Türkiye Elektrik İletim A.Ş.

Serhat Metin

Director

Planning & Strategic Investment Management Dept.

As of Dec. 31, 2021:

TEİAŞ

72.377,93 km Transmission Line

71.778,30 KM Overhead

583,67 KM Cable

15,96 KM Submarine Cable

99.374 MW

Installed Capacity

331 TWh

Generated Electricity

~ **329** TWh

Consumption

2.083 Substations

767 owned by TEİAŞ

17.041 Personnel

8.106 TEİAŞ

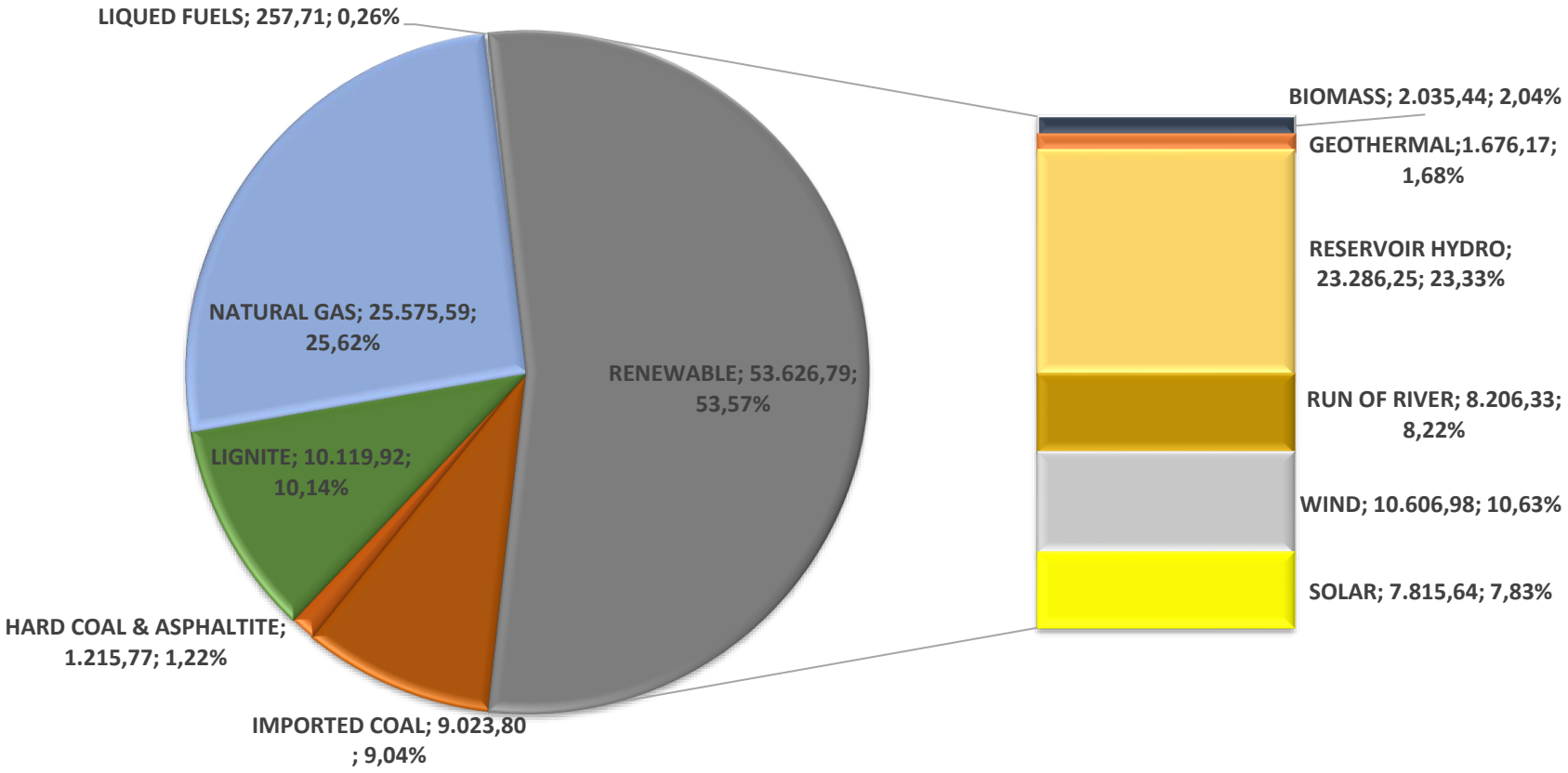
8.935 Service Procurement

BREAKDOWN OF INSTALLED CAPACITY

~ 8 GW

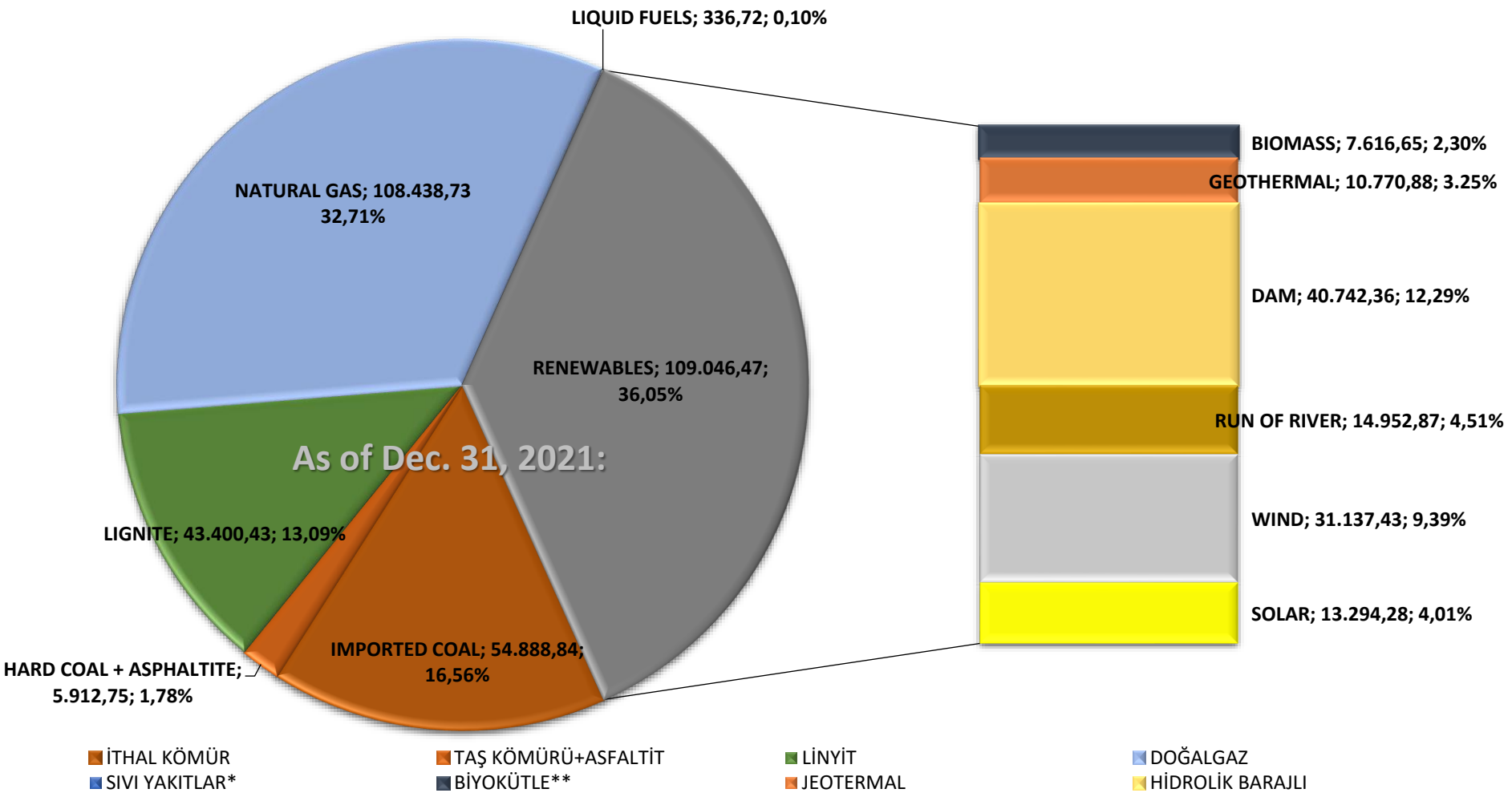
> 10 GW

> 31 GW



As of Dec. 31, 2021:

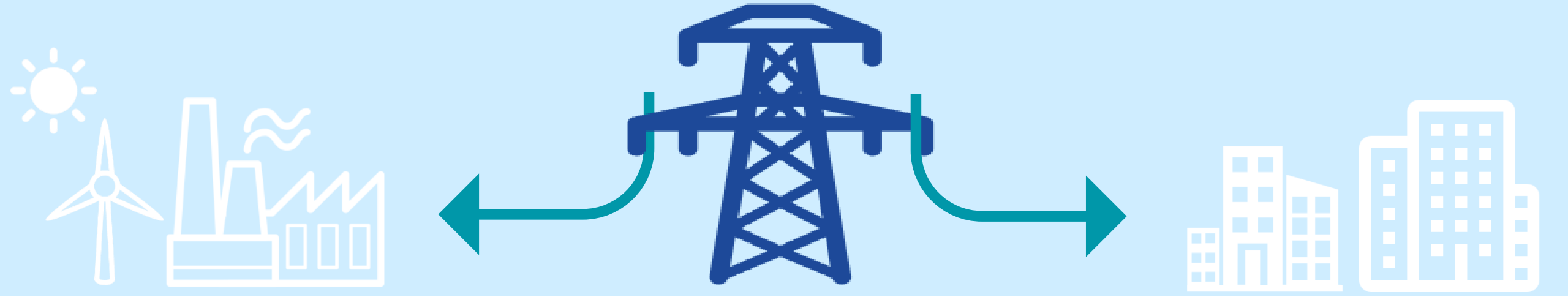
PRODUCED ENERGY



*** Fuel-Oil + Diesel oil + Naphtha**
****Including waste heat and industrial waste**

A Brief Overview of the Sector and Our Position in the Sector

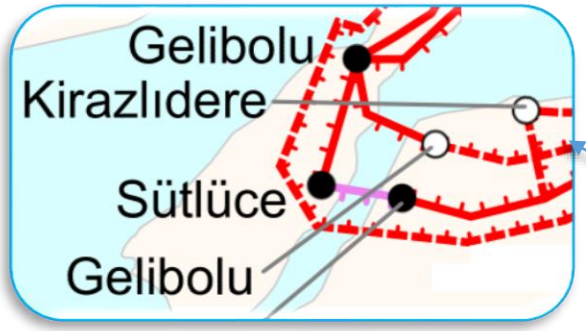
TEIAS constitutes the interaction infrastructure between generation and consumption in the Turkish Electricity Sector



TEİAŞ, as the transmission system operator, plays a critical role in the electrical energy value chain:

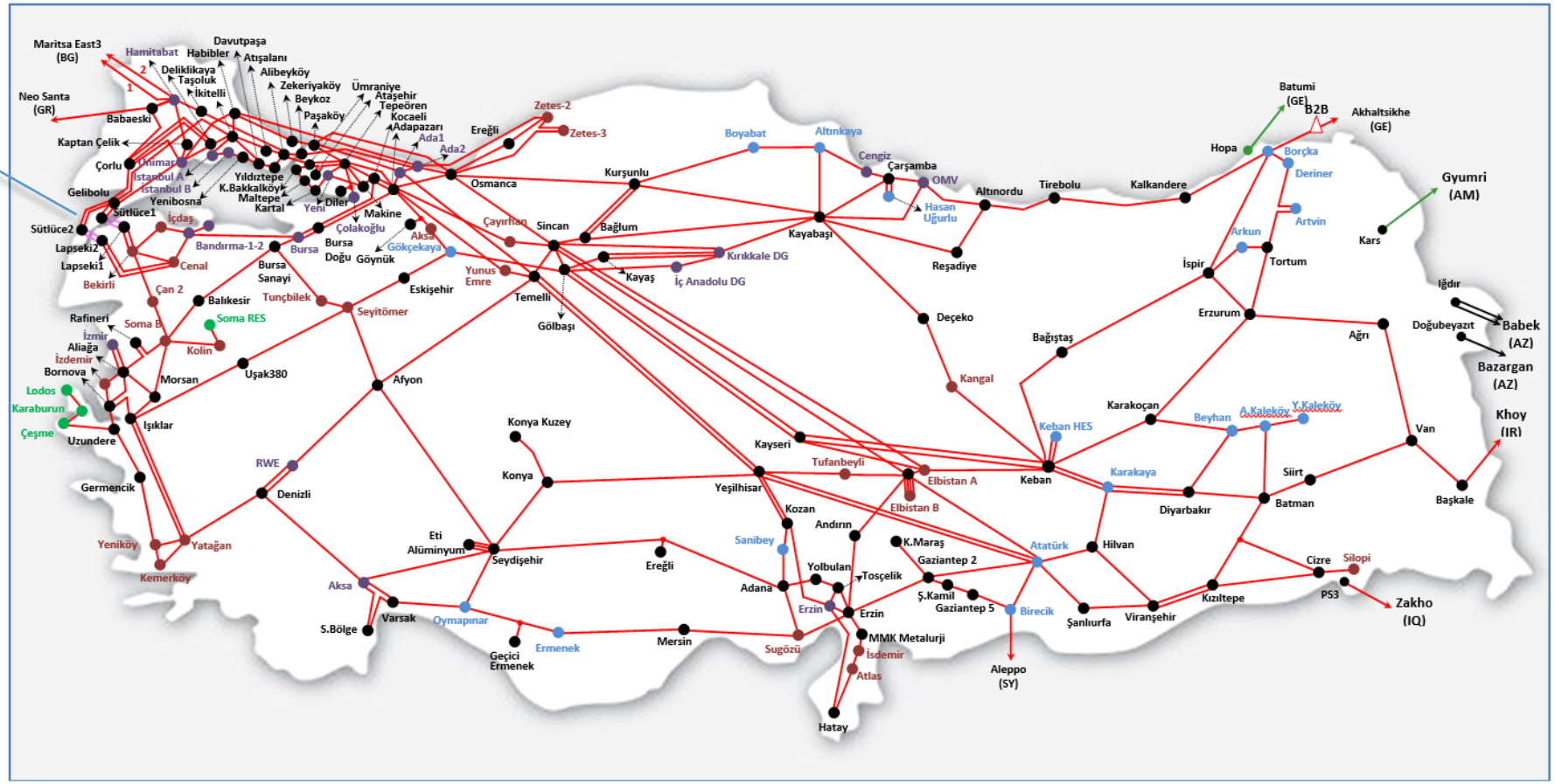
- Network connection of generation/consumption facilities,
- Providing grid infrastructure suitable for renewable energy generation,
- Realization of investments that allows the increase in installed capacity,
- Balancing the system,
- Implementing new technologies for a more effective operation.

TURKISH ELECTRICITY HV GRID (400 kV)



GELİBOLU SUBMARINE CABLES

New cable corridors to evacuate excess generation in Western Anatolia



Strong grid »»

- Locational flexibility
- Fewer congestions

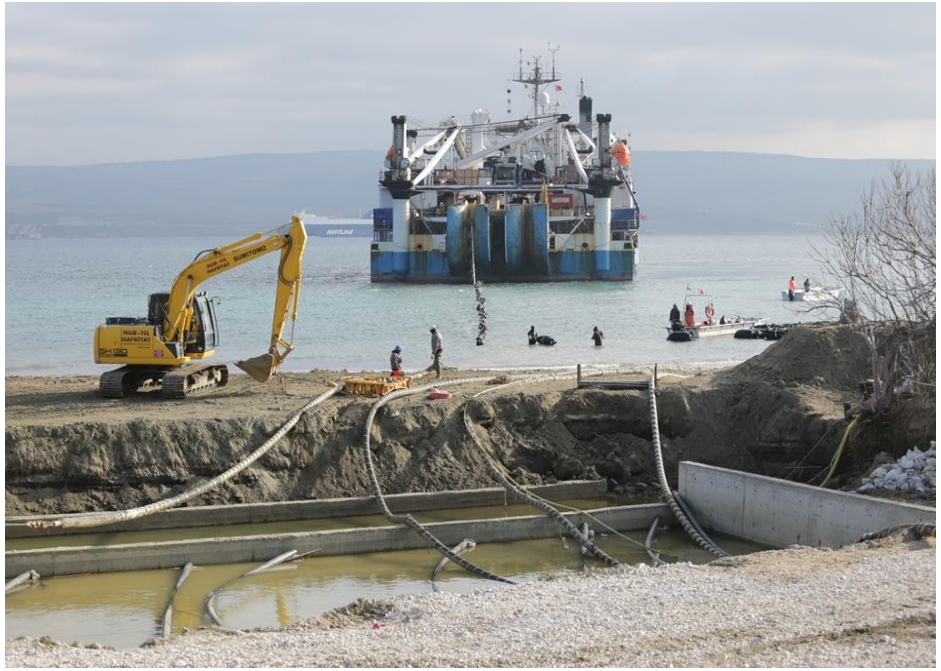
TEIAS World Bank Loans

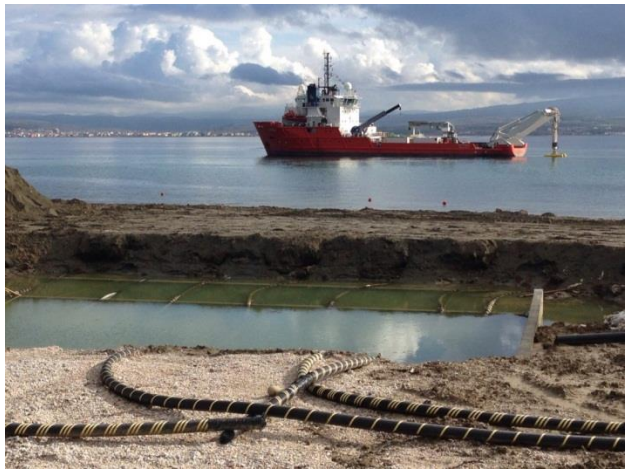
TEIAS has been using loans from the World Bank since 1985.

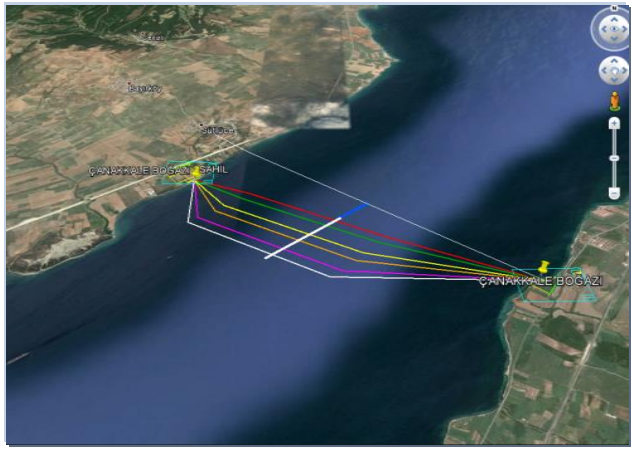
ECSEE APL 6 Project loan was US$220 million, used between 2010-2015.

For Renewable Energy Integration Project (REIP), TEIAS used a commercial loan of US$300 million, corresponding to €217.6 million + US$50 million Clean Technology Fund loan between 2014-2021.

The loan contract of Renewable Energy Integration Project Additional Financing (REIP AF) and the loan of €289.5 million corresponding to US$325 million was signed on December 1, 2020 and opened for effective use on January 8, 2021. The closing date of the loan is December 31, 2024.







INTERCONNECTIONS (EXISTING & PLANNED)

Existing 400kV OHL	
Existing 220kV OHL	HVDC Back to Back (Existing)
Existing 154kV OHL	
Existing 66 kV OHL	HVDC Back to Back (Under Construction)
Planned 400 kV OHL	HVDC Back to Back (Planned)
Planned 154 kV OHL	
Planned 66 – 20 kV OHL	

INTERNATIONAL MEMBERSHIPS

Involved through MENR

- IEA-Internatonal Energy Agency
- ECO-Economic Cooperation Organization
- BSEC-Black Sea Economic Cooperation
- UfM-Union For The Mediterranean
- The Electrical Interconnection Among The Eight Countries Project

Member As a TSO

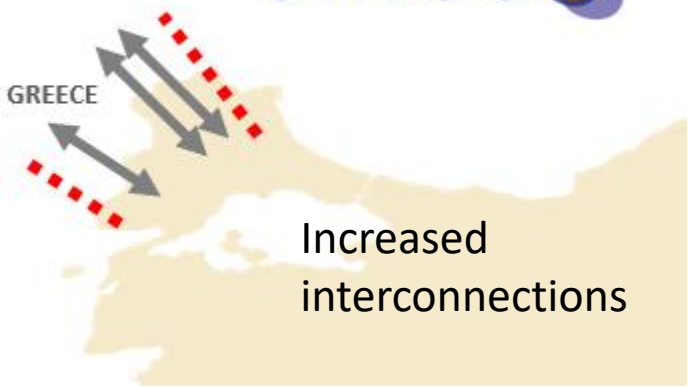
- ENTSO-E (European Network of Transmission System Operators for Electricity
- CIGRE (International Council on Large Electric Systems)
- Med-TSO (Mediterranean Transmission System Operators)
- EURELECTRIC (The Union of the Electric Industry)
- SEE CAO (Southeast Europe Coordinated Auction Office)
- WEC (World Energy Council)

FUTURE GRID

Advanced Wind and PV monitoring and forecast needs

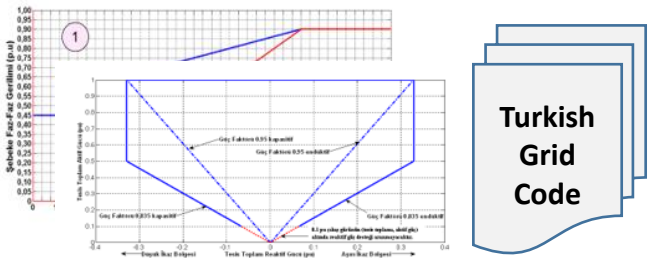
Hybrid Power Plants

Higher flexibility needs & stability concerns

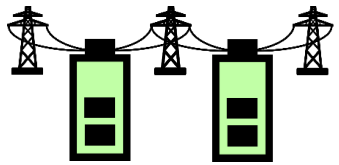


Increased interconnections

Electrical Vehicles



Need for Advanced Compliance Monitoring



Battery Storage