

# Energy Poverty in the Western Balkans

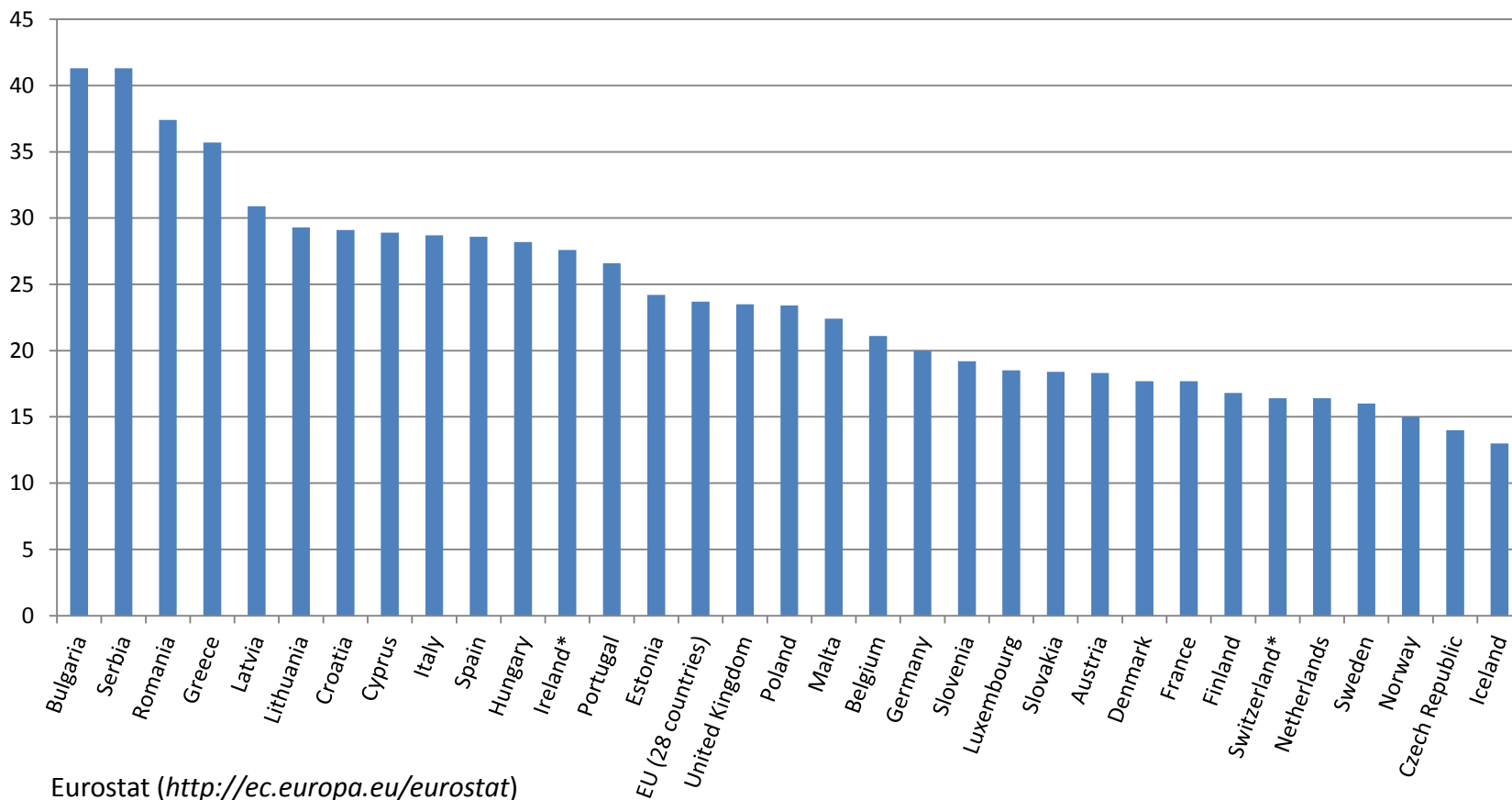
The balancing factor between Affordability and  
Environmental Sustainability

Mihailo Mihailović, Nikola Tomasović, Serbia

# Energy Poverty Definitions

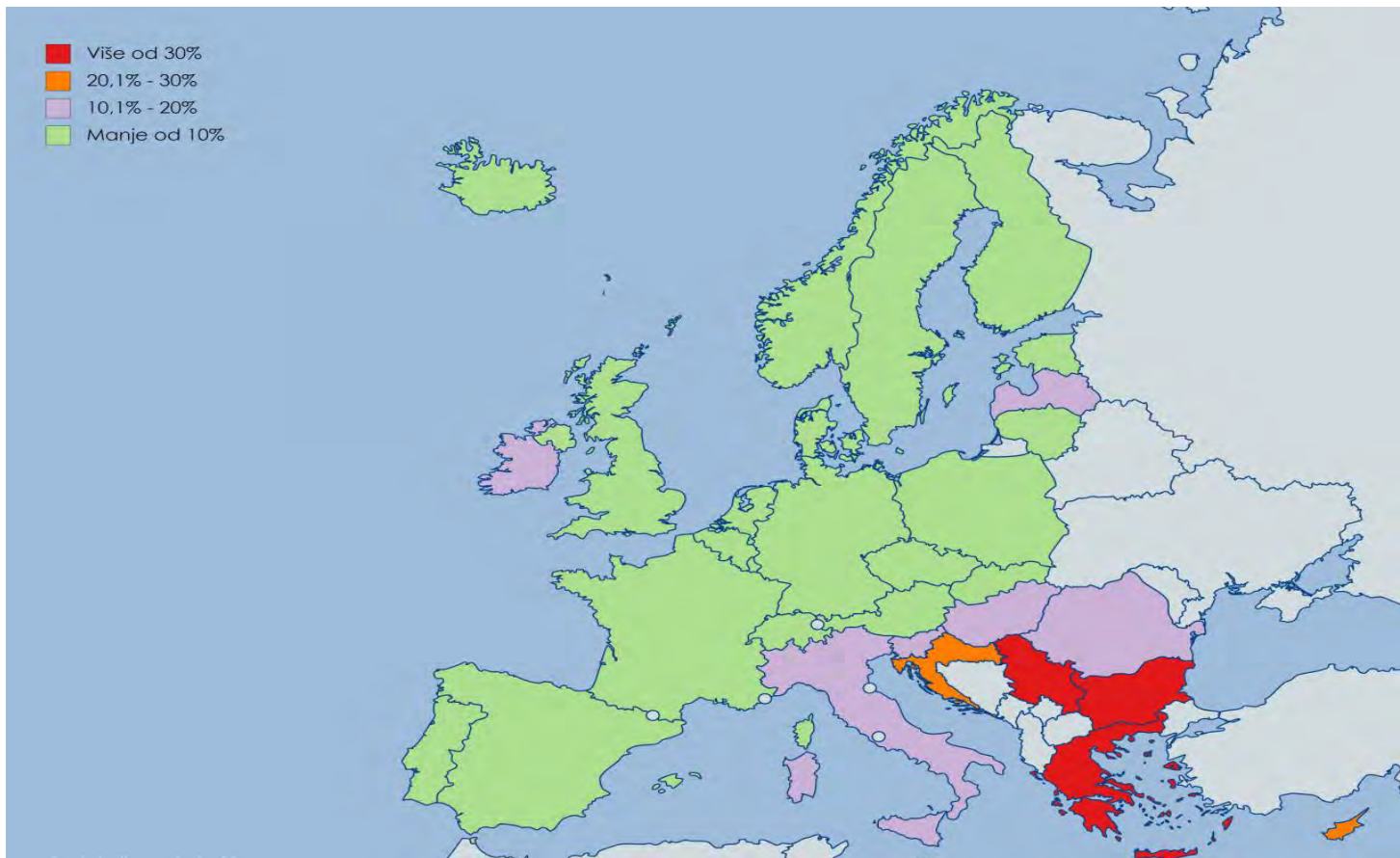
- There is now explicit definition of Energy poverty (or Fuel poverty) among the European countries
- Energy poverty is defined as a situation in which households are not able to obtain dignified living conditions and energy services at an affordable cost or to adequately heat their homes.
- Individuals do not have the possibility to provide adequate and proper heating conditions as recommended by the World Health Organisation, the proper conditions refer to 21 degrees Celsius in the living rooms and 18 in other rooms
- Fuel Poverty in the UK: a fuel poor household that needs to spend more than 10% of its income on fuel use and heating in order to achieve an adequate standard of warmth
- Energy Poverty Drivers: Demographic factors, Energy Prices, Income levels, Type of households, Heating Systems, Supply Choice, Building Efficiency, Policy Intervention

# Population at risk of poverty (%)



**High correlation between the percentage of the population at risk of poverty or social exclusion, and the percentage of the population with debt per utility bills.**

# Population with debt for utilities(%) 2015



Gavrilo Rajkovic

**The three Balkan countries have over 30% of the total population having problems with regular payment of utility bills - Greece, Serbia and Bulgaria**

# Energy Poverty issues in Europe

- Energy poverty is defined officially only in five EU member states - France, Ireland, the UK, Slovakia and Cyprus
- It has been defined unofficially in Austria, Italy and Malta
- Ireland - a poor household that spends more than 10% of their disposable income on energy services in the home.

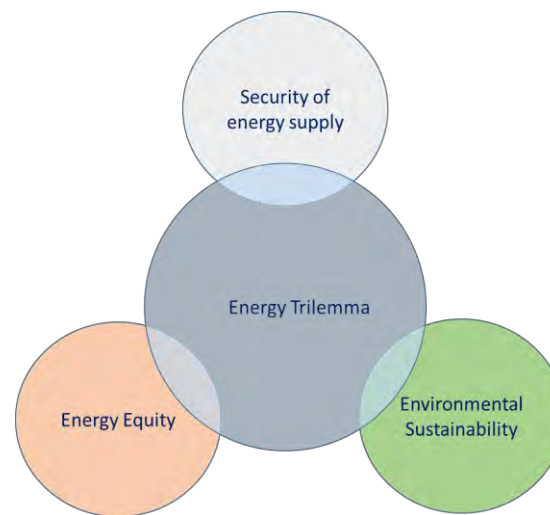
**PARADOX:** Among the countries with the highest percentage of the population that cannot provide adequate heat at residential capacities are coastal countries, with very hot climate, such as Greece, Cyprus, Portugal, and Bulgari, while the coldest countries in Europe demonstrate high performance globally- such as Norway, Sweden, Iceland, Finland- and at the same time they can be described with higher electricity prices than the rest of Europe.

It is clear that the level of development, economic, social and political conditions are much more important than climate conditions. It has to be added that there is a high percentage of inefficient housing, under development of infrastructure and system related problems



# Major National Challenges in the Western Balkans

1. Transformation of energy supply
2. Advancing of energy access
3. Enabling consumer affordability and industry competitiveness
4. Improvement of energy efficiency
5. Decarbonisation of the energy sector

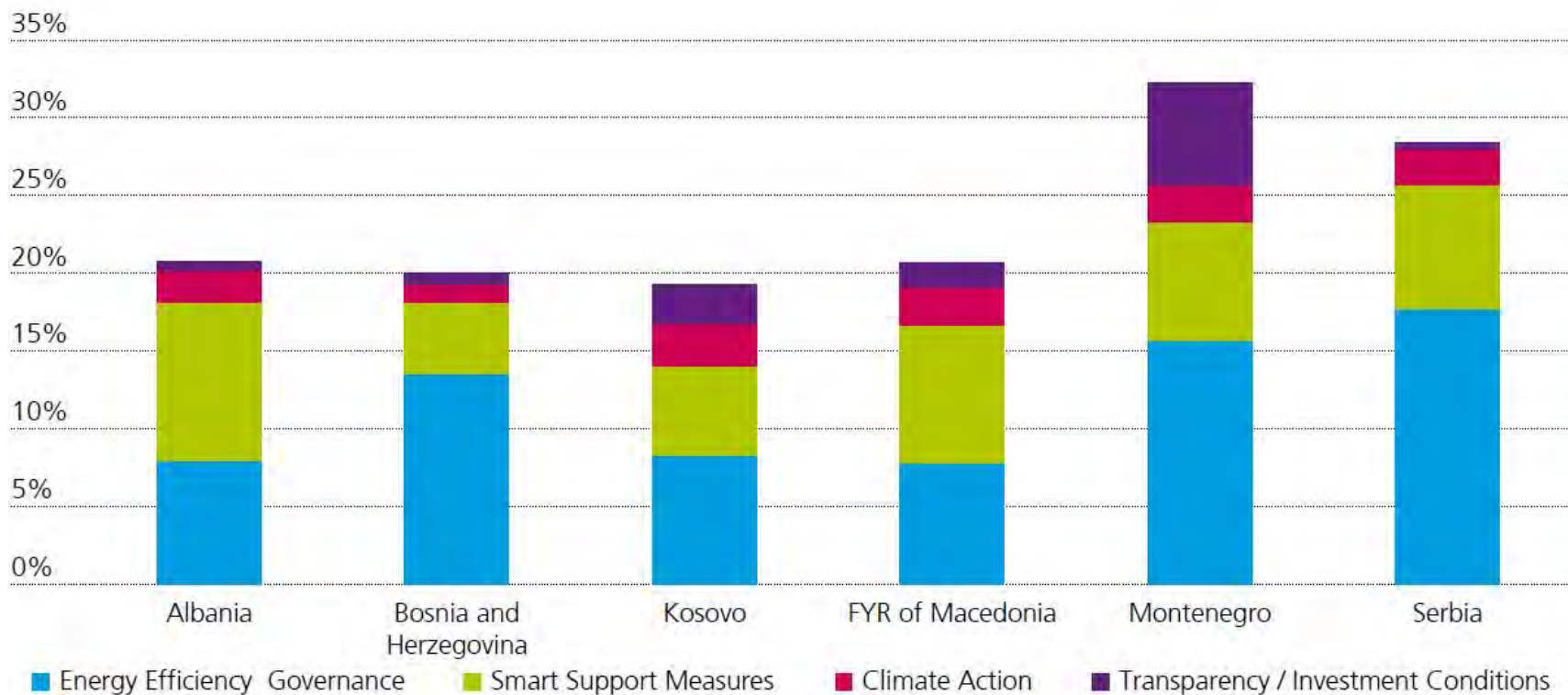


Country	Global Ranking	Energy Security	Energy Equity	Environmental Sustainability
Albania	72	81	85	22
Croatia	29	41	43	26
FYROM	65	53	79	60
Montenegro	56	55	72	62
Serbia	73	61	73	89

*Global WEC Energy Trilemma Ranking 2016 (out of 125 countries)*

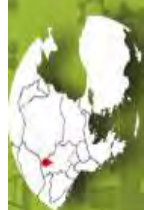
In order to provide energy under adequate security, quality and affordability standards some of the considered countries have been facing the cost of environmental sustainability

# Overall implementation of EU policies in WB

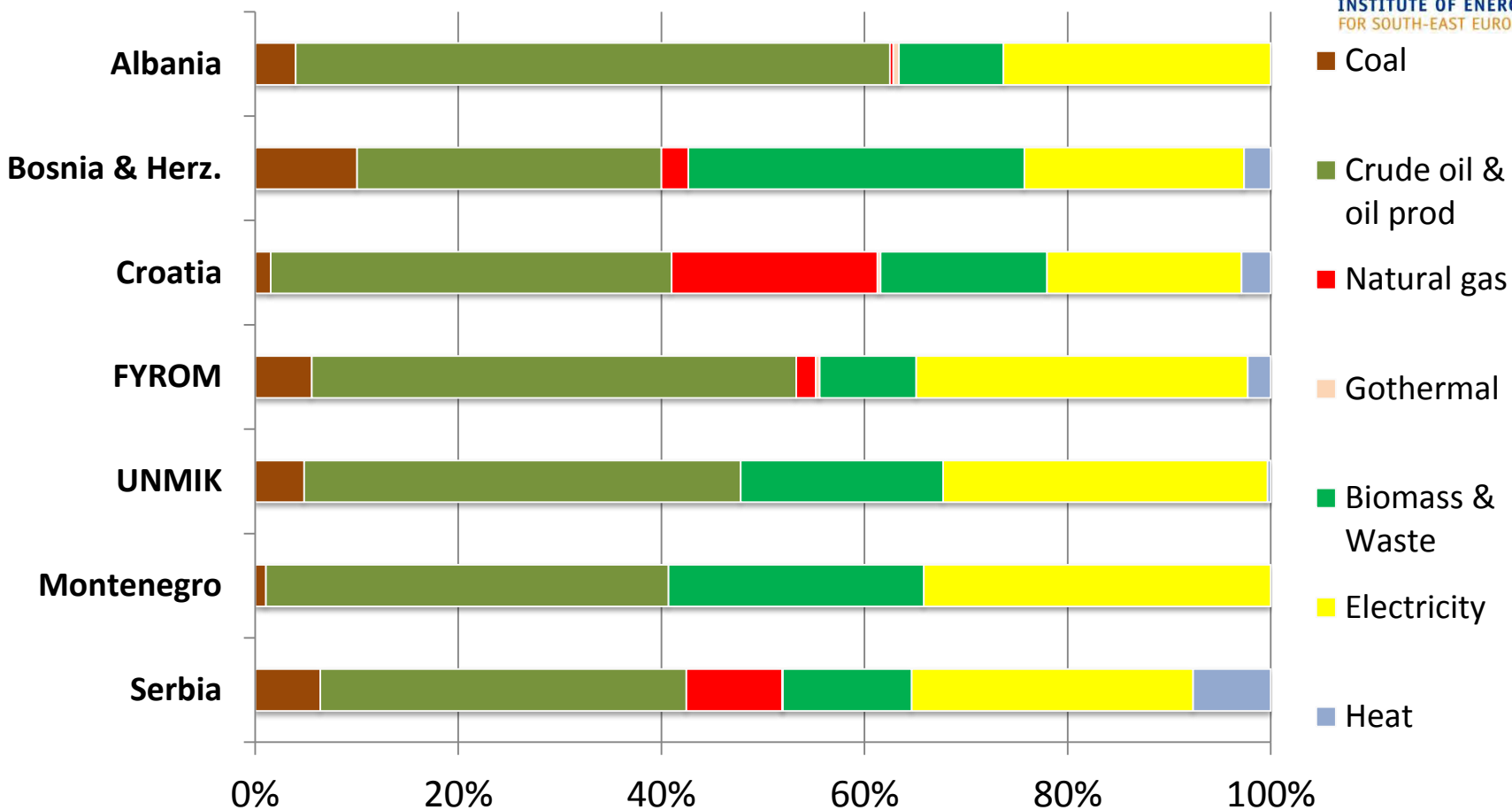


Source: Energy Community Secretariat

- Improving the governance for energy efficiency
- Implementing smart support measures that improve the sustainability of energy systems
- Fostering climate action and transparency of sustainable energy markets



# WB - Total Final Energy Consumption

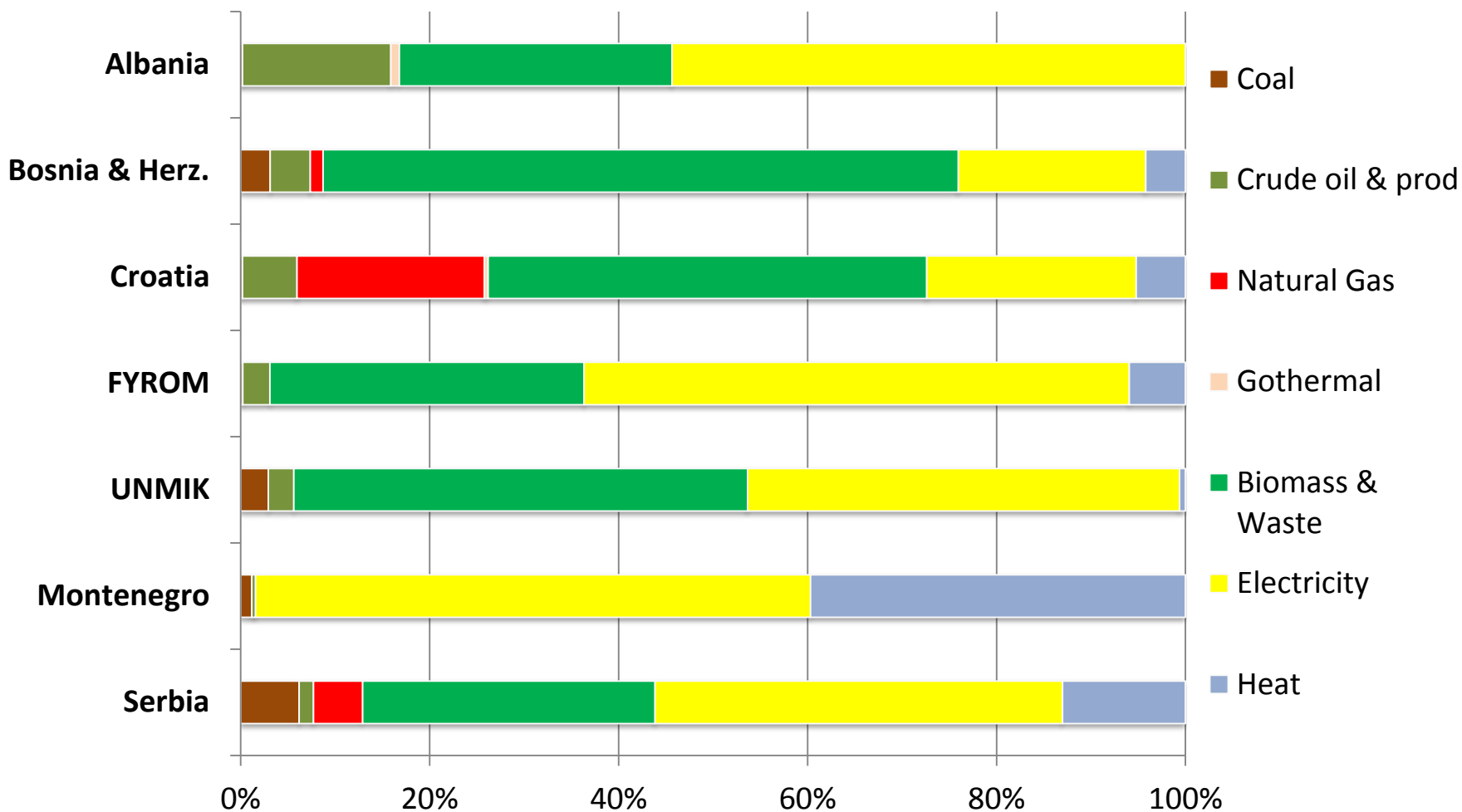


Data source: IEA

- Oil and its products, electricity and biomass dominate in TFE
- Further electrification of transport, heating and cooling sectors will raise several challenges in terms of investments and infrastructure development



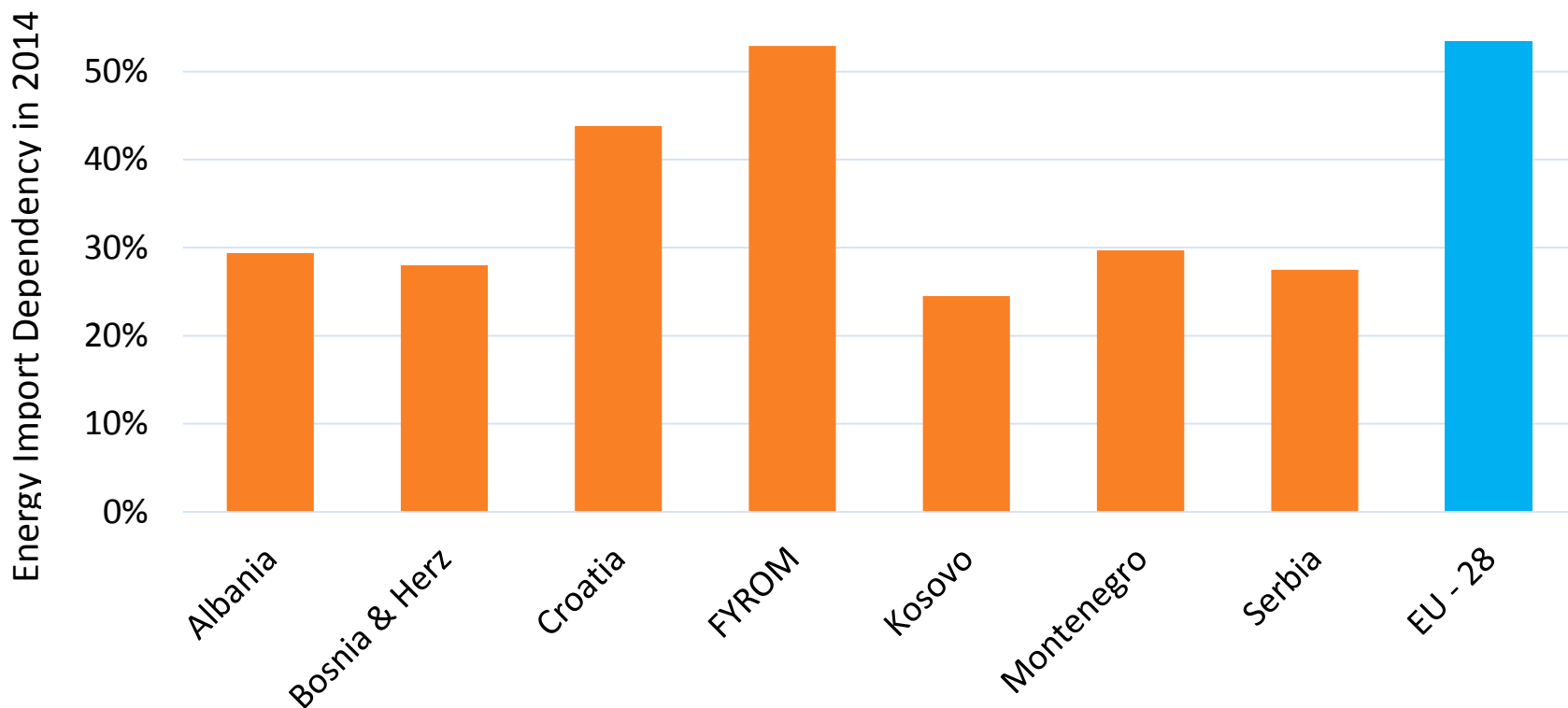
# WB - Households' Final Energy Consumption



Data source: IEA

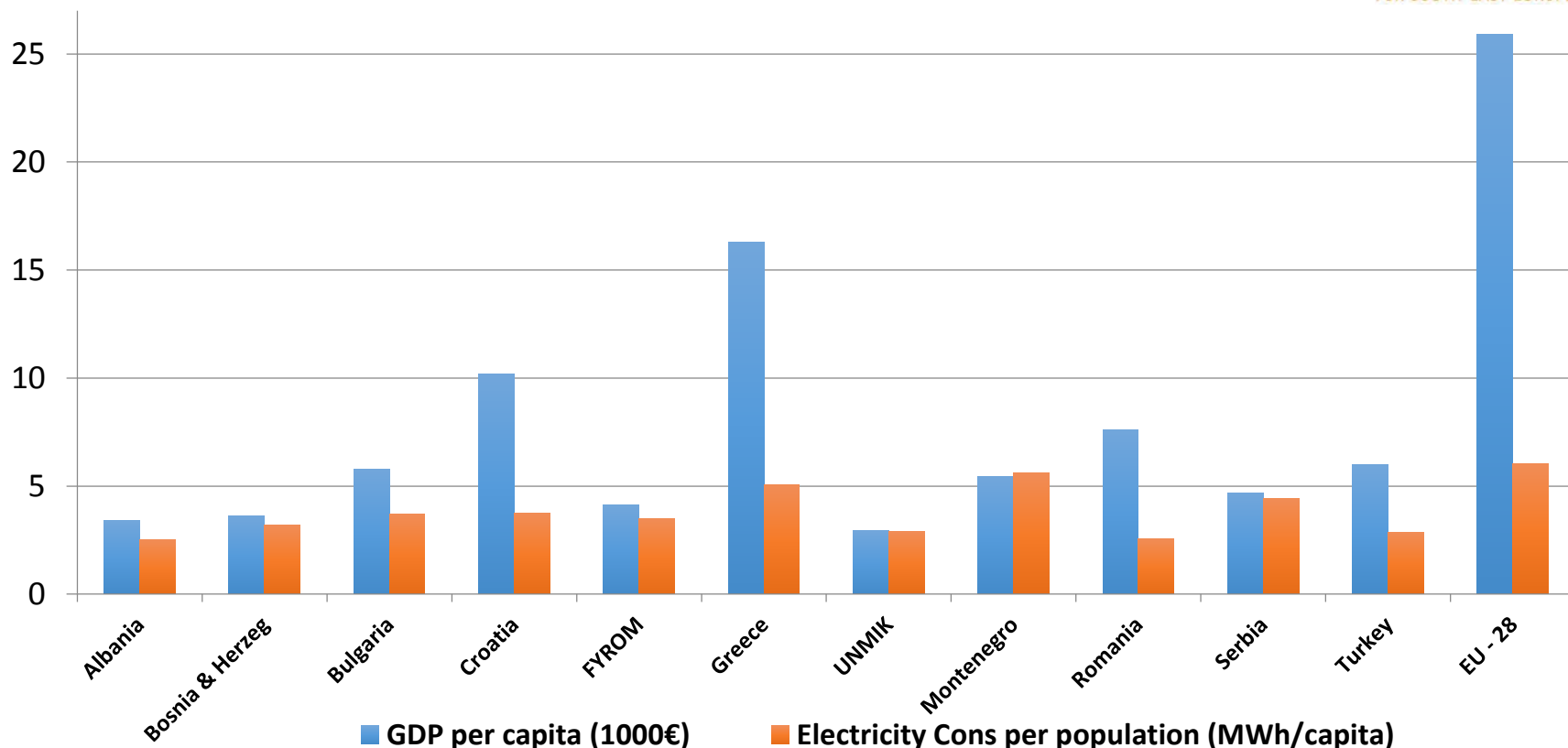


## Security of energy supply - Import dependence



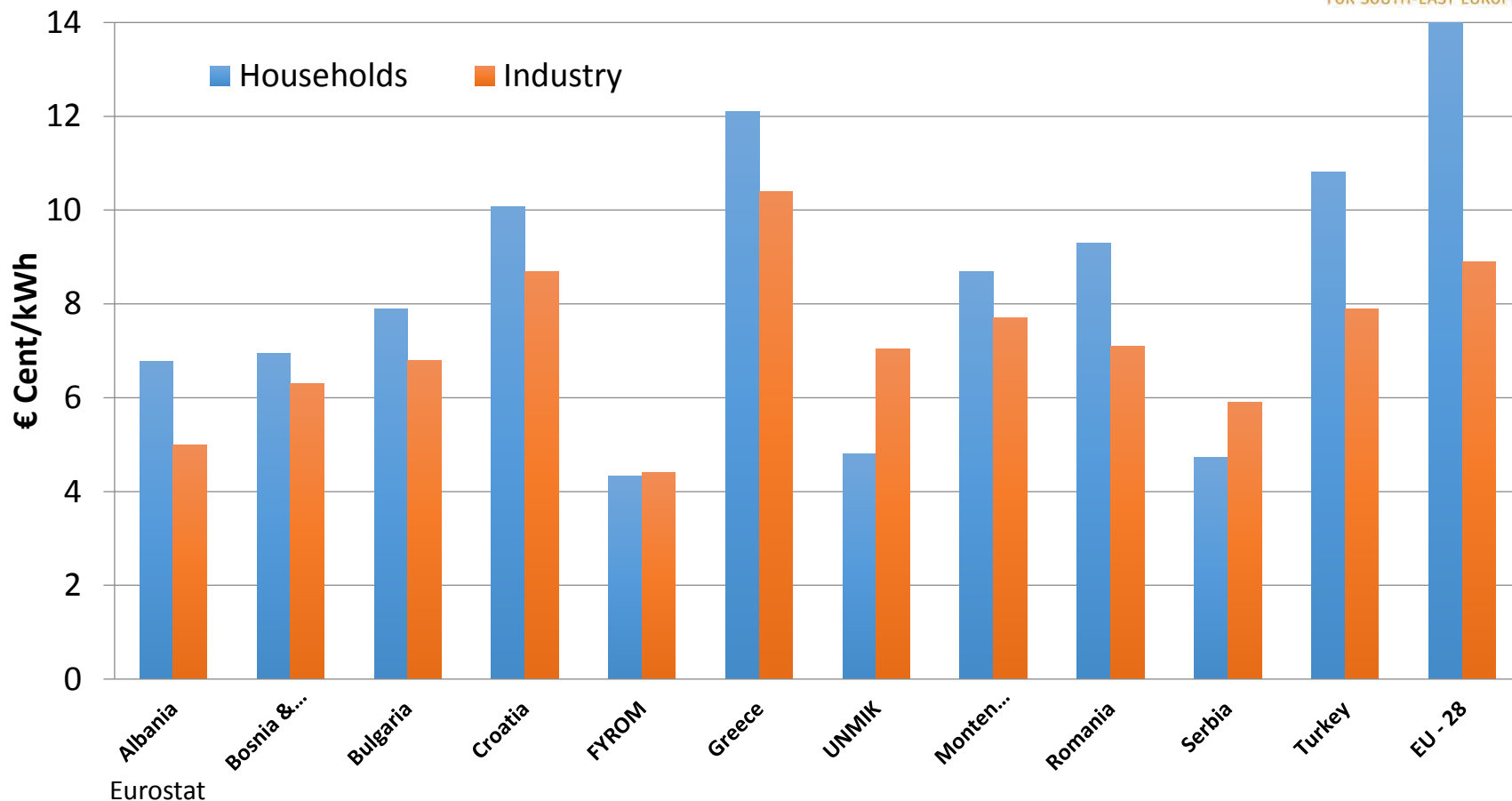
- **The average EU dependency on energy imports (53.4%) was higher than the relevant values for the WB in 2014 (mainly oil and gas)**
- **Generally, the WB region is an importer of electricity (Serbia is self-sufficient, BIH is an exporter)**

# GDP and Electricity Consumption per capita



- In 2013, the electricity consumption/capita in the WB was about 60% of the EU-28
- Households' electricity prices are carefully controlled and are much lower than in EU 28. Artificially low tariffs lead to low level of customers' energy efficiency.

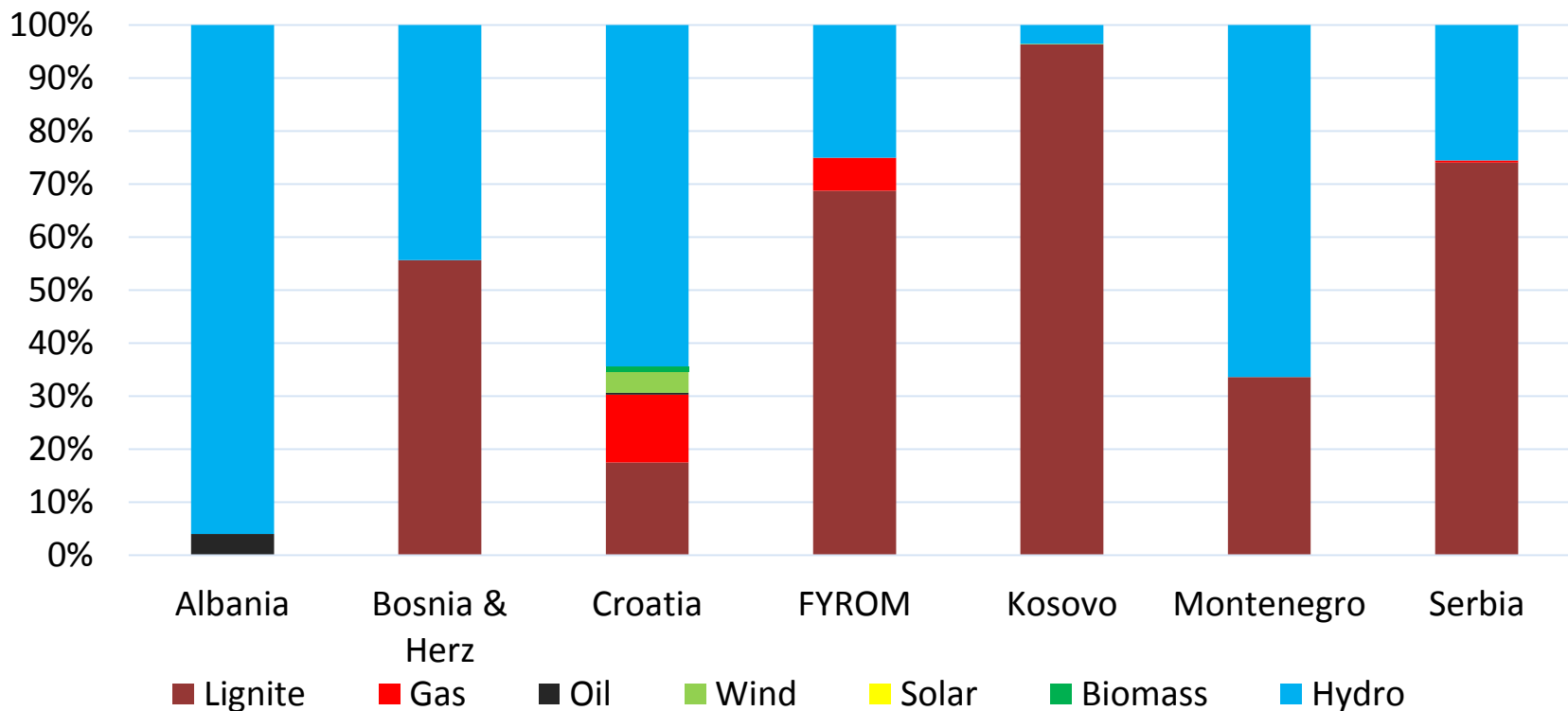
# Electricity Prices (excluded taxes & levies) - 2015



- **According to the World Bank, all consumers in the WB have access to electricity**
- **Industrial prices are usually lower than household prices, apart from Serbia and FYROM - Support of social benefits**



# Electricity Generation in the Western Balkans



- **The Trilemma policy framework in the WB could be considered as a dilemma between “black (fossil) ” and “green (renewables)” approach to long-term strategic energy planning**
- **During the next decade nearly 45% of the new WB generating capacities (about 6.2GW) is planned to run on coal**



# Combating Energy Poverty

The main instruments for reducing energy poverty:

- Energy Efficiency (for vulnerable consumers)
- Financial Support (to assist vulnerable customers to pay the bills)
- Consumer Protection (for those in vulnerable situations)
- Information and Counseling
- Measures for energy service providers

Usually the cost of energy services rises faster than households income energy subsidies and direct financial support for domestic energy services (mainly heat) can not provide a viable long-term solution to the problem of energy poverty.

Energy efficiency should be the first step in any system to combat energy poverty. The lack of finance therefore is confirmed as a key barrier to an effective implementation of energy efficiency policies.

# Combating Energy Poverty

## Considering the investments in terms of combating energy poverty

- Energy efficiency and energy saving measures in the buildings sector
- Improving the district heating system, the heating system in buildings
- Cooperation with international donors and the banking system in order to ensure investment subsidies for energy efficiency measures
- Replacement of household appliances with more efficient ones
- Refurbishment of public buildings under the support of state funds and international donors.
- Financial and technical support for the installation of smart meters
- Development of relevant statistical databases and improve data collection for relevant indicators
- Integration of biomass projects for heating and electricity production purposes
- Regional cooperation on addressing energy poverty issues / cooperation with the European Union, International Financial Institutions etc

# Main Challenges for the Western Balkans

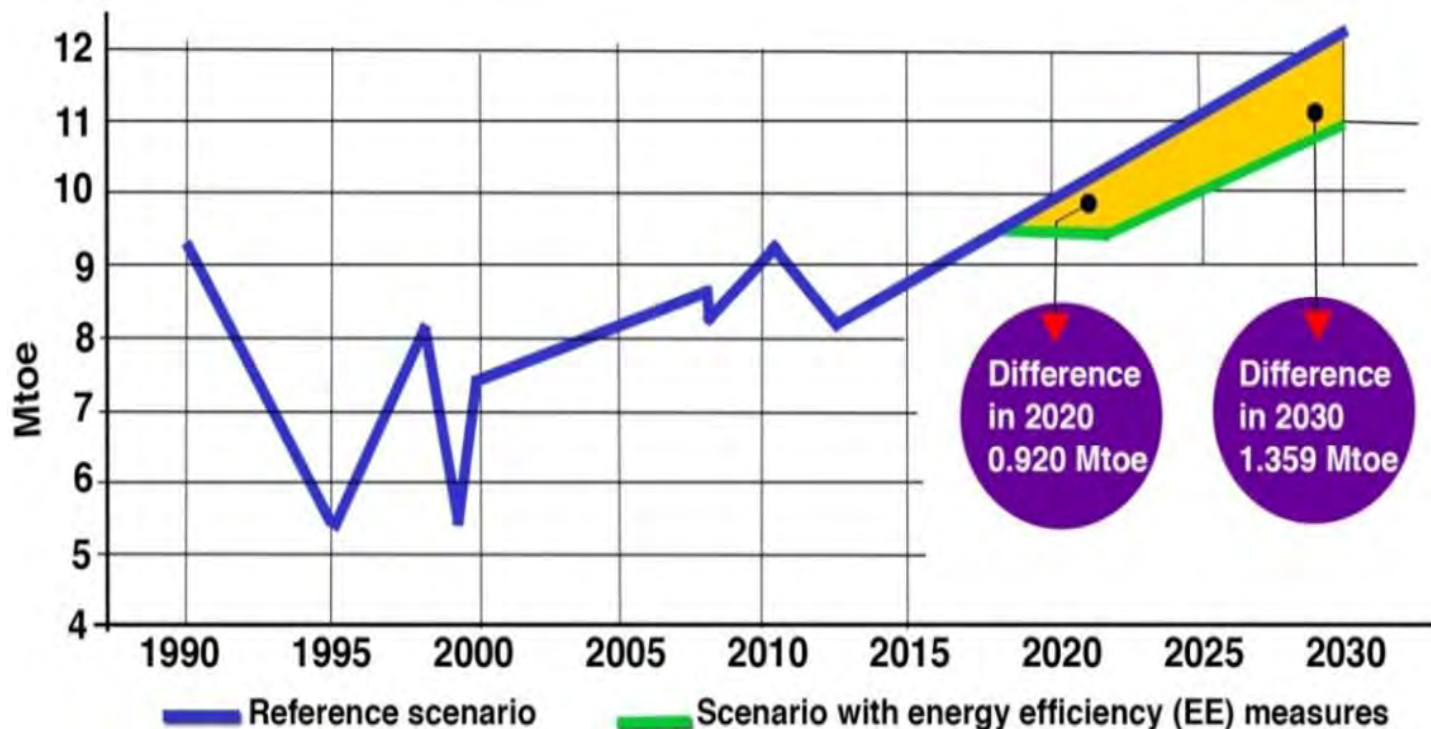
- Investing in new energy infrastructure projects and maintaining affordability standards
- Intensive energy consumption
- High values of carbon emission
- Moderate fossil fuels import dependency,
- Stable production and electricity supply,
- Development of the industrial sector and its relation to economic development and climate change
- High potential but minimal RES generation
- Lack of new investments
- Streamlining of finance instruments
- Improving investment patterns in the region

Thank you for your attention!





# Growth of Final Energy Consumption



Source: Energy sector Development Strategy of the Republic of Serbia 2025-2030



## Serbia - Renewable energy sources – technically usable potential

