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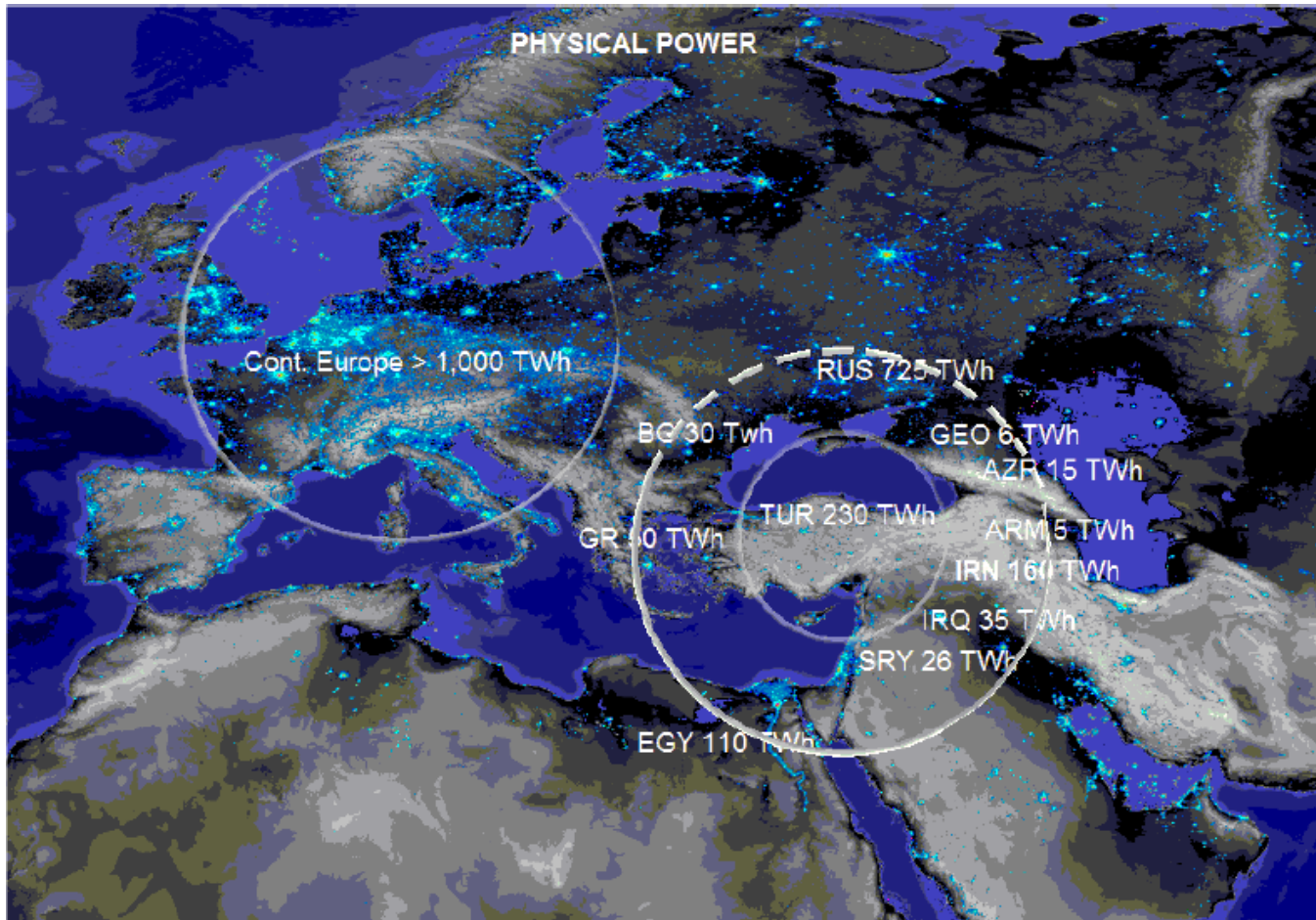
Borsa İstanbul and The Energy Market



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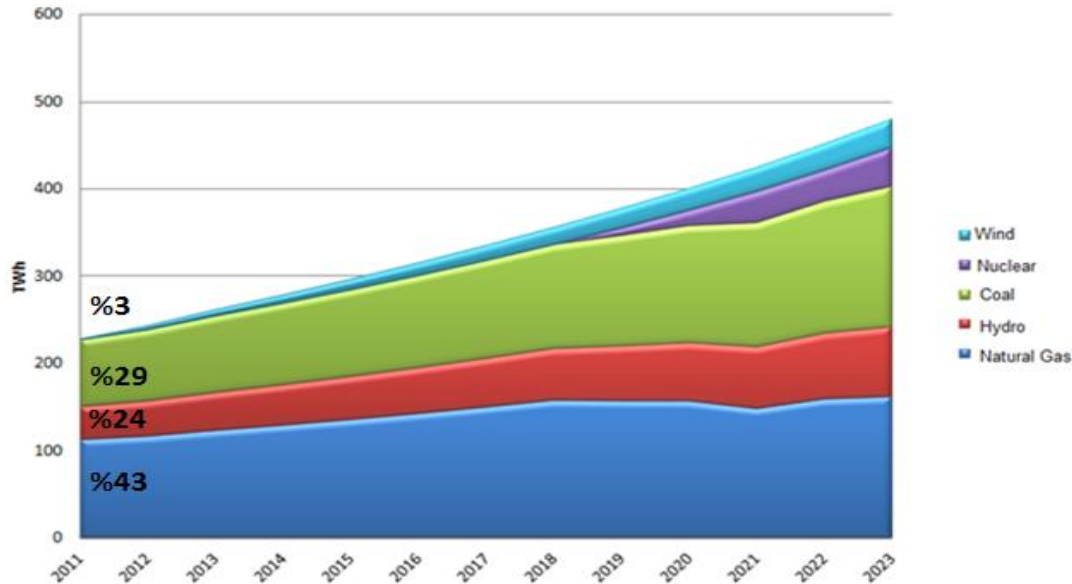
Benchmark for Investment

Turkey's Position in the Region



Production and Capacity Growth

Turkish Electricity Generation by Energy Source



Source: "Dynamics of Natural Gas Market" presented by Bans Sanli, Ministry of Energy and Natural Resources, 2013.

2003-2012:

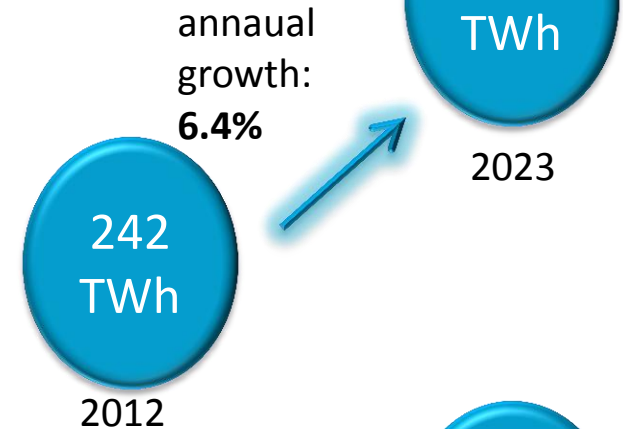
Avg. GDP Growth : 5,0%

Avg. Power Consumption Growth: 6,2%

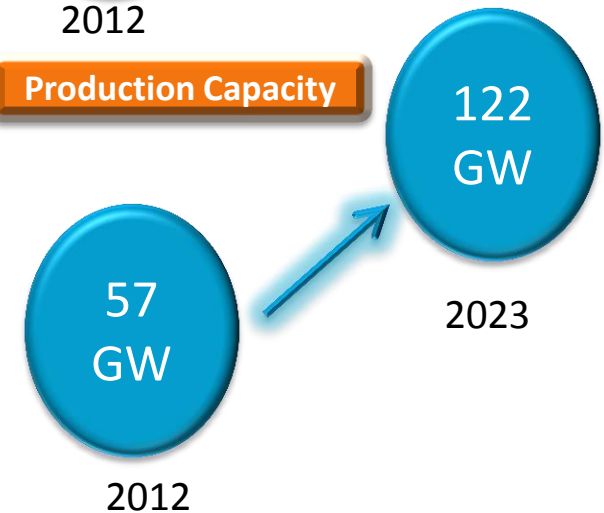
Fastest growing market after China for last 10 years

Need for **more than \$ 100 billion** investments.

Power Consumption

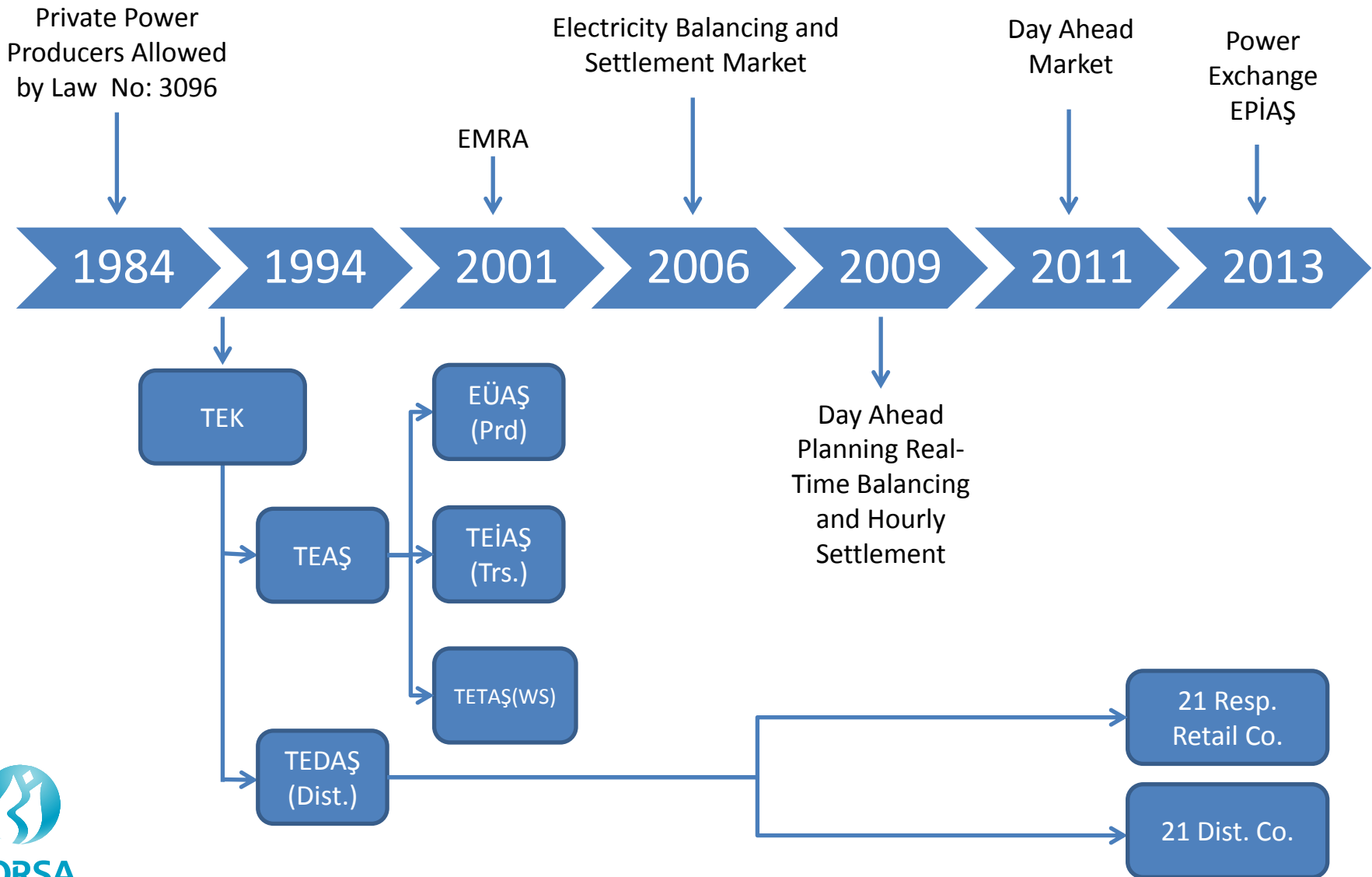


Production Capacity



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Liberalization Process



Market Structure, Participants and Trading Volumes

Over-the-counter Market Activities (Bilateral Agreements)

Organized Wholesale Electricity Markets (Day Ahead Planning Market, Balancing Power Market)

GENERATION

- EUAS
- BO-BOT-TOR*
- Independent Producers
- Autoproducers

WHOLESALE

- TETAS
- Private Wholesale Companies

RETAIL

- 21 responsible retailers
- Independent retailers

ELIGIBLE CONSUMERS

*PPP models in Turkey: BO: Build-Operate/ BOT: Build-Operate-Transfer/ TOR: Transfer of Operating Rights

Transmission (TEİİAŞ)

Distribution (21 distribution companies)

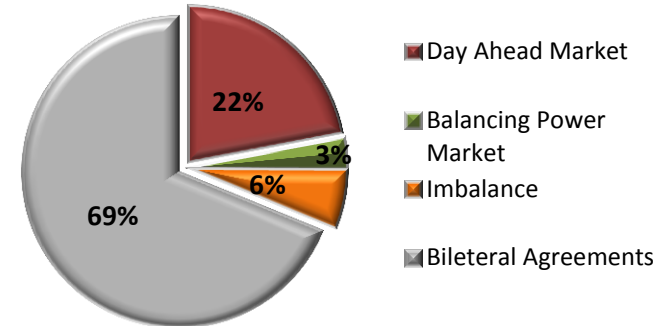
NON-ELIGIBLE CONSUMERS

Electricity Transmission Activities

Market Participants

Producers	517
Wholesalers	118
Retailers	57
Total	692

Market Volumes



Kaynak: PMUM

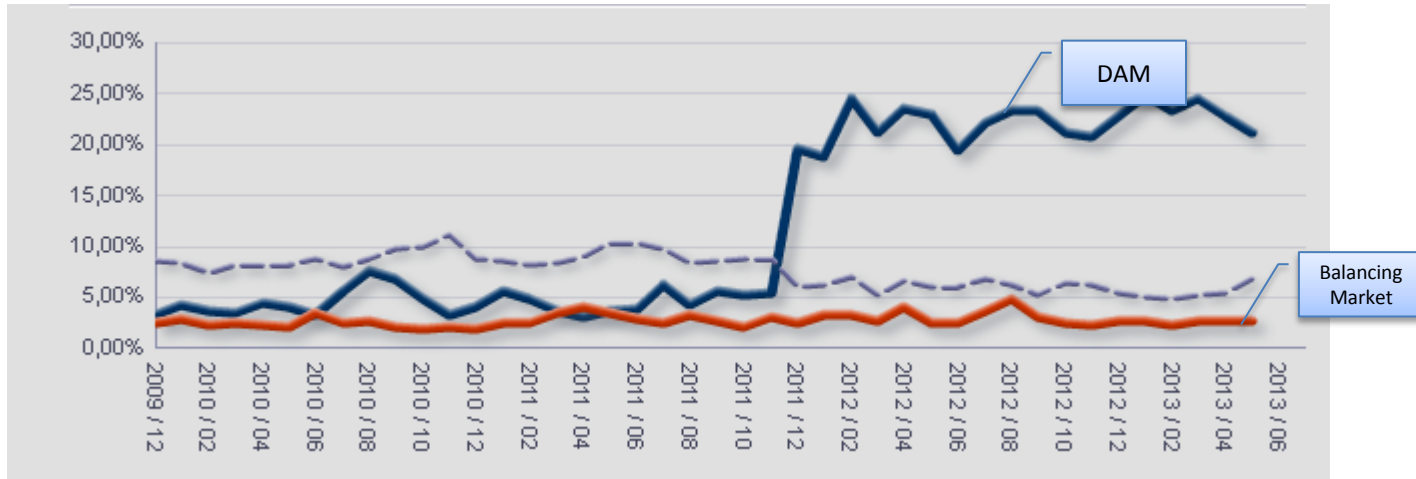
	Volume (TWh)	Value (Mil. USD)
2012		
Bileteral Agreements	150.32	12,542.22 (est.)
Day Ahead Market	47.93	4,211.50
Balancing Power Market	6.73	544.39
Imbalance	13.28	1,197.54
Total	218.27	18.495.65 (est.)



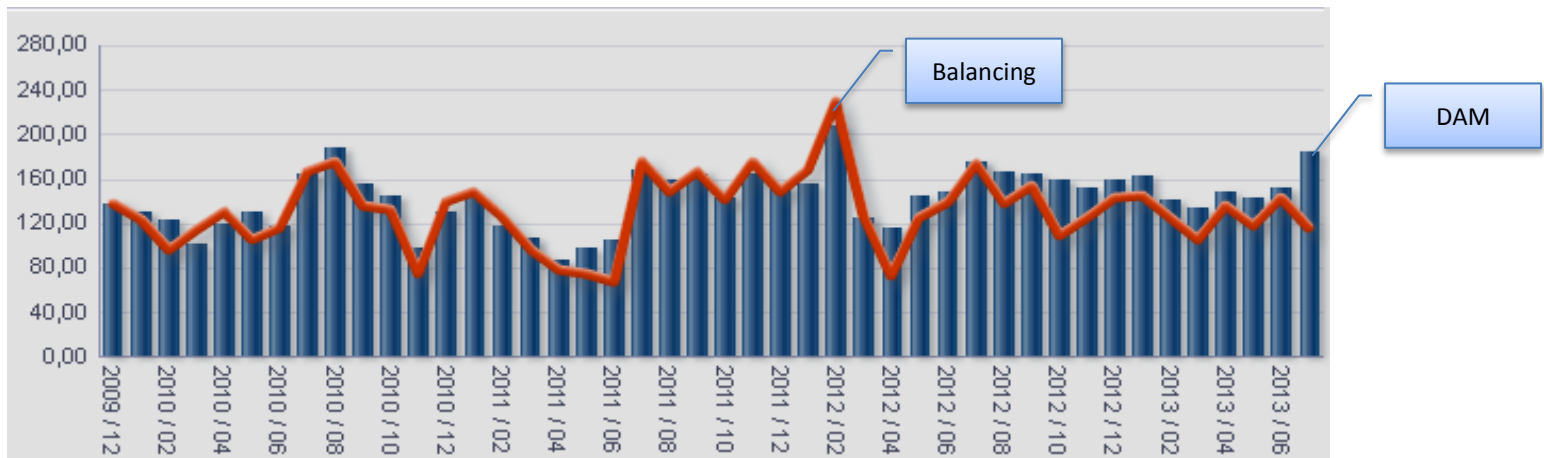
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Market Figures

Market Share



Prices



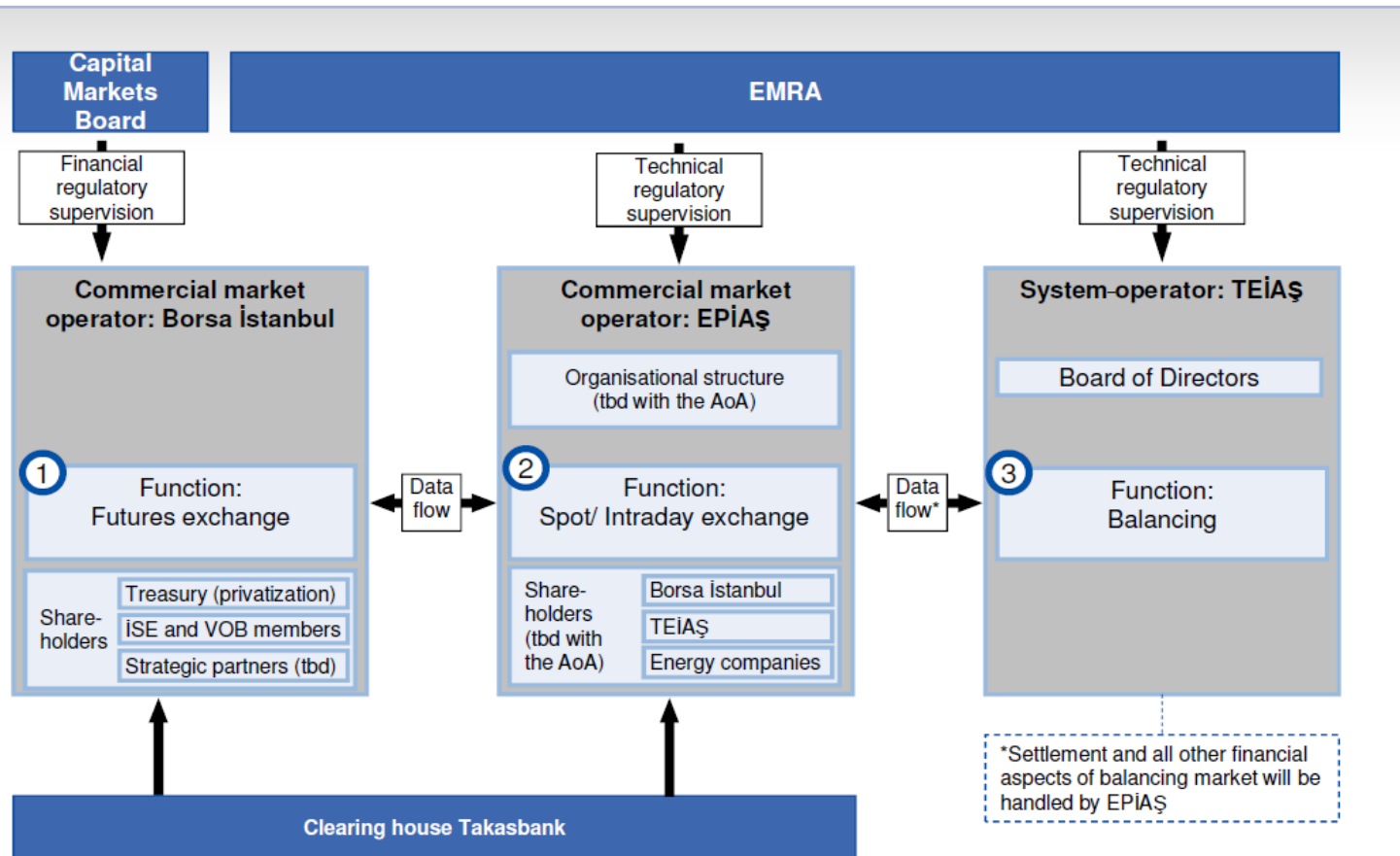
Market Structure

Turkish Market Structure Designed by new Electricity Market Law

	Organized Market System Operators	
Spot Market	Day Ahead Market	(EPIAS)
	Intraday Market (to be established)	(EPIAS)
Balancing Market	Balancing Power Market	(TEİAS)
Forward Market	Standardized Electricity Contracts	(Borsa İstanbul)
Derivatives Market	Electricity Derivatives Contracts	(Borsa İstanbul)

Market Structure

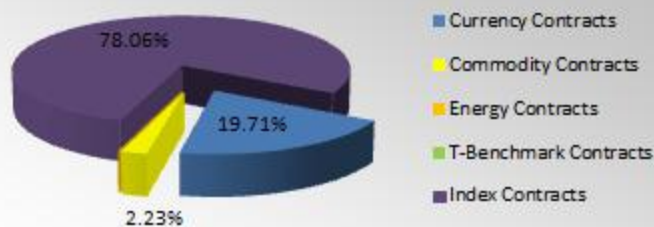
Organizational setup of the Turkish electricity wholesale market according to the revised Electricity Market Law



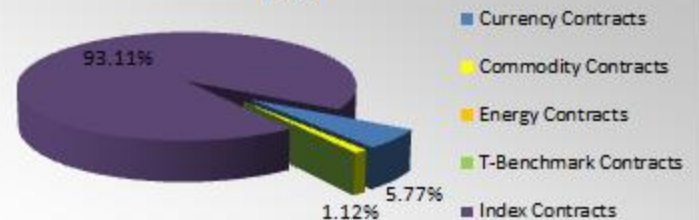
Electricity Futures

- Electricity futures have been traded on Turkish Derivatives Exchange (Turkdex) since September 26th, 2011
- Derivatives contracts in Turkdex were transferred to Borsa Istanbul Futures and Options Market on August 5th, 2013
- In 2012, more than 62 million contracts with a value of USD 200 Billion was traded on Turkdex
- Electricity futures had a volume of 928 contracts with USD 9,5 million value

Number of Contracts Traded Per Asset Class
(2012)



Trading Value Per Asset Class in 2012
(TRY)



"Base Load Electricity" Futures

Underlying Asset	The arithmetic average of the Day Ahead Market Prices announced by the Turkish Electricity Transmission Company for each hour of the contract month.
Contract Size	Number of hours in the contract month x 0.1 MWh Example: The contract size for 30 day contract months is 72 MWh (30x24x0.1MWh)
Price Quotation	TRY price of 1 MWh electricity shall be quoted with two decimals.(Example: 121.20)
Daily Price Limit	±10% above or below the prior day's settlement price.
Minimum Price Tick	0.10
Contract Months	All calendar months (The current contract month and the nearest three contract months shall be concurrently traded)
Final Settlement Day	The last day of each contract month. In case the last day of the contract month is not a business day, the expiry date is the business day following the last day of the contract month. In case domestic markets are closed for half day, the expiry date shall be the following business day.
Last Trading Day	Last business day of each contract month
Settlement Method	Cash Settlement.
Final Settlement Price	<ul style="list-style-type: none"> The basic arithmetic average of the Day Ahead Market Prices announced by the Turkish Electricity Transmission Company for each hour in the contract month.



"Base Load Electricity" Futures

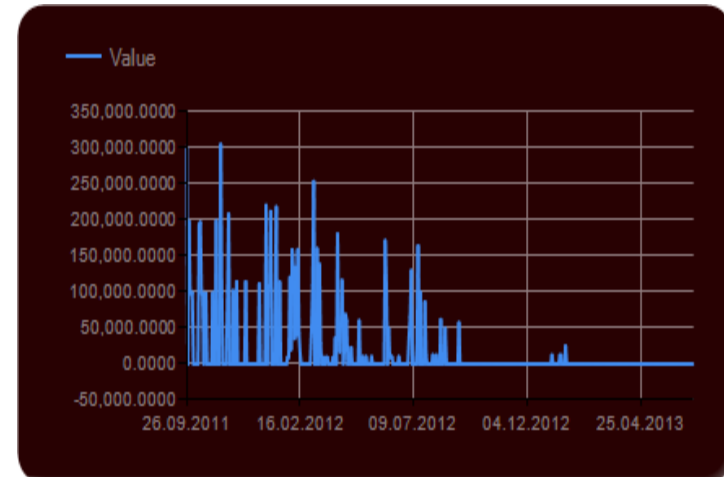
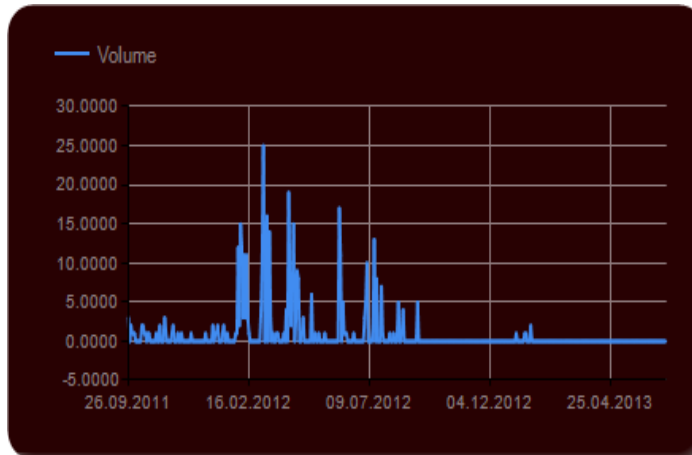
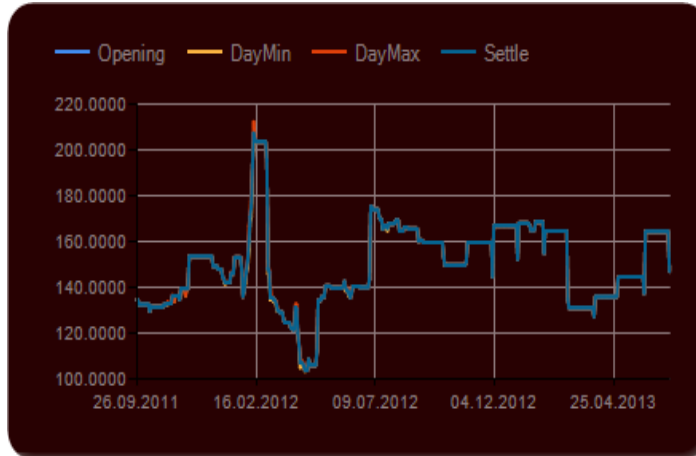
Daily Settlement Prices	<ul style="list-style-type: none"> •Weighted average price of trades within the last 10 minutes before the close of the trading session •If the number of trades within the last 10 minutes before the close of the trading session is less than 10, the weighted average of the last 10 transactions before the close of the session <p>If the daily settlement price cannot be calculated using the above-mentioned methods, daily settlement price may be determined by using below mentioned methods separately or in combination:</p> <ul style="list-style-type: none"> •Weighted average price of all the transactions performed throughout the trading session, •Previous day's settlement price, •Average of the best bid and best ask quotes at the close of the trading session, •Theoretical prices
Position Limits	There are two kinds of position limits for contracts listed at TURKDEX: Absolute and Percentage Limits. Absolute limit is determined as the number of open interest for each contract month that one account might hold. The absolute limit for each contract is 20,000. If the number of open interest pass over 20,000 then the system checks the percentage limit which is 10% of total open interest for the related contract month.
Margining	Contract based margining with an initial margin of TRY 1,200 (Maintenance level is 75%)
Clearing House	Istanbul Settlement and Custody Bank Inc. (Takasbank), acts as CCP



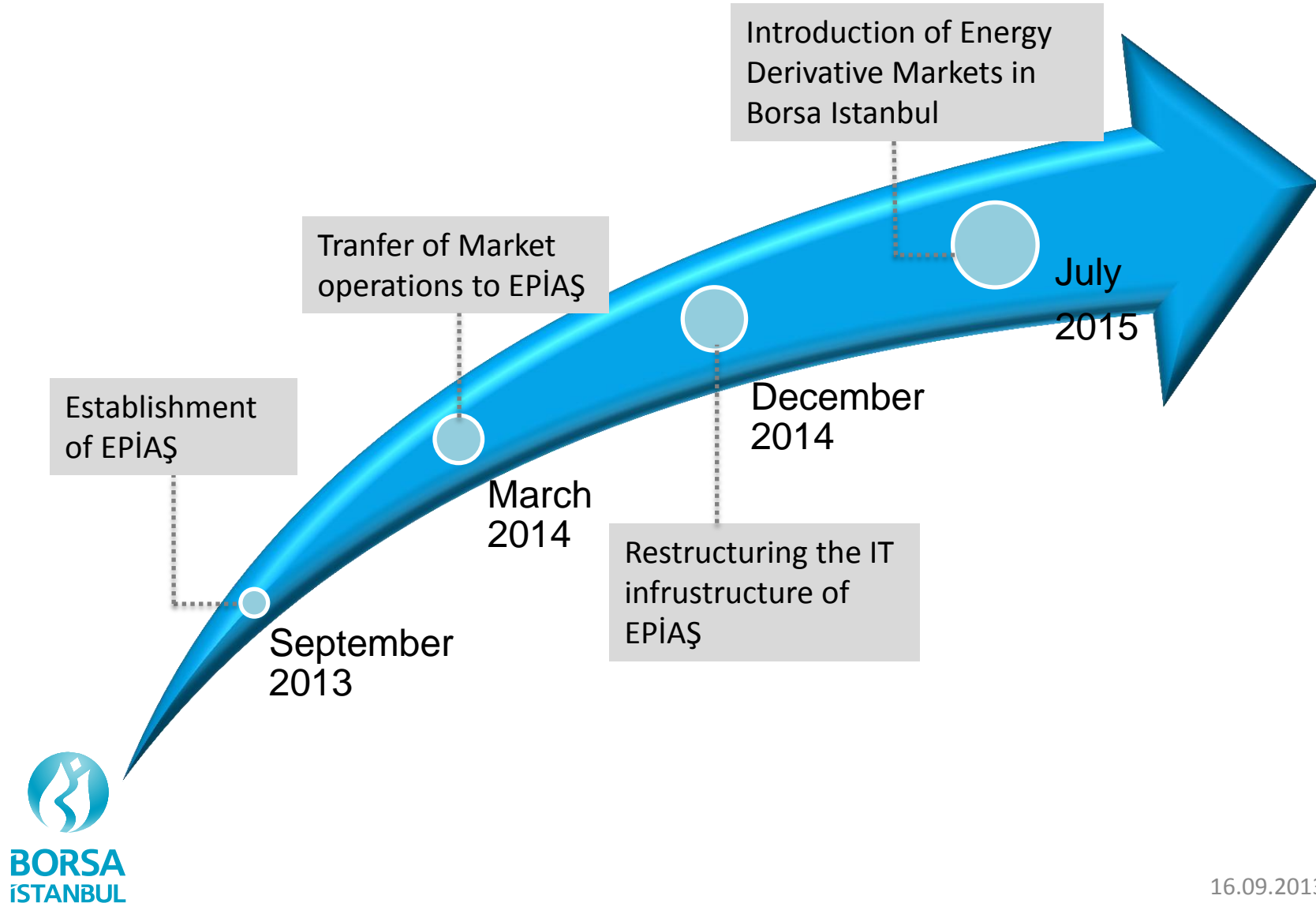
Historical Data

Contract: Base Load Elc.

Start Date: 26.09.2011



Road Map



THANK YOU