LOW CARBON AND ENVIRONMENTAL GOODS AND SERVICES (LCEGS)

Report for 2009/10

JULY 2011

Low Carbon and Environmental

Goods and Services (LCEGS)

Report for 2009/10

July 2011

Commissioned by the Department for Business, Innovation and Skills
from

The views expressed within this Report are those of the authors and do not necessarily reflect those of the Department of Business, Innovation and Skills.

We welcome feedback on the issues raised by this BIS commissioned study and comments should be sent to:
LCEGS@bis.gsi.gov.uk

Table of Contents

1. Introduction 6

2. Methodology 7

2.1 Sector Definition 7

2.2 Included Activities 8

2.3 Levels of Analysis 9

2.4 Key Measures 9

2.5 Data Sources 11

3. Global LCEGS Market 12

3.1 Global Sales 12

3.2 Global Growth Rates 16

4. UK LCEGS 21

4.1 Introduction 21

4.2 UK LCEGS Compared 21

4.3 UK LCEGS Sales 22

4.4 UK LCEGS Companies 24

4.5 UK LCEGS Employment 26

4.6 UK LCEGS Forecast Growth 28

4.7 LCEGS Activities and the Supply Chain 30

4.8 UK LCEGS Summary 32

5. UK LCEGS by Regions 34

5.1 Introduction 34

5.2 UK Regional Sales 34

5.3 UK Regional Companies 36

5.4 UK Regional Employment 38

5.5 UK Regional Growth 40

6. UK LCEGS Imports 42

6.1 Introduction 42

6.2 UK LCEGS Imports by Year 42

6.3 UK LCEGS Imports 2009/ 10 by Sub Sector 44

6.4 UK Imports by Country 45

7. UK LCEGS Exports 47

7.1 Introduction 47

7.2 UK LCEGS Exports by Sub Sector 47

7.3 Exports by Country 49

7.4 UK Exports by Country and by Market 50

7.5 UK Exports by Country and by Market 54

Appendices (Not included with the report)

A List of Sources

B Global LCEGS data file

C UK and Regions LCEGS data file

D UK Sub Regions LCEGS data file

E UK LCEGS Import data file

F UK LCEGS Export data file

G LCEGS International Markets data files

1. Introduction

This report quantifies the Low Carbon Environmental Goods and Services (LCEGS) sector for 2009/ 10. It was prepared with the support of, and contributions from, BIS, DECC and Defra staff.

LCEGS is a rapidly changing sector and, as part of the research for this report, several additional reduced environmental impact activities were also investigated, under the headings of “Cleaner Manufacturing”, “Cleaner Processes and Materials” and “Adaptation and Resilience.” The results of this research, which explores new boundaries for the LCEGS sector, are still being assessed and have not been included in this report. This report, therefore, retains a definition and range of activities that is consistent with research conducted for, and reported by BERR/ BIS in 2007/ 08 and 2008/ 09 except for Alternative Fuels where the definition has changed slightly. Nuclear Power has been split from this sector and is now one of the Sub Sectors in its own right.

The focus of this report is UK LCEGS performance in 2009/ 10, but to achieve this comparisons are made with baseline figures from 2007/ 08 and 2008/ 09 and benchmark comparisons are made with other leading global economies. The analysis is quantitative rather than qualitative, emphasising what we believe “is” rather than what it means. The enrichment process of adding context and meaning to the data is quite rightly the prerogative of the industry and its specialist representatives.

The methodology for this study is both traditional and innovative. It is traditional in that it focuses on key measures of economic performance- sales, growth, companies, employment, importing and exporting- but innovative in how the evidence base has been assembled and assessed from a very wide variety of public, private, academic, institutional and industrial sources over a five year period.

The research data is global and detailed, with measurement of approximately 2800 different goods and services included. The data is also hierarchically structured which means that analysis can be conducted at global, national, regional and sub regional level and products and services can be disaggregated into five levels of detail. For reporting purposes much of this detail is summarised at the sub sector level but the data remains available to government teams for further analysis.

While the main purpose of the report is to create an analytical baseline for the LCEGS sector and its performance there are a number of other potential purposes that may be supported by the evidence base. Global data can be used to identify potential new markets, growth forecasts can be used to identifying emerging markets and current export trends can be used to increase international sales. To this end, the report has been structured to start with an assessment of global markets, followed by UK and regional performances, import and finally export markets.

2. Methodology

2.1 Sector Definition

The definition of the LCEGS sector is the result of four year's work with UK National and regional government and UK industry organisations. The definition was designed to fill the gap in current Standard Industry Classification (SIC) codes that has resulted in activities in this area of the economy being consistently over- looked and under- valued. It has also allowed the UK public sector to report, monitor, develop and invest in a baseline of worthwhile activities that was previously ignored, fragmented and highly disputed.

As the title for the sector suggests, this is a broad definition of activities that may appear under the overlapping headings of Enviro, Eco, Renewable, Sustainable, Clean Tech, Low Carbon or No Carbon (and any other we might have missed). It has drawn on definitions from the US, Europe and further afield. It is constantly evolving and updating as new activities are identified, reach the market or are assigned one of the above labels. In the strictest sense it is not a "sector" but a flexible construct or "umbrella" term for capturing disparate activities spread across many existing sectors like transport, construction, energy etc. but with a common purpose- to reduce environmental impact.

It is also a very inclusive definition in that, with the 2800 activity headings, we include both supply chain activities (componentry & assemblies) and value chain activities (R&D, Supply & Training).

The sector has been defined using 24 sub sectors (Level 2 markets). These are sub-divided into three broad categories- Environmental, Renewable Energy and Low Carbon- the addition of each broadly mapping the evolution of the current LCEGS sector from its Environmental roots:

Environmental	**Renewable Energy**	**Low Carbon**
• Air Pollution • Contaminated Land • Energy Management • Environmental Consultancy • Environmental Monitoring • Marine Pollution Control • Noise & Vibration Control • Recovery and Recycling • Waste Management • Water Supply and Waste Water Treatment	• Biomass • Geothermal • Hydro • Photovoltaic • Wave & Tidal • Wind • Renewable Consulting	• Additional Energy Sources • Alternative Fuel/ Vehicle • Alternative Fuels • Building Technologies • Carbon Capture & Storage • Carbon Finance • Nuclear Power- (promoted from a Level 3 to a Level 2 activity in 2009/ 10 figures)

In turn, these 24 Level 2 markets have been divided into 119 sub sub sectors (Level 3 markets). Most of the analysis in this report is conducted using Level 2 or Level 3 data. Level 3 markets have been sub divided further, creating a total of 791 discrete economic activities (Level 4 markets) for further and future analysis. These, in turn, have been sub divided into the total of approximately 2800 activities.

The definition is designed to provide a baseline for the sector from which future changes and developments can be measured. Given the evolving nature of LCEGS it is likely that new activities and revised definitions of the sector will appear over time.

2.2 Included Activities

The activities included under each of these headings vary according to the structure of the industry/ sub sector. The approach is inclusive (rather than a specialist) and captures as much of the LCEGS Sector Value Chain activity as possible. The activities that we have included are: - design/ development, manufacture, supply, distribution, installation, maintenance, operations, R&D, Consultancy, support services and retail.

As well as capturing as broad a cross- sector as possible of the LCEGS Value Chain, activities are captured for companies that are specialist to the LCEGS Sector and also companies that are non- specialist but operate within the LCEGS supply chain. The analysis, therefore, includes:

- Companies that solely provide LCEGS products and services (anywhere in the Value Chain)
- Companies who are 100% providers of components or inputs into sub assemblies or final LCEGS products and services delivered by others
- Companies who (amongst other activities) provide components or inputs into sub assemblies or final assemblies of LCEGS products and services.

The threshold for including a company in the analysis is if at least 20% of sales activity can be directly attributed to the LCEGS Sector (as defined within this report). In the case of larger companies this can often be extracted from financial reports, cross referenced to industry sources. For much smaller companies we may have to extrapolate the percentage of sales based on product range and turnover, tempered by more detailed case materials that we hold about the market performance of similar businesses. The exception to this 20% rule is for large companies where a small proportion of overall sales is a significant contribution to the UK LCEGS sector.

While this is not an exact science, it is as accurate a method as possible for calculating the size and distribution of supply chain activity across a sector. However, because the methodology is not based solely on historical SIC listings etc. it does mean that estimates of Sales Value, Company numbers and Employment may be higher than more traditional estimates.

The threshold for inclusion (20% of company sales) in this report means that the company numbers and employment figures published in the following sections of this report focus upon the significant value- creating “core” of the LCEGS sector. This core is where true economic value is measured and this focus avoids (as far as is possible) any double counting of sales value within the supply chain. This threshold helps to maintain an overall relationship between sales, companies and employment that can be compared year-on-year both internally and with other countries. It also

provides a standard and consistent measure that can be compared with other sectors.

This threshold is, therefore, useful as an analytical standard but does exclude a number of companies (and associated levels of employment) that are in the LCEGS supply chain but whose activities, opportunities and risks are linked to a range of different sectors. It is still important to be able to identify and interact with these companies and this is why the associated company database to this report includes a wider range and diversity of companies.

2.3 Levels of Analysis

The data model for the LCEGS Sector is built bottom-up. This means that economic activities are identified at the lowest possible level of analysis (at the equivalent of a six or seven digit SIC code) and then aggregated together so that they can be reported upon more conveniently. In this report we record LCEGS Sector activities at five hierarchical levels but analyse the data at Levels 1 (Sector), 2 (Sub Sector) and 3 (Sub Sub Sector) only.

Each Level of detail has its own analytical benefits and in this report Level 1 is used to select the Top 53 global countries and for sub national analysis, Level 2 for identifying market growth trends and Level 3 for analysing national and regional LCEGS Sector performance.

Levels 1 to 3 are really aggregated “labels” under which activities can be conveniently grouped and assessed.

Levels 4- 5 contain “product group” market intelligence and are the levels closest to LCEGS products and services as companies would understand them.

2.4 Key Measures

In our analysis we concentrate on seven key measures. These are:

- Sales £m
- Companies
- Employment
- Growth
- Imports
- Exports
- Market

Sales is our estimate (in £m) of economic activity by identified companies in a defined region or country. Our estimate of Sales is based upon where economic activity takes place i.e. the location of the business rather than the location of the income earner. In calculating Sales value we consider:

- Turnover by sub sector within postcode sets
- Capital asset adjustment by sub sector within postcode sets
- ONS GDP calculations
- Supply chain procurement value sub sector by sub sector by postcode sets
- Sub sector specific sales reporting where available

Further adjustment is made on a sub sector basis for both head office activities and virtual working organisations so that, *as far as is practical, we report upon where Sales is conducted rather than where it is reported*. This applies to both domestic and international sales.

Companies is a measure of the total number of companies in the region that match (or fit within) the activity headings for the LCEGS Sector. Because of the limitations in using traditional SIC codes to identify high technology and "new economy" businesses we have used our own unique analytical process to allocate companies to the LCEGS activity headings. The total number of companies in this report has been arrived at by a bottom-up analysis of company stock within the country/ region using such sources as: Companies House, European credit agencies, British Telecom, Institutional listings and UK credit agencies.

Having identified the total company stock in the UK, product and service outputs have been identified and verified by accessing further databases that include: Institutional data sets, Yellow Pages, kMatrix proprietary databases, Euromonitor, Dun and Bradstreet and Thompson.

Employment is a measure of the estimated employment numbers across all aspects of the supply chain. National, regional and other economic data sources have been used to estimate current employment levels for each LCEGS Sector activity. Where employment information is scarce, or where we are estimating employment for a proportion of a company's sales, we rely on our comprehensive case study materials to provide sensible industry- specific ratios and benchmarks.

Following national statistics, our employment figures are disaggregated into four streams- management, supervisory, Administrative and Other. Where we are commissioned for Skills analysis, these four streams are disaggregated into much more detailed occupational groupings.

Our employment figures for LCEGS define the labour intensity of some market activities over others and help to identify the economic activities that are generating the highest levels of employment (but not necessarily value or growth).

Market Growth is our forward looking indicator and has been measured for the short to medium term (five years) where we have a high level of confidence in the growth trend. This indicator enables us to identify the ongoing strength and potential of each economic activity relative to other sector activities within the region/ sub region and relative to growth rates across the UK and in other key country markets (See Calculating Market Values for more information on market forecasting).

Imports and Exports are calculated using both in- country and out- of- country data. The data sources accessed include those listed (separately) but also include additional data from the logistics and freight forwarding industry (amongst others). National import export data is accessed from either government agencies or other institutions where available. In addition, we track supply chains and networks where we are able to get data, again through many of the data sources already identified for the sales values figures etc, but also through logistics, consumer data, and supply chain management industries. Multi- sourcing import and export data in

essential because companies rarely provide accurate or adequate numbers (to protect their competitive position).

The focus in this report is, to a much greater extent than previously, focused on international trade patterns and markets. As a result much more attention is paid to trade flows and international markets and market share. This is achieved using the key measures illustrated by Figure 1.

Figure 1: Key International Trade Measures

Domestic Market is a measure of the overall size of demand for LCEGS sector products and services in a specific country and is calculated using three measures. The simple formula used in this report is Domestic Market = Domestic Sales - Exports + Imports. The “market” is used to estimate the overall potential and opportunity for international sales growth

2.5 Data Sources

We attempt to limit the risk and error behind the numbers that we publish (whether historical or forecast) by multi- sourcing and monitoring a wide range of reliable sources and then making the remaining range of uncertainty explicit. A full list of sources is provided for this report but within each data template we have calculated and published the number of sources used to compile each of the 2800 lines of market data. On average 85 sources (differing depending upon the market activity) are used for each line of data in the LCEGS study.

For each market we track multiple sources of historical and forecasting data. From these sources we look to select at least seven that are current and that we have routinely tracked and verified (and, therefore, have built confidence in) over a number of years. Sources can be from company, industry, academic, public or market research sources and national statistics. The sources we reject may be out of date, unreliable, drastically under or overstated or too similar to other data sources.

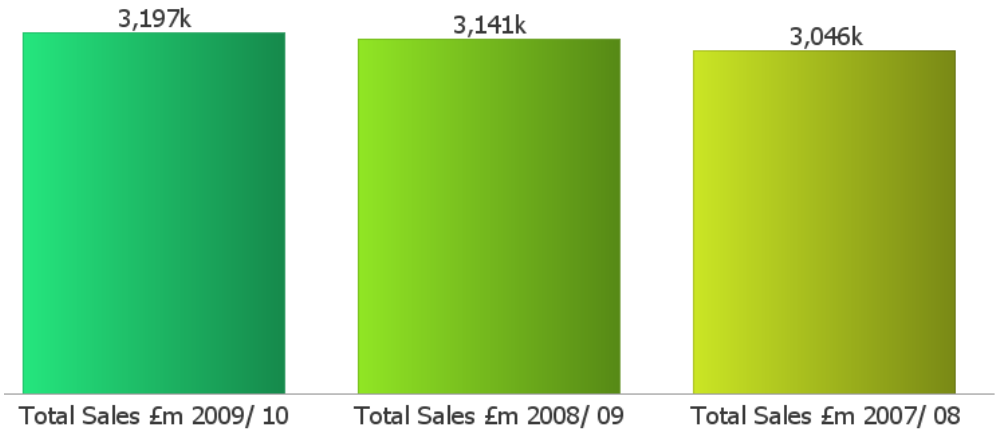
When we have identified a minimum of seven acceptable sources we then take the “average” of the seven figures as our selected figure. We then look at the range of individual responses in relation to the selected figure and if the range of results is within +/- 20% of our selected figure we are generally satisfied. In some cases (where more than seven reliable sources are available) we may look to narrow the range of results by excluding the more extreme results. Where the range of results is greater than +/- 20% we then look for further sources that may be used, until we arrive within the accepted range.

3. Global LCEGS Market

3.1 Global Sales

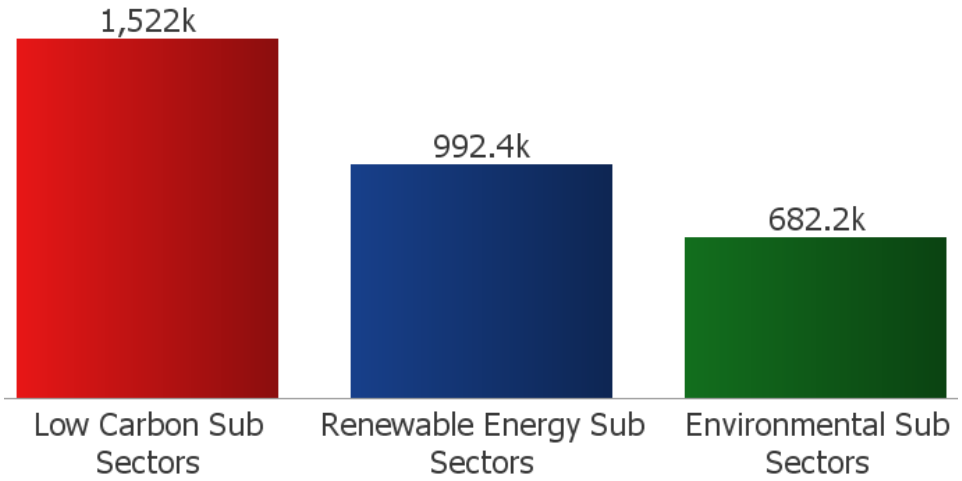
The size of the Global LCEGS Market has been calculated using a very wide range of sources (list provided separately to this report) and is measured by global sales across 226 countries.

Figure 2: Global LCEGS Sales by Year in £1,000m



The total for LCEGS Sales in 2009/ 10 is **£3.2 trillion.** This shows an annual increase from 2007/8 to 2008/ 9 of 3.1% and from 2008/ 9 to 2009/ 10 of 1.8% (see Figure 2).

Figure 3: Global LCEGS Sales for 2009/ 10 in £1,000m



In 2009/ 10 Low Carbon sales activities were estimated at £1.5 trillion (48% of the total), compared with £0.9 trillion for Renewable Energy (31%) and £0.7 trillion (21%) for Environmental (Figure 3). This ratio of value between the three activity groups in 2009/ 10 is the same as the previous two years.

Figure 4 shows how these sales are distributed across the 24 sub sectors of the LCEGS sector. The largest sub sectors are; Alternative Fuels (16%), Building Technologies (13%), Wind (12%), Alternative Fuel and Vehicles (11%), Geothermal (9%) and Water Supply & Waste Water Treatment (8%). These percentages are unchanged since 2007/ 08.

Figure 4: Global LCEGS Sales 2009/ 10 by Sub Sector in £m

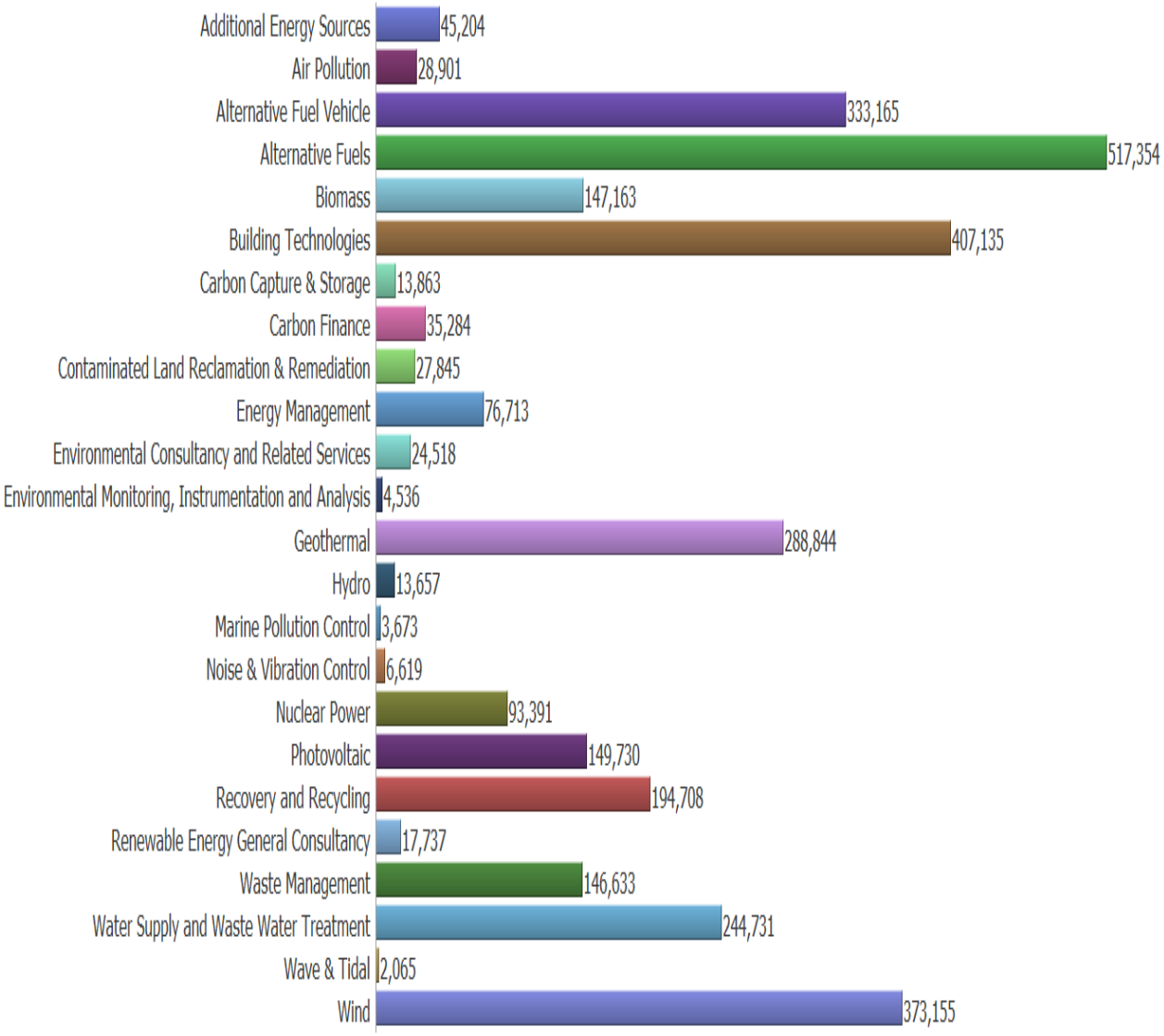
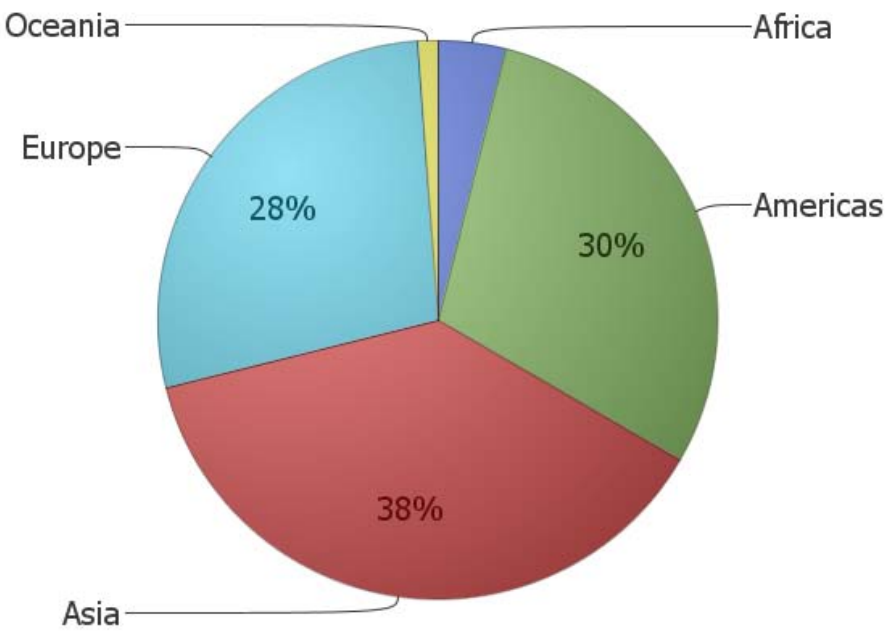


Figure 5 shows that Asia accounts for 38% of global sales, followed by the Americas (30%) and Europe (28%). This ratio of sales value between the global regions has not changed over the past three years.

Figure 5: LCEGS Sales by Global Region 2009/ 10



The breakdown of global sales is shown in more detail in Table 1, where we have ranked the Top 50 countries, showing columns for sale value (in £m), country sales as a % of the global total and country ranking.

In Table 1 we show that the US accounts for 20% of the global total, followed by China (13%), Japan (6%), India (6%) and Germany (4%). The UK is ranked sixth with a market share of 3.7%.

Overall, the Top 10 countries account for 65% of global sales and the Top 50 countries (listed below) account for 94% of sales.

Table 1: Global Value of LCEGS in £m by Top 50 Countries for 2009/ 10[1]

Country	Total £m	Rank	% of Total	Country	Total £m	Rank	% of Total
US	629,303	1	19.7	Pakistan	19,356	26	0.6
China	426,610	2	13.3	Saudi Arabia	18,474	27	0.6
India	199,115	3	6.2	Egypt	17,807	28	0.6
Japan	197,816	4	6.2	Ukraine	17,712	29	0.6
Germany	135,677	5	4.2	Belgium	17,559	30	0.5
United Kingdom	116,780	6	3.7	Colombia	17,542	31	0.5
France	98,228	7	3.1	Bangladesh	16,285	32	0.5
Brazil	92,513	8	2.9	Vietnam	16,186	33	0.5
Spain	87,345	9	2.7	Sweden	14,071	34	0.4
Italy	85,262	10	2.7	Austria	13,731	35	0.4
Russian Federation	81,884	11	2.6	Hong Kong	13,683	36	0.4
Mexico	61,833	12	1.9	Switzerland	13,505	37	0.4
Canada	57,535	13	1.8	Malaysia	12,815	38	0.4
South Korea	55,120	14	1.7	Greece	12,490	39	0.4
Indonesia	48,361	15	1.5	Algeria	12,102	40	0.4
Taiwan	35,060	16	1.1	Romania	10,666	41	0.3
Australia	32,243	17	1.0	Chile	10,206	42	0.3
Iran	29,889	18	0.9	Czechia	10,082	43	0.3
Turkey	29,800	19	0.9	Portugal	9,484	44	0.3
Thailand	29,711	20	0.9	Norway	9,199	45	0.3
South Africa	28,096	21	0.9	Peru	9,112	46	0.3
Argentina	27,926	22	0.9	Hungary	9,017	47	0.3
Netherlands	26,929	23	0.8	Denmark	8,853	48	0.3
Poland	26,378	24	0.8	Venezuela	8,848	49	0.3
Philippines	24,262	25	0.8	Finland	8,643	50	0.3

The UK is ranked sixth for the overall LCEGS sector and sixth in 19 of the 24 sub sectors. In each of the 19 cases where the UK is sixth it is ranked behind US, China, Japan, India and Germany.

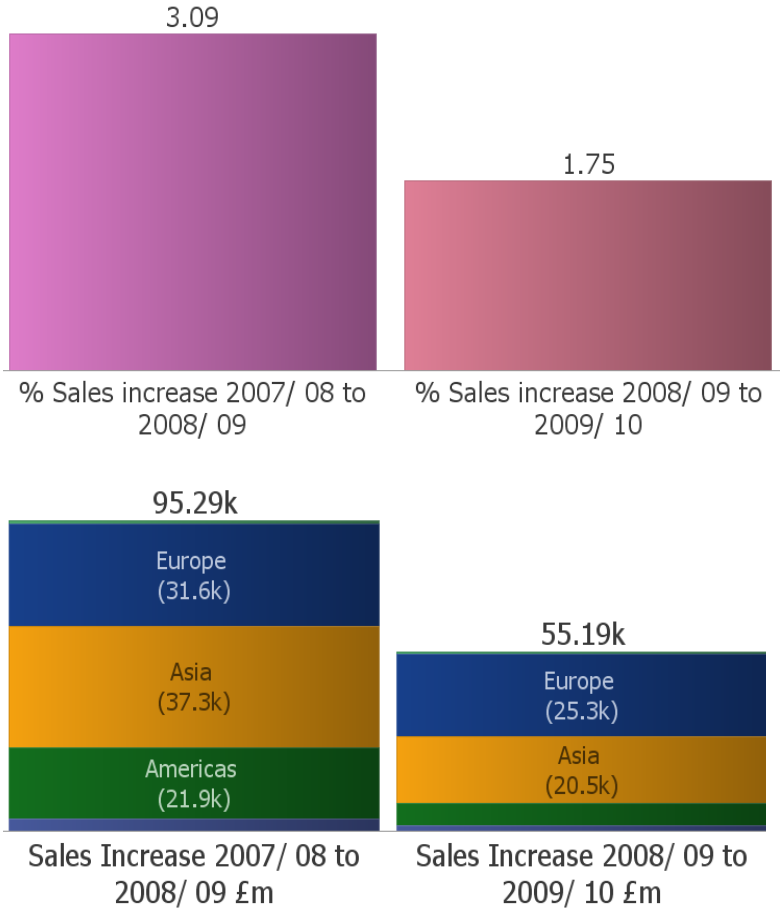
The five sub sectors where the UK is not sixth are: Carbon Finance (2nd), Alternative Energy Sources (7th); Geothermal (7th), Environmental Consulting (7th) and Photovoltaic (7th).

[1] Please note: This table now includes corrected values for the percentage of global share by country. Date of correction: 19/08/2011

3.2 Global Growth Rates

Global growth from 2007/ 08 to 2008/ 09 was 3.1% and a below forecast 1.8% for 2008/ 09 to 2009/ 10 (Figure 6). As the second graphic in Figure 9 shows this slow-down in growth occurred primarily in the Americas (almost 0% growth in the US) and Asia (minimal growth in China and Japan) and much less so in Europe as a whole.

Figure 6: Historical Growth 2007/ 08 to 2009/ 10 by % and then by £100m



This pattern of a decline in growth in 2008/ 09 to 2009/ 10 is shown more clearly in Table 2 where the sales figures for the last three years are compared for the Top 25 countries.

Columns 5 and 6 of Table 2 compare year- on- year growth and show that some countries- Germany, France, Mexico, Canada, and South Korea - experienced very little slow- down in growth when compared with the almost flat LCEGS performance of the Top 4 economies.

Table 2: LCEGS in £m by Top 25 Global Countries for 2007/ 08 to 2009/ 10

Country	Sales £m 2009/ 10	Sales £m 2008/ 09	Sales £m 2007/ 08	Growth % 2008/ 09 to 2009/ 10	Growth % 2007/ 08 to 2008/ 09
US	629,303	632,779	627,551	-0.5	0.8
China	426,610	418,926	411,552	1.8	1.8
India	199,115	194,149	189,383	2.6	2.5
Japan	197,816	197,338	191,076	0.2	3.3
Germany	135,677	131,673	127,826	3.0	3.0
UK	116,780	112,003	107,343	4.3	4.3
France	98,228	95,719	93,274	2.6	2.6
Brazil	92,513	83,762	79,804	10.4	5.0
Spain	87,345	85,277	77,381	2.4	10.2
Italy	85,262	83,496	81,749	2.1	2.1
Russian Federation	81,884	79,521	77,282	3.0	2.9
Mexico	61,833	58,401	55,206	5.9	5.8
Canada	57,535	56,003	54,521	2.7	2.7
South Korea	55,120	52,417	49,909	5.2	5.0
Indonesia	48,360	46,007	43,814	5.1	5.0
Taiwan	35,060	36,820	35,052	-4.8	5.0
Australia	32,243	31,583	30,939	2.1	2.1
Iran	29,889	28,422	27,047	5.2	5.1
Turkey	29,800	28,178	26,676	5.8	5.6
Thailand	29,711	28,277	26,939	5.1	5.0
South Africa	28,096	27,575	27,077	1.9	1.8
Argentina	27,926	29,325	27,924	-4.8	5.0
Netherlands	26,929	26,439	25,967	1.9	1.8
Poland	26,378	25,087	23,881	5.1	5.1
Philippines	24,262	20,929	21,895	15.9	-4.4

In Figure 7 the top European countries (by LCEGS growth) are shown for 2009/ 10. The UK is ranked 7th with annual growth of 4.3%, but with higher growth rates showing for a number of the smaller European economies.

Figure 7: Top 6 European Countries Growth % 2009/ 10

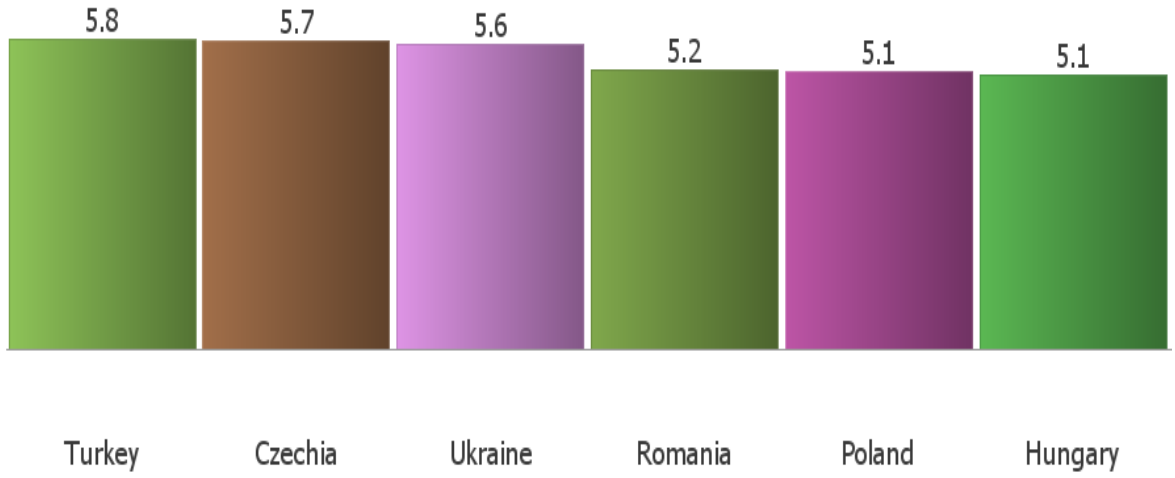
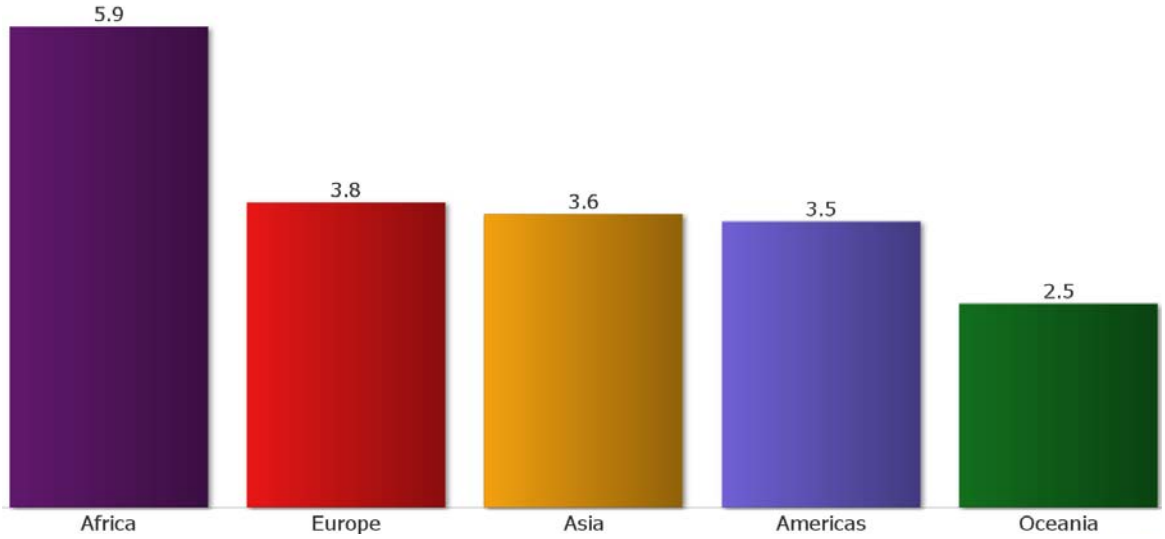


Figure 8: Forecast Growth 2010/ 11

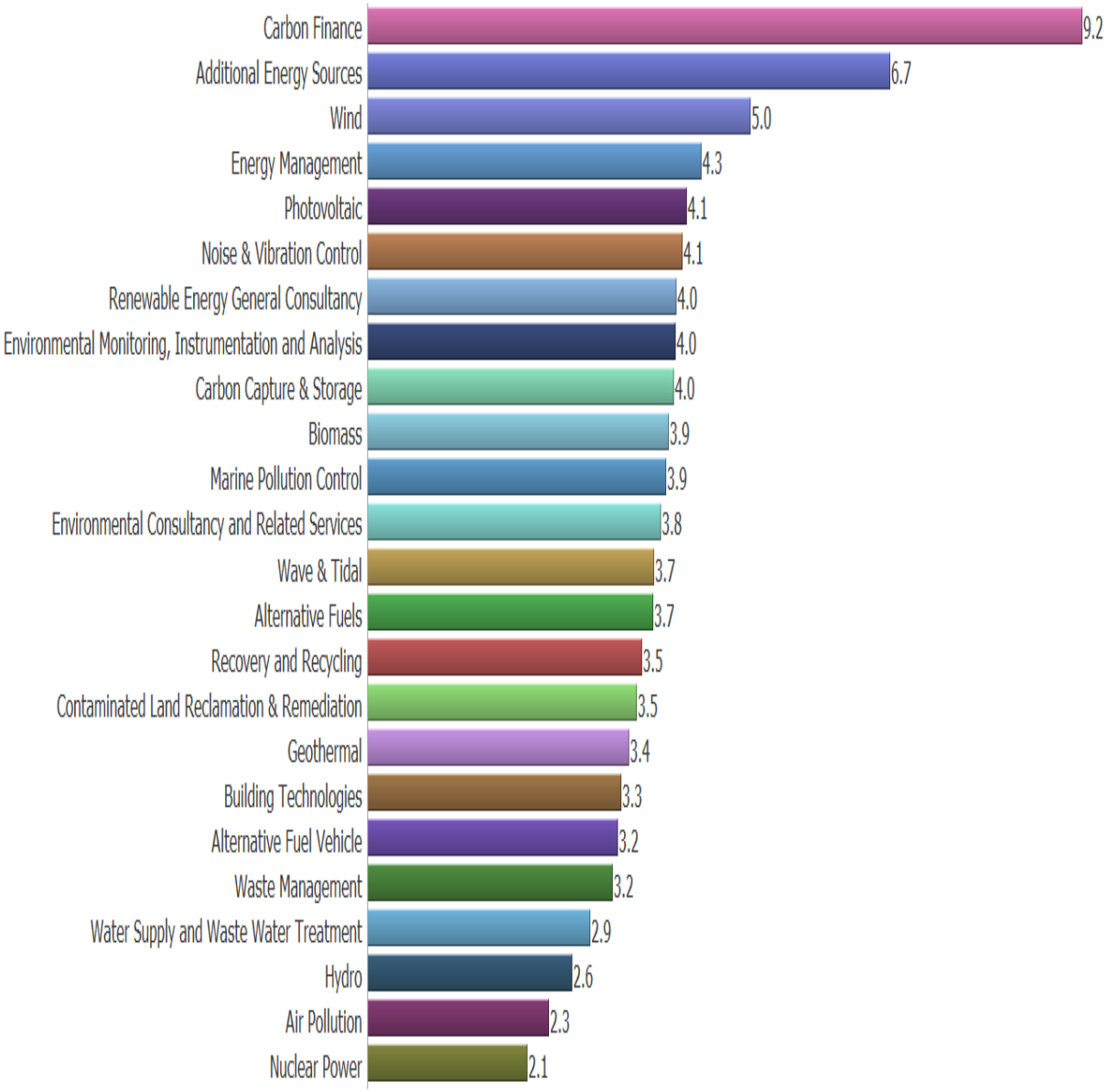


Forecasts suggest that this slow- down is a “blip” and that the forecast growth rate for LCEGS in 2010/ 11 will be 3.7% (Figure 8).

This forecast sees high levels of growth in Africa (compared to a low sales base) and a resumption of growth in Asia, the Americas and, to a lesser degree, Europe.

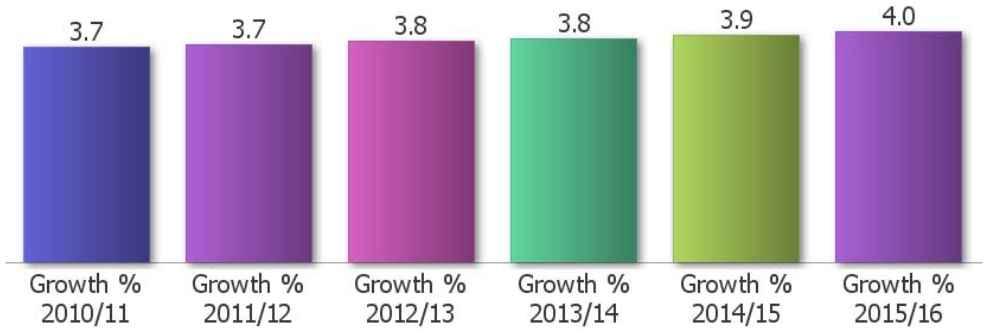
Figure 9 shows that at the sub sector level the highest global growth rates for 2010/ 11 are forecast to be Carbon Finance (9.3%), Additional Energy Sources (6.8%) and Wind (5.0%). The lowest growth rates will be for Nuclear Power (2.1), Air Pollution (2.3%) and Hydro Power (2.6%).

Figure 9: Global Growth Rates 2010/ 11 (%) by Sub Sector

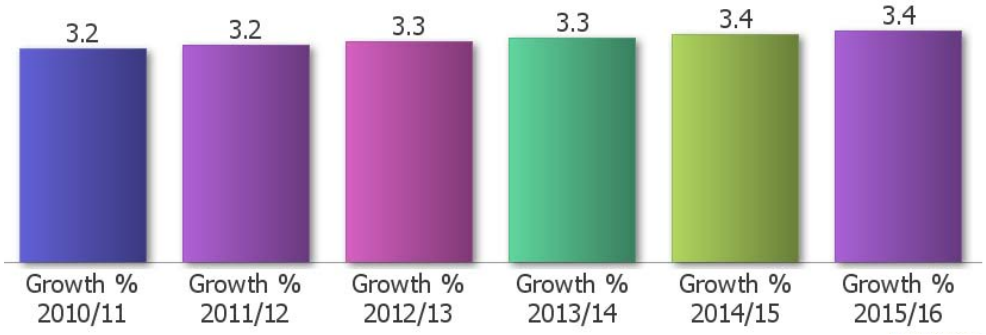


In Figure 10 we show the forecast global growth rates for LCEGS from 2010/ 11 to 2015/ 16. Growth for LCEGS as a whole increases from a forecast 3.7% to 4.0% but, as Figure 10 shows, growth rates are variable between Environmental (lower growth) and Renewable Energy (higher growth) activities.

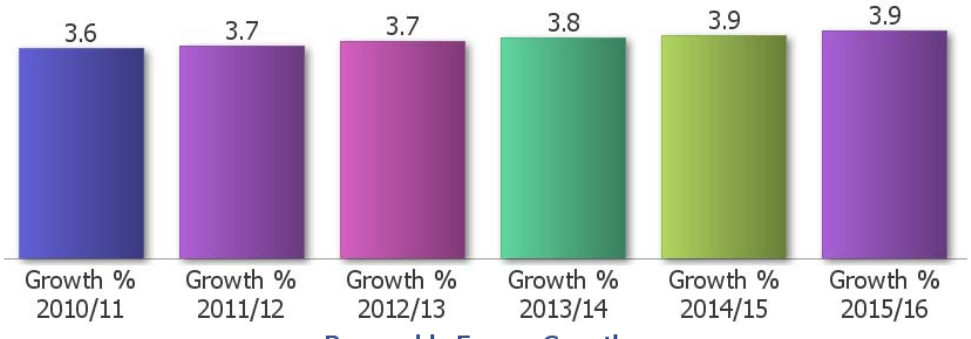
Figure 10: Global Growth Rates 2010/ 11 to 2015/ 16 (%)



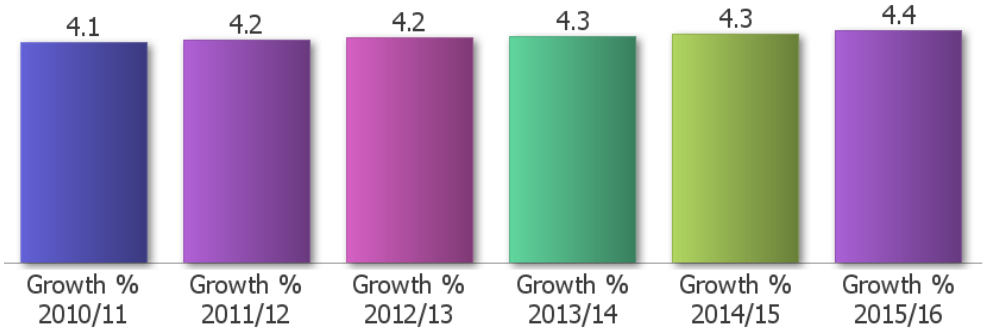
Environmental Growth



Low Carbon Growth



Renewable Energy Growth



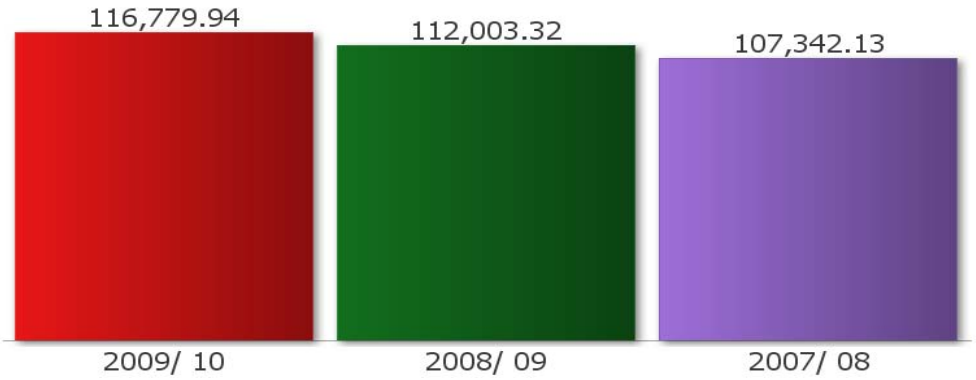
4. UK LCEGS

4.1 Introduction

In Section 3 we briefly alluded to the position of the UK LCEGS Sector in relation to global markets. In this section we now look at the UK in more detail against each of our four key measures- sales, companies, employment and growth.

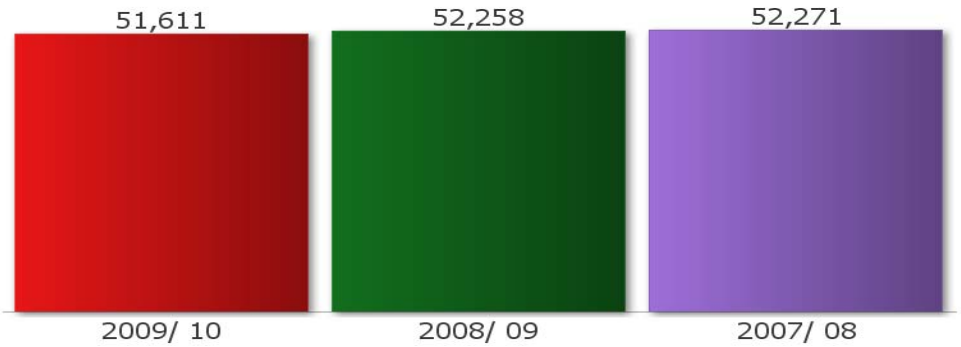
4.2 UK LCEGS Compared

Figure 11: UK LCEGS Sales (£m)



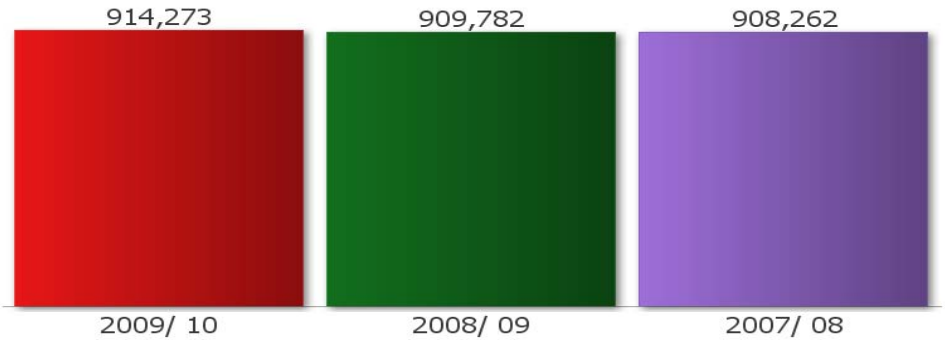
UK LCEGS Sales in 2009/ 10 is £116.8bn, showing an increase of £4.8bn or 4.26% from the previous year (Figure 11). This compares with an increase of £4.7bn or 4.34% from 2007/ 08 to 2008/ 09.

Figure 12: UK LCEGS Companies



The number of UK LCEGS Companies in 2009/ 10 is 51,611, showing an decrease of 647 or 1.2% from the previous year (Figure 12). This compares with an decrease of 13 from 2007/ 08 to 2008/ 09.

Figure 13: UK LCEGS Employment



The volume of UK LCEGS Employment in 2009/ 10 is 914,273, showing an increase of 4491 or 0.5% from the previous year (Figure 13).This compares with an increase of 1520 or 0.2% from 2007/ 08 to 2008/ 09.

4.3 UK LCEGS Sales

Table 3 shows sales by sub sector for the UK for the last three years.

Table 3: UK LCEGS Sales in £m for 2007/ 08 to 2009/ 10

Level 2	Sales £m 2009/ 10	Sales £m 2008/ 09	Sales £m 2007/ 08	Growth % 2008/ 09 to 2009/ 10	Growth % 2007/ 08 to 2008/ 09
Additional Energy Sources	1,297	1,251	1,208	3.7	3.6
Air Pollution	997	978	960	1.9	1.9
Alternative Fuel Vehicle	12,915	13,113	12,646	-1.5	3.7
Alternative Fuels	17,176	19,405	18,570	-11.5	4.5
Biomass	5,454	5,216	4,991	4.6	4.5
Building Technologies	14,129	13,526	12,954	4.5	4.4
Carbon Capture & Storage	497	483	468	3.0	3.2
Carbon Finance	5,925	5,640	5,228	5.0	7.9
Contaminated Land Reclamation & Remediation	963	938	914	2.6	2.6
Energy Management	2,719	2,635	2,553	3.2	3.2
Environmental Consultancy and Related Services	794	770	747	3.1	3.1
Environmental Monitoring, Instrumentation and Analysis	160	155	150	3.1	3.2
Geothermal	10,186	9,722	9,285	4.8	4.7
Hydro	529	516	503	2.6	2.5
Marine Pollution Control	129	124	120	3.6	3.5
Noise & Vibration Control	220	212	205	3.7	3.8
Nuclear Power	3,799				
Photovoltaic	4,997	4,721	4,462	5.8	5.8
Recovery and Recycling	6,936	6,724	6,519	3.2	3.1
Renewable Energy General Consultancy	506	492	480	2.7	2.6
Waste Management	5,071	4,945	4,824	2.5	2.5
Water Supply and Waste Water Treatment	8,230	8,101	7,974	1.6	1.6
Wave & Tidal	82	78	74	5.0	5.1
Wind	13,070	12,258	11,508	6.6	6.5
Total	**116,780**	**112,003**	**107,342**	**4.3**	**4.3**

As with the global pattern for sales (Figure 6), the largest sub sectors are Alternative Fuels (15%), Building Technologies (12%), Wind (11%), Alternative Fuel and Vehicles (11%) and Geothermal (9%).

In columns 5 and 6 of Table 3 the year-on-year increases are shown. There is little variation except for Nuclear Power, which has been split out from Alternatives Fuels for the 2009/ 10 report.

At Level 3 (the next level of disaggregation) the 2009/ 10 UK LCEGS Sector includes 29 activities worth over £1bn per annum. They account for 23% of Level 3 activities and 83% of UK Sales. They are listed in ranked order in Table 4, by value and by percentage of the UK total.

Table 4: UK LCEGS Sales Top Level 3 (£m) for 2009/ 10

Level 2	Level 3	Total £m	% of Total
Alternative Fuels	Other Bio Fuels	12,257	10.5
Alternative Fuel Vehicle	Alternative Fuels (main Stream) for Vehicles Only	11,258	9.6
Water Supply and Waste Water Treatment	Water Treatment and Distribution	5,862	5.0
Wind	Wind Farm Systems	5,250	4.5
Building Technologies	Windows	5,200	4.5
Carbon Finance	Carbon Credits Trading	4,646	4.0
Building Technologies	Insulation and Heat Retention Materials	4,259	3.6
Geothermal	Whole Systems Manufacture	4,129	3.5
Wind	Large Wind Turbine	4,118	3.5
Wind	Small Wind Turbine	3,702	3.2
Building Technologies	Doors	3,209	2.7
Recovery and Recycling	Waste Collection	2,687	2.3
Biomass	Biomass Energy Systems	2,254	1.9
Photovoltaic	Systems & Equipment	2,222	1.9
Geothermal	Suppliers of Systems	2,196	1.9
Geothermal	Manufacture and Supply of Specialist Equipment	2,151	1.8
Water Supply and Waste Water Treatment	Engineering	2,128	1.8
Waste Management	Construction & Operation of Waste Treatment Facilities	2,098	1.8
Alternative Fuels	Other Fuels	2,071	1.8
Alternative Fuels	Main Stream Bio Fuels	1,864	1.6
Biomass	Boilers and related Systems	1,750	1.5
Waste Management	Equipment For Waste Treatment	1,697	1.5
Alternative Fuel Vehicle	Other Fuels and Vehicles	1,657	1.4
Geothermal	Consulting & Related Services	1,581	1.4
Nuclear Power	Nuclear Power Plant Operations	1,514	1.3
Building Technologies	Monitoring and Control Systems	1,461	1.3
Photovoltaic	Photovoltaic Cells	1,304	1.1
Photovoltaic	Other Related Equipment and Chemicals	1,170	1.0
Recovery and Recycling	Glass Stock Processing	1,043	0.9

4.4 UK LCEGS Companies

Table 5 shows companies by sub sector for the UK for the last three years.

Table 5: UK LCEGS Companies in £m for 2007/ 08 to 2009/ 10

Level 2 Headings	Companies 2009/ 10	Companies 2008/ 09	Companies 2007/08	Increase % 2008/ 09 to 2009/ 10	Increase % 2007/ 08 to 2008/ 09
Additional Energy Sources	582	577	576	0.9	0.2
Air Pollution	496	496	496	0.0	0.0
Alternative Fuel Vehicle	6,078	6,374	6,361	-4.6	0.2
Alternative Fuels	7,775	9,220	9,332	-15.7	-1.2
Biomass	2,336	2,384	2,344	-2.0	1.7
Building Technologies	6,323	6,229	6,256	1.5	-0.4
Carbon Capture & Storage	232	231	234	0.4	-1.3
Carbon Finance	1,946	2,648	2,558	-26.5	3.5
Contaminated Land Reclamation & Remediation	442	445	444	-0.7	0.2
Energy Management	1,221	1,221	1,220	0.0	0.1
Environmental Consultancy and Related Services	375	375	375	0.0	0.0
Environmental Monitoring, Instrumentation and Analysis	72	72	72	0.0	0.0
Geothermal	4,465	4,478	4,505	-0.3	-0.6
Hydro	261	259	261	0.8	-0.8
Marine Pollution Control	56	56	56	0.0	0.0
Noise & Vibration Control	104	104	104	0.0	0.0
Nuclear Power	1,828				
Photovoltaic	2,085	2,135	2,121	-2.3	0.7
Recovery and Recycling	3,153	3,136	3,123	0.5	0.4
Renewable Energy General Consultancy	230	226	226	1.8	0.0
Waste Management	2,290	2,281	2,280	0.4	0.0
Water Supply and Waste Water Treatment	3,755	3,771	3,781	-0.4	-0.3
Wave & Tidal	33	33	33	0.0	0.0
Wind	5,473	5,507	5,513	-0.6	-0.1
Total	**51611**	**52258**	**52271**	**-1.2**	**0.0**

As for UK sales, the largest company counts by sub sector are Alternative Fuels, Wind, Building Technologies, Alternative Fuel & Vehicles and Geothermal. Together they account for 58% of the total.

In columns 5 and 6 of Table 3 the year-on-year increases/ decreases are shown. There is once again variation where Nuclear Power has been split out from Alternatives Fuels, but also significant variation for Carbon Finance, showing a 26% reduction in the number of companies involved in this sub sector. This may be due to the general shake-up of the Financial Sector and, more specifically, the slow- down in growth for Carbon Finance over the past 12 months.

At Level 3 the 2009/ 10 UK LCEGS Sector includes 28 activities with more than 500 companies. They are listed in ranked order in Table 6, by value and by percentage of the UK total.

Table 6: UK LCEGS Companies Top Level 3 for 2009/ 10

Level 2	Level 3	Companies	% of Total
Alternative Fuels	Other Bio Fuels	5,649	10.9
Alternative Fuel Vehicle	Alternative Fuels (main Stream) for Vehicles Only	5,340	10.3
Water Supply and Waste Water Treatment	Water Treatment and Distribution	2,659	5.2
Building Technologies	Windows	2,356	4.6
Wind	Wind Farm Systems	2,187	4.2
Geothermal	Whole Systems Manufacture	1,937	3.8
Building Technologies	Insulation and Heat Retention Materials	1,921	3.7
Wind	Large Wind Turbine	1,673	3.2
Wind	Small Wind Turbine	1,613	3.1
Carbon Finance	Carbon Credits Trading	1,460	2.8
Building Technologies	Doors	1,447	2.8
Recovery and Recycling	Waste Collection	1,199	2.3
Water Supply and Waste Water Treatment	Engineering	991	1.9
Biomass	Biomass Energy Systems	989	1.9
Waste Management	Construction & Operation of Waste Treatment Facilities	940	1.8
Geothermal	Manufacture and Supply of Specialist Equipment	936	1.8
Alternative Fuels	Other Fuels	907	1.8
Photovoltaic	Systems & Equipment	903	1.7
Geothermal	Suppliers of Systems	871	1.7
Alternative Fuels	Main Stream Bio Fuels	793	1.5
Waste Management	Equipment For Waste Treatment	777	1.5
Nuclear Power	Nuclear Power Plant Operations	758	1.5
Biomass	Boilers and related Systems	742	1.4
Alternative Fuel Vehicle	Other Fuels and Vehicles	738	1.4
Geothermal	Consulting & Related Services	679	1.3
Building Technologies	Monitoring and Control Systems	599	1.2
Photovoltaic	Photovoltaic Cells	526	1.0
Photovoltaic	Other Related Equipment and Chemicals	517	1.0

4.5 UK LCEGS Employment

Table 7 shows employment by sub sector for the UK for the last three years.

Table 7: UK LCEGS Employment for 2007/ 08 to 2009/ 10

Level 2 Headings	Employment 2009/ 10	Employment 2008/ 09	Employment 2007/08	Increase % 2008/ 09 to 2009/ 10	Increase % 2007/ 08 to 2008/ 09
Additional Energy Sources	11,331	10,491	10,629	8.0	-1.3
Air Pollution	9,186	9,157	9,160	0.3	0.0
Alternative Fuel Vehicle	101,072	106,173	106,832	-4.8	-0.6
Alternative Fuels	140,098	167,757	167,096	-16.5	0.4
Biomass	47,485	46,555	47,525	2.0	-2.0
Building Technologies	109,187	110,507	110,458	-1.2	0.0
Carbon Capture & Storage	4,695	4,691	4,702	0.1	-0.2
Carbon Finance	24,146	23,580	22,669	2.4	4.0
Contaminated Land Reclamation & Remediation	8,233	8,211	8,202	0.3	0.1
Energy Management	22,648	22,410	22,554	1.1	-0.6
Environmental Consultancy and Related Services	7,100	7,052	7,016	0.7	0.5
Environmental Monitoring, Instrumentation and Analysis	1,449	1,449	1,458	0.0	-0.6
Geothermal	79,012	78,857	78,650	0.2	0.3
Hydro	4,955	5,017	5,006	-1.2	0.2
Marine Pollution Control	1,025	1,017	1,020	0.8	-0.3
Noise & Vibration Control	1,933	1,951	1,950	-0.9	0.1
Nuclear Power	35,914				
Photovoltaic	39,152	39,177	38,770	-0.1	1.0
Recovery and Recycling	54,629	54,440	54,598	0.3	-0.3
Renewable Energy General Consultancy	4,865	4,519	4,588	7.7	-1.5
Waste Management	43,571	43,834	43,533	-0.6	0.7
Water Supply and Waste Water Treatment	70,841	70,802	70,520	0.1	0.4
Wave & Tidal	552	622	621	-11.3	0.2
Wind	91,194	91,514	90,705	-0.3	0.9
Total	**914273**	**909783**	**908262**	**0.5**	**0.2**

As for UK sales, the largest employment counts by sub sector are Alternative Fuels, Wind, Building Technologies, Alternative Fuel & Vehicles and Geothermal. Together they account for 57% of the employment total.

The employment swings between 2007/ 08 and 2008/ 09 are (positive) Additional Energy Sources (8%) and Renewable Energy Consulting (7.7%) and (negative) Wave & Tidal (-11%).

The small reduction in growth for Carbon Finance employment does not reflect the large reduction in companies recorded above. This suggests that most of the

reduction must be due to small companies withdrawing from Carbon Finance (and focusing on other activities) rather than company closures.

At Level 3 the 2009/ 10 UK LCEGS Sector includes 28 activities with more than 10,000 employees. They account for 22% of activities and 81% of sector employment They are listed in ranked order in Table 8, by value and by percentage of the UK total.

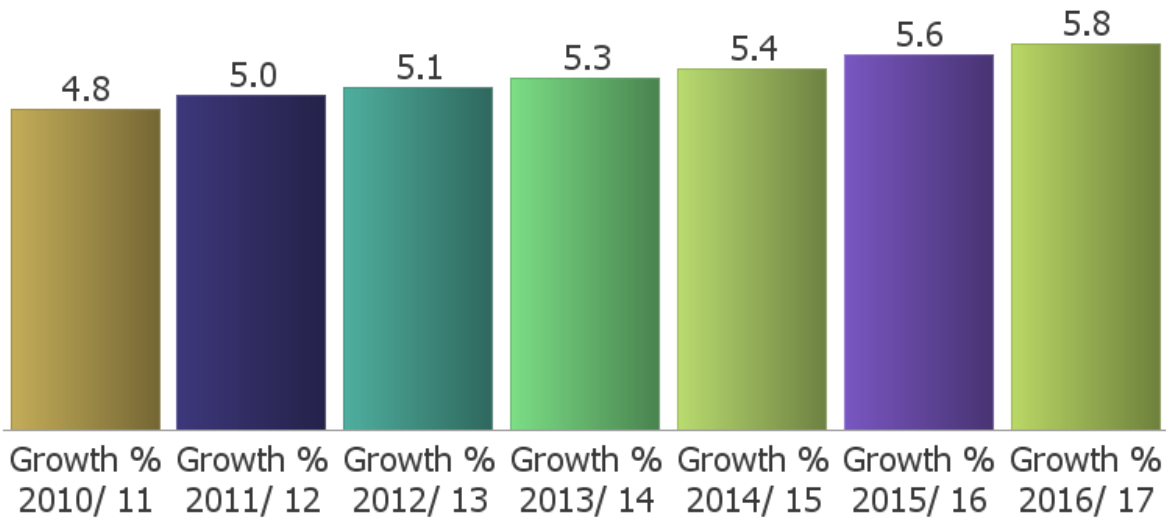
Table 8: UK LCEGS Employment Top Level 3 for 2009/ 10

Level 2	Level 3	Employment	% of Total
Alternative Fuels	Other Bio Fuels	99,038	10.8
Alternative Fuel Vehicle	Alternative Fuels (main Stream) for Vehicles Only	87,948	9.6
Water Supply and Waste Water Treatment	Water Treatment and Distribution	49,146	5.4
Building Technologies	Windows	40,453	4.4
Wind	Wind Farm Systems	37,024	4.0
Building Technologies	Insulation and Heat Retention Materials	33,678	3.7
Geothermal	Whole Systems Manufacture	31,614	3.5
Wind	Large Wind Turbine	30,132	3.3
Building Technologies	Doors	24,395	2.7
Wind	Small Wind Turbine	24,038	2.6
Recovery and Recycling	Waste Collection	22,288	2.4
Biomass	Biomass Energy Systems	21,378	2.3
Water Supply and Waste Water Treatment	Engineering	19,642	2.1
Geothermal	Suppliers of Systems	17,965	2.0
Waste Management	Equipment For Waste Treatment	17,332	1.9
Alternative Fuels	Main Stream Bio Fuels	16,727	1.8
Photovoltaic	Systems & Equipment	16,661	1.8
Alternative Fuels	Other Fuels	16,454	1.8
Geothermal	Manufacture and Supply of Specialist Equipment	16,416	1.8
Waste Management	Construction & Operation of Waste Treatment Facilities	16,321	1.8
Carbon Finance	Carbon Credits Trading	16,266	1.8
Biomass	Boilers and related Systems	13,653	1.5
Alternative Fuel Vehicle	Other Fuels and Vehicles	13,124	1.4
Nuclear Power	Nuclear Power Plant Operations	12,440	1.4
Geothermal	Consulting & Related Services	12,241	1.3
Building Technologies	Monitoring and Control Systems	10,661	1.2
Photovoltaic	Photovoltaic Cells	10,566	1.2
Nuclear Power	Nuclear Safety Engineering Services	10,054	1.1

4.6 UK LCEGS Forecast Growth

LCEGS growth in 2009/ 10 was 4.3%. Forecast growth rates for the UK are shown in Figure 14 and were weighted using sales figures.

Figure 14: UK LCEGS Growth 2009/ 10



The sector shows a steady increase in growth from 4.8% in 2010/ 11 to almost 6% by 2016/17.

In Table 9 forecast growth is shown by sub sector.

Table 9: UK LCEGS Forecast Growth by Sub Sector

Level 2	Growth % 2010/ 11	Growth % 2011/ 12	Growth % 2012/ 13	Growth % 2013/ 14	Growth % 2014/ 15	Growth % 2015/ 16	Growth % 2016/ 17	Growth % 2017/ 18	Growth % 2018/ 19	Growth % 2019/ 20
Air Pollution	2.1	2.1	2.2	2.2	2.3	2.4	2.5	2.6	2.6	2.7
Contaminated Land Reclamation & Remediation	2.8	2.9	3.0	3.1	3.2	3.2	3.4	3.5	3.5	3.6
Environmental Consultancy and Related Services	3.3	3.5	3.6	3.5	3.6	3.8	4.0	4.1	4.2	4.2
Environmental Monitoring, Instrumentation and Analysis	3.3	3.5	3.6	3.8	3.8	4.0	4.0	4.2	4.3	4.4
Marine Pollution Control	3.8	3.9	4.0	4.1	4.2	4.5	4.6	4.6	4.8	4.9
Noise & Vibration Control	3.9	4.0	4.2	4.4	4.5	4.6	4.8	4.8	5.1	5.1
Recovery and Recycling	3.4	3.6	3.8	4.0	4.2	4.3	4.8	4.9	5.1	5.4
Waste Management	2.8	2.8	3.0	3.0	3.2	3.3	3.5	3.5	3.7	3.8
Water Supply and Waste Water Treatment	1.7	1.8	1.9	2.0	2.0	2.1	2.2	2.3	2.4	2.4
Additional Energy Sources	3.8	4.0	4.1	4.1	4.4	4.5	4.6	4.8	4.8	5.1
Alternative Fuel Vehicle	3.9	3.9	4.1	4.2	4.3	4.4	4.6	4.8	5.0	5.1
Alternative Fuels	5.4	5.3	5.9	6.0	6.3	6.1	6.1	6.5	6.8	7.2
Nuclear Power	2.1	2.3	2.6	2.9	3.1	3.3	3.8	4.1	4.5	4.9
Building Technologies	4.7	4.8	4.9	5.1	5.4	5.5	5.7	5.9	5.9	6.3
Carbon Capture & Storage	3.4	3.6	3.6	3.7	3.9	3.9	4.0	4.1	4.4	4.5
Carbon Finance	9.5	12.1	10.3	10.4	10.0	12.1	11.5	11.8	14.2	8.1
Energy Management	3.4	3.5	3.6	3.8	3.9	4.0	4.1	4.2	4.4	4.4
Biomass	5.0	5.1	5.1	5.3	5.6	5.8	5.8	6.0	6.3	6.4
Geothermal	5.2	5.4	5.5	5.6	5.8	5.9	6.3	6.2	6.6	6.7
Hydro	2.8	2.9	2.9	3.1	3.3	3.4	3.5	3.6	3.6	3.9
Photovoltaic	6.2	6.3	6.7	6.8	6.9	7.4	7.6	7.5	7.9	8.3
Renewable Energy General Consultancy	2.7	3.0	3.0	3.1	3.0	3.3	3.2	3.5	3.4	3.5
Wave & Tidal	5.5	5.7	5.9	6.1	6.2	6.6	6.7	6.8	7.0	7.4
Wind	7.1	7.4	7.4	7.7	7.8	8.0	8.5	8.7	9.0	9.3

Forecast growth rates vary significantly between high growth (Wind and Carbon Finance) and low growth (Water/ Waste Water Treatment, Air Pollution and Waste Management).

4.7 LCEGS Activities and the Supply Chain

All LCEGS activities have been assigned a simple code that reflects the type of activity undertaken. This is important when trying to understand the comparative value of activities across the LCEGS supply chains. Figure 15 shows the distribution of value across the 13 activity headings. Manufacturing accounts for 21% or £24.5bn of the total and R&D for 6% or £7bn.

Figure 15: UK LCEGS 2009/ 10 (£m) by Activity Code

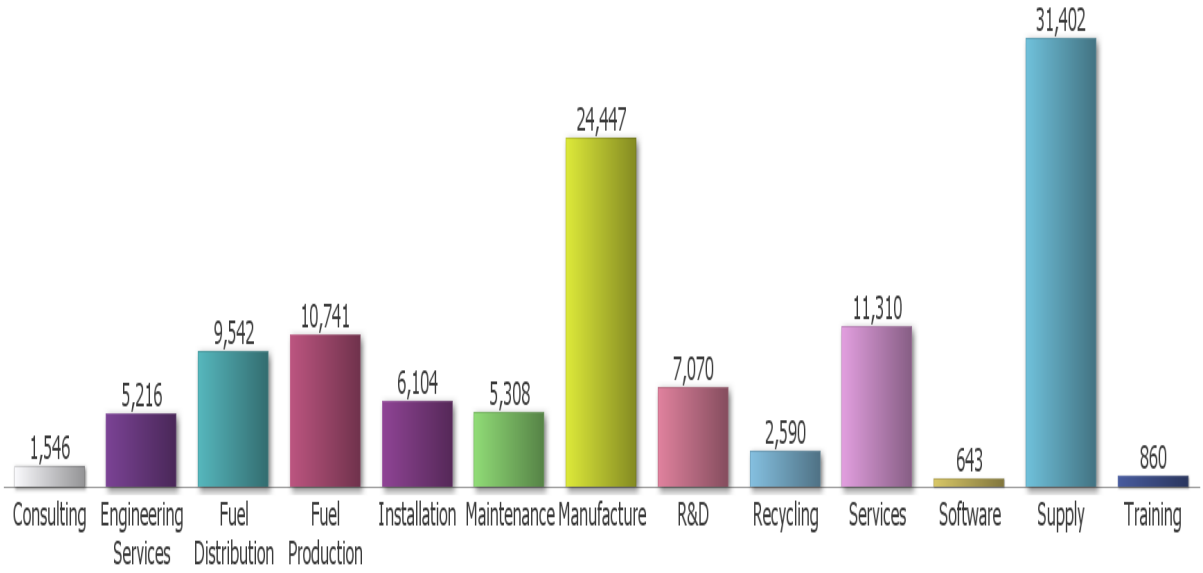


Figure 16: UK LCEGS 2009/ 10 Employment by Activity Code

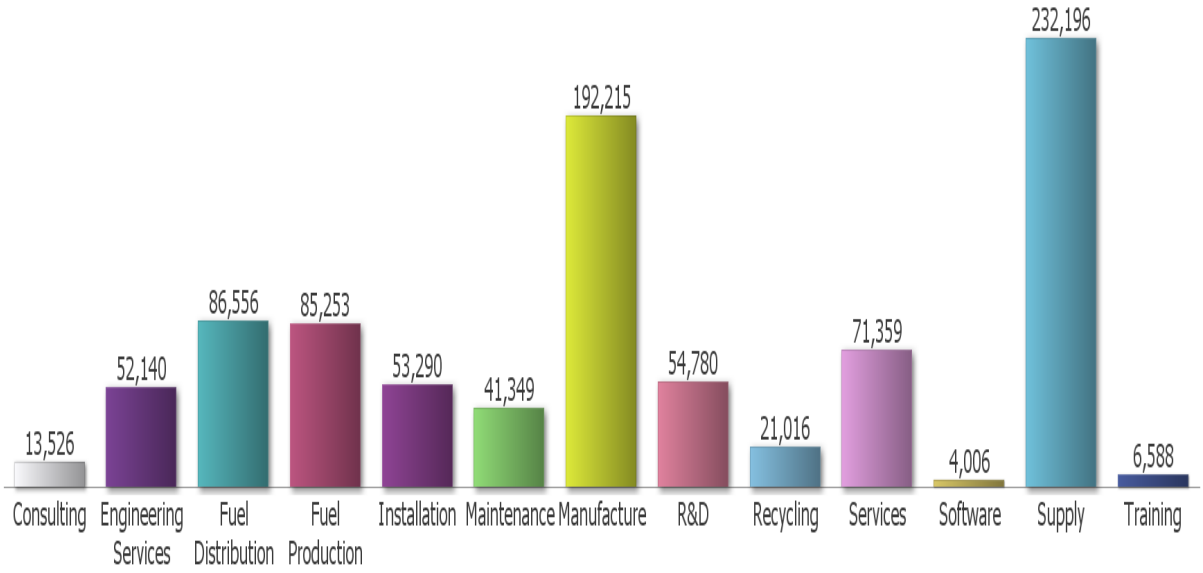


Figure 16 shows the distribution of employment with Manufacture accounting for 21% or 192,000 and R&D accounting for 55,000 or 6%.

Figure 17: UK LCEGS 2009/10 (£m) by Activity Code

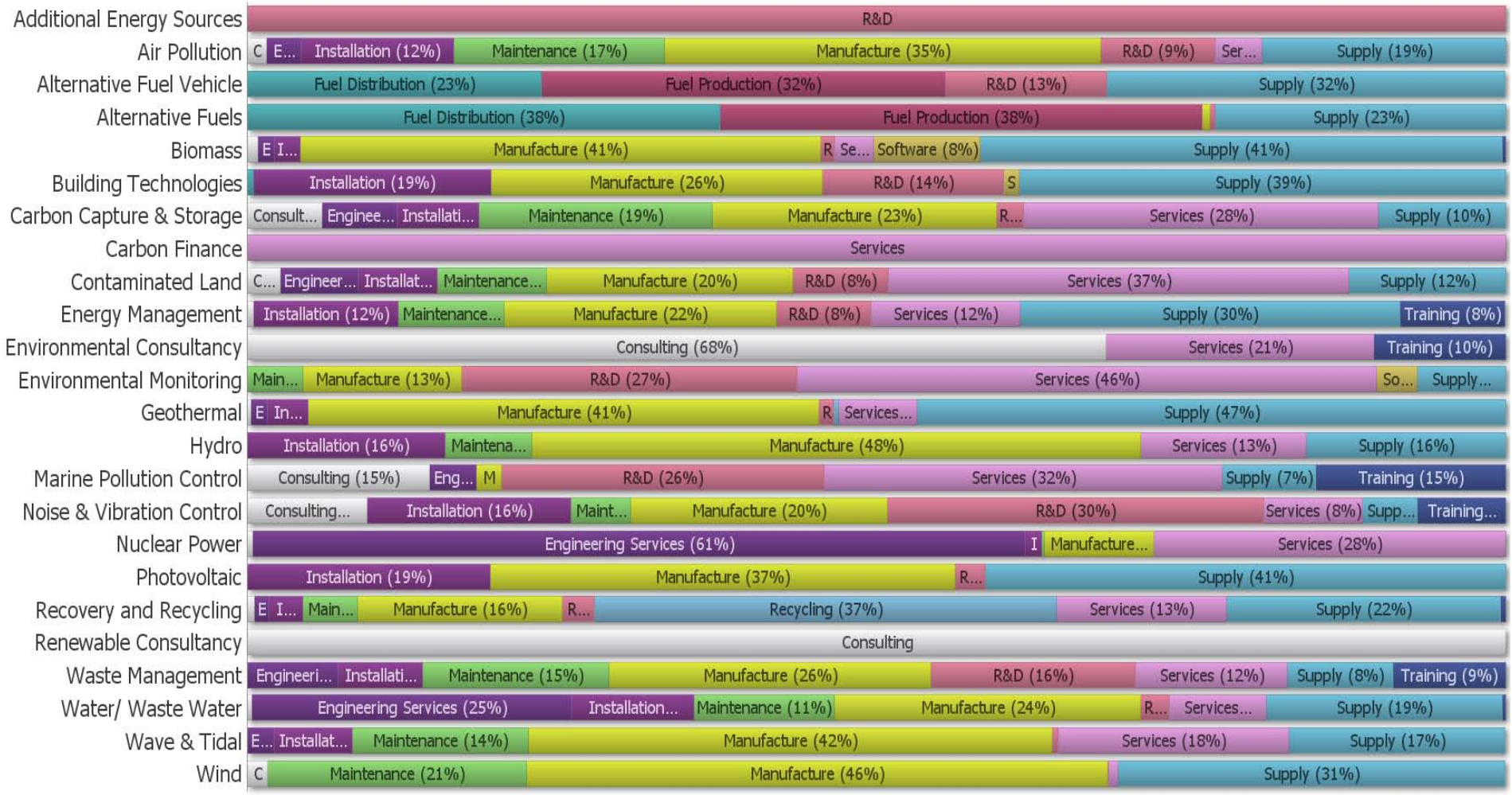


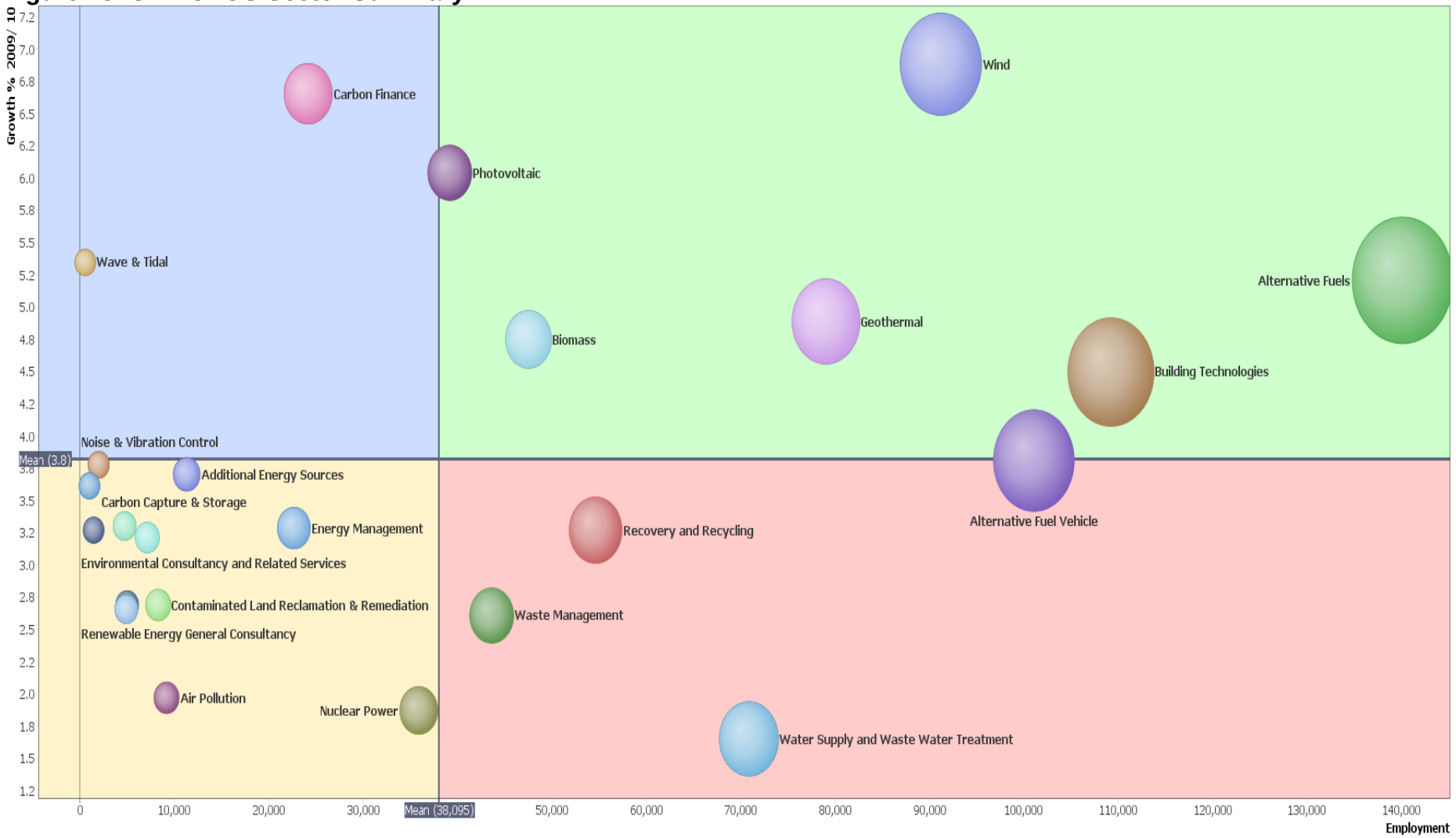
Figure 17 gives a sense of how activities are distributed across the sector by showing each sub sector split by activity code.

4.8 UK LCEGS Summary

In Figure 18 a Bubble Chart is used to display three of the four measures- Employment (horizontal axis), Current Year Sales Growth rate (vertical axis) and the size of each sub sector bubble to represent the value of sales. In a Bubble Chart the ideal positioning for a sub sector is top, right and large.

Figure 18 confirms that the LCEGS sector is dominated by three Low Carbon sub sectors- Alternative Fuels, Alternative Fuel & Vehicles and Building Technologies- and two Renewable Energy sub sectors- Wind and Geothermal. Many of the smaller Environmental sub sectors fall into the bottom left quadrant which represents comparatively lower growth/ lower employment.

Figure 18: UK LCEGS Sector Summary



5. UK LCEGS by Regions

5.1 Introduction

As an extension of the UK LCEGS analysis, the national figures were disaggregated for the UK regions and Devolved Administrations (Appendix C) and for the UK sub regions (Appendix D). This section provides a brief comparison of LCEGS across the UK, using the key four measures.

5.2 UK Regional Sales

Figure 19 shows that London (20%), the South East (12%) and the North West (10%) are the largest LCEGS regions by sales.

Figure 19: UK Regional Sales 2009/10

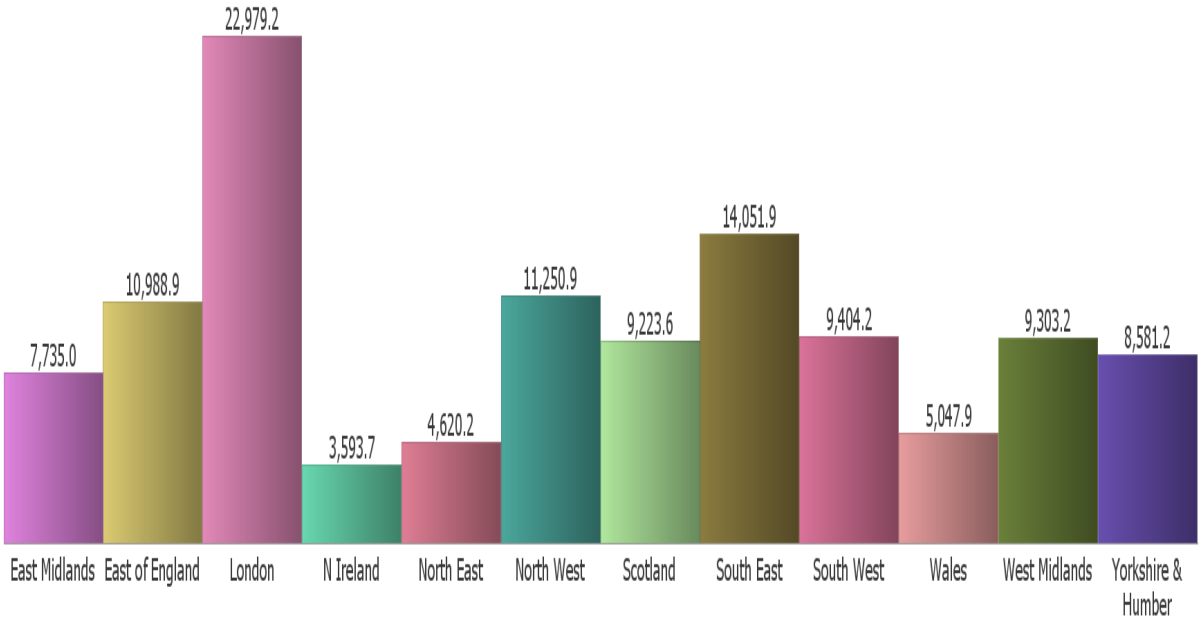


Table 10 shows regional sales by sub sector

Table 10: UK Regional Sales 2009/ 10

Sales	East Midlands	East of England	London	N Ireland	North East	North West	Scotland	South East	South West	Wales	West Midlands	Yorks & Humber	Total
Additional Energy Sources	100	146	148	38	73	192	123	99	80	62	103	134	**1,297**
Air Pollution	54	114	102	43	58	133	129	97	91	33	41	102	**997**
Alternative Fuel Vehicle	455	1,729	1,254	425	890	1,455	547	1,646	1,078	423	1,601	1,412	**12,915**
Alternative Fuels	1,715	2,072	1,904	483	821	1,877	1,716	2,060	1,756	560	1,542	670	**17,176**
Biomass	394	551	977	121	160	424	695	606	449	279	467	332	**5,454**
Building Technologies	1,045	1,161	2,073	343	678	1,507	1,021	2,426	1,134	783	745	1,212	**14,129**
Carbon Capture & Storage	36	76	59	12	31	90	59	1	39	10	28	53	**497**
Carbon Finance	16	23	5,723	6	8	23	21	37	21	10	19	17	**5,925**
Contaminated Land Reclamation & Remediation	87	120	85	19	54	158	112	80	95	27	43	85	**963**
Energy Management	259	179	334	85	163	296	138	270	309	141	295	250	**2,718**
Environmental Consultancy and Related Services	75	54	110	34	21	95	63	99	49	29	94	72	**794**
Environmental Monitoring, Instrumentation and Analysis	9	19	23	7	6	14	11	33	10	7	11	10	**160**
Geothermal	638	966	2,474	503	356	759	691	973	701	606	680	841	**10,186**
Hydro	47	53	106	21	15	38	30	76	33	17	62	33	**529**
Marine Pollution Control	9	8	17	5	7	13	12	21	12	4	8	13	**129**
Noise & Vibration Control	11	22	45	10	7	18	12	24	20	14	13	22	**220**
Nuclear Power	150	413	389	53	141	572	454	688	432	159	184	165	**3,798**
Photovoltaic	374	337	1,261	148	205	429	306	495	285	338	564	257	**4,997**
Recovery and Recycling	298	1,062	877	199	210	773	761	804	639	250	508	554	**6,936**
Renewable Energy General Consultancy	33	50	86	11	17	51	40	80	41	19	40	38	**505**
Waste Management	309	453	1,208	206	122	296	422	668	492	124	338	433	**5,071**
Water Supply and Waste Water Treatment	343	584	1,491	285	165	591	720	969	817	617	730	918	**8,230**
Wave & Tidal	4	10	10	2	4	8	9	9	7	5	7	8	**82**
Wind	1,273	788	2,224	535	409	1,438	1,132	1,790	817	532	1,180	952	**13,070**
Total	**7,735**	**10,989**	**22,979**	**3,594**	**4,620**	**11,251**	**9,223**	**14,052**	**9,404**	**5,048**	**9,303**	**8,581**	**116,780**
% of Total	**6.6**	**9.4**	**19.7**	**3.1**	**4.0**	**9.6**	**7.9**	**12.0**	**8.1**	**4.3**	**8.0**	**7.3**	**100.0**

5.3 UK Regional Companies

Figure 20 shows that London (18%), the South East (13%) and the North West (10%) have the largest number of LCEGS companies.

Figure 20: UK Regional Companies 2009/ 10

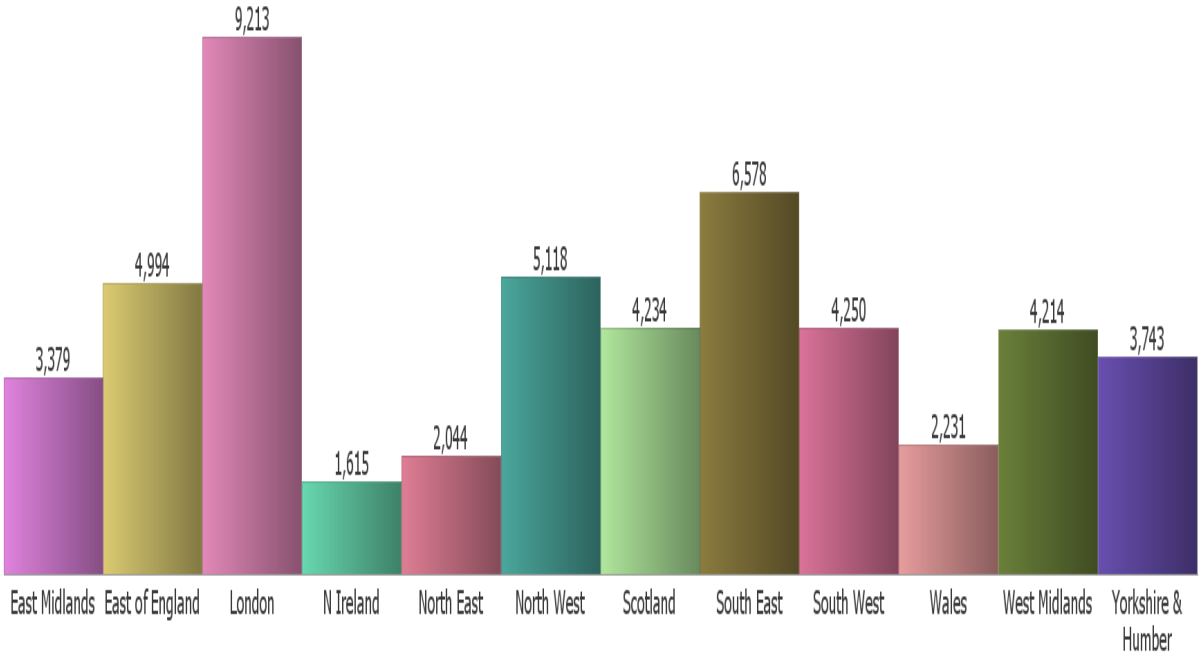


Table 11 shows regional companies by sub sector.

Table 11: UK Regional Companies 2009/ 10

Companies	East Midlands	East of England	London	N Ireland	North East	North West	Scotland	South East	South West	Wales	West Midlands	Yorks & Humber	Total
Additional Energy Sources	45	68	62	25	32	77	53	45	36	31	40	68	**582**
Air Pollution	12	57	32	5	9	145	118	59	19	2	6	32	**496**
Alternative Fuel Vehicle	203	772	573	199	439	709	253	771	533	190	794	642	**6,078**
Alternative Fuels	747	894	818	232	382	833	876	953	802	252	685	301	**7,775**
Biomass	153	233	437	46	60	169	319	291	188	105	205	130	**2,336**
Building Technologies	468	558	920	162	297	640	437	1,075	545	357	340	524	**6,323**
Carbon Capture & Storage	11	40	29	7	10	46	29	7	17	7	7	22	**232**
Carbon Finance	6	7	1,885	1	2	7	7	12	6	2	6	5	**1,946**
Contaminated Land Reclamation & Remediation	44	51	75	10	14	91	37	27	30	10	13	40	**442**
Energy Management	99	73	181	45	63	130	57	121	153	59	132	108	**1,221**
Environmental Consultancy and Related Services	23	16	99	3	3	68	16	53	8	3	57	26	**375**
Environmental Monitoring, Instrumentation and Analysis	0	11	12	0	0	0	0	49	0	0	0	0	**72**
Geothermal	294	444	928	221	162	310	316	490	324	286	313	377	**4,465**
Hydro	21	22	59	9	8	16	13	48	15	9	28	13	**261**
Marine Pollution Control	0	0	7	0	0	1	3	33	1	0	0	11	**56**
Noise & Vibration Control	0	6	49	0	0	3	0	29	11	0	0	6	**104**
Nuclear Power	71	200	172	32	69	259	241	306	225	87	90	78	**1,830**
Photovoltaic	181	140	420	70	94	200	131	223	120	145	250	110	**2,084**
Recovery and Recycling	124	556	393	80	90	389	316	389	263	103	227	223	**3,153**
Renewable Energy General Consultancy	13	23	29	9	12	28	18	30	18	12	19	19	**230**
Waste Management	144	201	480	102	64	142	190	319	230	62	158	198	**2,290**
Water Supply and Waste Water Treatment	161	277	661	134	79	264	325	445	389	283	326	412	**3,756**
Wave & Tidal	0	10	8	0	0	1	3	11	0	0	0	0	**33**
Wind	559	335	884	223	155	590	476	792	317	226	518	398	**5,473**
Total	**3,379**	**4,994**	**9,213**	**1,615**	**2,044**	**5,118**	**4,234**	**6,578**	**4,250**	**2,231**	**4,214**	**3,743**	**51,611**
% of Total	**6.5**	**9.7**	**17.9**	**3.1**	**4.0**	**9.9**	**8.2**	**12.7**	**8.2**	**4.3**	**8.2**	**7.3**	**100.0**

5.4 UK Regional Employment

Figure 21 shows that London (18%), the South East (13%) and the North West (10%) have the largest number of LCEGS employees.

Figure 21: UK Regional Employment 2009/ 10

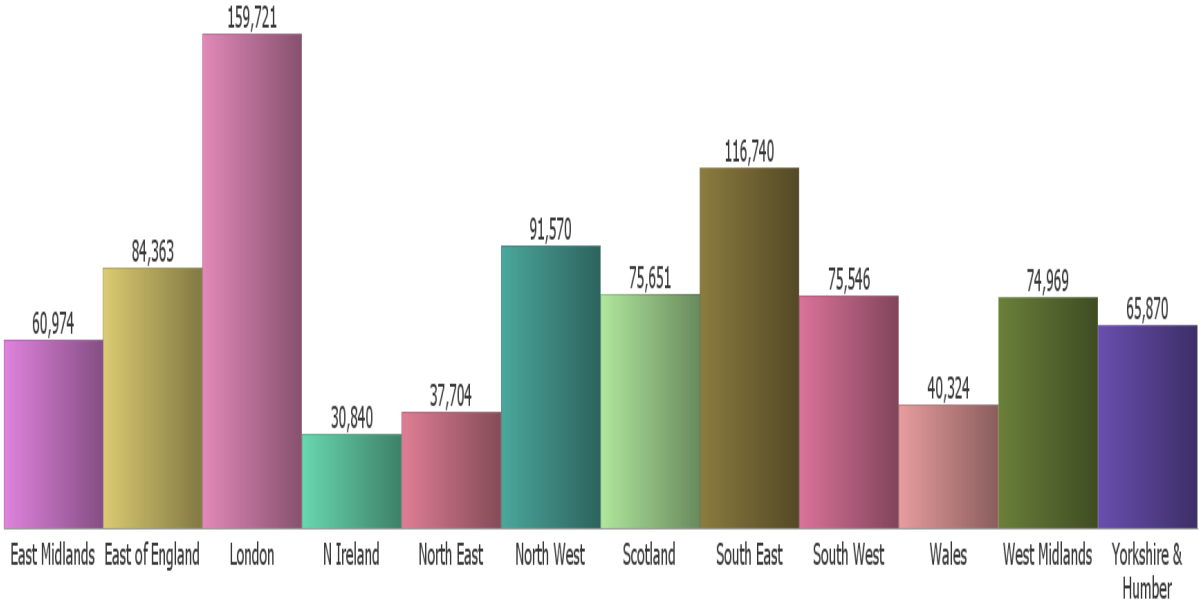


Table 12 shows regional employment by sub sector.

Table 12: UK Regional Employment 2009/ 10

Employment	East Midlands	East of England	London	N Ireland	North East	North West	Scotland	South East	South West	Wales	West Midlands	Yorks & Humber	Total
Additional Energy Sources	826	1,186	1,233	348	587	1,749	1,143	972	736	570	790	1,191	**11,331**
Air Pollution	639	975	893	517	595	1,101	1,022	826	806	415	529	868	**9,186**
Alternative Fuel Vehicle	3,722	12,848	8,947	3,298	6,667	11,984	4,172	13,240	8,875	3,251	14,711	9,357	**101,072**
Alternative Fuels	13,023	14,696	19,051	3,590	5,962	16,622	15,334	18,359	13,669	4,392	10,465	4,935	**140,098**
Biomass	3,231	4,778	8,324	1,201	1,574	3,803	6,291	5,383	3,583	2,473	4,040	2,804	**47,485**
Building Technologies	8,031	8,848	15,616	2,918	5,577	11,123	8,034	19,428	8,706	6,054	6,134	8,718	**109,187**
Carbon Capture & Storage	394	570	500	169	384	753	531	32	403	149	309	501	**4,695**
Carbon Finance	67	109	23,198	26	43	112	122	191	108	35	71	65	**24,147**
Contaminated Land Reclamation & Remediation	718	929	727	271	535	1,237	851	712	763	314	467	709	**8,233**
Energy Management	2,055	1,485	2,431	865	1,457	2,377	1,165	2,434	2,508	1,270	2,551	2,050	**22,648**
Environmental Consultancy and Related Services	633	496	886	373	282	779	566	849	469	354	737	676	**7,100**
Environmental Monitoring, Instrumentation and Analysis	97	144	163	83	63	134	117	218	107	100	117	106	**1,449**
Geothermal	5,012	7,242	17,929	4,643	2,853	6,171	4,818	8,313	5,457	4,073	5,590	6,911	**79,012**
Hydro	507	470	873	273	179	359	297	626	329	198	551	293	**4,955**
Marine Pollution Control	77	77	118	51	58	104	91	153	87	37	73	99	**1,025**
Noise & Vibration Control	129	179	290	119	115	153	119	196	175	147	130	181	**1,933**
Nuclear Power	1,675	3,774	4,306	489	1,303	5,072	3,916	5,943	4,285	1,513	1,878	1,760	**35,914**
Photovoltaic	2,964	2,619	9,520	1,340	1,626	3,238	2,481	4,009	2,199	2,553	4,429	2,174	**39,152**
Recovery and Recycling	2,484	8,281	6,558	1,823	1,804	5,516	6,055	6,521	5,045	2,187	4,005	4,350	**54,629**
Renewable Energy General Consultancy	319	477	758	136	183	466	417	768	385	181	353	420	**4,863**
Waste Management	2,573	3,951	9,848	1,829	1,220	2,514	3,703	5,804	4,196	1,181	2,940	3,812	**43,571**
Water Supply and Waste Water Treatment	3,080	4,975	13,568	2,511	1,585	4,762	6,375	8,393	7,151	5,093	5,981	7,367	**70,841**
Wave & Tidal	31	63	63	18	27	58	56	58	51	35	47	46	**553**
Wind	8,686	5,192	13,922	3,949	3,025	11,383	7,975	13,311	5,454	3,748	8,071	6,478	**91,194**
Total	**60,974**	**84,363**	**159,721**	**30,840**	**37,704**	**91,570**	**75,651**	**116,740**	**75,546**	**40,324**	**74,969**	**65,870**	**914,273**
% of Total	**6.7**	**9.2**	**17.5**	**3.4**	**4.1**	**10.0**	**8.3**	**12.8**	**8.3**	**4.4**	**8.2**	**7.2**	**100.0**

5.5 UK Regional Growth

Figure 22 shows that London (5%), the East Midlands (4.7%) and the North West (4.7%) had the highest growth rates for LCEGS activities.

Figure 22: UK Regional Growth 2009/ 10

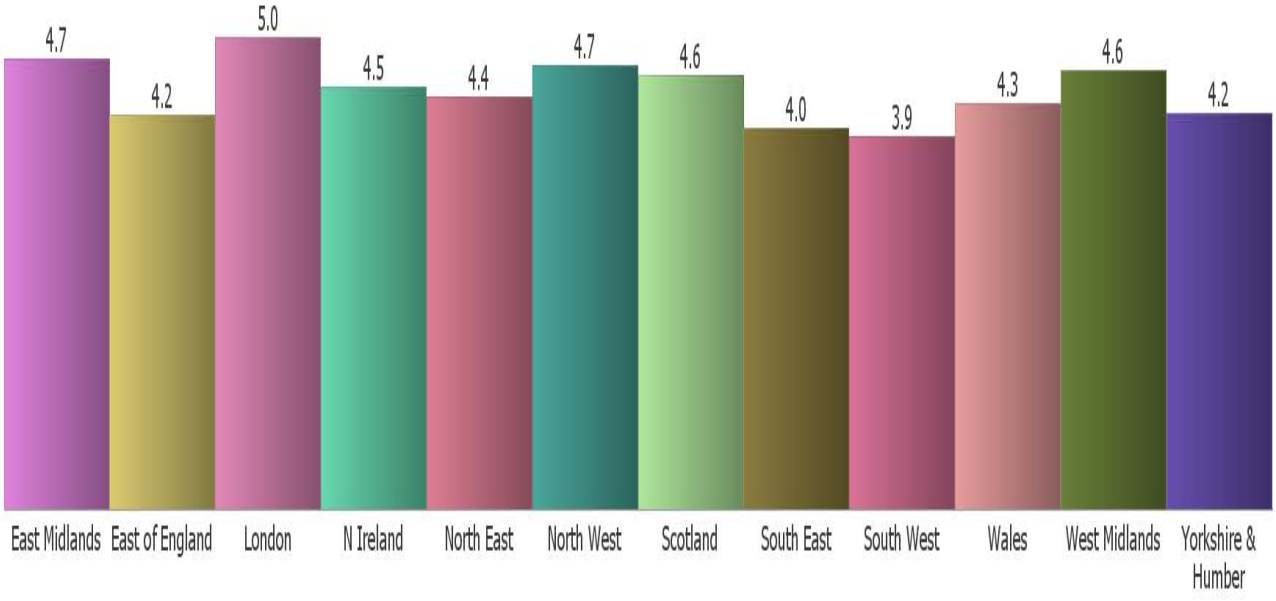


Table 13 shows regional growth rates by sub sector.

Table 13: UK Regional Growth 2009/ 10

Growth %	East Midlands	East of England	London	N Ireland	North East	North West	Scotland	South East	South West	Wales	West Midlands	Yorks & Humber
Additional Energy Sources	3.4	3.9	3.6	4.4	3.7	3.2	3.6	3.6	3.8	3.8	3.8	4.2
Air Pollution	1.9	1.9	2.0	1.9	2.1	1.9	2.0	2.0	1.9	2.0	1.9	2.1
Alternative Fuel Vehicle	4.3	3.9	4.1	3.7	4.0	3.6	4.0	3.2	3.6	3.9	4.3	3.7
Alternative Fuels	5.0	4.9	4.8	5.3	4.9	6.1	5.5	4.9	4.4	5.3	6.3	5.3
Biomass	4.9	4.4	4.9	4.4	4.8	5.1	4.8	4.5	4.7	5.1	4.7	4.7
Building Technologies	4.6	4.5	4.7	4.4	4.5	4.9	4.7	4.2	4.3	4.1	4.4	4.5
Carbon Capture & Storage	3.3	3.2	3.0	3.5	3.2	3.2	3.3	3.0	3.3	3.1	3.5	3.8
Carbon Finance	6.1	6.0	6.6	7.4	7.2	7.1	6.2	5.8	6.1	7.3	7.7	8.9
Contaminated Land Reclamation & Remediation	2.8	2.4	3.0	2.8	2.8	2.5	2.5	2.4	2.9	3.2	3.4	2.7
Energy Management	3.4	3.2	3.4	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.5	3.0
Environmental Consultancy and Related Services	3.1	3.3	3.1	3.3	3.2	3.3	3.2	3.4	3.2	2.9	3.2	3.0
Environmental Monitoring, Instrumentation and Analysis	3.2	3.0	3.4	3.6	3.4	3.0	3.3	3.2	3.7	3.4	3.3	3.4
Geothermal	5.2	4.2	5.1	4.7	5.2	5.4	5.3	4.3	4.8	4.9	5.0	4.6
Hydro	2.8	2.5	2.4	2.9	3.0	3.5	3.0	2.6	2.5	2.9	2.8	2.5
Marine Pollution Control	3.8	3.4	3.5	3.4	3.8	3.3	4.2	3.4	4.0	3.5	4.0	3.3
Noise & Vibration Control	3.4	4.0	4.0	3.7	3.4	3.6	3.8	3.5	4.1	4.0	3.8	3.4
Nuclear Power	2.6	1.7	2.7	2.7	1.7	1.5	1.4	1.7	1.6	2.0	3.1	2.5
Photovoltaic	6.0	6.1	6.5	6.1	5.5	6.2	6.7	5.5	5.6	6.4	5.4	5.5
Recovery and Recycling	3.1	3.4	3.2	3.3	3.3	3.6	3.0	3.3	3.1	3.4	3.0	3.4
Renewable Energy General Consultancy	2.5	2.5	2.7	2.7	2.4	2.7	2.7	3.2	2.5	2.8	2.0	2.4
Waste Management	2.7	2.7	2.5	2.7	2.7	2.9	2.7	2.2	2.7	3.0	2.7	2.9
Water Supply and Waste Water Treatment	1.7	1.8	1.6	1.8	1.7	1.7	1.7	1.5	1.6	1.7	1.7	1.6
Wave & Tidal	5.9	5.3	5.9	5.5	5.4	5.6	5.0	5.0	5.1	5.3	5.3	5.1
Wind	6.9	7.1	6.2	7.1	6.8	7.4	8.0	6.7	6.8	6.3	6.4	7.4
Total	**4.7**	**4.2**	**5.0**	**4.5**	**4.4**	**4.7**	**4.6**	**4.0**	**3.9**	**4.3**	**4.6**	**4.2**

6. UK LCEGS Imports[2]

6.1 Introduction

In the following sub section Imports are analysed for the last three years. This analysis focuses on Imports from all Top 53 countries to the UK. These countries account for approximately 90% of all UK imports.

6.2 UK LCEGS Imports by Year

Figure 23: LCEGS Imports Three Year Trend (£m)

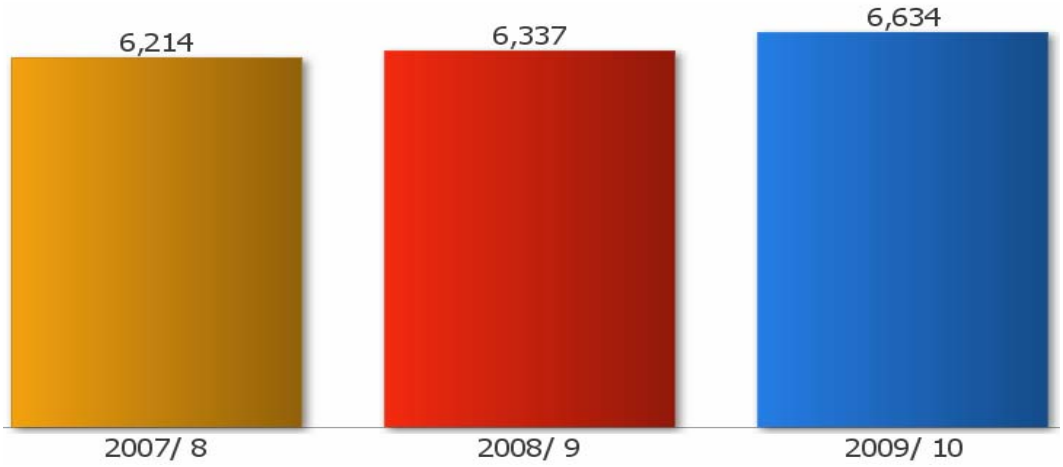


Figure 23 shows the three year trend for UK LCEGS Imports, starting with £6.2bn in 2007/ 08, £6.3bn in 2008/ 09 and ending with £6.6bn in 2009/ 2010. This shows a 2% and a 4.7% growth respectively.

Table 14 shows the three year import values by sub sector. The highest imports are for Alternative Fuels, Building Technologies, Water/ Waste Water, Wind, Geothermal and Photovoltaic.

[2] Please note that in this Chapter the Nuclear Power sector is included in the Alternatives Fuel sector.

Table 14: LCEGS Imports Three Year Trend by Sub Sector £m

Level 2	2007/ 08	2008/ 09	2009/ 10	% Diff 2007/ 08 to 2008/ 09	% Diff 2008/ 09 to 2009/ 10
Additional Energy Sources	95	96	103	1.2	6.9
Air Pollution	97	103	114	6.8	10.5
Alternative Fuel Vehicle	425	386	387	-9.2	0.3
Alternative Fuels	676	705	755	4.3	7.1
Biomass	444	453	456	2.1	0.6
Building Technologies	784	852	786	8.6	-7.7
Carbon Capture & Storage	45	44	54	-2.1	23.9
Carbon Finance	91	104	95	14.4	-8.6
Contaminated Land Reclamation & Remediation	49	49	56	0.0	15.0
Energy Management	192	204	193	6.6	-5.5
Environmental Consultancy and Related Services	14	14	13	3.5	-9.8
Environmental Monitoring, Instrumentation and Analysis	12	13	12	7.2	-4.7
Geothermal	606	614	678	1.4	10.4
Hydro	34	34	39	1.5	13.6
Marine Pollution Control	1	2	2	3.4	29.9
Noise & Vibration Control	17	18	19	10.3	3.2
Photovoltaic	602	641	649	6.4	1.3
Recovery and Recycling	260	262	263	0.9	0.3
Renewable Consulting	54	59	65	9.1	10.8
Waste Management	341	334	321	-2.1	-3.8
Water Supply and Waste Water Treatment	746	712	872	-4.5	22.4
Wave & Tidal	4	5	5	8.0	6.2
Wind	627	634	697	1.1	9.9
Total	**6,214**	**6,337**	**6,634**	**2.0**	**4.7**

The growth in Imports in 2007/ 08 to 2008/ 09 is high for Marine Pollution Control and Wave & Tidal (both from a low base) and Carbon Finance.

Import increase for the most recent year are more varied, showing a reduction for Carbon Finance and high growth for Water/ Waste Water, Carbon Capture & Storage and Geothermal. A consistent trend in import growth (by sub sector) has yet to emerge

6.3 UK LCEGS Imports 2009/ 10 by Sub Sector

Figure 24: UK LCEGS Imports 2009/ 10 £m

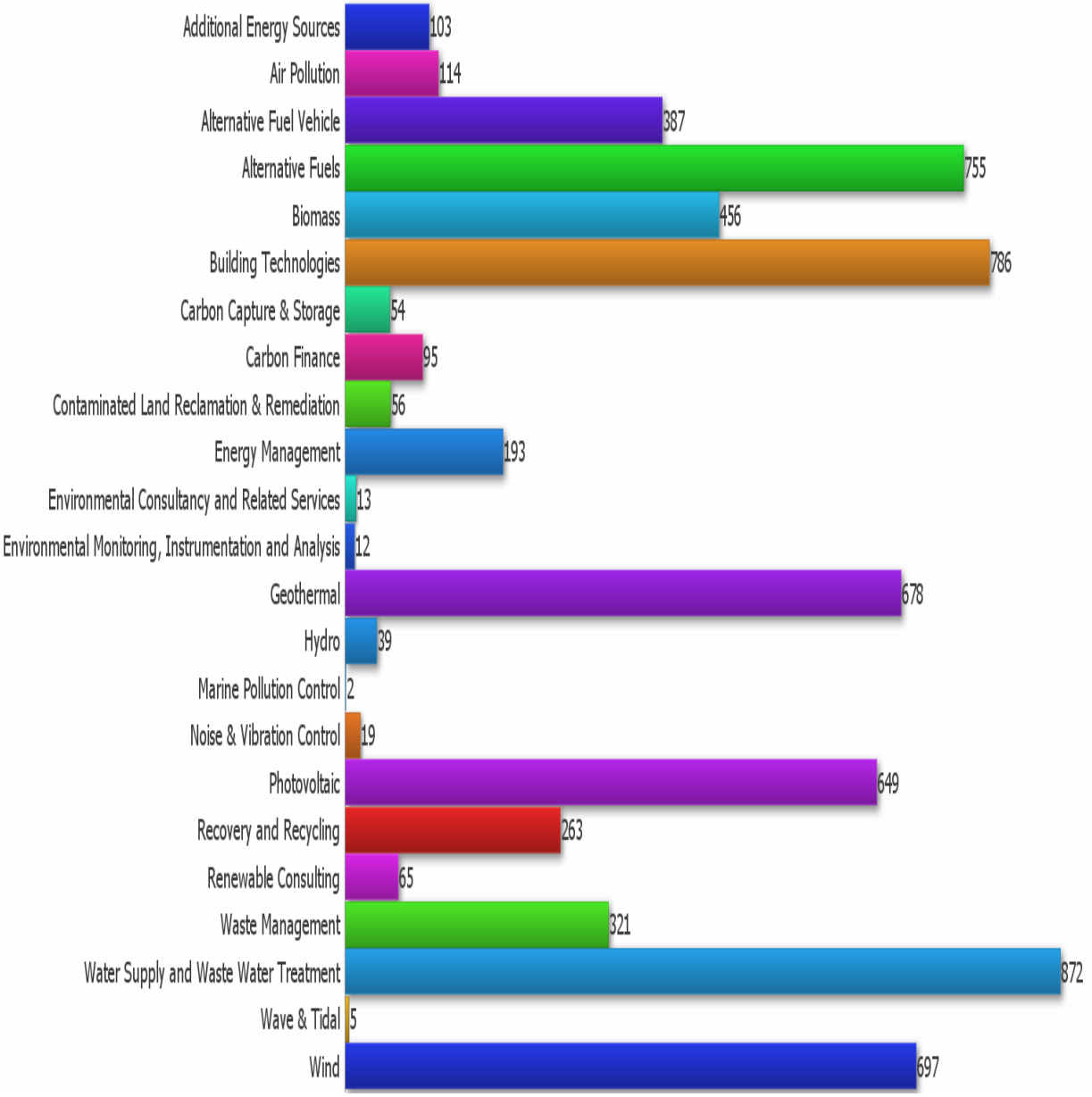


Figure 24 shows UK LCEGS Imports for 2009/ 10 by sub sector. Of the total £6.6bn, 66% is accounted for by: Water/ Waste Water (13%), Building Technologies (12%), Alternative Fuels (11%) and Wind, Photovoltaic and Geothermal (10% each).

6.4 UK Imports by Country

Figure 25 shows the values (£m) for Imports from the Top 13 countries. China leads with £450m (7%), followed by Hong Kong[3] (6%) and Spain (5%). The Top 13 countries account for £3.5bn of imports or 52% of the total.

Figure 25: UK LCEGS Imports 2009/ 10 by Top 13 Countries (£m)

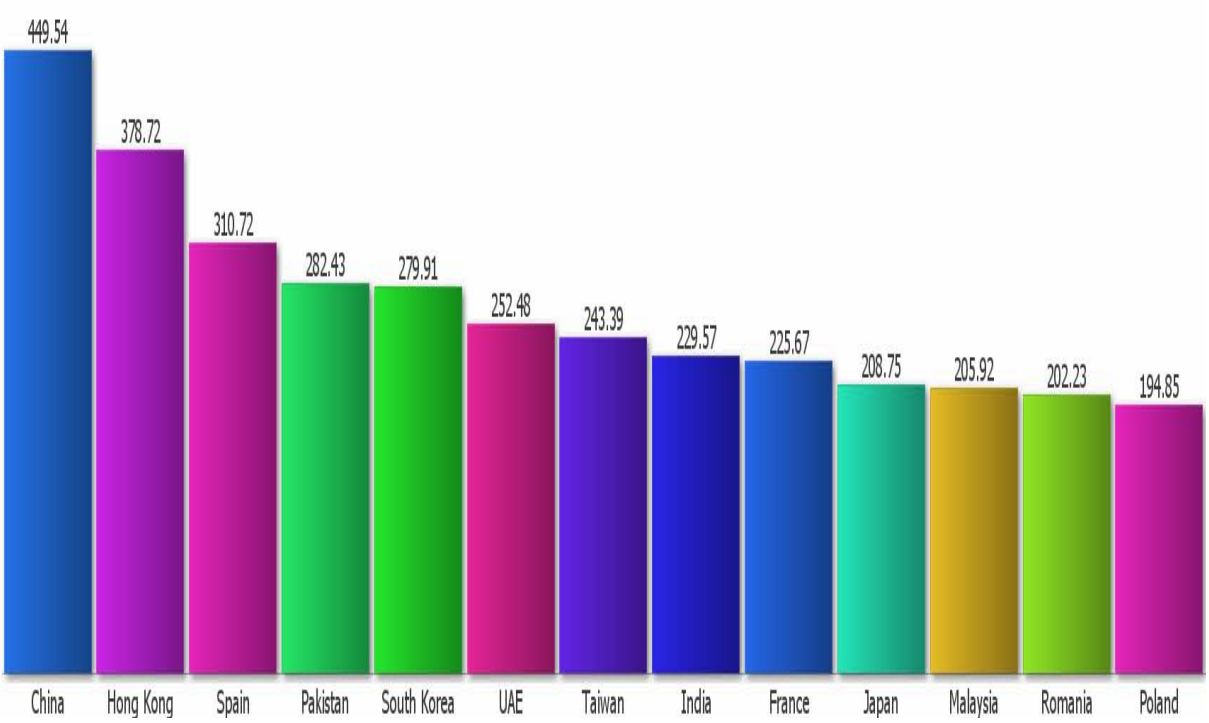


Figure 26 is a heat map[4] (colour coded red for low through to green for high value) and shows the highest value of imports at Level 3 for 22 of the Top 53 countries. This shows a much more varied picture of imports, with high values for Water Treatment and Distribution (several countries), Other Fuels (Hong Kong, Pakistan and Taiwan) and France for several Water Treatment activities.

[3] Much of which will have originated from China and Asia

[4] All heat mapping in this report is derived from Excel rules for conditional formatting where Red starts at 0, Green ends at the highest value in the data set and orange is set at the 50% Median. All values between are shown as graduated shades between green and red.

Figure 26: UK LCEGS Imports 2009/ 10 at Level 3

	Europe								Asia and Middle East														
Level 3	Denmark	France	Germany	Italy	Poland	Romania	Spain	Turkey	China	Hong Kong	India	Indonesia	Japan	Malaysia	Mexico	Pakistan	Singapore	South Korea	Taiwan	Thailand	UAE	US
Alternative Fuels (Main Stream) for Vehicles Only	32	4	7	9	7	5	10	6	13	22	8	29	10	6	5	16	14	12	4	8	4	10
Main Stream Fuels	1	2	3	2	2	1	21	4	4	7	3	1	2	2	1	7	4	1	6	1	3	1
Other Fuels	7	10	21	18	15	11	21	28	28	50	26	8	11	15	7	53	21	10	36	10	25	8
Biomass Energy Systems	6	7	5	3	4	5	5	6	16	7	7	6	7	7	4	10	4	10	5	5	5	5
Boilers and Related Systems	5	5	4	3	4	3	9	5	12	7	6	5	6	6	3	9	4	7	4	4	4	4
Doors	4	5	5	7	6	6	6	5	12	14	5	4	8	6	12	11	10	5	10	6	12	6
Insulation and Heat Retention Materials	4	5	4	7	8	9	7	7	14	15	5	4	7	6	13	11	11	6	9	6	13	7
Windows	4	5	5	9	8	8	23	8	14	17	5	5	8	6	15	12	12	6	12	8	12	7
Whole Systems Manufacture	12	8	6	7	8	9	23	6	22	16	10	14	7	10	6	1	7	9	13	8	19	9
Other Related Equipment and Chemicals	1	6	6	7	4	7	3	3	14	9	5	1	5	7	5	8	4	11	6	1	7	6
Photovoltaic Cells	0	6	4	6	3	7	3	3	15	8	5	1	4	7	4	7	3	10	5	0	6	6
Systems & Equipment	1	12	11	12	7	14	37	7	33	17	11	2	9	15	10	14	9	21	11	1	14	11
Construction & Operation of Waste Treatment Facilities	7	28	3	2	3	3	7	2	7	8	4	2	1	3	1	4	2	6	2	3	1	3
Equipment For Waste Treatment	5	21	2	2	3	2	5	2	6	6	3	1	1	3	1	3	1	4	2	3	1	3
Engineering	4	6	2	3	6	7	6	2	10	10	6	12	4	5	4	4	2	10	17	8	9	3
Water Treatment and Distribution	12	22	8	8	23	23	17	7	33	35	19	37	15	15	14	13	6	33	11	26	30	13
Large Wind Turbine	4	3	8	9	10	8	7	10	22	14	10	3	12	9	6	9	5	12	9	6	5	6
Small Wind Turbine	3	2	7	8	8	7	6	7	15	12	7	2	11	7	4	7	4	9	7	6	4	5
Wind Farm Systems	5	4	11	11	11	9	18	10	24	19	10	3	15	10	7	10	7	15	10	9	5	8

7. UK LCEGS Exports[5]

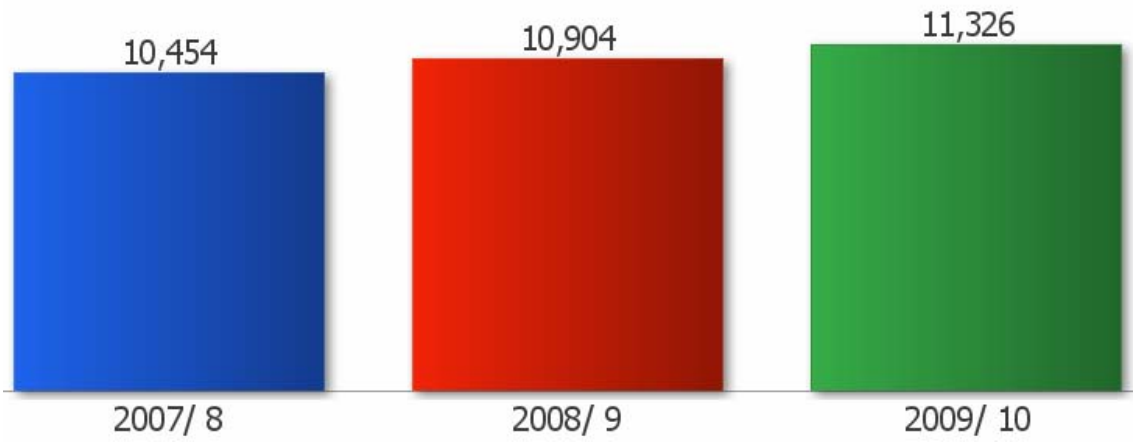
7.1 Introduction

In this section of the report we look at the export performance of the UK LCEGS Sector for 2009/ 10. This analysis tells us something about the existing trading relationships for the UK both by market and by destination country. What we will be looking at specifically is where strong export relations exist today and whether these areas correspond to the most attractive future global markets.

We have used a wide variety of sources (many of which we have already accessed to collect earlier stages of our research) to look at trade into and out of the UK Regions for both Tangibles (products) and Intangibles (services).

7.2 UK LCEGS Exports by Sub Sector

Figure 27: UK LCEGS Sector Exports (£m) 2007/ 08 to 2009/ 10



In Figure 27 UK LCEGS exports in 2009/ 10 are valued at £11.3bn, an increase of 3.9% over the previous year value of £10.9bn.This is slightly lower growth than reduction from the 4.3% increase in exports from 2007/ 08 to 2008/ 09.

In Table 15 we compare UK export values for 2007/ 08 to 2009/ 10 by sub sector.

[5] Please note that in this Chapter the Nuclear Power sector is included in the Alternative Fuels sector.

Table 15: UK LCEGS Exports for 2007/08 to 2009/10 (£m)

Level 2	2007/ 08	2008/ 09`	2009/ 10	% Diff 2007/ 08 to 2008/ 09	% Diff 2008/ 09 to 2009/ 10
Additional Energy Sources	144	158	178	10.0	12.3
Air Pollution	151	161	161	6.9	-0.1
Alternative Fuel Vehicle	608	606	648	-0.2	6.9
Alternative Fuels	1,145	1,230	1,308	7.5	6.3
Biomass	687	730	699	6.3	-4.3
Building Technologies	1,353	1,459	1,369	7.8	-6.2
Carbon Capture & Storage	69	67	65	-2.1	-3.4
Carbon Finance	142	163	152	15.4	-6.9
Contaminated Land Reclamation & Remediation	92	95	87	2.4	-7.5
Energy Management	304	322	328	5.7	2.0
Environmental Consultancy and Related Services	39	42	40	7.8	-4.5
Environmental Monitoring, Instrumentation and Analysis	20	20	19	2.1	-4.0
Geothermal	837	885	962	5.8	8.7
Hydro	56	58	65	2.8	13.6
Marine Pollution Control	3	3	3	2.8	-10.7
Noise & Vibration Control	32	35	32	9.8	-7.1
Photovoltaic	1,089	1,158	1,284	6.3	10.8
Recovery and Recycling	533	538	558	1.0	3.7
Renewable Consulting	84	92	98	9.5	5.9
Waste Management	450	473	510	5.1	7.7
Water Supply and Waste Water Treatment	1,223	1,173	1,165	-4.1	-0.6
Wave & Tidal	8	8	8	8.1	-3.3
Wind	1,388	1,426	1,587	2.8	11.3
Total	**10,454**	**10,904**	**11,326**	**4.3**	**3.9**

Table 15 shows that the highest value exports are consistently- Alternative Fuels, Building Technologies, Photovoltaic, Wind and Water/ Waste Water. They account for £6.7bn in 2009/ 10 or 60% of all exports.

Columns 5 and 6 show the year-on-year increases in exports but reveal no consistent trend.

Table 16 shows exports as a percentage of total LCEGS sales for the last three years. Surprisingly, the percentage has remained at 9.7% for all three years despite year-by-year fluctuations at the sub sector level. Of the 24 sub sectors only six have shown an increase in the percentage of exports each year- Alternative Energy Sources, Geothermal, Hydro, Photovotaic, Renewable Consulting and Waste Management.

Table 16 also shows that the sub sectors responsible for the highest percentage of exports (2009/ 10) are Photovoltaic (26%), Renewable Consulting (19%), Air

Pollution (16%), Noise & Vibration Control (14%) and Water/ Waste Water Treatment (14%).

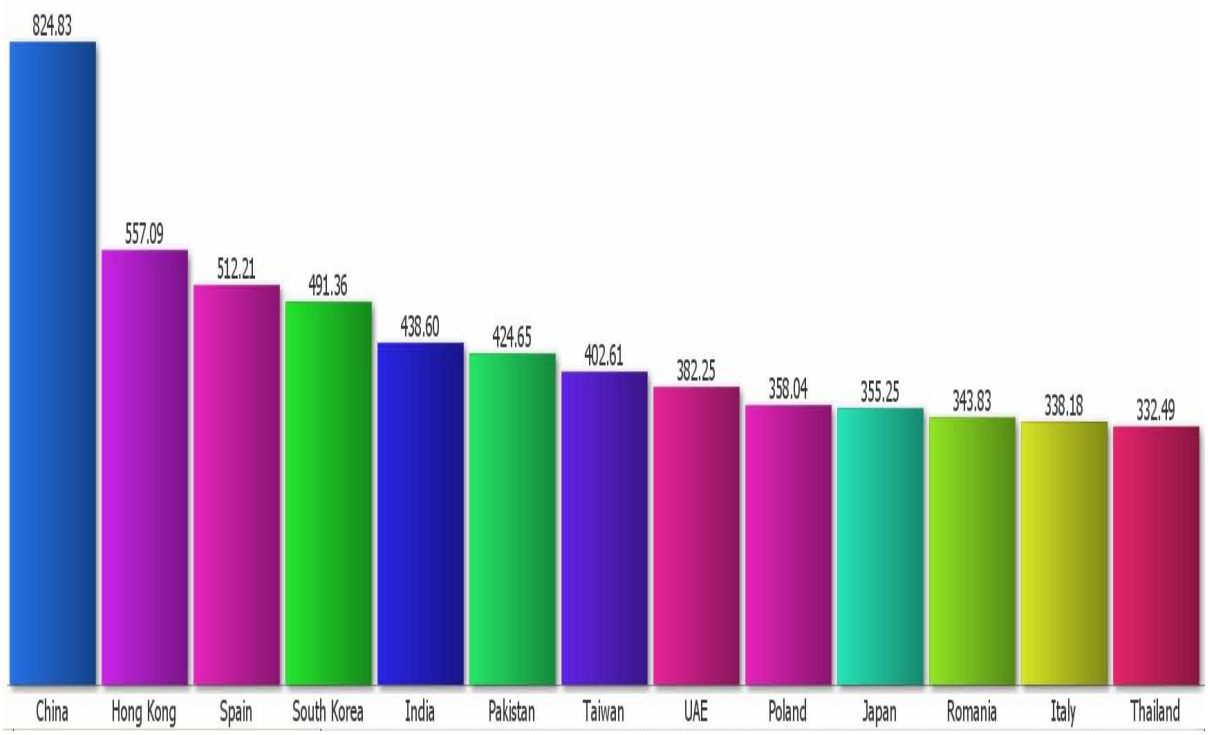
Table 16: UK LCEGS Export as a Percentage of Total Sales (£m)

	2007/ 08			2008/ 09`			2009/ 10		
Level 2	Sales	Exports	Exports as % of Sales	Sales	Exports	Exports as % of Sales	Sales	Exports	Exports as % of Sales
Additional Energy Sources	1,208	144	11.9	1,251	158	12.6	1,297	178	13.7
Air Pollution	960	151	15.7	978	161	16.5	997	161	16.1
Alternative Fuel Vehicle	12,646	608	4.8	13,113	606	4.6	12,915	648	5.0
Alternative Fuels	18,570	1,145	6.2	19,405	1,230	6.3	20,975	1,308	6.2
Biomass	4,991	687	13.8	5,216	730	14.0	5,454	699	12.8
Building Technologies	12,954	1,353	10.4	13,526	1,459	10.8	14,129	1,369	9.7
Carbon Capture & Storage	468	69	14.8	483	67	13.9	497	65	13.1
Carbon Finance	5,228	142	2.7	5,640	163	2.9	5,925	152	2.6
Contaminated Land Reclamation & Remediation	914	92	10.1	938	95	10.1	963	87	9.0
Energy Management	2,553	304	11.9	2,635	322	12.2	2,719	328	12.1
Environmental Consultancy and Related Services	747	39	5.2	770	42	5.5	794	40	5.0
Environmental Monitoring, Instrumentation and Analysis	150	20	13.3	155	20	12.9	160	19	11.9
Geothermal	9,285	837	9.0	9,722	885	9.1	10,186	962	9.4
Hydro	503	56	11.1	516	58	11.2	529	65	12.3
Marine Pollution Control	120	3	2.5	124	3	2.4	129	3	2.3
Noise & Vibration Control	205	32	15.6	212	35	16.5	220	32	14.5
Photovoltaic	4,462	1,089	24.4	4,721	1,158	24.5	4,997	1,284	25.7
Recovery and Recycling	6,519	533	8.2	6,724	538	8.0	6,936	558	8.0
Renewable Consulting	480	84	17.5	492	92	18.7	506	98	19.4
Waste Management	4,824	450	9.3	4,945	473	9.6	5,071	510	10.1
Water Supply and Waste Water Treatment	7,974	1,223	15.3	8,101	1,173	14.5	8,230	1,165	14.2
Wave & Tidal	74	8	10.8	78	8	10.3	82	8	9.8
Wind	11,508	1,388	12.1	12,258	1,426	11.6	13,070	1,587	12.1
Total	**107,342**	**10,454**	**9.7**	**112,003**	**10,904**	**9.7**	**116,780**	**11,326**	**9.7**

7.3 Exports by Country

The second “dimension” of export analysis is by country. In Figure 28 we show that the Top 13 Export destinations for the UK. The leading destinations are China (7%), Hong Kong (5%), Spain (4.5%), South Korea (4%), India (4%), Pakistan(4%) and Taiwan (3.5%). This ranking of export markets has remained consistent for each of the last three years.

Figure 28: UK LCEGS Exports 2009/ 10 by Top 13 Export Destinations (£m)



7.4 UK Exports by Country and by Market

In Figure 29 country and product/ service analysis is combined to try and determine the most attractive current export markets for the UK at the sub sector level. To do this we apply Heat Map formatting to the data, where the colour code moves from Red (lowest export value) through to Green (highest export value). To simplify the chart we have restricted it to the 22 export destinations. Figure 29 can be read in three ways: 1) Horizontally to identify the most popular sub sectors for export, 2) Vertically to identify the most active country markets and 3) Horizontally AND vertically to identify niche markets.

Read vertically, Figure 29 confirms our earlier analysis of the leading country destinations (above). Read horizontally, it also confirms our analysis of the most important sub sectors- Alternative Fuels, Building Technologies, Photovoltaic, Wind and Water/ Waste Water.

Read both horizontally and vertically, Figue 29 shows more niche markets (shaded near- green) for: Biomass to China; Alternative Fuel & Vehicles to Denmark; Water/ Waste Water Treatment to Indonesia and Portugal and Building Technologies to Italy.

Figure 29: 2009/ 10 Exports (£m) by Leading Country and Sub Sector

Level 2	Chile	China	Denmark	Hong Kong	India	Indonesia	Italy	Japan	Malaysia	Netherlands	Pakistan	Poland	Portugal	Romania	Russia	Singapore	South Korea	Spain	Taiwan	Thailand	Turkey	UAE
Alternative Fuel Vehicle	39.9	32.5	54.8	45.3	19.8	7.5	12.1	19.9	15.3	4.3	38.6	17.0	25.2	19.3	7.5	24.5	27.4	15.3	10.2	27.9	13.7	12.0
Alternative Fuels	5.6	117.8	19.6	59.1	99.8	15.8	25.7	20.6	52.9	30.4	78.0	31.1	19.2	33.0	21.4	33.2	27.9	93.6	55.6	47.2	40.9	40.3
Biomass	6.6	44.8	12.9	29.3	36.9	8.5	14.7	22.3	20.9	2.4	39.4	21.6	5.6	16.3	32.3	14.4	35.5	25.6	22.8	26.3	27.3	20.9
Building Technologies	34.7	74.6	8.1	77.3	26.7	34.8	80.1	60.2	34.1	18.2	46.8	49.8	12.8	43.0	22.8	65.7	48.9	75.2	63.4	33.6	34.5	65.9
Geothermal	16.1	93.2	16.0	44.2	37.6	15.0	30.2	19.4	41.4	46.4	5.1	25.0	12.6	33.8	23.7	23.3	40.6	47.9	41.5	23.1	25.7	56.4
Photovoltaic	9.8	122.1	4.0	62.3	43.5	5.9	49.8	57.3	59.3	24.5	65.4	48.5	24.2	51.4	41.9	34.2	60.1	60.8	41.2	2.8	43.7	38.8
Recovery and Recycling	16.6	33.9	22.9	21.6	15.3	19.4	17.5	18.9	15.7	8.7	20.6	22.0	8.8	16.0	15.8	15.5	14.9	25.3	9.9	19.9	17.0	16.2
Waste Management	12.7	31.8	16.8	36.0	17.3	20.3	9.4	5.6	14.7	10.5	17.0	13.2	16.1	13.7	22.7	14.3	25.6	28.4	23.9	5.7	12.2	5.7
Water/ Waste Water	46.2	49.3	23.7	66.6	40.3	75.4	25.5	29.2	23.1	30.1	22.4	40.3	78.2	31.9	16.9	10.8	52.9	41.6	44.6	61.1	15.1	49.9
Wind	54.5	120.7	106.5	64.7	45.9	48.8	43.3	55.5	53.5	57.8	44.3	47.8	64.3	39.1	44.3	25.6	85.7	47.5	43.8	69.7	41.9	28.7

When the same filtering and heat mapping process is applied to the data at Level 3, 20 markets are identified across 25 countries (see Figure 30a and 30b). This analysis identifies more priority export market niches by segmenting Building Technologies, Geothermal, Photovoltaic and Wind activities and highlighting (as examples) Windows to Spain,Water Distribution & Treatment to Indonesia and Saudi Arabia and Water Engineering to Taiwan.

Figure 30a: 2009/ 10 Exports (£m) By Leading Country and Level 3 Products and Services

Level 2	Level 3	Canada	Chile	China	Denmark	France	Hong Kong	Hungary	India	Indonesia	Italy	Japan	Malaysia	Pakistan
Additional Energy Sources	Additional Energy Sources Under Development	2.3	0.7	18.0	0.9	7.6	4.0	0.6	8.5	0.7	1.7	8.7	8.1	5.4
Alternative Fuel Vehicle	Alternative Fuels (Main Stream) for Vehicles Only	6.6	34.3	28.0	46.8	5.5	38.5	6.0	16.9	6.5	10.4	16.7	13.2	34.2
Alternative Fuels	Other Fuels	30.0	4.9	80.5	17.1	15.8	52.6	21.6	68.2	14.0	22.8	14.3	35.6	52.2
Biomass	Biomass Energy Systems	9.3	2.9	21.1	6.1	12.0	12.6	7.6	15.7	3.8	6.4	10.0	9.8	17.8
Building Technologies	Doors	5.0	8.6	19.3	2.1	8.3	17.6	9.5	7.6	9.0	19.4	15.3	8.4	12.3
Building Technologies	Insulation and Heat Retention Materials	8.2	10.9	27.2	2.8	10.5	27.8	14.2	9.7	11.9	25.9	20.7	12.8	15.1
Building Technologies	Monitoring and Control Systems	2.6	3.9	8.6	1.1	3.1	10.0	5.0	3.1	3.8	10.3	7.1	3.8	5.3
Building Technologies	Windows	7.1	11.4	19.5	2.2	8.0	21.9	12.3	6.4	10.2	24.5	17.2	9.1	14.2
Geothermal	Manufacture and Supply of Specialist Equipment	2.1	3.1	15.8	2.9	4.9	7.6	2.5	7.1	3.0	6.0	3.6	7.8	1.0
Geothermal	Suppliers of Systems	2.2	3.2	16.2	3.2	4.5	8.8	2.3	6.6	3.0	5.9	3.3	7.5	1.0
Geothermal	Whole Systems Manufacture	5.7	7.2	48.2	7.5	12.7	21.0	6.4	18.5	6.8	13.7	9.6	20.0	2.3
Photovoltaic	Other Related Equipment and Chemicals	4.0	2.1	25.8	1.0	11.4	13.4	3.2	9.2	1.4	11.4	12.5	12.0	14.7
Photovoltaic	Photovoltaic Cells	4.7	2.6	28.2	0.9	12.0	14.8	4.1	10.0	1.4	12.1	12.7	14.5	17.1
Photovoltaic	Systems & Equipment	9.6	4.6	61.3	1.9	21.1	29.8	7.1	21.4	2.6	23.5	28.3	29.8	29.9
Recovery and Recycling	Waste Collection	4.6	7.1	15.0	9.5	8.7	9.3	8.2	6.5	8.7	7.4	8.2	6.8	9.2
Water Supply and Waste Water Treatment	Engineering	5.4	11.9	11.6	5.9	10.3	14.8	7.0	9.9	19.8	6.4	7.1	5.6	5.1
Water Supply and Waste Water Treatment	Water Treatment and Distribution	12.9	33.1	36.5	17.2	31.5	50.1	19.2	29.3	53.6	18.4	21.3	16.9	16.8
Wind	Large Wind Turbine	9.9	19.6	44.8	38.5	5.6	22.7	16.9	16.2	19.3	15.3	18.7	20.0	15.0
Wind	Small Wind Turbine	5.5	11.1	25.7	24.6	3.1	14.2	9.3	10.8	10.6	9.6	12.8	11.7	10.6
Wind	Wind Farm Systems	11.2	23.8	50.3	43.4	7.1	27.8	20.4	18.9	19.0	18.4	24.0	21.8	18.8

Figure 30b: 2009/ 10 Exports (£m) By Leading Country and Level 3 Products and Services

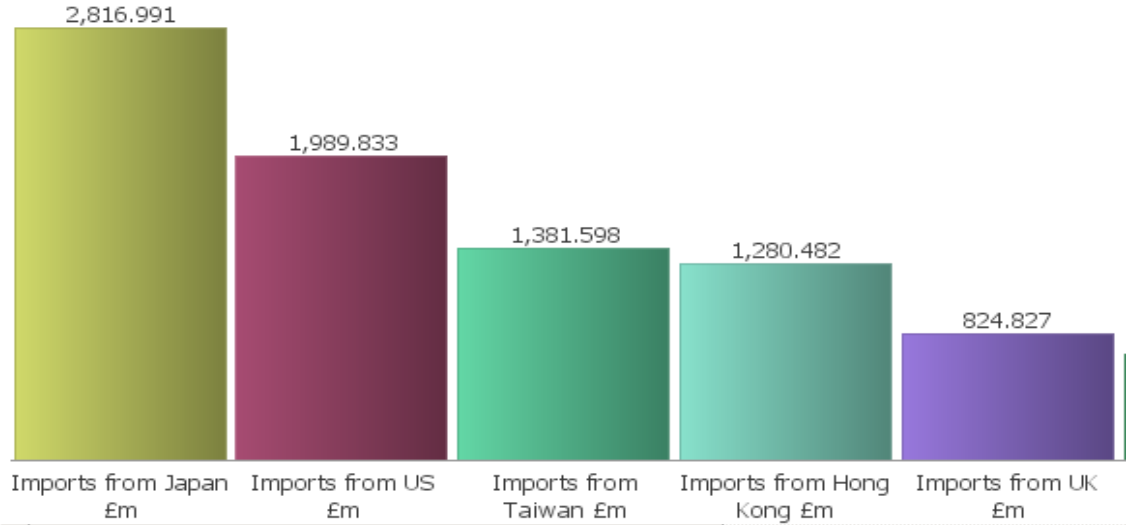
Level 2	Level 3	Pakistan	Poland	Portugal	Romania	Russia	Saudi Arabia	Singapore	South Korea	Spain	Taiwan	Thailand	UAE
Additional Energy Sources	Additional Energy Sources Under Development	5.4	9.8	1.7	10.9	3.0	0.7	9.5	4.3	8.9	4.5	0.9	11.2
Alternative Fuel Vehicle	Alternative Fuels (Main Stream) for Vehicles Only	34.2	15.0	21.4	16.9	6.4	22.7	21.2	23.7	13.2	8.7	24.3	10.6
Alternative Fuels	Other Fuels	52.2	27.9	16.5	23.6	14.4	37.6	28.7	20.0	40.9	48.7	42.3	35.9
Biomass	Biomass Energy Systems	17.8	8.9	2.8	7.8	14.5	7.7	5.9	16.6	8.1	10.9	13.1	10.1
Building Technologies	Doors	12.3	10.6	3.5	9.1	4.9	5.1	16.5	11.8	11.2	17.8	8.5	16.8
Building Technologies	Insulation and Heat Retention Materials	15.1	18.9	4.1	17.1	9.1	9.0	22.6	18.6	15.7	19.7	10.7	24.9
Building Technologies	Monitoring and Control Systems	5.3	5.8	1.6	5.4	2.5	3.1	7.3	5.4	5.4	8.2	3.8	7.5
Building Technologies	Windows	14.2	14.5	3.6	11.4	6.2	7.1	19.3	13.0	42.9	17.7	10.6	16.8
Geothermal	Manufacture and Supply of Specialist Equipment	1.0	4.6	2.7	6.1	4.8	5.1	4.8	7.7	4.7	7.4	4.3	10.3
Geothermal	Suppliers of Systems	1.0	4.4	2.4	6.4	4.7	4.9	4.3	8.3	3.5	7.9	4.1	10.0
Geothermal	Whole Systems Manufacture	2.3	12.4	5.9	15.8	10.7	13.8	10.6	17.6	33.3	19.8	11.4	27.1
Photovoltaic	Other Related Equipment and Chemicals	14.7	11.3	5.0	11.3	8.9	1.9	7.7	13.9	4.6	9.5	0.6	8.4
Photovoltaic	Photovoltaic Cells	17.1	10.8	6.5	13.4	9.6	1.9	7.7	14.0	5.1	9.1	0.6	9.0
Photovoltaic	Systems & Equipment	29.9	23.2	11.1	23.7	21.1	4.4	17.0	28.0	49.9	20.1	1.4	18.9
Recovery and Recycling	Waste Collection	9.2	9.9	3.9	7.2	6.4	6.6	6.9	6.4	10.7	3.2	9.1	7.4
Water Supply and Waste Water Treatment	Engineering	5.1	8.8	19.9	7.3	4.6	11.5	2.6	12.7	10.9	28.1	15.5	11.9
Water Supply and Waste Water Treatment	Water Treatment and Distribution	16.8	30.5	56.1	23.7	11.8	40.7	7.9	38.8	29.7	13.9	44.0	36.8
Wind	Large Wind Turbine	15.0	16.6	24.0	14.2	15.0	9.5	9.0	28.3	12.6	16.7	22.0	10.4
Wind	Small Wind Turbine	10.6	11.2	12.9	8.5	10.0	6.4	5.7	19.7	7.6	9.4	16.8	6.6
Wind	Wind Farm Systems	18.8	20.0	27.4	16.4	19.2	12.3	10.9	37.7	27.4	17.8	30.9	11.7

7.5 UK Exports by Country and by Market

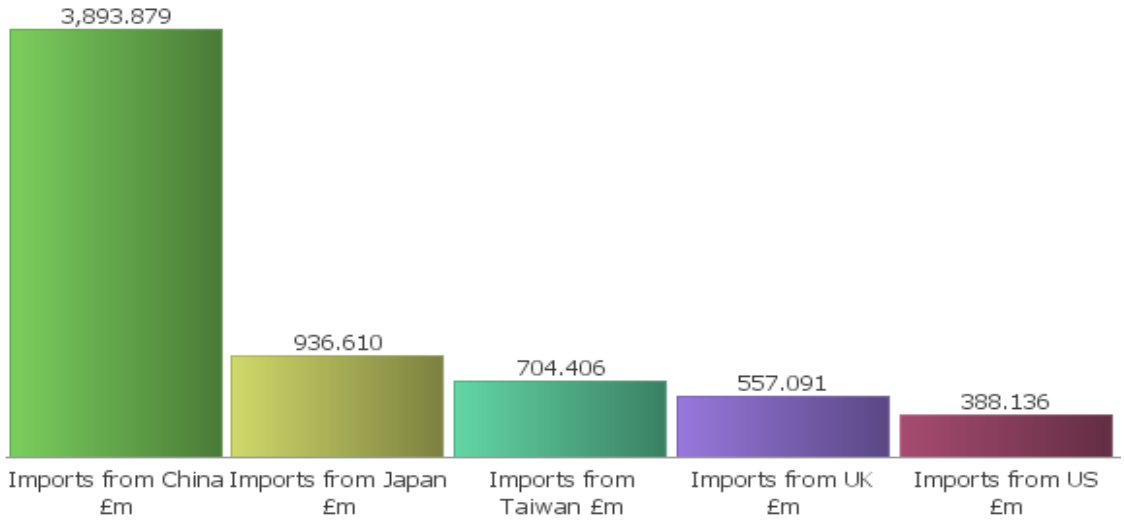
In the previous sub section, the focus was on the VALUE of exports into destination countries. In this sub section the focus is on the UK ranking in relation to a country's TOTAL imports. For this analysis total import and export data is compiled for all Top 53 countries (UK included) and UK exports are compared with all other Top 52 countries into a single country. This means that UK export performance can be ranked in relation to competing exporters for any of the major economies. This analysis adds a competitive dimension to the value of current export performance and is an indicator of the quality of trading relationship that exists. This data is drawn from Appendix G files on International Markets.

In Figure 31 we show a selection of 10 countries (from the Top 13) where UK exports are ranked within the top five sources of imports for those countries: Spain and India (1st); UAE, Poland and Romania (2nd); South Korea, Pakistan and Taiwan (3rd): Hong Kong (4th) and China (5th). Each graphic shows the comparative value of imports (including the supply chain) and ranking of the UK against its international competitors. In each case the UK is the leading European exporter to these countries.

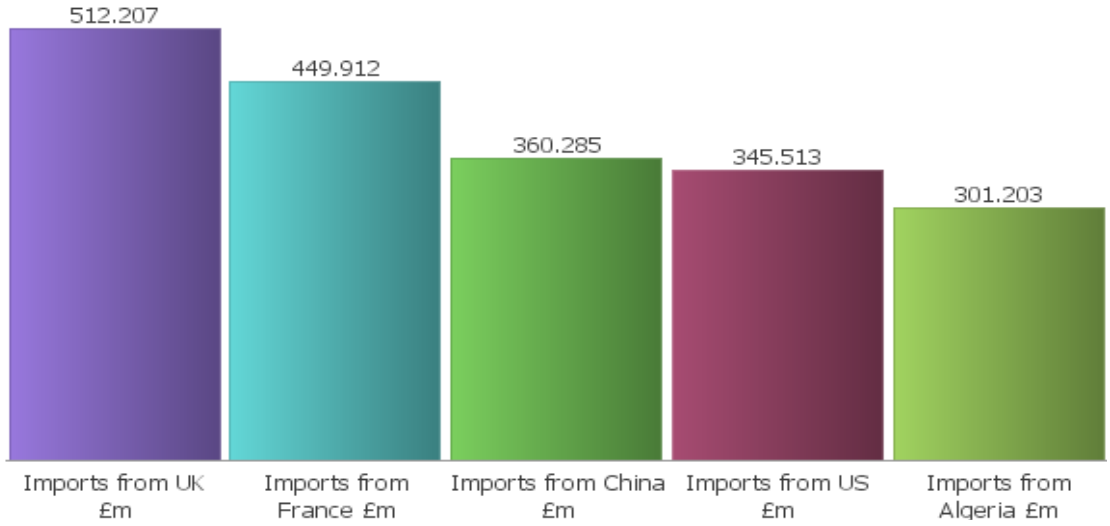
Figure 31: Examples of Import Ranking Exercise
China



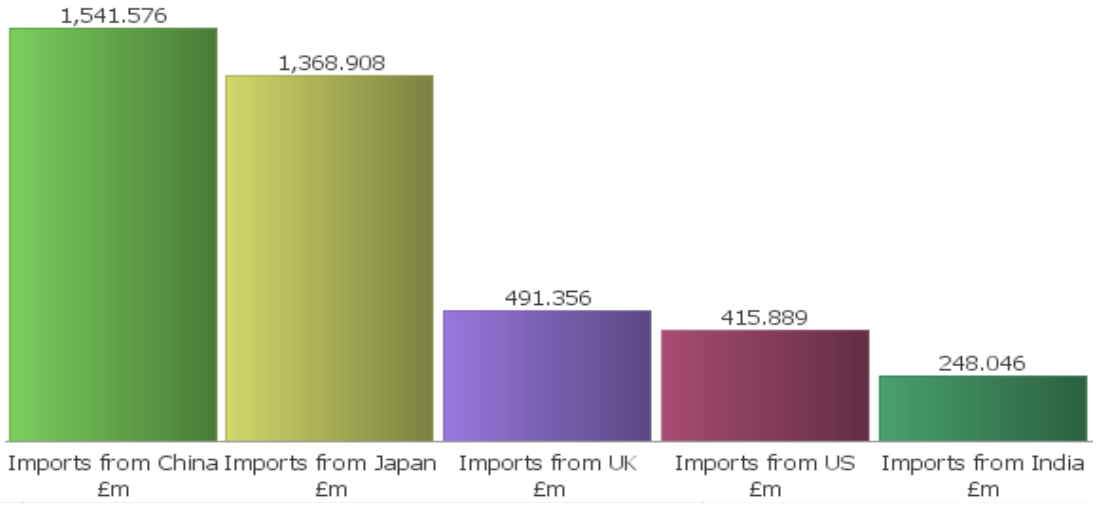
Hong Kong



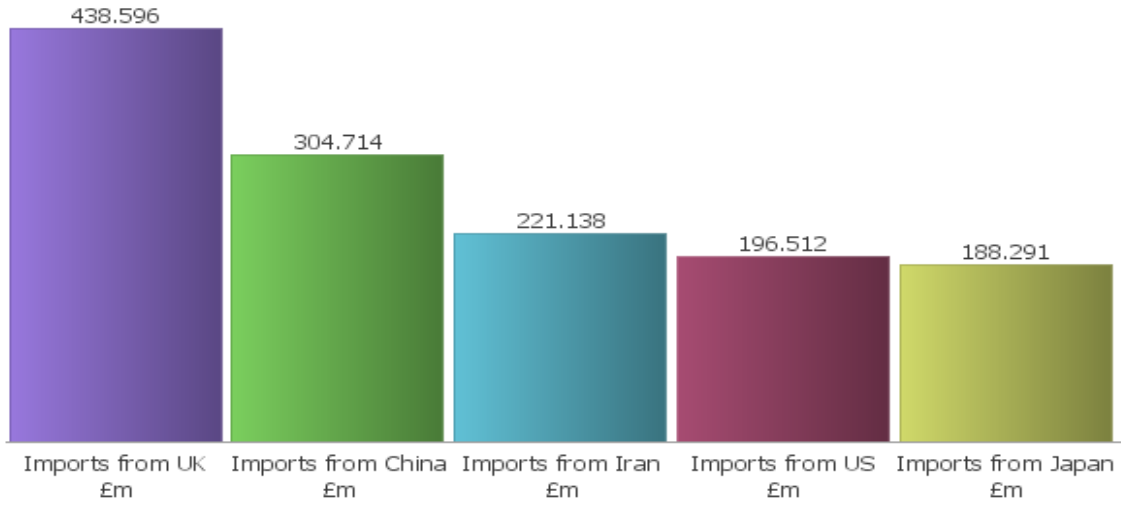
Spain



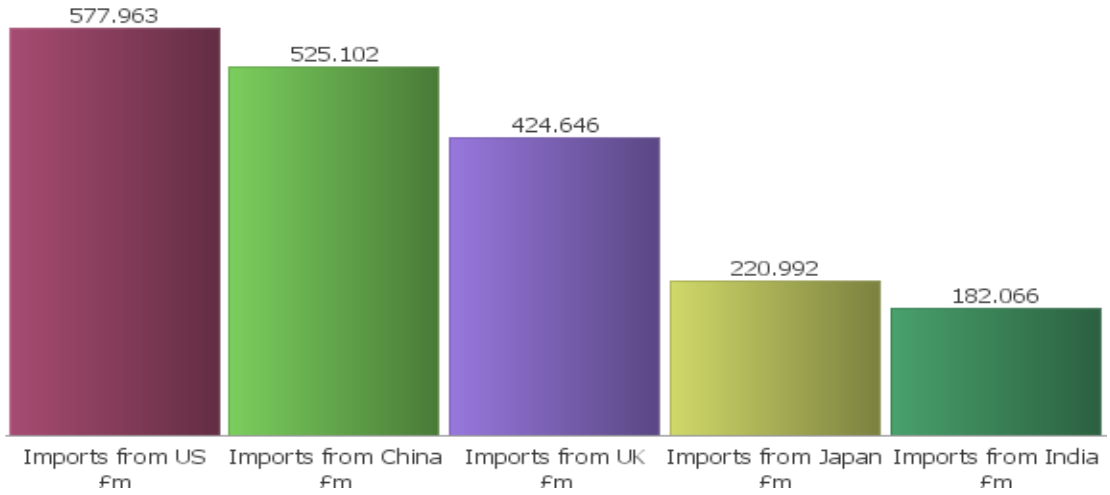
South Korea



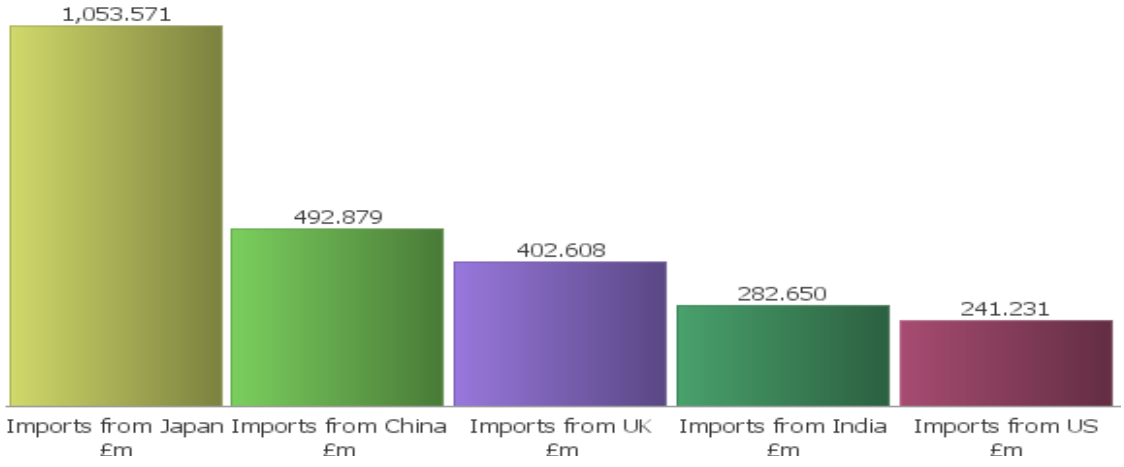
India



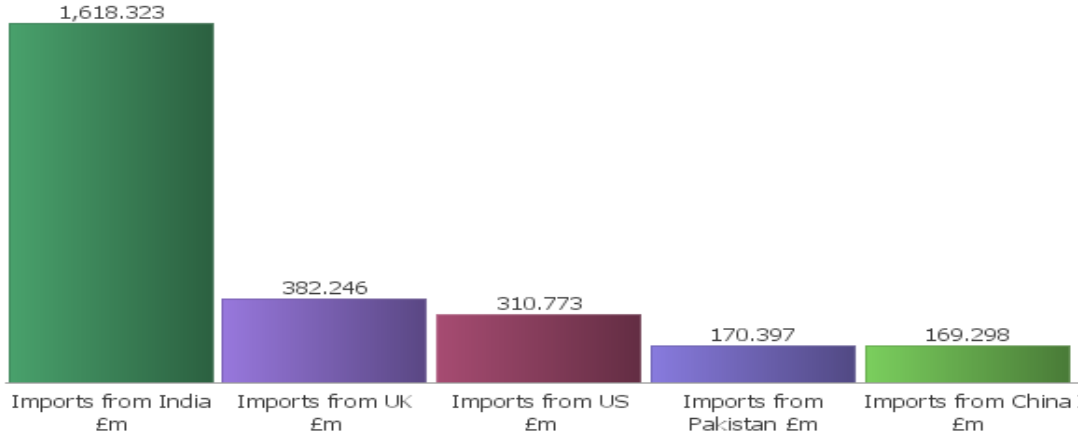
Pakistan



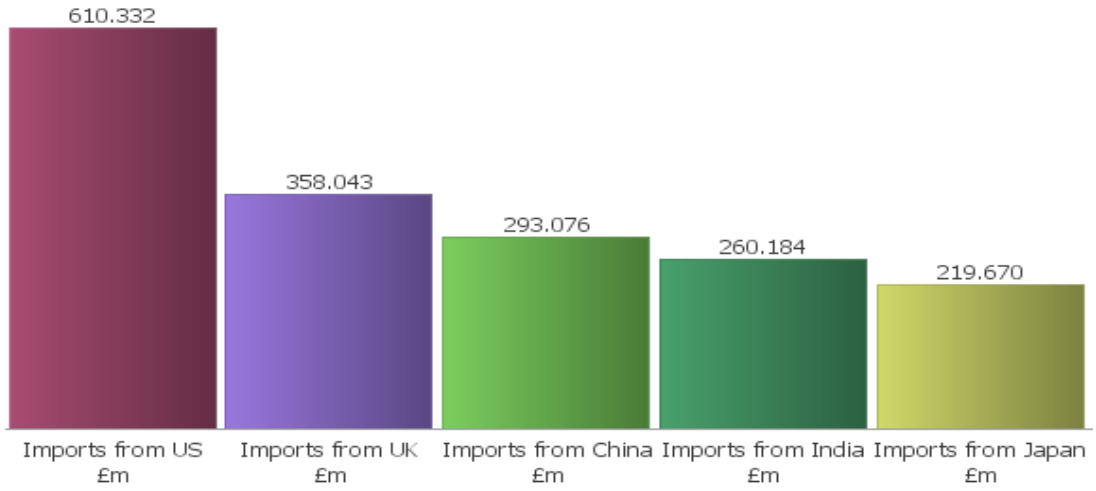
Taiwan



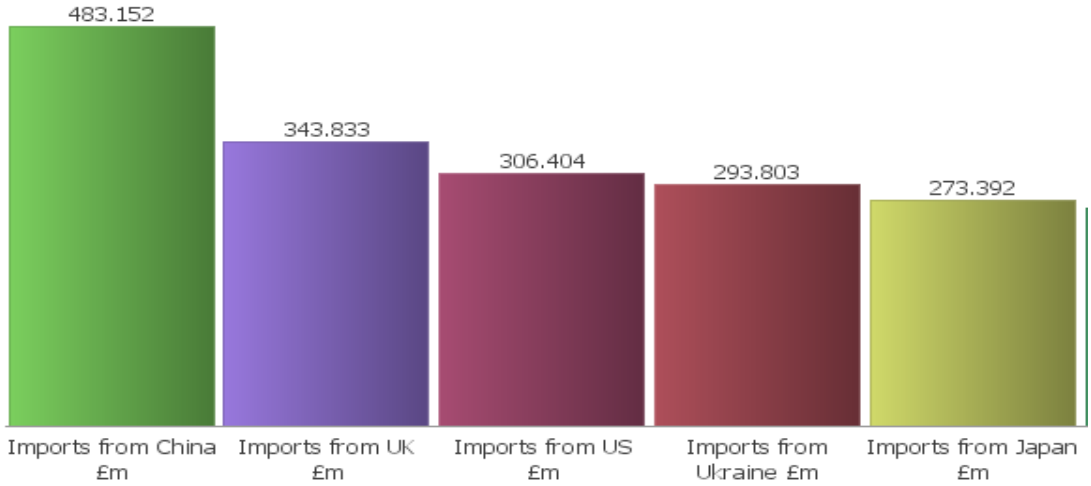
UAE



Poland



Romania



This publication is also available on our website at www.bis.gov.uk

Any enquiries regarding this publication should be sent to:

Department for Business, Innovation and Skills
1 Victoria Street
London SW1H 0ET
Tel: 020 7215 5000

If you require this publication in an alternative format, email enquiries@bis.gsi.gov.uk, or call 020 7215 5000.

URN 11/992X