



European policy for energy and climate, bilateral cooperation and green energy transition in the Balkans

“ The Difficult Decarbonisation Path in the Balkans ”

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The SE European Region Defined



Core countries

- Albania
- Bosnia and Herzegovina
- Bulgaria
- Croatia
- Cyprus
- Greece
- Hungary
- Israel
- Kosovo
- Montenegro
- North Macedonia
- Romania
- Serbia
- Slovenia
- Turkey

Peripheral countries

- Austria
- Egypt
- Italy
- Lebanon
- Moldova
- Slovakia
- Syria
- Ukraine

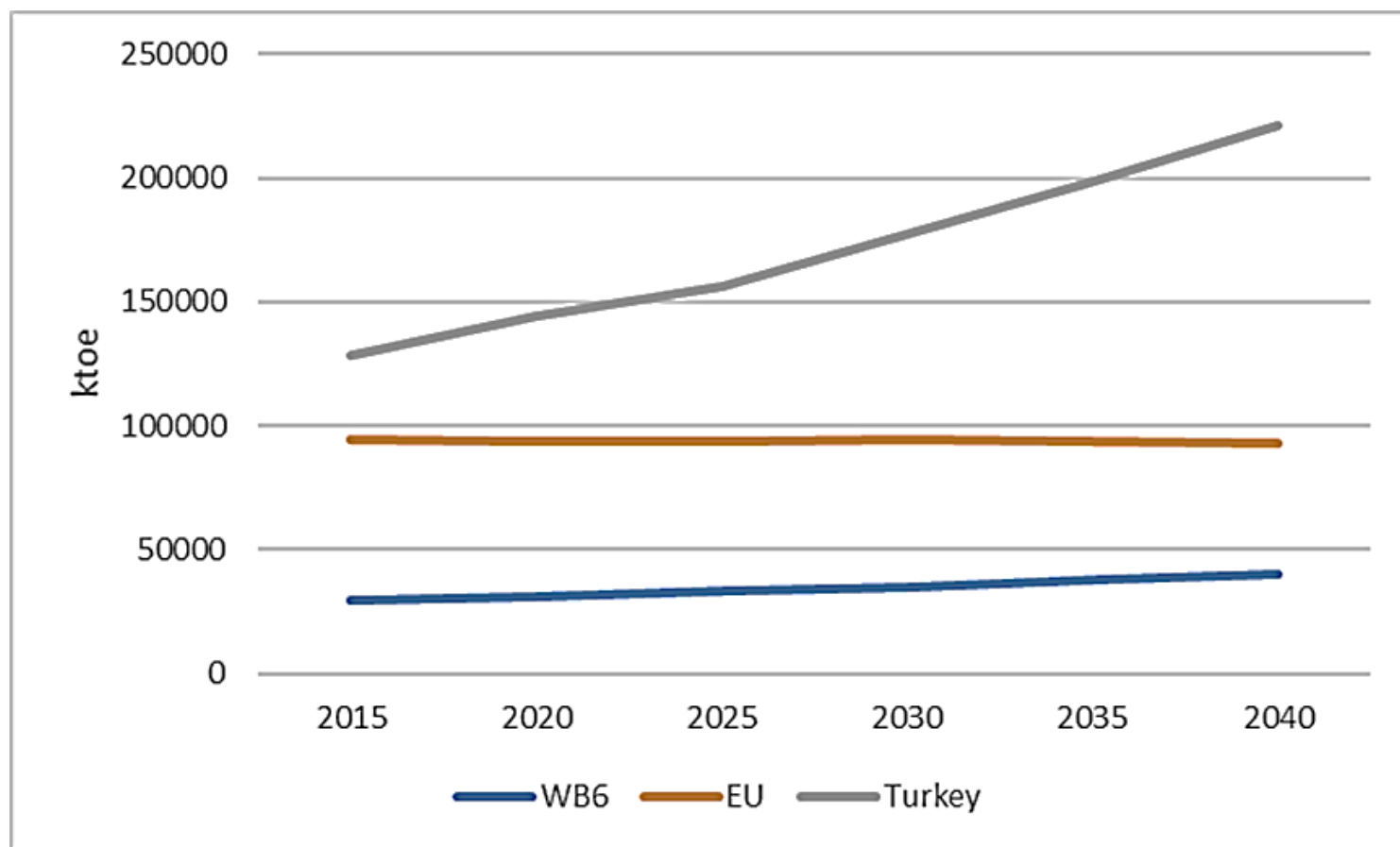
Introductory Remarks

- ❑ From an economic and political perspective today the Balkans are divided in the EU member countries (Greece, Bulgaria, Romania, Croatia, Slovenia) and in those in Western Balkans
- ❑ Energy demand projections by the IENE for the EU Balkan countries until 2040 show a flat, if not slightly diminishing, trend whereas corresponding projections for West Balkan countries indicate a growth pattern.
- ❑ As the economies of West Balkan countries are still developing at a relatively high rate, energy demand follows suit and is expected to grow further. This will help the introduction of clean technologies while making difficult the extraction from cheap coal use.
- ❑ Most countries in the Balkans, east and west, are highly dependent on hydrocarbon imports. This realisation makes it even harder to decarbonise as they have to develop indigenous clean form of energy.

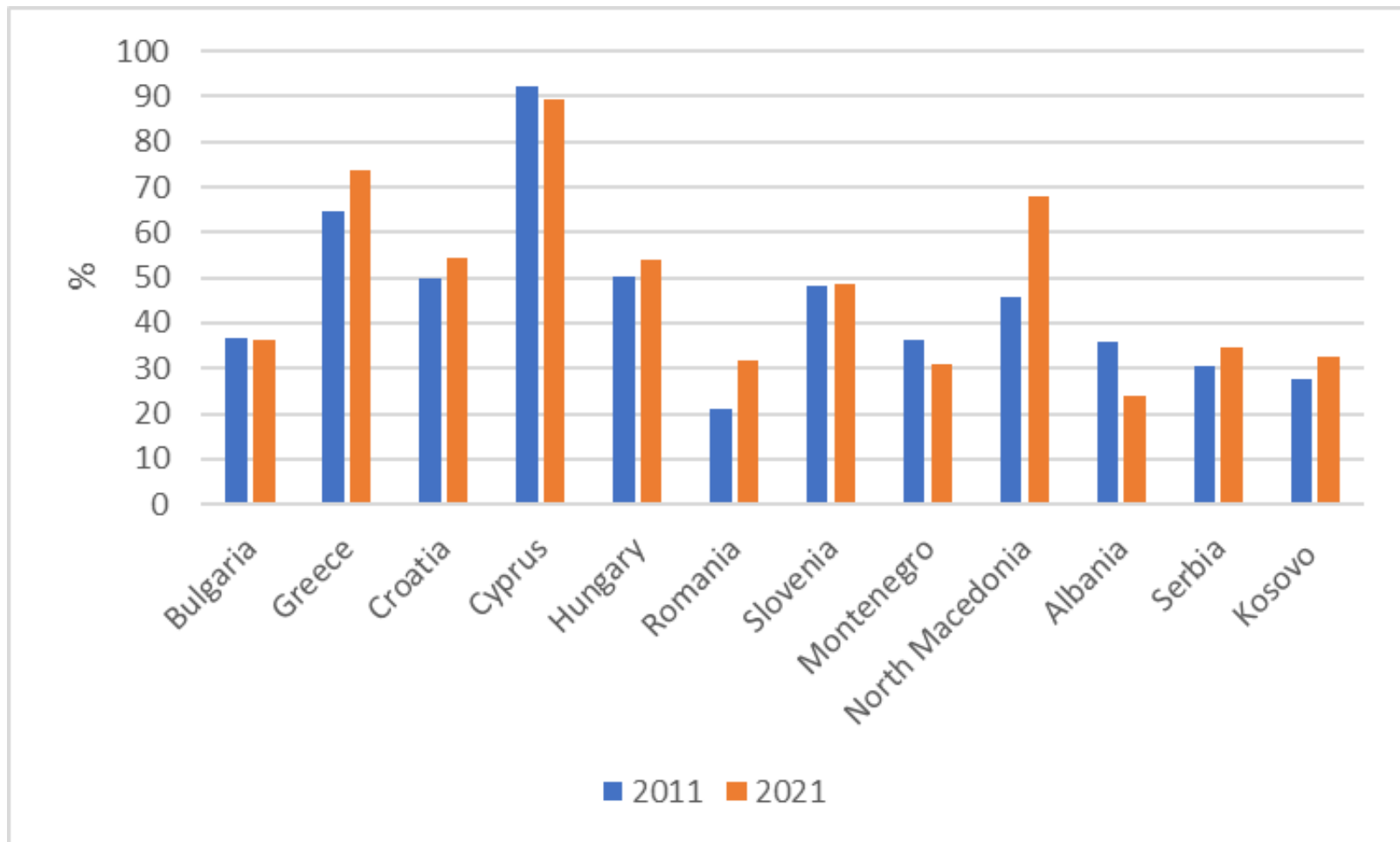
Introductory Remarks

- ❑ Between them the countries in the region have between them some 20 GW of installed coal/lignite power plants. Turkey has an additional 20 GW. Some countries continue to add new coal capacity since solid fuels provide much needed energy security.
- ❑ Commenting on the energy mix of the countries in the Balkan region we note that although over the last 10 years we have seen less solid fuel use, higher gas consumption, marginally less oil use, and much higher RES deployment and steady use of nuclear this does not enhance much a trend toward decarbonisation.
- ❑ Admittedly we have seen a lot more RES being installed and connected to the electricity grids in various countries with an a most doubling of RES input for power generation. But there are serious constraints in expanding and upgrading the electricity grids in the region. However, it is only through massive investment in new cross border electricity connections and electricity grid upgrades that we can hope to increase RES input in the whole energy system, not just for power generation.
- ❑ In this respect the path towards decarbonisation in SE Europe, and the Balkans in particular, is going to be long, ardeous and expensive. The arious governments and the EU and other international organisations will have to provide a lot more assistance (to companies and consumers alike) in order for clean technologies to be able to increase their share in the region's energy mix.

Gross Inland Energy Consumption in SE Europe per Group of Countries (2015-2040)



High Energy Dependence in SE Europe (2011 and 2021)



Sources: Eurostat, IENE

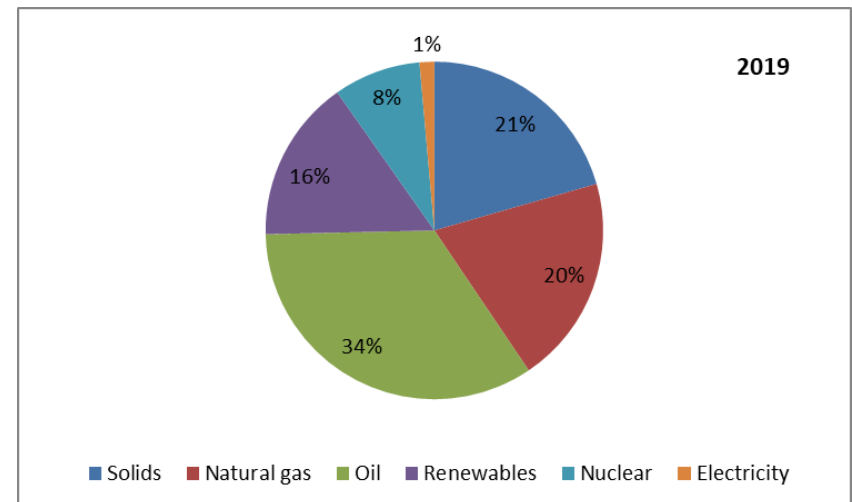
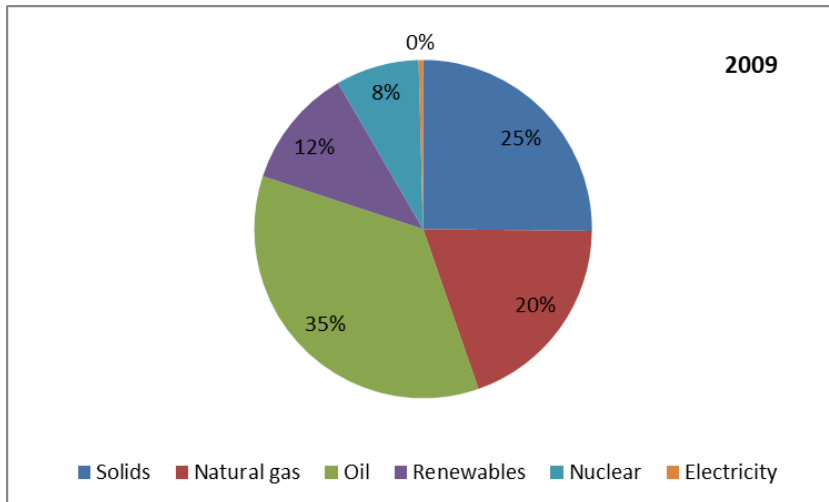
Table 1: Under Construction and Planned Coal Plants in SEE Countries (MW)*, as of January 2024

| Country | Announced | Pre-permit | Permitted | Announced + Pre-permit + Permitted | Construction | Shelved | Operating | Mothballed | Cancelled 2010-2023 | Retired 2000-2023 |
|------------------------|-----------|------------|-----------|------------------------------------|--------------|---------|-----------|------------|---------------------|-------------------|
| Albania | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 800 | 0 |
| Bosnia and Herzegovina | 0 | 1.350 | 0 | 1.350 | 0 | 350 | 2.090 | 0 | 3.500 | 0 |
| Bulgaria | 0 | 0 | 0 | 0 | 0 | 0 | 4.569 | 540 | 2.660 | 1.380 |
| Croatia | 0 | 0 | 0 | 0 | 0 | 0 | 217 | 125 | 1.300 | 0 |
| Greece | 0 | 0 | 0 | 0 | 0 | 0 | 2.885 | 0 | 1.250 | 3.053 |
| Hungary | 0 | 0 | 0 | 0 | 0 | 0 | 944 | 250 | 3.080 | 515 |
| Kosovo | 0 | 0 | 0 | 0 | 0 | 0 | 1.290 | 0 | 830 | 190 |
| Montenegro | 0 | 0 | 0 | 0 | 0 | 0 | 225 | 0 | 1.664 | 0 |
| North Macedonia | 0 | 0 | 0 | 0 | 0 | 0 | 824 | 0 | 730 | 0 |
| Romania | 0 | 0 | 0 | 0 | 0 | 0 | 2.310 | 645 | 5.705 | 4.780 |
| Serbia | 0 | 0 | 0 | 0 | 350 | 1.350 | 4.435 | 32 | 1.445 | 0 |
| Slovenia | 0 | 0 | 0 | 0 | 0 | 0 | 1.069 | 0 | 0 | 535 |
| Turkey | 1.000 | 888 | 2.920 | 4.808 | 145 | 4.820 | 20.473 | 400 | 89.068 | 0 |

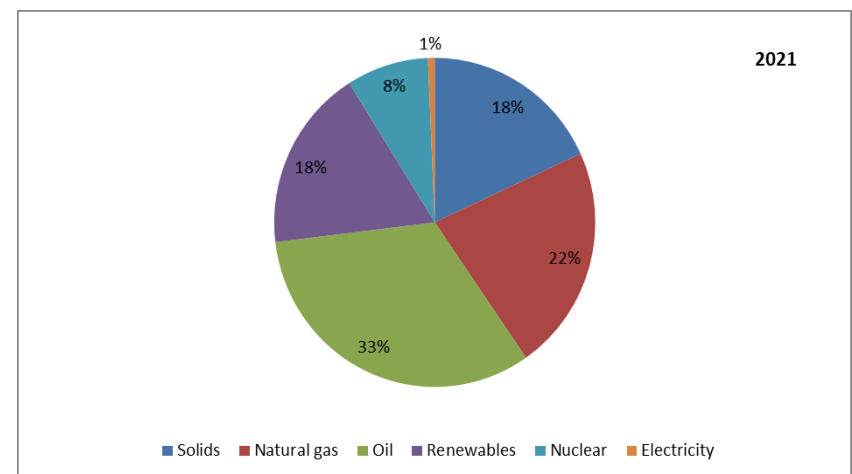
***Note:** Includes units 30 MW and larger

Sources: EndCoal, IENE

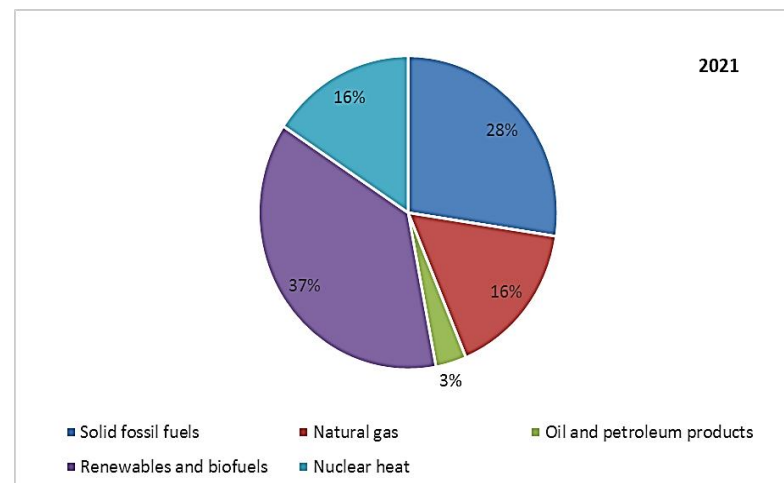
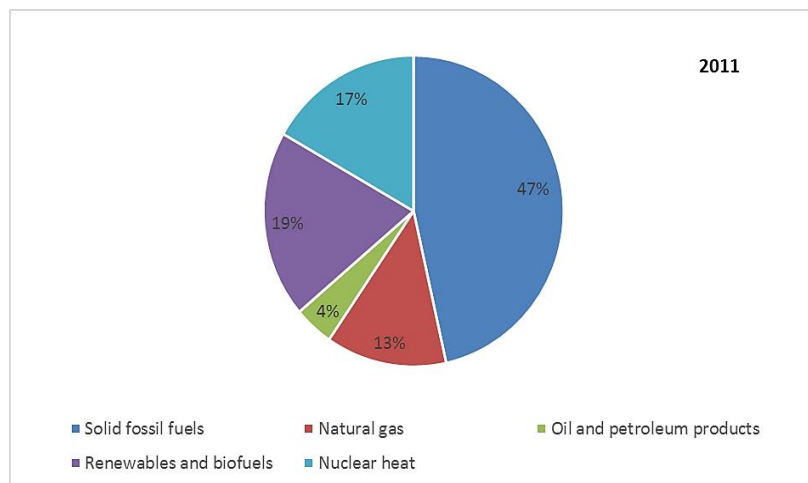
SE Europe's Energy Mix, Without Turkey, 2009, 2019 and 2021 - High Oil and Gas Import Dependence



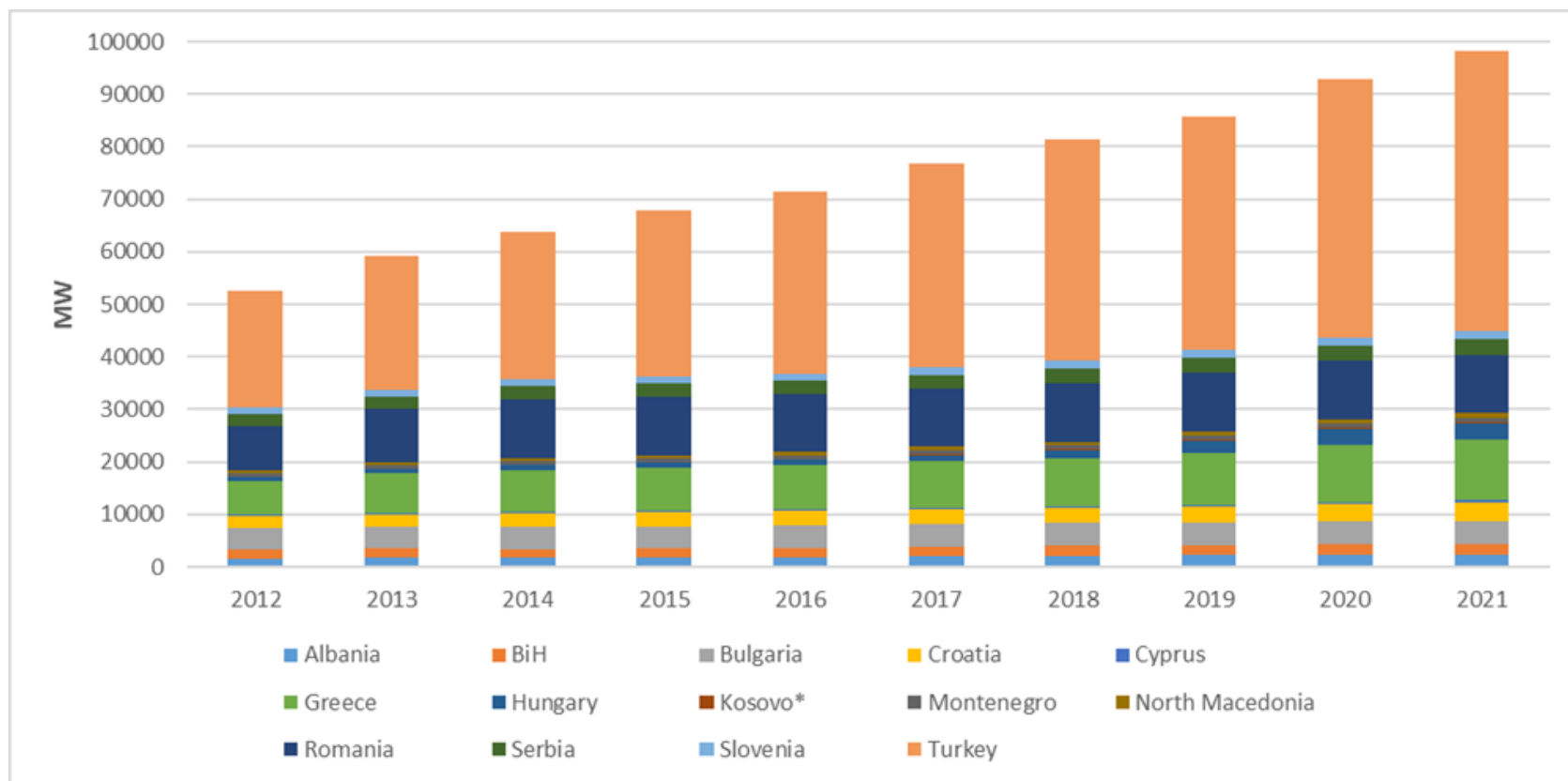
Over the last 10 years, we see considerably less solid fuel use, higher gas consumption, marginally less oil use, much higher RES deployment and steady nuclear use.



Power Generation Mix per Fuel in SE Europe (2011 and 2021)



Total Installed Capacity of RES Systems by Country in SE Europe, Including Hydro, 2012-2021



Note: *Kosovo is presented separately without prejudice to positions on status and in line with the United Nations Security Council Resolution 1244 (1999)

Sources: IRENA, IENE



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The background of the slide is a dark blue image of the European continent, viewed from space. The landmasses are dotted with white lights representing cities. Overlaid on this is a complex network of glowing blue lines that curve and connect across the continent, symbolizing an energy or communication network.

*Thank you
for your attention!*

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