

Environment

TOWARDS A REDUCTION IN ENERGY INTENSITY

- ▶ Lithuania's energy mix is dominated by fossil fuels and the country has become more and more dependent on energy imports.
- ▶ Lowering the country's energy intensity will make it less dependent on energy imports, while at the same time contributing to a reduction in emissions of greenhouse gases (GHG) and other pollutants.
- ▶ Improvements in energy efficiency, especially in the heating and transport sectors, will be crucial to lower energy intensity. A reform of environmental taxation could help Lithuania achieve that goal.

What's the issue?

Despite a 44% decline in Lithuania's energy supply per GDP between 2000 and 2014 – mostly due to the wholesale restructuring of the economy post-Soviet Union – it remains far above the OECD average. When measuring energy intensity as energy consumption per GDP, the picture looks somewhat better, though the country still performs worse than many of its peers (see Figure). Renewable energy sources, mainly wind energy and hydro energy, accounted for 23.9% of final energy consumption in 2014, above the country's EU target in 2020.

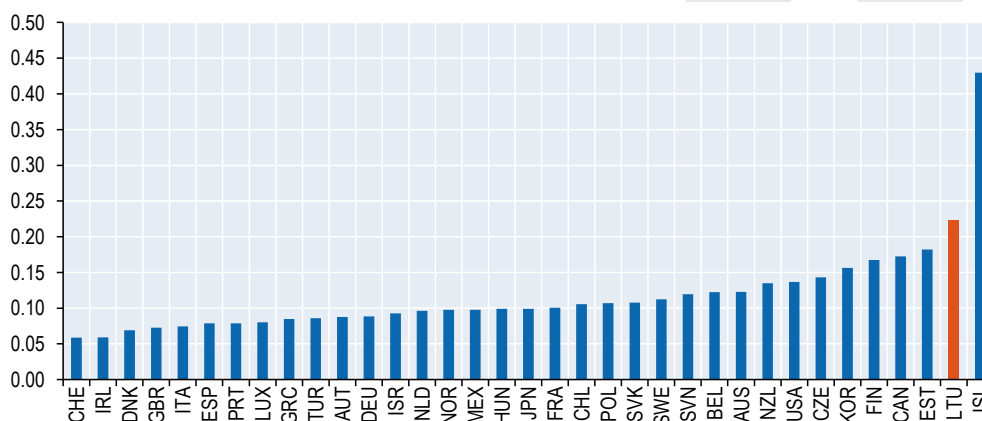
So far, Lithuania's main policies for improving energy efficiency are loans and subsidies for modernising multi-

apartment and public buildings, and the development of district heating systems. 70% of all multi-apartment buildings are expected to be modernised by 2020. In addition, the government plans to increase the use of Combined Heat and Power (CHP) generation. However, without appropriate financial incentives for this technology, it remains unclear how this objective will be met. With regard to the transport sector, the main measures are related to promoting green public transportation and improving road and railway networks, both planned to be achieved through EU structural funds.

The key legislative measures to raise energy efficiency include the draft law on energy efficiency, which

Lithuania energy intensity is high in international comparison

Gross inland energy consumption per unit of GDP (kg of oil equivalent/1000 EUR), 2014



Source: Eurostat.

transposes the EU Directive, and its amendments on electricity, energy, natural gas and the heating sector. Other sectoral initiatives include the National Heating Sector Development Programme to improve the efficiency of heat generation, transmission and consumption, and at the same time promoting a shift from natural gas to biomass. Effective implementation of these measures will be crucial for Lithuania to attain its energy efficiency targets of 2020.

A reform of environmental taxation may be the most effective measure to improve energy efficiency. Lithuania's revenue from environmental taxation is the second lowest in the EU-28 (where the average level is 2.46% of GDP) and has declined by almost one-third between 2003 and 2014, from 2.77% to 1.70% of GDP. Almost the entirety of environmental taxes consist of excise duties on oil and oil products, with pollution and natural resource use taxes accounting for the remaining share. The pollution tax was introduced by the 1991 Pollution Tax Act and covers specific sources of pollution, such as SO₂, NO_x, PM, from stationary and mobile sources.

Lithuanian taxes on motor fuels (diesel and petrol) and fuels used for heating are among the lowest in the EU. By contrast, taxation of liquified petroleum gas is high. There is no carbon tax, but as a EU member, Lithuania participates in the EU Emission Trading Scheme (ETS), which covered about 37% of the country's overall GHG emissions in 2013. This low taxation is one reason why renewables and energy efficient systems such as CHP are not being developed rapidly. There is scope to increase environmentally-related taxes, especially by raising taxes on motor and heating fuels, as well as transport taxes differentiated according to the fuel characteristics of vehicles.

Why is this important for Lithuania?

Lithuania overachieved its Kyoto Protocol target for the first commitment period, and is on track to meet the EU-wide target of a 20% reduction in GHG emissions by 2020 compared to 1990 levels. Under the EU Effort Sharing Decision, Lithuania has committed to limit the increase in its GHG emissions in sectors outside the ETS to 15% above 2005 levels by 2020. Considering the large share of fossil fuels in the energy mix, reducing the country's energy intensity could contribute to an overall decrease in Lithuania's GHG emissions, helping the country meet its emissions reduction targets.

In the last 10 years, Lithuania became more and more dependent on energy imports, mainly as a result of the decommissioning of the first two units of the Ignalina nuclear power plant, in 2004 and in 2009, due to safety concerns. Increasing energy efficiency would make Lithuania's economy less dependent on energy imports (especially oil) and consequently less vulnerable to movements in the price of energy.

What should policy makers do?

- ▶ Promote consistent energy efficiency regulations across sectors and ensure that Lithuania's long-term and interim targets are met.
- ▶ Invest in training programs for workers affected by the shift to a less energy intensive economy to adapt their skill-set and ensure that the transition is smooth.
- ▶ Raise the overall level of taxation on fossil fuels, while harmonising tax rates on different forms of energy in accordance with their emissions of greenhouse gases and other pollutants.



Further reading

OECD (2015), "Lithuania", in Compare your Country – Climate Change Mitigation Policies – Online Tool. <http://www.compareyourcountry.org/cop21>

OECD (2015), *Environment at a Glance 2015: OECD Indicators*, OECD Publishing. <http://dx.doi.org/10.1787/9789264235199-en>