MINGACHEVIR
STATE
UNIVERSITY

MINGACHEVIR STATE UNIVERSITY

CLIMATE ACTION PLAN

2024

www.greencampus.mdu.edu.az

CLIMATE ACTION PLAN

Table of Contents

CLIMATE ACTION PLAN

Introduction

A climate action plan is a document for measuring, monitoring, reducing greenhouse gas emissions and adopting climate adaptation measures. Climate action plans typically include targets for reducing greenhouse gas emissions and detailed steps to achieve and track those targets. Plans can also include elements such as sustainability strategies and clean energy targets. Plans generally focus on implementing measures that will achieve emissions reductions in the most efficient way possible.

The content of the climate action plan varies depending on the specific needs of Mingachevir State University. Several general sections covering the development, monitoring and implementation of climate change targets apply consistently across types of climate action plans:

- *A preliminary study and comparison of past greenhouse gas emissions and climate impacts in Mingachevir State University's Climate Action Plan.*
- *Models for planned emissions reductions and carbon offsets in each case covered by the plan.*
- *Details of funding of activities and programs under each section of the plan.*
- *Goals and targets to achieve carbon neutrality and sustainability goals.*
- *Interim target review dates to monitor compliance with the plan.*
- *Strategies for implementing university and industry partnerships, proposed regulations and guidelines.*

CLIMATE CHANGE: OUR CALL TO ACTION

Organizatonal profile

GOAL:

To achieve a reduction of carbon dioxide emissions at Mingachevir State University, to ensure proper waste management, to support the reduction of the average annual temperature by 1.5-2 °C according to the COP21 requirements until 2030, and to achieve "net zero" in carbon emissions. Provide both specific short and long-term actions to achieve CAP goals, and flexibility to adapt to new technologies and changes in climate science.

MİSSİON:

Contribute to a healthy future of society by increasing environmental knowledge and combating climate change, which is the basis of sustainable development. Leverage MSU's intellectual and financial resources to provide leadership in climate change solutions.

VİSİON:

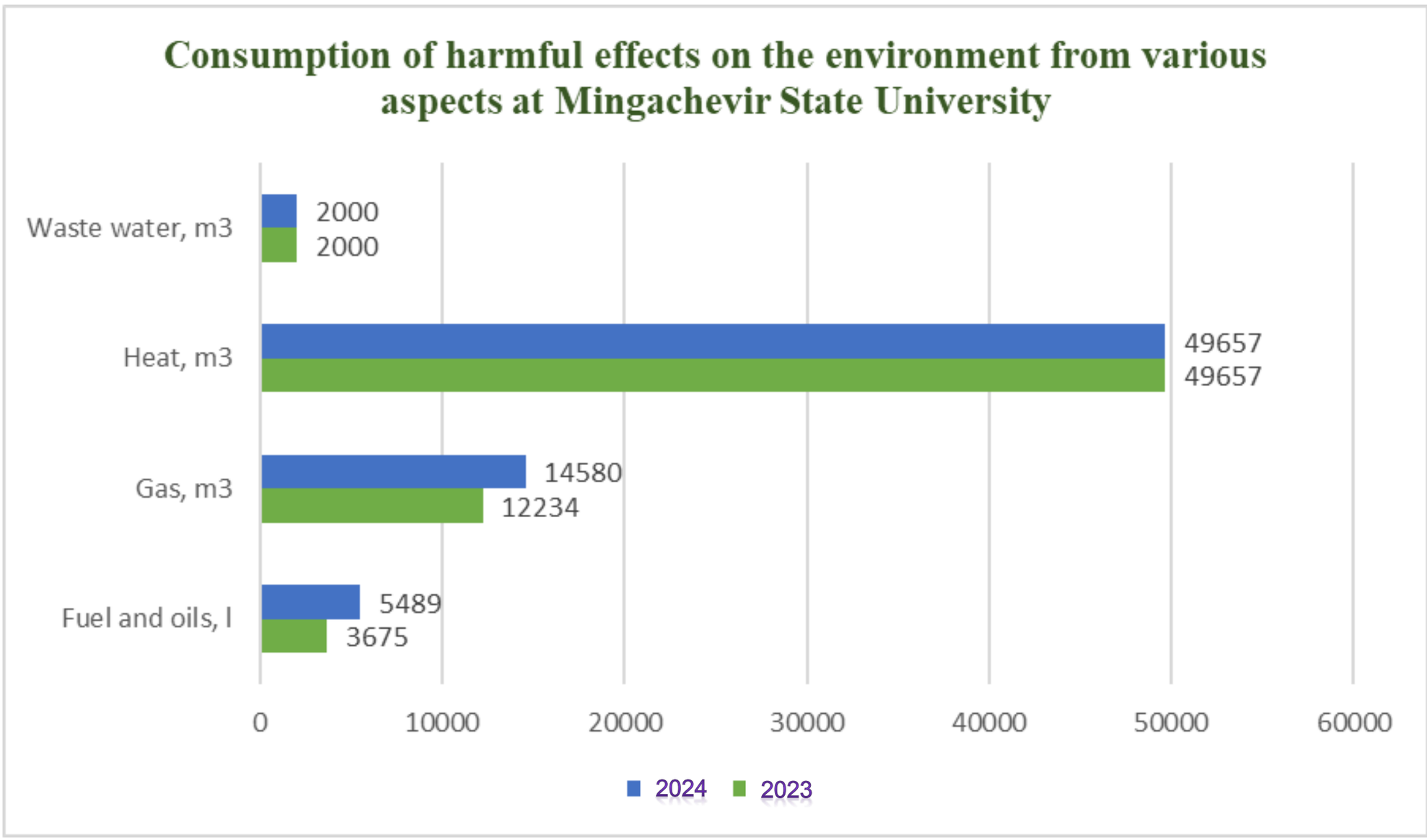
To become a leading university that has achieved "net zero" through research conducted in the direction of reducing carbon emissions.

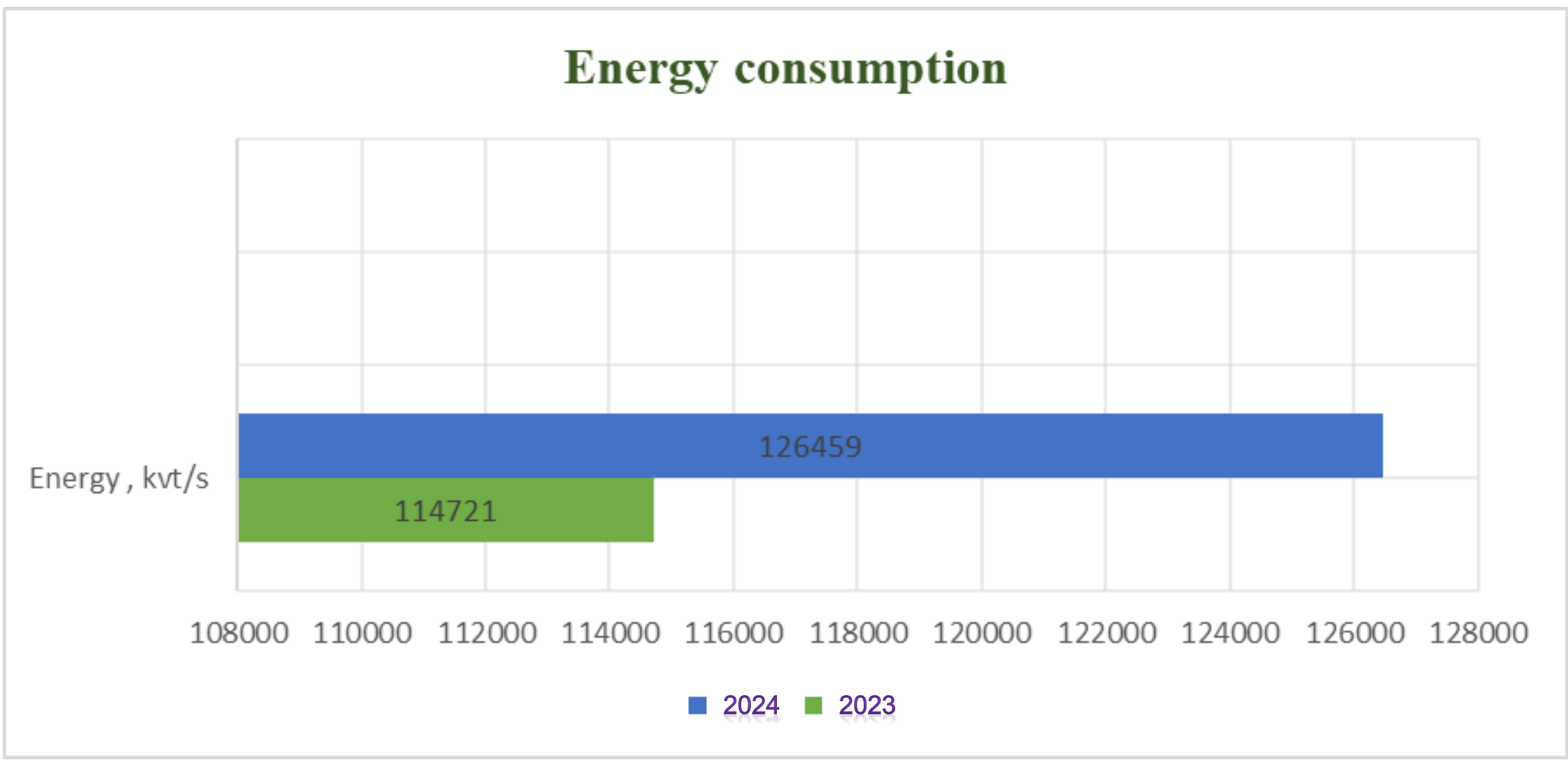
www.greencampus.mdu.edu.az

CLIMATE CHANGE: OUR CALL TO ACTION

MSU Greenhouse Gas Emisssions

An analysis of gas emission and consumption indicators for the last two years was conducted at Mingachevir State University.

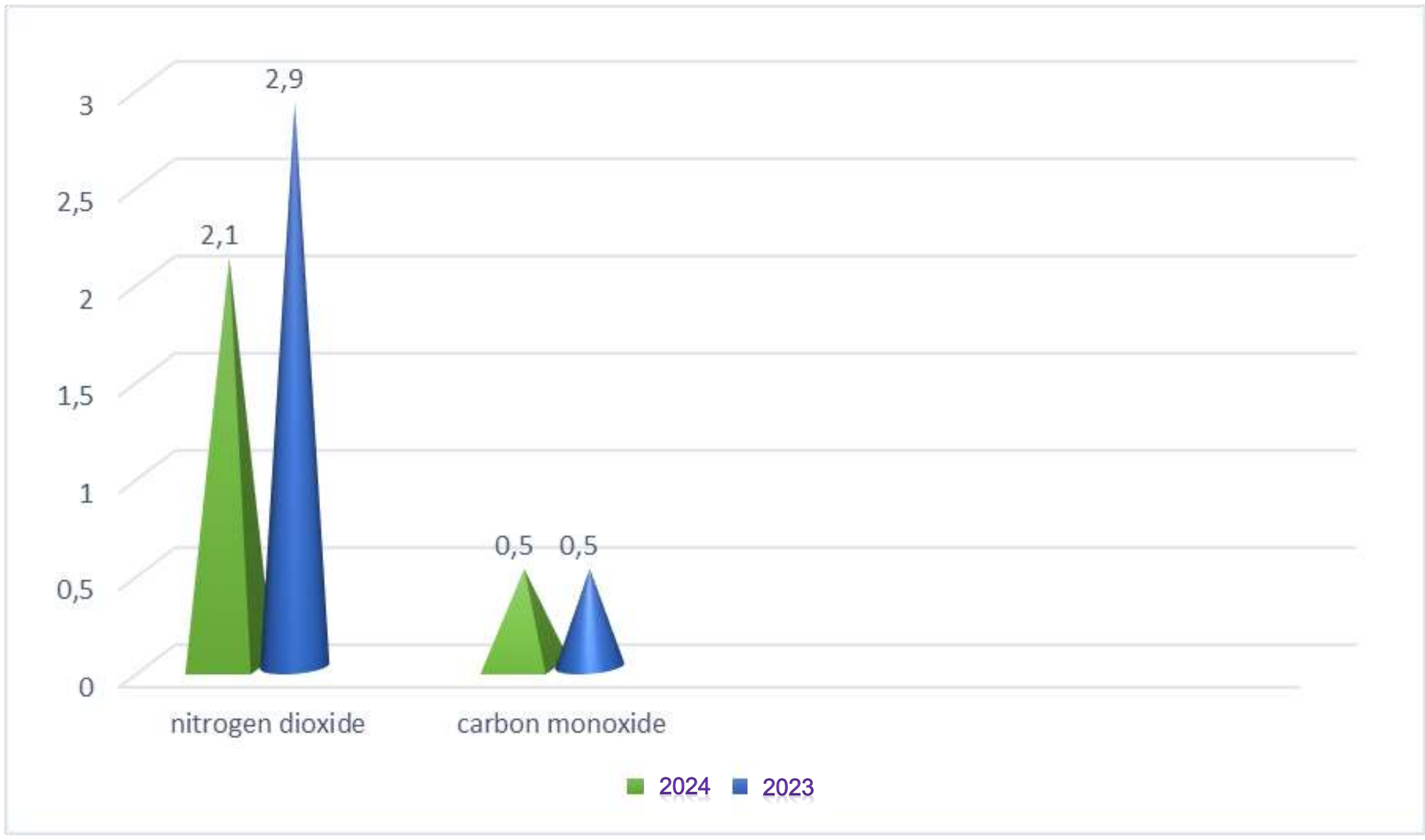




Based on the indicators, an increase in energy, gas and fuel, oil consumption was observed at Mingachevir State University. If we calculate the amount of NO_2 and CO emitted into the atmosphere based on the gas and heat indicators of the last two years, we will get the following result.

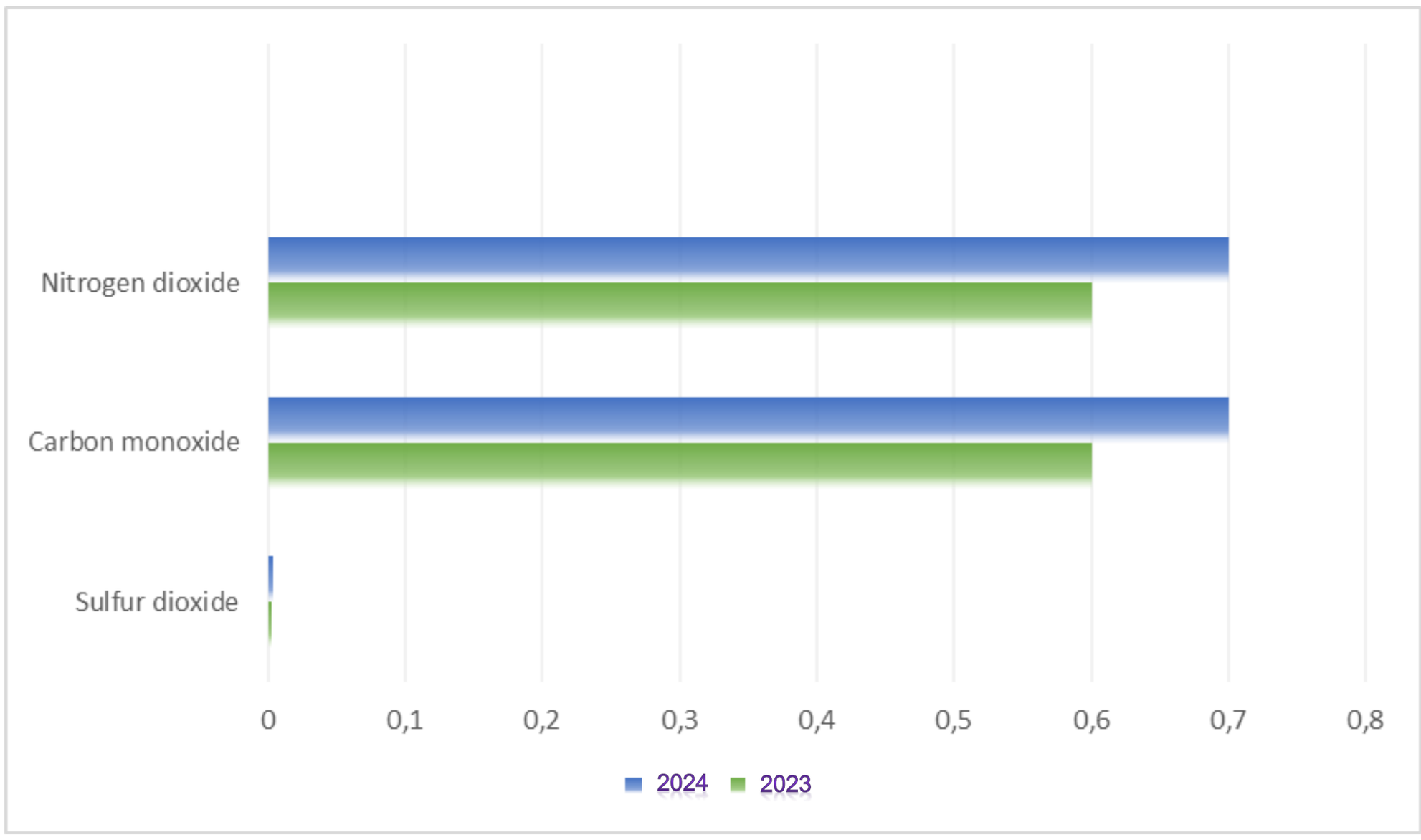
www.greencampus.mdu.edu.az

CLIMATE CHANGE: OUR CALL TO ACTION



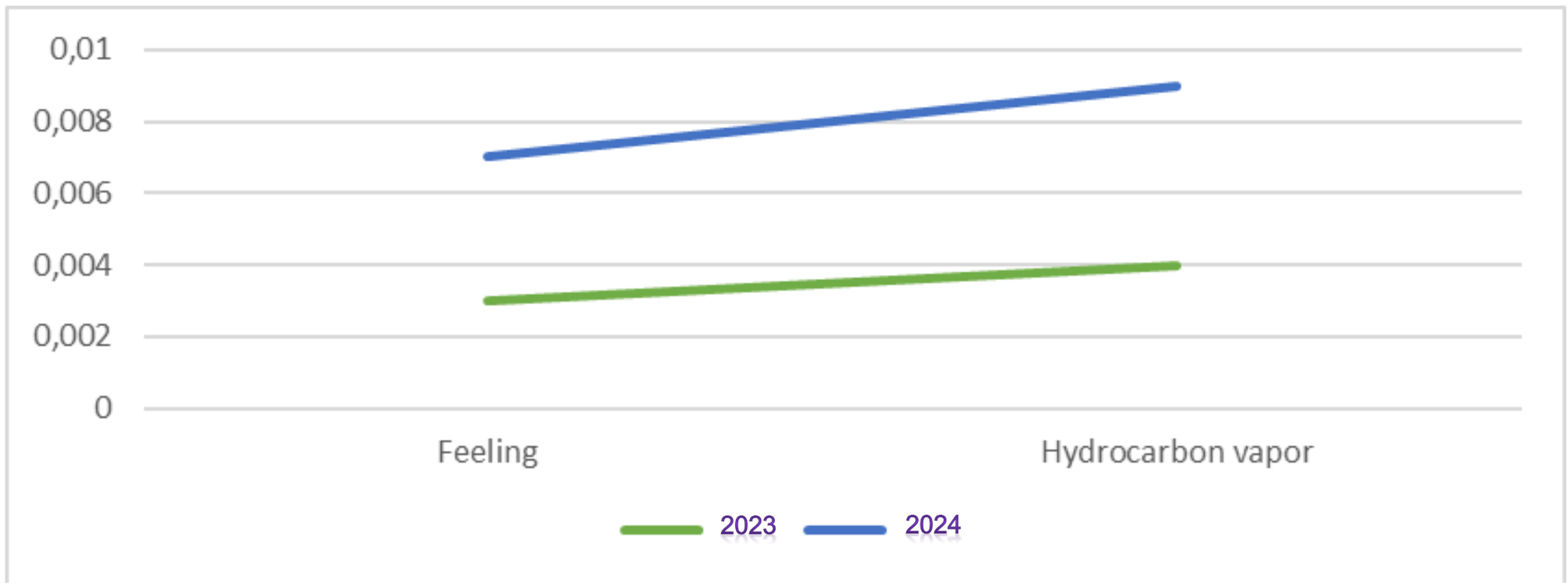
According to the result, gas emissions into the atmosphere are within the norm and no harmful effects on the environment are observed.

If we look at the amount of gas emissions released into the environment in fuel consumption, we will get the following calculation.

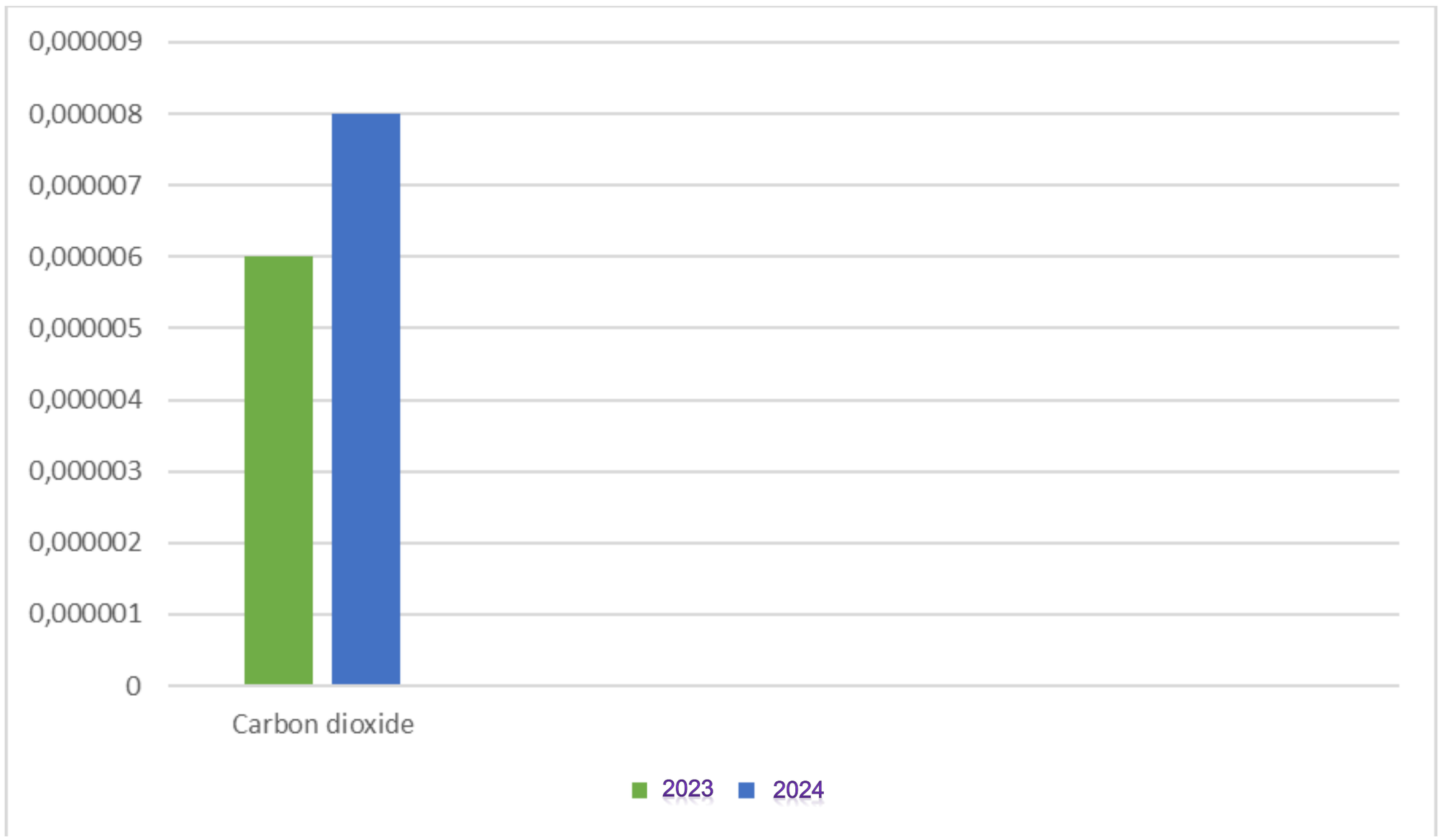


CLIMATE CHANGE: OUR CALL TO ACTION

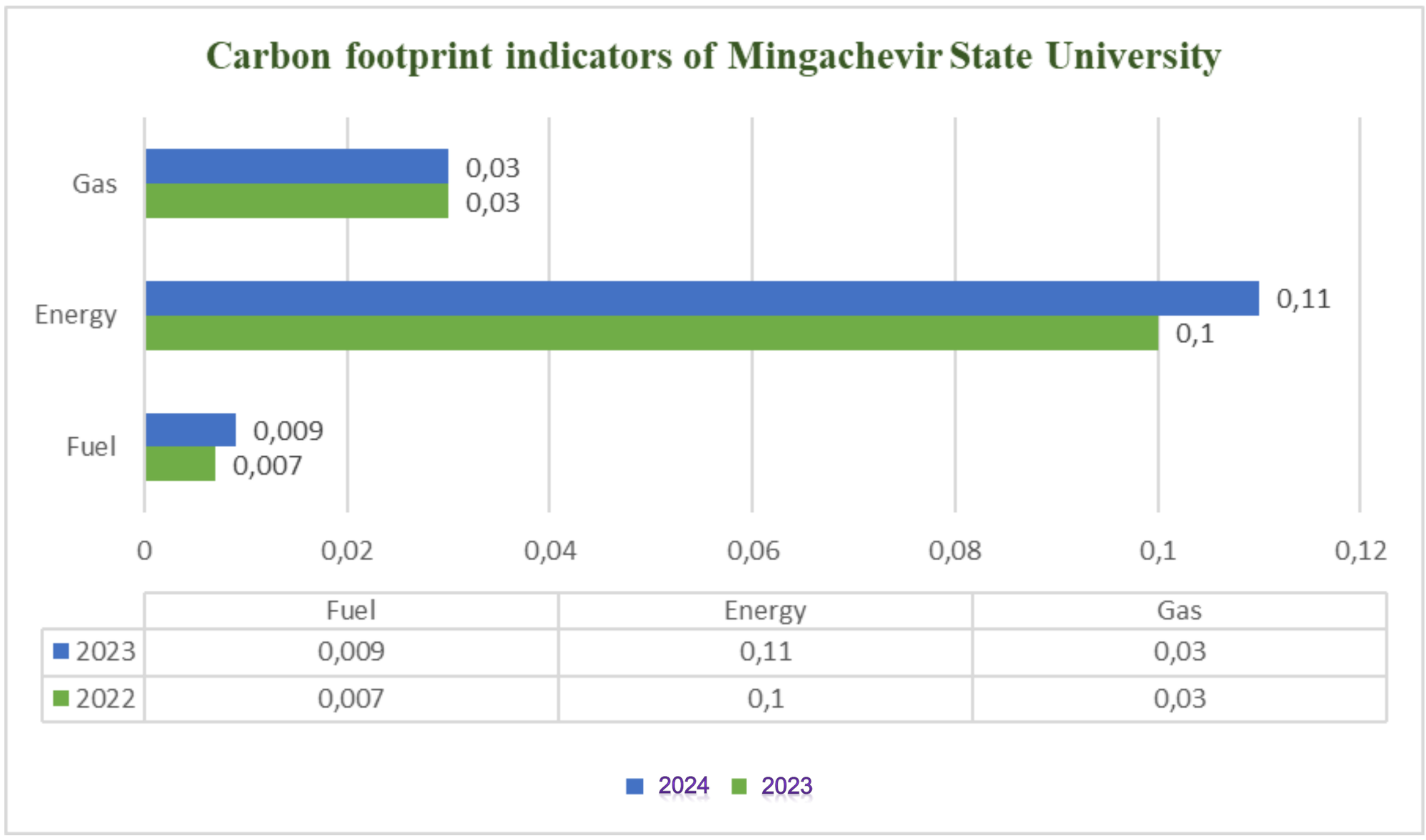
Indicators for soot and hydrocarbon vapour:



When calculating the amount of carbon dioxide, we will get the following result.



CLIMATE CHANGE: OUR CALL TO ACTION



In the last two years, an increase in the amount of carbon dioxide emitted from the use of electricity and fuel has been observed in the university.

Evaluating all parameters, it was determined that the amount of gas emissions affecting climate changes at Mingachevir State University is within the norm. However, when looking at the indicators over the years 2023 and 2024, a certain increase is observed, therefore, in order to minimize the harmful effects and achieve sustainable development, the following should be considered in the action plan.

CLIMATE CHANGE: OUR CALL TO ACTION

GHG Emissions Reduction Strategy

The main areas considered for climate change are:

- ***Transportation: Switch to electric and low-emission vehicles and reduce the number of car miles traveled per person, increase the number of bicycles.***
- ***Energy transition: Increasing investment in renewable and sustainable energy, carbon capture technology and energy innovation.***
- ***Building optimization: Reducing building energy use through upgrading existing structures and investing in new infrastructure.***
- ***Materials management: Waste, water, recycling, composting, etc., with the aim of reducing and disposing properly. material systems management for.***
- ***Resilience: Adapting to climate risks such as fire, flood, extreme heat, drought and storms, especially for vulnerable populations and infrastructure.***

Our actions in climate change solutions for our campus and buildings:

We take climate action in four different areas...
Energy, Transport, Waste and Green Lanes.

www.greencampus.mdu.edu.az

CLIMATE CHANGE: OUR CALL TO ACTION

Energy

- *Switching to LED lighting at the university with the "Energy Saving" project.*
- *Ensuring the correct management of the lighting system.*
- *Alternative energy sources - use of solar energy.*

Transportation

- *Reduction in the number of vehicles.*
- *Increasing the number of volleyballs, creating a road and a parking lot.*
- *Organization of regular "Running marathons".*

Waste

- *Provision of waste sorting.*
- *Reduce the amount of generated waste.*
- *Improving the recycling process.*
- *Implementation of waste-free technology.*

Increasing green lanes

- *Protection of greenery in our campus.*
- *Building a "Student Forest" by growing plants suitable for the Mingachevir climate.*
- *Protect natural ecosystems.*

www.greencampus.mdu.edu.az

CLIMATE CHANGE: OUR CALL TO ACTION

Carbon reduction initiatives typically fall into one of the following strategic approaches:

Prevention, reduction, replacement, elimination.

- ***Prevention strategies prevent carbon emissions and can include improving energy efficiency and replacing fossil fuel-based energy with renewable energy sources.***
- ***Mitigation strategies reduce the total energy required to power a given system and include traditional energy efficiency improvements such as improving insulation and reducing heat loss by replacing old technologies.***
- ***Replacement initiatives include switching from fossil fuels to emission-free fuels and can be costly.***
- ***Mitigation strategies include measures to ensure greenhouse gas reductions: these may include nature-based solutions such as tree planting and soil rehabilitation and/or technology that captures and stores carbon from the atmosphere.***

www.greencampus.mdu.edu.az

CLIMATE CHANGE: OUR CALL TO ACTION

Conclusion

Targets	Projected years	Carbon emission reduction trends	Actions to be taken
1. Improvement of technological processes (including switching to other types of fuel, raw materials, etc.) 2. Construction and commissioning of new gas purification equipment and facilities 3. Improving the efficiency of existing treatment plants (including their modernization, reconstruction and repair) 4. Elimination of pollution sources	2030	45% reduction in carbon emissions	This reduction would significantly exceed the Paris Agreement's emissions reduction target of 2030 to keep global warming to 1.5°C.
	2035	45% collective reduction of emissions from extended impact sources	This includes transportation, food, waste and materials, and embodied carbon. This will bring the university into line with the Paris Agreement's 1.5°C target in reducing carbon emissions
	2050	Achieving a 100% reduction in greenhouse gas emissions	Achieving "net zero" and ensuring maximum use of renewable energy sources and potential resources

CLIMATE CHANGE: OUR CALL TO ACTION

We have developed an ambitious plan to achieve carbon neutrality by 2030 and have involved our students in this process. Using the laboratory facilities of the university, determination of the amount of carbon and oxygen gases and establishment of comparative characteristics will be ensured.

A Climate Action Plan Working Group was formed and a management structure for the plan implementation process was developed. This includes determining how decisions will be made and communicated to the public based on an analysis of the whole process, and developing a robust approach to experiential learning partnerships across campus.

A renewable energy assessment study will be developed for our campus. This will allow us to understand how much solar potential we have on campus. The implementation of the plans will be carried out jointly with partners who are interested in climate change.

Conferences on climate change will be organized, research articles will be published in this direction, and environmental education will be provided at the same time.

www.greencampus.mdu.edu.az

Contact

Mingachevir State University (MSU)
Dilara Aliyeva street 21. Mingachevir, Azerbaijan
+994 242753272
www.mdu.edu.az
www.greencampus.mdu.edu.az