

“Update on the latest developments in the Albanian Power Sector” 2022-2023

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SEA Consulting

Sustainable Energy Advisors



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Services and experience;

- Policy and Sectorial Analysis
 - Authors of the Albania section of the SEE Energy Outlook 2022 with IENE
 - Drafting of the long term strategy of gas sector & Albgaz
- Electricity
 - HPP, PV, TPP, wind, pre-feasibilities and feasibilities
 - Market analysis
 - Regulatory
- Natural Gas, LNG, Hydrogen
 - Korca gas distribution project
 - Skopje-Pristina gas pipeline pre-feasibility
 - Vlora SFRU market analysis
 - Drafting of regulations
 - Potential of H2 exports to EU via EastMed pipeline

Partners;



Shkelqim Bozgo



Entela (Fico) Shehaj



Abaz Aliko

in close cooperation with a wide network of local and international energy experts

Clients;

Deloitte.

uni
per

ExxonMobil

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LOCAL Knowledge, GLOBAL Standards

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POWER

Ε R Ε

Albania is not meeting its domestic demand yet but a lot of investments are under way

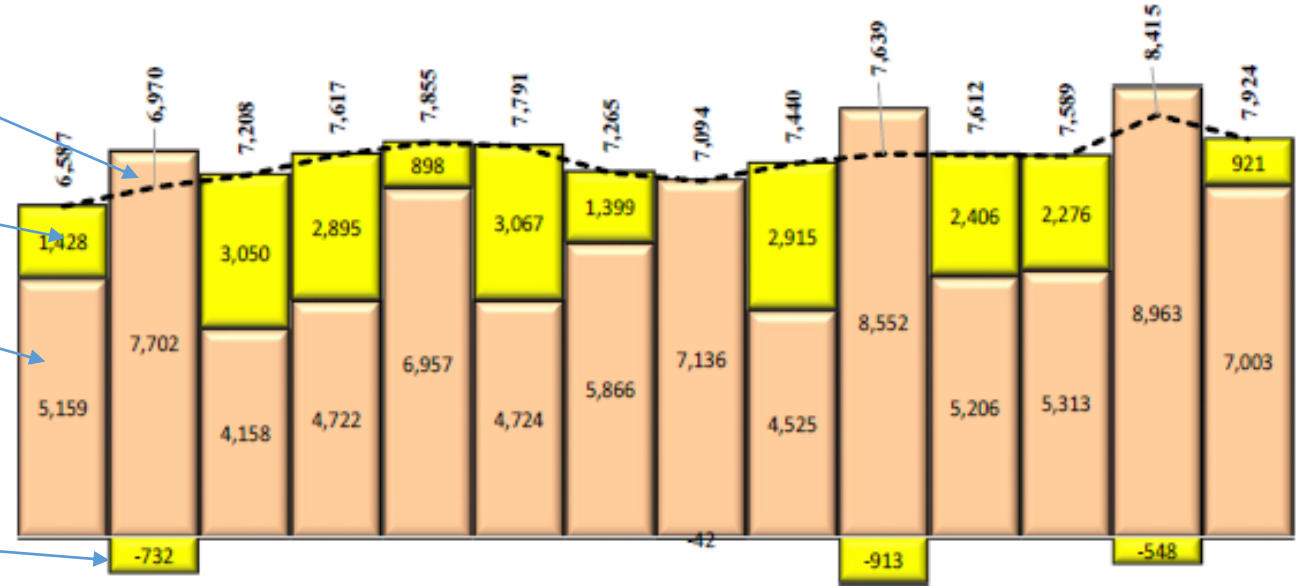
domestic consumption
(dotted line)

imports

domestic production

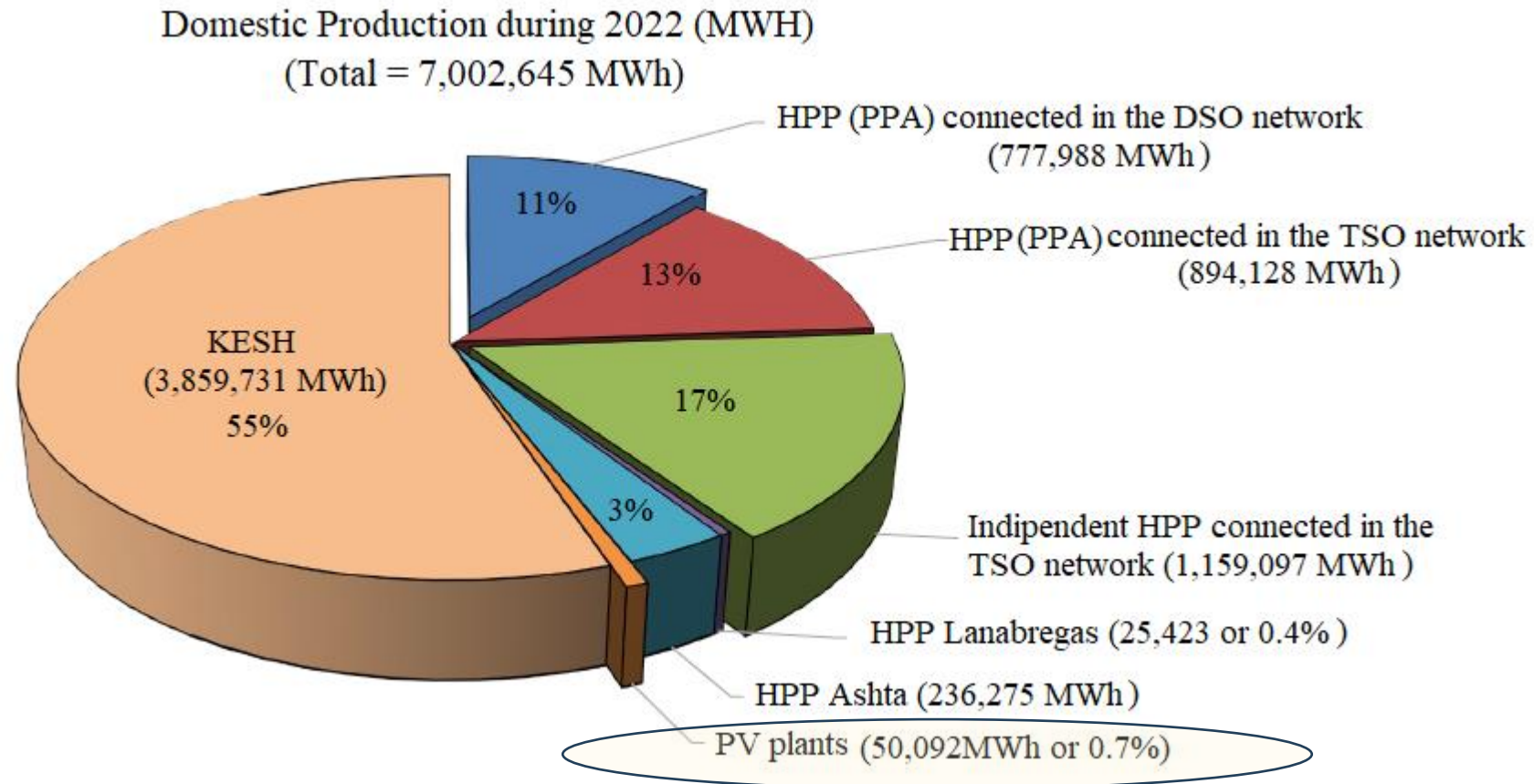
exports

KONTRIBUTET E PRODHIMIT NETO VENDAS DHE BALANCES IMPORT-EKSPORT NE KONSUMIN TOTAL TE ENERGIJE NE SHQIPERI (2009-2022) GWh



	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Balance Imp-Eks	1,428	-732	3,050	2,895	898	3,067	1,399	-42	2,915	-913	2,406	2,276	-548	921
Prodh Neto Vendas	5,159	7,702	4,158	4,722	6,957	4,724	5,866	7,136	4,525	8,552	5,206	5,313	8,963	7,003
Konsumi Total	6,587	6,970	7,208	7,617	7,855	7,791	7,265	7,094	7,440	7,639	7,612	7,589	8,415	7,924

Structure of the current production in 2022



Significant investments are under way

➤ RES - new generation capacities on HPP, PV and wind

❖ Hydro (2007-2022)

- 1,505 MW (2007) -> 2,6005 MW (2022)
- 200 MW are expected to start operation during 2022-2025 period
- Skavica HPP in upper Drini river under assessment
- SHPP era coming to completion

❖ PV (2021 – 2030) several projects under way

- 21 MW started production during 2022
- 255 MW have obtained connection agreement and expected to start prod during 2023
- 895 MW have obtained in principle approval to be connected to HV
- 2,975 MW have obtained preliminary opinion

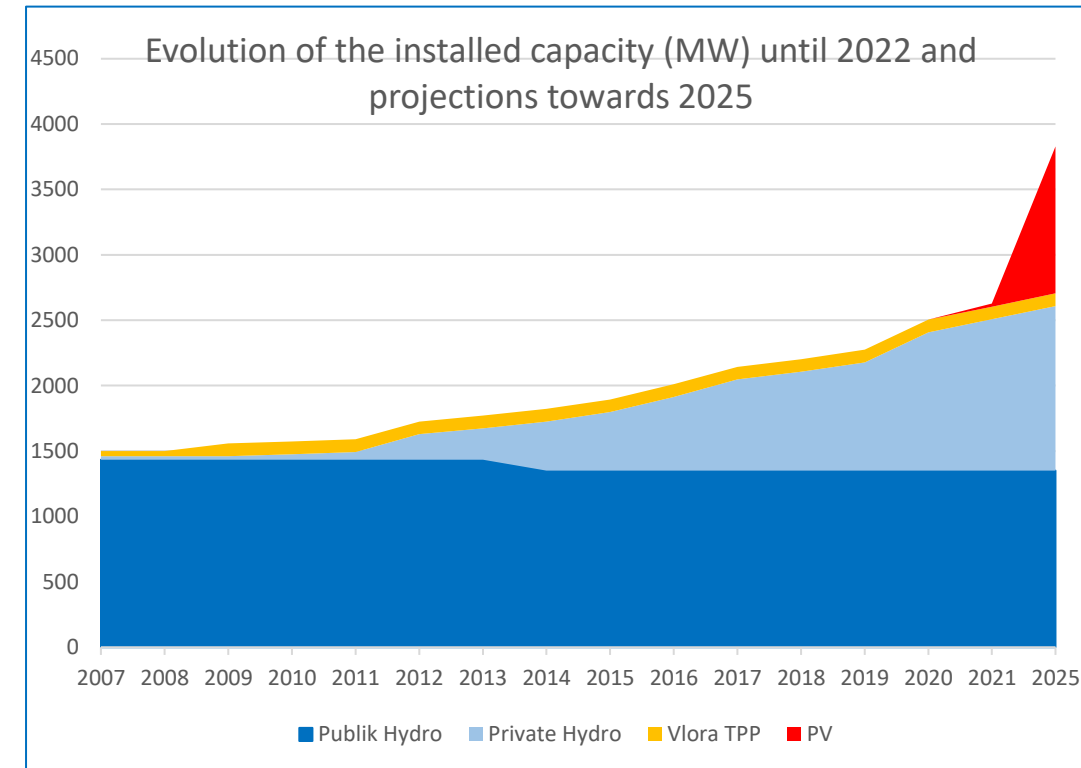
TOTAL = 4,126 MW under construction, permitting or queuing

❖ Wind (2023-2030)

- Wind tender (222 MW) tender finalized
- New tender (300MW) expected during 2024

➤ Gas TPP; Terna + Gener 2 plan to build a 170 MW gas fired power plant in Fier

➤ By 2030 if all is constructed, Albania will not only meet its own demand but also export electricity



Wind

Results of the first wind farm tender announced on 25 July 2023;

Winners	Tender Price (Eur/Mwh)	Capacity (MW)
“Total Eren” (FR) and “KMV” sh.p.k.	44.88	75.0
“Guris Insaat Ve Muhendislik A.S”, (TR) “Mogan Energy A.S” and “BRD” Sh.p.k.,	74.00	75.0
“Verbund” (AU)	74.95	72.6
Total capacity		222.6

- Contract for Difference will be signed with each of the winners
- Tender was organized in three phases
- Land had to be found by the investors
- Requested offers to be in the interval 10MW-75 MW/each
- 14 companies participated in the tendering process
- A study on the RES (wind) potential in Albania was made publicly available
- **Ministry has announced its intention to launch a new auction for an additional 300 MW wind**



OST Interconnection projects;

1. **Albania – North Macedonia interconnection and strengthening of southern Albania transmission system**

- Construction of the Interconnector 400 kV Elbasan2 (Albania) – Bitola (North Macedonia) -> 56 km
- Reinforcement of the existing 220 kV power line Elbasan2 – Fier substation ->74 km
- New substation Elbasan 3 that constitutes and extension of the existing 400/220 kV substation Elbasan 2
- Reinforcement and expansion of the existing substation in Fier. 400/220 kV transformers

The implementation of the project of 400 kV power lines between **Tirana2 - Zemblak- Fier and North Macedonia** reinforces the interconnection capacity between Albania and NM and strengthens the transmission capacities in the central and southern part of Albania

2. **Albania – Montenegro reconstruction of the 220kV interconnector between Vau i Dejës (Albania) – Podgoricë (Montenegro)**

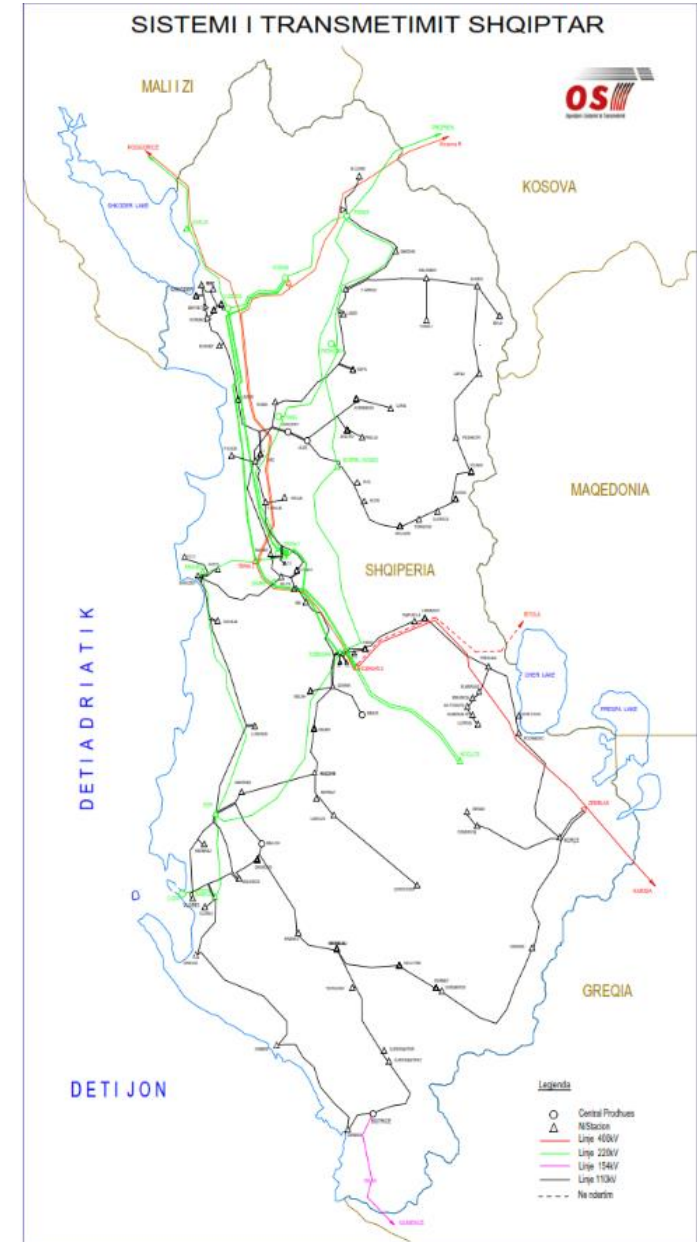
- Current transmission capacity will be expanded by replacement of the existing conductors with HTLS (High Temperature, Low Sag) conductors .
- The reinforced interconnector will enable the transmission of the excess power generated by several new RES capacities located in northern Albania through the existing HVDC line between Montenegro and Italy

3. **Albania – Montenegro construction of a new 110kV interconnector between Ulqin (Montenegro) – Velipoje (Albania)**

- 27 km power line
- Will connect the respective substations of Ulqin and Velipoje
- Will enhance the security of supply and stimulate the economic development of an area with high potential for tourism on both sides of the border

4. **Albania – Kosova construction of a new 110kV interconnector between Bajrram Curri substation (Albania) – Decan substation (Kosove)**

- Prefeasibility study finalized
- 14 km in Albania and 19 km in Kosove
- Will enhance exchanges between the two systems; coal based – Kosova and hydro based - Albania



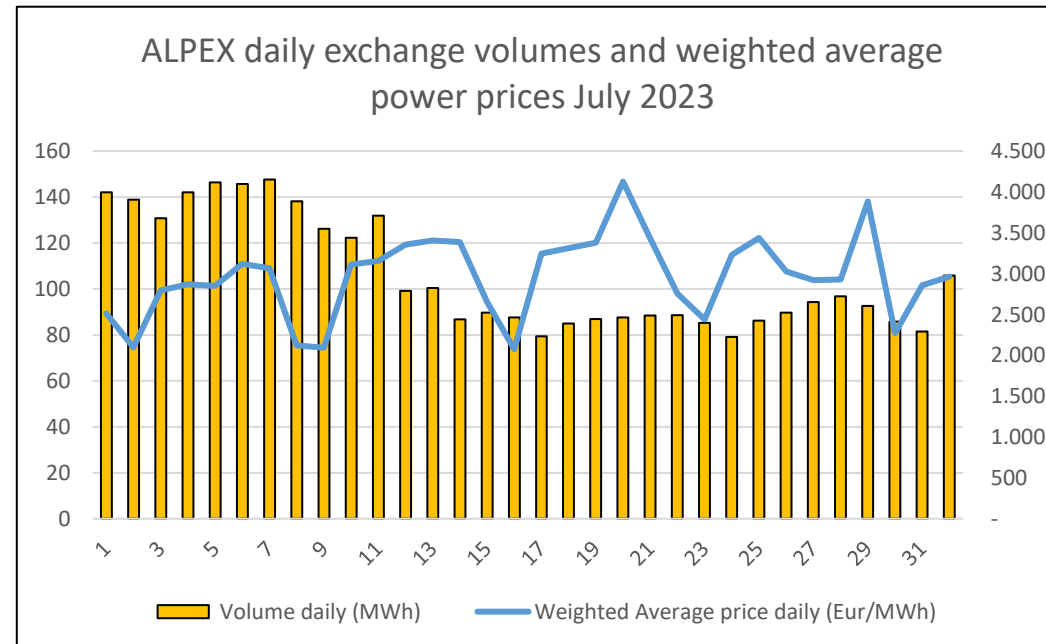
KESH the main generator in Albania

- KESH operates a cascade of **1,350 MW** installed capacity, structured in three hydropower plants (“HPPs”): Fierza, Koman and Vau I Dejes.
- KESH provides an annual average of **65% - 70% of the total domestic demand** depending on the level of rainfall
- KESH is the key player in the **balancing market and in providing ancillary;**
 - **In Albania** and
 - **Kosovo**, the market coupling with has further enhanced the importance of the role of KESH as KESH is effectively providing also balancing and ancillary services for the Kosovo market.
- **Development plans;**
 - **floating solar PV** in Vau i Dejes HPP expected to be operational in early 2025
 - **50 MW solar PV**
 - **Pump Storage Plant (PSP)** on existing KESH generation assets. The Project consists of using the already installed 500MW capacity at Fierza HPP and the 600MW of installed capacity at Koman HPP to implement a pump storage scheme, primarily to be used for balancing, peak and emergency purposes.

PSP will help KESH to act as the balancing counterparty for the large renewable and intermittent capacity expected to be coming on line in the next 5 years in Albania. At the same time, as the region transitions away from coal, intermittent capacities will require an increased capacity to balance the network – such capacity can be easily offered by KESH though the PSP

ALPEX; Albania-Kosovo Power Exchange

- Established in October 2020
- Owned by OST (57.25%) and KOSTT (42.75%)
- 21 October 2021 Framework Agreement on Market Coupling electricity markets between AL and KS.
- Licensed by ERE 29 September 2022
- October 2022 workshops with various Banks on clearing procedures
- July 2023; status of Nominated Electricity Market Operator (NEMO) awarded by ERE and ERO for both regulatory zones of Albania and Kosova.
- ALPEX has a **day-ahead platform**. It is run by OST, Albania's TSO.
- Various trainings on the trading platform
- 01 Feb 2022 ALPEX is accepted as associate partner in EUROPEX (European Association of Power Exchanges)
- **16 exchange members**



Exchange Member		
1	Transmission System Operator – OST sh.a	
2	Free Market Supplier – FTL sh.a	
3	Universal Service Supplier – FSHU sh.a	
4	Albanian Power Corporation – KESH sh.a	
5	Distribution System Operator – OSSH sh.a	
6	Ener Trade sh.p.k	
7	EZ-5 Energy sh.p.k	
8	GEN-I TIRANA sh.p.k	
9	ReNRGY Trading Group sh.p.k	
10	Future Energy Trading and Exchange Dynamics sh.p.k	
11	Natre Energy sh.p.k	
12	NOA Energy Trade sh.p.k	
13	Danske Commodities Albania sh.p.k	
14	GSA sh.p.k	
15	Energy Financing Team Tirana sh.p.k	
16	Devoll Hydropower Sh.A	



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THANK YOU!

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