

# *SSE's Economic Contribution to the UK*

## *Financial Year 2013/14*

*Final*  
*December 2014*





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## ***Foreword***

### **Alistair Phillips-Davis, CEO, SSE plc**

SSE has an essential purpose at its core – providing people and businesses with the energy they need to thrive and prosper. We have a responsibility to ensure this need is met in a reliable and sustainable way, both now and for the long term. While I am clear that is our mission and purpose, I also want to be sure that we are achieving it. That is why I am determined that SSE becomes increasingly transparent about its impacts so I know that progress is being made and – importantly – our stakeholders do too.

Earlier this year SSE asked PwC to undertake a study into the economic impacts our business activities create. I was pleasantly surprised. We found that in 2012/13, the impact of our business on the UK economy was similar to the trade and investment attracted to the UK from hosting the 2012 Olympics. We also learnt that for every one person we employ directly, our business supports almost five more jobs elsewhere in the UK economy.

For a company that is determined to be transparent about its impacts it is important for us to better understand the economic impact of our activities over a longer period of time. That's why we asked PwC to undertake the study again. This analysis has shown that SSE has contributed nearly £9bn to the UK economy in 2013/14 meaning that over the past three years there has been a total contribution to UK GDP of £27bn.

At the same time SSE has been developing its own capacity to measure and report its sustainability impacts, and published within this report is a summary of some of the main economic, environmental and social impacts of one of our most recent capital projects: the Keadby wind farm.

As a responsible company, SSE seeks to maximise the economic benefits from its activities, not just in the countries it operates in, but in local communities too. This analysis from PwC helps us to identify areas where we can enhance our impact.

I have always understood that SSE's impacts are not simply about the creation of jobs and wealth. There are many areas where SSE's business activities generate an impact on both society and the environment. By understanding what our impacts are we can better define how our business can increasingly be a force for good. Ultimately that's SSE's aim: to be responsible in all that we do, so we can make a positive impact on people's lives whilst doing so. This new report is simply the next step in our journey to deliver exactly that.

*Alistair Phillips-Davis*



# Executive summary

## Purpose

This is a PwC study commissioned by SSE plc, a major energy company operating in the UK and Republic of Ireland. It is an update to a report we produced for SSE in May 2014, which assessed the company's economic, employment and tax contributions in financial years 2011/12 (FY12) and 2012/13 (FY13). The purpose of the current report is to continue building awareness within SSE and amongst its stakeholders to understand the economic value that the company brings to society.

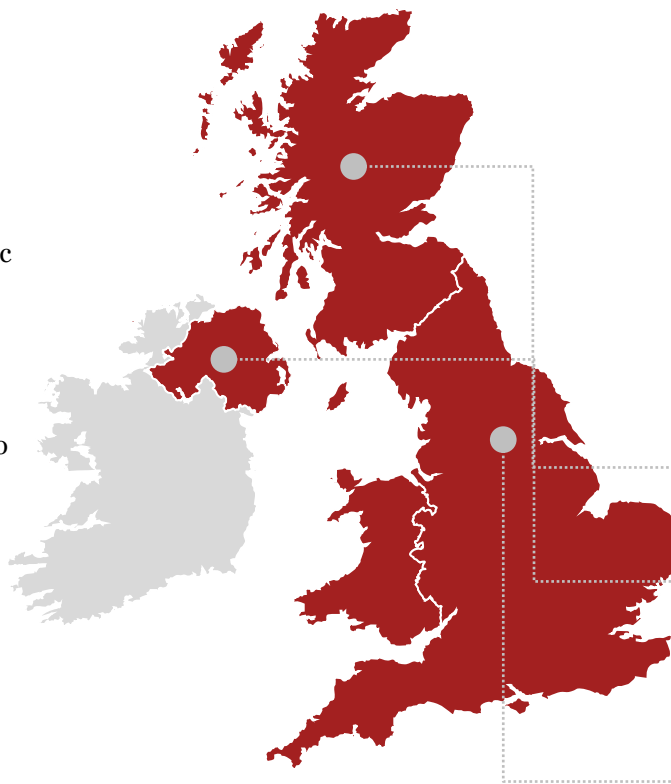
## Scope of analysis

This study covers all three of SSE's business segments: Networks, Retail and Wholesale. The indicators we have assessed are SSE's contribution to UK GDP and employment. These indicators are measured in gross terms and do not take into account what would have happened in the absence of SSE. Other economic, social and environmental impacts are outside of the scope of the study.

## Methodology

To estimate SSE's direct contribution to the UK economy, we used the company's financial accounts and other management information.

We applied economic input-output modelling to SSE's financial and procurement data to estimate SSE's contribution to GDP and jobs in SSE's UK supply chain.



## Key findings – in FY14 SSE\*:

- Contributed **£8.95bn to UK GDP**, bringing its total contribution over the past three years to **£27.0bn** (in FY14 prices).
- Supported **111,900 jobs in the UK** (equivalent to 0.4% of total UK employment), resulting in a yearly average of **113,600 jobs** supported over the past three years.
- SSE's average employee productivity of £115,700 is **2.2** times the national average.
- For every SSE employee, SSE supports another **4.9** jobs elsewhere in the UK.
- Of the UK total, **£1,352m was contributed to Scottish GDP** and **17,010 jobs** were supported in Scotland.
- Of the UK total, **£287m was contributed to the GDP of Northern Ireland** and **3,590 jobs** were supported there.

### Case study: Keadby wind farm

- Onshore wind farm development in England.
- £98.8m of expenditure throughout 2013.
- Contributed £43.3m to GDP and supported 720 person years of employment in 2013.

\* The economic impact results in this report have changed slightly from the original version due to subsequent updates in the financial data from SSE for the Republic of Ireland

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# *Introduction*

***1***

## ***Purpose and scope of this study***

In May 2014 we produced a study for SSE which estimated the company’s economic contribution in FY12 and FY13. The report covered estimates of SSE’s gross contribution to the UK’s GDP, employment, tax revenue and capital expenditure – both directly and indirectly in its supply chain and the wider economy. The report’s aim was to support SSE and its stakeholders in their understanding of the economic significance of the company for the UK.

After the publication of the first report, SSE asked us to update this analysis to estimate its contribution to the UK economy in FY14. For the purpose of this current report, we have focused on SSE Group contributions to UK GDP and employment (see table 1.1). The analysis covers SSE’s three business segments: Networks, Retail and Wholesale. It excludes jointly controlled entities in which SSE has a minority share. As a result, the figures presented may underestimate the total size of SSE’s economic footprint.

We present the results for the UK as a whole and include breakdowns for Scotland and Northern Ireland. Additionally, we include results of SSE’s own analysis of the economic contribution of the construction of its Keadby wind farm in England in 2013.

This report presents the results for FY14 and incorporates those from the previous report to show SSE’s total contribution to the economy over the past three years.

### **Limitations**

This study of SSE’s contribution to GDP and employment represents a gross analysis and does not take into account the extent to which part of these contributions might have happened anyway in the absence of SSE. The current report does not look at any other economic, social and environmental impacts created by SSE’s direct operations or value chains. Indirect and induced contributions are estimated using an input-output model. Data used for this analysis were provided by SSE and have not been audited by PwC.

**Table 1.1: Indicators assessed for this report**

<b>Indicator covered in the study</b>	<b>Measured as</b>	<b>Methodology</b>
<b>Contribution to GDP</b>	Gross Value Added (GVA), which is the company-level equivalent of GDP	Input-Output modelling
<b>Employment supported</b>	Headcount	Input-Output modelling

*Details of the methodologies can be found in the appendix*

Note: This report has been prepared solely for the benefit of SSE. The information contained in this report should not be relied on by anyone else. For a full disclaimer, please refer to the back cover of this report.

## About SSE

SSE plc ('SSE' or 'the company') is one of the largest companies in the UK, part of the FTSE100, and the only major energy provider which is both UK headquartered and operates exclusively in the UK and Republic of Ireland. Its core purpose is to "provide the energy people need in a reliable and sustainable way"<sup>1</sup> through its involvement predominantly in the generation, transmission, distribution and supply of electricity. SSE's business is organised into three segments: Networks, Wholesale and Retail. In FY14, SSE's reported profit before tax was £575m and it employed a total of 19,894 people across the UK and Republic of Ireland.



Picture source: SSE

<sup>1</sup> Source: SSE. <sup>2</sup> Rounded for presentational purposes.

### Table 1.2: SSE's UK business

#### SSE UK

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- Revenue: £29,671m
- Profit: £488m
- Employment: 19,100 employees<sup>2</sup>

#### Networks

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Transmission and distribution of electricity:

- Covers 130,000km of overhead lines and underground cables
- Connects to 3.7m homes and businesses

#### Wholesale

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Production and storage of gas, generation of electricity and energy portfolio management:

- Total electricity generation capacity of over 10.1 GW
- 28% of total capacity is from renewable sources (wind, biomass and hydro)

#### Retail

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Supply of electricity and gas and other services such as electrical contracting to business and household customers:

- 8.6m household and business customers throughout the UK
- Three UK brands: SSE Southern Electric, SSE SWALEC and SSE Scottish Hydro

Source: SSE





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# *SSE's contribution to UK GDP and employment*

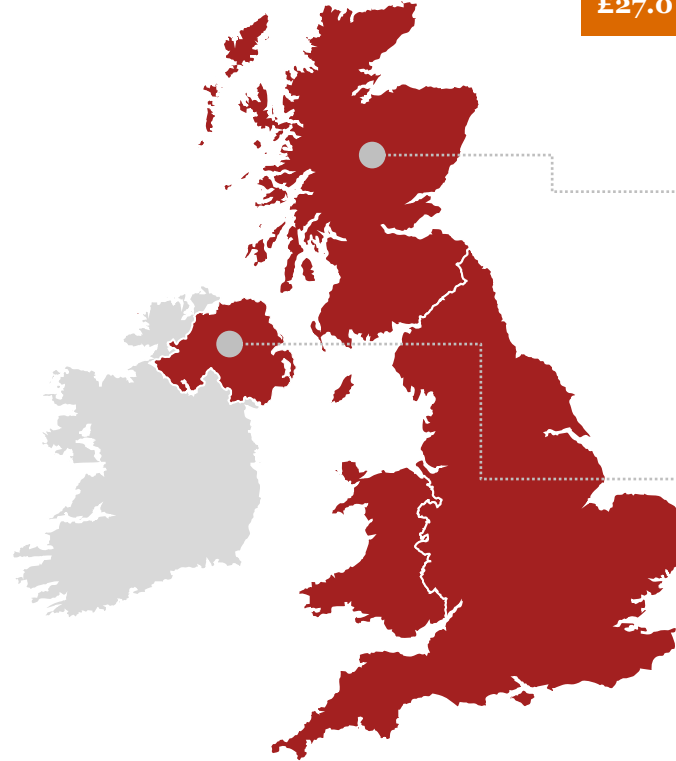
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## ***SSE's contribution to UK GDP and employment: key findings***

For every person employed by SSE directly, SSE supported **4.9** jobs elsewhere in the UK economy in FY14, which is higher than the UK average of 2.1.

At £115,700 in FY14, SSE's average employee productivity was **2.2** times the UK national average.



In FY14, SSE contributed **£8.95bn** to UK GDP and supported **111,900** jobs in the UK.

Over the last three years, SSE contributed **£27.0 bn** to UK economy (in FY14 prices).

### **Contribution to the Scottish economy**

In FY14, SSE contributed **£1,352m** to Scottish GDP and supported **17,010** jobs.

Over the last three years, SSE contributed **£3,931m** to the Scottish economy (in FY14 prices).

### **Contribution to the Northern Ireland economy**

In FY14, SSE contributed **£287m** to Northern Ireland GDP and supported **3,590** jobs.

Over the last three years, SSE contributed a total of **£837m** in Northern Ireland (in FY14 prices).



# Measuring economic contribution

We have estimated SSE’s economic contribution to the UK using two indicators:

- Contribution to GDP: Measured in terms of Gross Value Added (GVA)
- Employment supported: Expressed as number of jobs (headcount)

GVA is a measure of the value generated in the economy and represents the difference between the value of goods and services sold and the goods and services used as an input to their production. Hence, it is the company-level equivalent of GDP: adding up the GVA of all individual companies in the economy is equivalent to a country’s GDP.<sup>3</sup>

GVA is distributed as profits (before interest, taxes, depreciation and amortisation) and wages. SSE’s direct contribution to GDP can, therefore, be calculated from its financial statements by adding earnings before interest, tax, depreciation and amortisation (EBITDA) and employee compensation.

The contribution to GDP and employment are both divided into three tiers:

- 1. Direct contribution:** The increase in GDP and employment as a result of the supply of SSE’s goods and services;
- 2. Supply chain spend contribution (indirect):** The increase in GDP and employment from SSE’s demand for goods and services from its suppliers and their suppliers. This is often known as the ‘indirect contribution’;
- 3. Employee spend contribution (induced):** The increase in GDP and employment in the wider economy as a result of wages being spent by the employees of SSE and its suppliers. This is often known as the ‘induced contribution.’

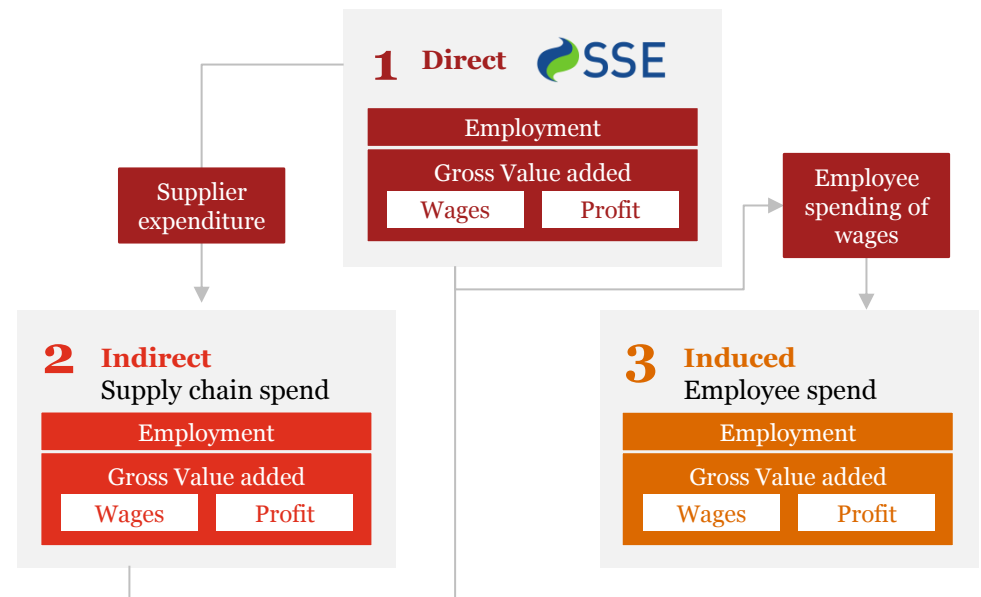
<sup>3</sup> After adjusting for taxes and subsidies on products, a component of GDP which is not included in the calculation of GVA.

Both the supply chain and employee spend contributions to GDP and employment have been estimated using economic input-output modelling. For this we have collected data from SSE on how much it spends on goods and services for both its operating and capital expenditure.

This section first discusses the contribution to the UK economy and then breaks this down at a sub-national level for Scotland and Northern Ireland.

A more detailed explanation of our methodology can be found in the appendix of this report.

**Figure 2.1: The relation between the three levels of economic contribution**



Source: PwC



## Direct contribution to the UK economy



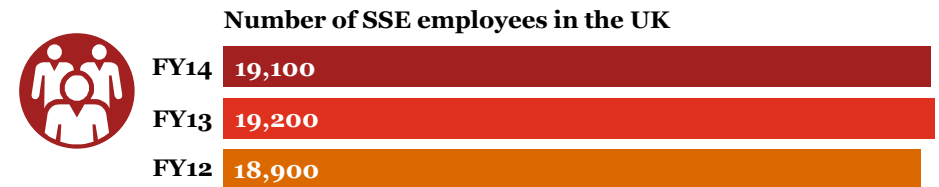
**In FY14, SSE employed 19,100 people in the UK.**

SSE employed a wide range of different skill sets, including engineers, technicians, business administration staff and customer support personnel. The largest share of staff was employed by SSE’s Retail business, followed by Networks and Wholesale.

**SSE’s direct contribution to GDP in FY14 amounted to £2.21bn.<sup>4</sup>**

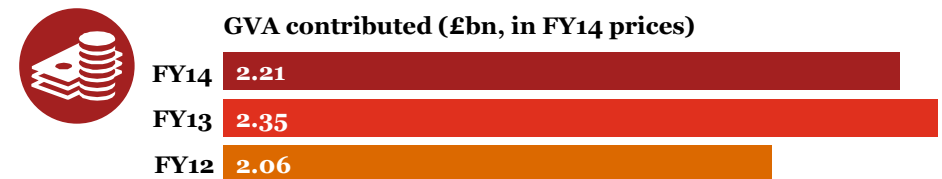
Combining SSE’s direct contribution to GDP and the size of its workforce implies that SSE’s average employee productivity was £115,700 in FY14. This compares to just under £52,500 for the UK in 2013, which means SSE’s average productivity is 2.2 times the national average.<sup>5</sup>

**Figure 2.2: Direct contribution to employment**



Source: SSE, PwC analysis

**Figure 2.3: Direct contribution to GDP**



Source: SSE, PwC analysis. Please note direct GVA in FY12 and FY13 have been restated after the previous report due to a change in the way we apportioned SSE total profits between the UK and Republic of Ireland.

**SSE’s average employee productivity in FY14 was 2.2 times the UK national average of £52,500**

<sup>4</sup> SSE’s direct contribution to GDP is estimated from data contained in its financial accounts that are prepared on an accruals basis for the financial year. For a more detailed description of the approach used in this section, please refer to the Appendix of this report. <sup>5</sup> Source: ONS. Average employee productivity is defined as Gross Value Added per employee.



# Employee compensation

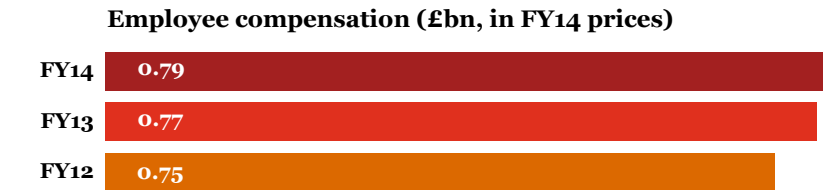


An important component of SSE’s direct contribution to GDP is employee compensation, which includes wages and salaries, social security costs, pension contributions and share-based remunerations.

In FY14, SSE paid out a total of £0.79bn in total employee compensation in the UK. Of this, £0.63bn in FY14 was paid as wages and salaries. Dividing this equally between SSE’s UK employees shows that SSE paid an average wage of £32,800 that year. For FY13 and FY12, the average wages were £31,300 and £30,600 respectively (in current prices).

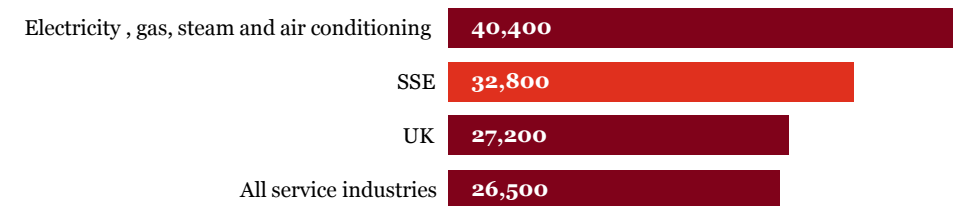
SSE’s average wage was above the UK mean average of £27,200 in 2013. SSE’s average wage sits between that of the *all service industries* and *electricity, gas, steam and air conditioning* sectors of the UK economy. This is consistent with the makeup of SSE’s business, which includes, for example, UK-based call centre workers in its Retail business as well as engineers in its Wholesale business.

**Figure 2.4: Total employee compensation**



Source: SSE, PwC analysis

**Figure 2.5: Comparing SSE’s mean average wage against UK mean averages in FY14**



Source: ONS, SSE, PwC analysis



## Total contribution to UK GDP



We estimate that, in FY14, SSE’s total contribution to UK GDP was £8.95bn. This is equivalent to 0.6% of the UK’s GDP in 2013. This brings SSE’s total contribution between FY12 and FY14 to £27.01bn when expressed in FY14 prices.<sup>6</sup> On average, 25% of this contribution was from SSE’s direct operations, 57% resulted from its supply chain spend and 18% resulted from spending by its employees and those of its suppliers.

In FY14, the sector benefitting most from SSE’s supply chain spend was the *crude oil, natural gas, and metal ores* sector, where we estimate SSE sustained £0.90bn of GVA. This reflects SSE’s core role in electricity generation and wholesale gas supply in the UK.

The second largest beneficiary from SSE’s supply chain spending was the *electricity* sector with £0.61bn, due in part to payments made to distribution and transmission network operators for use of their infrastructure. The third largest beneficiary was the *construction* sector, where we estimate SSE’s supply chain spending sustained £0.41bn of GVA.

**Figure 2.6: Total contribution to GDP (£bn, in FY14 prices)**



Source: SSE, PwC analysis

■ Direct ■ Supply chain ■ Employee spend

<sup>6</sup> We have inflated results from the FY13 report using the GDP deflator. As a result, the values appear slightly higher than reported in our May 2014 report, as they are expressed in FY14 prices rather than current prices.

<sup>7</sup> Source: ONS. GDP measured at factor cost.

**Table 2.1: Key sectors in terms of supply chain GDP contribution**

Sector	GVA contributed (£bn) FY14
Crude oil, natural gas, and metal ores	0.90
Electricity	0.61
Construction	0.41
Financial services, except insurance and pension	0.38
Gas	0.30
All other sectors	2.47
<b>Total</b>	<b>5.07</b>

Source: SSE, PwC analysis.



# Total contribution to UK employment



We estimate that SSE supported 111,900 jobs in the UK in FY14. Given SSE’s direct payroll of 19,100 employees, this implies that for every staff that SSE directly employs, it also supports another 4.9 jobs elsewhere in the UK. This is higher than the UK average multiplier of 3.1.<sup>8</sup> Over the last three years, SSE has supported an annual average of 113,600 jobs in the UK.

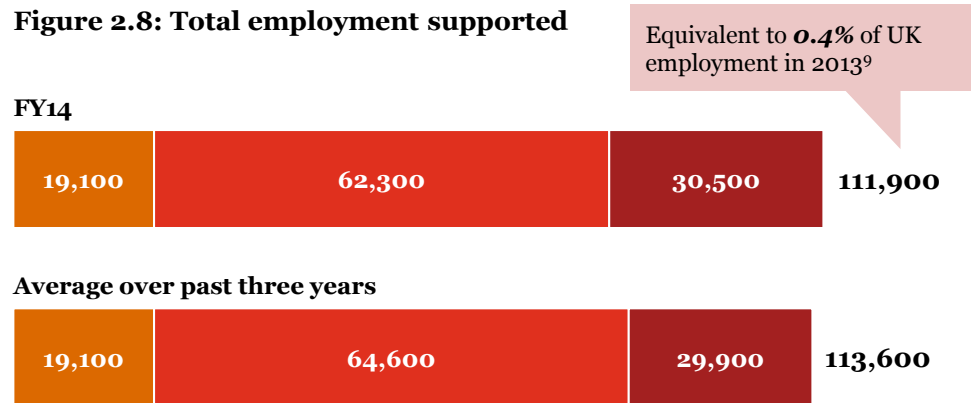
The largest beneficiary of SSE’s supply chain spend in terms of employment was the *construction* sector. We estimate SSE supported 6,000 jobs in this sector in FY14. This can be explained as SSE is a major investor in fixed assets such as network infrastructure. The second and third largest beneficiaries are the *auxiliary financial services* and *electricity* sectors.

**Figure 2.7: SSE’s employment multiplier in the UK**



Source: SSE, PwC analysis

**Figure 2.8: Total employment supported**



Source: SSE, PwC analysis

■ Direct ■ Supply chain ■ Employee spend

<sup>8</sup> Source: ONS, PwC analysis. UK average defined as the unweighted average of all UK sectors. <sup>9</sup> Source: Business Register and Employment Survey (BRES), PwC analysis.

**Table 2.2: Key sectors in terms of employment supported by SSE’s supply chain**

Sector	Number of jobs supported FY14
Construction	6,000
Services auxiliary to finance and insurance	4,600
Electricity	4,100
Head office and management consulting	3,400
Employment services	3,200
All other sectors	41,000
<b>Total</b>	<b>62,300</b>

Source: SSE, PwC analysis.



# Total contribution to Scottish GDP and employment



SSE’s contribution to Scottish GDP is largely driven by the GVA generated directly.<sup>10</sup> We estimate that in FY14 SSE’s operations in Scotland made a direct contribution of £818m to Scottish GDP, as part of a total contribution of £1,352m. The large direct contribution to Scottish GDP is driven by the high proportion of SSE employees based in Scotland. SSE’s UK profits are apportioned to Scotland based on the Scottish share of total UK wage payments.

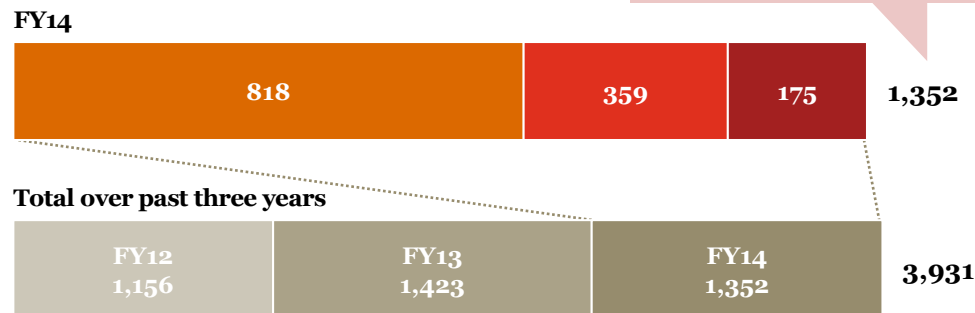
We estimate that SSE’s Scottish supply chain contributed £359m to Scottish GDP. Spending by employees of SSE and those in its Scottish supply chain contributed a further £175m.

The total contribution of £1,352m to Scottish GDP in FY14 is equivalent to approximately 1.3% of the GDP of Scotland in 2013.

We estimate that in FY14 SSE supported a total of 17,010 jobs in Scotland, which is equivalent to 0.7% of Scotland’s employment in 2013. SSE’s direct employment accounts for 6,910 of these jobs.

The sectors that benefited most in terms of employment support in SSE’s supply chain were *construction* (17% of supply chain employment) and *oil and gas extraction* (15%).

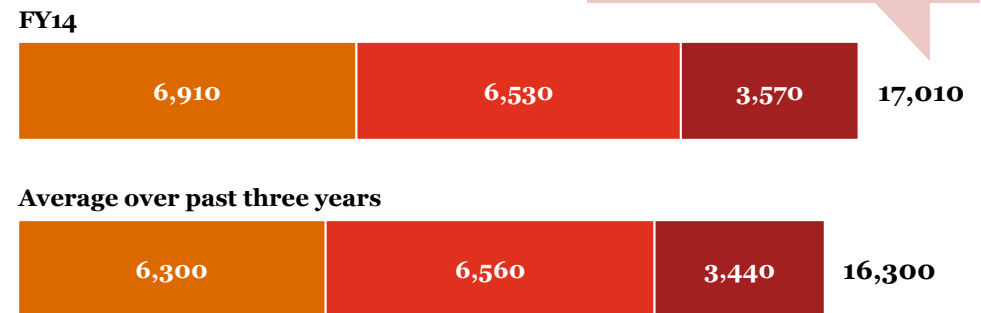
**Figure 2.9: Total contribution to Scottish GDP (£m, in FY14 prices)**



Source: SSE, PwC analysis

■ Direct ■ Supply chain ■ Employee spend

**Figure 2.10: Total Scottish employment supported**



Source: SSE, PwC analysis

■ Direct ■ Supply chain ■ Employee spend

<sup>10</sup> Please note that we look at the overall contribution of SSE Group to Scotland, which includes procurement from the rest of the UK and the Republic of Ireland. This does not reflect the multiplier effect of Scottish operations only.

<sup>11</sup> Source: ONS. GDP measured at factor cost. <sup>12</sup> Source: BRES, PwC analysis





# Total contribution to Northern Ireland GDP and employment



In Northern Ireland, the major contribution SSE made to GDP was through its supply chain spending.<sup>13</sup> We estimate that in FY14, SSE’s operations contributed around £12m to Northern Ireland GDP, but the company contributed £227m to GDP through its supplier expenditure.

SSE’s own operations in Northern Ireland are more limited, but it purchased a large amount of goods and services from Northern Ireland to support its wider business. The majority of its supply chain contribution falls in the *electricity, gas, and water* sector, which is equivalent to 69% of the total supply chain contribution.

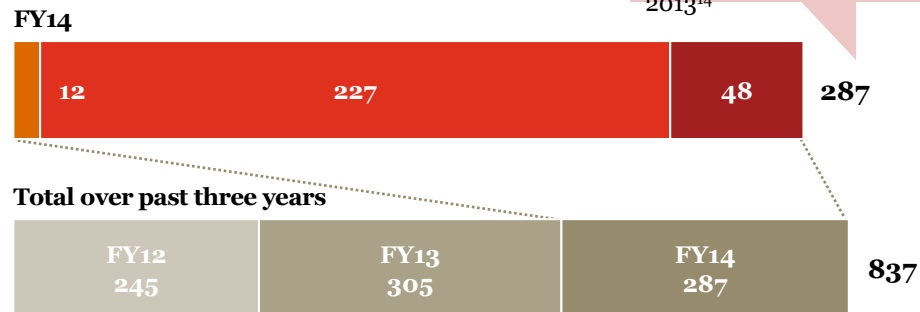
The contribution to GDP through spending of employees is, therefore, largely driven by employees in SSE’s Northern Ireland supply chain – this amounts to an estimated £48m of GVA in FY14.

Therefore, the total contribution to the Northern Ireland economy amounted to £287m, which is equivalent to 1.0% of Northern Ireland GDP in 2013.

In line with SSE’s contribution to Northern Ireland GDP, the vast majority of its support of employment is in its supply chain. We estimate that SSE supported a total of 3,590 jobs in Northern Ireland in FY14. 2,250 of these jobs were supported in SSE’s supply chain. The wage spend of these employees is the main reason for the further 1,220 estimated jobs supported through employee spend.

A large part of SSE’s supply chain in Northern Ireland consists of transmission of distribution networks. Therefore, 39% of the jobs supported by SSE’s supply chain were in the *electricity, gas, and water* sector.

**Figure 2.11: Total contribution to Northern Ireland GDP (£m, in FY14 prices)**

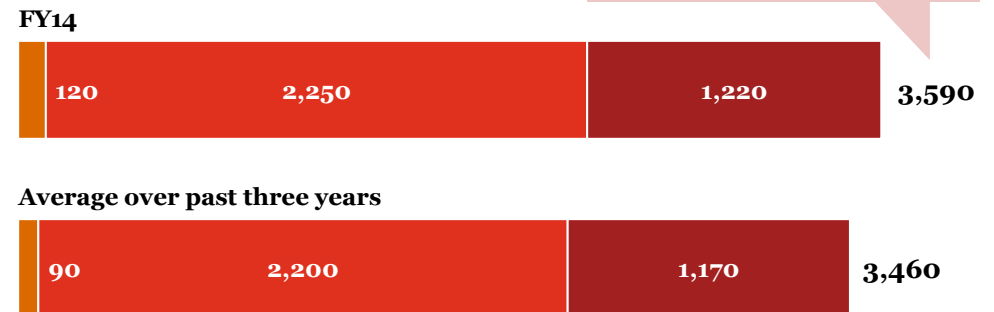


Equivalent to **1.0%** of Northern Ireland GDP in 2013<sup>14</sup>

Source: SSE, PwC analysis

■ Direct ■ Supply chain ■ Employee spend

**Figure 2.12: Total Northern Ireland employment supported**



Equivalent to **0.5%** of Northern Ireland employment in 2013<sup>15</sup>

Source: SSE, PwC analysis

■ Direct ■ Supply chain ■ Employee spend

<sup>13</sup> Please note that we look at the overall contribution to Northern Ireland by SSE Group, which includes procurement from the rest of the UK and Republic of Ireland. This does not reflect the multiplier effect of Northern Ireland operations only. <sup>14</sup> Source: ONS, PwC analysis. Northern Ireland GDP measured at factor cost. <sup>15</sup> Source: BRES, PwC analysis.



# *Case study: the economic contribution of the Keadby wind farm construction*

# 3

The information presented in this section is based on SSE's own analysis. PwC have provided limited ad hoc technical support to SHE Transmission in their production of the results presented here. PwC have not co-produced or provided any level of assurance on these results. As such, PwC makes no claim about the reliability of these results.



# Case study

## Keadby wind farm

<b>34</b> onshore turbines in North Lincolnshire	<b>68MW</b> Generation capacity	<b>£98.8m</b> Total capital expenditure	<b>£43.3m</b> Total estimated contribution to GDP	<b>720</b> person years of employment <sup>16</sup>
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### What is the Keadby wind farm?

The Keadby wind farm is a 34 turbine, 68MW onshore wind farm that became operational in summer 2014. It has the capacity to provide electricity for over 38,000 households, which is over half of the households in the nearby town of Scunthorpe, North Lincolnshire.

### What sustainability impacts does the Keadby project create?

SSE has been keen to better understand the sustainability impacts from its major construction projects. Following studies on Beaully-Denny transmission line and Fairburn wind farm, it chose Keadby as an example to study this year.

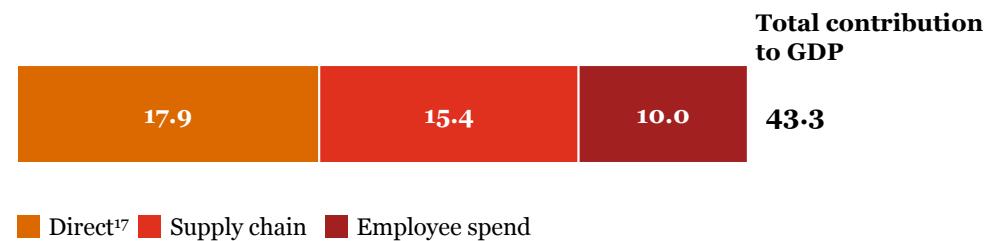
SSE identified a number of economic, social and environmental outcomes associated with constructing and operating the wind farm.

In terms of the project’s environmental impact, SSE has estimated that, over Keadby’s 25 year operational life, the energy generated will displace at least 718,800 tonnes of CO<sub>2</sub>-equivalent, compared to conventional energy generation.

As part of its initiative to alleviate negative social impacts over the course of construction, SSE contracted Balfour Beatty, an English firm, to build the North Pilfrey Bridge for £5m, a critical piece of infrastructure that enabled the construction of the wind farm. The bridge allows the majority of vehicles to reach the construction site directly and reduces the impact of traffic and noise disruption in nearby villages.

<sup>16</sup> A person year is the employment of a single person for the period of one year. It is the convention to use person years when reporting on the economic contribution of a capital expenditure project. <sup>17</sup> For the purpose of this case study, direct contribution is defined as that created by SSE and its direct subcontractors (first tier suppliers). Note that the direct impact of capital expenditure on SSE as a company may be negative. <sup>18</sup> Idem

Figure 3.1: Total contribution to GDP (£m, in FY14 prices)



Source: SSE analysis

Figure 3.2: Number of person years of employment supported



Source: SSE analysis



## Section 3 – Case study: the economic contribution of the Keadby wind farm construction

### What is the gross economic contribution of Keadby construction expenditure?

SSE's expenditure contributed a total of £43.3m to UK GDP. £98.8m was spent by SSE over the course of 2013 to construct Keadby wind farm. £42.2m, or 43% of this expenditure, was spent within the UK, with over 96% of the remainder being spent on turbines which could only be sourced overseas as there was no wind turbine supplier in the UK. 97 of the 100 contractors and suppliers in the construction phase were based in the UK.



Source: SSE analysis

SSE estimated that this directly supported 270 person years of employment in the UK. Taking into account the person years supported in the rest of the economy, SSE estimated that, in total, 720 person years of employment were supported in the UK in 2013. This implies that every £1m spent by SSE on the project in the UK supported 17.2 person years of employment in total.<sup>19</sup>

### Supporting local communities

As part of its commitment to support the economy of North Lincolnshire, SSE has set aside £340,000 per year for the surrounding communities over the 25-year life of the wind farm.

Half of the pledge is in the form of a local community benefit fund, which delivers financial support to community projects that stimulate positive social change. So far, the neighbouring communities have benefited from the upgrades of community facilities and services as well as new energy-saving infrastructure.

The other half of the commitment is placed with the sustainable development fund, which aims to support long-term social, economic and/or environmental transformations in the community.



<sup>19</sup> Note this ratio is calculated on UK expenditure only.

Picture source: SSE

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# *Concluding remarks*

**4**

## Concluding remarks

### What we found

This study was an update to our economic assessment presented in May this year. It showed the magnitude of SSE's gross economic contribution to the UK in FY14, whilst assessing some of the underlying drivers thereof.

Overall, we found that SSE's economic footprint has stayed stable over the last three years. In FY14, SSE contributed £8.95bn to UK GDP directly and through its supply chain, representing about 0.6% of the UK economy. This supported around 111,900 jobs in the UK or about 0.4% of total UK employment. A considerable proportion of this accrued to Scotland and Northern Ireland, where SSE supported a total of 17,010 and 3,590 jobs, respectively.

### Where next

Besides getting a better understanding of how its economic footprint has changed over the last three years, SSE has now a better overview of the sectoral distribution of its supply chain expenditure.

By carrying out this FY14 update, SSE has demonstrated that it takes transparency on its economic footprint seriously and that it has the appetite to continue to disclose it year on year. This analysis also provides management with evidence to inform how SSE can contribute to the communities in which it operates and support the wider UK economy. For example, SSE has now the opportunity to influence the practices and decisions of its wider value chain via its major direct suppliers, and to identify partnership opportunities to foster the UK's competitive advantages in the energy sector.

SSE is aware that its total impact does not only cover its financial and economic performance, but also the positive and negative social and environmental externalities it creates through its business model. SSE is already working to better understand these types of impacts, particularly around its capital projects, and will consider how its newly acquired knowledge can be applied to enhance the impacts of its project pipeline.

We are confident that the capabilities that PwC has supported SSE to develop will increase the likelihood that impact analysis becomes embedded into the company's approach to transparency and decision making on an ongoing basis.

We look forward to seeing SSE continuing to take a leading role in this space, living its core value of *demonstrating that its "actions and decisions are ethical, responsible and balanced, helping to achieve environmental, social and economic well-being for current and future generations"*.<sup>20</sup>

<sup>20</sup> Source: SSE Annual Report FY14

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# *Appendix*

# 5

## ***Appendix: Economic contribution approach (1/4)***

### **Overview**

SSE's economic contribution is defined in terms of its contribution to GDP and employment supported.

Contribution to GDP is measured in terms of Gross Value Added (GVA). GVA is a monetary measure of the value a company adds during its production process. Hence, it is the difference between the price of its products (outputs) and the price of the inputs it uses in producing these (or intermediate consumption). GVA is an alternative term for GDP at factor cost, which is GDP without taxes and subsidies on products. As such, GVA is the company-level equivalent of GDP.

The contribution to GDP and employment are estimated at the direct, indirect and induced levels. Direct contribution results from the company's own operations: it includes the people employed directly by a company and the economic value the company creates. Indirect contribution is generated in a company's supply chain through the procurement of inputs. Induced contribution is generated through wage spend by employees throughout the value chain, both a company's own employees and those in its supply chain. In the report these contributions have been called direct, supply chain spend and employee spend to make it easier for readers not familiar with economic terminology.

### **Approach to estimating direct economic contribution**

We estimate SSE's direct contribution to GDP using an income approach from data contained in its financial accounts that are prepared on an accruals basis for the financial year (rather than relating to the cash spent during the year). The following equation is used:

$$\begin{aligned} &\mathbf{Direct\ contribution\ to\ GDP} \\ &= \text{profit before interest and taxation} + \text{employee costs} \\ &\quad + \text{depreciation} + \text{amortisation.} \end{aligned}$$

These indicators are prepared for the UK. For Scotland and Northern Ireland, we apportioned the share of SSE's direct contribution to GDP by Home Nation on the basis of employee compensation in each Home Nation.

Direct employment is taken directly from SSE's human resources data. The breakdown by country and nation is based on the home address of its employees.



## Appendix: Economic contribution approach (2/4)

### Approach to estimating indirect and induced economic contribution

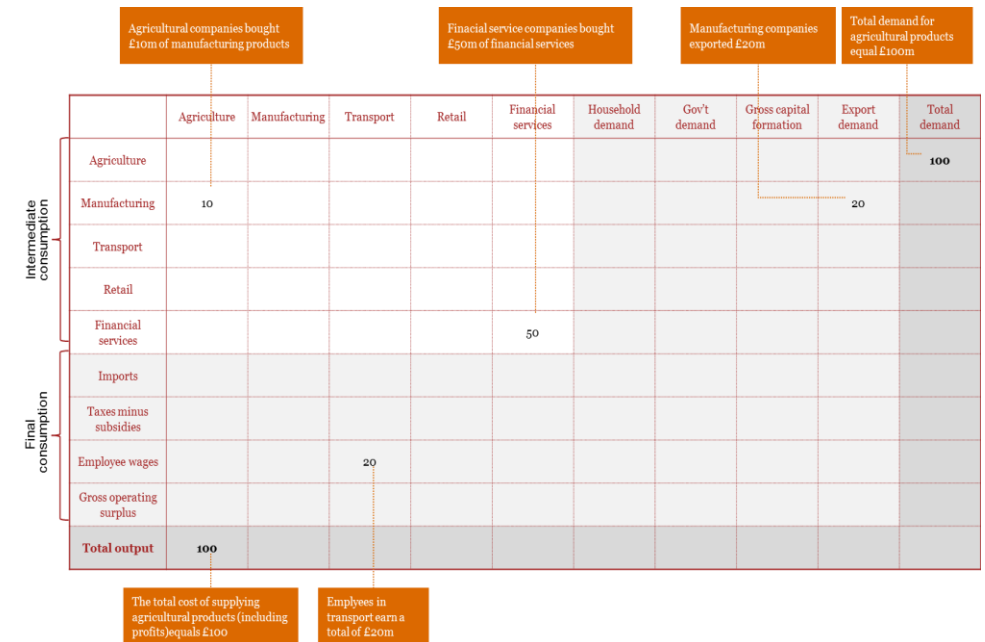
Indirect and induced economic contribution are estimated using an Input-Output model. This enables us to understand how industries relate to each other. On this basis we estimate how activity by one company stimulates economic activity elsewhere in the economy.

The indirect (or supply chain) contribution is estimated using SSE’s procurement data. We analysed SSE’s purchase ledger to identify the sectors of the economy the company spends money on in order to purchase inputs. The Input-Output table provides information on what the typical business in the supplier’s sector requires for producing one unit of output. Equally, we can model the supplier’s input requirements from other sectors to produce its own unit of output. In this way we can trace back the input requirements through the entire supply chain, and calculate the total value of production stimulated. This process of one company stimulating economic activity in other companies is referred to as the multiplier effect.

In addition to the above, an Input-Output table provides data on the share of revenue that constitutes profit and wages for each sector. We can apply this ratio to the total production value stimulated, and hence estimate the total GVA in the supply chain by sector associated to this. Additional statistics on employment provide information on the number of people that work in any particular sector. As we know the output stimulated in each sector, we can estimate the production value to job ratio. We can then apply this to the total production value stimulated in the supply chain. This allows us to estimate the number of jobs supported in the supply chain – the indirect employment.

These steps get repeated for calculating the induced contribution, but through using wage data to estimate how much production is stimulated in the supply chain that supports the products employees buy, e.g. accommodation, food and entertainment.

Figure A.1: A simplified version of an Input-Output table, the basis for an Input-Output model



## Appendix: Economic contribution approach (3/4)

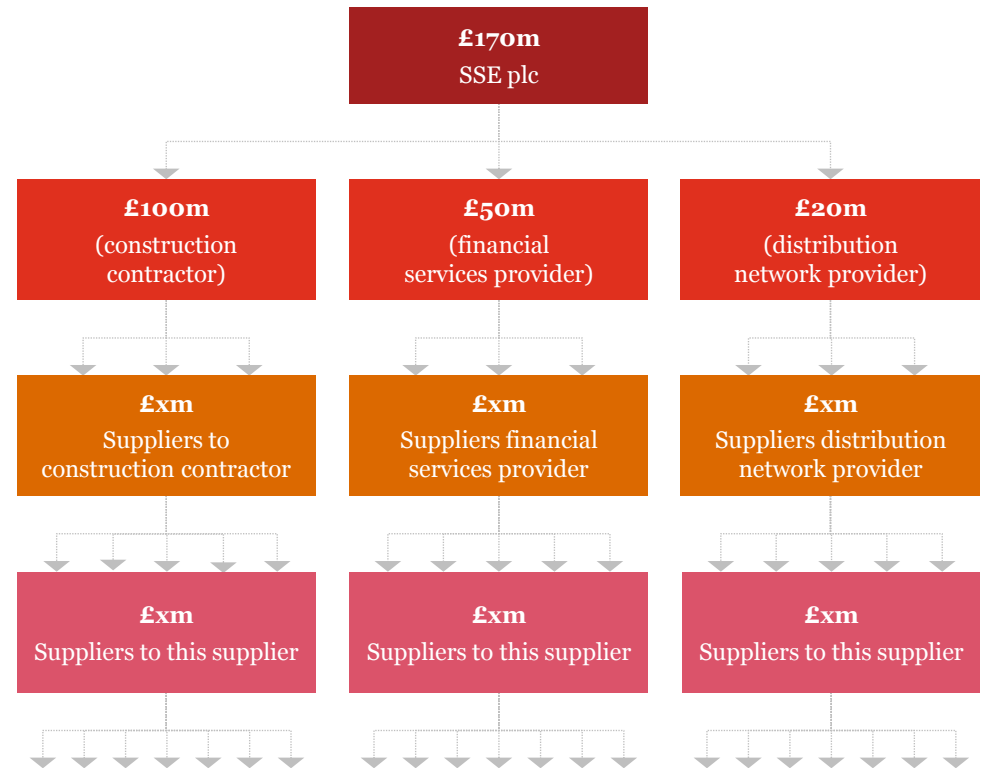
### Model data sources

The Input-Output models for each geography are based on Input-Output tables provided by the relevant statistics offices. Input-Output tables are based on data collected through business surveys undertaken by national statistics offices on an annual basis. We have combined data from the Input-Output tables with employment data for the relevant years to obtain employment to output ratios. These have been updated using estimates for labour productivity and inflation to reflect the years of our assessment. It should be noted that this type of adjustment does not sufficiently capture structural changes in the economy that occur between the input-output table year and the year of analysis.

**Table A.1: Key data sources for our Input-Output models**

Country	Source
<b>Input-Output tables</b>	
UK	ONS. UK Input-Output Analytical Tables, 2010
Scotland	Scottish Government. Input-Output Analytical Tables, 2011
Northern Ireland	DETINI. Social Accounts and Input-Output Tables, 2003
<b>Employment data</b>	
All geographies	ONS. Annual Employment Statistics (BRES) for relevant years

**Figure A.2: A simplified representation of the relation between SSE and its supply chain (note: hypothetical numbers used below)**



## ***Appendix: Economic contribution approach (4/4)***

### **Key notes and assumptions**

- All financial data presented are in FY14 prices, unless indicated otherwise.
- All analysis is done in gross terms and we have not assessed the net contribution of SSE to the economy.
- Where we have used data directly provided by SSE, we have not audited the data.
- SSE mapped the majority of its supplier expenditure to the relevant sector and country. We extrapolated the remainder of the expenditure in the same proportion as the mapped expenditure to obtain total expenditure by sector and country.
- A significant share of SSE's purchases is related to commodity trading. We have modelled SSE's net expenditure on energy commodities, as this represents the real contribution of the company to the economy. For financial instruments we have only modelled the commission paid by SSE.
- SSE is a Group of companies. We have excluded any transactions between the individual companies that make up the group to avoid double counting contributions.
- Our analysis does not cover jointly controlled entities in which SSE has a stake of 50% or less (e.g. Scottish Gas Networks), unless they are suppliers to SSE group in which case they are treated as any other supplier in the analysis. Jointly controlled entities in which SSE has a majority stake (e.g. SSE Contracting) are included.
- We have used three stand-alone models to estimate SSE's economic contribution in the UK, Scotland and Northern Ireland. These models are not linked and the results presented are, therefore, only related to the direct expenditure in each geography. They do not take into account feedback loops between geographies, for example, an English supplier buying goods from a Scottish company. The results, therefore, represent the lower bound of SSE's economic contribution (particularly in Scotland and Northern Ireland). For this reason, SSE's contribution in England and Wales cannot be derived by calculating the residual between the results for the UK, Scotland and Northern Ireland.
- The economic contribution for Scotland and Northern Ireland is based on total SSE Group expenditure in these regions. It is not related to the supplier expenditures of the operations based in these regions only. This explains the large indirect and induced contributions in these regions, particularly in Northern Ireland.
- To contextualise the contribution that SSE makes to the UK economy we have presented economic data from the ONS and other statistics agencies. It should be noted that these data generally refer to calendar years as opposed to financial years. We have referred to financial year data as FY[yy] and calendar year data as 20[yy]. When comparing calendar to financial years, we use 2011 for FY12, 2012 for FY13, and 2013 for FY14.

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