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Recommendations for climate protection through energy and financing

1 Build capacities to decarbonise regions, and thus Slovakia

A prerequisite for achieving carbon neutrality is the ability and readiness of the regions to ensure a consistent turn from the current uncoordinated development of the energy sector (in the broadest sense, i.e. including buildings, transport, industry, etc.) to its systematic and sustainable development. However, this requires an adequate planning and implementation infrastructure based on stable and qualified capacities in the regions. There is no such infrastructure or capacity at the regional and lower level in Slovakia.

The result is high energy intensity, insufficient use of available renewable energy sources, high dependence of the regions on fossil energy imports and thus a massive permanent leakage of money from their economies. Instead of stabilising regions' development, regional energy represents an obstacle to their development. In addition, the lack of planning and coordination capacities in the regions makes subsidies, especially from EU funds, the primary motivator for the preparation of energy projects. Such projects make only a minimal contribution towards the overall climate goal. This has a very negative effect on the efficiency of using public funding allocations for decarbonisation.

Therefore, it is extremely important that a separate measure, 'Support for Regional and Local Energy', finally became a part of the draft Operational Programme Slovakia under Objective 2: Greener Low Carbon Europe. This measure also assumes the establishment of regional sustainable energy centres (RSECs) to plan the decarbonisation process in each region and then assist in its implementation. Civic organisations encourage the European Commission (EC) to support this measure in the programming process actively. The EC should ensure that the Slovak government allocates sufficient funding for this crucial measure and creates favourable conditions for the future operation of the RSECs.

Without sufficient planning and coordination capacities, no region can be decarbonised; without carbon-neutral regions, Slovakia as a whole cannot be carbon-neutral either.

2 Savings and renewables instead of gas boilers

Both the draft Partnership Agreement and the draft Operational Programme Slovakia, unfortunately, include support for natural gas boilers in the framework of activities to improve air quality. Precisely, this concerns measure 2.7.8. *Reducing emission of air pollutant through the replacement of coal-fired boilers in households with low-emission heating appliances, including information activities aimed at improving air quality*, with an allocation of almost EUR 30 million.

However, the Slovak Innovation and Energy Agency (SIEA) estimated the cost of heating with natural gas at EUR 1 385 per year and with wood at EUR 943 per year.^{1 2} The fieldwork of the Consumer Protection Society³ shows that socially vulnerable households secure their fuel in different ways, in some cases at a cost of around EUR 250 per year. In addition, natural gas prices increased significantly in 2021, increasing the price of electricity.⁴ It is therefore essential to reduce energy demand by renovating buildings first. **The boiler subsidy will not address the air pollution issue, because people who have enough money to heat with natural gas have probably already been heating with it.** Moreover, around 2027, we would again need to explain why the same boilers that are supposed to protect the air need to be replaced to protect the climate. An example of a good approach to the building renovation is the upcoming scheme of the Slovak Environmental Agency – Renovate the house.⁵ The applicant must first reduce the energy demand by at least 30 per cent to receive support for the energy source. They can then choose from among heat pumps, photovoltaic panels, solar collectors, gas condensing boilers, heat recovery, and adaptation measures. However, it would be ideal if the Slovak Environmental Agency, because of the great interest, would set higher energy savings in the future and at the same time stop supporting natural gas boilers. Based on the SIEA data, the estimated total costs of using a heat pump are lower across a 10 to 15 years period compared to those of a condensing gas boiler. The operating costs of heating with a heat pump are only EUR 809 per year and annual savings could reach approx. EUR 576.⁶

We recommend that the ministries:

- ✓ Assess the situation of socially vulnerable households, which most likely use a variety of inappropriate fuels;
- ✓ For measure 2.7.8. of the Operational Programme Slovakia, make grant support conditional on improving the thermal performance of buildings and extended support to renewable energy sources based on the situation identified.

NGOs support ministries by sharing field survey data, importing examples of good practice and co-organising constructive dialogue among ministries and with other experts.

¹ <https://www.siea.sk/bezplatne-poradenstvo/publikacie-a-prezentacie/ake-su-naklady-na-vykurovanie/>

² Note: SIEA compared only operating expenses (OPEX) not, capital expenditures (CAPEX).

³ <https://www.sospotrebitelov.sk/>

⁴ <https://www.urso.gov.sk/6124-sk/burzove-ceny-elektriny-a-plynu/>

⁵ <https://www.obnovdomov.sk/>

⁶ <https://www.siea.sk/bezplatne-poradenstvo/publikacie-a-prezentacie/ake-su-naklady-na-vykurovanie/>

3 Support for fourth generation district heating systems

Current district heating systems are based on very high heat consumption in connected buildings. This means a waste of fossil fuels and biomass. This is unsustainable for consumers, the climate, and forests in the long term. Thermal power plants produce more than 5.5 per cent of Slovakia's greenhouse gas emissions.⁷

More than two years of work on a thermal solution for Prievidza and Nováky has shown that the only viable solution is to first optimise the energy demand of the buildings. Therefore, the greening of the heating sector cannot be planned in isolation and reduced to the modernisation of distribution systems and the replacement of one heat source with another.

In Prievidza, there is the potential for up to 52 to 62 per cent heat savings for heating of buildings connected to the central heat supply system.⁸ By reconstructing the city's distribution systems, it is possible to reduce losses by another 11 per cent.⁹

Around 2035, the city of Prievidza could consume only 46 per cent of the heat it currently uses if it implements fourth generation district heating.

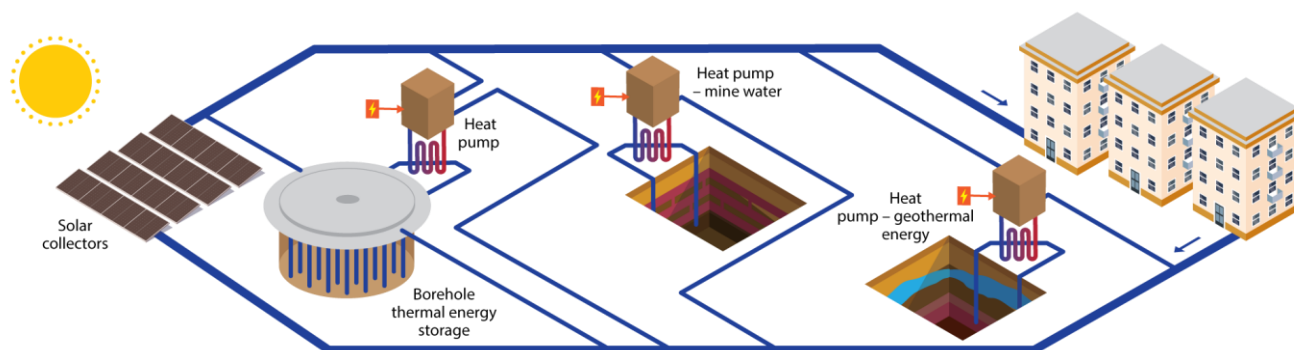


Diagram: heating the southern part of Prievidza with the fourth generation heat supply system.

For support from OP Slovakia and the Modernisation Fund, we recommend relevant ministries to:

- ✓ **Develop a long-term solution based on savings and renewable sources.** Every heating project supported by public funding should include a decarbonisation plan with a view to 2050;
- ✓ **Address energy demand reduction first**, i.e. combine building renovation and distribution modernisation with district heating, ideally a fourth generation heat supply system;
- ✓ Increase support for more efficient and innovative systems and not support fossil gas and unsustainable biomass-based sources.

⁷ <https://faktyoklime.sk/infografiky/emisie-sr>

⁸ Pre-feasibility study 4th generation district heating system in Upper Nitra region. 2021

⁹ Pre-feasibility study 4th generation district heating system in Upper Nitra region. 2021

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