



CLIMATE AND ENVIRONMENT PROTECTION

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CLIMATE STRATEGY AND GOVERNANCE

In the first part of the chapter on climate and environmental protection, one of the pillars of Magyar Telekom Group's sustainability strategy, the climate strategy, is presented. In line with the [TCFD](#) recommendations, the risks and opportunities related to climate change are then discussed. The climate protection results start with a presentation of energy use, followed by a breakdown of Magyar Telekom Group's greenhouse gas emissions broken down to affiliates. The results are concluded with energy and climate efficiency indicators. In the environmental chapter, activities related to biodiversity, air pollution, water use, circular economy and waste are discussed.

The EU taxonomy is an important tool for financing sustainable economic activities, and it is in Magyar Telekom Group's interest that the Regulation recognise the central role of electronic communications networks in supporting the economy through more environmentally friendly solutions. The current reporting system fails to show how investments support the green and digital transition. The telecommunications sector, including Deutsche Telekom Group, is therefore working to ensure that the sector's green transition activities are duly recognised within the taxonomy. The chapter concludes with a summary of the reporting obligations under the current state of the EU Taxonomy Regulation.

In the Sustainability Coordination chapter, it has already been mentioned that in 2023, the governance of the sustainability strategy within the company will be completely overhauled. However, the priorities and key objectives of the longer-term strategy, which were developed in 2021 and cover 5+5 years, have not changed. In line with its mission, Magyar Telekom Group, as one of the leading ICT service providers in Central Europe, is committed to climate and environmental protection. Its emission reduction commitments made in 2018 - approved by the Science Based Target Initiative (SBTi) - were replaced by more ambitious targets in 2019 in response to the IPCC's 1.5°C report and became the main focus of the strategy

SUCCESS STORY

Magyar Telekom HU's strategic goals include the expansion of onsite renewable energy production. To this end, in 2023, in the framework of an energy efficiency project financed by the parent company, it installed solar systems in different configurations at 8 base stations to gain a precise understanding of the system's operation. It also installed battery energy storage at 6 of the pilot stations. At these sites, these renewable energy devices have been able to provide approximately one third of the base stations' energy consumption.

The commitments made in the strategy to the SBTi have been maintained by Magyar Telekom Plc as valid until 2030, i.e.

- reduce Scope 1–2 emissions by 84% compared to 2015;
- reduce Scope 3 emissions by 30% compared to 2017.

From 2022, climate protection targets will also be included in the remuneration system of Magyar Telekom Group's senior executives (CEO and CxOs, as well as certain categories of senior management).

SUCCESS STORY

In 2022, the European economic environment changed significantly, making the procurement of renewable energy from the domestic market a priority. To this end, a short-term power purchase agreement (PPA) was concluded in 2022, which has partially replaced and will continue to replace the purchase of renewable certificates (GoOs), which were previously the exclusive source, from 2023. The 3-year PPA is a fixed-price contract with a Hungarian solar farm for the production of approximately 13.2 GWh of electricity per year.

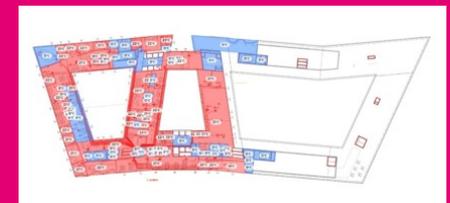
To maintain market leadership, a company must be able to react quickly to external market, geopolitical and environmental changes. As in previous years, at the beginning of 2023, it was clear that Europe would need to prepare for a number of changes affecting strategic sub-objectives, such as the risk of fuel price and availability, as well as the accelerating energy demand from

5G networks and data centres. In addition to the external changes, there have also been changes in the way Magyar Telekom Group serves its corporate customers: from February 2023, Magyar Telekom Group provides telecommunications and IT services to its mid- and large-sized corporate customers under the brand name „Telekom”. In addition, the name of T-Systems Hungary Ltd. Co. has been changed to Telekom Rendszerintegráció Ltd. Co., as that of a company that supports the specific system integration needs of Hungarian companies.

SUCCESS STORY

Energy management - measurements and savings: the energy management software uses the established WIFI and LAN network to montage the areas of the analysed properties based on the utilisation of the mapped zones. The visualisation of the use allows lighting and heating recommendations to be made for each area, and to optimise them in terms of energy savings

Illustration of the operation of the energy management software of Magyar Telekom Plc.



The structural change facilitates the implementation of the strategy by centrally and uniformly addressing the challenges. The strategy has therefore had to be adapted accordingly, with the Group's primary focus now being on reducing energy consumption that is still based on fossil fuels. The coverage of scope 1 and scope 2 emissions (leakage of fluorinated refrigerants, fuel consumption of emergency power sources) has been increased through a more thorough mapping of emissions. It was also important to keep the base year (2015) for the sub-targets the same, in line with the SBT commitment. It should be highlighted that the company has also started to develop a detailed transition plan to achieve an overall greenhouse gas emission reduction of 80% in scope 1–2 for the Hungarian member companies, including the expanded range of sources.

The [European Green Deal](#) also prioritises energy use and emissions in the ICT sector, recognising that this sector can make a significant contribution to achieving climate neutrality by 2050 through 5G, artificial intelligence, IoT and cloud services, but that its energy use may also increase. Magyar Telekom's first step is to increase energy efficiency in data centres and achieve climate neutrality by 2030. This is also one of the main pillars of Magyar Telekom Group's new climate strategy, in addition to the fact that the Group's entire electricity consumption, including that of its data centres, must be covered by renewable energy from 2021, in line with the parent company's expectations. Magyar Telekom Plc. is also leading the way in this in Deutsche Telekom Group, as it has been following this practice since 2016, and Telekom Rendszerintegráció Ltd. Co. (formerly T-Systems Hungary Ltd. Co.) has done so since 2018. For the time being, this has been predominantly done with purchased guarantees of origin (GoO), but the strategic goals include the expansion



of own (onsite) renewable capacity and the conclusion of a long-term power purchase agreement for renewable energy.

For its emission reduction sub-targets, the base year has been set to 2015 everywhere to be consistent with the scope 1–2 SBTi approved commitment. This chapter therefore presents data for 2015 and the last 5 years.

In order to provide investors and value chain partners with a very accurate and detailed picture of Magyar Telekom Group's climate protection activities, the Group has been reporting to the [CDP](#) (formerly Carbon Disclosure Project) online platform every year since 2010. Despite increasing requirements, it has achieved an A- rating in 2023. In the development and continuous improvement of the new strategy, the requirements of CDP, which have continuously become stricter and stricter throughout the years have also played a major role.

The strategic goals continue to include that Magyar Telekom offsets its remaining emissions for the Group each year. In 2023, the Group purchased certified emission reduction units for the ninth time. In the past years, the granting of allowances has resulted in significant risk for corporate green transition, and Magyar Telekom Group has introduced a quality assurance process for the purchase of allowances in 2023. It will select the most suitable project to be supported based on

the scoring system established by the Carbon Credit Quality Initiative, and will check whether the project can meet other quality requirements, such as the various safeguards set out in the CDP questionnaire or CORSIA, based on the available documentation. The company also considers it important that the implementation of the emission reduction projects and the compensation period be as close in time as possible, so another criterion for the selection was that the project should start as soon as possible after 2020. Based on this, in 2023 Magyar Telekom HU purchased 15,000 verified emission units (VERs) from the Ganzhou Swine Farm Animal Manure Management System GHG Mitigation Project, and the Macedonian member company compensated its emissions with an additional 1,400 VERs. The project supports the UN Sustainable Development Goals (SDGs) through social contributions in addition to emission reductions.

CLIMATE RISKS AND OPPORTUNITIES

In October 2022, Magyar Telekom Plc became an official TCFD sponsor, expressing the importance it attaches to the structured way in which climate change-related corporate actions are reflected in the company's operations and reporting. In 2022, the assessment of physical risks affecting its operations started. Based on past technical experience, flooding, flash floods, stormy winds, bush/forest fires and extremely hot days are challenges for the network and the future behaviour of these climate-related elements has been assessed. The 2023 Annual Report also includes the identified climate risks.

In the first round, the physical risks of climate change on infrastructure were analysed for Hungarian member companies, using different

climate scenarios for extreme temperatures (RCP4.5 and RCP8.5). It should be noted that the geographical distribution of the data could be improved for flash floods and forest fires, but a more detailed data set is not yet available. Flash flooding has been identified as the most risky weather event, and (depending on the scenarios) 19–24% of infrastructure operations could be negatively affected by extreme warm weather in the coming decades. This analysis can help to make infrastructure more resilient to the expected changes as part of its upgrades.

The financial impact of the above risks has been quantified in line with the inventory of assets and buildings. There are different categories of sites within Magyar Telekom HU, the average value of each site category has been used for the estimation, this can be further refined in the future.

In the modernisation of its infrastructure - for which Magyar Telekom Plc. has invested HUF 2 billion in 2023 - the company has prioritised the following technological applications to improve the resilience of the network to climate change:

- more heat-resistant batteries,
- more efficient air conditioning systems and
- open-air ventilation.

By using these three technologies together, Magyar Telekom Plc. has significantly reduced the use of air conditioners on an annual basis, resulting in significant energy savings. In line with previous plans, 1200 units were modernised/replaced in the network, not only to support energy saving targets but also to respond to the challenges of weather/climate changes at the sites. The Company does not stop there, but will continue in 2024 as it plans to carry out infrastructure upgrades of a similar magnitude this year.

The transition under the [Paris Agreement](#) could also entail a number of risks for companies. Deutsche Telekom, the parent company of Magyar Telekom Group, and its largest subsidiaries, including Magyar Telekom Group, have carried out a detailed analysis of the legal, market, environmental, technological and even reputational changes that are likely to occur during the transition, in 2023, and the extent to which they will affect the company's position. In the analysis, the biggest risks identified by Magyar Telekom Group were related to changes in the energy supply. A particularly high risk is that with the roll-out of 5G, users will generate more and more data traffic - and thus energy consumption - which energy efficiency measures will not be able to compensate. However, it should be stressed that the increase in energy use in the ICT sector should not be seen as a clear negative impact. This transition is similar to the shift from fossil fuels to electricity, with the difference that digitalisation can trigger not only energy use but also material use. Magyar Telekom Group is of course continuously working to reduce its energy consumption, maintain security of supply while using renewable energies, and contribute to the domestic net-zero transition with its own transition plan.

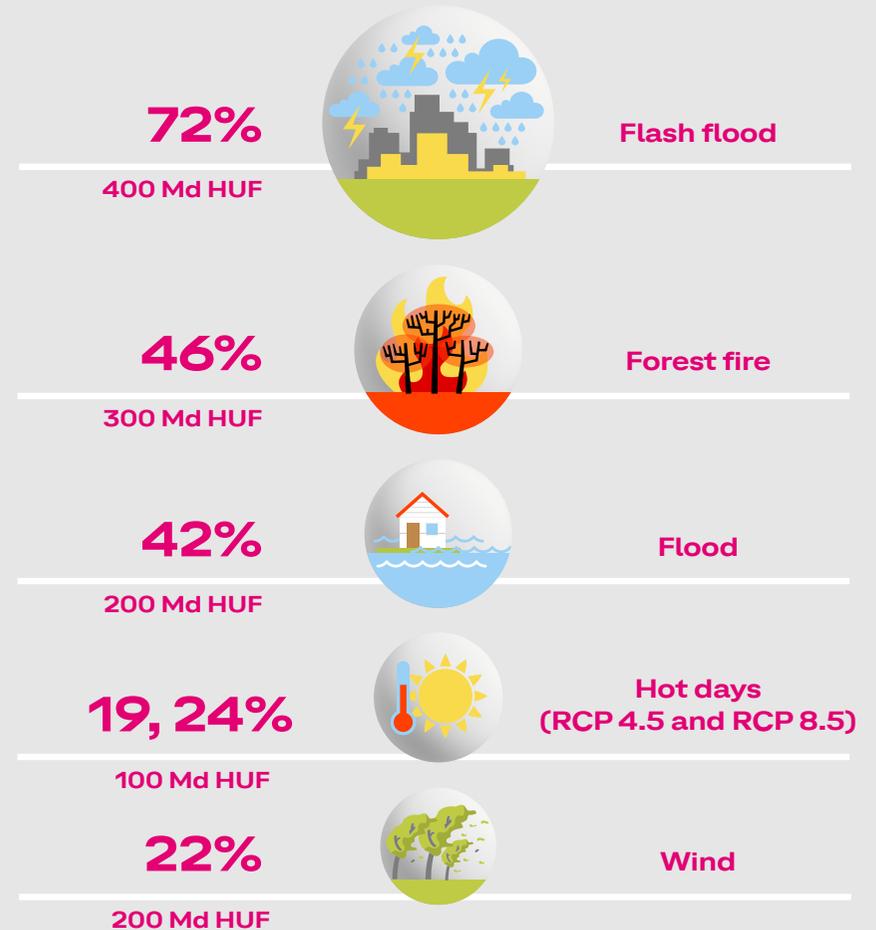
Deutsche Telekom has joined the RE100 initiative, under which all its member companies are to consume 100% renewable electricity from 2021. Renewable energy certificates will have to meet stricter requirements under the RE100 - to be applied by all Deutsche Telekom member companies from 2024 at the latest - and will therefore lead to a reduction in supply and a higher financial burden for Hungarian member companies, which will result in higher operating costs. In order to make costs

more predictable, Magyar Telekom Plc. has signed a 3-year direct renewable power purchase contract starting in 2023 and plans to move forward with more long-term contracts from 2024. Customers are increasingly looking for sustainable products and services, and in the case of Magyar Telekom Group, ensuring the long-term use of renewable energy sources is an important measure to this end. In addition to the above, Magyar Telekom HU's solutions also include the generation of its own (onsite) renewable energy and the reduction of electricity consumption from the grid.

As the European Union and Hungary undergo an economic transition in line with the 1.5°C vision, experts point to the potential instability of the electricity system. Therefore, it was important to assess the capacity of Magyar Telekom Group's infrastructure to handle the risk of electricity outages. In order to decrease service downtimes, Magyar Telekom Group has already equipped its mobile base stations and critical infrastructure sites with batteries in preparation for shorter periods of power outages. In order to be able to respond flexibly to a sudden or planned power outage, it has internal capacity to generate electricity at the affected location using mobile diesel generators, so that it can restore power at the most critical location within 2 hours. Although the network has been designed with a certain logic to ensure that it can provide a continuous service in the event of a longer-term and national blackout by supplying its own power to priority sites, it is dependent on diesel generators to operate. Makedonski Telekom A.D. is currently also dependent on the use of diesel generators due to local power supply uncertainties, so dependence on fuel supply is already present.

CLIMATE RISKS

The exposure of the entire infrastructure of the Magyar Telekom HU to an environmental/weather event and the estimated value of the infrastructure affected.



Damages in 2023: 18,55 M HUF, 591 notifications examined

The value of damage did not exceed the threshold for action (50 M HUF) in any month.

In 2023 Magyar Telekom HU has explored what additional products and services it can offer to help mitigate or adapt to climate change. Some of these are in the testing phase, such as the energy management solution, which was the first to be tested in the operation of its own headquarters. Among the risks associated with the 1.5°C transition, it should be noted that maintaining climate neutrality is becoming increasingly costly as expectations rise, and increased attention needs to be paid to the quality of the project chosen for support to reduce reputational risk. This ambition is reinforced by the fact that Deutsche Telekom will compensate the remaining scope 1–2 emissions mandatory at group level from 2025 as part of its climate targets.

Another option to reduce the use of fossil fuels, which will become even more expensive due to the expansion of EU emissions trading, would be to use electric vehicles, but this is still only a planned solution due to the lack of national charging capacity, especially for service vehicles.

Changing customer preferences not only creates a high risk but also an opportunity through early detection. In addition to the Eco Rating, initiated by Deutsche Telekom and other European mobile operators, which allows customers to make more informed purchases, Magyar Telekom Plc. has entered the market with refurbished mobile phones in 2023 to help its residential and corporate customers who are aware of material consumption and the circular economy to find options to their liking.

In recent years, business as usual has been greatly transformed by the pandemic. More than half of the working hours of Magyar Telekom Plc. and Telekom Rendszerintegráció Ltd. Co. employees

were teleworking, which slightly reduced the energy consumption of the buildings. The continuous application of the new standard means energy savings for Magyar Telekom HU, while it is of business importance in the field of services, as Magyar Telekom HU is not the only company in Hungary to have introduced teleworking and online meetings. It should be noted that this enablement in the telecommunication sector increases energy use while reducing overall greenhouse gas emissions from fossil fuels, thus contributing to climate change mitigation.

JOIN FORCES FOR SUSTAINABILITY

ExtraNet Green 1 GB data extension option

Magyar Telekom Plc also offers its customers the opportunity to choose services that contribute to climate protection. This is why in 2019 it created the ExtraNet Green 1 GB data extension option, where the Company guarantees that the energy needed to transmit the 1 GB of data will be covered by Magyar Telekom Plc’s own solar park. In 2023, approximately 5% of customers using data extension took advantage of this option.

Motivating vendors

Not only the company’s own operations but also its supply chain could be adversely affected by climate change. This risk can be managed through supplier assessment. In 2023, Magyar Telekom Plc. attempted to map more accurately the Telekom-related emissions of its suppliers as part of the assessment, and also introduced an environmental performance assessment on the procurement side in the selection process. Further information can be found in the Stakeholders / Suppliers chapter.

Employees’ community solar panel project

Magyar Telekom Plc. was the first in Hungary to introduce the community solar project. Under the project, employees lease solar panels from the Company for one year and the energy generated is used locally. In the first project, solar panels were installed on the Kékvirág street training facility, and after 2020, units at two more Szeged solar systems could be leased. In 2023, 200 employees participated in the staff solar project again. The continued success of the programme is demonstrated by the fact that the quantity offered was sold out even earlier than before. Since their installation, the solar systems have generated a total of around 411 MWh of clean energy, of which 93.1 MWh in 2023. For [Kékvirág street](#) and [Szeged I.](#) and [Szeged II.](#), the current production can be monitored.

Managing comments received regarding environment protection

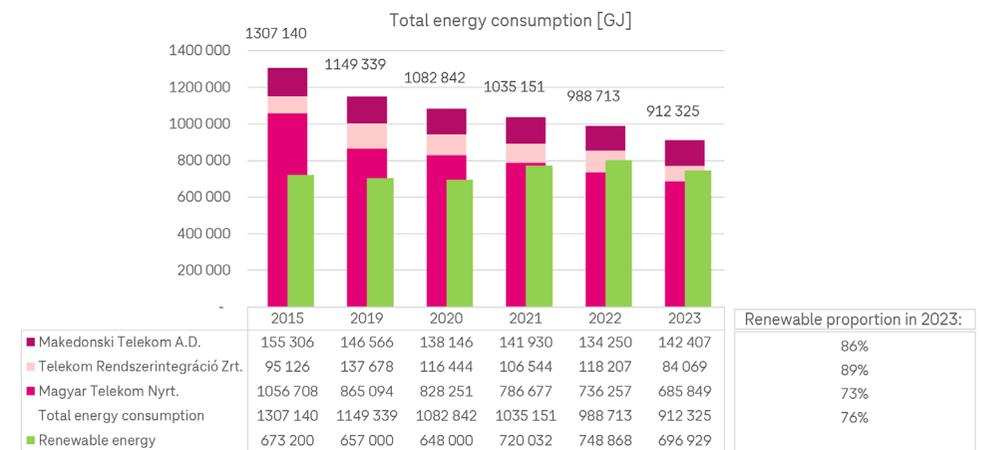
The management and supervision of the environmental remarks made by stakeholders is the

responsibility of Magyar Telekom Plc. ESG Center of Expertise team and the ESG Squad. The contact details for Magyar Telekom to receive comments have not changed (fenntarthatosag@telekom.hu and kornyezetvedelem@telekom.hu).

ENERGY CONSUMPTION – GRI-302

Magyar Telekom Group is continuously striving for energy efficiency and thanks to the measures taken, the Group’s total energy consumption has significantly decreased compared to 2015.

For the market-based zero-emissions operation, Magyar Telekom Group purchased 193 592 MWh of renewable energy in 2023, generated by solar, wind and hydro power plants, secured by a Guarantee of Origin or a direct contract. In addition, from 2023, a part of this was generated in a solar power plant in Hungary, which was also part of Magyar Telekom Plc.’s electricity purchase under a three-year power purchase agreement. In 2023, the Group was able to cover 76% of its total energy consumption with renewable energy sources from the market.



Electric power consumption

Magyar Telekom Group continued to strive for energy efficiency in 2023, with electricity consumption decreasing by 6.9% compared to 2022, and by 9% for Magyar Telekom HU. Electricity consumption accounted for 76% of total energy consumption. Magyar Telekom Group is increasing energy efficiency in line with its sustainability strategy, and the Hungarian member companies also take into account the guidelines of the ISO 50001 certification.

As a responsible company, Magyar Telekom HU gives priority to energy efficiency issues. It continuously measures, monitors and assesses its energy consumption and the significant influencing factors related to it, both in terms of real estate and technological infrastructure (or technology and related service equipment). On the basis of these measurements, energy efficiency opportunities are continuously explored and implemented in the form of projects, in line with energy management objectives.

Thanks to the improvements implemented in 2022 and 2023, the energy consumption of Magyar Telekom Plc. decreased by 11 500 MWh. The improvements consisted of the following:

- phasing out copper networks and replacing them with optical networks,
- full switch-off of 3G network in 2022,
- modernisation of mobile network equipment,
- intensive use of energy-saving software applications,
- complete switch-off of obsolete transmission technologies (e.g. PDH/SDH),
- replacement of batteries,
- replacement of charging equipment,
- replacement of technological air conditioning systems,
- optimisation of sites.

Thanks to the energy efficiency and other measures implemented in 2022 and 2023, Telekom Rendszerintegráció Ltd. Co. reduced its electricity consumption by more than 5,000 MWh in 2023. The improvements consisted of:

- upgrading the uninterruptible power supply system,
- upgrading of secondary pumps in the cooling system,
- review of sites, optimisation of used/rented space,
- organisational restructuring.

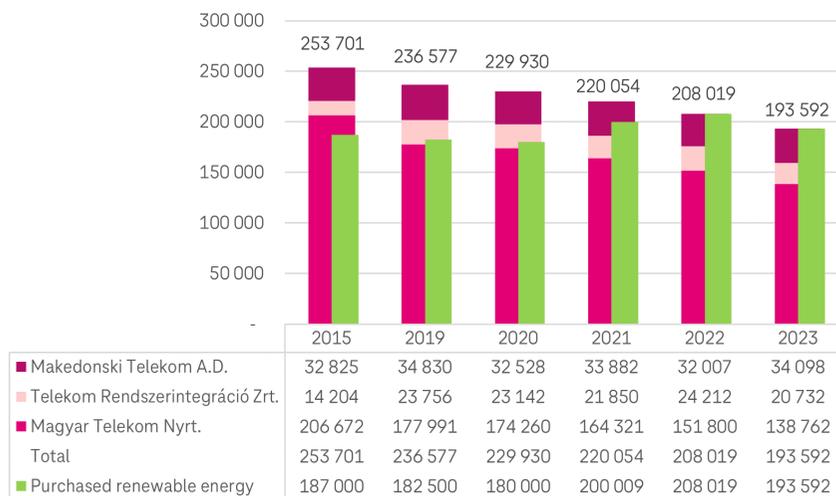
Magyar Telekom HU has invested significant resources in the development of the energy management system and related automation and intelligence, and in increasing the number of metering points. This has made it possible to identify anomalies in energy consumption in time and to deal with them as soon as possible in order to prevent unnecessary and unjustified consumption.

The electricity consumption of Magyar Telekom Group has been changed for methodological reasons in 2023. All consumption that is not billed to customers has been taken into account as own consumption for data centres, so the figures in the current report differ from those reported in previous years. In 2022, Magyar Telekom HU purchased renewable energy according to the new methodology, so 100% coverage was already achieved for the extended data set.

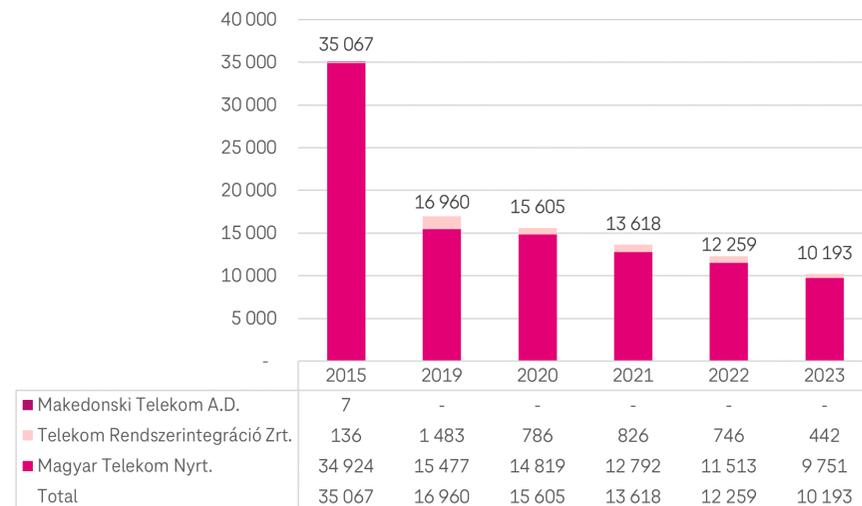
Natural gas consumption

Among the climate protection efforts of Magyar Telekom Group, the reduction of fossil fuels played a prominent role. Magyar Telekom Plc. moved to a new headquarters in 2018, which resulted in a significant reduction in the total natural gas consumption of its buildings in 2019. Further energy savings were achieved in 2023, thanks to the optimisation of sites and the use of energy management software at rural sites.

Electricity consumption [MWh]



Natural gas consumption [MWh]



Power purchased, does not include power generated by the company.

District heating

In 2023, Magyar Telekom HU achieved significant energy savings in district heating consumption. The energy management software tested in the headquarters, the higher outdoor temperatures during the heating season, the controlled temperature range in the buildings and the lower temperatures introduced during the winter break together contributed to a 34% reduction in district heating consumption in Magyar Telekom HU. In Makedonski Telekom A.D. there was no reduction in district heating energy consumption.

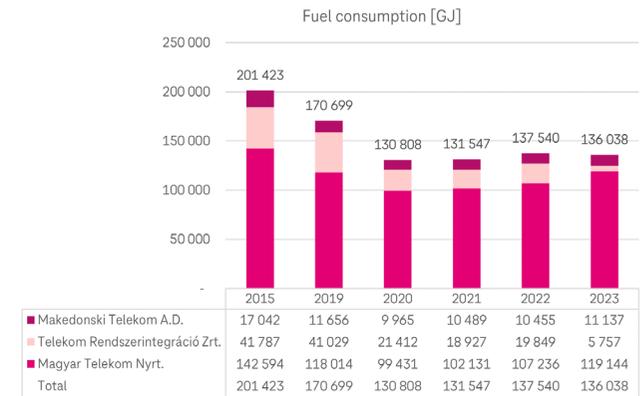
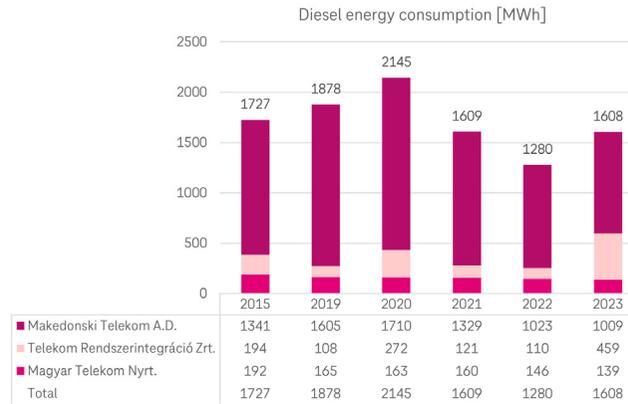
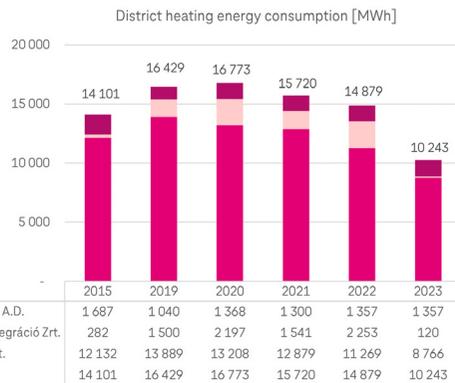
Diesel consumption

Magyar Telekom Group operates diesel generators as a source of emergency power to ensure continuous service. The generators are activated in the event of a malfunction or at regular intervals to test availability. The amount of diesel used is currently based on estimated technical data, but in 2023 the measurement of consumption data will start to be compiled into a uniform database. The time series has been reconstructed using expert estimates taking into account the change in the number of generators. Within the Group, Makedonski Telekom A.D. is the largest user due to the uncertain operation of the local electricity system.

Fuel consumption

Magyar Telekom Group's vehicle fleet is currently dominated by pure petrol and diesel vehicles, but hybrid cars are becoming more and more popular, and electric cars have also appeared. The consumption of the latter two categories has already been included in the electricity consumption in the Electricity consumption chapter, so the figures shown in the graph only include fossil fuel consumption.

The changes in corporate customer service, which have resulted in the movement of employees within the group, have caused the opposite trend in fuel consumption in the Hungarian member companies. Overall, however, there was a slight decrease (1.7%) for Magyar Telekom HU, due to changes in the composition and size of the fleet.



GREENHOUSE GAS EMISSIONS – GRI 305

Magyar Telekom Group continues to use the carbon dioxide equivalent (CO_{2e}) as an indicator to quantify GHG emissions from its activities, taking into account the global warming potential according to the IPCC 5th Assessment Report. Emissions are not measured but are calculated using the [Greenhouse Gas \(GHG\) Protocol](#)¹ methodology. Emissions from the bio-component of fuels are not included in the calculations. This is because there is no more precise information available on the quality of the fuels purchased, so a conservative estimate is made assuming the worst case, i.e. full fossil fuel use. Following the GHG Protocol, the indirect (scope 2) emissions are reported by Magyar Telekom Group on both a local (location-based) and a market-based basis. For the ninth consecutive year, Magyar Telekom HU has compensated its market-based emissions with purchased emission reduction units.

From 2023 onwards, Makedonski Telekom A.D. reports on the basis of Deutsche Telekom's emissions calculations and compensates its emissions. Previously, Magyar Telekom's own calculations were included in the report. This change was necessary because Makedonski Telekom A.D. needs to be consistent with the climate and energy targets set by Deutsche Telekom and applicable to the company's management. The calculations do not differ methodologically, and therefore do not deviate in the activity data used either, only in the emission factors applied. It should be noted here that the emissions from F-gases - a new category that is difficult to plan - are not fully compensated by Makedonski Telekom A.D. in 2023. Details of the GHG emissions of Magyar Telekom Group are presented in the following table.

Magyar Telekom Group's GHG emissions in total and by affiliates (tCO_{2e})

GHG emissions [tCO _{2e}]	2015	2019	2020	2021	2022	2023
Natural gas	7 103	3 417	3 144	2 754	2 479	2 061
Oil	1 145	503	574	431	343	431
Fuel (total)	14 748	12 649	9 687	9 739	10 177	10 059
Fuel (diesel)	7 731	7 394	5 987	5 984	6 006	5 820
Fuel (gasoline)	7 017	5 254	3 700	3 756	4 170	4 239
Electric power	105 640	79 514	69 162	68 791	68 895	64 564
District heating	2 994	3 380	3 048	3 068	2 838	1 866
F-gases - Magyar Telekom HU	1 767	2 258	2 201	1 655	1 764	1 879
F-gases - Makedonski Telekom A.D.	N.a.	N.a.	N.a.	N.a.	N.a.	202
Total emissions: scope 1+2 w/o market measures	133 398	101 721	87 816	86 438	86 495	81 062
Magyar Telekom Plc.	98 653	66 021	58 329	58 677	58 019	54 756
Telekom Rendszerintegráció Ltd. Co.*	8 472	10 281	8 289	7 924	9 723	6 933
Makedonski Telekom A.D.	26 273	25 419	21 198	19 837	18 753	19 373
Total emissions: scope 1+2 w/o market measures**	63 970	49 723	39 692	23 678	17 601	16 498
Magyar Telekom Plc.	36 565	16 931	14 590	14 146	13 542	14 099
Telekom Rendszerintegráció Ltd. Co.*	13 869	17 313	15 162	12 028	2 629	859
Makedonski Telekom A.D.	25 590	22 291	16 281	2 518	1 430	1 540

Time series for Makedonski Telekom A.D. is not consistent due to the data source change in 2023.

* T-Systems Hungary Ltd. Co. continues to operate under the name Telekom Rendszerintegráció Ltd. Co. from February 01, 2023.

** In the case of market-based emissions, only electricity has been 100% covered by certificates purchased with renewable energy. In the case of Magyar Telekom HU, the emission factors of 0 CO_{2e}/MWh are guaranteed for renewable energy sources.

¹Greenhouse Gas Protocol is a standard developed to calculate GHG emissions, which is a methodology also recognized by the Science Based Target initiative. <https://ghgprotocol.org>

More precise calculations for the new strategy

With the new strategy launched in 2021, the Group refined the calculations to reflect reality even more closely. In 2023, a further adjustment was necessary: the range of activities taken into account (certain consumption data for data centres, consumption of emergency power sources) and the range of greenhouse gases taken into account (fluorinated refrigerants and fire extinguishing gases containing fluorine) were extended. Changes have also been made to the emission factors used: estimates have been dropped, more accurate energy and density conversion factors have been applied, and new data publications have been taken into account. Activity data (energy consumed) have been only partially changed, with the addition of new sources. For Magyar Telekom HU, country-specific emission factors have continued to be used in the calculations to increase accuracy. In many cases, the emission factors for a given year are available after the publication of the report, so retroactive corrections are made depending on availability, while the factors available closest in time are used. The reported emissions data for the last two years therefore show a higher uncertainty compared to the previous period.

For emissions from electricity use, the emission factors of Hungarian member companies were calculated using the emission factors given in the AIB¹ publication. These emission factors only provide information on carbon dioxide, not on methane and nitrous oxide. In previous years, a correction was made to account for this shortcoming, but due to the error that can be introduced by the estimation, this correction is no longer applied². For fuels, the [Hungarian National Inventory Report \(2023\)](#) was the source for emissions data. In the case of district heating, the largest consu-

mer is Magyar Telekom headquarters building, so the data of the Budapest district heating system serving this building were taken into account in the calculations. For diesel used in emergency power sources, the default factors of the [IPCC 2006 Guidelines](#) were used. For consistency, Magyar Telekom HU reports the recalculated data for the whole time series.

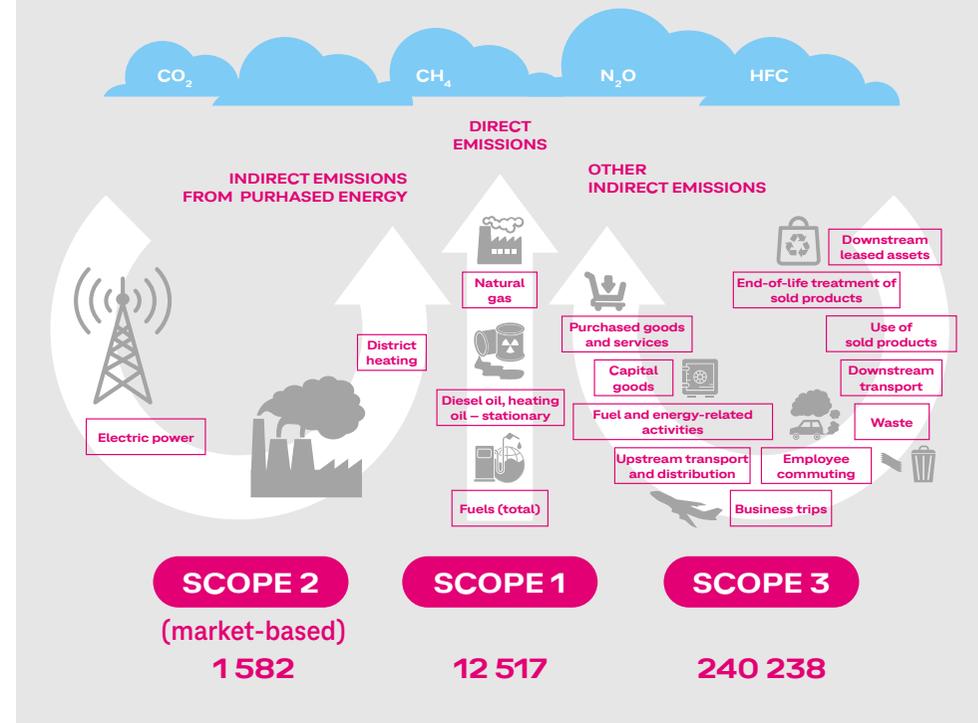
In 2023, the total scope 1 and 2 GHG emissions of Magyar Telekom HU decreased by 42% compared to 2015, amounting to 61 691 tonnes of CO_{2e} on a local basis, with a total energy consumption of 912 325 GJ. And the market-based emissions for Magyar Telekom HU, the new strategic target, were 60% lower compared to the 2015 base year. A total of 14,958 tonnes of CO_{2e} GHG emissions were achieved in 2023, which the company fully covered through the purchase of emission reduction credits.

In 2023, the total scope 1 and 2 GHG emissions of the Magyar Telekom Group amounted to 81 062 tonnes CO_{2e}. For Makedonski Telekom A.D., no data for F-gases back to 2015 is available, so the change compared to 2015 has not been quantified at group level.

Within Magyar Telekom Group, Magyar Telekom Plc. is responsible for the vast majority of scope 1+2 emissions, accounting for 68% of the Group's emissions applying location-based calculation, and for 85% applying market-based calculation. The table shows the direct and indirect emissions of the member companies for the years 2015-2023, calculated on location-based and market-based.

More details on scope 1 and scope 2 emissions can be found in the Annexes.

MAGYAR TELEKOM PLC. TOTAL GHG EMISSION IN TONNES OF CARBON DIOXIDE EQUIVALENT IN 2023



Magyar Telekom Plc. is the only company within the Group with SBTI commitments for other indirect (scope 3) issues. The company-related emissions in 2023 are presented in the chart. Scope 3 emis-

sions reported in previous years have changed significantly due to the calculation methods used and expanded data sources. A detailed presentation of scope 3 emissions can be found in the Annexes.

¹ The following site contains data going back to 2015, currently up to 2022: <https://www.aib-net.org/facts/european-residual-mix>

² Though the earlier AIB publications include total GHG emission factors, they can only be used for lifecycle analysis, they are not aligned with the GHG Protocol methodology.

ENERGY AND CLIMATE EFFICIENCY

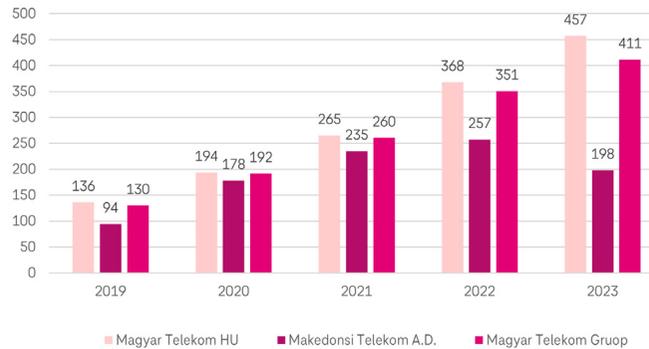
Energy efficiency remains a priority among the efficiency targets identified in previous years, while climate efficiency indicators have been introduced from 2021, in line with the new strategy. Two of the intensity indicators are sector-specific, while the revenue share of emissions is a general indicator. Magyar Telekom Group aims to continuously improve the indicators in line with the digitalisation and climate protection objectives of its strategy.

The energy intensity is measured by the electricity intensity of the telecommunications network, i.e. the amount of data transmitted per unit of electricity consumption (in GBit/kWh), as measured by Magyar Telekom Group.

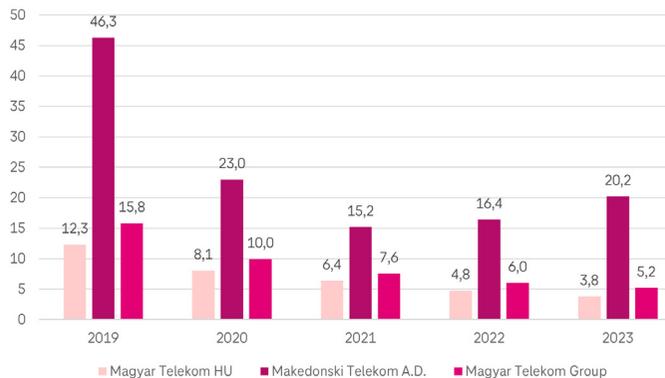
The climate efficiency indicator of Magyar Telekom Group indicates the amount of greenhouse gas emissions per unit of data transmitted on a local basis, and is shown in kg CO_{2e}/TB. Only the electricity consumption associated with the technology has been taken into account in the calculations. Due to the data transmission calculation methodology, Magyar Telekom HU is shown in one indicator.

A universal indicator of climate efficiency, not specific to the ICT sector, is the emissions per revenue. The figure shows the emissions (local and market-based) for the entire Magyar Telekom Group.

Energy efficiency [Gbit/kWh]



Climate efficiency [kgCO_{2e}/TB]



Revenue related emission intensity [kgCO_{2e}/Mft]



ENVIRONMENTAL EFFECTS

Telekom's business network for sustainability

Magyar Telekom Plc. has implemented a predominantly paperless operation in all its stores across the country, with contracts typically being concluded electronically (on tablets). Customers can request bags made from recycled paper or recycled PET bottles. All shops offer the possibility to drop off mobile devices that are no longer in use, and the collection of unused but working smartphones continued in 2023 under the so-called „mobile donor” programme.

In addition, since 2020, many shops have introduced environmentally friendly design elements. For example, „living” green walls to improve air quality, floors made of organic materials and lighting with recyclable LED lights. The use of sustainable materials is an important aspect for the company, which is why it uses PVC-free paints and decorative elements in the design of its latest stores. This design can be found in 17 stores with all the elements listed, but one of the above solutions can already be found in one third of the store network (60 stores).



¹The previously published data only included traffic on the IP core network, so the current data does not match the previous data release.

BIODIVERSITY AND ECOSYSTEMS

Magyar Telekom Group summarizes its commitment to the conservation of species diversity in its Environmental Policy and Biodiversity Statement.

Magyar Telekom's developments are generally not subject to an impact assessment. In 2023, a construction permit was required for a fixed line development project.

In the case of the development of mobile networks (construction of towers and base stations), an environmental and nature conservation permit was required in five cases, none of which concerned a nature conservation area. Hortobágy, Duna-Ipoly and Kiskunság National Park Directorates were involved in the authorisation procedure.

Magyar Telekom Plc. also takes care to ensure that work outside nature conservation areas is carried out with as little inconvenience as possible, too. To this end, it avoids unnecessary tree felling, carries out night work only by installing motion detectors in the interests of protected species, and handles waste generated during the work in accordance with the law.

LAND USE, LANDSCAPE IMPACT

It is important to the Group that its investments are made with the necessary land use, preferably maintaining the original environment, and that its buildings are as in keeping with the appearance of the area as possible.

The composition of the mobile network shows no significant change, with Magyar Telekom Group operating 8254 sites (base stations, repeaters, micro-connections) in 2023, 139 more than in the previous year, reflecting the expansion of the 5G network. The number of shared towers was 1,884, 13 more than in the previous year. The total number of towers in use also showed an increase.

NOISE AND VIBRATION PROTECTION

In the operation of the sites, the company pays particular attention to the impact of outdoor air conditioning systems and diesel-powered emergency generators as potential noise sources. In 2023, there were only three cases of noise problems reported by residents, all of which were investigated and resolved by Magyar Telekom Plc.

AIR POLLUTANT EMISSIONS

The boilers and diesel generators of Magyar Telekom Plc. cause air pollution during their operations. Pursuant to Decree 53/2017 (X. 18.), the operation of combustion plants with a thermal output of 140 kW is subject to a permit, and the emission limit value for the technology must not be exceeded during operation. Magyar Telekom Plc. always registers the equipment concerned with the environmental authority and carries out the statutory air pollution measurements every five years with an accredited measuring station. Compliance with the limits is checked annually by the authority by means of self-declaration via the National Environmental Information System.

Boilers

Magyar Telekom Plc. owned 21 boilers subject to licensing in 2023. The amount of air pollutants emitted can be determined by the operating time, emission factors and mass flow of the gas boilers, which is documented. The specific quantities of pollutants emitted by the company-owned boilers are available per boiler based on the relevant air quality monitoring reports. The operating hours for the specific equipment have been determined by technical estimation.

Annual emissions from boilers in 2023 were as follows:

NOx: 0.25 t
CO: 0.11 t

Diesel generators

The function of diesel generators is to avoid loss of service due to power outages. Since extended power outages (which cannot be bridged by batteries) are very rare, their operation is negligible. In order to maintain service continuity, it is important that these devices are operational when needed and therefore a trial run of approximately 1 hour is required every quarter.

As a consequence, the equipment does not exceed the legal limit of 40 hours of operation per year, which requires accredited measurements every five years. It is compulsory to record in the logbook of the equipment the hours of operation together with the consumption, in order to verify that the 40 hours per year are not exceeded (the logbook is kept electronically).

Magyar Telekom Plc. owned 50 diesel generators requiring a licence in 2023. The authority required the verification of the relevant limits by measurement for 8 large installations. Emissions from the equipment are determined by technical estimation in the absence of measurements.

Annual emissions from diesel generators in 2023 were as follows:

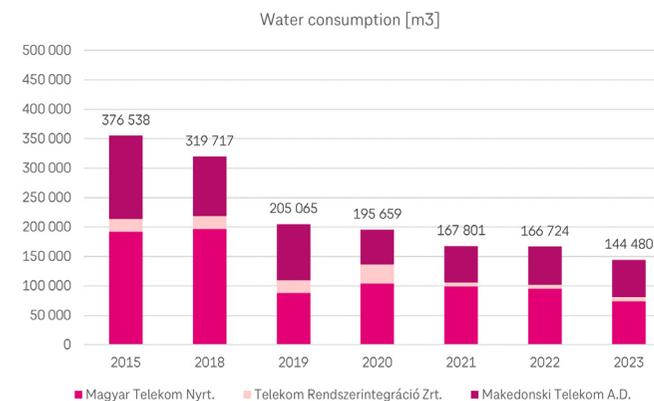
NOx: 0.22 t
CO: 0.06 t
PM10: 0.003 t

In accordance with the Hungarian legislation, Magyar Telekom Plc. pays an air pollution fee determined by the authority for the emissions of air pollutants into the atmosphere. In Hungary, only desulphurised fuel is sold, so sulphur dioxide emissions are kept below the limit value, no measurement is required.

WATER CONSUMPTION

Magyar Telekom Group uses water exclusively for municipal purposes. In the case of Magyar Telekom HU, the water consumption costs - and thus the quantities consumed - are allocated between the companies in the headquarters on a per-area basis. On May 30, 2023, Deutsche Telekom IT Solutions moved into the Magyar Telekom headquarters in order to make more efficient use of synergies within the Deutsche Telekom Group and to ensure sustainability. The new tenants were accommodated by the established teleworking arrangement, which also had an impact on office water consumption, which was noticeably reduced.

Magyar Telekom Group has very little involvement in water protection issues as it does not use industrial water. The amount of wastewater discharged is the same as the amount of tap water consumed due to the applied practice of settlement of accounts.



CIRCULAR ECONOMY AND WASTE – GRI 306

SUCCESS STORY

Refurbished phones

From October 2, 2023, you can buy refurbished A+ premium-rated handsets from Magyar Telekom Plc, which are phones in almost new condition, with only minimal aesthetic defects and at least 85% battery capacity.

By providing access to refurbished devices, Magyar Telekom Plc. provides all the means customers need to take advantage of the digital world, tailored to their needs and life situation, in one place. In addition to being available at a lower price than new ones, customers who choose these devices can not only increase the lifetime of their device, but also reduce the amount of electronic waste.

The refurbishment is carried out by a refurbishment centre certified ISO9001, ISO14001, ISO27001, ECOVADIS PLATINUM LABEL, RCUBE MOBILE LABEL. Before sale, the equipment must pass 56 technical tests (this number may be extended in the future).

Fulfilling manufacturer and distributor obligations

Magyar Telekom Group, in cooperation with manufacturers, strives to ensure that environmental awareness is also part of the manufacturing and recycling processes of the devices. Procurement requirements are discussed in more detail in the Stakeholders/Suppliers chapter. For more information on products with sustainable features, see the chapter on Digitalisation.

Magyar Telekom Plc. considers it a priority to limit its impact on the environment, and therefore pays

particular attention to the inspection, repair and re-deployment of equipment used in the network, as well as equipment used at customers' premises. For the latter, i.e. CPE equipment, the recycling rate was 53% in 2023. For the network equipment purchased, the primary consideration is to assess its energy efficiency.

Magyar Telekom HU fulfills its obligations as a manufacturer and distributor as follows:

- For electronic equipment also subject to the Product Charges Act, it has opted for the payment of the product charge, the state recovery system.
- It pays the EPR fee for packaging, packaging purchased from abroad, electronic equipment purchased from abroad, batteries and furniture purchased from abroad.

Magyar Telekom HU informs its customers on its websites about the possibility to return used and waste devices and batteries in accordance with the legal requirements. The manufacturers of all the equipment it sells are certified for energy efficiency in the European Union and comply with the environmental protection requirements laid down in the legislation.

Customers can obtain information on the lifetime of the appliances, their recycling and the materials used from the manufacturer's declarations in the shops.

Since July 01, 2023, the public waste management tasks of the municipalities and the state has been replaced by a centralized waste management system, with the abolition of the former and the creation of a new public waste management system, where the state's public waste management tasks includes the public waste management service and the institutional waste management activities.

Thus, MOHU MOL Waste Management Ltd. Co. has control over certain waste streams, which includes transport, disposal and recycling. All

economic entities, including Magyar Telekom HU, had to conclude a contract with MOHU until July 01, 2023 for the waste streams generated by the company and covered by the concession.

Accordingly, certain waste streams can only be transported from Magyar Telekom's sites by MOHU's partners. The employees of Magyar Telekom Plc. needed to be much more careful in their waste management in terms of waste sorting and collection. All employees concerned were provided with training material to help them carry out the new tasks, which facilitated collection in compliance with the legislation. The types of waste handled by MOHU were presented with photographic illustrations.

From 2021, Deutsche Telekom's member companies are also in the process of switching to a circular economy, reducing waste and thus contributing to global climate protection. Targets include increasing the take-back of mobile phones used by customers, keeping technology waste out of landfills and ensuring 100% sustainable packaging of own-brand products. Makedonski Telekom A.D.'s „eco-campaign” for mobile phones achieved outstanding success in 2023: 23% of mobile phones sold (excluding accessories) were taken back compared to the volume sold.

In order to reduce the environmental waste burden, the following measures have been taken at Magyar Telekom HU:

- the used assets are reused within Magyar Telekom, if possible, sold, rented/leased or donated to employees or external partners;
- provide for the separate collection of waste on the sites where this is possible;
- improve efficiency by reviewing contracts and collection points, carrying out inspections and communicating;
- In 2015, the DT Group-level regulation on cable waste management was published, compliance with which is ensured at Group level.

The amount and quality of waste generated de-

pends largely on ongoing telecoms projects and developments. At Magyar Telekom Plc. level, the total amount of waste increased by 1.6% in 2023 compared to the previous year, while at Group level the increase was 8%.

There is a significant increase in non-technological hazardous waste due to the purchase of disinfectant gels in connection with the pandemic, which have now expired. This type of waste is not expected to be generated in the future. Magyar Telekom transfers the hazardous waste to a business authorised to treat and dispose of it in accordance with the legal requirements.

The amount of non-hazardous technological waste has increased significantly due to the generation of waste from obsolete equipment decommissioned in connection with modernisation efforts.

The 38% increase in other hazardous waste was due to the number of waste batteries that were replaced and destroyed in 2023. Batteries play an important role in Magyar Telekom Group's uninterrupted service availability.

Paper waste decreased by 11% due to fewer document disposals and building clearances at Magyar Telekom Plc. in 2023.

In the case of municipal waste, the local public service is mandatory in Hungary, but only an estimate is available because the public service provider does not measure the amount of municipal waste it collects. The company does not transfer waste directly for incineration or composting. The disposal of the transferred municipal waste is the responsibility of the public operator. At Magyar Telekom Plc, 35% of municipal waste was collected separately.

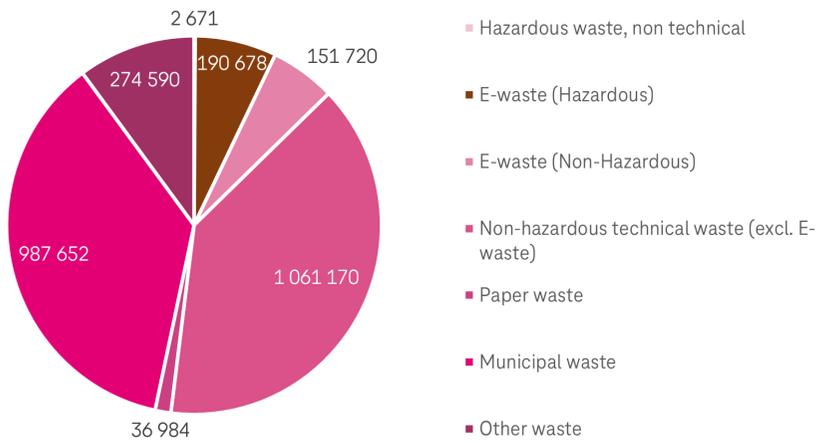
Also in 2023, Magyar Telekom Group transferred all the technological waste generated for recycling, of which 88% was actually recovered in Hungary as a result of the current waste processing process. And 54% of all waste generated by the Magyar Telekom Group's activities was recycled.

¹ Sustainable packaging means completely plastic-free, with boxes made from recycled paper to the extent while they still retain structural integrity, and non-toxic vegetable-based inks.

Quantity of waste generated (kg) and ratio of recycling, Magyar Telekom Group, 2015–2022

	2015	2019	2020	2021	2022	2023
Total waste [kg]	3 865 417	4 221 577	2 632 698	2 087 143	2 500 763	2 705 465
Recycled waste [kg]	528 307	973 447	776 650	906 307	1 431 096	1 452 543
Utilization rate (%)	14%	23%	30%	43%	57%	54%

Type of waste in 2023 [kg], Magyar Telekom Group



EU TAXONOMY COMPLIANCE

The EU taxonomy aims to provide a common picture of which activities and investments are sustainable. To do this, the European Commission has defined criteria with indicators. The companies concerned are obliged to report on the share of their turnover derived from economic activities covered by the EU taxonomy. In addition, companies must disclose the extent to which they invest in these economic activities and the level of operating expenditure associated with these activities.

An agreement was reached in 2020 on which economic activities are considered environmentally sustainable under the EU taxonomy. The regulation summarised the list of sustainable activities in six environmental targets, which are:

- Mitigate climate change
- Adapt to climate change
- Sustainable use and protection of water and marine resources
- Transition to a circular economy
- Pollution prevention and control
- Protecting and restoring biodiversity and ecosystems

The EU taxonomy distinguishes between taxonomy-eligible and taxonomy-aligned economic activities. The precise list of activities that can be taxonomy-eligible is set out in the delegated legislation for the specific environmental objectives. Taxonomy-aligned activities must fully meet the criteria set out in the legislation, and it is necessary to assess whether the activity does not have a significant negative impact on other environmental objectives. The legislation also requires social safeguards to be in place so that a company can claim that an activity is sustainable.

Through a Group-wide governance system, Deutsche Telekom ensures compliance with minimum social standards for all taxonomy eligible activities. Magyar Telekom fulfils its human rights due diligence obligations by applying a risk-based management system covering both the Group and the supply chain. It also engages in a trust-based dialogue with employee representatives and trade unions.

The aggregated group figures used as the basis for the calculation according to the EU taxonomy in the reporting year were revenue of HUF 849,372 million, capital expenditure of HUF 105,114 million and indirect costs of HUF 205,889 million.

Revenue and capital expenditure are determined on the basis of the consolidated accounts. In accordance with EU taxonomy rules, the disclosure of capital expenditure is not part of the taxonomy-eligible capital expenditure plan for the expansion of economic activities (CAPEX). Operating costs relevant to the EU taxonomy represent a small proportion of total operating expenditure. They include costs related to research and development; measures to remediate buildings; short-term leasing; maintenance and repair; and all other direct expenditure related to the day-to-day maintenance of property, plant and equipment.

As Magyar Telekom's core business is not yet adequately covered by the criteria in the EU taxonomy an aggregate view of the taxonomy eligibility of all economic activities results in 2023 in very low proportions of taxonomy-eligible revenue (2.17 percent), capital expenditure (0.19 percent), and operating expenditure (0 percent).

In the 2023 financial year, the taxonomy-aligned proportion of all economic activities of the Magyar Telekom Group was 0.01 percent of revenue, 0 percent of capital expenditure, and 0.16 percent of operating expenditure.

The disclosure required by the Taxonomy Regulation is provided in the Annexes.