

## Fourth enerCEE Report

### Status of Renewable Energy Uptake in Balkan Countries



The decarbonization of the energy sector in the Balkan countries can help to increase security of supply, promote regional development, mitigate climate change effects, while stimulating growth and regional development. Balkan countries have been geographically blessed with significant renewable energy potential, especially in hydropower, solar and wind. Unfortunately, the development of renewable energy capacities remains rather limited in these countries, mainly due to existing administrative and regulatory barriers for renewable energy uptake and limited interconnectivity. The majority of the countries are very dependent on imports and continue to rely

primarily on fossil fuels for power generation, which further exacerbates persisting energy poverty in the region.

This report looks at the current status of renewable energy capacities in 4 countries, namely Albania, Bosnia and Herzegovina, Croatia and North Macedonia, while also presenting plans for future development and diversification of the energy sector.

#### Albania

As a Contracting Party of the Energy Community, Albania set a 38% renewable energy target in final energy consumption until 2020 (34.6% in 2017). The adopted 2018- 2030 energy strategy aims to raise the share of renewables in primary consumption to 42% until 2030.

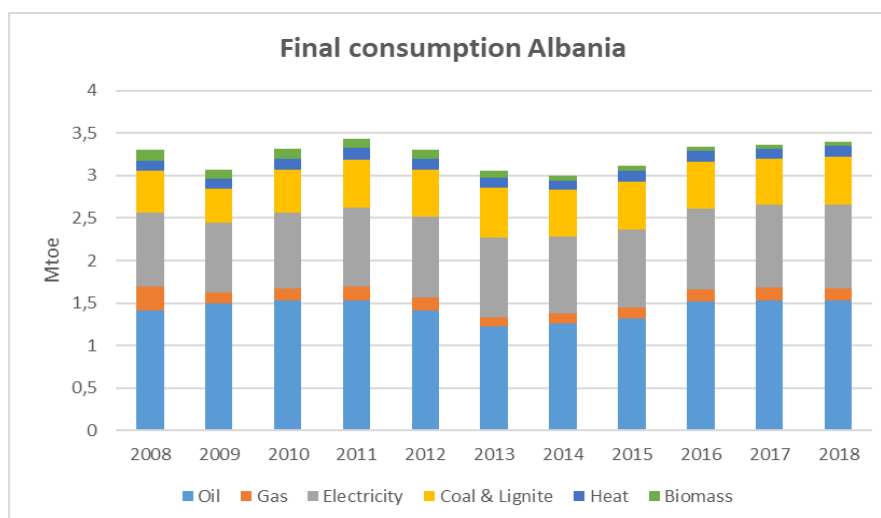


Figure 1- AEA, Source Enerdata

Though the country has considerable renewable energy potential, it has yet to be tapped fully. Albania has an estimated hydropower potential of 12 TWh as well as a significant potential of other renewable sources: 13 TWh/year of biomass power generation and 11 TWh/year of wind and 33 MW of solar.<sup>1</sup>

Since thermal power plants are not in operation, Albania strongly relies on hydropower generation and imports to meet its electricity demand. The diversification of the energy supply and the promotion of other renewable energy resources, such as biomass, solar energy and wind energy is one of the top priorities of the energy policy. The exploitation of the full RES potential would bring significant benefits, such as decrease the import dependence, improve security for energy supply, and contribute to the economic development.<sup>2</sup>

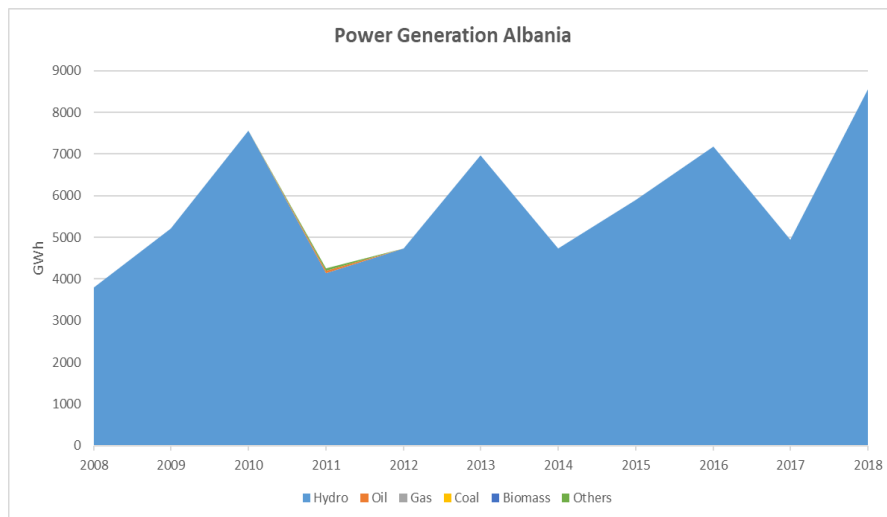


Figure 2- AEA, Source Enerdata

## Bosnia and Herzegovina

Bosnia and Herzegovina's Framework Energy Strategy until 2035 from the year 2018 lays out a number of priorities for the energy sector, including the harmonization of the regulatory framework, efficient use of resources, affordable energy and energy security for its citizens. Since the country is split into two governing entities, namely the Federation of Bosnia and Herzegovina and the Republic of Srpska, the implementation of strategic plans on the federal level is very challenging. Adoption and transposition of the EU acquis therefore remains very complex and time-consuming.

According to the Energy Community Secretariat, the primary fuel mix of Bosnia and Herzegovina in 2017 was made up of 78.1% of solid fuels, 7.1% of hydropower and only 14.8% of other renewables. The country has set a goal of 40% renewables in final energy consumption by 2020, as stated in the National Renewable Energy Action Plan (2016) and had only reached 36% in the year 2018<sup>3</sup>.

<sup>1</sup> Enerdata (2020): Albania, Country Energy Report, January 2020

<sup>2</sup> Energy Community Secretariat (2020): Albania, Annual Implementation Report, [https://www.energy-community.org/dam/jcr:0af3b17a-3759-4a23-a2ef-3134784e217c/EnC\\_IR2020.pdf](https://www.energy-community.org/dam/jcr:0af3b17a-3759-4a23-a2ef-3134784e217c/EnC_IR2020.pdf)

<sup>3</sup> [https://www.energy-community.org/implementation/Bosnia\\_Herzegovina.html](https://www.energy-community.org/implementation/Bosnia_Herzegovina.html)

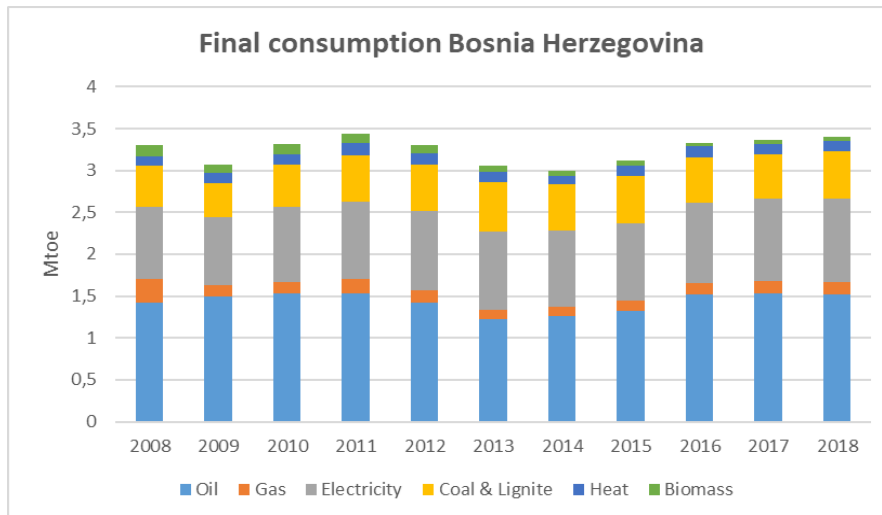


Figure 3- AEA, Source Enerdata

The country has large lignite resources and has the greatest renewable energy potential in the hydropower sector. A large hydropower plant of 159 MW is expected to be completed by 2024, while a number of other hydropower projects could add 210 MW. The growth in other renewable energy sources remains limited: first wind project (51 MW) was only commissioned in the year 2018 and a solar project has yet to be successfully developed<sup>4</sup>.

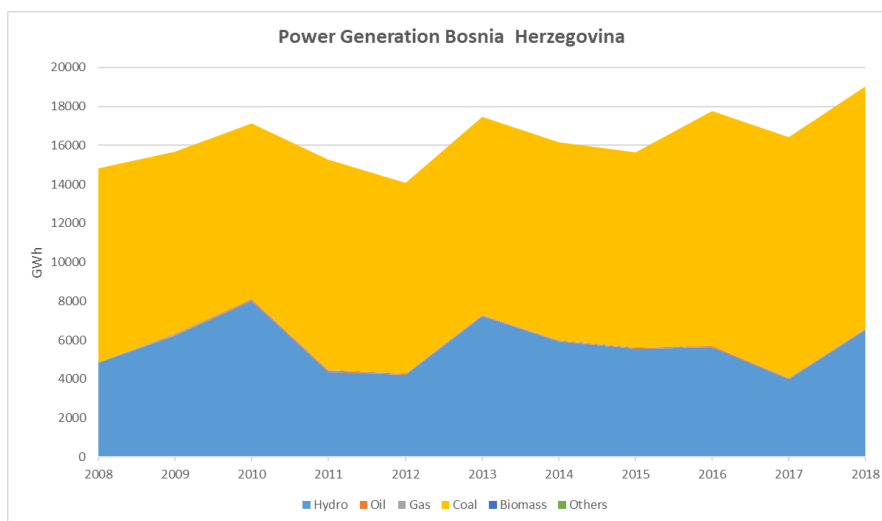


Figure 4 AEA, Source Enerdata

Currently, feed-in tariffs exist in both entities, while fixed feed-in premiums exist in Republic of Srpska; there is currently a new law in the works that would help the country move toward a more market-based scheme<sup>5</sup>. In order to speed up the energy transition and drastically increase the uptake of renewable energy sources, the country will need to introduce further support schemes and provide a stable framework to increase investor security.

## Croatia

As part of its obligations with regard to EU requirements, Croatia submitted its National Energy and Climate Plan to the European Commission. The NECP sets a renewable energy target for 2030 at 36.4%

<sup>4</sup> enerDATA (2020): Bosnia and Herzegovina. Country Energy Report. April 2020. enerDATA.

<sup>5</sup> Energy Community Secretariat (2020): Bosnia and Herzegovina. Annual Implementation Report. 1 November 2020. Energy Community.

in gross final energy consumption, an 8.4% increase over the 2020 goal, while a target of 13.2% exists for the transport sector, 36.6% for heating and cooling, and 63.8% in the electricity sector.

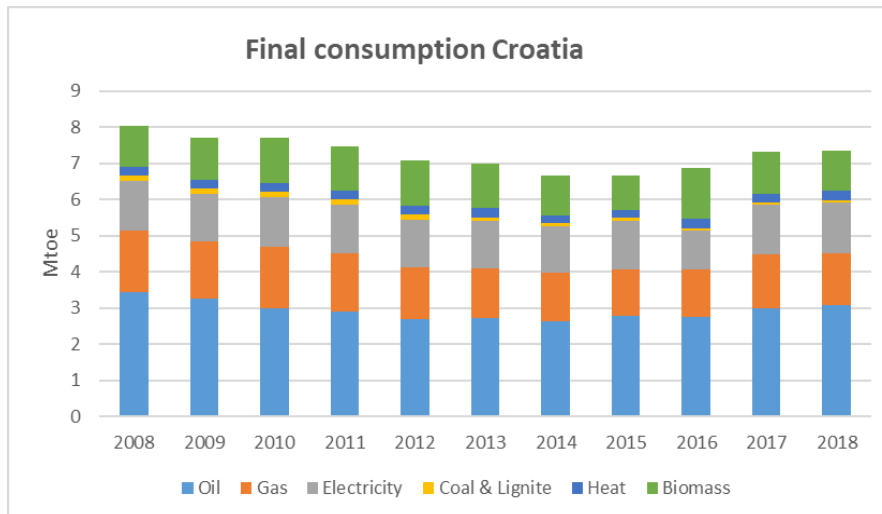


Figure 5 AEA, Source Enerdata

This targeted increase of renewable energy sources should help the country improve national energy security, decarbonisation of the energy sector and further reduce its import dependence. Currently, Croatia’s energy mix for power generation is predominantly dependent on hydropower (total installed capacity of 2200 MW<sup>6</sup>); by 2030, this capacity should reach an approximate level of 2.6 GW. The country also plans to expand renewable energy capacities by investing in solar and wind power plants. In particular, the Croatian national government will put an increased focus on expanding renewable energy uptake in more geographically separated areas (i.e. islands) from the mainland.

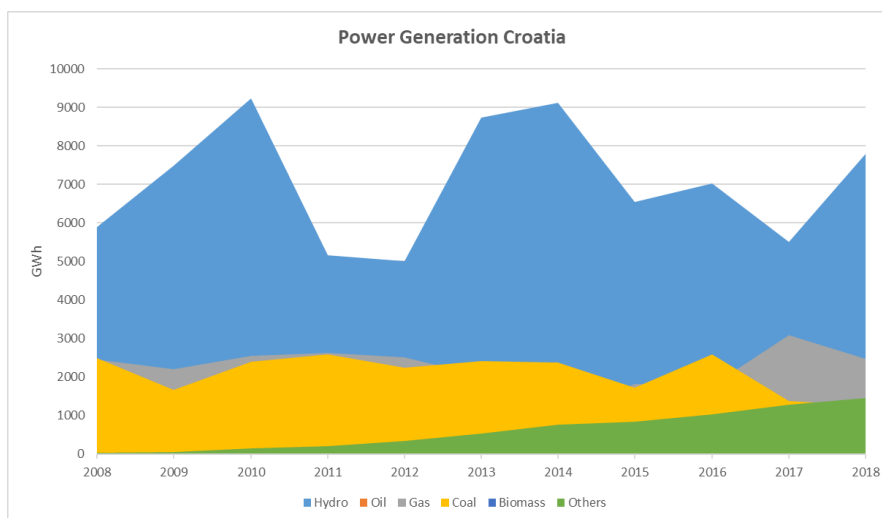


Figure 6 - AEA, Source Enerdata

## North Macedonia

North Macedonia is candidate country of the European Union and is committed to implementing the *acquis communautaire*. The country is the first Contracting Part of the Energy Community that has submitted its draft integrated national energy and climate plan.

<sup>6</sup> Ministry of Environment and Energy (2019): Integrated National Energy and Climate Plan for the Republic of Croatia for the period 2021-2030. Republic of Croatia. December 2019. [https://ec.europa.eu/energy/sites/ener/files/documents/hr\\_final\\_necp\\_main\\_en.pdf](https://ec.europa.eu/energy/sites/ener/files/documents/hr_final_necp_main_en.pdf)

The National Renewable Action Plan of North Macedonia was amended in 2017 and raised the target of renewables in final energy consumption to 24% in 2020 (27% share of electricity, 30% share of heating and 10% for transport). In December 2019, the Energy Development Strategy (until 2040), relying on the five dimensions of the Energy Union, was adopted. One of the six strategic goals is the upscaling of renewables in final energy consumption to 35-45% by 2040. To achieve this ambitious goal, the share of solar PV (up to 1.4 GW) wind (up to 750 MW) should be increased by 2040. In addition, the share of biofuels should account for 10% by 2030. To facilitate the uptake, renewable auctions (feed-in tariffs and premiums) will take place between 2020 and 2025.<sup>7</sup>

Power generation remained stable at 5.6 TWh between 2015 and 2018 and the production mainly relies on lignite (51%), hydropower (32%) and gas (13%) and is very dependent on electricity imports. Total capacities of renewable energy amounts to 766 MW.

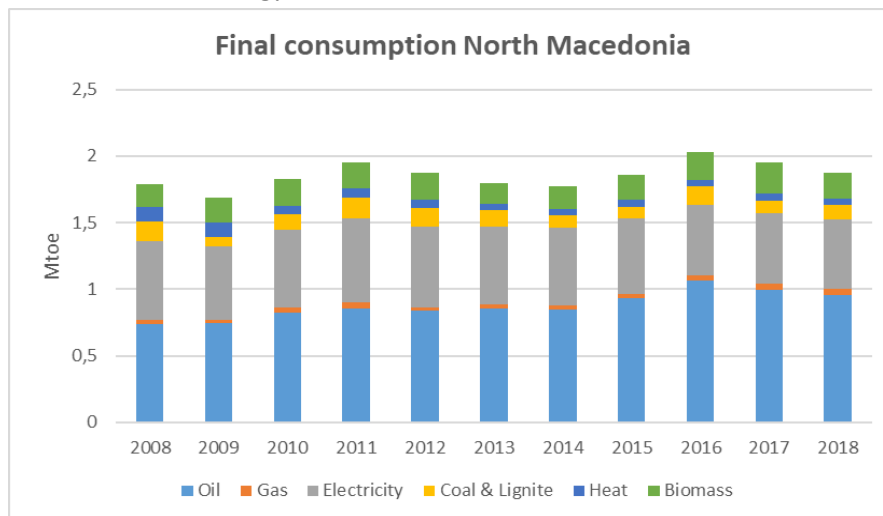


Figure 7 - AEA, Source Enerdata

North Macedonia has a high hydroelectric potential (estimated 9 TWh, while producing only 1 TWh), given its scenic mountainous and abundant rainfalls. The country's geothermal potential amounts to 500-600 GWh<sup>8</sup>. The Energy Development Strategy foresees a growing electricity consumption (3.7% / year) accounting for 11 TWh. To meet this rising demand, more than 1.8 GW of new capacity has to be installed after 2025, mainly hydropower and other renewables, as lignite-fired capacities will be progressively retired.

<sup>7</sup> Energy Community Secretariat (2020): North Macedonia, Annual Implementation Report, [https://www.energy-community.org/dam/jcr:0af3b17a-3759-4a23-a2ef-3134784e217c/EnC\\_IR2020.pdf](https://www.energy-community.org/dam/jcr:0af3b17a-3759-4a23-a2ef-3134784e217c/EnC_IR2020.pdf)

<sup>8</sup> Enerdata (2020): Macedonia. Country Energy Report. March 2020

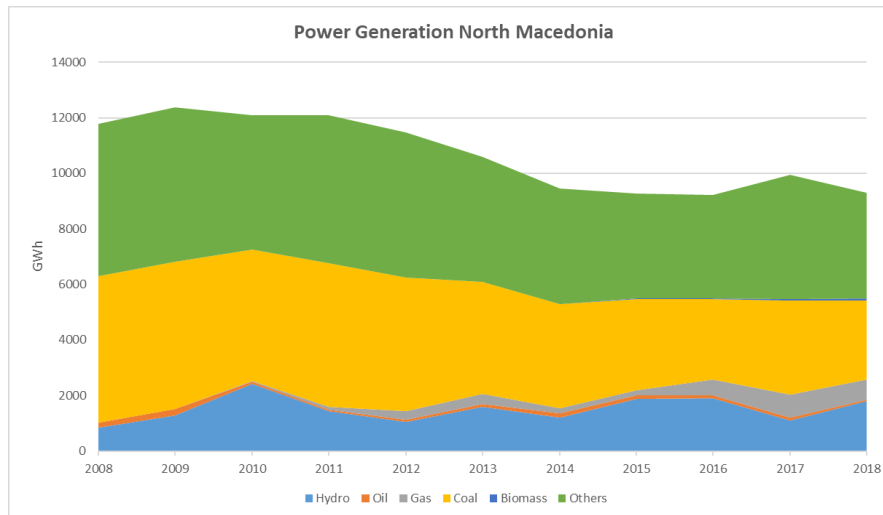


Figure 8 - AEA, Source Enerdata

### Summary

As the previous paragraphs showed, Albania, Bosnia and Herzegovina, Croatia and North Macedonia all have significant renewable energy potentials to exploit. However, due to the lack of supporting incentives and the strong reliance on fossil fuels and electricity imports, these resources are not sufficiently used. As either Contracting Parties of the Energy Community or Member States of the European Union, these countries are committed to the energy and climate policy goals of the EU and thus set final consumption targets for the electricity, heat and transport sectors. Making progress on these goals is not possible without macroeconomic growth, while creating enabling legislative frameworks to also combat energy poverty and speed-up the uptake of renewable energies.