



# Investing in Turkish Power Market: Opportunities & Challenges

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- The sole regulator of the Turkish electricity, natural gas, LPG and fuel and lubricants markets.
- The architect of the liberalization and regulation of the Turkish energy market
- An independent public entity with administrative and financial autonomy established in 2001
- Governed by a 9-member board
- Functions:
  - Issuing secondary legislation
  - Licensing market participants
  - Approving tariffs
  - Monitoring, supervising and auditing markets and market players

# Objectives of EMRA

## To establish

- *Financially viable*
- *Stable*
- *Transparent*
- *Non-discriminatory*
- *Competitive*

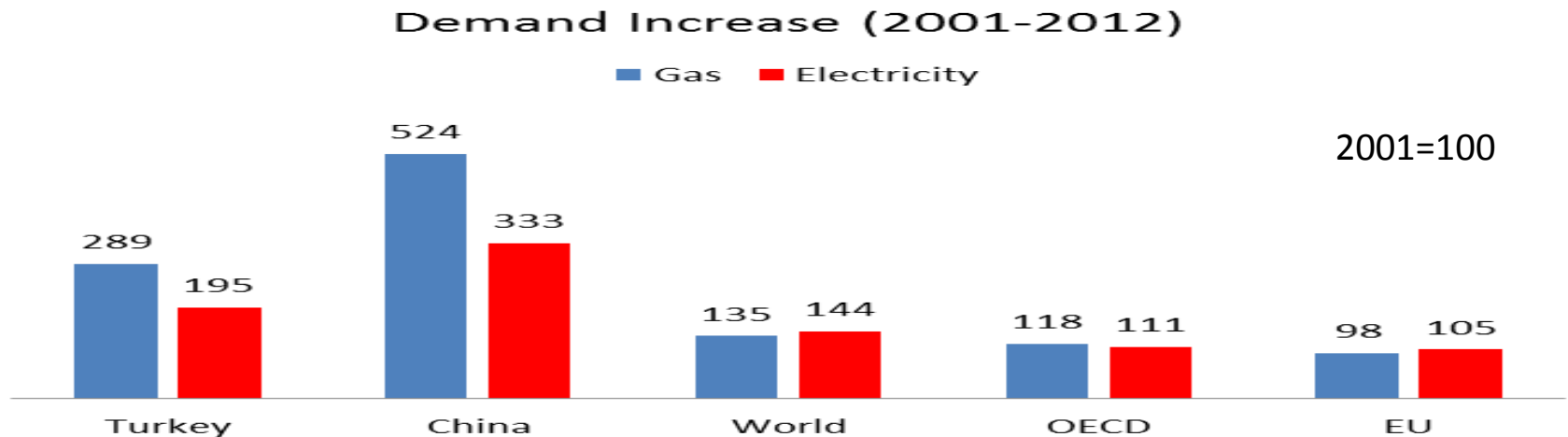
## energy markets

## ... for delivery of

- *Adequately*
- *Efficiently*
- *Continuously*
- *At high quality*
- *At low cost*
- *Environment friendly*

## energy

# Main Characteristics of Turkish Energy Market



Source: BP Statistical Review 2013

## Rapid growth in demand

- 20.5% pa in gas & 7% pa in electricity in the past quarter century despite economic crises in 1994, 1998, 2001 & 2008
- 600 m<sup>3</sup> pa & 3.200 kWh pa gross electricity consumption per capita

## High level of import dependency

- 91.7% in petroleum & 98.3% in gas

## Relatively high figures for energy intensity

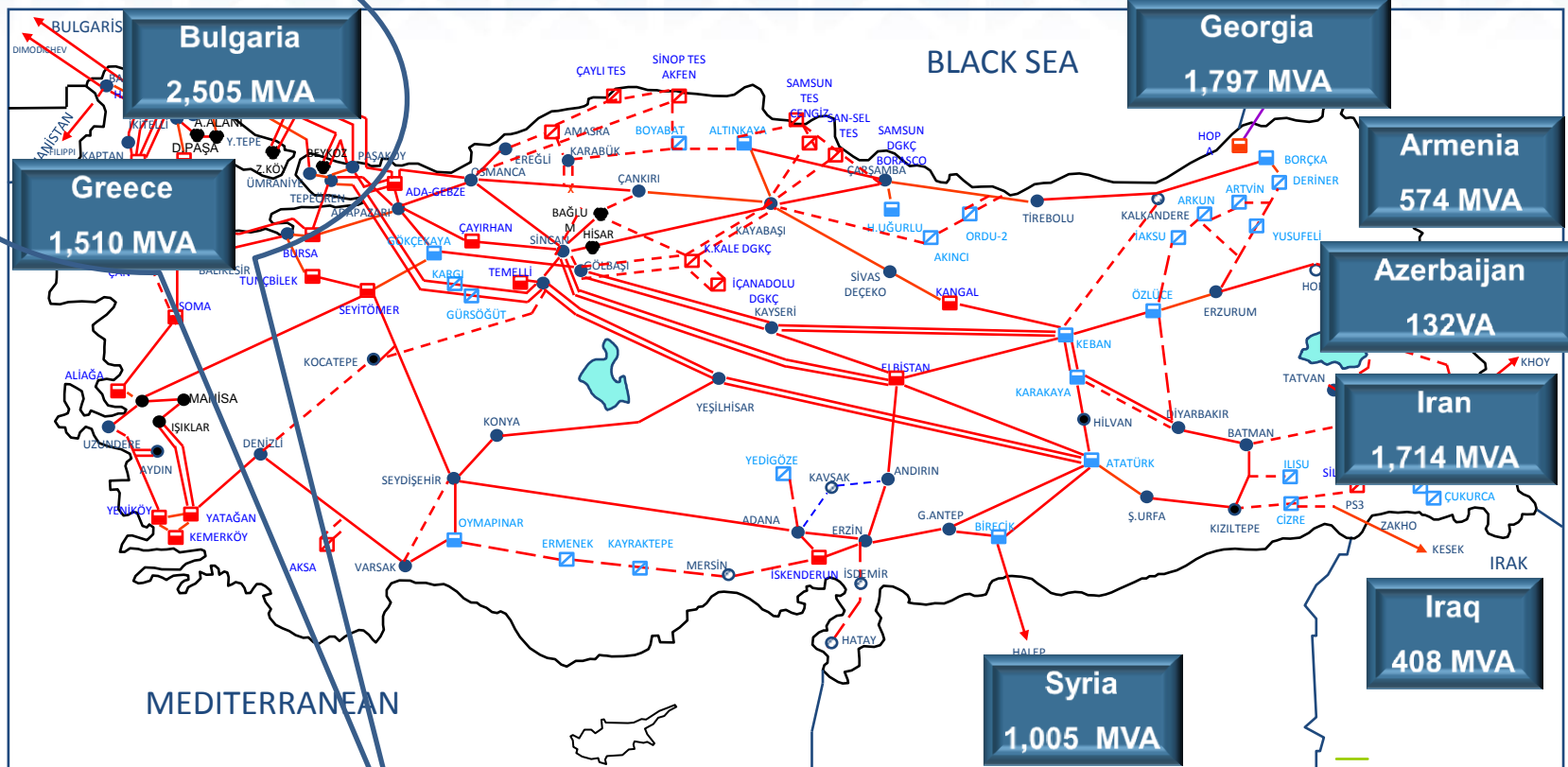
- 280 koe/1000 USD



# Electricity Markets: Generation (2012)



# HV Electricity Grid

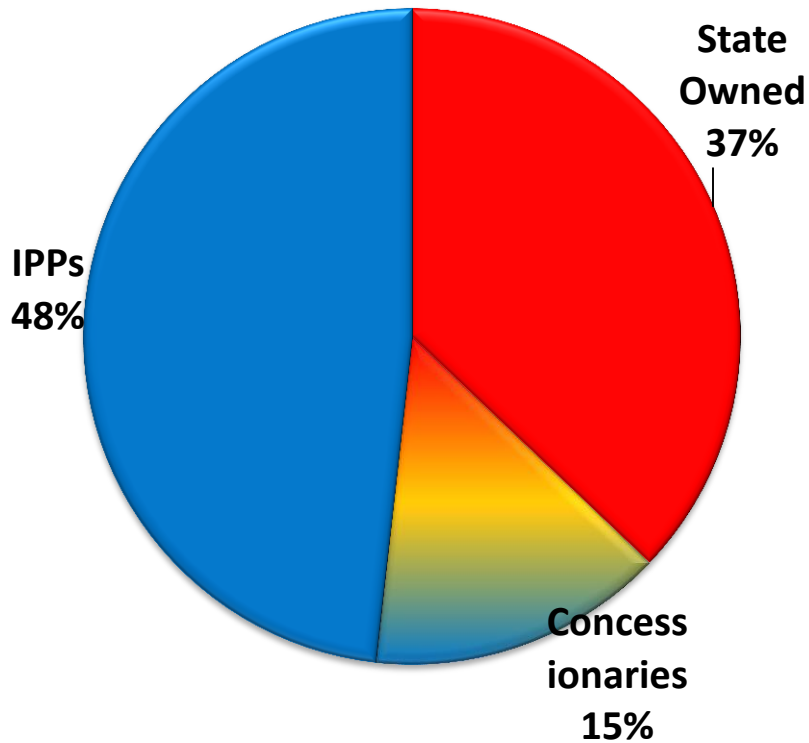


**Turkish power system is synchronized with the ENTSO-E**

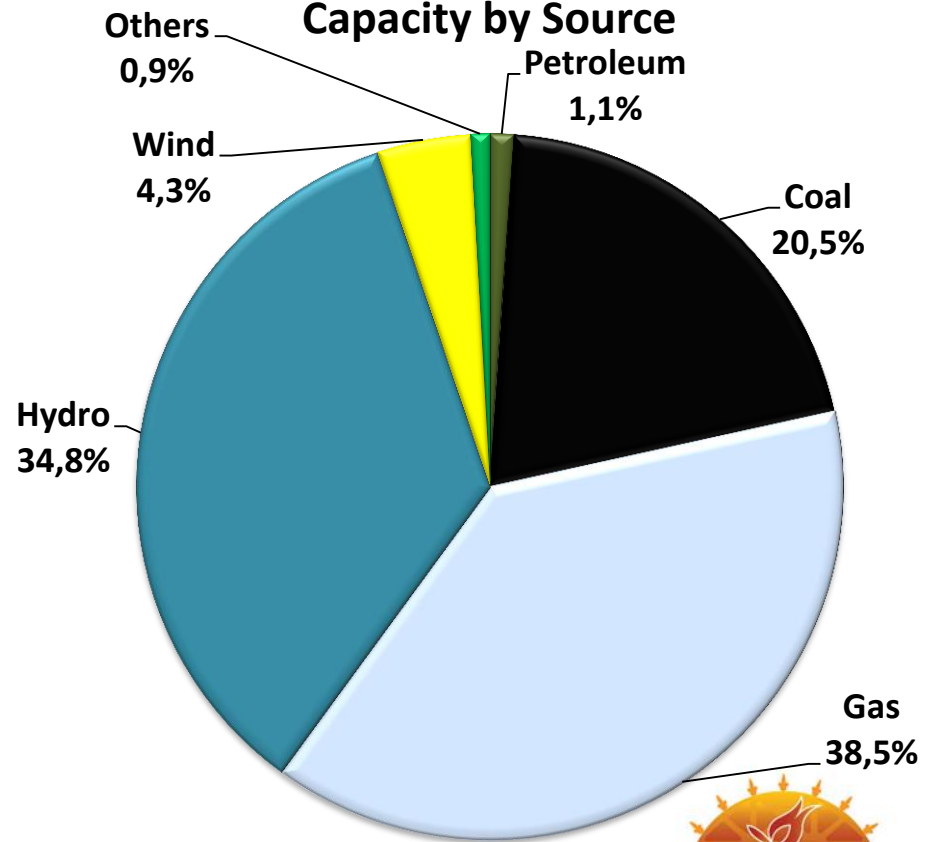


# Electricity Market: Installed Capacity

Capacity by Ownership



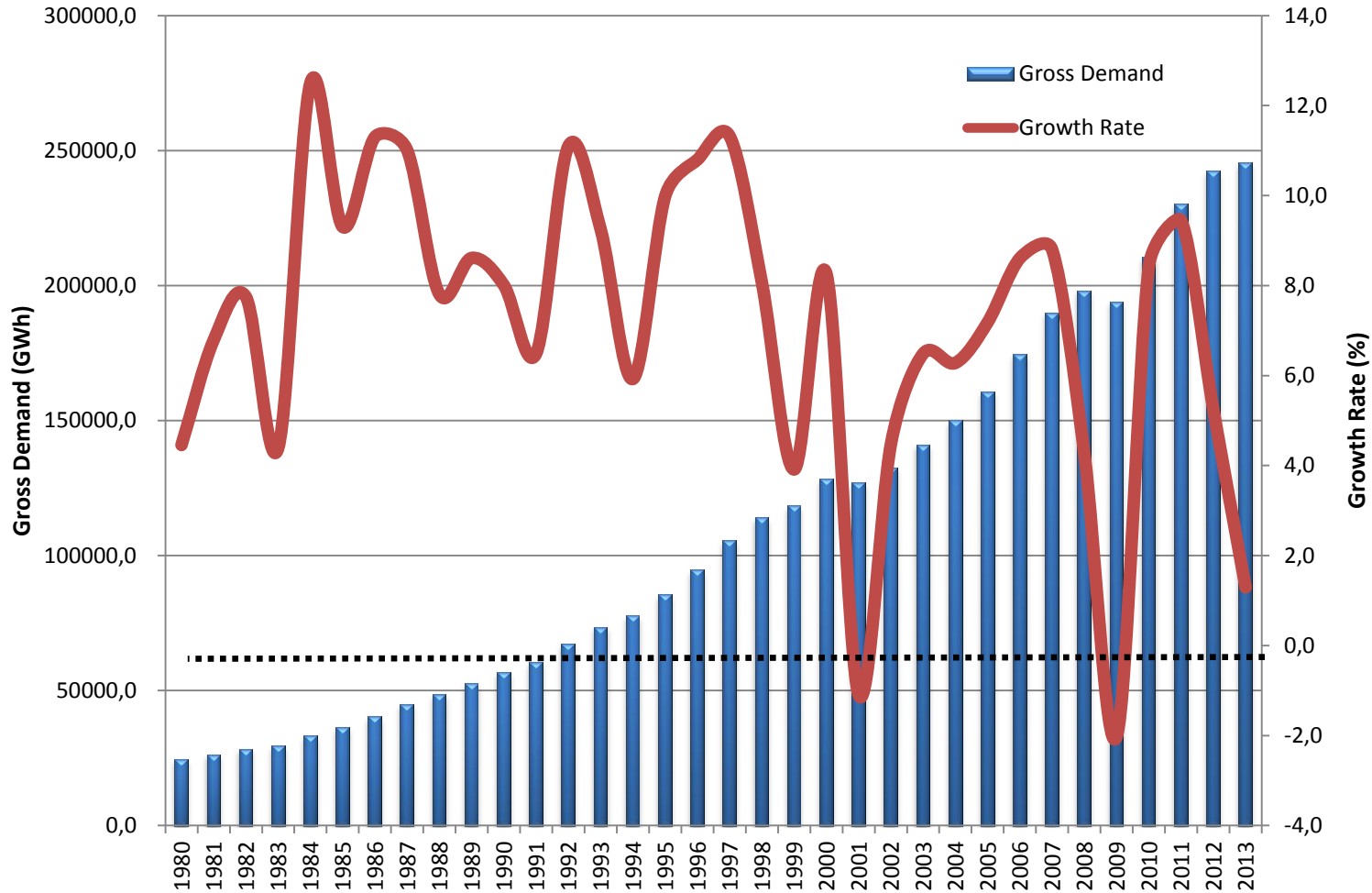
Capacity by Source



64 044 MW as of 2013



# Electricity Market: Demand



**Net  
Electricity  
Consumption  
per Capita**

EU: 5 545 kWh

TR: 2 583 kWh

Source: Eurostat





# Legal Basis: The EML

- A user-friendly systematic
- Priority to viability of investments
- Last resort supply obligation
- Consistency with the EU *Acquis*
- Non-discriminatory conduct between domestic and foreign investors
- Enforcement of uniform nation-wide end user tariffs for a limited time period

## Fundamentals of the EML

- Unbundling: Legal unbundling regime among market activities supplemented by privatization of distribution and generation assets.
- Third Party Access: Regulated TPA regime. Transmission and distribution companies should allow open, guaranteed, and non-discriminatory access to their networks, which is backed by Regulator's oversight.
- Cost-reflecting pricing: Regulated tariffs should not include any non-activity items.
- Wholesale Market Design: Bilateral contracts market complemented by a residual balancing mechanism.
- Power Exchange Approach: Intra-Day Market, Day-Ahead Market, Derivatives Market.
- Mitigating Market Power: Static precautions in terms of limiting market share i.e. 20%.

# Electricity Market Model

**587 GenCo**

Generation

**1 TransCo**

Transmission

**135 Supplier**

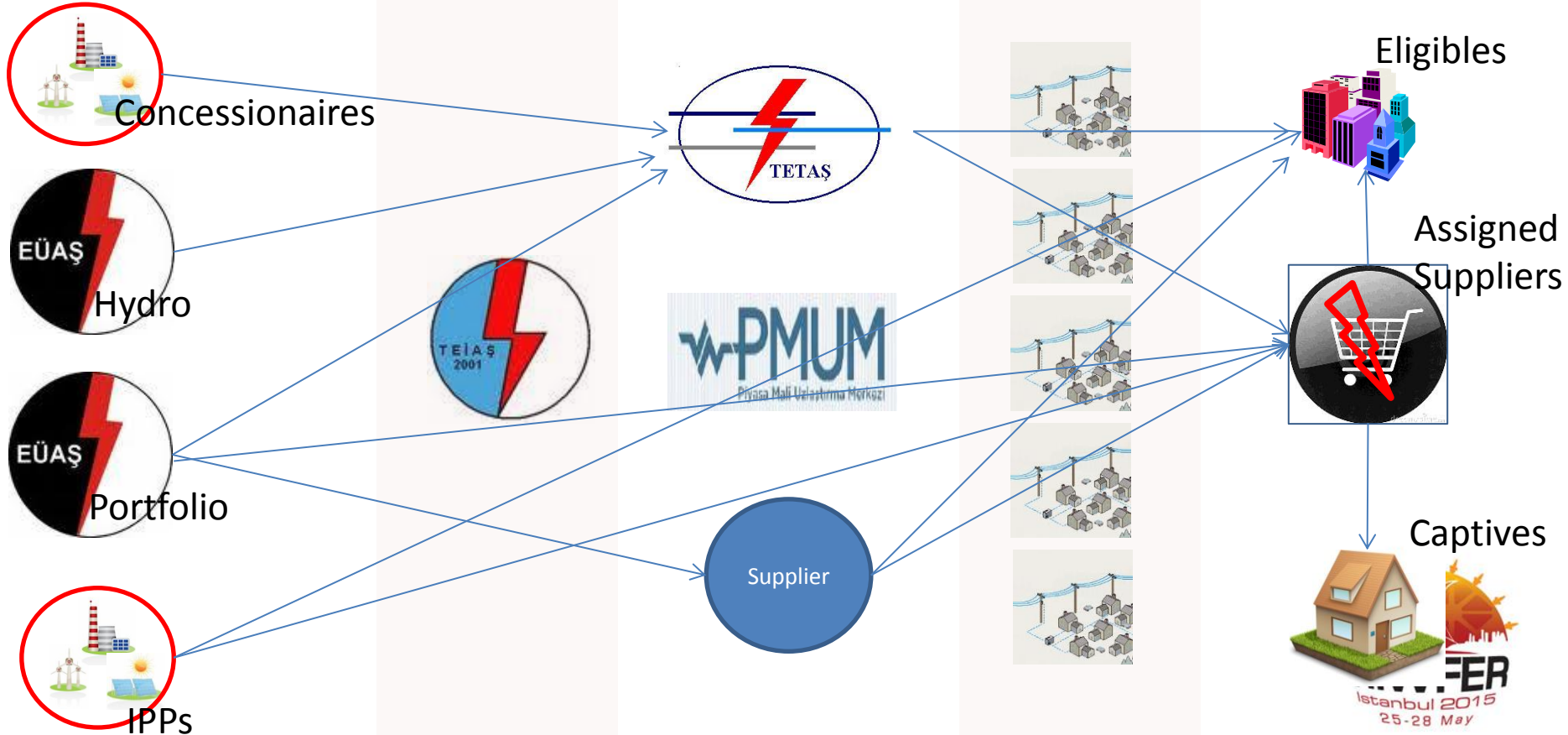
Wholesale

**21 DistCo**

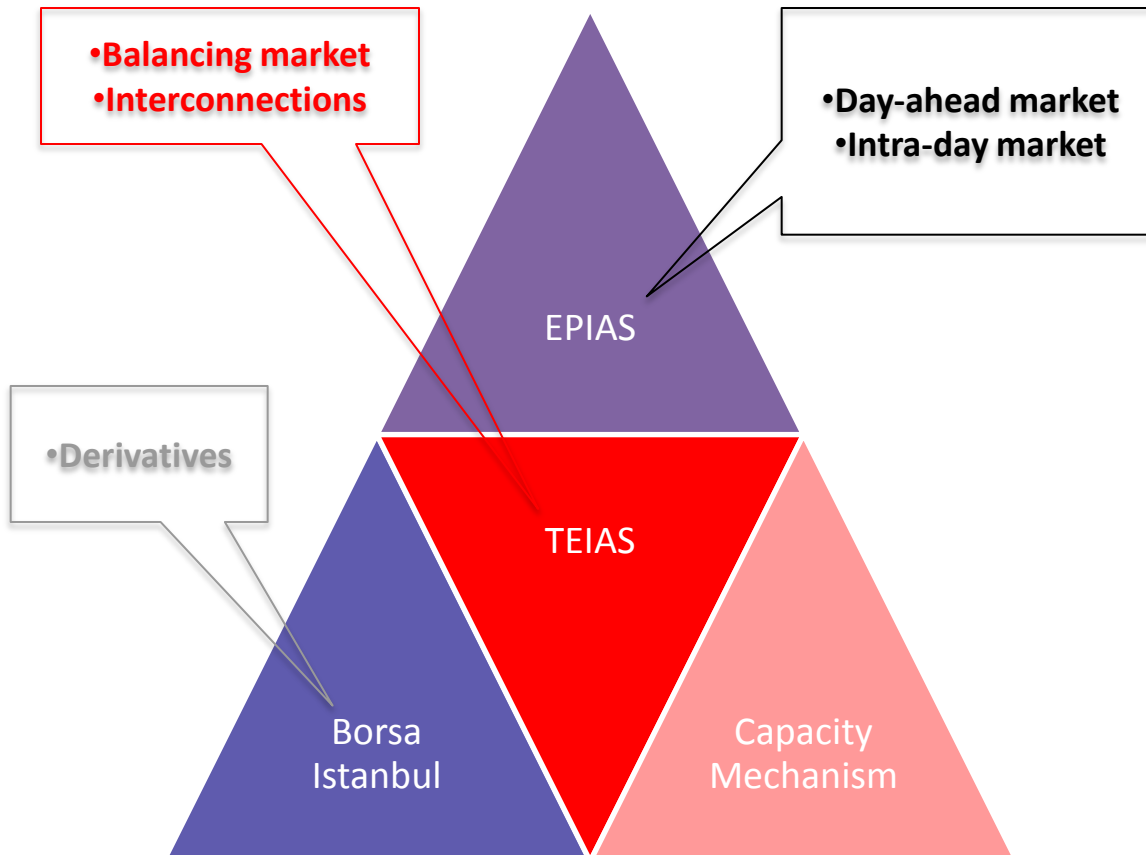
Distribution

**21 Assigned**

Retail



# Power Exchange Approach

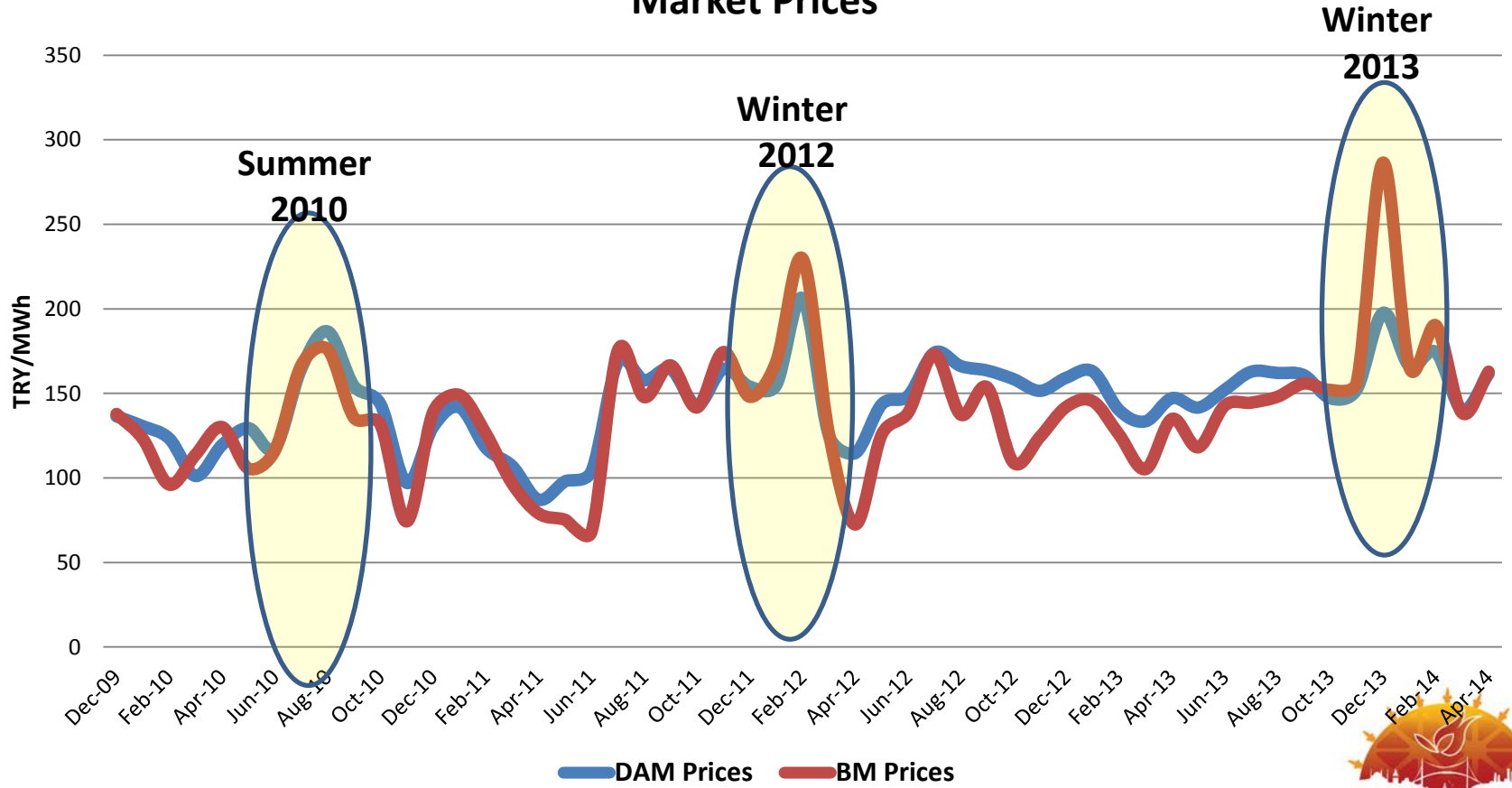


- Market operation as a separate activity
- Withdrawal of market operation from TEİAŞ: Enhancing TEİAŞ system operation capabilities
- Possibility for alternative markets
- Identification of Istanbul Exchange for derivatives trading



# Markets in Progress

**Market Prices**

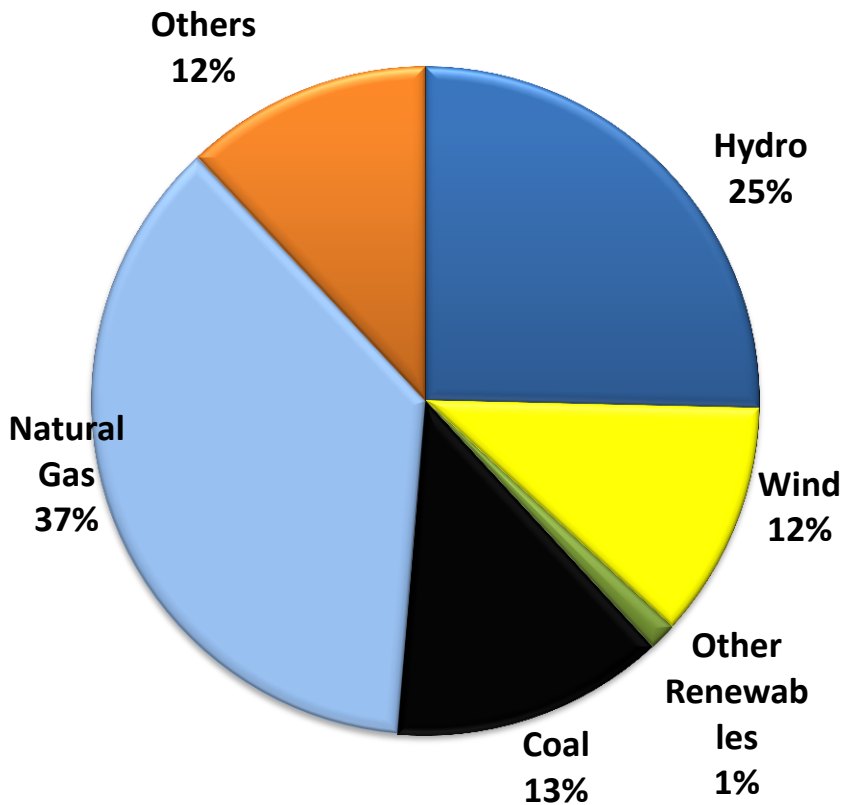


# Licensing Framework

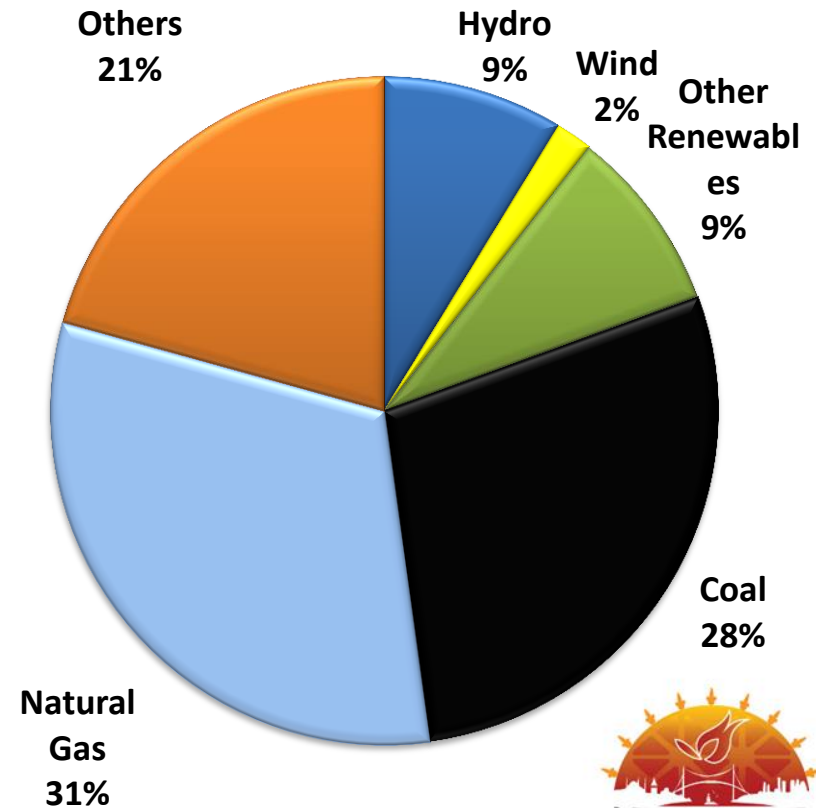
- An easy licensing approach: Enhanced with Pre-Licensing scheme
- Freedom of share transfer
- No regulatory approval for pledge of shares, right of usufruct and assignment of claims
- Step-in rights: Grant of license to a third party identified by the financier upon a limited or non-recourse project financing

# Licensing Portfolio (Private)

**Licensed (85 269 MW)**

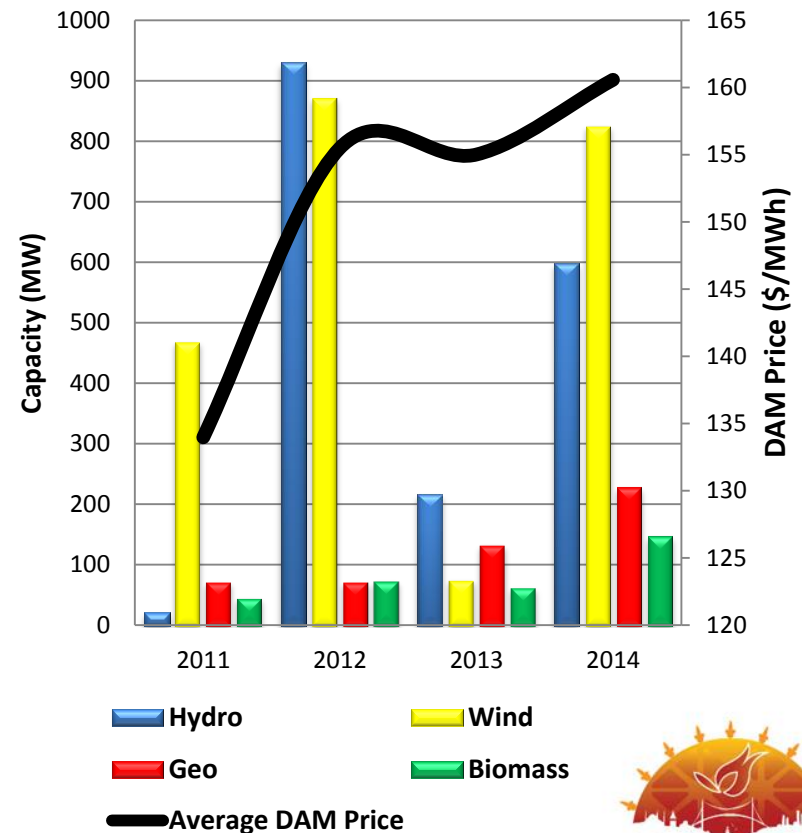


**At other stages (94 862 MW)**



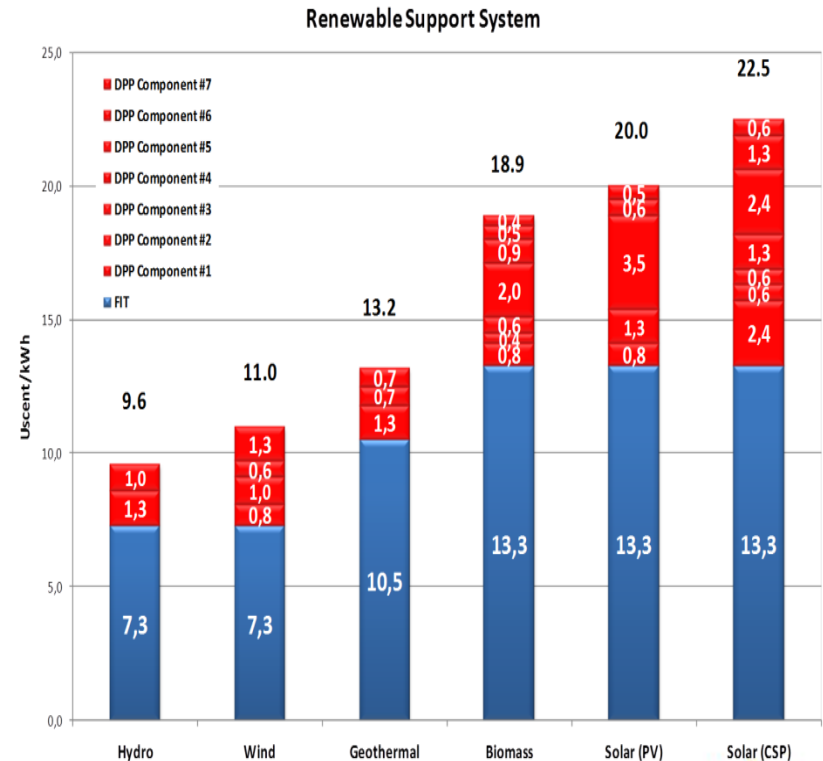
- FIT thru RESUM
  - Annual participation possibility
- Annual announcement of available connection capacity reserved for wind & solar
- Annual measurement data requirement for license application
  - Solar applications during first 5 working days of April
  - Wind applications during last 5 working days of April

RESUM Portfolio





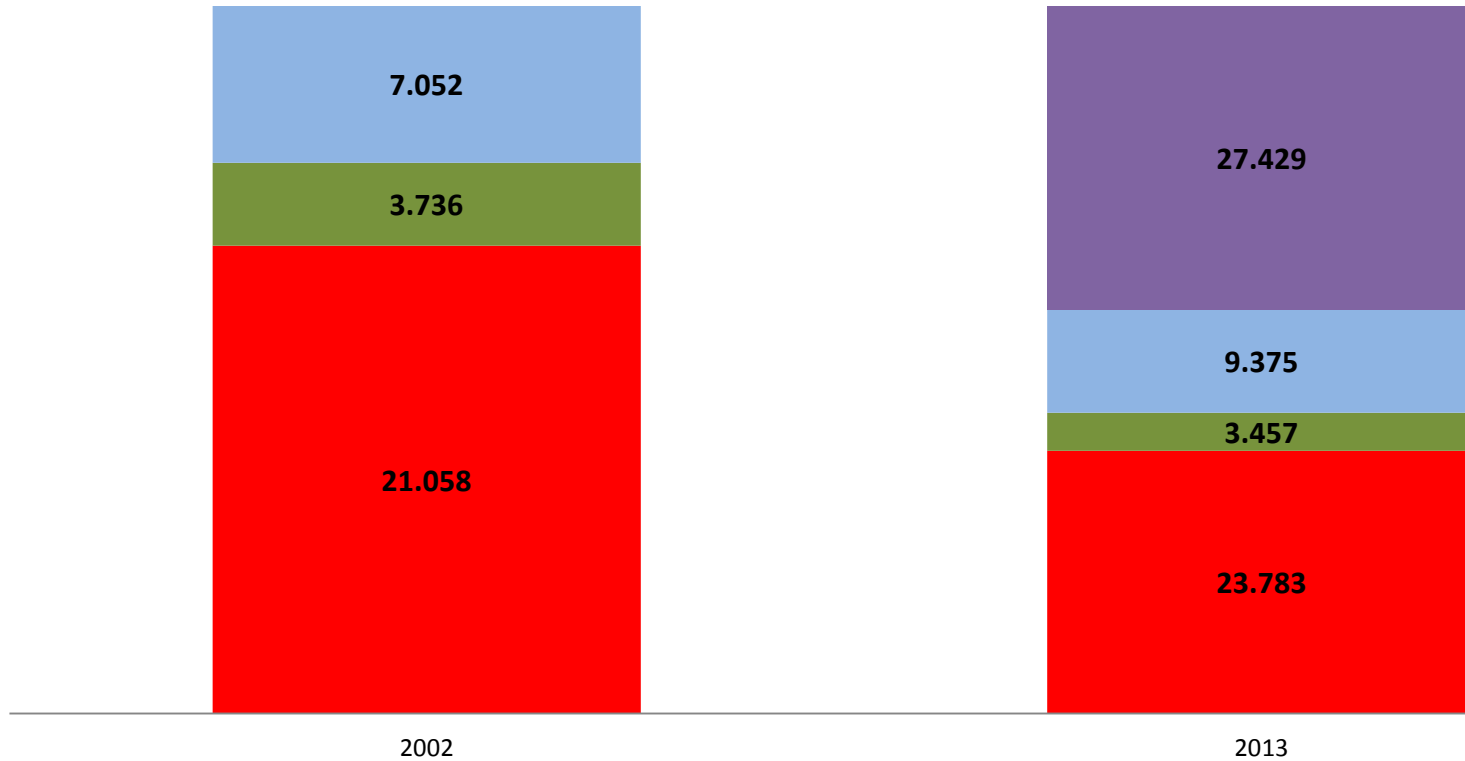
- Licensing fee facilities:
  - Only 10% of pre-licensing & licensing fees (valid for other domestic sources)
  - Exemption to pay annual license fee for 8 years in operation
- Connection priority
- Exemption from being a balancing unit
- License exemption for renewable power plants up to 1 MW capacity.



# Perception by Investors

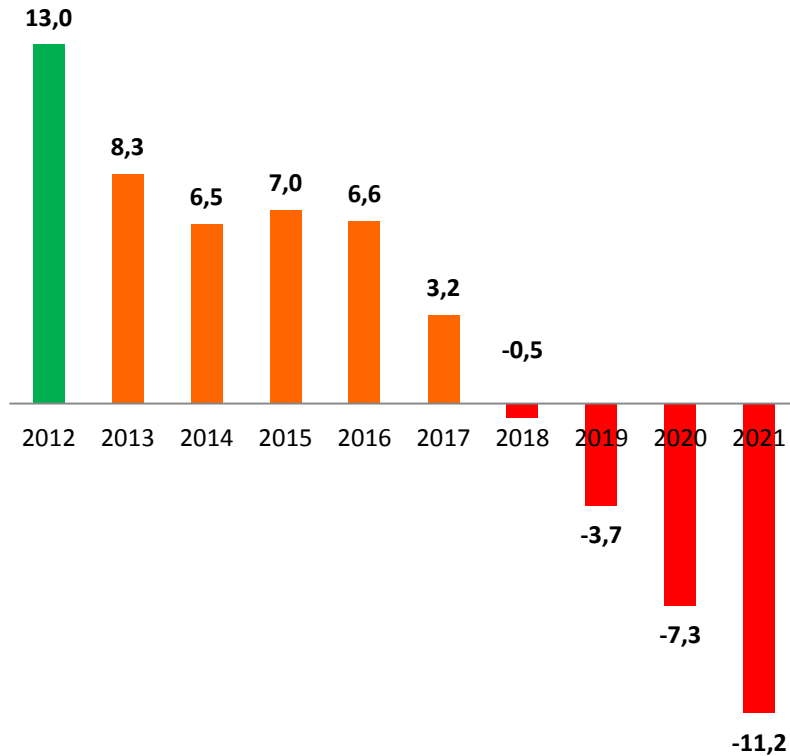
## Ownership Shift (MW)

■ State Owned ■ Autoproducer ■ Private Contracted ■ Private IPP

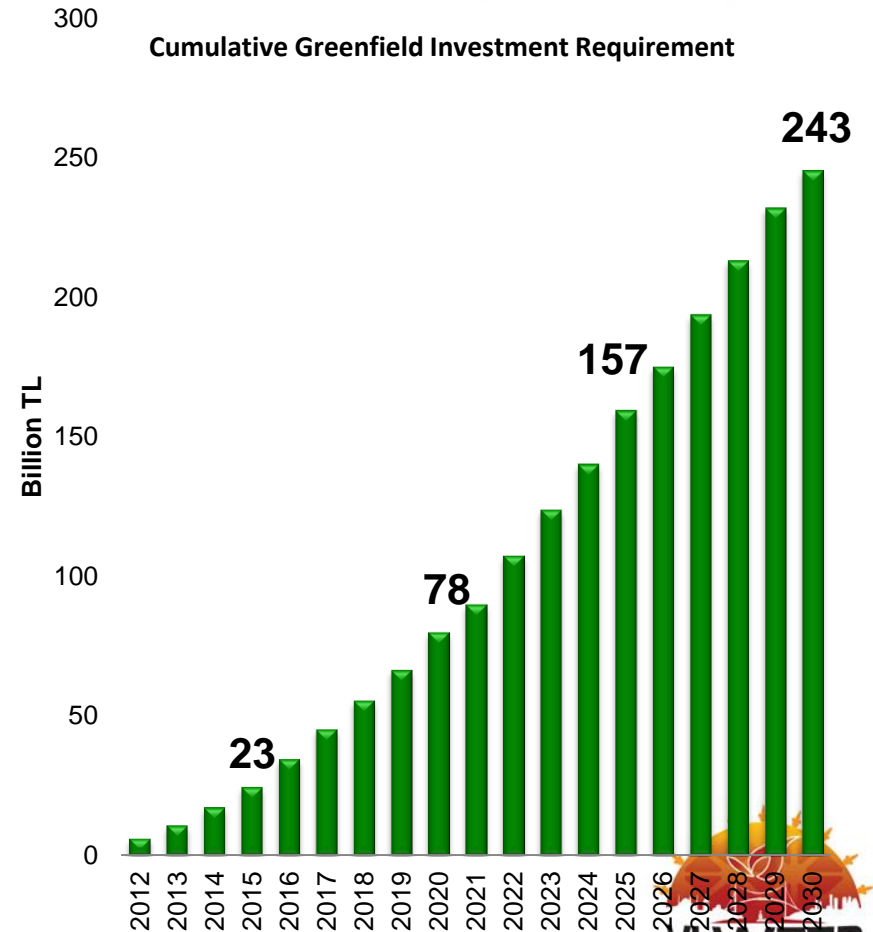


# Investment Requirement

Firm Energy Reserve Margin (%)



Cumulative Greenfield Investment Requirement



# Overall Assessment: Conditions for Success

- Well established market design
- Confidence in proper functioning of the market
- Attractive increase in demand and the availability of new capacity investment needed to meet demand
- Availability of adequate negotiable generation margin
- Wholesale prices that appeal to investors
- Involvement of financially viable buyers in the market
- Eligible consumers selecting their own suppliers with competing firms through bilateral contracts



# Opportunities

- Greenfield generation investment requirement due to high demand increase rate
- Well designed market rules continuous monitoring for market build up
- Increasing trade
- Promising possibilities for cross-border trade
- M&A

# Challenges

- High demand increase rate
- Insufficient metering and communication infrastructure
- Lack of REMIT type rules
- Employment of uniform tariffs
- Inadequate harmonization of infrastructure investments

## Last remarks...

- Turkey pursues its goal of market liberalization in energy sector enthusiastically.
- The regulatory environment is being designed and established along the path of EU accession.
- Regional cooperation and integration regards to the energy sector and participation in the energy-related international institutions are among the highest-priority of Turkish policymakers.
- There are substantial opportunities for greenfield investment and privatization opportunities.
- That is; a good opportunity and a growing market that often times “nudges” the potential investors domestic and international alike.



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