

District heating for the Western Balkans



Tuzla, Bosnia and Herzegovina. Photo: Wirestock via Adobe Stock

What is the situation with district heating and the decarbonisation process in the Western Balkans?

The heating sector in the Western Balkan countries (WB6) is predominantly based on coal, gas, heavy fuel oil and the inefficient use of wood, which contribute significantly to air pollution and greenhouse gas emissions. Around 14 per cent of total heat demand is produced and distributed to final users in district heating systems, which in turn are 97 per cent fossil-fuel-fired.¹

When considering alternatives to transform the heating sectors, WB6 decision makers mostly opt for gas or biomass. Some are even still trying to use coal for district heating. None of these alternatives is truly sustainable, and they put at risk

For more information

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¹ Energy Community Secretariat, [WB6 Energy Transition Tracker, June 2021](#), Energy Community, Third Edition, June 2021.

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the commitment of WB6 leaders to halt the use of fossil fuels and achieve the decarbonisation of the Western Balkans by 2050.²

Investments in district heating need a proper policy set-up

In the WB6, there is limited awareness about new technological applications and the multiple benefits and savings from investments in renewable-energy-based heating such as solar, geothermal, heat pumps and thermal energy storage. Local and national governments lack properly qualified staff, strategic thinking, technical knowledge and operative staff in place across the sectors to perform successful decarbonisation of the heating sector. There is still insufficient dialogue about district heating and increasing the share of sustainable, renewable sources in district heating. There is also little coverage of it in the National Energy and Climate Plans published so far, as well as limited integration in the spatial planning for district heating infrastructure.

Call to the EBRD

As we are faced with a climate emergency, we, civil society organisations from WB6 countries, recognise the fundamental need to work together with all stakeholders in combating climate change. We call on the EBRD to commit to:

Immediately ceasing to provide technical assistance or financing for any of the gas value chain projects in the WB6, including pipelines and interconnections (such as the Southern Gas Interconnector in Bosnia and Herzegovina).³ The new EBRD Energy Sector Strategy 2023-2028 must state a clear exit from new gas-based projects, which must go into effect immediately. The EBRD should help the countries work out how to reach a zero-carbon economy. It should clearly and explicitly commit to a rapid and complete shift away from oil and gas, and towards zero-emissions and decarbonisation.

Resisting the replacement of fossil fuels in district heating with new highly polluting practices that fuel the climate crisis or otherwise compromise environmental protection, such as primary forest biomass and waste incineration. This means halting further promotion of forest biomass or incineration projects within EBRD programmes such as ReDEWeB, Green Cities and others. The EBRD should refrain from investing in biomass, as it is a fuel that pollutes the air and contributes to a great number of deaths in the region.⁴ The EBRD should adopt a clear distinction that small combined heat and power installations may need to run on biomass where there are no viable heating alternatives, but this should consist of secondary woody biomass.

² [Sofia Declaration on the Green Agenda for the Western Balkans](#), *Regional Cooperation Council*, 10 November 2020.

³ Radio Sarajevo, [‘Razgovori /Ministar Džindić s delegacijom EU o izgradnji Bloka 7’](#), *Radio Sarajevo*, 16 February 2022.

⁴ In 2018, particulate matter pollution was responsible for about 379,000 premature deaths in the EU-28, and wood burning was a major and growing source (bigger than road transport). Forest Defenders Alliance, [Wood-burning is the largest source of deadly air pollution in Europe - So why does the EU encourage burning wood for “renewable energy”?](#), *Forest Defenders Alliance*, May 2021. Mary S. Booth, [Trees, Trash, and Toxics: How Biomass Energy Has Become the New Coal](#), *Partnership for Policy Integrity*, 2 April 2014.

Applying the precautionary principle for all non-evidence-based heating projects, where there is a great risk that projects might harm the achievement of the countries' climate and environmental goals, or those of the EU, since WB6 countries have not successfully adopted all of the goals.

Publishing regular monitoring data on climate and environmental performance for projects that have already been implemented (such as the biomass projects in Banja Luka and Prijedor, the Zenica heating plant on waste heat, etc.) in order to properly evaluate their environmental impacts in the operational phase as well as the investments' overall sustainability. State environmental monitoring mechanisms lack capacity, and project sponsors' own measurements lack independence, so relying on these for air quality, biodiversity protection, waste management or other environmental monitoring is not a guarantee for successful project implementation.

Committing to support only modern and clean heating technologies based on renewables. The EBRD should support solutions that are feasible, depending on the local potential for renewables (solar, geothermal, electricity produced from renewables like wind), excess heat recovery from industry and services, heat pumps and seasonal heat storage. Bankwatch has been involved in identifying the potential for clean heating solutions in the coal-dependent communities of Pljevlja (Montenegro) and Tuzla (Bosnia and Herzegovina), and we believe that investing in transformation in these or similar locations should be a priority.

Promoting the most efficient heating technologies, such as heat pumps, combined with sustainable renewable energy sources (air, water, geothermal, solar, wind, waste heat) and thermal energy storage technologies. The EBRD should promote and support a high penetration of electricity in the final energy consumption. The EBRD should programme the integration of industrial heat pumps in district heating systems, encourage higher incentives to competitively balance renewable energy sources and enhance industrial capacity within the WB6 to produce and install individual and industrial heat pumps. A great number of EBRD projects based on renewable technologies have been launched through the ReDEWeB and Green Cities programmes, and these can be used and replicated throughout the region. Once the investments are in place, the EBRD should encourage peer-to-peer experience exchanges for decision makers, experts, civil society and local communities to raise awareness about technological applications and the multiple climate, environmental and other benefits and savings from such investments.

Demonstrating more clearly to the public how the principle of 'Energy Efficiency First' has been implemented in practice. Energy efficiency should be considered before any investment in energy projects. The principle should be a benchmark for project financing that is applied even to otherwise economically viable projects. The EBRD should explain openly (i.e. in the project summary document) how the 'Energy Efficiency First' principle is integrated in the most cost-effective and rational way, while improving security of supply and reducing emissions and energy poverty.

Providing technical assistance to local authorities in the WB6 in transforming heating systems. Even larger towns and cities lack capacity or technical expertise within their municipal services to plan and implement the transformation of district heating. Therefore, the first prerequisite is to build capacity, not just in the sense of employing competent staff, but to develop corporate systems, work with heating providers and

large companies, undertake the technical planning and integration of heat pumps, thermal energy storage, solar thermal energy, etc.

Encouraging processes that are inclusive and transparent from the beginning of district heating planning, that allow locals to play an active role through ‘energy communities’ that pool finances, set up collective ownership of district heating networks, or engage in prosumer activities.

Supporting evidence-based data gathering. There is a serious lack of data on the heating sector in the Western Balkans. A deep analysis of the existing heating situation in each country is needed, including all relevant aspects – the technical, financial, social, legal and institutional set-up. Detailed and up-to-date data is needed about the existing and projected heat demand, the status of the building stock, the availability and share of use of different heat sources, and the status and performance of existing district heating systems.

Annex 1

Why gas should be abandoned as an option

The use of fossil fuels, including gas, in the heating sector makes it a significant contributor to air pollution and greenhouse gas emissions. Gas has a significant carbon intensity – when counting methane leaks during extraction and transportation, it is often no better than coal.⁵ However, all the WB6 governments plan to greatly expand gas use, risking carbon lock-in and stranded assets. The great advantage of the WB6 is that many of the countries are not gas-dependent (especially Albania, Kosovo and Montenegro), enabling them to avoid volatile gas prices and the use of gas as a political weapon. Gas also means financing the autocratic and repressive regimes of Russia or Azerbaijan.⁶ This relatively low gas use also enables the EBRD to closely follow its Energy Sector Strategy and fully decarbonise heating in the region by investing in modern, clean and comprehensive solutions.

Why biomass investment should be avoided

Similarly, burning primary forest biomass for district heating has negative consequences for the climate. It creates a dangerous ‘carbon debt’, and makes no meaningful improvement to the reduction of greenhouse gases when compared with emissions from coal over a timeframe relevant to addressing climate change.⁷ In addition, a 2017 World Bank study on biomass-based heating in the Western Balkans showed that on average, 75 per cent of the sustainable technical potential for woody biomass is already used. Thus, further increasing demand is likely to drive unsustainable forest harvesting and excessive transport of feedstock. The WB6 has a proven record of corruption and organised crime in illegal logging activities driven by profit;⁸ thus, investments in biomass combustion encourage a grey economy in the context of weak legal enforcement.

Why waste-to-energy should be dropped from investments

Another dead-end heating technology promoted in some WB6 countries (i.e. Tuzla, Bosnia and Herzegovina and Belgrade, Serbia) is waste-to-energy, which directly contradicts climate, air quality, recycling and resource efficiency targets. Waste incineration is a carbon-intensive process⁹ which harms rather than supports the transition to a circular economy.¹⁰ For the last decade, the recycling of municipal waste has remained extremely

⁵ CEE Bankwatch Network and Observatori Del Deute En La Globalitzacio, [Smoke and Mirrors: Why climate promises of the Southern Gas Corridor don't add up](#), 12 January 2018.

⁶ See for example Freedom House, [Azerbaijan](#), accessed 4 May 2022, and Human Rights Watch, [Azerbaijan](#), accessed 4 May 2022.

⁷ Partnership for Policy Integrity, [letter from scientists to the EU parliament regarding forest biomass](#), *Partnership for Policy Integrity*, 14 January 2018.

⁸ Jorum Duri, [The Western Balkans and Turkey: Overview of corruption in the environment and climate sector](#), U4 Helpdesk Answer, 12 June 2021.

⁹ The Intergovernmental Panel on Climate Change [reports that](#) each tonne of waste burnt produces up to 1.2 tonnes of carbon dioxide.

¹⁰ Rosella Recuperio, [Burning news: Waste-to-Energy is not sustainable as it harms the Circular Economy](#), 2 September 2019.

low across the region, in 2018 making up around 5 per cent for all economies except Albania (18.5 per cent)¹¹ and being significantly lower than in the European Union (47 per cent).¹² Investing in waste-to-energy infrastructures jeopardises already lagging recycling and circular economy targets. As with biomass, the sector is also particularly attractive for corruption due to the difficulty of tracking material flows,¹³ but in this case it is also close to impossible to transfer real risk to the private sector due to waste management being an essential public service.

¹¹ This percentage most likely includes estimates on recycling by informal waste collectors, as mentioned in European Environment Agency, [Municipal waste management in the Western Balkan countries](#), last updated 27 April 2022.

¹² OECD, [Competitiveness in South East Europe 2021: A Policy Outlook, Competitiveness and Private Sector Development](#), OECD Publishing, Paris, 2021. 2020 data is available at: European Environment Agency, [Municipal waste management in the Western Balkan countries](#), last updated 27 April 2022, but shows a distinct lack of clarity about the percentage of waste recycled.

¹³ See for example Albania's experience: Clare Nuttall, [Incinerators scandal threatens to bring down top Albanian politicians](#), *Intellinews*, 18 February 2022.