**Who is building renewable generation in W Europe?**

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# Introduction

The need to reduce emissions of greenhouse gases has led to strong efforts by governments to stimulate the construction of a large volume of ‘low-carbon’ generating plant. This paper examines what new renewable electricity generation plants are being built, where, by whom and using which resources.

# Data

The report uses as its data source, the ‘Power Station Tracker’ published biannually by the Platts newsletter Power in Europe (September 6, 2010), which lists all the major power generation projects in Western Europe. The projects are categorised as ‘in operation since Jan 2009’, ‘under construction’, ‘approved’, ‘applied’ and ‘planned’. This analysis excludes projects in the last two categories as a high proportion of these will not materialise, will be significantly delayed, or will be sold on to different developers. It includes hydro-electric schemes but not pumped storage. We also focus only on projects larger than 30MW.

Renewable Energy Projects in Western Europe – MW(no of projects)

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | Offshore wind | Onshore wind | Biomass | Solar | Hydro | Total | All projects inc fossil fuel |
| Austria | - | - | - | - | 140 (1) | 140 (1) | 3133 |
| Belgium | 846 (3) | - | - |  |  | 846 (3) | 4314 |
| Cyprus |  |  |  |  |  |  | 440 |
| Denmark | 809 (3) | - | 35 (1) |  |  | 844 (4) | 980 |
| Finland | - | - | 200 (1) | - |  | 200(1) | 2547 |
| Germany | 5674 (20) | - | - | 53 (1) |  | 5727 (21) | 29048 |
| Ireland | - | 400 (2) | - | - |  | 400 (2) | 2315 |
| Italy | - | 282 (3) | - | - |  | 282 (3) | 11952 |
| Netherlands | 1462 (5) | - | - | - |  | 1462 (5) | 9708 |
| Norway | 350 (1) | 496 (5) | - | - |  | 846 (6) | 2934 |
| Portugal | - | - | - | 50 (1) |  | 50 (1) | 6399 |
| Spain | - | - | - | - | - | - | 9922 |
| Sweden | 640 (1) | 522 (3) | - | - |  | 1162 (4) | 2453 |
| UK | 3550 (11) | 1480 (6) | 820 (5) | - |  | 5850 (22) | 25496 |
| Total | 13331 (44) | 3180 (19) | 1055 (7) | 103 (2) |  | 17809 (73) | 111641 |

Source: Power in Europe September 6, 2010

Note: The total column for all projects including fossil fuel excludes onshore wind.

The renewable projects are dominated by offshore wind, which makes up more than three quarters of the capacity, with onshore wind accounting for most of the rest (see Table 1). Two thirds of the capacity is in the UK and Germany.

To put these numbers in perspective, renewable capacity makes up only about 15 per cent of the capacity recently completed, under construction and approved and only Denmark is building more renewable capacity than fossil-fuelled capacity. Much of the fossil fuel capacity is gas-fired with more than 25GW of combined cycle plant under construction or on order in September 2010 compared to less than 7GW of off-shore wind under construction or on order then. Of the off-shore wind projects, 9.5GW (71%) are still at the approved stage and a significant proportion of these are delayed or not proceeded with, the picture for the expansion of renewables will appear even worse.

# Main developers

Despite the dominance of new fossil fuel projects, the renewable sector is a major new growth area for power generation projects and it is interesting to examine which companies are involved in the business. Only six companies are developing renewable projects in more than one country. Four of these are amongst the seven large multi-national European utilities – E.ON, Vattenfall, Iberdrola and RWE. A fifth is the Danish national oil and gas company, DONG, which in recent years has moved strongly into the electricity sector. The only apparently new company is Evelop.

Evelop is a subsidiary of Econcern, which went bankrupt in June 2009. Evelop, Ecostream, Econcern’s solar division and some of the biomass division of Econcern were taken over by a 100 per cent owned subsidiary of Eneco, Echo Investments. Eneco is a Dutch energy company owned by 61 municipalities.

Companies developing major renewable projects in more than one country

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Owner | No of projects | Capacity MW | Type | Countries |
| DONG | 4 | 972 | Offshore wind | Denmark, UK, Germany |
| E.ON | 4 | 830 | Offshore wind | Denmark, UK, Germany |
| Evelop | 2 | 542 | Offshore wind | Belgium, Netherlands |
| Iberdrola/Scot Power | 4 | 1326 | Onshore, Offshore | UK, Germany |
| RWE | 6 | 1376 | Biomass, Offshore | UK, Netherlands, Germany |
| Vattenfall | 5 | 1247 | Offshore, biomass | UK, Sweden, Germany, Denmark |