



UNITED KINGDOM

As an island nation, the United Kingdom has powerful natural resources for wind and marine energy. Yet historically, it has lagged behind other EU Member States such as Spain and Germany in building renewable energy capacity. For the first time, however, the United Kingdom took third place in renewable energy investment in 2009 thanks to a surge in financing of offshore wind projects in the North Sea. Under all future scenarios, the United Kingdom is poised for significant growth in private investments in renewable energy assets. Under current policies, growth of almost 185 percent is anticipated. With enhanced policies, the United Kingdom could see annual investments grow by 260 percent. In the enhanced policy scenario, the cumulative investment potential in the United Kingdom from 2010 to 2020 is projected to be \$134 billion, which would leverage installation of 44 GW of renewable energy generating capacity.

Like Germany, the United Kingdom is subject to EU environmental commitments including the target of 20 percent of energy production from renewable energy sources by 2020 and reducing carbon emissions by 20 percent on 1990 levels by 2020. The United Kingdom's renewable energy strategy has focused on wind power, with significant funding dedicated to offshore wind development. This trend is projected to continue.

The United Kingdom's National Renewable Energy Action Plan submitted to the European Commission in June said the country "needs to radically increase its use of renewable energy" by producing 15 percent of its energy from clean sources by 2020, up from 1.5 percent in 2005. The recent change in government does not appear to have dimmed overall support for meeting these goals, although the Government's Climate Change Adviser, the Committee on Climate Change, has advised the Conservative-Liberal Coalition should rein in proposals to raise its 15% target.

The United Kingdom has focused heavily on wind because of its strong on and offshore resources. The United Kingdom was one of the first countries to introduce wave and tidal stream devices to its waters. In October, the government shelved plans for a tidal power plant in England's Severn Estuary, which could have provided as much as 5% of the nation's power. However, enhanced incentives under the Renewables

Obligation in Scotland continue to support the development of wave and tidal power in the United Kingdom. The new government has also pledged measures to ramp up energy from waste through anaerobic digestion. In its October spending review the United Kingdom committed up to £1 billion for the development of four carbon capture and storage demonstration plants.

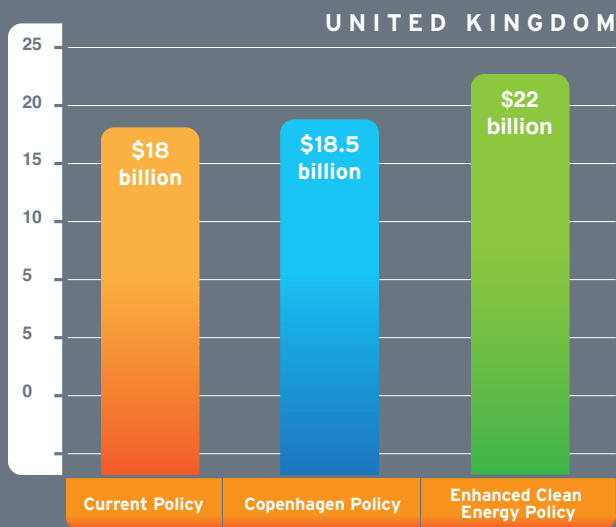
The United Kingdom recently adopted a feed-in tariff program for small scale photovoltaic (PV) solar development, though given its stronger wind and other natural resources this might prove too costly. The new coalition government also plans to establish a full feed-in-tariff system bringing in large-scale generators of energy from renewable sources, though no timeframe for its introduction has been announced. In addition, the Renewable Heat Incentive, a tariff plan aimed at incentivizing the generation of heat from renewable sources, is due to take effect in April 2011.

The government is working to bring the technologies listed in its Code for Sustainable Homes, which rate the sustainability of new construction against energy efficiency and environmental criteria, into line with those in the EU Renewable Energy Directive. It has also committed to expedite smart grid and smart meter rollout.

Rising electricity prices and growing public awareness of climate issues should aid in the implementation of these programmes.

To boost investment in its commercial-scale renewable energy sector, the government can consider reforming its Renewable Obligation program, which energy market participants use to comply with the country's overall clean energy targets. Forecasting prices of tradable credits under the program is a complicated endeavor, making it difficult to accurately estimate project capital cost requirements and secure financing. A more transparent system would offer the lower cost of capital that offshore wind project developers in particular desperately need. Beneficial accounting procedures and incentives for commercial developers, paired with injections from infrastructure banks for smaller developers, would also help ease entry into the market and make development more economical.

FIGURE 37. INVESTMENT IN RENEWABLE ENERGY ASSETS, 2020 (BILLIONS OF \$)



| NATIONAL CLEAN ENERGY POLICIES | |
|--------------------------------|---|
| Carbon Cap | |
| Carbon Market | ✓ |
| Renewable Energy Standard | ✓ |
| Clean Energy Tax Incentives | ✓ |
| Auto Efficiency Standards | ✓ |
| Feed-in Tariffs | ✓ |
| Government Procurement | ✓ |
| Green Bonds | ✓ |

| FINANCE AND INVESTMENT (2009)* | |
|--------------------------------|----------------|
| Total Investment | \$11.2 billion |
| G-20 Investment Rank | 3 |
| Percentage of G-20 Total | 9.9% |
| 5-Year Growth Rate | 127.4% |

| INSTALLED CLEAN ENERGY (2009) | |
|---------------------------------|----------|
| Total Renewable Energy Capacity | 7.5 GW |
| Total Power Capacity | 8.4% |
| Percentage of G-20 Total | 2.8% |
| 5-Year Growth Rate | 29.8% |
| Key Renewable Energy Sectors | |
| Wind | 4,000 MW |
| Biomass | 484 MW |

| KEY CLEAN ENERGY TARGETS (2010) | |
|---------------------------------|--|
| Renewable Energy Electricity | Procure 20% of electricity from renewable energy |

| KEY INVESTMENT INCENTIVES | |
|------------------------------|---|
| Renewable Energy Electricity | Renewable energy exempt from £4.3/MWh climate change levy |
| Renewable Energy | Renewable energy standard, with permit trading |

*Includes investments in venture capital and public markets, and asset finance for all clean energy technologies including biofuels and energy efficiency.