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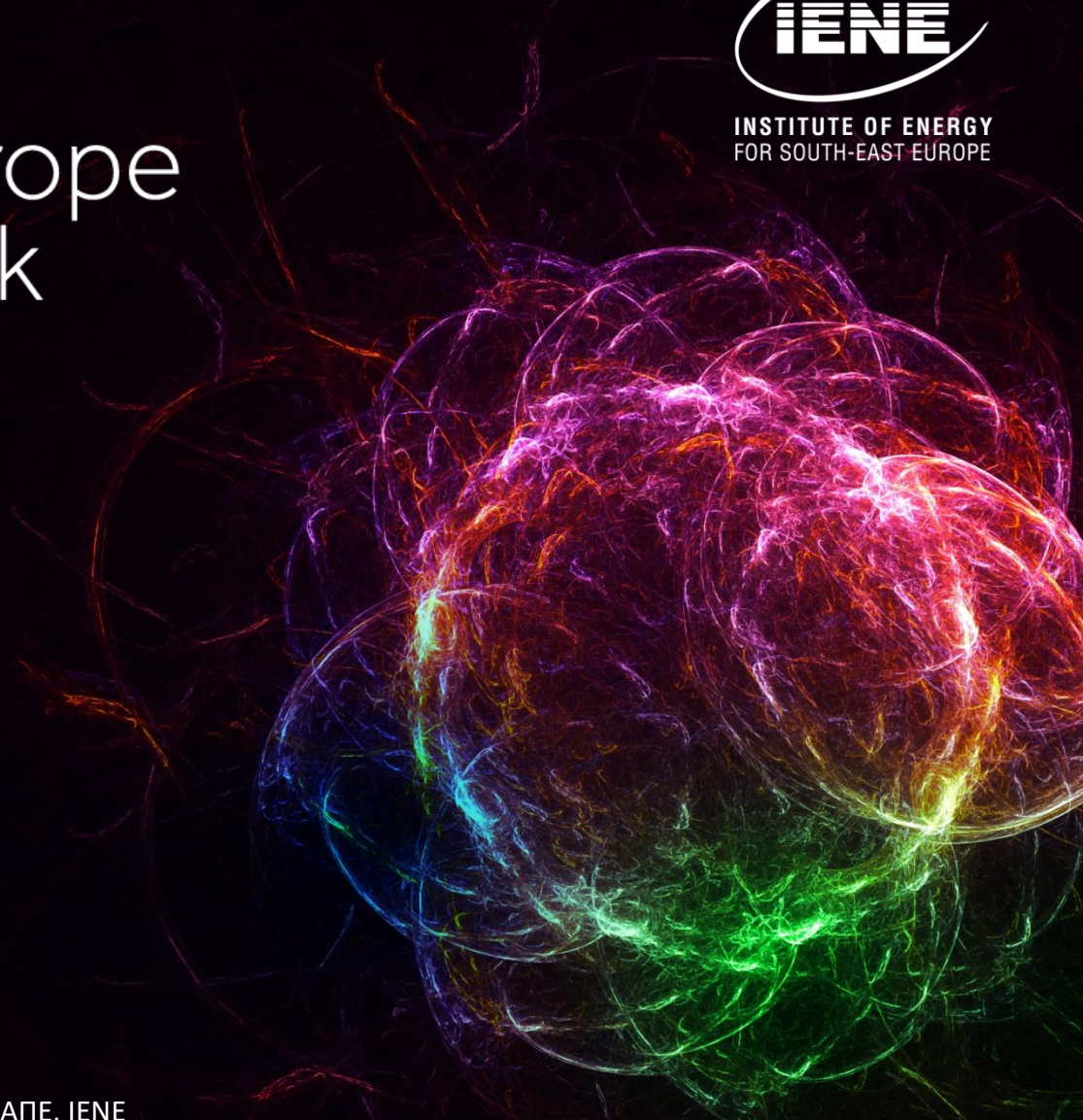
South East Europe Energy Outlook **2021/2022**

Διαδικτυακή Συνέντευξη Τύπου

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SE Europe & SE Mediterranean - Current Situation

The SE European region is characterized by distinctly different (in terms of structure and operation) and frequently segregated energy markets in various stages of RES development:

- The EU member states (Greece, Romania, Cyprus, Bulgaria, Croatia and Slovenia) have implemented several steps toward the smooth adaptation of EU energy and environmental policies and directives. Among them only Greece, Cyprus and Slovenia belong to Eurozone.
- The West Balkan countries (Albania, Serbia, Bosnia & Herzegovina, Montenegro, Kosovo, North Macedonia) are in a transition process within the Energy Community framework.
- Turkey with a rapidly growing economy has become one of the fastest growing RES markets in the world. Projections show that demand growth trend will continue. Turkey is the biggest energy hub in the region.
- Israel is an energy isolated country. All of the electricity consumed in Israel is generated locally with no imports from overseas. In addition, Israel does not export any electricity to neighbouring countries. Thus, there are no cross-border interconnections and nothing in this respect is planned. Recently Israel set a goal of generating 20 percent of its₂ electricity from solar radiation by 2025 and 30 percent by 2030

Renewable Energy Installed Capacity (MW) in SE Europe (2020)							
Country	Total Installed Electricity Capacity	Hydro	Wind	PV	Biomass / Biogas	Geothermal	TOTAL RES Installed Capacity
Albania	2.212	2.110	0	3	0	0	2.113
Bosnia & Herzegovina	4.757	2.000	135	20	3	0	2.158
Bulgaria	12.165	3.200	700	1065	100	0	5.065
Croatia	5.122	2.200	738	70	77	16	3.101
Cyprus	1800	0	158	129	10	0	297
Greece	20.700	3.400	4.000	3.000	83	0	10.483
Kosovo	1.597	80	33	7	0	0	120
Montenegro	1.045	700	118	2	0	0	820
North Macedonia	4.408	692	37	26	11	0	766
Romania	23.028	6.600	3.040	1.380	133	0	11.153
Serbia	8.485	3.000	481	21	15	0	3.517
Total without Turkey	85.319	23.982	9.440	5.723	432	16	39.616
Turkey	93.000	29.200	8.056	6.700	877	1.550	46.406
Grand Total	178.319	53.182	17.496	12.423	1.309	1.666	85.999

RES Installed Capacity in SE Europe (%) with and without Hydroelectricity

Country	RES Installed Capacity % (With Hydro)	RES Installed Capacity % (Without Hydro)
Albania	98%	0%
Bosnia & Herzegovina	47%	3%
Bulgaria	37%	15%
Croatia	65%	18%
Cyprus	17%	17%
Greece	50%	35%
Kosovo	8%	3%
Montenegro	80%	11%
North Macedonia	22%	2%
Romania	50%	20%
Serbia	40%	6%
Turkey	50%	18%

RES for Power Generation and RES for Heating and Cooling



RES for Power Generation

- Countries throughout SEE have high shares of electricity generated by an ageing fleet of coal-fired power plants. Now is therefore an auspicious moment for advancing a clean-energy transition in South East Europe (SEE).
- The most important change for the region is the sharply falling share of coal- and lignite based generation. Compared with 2017, it is forecast that less than half of the production from these fuels will remain in the system by 2030. The reduction will be compensated by an increase in RES generation of 20 TWh, in natural gas-based production (25 TWh) and in nuclear generation (11 TWh).
- RES units have increased their regional share in power generation to 33.89% in 2019, i.e. by more than 5.5 percentage points compared to 2014, when they contributed 28.2%. In addition, in 2019, the share of RES in total regional electricity consumption rose to 33.2% from 26.3% in 2014.
- a diverse mix of flexible generation technologies in SEE (hydro technologies, flexible biomass, natural gas and storage) can facilitate the integration of RES – especially wind and PV.
- However, the promising potential of wind, solar PV and biomass is not yet reflected in the energy policy of most of the SEE countries. Only Turkey, Greece, Romania and Bulgaria are exhibiting an emerging trend towards alternative renewable energy sources.

RES for Heating and Cooling

- The main source of RES for heating and cooling in South East Europe derives from biomass, shallow geothermal and solar thermal applications.
- Huge amounts of renewable heating and cooling can be supplied by solar thermal, geothermal and biomass to satisfy the entire heating and cooling needs of millions of buildings and also to satisfy in part the needs of industry.
- Many buildings in SE Europe have the potential to be independent of or less dependent on fossil fuels or electricity for heating and cooling.
- However, progress is much slower in Croatia, Slovenia, Bosnia and Herzegovina, the Republic of North Macedonia and Serbia.

Challenges for the further RES Development in the Region



There are several barriers to the development of renewable energy sources in SE Europe, including:

- Green Deal at any cost with insufficient financial compensation will jeopardise energy security and its geopolitical position, and would pose serious competitive challenges even at local level
- Yet overall, renewable energy investment remains fragile in SEE. Without a stable policy and an adequate regulatory framework, regional investment in renewable energy will continue to be unstable.
- There are serious concerns on renewable energy and public acceptance is decreased
- high costs involved in renewable energy power and the need for subsidies
- ageing transmission and grid infrastructure that struggles to cope with large variable RES energy volumes
- slow and unpredictable planning processes; regulatory uncertainty as most countries are transitioning towards competitive support schemes
- underdeveloped day-ahead and intraday markets,
- limited regional market integration and a high cost of capital stemming from both the above and,
- lack of experience in providing funding tools and limited comfort with lending to the⁶ sector by the local banking sector.

Total Anticipated Energy Investment per Sector 2021-2030

	Project sector	Description	2021 Investment estimate (€ mn)	2017 Investment estimate (€ mn)
OIL	Upstream	<ul style="list-style-type: none"> Field Exploration Development of new oil and gas wells 		
	Downstream	<ul style="list-style-type: none"> Refining (upgrading) Loading Terminals Storage facilities Crude / Product Pipeline(s) 	63,000	38,790
GAS	Country Gas Network	<ul style="list-style-type: none"> Grid development Main intra country pipeline(s) Storage facilities FSRU and LNG Terminals 	25,150	16,550
	Power Generation	<ul style="list-style-type: none"> Lignite Coal Gas (including CHP) Nuclear Large Hydro 	150,150	139,550
ELECTRICITY	Electricity Grid	<ul style="list-style-type: none"> New H/V transmission lines Upgrading and expansion of existing grid 		
	RES	<ul style="list-style-type: none"> Small Hydro Wind farms Photovoltaics Concentrating Solar Power Biomass (including liquid biofuels) Geothermal 	109,900	40,009
ENERGY EFFICIENCY		<ul style="list-style-type: none"> Buildings Industry Electric vehicles 	88,700	-
Total anticipated investments by 2030			436,900	234,822
Gas infrastructure			23,303	33,350
Electricity Interconnections			8,440	4,700
Cross-border energy projects (total)			31,743	38,050
Grand Total			468,643	272,872

A large segment of the above investment is earmarked for RES power generation projects in photovoltaics, wind, large and mini hydro, biomass and geothermal energy. In fact, RES geared investment represents a disproportionate high amount as it is likely to exceed €100 billion for a projected installed capacity in the range of 30GW. Thus electricity and RES form the backbone of investment activity in the region's energy market and it is in this area that new business opportunities are mainly to be found.

Conclusions

- The potential EU climate-neutrality target for 2050 is unprecedentedly ambitious, especially for the SEE region. While all member states will face challenges in delivering the required transformational changes under the European Green Deal, it would do well for the EU to continue paying special attention to the SEE region. Given the different starting points of these countries, the state of the market and their political discourses, actual and practical solutions are needed in overcoming the existing energy market barriers.
- The electricity-oriented investments correspond to approx. 34% of the total energy investments in the region at €150 billion. Following electricity investments are the RES related investments corresponding to 25% of the total at about €110 billion. Thus, electricity and RES form the backbone of investment activity in the region's energy market and it is in this area that new business opportunities are mainly to be found.
- To harness RES potential in the region and progressively phase out fossil fuels, the region needs updated renewable energy targets, sustained investment in solar and wind technologies, incentives to develop modern biomass, geothermal and small hydro and a holistic policy framework to create new jobs and maximize socioeconomic value.
- An interconnected European power system would be highly beneficial for variable RES integration. Indeed, regional cooperation, stronger power systems and market integration will help minimize power system costs for consumers while maximizing supply security.

Το IENE θα ήθελε να ευχαριστήσει θερμά τους Χορηγούς και τους Υποστηρικτές της Μελέτης χωρίς την συνεισφορά και την βοήθεια των οποίων αυτή η μελέτη δεν θα μπορούσε να υλοποιηθεί.

Ευχαριστώ Πολύ

