

EXECUTIVE SUMMARY AND KEY RECOMMENDATIONS

EXECUTIVE SUMMARY

Turkey will likely see the fastest medium- to long-term growth in energy demand among the IEA member countries. It has a young and urbanising population and energy use is still comparatively low. Therefore, ensuring sufficient energy supply to a growing economy remains the government's main energy policy concern. As one of the government's primary policy goals, energy security has attracted more focus than market reform and environmental protection. However, Turkey has progressed greatly in all areas of energy policy since the 2005 in-depth review and there are clear signs of a better future balance among the three primary energy policy goals.

Affordable energy is essential for increasing the living standards of the Turkish people. Large investments in energy infrastructure, especially in electricity and natural gas, are needed over the coming years to avoid bottlenecks in supply and to sustain rapid economic growth. Turkey will rely largely on the private sector as the source for such large energy investments.

To attract investments, the country needs to continue reforming its energy market. In the past few years, power sector reform has progressed significantly and comprised moving to cost-reflective wholesale tariffs; privatising distribution companies; launching a programme for privatising generation assets; and setting a date for full market opening. The May 2009 Electricity Market and Security of Supply Strategy outlines the way forward. The IEA congratulates Turkey for these reforms and urges it to pursue further reforms with relentless vigour. Turkey must see through its plans to increase competition and overall economic efficiency and to further reform tariffs. The plans exist; they now need to be implemented in full.

Closely intertwined with economic growth, energy use in Turkey is expected to roughly double over the next decade, and electricity demand is likely to increase even faster. Growth at this pace requires not only large investments but also measures to ensure energy security, especially in the electricity sector. The government rightly sees increasing domestic energy supply as part of the response. Turkey has large coal reserves and expects to multiply their use over the next decade to provide electricity for the growing population and expanding economy. The government is also determined to utilise Turkey's large remaining potential for hydro and wind power. Moreover, it has extensive plans for solar and geothermal energy, and aims to introduce nuclear power to

further diversify its power generating capacity. Indicative targets for improving security and sustainability of the electricity sector are determined in the May 2009 Electricity Market and Security of Supply Strategy.

In the natural gas sector, reform has been slower, largely owing to security of supply concerns, and needs to be accelerated. Turkey should urgently implement a revitalised package of gas market reforms to effectively unbundle BOTAS, the incumbent, in order to establish an independent gas transmission operator; ensure that recent progress in eliminating import-export restrictions is sustained; and reduce BOTAS's significant market share. All this would help attract investment and, in the end, ensure sufficient gas to improve gas supply security and flexibility.

Turkey imports practically all the oil and gas it uses and these imports may almost double over the next decade. A key part of Turkey's policy is energy diplomacy with the supplier countries in the region, which together hold more than 70% of the proven oil and gas reserves of the world. Turkey has been quite successful, as is evidenced by agreements with Russia, Iran, Iraq, Egypt, the Caspian region (Azerbaijan) and Central Asia (Turkmenistan). These agreements and the related projects also strengthen Turkey's role as a transit country, an energy corridor between its neighbouring supplier regions and the European and other international markets. Ceyhan on the Mediterranean coast is developing as a major oil terminal in the region. Turkey's proactive stance benefits both the country itself and the wider international community. The IEA acknowledges the responsibility Turkey has shown in improving global energy security.

In addition to securing oil and gas from diversified sources, the country should also focus on expanding its oil and gas storage capacity. In particular, the IEA encourages the government to develop a comprehensive long-term plan to increase emergency oil reserves and natural gas storage capacities to this effect. It should also improve the institutional capacity, possibly by swiftly establishing a stockholding agency to further improve compliance with the IEA 90-day oil stockholding obligation.

Large potential for energy efficiency improvements remains in all sectors. In a country where cars are becoming more and more popular and where significant new construction is foreseen, transport and buildings merit particular long-term attention from the decision makers.

Turkey remains on a trend towards the same unsustainable car- and oil-based transport system that is all too common in the other IEA member countries. Crucially, Turkey can change the current trend by decisive action. A more sustainable transport system would help save energy, avoid congestion, improve air quality and, as transport is the largest oil-consuming sector and relies on oil for almost all of its energy needs, increase oil security. Good examples in this regard are the ongoing projects to build high-speed rail

connections between the major cities, and to substantially improve the public transport system in Istanbul. Turkey should intensify its efforts to develop, adopt and implement a holistic strategy covering transport, energy and urban development.

Buildings are another key sector where efficiency measures would bring multiple benefits. Peak demand for electricity is gradually increasing, because of the growing use of appliances for heating and cooling. This demand could be reduced by more efficient appliances and by reducing the need for heating and cooling through better insulation and by using light colours for roofs and pavements, as well as natural shading. The recent programme of energy labelling of buildings is an important step towards improving energy efficiency in the buildings sector. Air-conditioning should be a focus of particular attention, also in light of climate change projections. Reducing electricity use for air-conditioning would save money that the government is spending on the electricity sector. Heat pumps look particularly attractive as a technology option for providing both energy-efficient cooling and heating, and the government should consider stronger incentives for their uptake.

Energy-related CO₂ emissions have more than doubled since 1990 and are likely to continue to increase fast over the medium and long term, in parallel with significant growth in energy demand. Turkey is a Party to the United Nations Framework Convention on Climate Change (UNFCCC) and became a Party to the Kyoto Protocol in 2009. However, as a rapidly developing economy with low emissions per capita, Turkey has preferred not to set a quantitative overall target to limit emissions. This exemption is based on the decision 26/CP.7 of 2001 by the Parties to the UNFCCC. Turkey is the only Annex-I country that has not (by May 2010) set mitigation targets for the post-2012 period or proposed mitigation actions to support them, as required under the Copenhagen Accord. It is also the only OECD country that does not have a national emission target for 2020.

Turkey's approach is to implement policies and measures to protect the climate system on the basis of equity and in accordance with common but differentiated responsibilities and respective capacities. Turkey sees that its special circumstances and differences from other Annex-I Parties are not addressed in the Copenhagen Accord. Nevertheless, Turkey has been working on further developing its post-2012 approach and determining its commitments. For example, it has set a unilateral quantitative target for CO₂ emissions from the energy sector (-7% from the reference scenario level in 2020), as defined in its 2009 National Climate Change Strategy. The IEA urges Turkey to intensify efforts to further develop its approach concerning the post-2012 regime and encourages it to set a quantitative overall target for limiting emissions. A target would provide an important signal to other countries of Turkey's commitment and intent. Turkey's approach on the post-2012 climate policy regime has implications on how much the country can

draw on the international sources for financing the new energy technology it will need both for limiting emissions and for increasing energy supply.

KEY RECOMMENDATIONS

The government of Turkey should:

- ▶ *Implement the 2009 Electricity Market and Security of Supply Strategy, and accelerate efforts to reform the natural gas market.*
- ▶ *Continue to ensure security of oil and gas supply, including by further co-operation with countries and companies in the region, expansion of natural gas storage capacity and further compliance with the IEA oil stockholding requirements.*
- ▶ *Intensify efforts to further improve energy efficiency as a means to supporting economic growth, energy security and environmental protection.*
- ▶ *Further develop its approach on the post-2012 climate policy regime and consider setting a meaningful quantitative overall target for emissions, while taking into account the advantages and disadvantages of such a target.*