

IMPLEMENTATION OF THE ENERGY INDEPENDENCE TARGETS IN THE TRANSPORT SECTOR

9 May 2024

No. VAE-3

SUMMARY

Relevance of the audit

Transport and logistics are major economic drivers, generating around 11% of Lithuania's gross domestic product. Transport is the largest energy consumer in Lithuania: out of 64 TWh of final energy consumption in 2022, as much as 25.7 TWh, or 40.4%, was used in the transport sector. As 99% of road transport vehicles in Lithuania are internal combustion engine vehicles, the transport sector also dominates in terms of greenhouse gas emissions, accounting for 31.8% of Lithuania's total greenhouse gas emissions, i.e. 6,011 kt CO₂ equivalent.

The EU and national strategy documents set ambitious targets for the transport sector of at least 15% renewable energy sources by 2030, as well as significant reductions in negative impact on climate and greenhouse gas emissions of at least 14% compared to 2005.

Increasing the share of renewable energy sources, promoting energy efficiency, ensuring sustainable mobility and modernising public transport are among the key challenges to mitigate climate change and reduce greenhouse gas emissions in the transport sector.

Objective and scope of the audit

The objective of the audit is to assess whether the use of renewable energy sources and energy efficiency in the transport sector is increasing.

Key audit questions:

- ✓ Whether the increased use of renewable energy sources in transport is ensured;

- ✓ Whether the increased energy efficiency in transport is ensured.

Audited entities:

Ministry of Transport and Communications: together with the Ministry of Energy, it formulates the policy for the development of infrastructure for alternative fuels and vehicles using them, establishes the principles for the preparation of plans for sustainable urban mobility, and coordinates the prepared plans.

Ministry of Environment: it formulates and coordinates Lithuania's climate change mitigation and adaptation policy.

Ministry of Energy: it formulates the policy on the development of fuels from renewable energy sources.

We collected data and information from the Lithuanian Energy Agency, the National Energy Regulatory Council, and municipalities.

The audit period was between 2019-2022; we also used data from the previous years and from 2023 or 2024 to assess changes.

The audit was carried out in accordance with international standards of supreme audit institutions. The scope of the audit and the methods applied are described in more detail in Annex 2 "Audit scope and methods" (page 36).

Key audit results

To achieve at least a 14% reduction in greenhouse gas emissions in the transport sector by 2030 compared to 2005, it is essential to accelerate the development of renewable energy sources, i.e. to increase the use of biofuels and electricity in the sector and to improve energy efficiency. Without a significant reduction of greenhouse gas emissions in the transport sector (at least 39% compared to 2022), the targets and objectives set out in the 2030 Climate Change Management Agenda will not be achieved.

1. The use of renewable energy in transport should be accelerated

- The EU and national strategy documents set a target of at least 15% of renewable energy sources used in the transport sector by 2030. However, in 2022, most of the energy consumed in road and rail transport (4 out of 6.4%) from renewable sources was derived from biofuels produced from food and feed crops, the use of which was limited to 5.61% from 2022. Without an increase in the use of advanced biofuels, renewable electricity and other alternative fuels, the transport sector will not achieve its targets regarding the use of renewable energy sources and the reduction of emissions (Sub-section 1.1, page 10).
- In order to increase the country's energy independence and domestic energy supply, it is essential to promote the domestic production and consumption of sustainable liquid advanced biofuels. As there is currently no such biofuel production capacity in Lithuania, the 2023 requirements for 0.4% blending of advanced biofuels into marketed fuels have been met by importing these biofuels from other countries, which does not ensure the use of local raw materials in the production of liquid advanced biofuels in Lithuania (Sub-section 1.1, page 10).

- In order to ensure the monitoring of the obligations regarding the use of renewable energy sources in the transport sector, a system of units of account for fuels derived from renewable energy sources has been set up, obliging fuel suppliers to provide information on the volumes of petrol, diesel and renewable fuels delivered to the domestic market. According to the system, in 2022, one fuel supplier did not comply with the requirement that an appropriate share (6.8%) of the energy value of petrol and diesel delivered to the domestic market should be renewable fuels, two did not comply with the requirement to blend advanced fuels, and three did not provide respective evidence. Non-compliance with this obligation has a negative impact on the ambition to increase the consumption of renewable energy and to reduce the negative impact of fuels on climate change and air pollution (Sub-section 1.1, page 10).
- Support for biomethane production started to be provided as late as 2020. As projects take about 3-4 years to implement, no biomethane was produced in Lithuania by 2023, and the 2022 target of 52.4 ktoe of biomethane consumption in transport has not been met. Without the necessary production capacity, the target of 81.5 ktoe or 950 GWh of biomethane produced from sustainable and local raw materials by 2030 in the National Energy and Climate Plan may not be achieved (Sub-section 1.1, page 10).
- The number of newly registered electric vehicle transactions is increasing rapidly, accounting for 11.35% of all transactions in 2023. Between 2019 and 2023, the number of these vehicles increased more than six-fold (from 3,106 to 19,977), but the target of 25,399 vehicles in 2023 was not reached. As the EU requirements for the use of renewable energy sources in the transport sector will increase in 2030 (from 14% to 29%), the development of electric vehicles needs to be further accelerated in order to reach the 2030 objectives (Sub-section 1.2, page 15).
- Better charging conditions are needed to increase the number of electric vehicles and to replace polluting vehicles. Between 2019 and 2023, the number of charging stations for electric vehicles increased by a factor of 10 (from 250 to 2,521 units), but the target of 8,731 stations for 2023 was not achieved. The insufficient expansion of the charging station network reduces the attractiveness of using electric vehicles in the transport sector. To increase the use of renewable energy sources and reduce pollution, the number of charging stations needs to be further increased in order to meet the 2030 objectives (Sub-section 1.2, page 15).

2. Energy efficiency measures in the transport sector are not sufficient to achieve the planned changes

- The number of electric vehicles is rising, but so is the number of petrol-fuelled vehicles. The vast majority (99%) of all vehicles in Lithuania run on petroleum fuels. Since 2005, the number of vehicles has roughly doubled to 2 million, with freight transport increasing, which has led to an increase in the consumption of petroleum fuels, reaching around 2 million tonnes in 2022. Due to the increased consumption of petroleum fuels, greenhouse gas emissions have increased by 43.3%, up to 6,011 kt CO₂ equivalent, compared to 2005 (Sub-section 2.1, page 22).
- In order to achieve the targets set out in the Climate Change Management Agenda, Lithuania's greenhouse gas emissions in the transport sector need to decrease by 39% between 2022 and 2030. Given that greenhouse gas emissions in the transport

sector have been declining by an average of 1.5 percentage points per year between 2019 and 2022 (from 6,283 to 6,011 kt CO₂ equivalent), the 2030 target will not be achieved without additional gas emissions mitigation measures (Sub-section 2.1, page 22).

- The Ministries of Energy, Transport and Communications, and Environment as well as the municipalities have implemented measures to shape public behaviour and change their habits, by encouraging the use of clean vehicles running on alternative fuels or public transport and other mobility measures. However, the number of polluting vehicles (running on diesel and petrol) has increased by 4.1% between 2021 and 2023, so further development of measures to change behaviour is needed to achieve the 2030 targets (Sub-section 2.1, page 22).
- Developing public transport infrastructure and adapting public transport routes to meet the needs of passengers is essential to change people's habits away from driving their own cars. Passenger transport by road and rail increased by 57.8% between 2021 and 2023 (from 208.9 million to 329.6 million passengers), but is still below the 2019 level of 380.8 million passengers; therefore, the 2025 target of 405 million passengers may not be met (Sub-section 2.2, page 27).
- The data platform developed by the Ministry of Transport and Communications should provide annual data on sustainable mobility measures implemented by the municipalities and their results, but there is still no information system in place for all municipalities to provide the data, so there is no consistent monitoring of the implementation of sustainable mobility measures. Due to the lack of monitoring, problems arising in relation to sustainable transport and the implementation of measures to achieve it are not adequately addressed (Sub-section 2.2, page 27).
- In order to meet the mobility needs of the public in the planned territory and to promote sustainable accessibility by all modes of transport and walking, it is recommended that municipalities make sustainable mobility plans. Thirty-nine out of 60 municipalities still have not made them, which does not ensure that measures to meet all mobility needs of the public are properly implemented (Sub-section 2.2, page 27).

Recommendations

To the Ministry of Energy

1. In order to promote the use of sustainable fuels produced from local renewable energy sources, to design and implement measures to promote the production of local liquid advanced biofuels and fuels of non-biological origin from renewable energy sources (Key audit result 1).
2. To ensure that fuel suppliers comply with their obligations regarding the mandatory supply of renewable fuels, to assess the system of obligations imposed on fuel suppliers and review the mechanism of sanctions for non-compliance (Key audit result 1).

To the Ministry of Transport and Communications

3. In order to achieve the target set out in the Climate Change Agenda, to provide for and implement additional measures to reduce greenhouse gas emissions in the transport sector by at least 14% by 2030 compared to 2005 (Key audit result 2).
4. In order to have reliable and comprehensive data on the implementation of sustainable mobility measures for informed decision-making, to enable all municipalities to provide high-quality and comparable data on the implementation of sustainable mobility measures through the platform of sustainable mobility indicators (Key audit result 2).

The measures and timeframes for implementing the recommendations, the expected impact of the audit and the indicators for measuring change are set out in the section “Plan for the implementation of the recommendations” (page 31) of the report. Up-to-date information on the status of the implementation of the recommendations, results and developments is published in open data section on the National Audit Office’s website at <https://www.valstybeskontrole.lt/LT/AtviriDuomenys>.