

ENERGY Efficiency

in SE Europe

The SE European region is characterized by distinctly different, in terms of structure and operation, and frequently segregated, energy markets in various stages; This also holds true for Energy Efficiency, (EE) development.

As of the six EU member states, (M-S), in the region, i.e., Bulgaria, Croatia, Cyprus, Greece, Romania, and Slovenia, all have implemented the required steps toward the smooth adaptation of EU Energy and Environmental policies and have transposed all relevant Directives.

The West Balkan countries i.e., Albania, Bosnia & Herzegovina, Kosovo, Montenegro, N. Macedonia, and Serbia are in a transition process, and all are operating within the Energy Community framework. Turkey, the biggest energy hub in the region, with a rapidly growing economy during reporting period, became one of the fastest growing RES markets in the world and with notable steps in EE, especially in the building sector. Israel is an energy isolated country, where all of the electricity consumed is generated locally, with no significant imports from overseas. In addition, Israel does not export any electricity to neighboring countries, as no cross-border interconnections exist, and nothing is planned except a link to Cyprus by 2025. Recently, Israel set a goal of generating 20% of its electricity from solar energy, by 2025 and 30% by 2030.

Regarding Energy Efficiency in SE Europe, all states in the region have transposed the EU legislation on EE, (EED and EED recast – Green Deal, etc.). Following the requirements of the EE Directive, each EU Member State, M-S, has set its own indicative national EE target, prepared, and published a three-year National EE Action Plan, so-called NEEAP, which was approved by the European Commission with an annual progress report published every year thereafter, showing the achieved progress. Israel and Turkey have also prepared their own NEEAPs, with targets until 2030.

Regarding Albania, Bosnia & Herzegovina, Kosovo, Montenegro, and N. Macedonia their NEEAPs were expected in late 2021 (or early 2022), having received the assistance of the Energy Community, in order to be in compliance with the EED requirements.

Energy Efficiency in Transport in EU Member Countries in SEE

Country	Targets by 2030
Bulgaria	Up to PEC 17.46 Mtoe FEC 10.32 Mtoe
Croatia	Up to PEC 8.3 Mtoe FEC 6.89 Mtoe
Cyprus	Up to PEC 2.4 Mtoe FEC 2.00 Mtoe
Greece	PEC up to 21.0 Mtoe FEC 16.5 Mtoe
Hungary	FEC up to 18.75 Mtoe (2005), meaning steady annual saving 0.17 Mtoe or 0.8% annual saving
Romania	PEC: BAU=58.7 Mtoe to 32.3 Mtoe (-45.1%) FEC: BAU=43.2 Mtoe to 25.7 Mtoe (-40.4%)
Slovenia	Up to PEC 6.35 Mtoe FEC : 4.72 Mtoe
Israel	PEC: BAU = 8.25 Mtoe to 6.88 Mtoe (-16.7%)
Turkey	PEC: -23.9 Mtoe

As for the actions for EE projects in the SE European states, it can be seen that along with national funding, the EU-funded Structural Supporting Fund, introduces designated operational programmes, OP, for EE projects, with incentives for EE measures and actions, in all sectors, including building, industry and transportation.

For all the other countries, an important role for the promotion of EE projects, is played by specialized programmes funded either by the EU and/or other IFIs, as WB, UNDP, USAID, JICA, etc.

Country	Actions for the promotion of EE
Bulgaria	DESIREE Programme grant 10.9 m€ for gasification 10,000 households - Important role of European Structural Fund, ESF
Croatia	EE of Family Houses (2014-20) 26.7m€ - Renovation of Public Apartment buildings 211 m€ + 25 m€ loan from IFIs
Cyprus	ESF: 8.7 m€ for SME – 18.4 m€ for households – 20 m€ for public buildings – 1.17 m€ for pilot HECHP (hospitals, etc.)
Greece	Envisaged National EE Fund (lending & guarantee fund) + role of ESCOs – Important role of EE in households of EXOIKONOMO -3rd phase (500+ m€)
Hungary	EU- Operational Programmes/ESF for EE actions in households/SMEs
Slovenia	EE in households via subsidies/soft loans (100% for weak households) – ESF
Israel	145m\$ for qualified EE projects via tender
Serbia	Funds for EE in all sectors by EU/JICA UNDP
Turkey	Actions for EE through incentives – Loans from IFIs (WB, etc.)
Albania B & H Montenegro Kosovo N. Macedonia	Critical the role of IFIs (EU/WB/UNDP/etc.) and other international funds

It is evident that there is a plethora of Energy Efficiency projects and programmes in the region. The overall target being to provide and support EU's long-term target to become the first "climate-neutral" continent, by 2050.

Energy Efficiency projects in the building sector, especially in public buildings, are acting as a "locomotive train" aiming to push forward other sectors such as transportation and SMEs/Industry.

However, as Eurostat announced in early 2020, the EU energy consumption across Europe is rising despite the efforts to reduce it. The EU-27 GDP grew rapidly, between 2014 to 2017, from €11,782billion to €13,964billion, indicating that economic activity has not yet decoupled from energy consumption. The COVID-19 pandemic, which severely hit Europe from 2020 onwards, led to a decrease in energy consumption in (2020/2021), as a result of widespread lockdowns and a slowdown of the economic activity. However, it is expected that economic recovery will lead to a rebound in energy consumption, or at least bring it up to its previous levels.

Accordingly, the proposed NEEAPs by all EU M-S in the region and of the ones to be submitted shortly by other countries, are of great importance and must be applied with reverence and great attention to detail, in order to achieve most or all of the proposed targets.

High-Efficiency Cogeneration of Heat and Power, HECHP

The status of HECHP is varying within the SE European states, since there are countries without any or with limited, installed CHP capacity, especially for residential and industrial purposes, while others have a long tradition, mainly in connection with District Heating systems, DHS. The regulatory framework for CHP for all SE Europe countries is based on the EED & EED recast (2012/27/EU & 2018/2002/EU respectively).

Country	Framework for CHP
Albania	No regulatory framework yet
Bosnia and Herzegovina	Law on the use of RES & Efficient Cogeneration (Federation of Bosnia and Herzegovina-FBiH entity); Law on the use of RES & HECHP (Republic of Srpska-RS entity)
Bulgaria Croatia Cyprus Hungary Greece Montenegro Romania	2012/27/EU & 2018/2002/EU transposed into national laws

The incentives for the promotion of cogenerated electricity are varying in SE Europe countries.

Country	Support Scheme for cogenerated electricity
Bulgaria	Priority of CHP connection to Grid, Obligatory purchase of cogenerated electricity at F-i-T, until 12/2018, Certificates of Origin, by 1/2019 and F-i-T replaced by F-i-P
Croatia	Obligation to buy excess cogenerated electricity by the TSO at certain proportion determined by Government's Ordinance issued every 31st October. Regulation of the status of eligible electricity produced to eliminate inconsistencies. Guarantee of origin for cogenerated electricity
Cyprus	Net-billing
Hungary	From 2011, F-i-T scheme abolished for cogenerated electricity, some units closed/ paused activities; some other cogenerators formed regulatory centres, offering their flexibility to the TSO, as virtual power plants.

Summing up, the total installed CHP capacity in SEE EU M-S corresponds to 5.2% of the total installed capacity in EU-27. The share of CHP in gross electricity generation ranges from 8.2% to 11.2% in each country, which is lagging behind the average EU-27 share (26.8%).

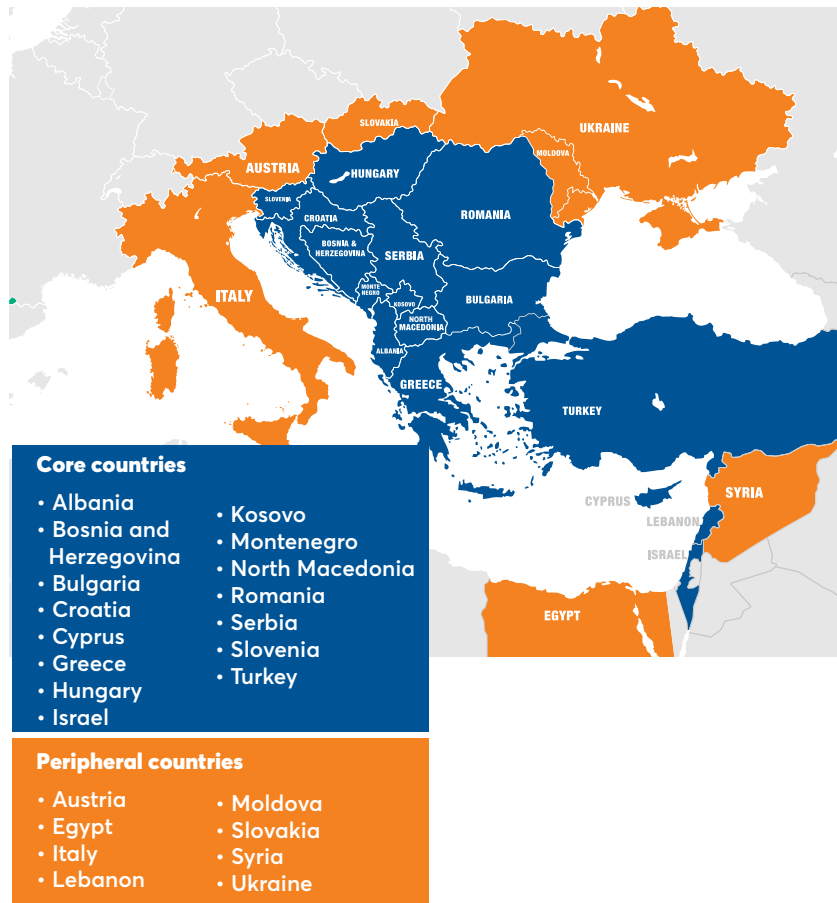
In addition, almost all SEE countries, with the exception of Albania, have integrated CHP units in their energy systems, mainly for providing useful heat to local district heating systems, for industrial applications or for agricultural purposes.

Who are we?

The Institute of Energy for SE Europe (IENE) is a nonprofit organization active throughout South East Europe, focusing on energy policy and analysis but also on information dissemination. IENE aims to promote a broader understanding of the major energy and environmental issues in the region.

key objective of the Institute is to contribute towards the implementation of the European Union's sustainable strategy which combines economic and social development, security of supply, environmental protection and climate change mitigation. Further information on the Institute, its mission and vision and its various activities can be found in www.iene.eu

The SE European Region as defined by IENE



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