

**WORLD ENERGY OUTLOOK 2007: FACT SHEET-
GLOBAL ENERGY DEMAND**

**WE ARE FACING AN UNSUSTAINABLE ENERGY FUTURE -
CAN WE AVOID IT?**

Global energy needs are expected to grow, with fossil fuels remaining the dominant source, sharply pushing up CO₂ emissions with dramatic implications for all countries. China and India are the emerging energy giants in this unsustainable future. Their unprecedented pace of economic development will require ever more energy and will transform the global energy system by dint of their sheer size in their growing weight in international fossil-fuel trade. Yet it will transform living standards for billions. The problems of energy security and climate change are global and require global solutions. The challenge for all countries is to put in motion a transition to a more secure, lower-carbon energy system, without undermining economic and social development. Vigorous and immediate policy responses are needed to set us on a more sustainable energy path.

- **If governments stick with current policies, the underlying premise of our Reference Scenario, the world's primary energy needs are projected to grow by 55% between 2005 and 2030.** Demand reaches 17.7 billion tonnes of oil equivalent, compared with 11.4 billion toe today. About half of the increase in global demand goes to power generation and one-fifth to meeting transport needs – mostly in the form of petroleum-based fuels.
- **Coal sees the biggest increase in demand in absolute terms**, in line with the spectacular growth of the past few years. Its share in world final energy consumption increases from 25% in 2005 to 28% in 2030. Over 80% of the increase in coal use arises in China and India. The share of natural gas increases modestly. Electricity use doubles, its share of final energy consumption rising from 17% to 22%.
- **Some \$22 trillion of investment in energy supply infrastructure is needed to meet projected global demand.** Mobilising all this investment will be challenging. The power sector requires \$11.6 trillion of capital expenditure worldwide over the *Outlook* period, accounting for more than half of total energy-supply investments. More than half of the investment in the electricity industry is needed for transmission and distribution networks. China alone needs to invest about \$3.7 trillion – 17% of the world total and more than all other developing Asian

countries together. India's investment needs are more than \$1.2 trillion, most of it in the power sector.

- **Developing countries, whose economies and populations are growing fastest, contribute 74% of the increase in global primary energy use. The emerging countries China and India alone account for 45% of the increase.** In aggregate, developing countries make up more than half of the global energy market in 2030, compared with only 41% today.
- **The resurgence of coal, driven primarily by booming power-sector demand in China and India, is a marked departure from past *WEOs*.** Higher oil and gas prices are making coal more competitive as a fuel for base load generation. China and India, which already account for 45% of world coal use, drive over four-fifths of the increase to 2030 in the Reference Scenario. In the OECD, coal use grows only very slowly, with most of the increase coming from the United States. Rising global coal use will continue to drive up energy-related CO₂ emissions over the projection period.
- **In the Alternative Policy Scenario (that assumes that governments around the world implement policies they are currently considering), global primary energy demand grows by 1.3% per year over 2005-2030 – 0.5 percentage points less than in the Reference Scenario.** Global oil demand in this Scenario is 14 mb/d lower in 2030 – equal to the entire current output of the United States, Canada and Mexico combined. Coal use falls most in absolute and percentage terms. Energy-related CO₂ emissions stabilise in the 2020s and, in 2030, are 19% lower than in the Reference Scenario.
- **In the High Growth Scenario (which assumes that China's and India's economies grow on average 1.5 percentage points per year faster than in the Reference Scenario), the increase in primary energy demand worldwide amounts to 6% in 2030,** compared with the Reference Scenario. Faster economic growth in China and India, absent any policy changes, boosts their energy demand. The stimulus to demand provided by stronger economic growth more than offsets the dampening effect of the higher international energy prices that accompany stronger demand in China, India and some other parts of the world. Global CO₂ emissions are 7% higher in 2030 than in the Reference Scenario, making it all the more urgent for governments around the world to act.