

TURKEY'S ENERGY PROSPECTS

Yusuf IŞIK

18 May 2007

ENERGY SECURITY IN EUROPE AND THE MEDITERRANEAN

MADRID

outline

- Turkey's main energy parameters and issues
- Perspectives and proposals toward solutions – including points relating to the EU, Mediterranean and Spanish contexts

1.1. Turkey's energy parameters and issues

- In 2005 consumption of 90 mtpe of primary energy
35 % oil 27 % NG 27 % coal 11% hydro+ oth renewables

2001-2005 AVE growth of 2.8 %

but 2003-> 5.7%

Electricity 161 bn kwh in 2005, 4.6 % AVE in 2001-2005

2003->6.7 %

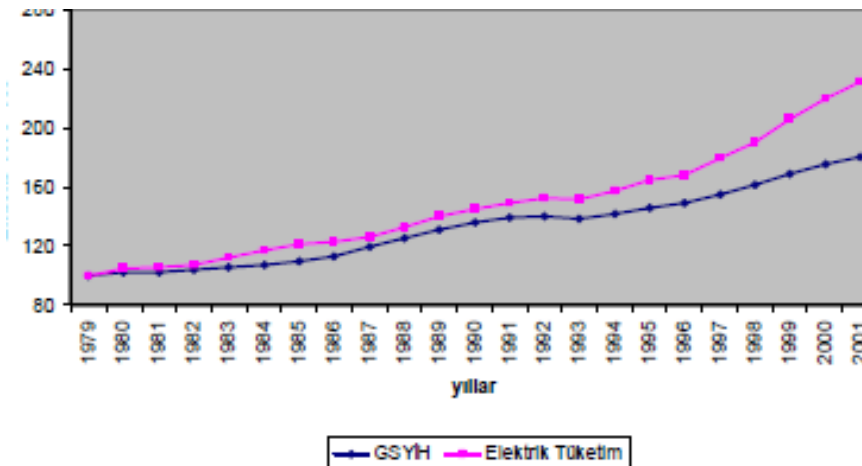
In 1990-2000 AVE electricity consumption > 8 %

But energy efficiency low,

Intensity more difficult to evaluate however it has not decreased
similarity with Spain to some extent

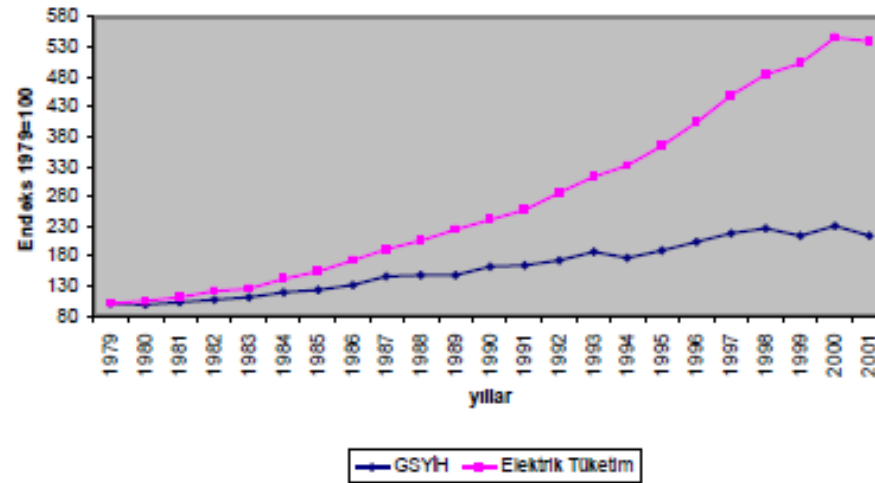
Elasticities-Spain

-electricity-Gdp-



Elasticities-Turkey

-electricity-Gdp-



1.2. Turkey's energy parameters and issues

- Dependency high: 72 %
- Also large share of NG in electricity generation
- Large technical and distribution losses
- Background:
 - nonsystematic development in the 1990s
 - surpluses
 - contingent liabilities
 - lack of flexibility
 - restrained market space

1.3. Turkey's energy parameters and issues

- What are Turkey's main concerns with energy?
 - 2002-2006 growth AVE: 7.5 %
 - Export drive, approx 17 % AVE
 - Need to continue this growth
 - Convergence with EU: with 5% per cap g, 62% in 2025
 - Further integration to the EU and world economies
 - The energy sector itself is a critical component

1.4. Turkey's energy parameters and issues

- There are further important issues:

In the case of Turkey,

- linked to technological development
- environment and climate change
- large I needs
- market mechanism
- regulatory
- governance
- large actors not involved sufficiently
- routes to Eurasia, Middle East

2.1. Perspectives and solutions

- Demand forecast:

Electricity consumption in bn kwh:

2005: 161	2010: high 242	2020: high 499
	low 216	low 406

7-8% AVE increase

Additional cap of 39500-56500 (low/high) required

Total I required estimated by government at 130 bn dollars

This is huge and a lower level could be sufficient with a more efficient I pattern and composition

2.2. Perspectives and solutions

- Some proposed approaches.
 - developing and using the max of each of lignite, hydro, other renewables,
 - aiming at flexibility
 - rehabilitations +
 - technological leap
 - attempt to involve actors, local and foreign
 - strengthen regulation and governance
 - extending the market space, mechanisms
 - going beyond the strategy document's provisions

2.2. Perspectives and solutions (contd)

Contd:

- integrating all the components
- preparing vertical integration
- preparations for integrating the UCT
- preparing further EU integration provided membership prospects are specified
- financing, thinking of a fund, EU participation
- CO2 trade

2.3. Perspectives and solutions (contd)

Further points:

- Security of S together with EU, Spain, in Med
- sale to India
- Ceyhan
- Turkey's contribution to the region, contacts with neighbours
- Eurasia dimension, route to China
- I in third countries
- Spanish participation to I,
- Spanish participation to technology, FP,
- Spanish cooperation in EU energy integration and Med and other areas energy security steps
- thus, synergy and predictability