted through a green space concept and targeted nature protection measures, including the greening of the roof and part of the facade.

Awareness raising

Biodiversity is one of the two focal points of environmental and energy management at ewz, which was presented to interested observers in last year's internal event programme 'Wir handeln JETZT!' (We're acting NOW!).

See:

→ naturemade star fund, page 10

→ Longitudinal connections of the Beverin, near Spinass, page 10

Smart city infrastructure

GRI 3-3

Management of material topics: Smart city infrastructure

The growth of urban populations presents a challenge, with greater resources required in a limited area and with limited infrastructure. The city of Zurich's smart city strategy aims to use the digital transformation to maintain and increase equality of opportunity and quality of life in the city, despite population density. Modern technology will serve to promote sustainable development and boost the city of Zurich as an innovation and business hub. In dialogue with experts and project managers from the municipal authorities, external users and various ewz divisions, the city aims to identify areas of potential for the smart city and implement them in projects. ewz is supporting Zurich's smart city strategy by implementing 14 smart city pilot projects and putting seven projects into operation by 2030.

ewz contributes to implementation of this strategy by supplying infrastructures, interfaces and services in the areas of telecommunications, energy and mobility.

- ewz operates a comprehensive fibre optic network in the city of Zurich, a key basis for site networking of public buildings and infrastructures. It supports numerous different digital services and facilitates new applications in public areas.
- The fibre optic network and LoRaWAN are also used for data transfer in smart metering (electricity, heating and cooling meters), which creates greater transparency around the consumption of these resources. This also enables faster correction of faults and more targeted optimisation of consumption.
- ewz supports other municipal divisions in their innovation and smart city projects by sharing its expertise, infrastructure and services. Examples include eCity maps, smart sensor seating and smart bus and tram stops.
- ewz also installs and operates fast-charging stations in public locations for electromobility.
- In collaboration with the Organisation and Informatics Competence Centre of the city of Zurich, ewz operates a long range wide area network (LoRaWAN). The LoRaWAN is particularly suited to networking of sensors in public areas (e.g. for microclimate measurement) and buildings (for operational optimisation).

Ongoing projects

The city of Zurich aims to offer its services in line with needs. The city has a wealth of mobility data, such as bicycle frequency, yet there is little data on the behaviour of the general public in public spaces and the use of infrastructure.

Following a successful attempt to measure length of time spent in public seating areas along with physical parameters through the use of sensors, a number of service departments of the city of Zurich approached ewz with new use cases in the previous year. The cross-industry project team, comprised of various service departments and ETH Zurich, made a convincing case. They showed that ewz infrastructures and the LoRaWan network are perfect for these applications.

Pilot projects are currently under way in the city of Zurich with ewz involvement, in such areas as synchronisation of public clocks as well as intelligent power production and roof greening at tram stops.

The 'Make Zurich Hackathon' was held in June 2023, with ewz as this year's host. In collaboration with Smart City Zürich, The Think Network and other partners, ewz advocated the issue of energy savings and discussed its search for solutions in this area.

ewz regularly takes part in the Kickstart innovation programme. Kickstart is an ecosystem innovation platform that brings together startups, companies, cities, foundations and universities to accelerate innovation. In concrete terms, ewz and other municipal service departments use the opportunity to collaborate with start-ups on proofs of concept, pilot projects and other innovations that can help deliver solutions in the smart city field.

See:

- Smart city infrastructure, page 55
- XGS-PON technology in the fibre optic network, page 14
- Cloud solutions with ewz.multicloud access, page 14
- eCity maps, page 14

Smart metering

Around 240,000 of the 300,000 conventional electricity meters in ewz supply areas are set to be replaced by smart meters by the end of 2027. This replacement is necessary to fulfil the statutory requirements in accordance with the Electricity Supply Act. For some years now, smart meters have been installed in new builds and refurbishments. The wide-scale introduction of smart meters had to be postponed until 2024 due to persistent bottlenecks in the supply chain for electronic components and the introduction of a major internal IT project. But the long-term target continues to apply.

Dialogue with stakeholders

GRI 3-3

Management of material topics: Dialogue with stakeholders

The successful construction and operation of infrastructure and the provision of new services requires close cooperation with the company's stakeholder groups. Among the main stakeholders are customers, employees, owners, authorities and the general public in the locations.

Stakeholder engagement contributes greatly to innovation and business development at ewz, and also influences the strategic orientation of the company. ewz integrates the needs and expectations of stakeholders into its corporate objectives and communicates the results transparently in its annual sustainability reporting, which is aligned with GRI standards.

In all supply areas and at all production sites, ewz maintains active dialogue with its stakeholders at the operational and strategic level. The company conducts meetings with advisory groups in connection with new power plant buildings, residual water remediation and waterway revitalisation. Regular sessions in municipalities in which wind farms are located facilitate exchange with stakeholders and early recognition of their wishes and needs. The ewz Sustainability Board assesses ewz's sustainability performance each year and offers an external perspective. (More on the ewz Sustainability Board: see GRI 2-29.)

See: → GRI 2-29 Approach to stakeholder engagement, page 35

GRI 413

Local communities

GRI 413-1

Operations with local community engagement, impact assessments, and development programmes

Hydropower plant locations

As compensation for the use of water in power production, electricity producers pay water rates to cantons and, depending on legal requirements, municipalities as well. ewz pays a total of around 11 million Swiss francs per year in water rates to the cantons of Aargau, the Grisons and Zurich, and to the local municipalities. Authorities, environmental organisations and other interest groups are involved early on in the planning of new plants, renovation of existing buildings and reconcessioning of hydroelectric power plants. The reconcessioning process for the hydroelectric power plants in the Bregaglia Valley gained momentum in the financial year with the launch of the main environment impact assessment (EIA). Representatives of the municipality, cantonal agencies and interested environmental associations will form an advisory group that will be actively involved in planning.

Locations of wind farms

In the acquisition of new wind farm projects, ewz closely evaluates the cost-effectiveness, climate and environmental impact and acceptance of the investment according to its own standards for these criteria. The approval process can impose strict standards on ewz in both the construction and operational phases. ewz invests in countries that offer transparent, fair and sustainable approval processes. This reduces the risk of later conflicts with stakeholders. For all wind farms in which ewz holds an investment, the potential noise emissions and shading are evaluated in an environmental impact study. The results are made available to the local approval authorities.

ewz is in constant dialogue with stakeholders in the vicinity of its wind farms. Wind farm sessions, in which stakeholders meet with ewz employees, are well attended, and are used to discuss requirements and queries with ewz and find joint solutions. There is great appreciation for personal contact with ewz as the wind farm owner and operator. Through its commitment, ewz is seen not just as a private investor, but also part of the city of Zurich. This means the company can position itself as a reliable partner that advocates for municipalities.

Our wind farms in northern France, Fontaine Le Sec and Le Groseiller went into operation in the previous year. Representatives of the local authorities – including the Mayor of the Lisbourg municipality, where the wind farms are located – as well as numerous project participants were invited to the opening ceremony. Pupils from local schools got to admire the wind turbines close up and experience a drone flight around the wind farm with augmented reality helmets.

High-alpine solar power plant sites

Implementing the energy strategy 2050 requires a rapid expansion of photovoltaics – and not just in the lowlands. PV systems in the mountains are more efficient, and they supply much-needed winter electricity. In close cooperation with local municipalities, ewz is implementing high-alpine plants at a rapid pace. The two solar power plants of Nandro Solar, above Savognin, and Tambo Solar in Splügen are currently in the planning phase. ewz considers transparent communication and involvement of all stakeholders – local council, landowners, farmers, tourism and environmental organisations – from the beginning of the planning process to be key in successful project implementation. Naturally this includes media conferences and regular project updates to the local population. Site visits with environmental organisations can help address their concerns and reflect findings from the environmental impact assessment. The engagement of local councils and all stakeholders is important for configuring the expansion of high-alpine solar power plants to the benefit of all.

Occupational health and safety

GRI 3-3

Management of material topics: Occupational health and safety

ewz seeks to increase the well-being and capability of its employees. Fewer absences due to illness and accidents, either occupational or non-occupational, also result in lower costs. ewz takes action to prevent accidents and hazards that could potentially endanger the health of employees. The issue of occupational health and safety is now also enshrined in the ewz target vision 2024.

The incidence of occupational accidents is five times lower than that of non-occupational accidents. Employees who are exposed to particular occupational hazards require special training. One example is employees who work on live systems and transmission lines.

GRI 403

Occupational health and safety

GRI 403-1

Occupational health and safety management system

The occupational health and safety system is based on the requirements of federal laws and associated ordinances:

- Federal Act on Employment in Business, Trade and Industry
- Federal Act on Accident Insurance
- Federal Act on Weak and Heavy Current Electrical Installations
- Federal Act on Product Safety

Rules derived from the Swiss National Accident Insurance Fund (SUVA) and the Federal Inspectorate for Heavy Current Installations (ESTI) are consistently applied at ewz, along with additional provisions where necessary. The implementation and assurance of workplace safety is the responsibility of supervisors, who are supported by the safety organisation.

The uppermost body of the safety organisation is the management representative for health and safety who heads the corresponding Management Board committee. In operational terms, the safety organisation is led by the company's Safety Officer, supported by the safety officers in the different divisions. There is also an emergency organisation, which is operated separately.

The safety organisation encompasses all activities of all employees, with a particular focus on work with electricity and in construction. Compliance with rules is reviewed in around 300 safety audits per year, with corresponding measures defined in the event of discrepancies.

The occupational health and safety management system (OHSMS) and the safety concept encompass all divisions of the company in their scope. The OHSMS is certified in accordance with ISO 45001. In May 2023 an external auditor carried out an ISO monitoring audit.

GRI 403-2

Hazard identification, risk assessment, and incident investigation

Every division that is exposed to particular hazards conducts hazard identification and risk assessments. The methods used by Suva (the Swiss National Accident Insurance Fund) apply, with consideration for the activities of the company's own employees as well as those of third-party companies. All hazards in operations are systematically recorded and mapped in a hazard portfolio, with measures derived as necessary.

Each year, ewz defines a focal point in the area of occupational health and safety. For 2023 the focal point was the lawful storage of hazardous materials in all sites, which was successfully implemented.

All occupational accidents and reported near-accidents are systematically investigated, with discrepancies identified and measures defined.

GRI 403-3

Occupational health services

Occupational health examinations are required for work at night, breathing protection and work at heights. The intervals, based on statutory requirements, are defined in cooperation with an occupational physician and assigned to the relevant employees through the internal personnel development tool. The tool is also used to monitor compliance, with reminders for employees and their supervisors whenever occupational health examinations are due. This ensures that fulfilment of requirements is both transparent and verifiable.

GRI 403-4

Worker participation, consultation, and communication on occupational health and safety

The Health and Safety Committee of the Management Board is chaired by the Occupational Health and Safety Management representative, and receives specialist advice from the Safety Officer. The committee discusses and decides upon measures in connection with OHSMS issues that affect the whole of ewz, and monitors their implementation. The committee convenes quarterly.

The safety team is composed of the safety officers of the individual divisions and the hazardous materials representative, under the leadership of the company's Safety Officer. The OU safety officers are tasked with promoting and coordinating OHSMS in their areas. They support line managers in meeting internal targets and implementing statutory provisions. The safety team meets regularly to discuss and monitor implementation of annual targets and special projects.

Employees have the right to information in all occupational health and safety-related issues, and to have their voices heard on these issues. The goal of this interaction is to turn employees into participants and make optimal use of their knowledge.

The safety officers are personally available for all employee queries concerning OHSMS issues.

GRI 403-5

Worker training on occupational health and safety

Through the appropriate training and experience of its employees, ewz ensures that they are equipped to handle the activities assigned to them, including the ability to recognise hazards. Examples of training include 'Correct Conduct in Low- and Medium-Voltage Plants', as well as first aid courses. ewz also runs regular awareness campaigns on life-saving rules as issued by the Swiss National Accident Insurance Fund (SUVA) and the Federal Inspectorate for Heavy Current Installations (ESTI).

There were 1,299 internal training days on the issue of workplace safety, which equates to 1.1 training days per FTE.

GRI 403-6

Promotion of worker health

The promotion of workplace health encompasses preventative measures as well as services in the area of exercise, nutrition, stress management and relaxation. The programme also includes virtual components. Various courses were also offered in the ewz Academy.

One goal of health promotion at ewz is the integration of exercise and relaxation into everyday routine, and a number of activities are offered in this area. The ewz headquarters in Oerlikon, Zurich hosted courses in yoga and fascia training, which were well attended. In addition, employees had the opportunity of lunchtime training in a gym with the ewz sport group.

Other activities in the field of prevention included a back check at various ewz sites provided information on posture and mobility and flexibility of the spine and the quality of core muscles, along with tips and exercises for improvement. The health check, in which a specialist examines parameters including blood sugar, cholesterol levels and blood pressure, and offers recommendations, was offered once again.

Another key factor is awareness of health issues among management, who receive training in courses. This year the early intervention and reintegration process was also reviewed and discussed in the divisions.

Last November, employees in the city of Zurich were able to take advantage of free seasonal flu vaccination in municipal vaccine pharmacies, which is offered every year.

GRI 403-7

Prevention and mitigation of occupational health and safety impacts directly linked by business relationships

External service providers on site are protected from undesirable effects through arrangements for occupational health and safety. Here supervisors issue safety instructions and training for external workers on site before work begins.

Joint training courses are held with employees from partner companies in civil engineering and electrical engineering. Typical training topics include the use of personal protective equipment, working on live systems, precision work on pipe systems and safety organisation.

GRI 403-9

Work-related injuries

	Unit	2019	2020	2021	2022	2023
Number of work-related deaths	No.	0	0	0	0	0
Number of work-related injuries	No.	35	35	33	32	25
Occupational accident rate	No. OA*/1,000 FTEs**	31	30	29	28	22
Lost time injury rate (LTIR)	No. OA/million working hours	9.7	8.4	10.9	9.9	6,0

* OA = occupational accidents **FTEs = full-time equivalents

In the previous year, occupational accidents were investigated, causes identified and measures introduced for future accident prevention. Fulfilment of these measures is continually monitored. There was no identifiable pattern to the type of accidents, the causes or the injuries, which included bruising, lacerations and contusions. The number of occupational accidents fell by 22 per cent compared to the previous year, with no serious accidents recorded. Happily there were no electrical accidents. ewz is determined to constantly reduce the number of accidents through preventative measures such as audits, training and hazard identification.

Calculation basis:

- Occupational accident rate per thousand FTEs
- Lost time injury rate (LTIR) per million hours worked

There are no case numbers for external or independent employees or contractual partners working on site. These appear in the statistics for the respective service providers.

All values are annual values as at 31 December 2023 and are not updated. Regulation: Accident Insurance Statistics (SSUV).

Development of employees

GRI 3-3

Management of material topics: Development of employees

The energy market is undergoing technological transformation and becoming more competitive. This makes it difficult for companies to retain and expand expertise. The competition for talent, especially from specialist areas such as engineering and electrical installation, requires attractive working conditions. ewz offers its employees development opportunities and a healthy work-life balance. All employees have access to services that promote their personal development and well-being. Satisfied, healthy employees are more committed, more motivated and more successful, and represent a decisive competitive advantage.

Career development: The ewz career model makes specialist, management and project careers into paths of equal validity with numerous development opportunities. The ewz Academy offers a range of training and education opportunities to support employees and ensure they can pursue an optimal career pathway. The focal points of the ewz Academy are aligned with the individual's career, the strategic orientation of the company, and current challenges. The training courses offered by the city of Zurich provide further educational opportunities, with both in-person and e-learning formats.

Annual succession and talent rounds serve to identify and develop talented employees and thus secure succession for top performers. This allows ewz to offer appropriate development opportunities – through delegation of more challenging activities or the offer of a management position, for instance.

Beyond their normal areas of activity, employees can engage with development themes that the company has defined as priorities; examples include the field of smart grids and the ewz Agile Competence Centre. This kind of cross-business activity facilitates professional development on the job.

Next generation: ewz is a company that trains apprentices. In the previous year, 50 vocational trainers guided 34 apprentices to successful certification in eight professions. Apprentices have the opportunity of completing a Federal Vocational Baccalaureate or a sports apprenticeship. The company offers an integration apprenticeship for refugees and supports apprentices with a continuing apprenticeship if they have previously lost their apprenticeship position. If apprentices fail to find a job following their apprenticeship, ewz helps them find a follow-up solution.

Recruitment of skilled workers: Over the next ten years, around 30 per cent of ewz employees will be retiring. There is a lack of skilled workers to replace them, and the labour market has dried up considerably. There is also a lack of next-generation workers for basic manual and technical functions. ewz is therefore training its own workforce, promoting education and enhancing its attractiveness as an employer. For instance: municipal employees now have the option of continuing to work beyond the age of 65. Anyone who introduces a skilled worker from their own network will receive a bonus under the 'Employees Recruiting Employees' programme.

The appeal of an employer can be measured by the time it takes to recruit new employees for IT, engineering and technical positions. ewz has set itself the goal of filling these positions within 80 days. This goal was reached in 2023, with an average time of 96.3 days.

GRI 404

Training and education

GRI 404-2

Programmes for upgrading employee skills and transition assistance programmes

Further training

ewz offers its employees, project managers, management and specialists platforms for exchange and education courses. The courses are regularly expanded and the technical requirements adjusted.

They include:

- Courses and exchange platforms of the ewz academy for specialist, project and management employees
- Forums on current projects in the divisions
- 'Wir handeln JETZT!' (We're acting NOW!) forum with specialists on current developments in sustainability
- Specific specialist and safety courses
- Team development workshops
- Courses on personal and professional development, covering such areas as:
management, project management, business management

In addition, the city of Zurich offers a wide range of educational opportunities for promoting employee skills that are or will in future be necessary for day-to-day working life. These take into account important aspects like individual life phases and the transfer of acquired knowledge into practice. Digital work has become a strong focal point of further education in recent years, with the introduction of digital media to facilitate collaboration. In numerous municipal courses and in the ewz academy, employees can acquire and develop digital skills.

In the Unacademy of the Agile Competence Centre, participants can define areas in which they would like further training. In the previous year, for example, there was a focus on engaging with different personality types and making decisions.

Next generation

ewz offers internships with Federal VET Diploma, with the additional option of a Federal Vocational Baccalaureat or Federal Vocational Certificate. Young people can also complete integration apprenticeships, or continuing, additional or sports apprenticeships.

Upon completion of their apprenticeship, the graduate can then spend a year gaining deeper professional knowledge or apply for a permanent position. To counter the skills shortage, ewz offers an apprenticeship in accordance with Art. 32 of the Vocational and Professional Education and Training Ordinance (lateral entry).

Employees in ewz's vocational education division train between 38 and 42 young people in five manual, three technical professions and one commercial profession in Zurich and Sils im Domleschg. In the professions of media specialist or commercial management, apprentices work in their own internal company, ewz.young, and receive commissions from various ewz departments.

Transition assistance

ewz provides support for employees who are entering new phases of life, including solutions developed with internal departments and external partners covering maternity and paternity, care within the family, and entering retirement. Case management assists with the return to work after an accident or illness supported by professional reorientation and job searching. For personal issues related to family, grief, moving, health and finances, employees can turn to a partner company that specialises in this kind of consultation.

2023 projects

ewz, VBZ (Zurich Public Transport) and the water utility of the city of Zurich took part in the Züri Engineers event in March 2023. The event is held annually on UNESCO World Engineering Day, and the motto for the previous year was 'To the smart city together'. The event aims to showcase the exciting and highly diverse job opportunities that the service departments can offer engineers – and to show how engineers can make a significant contribution to a city of Zurich that is a little more intelligent, and thus more sustainable.

See: → Employees, page 15

GRI 404-3

Percentage of employees receiving regular performance and career development reviews

All permanent and temporary employees at ewz receive evaluations on their performance and conduct. Targets defining performance expectations are set in annual reviews, and then assessed and discussed at half-yearly intervals. The development potential of employees is also assessed, with development planned in cooperation with the employee's supervisor. Throughout the city, the annual target agreement and review process is carried out on a digital platform.

Diversity and inclusion

GRI 3-3

Management of material topics: Diversity and inclusion

Diverse teams achieve better results. A range of perspectives, experiences and areas of expertise within teams increases creativity and promotes flexibility and openness. They help employees realise their full potential. A company based on diversity also increases its appeal – a competitive advantage in the battle for talent. ewz promotes and demands diversity in the spirit of equality and equal opportunities. Discrimination based on gender, gender orientation, origin, language, religion, disability and comparable personality traits is not tolerated. Another principle that is important to us is 'equal pay for equal work'. Internal wage equality analysis conducted with Logib revealed no statistically significant gender effect at ewz.

While diversity relates to the composition of the workforce, the aim of inclusion is to create a working environment and culture that enables all employees to participate and thrive. Building an integrative, inclusive culture is a long-term process, and one to which ewz is strongly committed.

The city of Zurich is the first state institution to be awarded the Swiss LGBTI Label. This label recognises companies and organisations that welcome lesbians, gay men, bisexuals as well as transgender and intersex individuals with an open, inclusive, appreciative culture. To build up a diverse workforce, ewz recruits through a variety of platforms, including the Diversity Job Group, whose mission is to promote diversity and inclusion in the labour market. Through various job portals, including 50plus-Jobs, Mama-Jobs, LGBTI-Jobs and Papa-Jobs, the Diversity Job Group bridges the gap between applicant and employer.

For Pride month 2023, ewz once again showed its (rainbow) colours and projected statements from the internal LGBTIQ* network 'rainbowpower' onto the Letten power station. ewz also provides regular awareness-raising measures for employees on issues like sexual harassment and discrimination. In spring last year, ewz co-hosted a webinar for employees together with the Office of Equality. The webinar covered real-life examples and legal foundations as well as issues such as handling conflict and discrimination within ewz, with pointers to various contacts that can offer advice and support. As well as supervisors and points of contact in HR, employees can also approach the ewz ombudsperson, the anonymous employee consultant, the city of Zurich Office of Equality or the city of Zurich Ombudsperson's Office. All information is available on an intranet page that deals with handling conflict.

Women are in the minority in technical, artisanal and IT professions. This means that some employer-branding measures need to be specifically targeted at women. Platforms include techface.ch and the Woman Contact Day, and there is a cooperation with the Swiss Association of Female Engineers. In summer 2023, a networking event was held in cooperation with SVIN, with a guided tour of the Auwiesen/Aubrugg substation and a compelling dialogue. ewz also supports the SVIN programme 'kidsinfo', which saw female employees in MINT professions at ewz sharing their career stories with primary school students. And in June 2023, ewz joined the 'Women in Power' network, which gives ewz's female employees access to an industry-wide network whose mission is to get more women working in the energy sector.

In general, ewz aims to increase the share of women working in management and the company as a whole. In 2023, this share increased by 0.5 percentage points to 19.3 per cent, and by 1.7 percentage points to 15.9 per cent for management positions.

See:

- [GRI 2-26 Mechanisms for seeking advice and raising concerns, page 34](#)
- [Interim Report on the Equality Plan of the city of Zurich](#)
- [Wage equality in the city of Zurich](#)

GRI 405

GRI 405-1

Diversity and equal opportunity

Diversity of governance bodies and employees

Diversity in the company	Unit	2022	2023
Share of women working in the company	%	18.8	19.3
Share of men working in the company	%	81.2	80.7
Share of employees under 30	%	12.7	13.6
Share of employees between 30 and 50	%	51.6	51.8
Share of employees over 50	%	35.7	34.6
Diversity at the management level			
Diversity at the management level	Unit	2022	2023
Share of women in management positions	%	14.3	15.9
Share of men in management positions	%	85.7	84.1
Share of management employees under 30	%	0.7	0.9
Share of management employees between 30 and 50	%	60.5	60.6
Share of management employees over 50	%	38.9	38.4

See:

→ Employees, page 15

→ GRI 2-7: Employees, page 29

Other important topics

GRI EU

Sector-specific disclosures

GRI EU3

Number of residential, industrial, institutional and commercial customer accounts

See: → The year at a glance, pages 2–3

GRI EU4

Length of above and underground transmission and distribution lines

Infrastructure in the supply areas in Zurich, central Grisons and the Bregaglia Valley:

	Unit	2019	2020	2021	2022	2023
Overhead lines	km	426	425	422	418	413
Cables	km	5,204	5,213	5,229	5,227	5,264
Substations	Number	29	29	29	29	29
Transformer stations	Number	911	910	911	916	918

GRI EU5

Allocation of CO₂ emissions allowances or equivalent

ewz does not own or trade in CO₂-emissions certificates.

GRI 205

Anti-corruption

GRI 205-2

Communication and training about anti-corruption policies and procedures

All employees at career level 2 or higher have to complete training in legal compliance. This equates to around 70 per cent of all employees. The training provides information on the basics of legal framework conditions that apply to the municipality and within ewz, covering topics such as combating and avoiding corruption, bribery and anti-trust practices. All new suppliers are obliged to acknowledge the Code of Conduct for Contractual Partners of the city of Zurich. This includes expectations on the issue of anti-corruption.

GRI 205-3

Confirmed incidents of corruption and measures taken

There were no incidents of corruption recorded in the reporting period.

GRI 206

Anti-competitive behaviour

GRI 206-1

Legal actions for anti-competitive behaviour, anti-trust and monopoly practices

There were no penalties for anti-competitive behaviour or violations of anti-trust and monopoly law recorded in the reporting period.

GRI 303

Water and effluents

GRI 303-1

Interactions with water as a shared resource

To produce electricity through hydropower, water is captured, diverted, collected and conducted through downpipes into turbines before the entire volume is fed back into a body of water below the power plant. The water used is not contaminated in this process. For cooling buildings and plant components such as generators, the power plant draws water and returns it to the body of water at a higher temperature. ewz has analysed the impact of climate change on the availability of water for the hydropower plant portfolio. In the worst-case scenario, in which atmospheric greenhouse gases continue to increase unchecked (RCP 8.5 scenario), average annual flows from ewz catchment areas could drop by up to 10 ten per cent. At the same time, we can expect a seasonal shift in flow volumes.

Lake water and groundwater are used to supply heating and cooling from renewable energies via heat exchangers to buildings that are connected to energy networks. The water is returned to its origins on site, at either a higher or lower temperature.

Contaminated water only arises from the internal painting group, garage operations and administrative buildings. Wastewater from painting and garages is pretreated in the internal ewz splitting plant and fed into the local sewage treatment plant. Similarly, wastewater from administrative buildings is fed into the local sewage treatment plant where it is treated and fed into receiving waters. Switzerland has strict regulations for the discharge of treated wastewater into waterways, which are designed to keep environmental impact to a minimum.

	Unit	2019	2020	2021	2022	2023
Service water in administrative and operational buildings	m ³	8,204	7,007	8,090	8,136	9,542

GRI 306

Waste

GRI 306-1

Waste generation and significant waste-related impacts

ewz's activities as an infrastructure operator and energy service provider that constructs and operates energy and telecommunication infrastructures results in recyclable materials and waste which, ideally, are recycled at the regional level. Failing this, waste is sent for thermal treatment or to landfill. This and the fact that most of the waste is disposed of in Switzerland, where strict legal requirements prevail, lead to the conclusion that there is no significant impact to be expected from the disposal of the company's own waste.

The impact of waste from upstream value chains is difficult to determine. Machines, technical equipment and systems make up the lion's share of goods acquired by ewz. The impact of waste from the associated raw material extraction, processing and goods production is only partly known.

GRI 306-2

Management of significant waste-related impacts

ewz uses the opportunities provided by the circular economy to prevent and reduce waste. While repair and maintenance of equipment are an integral part of operational processes, the reuse and upcycling of goods that are no longer required occurs on a project basis. Sustainable procurement also calls for waste reduction. Where possible, procured goods should have features such as long service life and reparability, as is the case with LED street lighting. In the case of renovation work at the Herdern maintenance depot, the new building is being erected on the shell of the existing one, with significant savings in raw materials as a result.

On its own construction sites, recycling concrete is now used in place of primary concrete for construction of conduit blocks. For recycling concrete, scrap material is used instead of gravel. This alternative approach was tested and approved in collaboration with the Swiss Federal Laboratories for Materials Science and Technology. This means less gravel is required, which reduces the amount of waste from the construction sector that goes to landfill.

At locations in the greater Zurich area, industrial and hazardous waste is sorted into recyclable and waste materials by a specialist waste disposal company in a single-stream recycling process, and sent for either recycling or disposal. The company offers comprehensive waste disposal solutions to electrical utilities and companies in the energy sector. It specialises in environmentally friendly cable recycling, certified handling of SF6 switching systems, recycling and metal trading. It is certified in accordance with ISO 9001 and ISO 14001, completely carbon-neutral, and operates Euro 6 standard vehicles exclusively. The aim of the disposal and recycling concept is to further increase the purity of recycled materials and the overall recycling rate. A reference visit as part of the tender process, check-weighing and annual reporting serve to ensure that the waste disposal company is operating in accordance with contractual and statutory provisions. Careful sorting and triage activities, the latest technologies and, in particular, high prices for metallic secondary raw materials on general raw material exchanges all ensure that the single-stream recycling process is profitable. Equivalent waste disposal services have been secured for ewz sites in the Grisons.

Operational refuse is sent for thermal recycling through the municipal Entsorgung + Recycling Zürich (Disposal + Recycling Zurich; ERZ). Waste-related data based on detailed information from the disposal service provider and ewz is collected annually and can be viewed in a database. This encompasses waste and recyclable materials from sites in the city of Zurich and in the canton of the Grisons. The management approach is reviewed each year, and measures are determined and implemented on the basis of internal suggestions and input from the waste disposal company.

GRI 306-3

Waste generated

Composition of recyclable and waste materials	Unit	2022	2023
Mineral waste	t	729.3	621.1
Operational refuse and floating debris	t	267.9	258.2
Primary metals	t	195.1	189.5
Old cables	t	336.1	268.2
Mixed fractions from metal	t	231.7	162.5
Bulky items and timber	t	114.2	190.5
Electrical materials	t	8.5	10.4
Paper and cardboard	t	36.8	27.7
Other hazardous waste	t	38.5	27.7
Total recyclable and waste materials	t	1,958.2	1,755.3
Total recycling rate	%	47	42

GRI 306-4

Waste diverted from disposal

GRI 306-5

Waste directed to disposal

In the previous year, the total weight of recycled and disposed waste was 1,755 t. The total weight of recycled materials in the previous year was 733 t, or 42 per cent of the overall waste volume. Materials are reused through recycling, composting and reprocessing. Thermal recycling occurs through heat recovery.

Non-hazardous materials	Unit	2022	2023
Recycled	t	732.2	568.8
Composted	t	7.5	1.0
Thermally recycled	t	401.5	389.4
Landfilled	t	552.0	554.5
Total non-hazardous materials	t	1,693.0	1,513.6
Of which metals	%	22	24
Recycling rate of non-hazardous materials	%	44	38

Metals represent the largest share of recycling of non-hazardous materials. Operational refuse and floating debris are the largest categories in thermal recycling. The category of landfilled materials is largely made up of ash from burning of wood for generating heat.

Hazardous materials	Unit	2022	2023
Reused	t	30.5	20.8
Recycled	t	151.1	142.8
Thermally recycled	t	83.3	78.0
Landfilled	t	0.2	0.1
Total hazardous materials	t	265.2	241.7
Recycling rate of hazardous materials	%	68	68

Hazardous materials include waste such as oils, paints, varnishes and solvents which require appropriate handling and correct disposal.

GRI Content Index 2023

Statement of use

ewz reported on the period 1 January to 31 December 2023 in accordance with the GRI Standards.

GRI 1 used

GRI 1: Foundation 2021

Applicable GRI sector standards

The GRI sector standards Utilities and Renewable Energies are not yet available. GRI G4 Sector Disclosures Electric Utilities 2013 is used instead.

Omissions

None

GRI standard and disclosure	Page	GRI standard and disclosure	Page
General disclosures			
GRI 2	General disclosures 2021		
The organisation and its reporting practices		Stakeholder engagement	
GRI 2-1	Organisational details	page 27	
GRI 2-2	Entities included in the organisation's sustainability reporting	page 27	
GRI 2-3	Reporting period, frequency and contact point	page 27	
GRI 2-4	Restatements of information	page 27	
GRI 2-5	External assurance	page 27	
Activities and workers			
GRI 2-6	Activities, value chain and other business relationships	page 28	
GRI 2-7	Employees	page 29	
GRI 2-8	Workers who are not employees	page 30	
Governance			
GRI 2-9	Governance structure and composition	page 30	
GRI 2-10	Nomination and selection of the highest governance body	page 30	
GRI 2-11	Chair of the highest governance body	page 31	
GRI 2-12	Role of the highest governance body in overseeing the management of impacts	page 31	
GRI 2-13	Delegation of responsibility for managing impacts	page 31	
GRI 2-14	Role of the highest governance body in sustainability reporting	page 31	
GRI 2-15	Conflicts of interest	page 31	
GRI 2-16	Communication of critical concerns	page 31	
GRI 2-17	Collective knowledge of the highest governance body	page 32	
GRI 2-18	Evaluation of the performance of the highest governance body	page 32	
GRI 2-19	Remuneration policies	page 32	
GRI 2-20	Process to determine remuneration	page 32	
GRI 2-21	Annual total compensation ratio	page 32	
Strategy, policies and practices			
GRI 2-22	Statement on sustainable development strategy	page 33	
GRI 2-23	Policy commitments	page 33	
GRI 2-24	Embedding policy commitments	page 34	
GRI 2-25	Processes to remediate negative impacts	page 34	
GRI 2-26	Mechanisms for seeking advice and raising concerns	page 34	
GRI 2-27	Compliance with laws and regulations	page 34	
GRI 2-28	Membership associations	page 34	
		Material topics	
		GRI 3:	Material topics 2021
		GRI 3-1	Process to determine material topics
		page 38	
		GRI 3-2	List of material topics
		page 39	
		Sustainable procurement	
		GRI 3:	Material topics 2021
		GRI 3-3	Management of material topics
		page 52	
		GRI 204:	Procurement practices 2016
		GRI 204-1	Proportion of spending on local suppliers
		page 53	
		Security of supply	
		GRI 3:	Material topics 2021
		GRI 3-3	Management of material topics
		page 45	
		GRI G4	Sector Disclosures Electric Utilities 2013
		EU29	Average power outage duration
		page 46	
		Smart city infrastructure	
		GRI 3:	Material topics 2021
		GRI 3-3	Management of material topics
		page 55	
		Sustainable products and services	
		GRI 3:	Material topics 2021
		GRI 3-3	Management of material topics
		page 41	
		GRI 302:	Energy 2016
		GRI 302-1	Energy consumption within the organisation
		page 43	
		GRI 302-2	Energy consumption outside of the organisation
		page 43	
		Climate protection and energy efficiency for the city of Zurich	
		GRI 3:	Material topics 2021
		GRI 3-3	Management of material topics
		page 47	
		GRI 305:	Emissions 2016
		GRI 305-1	Direct (Scope 1) GHG emissions
		page 48	
		GRI 305-2	Energy indirect (Scope 2) GHG emissions
		page 49	
		GRI 305-3	Other indirect (Scope 3) GHG emissions
		page 49	
		GRI 302:	Energy 2016
		GRI 302-5	Reductions in energy requirements of products and services
		page 50	

GRI standard and disclosure	Page
-----------------------------	------

Biodiversity

GRI 3: Material topics 2021	
GRI 3-3 Management of material topics	page 54
GRI 304: Biodiversity 2016	
GRI 304-3 Habitats protected or restored	page 54

Investment in renewable energies

GRI 3: Material topics 2021	
GRI 3-3 Management of material topics	page 44
GRI G4 Sector Disclosures Electric Utilities 2013	
EU1 Installed generating capacity	page 44
EU2 Electricity production	page 45

Occupational health and safety

GRI 3: Material topics 2021	
GRI 3-3 Management of material topics	page 58
GRI 403: Occupational health and safety 2018	
GRI 403-1 Occupational health and safety management system	page 58
GRI 403-2 Hazard identification, risk assessment, and incident investigation	page 59
GRI 403-3 Occupational health services	page 59
GRI 403-4 Worker participation, consultation, and communication on occupational health and safety	page 59
GRI 403-5 Worker training on occupational health and safety	page 59
GRI 403-6 Promotion of worker health	page 59
GRI 403-7 Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	page 60
GRI 403-9 Work-related injuries	page 60

Development of employees

GRI 3: Material topics 2021	
GRI 3-3 Management of material topics	page 61
GRI 404: Training and education 2016	
GRI 404-2 Programmes for upgrading employee skills and transition assistance programmes	page 61
GRI 404-3 Percentage of employees receiving regular performance and career development reviews	page 62

Diversity and inclusion

GRI 3: Material topics 2021	
GRI 3-3 Management of material topics	page 63
GRI 405: Diversity and equal opportunity 2016	
GRI 405-1 Diversity of governance bodies and employees	page 64

Dialogue with stakeholders

GRI 3: Material topics 2021	
GRI 3-3 Management of material topics	page 57
GRI 413: Local communities 2016	
GRI 413-1 Operations with local community engagement, impact assessments, and development programmes	page 57

GRI standard and disclosure	Page
-----------------------------	------

Important topics, that are not considered material topics

Sector-specific disclosures

GRI G4 Utilities Sector Disclosures 2013	
GRI EU3 Number of residential, industrial, institutional and commercial customer accounts	page 65
GRI EU4 Length of above and underground transmission and distribution lines	page 65
GRI EU5 Allocation of CO ₂ emissions allowances or equivalent	page 65

Anti-corruption

GRI 3: Material topics 2021	
GRI 3-3 Management of material topics	page 40
GRI 205: Anti-corruption 2016	
GRI 205-2 Communication and training about anti-corruption policies and procedures	page 65
GRI 205-3 Confirmed incidents of corruption and measures taken	page 65

Anti-competitive behaviour

GRI 3: Material topics 2021	
GRI 3-3 Management of material topics	page 40
GRI 206: Anti-competitive behaviour 2016	
GRI 206-1 Legal actions for anti-competitive behaviour, anti-trust, and monopoly practices	page 65

Water and effluents

GRI 3: Material topics 2021	
GRI 3-3 Management of material topics	page 31
GRI 303: Water and Effluents 2018	
GRI 303-1 Interactions with water as a shared resource	page 65

Waste

GRI 3: Material topics 2021	
GRI 3-3 Management of material topics	page 41
GRI 306: Waste 2020	
GRI 306-1 Waste generation and significant waste-related impacts	page 66
GRI 306-2 Management of significant waste-related impacts	page 66
GRI 306-3 Waste generated	page 67
GRI 306-4 Waste diverted from disposal	page 67
GRI 306-5 Waste directed to disposal	page 67

Supplier environmental assessment

GRI 3: Material topics 2021	
GRI 3-3 Management of material topics	page 52
GRI 308: Supplier environmental assessment 2016	
GRI 308-1 New suppliers that were screened using environmental criteria	page 53

Supplier social assessment

GRI 3: Material topics 2021	
GRI 3-3 Management of material topics	page 52
GRI 414: Supplier social assessment 2016	
GRI 414-1 New suppliers that were screened using social criteria	page 54

ewz
Zurich Municipal Electric Utility
Tramstrasse 35
8050 Zurich
Phone +41 (0) 58 319 41 11
www.ewz.ch

March 2024
Only available electronically