International Energy Agency

WORLD ENERGY INVESTMENT OUTLOOK 2014 FACTSHEET

OVERVIEW

- **More than $1.6 trillion was invested in 2013 in energy supply, a figure that has more than doubled in real terms since 2000; and a further $130 billion to improve energy efficiency.** Renewables are playing a growing role, with annual investing increasing from $60 billion in 2000 to a high point approaching $300 billion in 2011, before falling back since to $250 billion. The largest share of current investment, more than $1 trillion per year, is related to the extraction and transport of fossil fuels, oil refining and the construction of fossil fuel-fired power plants.

- **To 2035, annual investment needs in the New Policies Scenario rises steadily towards $2 trillion, while annual spending on energy efficiency increases to $550 billion.** This means a cumulative global investment bill of more than $48 trillion, consisting of around $40 trillion in energy supply and the remainder in energy efficiency. The main components of energy supply investment are $23 trillion in fossil fuel extraction, transport and oil refining; almost $10 trillion in power generation, of which low-carbon technologies – renewables ($6 trillion) and nuclear ($1 trillion) – account for almost three-quarters, and a further $7 trillion in transmission and distribution.

- **Less than half of the $40 trillion investment in energy supply goes to meet growth in demand**, the larger share is required to offset declining production from existing oil and gas fields and to replace power plants and other assets that reach the end of their productive life. These declines and retirements set a major investment challenge for policymakers and the industry, but they also represent a real opportunity to change the nature of the energy system by switching fuels or deploying more efficient technologies.

- **Nearly two-thirds of energy-supply investment takes place in emerging economies**, with the focus for investment moving beyond China to other parts of Asia, Africa and Latin America; but ageing infrastructure and climate policies create large requirements also across the OECD. The largest share of energy efficiency spending is in the European Union, North America and China.

- **Decisions to commit capital to the energy sector are increasingly shaped by government policy measures and incentives, rather than by signals coming from competitive markets.** In the oil sector, reliance on countries with more restrictive terms of access to their resources is set to grow, as output from North America plateaus and then falls back from the mid-2020s onwards. In the electricity sector, administrative signals or regulated rates of return have become, by far, the most important drivers for investment. Against this backdrop, mobilising private investors and capital will require a concerted effort to reduce political and regulatory uncertainties.

- **New types of investors in the energy sector are emerging, but the supply of long-term finance on suitable terms is still far from guaranteed.** Much of the dynamism in energy markets is coming from smaller market players or new entrants; these players tend to rely on external sources of financing. Outside North America (where external financing is more readily available), there is a need to unlock new sources of finance, via growth of bond, securitisation and equity markets and, potentially, by tapping into the large funds held by institutional investors, such as pension funds and insurers. This would help to diminish undue reliance on the relatively short maturity of loans available from the banking sector, which may be constrained by new capital adequacy requirements (the Basel III accord) in the wake of the financial crisis.

- **Getting the world on a 2 °C emissions path would mean a different investment landscape (and a breakthrough at the Paris 2015 COP).** A 450 Scenario would require $53 trillion in cumulative investment to 2035: around $40 trillion in energy supply (a figure comparable to the New Policies Scenario but with lower fossil fuels and higher renewables) and $14 trillion in energy efficiency ($6 trillion higher than in the New Policies Scenario). By 2035, investment in low-carbon energy supply rises to almost $900 billion and spending on energy efficiency exceeds $1 trillion, double the respective amounts seen in 2035 in the New Policies Scenario.