

WORLD ENERGY OUTLOOK 2006: FACT SHEET- BRAZIL

CAN BRAZIL TEACH THE WORLD NEW TRICKS?

Brazil is full of superlatives: with an estimated 175 million inhabitants, it has the fifth largest population in the world. Its economy is the biggest in Latin America. Still, despite its substantial resources, Brazil consumes more energy than it produces.

- Brazil is Latin America's largest energy consumer, accounting for over 40% of the region's consumption. Its **energy mix is dominated by renewable energy sources and oil**. In the Reference Scenario, primary energy demand is projected to grow annually at 2.1%, from 200 Mtoe in 2004 to 352 Mtoe in 2030. In the Alternative Policy Scenario, energy demand is 38 Mtoe lower, growing at just 1.7% per year thanks to energy-efficiency improvements. Electricity and oil make up most of the reduction.
- Crude oil production is expected to reach 3.1 mb/d in 2015 and 3.7 mb/d in 2030 in the Reference Scenario. In 2006, for the first time **Brazil became self-sufficient on a net basis. In both scenarios it remains so** over the *Outlook* period, provided that the necessary investment in the upstream oil sector, especially for exploration, is forthcoming. The share of imports in natural gas use drops, despite rapidly rising demand – on the assumption that the country's gas reserves are developed quickly enough. This will call for more private investment and a more effective regulatory framework.
- **Brazil is the world's second-largest producer and biggest exporter of ethanol**. It is also expanding its production and use of biodiesel. In the Reference Scenario, the share of biofuels in road-transport fuel demand rises from 14% in 2004 to 23% in 2030 and to 30% in the Alternative Policy Scenario.
- **Brazil is expected to continue to rely on hydropower** to meet most of its power-generation needs, building about 66 GW of new capacity between 2004 and 2030 in the Reference Scenario. Dams are likely to be located far from centres of demand, requiring large investments in transmission lines to connect them to the national grid.
- The investment needed to meet the projected growth in energy supply in the Reference Scenario is considerable and amounts to some \$470 billion (in year-2005 dollars) in 2004-2030. **The power sector alone needs over \$250 billion**, half for generation and half for transmission and distribution. Cumulative upstream oil investment totals over \$100 billion. In the Alternative Policy Scenario, investment needs on the supply side are reduced by \$7 billion in the oil and gas sectors and \$46 billion in the power sector, but demand-side investments are higher. Winning investor confidence in

order to secure financing in the power sector will hinge on careful implementation of the new power model.

- The major challenges for Brazil's energy sector will be **mobilising investment in oil, gas and electricity infrastructure and resolving environmental issues** over the construction of large dams, pipelines and transmission lines. A priority for the government will be to strengthen its policy and regulatory framework in order to secure the necessary investments.