# AKENERJİ
# ELEKTRİK ÜRETİM A.Ş.

## 2013

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www.akenerji.com.tr

# COMPANY OVERVIEW

## ➢ Private Energy Company

648 MW active power capacity (Natural gas, Hydro and wind)

900 MW natural gas to be operational 2H2014

198 MW hydro at development stage

## ➢ Role in Market

- Established in 1989, one of the largest and most experienced players in the market.
- Single-handedly produces 2% of energy generated in Turkey and is one of the market leaders among private generation companies. (10 % of private generators)

## ➢ Ranking in the Major 500

- Ranked in the list of “500 Major Industrial Enterprises of Turkey Research” by Istanbul Chamber of Industry consequently in the last 8 years

## ➢ Ownership Structure

- IPO-ed June 2000

| | |
|---|---|
| Akkök | 37,36 % |
| CEZ | 37,36 % |
| Public | 25,28 % |

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# STRONG SHAREHOLDER SYNERGY

## AKKÖK GROUP

➢One of the biggest industrial groups in Turkey

➢Active in several sectors with main focus on Chemicals,Energy,Real Estate,Port Operations,IT and Insurance

➢The group with around 4000 employees, combined revenues amounting to $ 2.7 billion in 2011.

➢Sectorel Breakdown of Group's Turnover in 2011:

- Chemicals :40%
- Energy :50%
- Others :10%

www.akkok.com.tr

## CEZ GROUP

➢CEZ is the largest Czech corporation, and the largest corporation among 10 new EU member states

➢8th largest Power Utility company in terms of market capitalization in Europe

➢Vertically integrated in the Czech Republic – from mining through generation to distribution and supply

➢Expertise in distribution and supply in Bulgaria and Romania

➢Generation know-how in lignite, coal, hydro and nuclear energy

➢CEZ announced 8,6 billion EUR net sales in 2012

www.cez.cz

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# GLOBAL TRENDS & EXPECTATIONS IN ENERGY

# HOW TO MEET THE GROWING DEMAND

➢**Today, with the growth of the economies, demand for energy is increasing. As a result, further investments and diversification of the energy sources seems immanent. With the developed energy markets, unefficient/expensive power plants will be eliminated and efficient/cheap ones will survive and present lower priced electricity to the end-user.**

➢**Power and utility organizations will need to double their base load generation (traditional and renewable sources) to address the growing energy demands of our global economy over the next 30 years.**

➢**They also will need to invest in new technologies for carbon capture, smart metering and demand side management and to reconfigure transmission and distribution systems to successfully integrate new sources of energy .**

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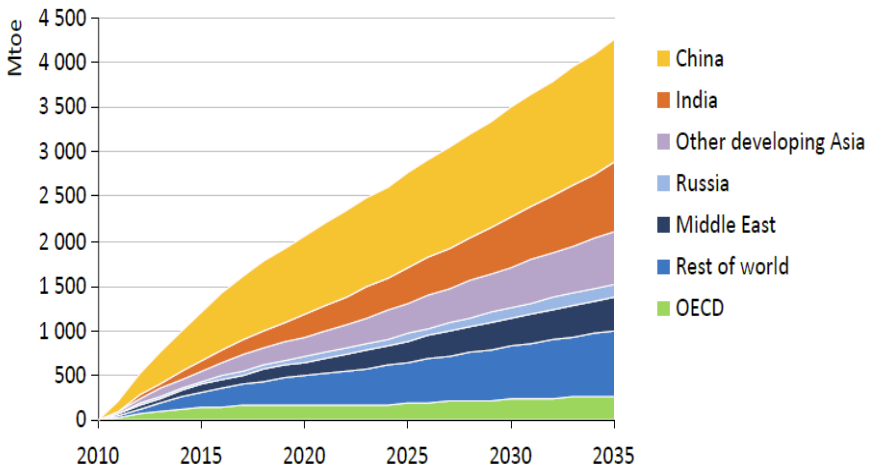
*Source: EIA, Deloitte*

# DEMAND FOR ENERGY IS DRIVEN BY EMERGING MARKETS

- **According to IEA World energy Outlook Report-2011, world primary energy demand will increase by one-third b/w 2010 and 2035.**

- **90% of the projected growth comes from non-OECD economies;**
  - **China alone accounts for more than 30%.**
  - **Demand in India, Indonesia, Brazil and the Middle East are faster than in China.**

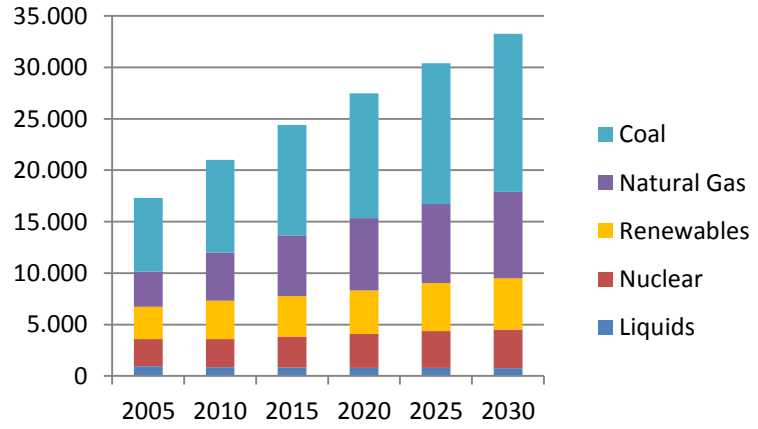
Growth in primary energy demand in the New Policies Scenario




- **It is forecasted that the increased need in baseload capacity will be primarily met through coal, natural gas and renewable sources.**

**Production Breakdown Forecast**

World's Electricity Production by Fuel (Trillion kWh)




*New Policies Scenario: Long term rise in ave temp. in excess of 3,5°C*
*Source: IEA, World Energy Outlook Report, 2011*

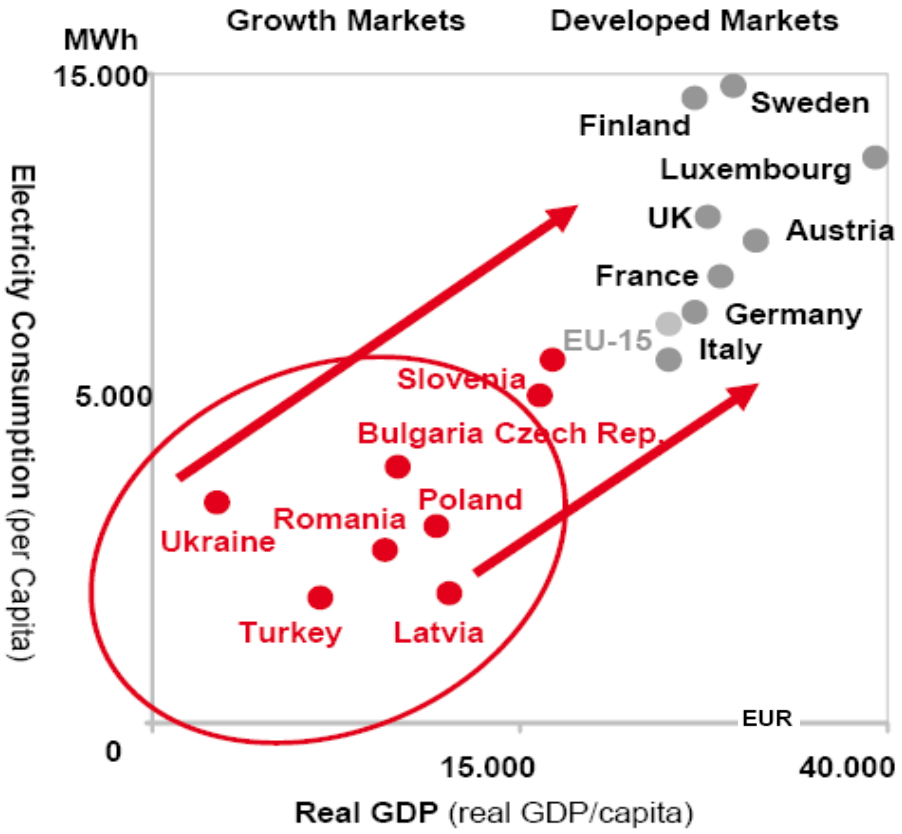
# NATURAL GAS CONSUMPTION EXPECTED TO CATCH UP COAL BY 2035

- Natural gas is the only fuel to increase its share in the global mix
- Gas demand increases at an average rate of 1.7% p.a. globally
- 81% of global gas demand and 70% of global gas production is driven by non-OECD countries
- Unconventional gas (tight gas, shale, coalbed methane) is set to play an increasingly important role
- Increase in gas-powered base load will increase the role natural gas plays in energy pricing

*Source: IEA, World Energy Outlook Report, 2011*

# TRENDS & EXPECTATIONS IN TURKISH ENERGY MARKET

# DEMAND GROWTH & POTENTIAL




➢Electricity consumption is mainly effected by GDP, population growth, urbanization, climate change and efficiency applications.

| GDP | 2011 | 2012 |
|---|---|---|
| Turkey | 8.5% | 2% ; 4% |
| EU | 1.4% ; 1.6% | -1.2 %;-0.5% |

*Source: IMF, OECD, WB, UN, Govt,*

➢It has been historically observed globally that the electricity market tends to grow +4% on average above the country growth rate. The difference in electricity demand and growth rates tends to be higher in developing countries, like Turkey.

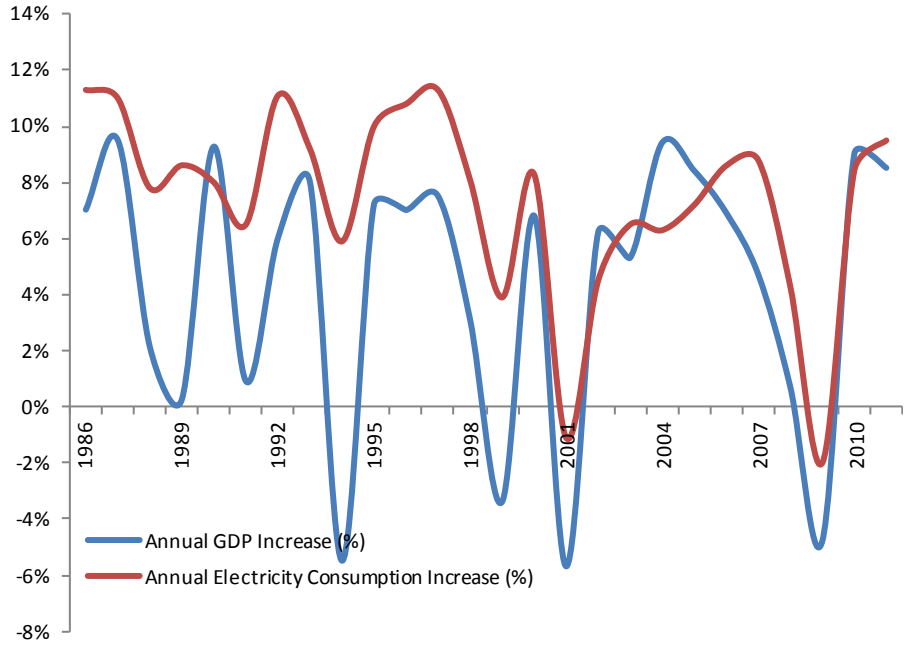
| | Growth Markets | Developed Markets |
|---|---|---|
| Electricity demand growth | + 3-7% | + 1-2% |
| GDP growth | + 4-10% | + 1-3% |

➢Turkey represents a significant potential in terms of consumption per capita while compered to the other countries with its increasing young population and economic growth potential.

*Source: EUROSTAT*

# CONSUMPTION DYNAMICS

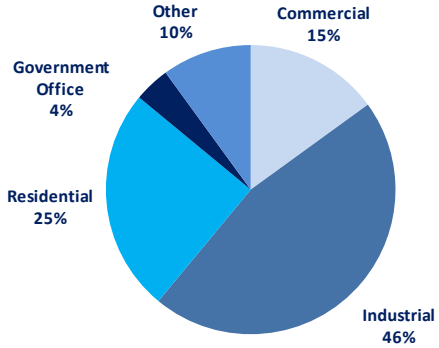
## Electricity Consumption Trend




➢In the last 20 years, net electricity consumption increased remarkably with 7 % CAGR.

➢TEIAS forecasts average annual consumption growth of 7 % per year for 2010 to 2019. The consumption growth may be shifted due to the global crises but the imbalance remains a problem. The global crises provides an opportunity for Turkey to improve the investment environment and create a healty, competitive market.

## Power Consumption Breakdown in Turkey



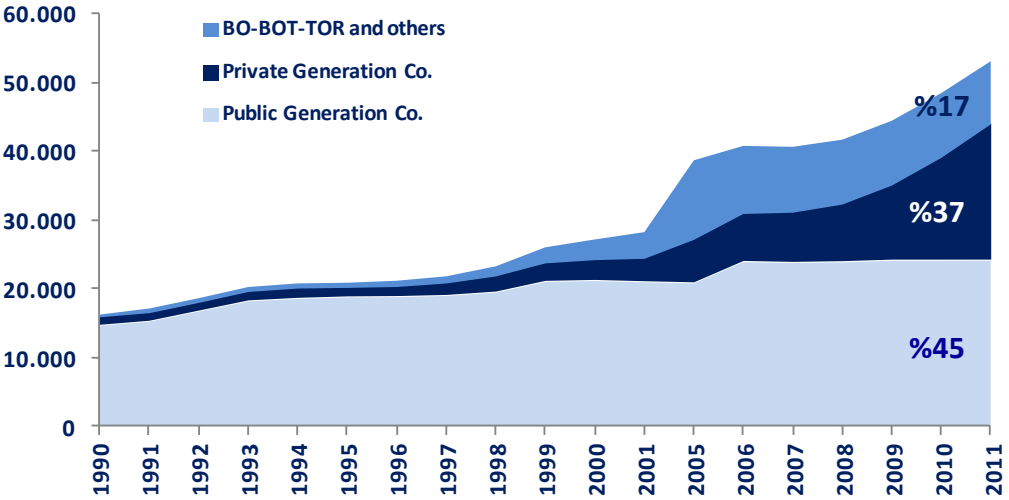

➢Electricity consumption proved to be resilient to the downturns in the economy. Increase in electricity demand has mostly been much higher than the increase in national income in growth years, while staying at the positive territory during recession years:

| | Years : Financial Crises | |
|---|---|---|
| | 2001 | 2009 |
| GDP in Turkey | -5,7% | -4,7% |
| Elec. Consumption | -1,2% | -3,1% |

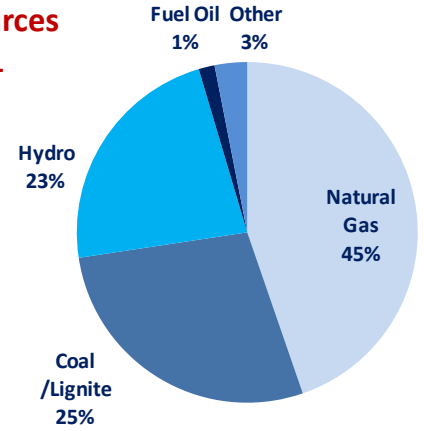
*Source: TEİAŞ, State Planning Organization, TUİK*

# GENERATION CHARACTERISTICS

## Turkey's Installed Capacity by Generation Companies (MW)




## Fuel Sources 2011




➢Today, majority of the electricity produced in Turkey is generated through state-owned/operated power plants.

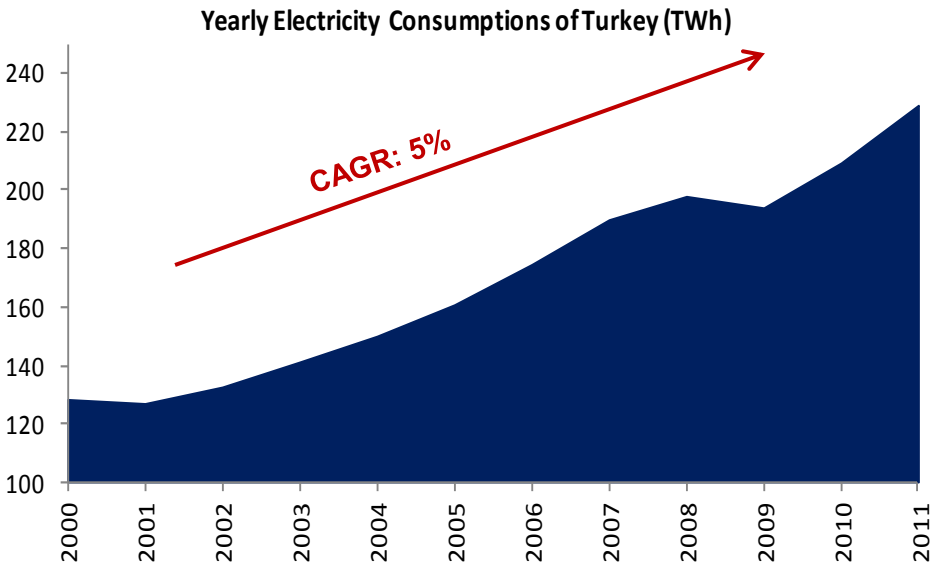
➢Import and Export of electricity depend on Governmental permits. Due to technical infrastructure, capacity for trade is very limited.

➢Currently the majority (90%) of natural gas is being imported by the government, there is no alternative and no price competition for natural gas in the market. As a result, that the electricity price is mainly sensitive to the NG price trend.

*Source: TEİAŞ, TEDAŞ*

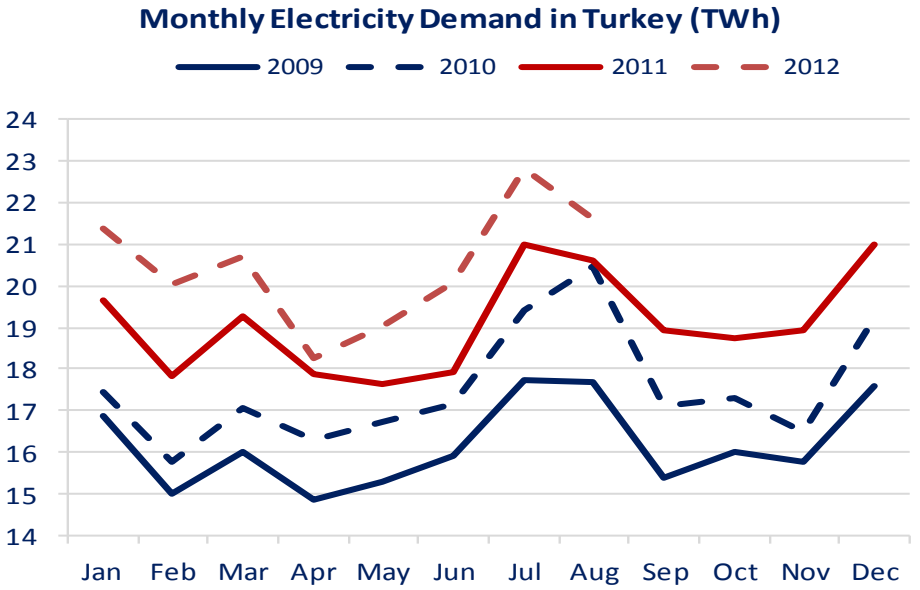
# YEARLY & MONTHLY GROWTH TRENDS

➢In 2011, consumption increased yoy by 9% and has been 229 TWh in Turkey.




| TWh | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Turkey | 128 | 127 | 133 | 141 | 150 | 161 | 175 | 190 | 198 | 194 | 209 | 229 |

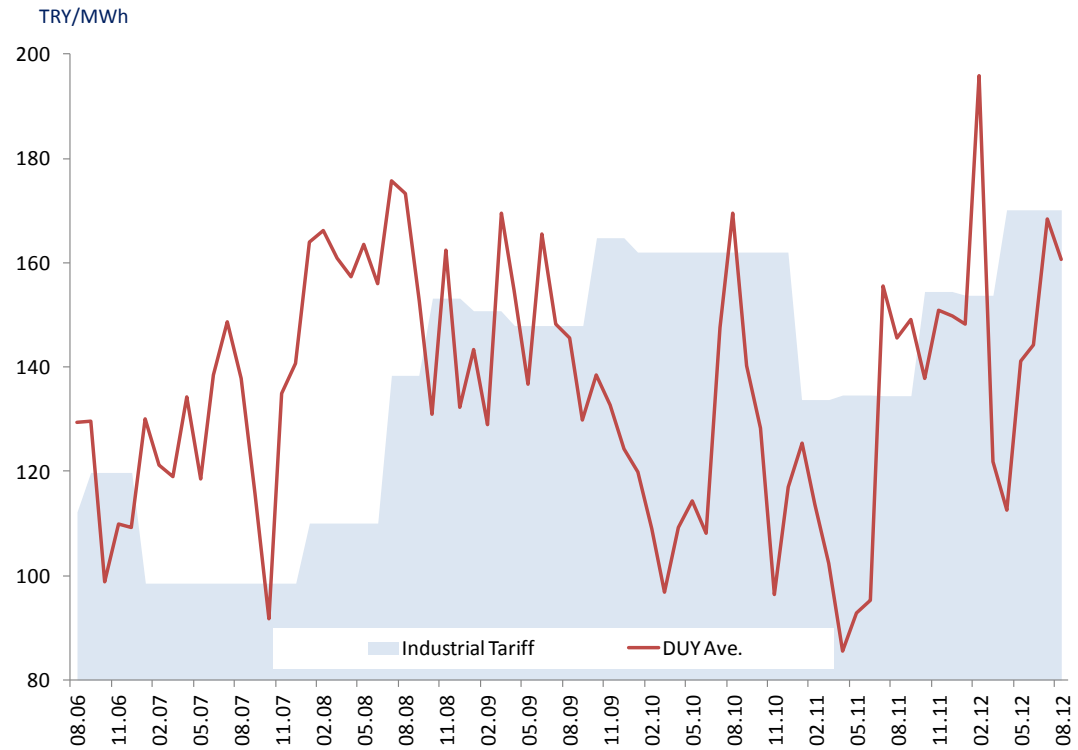
➢MoM increase in 2012 for the eight months is 8% in Turkey.




➢We expect Turkey to growth 3-4% in 2012 and forecast electricity demand growth to be higher than the country growth.

Source: TEİAŞ

# MARKET MECHANISM




- **The official electricity tariff (for residential /commercial/industrial use) is set by the government every 3 months as per APM*.**
- **NG tariffs are determined by the government, and adjusted quarterly by APM (the private gas suppliers operate by providing a discount rate off of the official tariff).**
- **The amount of imbalance in the market drives the price since the last-resort producers are predominantly NG/ fuel-oil plants → increasing electricity shortage forecasts indicate higher prices to come.**

**Private sector generation companies have the following sales platforms:**

**1 ) Contract the customer directly and provide them a discount rate from the official tariff**

**2 ) Selling to DUY system by quoting generation price/power plant and per the specific time-segment of the day (price, that the company itself announces per its own power plants)**

**3 ) Bilateral contracts with other players in the market with fixed prices**

*APM : Automatic Pricing Mechanism initiated in July.2008, where electricity and natural gas tariffs are automatically calculated and periodically applied according to the changes in price of fuel sources, FX rates, inflation rates etc.

**DUY : Clearing house system was initiated in Aug.2006, and provides an "open-market platform" for the power generation companies, since the price is set by the generation company according to the supply and demand dynamics, and is not limited by the official tariff. Sales to the DUY(Electricity Market Balancing and Settlement Regulation) system are exempt from TRT/Energy fund and transmission losses.

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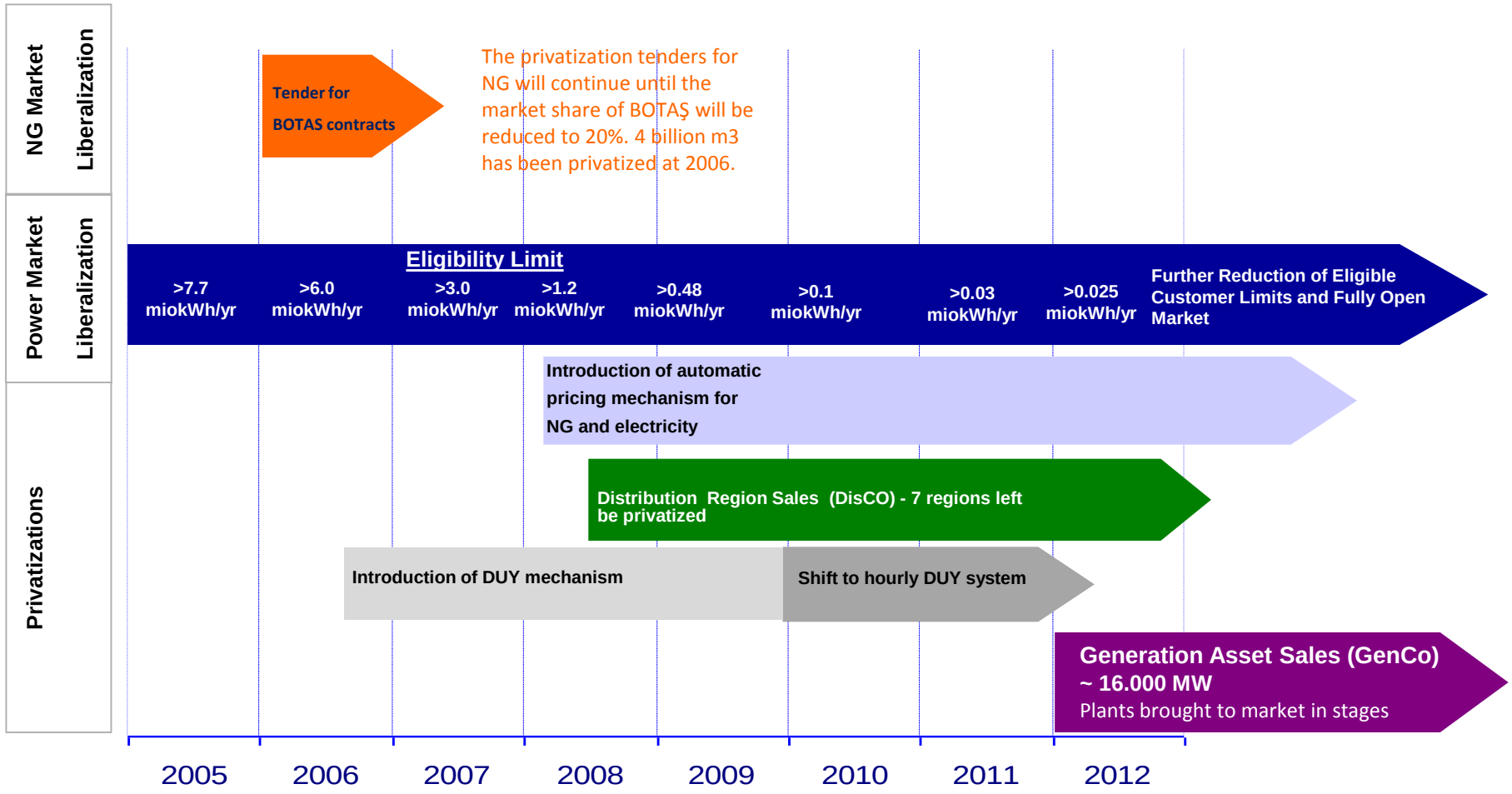
# MARKET LIBERALIZATION SCHEDULE

**Turkish Energy Market deregulation is developed after the UK Model and has been proceeding as per below schedule. Privatization & Liberalization should be expected to start to help create a transparent & competitive market environment.**




- **Timing of remaining DisCO tenders and kick off of GenCO tenders remain unannounced.**
- **The delays in the liberalization result in prolonging of regulated period.**

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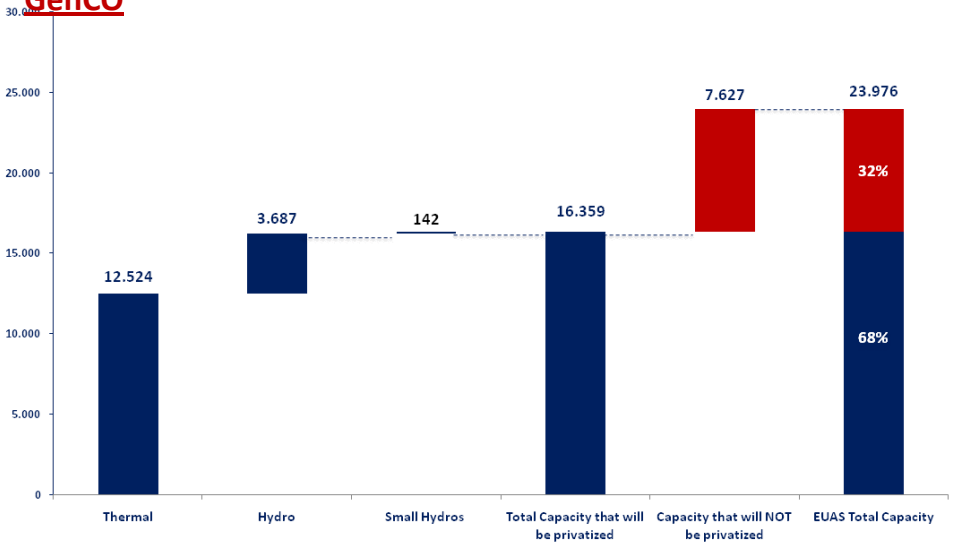
# PRIVATIZATION OVERVIEW

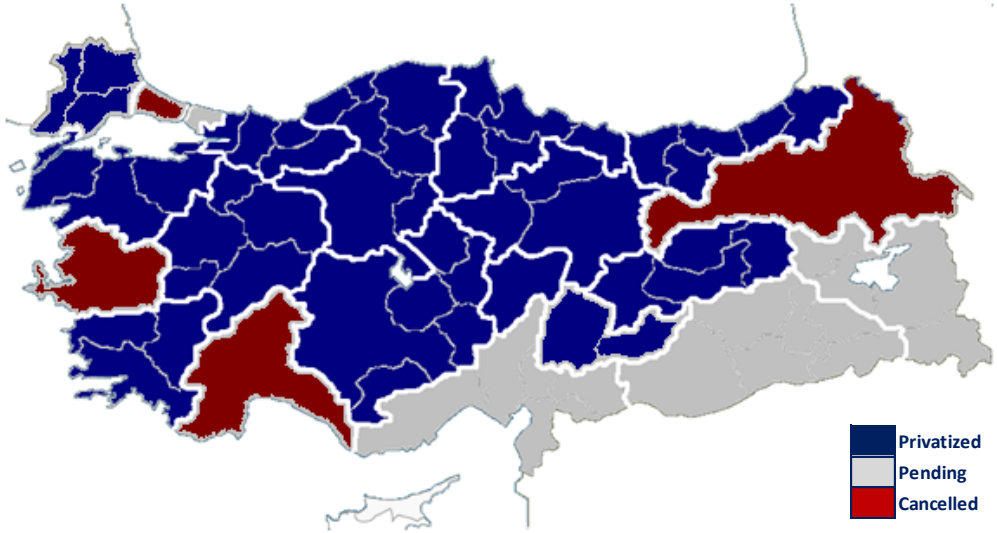
**The aim of the GenCo privatizations is to increase the efficiency in the market and provide cheap electricity to the end-user.**

## GenCO




- %37 of Turkey's capacity will be offered to the private sector.
- The Government is planning to privatize 97 of its power plants with a total capacity of 16.358 MW.
- 18 Thermal, 28 Hydro power plants and 52 small sized hydros will be privatized.

## DisCO




- Among 21 DisCOs, 3 tenders were cancelled and 4 tenders are pending.

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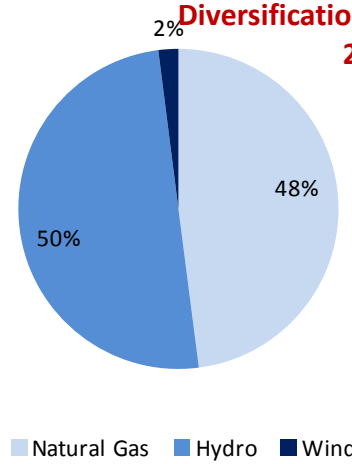
# AKENERJİ HIGHLIGHTS

- Diversified portfolio mix
- Tripling base load capacity through Egemer by 2014
- Experienced trading staff
- Profitability Margins are effected positively because of renewables in the portfolio
- The total capacity of 388 MW renewable portfolio enables Akenerji to avoid over 1 million tons of CO2 release
- All renewable projects in investment phase and operational are bank financed before 2008
- Egemer project financing (651 mio USD) was closed in 2011

# OPERATIONS and INVESTMENTS

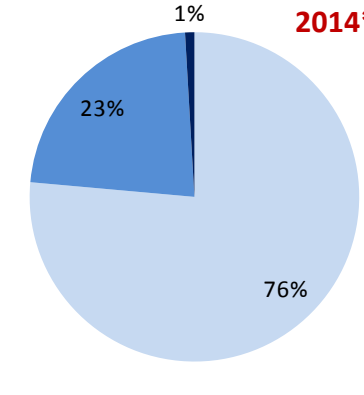

**Capacity Diversification by 2012**




| Operational Power Plants | Capacity [MW] |
|---|---|
| Bozüyük NGPP | 132 |
| Kemalpaşa NGPP | 127,6 |
| Ayyıldız WPP | 15 |
| Akocak HPP | 81 |
| Bulam HPP | 7 |
| Uluabat HPP | 100 |
| Burç HPP | 28 |
| Feke I HES | 30 |
| Feke II HPP | 70 |
| Himmetli HPP | 27 |
| Gökkaya HPP | 30 |
| **TOTAL** | **648** |

| Investments | Capacity [MW] | COD |
|---|---|---|
| Egemer | 900 | 2014 |
| Kemah | 198 | Development Phase |
| Geothermal License | 5 Permits | Development Phase |

**Capacity Diversification by 2014***

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* Capacity breakdown is based on the licensed investment assumptions given in the previous slides .

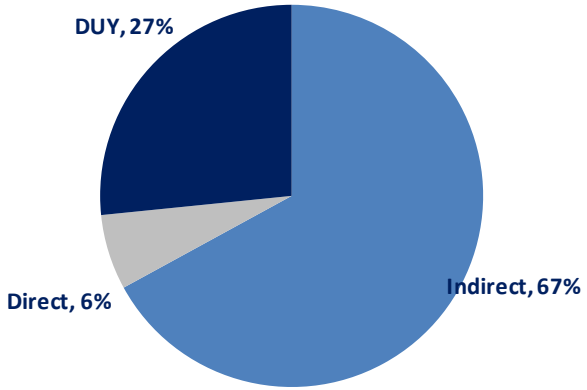
# SALES & PRICING ASSUMPTIONS

**Akenerji has 3 main types of customers: direct, and indirect customers, and DUY system.**

## DIRECT-INDIRECT SALES *

- **Tariff for sales to direct and indirect customers are set as a function of the government's tariff. Akenerji applies a discount rate for direct customers and indirect customers.**
- **Akenerji is the sole supplier of steam for its customers, and hence can directly reflect the NG price changes in its steam price.**

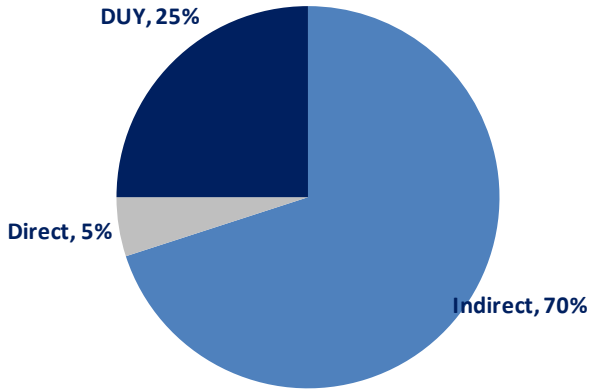
### 2011 Sales Breakdown




## DUY SALES

- **In the DUY Market, since the price is set by the generation company according to the supply and demand dynamics, and is not limited by the official tariff. In Dec.2009, DUY system switched to hourly pricing mechanism. Approximately 80% of sales in Turkey are sold with bilateral contracts with regulated tariff and the remaining take place in the DUY Market.**
- **For 2012, we expect 3-4% GDP growth and electricity demand to increase by 5-6%. Additionaly market will have 3500-4000 MW extra capacity so, we see more compatition in both DUY market and bilateral market. We have structured our sales portfolio according to these assumptions.**

### 2012 Sales Forecast

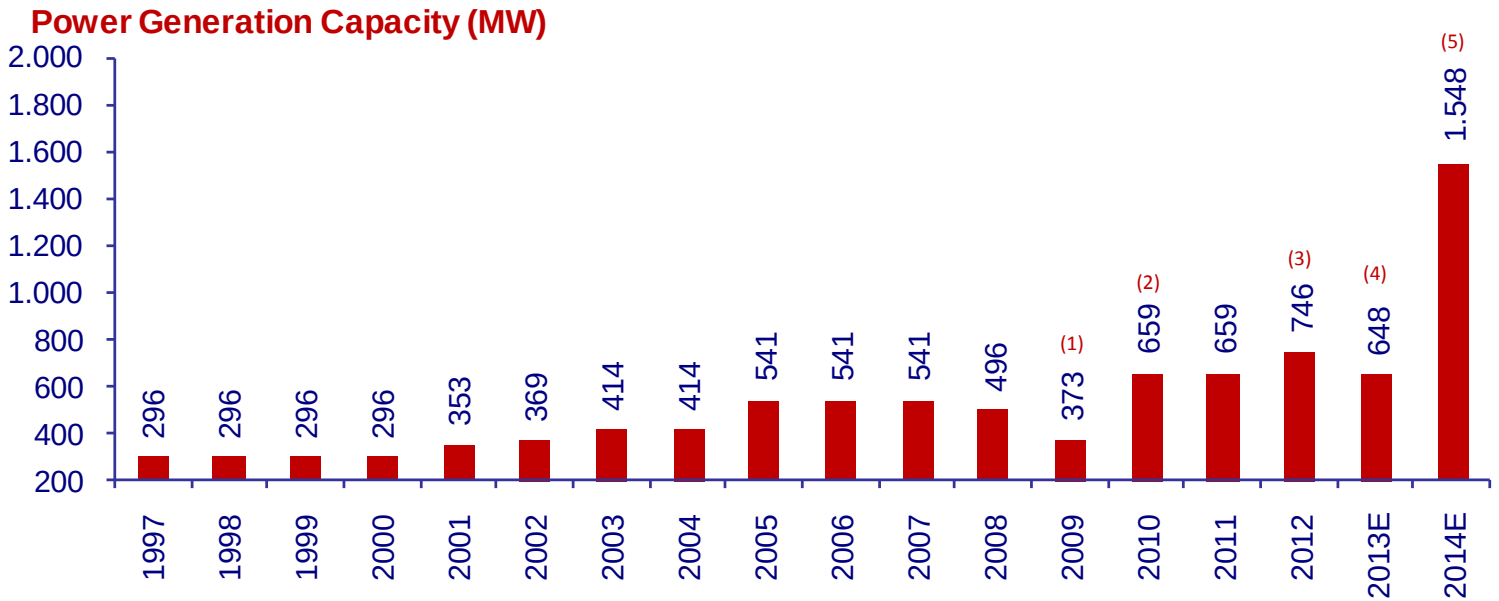



* : Direct customers have a physical direct line to the power plant, whereas the indirect customers are supplied through the national grid (at additional cost).

# CAPACITY & SALES FORECAST*

* These forecasts are based on the licensed investment assumptions given in the previous slides .

- With the completion of Egemer project, Akenerji's power generation capacity will increase with a CAGR of 28% by 2014.
- Average capacity utilisation rate can be considered as 30-40 % for hydro, 30-35% for wind power plants.
- In base load conditions 70-80% capacity utilisation rate can be used for our current operational NG fired power plants.




(1) : Ayyıldız WPP (15MW) has become operative.
Yalova NG PP (70MW) has sold to Aksa (Akkök Group Company).
69MW installed in various locations of Turkey have sold
(2) : Five HPPs commenced operations with a total capacity of 286MW
(3) : 3 HPPs, total capacity of 87 MW, became operational
(4) : Çerkezköy NG PP (98MW) decided to stop its operations
(5) : 900MW Egemer NGPP project and will become online

# EGEMER HIGHLIGHTS

- Egemer is a 900 MW, natural gas Combined Cycle Power Plant
- The projects is the largest investment of Akenerji and tripling the base load capacity
- One of the most efficient projects in Turkey with a desirable coastal location, located in Erzin/Hatay, in the south of the country
- The project will be operational in 2014
- Designed to be as an eco-friendly and contemporary power plant and expected to generate an annual average of 6,7 billion kWh of electricity
- Turnkey EPC agreement, (Engineering/Procurement/Construction), was signed with GE&Gama
- The project will employ more than 500 people during construction and 80 people during operation
- Environment Impact Assessment Report have been received and permits regarding the construction have been obtained
- Construction has started on site
- Total project cost will be 930 mio USD and consists of EPC contract price, financing interest during the construction, VAT and other reimbursable costs and a considerable amount of contingency, and financed with 70:30 debt:equity structure

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# FINANCING STRATEGY

- **Akenerji's Projects are in compliance with international environmental standards which enables access to international financing**

- **Akenerji prefers project financing for each SPV**
  - **Projects are financed with grace period + minimum 5+ year terms**
  - **Competitive pricing**
  - **Target Debt:Equity ratio is 70:30**
  - **Relatively low margins due to strong and attractive Akenerji Projects from Lenders' perspective**
  - **Limited support requirement from Akenerji**

# MAIN CAPEX ASSUMPTIONS

- For CAPEX estimations, the following data can be used:
  - 1,2-1,5 mio $/MW for HPPs,
  - 0,75-1 mio $/MW for NG PPs,
  - and 1,5-2 mio $/MW for wind projects.

- For investment period estimations , the following data can be used:
  - 2 years for WPPs,
  - 2-3 years for NG PPs ,
  - and 3 years for HPPs.

- Akenerji applies 30% equity-70% debt structure to its investments.

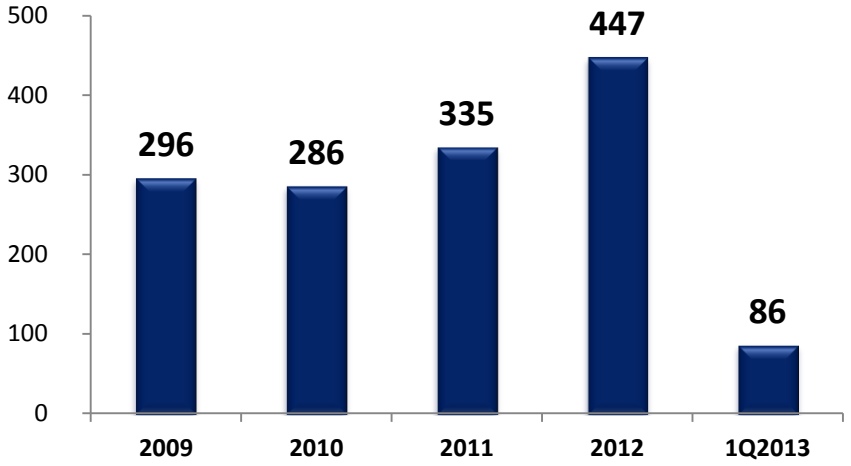
- All of Akenerji's renewable projects are eligible to benefit from the Renewable Energy Law- i.e. a purchasing guarantee for 10 years at a price to be determined by EMRA on a yearly basis. (Currently 7,3 $ cent/kwh)

- Akenerji has applied for VER (voluntary emission trading) certificates for ALL of its renewable portfolio.

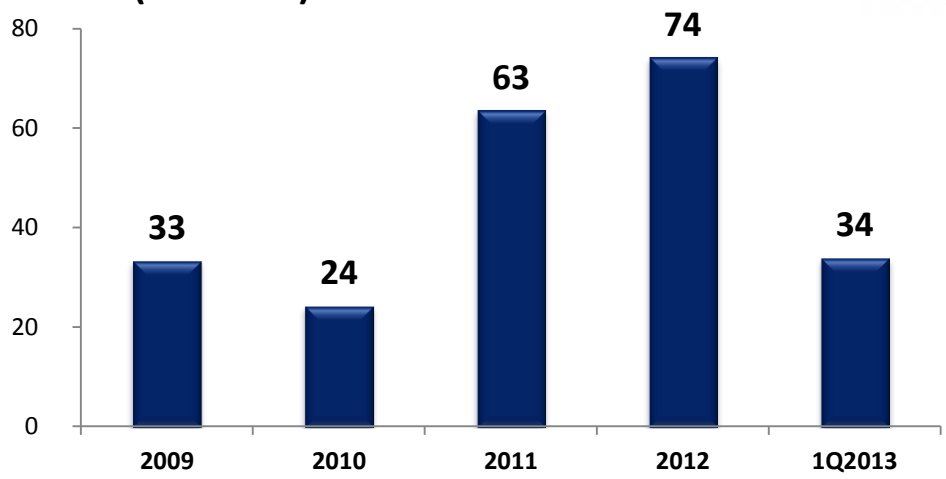
# FINANCIAL INFORMATION

# FINANCIAL PERFORMANCE

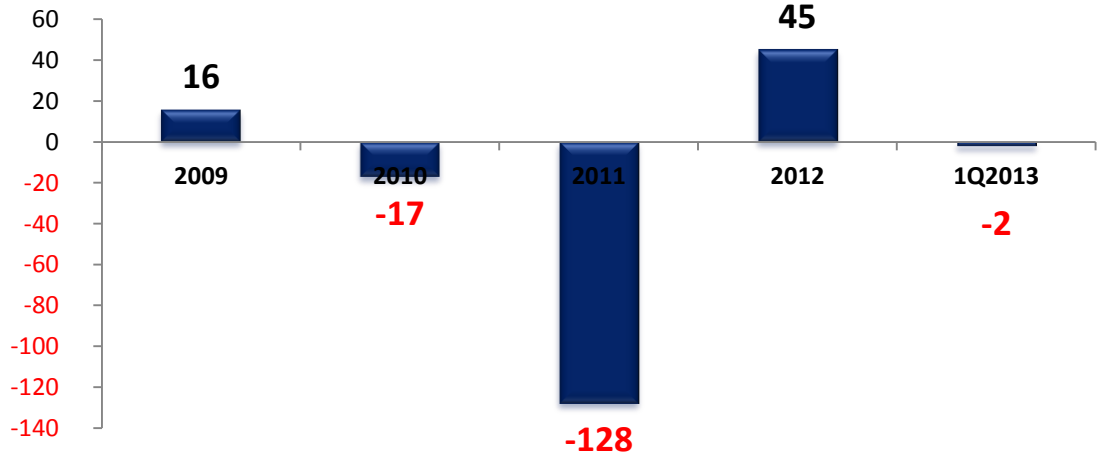
## Net Sales (mio USD)




## Ebitda (mio USD)




## Net Profit (mio USD)

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(*) : Excluding SEDAŞ.

# PROFITABILITY PERFORMANCE

Yearly Profitability Margins

| | 2002 | 2003* | 2004* | 2005 | 2006* | 2007* | 2008 | 2009 | 2010 | 2011 | 2012 | 1Q2013 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| EBITDA Margin | 17% | 18% | 13% | -5% | 0% | 9% | 15% | 11% | 9% | 19% | 17% | 39% |
| Net Margin | 15% | 2% | -5% | -20% | -7% | 1% | 15% | 5% | -6% | -38% | 10% | -2% |

Quarterly Profitability Margins

| | 1Q2010 | 2Q2010 | 3Q2010 | 4Q2010 | 1Q2011 | 2Q2011 | 3Q2011 | 4Q2011 | 1Q2012 | 2Q2012 | 3Q2012 | 4Q2012 | 1Q2013 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| EBITDA Margin | 15% | 5% | 8% | 8% | 20% | 35% | 23% | -2% | 10% | 25% | 16% | 14% | 39% |
| Net Margin | -10% | -26% | 23% | -16% | 3% | -29% | -91% | -31% | 30% | 7% | 11% | -12% | -2% |

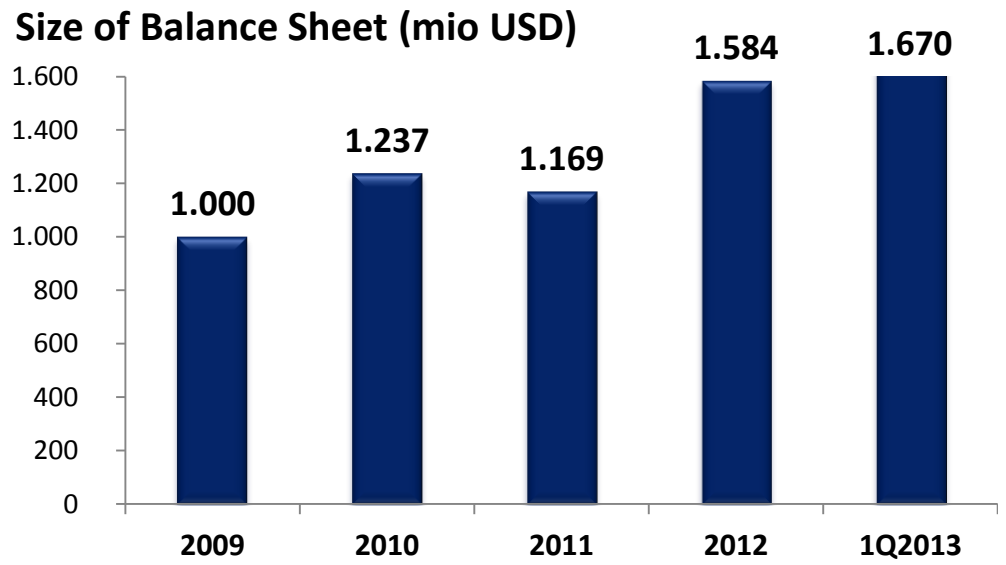
- **In the last three years, Akenerji incurred min 9% and max 19% Ebitda Margin with its diversified portfolio. With having three new hydro projects in 2012 with a total capacity of 87 MW, we expect that 2013 Ebitda margin will realize higher than previous years.**

* : In CMB's new inflation adjusted accounting terms.

* : TRT fund has been left out of the above calculations to better reveal performance.

* :Impairment losses (Provision the potential value difference resulting from power plant sales) have been left out of the above calculations to better reveal operational performance.

# CONSOLIDATED BALANCE SHEET



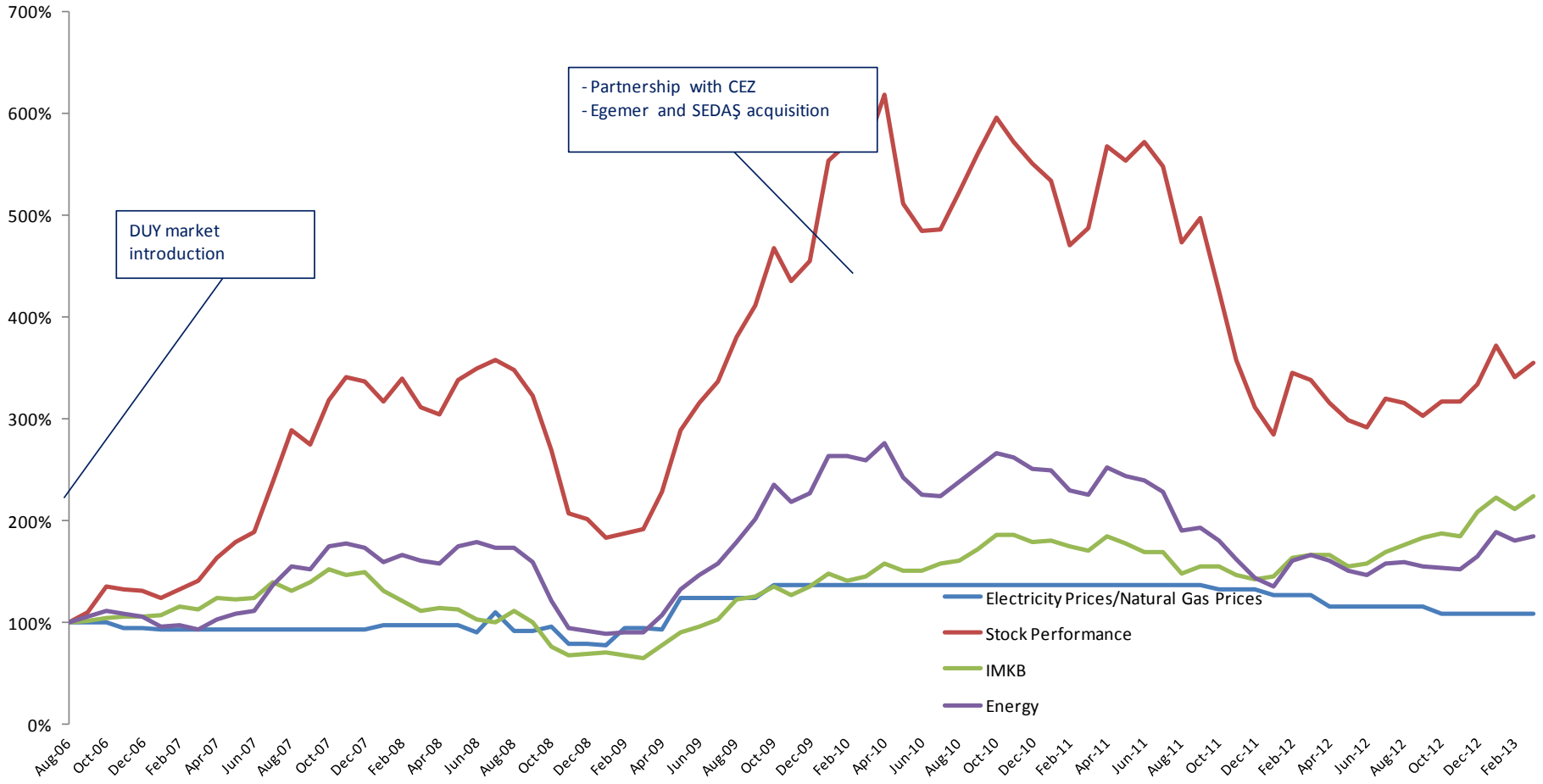

| Debt Structure (mio USD) | 2010 | 2011 | 2012 | 1Q2013 |
|---|---|---|---|---|
| Cash | 26 | 45 | 97 | 78 |
| Short-term Financial Debts | 227 | 249 | 128 | 142 |
| Long-term Financial Debts | 372 | 496 | 691 | 754 |
| **Net Debt** | **(573)** | **(700)** | **(721)** | **(818)** |

| Key Ratios | 2010 | 2011 | 2012 | 1Q2013 |
|---|---|---|---|---|
| Current Ratio | 0,6 | 0,3 | 1,1 | 0,9 |
| Leverage | 1,5 | 3,3 | 2,0 | 2,2 |
| Total Liabilities/Total Assets | 0,6 | 0,8 | 0,7 | 0,7 |
| ROE (%) | -3% | -41% | 9% | 0% |

Leverage = Total Liabilities / Shareholders's Equity

ROE = Net Profit (Loss) / Shareholders's Equity

# STOCK PERFORMANCE

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# ABBREVIATIONS

| | | |
|---|---|---|
| **MW** | : | Megawatt |
| **GW** | : | Gigawatt |
| **NG** | : | Natural Gas |
| **GDP** | : | Gross Domestic Product |
| **CAGR** | : | Compound Annual Growth Rate |
| **DUY** | : | Electricity Market Balancing and Settlement Regulation System |
| **DISCO** | : | Distribution Companies |
| **GENCO** | : | Generation Companies |
| **COD** | : | Commercial Operation Date |
| **TWh** | : | Terawatthour |
| **EUAS** | : | Electricity Generation Co.Inc. |
| **APM** | : | Automatic Pricing Mechanism |
| **TRT** | : | Turkish Radio - Television Corporation |
| **HPP** | : | Hydroelectric Power Plant |
| **WPP** | : | Wind Power Plant |
| **NG PP** | : | Natural Gas Fired Power Plant |
| **USD** | : | US Dollars |
| **mio $** | : | Million Dollars |
| **PP** | : | Power Plant |
| **SPV** | : | Special Purpose Vehicle Entity |
| **VER** | : | Voluntary Emmission Trading |
| **EMRA** | : | Electricity Market Regulatory Authority |
| **EBITDA** | : | Earnings Before Interest, Tax, Depreciation & Amortization |
| **CMB** | : | Capital Markets Board of Turkey |
| **TRY** | : | Turkish Lira |
| **ROE** | : | Return on Equity : Net Income / Shareholders' Equity |

AKKÖK

# AKENERJI INVESTOR RELATIONS


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