Telekom Srbija

GHG
REPORT FOR 2024

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Telekom Srbija is committed to reducing negative impact on climate changes through active measures aimed at lowering greenhouse gas (GHG) emissions.

Emissions are regularly monitored, and reporting on the results is carried out transparently.

Telekom Srbija

Long-term sustainability is one of the key directions of the company's development and a foundation for successful future operations, with climate policy playing a central role in this process.

Telekom Serbia is committed to reducing greenhouse gas (GHG) emissions, aware of its environmental impact as one of the major energy consumers. Through responsible resource management and the implementation of energy-efficient solutions, the company actively contributes to global and national efforts in combating climate change.

By striving to reduce its own carbon footprint through various mechanisms, such as the use of new technologies across all market segments and the optimization of business processes, the company aims to transition to more sustainable business models. With transparent reporting on the achieved results, Telekom Serbia sets ambitious goals in the field of environmental protection.

A responsible approach to climate challenges is not only an obligation but also an opportunity to build a better and more sustainable future.

CLIMATE CHANGE AND GREENHOUSE GASES (GHG)

Climate change represents long-term shifts in climate patterns at the global, regional, and local levels. It can have serious impacts on ecosystems, agriculture, infrastructure, the economy, and human well-being. Rising global temperatures, extreme weather events such as floods, droughts, hurricanes, melting ice surfaces, and rising sea levels are just some of the visible effects of climate change, which have now become almost everyday occurrences. Although climate change has occurred in the past, what characterizes the present is the speed of these changes, which does not allow living organisms to adapt to their consequences. For that reason and because of the correlation between the amount of greenhouse gases in the atmosphere and the rise in the Earth's average temperature, the scientific community holds that emissions of these gases, originating from human activities, are the dominant cause of climate change.

Greenhouse gases:

- **Carbon dioxide (CO_2)**
- **Methane (CH_4)**
- **Nitrogen suboxide (N_2O)**
- **Hydrofluorocarbons (HFCs, PFCs)**
- **Sulfur hexofluoride (SF_6) and**
- **Nitrogen trifluoride (NF_3)**

Greenhouse gases (GHGs) have different warming potential, which is why the unit CO2e (carbon dioxide equivalent) was introduced. This unit expresses the total amount of greenhouse gases emitted by human activities, enabling comparison of emissions from different gases and sources. This means that emissions of other gases are converted into an equivalent amount of CO2, considering their global warming potential and their ability to retain heat in the atmosphere compared to CO2.

A GHG report is prepared according to principles that ensure it is credible, reliable, and useful for analysis and decision-making regarding emission reductions:

1. **Relevance:** Data and information included in the inventory must be relevant for assessing greenhouse gas emissions and their impacts. This means including all company-specific key emission sources.
2. **Consistency:** Data must remain consistent over time and across methodologies to allow comparison of results between different periods. If methodology or data sources change, this must be clearly documented.
3. **Completeness:** The inventory should cover all sources of greenhouse gas emissions relevant for reporting, without omitting significant data or activities.
4. **Accuracy:** Data must be precise and reliable to minimize errors and uncertainties in reporting. Accuracy requires the use of sound methodologies, credible data sources, and appropriate calculations.
5. **Transparency:** All data, methodologies, and calculations used in the inventory must be clearly presented, enabling stakeholders to understand how the data was collected and processed.

DEFINING ORGANIZATIONAL BOUNDARIES

Organizational boundaries define the framework that determines the facilities and operations within an organization in the context of preparing a GHG inventory. The goal is to identify all facilities and key processes that lead to greenhouse gas emissions and over which the organization has control.

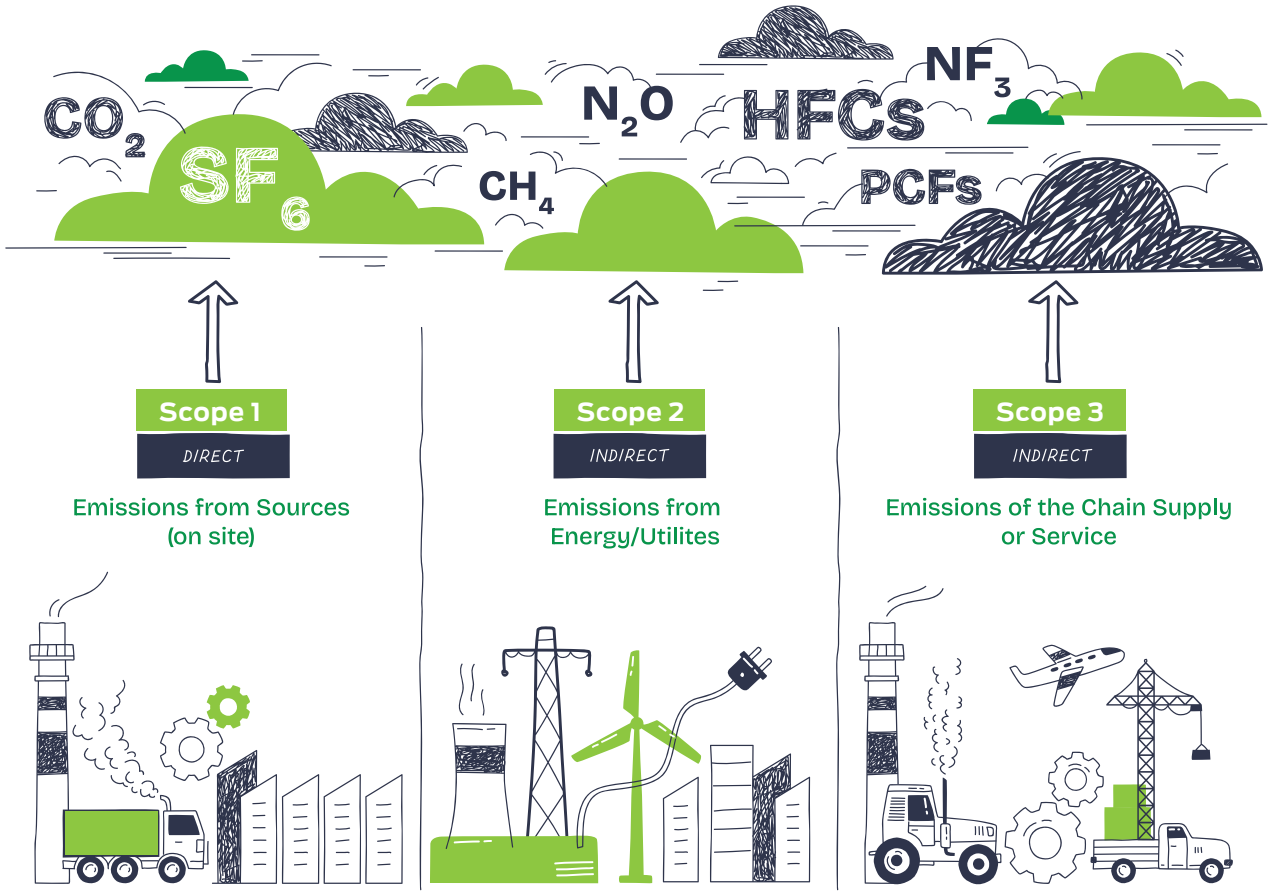
When determining organizational boundaries, it is important to select one approach and apply it consistently in the future. In the case of Telekom Serbia's GHG inventory, the operational control approach is used, which means that all operations and business processes over which the company has full operational control are included in the calculation.

DEFINING OPERATIONAL BOUNDARIES

Operational boundaries define all processes within a company's business activities that lead to greenhouse gas (GHG) emissions. Emissions are classified into three scopes (Scope 1, 2, and 3):

Within the defined organizational and operational boundaries of the GHG inventory, the following activities have been identified and their emissions calculated.

Scope 1 refers to direct GHG emissions arising from activities controlled by the company, such as: building heating (boiler rooms, individual furnaces, etc.), generators, vehicle fleet, and indirect emissions resulting from leaks in cooling systems. Scope 1 is most often presented through stationary and mobile sources.



In the context of the defined organizational boundaries of the GHG inventory, the following have been identified at Telekom Serbia:

- **Transport:** vehicles powered by diesel fuel and gasoline are used for the transport of people and materials.
- **Heating:** refers to heating with different energy sources at locations where boiler rooms and individual furnaces are used.
- **Operation of generators for electricity production:** used to generate electricity for equipment in case of power outages from the grid.
- **Air conditioning systems:** fugitive emissions, primarily leaks from air conditioning systems.

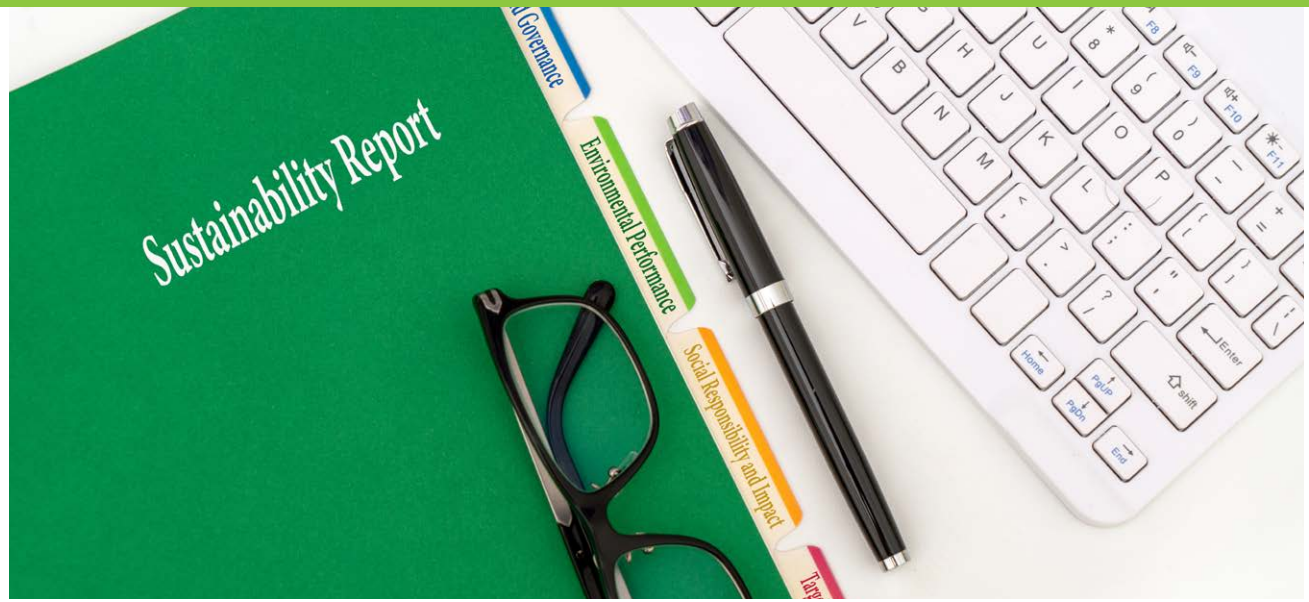
Scope 2 refers to the category of emissions that result from the consumption of purchased electricity, heat, steam, and similar energy sources used by the company. These emissions are a consequence of energy production by the supplier, but are attributed to the company as the end user. Within the defined organizational boundaries of the GHG inventory, the following have been identified:

- **Electricity consumption:**

The company consumes a significant amount of electricity to power telecommunications equipment and networks, data centers, IT equipment, and more. Telekom Serbia purchases electricity from Elektroprivreda Srbije (EPS) Serbian Electric Power Industry, with the energy purchased directly from EPS being 100% from renewable sources (hydropower), which significantly reduces the company's carbon footprint. However, since not all electricity is procured in this way - some is obtained through other legal entities and individuals - the overall electricity mix is approximately 70% from renewable sources and 30% from the EPS energy mix.

At the business facility located at Bulevar umetnosti 16 in New Belgrade, a solar power plant operates, covering about 30% of the building's annual electricity needs. In addition, a number of base stations are equipped with solar panels.

For electricity, according to the GHG Protocol, the report presents two values calculated based on location (Location-Based) and market (Market-Based) approaches. For the location-based method, the emission factor for the entire country is used, which in Serbia is defined by the Regulation on conversion factors of final energy into primary energy and carbon dioxide emission factors.



The market-based method refers to electricity purchased from a specific supplier, where the emission factor used for calculating emissions is the one stated in the contract, certificate, or invoice. If such data is not available, the Residual Mix (kgCO2e/kWh) from the Carbon Database Initiative for Serbia and the relevant year is applied.

- **Purchased thermal energy (district heating system):**

The majority of the company's facilities are connected to the district heating system, while a smaller number use other energy sources such as coal, fuel oil, heating oil, wood, and wood residues, which are reported under Scope 1 as direct emissions.

Scope 3 includes numerous indirect GHG emissions that result from the company's activities but are not under its direct control. It covers 15 categories of emissions generated throughout the supply chain, during the use of various products or services, and in other ways directly or indirectly linked to business operations. In the coming period, the company plans to engage in data collection, analysis, and calculation of these emissions.

IDENTIFICATION OF SOURCES AND THEIR GHG EMISSIONS

SCOPE 1 DIRECT EMISSIONS

ACTIVITY	ENERGY	tCO_{2e}
Heating	Coal	278
Heating	Extra light fuel oil (EL)	783
Heating	Low-sulfur fuel oil <1% S	570
Heating	Wood and wood waste	22
Air conditioning	Refrigerant gases	3,091
Aggregates	Diesel fuel	346
Transportation	Diesel fuel	4,184
Transportation	Gasoline	3,280

SCOPE 2 INDIRECT EMISSIONS

ACTIVITY	PURCHASED ENERGY	tCO_{2e}
Heating	Thermal	3,301
Operation of TK network, devices, IT equipment, air conditioning, lighting, etc.	Electric (Market-Based)	50,890

GHG EMISSIONS CALCULATION

Since Telekom Serbia's business activity is not production-based, the largest direct emissions come from transport, while indirect emissions arise mainly from the consumption of electricity and thermal energy. Calculations are therefore primarily carried out based on consumption, using the appropriate emission factors multiplied by the quantities of fuels, energy, and refrigerant gases consumed.
One of the key challenges in this method is determining the specific emission factors. There are numerous relevant databases that provide estimates of emission factors for individual fuels, energy sources, products, and services. The sources of emission factors applied in the calculation of GHG emissions are:

- Rulebook on conversion factors of final energy into primary energy and carbon dioxide emission factors ("Official Gazette of RS", No. 111 of 25.11.2021, No. 6 of 27 January 2023).
- Defra - Department for Environment, Food and Rural Affairs
- Climatiq
- Carbon Database Initiative
- Exceloplossing B.V.

The guiding principle adopted by the company is to apply the emission factor from the official Regulation on conversion factors of final energy into primary energy and carbon dioxide emission factors. If this document does not provide the necessary data, the emission factor from other referenced databases is used.

By applying the emission factors to the quantities of consumed energy and fuels, the emissions have been calculated.

CATEGORIES	2023 ($tCO0_{2e}$)	2024 (tCO_{2e})	Trend
Scope 1	12,751	12,554	↓
Stationary sources	1,764	1,653	↓
Mobile sources	7,296	7,810	↑
Fugitive sources	3,691	3,091	↓
Scope 2 (Market-Based)	45,068	54,191	↑
Electricity (Location-Based)	183,500	184,600	↑
Electricity (Market-Based)	40,533	50,890	↑
Thermal energy	4,535	3,301	↓
Scope 3	/	/	–
Total GHG emissions (Market-Based)	57,819	66,745[1]	↑

[1] In 2024, there was a significant change in the residual emission factor for electricity in Serbia compared to the previous year, which deteriorated from 0.687 to 0.845 (Carbon Database Initiative).

Intensity and GHG emissions

In order to monitor the decarbonization process, special KPIs of the intensity of GHG emissions are introduced.

INTENSITY	UNIT	Year 2023	Year 2024	Trend in relation to the previous year
GHG Emission Intensity total GHG emissions / achieved mobile network traffic	tCO_2eq/TB	0.21	0.19	↓
Economic GHG Emission Intensity total GHG emissions / operating profit – EBIT	tCO_2eq/EUR	0.000317	0.000215	↓
GHG Emission Intensity per User total GHG emissions / number of user	$tCO_2eq/user$	0.00704	0.00819[2]	↑

[2] In 2024, there was a significant change in the residual emission factor for electricity in Serbia compared to the previous year, which deteriorated from 0.687 to 0.845 (Carbon Database Initiative).

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