

ENERGY EFFICIENCY INSTITUTIONS IN TURKEY

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Energy Efficiency: A Strategic Agenda for Government and Industry

Grand Hyatt Amman, Amman, Jordan, 9 November 2009

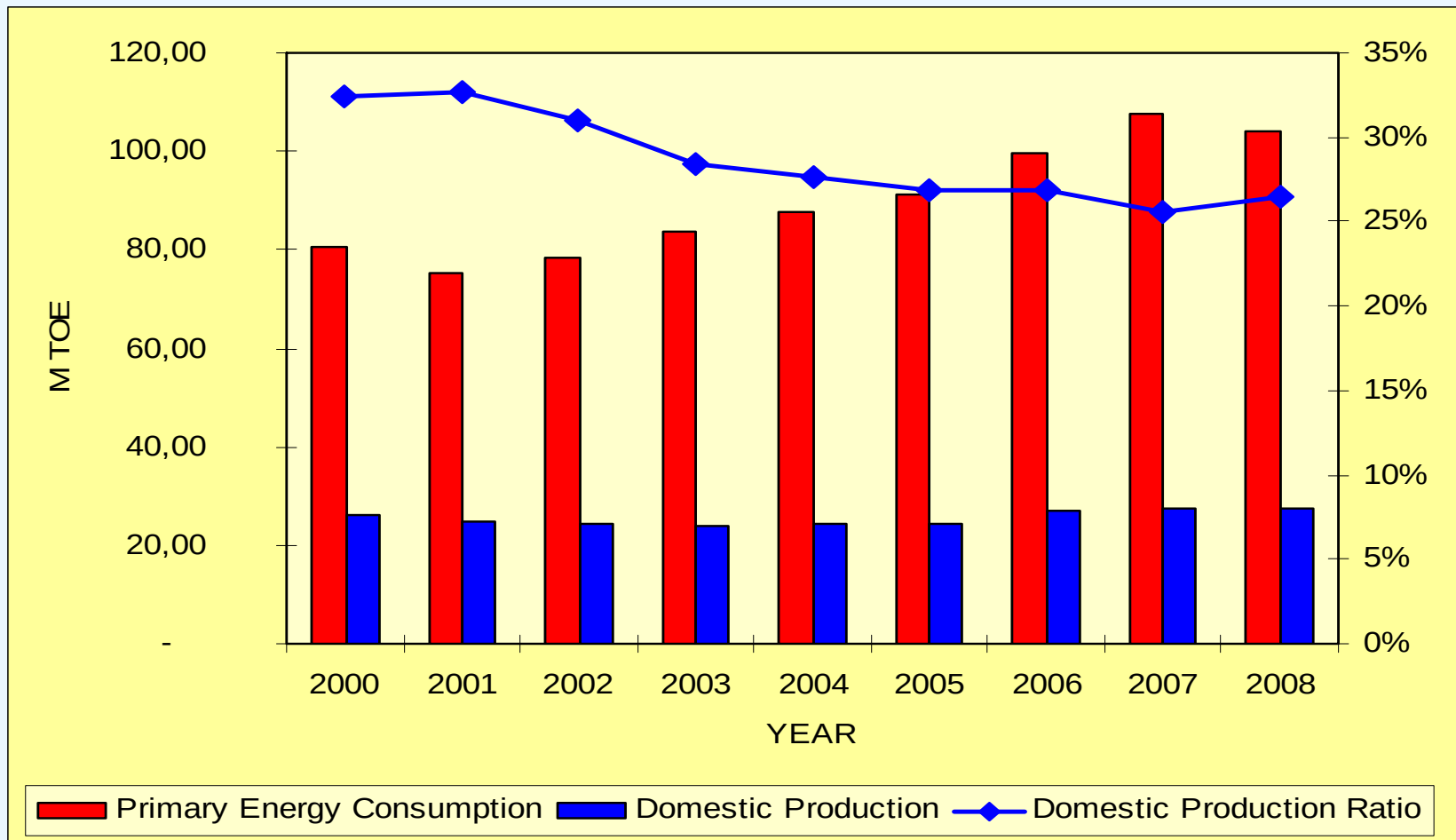


General Directorate of Electrical Power Resources, Survey
and Development Administration

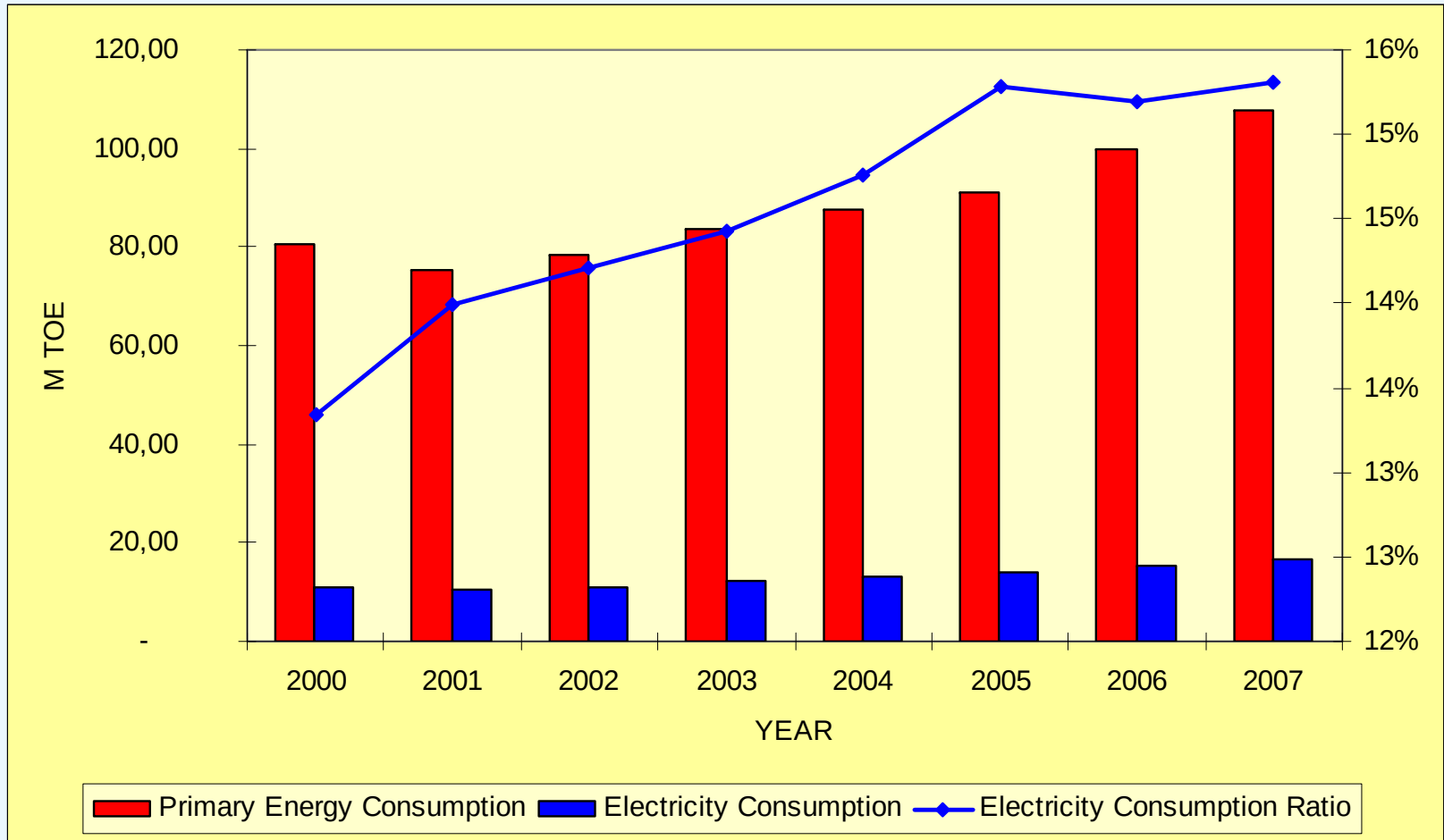
Context

- Overview of energy utilization in Turkey
- Background of EE
- Legislative Measures
- National EE Movement
- Implementations of New Legislation
- Future Plans
- Conclusions

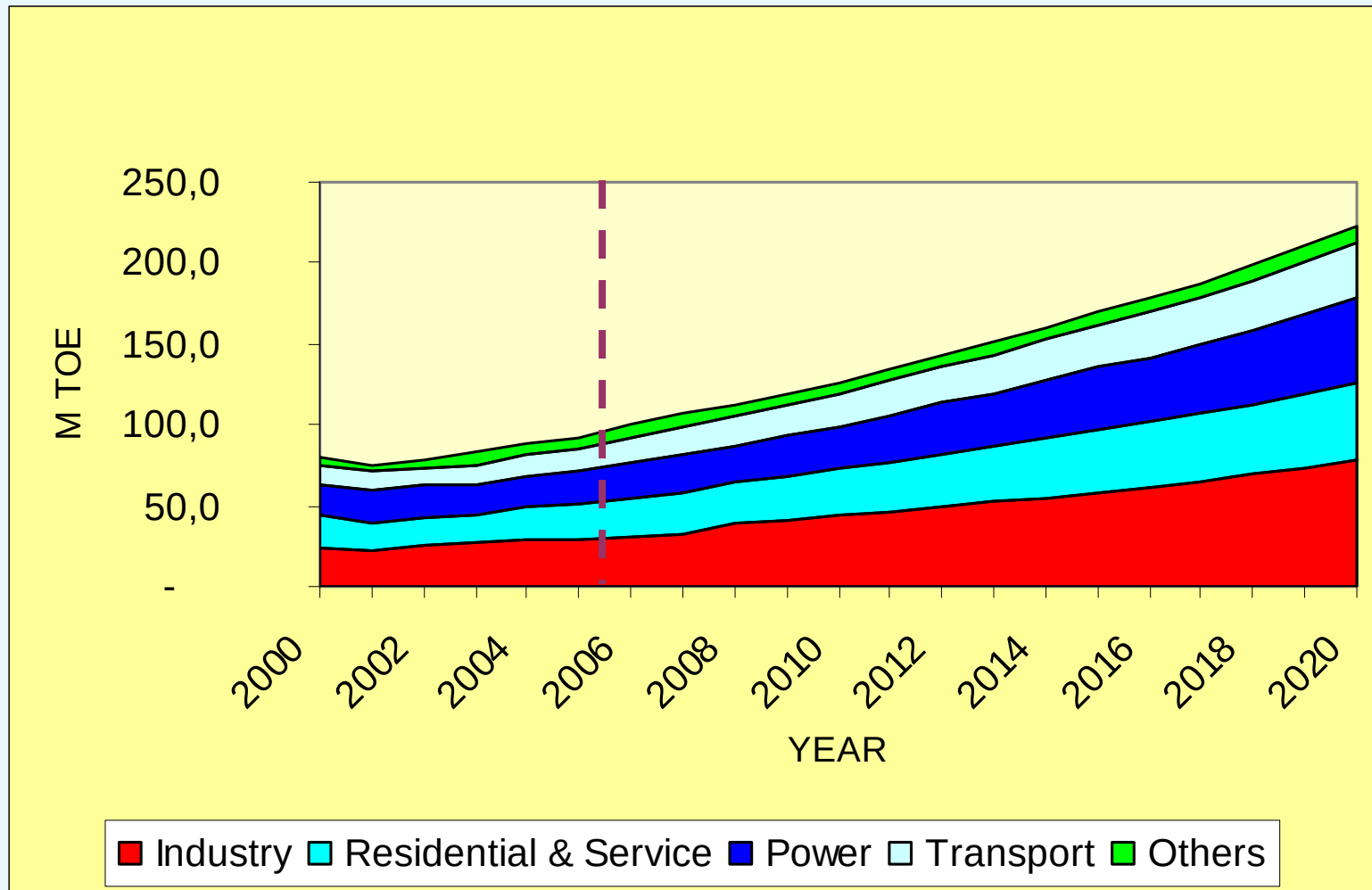
Primary Energy Consumption & Domestic Production



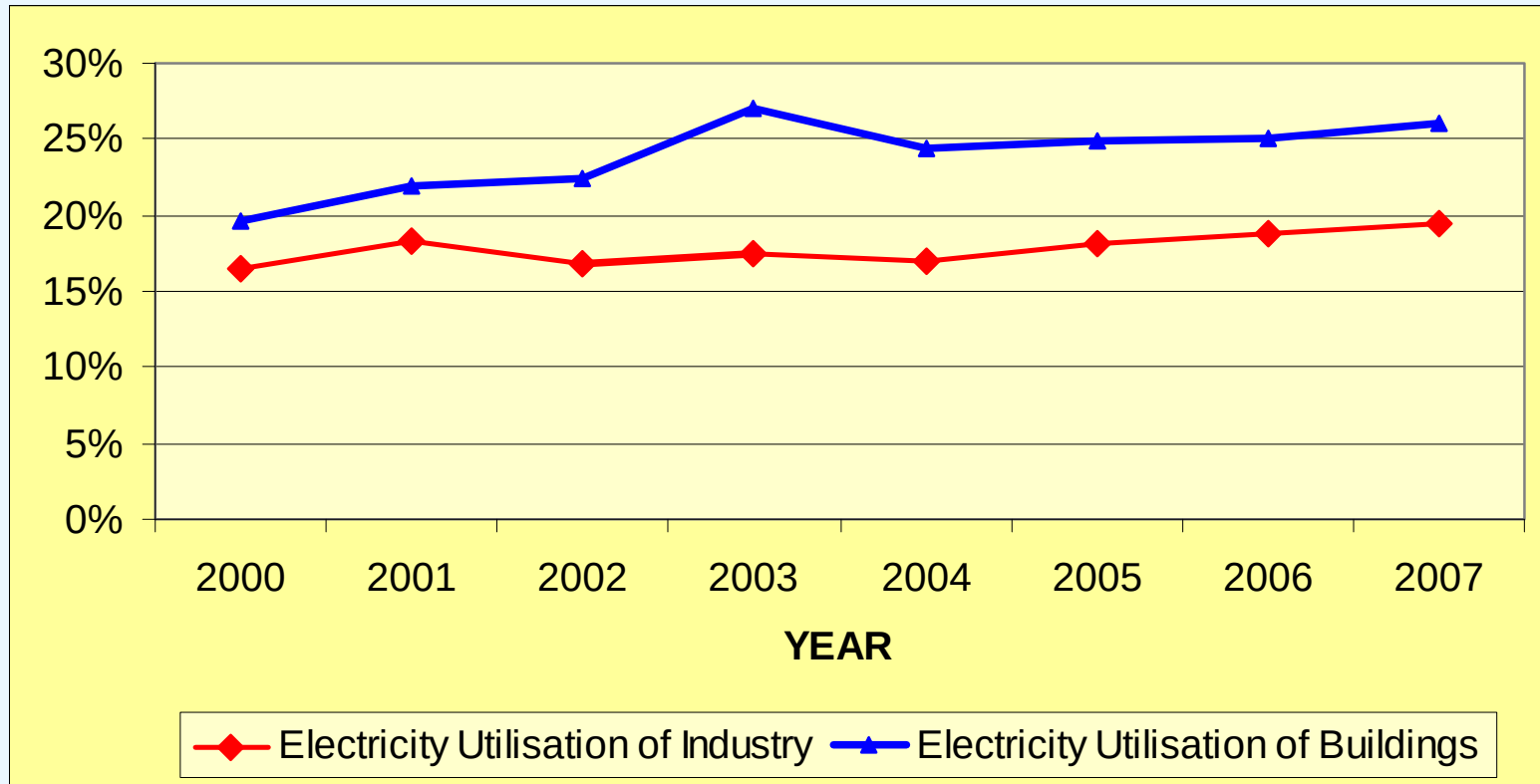
Primary Energy & Electricity Consumption



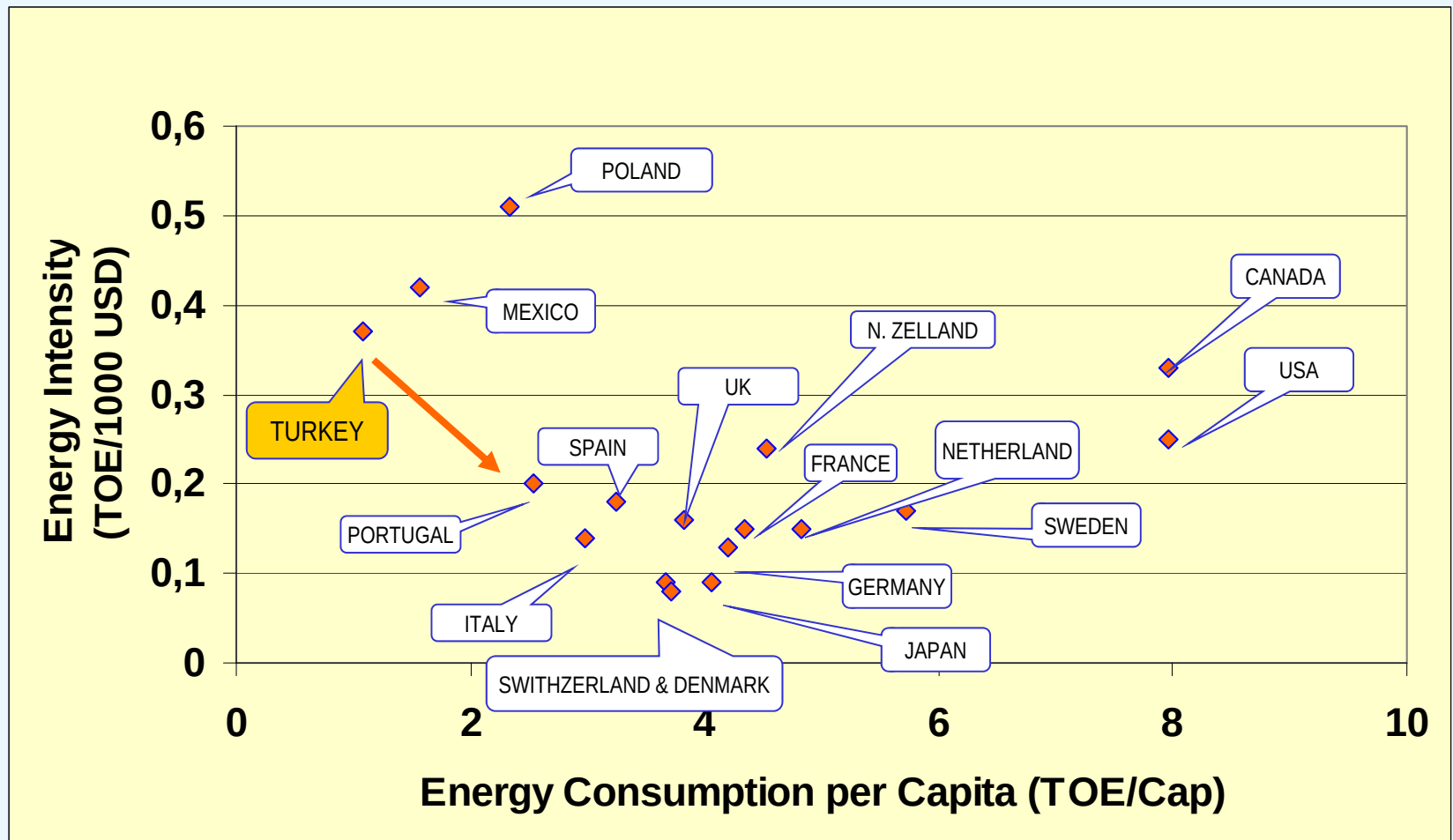
Energy Consumption by Sectors



Electricity Ratio in Energy Consumption



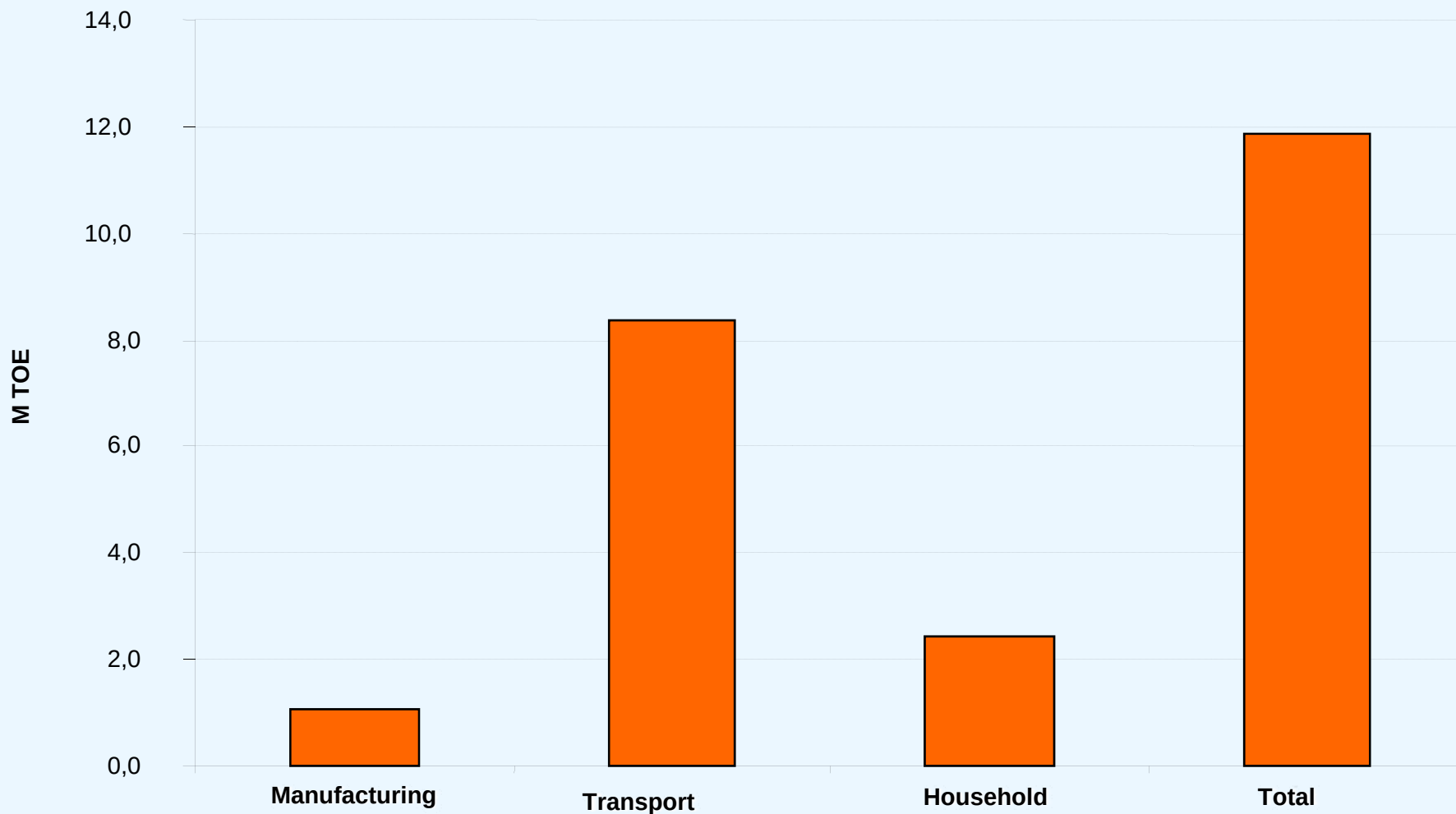
Energy Consumption & Energy Intensity



Previous Activities & Policies in Turkey

- Raising of public awareness (since 1981)
- Surveys and energy audits in industry building and transport sectors (since 1981)
- International Cooperation with UNIDO, World Bank, JICA and EU (since 1981)
- Development of energy management in industry and relevant trainings for energy managers (since 1995)
- Energy Efficiency Strategy Paper (June 24, 2004)

Saved Energy Between 1990 – 2004



Fundamental Transformation: 2007

Energy Efficiency (EE) Law & National EE Movement

- EE Law and its secondary legislation put in to force at 2007 and 2008.
- National EE Movement has been initiated by prime minister in 2008.

Vision of EE Law

- to make Turkey a country having low energy intensity and high energy consumption per capita
- to get maximum benefit from energy

Main Target

- Reduction of energy intensity of Turkey 15% by 2020

New EE Legislation since 2007 (1/2)

- **Law on Energy Efficiency** (OG: May 2, 2007, no 26510)
 - ✓ By Law on Appointment of Energy Managers in Schools, (April 17, 2009; no 27203)
 - ✓ By law on Energy Performance of Buildings (OG: December 5, 2008; no 27075)
 - ✓ By-Law on Improving Energy Efficiency for the Utilisation of Energy and Energy Resources (OG: October 25, 2008; no 27035)
 - Communiqué on implementation of the By-Law on Improving Energy Efficiency for the Utilisation of Energy Resources (OG: February 6, 2009; 27133)
 - ✓ By-Law on the Supporting Energy Efficiency of SME's Including Training, Audit and Consultancy Services (OG: October 18, 2008; no 27028)
 - ✓ By-Law on Improving Energy Efficiency in Transport (OG: June 9, 2008; no 26901)

New EE Legislation since 2007 (2/2)

- ✓ By-Law on Sharing of Heating and Domestic Hot Water Expense in Central Heating and Hot Water Systems in Buildings (OG: April 14, 2008; no 26847)
- ✓ By Law on Amendment of By Law on Using Guidelines of Equipments (OG: October 8, 2007; no 26667)
- ✓ Prime Minister Circular 2008/2 (OG: February 15, 2008; no 26788)
- ✓ Prime Minister Circular 2008/19 (OG: August 13, 2008; 26966)

Measures (1/2)

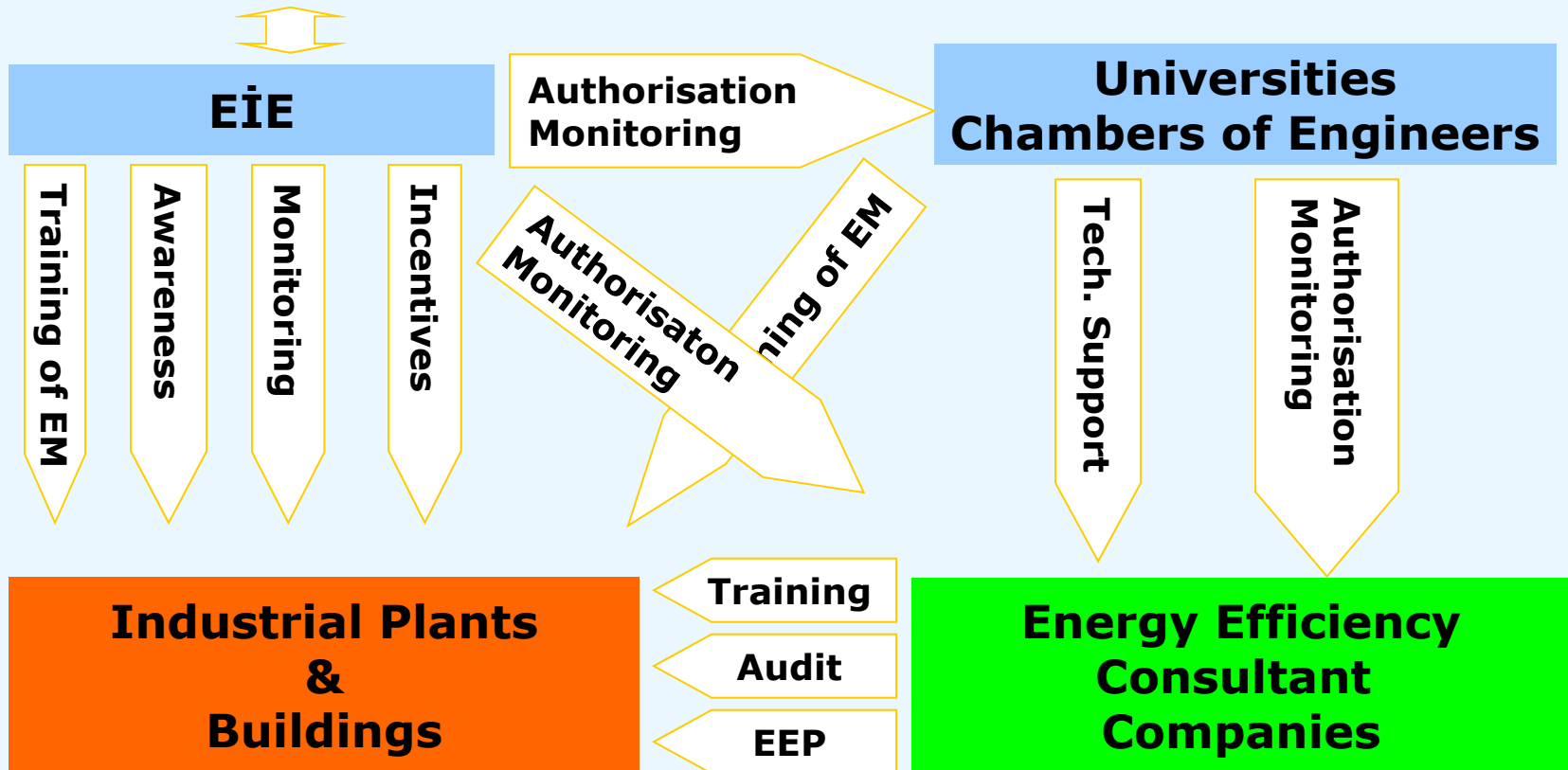
- Energy management
 - Industry
 - Building
- Incentives & Supports
 - Industry
 - R&D Projects
- Voluntary Agreements
 - to reduce energy intensity in industry
- Energy performance of buildings
 - Energy performance certificate
 - Individual metering and control systems for heating and hot water
- Minimum EE Requirements
 - Energy using equipments

Measures (2/2)

- Co-generation & Micro cogeneration
 - Licensing exemptions
- Renewable energy
 - Licensing exemptions by 500 kW installed capacity
- Public sector
 - Energy audits
 - Monitoring
 - Minimum EE requirements for energy consuming equipments
- Awareness
 - Energy efficiency week
 - Curriculum at schools
- Others
 - Monitoring
 - Measures to improve EE in transportation and electricity sector

Administrative Structure of EE in Turkey

ENERGY EFFICIENCY COORDINATION BOARD (EECB)



EE Coordination Board (EECB) (1/2)

- **Ministry of Energy and Natural Resources (Chairman)**
- Ministry of Internal Affairs
- Ministry of Finance
- Ministry of Education
- Ministry of Public Works and Settlement
- Ministry of Transport
- Ministry of Industry and Trade
- Ministry of Energy and Natural Resources
- Ministry of Environment and Forestry
- State Planning Organization
- Treasury
- Energy Market Regulatory Authority
- Turkish Standard Institution
- Scientific and Technological Research Council of Turkey (TUBITAK)
- Union of Chambers of Turkish Engineers and Architects
- The Union of Chambers and Commodity Exchange of Turkey
- Union of Turkish Municipality

EE Coordination Board (EECB) (2/2)

meets four times in a year

most recent meeting was held on **28/9/2009**

The responsibilities of the Board ;

- 1) To prepare national energy efficiency strategies, plans and programs, assess their effectiveness, taking and implementing new measures
- 2) To steer energy efficiency studies carried out by EIE
- 3) To approve the authorization certificates issued by EIE to chambers of profession and universities in promoting EE services
- 4) To approve EE projects prepared by the industrial establishments and voluntary agreement

National EE Movement

- 2008 - Energy Efficiency Year
- Implementation of action plans by provinces
- Joint actions to increase public awareness on;
 - electric motor systems
 - thermal insulation of buildings
 - tourism sector
 - shopping centers
 - household appliances and lamps
- Energy Efficiency Week & National EE Forum
- Improving of EE in public facilities
- Developing cooperation with public and private organizations
- Contests, seminars, symposium, conferences etc.



Implementation of EE Law

- **Authorizations**

- It has been started for universities, chamber of engineers and Energy Efficiency Consultant Companies by April 2009.
- 1 chamber of engineer and 8 EE Consultant Company have been authorized.

- **Training program**

- to certificate of energy managers and energy consultants

- **Incentives for industrial establishments**

- 56 industrial plants have been applied with 72 EE Projects to get incentive by January 2009 and approximately 17,000 toe energy saving is envisaged
- Budget for financial subsidies is 5,000,000 TL for 2009
- 17 Projects have been supporting with total cost around 5 millions TL of 12 industrial establishments

- **Voluntary agreement**

- 24 industrial plants have been applied by January 2009. EECB will take decision to define the industrial establishments to make voluntary agreement with government

- **Survey and monitoring studies**

- Survey studies such as benchmarking, energy audits etc, have been carrying out in energy intensive industry and buildings

- **Research and Development Projects have been supported by Scientific and Technological Research Council of Turkey (TUBITAK)**

International Cooperations

Third Country Training: JICA

Improving EE in Industry by
Voluntary Agreement

NETHERLANDS - SenterNovem

Utilization of Efficient Electrical
Household Appliances in
Turkish Market: GEF - UNDP

Promoting of EE in Buildings: GEF - UNDP

Improvement of EE in Industry: GEF - UNDP - UNIDO

Energy Modeling
Solar Energy
Development of ESCO's
US - TDA

2008

2009

2010

2011

2012

2013

2014

Future Plan for EE in Turkey

- Expanding of scope of incentives and supports
- More comprehensive campaign to raise public awareness
- Strengthening of infrastructure for follow up, monitoring and assessment studies
- Strengthening of national and international cooperation
- Rehabilitation of existing buildings (Improving heat insulation)
- Development of financial mechanisms such as carbon trade etc. in cooperation with national and international bodies
- Introducing and promoting of eco buildings
- Promoting of investment for small scale renewable

CONCLUSION

- Turkey has an important energy saving potential in all sectors, including power generation
- There are attractive opportunities for entrepreneurs
- Needs to strength of EE services
 - Capacity building
 - Financing mechanisms
- Good atmosphere for cooperation's

THANK YOU

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