

MINISTRY OF ENERGY AND NATURAL RESOURCES  
GENERAL DIRECTORATE OF ENERGY AFFAIRS

# OUTLOOK OF ENERGY SECTOR -electricity-

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# agenda

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- **Energy Outlook of Turkey**
  - Energy Policies
  - Strategies
  - Legislation
  - Primary energy demand
  - Electricity

# ENERGY POLICIES OF TURKEY



- **Efficient** production and use of energy,
- Environment-friendly,
- Diversification of sources as well as renewable and **domestic** sources,
- Taking advantage of **geo-political** position of Turkey,
- Decreasing dependency on **external sources**
- Supporting **R&D and local technologies**
- Prioritizing competitiveness,
- Respecting public good and consumer rights,
- Taking measures to meet the country's energy need continuously, securely and with **the lowest-cost**, by mobilizing public and private sectors within a free market structure

# Strategy Paper for Electricity Market and Supply Security

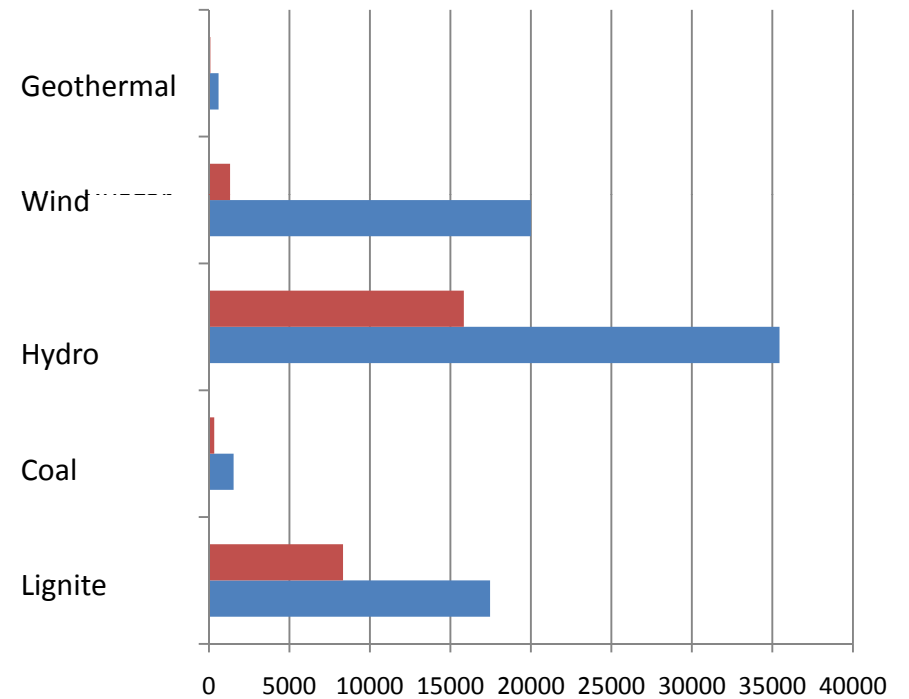
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- Targets for 2023 energy resources:
  - The share of renewable energy in electricity production → at least 30%
    - Wind installed capacity → 20.000 MW
    - Geothermal installed capacity → 600 MW
  - To include nuclear energy in production composition by 2020 → at least 5 %
  - Full utilization of Turkey's coal and hydro potential for electricity by 2023
- By doing so diversification will be achieved and all resources will contribute to the energy security and competitiveness

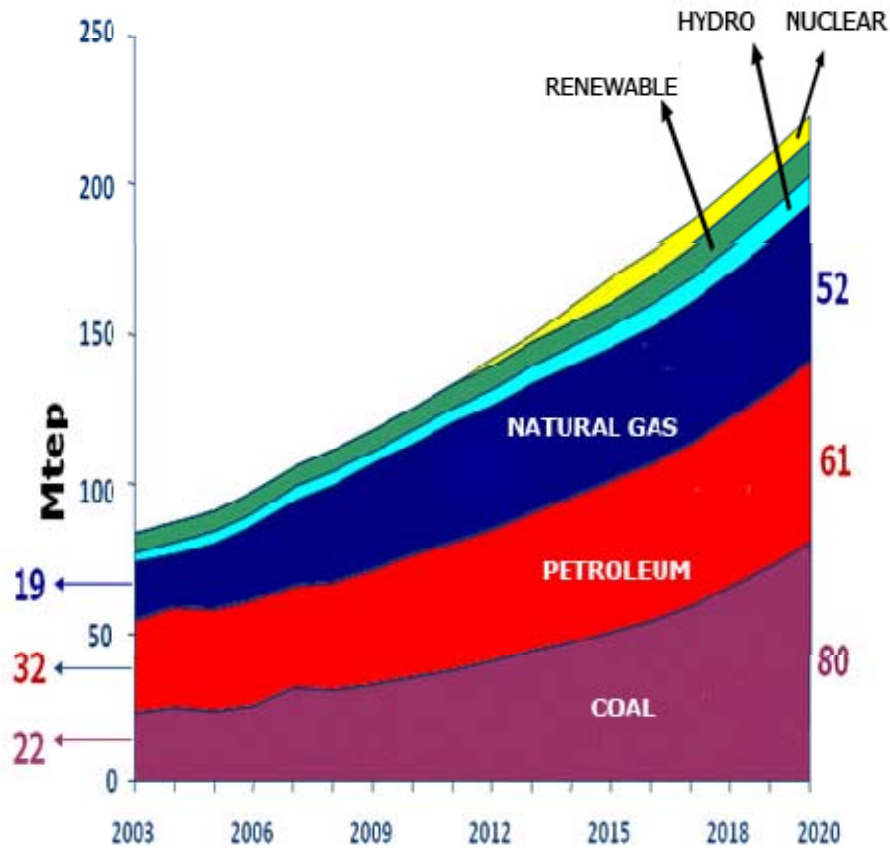
# Breakdown Of Domestic Potential Production of Electricity by Resources

January 2011

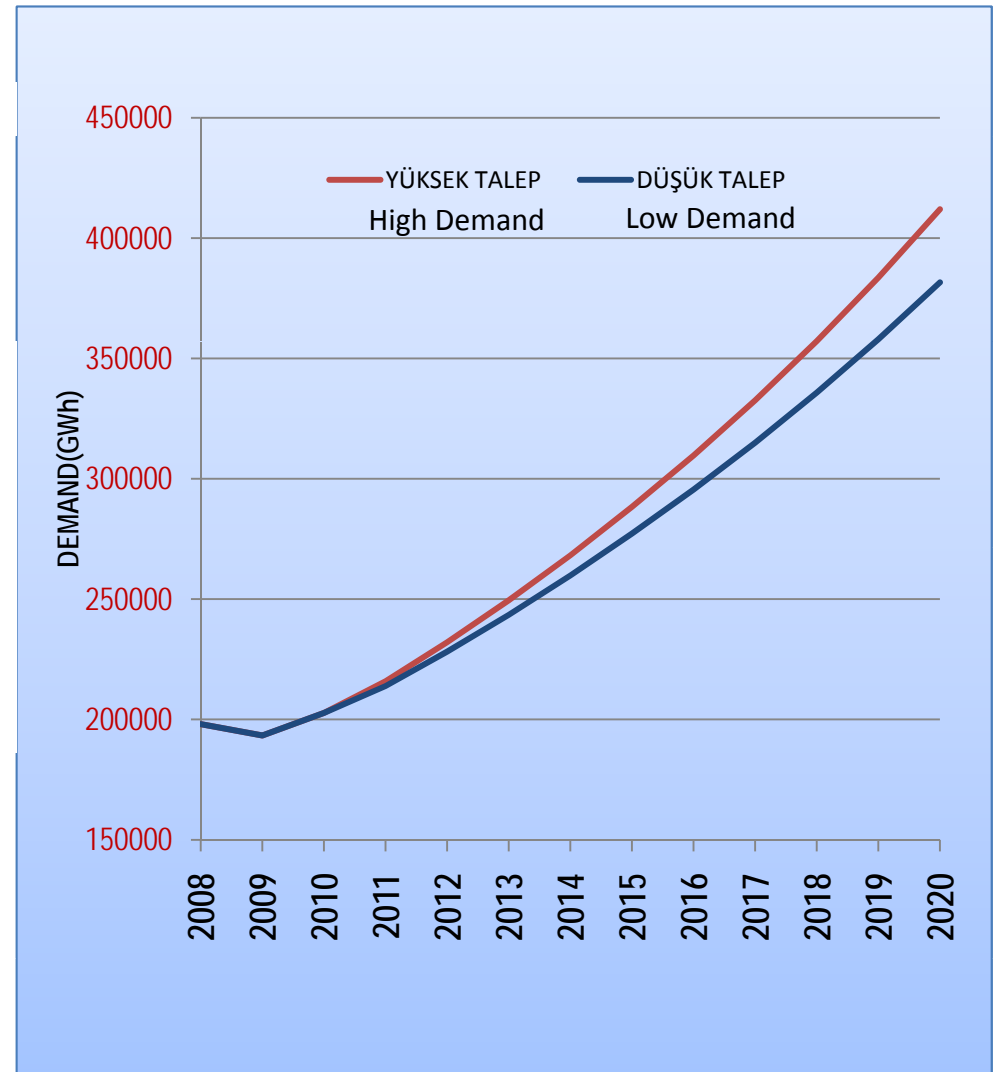
<u>Source</u>	<u>Potential (MW)</u>	<u>In Operation (MW)</u>	<u>Left, %</u>
Lignite	17470	8336	52
Coal	1535	335	78
Hydro	35440	15835	55
Wind	20000	1320	93
Geothermal	600	94	84
<b>Total</b>	<b>75045</b>	<b>25920</b>	<b>65</b>



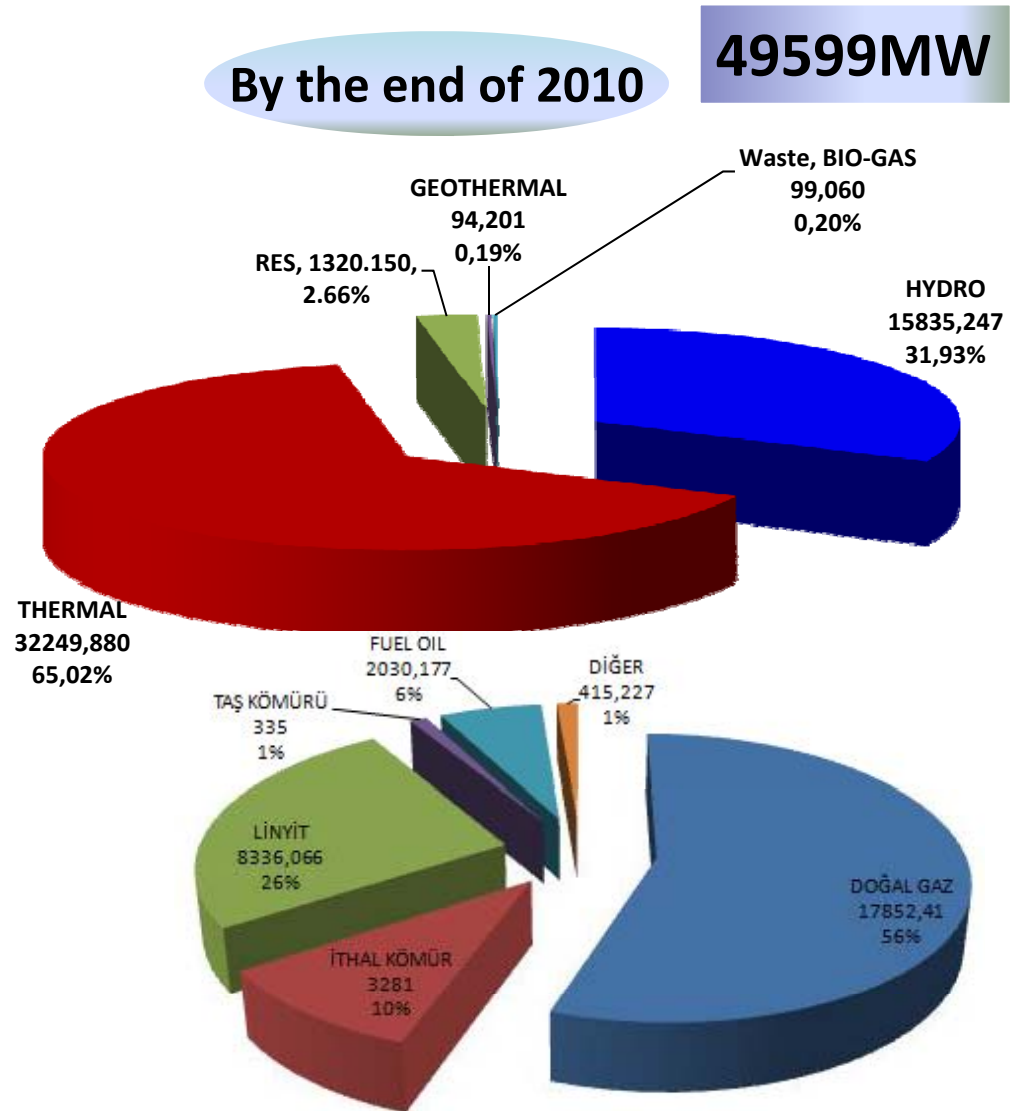
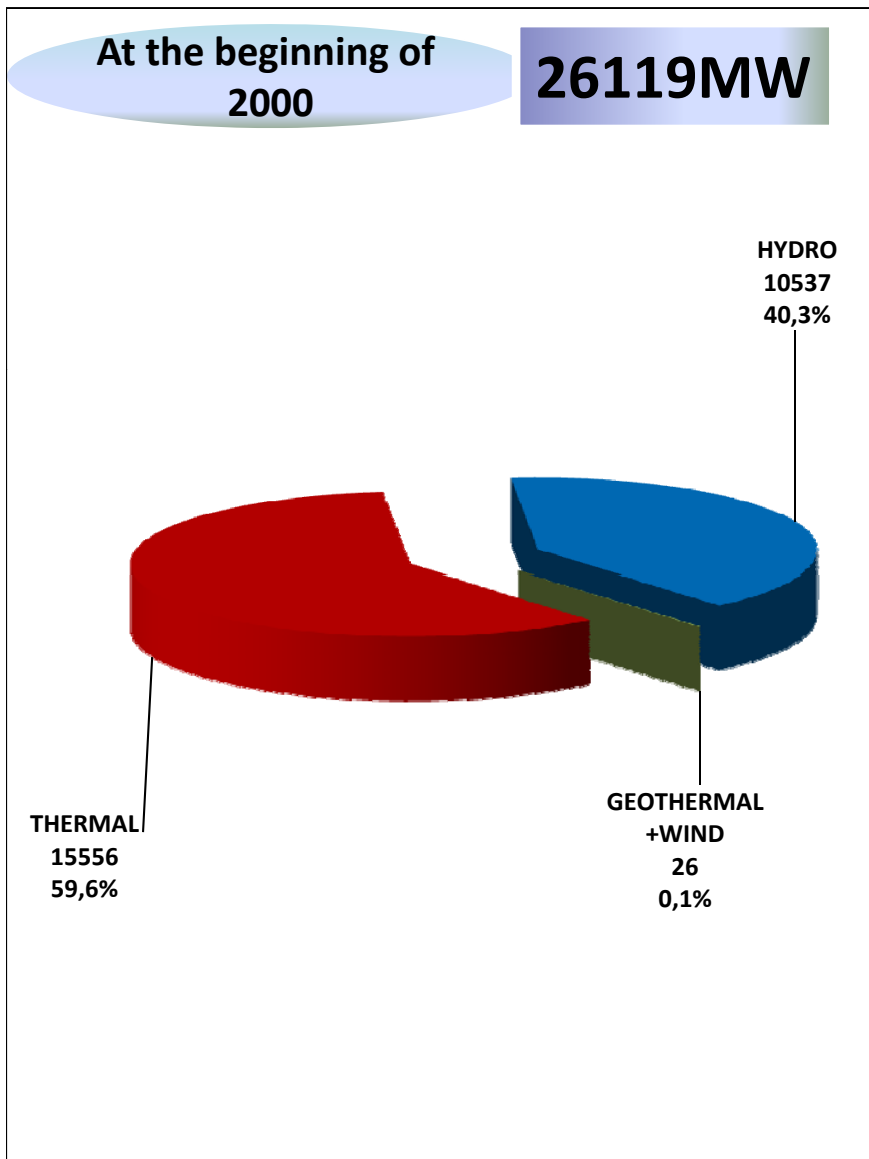
## Turkey – Projection of Primary Energy Demand (2003-2020)



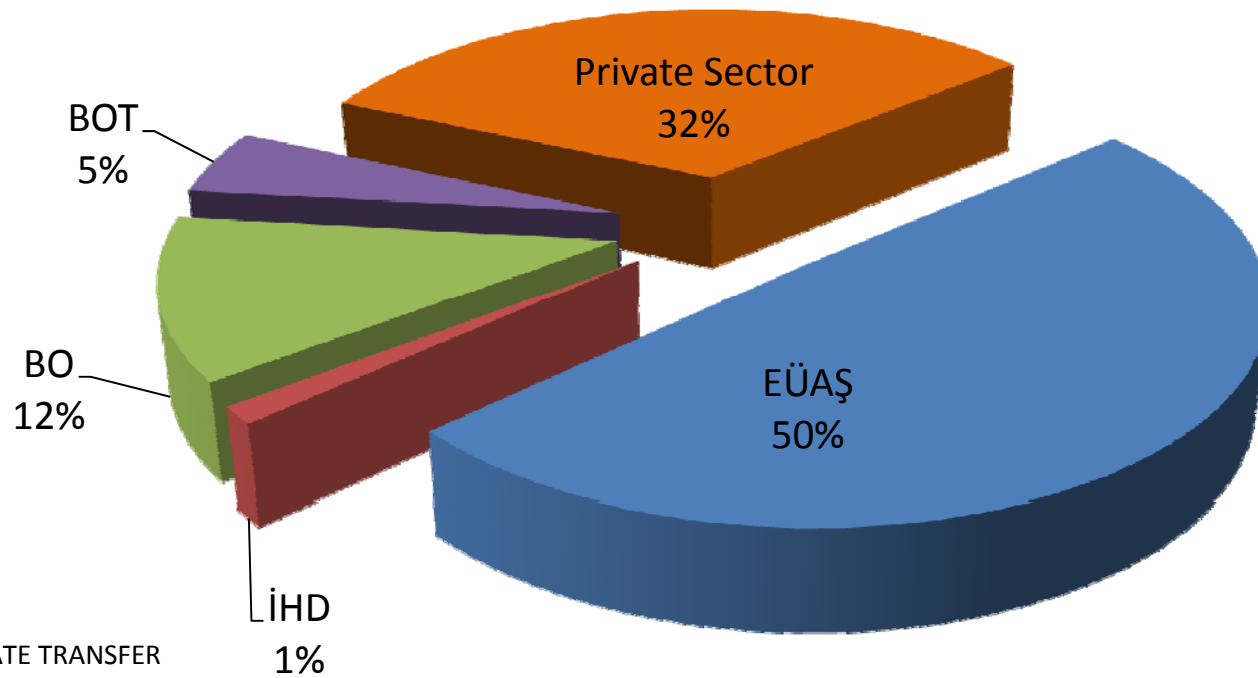
## Turkey – Projection of Electricity Demand (2008-2020)



# Turkey: Development of Installed Power



# Turkey: Public and Private Production (Installed power)

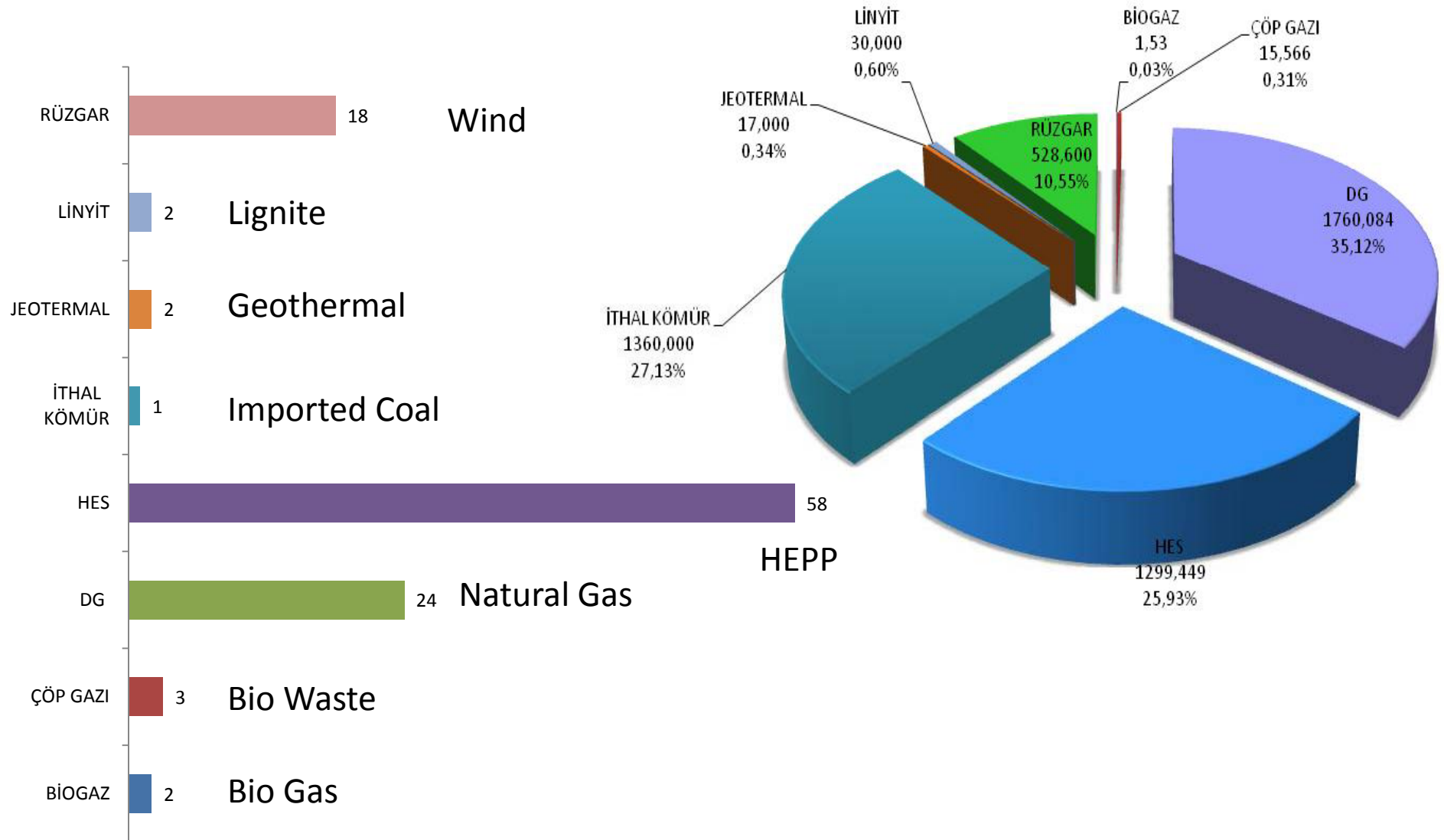


BOT: BUILD OPERATE TRANSFER

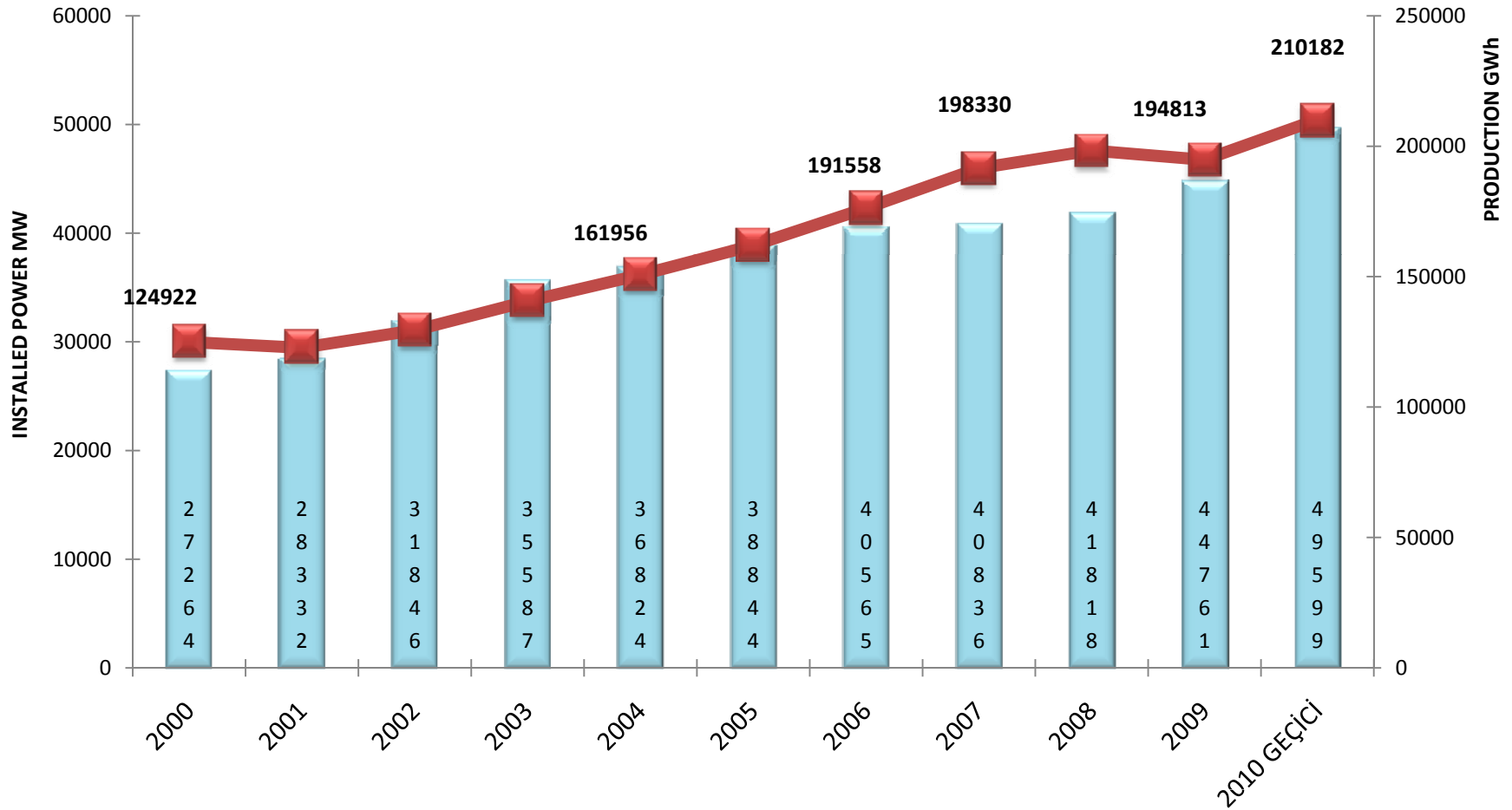
BO: BUILD OPERATE

*Installed power at the beginning of 2000 : 26119 MW, Private sector's share: 2655MW %*  
*Installed power by the end of 2010: 49599MW private sector %32 .*

## Fuel breakdown of 110 power stations in operation as of 2010

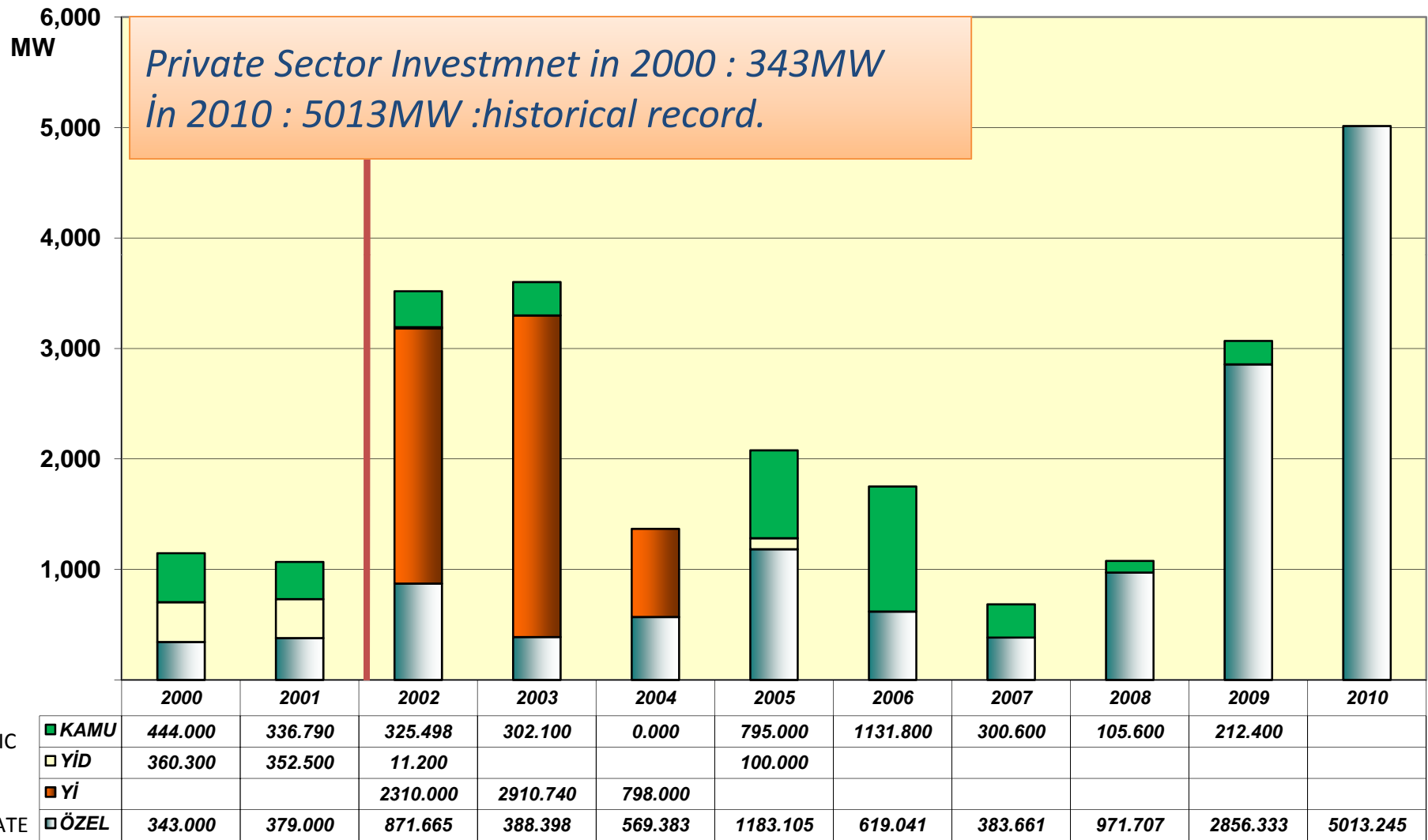


# Turkey: Installed Power and Production (2000-2010)

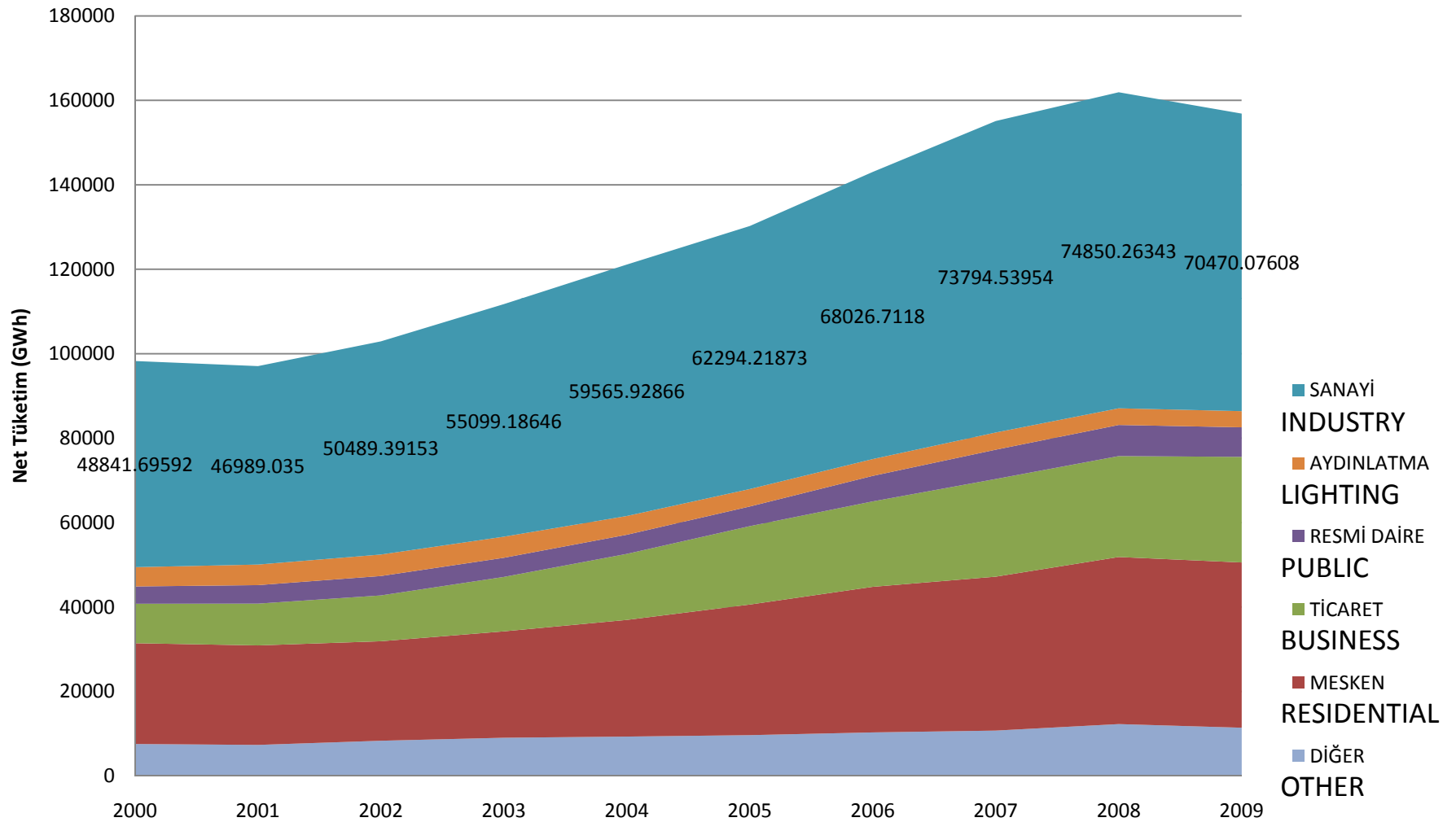


# Türkiye: Power Stations and Private Sector Investment (2000-2010)

Source: MENR



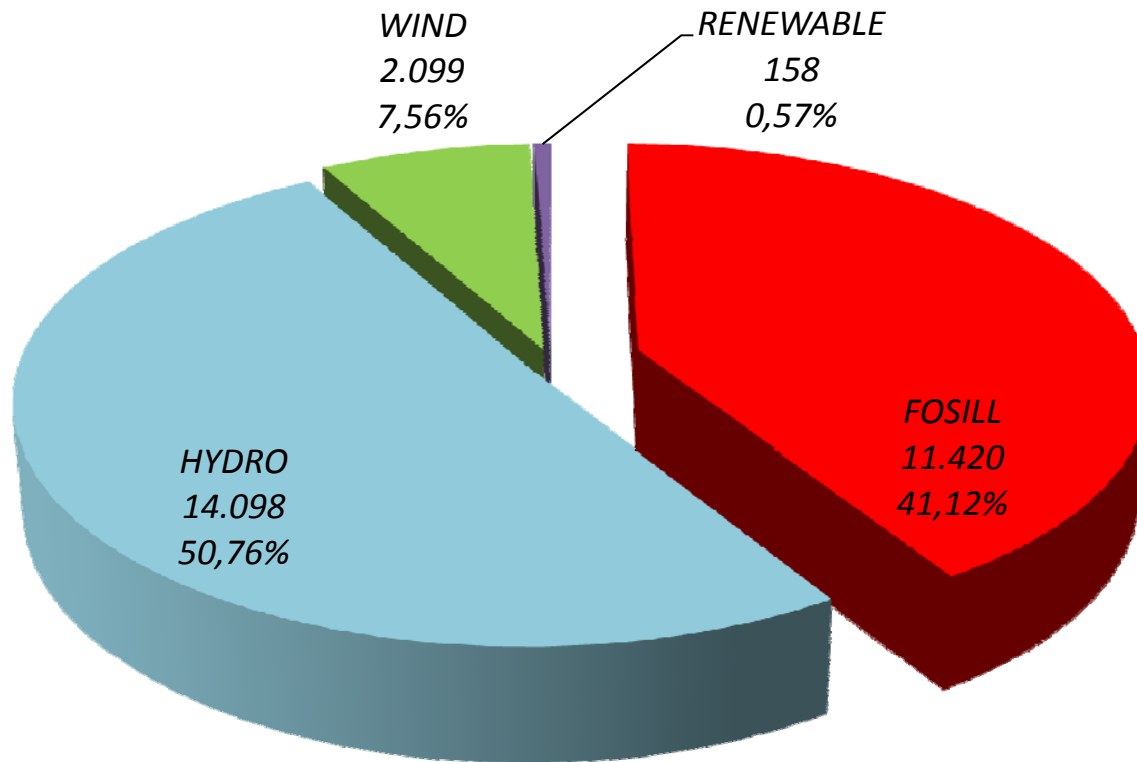
## Sectoral breakdown of Electricity Consumption in Turkey (2000 - 2009)



Decrease in public institutions, household electricity demand as a result of Technology and energy efficiency

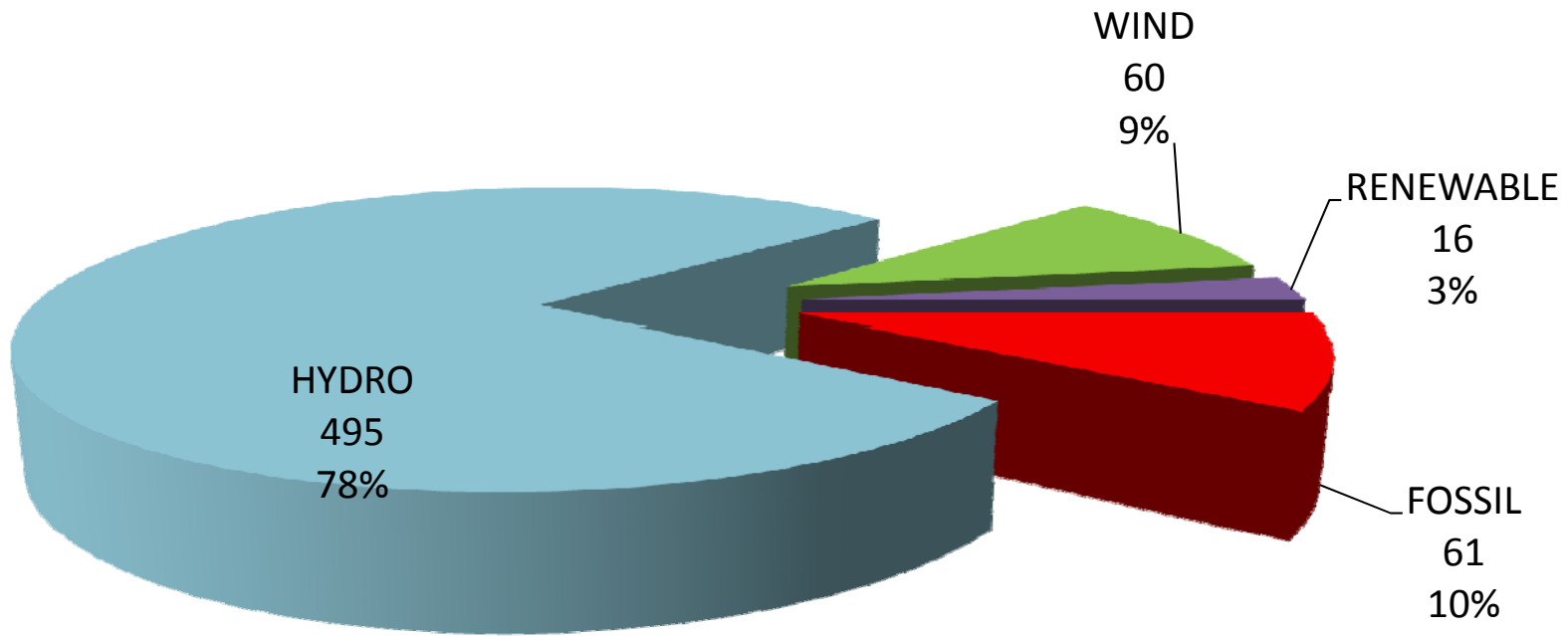
# Fuel / Resource Breakdown of 632 Installed Power Stations of 27775MW To be operated

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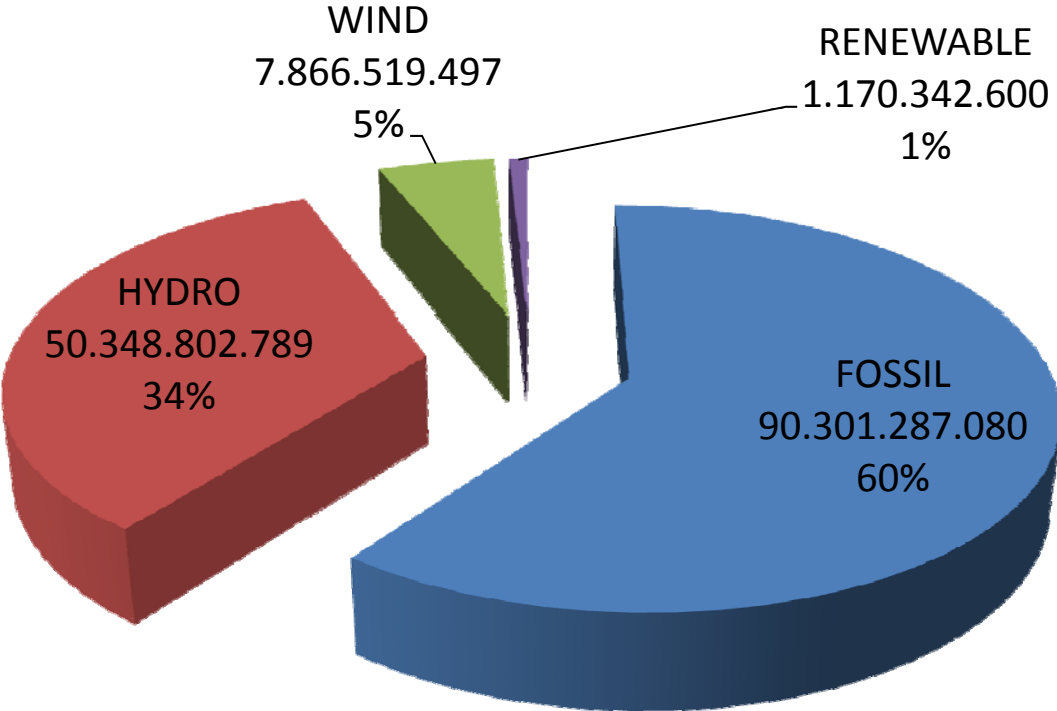
# Fuel breakdown of 632 Installed Power Stations of 27775MW To be operated

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Production breakdown of 632 Installed Power Stations of 27775MW To be operated /149.686.951.966 (kWh/year)

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# CONCLUSION

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- Turkey has one of the fastest growing energy demands in the world
- Turkey is implementing its energy policies and strategies.
- Energy efficiency is the most powerful means to diminish dependency on external sources and to secure energy
- Nuclear energy will be included for energy diversification.
- Countries like Japan, Korea and Spain have achieved superiority in energy technologies.
- Political commitment to support energy technologies and hence legislation re-regulated.
- Energy sources explorations have been made and they yielded results. Explorations will continue.