

# United Kingdom

**Overall Rank: 6**
**Type: Large Market; Small Market Share**

The United Kingdom (UK) is one of the few renewable energy markets that is projected to grow substantially, but will likely need to rely on significant imports of both technologies and feedstocks to meet expected demand. While export opportunities exist in most renewable energy sectors, U.S. wood pellet exports to the UK are expected to increase substantially and present the largest renewable energy export opportunity to the UK through 2015.

## Sub-Sector Rankings

Ethanol	Geothermal	Hydropower
11	N/A	N/A
Pellets	Solar	Wind
1	15	15

Renewable energy in the United Kingdom is poised for significant growth over the next decade, with policy changes driving investment across a wide cross section of technologies. The UK Government has made clear its intentions to deploy renewable energy technologies at scale; and partnerships between the UK and overseas organizations have become increasingly viewed as an important means of fast-tracking the introduction of new products to the market. What is more, the UK is one of the few markets in the world where future growth will necessitate a substantial amount of imports to meet expected demand.

Although the UK's renewable energy market is large, the market share enjoyed by U.S. exporters is relatively small, particularly in renewable energy power generation. Future market growth is thus expected to only marginally benefit exporters looking to sell technology and expertise into the UK. For example, despite ranking in the top ten globally in both expected wind and solar capacity installations through 2015, neither subsector ranks highly in terms of export potential.

However, the UK has traditionally been a strong customer of renewable fuels from the United States. Although ethanol exports to the UK dropped dramatically in 2013 when the EU imposed antidumping duties, wood pellet exports more than doubled (from 673 million kg to over 1.7 billion kg) and significant growth is projected to continue into the future, as the U.S. pellet industry is well positioned to continue being a top supplier to UK utilities.

### Overview of the Renewable Energy Market

Under the European Renewable Energy Directive of 2009, the UK committed to deriving 15 percent of its energy consumption from renewable energy sources by 2020. Estimates indicate that in order to meet this goal, roughly 30 percent of the UK's electricity generation will need to come from renewable sources.<sup>1</sup> For the 2013/2014 period, the total renewable obligation level for utilities is 13.4 percent in Great Britain and 6.3 percent in Northern Ireland.<sup>2</sup>

For a decade, the UK has focused its policy support around a complicated certificate and quota scheme known as "the Renewables Obligation." Different technologies received differentiated levels of support through a "banding" mechanism that provides a certain number of Renewable Obligation Certificates (ROCs) per MWh of electricity produced. In April 2013, new ROC banding levels took effect, with offshore wind and marine technologies benefiting the most from new tariff levels, while onshore wind and solar ROCs decreased.<sup>3</sup>

Small projects, up to 5MW, are also eligible for feed-in tariffs. The FIT for small solar projects has been especially popular, with over 1.1GW of PV capacity installed in 2011 – 10 times the anticipated amount. Consequently, the government cut FIT rates to save money, prompting a legal dispute with the solar industry. It later attempted to bring more stability to the scheme by proposing predictable cuts, starting in 2012, to keep track of falling costs.

Several policies collectively known as "Comprehensive Electricity Market Reform" are expected to replace the Renewables Obligation as the primary support mechanism for the industry in the future. In particular, the reform effort is expected to attract the £110 billion

investment that is needed to replace current generating capacity, upgrade the country's electricity grid by 2020, and cope with a rising demand for electricity.

Under the proposed reforms, the Renewables Obligation will close to new generators in March 2017. Electricity generation that is accredited under the Renewables Obligation will continue to receive its full lifetime of support (20 years) until the scheme closes in 2037. Beginning in 2027, the British Government will fix the price of the ROC for the remaining 10 years of the Renewables Obligation at its long-term value and buy the ROCs directly from renewable energy generators.<sup>4</sup> This is meant to reduce volatility in the final years of the scheme. The long-term value of a ROC will be the buyout price plus 10 percent.

Electricity market reform is also expected to include a carbon price floor, emissions performance standards, additional support for the Green Investment Bank that was launched in 2012, and "contracts for difference" which will ensure a certain level of profitability for renewable energy generation. On December 4, 2013, the UK Government's Department of Energy and Climate Change announced the final "strike price" that renewable energy developers will receive for projects brought online between 2014 and 2019 under the "contracts for difference scheme."

U.S. renewable energy exporters should continue to monitor the UK's policy environment closely, as any changes could facilitate new investment that may support export opportunities. In niche sectors like wood pellets that already enjoy a competitive position in the market, changes to policy – either positive or negative – may be impactful enough to dramatically change the attractiveness of the UK market relative to other potential export destinations.

### **Challenges and Barriers to Renewable Energy Exports**

Despite projections for growth in the UK, several challenges limit U.S. exports into the future. First, competition from EU-based suppliers will continue to be strong. At a time of global oversupply of technology, the UK's status as one of the few markets that requires imports to meet its demand makes it one of the most attractive markets anywhere in the world. It also means that American exporters face competition from lower cost products manufactured elsewhere, as well as innovative products manufactured in Europe.

Additionally, many of the products demanded by the UK market are not produced in great quantity in the United States. In the wind sector, for example, the UK is increasingly focused on the development of offshore wind projects. Exporters in this sector should anticipate difficulty convincing potential buyers that their products or services can transition well from onshore projects in the United States to offshore projects in the UK.

Recent sustainability requirements for ethanol in the EU's Renewable Energy Directive, which took effect this year, are expected to slow the import of ethanol from the United States as well.<sup>5</sup> Moreover, the EU's recent decision to impose a five-year \$83.03 per metric ton duty on U.S. ethanol imports that began in February 2013 will continue to diminish the attractiveness of ethanol produced in the United States.

### **Opportunities for U.S. Companies**

#### Solar

In the solar sector, the UK enjoys only about 550 MW of module manufacturing capacity and very little cell manufacturing capacity. Yet, ITA expects the UK to install roughly 1.7 GW of solar capacity through 2015, mostly in the form of small-scale, roof-mounted installations. Most technologies will need to be imported, but because buyers will be individual consumers, it will be difficult for U.S. companies to capture market share without distributor agreements in place.

#### Wind

The wind energy sector is expected to make the largest contribution towards the UK Government's renewable target. The UK has more than 8.2 GW of installed wind capacity in operation. By 2015, estimates indicate that roughly 12.8 GW will be installed with most of the new capacity expected to come from offshore development. With relatively shallow waters and strong winds extending into the North Sea, the UK has the largest offshore wind resource in the world. The UK Government has set aside £30million to support offshore wind development, with the goal of reaching 18 GW of offshore capacity by 2020.

Most U.S. wind exports to the UK will likely have to meet niche demands to be competitive, or be in the form of wind energy services. Financial expertise, environmental impact consultants, and engineers should all find some opportunities. Yet the competition for services in the UK wind market will be fierce, as the market is well developed and very mature.

### Biomass

Biomass energy production (for both electricity and heat) offers another important opportunity for U.S. renewable energy exports. More than a third of the UK's renewable power comes from biomass. In fact, the UK has the highest industrial demand for wood pellets in the European Union and uses biomass in large power plants both as a stand-alone fuel or to co-fire with coal. In 2012, biomass capacity in the UK was 829 MW – a 400 percent over the last ten years.

The contribution of biomass to the UK's renewable energy mix is currently around 10 percent, but is forecasted to increase to nearly 25 percent by 2020. To meet this expected demand increase, power plant operators are expected to import 1 million tons of biomass wood pellets annually per 100MW capacity. The UK's domestic biomass supply is expected to fall drastically short of this amount, meeting only 5 to 10 percent of the projected demand by 2014. The low volume of UK supply means that every year power generators must import millions of tons of wood chips or pellets to meet their biomass needs.

British electrical power generation company Drax is likely to be the largest user of wood pellets in the world

by the end of this decade. Drax is in the process of converting three of its six generating units at the coal-fired Drax Power Station (total capacity of approximately 4GW) in North Yorkshire to run on sustainable biomass. The actual timing of the conversion is dependent on biomass fuel sourcing. In 2012, Drax also decided to develop two U.S.-based pellet plants – in Mississippi and Louisiana, respectively – with a combined capacity of 900,000 tons a year, and to invest in a port facility in Louisiana with an annual export capacity of 3 million tons.

As a result, ITA expects significant commercial opportunities to emerge in the UK for U.S. biomass exporters. Already, most UK imports of wood pellets come from the United States and Canada; a trend which should continue through 2015. UK developers of biomass power plants are actively looking for credit worthy existing large industrial feedstock providers. U.S. suppliers interested in the UK market, however, must understand that they will need to deliver in a 2 years' timeframe (from the date in which a contract is signed) and that capacity of supply is paramount to finding success in the market.

#### **Upcoming Renewable Energy Trade Events for Exporters interested in the United Kingdom:**

- **EU Funds for Renewable Energy Cohesion (webinar);** *January 2014*
- **Argus European Biomass Trading Conference,** *April 9-10, 2014* – London
- **“All-Energy” Renewable Energy Conference and Exhibition;** *May 21-22, 2014* – Aberdeen AEEC

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### ***2014 Renewable Energy Top Markets Report***



This *Top Markets* case study is part of a larger report that includes rankings of 75 different markets in terms of overall U.S. renewable energy exports through 2015, as well as specific rankings for the ethanol, geothermal, hydropower, biomass pellets, solar and wind sectors. To access the full report, visit <http://export.gov/reee/topmarkets>.

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<sup>1</sup> “UK Renewable Energy Roadmap Update 2012,” Department of Energy and Climate Change, 27 December 2012, Accessed 17 April 2013, [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/80246/11-02-13\\_UK\\_Renewable\\_Energy\\_Roadmap\\_Update\\_FINAL\\_DRAFT.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/80246/11-02-13_UK_Renewable_Energy_Roadmap_Update_FINAL_DRAFT.pdf), p. 6.

<sup>2</sup> “UK Renewable Energy Roadmap Update 2012.”

<sup>3</sup> “UK solar, the new kids on the ROC,” *Bloomberg New Energy Finance*, 3 April 2013, Accessed 4 April 2013.

<sup>4</sup> This is as set out in the white paper on Electricity Market Reform and subject to parliamentary approval

<sup>5</sup> <https://www.bnef.com/News/77224?fromGlobalSearch=135948008>

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## *About the Office of Energy and Environmental Industries*

The Office of Energy and Environmental Industries (OEEI), a part of the International Trade Administration's Industry and Analysis unit, is dedicated to enhancing the global competitiveness of U.S. energy and environmental companies, expanding their market access, and increasing their exports. Industry analysts perform strategic research and analysis in order to shape and implement trade policy, create conditions that encourage innovation, lower the cost of doing business, and promote U.S. economic growth. For more information or to access other reports related to the Renewable Energy and Energy Efficiency Export Initiative, contact the office at (202) 482-5225 or visit [www.export.gov/reee](http://www.export.gov/reee).

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