

Annual, Financial and Sustainability Report



Ein Unternehmen
der Stadt Zürich

ewz

The year at a glance

Key financial figures

Total operating income				
		2021	2022	
Total operating income	CHF million	1,372	1,712	↗

Operating income				
		2021	2022	
EBITDA	CHF million	247	195	↘
EBIT/total operating income	in %	18.0	11.4	↘
EBIT	CHF million	182	126	↘
EBIT/total operating income	in %	13.3	7.4	↘

Company result				
		2021	2022	
Net profit	CHF million	183	129	↘
Net profit/total operating income	in %	13.3	7.6	↘

Balance sheet				
		31/12/2021	31/12/2022	
Total assets	CHF million	2,477	2,537	→
Non-current assets	CHF million	1,787	1,857	→
Equity capital	CHF million	1,882	1,932	→
Asset coverage ratio I	in %	105	104	→
Asset coverage ratio II	in %	122	110	→



1,221
Employees*

*incl. apprentices and interns

229
Women

992
Men



236,748
Customers



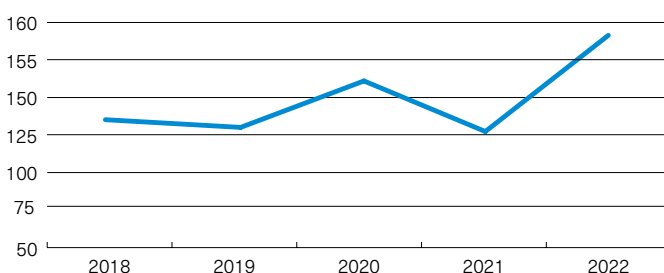
CHF 80 million
Profit transfer to the
city of Zurich

212,335
Residential
customers

24,413
Commercial and
business
customers



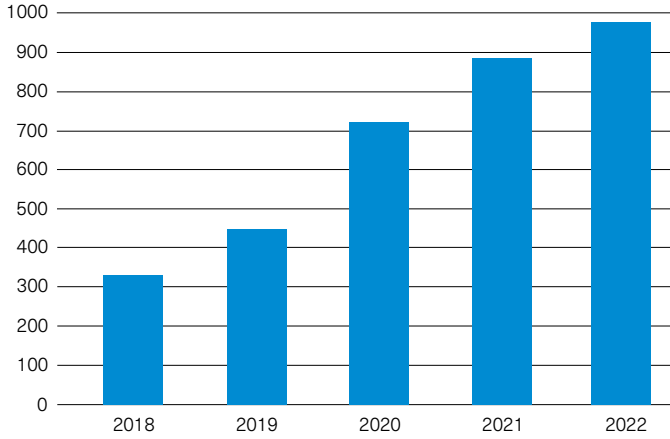
CHF 159 million
Capital expenditure





982 GWh

Wind power production



Wind production site



424 GWh

Heating and cooling sales, of which 76.3 per cent with carbon neutral production



6.4 g CO₂-eq

Emissions per kWh of energy produced

64,503 t CO₂-eq

Reduced or avoided for customers

1,367.4 MW

Installed electricity generation capacity renewable energies



1,009.0 MW

Hydropower



331.0 MW

Wind power



23.6 MW

Solar energy



3.8 MW

Biomass

Foreword by the CEO

Solid annual result amid a challenging electricity market

With revenues of 1,712.3 million Swiss francs and a net profit of 129.5 million Swiss francs, ewz has secured a solid annual result amid a challenging electricity market. Energy prices experienced huge increases across Europe in 2022. Wholesale prices for electricity were up to 20 times higher than the average for the previous years. There were various reasons for this unprecedented development: poor availability of French nuclear power plants, gradual relinquishment and tightening of gas deliveries from Russia, the outbreak of war in Ukraine, the dry summer and the consequent threat of electricity shortages in the colder months of the year. Under normal conditions we produce more electricity than we need, and sell this excess output through energy trading. To ensure a reliable supply for our customers despite the shortfall in production, the filling of our own reservoirs and active application of a conservative operational concept became very high priorities. As such, we were obliged to make up the missing volume with purchases on the market. This also enabled us to contribute to the federal government's winter energy reserve. In recent years we have managed to transfer 80 million Swiss francs in profit to the Zurich city treasury.

Energy transition and climate protection

Our investments and projects make an active and significant contribution to environmental and climate protection and the energy transition, while also working toward achievement of the net zero climate protection targets set by the city of Zurich (2040) and the federal authorities (2050). We are intensifying the efficient use of energy and accelerating the large-scale expansion and usage of renewable energies. In the city of Zurich we are substantially expanding the thermal networks that ensure renewable heat supplies. Voters of the city of Zurich approved a credit facility of 573 million Swiss francs for this endeavour, with 84.05 per cent voting 'yes' to the proposition. In the city of Zurich we installed a further 23 photovoltaic (PV) systems to reach a current total of 72 systems, with a combined output of 5,692 kWp. These systems helped us produce around 3.8 GWh of solar power last year – enough to supply 1,400 households. Across Switzerland we worked with our subsidiary SunTechnics Fabrisolar to increase PV output from 41,206 kWp to a high of 56,638 kWp. Overall, ewz owns 141 PV systems with an output of 20.6 MW and annual production of 14.9 GWh. On the Lago di Lei dam we launched another flagship project – our second large-scale high-alpine solar power system. Across Germany, France, Norway and Sweden, 119 wind farms produce 981.9 GWh of electricity, around double the output of our Bergell power plant group. After 15 years of deliberations, prospects for the first Swiss wind farm with ewz investment received a boost with the Federal Supreme Court completely rejecting all appeals against approval of the usage plan for the Mollendruz wind farm. 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.

New energy for a better tomorrow

As a vertically integrated 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 integrated solutions that help them realise lucrative investments. We operate efficient, cost-optimised electricity and telecom grids with high availability, and as a service provider and platform operator we are a reliable, attractive partner. We more than meet the demand for energy from renewable sources in our supply area. We are a reliable supplier, partner and specialist for technical conception and execution of innovative, tailored solutions for fossil-free heating and cooling supply, in Zurich and throughout Switzerland. For owners of sites and real estate we offer not only heating, cooling and electricity, but also planning, construction and operation of photovoltaic systems, billing solutions and electromobility infrastructure. Our modern communication infrastructure provides support for the 'Smart City Zurich' strategy, and we seize opportunities for digitalisation of customer services, digital products and intelligent management of plants and grids. Our vision: a renewable future for all. That is what we believe in, and our focus is on making it happen.

Attractive employer

We are a top employer with a staff of highly qualified employees in the city of Zurich and the canton of the Grisons, with consolidated expertise that covers the entire value chain. Conditions are being tightened further on the labour market, in the energy sector in particular, and it is becoming harder to attract qualified employees. A corporate culture that offers opportunities for development and sound framework conditions has a positive effect on our appeal as an employer. We offer compelling working conditions with flexible remote working arrangements, support talented employees, maintain a modern management culture in keeping with the times, enable a healthy work-life balance and facilitate a non-discriminatory working environment.

On behalf of the Management Board I would like to thank the public and our customers for their trust in 2022, and all our employees for their commitment.

Benedikt Loepfe
CEO ewz

Strategy

Our vision

New energy for a better tomorrow

We all want a renewable future. But it isn't going to happen on its own. There is much to be done before we reach this goal. And it will take all of us: energy providers, industry, society at large. We're already doing our part. Day in, day out, we work hard to ensure our customers have a secure, renewable supply of electricity, heating and cooling.

Our mission

If you want a brighter future, you have to commit to it today. As a committed, active company, that's exactly what we do. And, as we are already the most sustainable energy company in Switzerland, we enable everyone to make their contribution to a renewable future. 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 of Zurich'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. One of our central concerns is ensuring basic supply to our customers under attractive conditions, a mandate that we are committed to securing for the future as well. 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, biomass), both domestically and internationally. We provide our customers in the supply areas of Zurich and the Grisons, and throughout Switzerland, with 100 per cent green electricity from renewable sources, plus a range of other energy products. 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 for 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.

New energy for a better tomorrow

As the largest municipal utility in Switzerland, we are an expert partner for all private customers and corporate clients, for the users of our services and business partners alike. The city of Zurich is a strong owner which generates trust 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	2022 status	Progress
 5 Achieve gender equality	Increase in share of women working in the company	Women to make up 25 per cent of management and the company as a whole by 2025	Women in management positions: 14.3 per cent; women in the company as a whole: 18.8 per cent	→
 7 Produce reliable, safe and sustainable energy	Expansion of renewable energies	Electricity from sun, wind and water increases by an average 100 GWh per year by 2024	Expected annual growth in power production due to facilities now under construction: 88.1 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 in the city of Zurich	Deployment of 144,000 smart meters by 2024	Smart meters installed: 19,300	→
 13 Combat climate change and its impacts	Reduction of carbon emissions among customers	Savings of at least 79,000 t of CO ₂ -eq through energy networks and energy contracting in 2024	Carbon emissions saved: 64,503 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 also: → [GRI 3-2 List of material topics, page 37](#)

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. From production to sales, ewz offers an energy-efficient, low-carbon portfolio of products and services which provide 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, 2022

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 fell by 0.4 percentage points to 18.8 per cent.

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. ewz expanded its solar power production in the previous year, in particular through the investment models ewz.solarzürli and ewz.solargrischun, resulting in an additional 3.2 MWp of PV panels.

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 last two years, ewz is confident that it will meet its long-term target.

SDG 13 – In 2022, the population of the city of Zurich approved the city's net zero target for greenhouse gases. For the city as a whole the goal is net zero by 2040, and 2035 for municipal authorities. ewz is already sustainably combating climate change and its impacts by reducing the greenhouse gas emissions of its customers. The focus here is on saving and reducing carbon emissions through energy networks and energy contracting. A total of 64,503 tonnes CO₂-eq was saved in 2022.

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Annual Report 2022

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 in the production mix 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 small 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

Security of supply

Switzerland is facing the challenging task of defining and securing the electricity supply of the future. In addition to this, indications increasingly pointed to a shortfall of electricity (and natural gas) in the winter months. There were fears that supply would be constricted and that the necessary countermeasures (rationing, outages, etc.) would have a drastic impact on business and society. ewz tackled this issue early on and introduced relevant measures. That included conservative management of reservoirs and timely purchase of electricity on the market, with the goal of retaining maximum capacity in reservoirs and thus flexibility for the colder months. Precautionary concepts were developed for handling potential electricity outages in the city of Zurich and in the distribution grids in the Grisons. As part of the Department of Public Utilities and Transport, ewz is embedded in the municipal and cantonal executive staff which ensures successful coordination of all measures. It also set up its own task force. Within the Organisation for Power Supply in Extraordinary Situations (OSTRAL), which acts on the instruction of the Swiss Federal Office for National Economic Supply, it is responsible for managing consumption control.

Electricity prices

In early 2022 there were already signs of an imminent rise in power generation costs, and thus energy prices throughout Europe. The outbreak of war in Ukraine further intensified the energy situation. In summer, electricity prices reached a peak of EUR 1,081 per megawatt hour for the supply year 2023 (base load CH). The primary causes were Europe's lack of secured gas supply for the whole winter, the outage of half of France's nuclear power plants, and an all-time low in natural inflows in Switzerland due to a lack of precipitation. The Marmorera reservoir, for example, only filled up once throughout the year, rather than two and a half times as it does usually. ewz offers a wide range of market products, each individually negotiated, to qualifying companies that have ventured into the market. The parameters here include purchase volumes, consumption profile, contractual duration, etc. This means that any risks can be spread over several years. On the other hand, electricity prices for households and SMEs who draw their electricity from basic supply remain stable. ewz produces this electricity in its own power plants and those of its partners, and continues to charge low generation costs, which were well below market prices in the reporting period.

ewz takes over cooperation project companies

Since 2020, ewz has developed ten wind farm projects in France (split into 16 project companies) in cooperation with Ostwind International SAS (Ostwind). For strategic reasons, Ostwind chose to sell its stake in these joint projects. ewz assumed 100 per cent ownership of the project companies, allowing it to continue pursuing its expansion targets in the French wind market. Plans for the ten wind farms allow for 69 turbines and a total output of around 173 MW, which by 2028 are forecast to produce around 450 GWh of electricity. Four projects had been successfully completed by 2022.

Credit facility for thermal networks

The city of Zurich aims to reduce its carbon emissions to net zero by 2040. Fossil fuel-powered heating systems generate around 50 per cent of the city's direct carbon emissions, so replacing them is a matter of urgency, with the potential for significant impact. With the expansion of thermal grids, ewz intends to build more energy networks in Albisrieden, Altstetten, Aussersihl, City, Enge and Höngg in line with municipal energy plans and supply them with renewable heating and cooling energy. This has the potential to cut carbon emissions by another 52,000 tonnes a year. With a credit facility of 573 million Swiss francs, ewz has created the necessary expenditure capacity for this long-term project up to 2040. On 27 November 2022, the electorate of the city of Zurich approved the proposal, with 84.05 per cent of voters in favour.

Altstetten and Höngg energy network

A further milestone in the Altstetten and Höngg energy network came with the opening of Swiss Life Arena, the home stadium of the ZSC Lions. Long a place of pilgrimage for hockey fans, since autumn 2022 it has also been a showcase for use of renewable energies and energy efficiency. The sophisticated building technology system exploits synergies between cooling and heat production. ewz developed a smart, carbon-neutral energy concept for the arena that focuses on local, climate-friendly resources. The energy centre produces cooling for the ice surface along with ambient cooling for dehumidification of indoor air and air conditioning in the stadium. Meanwhile, the waste heat that results from this process is used to heat rooms, and heat pumps provide hot water for showers. The arena is integrated into the energy network and is contributing to the goal of supplying approximately 30,000 households with eco-friendly heating by 2035.

Solar power offensive in the city of Zurich

Photovoltaic production in the city of Zurich is set to quadruple by 2030 to reach around 120 GWh per year, with production for municipal properties increasing fivefold to reach 20 GWh per year. Since 1 September 2022, the amended energy law of the Canton of Zurich mandates that new buildings must produce their own electricity. In this context, the city will review the extent to which it

can impose additional requirements for PV installations in plans for privately owned property. In large-scale construction projects, the city is already seeking to persuade property developers to voluntarily realise their PV potential.

In 2022, ewz installed 23 PV systems in the city of Zurich, increasing output from 4,136 kWp (2021) to 5,692 kWp. Across Switzerland, ewz and its subsidiary SunTechnics Fabrisolar succeeded in increasing PV system capacities by 15,432 kWp to 56,638 kWp. On municipal properties, around 100 PV systems with an output of approximately 10,000 kWp produced 9.5 GWh of solar energy in 2022. In the city of Zurich, a total of 1,551 PV systems produce an output of 46,017 kWp (2021: 39,069 kWp) connected to the grid.

Lago di Lei – second large-scale high-alpine solar power plant

Following the first high-alpine solar power plant on the Albigna dam in autumn 2020, a second plant went into operation on the Lago di Lei dam in autumn 2022. The plant is 550 metres in length and boasts an output of around 340 kWp, with annual production forecast to be around 380 MWh. In response to the high demand for PV investments, the PV system at Lago di Lei was also offered as an investment model, and was very soon fully subscribed. As the owner of the PV system, ewz assumed responsibility for the planning and financing of the project. The Lago di Lei dam itself belongs to ewz partner Kraftwerke Hinterrhein AG (KHR), so much of the construction and installation was carried out by KHR employees. In its second year of operation, the Albigna dam produced 536 MWh of electricity (2021: 527 MWh). These values are testament to the efficiency of high-alpine plants and their positive contribution to security of supply in winter.

Federal Act for a Secure Electricity Supply using Renewable Energies (consolidated act)

The Council of States was the first chamber to debate the 'Federal Act on a Secure Electricity Supply from Renewable Energy Sources'. ewz is critical of several aspects: back-up supply was excluded, the bill was overloaded with wide-ranging funding models and grid cost exemptions were extended to electrolyzers and methanation plants. Moreover, the local electricity community creates loopholes in the market or in basic supply, and the use of flexibility is too narrowly defined. The bill is now under consideration by the relevant National Council committee and is expected to go before the National Council in the 2023 spring session. The matter is likely to reach resolution within the current legislative period. ewz is also calling for urgent streamlining and acceleration of procedures for further construction of renewable energy facilities.

Nuclear power investments

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. Prospects of a sale saw no particular improvement in 2022, and selling efforts have not resumed. ewz is continuing to monitor the market closely.

New exhibition in the Höngg hydropower plant

After months of refurbishment, the Höngg hydropower plant once again opened its doors to visitors in early December. There they experienced highlights such as an interactive panel which extended right up to the ceiling and offered a fascinating insight into the interplay of renewable energies and their significance for the city of Zurich. The exhibition focuses on hydroelectric power – both its history and the technology involved: When was water first used to produce electricity? How does a turbine work? Are hydroelectric power and environmental protection compatible? Insightful answers to these questions come in the form of holograms, film, installations and information panels. Visitors can also discover how ewz is contributing to the city's net-zero target and get information about energy-saving options.

Coronavirus

ewz began gradually easing coronavirus measures in February 2022. Remote work was introduced on 1 March. Where operations allow, employees can spend up to 40 per cent of their hours working from home, in a coworking space, or similar. Unfortunately, employees in some vital functions (grid centre, energy trading) had to continue team- and office-splitting until early April. Through consistent adherence with conduct and hygiene regulations, ewz succeeded in guaranteeing the health of its employees and maintaining security of supply at all times during the pandemic.

Nature and environment

naturemade star fund

ewz approved expenditure of 3 million Swiss francs for 30 renaturation projects through the naturemade star fund. The fund contributed CHF 370,000 to the urban park at Opfikon, which was completed in autumn 2022. The site offers a sustainable place of relaxation and leisure for the local population. For the Hundig water meadows in Glattfelden, the fund supported the re-establishment of a historically significant form of cultural landscape with a contribution of CHF 850,000. The water wheel at the site went into operation in late October. In the 'Ogna da Pardiala', a floodplain of national importance in the Surselva region, numerous vital measures were introduced for flora and fauna, with a focus on creating spawning grounds and juvenile habitats for fish. The ewz naturemade star fund financed the project with a contribution of around CHF 210,000. The projects supported by the naturemade star fund are aimed at improving and protecting dwindling habitats for various animals and plants, and promoting biodiversity.

Water for moorland on the Alp Flix

In cooperation with local authorities and nature conservation organisations, various measures were introduced to improve the moorland in the 'Son Roc' area of both ecological and scenic value on the Alp Flix. Part of the Ava da Savriez now flows constantly through the Son Roc plain before issuing into the Ava dallas Tigias. The rest of the water flows to another stream bed through a diversion. As well as changes to the course of the Savriez and the construction of an additional diversion, the Son Roc plain also requires a new stream bed system. These measures will result in ideal water levels on the moorland. The cost of the revitalisation measures is around CHF 900,000, with CHF 200,000 contributed by the ewz naturemade star fund.

Innovation

Smart meters

Unfortunately delivery delays for products with electronic components persisted into 2022, pushing back the planned rollout by another year to 2023. Nevertheless, ewz continued to ensure implementation of the requisite infrastructure in new construction projects and market products, and the installation of intelligent metering devices, as it did in the previous year. ewz is confident that it can fulfil its statutory requirements and replace 270,000 standard meters with smart meters by 2027.

Solar power investment model

Under the 'ewz.solarzüri' solar power investment model, 11,560 square metres of solar panels were erected on four school buildings, a VBZ transport stop roof, an ewz substation and in a residential development. In response to the great demand for PV investments, the PV system at Lago di Lei was also offered as part of the 'ewz.solargrischun' investment model at short notice. The 1,795 square metres of solar panels were fully subscribed within a short space of time. The 'ewz.solarzüri' and 'ewz.solargrischun' investment models offer ewz customers in the city of Zurich and in the Grisons supply area the opportunity of investing in PV systems and producing their own sustainable solar power. By the end of 2022, around 7,100 individuals and companies were already taking advantage of the investment model (+19 per cent compared to 2021), each investing in one of the 37 participating PV systems.

Electromobility

ewz increased its own fleet of battery-powered electric vehicles (BEVs) from 23.0 per cent to 24.3 per cent and is on track to achieve its preliminary target of 50 per cent in 2026. Further targets foresee at least 90 per cent of vehicles operating with renewable energies by 2030, rising to 100 per cent in 2035. Journeys will be avoided where possible, and vehicles operated under pooling and sharing models. At the administration building in Oerlikon Zurich, pooling is to be introduced in spring 2023. Category I and II vehicles were procured from the standardised municipal pool. However, market availability of BEVs in categories II to IV remains limited. In the absence of available options, existing vehicles will need to be deployed for longer where this is environmentally defensible. To ensure the autonomy of the vehicle fleet, including on-call service vehicles, the necessary charging infrastructure will be introduced to all service vehicle parking spaces at ewz sites where charging stations are outdated or lacking entirely.

ewz supports electric mobility

In 2022, ewz installed around 1,000 charging stations for electric vehicles, bringing the total to over 2,800 charging stations in private and public properties. One prominent example is the Airgate building, owned by the city of Zurich, where an initial phase saw 60 of a total of 500 parking places connected for e-mobility. Around 160 charging stations were installed for the various service departments in line with the municipal authorities' goal of net zero by 2035. There was also strong progress in the electrification of VBZ buses, with ewz installing seven new transformer stations with a total output of 7,000 kilowatt in the former underground diesel tanks of the VBZ garage in Hardau.

ewz visualisation of electricity consumption in the city of Zurich

Using open source software, experts at ewz have created a visual representation of electricity consumption in the city of Zurich, embedded in an interactive graphic on www.ewz.ch. The regression model (Prophet library) was trained with machine learning using electricity consumption and weather data for the city of Zurich from 1 January 2010 to 31 December 2021. The statistically expected electricity is calculated for the previous seven days and displayed as a daily average within a range. This process allows for deviations caused by weekends and public holidays which fall on different dates each year, when energy consumption is lower than on normal weekdays. The model also reflects the fact that electricity consumption in the city of Zurich has dropped by around 12 per cent since 2010 – a period in which the population itself actually grew.

Public lighting with LED

By the end of 2022 around half of the public lighting network – which numbers over 50,000 lights in total – had been switched to energy-saving LED technology. Dynamic lighting control means that under ideal conditions, LED lights require up to 90 per cent less energy than standard gas discharge lamps – with no impact on the safety of road users. When fitted with the right optics, LED lights also reduce undesirable light emissions, which has a positive impact on people as well as fauna and flora. The City of Zurich will need to further expand LED public lighting to help achieve its climate and energy policy targets. The City Council approved earmarked expenditure in the amount of 9.061 million Swiss francs on a one-off basis for the purchase of LED lights for the years 2022 to 2027.

Infrastructure

Energy services

ewz succeeded in putting 14 new plants into operation and now manages a total of 342 plants throughout Switzerland, which together represent a reduction in carbon emissions of around 64,503 million tonnes. In 2022 the City Council approved 11 projects, including the new energy network in Fehraltorf and the energy solution concept for the SBB Werkstatt site in Altstetten, Zurich.

Lake water pumps laid

In early 2022, ewz laid three lake water pumps for the existing Fraumünster lake heat network – a true innovation. By placing the pumps directly inside the extraction pipe, ewz has managed to almost double the supply capacity of the Fraumünster network and save space in the energy centres on land. The lake water pumps were lowered into the lake by deck crane (pontoon) and installed in the existing lake-water pipeline by industrial divers (at a depth of around 12 metres, 100 metres from the lake side of the Quaibrücke). At the Tiefenbrunnen work site, the platform was assembled together with the pumps, and the requisites cables were prepared and then laid in the water. A tug transported the components from the work site to the installation site.

Improving supply in the city of Zurich

In October 2022, work began on construction of foundations for six new masts in the Gattikon area. This was the first phase of work on an initial 1.7-km stretch of new overhead lines between Schweikrüti (Thalwil municipality) and Kilchberg. Upon completion, the reinforced high-voltage lines will extend to the future ewz substation at Waldegg and will help improve supply in the city of Zurich. The masts will be mounted in 2023 before the aluminium alloy conductors are installed. The construction of this initial stretch, including the six new masts, will require a total of around 2,200 tonnes of concrete, 330 tonnes of steel and 32 km of conductors and earth wires. The project was preceded by legal proceedings which lasted for 20 years. In the meantime, former ewz transmission lines were transferred to the national grid company Swissgrid, which in its capacity as general planner commissioned ewz with implementation.

Administration building in Oerlikon Zurich

The renovation of the administration building in Oerlikon Zurich was largely completed in 2022. Construction measures for tremor-proofing and fire safety were carried out on the ground floor and in the basement. The roofs were refurbished and the building technology upgraded, resulting in lower energy consumption and increased interior comfort. On the ground floor, the entrance area, atrium and cafeteria were redesigned. The meeting rooms were also consolidated to form a conference zone, joined by a 60-seat auditorium and an open-plan office. The last finishing touches will follow in early 2023, along with the installation of a PV system.

Renovation and expansion of Herdern maintenance depot

The second year of comprehensive renovation and expansion works at ewz's Herdern maintenance depot focused on the new central warehouse between the SBB railway viaducts. The shell was erected between September 2021 and July 2022. In October, work began on mounting the facade elements made of untreated Douglas fir timber sourced from reforestation projects close to Zurich. The new central warehouse will meet future operational and business standards for modern, efficient warehousing and will allow the site to be divided into administrative and logistical sections. Summer 2023 will see the start of work on the main building, which dates from 1974; it will be stripped to its shell, and tremor-proofing and energy-efficiency measures will be carried out. The building will also gain an additional two storeys, which will project over the existing substation and stretch over the new Mühleweg.

ewz substation, Selnau

The CoolCity energy network requires a central city location for an energy centre with a footprint of around 4,000 square metres and ceiling height of five metres. The plan is for the centre to eventually produce 94.6 GWh of heat and 25.6 GWh of cooling each year. It will house heat pumps with an output of 55 MW and cooling machines with an output of 36 MW, as well as the associated technical infrastructure. Water from Lake Zurich will serve as the energy source for the energy network. The ewz Selnau substation meets the spatial and technical requirements, and despite extensive research no alternative building was found in the city centre. Therefore rental agreements with the current tenants – Stiftung für konstruktive, konkrete und konzeptuelle Kunst (Foundation for Constructive, Concrete and Conceptual Art) and the Impact Hub – will not be extended.

High-wire act in central Grisons

In autumn, two damaged ewz conductors in the 60-kV high-voltage network in mountainous terrain between Prada and Sils im Domleschg had to be replaced. Up to 12 overhead line fitters worked on the 80-metre-high masts to replace the conductors in 540-metre lengths. To ensure safe working conditions, the fitters not only deactivated the two ewz conducts, but two Swissgrid transmission lines and one from RhB which run on the same route as well. They also took advantage of this outage, which lasted around a week, to replace 100 vibration dampers between Tiefencastel and Sils im Domleschg.

70-tonne transformer for electricity demand

In August, a 50-megavolt ampere transformer was installed in the Sempersteig substation to cover growing electricity demand in parts of the city centre, the districts of Hottingen and Fluntern, as well as the reserve grid over the coming decades. Transportation of the transformer was particularly challenging; with a total moving weight of 110 tonnes and a length of 18 metres, the move had to be carried out at night. The transformer will go into operation in late January 2023.

Partnerships and investments

ewz Deutschland GmbH

The wholly owned subsidiary encompasses investments in 16 production companies and 12 project development companies. The 119 wind farms in Germany, France, Norway and Sweden produced around 982 GWh of electricity (+11 per cent compared to 2021), around double the production of the Bergell power plant group. The ewz Deutschland Group has a consolidated balance sheet of around 499 million euros.

Mollendruz wind farm

The Federal Supreme Court has completely rejected all appeals lodged against the usage plan for the Mollendruz wind farm. Work has already begun on the building application, which ewz expects to be able to submit in mid-2023. The Mollendruz wind farm, which lies on the ridge to the east of the Col du Mollendruz, is expected to host 12 wind turbines with a total capacity of 50 MW. This will result in an output of 100 to 112 GWh of electricity from renewable energies per year. The Federal Supreme Court's ruling confirmed the 9 June 2020 decision of the administrative court of the Canton of Vaud. The total investment for the project is around 90 million Swiss francs. To date the development work, project planning, legal evaluations, approval processes and operation of the company ENM SA have absorbed an investment of around 7 million Swiss francs. Construction work is scheduled to begin in early 2025 with an expected duration of two years. Starting in 2027, the wind farm is set to generate electricity for at least 25 years.

Deep geothermal energy in the canton of Jura

Geothermal plants promise great energy potential. This technology uses geothermal heat from the depths to produce energy. Geo-Energie Suisse AG, a joint venture of several Swiss energy providers, has developed a construction-ready pilot project for a geothermal power plant in the Haute-Sorne municipality in the canton of Jura. The necessary permits from the canton and the municipality are in hand. The joint venture entered into an agreement with the Canton of Jura which protects the interests of the population and the environment. On 16 November 2022, the municipal council approved expenditure of 9 million Swiss francs that will allow ewz to take part in the initial exploratory phase.

Swissgrid investment increased

ewz has been a direct investor in the national grid company Swissgrid AG since its foundation, as well as an indirect investor through its partner plants. To ensure ewz can acquire shares held by partner plants if required, the City Parliament approved a credit facility of CHF 18 million. This allowed ewz to take over share packages offered by Kraftwerke Hinterrhein, Kraftwerk Oberhasli AG, Officine Idroelettriche di Blenio SA and Officine Idroelettriche della Maggia SA. This increased ewz's investment from 8.37 per cent to 9.7 per cent. Swissgrid AG achieves regulated yet secure and constant returns, so the purchase of Swissgrid shares is not just sound strategy, but also a wise economic investment.

Benefits for customers and employees

Stable energy prices for basic supply in 2023

Thanks to stable energy prices, electricity tariffs for basic supply in the city of Zurich and for the supply area of the Grisons will experience only moderate change. Because ewz has enough of its own hydropower plants, wind power plants and photovoltaic systems to produce the electricity it needs, major fluctuations on the power market have no impact on pricing under the basic supply system. However, higher Swissgrid AG tariffs mean that grid usage fees will increase. There is also a change to municipal levies to fund subsidies in accordance with the 'Ordinance on the Public Services of the Zurich Municipal Electric Utility' (VGL). The ewz electricity tariff is made up of the components 'energy supply', 'grid usage' and 'levies' (municipal levies and the national grid surcharge).

More money for funding measures

The city of Zurich has set itself the goal of reducing greenhouse gas emissions to net zero by 2040. This will require an expansion of funding measures and subsidies. In replacement heating, for example, incentives for switching from fossil fuel to renewable energy sources will be more financially attractive. Under the completely revised VGL approved by the City Parliament, ewz is not only able to accept grey electricity, it can also pay for the solar guarantee of origin at a rate of CHF 0.05/kWh. At the end of the year the City Council approved a new funding concept in the implementation rules for the VGL, which includes the removal of specific barriers to investment in PV systems. From 1 February 2023, for example, contributions can be issued for structural reinforcement of roofs and asbestos removal. All these measures allow for an amortisation of PV plants within 10 to 15 months – a very good rate given a minimum lifespan of 20 years.

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 energy supply from electricity, heating and cooling, as well as e-mobility. Four projects have already been carried out, 10 are currently in progress and others are 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.

Telecom project business

ewz links companies in the city of Zurich to data centres via fibre optics – not just in the region, but now throughout the country as well. The rapid growth in data centres in the Zurich region, in particular, has led to appreciable demand for these connections. To meet the increased requirements for data transmission, ewz is continually expanding its fibre optic infrastructure and the core network nodes. Depending on the managed service, this network expansion gives our customers access to bandwidths of up to 100 Gbit/s or even 400 Gbit/s, geo-redundant if required. Companies wishing to operate their own data transmission with a high degree of flexibility and autonomy can also take advantage of dedicated dark fibre solutions.

The fibre optic network is consistently deployed as a communication solution for the ewz energy networks and other partners, as well as the reading of ewz smart meters. ewz also offers smart building communication solutions for service applications in the area of building communications with the purpose of transmitting data from these technical systems and facilities. These solutions are available to electricians, ICT/telecoms providers and service providers, who can integrate the service into their individual portfolios.

Employees

At year-end, ewz employed a staff of 1,173 employees (not including apprentices and interns), or 1,100 full-time equivalents (FTEs). The share of women was 19 per cent, and 14 per cent in management positions. There were 281 employees on part-time contracts, representing 15 per cent of men and 57 per cent of women. Employees at ewz represent 29 nationalities, and 36 apprentices are undergoing training.

However, conditions are tightening further on the labour market, in the energy sector in particular, and it is becoming harder to attract qualified employees. At the same time, around 12 per cent of the ewz workforce is in the 58+ age group and will soon enter retirement. This makes internal development – and retention – of employees all the more important. In 2022, 36 employees underwent development in their roles or switched to new roles. In addition, 19 employees received support for further training. The ewz academy offers courses tailored to various career paths. ewz identifies talented employees in its annual succession and talent rounds and practises proactive succession planning.

A corporate culture that offers opportunities for development makes the company more attractive as an employer, which lends it a clear competitive advantage in recruitment.

Through its internships, ewz offers young people access professional life while also profiting from their knowledge. In 2022 ewz offered internships to 28 individuals, half of which (50 per cent) were taken up by women.

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Annual and management report 2022

Economic environment

The 2022 financial year was marked by unexpected events that led to unprecedented turbulence in the energy markets. Prices on the electricity market were already rising significantly in late 2021. From late February 2022, the outbreak of war in Ukraine, the outages at French nuclear power plants and the extreme drought in Europe led to unprecedented market turbulence, with prices peaking in early September. Wholesale electricity prices were at times over 20 times higher than the previous years' average. In August, for example, the increase in prices on the spot market accelerated enormously due to uncertainty regarding future trends, rising from around EUR 260/MWh to over EUR 700/MWh in just a few days.

As one of the five most important energy producers in Switzerland, ewz was severely affected by this turbulence, especially by the extreme drought, which led to historically low production figures for hydropower plants. The energy shortage expected for winter 2023 also caused ewz to pursue a cautious reservoir management strategy. In the short-term, this required the shortfall in energy production capacities to be procured on the wholesale market at highly unfavourable prices. This course of action strengthened the security of supply and meant that ewz was able to meet its delivery commitments to customers at all times.

In April, all coronavirus-related measures were lifted in Switzerland, along with the 'special situation', which led to the re-normalisation of working and living conditions. Economic growth fell in comparison to the previous year. The coronavirus crisis weakened economic activity considerably in 2020, which led to a substantial backlog in demand in 2021. This rise in consumer demand put pressure on the markets, as many companies had had to curb production during the pandemic, resulting in supply bottlenecks and shortages of skilled workers. This led to global price increases in the year under review. Inflation rose to record levels in Europe and the USA. To counter this increase, central banks decided on a restrictive monetary policy. These same tendencies were apparent in Switzerland, albeit less pronounced. 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.

The Council of States was the first chamber to debate the 'Federal Act on a Secure Electricity Supply from Renewable Energy Sources'. ewz is critical of several aspects: back-up supply is excluded, the bill is overloaded with wide-ranging funding models and grid cost exemptions are extended to electrolysers and methanation plants. Local electricity communities create loopholes in the market or basic supply, and the use of flexibility is defined too narrowly. The bill is now under consideration by the relevant National Council committee and is expected to go before the National Council in the 2023 spring session. ewz is also calling for urgent streamlining and acceleration of procedures for further construction of renewable energy facilities. As part of parliamentary initiative 21.501 (Indirect counter-proposal to the glacier initiative, Net-zero greenhouse gas emissions by 2050), the Swiss Parliament approved the 'Federal Act on Urgent Measures for the Short-Term Provision of a Reliable Power Supply in Winter'. This allowed for the construction of large-scale high-alpine photovoltaic plants, which produce electricity primarily in the winter months, and introduced an obligation for buildings to use solar energy. Parliament also included the elevation of the Grimsel dam wall by 23 m and the relocation of the Grimsel Pass road in the bill, and declared these to be urgent.

The city of Zurich aims to reduce its carbon emissions to net zero by 2040. Fossil fuel-powered heating systems generate around 50 per cent of the city's direct carbon emissions, so replacing them is a matter of urgency, with the potential for significant impact. With the expansion of thermal grids, ewz intends to build more energy networks in Albisrieden, Altstetten, Aussersihl, City, Enge and Höngg in line with municipal energy plans and supply them with renewable heating and cooling energy. This is expected to enable further carbon emissions reductions of 52,000 tonnes a year. ewz has set up a credit facility of 573 million Swiss francs until 2040 to provide the necessary expenditure capacity for the successful implementation of this long-term project. Voters of the city of Zurich adopted the proposal in November with 84.05 per cent in favour, thereby granting ewz the mandate to implement it.

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 have not improved significantly in 2022, which is why these selling efforts have not started again. 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 1,712.3 million Swiss francs, some 340.0 million Swiss francs or 24.8 per cent above the previous year. Operating expenses rose by 391.6 million Swiss francs in total. Huge price increases on the wholesale market combined with shortages in electricity production from hydropower led to much higher operating costs. The higher operating income was only able to offset part of the additional costs. Personnel costs increased by 1.4 million Swiss francs or 0.9 per cent compared to the previous year, primarily driven by the salary adjustments decided by the City Council as of 1 April 2022 and the additional jobs created.

Earnings before interest, taxes, depreciation and amortisation deteriorated by 51.6 million Swiss francs or 20.9 per cent compared with the previous year. The performance of the decommissioning and disposal fund was below average in the previous year, which had a negative influence on the 2022 results. Electricity market prices are expected to rise in the long term, which resulted in adjustments to provisions for Power Purchase Agreements of around 164 million Swiss francs. Compared to the previous year, depreciation and amortisation increased by 4.9 million Swiss francs or 7.7 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 the Grisons. Net profit fell by 53.5 million Swiss francs to 129.5 million Swiss francs (previous year: 183.0 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 26.8 per cent of total assets, increasing by around 10.2 million Swiss francs compared with the previous year. Non-current assets increased by 70.1 million Swiss francs as a result of the investments made. ewz invested around 159 million Swiss francs in plants and investments in the 2022 financial year. In addition to investing in network facilities and conventional energy production plants, ewz also spent significant amounts on renewable energies and on equipment in the Energy Services field of business. ewz was also able to increase its investment in the national grid company swissgrid AG from 8.3 per cent to 9.7 per cent with the successful purchase of additional shares. Short-term liabilities rose by 184.2 million Swiss francs. In total around 174 million Swiss francs of provisions were released for onerous contracts.

Cash flow statement

Cash flow from business activities fell compared with the previous year to 161.8 million Swiss francs (previous year: 176.6 million Swiss francs). This decrease is primarily attributable to the electricity procurement made necessary by the lower production from hydropower plants. Higher 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 decreased by 53.3 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 18 October 2022.

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 Kernenergiebeteiligungen). The money paid into the decommissioning and disposal fund (STENFO) is accounted for at market value in both companies. In the year under review, STENFO achieved below-average returns, which increased proportionate costs for ewz by around 66 million Swiss francs compared to the standard returns expected. The higher electricity market prices expected meant that provisions for onerous contracts were reduced by around 174 million Swiss francs in the 2022 financial year.

Outlook

The prospects for ewz over the next few years are positive and have even improved as a result of the increased electricity market prices. The current electricity shortage 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. Expansion of energy and telecom services will continue in the coming years to further reduce dependence on energy market prices. Broad diversification also helps reduce the volatility of net profit. Secure, long-term supply and stable, plannable income are the objectives for the forthcoming years for the grids operated by ewz in the City of Zurich and central Grisons.

ewz is planning to make annual investments of around 200 million Swiss francs in infrastructure. This means that the fabric of the existing assets can be safeguarded for the long term while ensuring sustainable growth and the expansion of renewable energy production.

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 a commercially run business, which finances itself and does not use 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 (Gemeindegesezt) 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 Ordinance 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)	2021 in CHF	2022 in CHF
Net revenues from goods and services*	1)	1,337,855,343	1,680,638,214
Capitalised own services		27,631,750	26,423,664
Other operating revenue		6,769,160	5,266,697
Total operating income (overall performance)		1,372,256,253	1,712,328,575
Energy procurement	2)	- 735,667,641	- 1,102,868,876
Costs of upstream grids, system services and surcharges	3)	- 102,026,981	- 109,063,459
Material and third-party services		- 72,750,982	- 70,977,240
Personnel		- 152,690,253	- 154,062,711
Levies	4)	- 25,830,350	- 23,837,973
Other operating expenses		- 36,422,829	- 56,201,146
Total operating expenses		- 1,125,389,036	- 1,517,011,405
Earnings before interest, taxes, depreciation and amortisation (EBITDA)		246,867,217	195,317,170
Depreciation, amortisation and impairment losses		- 64,420,672	- 69,365,055
Earnings before interest and taxes (EBIT)		182,446,545	125,952,115
Financial result		9,268,368	11,141,905
Earnings before taxes (EBT)		191,714,913	137,094,020
Taxes		- 8,665,380	- 7,598,026
Net profit		183,049,533	129,495,994
Contribution to special reserve		- 103,049,533	- 49,495,994
Profit transfer to city treasury		80,000,000	80,000,000

* 2021 adjustments: changes in provisions for naturemade star fund have been reclassified to net revenues from goods and services.

Balance sheet

Assets			
	Notes (from page 23)	31/12/2021 in CHF	31/12/2022 in CHF
Cash and cash equivalents		17,486,442	13,150,370
Current account with the city accounts department		383,129,797	329,786,003
Trade accounts receivable		186,099,700	274,251,192
Inventories		7,901,708	9,209,839
Prepaid expenses and deferred charges		95,788,625	53,792,588
Current assets		690,406,272	680,189,992
Financial assets	6)	453,492,023	466,031,816
Property, plant and equipment and intangible assets	7)	1,333,444,688	1,391,024,315
Non-current assets		1,786,936,711	1,857,056,131
Total assets		2,477,342,983	2,537,246,123

Equity and liabilities			
	Notes (from page 23)	31/12/2021 in CHF	31/12/2022 in CHF
Trade accounts payable		117,441,197	214,522,424
Other liabilities		15,395,085	37,779,151
Down payments and instalments from customers		110,127,241	106,031,298
Accrued expenses and deferred income		61,343,455	130,143,901
Short-term liabilities		304,306,978	488,476,774
Provisions	5)	290,688,081	116,925,431
Long-term liabilities		290,688,081	116,925,431
Special reserve		1,779,298,391	1,882,347,924
Net profit		183,049,533	129,495,994
Profit transfer to city treasury		- 80,000,000	- 80,000,000
Equity capital		1,882,347,924	1,931,843,918
Total equity and liabilities		2,477,342,983	2,537,246,123

Cash flow statement

	2021 in CHF	2022 in CHF
Net profit	183,049,533	129,495,994
Depreciation and amortisation	64,420,672	69,365,055
Change in provisions	- 37,693,870	- 173,762,650
Change in inventories	- 835,878	- 1,308,131
Change in accounts receivable	- 46,982,205	- 88,151,492
Change in prepaid expenses and deferred charges	- 41,008,464	41,996,037
Change in liabilities	47,401,924	119,465,293
Change in down payments and instalments from customers	12,112,496	- 4,095,943
Change in accrued expenses and deferred income	- 3,873,119	68,800,446
Cash flow from business activities	176,591,089	161,804,609
Investments in property, plant and equipment	- 116,445,616	- 124,598,609
Investments in financial assets	- 9,529,890	- 34,222,654
Divestment of property, plant and equipment and financial assets	29,882,521	19,336,788
Cash flow from investment activities	- 96,092,985	- 139,484,475
Change in liabilities due to city's accounts	7,878,494	53,343,794
Profit transfer to the city of Zurich	- 80,000,000	- 80,000,000
Cash flow from financial activities	- 72,121,506	- 26,656,206
Net change in cash and cash equivalents at end of accounting period	8,376,598	- 4,336,072
Cash and cash equivalents at beginning of accounting period	9,109,844	17,486,442
Cash and cash equivalents at end of accounting period	17,486,442	13,150,370

Notes

1) Net revenues from goods and services		
	2021 in CHF	2022 in CHF
Energy sales *	865,508,631	1,194,942,211
Grid usage	224,737,613	231,693,376
Surcharges for transmission grid	61,000,902	60,521,418
Goods and services sold to communities	45,883,399	49,137,196
Energy services	68,836,102	75,570,322
Telecom	30,540,009	30,240,849
Other operating supplies and services	41,348,687	38,532,842
Total	1,337,855,343	1,680,638,214

2) Energy procurement		
	2021 in CHF	2022 in CHF
Energy procurement from partner plants	- 89,038,726	- 62,979,444
Energy procurement from the market	- 631,078,216	- 1,019,777,629
Fuels, energy for energy service facilities	- 15,550,699	- 20,111,803
Total	- 735,667,641	- 1,102,868,876

3) Costs of upstream grids, system services and surcharges		
	2021 in CHF	2022 in CHF
Upstream grids	- 35,016,613	- 42,040,586
System services	- 4,394,811	- 4,375,544
Surcharge for transmission grid	- 62,615,557	- 62,647,329
Total	- 102,026,981	- 109,063,459

4) Levies		
	2021 in CHF	2022 in CHF
Hydropower plant taxes	- 9,752,957	- 7,073,669
Water rates	- 10,618,043	- 10,993,505
Concession fees and services	- 4,717,913	- 4,854,661
Other levies	- 741,437	- 916,138
Total	- 25,830,350	- 23,837,973

5) Provisions		
	31/12/2021 in CHF	31/12/2022 in CHF
Onerous contracts	273,283,021	99,354,005
naturemade star fund	11,672,293	11,401,148
Other operational activity	5,732,767	6,170,278
Total	290,688,081	116,925,431

* 2021 adjustments: expenses of the naturemade star fund have been reclassified to net revenues from goods and services.

Notes

6) Financial assets

		ewz share in %		Share capital of company	ewz share of share capital	Carrying amount as at 31/12/2022 in CHF
Investments						
ewz (Deutschland) GmbH	DE-Konstanz	100.0	EUR	164,338,412	EUR 164,338,412	158,457,254
SunTechnics Fabrisolar AG	Küsnacht	100.0	CHF	1,000,000	CHF 1,000,000	1,512,397
Energie Naturelle Mollendruz SA	La Praz	89.5	CHF	8,300,000	CHF 7,430,000	3,321,578
LaZur Energy 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
Swisselindex 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	1,343,700
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						381,093,250
					Nominal value	Carrying amount as at 31/12/2022 in CHF
Loans						
ewz (Deutschland) GmbH	DE-Konstanz		EUR	34,000,00		33,573,300
Swissgrid AG	Laufenburg		CHF	33,764,830		33,764,830
Energiepark Sisslerfeld AG	Sisseln		CHF	14,670,400		14,486,286
SunTechnics Fabrisolar AG	Küsnacht		CHF	800,000		800,000
EVUllution AG	Landquart		CHF	869,000		869,000
LaZur Energy SA	Lausanne		CHF	645,150		645,150
Eoliennes de Provence SA	Provence		CHF	800,000		800,000
Geo-Energie Suisse AG	Zurich		CHF	3,150,000		0
Total loans						84,938,566
Total financial assets						466,031,816

7) Property, plant and equipment and intangible assets

	Status as of 01/01/2022 in CHF	Additions in CHF	Disposals in CHF	Reclassification in CHF	Status as of 31/12/2022 in CHF
Acquisition values					
Power plants	813,802,229	811,772		15,720,098	830,334,099
Energy distribution facilities	2,668,256,558	2,065,200	- 17,006,957	47,312,677	2,700,627,478
Public lighting	48,948,587	-	- 1,144,398	6,137	47,810,326
Energy solutions and grid services	396,429,122	14,384,689	- 954,914	21,303,638	431,162,535
Telecom systems	251,434,469	157,734	- 102,335	7,808,408	259,298,276
General facilities, properties, grounds	135,421,284	2,302,140	-	985,574	138,708,998
Software	2,321,941	398,750	-	81,000	2,801,691
Facilities under construction	157,793,044	104,478,324	-	- 93,217,532	169,053,836
Total	4,474,407,234	124,598,609	- 19,208,604	-	4,579,797,239
	Status as of 01/01/2022 in CHF	Depreciation and amortisation in CHF	Disposals in CHF	Reclassification in CHF	Status as of 31/12/2022 in CHF
Cumulative depreciation					
Power plants	- 623,027,584	- 10,148,876		-	- 633,176,460
Energy distribution facilities	- 2,007,178,097	- 29,937,917	17,006,957	1,194,202	- 2,018,914,855
Public lighting	- 19,841,036	- 2,613,035	1,144,398	-	- 21,309,673
Energy solutions and grid services	- 167,093,698	- 15,221,156	101,648	- 1,194,202	- 183,407,408
Telecom systems	- 212,429,881	- 5,630,548	102,335	-	- 217,958,094
General facilities, properties, grounds	- 110,610,025	- 2,151,363	-	-	- 112,761,388
Software	- 782,225	- 462,821	-	-	- 1,245,046
Total	- 3,140,962,546	- 66,165,716	18,355,338	-	- 3,188,772,924
Total property, plant and equipment and intangible assets	1,333,444,688		- 853,266		1,391,024,315

Electricity balance sheet

Installed electricity generation capacity				
		2021	2022	
Hydropower plants	MW	1,009.0	1,009.0	→
Nuclear power plants	MW	295.8	295.8	→
Wind power plants	MW	325.0	331.0	→
Photovoltaic and solar thermal energy	MW	20.3	23.6	↗
Biomass power plants	MW		3.8	↗
Fuel cells	MW	0.2	0.0	↘
Total	MW	1,650.3	1,663.2	→

Electricity generation				
		2021	2022	
Hydropower	GWh	2,374.8	1,713.2	↘
Nuclear power	GWh	2,026.3	2,021.4	→
Wind power	GWh	888.0	981.9	↗
Waste incineration	GWh	26.2	25.6	→
Biomass*	GWh	92.4	82.9	↘
Photovoltaic and solar thermal energy	GWh	38.7	39.8	→
Various generating plants	GWh	0.5	0.1	↘
Total	GWh	5,446.9	4,864.9	↘

Electricity procurement				
		2021	2022	
Procurement from own plants	GWh	1,299.1	980.4	↘
Procurement from partner plants	GWh	3,090.0	2,713.2	↘
Procurement from third parties	GWh	168.5	193.6	↗
Trading	GWh	6,268.1	4,161.7	↘
Total	GWh	10,825.7	8,048.9	↘

Electricity supply				
		2021	2022	
Supply Switzerland	GWh	3,580.0	3,265.0	→
Trading	GWh	7,073.5	4,600.8	↘
Pumped storage	GWh	172.3	183.1	→
Total	GWh	10,825.7	8,048.9	↘

Subsidy systems, etc.				
		2021	2022	
Procurement	GWh	889.2	977.6	→
Supply	GWh	889.2	977.6	→

Energy solutions				
		2021	2022	
Heating and cooling sales	GWh	436.9	424.1	→
CO ₂ reduction or avoidance	Tonnes	66,227	64,503	→

Telecom				
		2021	2022	
Buildings with broadband connections	Number	40,401	40,667	→
Available broadband connections	Number	280,347	284,089	→

*incl. share of biomass in waste incineration

Sustainability report

in accordance with GRI Standards

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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. ewz is a dependent institution under public law and maintains its own accounts within the accounts of the city of Zurich and is not a legal entity of its own. All ewz 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, ewz 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 also:

- [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 also: → 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 2022 is March 2023.

Contact: nachhaltigkeit@ewz.ch

GRI 2-4

Restatements of information

ewz did not undertake any restatements of information in 2022 regarding environmental performance that may have arisen from mergers or other organisational changes. The dataset on landfilled, non-hazardous substances was revised due to the introduction of a new substance class for the 2021 financial year.

GRI 2-5

External assurance

There was no external audit of the Annual, Financial and Sustainability Report 2022 carried out by independent third parties.

Activities and workers

GRI 2-6

Activities, value chain and other business relationships

Activities: ewz wz 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 creates and operates environmentally and economically viable energy supply systems for complex sites and major projects through energy contracting and facility management. 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 2000-watt 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 also 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:

- 1,221 workers
- CHF 1,712 million total operating income
- 4,865 GWh electricity production
- 20 wholly owned hydropower plants and 5 investments in partner plants
- 13 wholly owned wind farms and 7 wind farm investments in operation
- 5,227 km of cable
- 418 km of overhead lines
- 29 substations
- 3,265 GWh electricity sold in Switzerland
- 237,000 electricity consumers
- 424 GWh heating and cooling sold
- 284,000 fibre optic connections to ewz.zürinet

Value chain: As a vertically integrated energy provider, ewz covers almost the entire value chain in the renewable energy industry.

The key products groups for procurement at ewz comprise:

- Machinery and technical equipment for energy production and distribution
- Systems for heating and ventilation technology
- 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 2022 it was between 200 million 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 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 2022 regarding the size, structure or ownership structure of the company. Despite bottlenecks due to the pandemic and the war in Ukraine, there were no significant changes to the supply chain.

See also:

- [Private customers](#)
- [Business solutions](#)
- [GNB 2014: Value chain of electrical energy \(PDF\), pages 16–17](#)

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.

	Unit	2018	2019	2020	2021	2022
Total workers*	Number**	1,218	1,212	1,230	1,213	1,221
Workers, female	Number	232	232	238	232	229
Workers, male	Number	986	980	992	981	992
Workers on open-ended contracts	Number	1,161	1,116	1,133	1,125	1,119
Workers on open-ended contracts, female	Number	214	203	201	198	194
Workers on open-ended contracts, male	Number	947	913	932	927	925
Workers on fixed contracts	Number	57	40	42	34	48
Workers on fixed contracts, female	Number	18	15	20	13	23
Workers on fixed contracts, male	Number	39	25	22	21	25
Full-time workers	Number	995	973	970	946	940
Full-time workers, female	Number	117	115	113	114	95
Full-time workers, male	Number	878	858	857	832	842
Part-time workers	Number	223	239	260	267	281
Part-time workers, female	Number	115	117	125	118	131
Part-time workers, male	Number	108	122	135	149	150
Workers in Zurich and Aargau	Number	1,107	1,099	1,116	1,102	1,108
Workers in central Grisons and the Bregaglia Valley	Number	111	113	114	111	113
Workers in management	Number	268	273	288	297	301
Women in management	Number	45	46	44	42	43
Men in management	Number	223	227	244	255	258
Men and women in apprenticeships or internships	Number	49	51	55	54	48
Coverage of the municipal pension fund	%	110.7	116.3	117.3	122.2	114.0
Employer savings contribution (of coordinated wage)	%	62	62	60	60	60

* including apprentices and interns

** individuals on 31 December of the respective year

GRI 2-8

Workers 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	2018	2019	2020	2021	2022
Workers bound by instructions	Number	69	50	43	29	42

Governance

GRI 2-9

Governance 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 also:

- [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 2-10

Nomination 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 also:

- [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 also:

- [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 also: ➤ [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. Sustainability issues are communicated at least once a year as part of the Management Board's

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 also:

- [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.

Siehe: [↗ 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 recorded in wage tables which are updated every year. The Personnel Law also sets out information on amounts for severance payment and wage continuations.

See also:

[↗ Personnel Law](#)

[↗ 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 also: [↗ 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 245,983.

Strategy, policies and practices

GRI 2-22

[Statement on sustainable development strategy](#)

See also:

- CEO Foreword, 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 is aiming for a sustainable future for all: 'New energy for a better tomorrow'. There is much to be done before we reach this goal. And everyone has a part to play: energy providers, industry, society. ewz is already working towards it. As a committed, active company, ewz constantly strives to ensure its customers have a secure, renewable supply of electricity, 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 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.

These targets have an influence on the energy and resource requirements of buildings, mobility and consumption. The foundation is formed by renewable energies and a sustainable lifestyle. As an energy company, ewz is part of the solution by securing supply of renewable energies and helping the general public reduce their carbon emissions. 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 a municipal service department of the city of Zurich with renewable energy plants throughout Europe. Its entire workforce is employed in Switzerland. ewz conforms with the laws and provisions of federal, cantonal and municipal authorities. 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 also:

- ↗ [Sustainable Municipal Policy](#)
- ↗ [ewz sustainability policy \(PDF\)](#)
- ↗ [Charter for Equality of Women and Men](#)
- Climate protection and energy efficiency for the city of Zurich, page 43

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 low-threshold advice, review complaints and act as a mediator.

See also: [➤ 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 also:

[➤ 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)
- digitalswitzerland, cross-industry initiative for promoting digital innovation
- 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

Einbindung von Stakeholdern

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:

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

Involvement at the strategic level

ewz invites representatives of relevant stakeholder groups to an annual stakeholder forum. The goal of the forum is to identify the concerns of the stakeholders and what they consider to be the most important sustainability issues for ewz. At least once a year, internal stakeholders such as members of the Management Board and employees have the opportunity of presenting their opinions on sustainability focal points. In addition, there is an employee information event each year where the Management Board provides an update on business developments. Employees have the opportunity of taking part in virtual and physical events and presenting their opinions and concerns.

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
- Cooperation with varying stakeholders in renaturation 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

Representatives of relevant stakeholder groups are included in strategic stakeholder engagement for the annual review of sustainability focal points. ewz is also in constant dialogue with representatives of organisations that are in direct contact with ewz or that are affected by its business activities.

See also:

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

Sector-specific disclosures

GRI EU1

[Installed capacity](#)

See also: → Electricity balance sheet, page 25

GRI EU2

[Net energy output](#)

See also: → Electricity balance sheet, page 25

GRI EU3

[Number of residential, industrial, institutional and commercial customer accounts](#)

See also: → 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	2018	2019	2020	2021	2022
Overhead lines	km	408	426	425	422	418
Cables	km	5,192	5,204	5,213	5,229	5,227
Substations	Number	29	29	29	29	29
Transformer stations	Number	897	911	910	911	916

GRI EU5

[Allocation of CO₂ emissions allowances or equivalent](#)

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

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 involves internal and external stakeholders in determining its materiality matrix. Sustainability focal points are validated for topicality and 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 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 every year, and new ones added as necessary, on the basis of dialogue with stakeholders and current sustainability trends.

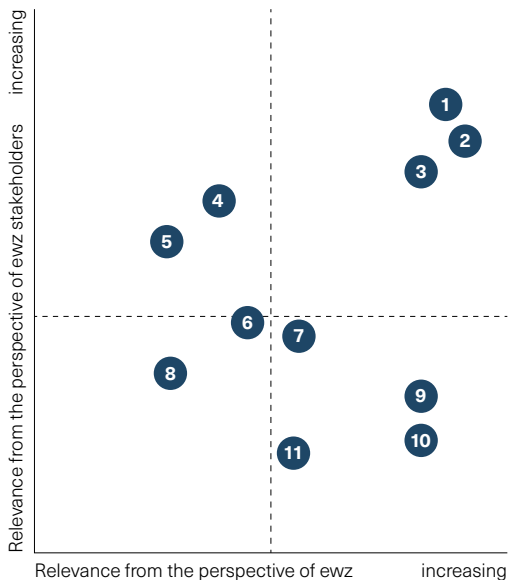
Completeness: ewz is particularly focused on advancing sustainability issues in areas where the company can exert a direct influence. The key issues that lie 'beyond' the organisation are regularly examined, and are included in this report. The sustainability performance of minority shareholdings, for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

See also: → Approach to stakeholder engagement, page 35

The material sustainability topics at ewz are:

- 1 Sustainable products and services
- 2 Investment 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 Stakeholder dialogue
- 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.

The sustainability focal points were reviewed for materiality in 2022, as they are every year. The Management Board of ewz undertook the following changes to the materiality matrix from a strategic perspective:

- Due to the shortage of skilled workers, ewz would like to focus more closely on promotion and further development of employees. Therefore the topic of 'employee development' was accorded higher priority by the Management Board.
- As a producing company, ewz is particularly affected by the topic of 'occupational health and safety'. In this area, ewz aims to continue all existing measures to provide a safe working environment for its employees. The relevance of this topic is seen as equal to that of 'employee development'.

Representatives of stakeholder groups undertook the following changes:

- Stakeholders accorded the topic of 'sustainable products and services' top priority, as they have for the last three years; it is followed in the list of priorities by 'investments in renewable energies' and 'security of supply'.
- In light of the climate crisis it is hardly surprising that the topic of 'climate protection and energy efficiency' should once again assume a slightly higher priority, as it did in the previous year. At the time of the survey, the prevailing electricity shortage had not yet been widely discussed and therefore presumably bore no influence on the stakeholders' assessment of the relevance of the topic.
- The topic of 'occupational health and safety' was once again prioritised a little lower than it was in the previous year. From the perspective of stakeholders, sound management of this 'internal' topic is a necessary prerequisite for business activities. However, this topic has no direct influence on stakeholders, which explains why they accorded it a lower priority.
- In light of the climate crisis and the pressing need to reduce greenhouse gas emissions, the topic of 'sustainable procurement' has gained in significance. The stakeholders expect ewz to focus more closely on this issue.
- The global challenge of protecting biodiversity also affects ewz. However, the greater significance accorded the topics listed above has pushed this topic down. Nonetheless, ewz continues to assume that protection of biodiversity remains highly important to stakeholders.

GRI 3-3

Management of material topics

General information on the 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 \(PDF\)](#). 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 in August 2021, valid 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.

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 quarterly and measures introduced where they are not met.

The internal control system (ICS) serves to identify operational, financial and legal risks in work processes and systems early on, and facilitate an appropriate response. 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.

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.

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

Security of supply

Electricity is a key pillar of the economy and of 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.

The importance of security of supply continues to increase with the introduction of new technologies and applications that require electricity. 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 anticipated increase in electrically operated applications such as heat pumps and electric vehicles places higher demands on the distribution grid, as it can lead to higher, locally concentrated energy consumption. ewz is responsible for the safe, efficient operation of the distribution grid in the city of Zurich and in supply areas of the Grisons. To this end, ewz maintains and modernises infrastructure taking economic aspects into consideration. Ensuring future viability requires such measures as:

- Forecasting of demand development and energy requirements in supply areas
- Planning, construction and operation of the corresponding infrastructure
- Technical and organisational innovations, particularly those that allow monitoring and control of grids (smart grid)

The smart grid will be developed on the basic infrastructure of the distribution grid. This affects grid levels 5, 6 and 7 in particular – the medium and low voltage levels. The main elements of this work are:

- Replacement of 270,000 standard electricity meters with smart meters. For some years now, new builds and refurbishments have been smart meter-ready. The project is due for completion in 2027.
- Development of concepts for project planning and piloting of intelligent metering, communication and control systems on grid levels 5 and 6. This encompasses modelling of the distribution grid as a digital twin. Together with a visualisation platform, this allows simulation of switching operations and the modelling and analysis of electricity flows.
- 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.

See also: → [GRI EU29 Average power outage duration, page 47](#)
→ [Federal Act for a Secure Electricity Supply, page 9](#)

Smart city infrastructure

The city of Zurich's smart city strategy aims to connect people, organisations and infrastructures through digital technologies in a way that creates social, environmental and economic added value. ewz contributes to implementation of this strategy by supplying infrastructures and interfaces in the areas of telecommunications, energy and mobility. In dialogue with experts and project managers from various ewz divisions, the municipal authorities and external users, the city aims to identify areas of potential for the smart city and implement them in projects. In collaboration with the Organisation and Informatics Competence Centre of the city of Zurich, ewz established a long range wide area network (LoRaWAN). The LoRaWAN is particularly suited to networking of sensors in public areas and buildings. ewz also installs and operates electromobility fast-charging stations in public locations. Digitalisation demands ever greater computing power and therefore highly efficient infrastructure. The city of Zurich is linked up by the comprehensive fibre-optic network ewz.zürinet, which covers basic supply. ewz operates the fibre-optic network, establishes new building connections, and sets up individual site networking for private companies and public authorities. This modern fibre optic infrastructure bolsters the city of Zurich's status as an innovative, progressive business location and increases the quality of life of its residents. The fibre optic network enables digital services in the form of high-definition TV, video on demand, broadband internet and telephony, while also allowing for the development of future applications. Smart metering enables customers to take advantage of prosumer arrangements, including production and consumption of electricity from their own small-scale plants.

See also: → [Smart city infrastructure, page 49](#)

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. ewz has a procurement function which operates under public-sector regulations and principles. Public-sector procurement pursues the goal of procuring goods and services from qualified providers at an optimal price and in the requisite quality.

Suppliers are obliged to adhere to the Code of Conduct for Contractual Partners of the city of Zurich. Suppliers that do not adhere to the code can be excluded from contracts with the city of Zurich for five years. The key points of the code encompass measures for prevention of corruption and compliance with statutory provisions in occupational safety. 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. The process enjoys a high degree of acceptance by the companies under inspection. The last review was in 2018. Of the 20 companies reviewed in the pilot phase, 19 had complied with the wage equality criteria in procurement and service provision.

Sustainable procurement is supported by:

- Internal sustainable procurement function
- Environmental delegates of all divisions as experts in sustainable procurement. They are tasked with assisting and supporting purchasers in the division to comply with sustainability criteria. This support applied to 92 per cent of the order volume of tenders in the previous year.
- Internal training of members of the environment and purchase team.

A new risk analysis concept for sustainable procurement management, which builds on existing analysis, was released last year. The concept was set to be implemented in the ensuing months with the help of environmental delegates.

Training in project procurement and operational purchasing helps raise awareness of sustainable procurement among new employees.

See also:

- GRI 204-1 Proportion of spending on local suppliers, page 47
- GRI 308-1 New suppliers that were screened using environmental criteria, page 58
- GRI 414-1 New suppliers that were screened using social criteria, page 64

Management approaches to material topics in the area of the environment

ewz conducts certified environmental management. This environmental management and its environmental programme is managed by a member of the Management Board – the Environmental Representative – and led by the Head of Environmental Management. The environmental programme is implemented in collaboration with delegates from the divisions and other specialists.

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. The environmental programme therefore includes:

- Reduction of energy consumption
- Increase in energy efficiency
- Increase in resource efficiency
- Increase in biodiversity in water and land ecosystems
- Reduction of greenhouse gas emissions from burning of combustibles and fuels
- 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.

Investment in renewable energies

Energy production in Europe is increasingly shifting to renewable energies. This move is driven by the already palpable effects of climate change and numerous international and national efforts for reduction of greenhouse gas emissions.

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. At present, framework conditions are often better outside of Switzerland, where more electricity can be produced from renewable energy sources per Swiss franc invested than in Switzerland.

See also:

- [Investment in renewable energies, page 58](#)
- [Energy strategy 2050](#)
- [Energy Perspectives 2050+](#)
- [Federal Act for a Secure Electricity Supply, page 9](#)
- [Energy transition and climate protection, page 4](#)
- [Altstetten and Höngg energy network, page 9](#)
- [ewz substation, Selnau, page 12](#)
- [Nuclear power investments, page 10](#)

Sustainable products and services

All customers covered by basic supply and on the open market receive electricity products from 100 per cent renewable energy. Electricity products are reviewed annually for their environmental footprint, using environmental accounting, and for greenhouse gas emissions.

ewz pursues the strategy of retaining and developing its sustainable products and services. In the previous year, ewz introduced the new solar contracting product for property owners with spaces of 500 square metres or more. The owners make their spaces available to ewz and profit from a complete solution tailored to their requirements. ewz takes care of planning, financing and construction as well as operation and maintenance of the solar power plant and the utilisation of residual electricity.

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.

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. Trading of physical electricity and certificates of origin optimises production and ensures the environmental quality of the products. Certificates of origin provide the electricity product with independent proof of quality. ewz looks after the development, marketing and sale of products and services connected with electricity and advises its customers.

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. Getting rid of fossil fuel-powered heating systems or replacing them with heat networks based on renewable energy reduces the corresponding direct carbon emissions of these systems for the owner. The customer can retain any emissions credits. 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 76.3 per cent. Renewable energy sources used by ewz include waste heat from data centres, lake water, wood chips and treated wastewater.

100/100 project: by 2030, this project aims to have innovative energy solutions in place and operating with completely climate-neutral energy and heat supply in 100 real estate projects throughout Switzerland. These solutions are combined with photovoltaic (PV) systems and electromobility. To date 14 projects have been completed or are in progress.

See also:

- [GRI 302-2 Energy consumption outside of the organisation, page 50](#)
- [100 real estate projects – 100 per cent climate-neutral, page 14](#)

Climate protection and energy efficiency

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 for 2050 that the federal government set out in its Energy Perspectives 2050+.

The population of the city of Zurich has expressed its support for sustainable energy supply in referendums. The company's strategy depends on the successful outcome of referendums for setting objectives for the 2000-watt society, for credit facilities that enable expansion of renewable energies, and for the establishment of energy networks that use renewable energy sources. 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.
- 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.
- The municipal administration aims to achieve net zero in direct greenhouse gas emissions by 2035.
- 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.

In addition to constructing power generation plants that are based on renewable energies, ewz provides effective measures for increasing energy efficiency and reducing carbon emissions in its supply areas. These measures are funded through municipal levies in electricity tariffs. They 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
- Subsidy programmes for tradespeople
- Efficiency bonus in electricity bills for companies that succeed in increasing their energy efficiency

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.

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 also:

- [Electromobility, page 11](#)
- [GRI 305 Emissions, page 54](#)
- [GRI 302-5 Reductions in energy requirements of products and services, page 51](#)

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. This is achieved through an ecological care and maintenance plan. The aim is to preserve the existing biodiversity of fauna and flora and expand it through further measures while integrating it with the surroundings. Biodiversity monitoring is in place for all larger areas, based on the guidelines of the International Union for Conservation of Nature (IUCN) which facilitate comparability between investments in biodiversity.

See also: → GRI 304-3 Habitats protected or restored, page 53

Management approaches to material topics in the area of social issues

Employee development

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. The ewz career model makes specialist, management and project careers into paths of equal validity with numerous development opportunities. Internal education and training provided by the ewz academy and training offered by the city of Zurich offer numerous opportunities, both online and in person. Employees can also attend external training courses.

Annual succession and talent rounds serve to identify and develop talented employees and thus secure succession for top performers. This presents talented employees with development opportunities within the company, whether by taking on more complex tasks or transitioning to management positions. ewz is a training company which trains around 40 apprentices in 10 different 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. 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 2022, with an average recruitment time of 78.9 days.

See also: → GRI 404 Training and education, page 62

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.

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. The label is valid for three years, until 2023. 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 company bridges the gap between applicant and employer. ewz provides regular awareness-raising measures for employees on the issues of sexual harassment and discrimination, and also supports 'Zürich schaut hin' (Zurich takes notice), a municipal campaign launched the previous year which aims to combat sexual, sexist, homophobic and transphobic harassment in the public sphere. In spring of last year, all managers received training from the Office of Equality and the ewz Human Resources division at the invitation of the Management Board. The focus of the events was on early detection and decisive action in the event of sexual harassment and discrimination.

Employees who find themselves in situations of conflict or discrimination, or who are looking for help, can consult various points of contact that offer advice and support. As well as supervisors and points of contact in Human Resources, 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. Last year the city of Zurich amended the regulation on linguistic equality to ensure appropriate consideration for non-binary individuals in official texts, either through gender-neutral terminology or formulations with a 'gender star' (a typographical means of acknowledging identities beyond male and female; this only applies to German). This regulation reflects the linguistic equality of women and men and makes non-binary individuals visible. Trained women in technical, artisanal and IT professions are in the minority. This means that some employer branding measures need to be specifically targeted at women. Platforms include frauenjobs.ch, techface.ch and the Woman Contact Day, and there are cooperations with the Swiss Association of Female Engineers and the Artisan's Network.

The goal is to increase the share of women working in management and the company as a whole to 25 per cent by 2025. In 2022, the share of women working in the company fell by 0.4 percentage points to 18.8 per cent. The share of women in management positions increased by 0.2 percentage points to 14.3 per cent.

See also:

- [GRI 405-1 Diversity of governance bodies and employees, page 63](#)
- [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 of the city of Zurich](#)

Stakeholder engagement

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 all 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. Through the stakeholder forum, representatives of stakeholder groups are in dialogue with members of the Management Board and sustainability management, and provide important input on strategic issues.

See also: → [GRI 304-3 Habitats protected or restored, page 53](#)

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 section on corporate culture includes the statement: 'The health and safety of our employees are integral components of our activities.'

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.

ewz has worked closely with the city of Zurich during the COVID-19 pandemic. Since February 2020 an ewz task force has been convening weekly to analyse the ongoing situation and develop necessary measures.

See also: → [GRI 403 Occupational health and safety, page 59](#)

Economic topics

GRI 204	Procurement practices								
GRI 204-1	Proportion of spending on local suppliers								
Of the products and services that ewz procured in 2022, 99 per cent of the purchase value was sourced from Swiss companies or companies with Swiss subsidiaries.									
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 actions 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.									
	Security of supply								
GRI EU29	Average power outage duration								
	<i>System Average Interruption Duration Index (SAIDI)</i>								
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 higher in 2022 than in the previous period – 7.6 minutes. The goal of keeping the average below 10 minutes over the last five years was met.									
	<table border="1"> <thead> <tr> <th></th> <th>Unit</th> <th>Average 2017 to 2021</th> <th>Average 2018 to 2022</th> </tr> </thead> <tbody> <tr> <td>Average interruption duration (SAIDI)</td> <td>Minutes per capita and annum</td> <td>6.8</td> <td>7.6</td> </tr> </tbody> </table>		Unit	Average 2017 to 2021	Average 2018 to 2022	Average interruption duration (SAIDI)	Minutes per capita and annum	6.8	7.6
	Unit	Average 2017 to 2021	Average 2018 to 2022						
Average interruption duration (SAIDI)	Minutes per capita and annum	6.8	7.6						
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 31 per cent of outages in the city of Zurich.									

Power shortage scenario

Throughout the course of the year there were indications of a potential power shortage scenario for the months of February and March 2023. ewz therefore acted early to ensure that reservoirs were as high as possible in the event of supply shortages. The company also made preparations for potential electricity saving measures, rationing and outages ordered by official directive. Uncertainty among the general public and companies was allayed by detailed information on the website and by employees in the ewz Customer Centre. To counter energy wastage, the city of Zurich and ewz supported the federal government's energy saving campaign. Energy saving measures were immediately introduced at ewz, including reduction of hot water and indoor temperatures in office spaces.

Initial savings by the city of Zurich and the general public were already apparent in late 2022, as ewz's online tool for visualisation of electricity consumption showed.

See also:

- [Security of supply, page 8](#)
- [Electricity prices, page 8](#)
- [Stable energy prices for basic supply in 2023, page 14](#)
- ↗ [Energy is scarce](#)
- [ewz visualisation of electricity consumption in the city of Zurich, page 14](#)
- ↗ [Electricity consumption in the city of Zurich](#)

Electricity grid

In 2022, the buildings of the Aubrugg and Auwiesen substations were refurbished or rebuilt, and the building technology partially renewed. The work will be completed in 2023. Auwiesen is one of four municipal substations that connect the distribution grid with the national Swissgrid transmission grid. Aubrugg is now used for crisis infrastructure and as a training centre.

In December of last year, the City Council approved an upgrade of the ewz substation Frohalp. The installation provides parts of the Zurich districts of Wollishofen and Leimbach with electrical energy. Medium-voltage systems will be expanded, and the switchgear, control systems and protection systems upgraded. Work is scheduled to begin in 2023 and will extend into 2026.

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. One of the planned measures is the large-scale project 'Zurich South Supply'. The high-voltage network that has evolved over time south of Lake Zurich will be boosted, and the connection to the national grid optimised. That includes new construction work at the Waldegg substation, which links the distribution grid and the transmission grid and which will replace the Samstagern and Obfelden substations. In autumn 2022, work began on construction of the mast foundations in the stretch between Schweikrüti (Thalwil) and Kilchberg.

Numerous customers in the city of Zurich have heightened requirements for the supply of electrical energy, including financial service providers and hospitals. For almost 20 years, ewz has been able to offer them the option of connecting their properties to a reserve grid via a redundant power cable. This ensure that if normal power supply fails, the reserve power supply is switched on within seconds. Almost 50 of these redundant connections have been installed to date. In the previous year, the reserve grid in districts 4 and 5 of the city of Zurich went into operation.

In 2022, 65 km of the electricity grid was upgraded. This equates to 1.2 per cent of the entire cable length of around 5,200 km.

See also:

- [70-tonne transformer for electricity demand, page 13](#)
- [Improving supply in the city of Zurich, page 12](#)
- [High-wire act in central Grisons, page 13](#)

Smart metering

The 270,000 standard electricity meters in the city of Zurich supply area will be replaced by smart meters by 2027. This replacement is necessary to fulfil the statutory requirements for an intelligent distribution grid. 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 by a year due to persistent bottlenecks in the supply chain for electronic components. But the long-term target continues to apply.

In 2022, ewz subsidiary Smart Grid Solutions AG was taken over by EVUolution AG. In return, ewz acquired a 22 per cent stake in EVUolution AG. ewz has been working closely with Smart Grid Solutions AG in the area of smart grids for a number of years now. This transaction ensures continued development of innovative grid management solutions so electricity grids can continue to operate reliably and economically in the future.

See also: → [Smart meters, page 11](#)

Infrastructure

ewz provides reliable, secure connections to data centres in the city of Zurich. It has also extended the fibre optic infrastructure beyond the city limits to connect users with data centres in the greater Zurich area. Now ewz is facilitating connections to data centres throughout the whole of Switzerland. To achieve this, ewz uses its own fibre optic infrastructure and supplements it with partner services where needed.

The city of Zurich can call on a wealth of mobility data, including bicycle traffic flow numbers, yet there is little data on the behaviour of the general public in public spaces and the use of infrastructure. In collaboration with the Office for Civil Engineering and the ETH Center for Project-Based Learning, ewz developed and tested sensors that collect data on the length of time spent in seating areas. Temperature, air humidity, location and noise levels were also measured, along with the robustness and reliability of the sensors themselves, data transfer via the LoRaWAN and the time spent on data analysis. If the sensors prove worthwhile, they could be used in the future for planning public spaces, such as squares. Further applications of the LoRaWAN, such as parking sensors at public charging stations, are currently in the test phase.

Last year ewz took part in Kickstart, an ecosystem innovation platform that brings together startups, companies, cities, foundations and universities to accelerate innovation. Along with other municipal service departments, ewz identified five interesting startups that offer smart city solutions. In 2023 these solutions will undergo proof of concept.

For the Swiss Digital Days in Zurich and the Grisons Digital Day, ewz demonstrated how sensors help the city of Zurich collect data on usage of urban infrastructure.

To enable VBZ (Zurich Public Transport) to operate charging stations for electric buses in its Hardau garage, ewz installed seven transformers with a total output of 7,000 kW at the site last year. At some point the VBZ battery-driven bus fleet will replace diesel-powered buses, which is expected to deliver carbon savings of around 400 tonnes per year.

To prevent electric vehicle charging stations causing power peaks in the distribution grid around lunchtime and after working hours, ewz has introduced tariff times. This provides vehicle owners with financial incentives for charging outside of peak times.

See also::

→ [Telecom project business, page 15](#)

↗ [Kickstart](#)

↗ [Swiss Digital Days](#)

↗ [Grisons Digital Day](#)

→ [ewz supports electric mobility, page 11](#)

Environmental topics

GRI 302

Energy

GRI 302-1

Energy consumption within the organisation

Energy consumption covered by renewable energies*	Unit	2021	2022
Heating required	MWh	1,181	1,100
Power consumption	MWh	2,576	2,370
Fuel consumption	MWh	35	5
Total energy consumption of renewable energies	MWh	3,792	3,474
Energy consumption covered by non-renewable energies**	Unit	2021	2022
Heating required	MWh	236	375
Power consumption	MWh	–	–
Fuel consumption	MWh	2,370	1,952
Total energy consumption of non-renewable energies	MWh	2,464	2,327
Total energy consumption within the organisation	MWh	6,256	5,802

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

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

See also: → Electromobility, page 11 → Administration building in Oerlikon Zurich, page 12

→ Renovation and expansion of Herdern maintenance depot, page 12

GRI 302-2

Energy consumption outside of the organisation

Electricity supply	Unit	2018	2019	2020	2021	2022
Electricity supply, Switzerland	GWh	3,869.0	3,638.5	3,332.6	3,580.0	3,265.0
Electricity supply, subsidy systems and other	GWh	325.0	443.7	707.7	883.7	977.6
Electricity supply to end customers, Switzerland	GWh	3,332.5	3,055.6	2,692.7	2,787.9	*2,670.4
Electricity supply from renewable energies to end customers	GWh	3,042.6	2,899.8	2,692.7	2,787.9	*2,670.4
Proportion of renewable energies in electricity supply to end customers	%	91.3	94.9	100.0	100.0	100.0
Electricity consumption in the city of Zurich	GWh	2,893.5	2,873.5	2,762.4	2,735.3	2,723.9

* deferred value as at 31/12

Heating and cooling sales	Unit	2018	2019	2020	2021	2022
Heating sales	GWh	261.3	281.3	302.4	358.9	333.5
Cooling sales	GWh	75.4	79.2	76.7	78.0	90.6
Heating and cooling sales	GWh	336.7	360.5	379.1	436.9	424.1
City of Zurich heating degree days	Kelvin days	2,935	3,112	2,933	3,401	2,775
Proportion of heating and cooling from renewable energies or unused waste heat	%	75.8	76.8	78.5	74.5	76.3
Number of energy networks	Number	38	42	46	47	51
Number of individual systems	Number	294	303	318	328	342
Carbon minimisation or avoidance through energy contracting	t CO ₂ -eq	48,370	54,889	56,854	66,227	64,503

See also:

→ Solar power investment model, page 11 → Energy Services, page 12

→ Lake water pumps laid, page 12 → Electricity balance sheet, page 25

Public lighting

ewz is responsible for public lighting in the city of Zurich and 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. Through a communication module, street lighting is set to one of three levels to achieve the necessary degree of illumination based on traffic conditions. Radar and thermal imaging cameras are 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	2021	2022
Street lighting	Number	42,636	42,659
Proportion of LED	%	45.0	51.5%
Energy savings	%	6.9	6.2%

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 2022, the electricity consumed by public lighting was reduced by a total of 6.2 per cent, to 14.1 GWh.

See also: → [Public lighting with LED](#), page 11

Energy efficiency consulting

On average, 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 2022. High electricity prices on the liberalised market and the prospect of electricity shortages in the second half of winter 2022/2023 prompted many companies to review their energy requirements. As a result, almost 400 energy efficiency consultations were carried out in the previous year. The Climate Office of the city of Zurich also received many enquiries from the general public concerning the phasing out of fossil-fuel heating.

Energy efficiency consultants identify potential, recommend measures and support their implementation. Where required, they follow this up with awareness-raising measures for employees and monitoring of the energy situation. They develop target agreements for increasing efficiency and assist with ISO 50001 certification. In businesses, simple measures such as optimising ventilation and introducing new lighting concepts can lead to savings of 10 to 15 per cent.

Since 2013, ewz has conducted 216 consultations in commercial kitchens under the EcoGastro programme. In the previous year, consultants inspected a further 15 businesses and recommended energy-saving measures. With the end of subsidies for induction cookers, ewz has withdrawn from consulting in this area. Launched by eartheffect in cooperation with ewz, the EcoGastro programme certifies and promotes efficient commercial kitchen equipment and issues the EcoGastro label.

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. 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; in 2021, there were total energy savings of 10.5 GWh.

See also:

→ [Energy efficiency consulting](#)

→ [EcoGastro](#)

Financial support

	Unit	2018	2019	2020	2021	2022
2000-watt contribution payments	CHF m	1.48	3.09	5.70	11.02	10.45
Efficiency bonus refunds	CHF m	16.1	15.3	15.0	14.8	15.0

2000-watt contributions are financial benefits for funding measures that contribute to reaching 2000-watt targets. They are used to support energy efficiency measures, the construction and operation of solar power and heat pump systems, connections to heating networks and charging infrastructure for electric vehicles in the city of Zurich and eligible municipalities in the canton of the Grisons. In 2022, construction of charging infrastructure represented the majority of grants, at 55 per cent. Around 19 per cent of contributions went to construction of photovoltaic systems, 13 per cent to the construction of heat pumps.

The number of funding applications for 2000-watt contributions increased markedly in 2021 and 2022. This is testament to a widespread willingness among the general public and companies to invest in a carbon-neutral future – particularly in photovoltaics, replacement heating and charging infrastructure for electric vehicles. To continue meeting this great demand, the tariff component 'Levies' will be increased by CHF 0.03 to CHF 0.0215/kWh in the city of Zurich, and by the same amount for a total of CHF 0.017/kWh in eligible localities in the Grisons.

Under the amended cantonal energy law, which came into effect on 1 September 2022, 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 with a new funding programme. This programme is designed to accelerate the shift to climate-friendly heating solutions while also reducing the energy requirements of existing heating systems. Half of the existing 2000-watt contributions will be funded by the 'Replacement Heating and Heating Optimisation' funding programme from October 2022. There will be no change to the amount paid by building owners in contributions.

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

See also: → More money for funding measures, page 14

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	2018	2019	2020	2021	2022
Service water in administrative and operational buildings	m ³	8,364	8,204	7,007	8,090	8,136

Biodiversity**Habitats protected or restored**

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 Schanzengraben in Zurich.

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.

VUE, the association that issues the naturmade label, stipulated that an additional fund levy be raised on photovoltaic, wind and biomass technologies starting in January 2022. At the same time it reduced the contribution from CHF 0.01/kWh to CHF 0.007/kWh. This means that income for the fund will remain steady at around 4 million Swiss francs per year. Meanwhile, the scope of the fund is expanding; 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 2022, the ewz naturemade star fund invested a total of 3.4 million Swiss francs in improvement measures.

Under statutory conditions for wastewater treatment at ewz hydropower plants in central Grisons, ewz has committed to improving the moorland in the 'Son Roc' region on the Alp Flix, canton of the Grisons. In future, a constant volume of water from an upstream water intake will flow through the moor to maintain water levels. This will preserve the ecologically valuable moorland and its great diversity of species. The ewz naturemade star fund contributed around CHF 230,000 to the total cost of approximately CHF 900,000, with improvements implemented in excess of the minimum required by law. The canton, the fishery association, concessions communities and environmental associations all contribute to these solutions. With the revitalisation of the Salategna stream and associated rewetting of the endangered moorland on Alp Flix in the canton of the Grisons, ewz has succeeded in implementing wastewater treatment in accordance with the Water Protection Act in all ewz power plants.

In the Opfikon municipality, a stretch of the urban River Glatt measuring 750 metres was revitalised and ecologically upgraded. The channel was kept as close to natural conditions as possible, with significant improvements to structural and flow diversity which now offer a wealth of habitats to many different water organisms. New deep sections offer cooler conditions for fish seeking refuge in hot summers. The ewz naturemade star fund contributed CHF 370,000 to the revitalisation project, which cost a total of around 1.24 million Swiss francs. For the 14 large-scale operational sites, with a total area of around 156,000 square metres, there is a property-specific green space concept in place. This includes:

- Definition of target species
- Promotion of ecologically valuable habitats in line with the Green City Zurich 2022 catalogue
- Action planning for promoting biodiversity

Options for promoting biodiversity include replacing lawns with flower meadows, hedges and trees, greening roofs and facades of buildings, and unsealing and greening traffic surfaces. Green spaces and open areas are maintained naturally without fertilisers or herbicides to protect habitats of native animals and plants.

In the renovation and construction of the Herdern maintenance depot, habitat planning was introduced to increase biodiversity and promote new species. Green spaces are being enlarged by unsealing and green open areas linked up. Building roof surfaces will also be intensively and extensively greened.

Since 2004 the operational sites of the Aubrugg and Auwiesen substations and the site of the Hönigg power plant, including its banks, have received awards for natural design. Recertification followed in 2022, issued by the Stiftung Natur & Wirtschaft (Nature & Business Foundation). Targeted measures have succeeded in establishing highly valuable ecosystems on the sites, incorporating forestation of banks, species-rich fertile meadows and rough meadows.

Biodiversity is one of the three 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 also:

- naturemade star fund, page 10
- Water for moorland on the Alp Flix, page 10
- ↗ [Hydro-ecological study](#)

GRI 305

GRI 305-1

Emissions

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	Unit	2019	2020	2021	**2022
from power production	t CO ₂ -eq*	1,821	1,388	1,240	1,463
from energy contracting	t CO ₂ -eq	18,700	17,510	22,826	20,912
from other activities	t CO ₂ -eq	143	34	34	36
from investments	t CO ₂ -eq	661	871	10,054	11,517
Direct GHG from all activities	t CO₂-eq	21,325	19,803	34,153	33,927
GHG of biogenic origin	t CO ₂ -eq	3,204	3,196	167,583	150,667

* CO₂ equivalent

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

The energy contracting business is responsible for the largest share of emissions at ewz. 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. As energy contracting plants are added, the level of direct GHG emissions increases. GHG emissions from customers, on the other hand, are completely eliminated. Overall there has been a significant reduction in GHG emissions.

In the previous year, ewz assessed the climate risks facing the company and its divisions, today and in the future. The impact of climate change could include more frequent, more intense incidents of extreme weather; drier, hotter summers; warmer, wetter winters; thawing permafrost. The impact on ewz – both negative and positive – is already appreciable now and will persist into the future. The results of the assessment were incorporated into the company's risk management and will influence future strategic decisions.

In 2022, the Sisslerfeld wood-fired combined heat and power plant was retrospectively included in the greenhouse gas balance for 2021. This led to a significant increase in ewz's direct GHG emissions. Comparatively warm weather conditions in spring and autumn of the previous year led to a drop in heating demand, which in turn reduced carbon emissions in the area of energy contracting.

Calculation basis:

- 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 and NF₃ in accordance with the GHG Protocol, and ODS in accordance with the Montreal Protocol
- GHG emission factors from the UVEK LCI database DQRv2:2022 and KBOB 2022
- Methane emissions from reservoirs: GHG Calculation Tool for Stationary Combustion

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
from district heating purchase	t CO ₂ -eq*	322	320	353	396
from electricity purchased for internal use and pump operation	t CO ₂ -eq	714	773	41	59
from grid losses of purchased electricity	t CO ₂ -eq	34,336	32,661	16,061	18,268
Indirect GHG	t CO₂-eq	35,372	33,753	16,455	18,723

* CO₂ equivalent

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

The reduction of GHG emissions from 2021 was due to the updating of environmental performance data from the Coordination Conference for Public Sector Construction and Property Services (KBOB). In particular, this resulted in a decrease in the emission factor for the electricity residual mix, a decisive factor in grid losses. The methodology for calculating pump losses was amended to prevent double counting.

Calculation basis:

- 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 and NF₃ in accordance with the GHG Protocol, and ODS in accordance with the Montreal Protocol
- 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, 2016

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	Unit	2021
from energy consumption	t CO ₂ -eq*	62,395
from the development of infrastructures	t CO ₂ -eq	50,555
from service providers	t CO ₂ -eq	14,045
from other activities	t CO₂-eq	699
Indirect GHG	t CO₂-eq	127,695

* 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 2021 financial year.

Calculation basis:

- 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 and NF₃ in accordance with the GHG Protocol, and ODS in accordance with the Montreal Protocol
- 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

GRI 306

Waste

GRI 306-1

Waste generation and significant waste-related impacts

As an infrastructure operator and energy service provider which constructs and operates energy and telecommunication infrastructures, ewz is generally responsible for a lower level of waste in comparison with other sectors. ewz has analysed this to the best of its abilities and only included thermal treatment and landfilling as a last resort. 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 plant make up the majority of materials acquired. The impact of waste from the associated raw material extraction, processing and goods production is not 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 items 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 activities 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. ewz also collaborates with the Swiss Federal Laboratories for Materials Science and Technology (EMPA) to evaluate the thermal conductivity of recycled concrete, which represents a decision criterion when evaluating usage. For recycling, scrap material is used instead of gravel.

In a single-stream recycling process, industrial and hazardous waste is sorted into recyclable and waste materials by a specialist waste disposal company and sent for recycling or disposal. This company offers comprehensive waste disposal solutions to electrical utilities and companies in the energy sector, and is therefore specialised 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 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. In 2022, positive price developments for metallic secondary raw materials on general commodity exchanges further increased gains from the single-stream recycling process.

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 retrieved from 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	2021	2022
Mineral waste	t	656.0	729.3
Operational refuse and floating debris	t	306.9	267.9
Primary metals	t	213.3	195.1
Old cables	t	204.2	336.1
Mixed fractions from metal	t	193.1	231.7
Bulky items and timber	t	162.4	114.2
Electrical materials	t	42.5	8.5
Paper and cardboard	t	41.2	36.8
Other hazardous waste	t	28.8	38.5
Total recyclable and waste materials	t	1,848.5	1,958.2

The list of waste materials was updated in the previous year, and ash from the burning of biomass was retrospectively included in the statistics for 2021.

GRI 306-4

Waste diverted from disposal

GRI 306-5

Waste directed to disposal

Non-hazardous materials	Unit	2021	2022
Recycled	t	680.3	732.2
Composted	t	13.7	7.5
Thermally recycled	t	468.2	401.5
Landfilled	t	555.8	552.0
Total non-hazardous materials	t	1,718.1	1,693.0
of which metals	%	27	22
Recycling rate	%	40	44

Metals represent the largest share of recycling. 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	2021	2022
Reused	t	24.5	30.5
Recycled	t	67.1	151.1
Thermally recycled	t	38.8	83.3
Landfilled	t	0.01	0.2
Total hazardous materials	t	130.4	265.2
Recycling rate	%	70	68

Thermal recycling occurs through heat recovery. Hazardous materials include waste such as oils, paints, varnishes and solvents which require appropriate handling and correct disposal.

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.

Around 43 per cent of tenders were carried out with the support of environmental delegates in the previous year, which equates to around 63 per cent of the tendered order volume.

See also: → [City of Zurich Procurement](#)

Investment in renewable energies

GRI EU1

Installed capacity

ewz is committed to the construction of wind farms, primarily 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. Geothermal energy and biomass plants will complement the future production portfolio. Investments in nuclear power plants will end by 2034 at the latest, along with purchase of electricity from nuclear plants. The expansion of renewable energies can be seen in the increase in overall output of ewz power production plants between 2013 and 2022. 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. The annual production from all wind farms, both wholly owned wind farms and 18 investments, was around 982 GWh in 2022.

Alongside hydroelectric power and wind, photovoltaic is the third pillar of the ewz production portfolio. In the previous year, ewz set itself the long-term target of increasing the output of its own PV systems 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.

See also:

- ewz (Deutschland) GmbH, page 13
- Solar power offensive in the city of Zurich, page 9
- Mollendruz wind farm, page 13
- Beteiligungsmodelle Solarstrom, Seite 11
- ewz takes over cooperation project companies, page 9
- Lago di Lei – second large-scale high-alpine solar power plant, page 9
- [City of Zurich PV strategy](#)
- Deep geothermal energy in the canton of Jura, page 13

GRI EU2

Net energy output

The overall volume of electricity produced in ewz's own power plants and partner plants, as well as procurement of electricity based on procurement rights, has fallen in comparison with the previous year. Precipitation throughout the year was significantly lower than the long-term average, resulting in a decline in production of electricity from hydroelectric power of around 0.5 TWh.

In total, 4.9 TWh of electricity was produced, 11 per cent less than the previous year. Around 58 per cent of electricity production comes from power plants that use renewable energy sources.

See also: → [Electricity balance sheet, page 25](#)

Social issues

GRI 403

Occupational health and safety

GRI 403-1

Occupational health and safety management system

ewz provides safe, healthy workplaces. It also maintains an internal occupational health and safety management system (OHSMS). It complies with the requirements of the safety concept for preventing work-related injuries and illness, and is committed to proactive improvement in performance. The company is subject to numerous laws, ordinances, guidelines and standards related to the OHSMS. These include the Employment Act, the Accident Prevention Ordinance and the Accident Insurance Ordinance, as well as specific laws and ordinances related to the production and distribution of electricity, and health and safety in construction.

The safety organisation is composed of the management representative for health and safety, the Health and Safety Committee of the Management Board, the Safety Officer and their deputy, along with the ewz safety team. ewz also maintains an emergency organisation and hazardous materials management.

The OHSMS and the safety concept encompass all divisions of the company in their scope. The OHSMS is certified in accordance with ISO 45001. In 2022 an external auditor carried out a monitoring audit.

GRI 403-2

Hazard identification, risk assessment, and incident investigation

Hazards are identified in each area based on the activities carried out in the area concerned. The methods used by SUVA (the Swiss National Accident Insurance Fund) apply. All hazards in operations are systematically recorded in a hazard portfolio, and the risk to workplaces and work processes assessed. The aim of this is the timely identification of all hazards for the company's own employees and those of external companies that work with ewz. Appropriate measures are taken to eliminate or minimise hazards, and fulfilment of these measures is monitored. Supervisors are responsible for updating the hazard portfolio regularly and for identifying new hazards, including hazards that arise from operational changes. The OHSMS also incorporates systematic incident analysis in the event of occupational accidents and 'close calls'. This results in measures for preventing recurrence. Supervisors and safety officers conduct regular workplace audits to gauge the success of all measures taken.

A network of 26 safety officers, specialists and assistants in the organisational units ensures that workplace safety obligations are met. They apply their expertise to the safe conduct and the health of employees. The safety organisation pursues new goals each year to guarantee safety in the company. It regularly expands its knowledge and skills in mandatory training, and consolidates skills through success monitoring and regular drills.

External audits also help in the identification of deviations (from safety regulations, etc.) and hazards.

GRI 403-3

Occupational health services

Occupational health examinations are required for certain roles and types of work. These are defined in cooperation with an occupational physician and assigned to the relevant employees through the internal personnel development tool. The tool allows employees to view and document the current status of any occupational health examinations they are required to undergo and the repeat intervals mandated by law. 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 Management Board's Health and Safety Committee 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 Health and Safety Committee convenes quarterly.

The safety team is composed of the safety officers of the individual organisational units (OUs). It is headed by the Occupational Health and Safety Management representative and their deputy. 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, set and monitor implementation of annual targets and special projects of the OU safety officers.

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 company's Safety Officer and their deputy 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. Where necessary, additional measures such as mentoring are introduced to help employees acquire and maintain the necessary skills. Examples of training include 'Correct Conduct in Low- and Medium-Voltage Plants', as well as first aid courses. ewz also runs awareness campaigns on life-saving rules for working with electricity as issued by the Swiss National Accident Insurance Fund (SUVA) and the Federal Inspectorate for Heavy Current Installations (ESTI).

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. Management are trained in health issues. The programme also includes virtual components.

One goal of health promotion at ewz is the integration of exercise into everyday routine, and a number of activities are offered in this area. In spring 2022, for instance, a team challenge was staged in which employees joined together to set an exercise target. In addition, employees had the opportunity of lunchtime training in a gym with the ewz sport group, and were able to choose from a wide range of free online workouts. A well-known triathlete also trained with the jogging enthusiasts among the employees and demonstrated optimised running techniques.

Further services encompassed the areas of relaxation, nutrition and prevention, including nutritional coaching and health checks. For the health check, a specialist examines parameters including blood sugar, cholesterol levels and blood pressure, and offers recommendations.

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. This includes ewz project managers or internal contractors issuing safety instructions for external workers on site before work begins. Project-specific safety concepts are also applied, for example in civil engineering works and substation renovations.

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	2018	2019	2020	2021	2022
Number of work-related deaths	No.	0	0	0	0	0
Number of work-related injuries	No.	31	35	35	33	32
Occupational accident rate	No. OA*/1,000 FTEs**	27	31	30	29	28
Lost time injury rate (LTIR)	No. OA/million working hours		9.7	8.4	10.9	9.9

* OA = occupational accident
 **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. In the previous year, there was a relatively frequent incidence of bruising through tripping or falling accidents. Other common injuries include lacerations from sharp surfaces and contusions of hands and fingers by heavy objects. In 2022 there was one incidence of electrical accident among specialist workers. Through preventative work such as audits, training and hazard detection, ewz endeavours to reduce incidence of this type of accident to zero. A comprehensive programme aimed at preventing tripping and falling accidents was launched. This raised employee awareness for tripping and falling hazards, and ways of eliminating them, with a secondary focus on strengthening responsiveness and sense of balance among employees. These efforts were supported by a live action course and a footbag programme.

The safety team also carried out prevention campaigns. One of these campaigns offered ergonomic tips for the prevention of neck and back pain, while another addressed protection from UV radiation. Targeted measures also raised awareness in the use of specialist cutters. There were 250 internal safety audits aimed at identifying unsafe conditions and activities, and the effectiveness of measures is monitored. There were 1,828 internal training days on the issue of workplace safety, which equates to 1.6 training days per FTE.

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 and are not updated. Regulation: Accident Insurance Statistics (SSUV).

Training and education

Programmes for upgrading employee skills and transition assistance programmes

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
 - Communication
 - IT

In addition, the city of Zurich offers a wide range of educational opportunities for promoting 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.

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.

A company-wide employee survey covering the future world of work carried out in spring 2022 revealed that the framework conditions at ewz are well aligned with the expectations of employees. However, there were elements that left room for improvement. In the Unacademy of the Agile Competence Centre, participants can define areas in which they would like further training. In the previous year, this included themes like Gen Z and prioritisation of team responsibilities. To promote the professional and personal development of its employees, ewz offered dedicated consultation through an external specialist. In a pilot project, apprentices had the opportunity to set up a 'company within the company', which accepts orders from different divisions and processes them independently. This helps apprentices acquire skills in resource and project management and agile methods. Due to its success, ewz.young was established on a definitive basis in the fourth quarter of 2022.

As part of the building refurbishment at the Aubrugg substation, a central training centre was established for apprentice grid electricians and assembly personnel. There is only one other centre of this kind in Switzerland. As such, Aubrugg has major significance in the training landscape, and it sends out a positive signal in the face of the skilled labour shortage.

ewz, VBZ and the water utility of the city of Zurich came together to take part in the Züri Engineers Event on 4 March 2022, UNESCO World Engineering Day. The basic idea behind it is to promote the next generation of engineers and to make the outstanding contribution of engineers visible to the public.

See also: → [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.

GRI 405

Diversity and equal opportunity

GRI 405-1

Diversity of governance bodies and employees

Diversity in the company	Unit	2021	2022
Share of women working in the company	%	19.1	18.8
Share of men working in the company	%	80.9	81.2
Share of employees under 30	%	12.3	12.7
Share of employees between 30 and 50	%	53.5	51.6
Share of employees over 50	%	33.7	35.7
Diversity at the management level			
Diversity at the management level	Unit	2021	2022
Share of women in management positions	%	14.1	14.3
Share of men in management positions	%	85.9	85.7
Share of management employees under 30	%	0.3	0.7
Share of management employees between 30 and 50	%	63.3	60.5
Share of management employees over 50	%	36.4	38.9

See also:

- Employees, page 15
- GRI 2-7: Employees, page 29

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 11 million Swiss francs per year in water rates to the cantons of Aargau, Grison and Zurich, and to the local municipalities. Authorities, environmental organisations and other interest groups are involved early on within the framework of advisory groups in the planning of new plants, renovation of existing buildings and reconcessioning of hydroelectric power plants. There were no advisory group meetings related to hydropower plants in the previous year.

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 and the results made available to the local municipalities.

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 it can position itself as a reliable partner that advocates for municipalities.

In the previous year, a successful event was staged around the Vihiersois wind farm in the Saint-Paul-du-Bois municipality with landowners, association representatives, service providers, residents and the mayors of Saint-Paul-du-Bois and Lys-Haut-Layon. In Norway there was a belated opening ceremony for the Måkaknuten and Stigafjellet wind farms, which went into operation in 2020. ewz celebrated the commissioning with municipal representatives, landowners and service providers in an all-day event which included a visit to the plants and an evening reception. In 2022 ewz also invited landowners, mayors and service providers of the Kleinbrembach and Vogelsberg wind farms in Germany to an evening event. The invitees took advantage of the event to ask questions and hold technical discussions.

GRI 414

GRI 414-1

Supplier social assessment

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

GRI Content Index 2022

As part of its 'Content Index – Essentials' service, GRI Services reviewed the GRI Content Index 2022 and determined that the index is clearly presented and consistent with the GRI Standards, and that the references for disclosures 2-1 to 2-5, 3-1 and 3-2 concur with the corresponding sections in the report part. This service was carried out for the German version of the report.



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Statement of use

ewz reported on the period 1 January to 31 December 2022 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 Electric Utilities Sector Disclosures 2013 is applied.

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