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# The Economic Contribution of the Renewable Energy and Energy Efficiency Sectors in the South West of England

Regen SW

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## Executive Summary

### *Introduction*

Regen SW commissioned DTZ to undertake a study to calculate the contribution of the Renewable Energy (RE) sector and Energy Efficiency (EE) sector to the South West economy in May 2010. This work follows on from previous studies to assess the contribution of the sectors to the South West Economy in 2005 and 2008.

The key objectives of the study are to:

- Identify the economic contribution of the RE and EE sectors to the South West economy in terms of jobs and Gross Value Added (GVA)<sup>1</sup> in 2010, and compare this to previous studies
- Identify business attitudes towards the support services provided by Regen SW to organisations active in the RE and EE sectors

Environmental Technologies were identified in the South West Regional Economic Strategy (RES) as a priority sector for the region. Overall this sector offers significant growth potential, with much of the developments being driven by EU and UK environmental legislation. Renewable Energy and Energy Efficiency are significant sub-sectors within Environmental Technologies. The South West is well placed to take advantage of growth in these sectors given its natural and knowledge assets.

In carrying this study, DTZ conducted a survey with 248 businesses and public sector organisations in the RE and EE sector in the South West Region, and then scaled up the results to estimate the size of the whole sector in the region.

### ***Overview of the Renewable Energy Sector***

The results of this study demonstrate very strong growth in the renewable sector in the South West: consistent with the high levels of growth in the sector at a UK level. The South West region is well placed to take advantage of growth in the Renewable Energy sector due to the expertise already present in the region, and the region's natural assets. The region has a track record of 'firsts' in renewable energy and is at the forefront of new renewable energy developments such as wave energy and offshore wind.

The sector directly employs 5,160 FTEs jobs in the region, with a GVA of almost £251 million. In our 2008 study we estimated that the RE sector supported 2,900 FTE jobs contributing £215 million of GVA to the regional economy. Comparing the two studies, it appears that employment in the RE sector has grown by 78% since 2008, whilst GVA per head has remained broadly in line with 2008 (currently at £47,000). The growth in employment has occurred through a combination of firm growth and an increase in the number of firms active in the sector. RE businesses are generally younger than their EE counterparts with more businesses being formed since 2000. The growth in the RE sector since 2005 has vastly outperformed the economy as a whole – employment growth over the period 2005-08 was +160%, compared to 10% in the South West economy as a whole.

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<sup>1</sup> GVA or Gross Value Added is a measure of economic output. In this case we have defined it as turnover minus the cost of bought in goods and services

It is estimated that 6,000 jobs in the South West are supported by the RE sector either directly or indirectly. This supports £293 million of GVA in the South West economy. Productivity (GVA per employee) in the RE sector stands at £47,000.

| Renewable Energy                      | 2005 data | 2008 data | 2010 data |
|---------------------------------------|-----------|-----------|-----------|
| <b>Gross direct employment (FTEs)</b> | 1,140     | 2,900     | 5,160     |
| <b>Direct GVA creation</b>            | £34m      | £215m     | £251m     |
| <b>Net employment effect (FTEs)</b>   |           | 4,000     | 6,000     |
| <b>Net GVA effect</b>                 |           | £288m     | £293m     |

### **Overview of the Energy Efficiency Sector**

This study demonstrates that the EE sector has a significant impact on the South West economy. The gross direct contribution of the EE sector to the South West is to support 4,660 FTEs jobs and £153m of GVA. Comparing these figures with 2008, employment in the EE sector in the region has increased by 8% since 2008, whilst average GVA per head has dropped from £68,000 to £33,000.

After taking account for leakage and multiplier effects, the net contribution of the EE sector to the South West is estimated to be £178m of GVA, supporting 5,430 FTEs jobs either directly or indirectly.

| Renewable Energy                      | 2008 data | 2010 data |
|---------------------------------------|-----------|-----------|
| <b>Gross direct employment (FTEs)</b> | 4,300     | 4,660     |
| <b>Direct GVA creation</b>            | £294m     | £153m     |
| <b>Net employment effect (FTEs)</b>   | 5,600     | 5,430     |
| <b>Net GVA effect</b>                 | £379m     | £178m     |

### **Summary of Key Findings for RE and EE**

Regen SW identified a total of 731 businesses thought to be active in the Renewable Energy and/or Energy Efficiency sectors; these directly support in excess of 9,820 jobs and a GVA of over £400m. The survey has also identified around 50 public sector organisations active in the RE and EE sectors in the region, with a total employment of around 700 FTEs.<sup>2</sup>

The findings from this study reinforce a study by BERR<sup>3</sup>, which demonstrated that the Environmental Goods and Services sector is an important component of the regional economy, and that the South West outperforms other UK regional economies of a similar scale such as Scotland and the West Midlands in terms of the level of activity in the sector.

Businesses were asked whether they had received support from Regen SW, and to give their opinion of the quality of support received. 91% of businesses receiving support from Regen SW rated the service as either good or very good (consistent with feedback from previous studies).

<sup>2</sup> Note: the figures for public sector employment should be seen as a minimum. They relate to the sample of organisations (rather than the population as with the private sector), and have not been scaled up to the total size of the sector as the total population of active public sector organisations is unknown.

<sup>3</sup> BERR, March 2009, "Low Carbon and Environmental Goods and Services: an industry analysis", available from <http://www.bis.gov.uk/files/file50253.pdf>



## 1. Introduction

### 1.1 Study Objectives

DTZ has produced a number of studies for Regen SW on the economic contribution of the Renewable Energy (RE) and Energy Efficiency (EE) sectors to the South West economy. In May 2010, Regen SW commissioned DTZ to produce an update to these studies. The key objectives of the study are to:

- Identify the economic contribution of the RE and EE sectors to the South West economy in terms of jobs and GVA in 2010, and compare this to the 2008 and 2005 studies
- Identify the business attitudes towards the support services provided by Regen SW to organisations active in the RE and EE sectors

### 1.2 Methodology

This update study has been carried out on a compatible basis to the 2008 and 2005 studies on the RE and EE sectors to ensure that the results are comparable. The questionnaire for the survey element of this study retained the majority of the original questions in their original format to ensure comparability.

In the 2008 study DTZ undertook a survey of 152 firms in the RE and EE sectors. In the 2005 study DTZ undertook a survey of 100 firms in the RE sector only. For the purposes of the 2010 update, DTZ conducted a telephone survey with 248 organisations. The purpose of the telephone survey was to assess:

- The current level of employment and GVA in the RE and EE sectors in the South West.
- The attitude towards the support services provided by Regen SW

The results from the 2010 update study have been compared to our previous studies to show the trend in employment and economic contribution of the RE and EE sectors over time.

### 1.3 Survey Response Rate

DTZ contacted a total of 848 organisations and completed 248 interviews. The distribution of the organisations interviewed is as follows:

- 195 respondents interviewed are private sector businesses, and 53 organisations are in the public sector.
- 228 organisations are active in the RE sector and 111 organisations of those interviewed are active in the EE sector.

The survey findings shown in the remainder of the report relate to the results from the 248 achieved interviews. To ensure comparability when comparing with the previous studies, the

focus of the study is on the 195 private businesses interviewed that are active in the South West and in the RE and/or EE sectors, since the 2008 and 2005 studies involved private companies only. Comparisons between the private and public organisations interviewed in the 2010 survey are shown separately.

## 1.4 Background and Definitions

This section provides an overview and definitions of the Renewable Energy and Energy Efficiency sectors in the South West.

### Renewable Energy Sector

Renewable Energy (RE) is a sub-sector of the environmental technologies sector and is expected to play a significant role in developing the wider sector's future developments. In the previous studies for Regen SW, we estimated that there were 1,140 FTEs employed directly in the Renewable Energy sector in 2005, generating a GVA of £34 million per annum. By 2008, we estimated that this had increased to 2,900 FTEs and a GVA of £215 million per annum. According to BERR study, the South West RE sector was worth £2.1 billion in 2007/8, with more than 1,000 companies employing 17,600 people<sup>4</sup> - however it should be noted that the definition used in the BERR study is much broader than that adopted here, including non-specialist supply chain activities.

This sector is expected to grow strongly, largely as a result of government policy interventions to reduce carbon dioxide emissions by 60% by 2050 and for renewable energy to supply 15% of UK energy by 2020. The South West region is well placed to take advantage of this growth, both due to the expertise already present in the region, and the region's natural assets. The region has a track record of 'firsts' in renewable energy, from the UK's first commercial wind farm, to the first UK scheme to harness electricity from fermented farm and food waste. The 2009 survey of RE projects in South West England undertaken by Regen SW identified 470 grid-connected renewable electricity projects in the South West (155MW of installed capacity) and 1,504 renewable heat projects (56MW). The South West is at the forefront of new renewable energy developments such as wave energy, with the construction of the 'Wave Hub' to be located off Cornwall currently underway; and the granting of two licences for offshore wind within the region (Atlantic Array and West of Wight zone).

For the purposes of this study, we have defined the RE sector as including commercial organisations involved in the design, manufacture, and supply of devices that derive energy from renewable sources and related services. It includes the following technologies:

- Wind
- Biomass
- Marine Energy
- Hydro
- Micro-renewables (on-site or buildings integrated renewables)
- 'Other Renewable Energy' includes a range of businesses involved in hydrogen, concentrated solar, ocean thermal, geothermal, landfill/sewage gas, bio-fuels, biomass burners, and heat pumps. This category also acts as a catchall category for consultants,

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<sup>4</sup> BERR, March 2009, "*Low Carbon and Environmental Goods and Services: an industry analysis*", available from <http://www.bis.gov.uk/files/file50253.pdf>

architects, and engineers involved in the RE sector generally, where it was not possible to categorise jobs into individual sub-sectors.

## Energy Efficiency Sector

Research into the EE sector in the UK and South West has traditionally been more limited than for RE. However more recently, the definition and available information of this sector has widened. In addition to the more established environmental activities, information is becoming readily available for a number of other emerging low carbon activities, such as energy management and building technologies. BERR estimate that the Environmental and Emerging Low Carbon sectors have a market value of £6.6 billion in the UK<sup>5</sup> - however it should be noted that the definition used in the BERR study is much broader than that adopted here.

For the purposes of this study, we have defined the EE sector as including commercial organisations involved in the design, manufacture, and supply of energy efficient products and energy efficiency services. This includes the following sub-sectors:

- Building design and management, including insulation and lighting
- Products and services in process management and monitoring
- Products and services in the manufacture and supply of motors, drives, and pumps
- The supply of heating and cooling products, including heat exchangers, heat recovery, HVAC, and refrigeration
- Consultancy services, in particular in energy management
- Power production and control, including boilers, CHP, generators, transformers, and power factor correction
- The manufacture and supply of fluid management products (including air)
- The 'Other Energy Efficiency' sub-sector includes a range of advisory firms working in Energy Efficiency generally such as engineers and consultants, where it was not possible to allocate employment to specific sub-sectors

## 1.5 Comparison with Other Regions

A report by BERR (2009) estimated that in 2007/8, the Environmental Goods and Services sector as a whole was estimated to be worth nearly £8.7 billion in the South West, employing 37,600 people in 4,200 businesses<sup>6</sup>. This represents 8.1% of the total UK Environmental Goods and Services sector, making the South West the fifth largest UK region in terms of value.

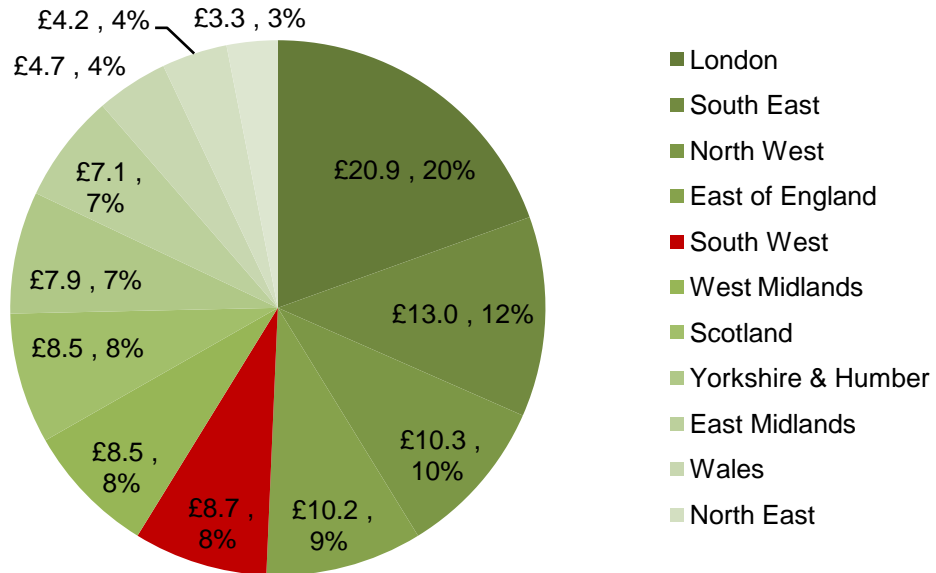
The South West has a concentration of activity in the sector relative to the UK as a whole, and outperforms regions such as the West Midlands and Scotland which have economies of a similar size to the South West, in terms of the level of activity in the sector.

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<sup>5</sup> BERR, March 2009, "*Low Carbon and Environmental Goods and Services: an industry analysis*", available from <http://www.bis.gov.uk/files/file50253.pdf>

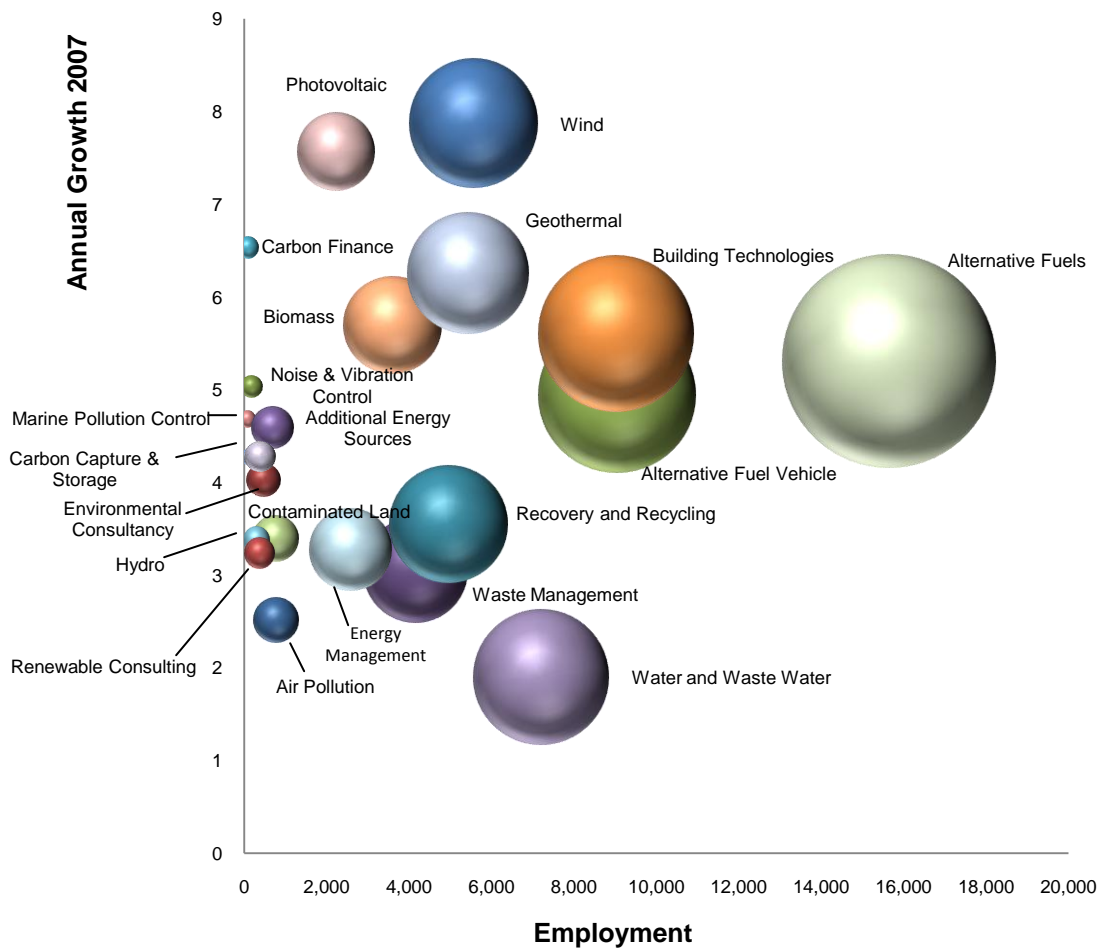
<sup>6</sup> *ibid*

**Figure 1.1: Market Value of the Environmental Goods and Services Sector (all figures in £ billions)**



In 2007/08, the fastest growing sub-sectors of the Environmental Goods and Services sector in the South West were Wind, Photovoltaics, and Geothermal. The largest components in terms of absolute level of employment and market value were Alternative Fuels and Alternative Fuel Vehicles, Building Technologies, Wind, and Water and Waste Water. In comparison to other regions, the South West has a particular specialisation in Contaminated Land, Water & Waste Water, Waste Management, Recovery and Recycling, Wave & Tidal, Energy Management, and Alternative Fuels.

Overall, the sector is expected to experience significant growth in the South West region, due to legislative and policy drivers; a concentration of existing firms and expertise in the sector; and significant environmental assets.



## 1.6 Report Outline

The remainder of this report is organised as follows:

- **Section two** – provides a summary of survey data relating to organisational demographics, including employment, turnover, and gross value added (GVA) of the private organisations surveyed
- **Section three** – the results from the survey are extrapolated to estimate the overall contribution of the RE and EE sectors to the economy of the South West region
- **Section four** – contains further data from the survey on the use and perception of Regen SW support

## 2. Economic Contribution of Organisations Interviewed

This section provides an overview of survey responses from businesses active in the RE and/or EE sectors in the South West. Results from public sector organisations are shown separately at the end of this section and indicated clearly. The purpose of this section is to show the characteristics of businesses based in the South West.

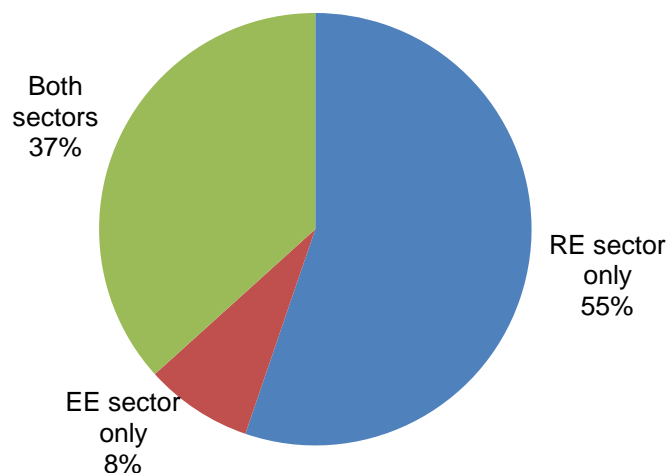
### 2.1 Business Demographics

#### Survey Sample

DTZ completed interviews with a total of 195 businesses active in the RE and/or EE sectors in the South West region. As shown in Figure 2.1 below, 55% of the businesses are active in RE only, 8% in EE only, and a further 37% are active in both sectors.

In our 2008 study 64% of the businesses were active in RE only, 20% in EE only, and a further 16% were active in both sectors. This is an indication that more companies are now involved in both the RE and EE sectors as opposed to just one of them. An extension to the diversification of firms, although not backed up by firm evidence, is that over time firms are becoming more active in a range of technologies rather than pursuing a single technology.

**Figure 2.1: Survey Sample by Sector**



#### Overall Size of Businesses

Businesses were asked to quantify their overall number of staff employed across all sectors (not just RE and EE), expressed as full time equivalents employees (FTEs). Figure 2.2 shows the distribution of the businesses by total employment in all sectors. Overall, 57% of firms are micro-businesses with fewer than 10 FTEs. A further 32% of businesses have between 10 and 49 FTEs (small businesses), and 8% of businesses employ between 50 and 249 FTEs (medium sized businesses). 4% of the sample consists of large businesses with more than 250 FTEs. Across all sectors the mean average number of employees is 47; however the median is just 9 FTEs, reflecting the fact that there are a small number of large firms included

in the sample. It is worth noting that the mean average employment per firm across the economy as a whole is 13 – hence this sector has a larger than average firm size.

**Figure 2.2: Businesses by Total Employment**

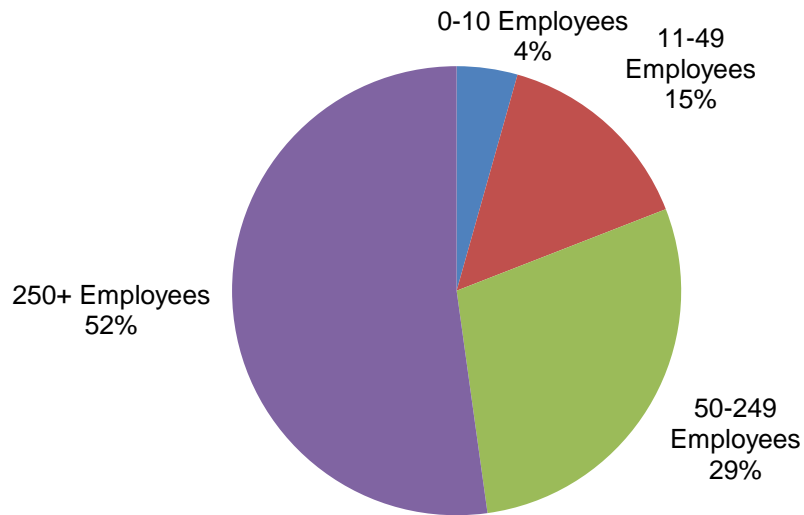
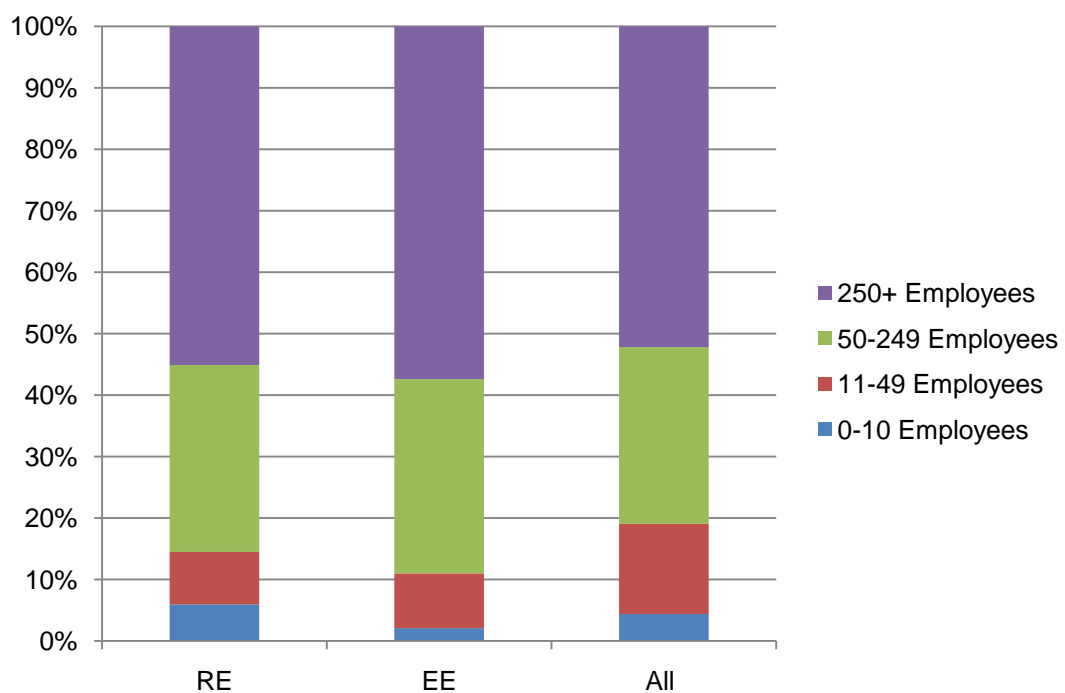


Figure 2.3 shows the breakdown of total employment in each sector by size of firm. Large businesses (250+ FTEs) account for 52% of total employment, with small and medium sized businesses (10-249 employees) accounting for 43% of employment. Whilst 53% of all businesses are micro-businesses, they account for just 4% of total employment.

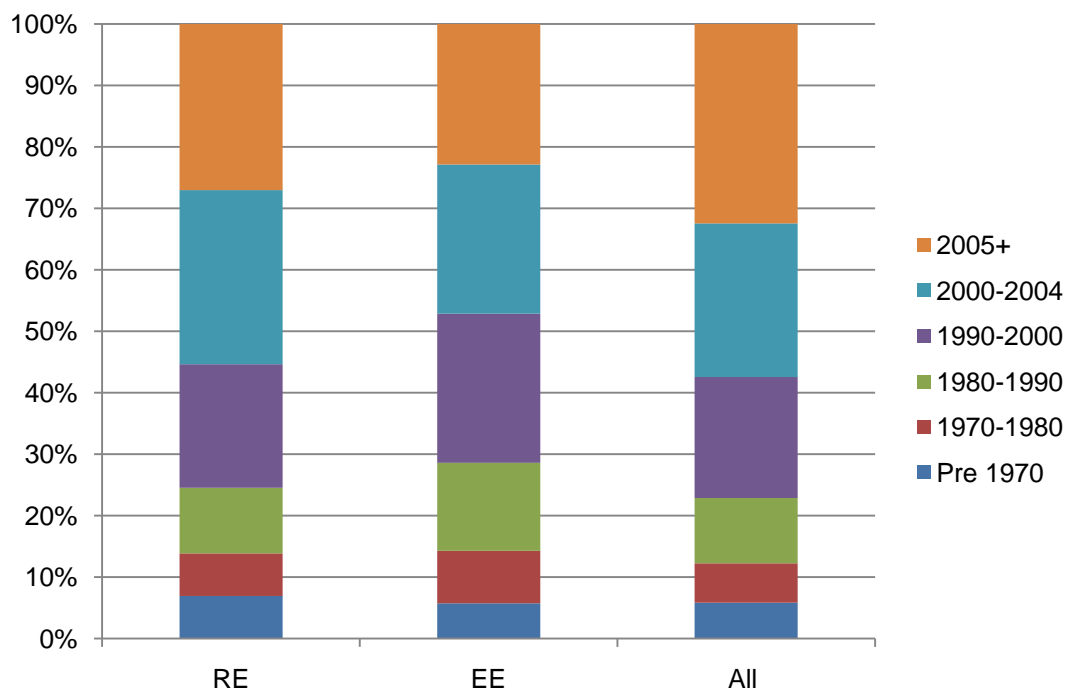
**Figure 2.3: Breakdown of Total Employment by Size of firm**



## Age of Businesses

Figure 2.4 provides a profile of when businesses were formed. 32% of all the businesses were established since 2005, with a further 25% established between 2000 and 2004. 6% of businesses were established prior to 1970, with the oldest formed in 1850. The proportion of businesses formed since 2000 is the highest in the RE sector, with 55% of businesses formed since 2000. This suggests that the RE sector is a newer growth sector than the EE sector.

**Figure 2.4: Age Profile of Sampled Businesses**



## 2.2 Direct Economic Contribution of Sample Businesses

The survey was designed such that data on employment and GVA could be captured. These results can be split by sector (RE and EE). The data allows us to quantify the level of economic activity within the sample businesses, and scale this up to estimate the overall contribution of the sector (see Section 3).

Table 2.2 provides a summary of statistics on the direct economic contribution of the sample businesses to the RE and EE sectors, which can be summarised as follows:

- A total of 178 businesses are active in the RE sector (including those that are active in both sectors), and 77 businesses are active in the EE sector (including those that are active in both sectors)
- Total employment identified in RE businesses is 1,622 FTEs. This gives an average of 9 FTEs working in RE per business. This is lower than the corresponding figure in 2008 (13) which may in part reflect the number of new entrants into the sector. It is also lower than the average firm size across the whole economy (13).

- Total employment in EE identified in sample businesses is 1,280 FTEs. This gives an average of 18 FTEs per EE business (again down from an average of 38 FTEs in 2008<sup>7</sup>), which is larger than the average firm across the whole economy.
- The average turnover per FTE is £98,000 for RE businesses (up from £91,000 in 2008), and £55,000 for EE businesses (down from £109,000 in 2008). It is worth noting as a benchmark that the average turnover per FTE across the economy as a whole was £120,000 in 2008; hence the RE and EE sectors have below-average turnover per head.
- GVA has been calculated by considering turnover and the cost of purchases within businesses in the sector. The average GVA per FTE in the RE sector is £47,000, which is a slight decrease on the value for 2008 (£51,000). GVA per head is comparatively lower in the EE sector at £33,000 per head. However when compared to the industry-wide UK average of £35,000 per head<sup>8</sup>, the RE sector has relatively high GVA per head, whilst the EE sector is around the average. The RE sector has levels of GVA per head just under the average values for the Manufacturing (£54,000) and Business Services (£55,000) sectors.

**Table 2.1: Summary Statistics for RE and EE businesses**

|   | RE       | EE       | Benchmark:<br>Whole UK<br>Economy |
|---|----------|----------|-----------------------------------|
| <b>Number of businesses involved in sector (including those involved in both sectors)</b> | 178      | 77       |                                   |
| <b>Employment in sector</b>   |          |          |                                   |
| <b>Total employment</b>   | 1,622    | 1,280    |                                   |
| <b>Average per business</b>   | 9        | 18       | 13                                |
| <b>Turnover in sector</b>   |          |          |                                   |
| <b>Average per business</b>   | £927,000 | £959,000 |                                   |
| <b>Average per FTE</b>  | £98,000  | £55,000  | £120,000                          |
| <b>Gross Value Added in sector</b>  |          |          |                                   |
| <b>Average per business</b>   | £450,000 | £574,000 |                                   |
| <b>Average per FTE</b>  | £47,000  | £33,000  | £35,000                           |

\* Note that these are figures for the sample rather than the sector as a whole which are presented in Section 3.

## 2.3 Wider Impact on the South West Economy

In assessing the full impact of RE and EE businesses on the economy of the South West, it is important to assess the extent to which spending on suppliers and wages are retained within the region. Any supplier and wage spending retained in the local economy will lead to additional economic benefit to the area (multiplier effects). Conversely, employment within

<sup>7</sup> However, this was due to a bigger sample of large EE organisations in the 2008 survey when compared to the 2010 sample. The average employment for EE organisations with less than 50 FTEs in the 2008 survey stood at 10 FTEs which is more representative of the sector.

<sup>8</sup> Source: Annual Business Inquiry, 2008

the region which is associated with staff based outside the region will lead to leakages of benefit outside the region.

## Location of Employees

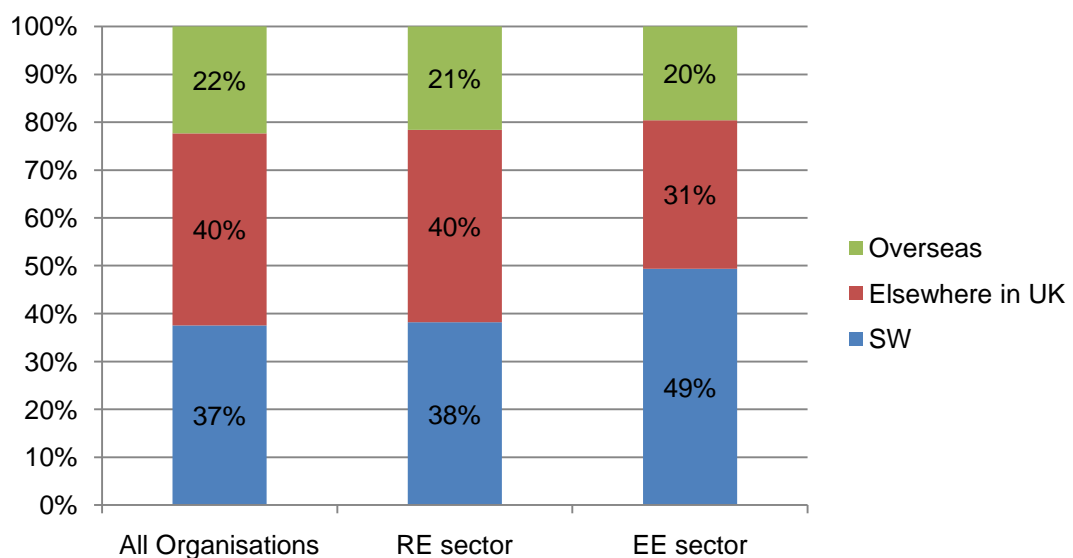
In considering the impact of RE and EE businesses on the economy of the South West, it is important to consider the extent to which jobs are filled by people who live in the South West region, or conversely the extent to which employment 'leaks' out of the region.

Organisations were questioned on the proportion of their workers who live outside of the South West region. 9% of all workers in sample businesses live outside of the South West (this has remained relatively constant since 2008 where the employment leakage stood at 10%). Therefore 9% of the benefits of employment from the RE and EE sectors do not occur within the SW and leak into other regions. This is high relative to other sectors, since the average leakage of jobs based in the South West region to workers resident elsewhere is 3.4%<sup>9</sup>.

## Location of Suppliers

In addition to wage spending, it is also important to consider the extent to which supplier spending is retained within the region. Figure 2.5 shows the pattern of spending by RE and EE firms on suppliers located in the South West, the rest of the UK, and overseas. In total, 37% of purchases made by RE/EE businesses are made in the SW, 40% are from the rest of the UK, and 22% from overseas. Businesses in EE make a larger proportion of their purchases from within the South West (49%) than businesses in RE (38%). This is likely to be due to the fact that the EE sector is more established in the South West region, so businesses can more easily source goods and services within the region.

**Figure 2.5: Location of Bought-in Goods and Services**



<sup>9</sup> NOMIS, 2001 Census – UK Travel Flows, accessed on 24<sup>th</sup> May 2010, available from <https://www.nomisweb.co.uk>

In 2008, 35% of the businesses' purchases were made within the SW – slightly lower than the 37% figure today. This suggests that businesses are increasingly sourcing from within the region.

## 2.4 Firm-level Growth

In addition to supplying current employment data, businesses also provided information on their level of employment five years ago (or year of establishment if sooner). This has allowed us to assess the extent to which sector growth is driven by the growth of individual businesses, or new business starts.

### Firm Level Changes of Employment

Table 2.3 contains data on employment growth within businesses. Overall, just over half of the companies active in the RE and/or EE sectors have experienced employment growth since 2005; and a further 34% employ the same number of people now as five years ago. Only 11% of firms have experienced a decrease in employment over this period.

The proportion of firms which have grown is higher in the RE sector than the EE sector (63% compared to 21%), further reinforcing the difference in the relative growth of these sectors.

**Table 2.2: Firm Level Changes in Employment since 2005**

|                      | Increase | Decrease | No change |
|----------------------|----------|----------|-----------|
| <b>RE</b>            | 63%      | 7%       | 30%       |
| <b>EE</b>            | 21%      | 21%      | 57%       |
| <b>Both sectors</b>  | 51%      | 15%      | 34%       |
| <b>All companies</b> | 56%      | 11%      | 34%       |

### Start-up Businesses

Some of the sampled businesses did not exist five years ago. Overall 61 businesses sampled were set up since 2005, equating to 32% of the sample. The average current employment was 6 FTEs per start-up firm. The rate of business start-ups was higher in the RE sector (68% of businesses) than in the EE sector (10%), again reinforcing the difference between the two sectors; with RE still experiencing new growth and start-ups, and EE a more established sector.

## 2.5 Public Sector Employment

DTZ also completed interviews with 53 organisations from the public sector that are active in the RE and/or EE sectors in the South West region. 36% of the organisations sampled are active in RE only, 6% in EE only, and a further 58% are active in both sectors. As shown in Table 2.4 public organisations are more likely to be involved in both sectors rather than just RE or EE (a difference when compared to firms).

**Table 2.3: Survey Sample by Sector**

|                               | Private Firms | Public Organisations |
|-------------------------------|---------------|----------------------|
| <b>RE only</b>                | 55%           | 36%                  |
| <b>EE only</b>                | 8%            | 6%                   |
| <b>Active in Both sectors</b> | 37%           | 58%                  |

### Overall Organisation Size

Public organisations were asked to quantify their overall number of staff employed across all sector (not just RE and EE), expressed as FTEs. Overall, 29% of organisations are micro-sized with fewer than 10 FTEs. A further 20% of organisations have between 10 and 49 FTEs (small organisations), and 24% of organisations employ between 50 and 249 FTEs. 27% of the sample consists of large organisations with more than 250 FTEs. The median number of employees per organisation is 51 FTEs significantly larger than the average firm.

### Public Sector Employment in the Renewable Energy and Energy Efficiency sectors

Table 2.4 provides a summary of statistics of the sample public organisations in the RE and EE sectors, which can be summarised as follows:

- A total of 50 public organisations are active in the RE sector (including those that are active in both sectors), and 34 public organisations are active in the EE sector (including those that are active in both sectors)
- Total employment identified in RE public organisations is 380 FTEs. This gives an average of 8 FTEs working in RE per organisations (compared to 9 in the private sector)
- Total employment in EE identified in the sample organisations is 329 FTEs. This gives an average of 10 FTEs per EE organisation (compared to 18 in the private sector)

**Table 2.4: Summary Statistics for the RE and EE sectors, public organisations**

|   | RE  | EE  |
|---|-----|-----|
| <b>Number of businesses involved in sector (including those involved in both sectors)</b> | 50  | 34  |
| <b>Employment in sector</b>   |     |     |
| <b>Total employment</b>   | 380 | 329 |
| <b>Average per business</b>   | 8   | 10  |

Note that these are figures from the sample rather than the whole public sector in the region. The total number of public sector organisations active in the RE and/or EE sectors in the region is unknown, and therefore it is not possible to scale it to represent the whole region as was done with the private businesses.

### 3. Estimates for the Economic Contribution of the Renewable Energy and Energy Efficiency Sectors

The purpose of this section is to provide an estimate of the total contribution of the RE and EE sectors to the South West economy. In order to achieve this, the results of the survey have been scaled up to reflect the total population of businesses thought to be directly active in the RE and EE sectors. Great care has been taken to ensure that the estimates are robust and do not overstate the contribution of the sector.

As well as calculating the gross (direct) contribution of the RE and EE sectors to the South West economy in terms of jobs and GVA creation; an assessment has also been made of the net impact on the economy after accounting from leakage and multiplier effects (i.e. through supply chain purchases and income effects).

#### 3.1 Survey Sample

A total of 195 businesses completed the survey out of an effective population of 731 businesses. The overall response rate was 29%, with the mixture of businesses active in RE and EE broadly representative of the effective survey population. Table 3.1 provides an overview of survey responses by sector.

**Table 3.1: Survey Responses by sector for private firms**

|                             | RE sector<br>(including those active in<br>both sectors) | EE sector<br>(including those active in<br>both sectors) |
|-----------------------------|--|--|
| <b>Effective Population</b> | 557  | 266  |
| <b>Sample Businesses</b>    | 178  | 77   |
| <b>Response Rate</b>        | 32%  | 29%  |

Table 3.2 below provides an overview of the key statistics for the RE and EE sectors from the survey population. These statistics have been used to model the gross and net impact of the RE and EE sectors.

**Table 3.2: Key Statistics by sector**

|  | RE sector<br>(including businesses<br>active in both sectors) | EE sector<br>(including those active in<br>both sectors) |
|--|---|--|
| <b>Average employment in<br/>sector per business</b> | 9   | 18   |
| <b>Average turnover in<br/>sector per FTE</b>        | £ 98,000  | £ 55,000   |
| <b>Average GVA in sector<br/>per FTE</b>             | £ 47,000  | £ 33,000   |

### 3.2 Gross Direct Impact of the RE and EE Sectors

The statistics outlined in Tables 3.1 and 3.2 have been used to scale up to the known population of businesses active in each sector. Table 3.3 provides summary statistics for the direct contribution of the RE and EE sectors.

As shown, the RE sector is estimated to directly employ almost 5,200 FTEs in the region, with a GVA of £250.6 million per annum. The EE sector is smaller, directly employing almost 4,700 FTEs with a GVA of £152.7 million. The combined impact of the RE and EE sectors is to support in excess of 9,800 FTEs with a GVA of over £400 million.

**Table 3.3: Direct Contribution of RE and EE in the South West**

| 2010                     |           |           |                   |
|--------------------------|-----------|-----------|-------------------|
|                          | RE sector | EE sector | RE and EE sectors |
| <b>Employment (FTEs)</b> | 5,161     | 4,662     | 9,824             |
| <b>Turnover</b>          | £516.2m   | £255.1m   | £771.3m           |
| <b>GVA</b>               | £250.6m   | £152.6m   | £403.2m           |

To put these figures into perspective, our 2008 study identified 2,945 FTEs in the RE sector and 4,320 FTEs in the EE sector. In other words, in the past two years employment has grown by 75% in the RE sector and 8% in the EE sector, or 35% overall. The RE sector experienced a 160% growth in employment over the period 2005-2008 – by contrast, employment in the South West as a whole grew by 10% over this period. The scale of growth in the RE sector was significantly higher than other growth sectors in the region such as sewage and waste disposal (+52% growth over the period 2005-2008), water transport (+56%), and forestry and related service (+48%).<sup>10</sup>

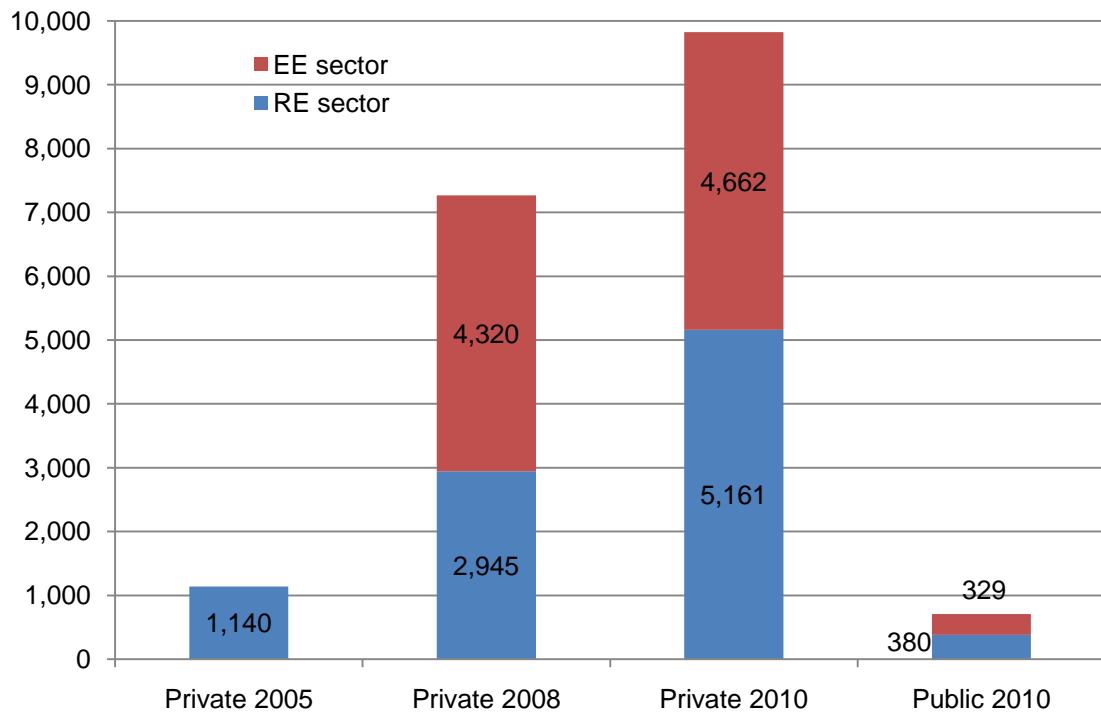
Our 2008 study identified a GVA contribution to the South West economy of £509 million, which is around 26% higher than the current GVA contribution. The reduction in total GVA may in part be due to the recent economic climate which has hit productivity in firms.

In addition to this, the 2010 study identified total employment in RE and EE in public sector organisations of 709 FTEs, with a gross GVA contribution of £20.6 million (based on average earnings). Whilst the total number of public sector organisations in the sector is not known, these figures have been added to the totals for the sector for indicative purposes.

Overall, the analysis demonstrates strong employment growth in the sector over the past five years, but with a drop in productivity over the past two years.

<sup>10</sup> Note that it is only possible to make comparisons to growth in other sectors to 2008, as detailed sectoral data for 2009 and 2010 have not yet been released. However, the continued increase in employment in RE throughout 2009 and 2010 is in contrast to the reduction in employment across the economy as a whole due to the recession.

**Figure 3.1: Direct Employment Contribution in the RE and EE sectors in the South West**



### 3.3 Net Impacts on the South West Economy

The above figures relate to the gross direct impact of the RE and EE sectors on the South West economy. In calculating the net additional impact of the sector to the region, we have taken leakage and multiplier effects into account. As set out in Section 2.3, the leakage of employment outside the South West in the sample businesses is 9% for the RE and EE sectors. In terms of multiplier effects, we have assumed a multiplier ratio of 1.28, based on results from the survey<sup>11</sup>.

Table 3.4 provides a summary of the impact of the RE and EE sectors on the South West economy after accounting for leakage and multiplier effects. The RE sector is estimated to support more than 6,000 jobs in the South West either directly or indirectly, with a GVA contribution of £292.7m. The EE sector supports more than 5,400 jobs with a GVA of £177.9m.

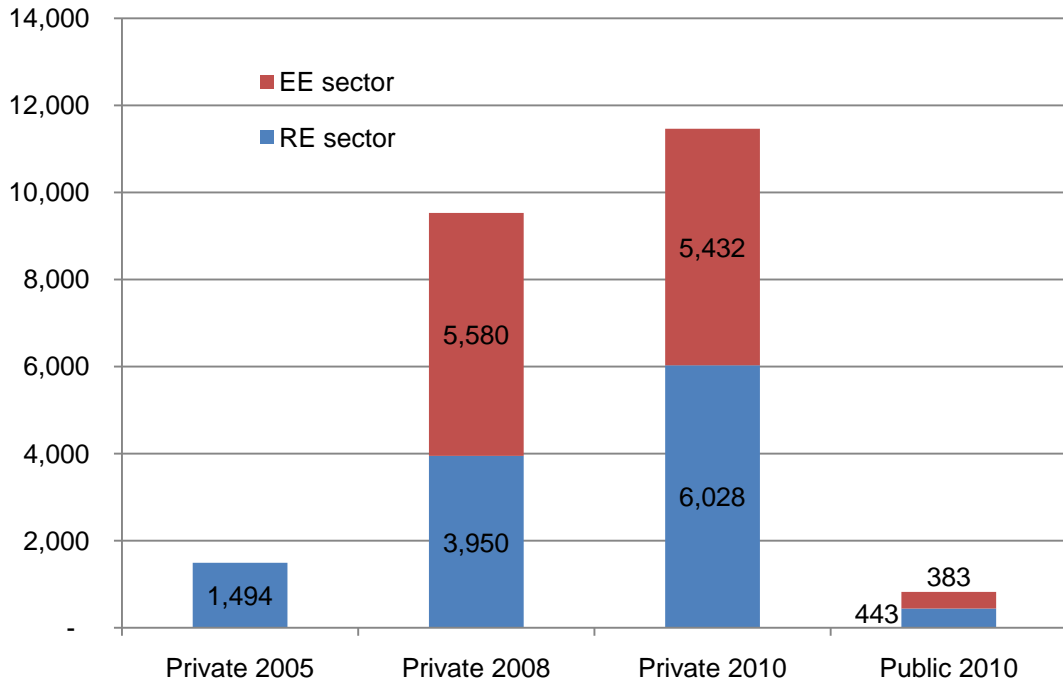
**Table 3.4: Net Impact of RE and EE sectors on the South West economy**

|                   | RE sector | EE sector | All businesses | Public Sector |
|-------------------|-----------|-----------|----------------|---------------|
| Employment (FTEs) | 6,028     | 5,432     | 11,460         | 826           |
| Turnover          | £603m     | £297.1m   | £900.1m        |               |
| GVA               | £292.7m   | £177.9m   | £470.8m        | £24.0m        |

<sup>11</sup> This included an assessment of supply chain linkages within the SW region, and the extent to which staff wages result in further 'induced' spending within the region.

Again, the net employment figures are significantly higher than in the 2008 study, which identified 3,950 FTEs in the RE sector and 5,580 FTEs in the EE sector.

**Figure 3.2: Net Employment Contribution of the RE and EE sectors in the South West**



## 4. Opinion of Regen SW Support

As part of the survey, organisations were asked whether they had received support from Regen SW, and to give their opinion of the quality of support received.

All of the 195 businesses and 53 public organisations sampled had received support from Regen SW, and were asked to rate the quality of the support received. The results were very positive, with 91% of the private organisations rating the service as either good or very good. It is interesting to note that all of the public organisations interviewed rate the service provided by Regen SW as either good or very good.

**Figure 4.1: Opinion of Regen SW's Support**

