

**13th Energy Arena:
Game Changing Energy Dynamics in the World and in Turkey
September 8-9, 2011, Istanbul
STEAM (Strategic Technical Economic Research Center)**

Good morning. Sayın Bakanım, Ministers, Ladies and Gentlemen. Thank you for inviting me to today's STEAM arena.

Slide 1: Opening slide

This morning I will focus on possible directions for Turkey's energy agenda. I would like to highlight three such directions:

1. Improving energy efficiency
2. Scaling up renewable energy
3. Further expanding private participation and investment, liberalizing markets, strengthening regulation

First, however, I will recall **four stylized facts** about Turkey's energy sector. These are well known facts, but it's helpful to re-call them – because they lay the basis for future directions and policy and institutional reforms.

Slide 2: Fact 1: Energy demand will continue growing strongly

- **Turkey has recovered from the global economic crisis. The demand for energy has resumed rapid growth.** The Government projects future energy demand growth 6.5-7.5% per annum. So, **Turkey's energy supply must continue growing** to meet rising energy demand.

Slide 3: Fact 2: Turkey's economy is energy intensive compared with the OECD.

- Turkey required 0.26 ton of oil equivalent (toe) for every \$1,000 of GDP, compared with the OECD average of 0.18 in 2008.

Slide 4: Fact 3: Turkey greatly depends on energy imports.

- **So far, Turkey's rising energy demand has been met largely by imports.** In 2010, more than half of all electricity generation was from imported fuels.
- **This high energy import dependence brings with it several major costs:**
 1. It reduces energy security
 2. It means investments and jobs elsewhere, not in Turkey
 3. Most imported energy is from fossil fuels, so it's not clean and green.
 4. And high energy imports account for a large part of Turkey's high current account deficit.
- Indeed, energy imports accounted for over 20% of Turkey's total imports and 81 % of the current account deficit in 2010. Every US\$ 10 increase in the price of a barrel of oil raises the CAD by about 0.5 percent of GDP.

Slide 5: Fact 4: High fossil fuel use drives Turkey's GHG emissions.

- Because of the high share of fossil fuels in energy generation, the **energy sector is by far the largest contributor to greenhouse gas emissions in Turkey**: 278 million tons CO₂ equivalent, or 75.3 % of the total in 2009.
- **Turkey is among the countries that are most vulnerable to climate change** (ranking 3rd among ECA countries after Russia and Albania).

To sum up so far: energy demand is growing rapidly; Turkey's economy is energy intensive; and it depends on imported fossil fuels that drive emissions.

Slide 6: Turkey's Energy Agenda: Some Possible Directions – Overview

What do these well-known facts about Turkey's energy sector imply for the directions of Turkey's future energy agenda?

- o First, increasing energy efficiency and, second, increasing renewable energy are crucial. They increase energy security; they mean investments and jobs; they help contain imports and the current account deficit; and they mean a cleaner and greener Turkey.

- And third, continued private sector participation, along with market liberalization and strengthened regulation, will be key for further improvements in the performance of the energy sector overall.

Slide 7: Direction 1: Improving energy efficiency.

- A recent World Bank study¹ pinpoints the areas where Turkey can realize the greatest energy efficiency gains: The Building Sector (both commercial and residential) and industrial sectors such as chemicals, iron & steel and cement.
- We estimate, for example, that in industries and buildings alone, the total energy saving potential is about 27% or 15.1 million toe. This is about 20% of annual energy imports.
- The Government the private sector, families and the public – we can all contribute much to energy efficiency.
- **Just 3 examples:** first, the development of Energy Service Companies (ECOs); second, energy efficient cars and third, better buildings insulation and lighting.

Slide 8: Direction 2: Further scaling up renewable energy.

- **Turkey currently aims to increase the share of renewable resources in energy generation to at least 30% by 2023.**
- Now, by the end of 2010, renewable energy had already exceeded 25% of total generation.
- With this success so far, Turkey may ask itself: can we raise our target? Can we set a more ambitious, new target, above 30% renewable energy generation by 2023?

¹ Turkey: Tapping Energy Savings Potential in Industry and Buildings, November 2010.

- **Looking specifically at hydro power, Turkey targets full utilization of its economic hydro potential.** While using this potential, a strengthened legislative and regulatory framework will be important to ensure that the development of hydro resources to effectively address the **potential cumulative environmental effects and dam safety issues.**
- **For efficient use of wind energy,** the deployment of sophisticated Smart Grid applications will be the key.
- **As regards solar energy, it will be important to keep the solar feed-in-tariff under review to attract new private investment.**

Slide 9: Direction 3: Further expanding private participation and investment, liberalizing markets, strengthening regulation

- **First, electricity distribution privatization is succeeding in Turkey. I hope the program can be completed quickly.**
- **Secondly, I also hope that the planned privatization of the generation assets can proceed expeditiously as well.**
- **Thirdly, Turkey may consider the restructuring and unbundling of TEIAS,** as the institutional set-up of TEIAS may not be sustainable much longer in a liberalized sector.
- **Finally, regarding gas, an amendment to the Gas Market Law will be welcome.** I believe that an effective Gas Market Law can address two inter-related issues: contracting for gas imports and the restructuring of BOTAŞ beginning with the legal unbundling of the trading and network functions of BOTAŞ into two companies, then the listing of the unbundled companies in the Istanbul Stock Exchange.

In closing, I would like to highlight once more the strong support of the World Bank Group—the World Bank itself, but also IFC and MIGA—for the Turkish energy sector and our readiness to continue and expand our energy partnership with the Turkish government and the private sector.

Thank you. Teşekkür ederim.