



# Corporate Social Responsibility Annual Review for 2009

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# Welcome

## A Message From Ann Loughrey, Head of Corporate Social Responsibility

### Welcome to our Corporate Social Responsibility Annual Review for 2009.

The year was a challenging one as the UK suffered the effects of the economic recession – but despite this, we made huge progress in a number of areas.

One of the most exciting developments was our progress towards making Carbon Capture and Storage (CCS) a realistic option in the fight against global climate change.

This technology could have the potential to capture around 90% of the CO<sub>2</sub> produced from burning coal to produce electricity and transport it by pipeline for long-term geological storage under the North Sea.

During the year Longannet Power Station became the first major power station in the UK to capture CO<sub>2</sub> from its flue gases, signalling a major step forward in this clean coal technology.

Working closely with Norwegian CO<sub>2</sub> removal specialists Aker Clean Carbon, by November 2009 we announced a major breakthrough in reducing the amount of energy required in the carbon capture process, which in turn will reduce the cost.

We have ambitions to make Longannet Power Station a global centre of excellence for Carbon Capture and Storage and aim to develop a commercial scale demonstration plant by 2014.

With several coal power stations the size of Longannet – over 2,000 MW – opening in other parts of the world every week – the results of this work could have a massive impact globally, removing billions of tonnes of CO<sub>2</sub> from the atmosphere each year and creating engineering jobs in the UK.

Global climate change and making the transition to a low carbon economy, while maintaining energy prices at affordable levels for customers continues to be the most significant CSR issue for ScottishPower and our stakeholders. Our response to this challenge is covered in detail in the Respect for the Environment section of this Review, along with information on other areas of stakeholder concern such as air quality, major projects, biodiversity and resource use.

We are also continuing to invest hundreds of millions of pounds in upgrading our energy networks to support renewable energy developments and improve the security of customers' supplies. Delivering this level of investment in the current economic climate and to a very demanding timescale is a key challenge for us – but one that we are determined to meet.

Water is an environmental issue that has grown in significance during the past year, following the introduction of the Water Framework Directive and the drafting of River Basin Management Plans. We continue to have extensive dialogue with stakeholder groups at our Galloway Hydro-electric scheme and have introduced a new section on water in the environmental section of our Review.

Energy prices and fuel poverty continued to be the most significant customer issues. During the year we continued to work with Energy Action Scotland, National Energy Action and the Fuel Poverty Advisory Group to help address the issue of affordable warmth.

We spent over £79 million under mandatory government programmes to improve the energy efficiency of customers' homes, helping many low-income families to reduce their energy consumption in the long term, and channelled a further £7 million into social tariffs to help those customers most in need.

During the year we also targeted a further £5 million at projects to help people suffering from fuel poverty through our charity, the ScottishPower Energy People Trust and other community partnerships.

To help all customers get the best value energy deals, we reduced prices in March 2009 and launched several new products, including discounted, fixed and capped price deals, as well as a new internet-based Pay As You Go service.

Safety continues to be a key priority across our business.

During 2009 there were no fatalities amongst our employees or contractors and we reduced the number of Lost Time Accidents across our businesses from 29 to 12.

Process and asset safety are areas in which ScottishPower is investing time, effort and money, to ensure that our management systems are in line with best practice.

We also invested around £3.5 million in our local communities, supporting projects that enhance education and employability, public safety, the environment, arts and culture, as well as many hundreds of charities that are close to the hearts of the people who live in the areas where we operate.

We remain committed to doing business responsibly. In this CSR Annual Review and on our CSR TV station you will find details of some of the great initiatives our businesses have been involved in during 2009. I hope you find it interesting. As always, we would welcome your feedback on this year's Review.



**Ann Loughrey**  
**ScottishPower's Head of Corporate**  
**Social Responsibility**

## About this Report

Our CSR Annual Review outlines our approach and reports on our performance against key environmental, social and economic indicators from January to December 2009, unless otherwise stated. We report on CSR annually – our last report was published in July 2009.

The report covers the activities of Scottish Power Limited (ScottishPower) in the UK, but excludes ScottishPower Renewables and other IBERDROLA Group activities in the UK. This year, for the first time, we have aligned our reporting to the Global Reporting Initiative (GRI3) framework in line with the IBERDROLA Group.

We have continued to report on issues not covered by the GRI framework where our stakeholders have indicated that this is important to them. We have sought to provide a comprehensive, accurate and transparent account of our approach to key issues, our performance over the period and to present this information within the context of current legislative, regulatory and market influences.

Where we have not reported against a GRI indicator, this is generally explained within the appropriate section of the Review – for example, the use of child or forced labour is prohibited by EU law. We have presented the information under our six key values:

### Our Six Key Values

- Corporate Ethics & Responsibility
- Economic Results
- Respect for the Environment
- Sense of Belonging & Trust
- Safety & Reliability
- Customer Focus

## Materiality

We continue to report on the issues that our stakeholders consider to be the most important. These were defined originally in 2004 through stakeholder workshops and in-depth interviews that identified ScottishPower's 12 most significant impact areas:

### Our 12 Significant Impact Areas

- Provision of Energy
- Climate Change & Emissions to Air
- Health and Safety
- Customer Experience
- Employment Experience
- Biodiversity
- Wastes & Resource Use
- Sites, Siting and Infrastructure
- Customers With Special Circumstances
- Communities
- Economic
- Procurement

Feedback from these groups is channelled through our CSR Steering Committee to ensure that we continue to focus our CSR activities and reporting on the issues that are most significant to stakeholders and ultimately to the success of our business.

These impact areas have been retained under our current report structure, with some changes in focus to reflect evolving stakeholder priorities. Wherever possible, we have compiled data to provide a like for like comparison on previous year's reports.

We continue to engage with stakeholder groups, through formal feedback sessions at corporate level, through our Environmental Forum of external experts and with various groups including government, regulators, NGOs, consumer groups, employees and community representatives at both corporate and operational levels



■ *ScottishPower's Head Office at Atlantic Quay, Glasgow*

“Feedback is channelled through our Steering Committee to ensure we continue to focus our CSR activities and reporting on the the most significant issues to stakeholders and ultimately to the success of our business.’

## Our Year in Summary – Highlights of 2009

**January**

- We signed a three-year, £40m coal deal with ATH Resources for the supply of 800,000 tonnes of Scottish coal, strengthening our support for the local economy.
- We launched an education project with Do-Be Ltd and North Lanarkshire Council, to inspire children to learn using MP4 technology.
- We continued as principal sponsor of Celtic Connections, Scotland's premier traditional music festival, which attracts audiences of 100,000 people and brings millions of pounds into Glasgow's economy each year.

**February**

- The ScottishPower Energy People Trust announced funding of £50,000 for a project to that will enable One Parent Families Scotland to help 6,000 vulnerable families out of fuel poverty.
- We announced cuts in gas and electricity prices, effective from March 2009.

**March**

- We announced plans for a new 1,000MW combined cycle gas turbine power station adjacent to our existing plant at Damhead Creek, Kent.
- Our Energy Networks business completed a £7m connection for a new windfarm in East Lothian that will strengthen the electricity network around Dunbar.
- Our Energy Wholesale business became the first UK generator to be awarded PAS 55 certification for asset management.

“In May, ScottishPower announced the launch of its Carbon Capture trials at Longannet Power Station in Fife.”

**April**

- The amount of money donated by the ScottishPower Energy People Trust to fuel poverty projects topped the £5m mark.
- We secured the largest energy supply contract ever to be awarded in Scotland from the Scottish Government.
- Procurement Scotland awarded the £600m contract that will see ScottishPower supply all of Scotland's public sector buildings, hospitals and schools with green energy.

**May**

- We announced the launch of our Carbon Capture trials at Longannet Power Station in Fife, using technology developed by Aker Clean Carbon of Norway. The results of a study illustrated the vast storage potential for liquefied CO<sub>2</sub> in rock formations under the Central North Sea.
- Our parent company, IBERDROLA, confirmed its intention to establish a Centre of Excellence for CCS in the UK and announced funding for a Chair in CCS at the University of Edinburgh.



■ Energy Networks director Guy Jefferson and, right, the China Power Investment Corporation visit Longannet



“We retained Platinum status in Business in the Community’s Corporate Responsibility Index for the third year in a row.”

## June

- We retained Platinum status in Business in the Community’s Corporate Responsibility Index for the third consecutive year.
- The ScottishPower Energy People Trust donated £12,000 to a project in Dundee to help 5,000 homeless people in Dundee set up home with starter packs of household items, making them less likely to run into difficulties with fuel bills.
- We announced that we would be developing charging points for electric vehicles in Glasgow, working with a consortium including Allied Vehicles and Glasgow City Council.

## July

- Guy Jefferson, a director of our Energy Networks business in North Wales, was honoured by HRH The Prince of Wales when he was named the Prince’s Ambassador for Wales,

in recognition of his commitment to leadership and responsible business.

- Longannet Power Station welcomed a delegation from the China Power Investment Corporation, who travelled to Fife to find out more about Carbon Capture and Storage.

## August

- Our Carbon Capture and Storage project was strengthened when Shell and National Grid joined our consortium with Aker Clean Carbon, bringing expertise in offshore geological CO<sub>2</sub> storage and the operation of high pressure pipelines to the partnership.
- The ScottishPower Energy People Trust announced funding of £60,000 for a three-year Warmer Healthier Children project, run by National Energy Action and Energy Action Scotland. It will involve fuel poverty training for agencies that work with vulnerable people. 11,000 families should benefit.



## September

- We became the first UK utility to complete a £50m project to replace more than 320,000 prepayment meters with new key meter technology, across our service territories, including the cities of Glasgow, Edinburgh and Liverpool.
- We launched a new plug-in PowerPod device that enables Pay As You Go customers to top up the credit on their meter via the Internet.

## October

- We won two awards and a commendation at the Scottish Arts & Business Awards for our work with the Edinburgh Book Festival and National Theatre of Scotland and our partnership with the Citizens Theatre.
- Susan Deacon, a former Scottish Government Minister, was appointed as a Trustee of The IBERDROLA Foundation, which supports projects that contribute to the progress of scientific, social, cultural and educational endeavour.
- The Foundation subsequently launched a Master and PhD scholarship programme in January 2010, for which graduates in the UK can apply.

## November

- We announced a major breakthrough in reducing the amount of energy required to separate the CO<sub>2</sub> emissions from Longannet Power Station's flue gases. Scientists and engineers working for ScottishPower and Aker Clean Carbon succeeded in reducing the energy

“The IBERDROLA Group made a commitment in December to bring its CO<sub>2</sub> emissions to 20% below those of the European electricity sector by 2020.”

requirement of the carbon capture process by about a third.

- We also submitted our technical and commercial study to the Department of Energy and Climate Change as part of the UK Government's competition to fund the country's first commercial-scale CCS demonstration plant
- Our consortium, with Shell, National Grid and Aker Clean Carbon, is one of the two remaining participants in the competition, which had nine entrants originally.

## December

- We joined the 2020 Delivery Group on Climate Change, which aims to ensure the public and private sectors work together to deliver the Scottish Government's climate change targets of a 42% reduction in CO<sub>2</sub> emissions by 2020.
- The IBERDROLA Group made a commitment to bring its CO<sub>2</sub> emissions to 20% below those of the European electricity sector by 2020.

## Performance Highlights

- Leading the UK in the development of Carbon Capture and Storage technology
- Good progress on installation of clean coal technologies to reduce emissions of SO<sub>2</sub> and NO<sub>x</sub>
- We exceeded our 2010 targets for emission reductions for CO<sub>2</sub> and NO<sub>x</sub> per GWh electricity generated or controlled. We reduced CO<sub>2</sub> by 61% against a 1999 baseline, compared with our target of 25% and reduced NO<sub>x</sub> by 73%, against a target of 50%. We were just short of our target for SO<sub>2</sub> (80.7% reduction achieved, compared with our 85% target) due to a delay in commissioning FGD at Longannet
- Delivered 80% of our three-year target (2008-2011) for CO<sub>2</sub> savings under the Carbon Emission Reduction Target
- ScottishPower Energy People Trust awarded grants totalling £1,958,328 to 29 fuel poverty projects administered by not-for-profit groups which will help 512,697 households and 556,761 individuals
- ScottishPower Green Energy Trust awarded £185,579 to help fund 15 small renewable energy projects. At December 2009 the Trust had awarded a total of £1,131,810 to 123 community projects
- Sales of green energy to commercial and industrial customers grew by 24% on 2008 to 2.1TWh
- First UK supplier to complete a two-year trial of Smart meters, which can encourage customers to save energy
- Started work on developing and testing smart grid technology in Glasgow's East End as part of the Clyde Gateway regeneration project, which is linked to the Glasgow 2014 Commonwealth Games.



■ ScottishPower Renewables' Whitelee Windfarm is providing our customers with green energy (Pic: Blue Leaf Natural Resources)

## About Us

Scottish Power Limited (ScottishPower) is part of the IBERDROLA Group of Spain, one of the world's largest electricity utilities by market capitalisation. The Group employs more than 33,000 people in 40 countries worldwide, with operations concentrated in the Atlantic region, including the Iberian Peninsula, the UK, the United States and Latin America.

IBERDROLA is the world leader in renewable energy, but in 2007, ScottishPower Renewables became part of IBERDROLA Renovables and while it remains a sister company to Scottish Power Ltd, as we are both part of the IBERDROLA Group, it is a separate legal entity.

ScottishPower has three main business divisions:

### Energy Wholesale

Operates a diverse generation fleet with a capacity of 6,000 MW, plus gas storage and trades energy commodities and carbon.

### Energy Networks

Owns and operates our electricity transmission and distribution networks in south and Central Scotland, Merseyside, Cheshire and North Wales.

### Energy Retail

Supplies customer services to 5.2 million electricity and gas customers across the UK.



■ IBERDROLA' s Headquarters in Spain

We also have several joint ventures and subsidiaries. These include SWM Ltd, a wholly-owned subsidiary of our Energy Wholesale business that operates a sludge drying facility near Glasgow' and ScotAsh Ltd, a 50:50 joint venture with Lafarge Cement UK, which processes power station ash into products for the construction industry.

ScottishPower's headquarters continues to be located at: 1 Atlantic Quay, Glasgow, G2 8SP.

## Our Strategy

IBERDROLA expects to invest €18 billion over the three-year period from 2010-2012. €9 billion will be invested in renewable energy, €6.3 billion in networks and €2.7 billion in generation and supply.

The United States will receive 39% of total investments, the United Kingdom 25%, Spain 24%, and Latin America and other markets 12%.

IBERDROLA has a strong focus on renewables in the UK and is part of a consortium that has ambitions to build a nuclear power station. These activities are separate from ScottishPower's operations.

Investment in ScottishPower will include creating a Centre of Excellence for Carbon Capture and Storage at Longannet Power Station, progressing plans for new gas-fired power stations in Scotland and England and investing in the development of ScottishPower's energy networks to support renewable energy projects and enhance security of supply.

### At the end of December 2009 our key statistics were:

- 8,670 employees
- 5,248,804 electricity and gas customers
- 3.47 million electricity connections
- 6,139 MW of generation capacity
- 116,197 of underground cables and overhead lines
- Turnover of £6,764 million
- Net profit of £604.5 million
- Procurement spend of £5,255.5 million
- Community investment of £3.57 million



“We aspire to be the preferred Company because of our commitment to the creation of value, people’s quality of life and the protection of the environment.”

## 2. Corporate Ethics and Responsibility

ScottishPower is committed to the best corporate governance practices, to principles of business ethics and to transparency across all of the company’s areas of activity.

We demand responsible behaviour from all our employees, contractors and suppliers and we are committed to achieving sustainable growth through responsible actions, respect for the natural environment and upholding the principles of social justice.

We believe that doing business responsibly builds the trust of customers and other stakeholders, providing a competitive edge in the marketplace.

### **Vision and Values**

During 2009 ScottishPower worked with IBERDROLA on the alignment and unification of our vision and values.

### **Our Vision**

“We aspire to be the preferred Company because of our commitment to the creation of value, people’s quality of life and the protection of the environment.”

## Our Values

IBERDROLA's vision, which brings together the economic, social and environmental aspects of sustainability, is based on six values, representing the company's commitments to the environment, society and its key stakeholders. These can be seen on the company website: [www.iberdrola.es](http://www.iberdrola.es) under Reputation and Sustainability.

### 1. Corporate Ethics and Responsibility

We are committed to the best corporate governance practices, to principles of business ethics and to transparency in all of the company's fields of endeavour. Responsible behaviour by everyone who is part of ScottishPower is an ever-present guideline for action and a distinctive feature of our company.

### 2. Economic Results

ScottishPower is committed to achieving the growth and profitability objectives spelled out in IBERDROLA's Strategic Plan while respecting the environment and upholding the principles of social justice.

### 3. Respect for the Environment

We work to ensure that we demonstrate respect for our environment and be recognised as an environmentally responsible company.

### 4. Safety and Reliability

We aim to prevent any harm to people, property and the natural environment and deliver safe and reliable energy to our customers.

### 5. Customer Focus

We aim to achieve customer loyalty through competitiveness, choice and service

### 6. Sense of Belonging & Trust

ScottishPower wants to inspire trust among our employees, our communities and all those who participate in and deal with the company.

These values are embedded in our day-to-day activities. We believe that responsible conduct in keeping with the vision and values described above is the best assurance of the Group's commitment to creating value for its shareholders and other stakeholders.

“IBERDROLA's vision, which brings together the economic, social and environmental aspects of sustainability, is based on six values, representing the company's commitments to the environment, society and its key stakeholders.”

## Governance

ScottishPower is part of the IBERDROLA group, which is committed to responsible business operations and growth. IBERDROLA operates a corporate governance framework that reflects international best practice, in particular the Unified Good Governance Code for Listed Companies, approved by the National Securities Market Commission.

IBERDROLA's main board believes in a "multi local" approach that combines corporate and local management of its subsidiaries.

In the UK, responsibility for the day-to-day running of ScottishPower's operations, including compliance, risk management and control, lies with the ScottishPower Executive Team:

<b>Nick Horler</b>	Chief Executive Officer
<b>Frank Mitchell</b>	Director, Energy Networks
<b>John Campbell</b>	Director, Energy Wholesale
<b>Raymond Jack</b>	Director, Energy Retail
<b>Ramón Fernández Olmedo</b>	Director, Finance
<b>Rupert Steele</b>	Director, Regulation
<b>Sheila Duncan</b>	Human Resources Director
<b>Marion Venman</b>	Head of Legal and General Secretary

IBERDROLA is a global organisation that understands the importance of local management in the 40-plus countries in which it operates.

Ensuring that the ScottishPower Board combines both global international business experience with a strong Scottish and UK core is fundamental to IBERDROLA's aim of ensuring its activities are globally coordinated and implemented in the most appropriate way in the UK and Scotland.



Nick Horler – Chief Executive Officer



Frank Mitchell – Director,  
Energy Networks



John Campbell – Director, Energy Wholesale



Raymond Jack – Director, Energy Retail



Rupert Steele – Director, Regulation



Sheila Duncan – HR Director



The ScottishPower Board comprises the Chairman José Ignacio Sanchez Galán and ten other directors. José Ignacio Sanchez Galán is also the Chairman and Chief Executive of Iberdrola S.A. and is the Chairman of Iberdrola Renovables S.A. The directors of Scottish Power Limited and their classifications are shown below:

<b>José Ignacio Sánchez Galán (Chairman)</b>	Non-independent, non-executive director
<b>Amparo Moraleda Martinez</b>	Non-independent, non-executive director
<b>Nick Horler (Chief Executive)</b>	Executive director
<b>Fernando Becker Zuazua</b>	Non-independent, non-executive director
<b>José Luís San Pedro Gerenabarrena</b>	Non-independent, non-executive director
<b>José Miguel Alcolea Cantos</b>	Non-independent, non-executive director
<b>José Sainz Armada</b>	Non-independent, non-executive director
<b>John Campbell</b>	Executive director
<b>Rt Hon Lord Macdonald of Tradeston</b>	Independent non-executive director
<b>Lord Kerr of Kinlochard</b>	Independent non-executive director
<b>Sir Tom Farmer</b>	Independent non-executive director

The three independent non-executive directors were appointed during 2009. John Campbell was also appointed as a director during 2009.

**Following a review of corporate governance arrangements in the early part of 2009, a new corporate governance model was put in place for ScottishPower. As a consequence of this, the ScottishPower Audit and Compliance Committee was set up in February 2009. A further consequence of this review was the winding up of the Advisory Board with effect from 1 November 2009.**

*The ScottishPower Audit and Compliance Committee ('the Committee')* is a permanent internal body, having an informative and consultative role, without executive functions, with powers of information, assessment and presentation of proposals to the Board of ScottishPower within its scope of action. The Committee is governed by the Memorandum and Articles of Association of Scottish Power Limited and by the Terms of Reference of the Committee. The Committee's responsibilities include:

- Monitoring the financial reporting process for the group
- Monitoring the effectiveness of the group's internal control, internal audit and risk management systems, and
- Monitoring the statutory audit of the annual and consolidated accounts

A risk and control governance framework is in place across ScottishPower. The risk management framework and internal control system is subject to continuous review and development. The company is committed to ensuring that a proper control environment is maintained.

"Executive Director John Campbell and Non-executive Directors Lord Macdonald of Tradeston, Lord Kerr of Kinlochard and Sir Tom Farmer were appointed to the Board in 2009."

## **Fraud, Bribery and Corruption**

All employees are given the ScottishPower “Red Book”, which is a Code of Conduct on compliance, behaviour and the law. The company has an anti fraud policy and appropriate mechanisms are in place to prevent fraud, bribery and corruption.

During the latter half of 2009 the company began assessing its anti-bribery and corruption measures against the requirements of the new Bribery Act, which received Royal Assent in April 2010. There were no incidents of fraud, bribery or corruption involving employees of ScottishPower during 2009

## **Human Rights**

Our Security Director and three Security Managers have all received training in human rights, although no new training was conducted during 2009.

Human rights issues for workers and contractors are assured by UK and European legislation. The rights of individuals and communities are taken into consideration through the planning procedures for transmission lines and power stations, which involve detailed environmental impact assessment and extensive consultation.

We select most of our suppliers through the Achilles procurement portal where suppliers are required to provide policy and performance information on human rights.

Fuel procurement is handled by a separate specialist team in Energy Wholesale who, as part of coal supply contracts with non-EU countries, review a number of factors such as management of local operations, social and welfare arrangements for local employees, living standards, health and education provisions and comparisons of local salaries against both industry and national average wages.

We are members of the Association of UK Coal Importer's (Coallmp) which has produced a CSR Policy and Guidelines detailing Coallmp members' expectations of suppliers in respect of a number of CSR related areas.

In addition, we have produced draft clauses for use by members in their coal supply contracts which require the suppliers to give an undertaking that they will comply with the principles of the CSR policy. Breach of any of the clauses can result in termination of the contract. We have successfully included the policy, the supplier representation and termination events in our most recent contract.

We are actively trying to engage more European players in adopting the principles and to work with Coallmp to build a critical mass behind the drive to establish the CSR policy in the wider coal industry.

In addition to engaging with our European counterparties, the Coallmp CSR sub-group is now focusing on the next stage – checking supplier compliance with the principles via mine audits.

## How we manage CSR

Corporate Social Responsibility is enshrined in each one of our company values, which guide us in everything we do.

The Executive Team, headed by the CEO, is committed to CSR – doing business responsibly to achieve sustainable growth and to protect and enhance the reputation of ScottishPower and the wider IBERDROLA Group in the UK.

A Corporate Social Responsibility Steering Committee, made up of senior representatives from across all the functions in ScottishPower, provides a link between the Executive Team and business operations. The Committee is responsible for policy development and review and advising business heads on Corporate Social Responsibility.

We do not have a CSR strategy per se – through our CSR Steering Group we ensure that CSR is integrated into the company's strategy for sustainable growth and that social and environmental issues are given full consideration in our business decision making.

A key part of our CSR framework is on-going consultation with stakeholder groups, listening to and considering their feedback and, where appropriate, addressing the issues they raise in the way we do business.

We have a distinct framework for environmental governance, as it involves an increasing number of mandatory demands and legislative compliance. Responsibility for environmental issues at Board level rests with the CEO.

Environmental policy, strategy and leadership is decided at Executive Team level within ScottishPower and implemented by the business level directors and their teams.

Reporting to the Executive Team, the

cross-company Environmental Coordination Group (UK) is the key vehicle for environmental governance and policy development. The Group, which is chaired by the Energy and Environment Director, also monitors compliance and performance issues.

Environmental issues are incorporated into the company's risk and control management framework, to apply the "precautionary principle" and ensure any risks to the business are addressed. Material environmental issues are central to strategy development and these are formally included in the company's business planning process.

The precautionary principle is also applied through the universal use of environmental management systems and environmental impact assessments for major projects.

Environmental performance is measured through targets and associated KPIs and reported to external stakeholders annually, through the CSR Annual Review and other documents, such as EMAS Statements.

Managers are assessed on environmental objectives as part of a balanced scorecard that also includes economic, health, safety and other objectives.

To provide an external view on environmental strategy and policies, we have an Environmental Forum, which provides a balanced stakeholder perspective and constructive feedback on our policies and proposals. Internal membership of the Forum includes our most senior executives, while the external members are individuals who are eminent in the fields of energy and environmental issues.

The Environmental Forum meets at least twice each year to discuss key topical and emerging issues related to energy and the environment.

## ISO 26000

With the launch of a new international standard for Social Responsibility, ISO 26000, expected to take place towards the end of 2010, our CSR Steering Group has been monitoring developments and will decide by the end of Q3 2010 whether we want to benchmark our operations against the guidelines contained in the standard.

ISO 26000 will integrate social responsibility, providing an international consensus on what it means, what issues an organisation needs to address in order to operate in a socially responsible manner, and what is best practice in social responsibility.

The standard has been developed over five years with input from 91 countries and 42 organisations, including the European Commission, the Organisation for Economic Cooperation and Development (OECD), the International Labour Organization, Consumers International, the World Health Organization, the United Nations Division for Sustainable Development and Global Reporting Initiative.

ISO 26000 will be intended for use by organisations of all types, in both public and private sectors, in developed and developing countries, as well as in economies in transition.

It will assist them in their efforts to operate in the socially responsible manner that society increasingly demands. ISO 26000 contains voluntary guidance, not requirements, and therefore will not be for use as a certification standard.

### Report Scope

This CSR Annual Review reports on the performance of ScottishPower during the calendar year 2009, unless otherwise stated. It excludes the activities of our sister company,

ScottishPower Renewables, which reports separately through Iberdrola Renovables.

This year, for the first time, we have based our report on the G3 Sustainability Reporting Guidelines (GRI G3) prepared by the Global Reporting Initiative (GRI). The G3 guidelines are used as a basis for the IBERDROLA Group's Sustainability Review.

In this report, we have concentrated on those GRI indicators we have identified as the most material to our business. We have provided information in narrative format and quantitative and qualitative data. We have structured the report according to the company's six key values. Throughout the report we have explained why specific issues are material to our business.

We have not reported on indicators where these are superceded by UK and European law, particularly in areas such as displacement of indigenous communities and the use of child or indentured labour.

In addition to the GRI indicators, we have retained elements of CSR reporting that are not covered by the GRI Reporting Guidelines, but which remain issues of concern or interest to stakeholder groups in the UK.

These include employee health and safety indicators, certain customer and community information and the protection of biodiversity that is of concern to the UK, but not on the International Union for Conservation of Nature (IUCN) Red List of species under threat.

The CSR Annual Review aims to provide a transparent account of our performance against the key social and environmental indicators as they apply to our business. The CSR Annual Review is independently assured by Two Tomorrows.

## Stakeholder Engagement

Communicating with stakeholders and understanding their opinions enables companies to develop better-informed policies and strategies that are more likely to be successful. During the year we held a further stakeholder feedback session to canvass opinions on our 2008 Corporate Social Responsibility Annual Review. As a result, we have taken on board some of this feedback in terms of the content and style of this CSR Annual Review.

We engage with our many stakeholder groups regularly, to build and maintain positive relationships and listen to their opinions on our business. Stakeholder analysis and mapping is undertaken as part of the communication planning processes at corporate, business and site levels and stakeholder management plans are developed in connection with specific projects. ScottishPower is represented on IBERDROLA Group's Reputation Committee, which provides a forum for discussion on stakeholder engagement and the key issues emerging at Group and geographic levels.

### Customers

We carry out regular Voice of the Customer surveys to gather feedback on the customer experience and focus our efforts on addressing any issues raised.

### Environment

Our Environmental Forum challenges and informs our environmental policies and actions. It meets at least twice a year and includes academics, policy experts and representatives from environmental organisations. We engage with many environmental stakeholders on a daily basis. Some examples can be seen in the Biodiversity section of this report, under Respect for the Environment.

### Community

We maintain close links with communities at our existing sites and conduct significant community consultation on any new developments. Some examples can be seen in the Our Communities section of this report, under Sense of Belonging and Trust.

### Employees

We gather employee feedback throughout the year through formal and informal channels and use the results to improve the employment experience.

### Government

We continue to engage with Governments and

“We maintain close links with communities at our sites and conduct significant community consultation on any new developments.”

their agencies on all aspects of energy policy and other industry issues.

### Regulators

We maintain regular dialogue with our industry regulators including Ofgem, the Environment Agency and Scottish Environmental Protection Agency (SEPA).

### NGOs/Special interest groups

We consult extensively with a variety of Non Governmental Organisations and where appropriate work closely with them on developing our projects.

### Suppliers

We engage in regular feedback sessions with all major suppliers, and maintain close communications both at contract award stage and during contract delivery.

## Lobbying

We make representation to public powers through meetings and responses to government and regulatory consultations to explain ScottishPower's stance and provide the necessary information.

We are also represented through the following organisations: Energy Retail Association (ERA); Energy Networks Association (ENA); Association of Electricity Producers (AEP); United Kingdom Business Council of Sustainable Energy (UKBCSE) and the Scottish Council for Development and Industry (SCDI).

## Donations to Political Parties

We are a politically neutral company and subject to the Political Parties, Elections and Referendums Act 2000, which defines political "donations" and "expenditure" in wider terms than would be commonly understood by these phrases.

During the period to December 2009, we made donations totalling £22,500 for the sponsorship of conferences and events – activities which may be regarded as falling within the terms of the Act. The recipients of these payments were:

<b>The Labour Party</b>	<b>£7,000</b>
<b>The Conservative Party</b>	<b>£7,000</b>
<b>The Scottish National Party</b>	<b>£6,500</b>
<b>Plaid Cymru – Party of Wales</b>	<b>£2,000</b>

These occasions provide an important opportunity for the company to represent its views on a non-partisan basis to politicians from across the political spectrum. The payments do not indicate support for any political party.

“We make representation to public powers through meetings and responses to government and regulatory consultations to explain our stance and provide the necessary information.”

## Benchmarking and Recognition

ScottishPower participates in a number of external indices and award programmes.

### **Business in the Community**

ScottishPower has retained platinum status in Business in the Community's Corporate Responsibility Index 2008 – for the third year in a row. The index, which ScottishPower has participated in since its launch in 2002, is widely recognised as the UK's leading voluntary benchmark of corporate responsibility.

In addition, Guy Jefferson, Director of Field Operations, for Merseyside, Cheshire and North Wales, was chosen by HRH The Prince of Wales as his 2009 Prince's Ambassador for Wales. Guy led a "Seeing is Believing" tour of top influencers in Flintshire in November 2008, culminating in each of the businesses pledging continuing support for three education establishments.

### **Business in the Community Awards for Excellence 2009**

During 2009 we were awarded a new Big Tick in the Power in Partnership Award for our work with North Staffordshire Warm Zone.

In addition, three Big Ticks were re-accredited:

Merrill Lynch Education Award – ScottishPower Learning and Development

Proctor & Gamble Responsible Marketing and Innovation Award – ScottishPower Energy Retail and ScotAsh Limited, our sustainable construction products joint venture with Lafarge Cement.

### **Carbon Disclosure Project**

ScottishPower provides information to IBERDROLA for their submission to the Carbon Disclosure Project's Climate Leadership Index of top 50 global companies.

The Carbon Disclosure Project is the world's largest institutional investor collaboration on the business implications for climate change. More than 1,000 large corporations report on their emissions through the CDP's website: [www.cdproject.net](http://www.cdproject.net)

## Other Awards 2009

- Arts & Business Scotland, Sustainability Award – ScottishPower won two awards in this category for its work with Edinburgh International Book Festival and the National Theatre of Scotland
- Arts & Business Scotland Community Award, ScottishPower received a Commended for our work with The Citizens Theatre Ltd.
- Energy Networks was short listed as a finalist in the 2009 National Customer Service Awards in the Best Customer Service training category.
- Longannet Power Station and our ScotAsh joint venture were short listed for Vision in Business for the Environment of Scotland Award (VIBES) in the Management category.
- ScotAsh won the Environmental Product Award in the 2009 National Environment and Energy Awards
- ScotAsh was awarded a Green Business Fife Award for Innovation.

## Health and Safety Awards

- ScottishPower retained its Gold status in the Healthy Working Lives award scheme
- Our Fleet Business was Highly Commended in RoSPA's fleet awards for the MORR Trophy, having won the accolade in 2008
- Norec, our coal and ash plant partner at Longannet Power Station received a prestigious Sword of Honour from the British Safety Council – the award recognises exemplary health and safety systems
- ScotAsh received its third consecutive RoSPA Gold Award.



■ ScotAsh Managing Director Peter Quinn receives the company's Green Business Fife Award for Innovation from Jonathon Porritt (left) and John Muir





“We are working to alleviate fuel poverty through our social spend and energy efficiency programmes, which totalled £91 million during 2009.”

### 3. Economic Results

A sustainable business must also be economically successful, generating profit for future investment and growth and creating value for its shareholders.

Although the IBERDROLA group is not listed on the London Stock Exchange, many leading UK pension and investment funds hold our shares, so many thousands of British people benefit directly from our strong financial performance through their pensions and investments. We also support the regional and national economies through the direct and indirect employment of thousands of people, contributing tax revenues to the UK Treasury and through our significant procurement of goods and services.

Energy suppliers in the UK were criticised by consumer organisations during 2009 for the prices they charge customers for electricity and gas. However, pricing is complex. Energy bills reflect not only the price of fuel – they include the costs of producing and transporting energy and mandatory government programmes designed to reduce carbon, improve the energy efficiency of customers' homes and provide help for vulnerable customers.

In its Project Discovery report, the energy regulator Ofgem warns that investment of around £200 billion will be needed in the UK energy industry over the next 10 years to secure energy supplies and meet climate change targets. Ofgem also expressed concern about the effect of this unprecedented level of investment on consumer bills, which may mean that more customers are tipped into fuel poverty.

At ScottishPower we are well aware of the difficult balance we have to strike between generating profit for investment and maintaining affordability for customers.

We are investing significantly in developing our networks and adapting them to support low carbon generation and we are leading one of the UK's most advanced carbon capture and storage projects at our Longannet Power Station in Fife.

At the same time, we are investing in the roll-out of Smart Meters, which will help customers to reduce their energy bills, through managing their energy consumption in the most efficient way possible.

We are also working to alleviate fuel poverty, through our social spend and energy efficiency programmes, which totalled £91 million during 2009.



### Key Financial Results 2009

	2009 (m)	2008(m)
Revenues	£6,764	£6,358.3
Earnings Before Interest and Tax	£800.1	£742.4
Net Profit	£604.5	£725.1

Turnover for ScottishPower increased by 6% for the 12 months to 31st December 2009, while earnings before interest and tax were up on 2008 levels by 8%.

Net profit reduced by 17% on the previous year reflecting that 2008 results were inflated by the release of tax provisions following the successful resolution of disputed tax amounts with HM Revenue and Customs.



“During 2009, we started to source biomass fuel, wood pellets, from a Scottish supplier for the first time.”

### Contribution to Regional and UK Economies

We continued to make a significant contribution to the regional economies where we operate in Scotland, England and Wales through our payroll and to the UK national economy via tax paid to HM Revenue & Customs.

At 31st December 2009, we employed 8,670 people, with an average headcount throughout the year of 8,915. Our total payroll for 2009 was £283 million and our pension funds paid out a total of £112 million to retired employees.

We collected £274 million in VAT and paid £221.1 million in corporation tax – up 6% on last year.

### Procurement Spend

The total value of our procurement spend for 2009 was £5,255.5 million, including fuel and energy purchases. The total value of our non-fuel purchases for the year was £789 million, of which the majority were contracts made with UK suppliers in pounds sterling. At the year-end we had 56,600 registered suppliers and had placed orders with 4,622 suppliers during the year.

A new three-year coal contract was signed with ATH Resources in January 2009 for the supply of 800,000 tonnes of coal. Most of the coal will be sourced from ATH's surface mine at Muir Dean in Fife, which opened in July 2008. The mine is expected to produce 500,000 tonnes of coal annually and have a workforce of 100 at full production. This contract for UK coal, followed a major contract with Scottish Coal that was signed in July 2008. The deal, for up to 10 million tonnes of coal over five years, was the largest ever coal contract to be placed by a UK generator.

During 2009 we also sourced biomass fuel from a Scottish company for the first time. In previous years, wood pellets have been imported from Germany, Latvia and Portugal due to the lack of availability of local suppliers. However, in 2009 we used Scottish-sourced wood pellets supplied by a company in Perth, helping to reduce the transport miles involved in biomass generation. The pellets comprise local sawdust, wood chip and forestry residue.

## Markets and Competition

Our own customer base was 5.25 million at the end of 2009 – broadly similar to last year.

The UK energy supply sector remained very competitive during 2009 with switching levels among domestic customers up by 20%.

A review of the sector, conducted by the regulator Ofgem, concluded that customer switching levels in UK energy supply were higher than any other sizeable competitive energy market in the world and was one of the most competitive markets in the UK, comparing well with sectors such as telecommunications and insurance.

In April 2009 we signed a major contract with Procurement Scotland, to supply green energy to all of Scotland's major public buildings, from Edinburgh Castle and the Scottish Parliament, to all state-run schools and hospitals. The contract is worth around £600million over a possible four years.

## Investment and Pricing

Challenging economic conditions during 2009 served to raise the cost of capital for the corporate sector, making it necessary to delay some non-essential planned investments.

During the recession and early stages of the recovery, we have continued to invest in everything that is critical to the safe and effective operation of our power stations and electricity networks, and to ensure that we continue to meet all regulatory and legal obligations.

Other investments have been prioritised and we have favoured those that provide the best rates of return, while maintaining tight control of budgets and cash flow. Our capital spend for the year was £549 million, compared with £741 million in 2008, with £359 million of this invested in strengthening our networks and providing grid connections for renewable energy projects.

As well as making significant investments in our networks, we are exploring various options to extend our generation fleet. During 2009 we submitted applications for Section 36 consent in respect of a proposed Combined cycle Gas Turbine (CCGT) power station at Cockerzie, East Lothian and a new CCGT adjacent to our existing gas station at Damhead Creek, Kent.

We also acquired an option on a further potential site for a CCGT power station at Avonmouth near Bristol during the year. During 2009 we continued to make preparations for capital projects that will be progressed when the credit flow improves.

## Price Regulation

The operation of our transmission and distribution networks continues to be regulated by Ofgem who announced the outcome of their Distribution Price Control Review in December 2009.

Ofgem protects customers' interests by regulating transmission and distribution network operators through five-year price control periods which include curbs on expenditure, as well incentives for efficiency and technical innovation.

Energy transportation charges make up about one fifth of a household customer's bill, so Ofgem aims to balance the companies' need for adequate resources with protecting customers' interests in relation to prices.

The price controls set the maximum amount of revenue that energy network owners can take through charges they levy on users of their networks to cover their costs and earn them a return in line with agreed expectations.

As a result of the Distribution Price control Review, our base return has been cut from 4.8%

to 4%, representing a reduction of almost 20% in our allowed rate of return during very challenging economic conditions.

We have expressed concern that the 4% headline rate of return is inadequate to encourage and stimulate the investment that the UK's infrastructure requires.

In addition, the Company does not view this rate of return to be consistent with the amount of investment required in order to support the delivery of the UK's energy policy and EU carbon reduction targets, especially given the global competition for investment.

However, we welcome the system's transparency and predictability, and believe that, by fully implementing IBERDROLA's global model for excellence, we will be able to achieve the level of return that the Group's investors demand. This will require taking advantage of the opportunities included in a number of key areas within Ofgem's proposals in respect of making strong efficiency measures and through the incentives mechanisms.



## Energy Efficiency and Help for Vulnerable Customers

We spend significant sums of money on helping customers to make their homes more energy efficient and reduce fuel bills under the Government's mandatory Carbon Emissions Reduction Target (CERT) programme.

This involves reducing CO<sub>2</sub> emissions from wasted energy by installing energy saving measures such as loft and cavity wall insulation in customers' homes and providing energy efficient light bulbs or appliances. During 2009 we spent £79.1 million on customer energy efficiency programmes, helping customers to reduce the amount of energy they use in the long-term.

We also help vulnerable customers who suffer from fuel poverty through our charity, the ScottishPower Energy People Trust. The Trust awards grants to not-for-profit organisations that help people who are suffering from fuel poverty.

Programmes funded cover energy efficiency and income maximisation advice, as well as crisis funding. We spent £12 million on fuel poverty initiatives during 2009, including through the ScottishPower Energy People Trust, social tariffs and community partnerships.

Our combined spend on energy efficiency and fuel poverty initiatives was £91 million for 2009.

More information on the ScottishPower Energy People Trust appears in the [Customer Focus](#) section of this report.

## Community Investment

We continued to support a host of programmes in the communities we serve during 2009, ranging from employability training for young people, to arts and culture, environmental and public safety projects, energy efficiency and charitable giving.

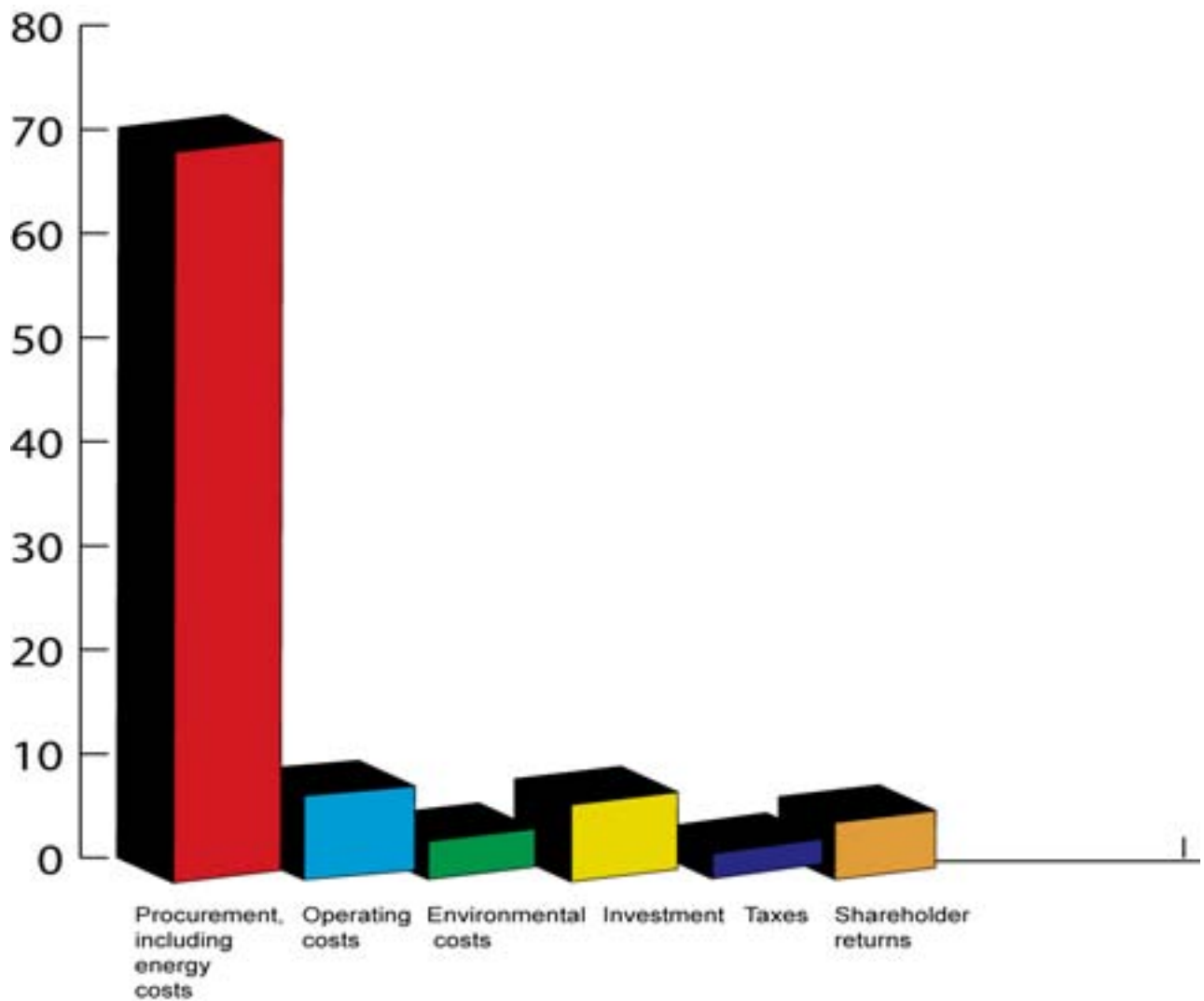
Our total community investment for 2009 was £3.58 million. Examples of the projects we supported during 2009 appear in the Sense of Belonging and Trust section of this report.

“We submitted applications for Section 36 consent in respect of a proposed Combined Cycle Gas Turbine power station at Cockenzie, East Lothian, and a new CCGT adjacent to our existing gas station at Damhead Creek, Kent.”

## Customer Bills

Our customers' energy bills are made up of various different costs, from the fuel we use, to mandatory government energy efficiency programmes, investing in the electricity network and lower carbon generation and the cost of transporting energy to customers' homes.

The diagram below shows where the money goes for every £100 that a customer spends with us, across the whole electricity supply chain from electricity generation, through transmission and distribution to supply.



## Key Elements of a Domestic Customer's Bill

The section below shows how our Energy Retail business allocates the income from a typical customer bill – the cost of electricity and gas makes up just over half of this bill.

### Wholesale energy costs

This is the basic cost of the energy itself – known as the wholesale energy cost. We purchase energy in advance to make sure we can meet customer demand. Buying in advance also helps us to ensure sufficient supplies of energy and smooth out what customers pay, as wholesale costs can be highly variable from day to day.

### Delivering the energy to homes

This is the cost of transporting energy to customers' homes through the network of wires and pipes that covers the country. For every unit of energy used by a customer, we pay a fee to the company who owns the pipes or wires that connect to customers' homes. These fees, which are effectively a "delivery charge" for energy, are agreed with the industry regulator Ofgem.

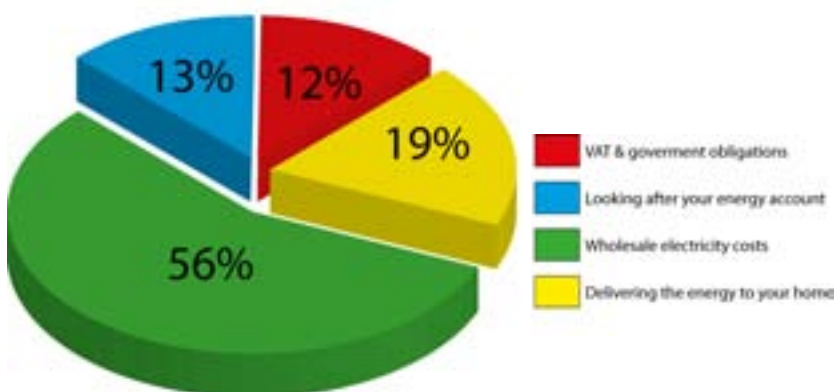
### Maintaining energy accounts

This includes the cost of reading meters, printing and posting bills, maintaining call centres to answer customer enquiries and collecting money from our customers. It also includes the normal profit we make as a company.

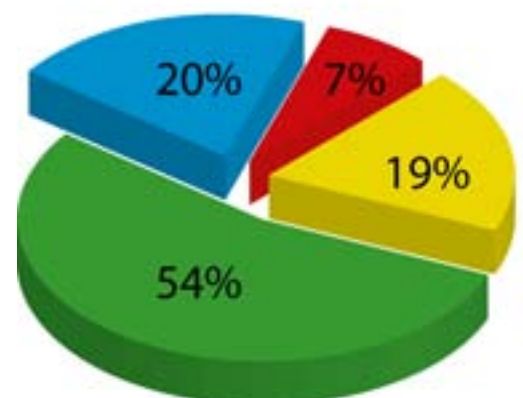
### VAT & government obligations

As well as the standard VAT charge, which is 5% for domestic energy, the Government has introduced several obligations that all energy suppliers are required to deliver. These are explained in more detail, below.

### Electricity



### Gas



\*Based on an average of ScottishPower's domestic customers across Britain with typical annual mains gas usage of 20,500kWh. Costs are indicative as at 30th November 2009.



## Government Obligations

### Renewable energy

Under the Renewables Obligation all major UK energy suppliers are required to obtain a specific percentage of the electricity they sell to customers from renewable sources, such as wind power. The cost of meeting this obligation is included in the price of electricity.

### Social Initiatives

UK energy suppliers have agreed that they will increase spend to £150 million in 2010/11 on a range of social programmes to assist vulnerable and fuel poor customers.

In addition, the Government has introduced another scheme, the Community Energy Savings Programme (CESP), which obliges suppliers and generators to pay for the installation of energy efficiency measures in the homes of people living in areas of social deprivation.

The objective of the programme is to permanently reduce fuel bills for vulnerable customers on low incomes and to reduce CO<sub>2</sub> emissions. It is estimated that this programme will cost the energy industry £350 million over the next three years.. We include an allowance for the cost of meeting this objective in our energy prices

### Carbon Emissions Reduction Target (CERT)

CERT is the main government policy aimed at reducing carbon emissions by improving the energy efficiency of UK households. It obliges all of the UK's major energy suppliers to deliver energy efficiency measures like loft and cavity wall insulation to homes across the UK.

Many of these measures are discounted and in some cases are provided free of charge. It is estimated that delivering this policy will cost the energy industry £3.2 billion in the period between 2008 and 2011. Like other energy companies we include an allowance for the cost of meeting this objective in our energy prices.

For further information on products and prices, please see our customer website:

[www.scottishpower.co.uk](http://www.scottishpower.co.uk)



“We aspire to be the preferred company because of our commitment to the creation of value, people’s quality of life and the protection of the environment.”

#### 4 Respect for the Environment

Running our business with respect for the environment is a cornerstone of ScottishPower’s strategy, as we have worked to develop our business sustainably for many years. Respect for the environment is a value that is shared throughout the IBERDROLA Group and which is enshrined in the Group’s vision:

##### **Our Vision**

“We aspire to be the preferred company because of our commitment to the creation of value, people’s quality of life and the protection of the environment.”

##### **Managing Our Impacts**

As one of the UK’s major energy utilities we recognise that our activities – the generation, transmission and distribution of electricity, the operation and maintenance of our plant, and the construction of new projects can have impacts on the environment.

So for us, respect for the environment means striving to eliminate, minimise or control our environmental impacts, in particular:

- Minimising the carbon footprint of our business
- Reducing emissions to air, land and water
- Ensuring full regulatory compliance
- Minimising our use of natural and man-made resources
- Sourcing material resources responsibly
- Cutting waste and encouraging re-use and recycling
- Protecting natural habitats and biological diversity.

We share an Environmental Policy with other companies in the IBERDROLA Group. Information on environmental governance is covered in the [Corporate Ethics and Responsibility](#) section of this report.

## Environmental Policy

The company's actions shall be guided by the following basic action principles:

**INTEGRATE** fully the environmental dimension and respect for the natural environment into the company's strategy.

**ENSURE** at all times the compatibility of financial profit with environmental protection through innovation and eco-efficiency.

**INCORPORATE** the environmental dimension into investment decision processes and the planning and carrying out of activities, promoting the consideration thereof in cost-benefit analysis.

**ESTABLISH** appropriate management systems that help to reduce environmental risk and that include

- Strict compliance with the law, the various international commitments executed and internal regulations on environmental matters applicable to the activities, facilities, products and services of the company, bearing in mind as well legislative trends and the latest international practices, and putting procedures in place that will allow the company to know and control compliance with such commitments.
- On-going efforts to identify, assess and reduce the adverse environmental effects of the activities, facilities, products and services of the company.
- Provision of information to and training of employees on the effects of the development of the company's processes and products to minimise the detrimental effects of its activities on their health and on the environment.
- Development of plans and programmes, setting objectives and goals, updating of emergency plans and performance of internal audits that will

make it possible to reduce risks, minimise adverse environmental effects and regularly control the progress and effectiveness of the measures applied, fostering the on-going improvement of our processes and practices.

**RESPECT** nature, biodiversity and the historical and artistic heritage in the natural environment where the company's facilities are located.

**FOSTER** research and development of new technologies and processes that help to address climate change and other environmental challenges with a preventive approach, allow for a more efficient use of natural resources and permit progress towards a more sustainable energy model.

**PROMOTE** behaviour in line with the principles of this policy among the principal stakeholders of the company, assigning positive value to alignment therewith, particularly in the selection of contractors and suppliers.

**ESTABLISH** constructive dialogue with Government Agencies, Non-Governmental Organisations, shareholders, customers, local communities and other stakeholders in order to:

- Work jointly in the search for solutions to environmental problems.
- Contribute to the development of a useful public policy from the environmental standpoint that is efficient in economic terms.
- Raise awareness on the importance of taking measures to reduce greenhouse gases.

**REPORT** transparently on environmental results and actions, establishing the appropriate channels to favour communication with the principal stakeholders.

## Climate Change

### Issue in Context

Climate change is the most significant issue facing the world today and energy utilities will play a pivotal role in helping to meet Government targets for reducing CO<sub>2</sub> emissions.

### International Activity

While the UN Climate Change Conference, held in Copenhagen last December, failed to result in an international agreement for reducing CO<sub>2</sub> emissions, the Copenhagen Accord made a commitment to limit temperature rises to 2°C and to provide funding support to developing nations of up to \$100 billion by 2020.

More than 100 countries are now associated with the Accord – accounting for 80% of global CO<sub>2</sub> emissions – and many have committed to targets and actions.

Negotiations will continue when the Conference of Parties to the UN Framework Convention on Climate Change meet in Cancun, Mexico, during 2010 and in South Africa in 2011.

### Europe

The EU committed in 2007 to a target reduction in CO<sub>2</sub> emissions of 20% by 2020, relative to 1990 levels. It may now raise this target to 30%, in the context of an international, legally binding agreement, with similar contributions from others. This would have the effect of increasing the price of carbon. Strong carbon prices are essential for driving investment in low carbon technologies.

### United Kingdom

The UK Climate Change Act (2008) sets legally binding targets for the UK to cut CO<sub>2</sub> emissions by at least 80% by 2050, with an interim target of at least 34% by 2020. The UK Low Carbon Transition Plan sets out how this will be achieved. Areas relevant to the power sector include:

- Supporting the EU Emissions Trading Scheme, which limits carbon emissions from heavy industry and the power sector across the EU
- Taking the lead internationally in supporting commercial-scale Carbon Capture and Storage projects
- Working to facilitate new nuclear power stations
- Producing a National Renewable Energy Action Plan for the EU, setting out how the UK intends to achieve its target of meeting 15% of the UK's energy demand from renewables by 2020
- Developing a Marine Energy Action Plan
- Improving support for biomass generation through the Renewables Obligation

- Planning a more flexible grid that can manage energy from renewable sources and cope with changes in demand
- Extending the Carbon Emissions Reduction Target (CERT) to 2012 – taking the amount Britain's energy suppliers will invest in home energy efficiency to £3bn
- Rolling out the Community Energy Saving Programme (CESP). Funded by generators and suppliers, this will improve the energy efficiency of homes within whole streets or communities
- Introducing feed-in tariffs to pay owners of small-scale renewables, such as windfarms, cash for any surplus energy they produce
- Plans for the roll-out of smart meters to encourage changes in consumer behaviour.

Additional pledges made by the Coalition Government include supporting an increase in the EU emission reduction target to 30% by 2020 and establishing an emissions performance standard that will prevent coal-fired power stations being built unless they are equipped with sufficient carbon capture and storage.

## Scotland

The Scottish Government's Climate Change (Scotland) Act was passed unanimously by the Scottish Parliament in 2009. The Scottish Government is supporting UK and European targets and has its own ambitious targets for renewable energy, aiming to meet 50% of the nation's energy needs from renewable sources by 2020.

It has also committed to reduce Scotland's CO<sub>2</sub> emissions by 80% by 2050, with an interim target of 34% by 2020, or 42% if the EU increases its target reduction for the same time-scale from 20% to 30%.

## Why it is a Material Issue

### Role of the Electricity Supply Industry

Climate change is a significant issue for ScottishPower because the burning of fossil fuels, such as coal and gas, creates CO<sub>2</sub>. In 2009 the energy supply industry accounted for an estimated 39% of the UK's CO<sub>2</sub> emissions, according to the Department of Energy and Climate Change's statistical release. Based on DECC's (provisional) figures for 2009, emissions from the UK's electricity supply sector continued to fall between 2008 and 2009, with a reduction in CO<sub>2</sub> emissions of 11.3% (237Mt).

### Climate Science

Despite questions being raised over some aspects of climate science during 2009, there is an overwhelming body of evidence that shows the world is getting warmer – and that the temperature rise is linked with human activity and an increased concentration of greenhouse gas emissions in the atmosphere.

Several independent studies, including one from the Met Office Hadley Centre and the NASA Goddard Institute for Space Studies show that the Earth has warmed by around 0.75°C since 1900.

### Effects on People and Planet

Changes to the Earth's climate have already been felt, with increased flooding in some parts of the world and drought or water stress in others.

Oxfam, in its report 'Suffering the Science: Climate Change People and Poverty', published ahead of the 2009 G8 summit in Italy, presents evidence from the communities Oxfam works with in almost 100 countries to show that climate change is hitting the world's poorest people the hardest. It warns that the most worrying effect of climate change is hunger, with poor farmers losing crop after crop due to drought or heavy rains and changing seasons, while flooding also increases the transmission of water borne diseases.

The United Nations Environment Programme states that climate change will have an impact on all types of natural habitat, leading to a loss of biodiversity, extinction of species and an adverse effect on people who depend on their local ecosystems.

“Despite questions being raised about some aspects of climate science, there is an overwhelming body of evidence that shows the world is getting warmer.”

## Climate Change Economics

Reports by Professor Lord Nicholas Stern (The Stern Review on the Economics of Climate Change 2006, and A Blueprint for a Safer Planet, 2009) estimate that introducing measures to cut greenhouse gas emissions to avoid the worst impacts of climate change could cost between 1-2% of world Gross Domestic Product (GDP) per year by 2050.

Conversely, taking no action on emissions could cause the costs and risks of climate change to increase to an estimated loss of at least 5% of global GDP each year. Summer floods in 2007 resulted in insured flooding losses of an estimated £4.9bn.

## Adaptation

ScottishPower, like other utilities, is required under the Climate Change Act 2008 to provide the Government with a report on the risks and opportunities facing our business as a result of climate change.

This will form part of a UK-wide climate change risk assessment from which an adaptation action plan for climate change will be developed.

## Cleaner Generation

ScottishPower is committed to reducing CO<sub>2</sub> emissions across its energy portfolio in support of the reduction targets set by the UK and Scottish Governments.

We operate coal, gas, hydro and pumped storage power stations and co-fire biomass materials, such as wood chips, at our two coal-fired power stations. Longannet Power Station is at the forefront of carbon capture demonstration technology and has ambitions to become a centre of excellence for carbon capture and storage (CCS).



■ Cockerzie, a coal-fired station in East Lothian, will close by the end of 2015 (Pic: Craig Yorkston)

Cockerzie Power Station, our 1,200MW coal station in East Lothian, will close by 31st December 2015. An application for consent to build a Combined Cycle Gas Turbine (CCGT) power station to replace it was lodged with the Scottish Government's Energy Consent Unit in December 2009.

The IBERDROLA Group's renewable energy portfolio in the UK is developed and operated by our sister company, ScottishPower Renewables.

ScottishPower Renewables is the UK's largest windfarm developer and operator and ended 2009 with installed capacity of 800MW and a project pipeline of 5,115MW.

The business is also involved commercialisation of emerging technologies, such as wave and tidal power. ScottishPower has no nuclear power stations – however, IBERDROLA is part of a consortium with GDF SUEZ and Scottish & Southern Energy to pursue the development of new nuclear power stations in the UK.

In October 2009 the consortium secured the option to purchase a site for a new nuclear power station at Sellafield on the Cumbrian coast from the Nuclear Decommissioning Authority. They are currently preparing detailed plans for a new nuclear power station on the site with a capacity of up to 3.6 GW.

Electricity Generation by Type		
Generation Type	2009 (GWh)	2008 (GWh)
Coal	11,039	10,835
Gas	13,460	13,948
Hydro	1,050	1,190
Other	206	226
<b>Total</b>	<b>25,755</b>	<b>26,199</b>

The figure for hydro generation includes pumped storage from Cruachan Power Station. Hydro generation from Galloway, Lanark and run-off from Cruachan was 426 GWh during 2009. This figure does not include the output of our sister company, ScottishPower Renewables, which reached 1.7 million MWh in 2009 – [www.scottishpower.com/PressReleases\\_1998.htm](http://www.scottishpower.com/PressReleases_1998.htm)

The amount of electricity generated by ScottishPower reduced by 1.7% during 2009, although the proportions of generation by source remained broadly similar, with a 1% increase in coal generation and a 1.5% reduction in electricity generated from gas.

ScottishPower meets customer energy demand from its own generation and electricity purchases, including renewable energy from ScottishPower Renewables and other generators.

ScottishPower's fuel mix, for energy supplied to customers, between April 2008 and March 2009 (the latest available figures) is shown below. ScottishPower supplied more electricity from coal, gas and renewables than the UK average and no nuclear power. The fuel mix for the period April 2009 to March 2010 will be published in September.

Fuel	% Total	2008
Coal	43.5	32.9
Gas	49.3	43.3
Nuclear	0	15.3
Renewable	6.9	5.9
Other	0.3	2.6
<b>Total</b>	<b>100.00</b>	<b>100.00</b>
CO <sub>2</sub> emissions	0.57 per KWh	0.46/KWh
High level nuclear waste	0.00g per KWh	0.01g/KWh





■ Work started in 2009 to test the complex chemistry involved in carbon capture at Longannet's Mobile Test Unit

### Carbon Capture and Storage

ScottishPower has ambitions to develop a centre of excellence for clean coal at Longannet Power Station in Fife.

The power station is leading a major project to investigate the feasibility of Carbon Capture and Storage (CCS) and in 2009 became the first major coal generating station in the UK to capture CO<sub>2</sub> from its flue gases in a Mobile Test Unit, supplied by Aker Clean Carbon of Norway.

The mobile test unit (MTU) launched in April 2009 has been operating 24 hours a day to capture the CO<sub>2</sub> produced from the generation of 1MW of electricity, capturing about 90% of the carbon from 1,000 cubic metres of exhaust gases every hour.

The hot flue gases are passed through an absorber tower, where amines – chemicals that stick to CO<sub>2</sub> molecules – scrub out the CO<sub>2</sub>. The CO<sub>2</sub>-rich amines are then heated to release the CO<sub>2</sub> to be compressed into a liquid, ready for transportation and storage. Three key aims of the testing process were to develop an amine that is relatively low cost, long lasting and which requires less heat energy in the CO<sub>2</sub> separation process. The ScottishPower CCS project has linked up with the University of Trondheim in Norway who are working to develop more sustainable amines with better longevity and which require a lower energy input.

“ScottishPower has ambitions to develop a centre of excellence for clean coal at Longannet Power Station.”

Results from the MTU have been encouraging – process improvements have achieved considerable energy savings in the capture process, compared with what was previously thought achievable.

A consortium led by ScottishPower, which includes Shell, National Grid and Aker Clean Carbon, is one of two remaining bidders in the UK Government's competition to build a commercial scale CCS project.

In March 2010 (just outside the reporting period) the ScottishPower-led CCS consortium was awarded Government funding to develop a Front End Engineering Design Study – detailed design and engineering plans for a retrofit of a commercial scale CCS scheme at Longannet Power Station.

ScottishPower hopes to have a 300 MW CCS demonstration project fully operational at Longannet Power Station by 2014, offering a blueprint that could capture up to 90% of Longannet's CO<sub>2</sub> and be deployed at thousands of existing coal stations throughout the world to control greenhouse gas emissions.

To provide an academic focus for its centre of excellence, ScottishPower is funding a Chair in Carbon Capture and Storage at the University of Edinburgh.

## Carbon Dioxide Storage

ScottishPower's CCS project is examining options for the storage of CO<sub>2</sub> in underground rock formations in the North Sea. In 2009, a detailed study 'Opportunities for CO<sub>2</sub> Storage around Scotland' highlighted the potential in the Central North Sea to store emissions in saline aquifers beneath the Central North Sea seabed and depleted oil and gas fields.

Saline aquifers are porous rock formations filled with highly-concentrated salt water and covered by a thick cap of impermeable cap-rock that will keep liquefied CO<sub>2</sub> in place.

One of the report's key conclusions is that Scotland has not only the storage capacity but also the geographical context and know-how to become a major hub for CO<sub>2</sub> transportation and storage in Europe.

The UK already has the offshore infrastructure and the engineering skills and experience that give us a unique opportunity to play a leading role in this emerging industry and low carbon economy of the future.

Shell UK Limited (Shell) joined the consortium in August 2009 and bring with them expertise as a global leader in offshore oil and gas operations.

The National Grid also joined the ScottishPower consortium in August 2009 as investigations continue into using the existing natural gas transmission pipelines in Scotland for CO<sub>2</sub> transportation as North Sea gas supplies decline.

“We hope to have a 300MW CCS demonstration project fully operational at Longannet by 2014, offering a blueprint that could capture up to 90% of the station's CO<sub>2</sub> and be deployed at thousands of existing coal stations worldwide.”

## Carbon Management

### Our Greenhouse Gas Footprint

Our overall carbon footprint for 2009 reduced by 2.27%, due to a modest reduction in CO<sub>2</sub> from power generation and a significant reduction in CO<sub>2</sub> from transport and travel.

GHG Footprint (CO <sub>2</sub> )	2009	2008
Power stations (energy generated, tonnes)	15,280,030	15,413,819
Transport (tonnes)	283,463	537,670
Internal energy and process use (tonnes)	164,349	141,900
CO <sub>2</sub> equivalent from SF <sub>6</sub> released (tonnes)	8,508	8,198
<b>Total CO<sub>2</sub> emissions (tonnes)</b>	<b>15,736,350</b>	<b>16,101,586</b>

Methane releases of 467.4 tonnes have been counted as 9,815.4 tonnes CO<sub>2</sub> equivalent. November and December energy usage estimated for some sites. Conversion factors taken from document "2009 Guidelines to Defra/DECC's GHG Conversion Factors for Company Reporting" Version 2.0, updated 30/9/09.

### Ozone Depleting Substances

This includes emissions of CFCs, HCFCs, halons and methyl bromide. There was one very minor occurrence of CFC release at Shoreham Power Station during 2009 amounting to 50 grammes CFC equivalent.

### Carbon Management Strategy

ScottishPower's Carbon Management Strategy includes the following measures:

- Reduce the carbon intensity of our generation by investing in clean coal technologies, specifically Carbon Capture and Storage, gas-fired generation and hydro
- Reduce the carbon intensity of the electricity we supply to our customers by maximising renewable energy in the fuel mix, from ScottishPower Renewables and other operators
- Support our parent IBERDROLA's ambitions to build new nuclear stations in the UK
- Participate fully in the Carbon Reduction Commitment Energy.

### Efficiency Scheme

- Internally, continue to reduce energy use, business mileage and other forms of business travel
- Reduce vehicle related emissions by renegotiating our fleet agreement

Targets for carbon management are being agreed at IBERDROLA Group level. A Group-wide Action Plan is under development.

## Market Mechanisms

### EU Emissions Trading Scheme

The EU Emissions Trading Scheme (EU ETS) is the primary mechanism for reducing CO<sub>2</sub> emissions across power generation and heavy industry throughout Europe. By placing a price on carbon, it aims to encourage companies to reduce their operational emissions and invest in lower carbon technologies.

Under the scheme, an overall CO<sub>2</sub> cap is set and carbon allowances are distributed through a National Allocation Plan (NAP). These may be used in respect of any plant, or traded.



■ *The Carbon Capture Mobile Test Unit is aiding our bid to create a CCS Centre of Excellence at Longannet*

Participants must ensure emissions equal allowances. They can buy additional allowances to accommodate increased emissions, or reduce emissions and sell their excess allowances. The scheme is now in its second phase, which will run until 2011.

EU ETS requires each eligible installation to produce an annual emissions report for the previous calendar year, which must be externally verified before being submitted to the regulator by the end of March. Allowances equal to these verified emissions must then be surrendered by the end of April.

ScottishPower submitted 15,137,286 CO<sub>2</sub> allowances for 2009.

This comprised 10,191,739 free allowances and net trades of 5,231,898, leaving a net surplus for the year of 286,351 that can be used across subsequent years in Phase 2.

According to Point Carbon, the EU ETS continued to see the lion's share of carbon traded in 2009, with 5.6Gt traded, equivalent to 68% of global volume, with a value of €73bn, or 77% of global value. However, the value of the carbon market globally barely grew in 2009 – despite doubling between 2007 and 2008.

EU allowances traded within the €8.2-15.87/t price range during 2009. The price fell in early in 2009, hitting the low in mid February before rising to the peak of €15.87/t in May.

The remained of the year saw the contract trade in a tight range €12.4-15.5/t. A lack of fundamental drivers and no firm commitment from the Copenhagen conference on non-EU carbon abatement programmes resulted in a largely flat market.

## Renewables Obligation

The Renewables Obligation is another mechanism designed to increase market demand for – and financially support – renewable generation. It places a requirement on suppliers to source a specific proportion of the electricity they supply from renewable sources.

Suppliers must demonstrate compliance by presenting tradable Renewable Obligation Certificates (ROCs) acquired from generators certified by Ofgem, or payment of a “Buyout Fine”. ScottishPower's small-scale hydro plant qualifies for ROCs, as do Longannet and Cockenzie power stations in respect of electricity generated by co-firing biomass.

Scottish Power's renewable obligation for 2008/09 was 2,205,678 ROCs – supplying 2,205,678 MWh of electricity from certified renewable sources. Against this we submitted 1,851,018 ROCs.

This equates to 84% of the obligation being met through ROCs. The shortfall was made up by paying a buyout fee for the remainder of the obligation. Overall compliance across the whole UK market was 65%.

“ScottishPower met 84% of its Renewable Obligation through ROCs. Overall compliance across the UK market was 65%.”



■ *Bonnington Power Station, part of the Lanark Hydro-electric scheme, is a clean generator of sustainable electricity*

## Carbon Reduction Commitment Energy Efficiency Scheme

ScottishPower made preparations during 2009 for the introduction of the Carbon Reduction Commitment (CRC) Energy Efficiency Scheme.

The CRC is a new carbon trading scheme developed by the Government for large public and private sector organisations that are not already covered by the EU ETS.

The new scheme will be operational from April 2010 and covers electricity and gas consumption.

Organisations must participate in the CRC scheme if they have at least one half-hourly electricity meter (HHM) settled on the half-hourly market and their total half-hourly electricity consumption exceeded 6,000 megawatt-hours (MWh) during 2008.

Participants in the CRC must purchase carbon allowances to cover their emissions (£12/t CO<sub>2</sub> in the first phase).

This money is paid back to participants each year in "revenue recycling" – but participants get more or less money depending on their rank in a league table CRC is designed to improve energy efficiency in large organisations.

It will operate as a 'cap and trade' mechanism,

providing a financial incentive to reduce energy use by putting a price on carbon emissions from energy use.

Qualifying organisations will have to comply legally with the scheme or face financial and other penalties.

In preparation for the introduction of the CRC Scheme, ScottishPower has installed an Automated Meter Reading process, covering approximately 40 offices and buildings and is in the process of adopting the Carbon Trust Standard.

The Carbon Trust Standard was developed by the Carbon Trust in 2007/08. It is designed to provide a robust, objective and consistent methodology for assessing corporate carbon performance.

The Standard specifies requirements in the areas of:

- Carbon footprint measurement
- Carbon management
- Carbon reduction performance

Assessment against the Standard is undertaken by independent third-party assessors. The process is managed by the Carbon Trust Standard Company – a subsidiary of the Carbon Trust.

"We prepared in 2009 for the introduction of the Carbon Reduction Commitment Energy Efficiency Scheme."

## Internal Initiatives

A number of initiatives to reduce energy use and carbon were implemented during 2009.

### Telecoms Cooling

In Energy Networks a key project was the introduction of a new cooling system to maintain Cisco telecoms equipment at a safe working temperature, without the use of energy and maintenance intensive systems.

The RFI Cool system from 4Energy uses directed air and was tested by ScottishPower as part of the Innovation Funding Incentive. The system can maintain telecommunication rooms in which Cisco servers are located at under 40C under Glasgow climatic conditions.

The initiative provides a better environmental solution than traditional vapour compression air conditioning, delivering power use savings of 93% and CO<sub>2</sub> savings of 6,020 kg CO<sub>2</sub> per site.

When the system is rolled out to all 17 sites, we expect to make CO<sub>2</sub> savings of 102,340 kg per annum.

### Power Station Efficiency Improvements

We achieved average efficiencies for our generating plant of 51.8% for CCGTs, 34.98% for coal and 51.07% for CHPs. In Energy Wholesale there were various initiatives to reduce energy use during 2009. These included:

- Installation of a new high-pressure turbine rotor on U1 at Longannet Power Station, which has improved efficiency from 86% to 92%, reducing

emissions and coal use per GWh of electricity produced.

- Re-designed turbine blades at Rye House Power Station also improved the efficiency of Gas Turbine II by 0.5%

- Two projects implemented in 2009 at Damhead Creek Power Station have produced significant energy savings. Production Technicians looked closely at ways of optimising the station's heat transfer processes, especially during summer when ambient temperatures are higher.

Projects tackled energy savings by subtly altering the operation of the closed circuit cooling water (CCCW) system and the HRSG Preheater Pump Shutdown Logic. Solutions were built in to the site's logic controls, enabling computer systems to maintain optimal conditions during normal operations. The CCCW system changes alone saved 50% of its running costs for an average summer period.

- Hatfield Moor's Lindholme Compression Site's water bath heater, which warms up imported gas arriving on site prior to its storage, was recommissioned in July 2009. The new heater now activates at a reduced set point temperature – resulting in 25% less fuel gas being used compared with the same six-month period in 2008, despite increased volumes of gas being injected.

### External Initiatives

We are involved in a number of external initiatives to reduce carbon, ranging from customer energy efficiency programmes to the provision of charging points for electric vehicles.

## Energy Efficiency

ScottishPower has a strong track record of exceeding its targets in statutory energy efficiency programmes.

Most of our energy saving measures are delivered through strategic alliances with social housing providers, including local authorities and housing associations, helping to target energy efficiency improvements and reducing energy bills amongst the households that need help the most.

We have more than a hundred partnerships across the UK and the home energy efficiency improvements we fund are delivered through our partnership with the quality provider, Eaga. In addition, we are the energy partners in four Warm Zones – in Newcastle, Gateshead, Kirklees and North Stafford in England – and Community Energy Partnerships in North and South Lanarkshire.

### Carbon Emissions Reduction Target (CERT)

The Carbon Emissions Reduction Target (CERT) puts an obligation on energy suppliers to deliver CO<sub>2</sub> savings of 154 million tonnes in the period from 2008-2011, at a cost of around £3 billion.

Forty percent of the programme must be targeted at priority group customers, such as people on low incomes and anyone over the age

of 70, regardless of income. CERT can be used as a vehicle to deploy microgeneration in the home, for example, solar hot water systems, or air heat pumps.

It can also be used to support trials of new initiatives, such as encouraging behavioural change, where carbon savings cannot yet be quantified. Projects such as solid wall insulation, which were not included in previous energy efficiency schemes, can also be funded under CERT.

In addition, we have an obligation to fund a new Community Energy Saving Programme (CESP) to support energy efficiency projects at a local level. The £350 million cost will be shared between energy suppliers and generators and will be delivered between October 2009 and December 2012.

CESP aims to deliver CO<sub>2</sub> savings, while supporting the Government's Fuel Poverty Strategy by helping some of the UK's poorest communities achieve savings on their fuel bills. Communities helped are being identified through indices of multiple deprivation. Energy efficiency advice is also included in projects funded by the ScottishPower Energy People Trust which is part of ScottishPower's social programme to tackle fuel poverty – see our [Customer Focus](#) section for more information.

## Energy saving measures installed 2009

Cavity walls insulated – 116,902

Lofts insulated – 106,000

Energy saving light bulbs distributed – 5.5 million





■ *ScottishPower is working with partners to help develop the use of electric vehicles in Glasgow over the next two years*

## Electric Vehicles

During 2009 we joined a consortium to support the trial and development of electric vehicles in Glasgow over the next two years. Others involved in the project are niche vehicle manufacturer Allied Vehicles, Glasgow City Council, the University of Strathclyde, Scottish Enterprise and Axion – the company that will develop batteries for the cars. Our role will be to develop the electricity network, including charging points.

The project has received funding of £1.8m from the Technology Strategy Board. The aim is develop Glasgow as a centre of excellence for low carbon transport.

## May Day Network

In May 2009 we sponsored the Prince of Wales' May Day Network event in Edinburgh for the second consecutive year. As a signatory to the May Day Network, which is administered by Business in the Community, we have made the following pledges:

- To calculate our carbon footprint
- Report on our carbon footprint
- Encourage employees to reduce their carbon footprint at home and at work
- Mobilise customers to take action 2020 Delivery Group.

## 2020 Delivery Group

In December 2009 ScottishPower joined a new 2020 Delivery Group that is aiming to ensure that all sectors of Scotland's economy and civic society contribute fully to achieving the Scottish Government's Climate Change Delivery Plan, which includes the target of a 42% reduction in emissions over the next decade.

## Networks & Metering

### Smart Meters

ScottishPower is one of four UK suppliers that worked on energy demand research projects between April 2007 and February 2010.

The project involved researching customers' home energy use habits and determining which measures are effective in encouraging them to reduce their energy use.

The research, involving a representative sample of around 2,600 customers, was part-funded by the Government and examined the influence of enhanced information on customers' energy use habits.

Interventions included:

- Providing better information to encourage people to save energy, including historical comparisons of their energy use
- Providing a real-time visual display unit, and
- The installation of smart meters.

For two years ScottishPower has tested the new smart electricity and gas meters in just under 1,000 homes.

This has allowed us to better understand the system requirements and the processes involved in sending and receiving what will eventually be billions of items of information every year. Smart meters provide precise real time information on energy consumption, enabling customers to better manage their energy use.

Energy companies will also be able to design specifically tailored tariffs that will benefit their customers – and bring an end to estimated bills and manual meter readings, so there will never be any doubt about the cost of energy.

During 2010 ScottishPower will increase the number of smart meters it installs in customers' homes in preparation for the full roll-out of smart metering, which is expected to start in 2012. Over the next two years, we will install an additional 100,000 plus smart meters.

Energy companies and the Government will now be working in partnership to replace 49 million meters in more than 27 million homes over the next decade to achieve a step change in the efficient use of energy in Britain's homes.

### Network Losses

Losses of electricity from transmission and distribution networks have an impact on the UK's carbon footprint, as losses represent wasted energy.

A proportion of network losses are due to performance of equipment and supply and demand patterns – these are known as technical losses and Distribution Network Operators have a regulatory incentive to reduce these losses through the price control mechanism, administered by Ofgem.

Other losses, known as commercial losses, arise through theft, inaccurate meters and errors in meter reading. Many of these factors are outside the control of the system operator.

ScottishPower's distribution losses for 2008/09 reduced slightly on the previous year from 6.6% to 6.0% in the Manweb area and 5.9% to 5.5% in Scotland. Losses reported to Ofgem by other UK operators in 2008/09 ranged between 3.8% and 7.8%.

## Smart Grid

ScottishPower aims to develop the UK's largest smart grid network in Glasgow. We are already developing and trialling a localised smart grid system as part of a regeneration scheme in Glasgow's East End, in preparation for the Glasgow 2014 Commonwealth Games.

A smart grid will allow households that generate their own electricity from microrenewables to sell excess power back to the grid and help to facilitate a network capable of supporting widespread use of electric vehicles.

Intelligent monitoring devices will keep track of all electricity flowing in the system so that it operates in the most efficient way possible. A smart grid will balance the power produced by micro-generation with larger-scale generation such as wind power, as well as traditional power stations. It will also be designed to allow the grid to reconfigure itself in the event of a fault, or excess demand, so that interruptions to supplies are minimised.

The company has set-up a dedicated team of engineers to work on the concept, using its own investment as well as funds from the Department of Energy and Climate Change (DECC) and the energy regulator Ofgem.

Smart grids will be able to automatically start selected appliances, such as washing machines, or even factory equipment when the cost of electricity is at its lowest in off-peak hours. During the periods of highest usage it could do the opposite, turning off unnecessary appliances to reduce demand and save energy. The company is planning to work with a range of academics and public bodies in order to deliver the project in Glasgow. As part of the UK Low Carbon Transition Plan, the Government wants to see smart grids rolled out across the UK over the next two decades.



“ScottishPower plans to work with a range of academics and public bodies to deliver the UK's largest Smart Grid in the city of Glasgow.”



■ *St Michael's On Wyre School, Preston, now has solar panels – thanks to funding from the Green Energy Trust*

## **Green Energy**

We continue to offer a range of green energy options in both the domestic sector and for businesses and organisations.

For domestic customers we have offered a Green Energy Fund product, which supports small scale renewable energy projects in UK communities, since 1998. An online green option is also available.

The Green Energy Fund enables customers to donate the dual fuel discount they would get for taking both electricity and gas into a Green Energy Trust, which is also supported by the company.

The Green Energy Trust is administered by an independent Board of Trustees which meets three times per year to award grants to small-scale renewable energy projects, including microrenewables such as mini wind turbines and solar panels in schools, biomass fuelled Combined Heat and Power schemes and ground source heat pumps.

During 2009 the Green Energy Trust awarded a further £185,579 to 15 small renewable energy projects. At December 2009 the Trust had awarded a total of £1,131,810 to 123 community projects.

During 2009 we worked on the launch of a new domestic green energy product – Simply Green Energy – that allows customers to support renewable electricity generation and make a positive contribution to the environment. The tariff meets Ofgem’s Green Supply Guidelines and has been certified under the new, independent Green Energy Certification Scheme.

Simply Green Energy’ (which launched in February 2010, just outside the reporting period) will match every unit of electricity used by a customer with an equivalent amount of energy generated from renewable wind sources.

Customers on the tariff will also be supporting community based renewable energy projects with the dual fuel discount of £10.50 per year being donated to the Green Energy Trust. Simply Green is only available online. [For more information on the ScottishPower Green Energy Trust, visit: www.scottishpowergreentrust.co.uk](http://www.scottishpowergreentrust.co.uk)



■ The Green Energy Trust helped the Sulwath Centre near Dumfries install a wood pellet boiler and solar thermal panels

“The Green Energy Fund enables customers to donate the dual fuel discount they would get for taking both electricity and gas into a Green Energy Trust.”

## Acidification & Air Quality

### Issue in Context

Power stations must control emissions to air of SO<sub>2</sub>, NO<sub>x</sub> and dust under the terms of the Large Combustion Plant Directive (LCPD) and the Integrated Pollution Prevention and Control (IPPC) Directive.

Tighter emission limits came into force from 1st January 2008 and NO<sub>x</sub> emission limits will be further constrained from the end of 2015, requiring coal-fired power stations to install further abatement technologies and systems, or close down.

### New Developments in Europe

Some air pollutants travel enormous distances from their source, so limits are agreed at EU level under the United Nations Economic Commission for Europe (UNECE). EU ministers are expected to reach agreement on the new Industrial Emissions Directive (IED) during 2010.

The IED recasts seven existing directives, including the Large Combustion Plants Directive, the IPPC Directive and the Waste Incineration Directive into one cohesive piece of legislation.

The directive tightens minimum emission limit values in certain industrial sectors across the EU – particularly for large combustion plants. It also clarifies and strengthens the concept of Best Available Techniques in controlling emissions and introduces new requirements for monitoring, plant inspections and compliance reporting.

Another Directive – Ambient Air Quality and Cleaner Air for Europe was adopted by the European Commission in 2008. From mid-2010 this will streamline European legislation by merging five existing directives on air quality.

The Directive on Ambient Air Quality and Cleaner Air for Europe and its daughter Directives, builds on

existing air quality standards and introduces limit values for PM2.5 fine particles. The daughter Directives cover:

- Limit values for sulphur dioxide (SO<sub>2</sub>), oxides of nitrogen (NO<sub>x</sub>) and particulates (PM10)
- Limit values for carbon monoxide and benzene
- Target values for the protection of human health and vegetation
- Polycyclic aromatic hydrocarbons and metallic elements cadmium, arsenic, nickel and mercury.

The Directive is part of the wider implementation of the EU Thematic Strategy on Air Pollution, published in 2005. This sets targets for human health, acid deposition and ecosystem eutrophication – disruption such as algal bloom on water bodies, caused by higher than normal levels of nutrients, such as nitrogen.

### UK Performance

In April 2009, the UK notified Europe of the need for a time extension for the application of the PM10 Limit Value, though it is expected that compliance will be achieved across the UK by 2011. The UK is on track to achieve the 2010 ceilings, with the exception of that for NO<sub>x</sub> which is expected to be met by 2012.

In March 2010 DEFRA published a paper 'Air Pollution: Action in a Changing Climate', expressing the need for closer integration between air quality and climate change policies. Discussions of new national emission ceilings for 2020 have started within UNECE and the UK will review what its climate change actions could deliver in terms of reductions in emissions of key pollutants.

## Why it is a Material Issue

Air quality is a significant issue for ScottishPower because we operate thermal power stations to generate electricity.

The combustion of coal to generate electricity produces SO<sub>2</sub>, NO<sub>x</sub> and dust emissions, while the combustion of natural gas produces NO<sub>x</sub>.

According to DEFRA's statistical release of December 2009, combustion in energy production and transformation and combustion in heavy industry was the biggest contributor to the UK's SO<sub>2</sub> emissions in 2008.

Road transport was the largest source of UK NO<sub>x</sub> emissions in the same period, accounting for 32% of the total, however, thermal electricity generation is also a significant source.

Emissions of SO<sub>2</sub> and NO<sub>x</sub> affect air quality and can disrupt ecosystems through acid rain damage to vegetation and watercourses. Along with low level ozone and fugitive dust emissions, they have been linked with respiratory conditions and adverse impacts on human health.



■ Construction work to retrofit Longannet Power Station with Flue Gas Desulphurisation SO<sub>2</sub> abatement system

“In 1999, we set long-term visionary goals to reduce our SO<sub>2</sub> and NO<sub>x</sub> emissions per GWh of electricity generated”

At ScottishPower we have been working to progressively reduce emissions from our power stations since 1990. In 1999 we set visionary goals to reduce our emissions per GWh of electricity generated by 50% for NO<sub>x</sub> and 85% for SO<sub>2</sub> by 2010.

## Link Between Air Quality and Climate Change

Climate change and air pollutants share common sources. Greenhouse gases affect the upper atmosphere, while air quality is dependent on the concentration of pollutants closer to the ground.

Some air pollutants, such as low level ozone, also act as greenhouse gases and NO<sub>x</sub> and Volatile Organic Hydrocarbons (VOCs) are involved in the formation of low level ozone.

The United Nations Environment Programme (UNEP) is assessing black carbon (and ground level ozone to evaluate their roles in air pollution and climate change. Black carbon is particulate matter caused by the inefficient burning of fossil fuels. Common sources include diesel engines, coal power stations and the burning of biomass.

According to DEFRA's publication Air Pollution: Action in a Changing Climate, electricity generation and road transport are two of the most significant sources of both air quality and climate pollutants. Other sources include shipping (NO<sub>x</sub> and CO<sub>2</sub>), agriculture (NH<sub>3</sub>, nitrous oxide (N<sub>2</sub>O) and methane (CH<sub>4</sub>), and biomass burning (PM, NO<sub>x</sub> and N<sub>2</sub>O).

## Emissions Abatement Technologies

### Emissions Abatement

We utilise a number of different emissions abatement technologies at our power stations to enable us to meet the limits on emissions set out in the Pollution Prevention and Control permits for each of our thermal sites.

These are summarised in the table below.

	Low NOx Burners	Boosted Overfire Air	Flue Gas Desulphurisation (FGD)	Electrostatic Precipitators	Selective Catalytic Reduction
Longannet	✓	✓	Commissioning	✓	Consented*
Cockenzie	✓	✓	x	✓	n/a
Rye House	✓	n/a	n/a	n/a	n/a
Damhead Creek	✓	n/a	n/a	n/a	n/a
Shoreham	x	n/a	n/a	n/a	n/a

\* Consent for the project was granted by the Scottish Government in March 2010, just outside the reporting period.

### Large Combustion Plant Directive (LCPD)

Longannet Power Station is opted in to the LCPD under the National Emission Reduction Plan (NERP) which sets maximum annual allowances, or “bubbles” for emissions of SO<sub>2</sub>, NO<sub>x</sub> and dust.

The station must demonstrate compliance with these limits by a system of Continuous Emissions Monitoring. The accuracy of the instrumentation used to do this must be independently tested and quality assured to the European standard EN14181.

Cockenzie Power Station, our other coal-fired station is opted out of the LCPD and must close by the end of 2015.

The LCPD is currently being recast by the European Commission under current proposals for an Industrial Emissions Directive that brings together seven pieces of legislation, including the Waste Incineration Directive and the IPPC Directive – see New Developments in Europe.



## Reducing NO<sub>x</sub>

### Low NO<sub>x</sub> Burners

Low NO<sub>x</sub> burners reduce emissions of oxides of nitrogen (NO<sub>x</sub>) from coal or gas-fired power stations by staging the mixing of fuel and air in the burner to reduce the formation of thermal NO<sub>x</sub>. There are three stages to fuel combustion in a typical low NO<sub>x</sub> burner. In the first stage, combustion takes place in a fuel-rich, oxygen-deficient zone where NO<sub>x</sub> and hydrocarbon fragments are formed.

During stage two, the hydrocarbon fragments then react with the NO<sub>x</sub> to form elemental nitrogen. In the final stage of combustion, further air is added to complete the burnout of the carbonaceous matter. The formation of NO<sub>x</sub> in the final stage can be minimised by completing the combustion in an air-lean environment. Low NO<sub>x</sub> burners can be combined with other primary measures of NO<sub>x</sub> reduction, such as Boosted Overfire Air techniques.

### Boosted Overfire Air (BOFA)

BOFA reduces the formation of oxides of nitrogen (thermal NO<sub>x</sub>) during combustion and is an emissions reduction measure over and above Low NO<sub>x</sub> burners.

Thermal NO<sub>x</sub> is produced when oxygen mixes with coal in the hottest part of the coal flame. NO<sub>x</sub> production can therefore be reduced by controlling the fuel and air mixing. The BOFA system is an extension of this principle. BOFA works by further staging where the fuel and air meet. Air is taken from the normal, secondary air supply to the burners and is added back into the boiler between the upper row of the burners and the top of the furnace section of the boiler. Additional fans forcefully inject this 'over fire' air to ensure adequate mixing between the air and any remaining unburned coal particles. Since this final burn out of the fuel occurs at a lower temperature, nitrogen, rather than NO<sub>x</sub>, tends to be formed. BOFA will typically reduce NO<sub>x</sub> levels by between 20 and 25%.



“The Boosted Overfire Air system being fitted at Cockenzie and Longannet will typically reduce NO<sub>x</sub> levels by between 20-25%.”

■ Monitoring emissions at Longannet Power Station control room (Pic: Davidson Read Associates)

## Selective Catalytic Reduction

To prepare for meeting tighter emission limits for NO<sub>x</sub> from the end of 2015, ScottishPower is examining options for fitting further NO<sub>x</sub> abatement at Longannet.

A feasibility study has been conducted into fitting Units 1, 2 and 3 with Selective Catalytic Reduction (SCR) technology and, in 2010, front-end engineering design studies are due to be completed by two selected contractors. Consent for the project was granted by the Scottish Government in March 2010, just outside the reporting period.

SCR could cut NO<sub>x</sub> emissions by up to 90%, ensuring Longannet can meet the future LCPD NO<sub>x</sub> limit of 200mg/Nm<sup>3</sup>, and potentially extend the station's working life until around 2030.

SCR is a post-combustion method of NO<sub>x</sub> abatement. It involves taking the exhaust gas from the boiler at a temperature of up to 400°C, passing it over a vanadium pentoxide catalyst and injecting ammonia. This facilitates a chemical reaction between the ammonia and NO<sub>x</sub> to create harmless atmospheric nitrogen and water vapour.

The front-end studies have examined the complex technical challenge of retrofitting SCR in the limited physical space available. The studies are now being assessed by ScottishPower before a preferred option is selected. It is anticipated that construction could start in 2012 with the system being operational in time for the 2015 deadline.

A feasibility study has been conducted into fitting Units 1, 2 and 3 with Selective Catalytic Reduction technology and, in 2010, front-end engineering design studies are due to be completed by two selected contractors.

## Reducing Dust

### Electrostatic Precipitators

Dust emissions at Longannet and Cockerzie power stations are controlled through the use of high-efficiency electrostatic precipitators that collect up to 99% of particulates before they reach the chimney.

In recent years ScottishPower has operated a strategy of burning lower sulphur coals, which result in the potential for increased dust emissions. We addressed this issue at Longannet Power Station by utilising a sulphur trioxide (SO<sub>3</sub>) injection plant that improved the effectiveness of the precipitators in dealing with low-sulphur fuels.

## Reducing SO<sub>2</sub>

### Flue Gas Desulphurisation

Work at Longannet Power Station continued during 2009 on a £170 million project to install Flue Gas Desulphurisation (FGD) on three units.

FGD is regarded as 'Best Available Technique' (BAT) by SEPA to abate SO<sub>2</sub> and the system will cut the station's SO<sub>2</sub> emissions by at least 94%. The technique chosen for Longannet is Seawater Scrubbing FGD which works by using seawater's inherent alkaline properties to absorb and neutralise acidic SO<sub>2</sub>.

Longannet uses large quantities of water from the Forth Estuary as cooling water for its condensers.

This condenser cooling water will be reused by bringing it into close contact with the station's flue gases in purpose-built absorber towers to absorb the SO<sub>2</sub>, resulting in a harmless soluble sulphate (SO<sub>4</sub>) that can be discharged back to the estuary.

The process does not require chemicals – only seawater and air are used – and the discharged seawater will comply fully with environmental regulations.

Commissioning of FGD on Units 1 and 2 will take place in spring 2010 following delays after issues were identified with the circulating water pipework.

FGD installation on Unit 3 suffered a setback in March 2009 when the absorber tower was damaged by fire. An investigation was carried out by a Panel of Inquiry and Fife Fire and Rescue Service but no root cause has yet been identified.

The investigation is ongoing and the absorber tower will be deconstructed in spring/summer 2010. It will be rebuilt for commissioning in the second quarter of 2012.



■ A coal scraper on the stockpile at Longannet

### Coal management

In 2009 Longannet and Cockerzie power stations began to use increasing quantities of indigenous coal. Scottish mines supplied around 20% of the stations' total coal consumption during the year.

Local coals have a higher sulphur content than the foreign coals used at Longannet and Cockerzie – mainly imported from Russia and Colombia.

From 2010, when FGD will be operational on two units at Longannet, the station will ramp up its use of Scottish coal. It is likely, however, that indigenous coals will require to be blended with foreign stocks, depending on prevailing water conditions in the River Forth. Unit 4, which is not being fitted with FGD, will continue to burn imported low-sulphur blended coals equivalent to a maximum annual average sulphur content of 0.5%.

**Emissions Data 2009**

	2009	2008
Total electricity generated (GWh)	25,755	26,199

CO2	2009	2008
Total CO2 emissions per GWh energy generated/controlled (ktonnes)	0.59	0.59
Total CO2 emissions for energy generated/controlled (ktonnes)	15,280	15,413
SO2		
Total SO2 emissions per GWh energy generated/controlled (tonnes)	1.66	1.5
Total SO2 emissions for energy generated/controlled (ktonnes)	42.64	39.35
NOx		
Total NOx emissions per GWh energy generated/controlled (tonnes)	1.04	1.18
Total NOx emissions for energy generated/controlled (ktonnes)	26.68	31.05
Particulates		
Total particulate emissions per GWh energy generated/controlled (tonnes)	0.039	0.04
Total particulate emissions for energy generated/controlled (ktonnes)	1.000	0.911
Heavy Metals		
Mercury (te, total)	0.143	0.175

The increased use of Scottish coal during 2009 resulted in a slight increase in SO<sub>2</sub> emissions on the previous year. NO<sub>x</sub> emissions continued to reduce due to the commissioning of Boosted Overfire Air technology at our coal-fired power stations.

Emissions from our power stations are reported in the Scottish Pollutant Release Inventory ([www.sepa.org.uk](http://www.sepa.org.uk)) and the Pollution Inventory for England and Wales ([www.environment-agency.gov.uk](http://www.environment-agency.gov.uk)).

## Our Emissions Targets

In the early 1990s we established long-term targets for reductions in our emissions by 2010. These were to reduce emissions per GWh from a 1999 baseline by:

- 25% for CO<sub>2</sub>
- 85% for SO<sub>2</sub>
- 50% for NO<sub>x</sub>

The targets, when set, included the output of our sister company, ScottishPower Renewables, which now reports its performance as part of IBERDROLA Renovables, IBERDROLA's renewable energy division.

ScottishPower uses all of ScottishPower Renewables' generation output, which totalled 1.7 million MWh in 2009. To ensure consistency, we are stating our performance against these targets, including the renewable generation figure

	1999	2009	Performance Against Target	Comment
Total energy generated/controlled	12,798	42,755*		
CO <sub>2</sub> per GWh (kte/GWh)	0.92	0.36	60.8%	Target exceeded by more than double
SO <sub>2</sub> per GWh (tonnes)	5.14	0.99	80.7%	Just short of target due to delay in full commissioning of FGD
NO <sub>x</sub> per GWh (tonnes)	2.29	0.62	73%	Target exceeded by 22%

\* Includes 25,755 GWh of own generation and 17,000 GWh from ScottishPower Renewables.

## Resource Use and Waste

### The Issue in Context

Globally, we are using about 25% more natural resources than the planet can replace. According to environmental charity WWF, those of us in the UK are consuming three times our fair share of the planet's natural resources.

We face an ecological debt that will have severe consequences as the natural environment struggles to support the world's population.

The Sustainable Development Commission too, warns us that the world's economies are putting increasing pressure on natural resources, such as coal, oil, timber and minerals, as well as air, land, water and ecosystems.

It is clear that moving to more sustainable patterns of production and consumption, making better use of resources and creating less waste, has benefits for the natural environment and the economy. Wasted energy, unnecessary transport mileage and inefficient use of other resources adds to our overall carbon footprint, while landfill sites generate methane, a more potent greenhouse gas than CO<sub>2</sub>.

Research conducted for DEFRA estimated potential resource efficiency gains for UK businesses of as much as £6.4 billion, covering energy, waste and water.

In Europe, the key legislative driver for reducing waste is the Waste Framework Directive, which was revised in 2008. It focuses on the prevention, re-use, recycling and recovery of waste. Other Directives cover specific wastes including electrical and electronic equipment, oil,

hazardous wastes, packaging, batteries and end-of-life vehicles.

According to DEFRA, recycling in the UK already saves the equivalent in greenhouse gas emissions of taking 3.5 million cars off our roads by conserving virgin materials and reducing the amount of waste sent to landfill.

A key driver for waste reduction in the UK is the Landfill Tax. This will rise to £72 per tonne by 2013, with possible restrictions on the types of material that can be disposed of to landfill. The UK, Scottish and Welsh Governments all have National Waste Strategies – Scotland's ambitious Zero Waste Strategy were published in 2010 following a period of consultation.

### Why it is a Material Issue

Resource use and waste are material issues for ScottishPower. As an operator of thermal generation plants we use significant volumes of fuel, including coal and gas and natural resources, such as water, for cooling. We also use large quantities of wood and steel in powerline construction and repair and metals, such as copper in electrical equipment.

Our offices use significant volumes of IT and telephony equipment and large volumes of paper are used in billing, despite a growing trend towards online, paperless billing. We have many waste streams, ranging from debris collected at power station water intakes, to scrap metal and used mobile phones.

## Actions on Resource Use

The actions we take to ensure efficient use of resources to minimise environmental and economic impact include:

### Responsible Procurement

- Seeking products and materials that are more sustainable than conventional materials – such as timber distribution poles sourced from sustainable forests and biomass fuel sourced in Scotland, to reduce transport CO<sub>2</sub>
- Sourcing our requirements from environmentally-responsible suppliers, such as members of Achilles' Verify Scheme, a database of suppliers that have undergone a standard assessment of safety, health, environmental and quality management systems and performance.

### Management and Monitoring

- Managing our use of resources through Environmental Management Systems – knowing how much of everything we use helps us to identify areas for improvement and set targets in our annual environmental plans
- Monitoring energy and water use across our businesses to identify ways of reducing consumption through process improvements and measures such as the use of borehole water and rainwater harvesting.

## Actions on Waste

The actions we take to minimise waste and deal with it in a responsible manner include:

- Waste minimisation and waste data systems to help identify areas for improvement
- Re-using resources, wherever possible – this includes re-using plant, such as transformers and reconditioned oils. It also includes the use of biomass materials for generation



“We have waste segregation schemes in place for recycling materials such as wood, metal, oil and paper.”

- Recycling – power station ash is a key waste but a high proportion is processed by our award-winning ScotAsh business into sustainable products for the construction industry
- We have waste segregation schemes in place for recycling materials such as wood, metals, SF<sub>6</sub> gas, transformer oils, paper and other office consumables from toner cartridges and light bulbs, to batteries and mobile phones
- Where we cannot re-use or recycle wastes, disposal is carried out by certified contractors, in line with all relevant regulations and our Duty of Care obligations
- We audit staff and contractors to ensure compliance with waste legislation.

## Performance 2009

### Reduce

We reduced our business mileage, vehicle fuel use and air travel significantly during 2009, resulting in a 47% reduction in CO<sub>2</sub> emissions from transport and travel.

- Internal electricity use in offices and buildings increased slightly from 212.4 to 247.5 GWh during the year
- We reduced our mains water use by 200,000 million m<sup>3</sup> during the year, as a result of efficiency improvements in our power stations, including the installation of new mechanical seals on Longannet's cooling water pumps
- At Damhead Creek Power Station the sinking of a borehole to provide the station with water could from 2010 provide around 1.83 cubic metres of water a minute. The supply is treated in a new water recovery plant and used for making process steam along with recycled process water from a blowdown blast cooler
- At Hatfield Moor gas storage facility, water use was reduced by more than half (53%) in the year to 128m<sup>3</sup>, compared with 277m<sup>3</sup> in 2008. These savings were achieved by no longer using water to cool the gas during operations and the removal of a sprinkler system. Hatfield has had a rainwater harvesting system in operation for several years
- Hatfield Moor also reduced by 25% the amount of energy used to operate the water bath heater that warms up imported gas arriving on site prior to its injection into the reservoir for storage.

### Re-use

- Work continued in 2009 to replace the external glazing of Longannet's boiler house with reinforced plastic, resulting in thousands of panes of waste glass. Around 70 tonnes of reinforced glass was sent to Viridor in Bonnyrigg, where it was ground and the wire removed using a magnetic separator. The processed substance is then used in the manufacture of glass or glass fibre sheeting
- We continued to use biomass at our coal power stations including, for the first time wood pellets sourced from a company in Perthshire
- We re-used the transmission towers when refurbishing a 41-km powerline between Dalkeith and Galashiels, saving approximately 1,787 tonnes of steel and 4,750 tonnes of concrete foundation that would have been involved in constructing a new line.



## Recycling

- Approximately 460,000 tonnes of ash was recovered for sale in 2009. ScotAsh, our ash processing joint venture with Lafarge Cement, processes much of the fly ash and uses it to manufacture blended products, such as cements and grouts. The company sold 689,461 tonnes of ash-based products to the construction industry during 2009. This included supplying high profile projects, such as the M74 extension, the Glasgow 2014 Commonwealth Games and the refurbishment of Rosyth Dockyard in preparation for the building of two new aircraft carriers.

ScotAsh is featured as a case study in a report published by Tomorrow's Company and the UK Government's Department for Business Innovation and Skills: "Running a Successful Business in the UK Low Carbon Economy."

- Longannet Power Station collected 246 tonnes of marine debris from the cooling water drum screen trash baskets, which was recycled in garden compost by TRG, Glenfarg
- We continued to produce waste derived fuel from dried sewage sludge at our Daldowie sludge drying facility near Glasgow
- At Longannet, an old rubber conveyor belt, a third of a kilometre long, was recovered during the coal exchange hopper refurbishment to be recycled as warehouse curtains and flooring for horses' stables.



- *ScotAsh recycles ash from our coal-fired stations and processes it for reuse in sustainable construction products*

**Resource Use 2009****Fuel**

Fuel	2009	2008
Coal (ktonnes)	4,462	4,436
Oil (ktonnes)	17,9	17
Gas (ktonnes)	2,096	2,188
Biomass and WDF (ktonnes)	78	94
Diesel oil (ktonnes)	210	Not Reported

There was very little change to our fuel use during 2009. Coal generation remained at lower levels than normal, due to a requirement by National Grid Transmission to reduce electricity exports to England due to work on the high- voltage transmission line network.

Longannet therefore agreed to cap its generation to 1,182 MW between mid March and the end of October. However, in the final quarter of 2009, all four units at the station were available to generate for the first time in three years, following a series of major outages to complete environmental projects such as Boosted Overfire Air and FGD.

Biomass use reduced slightly on the previous year, again due to constraints on our coal plant, where the biomass materials are co-fired along with coal to produce electricity.

**Paper, Oil and Chemicals**

Paper	2009	2008
Paper purchased (kg)	65,317.5	Not reported
Paper consumption/employee (kg)	10.83	Not reported
Oil		
Oil consumption (litres)	1,356,060	Not reported
Chemicals		
Ammonia (te)	25.62	Not reported
Sodium Hydroxide (te)	5,391.48	Not reported
Sodium Hypochlorite (te)	4,183.140	Not reported
Sulfuric Acid (te)	12,895.62	Not reported

\* Some oil data from the ScottishPower Manweb area is estimated.

### Internal Energy Use: Power Stations

	2009	2008
Indirect energy consumption in generation (GJ)	1,780	Not reported
Imported power (GJ)	1,110	Not reported
Self-generated power use (GJ)	669,4	Not reported

### Energy Consumption in Offices and Buildings (including auxiliary power use)

	2009	2008
Indirect energy consumption in generation (GJ)	1,780	Not reported
Imported power (GJ)	1,110	Not reported
Self-generated power use (GJ)	669,4	Not reported

\* Last year we reported a figure of 955GWh for internal energy use, however, this included process energy for the power stations. Internal energy use in offices and buildings for 2008 was 212.37 GWh. November and December energy usage estimated for some sites.

### Water Use: Power Stations

	2009 (million m3)	2008
Tidal/estuarine	646	Not reported
Portable mains water	3.6	3.8
Groundwater/borehole	0.54	Not reported
River water	1,267	

\* In previous years the figure for tidal, river and borehole water was amalgamated. The combined figure for 2008 was 1,861.

### Water Use: Offices and Buildings

A total of 51,389 m<sup>3</sup> of water was used in our offices and buildings during 2009.

## Transport Fuel Use

	2009	2008
Business mileage	16,926,118	17,809,548
Unleaded petrol used (000 litres)	28.173	87
Diesel used (000 litres)	3,409.5	4,518
LPG used (000 litres)	11.005	17
Generation plant diesel used (000 litres)	1,373	1,379

\* Generation plant diesel use includes mobile plant, generators and fire pumps

Vehicle fuel use reduced significantly during the year as there has been a reduction in Fleet commercial vehicles. Further reductions may be attributed to 'Zonal' working in Energy Networks, who have the greatest number of commercial vehicles. Petrol usage continued to reduce – the vast majority of our vehicles run on diesel.



■ Mobile plant involved in coal management at Longannet Power Station – we are working to cut vehicle fuel usage

## Wastes 2009

Hazardous wastes	2009	2008
Total Arising (tonnes)	29,335.37	6,556.5
Total Recovered (tonnes)	2,581.57	5,820.1
Total Arising (litres)	490,578.03	683,969
Total Recovered (litres)	364,887	564,319
<b>Non Hazardous wastes</b>		
Total Arising (tonnes)	248,440.19	256,830.6
Total Recovered (tonnes)	207,251.52	245,397.5
Total Arising (litres)	740,152.78	1,929,126
Total Recovered (litres)	132,348.96	648,594

## UK Ash Data

	2009 (tonnes)	2008 (tonnes)
Furnace Bottom Ash Produced	50,055	56,674
Pulverised Fuel Ash Produced	468,375	486,565
<b>Ash Recovered for Sales</b>		
FBA	68,989	27,628
PFA	394,105	432,418
<b>Net disposal of ash</b>		
FBA	-18,934	29,046
PFA	74,274	54,147

There can be a time lapse between production of ash and its eventual processing by ScotAsh. Some ash quantified as "disposal" goes to lagoons for temporary storage and from where it can subsequently be recovered and sold/re-used. This explains why more Furnace Bottom Ash was sold than produced during 2009.

## Water

### Issue in Context

Water has been growing in prominence as an environmental issue over the past 20 years – in terms of managing our use of water resources, the effects of pollution on water quality and the link between water and climate change.

Currently, one third of the global population live in water stressed areas. Waterwise UK, in its report: Hidden Waters, states that if present levels of consumption continue, two-thirds of the world's population will live in areas of water stress by 2025.

Consumption of water in the UK is just slightly above the global average of around 3,400 litres of water, per person, per day, while China consumes just 1,900 litres of water per person, per day, and the US uses a massive 6,800 litres per person, per day.

Actual consumption of water in the UK amounts to 150 litres, per person, per day. Of this, only around two litres are for drinking, the rest is for bathing and household use – but the figure of 3,400 litres includes embedded water in the goods and services we buy.

Globally, agriculture accounts for the greatest water use – it takes about 1,000 litres to grow a kilo of wheat and three times as much for a kilo of beef. A single sheet of A4 paper takes 10 litres of water to produce, a microchip takes 32 litres and manufacturing a car uses up to 400,000 litres of water.

In the UK, about 45% of our fresh water is used in industry, including electricity generation. A study commissioned by the European Commission, published in 2007, estimates that water efficiency throughout Europe could be improved by 40%.

Increasingly, parts of Europe and the UK are experiencing episodes of both flooding and

drought, with impacts on people and ecosystems.

Drought management plans are included in the Common Implementation strategy of the Water Framework Directive. Meanwhile, Scotland enacted its Flood Risk Management Act in June 2009 and the UK Flood and Water Management Act 2010, received Royal Assent on 8th April.

### Water Quality

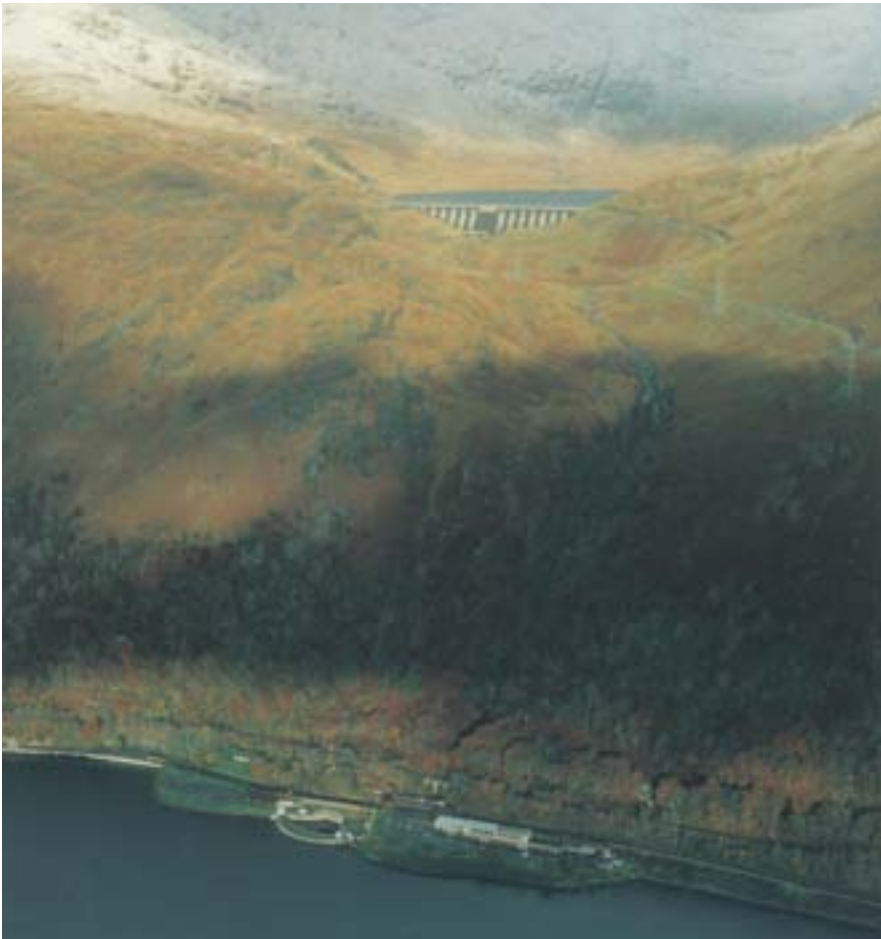
The Water Framework Directive is the most substantial piece of water legislation to be produced by the European Commission. Fundamentally, it is a set of guidelines for managing large bodies of water, improving water quality and reducing potential hazards such as flooding.

It aims to protect, improve and ensure the sustainable management of water resources to a common standard across the EU.

The directive requires all inland and coastal waters to reach 'good chemical and ecological status' for surface waters and 'good status' for groundwater in terms of quality and quantity by 2015.

Each member state is making plans to protect and improve rivers, lakes and coastal waters, to prevent flooding and manage droughts. In the UK this includes River Basin Management Plans for distinct areas, which were published in December 2009.

The directive also aims to achieve elimination of hazardous substances by 2020. Measures to reduce or eliminate the discharge of a specified list of substances are implemented via the Groundwater Directive, a daughter directive of the WFD.



“Our thermal stations use water to create steam for electricity and water is used to generate electricity at our hydro-electric power stations.”

■ *Cruachan Power Station: its turbines are reversable, enabling it to pump water back to the upper reservoir for reuse*

### Why it is a Material Issue

Water is a material issue for ScottishPower as there is a strong co-dependency between water and energy.

Our thermal power stations use water to create steam for electricity generation. Three stations also use large quantities of water for cooling, though the vast majority of this is returned to the river or estuary, virtually unchanged.

Water is used to generate electricity at our hydro-electric power stations and even to “store” electricity in the case of Cruachan, our hydro/pumped storage station.

The water industry is energy intensive and, according to Water UK, consumes about 3% of

total energy used in the UK for pumping water and wastewater and operating treatment plants to ensure environmental and quality standards are met.

The water industry is becoming more efficient, but population and consumption growth, along with more stringent standards, are driving energy use up. This is an issue the water industry is addressing.

Meanwhile, energy companies, such as ScottishPower, have been working to try and reduce their water footprints.

## Effects of Climate Change

Climate forecasts for the UK indicate a pattern of hotter, drier summers and more frequent and intense rainfall in winter, suggesting that floods and drought will be more common in future.

By 2050, 80% of UK rivers are predicted to have half their current flow volume during the summer, which could create water shortages and affect water quality.

Droughts can cause adverse effects on water environments. For example, discharges into rivers with low flows means that less dilution takes place than would happen under normal conditions. Conversely, flooding intensifies diffuse pollution, when surface run-off water carries pollutants from land into rivers and lakes.

Floods and droughts can affect the operation of power stations, including the hydro capacity available, while flooding can put electricity substations at risk.

Following floods in summer 2007, the Government initiated a review into the resilience of electricity substations to flood risk, led by the Electricity Networks Association (ENA) and including representatives from DECC, the electricity network owners, SEPA, the Environment Agency, the Met Office and Ofgem.

The electricity network companies and the environment agency have completed a structured exchange of information that has enabled the companies to identify all the sites at risk from fluvial or tidal flooding.

ScottishPower and other electricity distribution companies included proposals to improve the flood resilience of major electricity substations in investment plans submitted to Ofgem (as part of their five year price reviews) which include proposals to improve the flood resilience of major electricity substations.





- *Maintaining water valves at Longannet, and other sites, is helping reduce mainswater usage by eliminating leaks*

## **Actions on Water**

Over the last few years we have sought progressively to improve water efficiency and reduce the water footprint of our business.

We measure and monitor our water consumption, to help us identify potential areas for improvement.

At Longannet Power Station, this resulted in a major overhaul of the townwater system, which has saved thousands of litres of water since 2007. The installation of new mechanical seals on the cooling water pumps has also resulted in townwater savings since 2008, as the new seals utilise untreated seawater for cooling.

During the Unit 4 outage in 2009, 24 valves were repaired or replaced to minimise water leaks. There are also plans to fit a further four meters at points in the water system to further improve identification of areas of water loss.

Water extracted from underground aquifers on station land is used in the fire hydrant system, for dust suppression and to supply our ash processing joint venture, ScotAsh. In 2009, 543,603 m<sup>3</sup> of borehole water was abstracted.

During 2009 Damhead Creek Power Station in Kent continued work to extract water from a borehole, which taps into an aquifer 200m below the site. From 2010 the borehole will have the potential to provide around 1.83 cubic metres of water a minute to offset the use of townswater.

The supply is treated in a new water recovery plant and used for making process steam along with recycled process water from a blowdown blast cooler.

Meanwhile, rainwater harvesting schemes are in place at Rye House Power Station and Hatfield Moor gas storage facility. At Rye House, re-using rainwater resulted in townswater savings of 38,632 m<sup>3</sup> during 2009.

The Visitor Centre at Cruachan Power Station, near Oban, uses untreated “grey” water from Loch Awe to supply the toilets, which also have “hippo bags” installed.

Water saving devices, from low flow and sensor operated taps and toilet flush savers are in place at most of our offices and depots.



■ Cruachan Visitor Centre is a 'gold' winner in the Green Tourism Awards for its efforts to promote sustainability

## Water Framework Directive

To meet the requirements of the EU Water Framework Directive, ScottishPower must examine the operation of its Galloway Hydro Scheme and determine how to achieve the best ecological outcome for all the water bodies associated with the scheme.

The company has commissioned independent ecology and hydrology consultants to assist with this task, which aims to ensure the various water bodies meet SEPA's classification for Good Ecological Potential (GEP).

Proposals may involve diverting a portion of the compensation flow from one river to another and working to achieve variable flows, often referred to as "Ecologically Acceptable Flows", that replicate natural river conditions. The company is also considering whether additional fish passes may be required.

A team at the Galloway Hydros is investigating how the ecological status of the scheme as a whole can be improved in the run up to



■ *Outfall of water from Loch Doon Reservoir*

"A team at the Galloway Hydros is investigating how the ecological status of the scheme as a whole can be improved in the run up to the publication of River Basin Management Plans."

publication of River Basin Management Plans for the Solway Tweed and Scotland river basin districts.

Water management issues relating to the hydros, identified by SEPA, include flow rates in rivers and overcoming barriers to fish migration.

A key area being examined by our appointed ecologists and hydrologists is that of compensation flows – water the hydro stations release to local rivers to compensate for impounding water via its dams.

Levels of compensation flow in some rivers in the scheme do not achieve SEPA's criteria for Good Ecological Potential, while flows to others – such as the River Doon – are much higher than SEPA would require for Good Ecological Potential to be achieved.

The compensation flow of 45 million gallons/day to the River Doon was agreed as part of the Galloway Water Power Act in 1929.

At that time the compensation flow was agreed with the owners of mills on the river to support their operations. However, these mills longer exist.

ScottishPower is, therefore, looking at optimising water flows to benefit all rivers and water bodies associated with the Galloway Hydro Scheme.

Proposals developed by ScottishPower will be submitted to SEPA, which issues the company's licence under the Water Environment (Controlled Activities) (Scotland) Regulations 2005.

SEPA will only approve any variation to our licence after thorough scrutiny of the company's proposals, which takes into account stakeholder feedback, following a period of consultation.

Further information is available on Energy Wholesale's environmental website:

[www.spenergywholesale.com](http://www.spenergywholesale.com)



■ *The Glenlochar Barrage, part of the Galloway Hydro-electric Scheme, helps to control water levels on Loch Ken*

## **Flood Management**

Our Galloway Hydro Scheme plays an important role in flood management. The large storage capacity of its two main reservoirs, Loch Doon and Clatteringshaws, allows water to be stored in times of heavy rainfall and released later in a controlled fashion.

We also monitor river levels in the northerly end of the scheme and can react to the threat of flooding by lowering reservoir levels and alerting stakeholders by telephone to flood warnings, giving individuals time to take precautions, such as moving livestock to a safer location.

For further information on flood management, please visit Energy Wholesale's environmental website:

[www.spenergywholesale.com](http://www.spenergywholesale.com)

## Water Use 2009

### Water Use: Power Stations

	2009 (million m3)	2008
Tidal/estuarine	646	Not reported*
Potable mains water	3.6	3.8
Groundwater/borehole	543,603	Not reported*
River water	1,267	Not reported*
Rainwater re-use	38,632	

\* In previous years the figure for tidal, river and borehole water was amalgamated. The combined figure for 2008 was 1,861.

### Water Use: Offices and Buildings

A total of 51,389 m<sup>3</sup> of water was used in our offices and buildings during 2009.

### Discharges to Water 2009

Our main discharges to water are cooling water from our coal power stations, Longannet and Cogenzie, which extract large volumes of water from the River Forth for cooling and then return it to the estuary afterwards. Shoreham, our gas station in West Sussex also uses seawater for cooling, extracted from the English Channel.

Other discharges to water include compensation flows released from our hydro-electric scheme in Galloway to local rivers.

## Biodiversity

ScottishPower is a major landowner. Our power stations and substations – from southern England to the Scottish Highlands – occupy a significant area.

These landholdings include, of course, the apparatus for generating and supplying electricity to our customers. But many of our sites also contain wild spaces – for instance, coastal marshes in Kent, reservoirs and rivers in Galloway and freshwater lagoons next to the Forth Estuary.

Some of our sites are also located on, or near, areas that are recognised as important for wildlife and have been afforded statutory protection for their habitats and species.

This year we have begun the process of reporting our biodiversity management against the GRI biodiversity indicators. However, in some instances UK or European indicators are of greater relevance in Britain so we have continued to report on UK Biodiversity Action Plan (UK BAP) species, to provide a comprehensive report.

ScottishPower is committed to the environmental stewardship of the land within our boundaries. We also seek to promote the biological diversity – or biodiversity – of life that is found on our landholdings.

Our planet is rich in biological diversity. Around 10 million species of animal and plant occupy their own special place in the world ecosystem, the product of billions of years of evolution. It's this richness of biodiversity that provides the support systems that sustain human existence and quality of life – clear water, fresh air, productive soil, food, medicine and clothing. However, the world is witnessing the greatest extinction crisis since dinosaurs disappeared from the planet 65 million years ago, according to the International Union for Conservation of Nature (IUCN).

Biodiversity is being lost up to 1,000 times faster than the natural rate as a result of human activity, including habitat destruction and climate change. It is estimated that 34,000 plant and 5,200 animal species may be on the brink of extinction. Furthermore, 45% of the Earth's original forests and 10% of its coral reefs have been destroyed.



■ *Planting trees as part of our efforts to promote biodiversity at Cruachan Power Station, Argyll*



“The UK Biodiversity Action Plan has published plans for 65 habitats and 1149 of the our most threatened species.”

■ *The UK BAP species, the Song Thrush, is found at many of ScottishPower's sites (Pic: Blue Leaf Natural Resources)*

## International and national action

International action to sustain the variety of life on Earth is based on the Convention on Biological Diversity, signed by more than 150 countries following the Rio Earth Summit in 1992. Each signatory country committed to developing a national strategy for the conservation and sustainable use of biological diversity.

In response, the UK Government has implemented the UK Biodiversity Action Plan (UK BAP) published action plans for 65 vulnerable habitats and 1149 of our most threatened species – some rare but others very familiar, such as House Sparrows and Bluebells, that are declining in population.

While lead partners and agencies are implementing these action plans, a network of country wide and regional BAPs is delivering biodiversity conservation at a local level, raising public awareness and promoting environmental education. Meanwhile, world leaders at the Earth Summit in Johannesburg in 2002 made a commitment as part of the Convention on Biological Diversity to reduce significantly the rate

of loss of biodiversity by 2010, which has been designated by the United Nations as the International Year of Biodiversity. The UK Government committed itself to a stricter target – to halt the loss of biodiversity by 2010.

In November 2009, the United Nations Secretary General Ban Ki-Moon stated that the 2010 target to stem the rate of species' loss will not be achieved. This followed an admission by the UK Parliamentary Office of Science and Technology, and its partners, in October 2009, that the stricter UK target will also not be achieved.

As part of the International Year of Biodiversity, the world community will adopt a new strategic plan for implementing the Convention on Biological Diversity at the Nagoya Summit in October 2010. In March 2010, the European Union's Environment Council reached an agreement on aims and ambitions for managing biodiversity loss across Europe, including a target of halting the loss of biodiversity and the degradation of ecosystems in the EU by 2020 and restoring them, as far is feasible.

## Legislative Framework

The European Community has adopted two Directives in relation to the conservation of terrestrial nature and wildlife – the EC Birds Directive and the Habitats Directive.

These provide for the protection by Member States of animal and plant species of European importance and the habitats that support them, particularly by establishing a network of protected sites.

These EC Directives have been transposed into UK law by means of The Conservation (Natural Habitats, etc.) Regulations 1994.

In addition, the EC's Water Framework Directive requires Member States to achieve stated targets for protecting and improving inland and coastal waters. The EC's Marine Strategy Framework Directive similarly sets out targets for the marine environment.

These framework directives have been transposed into UK law by means of legislation specifically for England and Wales, Scotland and Northern Ireland.

The main piece of legislation relating to nature conservation in Great Britain is the amended Wildlife and Countryside Act 1981 (amended 1991) that protects threatened species and their habitat.

The Countryside and Rights of Way Act 2000 places a duty on government departments in England and Wales to have regard for biodiversity, strengthens wildlife protection and lists priority habitats and species for conservation action. The Nature Conservation Act (Scotland) 2004 introduces similar measures for Scotland.

The Offshore Marine Conservation (Natural Habitats, &c.) Regulations 2007 seek to manage certain activities that have an effect on important species and habitats in the offshore marine environment beyond 12 nautical miles from the UK coast.

Two further items of legislation relating to marine and coastal environmental protection have recently been given Royal Assent – the UK Marine and Coastal Access Act 2009 mainly affects England and Wales and the Marine (Scotland) Act 2010 covers Scotland.

Both acts provide for the establishment of organisations to deliver marine management for the relevant offshore coastal waters and a planning system to promote efficient, sustainable use and protection of marine resources, plus licensing and marine enforcement.

The acts also enable the designation of marine nature conservation areas – Marine Conservation Zones in England and Wales and Marine Protection Areas in Scotland. The purpose of these new designations will be to halt the deterioration of the UK's marine biodiversity and promote its recovery, where appropriate, support healthy ecosystems and help deliver European and international marine conservation commitments.



## Protected Sites

A key policy tool for conserving habitats and species is the creation of protected or designated sites. Sites of international importance for wildbirds are designated as Ramsar sites, following the Ramsar Convention on Wetlands, 1971.

At European level, The EC Birds and Habitats Directives established Natura 2000 – a European-wide network of nature conservation sites that are subject to high levels of protection against damage. These sites include Special Protection Areas (SPAs) – sites of European importance of wildbirds – and Special Areas of Conservation (SAC) for habitats and wildlife other than wildbirds. Within the UK, sites that are nationally important for biodiversity, geological or physiographical features are protected as Sites of Special Scientific Interest (SSSI).

Several of ScottishPower Energy Wholesale's generating sites have landholdings that are on or adjacent to "protected sites". A key area is the Galloway Hydro-electric Scheme which covers a substantial area of southwest Scotland. The Galloway Hydros is exposed to 11 protected sites including those at Loch Doon and Loch Ken – two reservoirs with a total area of 1,138 hectares.

There are also protected sites on or adjacent to Longannet and Cockenzie coal-fired power stations, Damhead Creek CCGT, Lanark Hydro-electric Scheme, Cruachan pumped storage power station and Hatfield Moor gas storage facility.

It is estimated that 41% of Energy Wholesale's landholdings (an estimated 3,264 hectares) fall within protected areas, largely due to the extent of the protected sites at Galloway Hydros.

ScottishPower is conscious that important habitats and species may occur on land outwith protected sites. A list has been compiled of certain aspects of Energy Wholesale's landholdings that have been nominally identified as areas of high biodiversity value. These locations are listed in the document "ScottishPower Energy Wholesale's Biodiversity Reporting and the GRI Index".



■ *Loch Ken, a component of the Galloway Hydros, is covered by a range of national and international designations*

## Protected Species

The International Union for Conservation of Nature (IUCN) has for more than four decades been assessing the conservation status of the world's biological diversity to highlight those threatened with extinction.

The IUCN maintains the IUCN Red List of Threatened Species that provides taxonomic, conservation status and distribution information on the small percentage of plants and animals that have so far been globally evaluated against its categories and criteria.

The IUCN Red List catalogues species according to their extinction risk – from high to low these categories are critically endangered, endangered and vulnerable. This list is widely considered to be the most objective and authoritative system for classifying species in terms of their extinction risk.

In previous surveys five species have been recorded on Energy Wholesale landholdings that feature on the IUCN Red List:

- *Bembidion humerale*, a ground beetle, recorded from the Lindholme Compression Site (Hatfield Moor Gas Storage Facility), is cited as Endangered on the IUCN Red Data Lists. This species is only known in the UK from the Humberhead Peatlands NNR.
- *Curimopsis nigrita*, the Mire Pill-beetle, recorded from the Lindholme Compression Site is cited as Endangered on the IUCN Red Data Lists. This species is only known in the UK from three sites within the Humberhead Peatlands NNR, each supporting many small, fragmented populations.
- *Phaonia jaroschewskii*, the Hairy Canary Fly, recorded from the Lindholme Compression Site is cited as Vulnerable on the IUCN Red Data Lists. This yellow muscid fly is known from the Humberhead Peatlands NNR and two other English sites

“Five IUCN Red List species have been recorded at Energy Wholesale sites.”

- Oxbow Diving Beetle (*Hydroporus rufifrons*) recorded from Kenmure Holms, Galloway Hydros, is cited as Vulnerable on the IUCN Red Data Lists. It has been recorded from six UK counties with its strongholds in Galloway and the Lake District.
- River Jelly Lichen (*Collema dichotomum*) recorded from the Lanark Hydros, is cited as Vulnerable on the IUCN Red Data Lists. This lichen grows on submerged rocks in fast-flowing streams and has been found in eleven 10km squares in the UK.

Over the last decade, the allocation of resources and prioritisation of biodiversity action in the UK have been guided by the UK BAP. This initiative was developed by the UK Government to meet its commitments under the Convention of Biological Diversity.

Species and habitats are afforded levels of official priority within the UK BAP, according to objective criteria, such as rates of decline or perceived threats to populations, and pragmatic decisions about what targets are attainable. The UK BAP list includes 65 habitats and 1 149 species that have been identified as priorities for conservation action.



■ *This young Ring Ouzel was found at Cruachan Reservoir, confirming the UK BAP species had bred (Pic: Blue Leaf)*

ScottishPower is represented on the Scottish Biodiversity Forum, the organisation that liaises with partner groups preparing species action plans for Scotland and reports on progress to the UK Biodiversity Group.

Energy Wholesale's landholdings offer habitats for a number of UK BAP priority species. From the information available, a total of 28 UK BAP birds – half of the 56 distinct species on the priority list – have been recorded as wintering, breeding or passage species at EW sites.

Energy Wholesale sites also support nine mammals; seven fish; five reptiles; two amphibians; eight butterflies and moths; four other species of invertebrates; one lichen and seven plant species – all of which are listed on the UK BAP.

The document "ScottishPower Energy Wholesale's Biodiversity Reporting and the GRI Index" provide a detailed breakdown of each of our generating

sites' relationships with UK BAP species.

ScottishPower is a member of two biodiversity steering groups that lead biodiversity action plans in their areas – East Lothian Biodiversity and Argyll and Bute Biodiversity Partnership – and attends their regular meetings.

The company is a lead partner in Dumfries and Galloway's species action plan for the internationally threatened fern, Pillwort. The UK BAP species grows in lochs and ponds and the Galloway Hydros is leading efforts to maintain water levels for the fern at Loch Ken.

The company is also a partner in the Dumfries and Galloway's action plan for wetland habitat – specifically Fen, Carr, Marsh, Swamp and Reedbed – in respect of water levels on Loch Ken and other areas.

ScottishPower is listed as a partner in Argyll and Bute Biodiversity partnership's species action plan for Golden Eagle.

## ScottishPower's Approach

We recognise that present and future generations should be able to enjoy the benefits that biodiversity bestows. As a key indicator of sustainable development, biodiversity has been an integral part of our environmental policy for many years.

We seek not only to minimise the effects of our operations on biodiversity but also to promote wildlife and habitats through implementing positive conservation management and research at our sites and in the wider countryside. IBERDROLA published its first group-wide Biodiversity Policy in December 2007. ScottishPower's Biodiversity Policy, which aligns to the IBERDROLA group policy, is available for download.

### Our proactive approach includes:

- Implementing Biodiversity Action Plans (BAPs) at all of Energy Wholesale's generating sites. The BAPs set out objectives to entrench existing good practice, enhance habitats further for wildlife and plants and establish a timescale for their implementation
- Employing or co-sponsoring four countryside rangers at different Energy Wholesale sites to conduct biodiversity monitoring and liaise with the public
- Assisting research into protected areas and for protected species, supporting studies by NGOs and linking in to local authority biodiversity plans and projects
- Working in partnership with Fisheries Boards, particularly at our hydro generation schemes, to protect and enhance the aquatic environment
- Carrying out Environmental Impact Assessments for new-build developments, such as overhead lines and new power developments, and ensuring Environmental Management Plans are developed for projects where aspects of nature conservation value are identified.

ScottishPower's approach has evolved over many years and goes beyond regulatory requirements. ScottishPower's Environment Forum meets regularly and brings together senior executives with representatives from stakeholder groups including environmental regulators, WWF and the Royal Society for the Protection of Birds (RSPB).

It provides a forum to discuss the company's policy with external experts, improve two-way communication and ensure our approach is in line with best practice. We work closely with statutory agencies such as Scottish Natural Heritage, English Nature and Fisheries Boards, as well as non-governmental organisations, including the RSPB, WWF and Wildlife Trusts, in respect of our present sites and planned developments.

"We seek not only to minimise the effects of our operations on biodiversity but also to promote wildlife and habitats through implementing positive conservation management and research at our sites and in the wider countryside."

## Stakeholder Engagement

Our Galloway Hydros team co-operates closely with the RSPB in Galloway and leases land for a major wildlife reserve.

At present, the society leases two parcels of land totalling 60 hectares from ScottishPower on the south side of Loch Ken. This represents a quarter (25.4%) of the total area of the Ken-Dee Marshes Reserve (221ha). The RSPB is in negotiations with ScottishPower regarding future lease arrangements and the inclusion of further landholdings.

The Galloway Hydros have worked closely with the RSPB since 1996 to manage water levels on Loch Ken, as far as operations will allow, to encourage successful nesting by wading birds and waterfowl.

Under the agreement, water levels are kept high from March to mid April to encourage early breeding ducks and waders to nest above the levels of flash floods that can occur in spring. Levels are then lowered from April until late June, exposing the marshy margins of the loch for feeding wading birds. The RSPB acknowledges

that the co-operation of ScottishPower has “greatly enhanced waterfowl breeding success” at Loch Ken. The partnership at Loch Ken was used as a case study in the National Report for the 7th meeting of the Conference of the Contracting Parties to the Ramsar Convention on Wetlands.

ScottishPower is also supporting work by RSPB Scotland to improve woodland habitat for the Capercaillie, a large species of grouse. A key element is supporting native forest expansion at Abernethy Forest in the Scottish Highlands. The support ties in with work by IBERDROLA to conserve Capercaillie in the Spanish Pyrenees.

In the past we co-sponsored the RSPB-led Black Grouse Recovery Project in Argyll and Bute from 2002-2007, which surveyed priority sites in the region for the UK BAP species.

ScottishPower is a corporate and business sponsor of the Scottish Wildlife Trust (SWT). We work closely with the SWT at the Falls of Clyde National Nature Reserve (NNR) near Lanark. The SWT leases around five hectares of land for the reserve from ScottishPower around Bonnington



■ *Grasshopper Warblers nest at the Galloway wetlands (Pic: Blue Leaf)*

“The RSPB say the co-operation of ScottishPower in controlling water levels at Loch Ken has greatly enhanced the success of nesting waterfowl.”

Power Station, part of the Lanark Hydro-electric Scheme. In 2009, a new 10-year management plan for the Falls of Clyde reserve was prepared by the SWT in liaison with ScottishPower.

ScottishPower is proud of its partnership with the SWT at the Falls of Clyde and has worked closely with the Trust to deliver several projects. Since 2001, ScottishPower has sponsored a seasonal ranger at the Falls of Clyde, which attracts 60,000 visitors each year, while hydro staff helped set up a CCTV link to beam live pictures of breeding Peregrine falcons to the SWT's Visitor Centre at New Lanark.

In 1998, ScottishPower gifted ownership of Hadfast Valley, near Cousland in East Lothian, to the Trust to manage the site as a wildlife reserve.



■ *SWT seasonal ranger Donna Mathieson at the Falls of Clyde – we have supported the post since 2001 to help safeguard public safety at the gorge*

Blackburn Mill CCGT is a gold corporate member of The Wildlife Trust for Lancashire, Merseyside and North Merseyside and Rye House CCGT is a gold corporate member of the Hertfordshire and Middlesex Wildlife Trust. Both generating sites have received help from their local Trusts in advancing their biodiversity actions.

Our other partnerships with stakeholders include:

- We are a supporter of the Carrifran Wildwood Project in the Scottish Borders through our Rural Care Project. Since the start of the project in 2000, around 282 hectares have been planted with 453,000 native trees as part of a landscape-scale ecology restoration project. ScottishPower's donation has been used for planting and protecting trees in the lower part of Carrifran Valley and to support a pioneering attempt to establish a treeline woodland at high levels.
- ScottishPower is a corporate member of the Forth Estuary Forum, a voluntary partnership of organisations with the principal aim of promoting the wise and sustainable use of the Firth of Forth. The company is represented on the Forum's management group.
- We co-sponsored the Raptor Research Foundation Scotland's annual conference, in Pitlochry, in autumn 2009.

## Performance Summary 2009

ScottishPower's businesses contribute a range of environmental information to IBERDROLA'S sustainability and ScottishPower's Corporate Social Responsibility reports.

This information was aligned in 2009 to the Global Reporting Initiative (GRI) indicators. The GRI is a long-term, multi-stakeholder organisation and process whose mission is to develop and disseminate globally applicable reporting guidelines. These guidelines are designed to assist reporting organisations and their stakeholders in articulating and understanding contributions of the reporting organisation to sustainable development. The five GRI indicators relating to biodiversity are as follows:

**EN11** – Location and size of land owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas

**EN12** – Description of significant impacts of activities, products, and services on biodiversity in protected areas and areas of high biodiversity value outside protected areas

**EU13** – Biodiversity of offset habitats compared to the biodiversity of the affected areas

**EN14** – Strategies, current actions, and future plans for managing impacts on biodiversity

**EN15** – Number of IUCN Red List Species and national conservation list species with habitats in areas affected by operations, by level or extinction.

A detailed discussion of each biodiversity indicator in relation to Energy Wholesale's sites is contained in "Our Special Sites: Aligning ScottishPower Energy Wholesale's biodiversity reporting to the GRI Index". A summary is contained in the IBERDROLA sustainability report.

## Key achievements in 2009

- Continued to engage ecological clerks of works for major projects and co-sponsor Countryside Rangers at key sites to monitor the effects of our operations, monitor biodiversity and liaise with members of the public.
- Continued to implement biodiversity codes of practice for major Energy Networks projects
- Biodiversity Action Plans were progressed at 10 Energy Wholesale sites
- Four pairs of Peregrines nested at Energy Wholesale sites, a pair of Barn Owls likely nested at Damhead Creek while visitors to Cruachan Visitor Centre enjoyed views of nesting Ospreys
- Great Crested Newts were recorded in record numbers at Damhead Creek and the local population of Water Voles showed an apparent dramatic increase following conservation work
- Two new invertebrate species were recorded for Argyll following a biodiversity survey at Cruachan
- Work began to extend an area of wet grassland used by breeding wading birds at Valleyfield Ash Lagoons.

## Biodiversity Action Plans

Energy Wholesale operates nine Biodiversity Action Plans (BAPs) that cover 10 generating sites in Scotland and England. The BAPs were all launched between 2004 and 2007 and aim to entrench existing good practice and set out ecological enhancement objectives and a timescale for their implementation.

Several site BAPs were reviewed and updated in 2009 as part of their five-year implementation cycle and following an independent assessment, by RPS Planning & Development in 2008, of their success in delivering biodiversity objectives. Details about priority species and biodiversity action plans at Energy Wholesale were made available in 2009 as downloadable electronic documents on the [www.spenergywholesale.com](http://www.spenergywholesale.com) website.

### Longannet Power Station

In 2009, the station renewed its five-year BAP that details planned work to promote the habitats and species found at its sites – the power station, Longannet Lagoons and Valleyfield Lagoons.

The Low Valleyfield site, 6km east of Longannet, is an important element in the make-up of the Inner Forth Estuary, which is internationally recognised for its value to wildlife, especially birds.

The area is covered by natural history designations including the Firth of Forth Ramsar site and Special Protection Area. Valleyfield Lagoons was designated part of the Firth of Forth Site of



■ Fife Coast and Countryside Trust Ranger Derek Abbot and some of his voluntary helpers at Valleyfield Lagoons



Special Scientific Interest (SSSI) in 1991 and included in the wider Torry Bay Local Nature Reserve (LNR) designation in 1996.

The reserve extends to 683 hectares and a Fife Coast and Countryside Trust Ranger, jointly funded by ScottishPower, Scottish Natural Heritage and Fife Council, is employed to monitor and manage its wildlife communities and liaise with the public.

The lagoons are rich in biological diversity and its flora and fauna have been well studied. The site list extends to 162 types of birds, 247 moth and 13 butterfly species, 51 types of hoverfly, 60 species of bee and wasps while many other invertebrates, mammals and vascular plants have been recorded.

A new ranger, Derek Abbott, was appointed in October 2009 and worked with the station's Environment Team to produce the updated biodiversity plan, which runs from 2009-2013.

The document presents a list of ecological enhancement objectives for woodland, scrub, grassland, hedgerows and open standing water habitats and lays out a timescale for their implementation.

Key projects in coming years will include thinning of woodlands, maintenance and creation of ponds, creation of hedgerows and management of grassland for wildflowers.

The BAP also details various measures for preserving a colony of Sand Martins that breed on ash stockpiles at Longannet Lagoons. In 2009, the birds nested successfully in a stockpile away from operational areas and it is planned to maintain and monitor this site.

The BAP will also look at using ash to build artificial nesting walls in non-operational areas and profiling operational ash stocks to make them less attractive as nesting sites.

The Countryside Ranger is preparing to undertake



“The BAP will detail various measures for preserving a colony of Sand Martins that breed on ash stockpiles at Longannet Lagoons.”

new, formal monitoring of species in 2010, including undertaking butterfly and bumblebee transects, and continuing bird counts and surveys.

A team of local wildlife enthusiasts will support this survey work, at both Longannet and Valleyfield, to improve knowledge of the species on site and the habitats they use. Derek said: “These are local people with extensive local knowledge and it is good to have them on board. As voluntary rangers, they will play an important role in recording what’s here.”

Derek added: “There has been significant



■ Construction at Valleyfield Lagoons will ultimately lead to a greater area for breeding waders such as Ringed Plover (top) and Redshank (Both pics: Blue Leaf)

recording of species on the site and this will continue, however, I wish to increase the practical conservation carried out and involvement with the local community.

“Since my appointment, I have been setting up a programme with local schools and have already visited Torry Bay (Torryburn), Culross and Tulliallan (Kincardine) Primarys, to tell them about the site and its wildlife.

“The pupils will be growing wildflowers and will eventually be involved in planting them out at one of the meadows on the lagoons. The children will also be involved in building bird nestboxes which will be put up in the public areas of the reserve and at the power station.”

New environmental interpretation will be installed at the reserve in 2010 and there are longer-term proposals to create visitor facilities, including birdwatching hides.

Meanwhile, a Longannet project team has advanced plans to extend the area devoted to wildlife at Valleyfield Lagoons. During lagoon construction work in 2009, Lagoon No.5, at the southeast edge of the site, was bisected by the creation of a new embankment. The 5.9 hectare south portion will be infilled with ash and allowed to dry out before being capped with a layer of shale. Over time the site will revert to a nature area and it will complement the existing adjacent wet grassland that is used each year by breeding wading birds, such as Redshank, Lapwing and Ringed Plover.

## Cockenzie Power Station

Community involvement is at the core of Cockenzie's biodiversity action plan (BAP) – with the power station linking up with local people and organisations to improve the environment.

The station launched its BAP in 2004 to preserve and enhance habitats and wildlife on its sites. The document was reviewed and updated in 2009. A key feature of Cockenzie's BAP is creating new habitats for wildlife that can also be enjoyed by local people.

Large areas of the station grounds, the coal plant and settling lagoons are amenity grassland, which is relatively poor for wildlife. Cockenzie is supporting local efforts to create a new area of community woodland linking Prestonpans and Port Seton.

The station has handed over 10 hectares of land to the west and south of its coal plant to local people who make up the Prestonlinks Woodland Group. The group has created new areas of woodland, two orchards and a large wildflower meadow on part of a redundant field. Native plants of 14 species will provide useful habitats for wildlife while improving the site's appearance.

The station works closely with East Lothian Countryside Ranger Service to maintain habitats at Cockenzie's ash settling lagoons at Musselburgh, as far as operations will allow.

ScottishPower co-sponsor a countryside ranger to monitor species and liaise with the public at the lagoons.

Non-operational lagoons have been landscaped and handed over to the local community. The woodlands and meadows that have developed support 177 species of plants and a large population of invertebrates, offering food and cover for nesting birds and small mammals. The woodlands and meadows that have developed support 177 species of plants and a large



■ *Levenhall Links countryside ranger Nick Aitken*

population of invertebrates, offering food and cover for nesting birds and small mammals. UK BAP breeding species include Grey Partridge, Skylark, Dunnock, Song Thrush, Grasshopper Warbler, House Sparrow, Linnet, Bullfinch, Yellowhammer and Reed Bunting.

Meanwhile, wader scrapes – six shallow freshwater pools lined with clay – were created by ScottishPower and offer feeding for migratory wading birds. In winter, hundreds of waders, gulls and ducks will congregate on the flat ashflats of active lagoons, on the purpose-built wader scrapes and on the short grassland of the meadows. Key species include Oystercatcher (peak 3250); Bar-tailed Godwit (1136); Redshank (463); Dunlin (420), Golden Plover (1450); and the UK BAP species Curlew (386) and Lapwing (1198).

Other BAP ventures including the maintenance of an ash pile that is used by a colony of up to 120 pairs and the installation of a Kestrel nestbox at the coal plant, which has also had breeding Barn Owls.

## Damhead Creek Power Station

Damhead Creek's landholdings include a mitigation area of 32 hectares that features a range of habitats rich in wildlife.

The area has been developed as part of the planning conditions for the station's construction. These required the operators to retain existing habitats and create and manage new areas for biodiversity.

A habitat management plan (HMP) was developed in liaison with Kent Trust for Nature Conservation, the Royal Society for the Protection of Birds and Natural England.

The strategy will run for the lifetime of the station and is reviewed every five years by Medway Council, Kent County Council and Natural England.



■ *Damhead Creek CCGT and the mitigation land's extensive reedbed*

Damhead Creek launched its BAP in 2005-06, to support the four key aims of the mitigation area's HMP:

- Provide wildlife corridors to link retained features and conserve habitats of high ecological value
- Create wildlife habitats
- Manage land to enhance its nature conservation value
- Protect existing access.

The HMP, which was reviewed and updated in September 2008, aims to maintain, protect or enhance habitats such as wetlands, reedbeds, grasslands, native woodland, saltmarsh and scrub. It also targets pro-active measures to improve conditions for key species including Water Vole, Great Crested Newt and Barn Owl, although the range of work is also benefiting large numbers of common species and plants.

The HMP is supported by a range of ecological studies – including bird and mammal surveys and ongoing hydrological monitoring.

A total of 80 species of bird were recorded during survey work at the mitigation area in 2009.

These included 29 species that were confirmed as breeding and a further 24 species that probably or possibly nested at the site.



■ *A mechanical digger clears vegetation from the Berry Wiggins drain to improve conditions for Water Voles at Damhead Creek*

Six confirmed breeding species in 2009 are listed on the UK BAP – Cuckoo, Skylark, Dunnock, Song Thrush, Linnets and Reed Bunting.

Water Vole surveys in 2009 revealed the UK BAP species is widespread across Damhead Creek's mitigation area and is benefiting from active conservation measures by station staff. The study found that signs of vole activity were twice as frequent compared with 2008 with some waterbodies having high population densities. The apparent increase follows dredging and vegetation clearance in winter 2008-09 to improve the Berry Wiggins Drain, which bisects the mitigation land.

Great Crested Newts, another UK BAP species, were found in record numbers at the mitigation land in 2009. A total of 40 adults were found, along with evidence of breeding, mostly at the station's Wetland Creation Area. The previous best count was 17 in 2007. Meanwhile, more than 90 Smooth Newts were found at various waterbodies at the site. The station is looking at recommendations for ongoing management of waterbodies that are important for newts.

The station's nestbox programme for Barn Owls resulted in one pair probably breeding in 2009. Since the start of the scheme in 2002, 30 young owls have been fledged, boosting the Kent population.

## Shoreham Power Station

Shoreham has operated a biodiversity action plan (BAP) since 2001, shortly after the plant's opening. Purpose-built shingle banks were created within the site boundary as part of the planning conditions for the CCGT's construction and these have been colonised by specialist plant communities. The BAP's key aim to implement measures to maintain the vegetated shingle habitat created on the site, survey what grows and encourage the rarer plants to thrive.

Vegetated shingle is an internationally threatened and fragile habitat with a limited distribution in Great Britain, largely confined to the coastal areas of Kent, Essex and Sussex. It is featured on Annex 1 of the EC Habitats Directive as a habitat of international conservation importance and listed as a priority habitat for conservation in the UK BAP. Adur Council's Nature Coast Project Officer Dee Christensen carries out an annual survey, assisted by station staff, of the plant communities that have colonised the shingle banks.

Dee Christensen said: "Internationally, vegetated shingle is a very rare habitat and one that's under considerable threat from the many pressures on our coastline, both development and recreation. That's why havens such as that at Shoreham are important – they act as a reservoir for vegetated shingle plants. I would love to see the plants found at Shoreham spreading out into the wider environment."

The station has established a photographic database of the plants found on site. This enables the identification of the priority species and allows better protection measures to be put in place. No herbicide is used to control vegetation at Shoreham but weeding is carried out by hand each year to remove weeds and other undesirable. Meanwhile, an estimated 19 young Peregrine Falcons have fledged from a purpose-built nestbox high on the station's 106-metre chimney. The station liaises closely with Sussex Ornithological Society in the project – and three chicks successfully fledged in 2009.



■ *The purpose-built vegetated shingle banks at Shoreham Power Station and, above, the young Peregrine Falcon chicks that fledged in 2009 (Pics: Graham Roberts)*

## Rye House Power Station

The station's potential impact on the environment was considered during its construction in the late 1990s.

The developers prepared a landscaping strategy, including the formation of a 3.6 hectare ecological conservation area, to help reduce the visual impact of the new plant, and potential process noise, by natural screening with trees and shrubs.

Enhancements include native tree planting and the creation of ponds that have matured into wildlife rich habitats. Rye House's BAP seeks to



■ *Great Crested Newt – a key species at Rye House*



■ *Common Frogs are abundant at Rye House's ponds*

entrench the existing good practice shown at the station and contribute to the ongoing development of these habitats.

A further pond was added as part of the BAP in 2005 as a key feature of a wildlife garden created on a patch of ground. In 2009, a pair of Mallard raised a brood of ducklings on the reed-fringed pool.

Also as part of the station's BAP, five boxes for bats have been erected around the grounds to benefit species like the Common Pipistrelle – a nestbox has also been put up for Robins.

Meanwhile, areas of amenity grasslands are left to grow naturally over the summer to create little meadows, encouraging floral diversity and invertebrate populations.

Kestrels, nested successfully at Rye House in 2009 for the second year in a row. The pair have chosen a site high on one of the station's three chimneys and successfully raised a brood of four young.

## Blackburn Mill CCGT

Blackburn Mill CCGT launched its biodiversity action plan (BAP) in 2005.

The station liaised with the Royal Society for the Protection of Birds (RSPB) and Lancashire Wildlife Trust (LWT) to develop a series of wildlife-friendly measures.

With the help of the scout troop from Feniscowles, site staff have carried out initial work to create a wildlife corridor and provide nestboxes for birds, such as Blue Tit and bats.

Long-term actions will include managing a copse of trees to the south of the site to improve its structure for animals and plants. Blackburn Mill is also a 'silver' corporate member of LWT.

## Hatfield Moor Gas Storage Facility

Hatfield Moor's BAP aims to provide elements of habitat continuity between the site's landholdings and the adjacent nationally-important peatlands of Hatfield Moor.

The site launched its BAP in 2006 after an ecological survey concluded the site had great potential for the enhancement of habitats. Several initiatives have now been successfully launched. A key objective is to extend the woodland area of the adjacent Hatfield Moor SSSI by sensitive planting of native species at Lindholme. These include Scot's Pine, Silver Birch, Oak, Hawthorn and Alder – species that reflect the neighbouring mature woodland of the Hatfield Moor.

The use of herbicide has ceased in planted areas and a mowing regime is increasing the diversity of plants and invertebrates, such as beetles and dragonflies, in areas of grassland and wildflower meadow in the north and south of the Lindholme site. Nestboxes were put in place at Beltoft and Hatfield Well in 2009 while bird boxes are already in place at Lindholme.

Hatfield Moor's BAP is due to be reviewed and updated in 2010 and will incorporate proposals for the Hatfield Moor Well for the first time.

ScottishPower makes an annual payment to Natural England to subsidise the cost of ongoing habitat management, including birch clearance, to improve habitat for Nightjars. An annual financial contribution is also paid to Thorne and Hatfield Moors Conservation Forum to help with their ongoing fieldwork and research.



■ *Common Blue Damselfly – Hatfield Moor which has a special range of invertebrate species (Pic: Blue Leaf Natural Resources)*





■ *Small Pearl-bordered Fritillary – a UK BAP butterfly species found at Cruachan Power Station (Pic: Blue Leaf Natural Resources)*

### **Cruachan Power Station**

Cruachan's BAP aims to protect and encourage the special habitats and wildlife species found in the station grounds and surrounding area.

The BAP, established in 2005, seeks to encourage the spread of native species through sensitive tree planting around the station and its landholdings on the south-facing slopes of Ben Cruachan.

A wild garden near the site's administration block is enabling the natural colonisation of species such as Oak, Rowan and Willow seedlings and wildflowers which are being transplanted on site.

Where possible, garden waste is composted while the station strives to minimise the use of chemical herbicides and weedkillers. Staff are made aware of the ongoing efforts for biodiversity through a station newsletter while the site maintains close contact with other stakeholders, including landowners and Loch Awe Fisheries Trust.

“Cruachan's BAP seeks to encourage the spread of native species through sensitive tree planting at the station and on the steep slopes of Ben Cruachan.”

To improve its understanding of local biodiversity, the station commissioned a breeding bird and wildlife survey in spring and summer 2009.

The area is one of the most important for butterflies in Scotland, with a healthy population of the vulnerable Pearl-bordered Fritillary.

Scrub clearance operations, to maintain the powerline connection to Cruachan, helps the black-and-orange butterfly to thrive by creating woodland glades that support the fritillary's main foodplant, the Common Dog-violet. Other UK BAP butterflies that occur include the Small Pearl-bordered Fritillary and Small Heath.

The 2009 survey found 45 species of birds at Cruachan – 20 of which were confirmed as breeding on site while a further 12 species may have nested.

Among the UK BAP birds that were found in spring/summer 2009 were Cuckoo, Skylark, Tree Pipit, Dunnock, Song Thrush, Wood Warbler, Spotted Flycatcher, Twite and Lesser Redpoll.

Another priority species – the Black-throated Diver – was seen fishing in Loch Awe at Cruachan Visitor Centre.

The 2009 survey also found several invertebrates that have apparently never been recorded in Argyll before. These included the micro moth *Pyrausta purpuralis* and *Sicus ferrugineus*, a cone-headed fly that is rare in Scotland.

Further studies will look more closely at the varied invertebrate life at the station's landholdings.

For a second successive year in 2009, CCTV pictures of breeding Ospreys were relayed to Cruachan's Visitor Centre.

Visitors enjoyed close-up views as the pair, which nested near the station, successfully raised one chick.



■ Some of the special wildlife that use the habitats at Cruachan, from, top Wood Warbler, Green Hairstreak and Starry Saxifrage (Pics: Blue Leaf Natural Resources)

## Galloway and Lanark Hydros

The Galloway hydro-electric scheme is situated in an area of considerable conservation and scenic value.

Water levels and the quality of water in rivers and reservoirs are vitally important to the ecology of habitats, which affect insects, fish, birds and water mammals.

Galloway Hydros launched its biodiversity action plan (BAP) in 2005, aiming to preserve and enhance habitats and wildlife at the schemes. A new five-year plan was published in 2009, setting out a list of ecological enhancement objectives and a timescale for their implementation.

ScottishPower will work with partners, including Galloway Fisheries Trust, Scottish Natural Heritage and the Royal Society for the Protection of Birds, to achieve our objectives.

A key feature of the Hydros' BAP is safeguarding and improving movements of migratory fish,



“Water levels and the quality of water in rivers and reservoirs are vitally important to the ecology of habitats, which affects insects, fish, birds and water mammals”

such as Sea Trout and Atlantic Salmon, through the Galloway scheme.

Actions adopted in the Hydros' BAP include non-intervention measures to benefit habitats and species, such as leaving dead and fallen trees and reducing the frequency of grass cutting to encourage invertebrates. Use of herbicide is kept to a minimum to foster the emergence of semi-natural vegetation while all vegetation management takes place outwith the bird breeding season.

The Hydros will work with the RSPB to erect nestboxes for birds, bats and Red Squirrel. Artificial nest sites will also be created at Earlstoun, Carsfad and Glenlee for Sand Martin. In addition, small ponds are planned at Glenlee to encourage amphibians, aquatic plants and water insects.

At Lanark Hydros, we are working with the Scottish Wildlife Trust, at its Falls of Clyde Reserve, to implement aspects of our BAP. Projects include removal of non-native species, coppicing of woodland at Stonebyres and Bonnington Power Stations and the development of a wildflower meadow at Bonnington.

■ *We are working to help Red Squirrels at some of our sites at the Galloway Hydros (Pic: Laurie Campbell)*

## Fisheries

We have in place a number of measures to protect fisheries at our Galloway Hydro-electric Scheme and our Thermal Power Stations.

### Galloway Hydros

In the mid 1930s, a series of dams was built on the Rivers Deugh, Ken and Dee to store water for the Galloway hydro-electric scheme. At an early stage in the planning for the scheme, a need was recognised to preserve the spawning grounds of Atlantic salmon in the upper reaches of the Rivers Doon, Ken and Dee.

Provision for fish passes at Tongland, Earlstoun and Carsfad, as well as a pass for the descent of salmon smolts at Kendoon, was made under the Galloway Water Power Act 1929. Although not included in the Act, a fish pass was also provided at Loch Doon after pressure from local groups and the River Doon Fishery Board under Section 80 of the Galloway Water Power Act, which afforded protection to the River Doon

landowners in the event of their salmon fishing or amenity being adversely affected by the power development.

The fish ladders consist of a series of ascending pools, some of which are large resting pools, each connected by a submerged gate into the reservoir through which the fish can swim. Over the years, the structures have been improved following various studies into fish movements and Galloway Hydros continue to maintain the passes annually.

The Galloway Hydros works with Kirkcudbrightshire Dee District Salmon Fishery Board and Galloway Fisheries Trust (GFT) on projects to protect existing salmon stocks and encourage their recovery.

A recent joint venture was the installation of a Vaki Riverwatcher fish counter in an upper holding pool at Tongland fish ladder to collect accurate data on salmon and Sea Trout entering



■ *Maintaining the fish ladder at Earlstoun Power Station in the Galloway Hydro-electric scheme*

the Dee system. A number of Passive Integrated Transponders (PITs) have been located along the ladder to detect tagged fish and track their exact route and the time it takes them to pass through.

The results will identify whether the fish have particular problems at any of the fish ladder's chambers or entrances. Details of these projects and others are contained in a Fisheries Management factsheet produced by the Hydros.

ScottishPower has also funded the construction and meets the running costs of a salmon hatchery near Loch Ken to restock the Dee. The state-of-the-art facility can hold up to 300,000 eggs that are harvested from hen fish of local origin and cared for until they hatch.

Meanwhile, compensation flows are maintained

by ScottishPower on the rivers Doon, Ken and Blackwater of Dee, to ensure sufficient running water for fish movements.

The Hydros also support high-level action and in 2007 funded the writing of a Salmon Management Plan for the Dee catchment.

The Scottish Fisheries Committee, in its 2008 annual report, said it was "encouraged" by the partnership approach between ScottishPower and its stakeholders to develop the strategy.

The Plan examined all the available information on the river's salmon population, water quality and other biological data to gain a clearer picture of the health of the river and its fish. It considered the potential and actual threats to the river's salmon and laid out a five-year work programme to address areas of concern.



■ *Fitting adult Atlantic Salmon with transponder devices is providing useful data (Pic: Galloway Fisheries Trust)*

Other recent projects include:

### Freshwater Pearl Mussel Research

The Galloway Hydros supported research into the endangered Freshwater Pearl Mussel to help reverse its decline in Ayrshire's rivers which were once a stronghold for the UK Biodiversity Action Plan species.



■ A Freshwater Pearl Mussel (Pic: Ayrshire Rivers Trust)

The Hydros and Scottish Natural Heritage jointly-funded studies by Ayrshire Rivers Trust in summer 2009 to search Loch Doon's riverbed for juvenile Freshwater Pearl Mussels.

Sites on the Rivers Doon and Girvan were also checked for adult mussels and any found were genetically sampled.

Results will provide key information for future management of the rivers, including the feasibility of a long-term captive breeding programme to restock the river.

The Trust's Brian Shaw said: "The Doon once had a fishery for Freshwater Pearl Mussels. However, the most recent survey found low densities with no evidence of recent recruitment into the population.

"The species is an indicator of high water quality and a healthy ecosystem.

"The Trust is keen to prevent the extinction of the species that is important in terms of local heritage and biodiversity."

### Fish Relocation

Fisheries experts were surprised and encouraged by the healthy numbers of fish at Earlstoun Fish Ladder when operations at the structure allowed a rare glimpse of what's going on under the water's surface.

Routine maintenance of the ladder by the Galloway Hydros in July 2009 required the water level to be drained in its pools. Galloway Fisheries Trust (GFT) was approached to help remove any fish in the ladder and 204 individuals were carefully relocated to a new site. Four species were found during the operation; Atlantic Salmon, Brown Trout, Rainbow Trout and Rudd.

GFT Biologist Jackie Graham said: "It's the first time GFT have relocated fish from the Earlstoun ladder and we were cheered by the fact so many fish were present. We were also surprised to find some large Salmon that had worked their way up through the scheme relatively early in the year – so it is clear the ladders are doing their job."

## Thermal Stations

During 2009 we moved closer to resolving the issue the longstanding issue of fish entrainment at Longannet Power Station's cooling water (CW) system. Significant numbers of fish are entrained annually in the CW system although studies supported by ScottishPower do not indicate that this has an adverse effect on overall fish populations in the Forth Estuary.

A front-end engineering design was commissioned in 2009 for a catch-and return systems to safely return entrained fish and marine debris to the Firth of Forth. Management at Longannet have explored various solutions in recent years – including finer screens to prevent fish from entering the CW intakes and acoustic deterrents – but these did not prove feasible.

The investigations into a catch-and-return system were supported by a trial in 2007 on one unit that provided a large volume of data that was analysed by independent experts. A catch-and-return system for fish and marine debris has now been agreed as the Best Available Technique for Longannet by the Fisheries Committee and SEPA.

At the end of 2009, an external consultant, Entec, was commissioned to carry out the preliminary design assessment. The design has to ensure that the CW plant and drum screens are fully and safely accessible. The drum screens have been redesigned to improve the catching troughs that lift out debris to ensure they retain water. Fish will be washed out of the trough by redesigned spray jets then pass along a channel, to be returned to the estuary at the end of the existing sea jetty. The system will be fully automatic and designed to cause as little disturbance as possible to the fish. The conceptual design will have to be agreed by the consultees, hopefully in the first quarter of 2010, after which the project will go forward to detailed design. It is hoped that the new system could be commissioned by the end of 2010.

## Study at Shoreham

At Shoreham, the CCGT's cooling water system was designed to minimise fish entrapment using a combination of a state-of-the-art acoustic fish deterrent system and a fish return arrangement. Fish entering the cooling water (CW) band screens from the English Channel are intercepted by operators, retained for a period of 24 hours then checked for good health before being returned to the sea. These measures have resulted in Shoreham having one of the lowest rates in Europe for fish entrapment mortality per unit of generation for a directly-cooled power plant.

Shoreham has also commissioned a study into the effect of the acoustic deterrent on fish in Shoreham Harbour. The station has also funded trawl surveys to check if the heated seawater discharge from the outfall is attracting Sea Bass. The station funded the installation of an automatic fish counter and video camera on the River Adur. These are maintained by the Environment Agency and are used to monitor any changes in Sea Trout returns to the river.

“A fish deterrent and return system has resulted in Shoreham having one of the lowest rates in Europe for fish entrapment mortality per unit of generation.”

## Environmental Management

### Environmental Management Systems

Our Energy Networks business and all of our main power stations operate Environmental Management Systems that are compliant with ISO 14001, the international standard for Environmental Management Systems (EMSs). In addition, two of our power stations, Longannet and Damhead Creek, have EMSs that meet the requirements of the EU's Eco-Management and Audit Scheme (EMAS).

During 2009 Energy Wholesale started work on a project to achieve ISO 14001 certification in respect of its Head Office activities. All remaining parts of the business that operate non-accredited EMSs are working towards achieving accreditation during 2010 in line with IBERDROLA's Global Environmental Management model. Ref:

<http://www.iberdrola.es/webibd/corporativa/iberdrola?IDPAG=ENWEBRESMASIS>

In addition, Energy Wholesale adopted ISO 14063, the international standard for environmental communication, during 2009, as well as developing an Environmental Communications Policy, Strategy and Guidelines and an environmental website.

### Pollution Prevention & Control

All of our thermal power stations, our gas storage facility at Hatfield Moor and the ash lagoons at Longannet and Cockenzie power stations are operated under strict conditions set out in a Pollution Prevention and Control (PPC).

PPC permits are issued and monitored by the Scottish Environment Protection Agency (SEPA) in Scotland and the Environment Agency in England, under the Pollution Prevention and Control Regulations 2000.

The PPC Regulations are driven by the EU's Integrated Pollution Prevention and Control (IPPC) Directive and require the use of Best Available Techniques (BAT) to eliminate or minimise all polluting emissions.

PPC permits cover emissions to air, land and water, as well as noise, vibration and heat loss. They also cover the use of energy and raw materials, waste reduction and the management of potential environmental risks.



■ Checking the operation of oil skimmers at Cruachan



## **Oil Containment**

### **Significant Spills**

There were two oil spill incidents classified as “significant” during 2009. A spill of 1,000 litres occurred at Cockenzie Power Station – all of which was contained on site. Energy Networks reported a second Fluid Filled Cable leak at Gorgie in Edinburgh, of up to 10,000 litres. The leak occurred inside a chemical plant, under newly constructed plant, capped by reinforced concrete.

Supply outage restrictions and site owner negotiations delayed repairs, increasing the leakage volume. Repairs were completed, and Energy Networks is continuing to liaise with the Scottish Environmental Protection Agency. Groundwater monitoring will continue into 2010, and possibly beyond.

### **Environmental Compliance 2009**

During 2009 there were no environmental prosecutions or fines. Energy Networks received one formal warning in relation to a significant oil spill at Gorgie, Edinburgh, and a statutory notice regarding a noise complaint at Grant Street substation in Glasgow.

There were two environmental breaches in Energy Networks and 20 in Energy Wholesale – two involved breaches of an Environmental Limit Condition and 18 involved breaches of Environmental Management Conditions.

Energy Wholesale received 47 community complaints during the year.

### **Other Issues**

#### **Procurement**

We have an Environmental Procurement policy and select most of our suppliers through the Achilles procurement portal where suppliers are required to provide policy and performance information on environmental and social issues, including human rights.

#### **PCB Status of Equipment**

As reported in 2008, ScottishPower has no electrical equipment that contains PCBs in concentrations above 50 parts per million. All ground-mounted equipment was tested prior to 2007 and there were no changes to the PCB status of our equipment in 2009.

#### **Contaminated Land**

ScottishPower's Contaminated Land Policy includes measures to help identify, assess, control and mitigate the risks of land or property contamination. Each business has ongoing programmes of investigation, including desktop and invasive surveys, the outcomes of which are fed into contaminated land registers.



■ *Bonnington Power Station at the Lanark Hydro-electric Scheme*

## Sites and Infrastructure

Energy companies have a significant presence in the environment around us, including power stations, substations, overhead lines and cables, in towns and cities and the countryside.

The planning and development of electricity infrastructure is more important today than at any time since the development of the national grid in the 1930s, as we move towards a low carbon economy.

During the next 10-15 years, UK energy companies will plan and build new power stations and windfarms to replace ageing plant and ensure they can continue to meet customer demand for electricity, while cutting the CO<sub>2</sub> emissions associated with climate change.

In this section we describe how our Energy Wholesale and Energy Networks businesses are responding to the respective challenges of providing new power stations and developing the transmission and distribution networks. Major investment in the UK's energy networks, to transport electricity around the country, will be fundamental to low carbon repowering. The Electricity Networks Strategy Group estimates that up to £4.7 billion will be needed to upgrade the electricity grid and accommodate new power generation by 2020.

This work will include strengthening existing area networks, increasing the capacity of strategic links, such as the power interconnector between Scotland and England and the creation of new Anglo-Scottish subsea power links.

During 2009 ScottishPower discussed its distribution network requirements with the energy regulator, Ofgem. Prior to submitting our business plans to Ofgem we consulted various stakeholders and made a thorough assessment of our expenditure.

We were actively involved, along with other Distribution Network Operators (DNO), in consultations for the fifth Electricity Distribution Price Control Review (DPCR5).

Ofgem sets the total revenues that DNOs can collect from customers and places incentives on them to innovate and find new ways to improve their efficiency and quality of service. This is achieved through a price control that is set every five years.

Ofgem's final proposals for the 2010-2015 price control were accepted by all seven DNOs in January 2010, just outside the reporting period.

Over the next five years ScottishPower and other DNOs will be allowed to invest up to £7.2 billion in the upgrading their networks. This includes a £500 million sustainability fund allowing them to undertake large-scale trials of smart grids and other technology required in a low carbon economy. The impact on household electricity bills will be an increase of £4.30 per year on average across the country. The new price control will run from April 1 until March 31 2015.



## National Planning Frameworks

To deliver the UK's target of meeting 30% of energy needs from renewable sources by 2020, grid development work needs to progress swiftly.

In recent years electricity infrastructure projects have often been subject to lengthy planning delays. However, improvements have been made to the planning systems in Scotland, England and Wales to address this.

A new Infrastructure Planning Commission was established to consider consents for all new electricity generation projects and energy networks developments of 132kV or above in England and Wales.

However, the Coalition Government now aims to bring forward legislation in 2011 to replace the Infrastructure Planning Commission (IPC), introducing a revised structure within Government, which will put the fairer, faster decision making that national infrastructure planning requires, on a democratic footing.

Ministers in the Government Department for Communities and Local Government (CLG) aim to make provision for new legislation in a Decentralisation and Localism Bill. This will be introduced around the end of this year, and subject to the will of Parliament, become law sometime in 2011.

The expertise, processes and special character of the IPC will be retained in the creation of a Major Infrastructure Unit as part of a revised CLG structure that includes the Planning Inspectorate. Recommendations on nationally significant infrastructure projects will be made to the relevant Secretary of State for final decisions.

In Scotland, all major energy developments are routed through the Scottish Government's Energy Consents Unit. These include:

- Power stations and onshore windfarms of 50 megawatts (MW) that are not wholly or mainly driven by water (such as coal/gas fired or nuclear plant)
- Offshore windfarms and generating stations in excess of 1MW, wholly or mainly driven by water (such as hydroelectric, wave or tidal generating stations)
- Overhead power lines and associated infrastructure, as well as large gas and oil pipelines.

Applications below these thresholds are made to the relevant local planning authority.

In June 2009, the Scottish Government published the Second National Planning Framework for Scotland (NPF2), which sets out Scotland's strategy for long-term development over the next 20 to 25 years. Under The Town and Country Planning (Hierarchy of Developments) (Scotland) Regulations 2009, which came into force in April 2009, new planning applications have been divided into a three-tier hierarchy – "national" "major" and "local" developments – each with its own procedures proportionate to that tier. National developments are those identified in NPF2 as being developments of national strategic importance and include new non-nuclear baseload capacity at Scotland's power station sites and electricity grid reinforcements.

Under the Framework, the Scottish Government considers that new generating plant should be sited adjacent to existing thermal power stations, where it can make use of existing supporting infrastructure.

The Scottish Government is considering mechanisms that could be put in place through its consenting powers to ensure that carbon capture and storage technology is installed at new and existing baseload stations as soon as possible, with the aim of decarbonising the electricity generation sector by 2030.

NFP2 recognises a need to increase the capacity of parts of the transmission system, especially to connect new windfarm developments in remote areas. It also stresses that, given the long lead-in time for electricity transmission projects, this work must be taken forward soon.

The Scottish Government is proposing to designate a number of reinforcement projects as national developments, including the Beaulay-Denny overhead line project, from North to Central Scotland, increased north-south transfer capability in Central Scotland, a new South-West Scotland transmission line and strengthening the Scotland-England interconnectors.

Since August 2009, all applications for National and Major developments must undertake a statutory pre-application consultation period as laid down in the Town and Country Planning (Development Planning) (Scotland) Regulations 2008.

We have a long track record of pre-application public consultation with stakeholders in respect of our developments but the 2008 Regulations formalise this approach.



■ *Glenlee Power Station Control Room – the nerve centre of the Galloway Hydro-electric Scheme*

## ScottishPower's Approach

Development activities create jobs and support the economy, but potentially negative impacts, such as construction traffic, noise, visual impact and potential damage to habitats and ecosystems, must be fully assessed and mitigation measures put in place where appropriate.

We work hard to maintain the trust of communities through a responsible approach in the planning, development and operation of our assets. We consult extensively with our stakeholders when planning new developments, ensuring that consideration has been given to landscape and ecological issues and the needs of local communities and businesses.

When we are planning a new development, we make a point of telling as many people as possible about our plans and listening to the views of community groups, wildlife, heritage organisations and businesses. Consultation is a very important part of the planning process for new developments and the feedback we receive helps to ensure these new developments are acceptable to the community and are built responsibly.

Many of our assets, such as pylons, are on land owned by other people, so it is important that we have effective policies in place to ensure we can maintain the safety and integrity of our plant, while respecting the needs of landowners and local communities.

### Our approach to infrastructure development includes:

- Careful site selection – as long as sites meet our technical and regulatory license criteria, we will favour sites that cause the least impact on people, wildlife, ecology and heritage
- Ensuring all developments respect the environment and landscape where they are situated
- Consulting with communities, local authorities, landowners, wildlife and heritage organisations to ensure we avoid areas of significant ecological or heritage value
- When refurbishing the electricity network, utilising improved design to make improvements, such as reducing the number of pylons, re-siting pylons that are especially intrusive, or diverting or undergrounding short sections of line to preserve areas of scenic beauty
- Concealing substations in some locations through special housings or screening
- Providing habitat management and enhancement programmes.

We are also working to reduce the impact of our network operations in certain areas of outstanding natural beauty, including undergrounding sections of overhead lines. For some projects we install cables using a plough, which creates significantly less disturbance to the landscape and ecology than conventional trench excavation.

In 2008 we introduced a new wooden pole for 132,000 volt overhead lines. It is more aesthetically pleasing than conventional steel towers and offers various technical and environmental benefits. The

poles are made from sustainable Nordic timber, which is accredited by the Forestry Stewardship Council, and strong enough to meet the resilience requirement of standard EN 50431. Another key advantage is that the poles are around 12m shorter than conventional towers, which means they can be easily screened with trees. We recognise that our installations can adversely affect the environment and community, and seek to minimise this through careful planning and construction, creating environmental improvements where opportunities arise.

## Infrastructure Investments

### Energy Networks

SP Energy Networks is planning investment of over £1 billion over five years in upgrading the electricity transmission grid to support new renewable energy projects.

During 2009 we completed connections to a further 500 MW of renewable energy. Many of these were in the Scottish Borders, including Crystal Rigg (200MW), Dunlaw (30MW), Toddleburn (30MW) and Longpark (38MW). We are also progressing site works and designs for a range of other proposed generation sites, including major windfarm projects such as the Whitelee extension, Arecleoch, Clyde and Harestanes. The additional renewable capacity from upgrades across our licensed areas in Scotland, England and Wales could be in excess of 5,000 MW.

During 2009 we contributed to strategic discussions with National Grid, Ofgem and the Department of Energy and Climate Change, via the Energy Networks Strategy Group, on the likely developments required to the Scottish, British and European grids to accommodate new renewable energy projects, including onshore and offshore wind and marine energy.

“SP Energy Networks is planning to invest more than £1 billion over five years to upgrade the electricity transmission grid to support new renewable projects.”

### Key areas of work in 2009 included:

#### Interconnector Upgrades

Following the completion of two new substations in South Lanarkshire in 2008 to upgrade the Anglo-Scottish interconnector to 2,800 MW, work continued in 2009 towards achieving a further incremental upgrade to 3,300 MW. This includes renewing conductors and substation work on the main East Coast line.

To further strengthen grid interconnections, we are planning to upgrade the East to West network across central Scotland. This is part of a strategic plan to support low carbon electricity generation and ensure that power from Scotland's wind and marine renewables can be delivered to population centres and exported to England and Wales. We are also strengthening the links between windfarms in South West Scotland and the interconnector with Northern Ireland.

## Supporting Renewables

### Beauly to Denny Line Upgrade

In January 2010, the Scottish Government approved the essential infrastructure upgrade to the high voltage transmission line between Beauly, near Inverness and Denny, near Falkirk.

The approval follows a lengthy planning process that started in 2005 and a Public Inquiry that began in 2007. ScottishPower has been granted planning permission to upgrade the 20km section of the 220km line that lies within the company's network area, from the north of Stirlingshire to Denny.

The project will be vital to ensuring the UK as a whole can benefit from renewable energy generated in Scotland. Around 90% of the new line will be in Scottish & Southern Energy's territory. The planned upgrade will involve replacing the existing 132 kV line with a 400 kV line, approximately 60% of which would be built on a route adjacent to the existing line. We are required to build a new substation near Denny, as part of the project.

A planning decision on Denny North substation is being considered separately from the main overhead line by Falkirk Council.

### South West Scotland

Investment in the South West Scotland Renewables Project, which consists of several overhead lines and substations, will facilitate connection of up to 10 windfarms providing potentially 800MW of new renewable energy.

Throughout the project we are working closely with various environmental agencies and key stakeholders to ensure disruption to the environment and local roads is minimised at all times. Currently in planning this scheme is expected to commence in 2010, taking up to three years to complete.

Following extensive consultation and environmental impact assessment, we submitted an application for Section 37 consent in early 2009, for a new transmission line that will run from Coylton to Dalmellington to New Cumnock in Ayrshire.

Two new substations and a new 132 kV line are being built to provide connections for 249MW of new renewable generation at Marks Hill and Arcleoch windfarms in south west Scotland, with

“The South West Scotland Renewables Project will facilitate the connection of up to 10 new windfarms, providing potentially 800MW of renewable energy.”

the Moyle interconnector, the power link between Scotland and Northern Ireland.

We are consulting with stakeholders and the public on proposals to construct a new 132kV overhead transmission line in Dumfries and Galloway. It would run between the proposed Blackcraig and Margree windfarms, 7km east of St Johns Town of Dalry, to the proposed Meiklehill substation, four kilometres north east of



Dalmellington in East Ayrshire. Following a review of the consultation responses, a route for the overhead line will be confirmed and a full Environmental Impact Assessment (EIA) will be undertaken to support the submission for Section 37 planning consent.

Plans for a 400/132kV substation at Bearholm, near Moffat, were approved in March 2009 by the Reporter for the Scottish Government's Directorate for Planning and Environmental Appeal, following a two-day planning hearing.

The substation will connect the proposed windfarm at Harestanes (Forest of Ae) to the existing electricity grid network.

The Reporter attached nine conditions on the consent that includes the submission of proposals to alleviate the risk of flooding at the substation.

The project will also require a short deviation of the existing cross border overhead line, the installation of 16km of underground cable linking the windfarm to the substation and a compensatory flood storage area. The compensatory storage area is located to the north of the substation adjacent to the Evan Water.

## East of Scotland and the Borders

Refurbishment and reinforcement work was completed over 41km of the 'P Route' overhead line, from Dalkeith to Galashiels, during 2009 to enable grid connection of two windfarms at the Dunlaw extension and Toddleburn.

The line was nearing the end of its useful life but the improvements to bring the P Route up to modern standards have negated the need for manufacturing and installing a new tower line and allowed the connection of 66MW of new wind capacity. Refurbishing the line saved using a further 1,787 tonnes of steel and 4,750 tonnes of concrete foundation that would have been involved in constructing a new line.

To accommodate the extension of Dunlaw windfarm, a new 132/33kV outdoor transmission substation was constructed, along with enabling works at Smeaton and Galashiels substations, including the installation of a new 275/132kV transformer. The 36MW potential generation from the new 12-turbine Toddleburn windfarm, was connected to the grid via 6km of 33kV cable, laid over very difficult terrain.

During the year we started consultations on



■ *Dun Law windfarm*

proposals to construct a new 132kV overhead line in the Scottish Borders, and Dumfries and Galloway. The development is needed to allow a connection to the electricity network for the proposed windfarm at Earlsbaugh.

We also started public consultations on proposals for a new 132kV steel lattice tower line between Gretna Substation and the proposed Ewe Hill windfarm substation, with a subsequent connection to the proposed Newfield windfarm substation. Following a review of the consultation responses, a route for the overhead line will be confirmed and a full Environmental Impact Assessment (EIA) will be undertaken to support our application for planning consent.

We completed a £7m project to connect the 48MW Aikengall Windfarm to the network in 2009. The connection involved laying 18km of new cables and installing a new substation at Old Belton that will help to strengthen the electricity network and secure supplies in the Dunbar area.

### **West of Scotland and Lanarkshire**

We have consulted over our proposals for a new 132kV heavy duty wood pole line to connect the proposed Harelaw Windfarm substation, 4km south of Neilston, East Renfrewshire, with the existing overhead line to the south-east of Neilston.

Following a review of the consultation responses, a route for the overhead line will be confirmed and a full Environmental Impact Assessment (EIA) will be undertaken to support our application for planning consent.

We are also carrying out a major project on existing electricity lines between Dalmally and Windyhill to further increase the potential for renewable energy development in Kintyre and to reinforce current electricity supplies along the route.

The £15 million project is taking place across some of the country's most mountainous terrain – more than 50 of the electricity towers across the route can only be accessed by helicopter. The full scope of the £15m project includes the construction of a new 275 kV substation, upgrade work at the existing Dalmally and Windyhill substations, and the installation of a fiberoptic earthwire for circuit protection and communication across 80 km of electricity lines. The project will also see the refurbishment of insulators and fittings on 35 pylon towers. Protected species along the route include Golden Eagles, Red Throated Divers, Merlins, nesting Ravens and Great Crested Newts. We are working closely with Scottish Natural Heritage, The Forestry Commission, Scottish Water and major land owners to ensure the work is managed with the greatest consideration for the environment.

### **South Lanarkshire**

In South Lanarkshire, a planning application is being progressed for Andershaw windfarm, approximately 4km south of Douglas. The windfarm is to be connected to the electricity network via the Coalburn substation by a new single circuit 132kV overhead line using wood pole structures.

Consultation was carried out in 2008 and we are now looking to submit an application to the Scottish Ministers for consent. An Environmental Statement will accompany the application. The proposed overhead line avoids directly crossing all statutory and non-statutory designated sites.

## Wales & North West England

We are working with the Welsh Assembly to increase the capacity in the electricity network on Anglesey. At present the electricity infrastructure on the island is running to almost full capacity, constraining new major business development. As a part of the project, we have installed a bespoke aluminium cabling bridge, attached to the A55 Anglesey causeway, to carry a cable over a seawater inlet. New reinforcement circuits will be constructed to allow businesses such as Parc Cybi development site to expand and potentially create more jobs.

A Section 37 application has been made for a new overhead line connection from Llandinam Windfarm to Welshpool Substation in Wales. The proposed 132kV single circuit wood pole overhead line will run eastwards for 35km from a new Llandinam Windfarm Substation being built as part of the proposed upgrade to the existing Llandinam Windfarm and will terminate at the existing Welshpool Substation. An Environmental Statement has been produced and pre-application consultations carried out as part of the application.

We seeking consent to build 6.5km of overhead line from the new Tirgwynt windfarm substation to connect into the existing 132kV Carno to Newtown overhead line near Pont y Sarn, west of Carno. A substation compound is also proposed at Pont y Sarn substation.

To connect into the new substation the existing 132kV overhead line will be diverted, resulting in the dismantling of approximately 640m of existing overhead line and the construction of approximately 614m of new overhead line on single wood pole supports. An appraisal of the potential effect of both the developments is included within an Environmental Statement. We submitted detailed proposals in April 2009 for a new 21km 132kV wooden pole overhead power

“We are working with the Welsh Assembly to increase the capacity in the electricity network on Anglesey.”

line between the Legacy substation in Wrexham and Oswestry substation.

The £13 million proposal will help guarantee the security of electricity supplies to 80,000 homes and business in the Wrexham, Shropshire and Powys areas. To inform the route of the proposed power line, we organised public meetings and received more than 120 enquiries from members of the public. The final route and design we put forward is the result of three years of detailed planning and consultation and took into consideration stakeholder feedback.

## North West England

Following a formal Wayleave Hearing, the Department for Energy and Climate Change granted us Section 37 to build a new 132kV line between Carrington and Lostock substations. The original planning application was submitted in 2003.

The project involves the construction of 20km of overhead line utilising 'Trident' wood poles and includes a 3km section of cable at the Carrington end. The £12 million proposal will help to secure electricity supplies for the significant increase in industrial load in the East Cheshire area.

## Urban Projects

During 2009 we continued early scoping studies to determine the electricity infrastructure requirements for the Clyde Gateway Project, which includes major infrastructure developments to support the Glasgow 2014 Commonwealth Games and future economic development in Glasgow's East End.

The Clyde Gateway Project is one of the most ambitious regeneration plans in Europe. Public sector investment of some £140 million has been committed in the short-term and a key aim of the project is to attract at least £1.5 billion of private investment, to regenerate an area that was once dependent on heavy industry. The Project will have a 20-year lifespan and aims to create 20,000 jobs, build 10,000 homes, a business technology park and major new roadways. It also seeks to improve public spaces and transport strategy.

We are preparing a bid to become the energy partner of choice to the Clyde Gateway Project. Based in Glasgow and with a solid track record of engineering and electricity infrastructure provision in the city dating back more than 100 years, we believe we have what it takes to deliver this massive project.

As part of the Clyde Gateway project we are already developing a localised Smart Grid demonstration project where 'next generation' technology is being developed and trials are already being carried out.

The Glasgow Smart Grid will be the largest in the UK. It will also allow households who generate their own electricity the ability to easily sell excess power back to the grid and help facilitate a network capable of supporting widespread use of electric vehicles. For more information in Smart Grids, see the [Climate Change](#) section of this review.

Meanwhile, in Edinburgh, we continued replacing the cables that connect to Dewar Place substation

and supply the city's main commercial centre. Due to the volume of traffic in Edinburgh's West End and the presence of the railway line between Haymarket and Waverley stations, part of the cabling is to be installed in an underground tunnel.

The entry point for the cables was Gardner's Crescent, where a community garden had become derelict. Working with the community, we will restore the garden as part of the project. We completed tunnelling during 2009, excavating through 220 metres of Edinburgh rock, more than 30 metres below ground level.

We also continued work to install a new substation at Roseburn, Edinburgh. The original substation and the surrounding area had been susceptible to flooding. The new substation is being constructed to a standard that will make it much less likely to be affected, should flooding occur in the future. The project will also reinforce the local electricity network helping to enhance security of supplies.

In Glasgow, we are conducting key reinforcements of the electricity grid to support growing demand and future development in the city's West End, and, further west, in the area between Erskine in Renfrewshire and Devol Moor, Inverclyde.

We are also conducting a £12m upgrade of underground cables in the area around the former Ravenscraig Steelworks in Lanarkshire.

We are committed to putting customers at the heart of our business and want to ensure all interested parties are given the opportunity to be involved and influence decisions.

To view presentations from our stakeholder events, or to leave feedback, please see our Energy Networks website:

[www.spenergynetworks.com](http://www.spenergynetworks.com)

## Energy Wholesale

There were a number of developments at Energy Wholesale sites during the year, including announcements of major new projects to build a new CCGT at Damhead Creek and repower Cockenzie Power Station as a CCGT.

For several years now there has also been a series of significant projects to extend the life of Longannet Power Station, in Fife. During the year work continued to progress several major projects, including Flue Gas Desulphurisation (FGD), Carbon Capture and Storage and front-end design studies for Selective Catalytic Reduction.

For further information on these projects, see the Climate Change and Air Quality & Acidification sections of this report. Enabling works were also completed during the year for a new Biomass to Energy plant, close to Longannet Power Station.



■ Longannet Power Station, Fife



■ Hatfield Moor Gas Storage Facility, Yorkshire

## New-build developments

### Hatfield Moor

Our proposal to expand our existing gas storage operation at Hatfield Moor has been given planning approval by Doncaster Metropolitan Borough Council. The project involves making use of a second empty natural gasfield to store natural gas supplies.

The depleted reservoir, at Hatfield West, is close to the existing Hatfield Moor reservoir. The Lindholme Compressor Site will import and export the additional gas via its existing NTS pipeline connection.

Planning consent was obtained on February 2, 2010 (just outside the reporting period) and we will now continue to prepare the other consents required to develop the gas storage facility.

## Cockenzie CCGT

Our plans to repower Cockenzie Power Station with efficient CCGT gas-fired units are to be heard at a public inquiry. The coal-fired station, opened in 1967, will close in its current format by December 31 2015.

The Scottish Government has identified continued power generation at Cockenzie as a priority National Development in its second National Planning Framework. The output of the proposed CCGT would be the same or less than the existing station, which has a capacity of 1,200MW. A 17km underground pipeline to connect the CCGT with the nearest national transmission pipeline at East Fortune is also part of project, but subject to a separate consent.

The CCGT would be built in line with the phased demolition of the existing coal station and the new plant would be fully operational by 2016. ScottishPower consulted with stakeholders over the proposals at the earliest opportunity so that any issues could be explored during the detailed Environmental Impact Assessment (EIA). Public exhibitions were held at the outset in June 2009 followed by a further three rounds of meetings and events. The project team also developed a project information sheet and three community newsletters to keep the public fully informed.

Extensive environmental studies have been undertaken, and consultations carried out with organisations such as Scottish Natural Heritage, Marine Scotland and SEPA to ensure the

environment is protected. An Environment Statement was submitted to support the applications that were submitted to the Scottish Government Energy Consents Unit in December 2009.

**Note:** Outside the reporting period, East Lothian Council, a statutory consultee, voted to reject the proposals at a special meeting on April 20 2010. A public inquiry will now be held before Scottish ministers make the final decision on the Section 36 Consent.

## Damhead Creek 2

We are seeking consent for a 1,000MW CCGT power station at Damhead Creek in Kent. The new £500million gas station will be adjacent to our existing 805MW CCGT at Kingsnorth Industrial Estate near Hoo.

The application under Section 36 of the Electricity Act was submitted to the Department of Energy and Climate Change (DECC) in summer 2009. The proposals will also ensure that carbon capture technology can be readily added to the plant.

As well as doubling the power output, Damhead Creek 2 will create 1,000 construction jobs and 50 permanent posts once the plant is operational. We estimate that about £27m will be spent annually on local services throughout the intended 25-year lifetime of Damhead Creek 2.

“Our proposals for a new 1000MW CCGT at Damhead Creek will create 1000 construction jobs and 50 permanent posts when the plant becomes operational.”

## Redundant Sites

### Townhill

The initial phase of demolition work was completed in January 2009 at the 5.9 hectare site of the former Townhill Power Station in Dunfermline, Fife. The station was decommissioned in 1985 but had previously seen service as a coal and gas-fired plant. We are engaging with Fife Council's emerging Dunfermline and East Fife Local Plan to consider the future strategy and allocation for the site with a view to its redevelopment. Under the Plan, issued for consultation by Fife Council in February 2010 (just outside our reporting period) the site's preferred uses include community leisure facilities, a hotel and possible housing.

### Methil

Preparatory work is due to begin in 2010 in advance of the demolition of Methil Power Station in Fife. Methil, a 60MW station powered by coal slurry, operated from 1965 until its closure in 2000. Fife Council, SEPA and Forth Ports are all involved in talks about the demolition work and what will happen to the site. The draft Kirkcaldy and Mid Fife Local Plan, issued for consultation by Fife Council in October 2008, has highlighted the former station as a key site within Levenmouth with potential for preferred redevelopment as a high-quality leisure or tourism development, such as a quality hotel.

### Inverkip

In July 2009, we submitted an application for outline planning permission for the redevelopment of the Inverkip Power Station site in Inverclyde. The application is for a mixed-use development of up to 780 homes and a possible mixture of small business units and shops.

The proposed development would be known as 'Brueacre Village'. The application took two years to prepare and follows and consultation with the local community, Inverclyde Council and other key stakeholders. The development would require the demolition of the site, which could commence in 2010. Inverkip was an oil-fired station, built in 1970, and had a total generating capacity of 2028 MW. However due to the soaring price of oil in the 1970s the station was never commercially operated except during 1984/85. The plant was kept as a strategic reserve until the late 1990s when it was mothballed.

### Kincardine

We have signed a five-year agreement with the Scottish Police Services Authority to allow the site of the former Kincardine Power Station to be used for large-scale police public order training. The 55-hectare site will be used for training by the Scottish Police College at Tulliallan, Fife, ahead of the London Olympics and Glasgow Commonwealth Games and for overspill car parking.

“We consult widely with stakeholder groups not only during the planning of new developments, but about the future of our decommissioned sites.”



“We aim to build strong and enduring relationships with all our stakeholders, to create a sense of belonging and trust.”

## 5 Sense of Belonging and Trust

We aim to build strong and enduring relationships with all our stakeholders, to create a sense of belonging and trust. This philosophy is especially pertinent to our people, those who work for and with us, and those who live in our local communities.

Working hard to create a sense of belonging and trust, through our policies and actions is important to us, not only because it is the right thing to do, but also because it creates lasting benefits for our business.

We work to engender employee loyalty, so that we can attract and retain the best people in an increasingly competitive employment market, where many industries, including our own, face imminent skills shortages. We also want to be a good corporate neighbour to the communities in which we operate by maintaining dialogue and trust and supporting projects that add value for local people and further the aims of social justice.

In this section we cover:

- Our People
- Our Communities.



## Our People

**Employee Profile and Diversity**

At the end of December 2009 we employed 8,670 people, of which 66.6% were men and 33.4% were women.

Our employee turnover rate for the year was 9.8% and our total payroll was £282.8 million.

We work to encourage diversity in our employee population and promote equal opportunities in the workplace for people from all walks of life, however, the power engineering sector still attracts more male than female entrants.

This is something we hope to address through our trained STEM Ambassadors, who work with schools to encourage more young people into Science, Technology, Engineering and Maths.

**Workforce by Category**

Total Workforce by Employee Category	Workforce at the End of the Period
Male	5,773.00
Managers	347.00
Advanced Degree Holders	1,092.00
Basic Degree Holders	1,203.00
Rest of Professionals	3,131.00
Female	2,807.00
Managers	122.00
Advanced Degree Holders	340.00
Basic Degree Holders	456.00
Rest of Professionals	1,070.00
<b>Total Workforce</b>	<b>8,670.00</b>

A professional, highly skilled and motivated workforce is critical to our on-going success, as our markets and the technologies deployed continue to evolve in the transition towards a low carbon economy.

It is important to us that we attract the best young talent for development and retain the high levels of knowledge and skill contributed by employees with long experience.

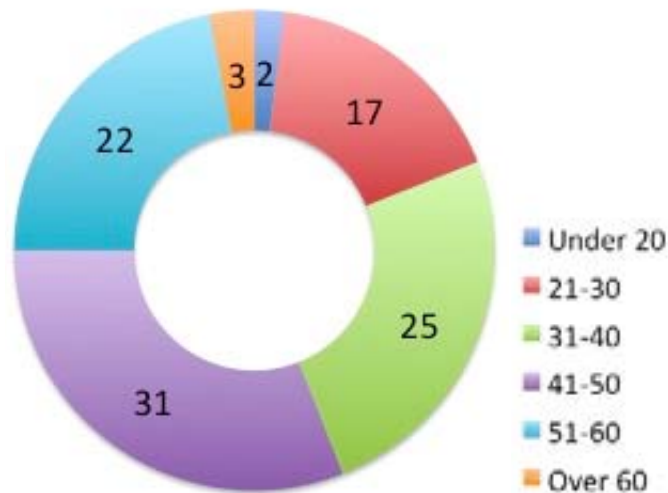
We achieve this by encouraging and rewarding success and providing an environment where employee safety and wellbeing, personal development, effective leadership and work-life balance are valued.

Our employees enjoy a range of benefits, including market competitive salaries and holidays, sick pay, pension, family friendly policies, childcare vouchers, occupational health, leisure facilities at larger sites and discount schemes.

We have a suite of Human Resources policies, covering a range of issues from Equal Pay and Opportunities to Alcohol and Drugs and Whistleblowing.

These can be accessed on our website:  
[www.scottishpowercsrannualreview.com/our\\_people.php](http://www.scottishpowercsrannualreview.com/our_people.php)  
 All of our policies and actions towards employees

### Workforce by Age %



are aimed at achieving leading-edge employment practices and comply fully with EU employment laws. This prohibits the use of child labour and forced labour.



## Health, Safety and Wellbeing

We continue to offer a comprehensive range of health services for employees at all levels, ranging from health surveillance of all employees on the occupational risk register, to voluntary Wellscreen health checks, physiotherapy and confidential counselling.

In 2009 we were successful in reducing the number of days per employee lost to sickness absence by 24% from 12.7 days to 9.6 days during the year.

During the last two years various measures have been introduced to support employee attendance, including “attendance academies” and rehabilitation programmes, often involving interventions such as physiotherapy, to help employees return to work after illness or injury.

We were also successful in retaining our Gold Award in Scotland’s Healthy Working Lives programme, which is presented by the Scottish Centre for Healthy Working Lives to organisations that demonstrate a long-term commitment to improving health and safety in the workplace.

The awards are given at three levels – Bronze, Silver and Gold – with a special award for mental health and wellbeing.

Our Wellbeing programme is managed by our Wellbeing Steering Group, which is led by Occupational Health & Safety and includes representatives from each of our businesses.

Key elements of the long-term programme include: healthy eating, supporting staff attendance, mental wellbeing, avoiding accidents in the workplace and health and the environment.

In 2009 we introduced a new quarterly magazine, Wellbeing Matters, which is designed to promote a healthy lifestyle and reinforce Wellbeing campaign topics, ranging from weight loss and smoking cessation, to advice on exercise and back health.



“We were successful in retaining our Gold Award in Scotland’s Healthy Working Lives programme.”

## Employee Benefits

### Pensions and Retirement

ScottishPower provides employee retirement benefits that are market competitive and in line with best practice standards. Over 75% of all employees contribute to our pension plans.

We have three pension schemes – two final salary schemes, which are closed to new entrants and the ScottishPower Stakeholder Plan pension scheme.

Our longer serving employees benefit from our two final salary pension schemes which have the security of building up valuable pension benefits with flexible, innovative options for topping up their Scheme benefits.

Our schemes are well funded and managed by effective, responsible trustee bodies committed to safeguarding these pension schemes for all members.

A summary of the features of our pension schemes is shown in the table below.

	Stakeholder Pension (defined contribution)	SP Pension Scheme (final salary)	ESPS Manweb Group Scheme (final salary)
Percentage of pensionable salary contributed by employer	6%	15%	20.3%
Percentage of pensionable salary contributed by employee	5%	5%	5.5%

ScottishPower contribute 6% of pensionable salaries to the pensions of Stakeholder Pension scheme members while the employee contributes 5% of their pensionable salary to the scheme.

Our Stakeholder Pension provides employees with an incentive to save for retirement with the company's support in an easy, flexible and tax efficient way. We reward continuing employee service with increases in the company's contributions at the milestones of five, 10 and 25 years' service. Our Stakeholder plan also includes life assurance cover.

“Our Wellbeing programme includes healthy eating, supporting staff attendance, mental well-being, avoiding accidents in the workplace and health and the environment.

ScottishPower supports employees preparing for retirement in many ways such as:

- Helping them understand the financial benefits payable from our pension schemes to enable them to make better Informed financial choices
- Clearly articulating the process from our administrators, issuing the first quotation six months in advance of the Member's Normal Pension Age, to requesting a quotation of retirement benefits from our administrator through to final benefit settlement
- Assistance with practical issues they may face in retirement by facilitating attendance at pre-retirement courses sponsored by third party providers.

We are currently piloting an in-house pre-retirement course tailored to our employees, processes and HR policies on retirement.

### **Pensions Communication**

We use a range of different approaches and media to communicate our pension arrangements, targeting support appropriately throughout the lifecycle of our employees – pre-employment, induction programmes, mid-career, lifestyle changes, leaving service, pre-retirement and post retirement.

We also offer a dedicated pensions helpline, 1:1 on site pension surgeries, annual pension scheme newsletters and a recently launched pensions website that all members can access. This allows employees and scheme members to access information on the financing and management of the schemes and enables employees to calculate estimates of pension benefits and access their benefit statements online. .

All pension plan members are provided with annual Benefit Statements, incorporating State benefit forecasts, plain English guides to all pension arrangements and access to Individual Financial Advice providers. We also provide our retired Employee Associations with bi-annual pension scheme updates.



“Currently, we are piloting an in-house pre-retirement course that’s tailored to our employees.”

During 2009 we held a series of roadshows and surgeries for staff, including presentations at employee team meetings, one-to-one surgeries and setting up stalls in canteens and staff breakout rooms.

This involved providing employees with information on the key benefits and the financing and management of the company's pension schemes, while independent financial advisers were available to offer more general advice.

We also held pensions forums in May and October at which retired staff associations could meet the pensions management team for an update on the schemes' funding and management.

### **Pension Scheme Management**

Falls on all the major world stock markets made 2009 a challenging year for all pension schemes.

However, our strategy to reduce equity weightings in the last five years with a focus on a liability-linked benchmark has reduced the impact of stock market falls on the overall funding position of the schemes.

The schemes currently have less than 50% of the assets invested in equities, the remainder being invested in Government and corporate bonds, cash, property and infrastructure funds.

### **ScottishPower Pension Scheme**

Asset values of the fund at 31st December 2009 were £2.2 billion, an increase of £308 million since the low point in world stock markets at the end of March 2009.

The scheme is currently going through its three-yearly Actuarial Valuation and the company and trustees are discussing future funding plans for the scheme.

“Our strategy to reduce equity weightings in the last five years has reduced the impact of stock market falls on the overall funding position of the schemes.”



### **Manweb Group Pension Scheme**

Asset values of the fund at the end of December 2009 were £753 million, an increase of £138 million since the low point in world stock markets in March 2009.

The scheme is currently going through its three-yearly Actuarial Valuation and the company and trustees are discussing future funding plans for the scheme.

## Employee Share Plans

We offer two employee share plans to enable employees to benefit from the successful performance of the IBERDROLA Group.

### Share Incentive Plan

The company deducts money from employees' pre-tax salary and uses it to purchase shares, which are held in trust on the employee's behalf.

This scheme also includes the bonus of free matching shares for every partnership share acquired, up to a monthly maximum. Dividends are paid on these shares twice a year.

### Sharesave Scheme

The company also operates a Sharesave Scheme (Save As You Earn), whereby employees pay into a savings scheme from their after tax pay for a period of three or five years. They receive a guaranteed tax-free bonus at the end of the savings contract and the option to buy shares at a set price, or cash in their savings.

A total of 66% of employees are paying into the Share Incentive Plan and 44% of employees are paying into Sharesave. The average monthly contribution for the Share Incentive Plan is £91 per employee, while the average monthly saving under Sharesave in 2009 was £118 per employee.

During autumn 2009 we announced that a revised Share Incentive Plan would be made available to all employees early in 2010. The new plan will be structured in a similar way to previous Share Incentive Plans.

Furthermore, a new enhanced matching facility will be included for the first 12 months. This enhanced matching facility will see the company matching shares purchased by employees on a 2 for 1 basis, up to the first £50 invested.

This new plan delivers on a commitment made by IBERDROLA to ensure that all ScottishPower employees would continue to have access to employee Share Incentive Plans comparable to those that were available before the integration with IBEDROLA.

## Other Employee Benefits

Employees can benefit from subsidised gym facilities at a number of our larger sites and through our Your Choices benefits scheme employees have access to discounted gym membership at a range of external health and fitness clubs.

## Your Choices

Your Choices is a range of voluntary benefits for employees from arrangements between the company and other providers of goods and services that include:

- Retail vouchers
- Holiday discounts
- Personal financial advice
- Gym membership.

## General Motors

Through our partnership with General Motors, employees and their immediate families can purchase a brand new car at a generous discount.

The GM Partners Programme runs special offers throughout the year, with preferential deals on all of GM's UK brands, such as Vauxhall, Saab and Chevrolet.

The programme also includes savings on factory-fitted options and delivery charges and better than market deals on finance and insurance.

## Give As You Earn

We operate a Give As You Earn scheme, enabling employees to make charitable donations in a tax efficient manner and in 2008 received a Payroll Giving Quality Mark Silver Award, which recognised our efforts to encourage a culture of employee giving in the workplace.

The Silver Award is given to companies who engage between 5% and 9% of employees in their payroll giving schemes. In 2009, 605 employees contributed just over £53,000 to good causes via Give As You Earn.

“During 2009, 605 employees contributed just over £53,000 to good causes through the payroll giving scheme.”



## Other Key Employee Issues

### Restructuring and Redeployment

We developed a policy in consultation with the trade unions in 2008, to accommodate, where possible, the re-training and redeployment of employees who find their roles displaced as a result of restructures, or changes in market conditions.

During 2009 we continued a re-deployment programme that commenced in 2008.

### International Mobility Plan

Following the development last year of a Global Mobility Policy, we have seen an increase in employee exchanges between companies across the group, particularly between the UK, Spain and Energy East in the US.

The Policy provides a framework for the identification and placement of professional development opportunities across the wider IBERDROLA group.

### Discrimination

We are committed to equal opportunities for all, irrespective of age, colour, disability, ethnic or national origin, marital status, nationality, race, religion, belief, sex, sexual orientation, or other considerations not justified in law, which are irrelevant to the performance of the job.

We operate an Equal Opportunities policy, which covers all employees and the treatment of agency staff, contractors, consultants or any other person working for or on behalf of ScottishPower.

We view discrimination as serious misconduct, which is subject to action under the Disciplinary Procedure. Employment Tribunal proceedings for

discrimination can be taken against both employers and employees and in some cases, an individual employee may be found personally liable to compensate the person bringing the claim of unlawful discrimination.

The number of Employment Tribunal cases relating to alleged discrimination during 2009 was six.

Of these, two were withdrawn, two were settled by the company and two are on-going.

Two internal claims were made relating to harassment, one of which resulted in an employee undergoing disciplinary action and another in which investigations continue.

### Employee engagement and communication

We continued our commitment to employee communication through a number of channels including senior management site visits and roadshows, an employee intranet – in which each business director has an e-zine channel – email updates, webcasts, team briefings and the award-winning monthly newspaper, ScottishPower News.

We launched a new Wellbeing magazine during the year, which covers occupational and personal health issues and is available in both hard copy and e-zine formats.

Towards the end of 2009 ScottishPower News was replaced with a new, Group-wide magazine, Connection, which is available in English and Spanish editions. We also launched a new pensions website during the year.

## Freedom of Association and employee consultation

We continue to recognise four Trade Unions (Unison, Unite, T&G, and Prospect). 55% of employees are Trade Union members.

We have a company consultation and negotiation framework and agreement, which acts as a vehicle for discussion, consultation, and negotiation on a range of topics including business performance, strategy, proposals for organisational change and matters of concern or interest to the company, the Trade Unions and employees.

The framework was revised in 2008 to include representation for employees on personal contracts, who previously had not been represented in formal consultation arrangements.

### Company Consultative & Negotiating Council

The Company Consultative & Negotiating Council (CCNC) is the main formal consultation body in ScottishPower. Its membership includes:

- Senior management representatives from each business
- Trade Union full time officers and lay representatives
- Non collective employee representatives

Meeting twice a year, subjects discussed by the CCNC include:

- Company and business performance
- Company strategy
- Challenges and opportunities facing the company
- Proposals for, and implementation of, organisational change
- Health and safety, pensions or any other relevant company policies and practices and the process for communicating these policies and practices
- Learning and development including training, employee development frameworks
- Matters where consultation of employee representatives is required by law.

Two sub groups of the CCNC have been established specifically to deal with matters relating to pensions and employment policy.

“The Company Consultative & Negotiating Council is the main formal consultation body in ScottishPower.”

The Company Health & Safety Council (CHSC) has similar membership to the CCNC but includes Health and Safety Managers from each of the businesses. It meets twice yearly in May and November and covers a range of health and safety issues, including:

- Developing safe systems of work and safety procedures
- Analysing accidents and causes of notifiable occupational diseases
- Reviewing risk assessments
- Examining safety audit reports
- Considering reports submitted by safety representatives
- Monitoring the effectiveness of health and safety training
- Considering reports and factual information provided by HSE inspectors and Environmental Health Officers
- Monitoring and reviewing the adequacy of health and safety communication and publicity within the workplace
- Monitoring health and safety arrangements and revising them when necessary.

There were no incidents or disputes during 2009 relating to the rights of employees to union representation.



## Learning and Development

We are committed to the development of our people at all levels within the organisation, to ensure strong leadership and succession planning, senior management and team leader competency and the highest standards of skills across all disciplines.

### Leadership Development Review

Last year we commissioned organisational capability specialists YSC to conduct a business leadership review, as a precursor to developing a new leadership model for our most senior executives.

Subsequently, we launched a new Group Leadership Model, Energising Leaders, providing a common understanding of the required behaviours across the IBERDROLA Group.

We evaluated around 80 of our most senior executives against this model with a view to understanding our current capabilities, strengths and areas for improvement, both at an individual and organisational level. Participants now have personal development plans in place, based on the feedback provided.



### Global Energy MBA

Currently we are sponsoring five managers to participate in the Global Energy MBA at Warwick University. This unique MBA is based on the internationally-respected Warwick Business School's Business MBA, but focused specifically on the energy sector.

## People Leader Programme

Our People Leader Programme is designed to support our people as they begin their management careers. The programme consists of four modules:

1. **Your Role As A Leader** – covering leadership models, coaching, feedback and personal awareness
2. **Leading Health & Safety** – covering management responsibilities with regard to health and safety
3. **Performance Management** – covering the Performance Management policy and process and the soft skills needed to conduct face-to-face interventions
4. **Dealing With People Situations** – covering the interpretation and application of HR policies and procedures, such as the grievance, disciplinary and absenteeism policies.

During 2009 we continued to assess our organisational capability and development needs. Following an Employee Development Review, we intend to put more focus on senior management below executive level during 2010, through a range of activities, including coaching.

## Graduates and Apprentices

During 2009 we recruited 10 graduates and seven apprentices across our businesses.

Our graduate development programme lasts for two years and aims to deliver professional development, self-awareness and experience in the graduate's area of choice. Lasting for three or four years depending on the trade selected, our modern apprenticeship programmes combine a blend of academic and technical skills training with work based learning and assessment.

### National Skills Academy

The Power Academy was established in 2004, as part of the Government's National Skills Academy programme, bringing together power companies and universities, to address the shortfall in engineering expertise in the electrical power industry.

In summer 2009 we employed a total eight undergraduate scholars on internships, who contributed a real value in terms of output during

their eight-week placements. The undergraduates are assigned projects at the start of their placement, which they carry out under the guidance of a mentor from the company.

The final close down usually involves some kind of presentation to a group of engineers and managers. The students receive payment and gain valuable experience of working in a diverse engineering company – some scholars continue their work outwith the summer period on an unpaid basis, as part of their degree course.

The Power Academy benefits the company by ensuring we have access to fresh talent from the top engineering universities in the UK and enhanced opportunities to promote sector attractiveness.

ScottishPower is a founder and contributing board member of the National Skills Academy for Power, which, by capturing and sharing industry knowledge, aims to address future long-term skills shortages.

## Ongoing Development

We have a large requirement for technical training to ensure our employees have the highest levels of competency required for the safe operation and maintenance of the electricity infrastructure.

Our two purpose built training centres at Dealain House in Cumbernauld and Hoylake, near Liverpool deliver dozens of courses both to ScottishPower employees and to the external marketplace.

These centres of excellence cover training in areas such as high voltage operations, low voltage operations, cable jointing, roads and streetworks, wiring, live line working and public lighting. The syllabus is revised continually in response to emerging regulations to ensure the appropriate training can be delivered before changes in regulations come into force.

The training centres provide skills training for staff, our external contractors and also offer a range of courses for the external marketplace.

We remain committed to employee development across the business to ensure high standards of quality and safety.

In 2009 we provided a total of 3,968 internal training events with over 15,000 delegates taking part, in subjects ranging from risk assessment to customer service.

Employees also have access to hundreds of online courses through our e-learning service.

During 2009 we delivered training on the new Group business management system, SAP, to around 4,000 people between July and December.

	2009	2008
Average no of training days per employee	3.4	3.5
2 number of degrees at training events	16,621	15,951
Number of hours spent on online courses	5,293	5,669
Number of online courses	363	Not reported
Number of training days	79,119	31,730
Number of training events	3,968	3,363

## Community Based Development

During 2009, 294 employees participated in Community Based Development, community programmes that support employee development.

Community Based Development provides opportunities for employees to engage with a cross section of the communities we serve, helping the company understand the diverse needs of its customers. Examples include gaining Board experience and enhancing leadership skills as a volunteer on the Arts and Business Board Bank and acting as development advisers for the Prince's Trust. For further information on community based development, see the [Our Communities](#) section of this report.



■ Funding from our Green Energy Trust enabled the Timespan museum and arts centre in Helmsdale, Sutherland, to install solar panels.

“Building and maintaining the trust of our communities has been one of our key priorities over many years.”

## Our Communities

The strong and enduring relationships we have with our local communities is a source of great pride to us – and one that we believe is essential to the economic development of our business.

Building and maintaining the trust of our communities has been one of our key priorities over many years. We have a long track record of supporting communities not only financially, but also through the skills, generosity and enthusiasm of our people.

We have a significant presence in many communities – power stations and substations, offices and overhead lines, along with meters in several million homes and businesses.

Our people are an integral part of the community too, with networks staff out and about urban and rural areas, working on substations, powerlines and cables to keep the lights on, and meter readers, sales staff and community liaison officers visiting people at their homes.

We aim to conduct our activities responsibly, in a way that is considerate to local communities – minimising disturbance to people’s daily lives wherever we can.

At the heart of building and maintaining the trust of our communities is open and honest communication. That means being willing to listen to community stakeholders, encouraging two-way communication and doing what we say we’ll do.

Like many companies, we support our local communities through investment in sponsorships and charitable giving that benefits society or the environment. As our presence in a community is usually long-term, we favour enduring partnerships for our community investment programmes, which allow us to deliver tangible and lasting benefits over time.

## Community Consultation

We consult closely with communities early on in our development process for new projects, upgrades to power lines, new power stations or major developments at any of our sites, such as our plans for a new CCGT plant to replace Cockenzie Power Station.

This ensures that local people have an opportunity to comment on and input into our proposals before we submit an application for planning consent – and that any issues they make us aware of can be fully explored during the environmental impact assessment.

Longannet and Cockenzie power stations, which are major sites located close to communities, have Local Liaison Committees that meet regularly to discuss topics of mutual interest.

For further information on our approach to infrastructure development, please see the [Respect for the Environment](#) section of this report.







■ Primary children on the Tongland Tour and, below, the Cruachan Visitor Centre and the exhibition centre at Longannet

## Visitor Centres

We have visitor centres at several of our generating sites – all of which have been refurbished recently to a high standard.

Cruachan Power Station's Visitor Centre, near Oban, is open all year round and welcomes over 60,000 visitors annually. Visitors can browse exhibitions on electricity and travel into the heart of Ben Cruachan to see the pumped storage station's turbine hall.

Visitor Centres at the Galloway Hydros and Longannet Power Station are open only to organised groups, by appointment.

At Tongland Power Station in Galloway, the Tongland Tour caters for local schools and youth groups. Our experienced guides give children an introduction to staying safe near water and electricity. At Longannet, the Visitor Centre includes displays on electricity generation and the environment – including Clean Coal and the emissions abatement technologies in use.



## Overall Community Investment

We use the London Benchmarking Group model to evaluate our community support activities. The model allows companies to report community contributions and achievements by measuring the total impact on communities rather than financial contributions alone.

The LBG is the standard for community reporting adopted by almost 120 companies in the UK.

Our input to the model is reviewed by the London Benchmarking Group annually to ensure we are applying its principles correctly and consistently.

During 2009, ScottishPower contributed £3.6 million in community support activity, of which £1.9 million was contributed to registered charitable organisations.

The total incorporated £53,911 categorised as charitable gifts, £3.43 million, categorised as community investment and £50,137 categorised as commercial initiatives, given in cash, through staff time and in-kind donations.

## Analysis of Community Investment

Our community investment strategy reflects our culture and the main areas of investment are:

- Education and employability
- Public safety
- Environment
- Energy Efficiency
- Community and the arts

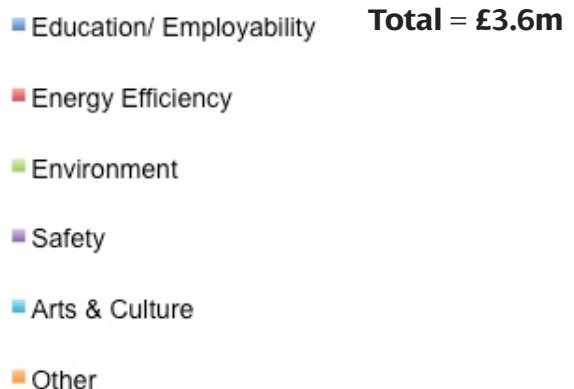
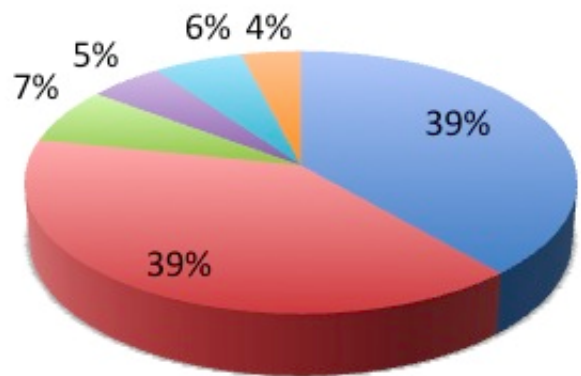
The majority of our community investment programmes are directed at improving the lives and prospects of young people.

## Community Programmes

### Education and Employability

We have used our skills and experience since 1996 to provide employability training for disadvantaged young people in our local communities. Over that time, our endeavours have helped more than 18,600 young people.

In 2009, a total of 2094 young people benefited from our school based, community based and work based employability programmes.



## School-Based Programmes

Our school-based programmes are designed to help pupils prepare for the world of work by gaining a better understanding of the skills required.

Our support concentrates on schools in deprived areas and links in with Government education strategy.

In 2009 we continued our engagement with schools delivering our structured programmes – School to Work, Looking Forward to Work and Young Managers – to 40 schools in our local communities, with 505 pupils participating in 35 initiatives under the three programmes.

In addition a further 1,478 young people were supported through other employability based engagement activities including career and industry awareness sessions, and recruitment and interview simulations

Once again the success of the School to Work programme was recognised in Business in the Community's annual awards when our Big Tick in the Merrill Lynch Raising Achievement in Young People category was re-accredited.

## Community Based Programmes

Our community-based programmes are designed to help young people build their skills in preparation for work, realise their potential and help them set goals for their futures.

Our main community based projects were provided through our role as a Delivery Partner for The Prince's Trust Team programme, which we continued to facilitate throughout the first quarter of 2009, delivering three Prince's Trust Team programmes, involving 44 young people.

Since we became involved with the Prince's Trust Team programme, we have supported 2,946 young people.

We have now re-focused our partnership with the Trust to support the Princes Trust Development Awards – providing grants to help young people access further education, training and employment opportunities.

The awards look to remove any financial barriers that may prevent disadvantaged young people from getting a job, receiving the training they need or entering further education.

This may include the payment of fees, or having certain materials or equipment to make them eligible for a role.

In 2009 10 ScottishPower staff members were trained to carry out one-to-one assessments with the young people.

## Work Based Programmes

Our work-based programmes are designed to provide young people with vocational training, high quality work placements and nationally recognised qualifications.

During 2009, 67 young people benefited from our Skillseeker programme.

Despite the economic climate and rising unemployment rate throughout 2009, the programme's success rate has been maintained over the last four years, with 81% of participants moving into sustainable employment.

To date more than 1,400 school leavers have benefited from the programme



■ We supported Do-Be Ltd in a learning project using MP4 technology in North Lanarkshire

### Other Support for Young People

We continued our sponsorship of Outward Bound to allow schools in disadvantaged areas to access their facilities to develop their pupils' self-esteem and confidence.

In partnership with North Lanarkshire Council we supported a pilot project – Do-Be Ltd – to provide two secondary schools and 12 primary schools in North Lanarkshire with MP4 players as an engaging, fun way of learning that is relevant to young people and aligned to their use of technology in everyday life.

We sponsored the Prince's Scottish Youth Business Trust's bi-annual conference in 2009 – in its 20th anniversary year. The purpose of the event was to recognise the hundreds of people who give their time to help young entrepreneurs supported by the Trust as they establish and develop their business ideas into productive, sustainable businesses.

For the last three years we have sponsored a Business Challenge in North East Wales. This event is co-ordinated by the 14-19 Network, which gives pupils the opportunity to develop work related skills including entrepreneurship.

Heats were held between schools from the education authorities of Wrexham, Flintshire and Denbighshire, with the winners going forward to the final, which took place on 3rd February 2010. A total of 240 pupils participated in the event.

## Prince's Seeing is Believing Programme

In 2008 ScottishPower Learning sponsored an event which brought Welsh business leaders together with young people from deprived communities, as part of the Prince's Seeing is Believing programme, which is run by Business in the Community, in Wales.

The visit, led by Guy Jefferson, Customer & Performance Director, ScottishPower Energy Networks, explored the barriers to work that young people face in some of Flintshire's most disadvantaged areas.

The Prince's Seeing is Believing programme invites senior business leaders to see for themselves how business can play a role in tackling the UK's most pressing social issues in some of the most deprived inner cities and rural areas. As a result of the Flintshire event, each of the business leaders who attended, pledged ongoing support to schools and educational establishments in the area.

In 2009 Guy Jefferson was chosen to be the Prince's Ambassador for Wales and we have continued to support schools and educational establishments as part of the Seeing is Believing programme, where our skills and resources can make a real difference.



■ *Some of the young people involved with Seeing is Believing*

In 2009 we continued to support a school that educates young people who suffer from social phobias that create issues with mainstream education, including social anxiety disorder and selective mutism.

One of the projects we sponsored was a drama initiative using an outreach worker to deliver sessions with the young people to help develop their confidence and self-esteem, culminating in the production of a DVD.

The project was successful in breaking down barriers, building trust and boosting the pupils' confidence and willingness to contribute to a team project.

## IBERDROLA Foundation Scholarships

In January 2010, just outside the reporting period, the Fundación IBERDROLA (IBERDROLA Foundation) launched a new Masters and PhD scholarship programme.

Up to 40 scholarships in the fields of energy and the environment will be awarded to British and Spanish postgraduates in the first round of the programme.

The Fundación IBERDROLA will pay students' registration fees and provide them with a monthly living allowance of €1,200 or £1,200, depending on their place of study.

Subjects covered by the scholarships include: renewable energies, sustainable energy systems, environment and biodiversity, clean coal technologies, emissions management and carbon capture, energy storage, electric vehicles and smart grids.

The objective of the programme is to contribute to excellence in training and research within the energy sector, with particular focus on renewable energies, safeguarding the environment, combating climate change and energy efficiency.

## Staff Development in the Community

For the last few years we have combined our commitments to communities with the personal development of our people by providing community based development (CBD) opportunities.

These opportunities enhance employees' personal and professional development and give them the feel good factor of making a positive contribution to society.

During 2009, 294 employees participated in Community Based Development. Through these innovative schemes, employees can expect to develop:

- Leadership skills through Business in the Community's Partners in Leadership Programme
- Team-working and communication skills through team community projects
- Presentation skills through our Young Managers Programme
- Interpersonal skills as a Prince's Trust Development Awards Assessor

Community Based Development provides opportunities for employees to engage with a cross section of the communities we serve. Raising staff awareness in turn helps the company to understand the diverse needs of its customers. It also provides opportunities for teams from across ScottishPower to engage in community activities. Working on a community project can help develop teamwork and can act as an opportunity for cross-departmental working.

## Arts & Business Board Bank

During the year we continued to contribute to the Arts & Business Board Bank, which provides business volunteers to serve as non-executive directors on the boards of arts organisations.

Arts & Business keeps a confidential register of business volunteers who wish to serve on the board of an arts organisation or museum. Volunteers receive a thorough induction and are then matched to organisations seeking support.

Good governance is vital to the success of arts organisations and museums, enabling them to realise their creative potential.

An effective board will offer a range of skills to the organisation, including expertise in finance, marketing and planning. The Board Bank is available free to any professional, not-for-profit arts organisation or museum. During 2009 eight staff gained board experience

and shared their skills through the Arts & Business Board Bank.

## Pilotlight Scotland

We continued to support Pilotlight Scotland, which matches teams of four senior business people from separate businesses with small charities and social enterprises, in order to help them build capacity and sustainability.

The relationship is based on a team approach to coaching and is facilitated and supported by a dedicated Pilotlight project manager.

In 2009 five senior managers were involved in Pilotlight with the following charities – Deaf Connections, Glasgow; Orbiston Neighbourhood Centre, Bellshill; Lanarkshire Association for Mental Health; Theatre Nemo, Glasgow and Gizzabreak, Glasgow.

## STEM Ambassadors

Twenty five employees, including graduates and apprentices, volunteered for the STEM Ambassador programme during the year and undertook training provided by STEMNet at our training centres in Cumbernauld and Hoylake.

The STEM Ambassadors programme is a UK-wide initiative, involving thousands of people who work with schools on a voluntary basis to share their enthusiasm for their career and encourage more school children into Science, Technology, Engineering and Maths subjects at school.

## Community Volunteering

In 2009 our staff continued to support local projects, as part of our commitment to local groups that require additional support, and sometime specialist skills that staff members can provide.

It also offers an opportunity for Team based development, with staff gaining new skills in their working practises as they support the projects.

**Here are a few examples of projects supported by our people during 2009:**

### RSPB Skinflats Nature Reserve Tree Surgery

Located on the shores of the Forth, north of Grangemouth and just south of the Kincardine Bridge, the RSPB reserve at Skinflats consists of inter-tidal mud and salt marsh, making it an ideal site for migrating, ground nesting birds.

However, with large, over-grown trees lining the perimeter casting “invisible shadows” over the nesting areas, there was a requirement for pollarding (cutting back to a stump but keeping the tree alive and allowing shoots to come through).

A team of eight staff and contractors from our Energy Networks tree felling team worked together over a three-day period to carry out the essential work.



■ *The team from Energy Networks who took part in the tree felling work at the RSPB's Skinflats reserve*

“A team of eight staff and contractors worked together over a three-day period to carry out the essential tree-felling work.”



“Under the tuition of willow artist Geoff Forrest, 30 staff created a unique design of three large willow arches.”

### Carmunnock Willow Sculpture Project

Carmunnock is a Conservation Village, located three miles south of Glasgow City Centre.

To the west of the village there is a six hectare site of willow coppice, which is used primarily for dog-walking by local people, though the footpath network is poorly defined and often very boggy underfoot.

Following consultation with local people and other stakeholders on the future use and appearance of this valued but under-used area, Glasgow Greenspace offered a proposal to create a family-orientated Sculpture Park and Trail through the willow areas.

The aim was to create an improved network of cycle and walkways to facilitate access and create willow sculptures, to make the area attractive to visitors.

This would in turn promote healthy activities and create a new recreational space that would link in with the 2014 Commonwealth Games Mountain Bike Trail on nearby Cathkin Braes.

In early December 2009 the project’s first sculpture was created by staff from our offices in Cathcart. Under the tuition of willow artist Geoff

Forrest, 30 staff created a unique design of three large willow arches set on the side of a hill in the coppice area.

This initial demonstration sculpture was intended to attract the attention of local people and stimulate interest in the proposed Sculpture Park

We are planning further involvement in this project in the year ahead, involving five local schools working with artists and our staff to create animal sculptures.





## Sixth Form Room Refurbished

A group of employees from Energy Retail spent three days renovating the sixth form Common Room at Ruabon School, Wrexham.

The team painted and decorated the room and put in a kitchen area, including a kettle and microwave, donated by local companies, plus tables and chairs recovered from a refurbishment at our Hoylake Training Centre.

We offer learning support at the school, mentoring of pupils and teachers and help and advice with health and safety.

## Give and Gain Day

As part of Business in the Community's Give and Gain, a team of our Networks staff, based at Mold depot, participated in transforming an outdoor space at Sandycroft Primary School by building a seating area and planters that the younger pupils could use to grow their own plants and vegetables. A number of local companies supported the event, each developing a different part of the playground.



■ Networks staff from our Mold Depot transformed the grounds at Sandycroft Primary school, Flintshire

## Public Safety

Our Energy Networks business runs an award-winning public safety programme, much of which is dedicated to school children, to make them aware of the dangers of electricity at primary school age.

PowerWise, our safety education initiative, runs a pioneering safety education programme teaching primary school children aged four to eleven years the potential dangers of electricity in the home and outdoor environment.

The programme is taught by qualified school teachers and is linked to the school curriculum in our operating areas across Scotland, North-West England and Wales.

In 2009, 494 teaching days were utilised, reaching 73,104 pupils from 434 schools.

More than 130 extra schools and 15,000

additional pupils benefited from the programme, compared with 2008.

PowerWise resource packs, full of lesson plans, activities and all the resources needed for primary schools to conduct their own electricity safety lesson are provided free of charge to schools which have received the classroom education programme and on request via the website. In 2009, 454 resource packs were distributed following requests.

The PowerWise website – [www.powerwise.org.uk](http://www.powerwise.org.uk) – is packed with lesson plans, interactive games and electricity information that both teachers and parents can use. Last year it was extended to include resources for secondary school children.

There were almost 59,354 hits to the website in 2009 – an increase of more than 17,000 on the previous year.



## Safety Education Centres

We support two innovative, dedicated safety education centres operated by local public authorities within ScottishPower's network areas – DangerPoint in North Wales and the Risk Factory in Edinburgh.

The safety education centres are designed to educate and raise awareness of accidents, injury prevention and personal safety, in a safe and controlled environment.

They provide realistic settings, specifically designed for children and young people, as a background for safety education through hands on experiences in the home, on the roads, at the farm or in the country, and on building sites. During the 2009, 6,582 children visited DangerPoint and 6,298 visited The Risk Factory.

## Crucial Crew

Crucial Crew is a national experiential learning programme where children take part in a range of fast-paced scenarios designed to raise awareness of the dangers of electricity and other common hazards.

Last year Energy Networks presented key safety messages to 15,460 children at nine Crucial Crew events across the UK. The number of children attending these events was up by around 50% on 2008.

## Industrial safety

As well as schools, Energy Networks provides electrical safety information and educational events to the public, including high-risk industrial sectors, such as farming, agriculture and leisure; and contractor associations and trade bodies.

In 2009, we sent out 136 "e-shots", by email, to key target groups, to provide information and link in with the safety section of our website. Our staff also visited many recreational sites in our home territories, such as fisheries, camp sites and marinas, where a potential risk had been identified from overhead lines and/or ScottishPower equipment, to speak to people and distribute safety literature.

Longannet Power Station, ScotAsh and some key contractors continued to sponsor a vehicle used by Community Police in West Fife. The venture has been highly praised by Fife Constabulary and enables Community Police officers to instigate campaigns aimed at promoting public safety and security.

"Energy Networks presented key safety messages to 15,460 children at nine Crucial Crew events across the UK – an increase of 50% compared with 2008."



■ Children from Johnston and Castledykes Primary Schools, Kirkcudbright, enjoy a day out at the Tongland Tour

## Tongland Tour

Our Visitor Centre at Tongland Power Station – part of the Galloway Hydro-electric Scheme – has a strong focus on water safety. The centre, which was refurbished in 2009, offers tours to school groups by appointment.

Children learn about staying safe near the scheme's dams and reservoirs and electrical safety, along with the history of the scheme, all about renewable energy and wildlife – such as the lifecycle of a salmon – and have the opportunity to see the fish ladder and walk across the dam.

The Galloway Hydros produced a safety DVD, which has been distributed to local schools, and also has a safety factsheet, which is downloadable from the Energy Wholesale website: [www.spenergywholesale.com](http://www.spenergywholesale.com)

For more details about the scheme's work with schools: [www.visithydros@scottishpower.com](mailto:www.visithydros@scottishpower.com)



■ Pupils are shown safely across Tongland Dam

## Environmental Sponsorships

We sponsored The Prince of Wales's May Day Business Summit on Climate Change in Edinburgh on 1 May 2009 for the second consecutive year. Over 100 companies attended the event at Our Dynamic Earth in Edinburgh – which was linked by satellite to 1,500 business leaders at 12 events across the UK.

Those attending were asked to make “carbon pledges” – promising to measure their carbon footprint, set targets to reduce it and encourage customers and employees to take steps to reduce CO<sub>2</sub> emissions.

We also sponsored the inaugural Scottish Green Awards in partnership with Business Insider and the Daily Record. The Awards were established to promote Scotland as a country that encourages sustainability, tackles climate change and is committed to improving energy efficiency. Awards in 12 categories were presented to individuals and businesses who have shown initiative in the reduction of their overall carbon and environmental footprint, which in turn has shown that this has had a positive effect on their surroundings and or positive commercial impact on their business.

## Green Energy Trust

The ScottishPower Green Energy Trust – funded through our domestic green energy tariffs – supports small scale renewable energy projects at community level.

During 2009, the Trust approved grant funding of £185,589 to 15 projects, throughout Britain. Since the formation of the Trust 11 years ago, it has awarded funding of £1,131,810 to 123 projects.

The projects funded, many of them in schools, help educate people about the benefits of renewable energy while saving them money on fuel bills. For more information on the ScottishPower Green Energy Trust, visit their website at [www.scottishpowergreentrust.co.uk](http://www.scottishpowergreentrust.co.uk)

### Green Energy Trust projects funded during the year include:

- A £25,000 grant to The Windmill Christian Centre, Arbroath, to help fund the installation of a solar array to power the centre's hot water needs
- An £11,748 grant to help fund solar panels at the Timespan Museum and Arts Centre in Helmsdale
- A grant of £6,382 for the Assynt Foundation. The environmental charity will use the money to help fund a woodchip boiler at Glencanisp Lodge, an old hunting lodge which is to be used as a training centre
- A grant of £11,850 towards the installation of a wind turbine at eco school, Pilling St John's in Lancashire.

## Fuel Poverty Conferences

As part of our continuing commitment to alleviating fuel poverty, we once again sponsored Energy Action Scotland's annual conference.

The conference, held in Dunblane in November, and opened by Scotland's Housing and Communities Minister Alex Neil, explored the theme of Overcoming Barriers to Ending Fuel Poverty. During the year we also sponsored National Energy Action's House of Commons Reception, an event at which key stakeholders are briefed about the work NEA is doing to help reduce fuel poverty and promote energy efficiency solutions.

## Arts & Culture Sponsorships

### Celtic Connections

We continued to be the principal sponsor of Celtic Connections, a traditional music festival which now has over 100,000 attendances per annum over 18 days during January.

Fourteen venues across Glasgow hosted the series of 71 free and 205 paid for events in 2009. Celtic Connections celebrates traditional music on a massive scale – in 2009 more than 1,500 musicians and singers from all over the world performed at the festival.

The Celtic Connections Education Programme was also a huge success, with 15,000 school children – many experiencing live music for the first time – benefiting from a series of eight school concerts at the Glasgow Royal Concert Hall. Forty free workshops also took place in schools.

Celtic Connections 2009 celebrated the 250th anniversary of Robert Burns' birth and launched Homecoming Scotland with a diverse programme of events ranging from a 12-hour Burns Song Marathon, a Jamaican Burns Night and a suite of new compositions by some of today's leading contemporary composers and musicians. Our sponsorship of Celtic Connections started as a three-year agreement, which in 2009 was extended to include 2010.

### ScottishPower Pipe Band

We have supported the world-renowned ScottishPower Pipe band for 20 years and continued our sponsorship in 2009.

Led by Pipe Major Chris Armstrong and Leading Drummer Barry Wilson, the band consists of some of the world's top award-winning pipers and drummers and are currently ranked 7th in the World. In 2009 Barry Wilson retained the World Solo Drumming title for the third year running.

The ScottishPower Pipe Band has played for Her Majesty the Queen at Braemar and for the Pope at St Peter's in Rome. They have made various recordings and high profile appearances all over the world, including the official opening of the Scottish Parliament and a Royal Variety Performance.

For further information, visit the band's website at <http://www.scottishpowerpipeband.com>



■ *The ScottishPower Pipe Band played an active role in the Celtic Connections traditional music festival*

“We have supported the world-renowned ScottishPower Pipe band for 20 years and continued our sponsorship in 2009.”

## Citizen's Theatre

We sponsored the Christmas production of Cinderella at the Citizen's Theatre in Glasgow.

## Tramway Outside Art Project

Resident artists at the Tramway Theatre are working with young people across three sites to teach them various artforms, including macro photography, story telling, performance art and new media, along with and storyboarding based around found objects. All art forms, along with parkour – training to overcome physical and mental obstacles undertaken by “free runners” – link the young people with their environment.

The scheme provides diversionary activities for youngsters aged 10 to 19. Artists turn up for the free sessions, run by Tramway, at two parks in Glasgow on Tuesdays, Wednesdays and Thursdays to teach kids art forms, parkour, skateboarding and BMX biking. More than 2,500 kids have been involved in the project.

Children are also taught about the environment and have turned rubbish from the parks into art. The project works jointly with the Community Services Group youth services. As a result of this joint working, a regular youth services group in Pollokshields has increased its average weekly attendance from 35 to 65 young people.



■ Youths demonstrate their free running skills, acquired at the Tramway Theatre's Outside Art project.



## Edinburgh Book Festival

For several years now we have sponsored the Edinburgh Book Festival, which brings together 800 authors, philosophers, poets and entertainers from 40 countries in an extravaganza of books, lectures, workshops, children's events and live music.

The 2009 Book Festival, held over 17 days, attracted around 220,000 visitors. This year we introduced the ScottishPower Story Swap shop, which encouraged children to recycle their old books by swapping them with classmates.

Hundreds of pupils across Scotland took part in the Story Swap Shop, which raised money for environmental projects by charging 50p per book traded.

The competition was organised by ScottishPower, in partnership with the Edinburgh International Book Festival and Friends of the Earth Scotland. It was won by the Community School of Auchterarder, who swapped more 250 books and raised more than £120. Pupils were treated to an exclusive story time with 'Mr Gum' author Andy Stanton as a reward.



■ *Children from the Community School of Auchterarder won our story swap competition*

## **National Theatre of Scotland – Transform**

Transform, a major National Theatre of Scotland initiative, which takes theatre to the heart of a school and its community is another of our enduring sponsorships.

Over a period of up to 20 weeks, a team of artists and theatre workers involve pupils, teachers, ancillary staff and local community groups in the creation of a piece of theatre.

The development, rehearsal and creation of the performance, together with the creative learning opportunities along the way, helps to boost pupils' self-confidence, builds team spirit and widens their knowledge of performance arts.

Between 2006 and 2008 our sponsorship allowed NTS to create Transforms in Ardrossan, Methil, Doon Valley, Dunbar, Arran, East Kilbride, Port Glasgow and Kilmarnock.

Three Transforms – in Dumfries, Barrhead and Dunfermline – were included in the 2008-09 programme and over the next year, and four more Transforms took place during 2009 in Caithness, Orkney, Moray and Glasgow, with Aberdeen scheduled for 2010.

Building on our partnership with the National Theatre of Scotland, we engaged directly with three schools involved in Transform in 2009 – Barrhead High School, Kirkwall Grammar and Kilmarnock Academy, delivering our employability skills programme Looking Forward to Work to 47, S4 pupils.

## **Portsoy Boat Festival**

ScottishPower sponsored the Portsoy Boat Festival as part of the Homecoming Scotland celebrations in 2009.

This annual festival is created and managed by volunteers and sets out to provide a weekend that encapsulates the maritime and rural culture and heritage of the region by combining traditional boats and sailing, music, song and dance, craft demonstrations, food and drink and activities for the young and old. The event attracted more than 20,000 visitors in 2009.

## **Arts & Business Awards**

At the Arts & Business Scotland Awards on 1st October 2009, we were commended for our sponsorship of the Citizen's Theatre and awarded the Sustainability Award for our sponsorship of National Theatre of Scotland and the Edinburgh International Book Festival.

“ScottishPower sponsored the Portsoy Boat Festival as part of the Homecoming Scotland celebrations in 2009.”

## Your Champions and Your Heroes

The “Your Champions” and “Your Heroes” Awards programmes, are run in partnership between ScottishPower and Trinity Mirror Newspapers in North Wales, Cheshire and Southport.

The award schemes recognise members of the local communities for the contributions they have made and there were many inspirational community champions in 2009, including:

- **Alison Dixon** from South Cheshire who has dedicated her life to warning young people about the dangers of alcohol abuse following the tragic death of her son, aged 26 because of a drink problem.
- **Comfort Parcels for Troops from Halton.** This group sends packages of essential items to troops on the Afghan front line and is the only MOD approved parcel scheme in the UK.
- **Ellesmere Port and Neston Special Olympics team** – more than 17 of their athletes triumphed at the 2009 Great Britain National Summer Games in Leicester.
- **Wallasey School** who raised over £17,000 for local hospice, Claire House. They walked across England (87 miles), canoed in Scotland (74 miles), cycled across Wales (168 miles) and ran across Ireland (133 miles).
- 18-year-old trainee youth worker, **Shaun Edwards** from Wrexham, who has spent the last five years fundraising, despite having cerebral palsy.



■ Pupils from Wallasey High won Champion School of the Year. They are pictured with Carl Wood, Publishing Director, Trinity Mirror, Cheshire, Head Teacher Phil Duffy, Director Energy Retail, ScottishPower, Raymond Jack and snooker star Willie Thorne

The overall Champion of Champions was **Carol Highton** from Runcorn, whose son Brian Shields, committed suicide because of his debt to a loan shark.

Carol set up the Brian Shields Trust to warn people about the dangers of turning to loan sharks and to put people facing debt in touch with agencies that can help them. Her charity also offers a 24-hour helpline.

Carol campaigned hard against violent and illegal loan sharks and is involved in a loan shark busting national taskforce. She has received other awards, including one from the Trading Standards Institute and a Best magazine Bravest Women award.

The Your Champions Awards have been running in Chester for 22 years and in north Wales for 12 years, while Your Heroes has been running in Southport for four years.



■ *Champion of Champions Carol Highton is pictured with Raymond Jack, Director Energy Retail, ScottishPower, Carl Wood, Publishing director, Cheshire, Trinity Mirror and snooker player, Willie Thorne.*



“Health and safety remains a significant priority for our business and we constantly seek ways to improve.”

– **Doug Wilson, Health & Safety Director**



## 6 Safety and Reliability

Protecting our staff, contractors and the general public from harm associated with our activities is a top priority for ScottishPower.

Although the health and safety record of the UK electricity sector has improved greatly in the last 20 years, we can never be complacent – health and safety remains a significant priority for our business and we constantly seek ways to improve.

The Health and Safety Executive’s report on accident statistics for 2008/09 remind us why. Even in these days of heightened safety awareness 180 people in the UK were fatally injured at work last year and 27,594 suffered major injuries.

During the same period, 29.3 million working days were lost due to work-related ill health and injuries sustained in the workplace. The cost in terms of human suffering is enormous, to the individuals concerned – and their families. Injury and illness also result in significant financial costs to employers and society, so well managed risk and a positive health and safety culture have a direct impact on economic performance.

At ScottishPower our health and safety performance continues to improve, with fewer accidents in 2009 than at any time in our history. This has been achieved through training and managing risk to ensure safe working conditions and by people focused programmes, such as behavioural safety. But we continue to broaden our view. Recognising that safety and reliability go hand in hand, we have also been focusing on asset management and process safety, to ensure our plant and our people continue to deliver a safe and reliable service to the millions of homes and businesses we serve.

**Doug Wilson, Health & Safety Director**

## Governance & Management

### Health and Safety Governance

Our Health and Safety Policy is approved by the Chief Executive and complemented by local policies at site level. We measure our performance annually against our company Health and Safety Standards that are designed to promote world-class performance.

An executive Health and Safety Governance Committee provides executive level focus and drive, and we have a Health and Safety Council, comprising union appointed safety representatives, trade union officials, employee representatives and managers.

Most sites and key departments have health, safety and environment committees, which meet regularly.

Health and safety is integrated into our management processes, including business planning. It is embedded in our business risk and control framework and is one of the key criteria used to measure managers' performance.

### Health and Safety Management

A central safety department and occupational health team provides specialist support to the businesses on matters ranging from occupational hygiene to public safety.

During 2009 we achieved the major milestone of having all health and safety management systems in the company certified to the Occupational Health and Safety Assurance Standard – OHSAS 18001.

We are also installing a new Health and Safety Management IT System, Cintellate, which will improve the sharing of data across the business.

We continually review our working practices and processes to ensure they remain in line with best practice and to assess new risks that may arise from new areas of business.

### Equipment and Training

Specific equipment requirements are defined within a raft of appropriate policies and procedures, all of which are supported by a suitable and sufficient assessment of risk and from the measures required for the control of such risks.

Contractors and Sub contractors are expected to comply with ScottishPower requirements and in doing so carry out risk assessments to identify control measures required.

Safety training is given high priority, especially for staff requiring 'authorisation' for technical, safety-critical roles.

Our two technical training centres offer a wide range of safety training, including NEBOSH (The National Examination Board in Occupational Safety and Health) and IOSH (Institution of Safety and Health) courses.

They also provide training in leadership, behavioural safety, First Aid and refresher courses on risk assessment.

Site-level courses cover a wide range of subjects from working at height and working in confined spaces to electrical safety and defensive driving. Training records are maintained by ScottishPower Development and recalls are made as necessary. This is particularly the case with safety critical training requirements.



## Employee Involvement

We have a network of health and safety committees throughout the company and operate a safety suggestion scheme in several of our businesses to encourage employee contribution and feedback. We have union appointed safety representatives in all businesses, as well as workplace safety co-ordinators.

We communicate on health and safety via a range of channels, from conferences and magazines, to team talks, posters, plasma screens, email and the intranet.

## External Engagement

We have good working relationships with the national health and safety authorities and many of our health and safety practitioners participate in professional bodies including the Electricity Industry Occupational Health Advisory Group, British Occupational Hygiene Society, Institution of Occupational Safety and Health, Royal Society for the Prevention of Accidents and the Society of Occupational Medicine.

The Occupational Health Department sponsors the British Occupational Health Research Foundation, which undertakes research to derive evidence-based guidance for occupational health practice.

## Occupational Health

Our employees have access to a range of occupational health services, delivered by medical advisers, occupational hygienists and occupational health nurses.

Our occupational health department provides a comprehensive service, including health surveillance, treatment, preventative medicine through health campaigns, voluntary well-screen health checks, and measures such as counselling, and the promotion of wellbeing. We also offer physiotherapy, rehabilitation and support for employees returning to work after illness or injury. Larger sites have well-equipped fitness centres and health and wellbeing are promoted through a Wellbeing Programme, with campaigns on a wide range of issues.

### Health Monitoring

Work related ill-health can emerge over many years, so we maintain an occupational health risk register, which holds details of all employees who

### Sickness Absence

During 2009 we achieved a 24.4% reduction in sickness absence levels, which dropped from an average number of 12.7 sick days per employee in 2008, to 9.6 in 2009.

We have made concerted efforts to tackle sickness absence over the last two years, establishing "attendance academies", supporting employees in returning to work after illness and running targeted wellbeing campaigns.

	Measure	2008 data	2009 data
Number of sickness days per person	Days per person	12.7	9.6
Days lost due to sickness	%	4.8	3.5

Occupational Health monitoring – Number of employees

2008 data	2009 data
1684	1708

may be exposed to work-related health hazards such as noise, vibration and chemical substances. We monitor all employees on the register, to enable us to detect any signs of ill health at a very early stage.

In recent years the incidence of diseases such as noise-induced deafness and Hand Arm Vibration Syndrome has reduced considerably due to health and safety control measures. In 2009 we conducted health monitoring of 1,708 employees on the occupational health risk register.

### First Aid Arrangements

We have more than 500 trained First Aiders in the company and each year we hold an internal First Aid conference and competition.

Our 2009 event was held in March at our Dealain House Training Centre and included a presentation from an A & E consultant.



## Health and Safety Standards

Each of our businesses is assessed annually against the company's Health and Safety Standards. The results are used to drive management plans and objectives within the businesses and the reports have provided a strong impetus for continuous improvement in health and safety performance.

Specific health and safety auditing and inspections are undertaken regularly by the businesses, as part of their health and safety management systems.

In 2009 we embarked on a programme of work to replace the existing standards with DNV's International Safety Rating System, 8th edition (ISRS 8). DNV is global, independent foundation that specialises in services for managing risk to people, property and the environment.

ISRS 8 involves a detailed assessment of a business unit's performance against 15 key processes, as follows:

### The 15 key processes considered by ISRS 8:

- Leadership
- Planning and administration
- Risk evaluation
- Human resources
- Compliance assurance
- Project management
- Training and competence
- Communication and promotion
- Risk control
- Asset management
- Contractor management and purchasing
- Emergency preparedness
- Learning from events
- Risk monitoring
- Results and review.

The ISRS 8th edition includes specific controls needed for managing process related events and can also be used to assess other elements of sustainability and social responsibility, such as quality and environmental performance.

Also included are updates to reflect changes in international standards including OHSAS 18001:2007, ISO 9001:2008 and Global Reporting Initiative 2006. Roll-out of ISRS 8 should be completed across our businesses by the end of 2010

## Safety Standards Performance 2009

**Health and Safety Standards: SP Average/Mean Scores**

	Unit	2008	2009
<b>SP Average/mean scores</b>			
01 Leadership: SP Average	Number	82.0	89.6
Yearly movement: Leadership	%	No Value	7.6
02 Employee Involvement SP Average	Number	72.0	82.9
Yearly movement: Employee Involvement	%	No Value	10.9
04 Training and Competence: SP Average	Number	75.6	84.9
Yearly movement: Training & Competence	%	No Value	9.3
05 Occupational Health: SP Average	Number	72.6	80.5
Yearly movement: OH	%	No Value	7.9
Average for all 12 standards	Number	75.3	83.0
Yearly movement on all 12 standards	%	No Value	7.7

**Health and Safety Standards Best Practice Scores**

	2008	2009
1 Leadership	85.4	91.5
2 Employee Involvement	77.1	85.2
3 Risk Management	80.1	93.1
4 Training & Competence	80.2	81.1
5 Occupational Health	79.3	84.8
6 Information & Communication	88.5	88.3
7 Rules & Procedures	80.2	85.8
8 Contractor and Supplier Safety	87.9	95.8
9 Accident Investigation & Analysis	79.3	85.6
10 Change Management	58.0	81.0
11 Public Safety & Stakeholder Relationships	81.9	93.1
12 Audit and Review	91.1	99.1

## Accidents &amp; Injuries

**Lost Time Accident Rate**

	Measure	2008 data	2009 data
No. Lost Time Accidents	Number	29	12
LTA rate per 100 employees	Number	0.31	0.13

**Health & Safety Incidents Reported under RIDDOR**

	2008	2009
Dangerous Occurrences	14	11
Enforcement Actions	0	0
Fatal Injuries	0	0
Reportable Injuries	18	12
Work Related Diseases	3	0

**Accidents, Injuries and Dangerous Occurrences**

During 2009 the number of Lost Time Accidents fell by 59% from 29 in 2008, to 12, helping us to exceed our safety target. The number of reportable injuries also dropped from 18 to 12.

While the number of dangerous occurrences fell during the year, one very serious incident occurred at Rye House Power Station in January 2009 when three contractors were badly scalded while removing a valve for maintenance.

A panel of inquiry was formed immediately after the incident to establish the root cause and a number of recommendations have been implemented. ScottishPower made a video outlining what happened in the run-up to the incident to share lessons learned with staff, contractors and industry colleagues.

The video can be accessed online at:  
[www.scottishpower.com/Ryehouse\\_Video/default.htm](http://www.scottishpower.com/Ryehouse_Video/default.htm)

There were no fatalities among our workforce and contractors during 2009, however, there were three fatalities involving members of the public making contact with our powerlines.

In July 2009 an HIAB crane operator was lifting a container off a flat bed lorry in a farmyard, when the boom came into contact with an overhead line.

In November 2009 two construction workers were working at the back of a tipper lorry. As the driver raised the tipper, it came into contact with an 11 kV line. The two operators at the back were killed as they were in contact with the vehicle.

In both cases the overhead lines were above the minimum height criteria and warning signage was correctly posted.

There were no fines or prosecutions relating to health and safety in 2009.

## Safety Programmes

### Behavioural Safety

Behavioural safety programmes have played a significant role in helping to reduce the number of accidents and injuries within the business and maintaining high levels of safety awareness among employees and contractors.

These programmes involve trained staff conducting safety tours, or behavioural safety audits, where they engage with employees in a positive way about the safety aspects of the job they are doing.

Larger sites use STOP risk assessments (the Safety Training Observation Program) using a pro forma checklist, while smaller locations use similar behavioural auditing techniques, but in a less formal way.

### Process Safety

Process safety involves a strong focus on asset management to ensure plant safety and to protect its operational integrity.

ScottishPower renewed its focus on process safety in 2007, following the failure of a coal conveyor at Longannet Power Station, which thankfully, caused no injuries.

In the industry globally during 2009 plant failures have caused multiple fatalities. An explosion at a new gas power station in Middletown, Connecticut in the US killed five people, while 75 power workers died when a turbine exploded at a major hydro-electric power station in Eastern Siberia.

Correct installation, operation and maintenance of plant is essential to high standards of safety. Our Energy Networks and Energy Wholesale businesses have achieved PAS55 accreditation for

asset management and new systems are being installed, to provide engineering managers with a much better and clearer overview of the plant and its condition.

To ensure effective process safety, the business has adopted a set of principles, endorsed by senior management, which will also apply to contractors and suppliers.

These govern the identification of safety critical assets and the installation, operation, maintenance and decommissioning of plant in accordance with specific standards, specifications, practices and procedures.

The principles also include employee authorisation, decision-making, competency, and responsibility and outline processes for the investigation of incidents and near misses, the sharing of information, as well as the operation of risk control, change control and performance measurement frameworks.

During the year the Energy Networks business made a DVD on process safety to communicate its key concepts to employees.

The Energy Wholesale business launched a number of process safety workstreams and a set of operational standards during 2009, while the Metering Services business called a Safety Stand Down for all meter installation staff in June.

The theme of the event, entitled: "It's in Your Hands", was electrical safety, with a particular emphasis on polarity. It was attended by more than 400 staff and included video, interactive live theatre drama, a computer simulated graphics training video. All meter fixing operatives were given a new polarity testing kit.

## Public Safety

We continued to conduct public safety campaigns during the year with a particular focus on children, through our award winning PowerWise programme.

This consists of health and safety education in schools, supported by visits to custom built safety centres in Flintshire, North Wales and The Risk Factory in Edinburgh.

In addition, our Galloway Hydro-electric scheme hosts safety based visits for schools at its visitor centre at Tongland Power Station in Kirkcudbright (by appointment only).

They have a safety DVD, focusing on water safety and in 2009 developed a factsheet on water and electrical safety.

At Galloway and Lanark Hydro-electric Schemes countryside rangers sponsored by ScottishPower play an important role in both nature

conservation and public safety.

Although children are our main focus, we also run safety campaigns aimed at others, such as construction and agricultural workers and sporting groups, such as anglers.

Copper theft from electricity substations is a continuing issue for Energy Networks, as it not only endangers those involved in the act of theft, but also compromises public safety and can result in outages.

The company has been working with police to minimise these incidents, including the use of SmartWater forensic coding and a media information campaign in areas that thieves have targeted.

For further information on Public Safety, please see the [Sense of Belonging and Trust](#) section of this report.



■ Dumfries and Galloway Council countryside ranger Andrew Blunsum, co-sponsored by the Galloway Hydros, helps to ensure the safety of members of the public when visiting scenic Loch Ken – a popular watersport destination

## Plant Reliability & Energy Security

The security and integrity of electricity supplies depends on the reliable operation of power stations and the transmission and distribution networks.

ScottishPower's Energy Wholesale and Energy Networks businesses operate asset management systems, to ensure plant is operated and maintained properly and that the necessary investments are made to maintain the reliability and integrity of equipment and optimise its lifespan.

During 2009 we achieved an average plant availability of 78% for our power stations.

The reliability of our networks are measured by recording customer interruptions (CI) and Customer Minutes Lost (CML). These figures are compiled from April to March and submitted to Ofgem to include in its annual Electricity Distribution Quality of Service Report.

ScottishPower operates two distribution systems – Energy Networks North, covering south and central Scotland and Energy Networks South, covering Merseyside, Cheshire and north Wales.

	Energy Networks South	Energy Networks North
Customer Minutes Lost	54.8	48.5
Customer Interruptions	49.3	55.7

Further information on network performance can be found in the [Customer Focus](#) section of this report.

## Emergencies and Business Continuity

Our power stations, networks and retail businesses all have clearly defined emergency response plans to ensure the safety of staff and members of the public and provide continuity of service.

These plans cover weather-related, technical and environmental emergencies and are tested on a regular basis through exercises. From time to time these exercises include members of the emergency services.

“Our Energy Wholesale and Energy Networks businesses operate asset management systems, to ensure plant is operated and maintained properly to maintain its integrity and reliability.”

## Energy Security

The long-term security of energy supplies is included in our strategy, with the aim of providing secure, diverse, sustainable and affordable energy for our customers.

Our approach includes investing in lower-carbon generation, investing in networks and working with customers to improve the energy efficiency of their homes.

### Investing in Generation

Our investment strategy is geared towards replacing and refurbishing generation plant and reducing our emissions footprint, to build a

diverse portfolio that meets the needs of our customers.

During the year we submitted an application for Section 36 consent to build a new Combined Cycle Gas Turbine (CCGT) power station to replace our existing coal-fired power station at Cockerzie, East Lothian, which will close before the end of 2015.

We also submitted an application for Section 36 consent to the Department of Energy and Climate Change (DECC) to build a new 1,000 MW CCGT adjacent to our existing gas power station at Damhead Creek on the Hoo Peninsula, Kent.



■ *ScottishPower has submitted an application to replace Cockerzie's coal-fired station with a modern CCGT plant*

**Gas**

We operate three large combined cycle gas turbine (CCGT) power stations in England. We are examining further opportunities for CCGT developments, including Damhead Creek 2, and extending our gas storage capabilities at Hatfield Moor.

**Wind & Marine Renewables**

Our sister company, ScottishPower Renewables continues a programme of major investment in onshore and offshore wind, tidal and wave energy projects.

The programme aims to secure 1,800 MW of new renewable energy by 2012 and includes the extension and repowering of existing windfarms.

**Nuclear**

Through our parent company, IBERDROLA, we have formed a joint venture with GDF SUEZ and Scottish & Southern Energy to pursue the development of new nuclear power stations in the UK.

The partnership will also seek to purchase divested assets, if appropriate. Nuclear energy has played a pivotal role in meeting base-load

energy demand for decades and in future will ensure the UK can produce sufficient low-carbon electricity to meet customer demand.

**Hydro & Biomass**

During the year we completed enabling works for a new biomass to energy plant at our Longannet Power Station in Fife and we continue to use biomass fuels mixed with coal at Longannet and Cockerzie.

We continue to invest in renewable energy production at our hydro-electric schemes in Galloway and Lanark and our pumped storage power station at Cruachan.

**Clean Coal**

Clean coal will have an important role to play in maintaining security of supply and keeping electricity prices affordable.

We are currently working to extend the operational life of Longannet Power Station, finalising a bid to build the UK's first commercial scale Carbon Capture and Storage project and by investing in clean coal technologies, including Flue Gas Desulphurisation, Boosted Overfire Air and Selective Catalytic Reduction.



“We are currently working to extend the operational life of Longannet Power Station by investing in clean coal technology.”



## Fuel Supplies

**Coal:** The installation of environmental technologies at our coal stations means that we are now able to use a greater proportion of Scottish coal. Two coal deals have been signed, with Scottish Coal and ATH Resources, for the next three years.

**Gas:** We have contracts in place with Statoil for Norwegian gas and our parent, IBERDROLA, has re-gasification capacity at the Isle of Grain Liquefied Natural Gas importation terminal in Kent. In addition, we operate a gas storage facility at Hatfield Moor, near Doncaster. We plan to develop a second reservoir to the west of our existing site to expand our gas storage capability.

## Investing in Networks

Investments in new network technologies help improve the security and reliability of electricity supplies in rural areas served by overhead line networks. We are investing hundreds of millions of pounds each year in our transmission and distribution networks to support the development of new renewable energy projects, such as windfarms, which will enable energy to be transported from generation sites to population centres.

We are also investing heavily in infrastructure that will support development in towns and cities across central and southern Scotland and Cheshire, Merseyside and North Wales.

During the year we implemented TP22, which offers improved fault location on the low voltage network, particularly hard to trace intermittent faults. Prior to using this equipment, locating faults of this type could take weeks, during which time the customer continued to suffer multiple interruptions to their electricity supply. TP22 has speeded up fault location and repair times and has also reduced the number of excavations involved in trying to pinpoint this type of fault.

Significant investment will be required in the regeneration of Eastern Glasgow, particularly in the run-up to the Glasgow 2014 Commonwealth Games.

## Working with Customers

Energy efficiency has a significant role to play in managing energy demand, reducing CO<sub>2</sub> emissions and helping customers to reduce their energy bills.

We have a strong track record in customer energy efficiency programmes providing energy efficiency advice and measures. Much of this activity is delivered through designated Warm Zones, Community Energy Partnerships and alliances with social housing providers.

“Implementation of TP22 equipment during the year has helped to speed up fault location on our low voltage network, particularly for hard to trace intermittent faults.”



ScottishPower supplies electricity and gas to 5.2 million customers throughout Britain and provides electricity connections to 3.47 million customers, ranking us amongst the UK's "big six" energy suppliers.

## 7 Customer Focus

ScottishPower supplies electricity and gas to 5.2 million customers throughout Britain and provides electricity connections to 3.47 million customers, ranking us amongst the UK's "big six" energy suppliers.

During 2009 energy prices and fuel poverty continued to be the most significant customer issues for energy companies. We recognise that 2009 was a difficult year for many customers, with the UK feeling the effects of the worst global recession since the 1930s and many people struggling to pay their household bills.

The recession was compounded by a severe winter – the coldest on record for 31 years – which saw temperatures plunge as low as minus 27°C and the heaviest snow fall in the UK for 18 years. During this exceptionally cold spell, energy use increased in households throughout Britain, but especially in Scotland, which was hit the hardest, with sub-zero temperatures and sustained snow and ice.

Energy companies have been criticised in some sections of the media for making large profits, while retail energy prices remain at among their highest levels for the past five years.

However, pricing is complex. As we explain in the Economic Results section of this report, an increasing proportion of household energy bills is paying for the delivery of energy to homes – such as investment in networks and mandatory government programmes to reduce carbon. Transmission charges levied by National Grid on generators vary according to the distance between the source of power and main centre of demand – meaning that Scottish companies pay more.

## Customer Profile

**Number of customers:** 5,248,804

**Electricity customers:** 3,242,111

**Gas customers:** 2,006,693

Our customer profile at 31st December 2009 includes domestic, industrial and SME customers, as well as public sector organisations, including the Scottish Parliament, the NHS and all schools in Scotland. The number of customers reduced by 3.3% on last year's figure of 5.43 million. We supplied our customers with:

**Electricity:** 37,520 GWh

**Therms of gas:** 1,130,321,052.

## Ofgem Energy Supply Probe

The Regulator, Ofgem launched its Energy Supply Probe, an investigation into the electricity and gas supply markets for households and small businesses, in February 2008.

Announcing its initial findings in October 2008, Ofgem reported that the market was working well – there was no evidence of a price cartel, and retail price rises could be justified by wholesale costs. However, Ofgem concluded that competition in these markets could be more effective. It has therefore developed a package of measures aimed at achieving further benefits for consumers. The first introduces two new license conditions for domestic suppliers to address concerns over unjustified price differentials. These came into effect on 1 September 2009. They:

- Require any difference in the terms and conditions offered by suppliers in respect of different payment methods to be cost reflective; and
- Prohibit undue discrimination in any terms and conditions offered to consumers.

Other measures, aimed at promoting competition and consumer engagement, include obligations on suppliers to:

- Improve the information they provide to customers on their bills and in a new annual statement
- Help vulnerable and indebted consumers who are currently blocked from changing suppliers due to outstanding debts
- Improve the conduct of their sales and marketing activities
- Help small business consumers by providing them with better information on the terms and conditions of their contracts; and
- Improve the transparency of their supply and generation activities.

These measures were introduced into suppliers' licenses in October 2009, and will be implemented between October 2009 and July 2010.

## Pricing and Product Innovation

Energy prices remained the single biggest issue for our customers during 2009, following high wholesale prices in 2008, which pushed up the average domestic energy bill to over £1,300 a year.

We reduced our prices for both electricity and gas customers in March 2009, following a slight drop in wholesale prices. Actual savings to customers depend on individual service packages, but with gas prices reduced by an average of 7.5% and electricity prices by an average of 3%, a direct debit, dual fuel customer could have benefited from an annual saving of £54.

During the year UK energy suppliers were criticised for failing to reduce prices more quickly after wholesale prices had dropped. However, pricing remains a complex area.

Energy suppliers like ScottishPower often buy ahead when wholesale prices may be high, so it takes some time for price reductions to filter through to our customers. It is important that we buy ahead to ensure we can meet our customers' requirements for energy when they need it – and to avoid high spot market prices.

But wholesale energy prices are not the only factor that influences customers' energy bills. In early 2010 typically less than 60% of an energy bill was based on wholesale prices. A significant proportion of the bill goes towards investment in cleaner energy and better networks, along with government programmes on energy efficiency that energy suppliers are obliged to fund.

These costs look set to rise further in the years ahead. Ofgem estimates that the UK electricity industry will need to invest more than £200 billion to ensure we have a modern and reliable, low carbon electricity network.

To help customers cope with rising electricity costs, ScottishPower offers practical energy efficiency advice and has run an awareness campaign "**Take the Savings Challenge**" to encourage customers to check with us whether they are on the best tariff for their needs.

“Ofgem estimates that the UK electricity industry will need to invest more than £200 billion to ensure we have a modern and reliable, low carbon electricity network.”

We offer a range of products and flexible payment methods, some of which were introduced during 2009 in response to feedback from customer satisfaction surveys. These include:

- **Discounted Energy, December 2010:** This offer is guaranteed to remain 4% below ScottishPower's standard monthly Direct Debit prices until December 2010 and offers additional discounts for dual fuel (gas and electricity combined) accounts and further discounts for online account management.
- **Pay in Advance:** By paying a minimum of one year's energy consumption in advance, customers receive a discount of 5% below standard direct debit prices, provided their account remains in credit. An additional discount applies to dual fuel (gas and electricity combined) accounts
- **Fit 'n' Flex:** Customers on this offer have their energy prices fixed until 31st July 2010, with discounts applied for dual fuel (gas and electricity combined) accounts and online account management.
- **Capped Price Energy, September 2011:** This offer provides customers with a guarantee that the price they pay for their units of gas and electricity will not rise above a capped level before September 2011. In addition, if standard prices fall, prices for customers on this product will fall also. Discounts apply for dual fuel (gas and electricity combined) accounts and online account management

In June 2009 ScottishPower became the first UK energy supplier to offer small "interest" payments to Direct Debit customers whose accounts have a credit balance at the time of their annual assessment.

We offer discounts for dual fuel customers, who take both gas and electricity, and further discounts for online customers.

Our Prepayment prices have been set at levels significantly below standard quarterly cash rates for several years now.

During 2009, we became the first energy supplier in the UK to complete the roll-out of 323,000 new key meters across our network area, replacing old "token" meters.

This enabled us to launch in Autumn 2009 a new Pay As You Go service that enables prepayment customers to top up the credit in their meters via a secure internet page, using a plug-in device called a PowerPod.

The PowerPod top-up facility is a first for the UK energy supply industry and follows our success with online energy products, in which we have led the sector in customer satisfaction ratings. At the end of December 2009 we had 953,123 online customers.

We continued to offer green energy products and recently launched a new, independently certified product, which meets Ofgem's guidelines for green energy products. For further information about Green Energy, see the [Climate Change](#) section of this report.

## Sales and Marketing

ScottishPower is committed to ethical sales and marketing. We subscribe to the Billing Code and Sales Code, which govern the quality of information provided to customers.

We have been members of the Association of Energy Suppliers' EnergySure Code of Practice since it was established in 2002.

The scheme sets strict standards for the recruitment of sales agents and the training and assessment they must undertake to become EnergySure accredited.

It also sets procedures and standards for the way in which face to face sales are conducted. It is underpinned by a registration process, which records details of each sales agent and their competency standards.

We comply with all advertising guidance legislation and operate a structured sign off procedure internally for all advertisements, which includes screening by senior staff in the legal, pricing, product development and marketing teams.

We also voluntarily subscribe to the Green Supply Guidelines focusing upon the transparent and accurate promotion of environmental products.

We had no non-compliances with any voluntary codes relating to sales and marketing during 2009.



## Customer Information

Customers can access a wealth of information on many aspects of our business via our website and we also send out information with customer bills.

A key piece of information we provide customers with annually is the fuel mix we use in our electricity supply.

This is available via our customer website: [www.scottishpower.co.uk](http://www.scottishpower.co.uk), in our CSR Annual Review (see section on [Climate Change](#)) and it is also published in our standards of service booklet, which explains how we've performed against the Guaranteed Standards for customer service.

Information on what to do in an emergency is provided to every customer on the back of the bill, via our website and in our Welcome Pack for new customers. We also provide information to customers on how to read a meter.

We issue energy efficiency advice to every customer at least once a year, via the billing cycle and we use energy efficiency messages in our marketing campaigns.

We were short-listed for a Business in the Community Award for Responsible Marketing in 2007 and gained "Big Tick" re-accreditation in 2008 and 2009.

We provide energy efficiency advice on our website and offer a free phone energy efficiency advice line for both domestic and business customers.

During 2009 we provided energy efficiency advice to 38,397 customers, including home energy efficiency audits and advice on home insulation, grants and appliances. We also provide information about carbon monoxide poisoning.

"Customers can access a wealth of information on many aspects of our business via our website and we send out information with customer bills."

## Customer Privacy and Data Protection

We are committed to protecting our customers' privacy and keeping their personal data secure and operate a Privacy Policy to ensure this is achieved.

During 2009 we received 119 complaints relating to customer privacy. Of these, 114 were made by the Telephone Preference Service and only one was found to be justified. Five came from the Information Commissioner – one complaint was found to be justified, two not justified and one was on-going.\*

We also identified a number of complaints relating to customer privacy on our complaints tracker. A total of 31 were passed to our Data Protection team for further investigation in 2009.

No leaks, thefts or losses of customer data occurred during the year.

\* Data compiled to 22nd December 2009.

## Customer Service

During 2009 we re-focused our efforts on improving the service we provide to our customers with a new initiative – Customer 1st.

The aims of this programme include:

- Offering the best range of products in our sector – and engaging with customers to ensure they are on the best tariff for their needs
- Doing our utmost to ensure that customers receive accurate bills and that direct debit payment plans remain in line with energy use
- Making it easy for customers to contact us
- Ensuring that we are straightforward to deal with; and
- Caring about customers' problems and doing what we say we'll do.

A dedicated team with five workstreams has been established covering all key areas of customer contact to improve service delivery.

We engage regularly with consumer associations, including Consumer Focus, Consumer Direct and the Energy Ombudsman on our customer service and take on board their feedback.

### Telephone Service

We operate across five main customer contact centres across central Scotland, north-west England and north Wales, including a Welsh language call centre. Customer calls are routed by payment type in order to provide a tailored customer experience and service offering. We responded to 8.3 million calls during 2009.

### Customer Satisfaction

We continue to conduct "Voice of the Customer" satisfaction surveys among domestic customers annually, using constituent attributes that customers have told us are critical to quality.

Using robust, quantitative primary market research techniques, computer-assisted telephone interviewing is combined with



online surveys to gain consumers' perceptions and expectations of all areas of ScottishPower's service. This research is complemented with further qualitative research every two-three years. In our customer survey for 2009, mean overall satisfaction was up slightly on the previous year last year at 7.4 (+0.2).



In 2009 1,148 customers took part in our survey and were questioned about 75 weighted service attributes. Of these, 70 remained steady, four declined on the previous year and one improved.

57% of customers who took part in our Voice of the Customer survey were satisfied – giving scores of 8-10 (out of 10) compared with 48% last year.

### External Benchmarks

In the UK National Customer Satisfaction index (NCSI-UK) conducted in Q1 of 2009, customer satisfaction for utility companies as a whole fell by 5%. ScottishPower scored the industry average of 63 (the survey, based on customer interviews, scores companies in 16 industries from 0-100).

The NCSI-UK, conducted by the CFI Group, uses the same methodology as the American Customer Satisfaction Index. We scored an overall ranking of 3, or “about average” in the JD Power and Associates annual customer satisfaction survey, which questioned 2,845 UK electricity customers and 2,849 gas customers in August 2009.

Once again our online services were ranked No.1 in the uswitch annual customer satisfaction survey, which was conducted in September 2009, involving 5,090 respondents. We also scored highly on billing and the transfer process, but scored poorly for reward schemes. Our overall satisfaction rating of 63.3% improved by 3% on last year.



## Customer Complaints

Since energywatch, the former consumer organisation for the industry was replaced with Consumer Direct and Consumer Focus, no energy suppliers have published full complaint data.

This is because Consumer Focus has been consulting with customers and suppliers, on a fresh approach to evaluating suppliers' performance, following the introduction of new arrangements for redress and complaint handling in the energy sector from October 2008 and the companies' preference is to be compared on a like-for-like basis.

One of our key customer service targets for 2009 was to achieve a 20% reduction in customer complaints being escalated to Consumer Direct.

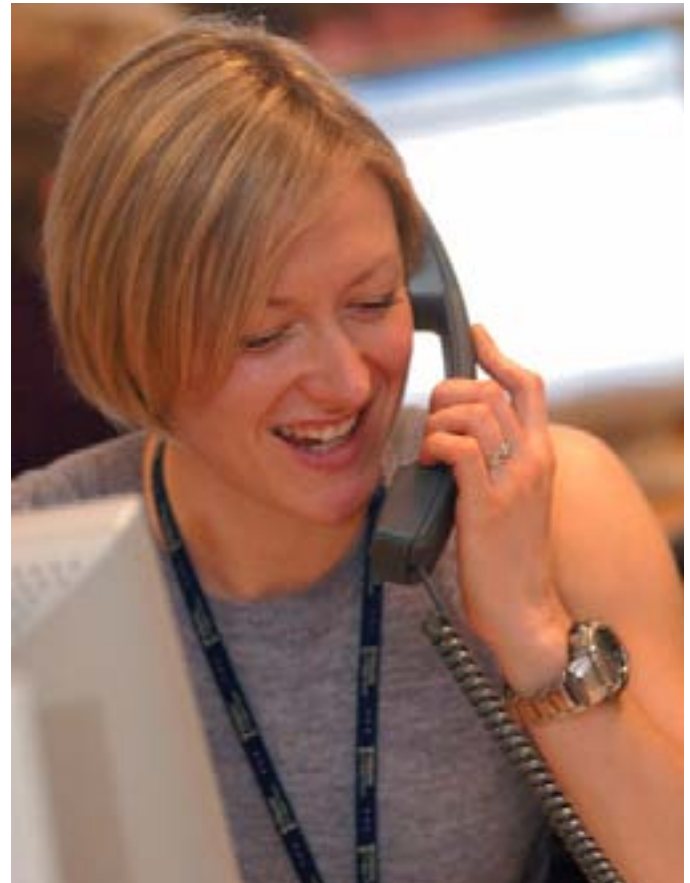
We are pleased to report that we achieved a reduction of 83% against this target, with referrals dropping from 332 to 55 during 2009.

Throughout the year we delivered improvements that have reduced customer complaints.

In response to customer feedback from research conducted in 2008, we implemented new call handling functionality across 2009, to increase the quality of service offered to all customers.

One system, Virtual Call on Hold, tells customers their estimated waiting time if our Call Centres

“We achieved a reduction of 83% in the number of customer complaints that are escalated to Consumer Direct – down to 55 in 2009 compared with 332.”



are busy when they call, and provides the option for us to call them back when they reach the head of the queue, or at a more suitable time, instead of holding to speak to an agent.

Other innovations have been introduced to improve customer service, such as key meters and at home internet credit top-up – see the Pricing and Product Innovation section for further details.

Energy Networks reports the number of complaints it receives annually to Ofgem. During the period from October 2008 to September 2009 (the latest available figures) Energy Networks received 7,455 complaints.

Of these, 96.7% related to loss of electricity supply (planned and unplanned) and emergency situations. The remainder related to quotations for new connections, the delivery of new connections and other issues.



“Investments in our networks from 2008 to 2013 is expected to total more than £2.3 billion.”

### Our Networks

We continued to invest in our networks during the year to reduce the number and duration of interruptions to power supply experienced by our customers.

Our five-year investment plan for 2008-2013 involves the upgrading and modernisation of the overhead line network, substations, underground cables and network protection systems in our Scottish and Manweb network territories.

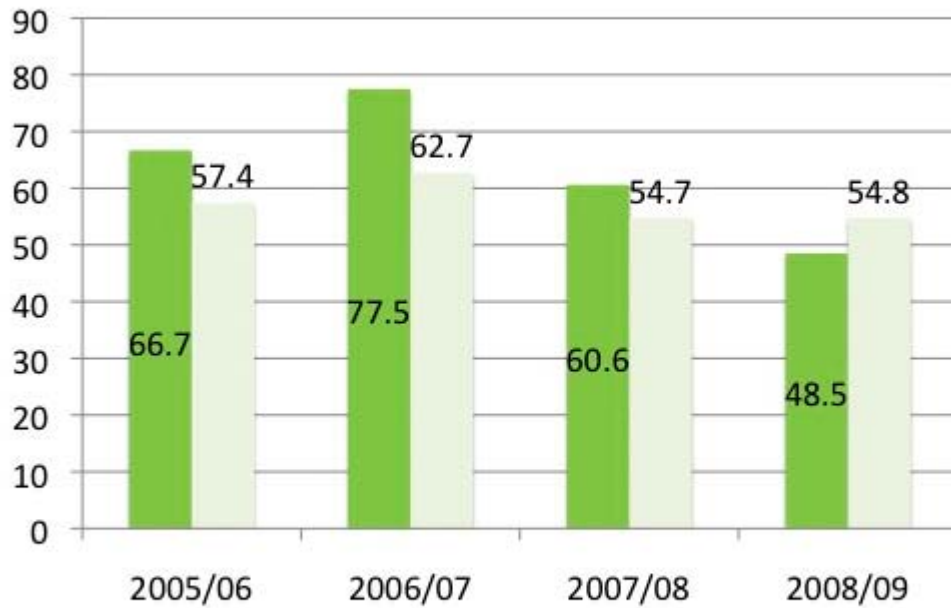
We are also reinforcing the network to accommodate growing numbers of renewable energy projects, such as windfarms, which also helps to increase network resilience and safeguard supplies to customers. Investments in our networks from 2008 to 2013 is expected to total more than £2.3 billion.

The performance of our networks are measured by recording customer interruptions (CI) and Customer Minutes Lost (CML). These figures are compiled from April to March and submitted to Ofgem to include in its annual Electricity Distribution Quality of Service Report.

ScottishPower operates two distribution systems – ScottishPower Distribution, covering south and central Scotland and ScottishPower Manweb, covering Merseyside, Cheshire and north Wales.

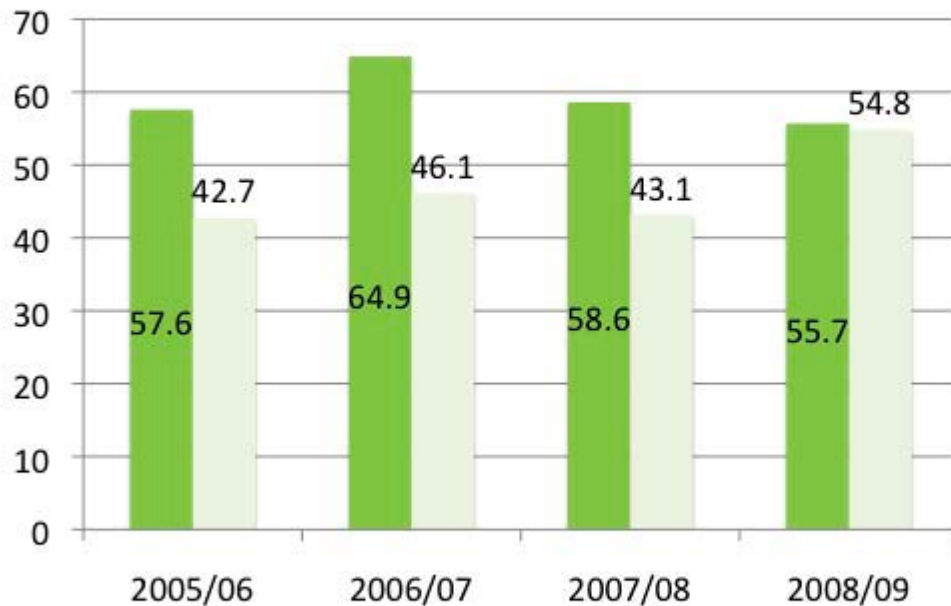
One of our key targets for 2009 was to meet the Quality of Supply targets set by Ofgem. These targets were exceeded in the ScottishPower Distribution area, but not met in the ScottishPower Manweb distribution area, due to an exceptional event in November 2008, involving the failure of a circuit breaker at Rainhill substation, which took 120,000 customers off supply for up to 38 minutes.

### Customer Minutes Lost



- ◆ ScottishPower Distribution. Regulatory target 2008/09 = 54.0
- ◆ ScottishPower Manweb. Regulatory target 2008/09 = 46.1

### Customer Interruptions



- ◆ ScottishPower Distribution. Regulatory target 2008/09 = 60.8
- ◆ ScottishPower Manweb. Regulatory target 2008/09 = 46.7

### Help for Vulnerable Customers

ScottishPower has for many years run programmes designed to help vulnerable customers. Collectively suppliers entered into an agreement with Government to spend an additional £225m on social initiatives between 1st April 2008 and 31st March 2011.

During the first year of the agreement, the collective social spend of UK suppliers was £157 million – almost a three-fold increase on the previous year.

We met our share of the social spend target for the period April 2008 to March 2009 and at 31st December 2009 were on track to meet our target for the period April 2009 to March 2010.

### Fuel Poverty

Fuel poverty continues to be a major issue in the UK.

Government figures show that four million people in England and 569,000 in Scotland were living in fuel poverty in 2007, while National Energy Action estimates that fuel poverty affects some 340,000 people in Wales.

A combination of economic recession, rising energy prices and an exceptionally cold winter will almost certainly have nudged even more households into fuel poverty at the end of 2009.

Fuel Poverty is said to exist when a household has to spend 10% or more of its income on energy to maintain acceptable levels of warmth. This is considered to be a temperature of 21- 23°C in the main living area of a home and 18°C in other areas.

Fuel poverty is influenced by three key factors – the cost of fuel, the income of the household and the energy efficiency of the home. Other contributory factors include under occupation of property and the use of electrical appliances that are not energy efficient.

Policies and programmes designed to tackle fuel poverty aim to help fuel poor households achieve “affordable warmth”, where acceptable levels of heating and normal appliance use cost less than 10% of household income.



## ScottishPower's Actions

We fund a number of programmes to help ease fuel poverty, including:

- Funding projects to address fuel poverty through the independent charity, the ScottishPower Energy People Trust
- Funding home energy efficiency improvements through our CERT programme
- Supporting the national Home Heat Helpline
- Working with Citizens Advice Bureau on energy debt prevention and income maximisation
- Social tariffs and fair pricing for prepayment customers
- Providing bill rebates through our social programme
- Working with Government and other suppliers through the Fuel Poverty Forum and Fuel Poverty Acton Group
- Helping customers through a dedicated Social Responsibility Support team.



## The ScottishPower Energy People Trust

The ScottishPower Energy People Trust funds not-for-profit groups that help people whose lives are affected by fuel poverty.

Since its formation in November 2005, the Trust has provided around £6.5 million to programmes run by grass roots organisations that help people who are struggling to pay their energy bills due to low incomes, poor housing or ill health.

The Trust is funded by ScottishPower through our social spend programme and by voluntary donations from independent supporters.

During 2009, ScottishPower contributed a total of £3.17 million to the Trust.

The Trust is administered by an independent and experienced Board of Trustees who have a special

interest in fuel poverty. It includes representatives from Energy Action Scotland and National Energy Action.

### Trust Performance in 2009

During 2009 the ScottishPower Energy People Trust awarded £1,958,328.24, to not-for-profit organisations in respect of 29 projects to help alleviate fuel poverty, helping 512,697 households and 556,761 individuals.

Projects funded include crisis funding, income maximisation, energy efficiency advice and research, particularly exploring links between fuel poverty and health. All projects funded must include the provision of energy efficiency advice.



■ *Independent Living Support, a charity supported by the ScottishPower Energy People Trust*

## Projects Funded in 2009

Here are some example of projects that were funded by the ScottishPower Energy People Trust during 2009. Find out more by watching CSR TV, or logging on to the Trust's website:

[www.energypeopletrust.com](http://www.energypeopletrust.com)

### **Independent Living Support**

Independent Living Support, based in Dumfries, is helping to alleviate fuel poverty in vulnerable households after receiving a grant of just under £55,000 from the ScottishPower Energy People Trust.

Aimed at vulnerable people aged 16-60 years, the three-year Empowering People project provides a drop-in centre, a freephone number to access utilities, landlords or council departments, and a project worker who can provide guidance and practical support on utility services and fuel poverty issues. Those using the project's services can also make use of email and internet facilities to improve their access to competitive energy deals.

The project encourages people to manage their energy accounts responsibly and provides advice on how to register with an energy supplier on taking up a tenancy, how to budget effectively and provides support to help people manage the on-going relationship with their energy supplier.

Crisis funding may also be given in certain circumstances to service users facing serious difficulties. In its first year the Empowering People project saved clients around £10,000 – helping to reduce fuel poverty in some of Dumfries and Galloway's most vulnerable families.

### **Bevan Foundation**

In December 2009 the Trust awarded nearly £25,000 to The Bevan Foundation for its project "How Fuel Poor Households Manage Fuel Use and Bills".

The Bevan Foundation project will investigate households and their management of fuel consumption, expenditure and awareness of advice and support to overcome fuel poverty. The initiative aims to reach nearly 350,000 households across the country.

The pilot research will be carried out in three locations, one rural, one urban and one social housing estate. Staff will interview people with the aim of understanding household perception and behaviour. The objective is to identify awareness of how fuel poor manage their fuel consumption.

"Since its formation in 2005, the ScottishPower Energy People Trust has provided £6.5 million to organisations that work to help vulnerable people out of fuel poverty."





“We are entirely confident The Fuel Poverty Fund has alleviated fuel poverty in isolated households across Scotland” – John Macfarlane, RSABI

### RSABI Fuel Poverty Fund

The ScottishPower Energy People Trust has issued its third grant in three years to help tackle fuel poverty in Scotland's most isolated areas.

The Royal Scottish Agricultural Benevolent Institution (RSABI) has received £84,000 in grants since 2006 to operate a fuel poverty fund specifically for vulnerable people, especially the elderly, in rural or remote communities. New funding of £34,500 from the Trust will enable the RSABI to continue its scheme, offering payments for fuel bills for 150 people in crisis, until May 2010.

John Macfarlane, Welfare Manager at RSABI, said: “We are entirely confident that this initiative has alleviated fuel poverty in isolated households across Scotland, who would otherwise have severely struggled to cope. We are now looking forward to helping more people this coming winter and, thanks to the ScottishPower Energy People Trust's continuing support, offering tariff checks and a supported referral to the Scottish Government's Energy Assistance Package as well as fuel grants and a benefits check.”

### Warmer Healthier Children

A £60,000 grant from the ScottishPower Energy People Trust will improve the lives of 11,000 families in England and Scotland, with the roll-out of the Warmer, Healthier Children project.

National Energy Action (NEA) and Energy Action Scotland (EAS) are the key partners in the three-year scheme that will deliver training about fuel poverty to staff from family agencies and support groups for vulnerable families, such as SureStart and Gingerbread.

Warmer, Healthier Children will also control a hardship fund for people in need to help them pay off small debts or invest in energy efficiency.

Jenny Saunders, Chief Executive of NEA, said: “NEA estimates that more than one million children are living in fuel poverty in England alone. Warmer, Healthier Children aims to make a positive impact on the lives of families living in cold, damp homes, through vital training for support workers.”

## Debt and Disconnection

We offer help to any customers who let us know they are having difficulties in paying their energy bills. This may include devising a flexible payment plan, changing the customer's tariff, offering energy efficiency advice and directing them to agencies that are able to offer additional assistance.

We have subscribed to the Energy Retail Association's Safety Net since it was established in 2004, which aims to ensure that no vulnerable customer in Britain is disconnected from their electricity or gas supply.

Disconnection is an emotive issue, but it remains an important sanction for energy supply companies in cases where customers refuse to pay, despite having the means to do so. We must therefore focus our efforts on identifying and helping customers who can't pay due to financial hardship.

Disconnection continues to be the option of last resort and is never a preferred course of action. We have a strong focus on early customer contact with appropriate assistance and support. We aim to offer our customers frequent contact opportunities throughout the debt recovery process, by letter, phone and face-to-face contact, actively encouraging the customer to contact us to discuss their account at every stage.

We aim to contact the customer nine times, on average, which includes an outbound call where possible and at least one visit to the property, prior to any disconnection of supply. In the majority of cases, customers agree repayment methods, have a pre-payment meter fitted or qualify for benefits through the Fuel Direct scheme before disconnection takes place.

During the year the Credit strategy team devised a method of recognising which customers pose a greater risk of bad debt by examining their payment history.

We can now identify customers who are low risk, reliable payers and apply different processes compared to higher risk, non-paying customers. This supports our business goals of valuing our customers – by putting in measures to manage their account appropriately, and valuing our business – by collecting payments on time.

### Disconnection and Reconnection Data 2009

2009 Data	Electricity	Gas	Total
Disconnections due to non-payment	418	1,013	<b>1,431</b>
Reconnections within 24 hours	119	230	<b>349</b>
Reconnections within 7 days	181	392	<b>573</b>

## Social Tariff and Rebates

In January 2009 we launched a new social tariff, Fresh Start, which has helped some of our most vulnerable customers to make significant savings on their energy bills.

The social tariff was made available to customers aged 60 years, or above, and in receipt of a social welfare benefit.

Customers were identified as being eligible for the social tariff through our Carefree database of vulnerable customers and customers on the Fuel Direct programme, where fuel costs are paid directly out of benefits.

In addition, all of these customers received a winter rebate of £85 and customers on Fuel Direct received varying payments to help clear outstanding debt.

The Fresh Start social tariff combines discounted prices with access to energy efficiency measures and benefits health checks.

In the UK, as much as £9 billion in benefits remains unclaimed each year. Our experience to date has shown every £1 invested in this area can release £20 in previously unclaimed benefits payments for customers. We believe this is important in helping people to stay out of fuel poverty in the long term.

The number of customers on our social tariff at the end of December 2009 was 80,304.



In addition, we continued to hold standard pre-payment bills below those for customers on standard quarterly prices. This benefits 640,000 of the UK's most vulnerable customers by an estimated £16 million per year.

We also launched a new fixed-price energy plan in 2009, offering discounts of approximately 10% on standard gas prices.

At the end of 2009 we were planning our 2009/10 winter rebate. This will involve a rebate of £50 for some 60,000 vulnerable customers with all-electric heating.

During 2009, we worked with the Department of Work and Pensions on a new energy rebate scheme, whereby DWP identifies customers across Britain who are in receipt of the guaranteed element of pension credit.

All eligible pensioners will be matched with their energy supplier and given a rebate of £80. It is estimated that the programme will help around a quarter of a million vulnerable pensioners throughout Britain.



“Our Social Responsibility Support Team, established in 2009, provides a single point of contact for vulnerable customers and the agencies that help them.”

## Energy Efficiency

We continued to meet our targets for customer energy efficiency under the Government's CERT programme, by installing energy saving measures such as cavity wall and loft insulation and energy efficient lighting in customers' homes.

Forty per cent of our CERT programme is directed at people on low incomes and people aged 70 years or over, thus helping some of our most vulnerable customers to achieve long term savings on their energy bills.

We deliver our customer energy efficiency programmes through partnerships with social housing providers, including Warm Zones. In addition to carrying our physical energy efficiency measures, the majority of these projects include income maximisation advice.

For example in North Staffordshire Warm Zone, where we are the energy partner, more than £2.2m of additional income has been generated through benefits claims, benefiting more than 1,700 households in the area.

Home energy efficiency improvements carried out in the Warm Zone territory are estimated to have saved £1 million on energy bills and 280,000 tonnes of CO<sub>2</sub>.

## Home Heat Helpline

We continued to support the Home Heat Helpline, an independent telephone service funded by the UK's six largest energy companies, for the fourth successive year during 2009.

The Helpline aims to give help and advice to people who are struggling to pay their energy bills or to keep warm in winter.

Independent advisors can provide information and advice on keeping warm and using energy efficiently, as well as payment plan options and how those with special needs can become a Priority Service Customer. The Home Heat Helpline was relaunched in 2009, with a major awareness campaign headed by Coronation Street actress Kym Marsh.

The relaunch involved visits to shopping malls across Britain, particularly in fuel poverty "hot spots". In 2009 the number of calls to the Home Heat Helpline surged to 32,246 – 7,573 more than in 2008 and 12,500 more than in 2007. Of these, 3,187 were referred to us, compared with 1,375 in 2008. The free phone number is **0800 33 66 99**. For further information visit the [Home Heat Helpline](#) website.

“Home energy efficiency improvements carried out in the Warm Zone territory are estimated to have saved customers £1 million on energy bills and saved 280,000 tonnes of CO<sub>2</sub>.”

### Other Help for Vulnerable Customers

We established a vulnerable customer team – the Social Responsibility Support Team – during 2009, which brings together specialists from different parts of the business into a unified team to provide a single point of contact for vulnerable customers and the agencies that help them.

It is responsible for Carefree customers on our Priority Services Register, matters relating to the Energy Assistance Package, the Home Heat Helpline and Fuel Direct. The team also has specially trained staff to manage our day-to-day relationships with Citizens Advice Bureau, Age Concern, RNID, RNIB and local authorities. In addition, Social Responsibility Support will work closely with the team that deals with Consumer Direct, Consumer Focus and the Ombudsman.

Internally, the team is the main point of contact for Energy Networks, who need to be aware of customers who have special needs in case of interruptions to the power supply, from planned maintenance or faults.

### Carefree Scheme

Customers who have special needs or senior citizens can sign up to join our Priority Services Register, branded within ScottishPower as the Carefree Scheme, which offers these vulnerable customers added peace of mind.

A key feature of Carefree is the Password Scheme, where Carefree members can choose and use a special password to check that a caller to their home is a ScottishPower employee or agent. At the end of 2009, there were more than 31,000 customers with a gas account on our Carefree Register. Carefree customers who meet certain eligibility conditions are entitled to receive free gas safety checks. Our appointed Gas Safe contractor carried out around 20,000 home visits in 2009, to carry out gas safety checks.



“At the end of 2009, there were more than 31,000 customers with a gas account on our Carefree Register.”

## Community Liaison Officers

ScottishPower has a dedicated team of 13 Community Liaison Officers, which has been established for many years. Its processes in relation to home visits are accredited by the International Standards Organisation.

These skilled and experienced employees have a key role in identifying and communicating with vulnerable customers and helping to manage debt and other issues through one-to-one support.

In 2009 our Community Liaison Officers made many thousands of visits to customers' homes to help customers with special needs and provide advice on a range of subjects including energy efficiency, debt management and metering.

During the year we set up a hardship fund of £200,000, enabling our Community Liaison Officers to help customers in genuine need pay their energy bills, clear debt, or replace old heating systems that were beyond economic repair.

## Customer Diversity

We try to always meet the needs of our diverse customer base, offering bills and information in different languages and formats to help non-English speakers and those who are visually impaired.





In this section you will find details of how we have fulfilled the disclosure requirements of the GRI indicators, along with a glossary and contact details for giving feedback on this report.

## 8. Assurance

Our CSR Annual Review has once again been assured by external auditors, Two Tomorrows, who undertake independent scrutiny of the data and any claims we publish.

This year, for the first time, we have aligned our CSR Annual Review to the Global Reporting Initiative (GRI) Reporting Guidelines, third version. This section contains tables listing the key GRI indicators, some brief commentary on how we have fulfilled the disclosure requirements and signposting via cross-references to the relevant pages of the report.

We have self-declared a B+ application level with GRI-G3. In addition, the B+ level of application was endorsed by independent assurance company Two Tomorrows, who conducted a third party assessment of our GRI application level.





Report Application Levels

		2002 In Accordance	C	C+	B	B+	A	A+
Mandatory	Self Declared			Report Externally Assured		Report Externally Assured		Report Externally Assured
	Third Party Checked			Report Externally Assured		Report Externally Assured		Report Externally Assured
Optional	GRI Checked			Report Externally Assured		Report Externally Assured		Report Externally Assured

Standard Disclosures Part 1: Profile Disclosures

Profile Disclosure	Description	Cross Reference	Comment
<b>1. Strategy and Analysis</b>			
1.1	Statement from the most senior decision marker of the organization	Welcome section: pp1-2	
1.2	Description of key impacts, risks and opportunities	Welcome section: pp1-2	
<b>2. Organizational Profile</b>			
2.1	Name of organization	Welcome section: p3	
2.2	Primary brands, products and services	Welcome section: p9	
2.3	Organization structure	Welcome section: p9	
2.4	Location of organization's HQ	Welcome section: p9	
2.5	No. Countries where organization operates	Welcome section: p9	
2.6	Nature of ownership and legal form	Welcome section: p9	
2.7	Markets served	Welcome section: p9	
2.8	Scale of the reporting organization	Welcome section: p9-10	
2.9	Significant changes during the reporting period regarding size, structure or ownership	Welcome section: p9	
2.10	Awards received during the reporting period	Corporate Ethics & Responsibility, Benchmarking and Recognition: pp21-22	

Profile Disclosure	Description	Cross Reference	Comment
<b>3. Report Parameters</b>			
3.1	Reporting period	Welcome section, About This Report: p3	
3.2	Date of most recent previous report	Welcome section, About This Report: p3	
3.3	Reporting cycle	Welcome section, About This Report: p3	
3.4	Contact point for questions about the report	Assurance & Information section	
3.5	Process for defining report content	Welcome section, About This Report: p3 and Corporate Ethics section, Report Scope: p18	
3.6	Boundary of the report	Welcome section, About This Report: p3 and other sections, as appropriate	
3.7	State any specific limitations on the scope or boundary of the report	Welcome section, About This Report: p3 Corporate Ethics & Responsibility: p18-19	
3.8	Basis for reporting on joint ventures, subsidiaries, leased or outsourced facilities	Not applicable to SP – see IBERDROLA Sustainability Report p24	
3.9	Data measurement techniques and the bases of calculations, including assumptions and techniques, underlying estimations applied to compilation of indicators and other information in the report	Individual sections, as appropriate.	
3.10	Explanation of the effect of any re-statements of information provided in earlier reports	Not applicable to SP – see IBERDROLA sustainability Report p25	
3.11	Significant changes from previous reporting periods in the scope, boundary or measurement methods applied in the report	Welcome section, About This Report: p3 and Customer Focus section, Complaints: p176	
3.12	Table identifying the location of standard disclosures in the report	Assurance and Information section	
3.13	Policy and current practice with regard to seeking external assurance for the report	Assurance and Information section	

Profile Disclosure	Description	Cross reference	Comment
<b>4. Governance, Commitment and Engagements</b>			
4.1	Governance structure of the organization, including committees under the highest governance body responsible for specific tasks, such as setting strategy or organizational oversight.	Corporate Ethics & Responsibility section: pp13-15	
4.2	Indicate whether the Chair of the highest governance body is also an executive officer.	Corporate Ethics & Responsibility section: pp13-15	
4.3	For organizations that have a unitary board structure, state the number of members of the highest governance body that are independent and/or non-executive members.	Corporate Ethics & Responsibility section: p15	See IBERDROLA Sustainability Report, p28
4.4	Mechanisms for shareholders and employees to provide recommendations or direction to the highest governance body.	See IBERDROLA Sustainability Report, p28	
4.5	Linkage between compensation for members of the highest governance body, senior managers, and executives (including departure arrangements), and the organization's performance (including social and environmental performance).	P17, p156 & IBERDROLA Sustainability Report, p29	
4.6	Processes in place for the highest governance body to ensure conflicts of interest are avoided.	Corporate Ethics & Responsibility section: p15	
4.7	Process for determining the qualifications and expertise of the members of the highest governance body for guiding the organization's strategy on economic, environmental, and social topics.	See IBERDROLA Sustainability Report, p29	
4.8	Internally developed statements of mission or values, codes of conduct, and principles relevant to economic, environmental, and social performance and the status of their implementation.	Corporate Ethics & Responsibility section: p12	Other specific policies are covered in appropriate sections, for example, Environmental Policy in Respect for the Environment Section
4.9	Procedures of the highest governance body for overseeing the organization's identification and management of economic, environmental, and social performance, including relevant risks and opportunities, and adherence or compliance with internationally agreed standards, codes of conduct, and principles.	See IBERDROLA Sustainability Report, p31	Not available: covered only at IBERDROLA Group level
4.10	Processes for evaluating the highest governance body's own performance, particularly with respect to economic, environmental, and social performance.	See IBERDROLA Sustainability Report, p31	Not available: covered only at IBERDROLA Group level
4.11	Explanation of whether and how the precautionary approach or principle is addressed by the organization.	Corporate Ethics & Responsibility section: p17	
4.12	Externally developed economic, environmental, and social charters, principles, or other initiatives to which the organization subscribes or endorses.	Respect for the Environment section: p47	Also covered in other sections, as appropriate
4.13	Memberships in associations (such as industry associations) and/or national/international advocacy organizations in which the organization has positions in governance bodies; participates in projects or committees; provides substantive funding beyond routine membership dues; or views membership as strategic.	Corporate Ethics & Responsibility section: p19	Also covered in other sections, as appropriate
4.14	List of stakeholder groups engaged by the organization.	Corporate Ethics & Responsibility section: p19	Also covered in other sections, as appropriate
4.15	Basis for identification and selection of stakeholders with whom to engage.	Corporate Ethics & Responsibility section: pp19-20 and other sections as appropriate	Also Biodiversity section of Respect for the Environment and Customer Focus
4.16	Approaches to stakeholder engagement, including frequency of engagement by type and by stakeholder group.	Corporate Ethics & Responsibility section: pp19-20	Also covered in other sections, as appropriate
4.17	Key topics and concerns that have been raised through stakeholder engagement, and how the organization has responded to those key topics and concerns, including through its reporting.	Welcome section: pp3-4 and other sections, as appropriate	Examples include fuel poverty, energy prices, the Water Framework Directive, Flood Management, fisheries, Carbon Capture and Storage and management of sites

Profile Disclosure	Description	Cross Reference	Comment
Standard Disclosures Part II: Standard Disclosures on Management Approach			
DMA EC	Disclosures on management approach, economic	Economic Results section	
DMA EN	Disclosures on management approach, environment	Respect for the Environment section	Approaches described to each issue
DMA LA	Disclosures on management approach, labour	Sense of Belonging and Trust, Our People:	
DMA HR	Disclosure on management approach, human rights	Partial coverage in Corporate Ethics & Responsibility section:	
DMA SO	Disclosure on management approach, social	Corporate Ethics & Responsibility, How We Manage CSR.  Sense of Belonging and Trust – Our Communities and Customer Focus section.	
DMA PR	Disclosure on management approach, product responsibility	Customer Focus section,	

Standard Disclosures Part III Performance Indicators: Environmental			
Performance Indicator	Description	Cross Reference	Comment
EN1	Materials used by weight or volume	Respect for the Environment section: p64	
EN2	Percentage of materials used that are recycled input materials.	None	Not Available
EN3	Direct energy consumption by primary energy source.	Respect for the Environment section: pp64-66	
EN4	Indirect energy consumption by primary source.	Respect for the Environment section: p65	
EN5	Energy saved due to conservation and efficiency improvements.	Respect for Environment section: p45	
EN6	Initiatives to provide energy-efficient or renewable energy based products and services, and reductions in energy requirements as a result of these initiatives.	Respect for Environment section: pp45-48	
EN7	Initiatives to reduce indirect energy consumption and reductions achieved.	Respect for the Environment section: p45, p62	
EN8	Total water withdrawal by source.	Respect for Environment section: p65	
EN9	Water sources significantly affected by withdrawal of water.	Respect for the Environment section: pp73-74	Partially reported
EN10	Percentage and total volume of water recycled and reused.	Respect for the Environment section: p62	Partially reported
EN11	Location and size of land owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas.	Respect for the Environment section: p79	Energy Wholesale only
EN12	Description of significant impacts of activities, products, and services on biodiversity in protected areas and areas of high biodiversity value outside protected areas.	Respect for the Environment section: p79	Summary information only.
EN13	Habitats protected or restored.	Respect for the Environment section: pp86-101	Energy Wholesale only
EN14	Strategies, current actions, and future plans for managing impacts on biodiversity.	Respect for the Environment section: pp82-101	
EN15	Number of IUCN Red List species and national conservation list species with habitats in areas affected by operations, by level of extinction risk.	Respect for the Environment section: p80	Energy Wholesale only
EN16	Total direct and indirect greenhouse gas emissions by weight.	Respect for the Environment section: p41	
EN17	Other relevant indirect greenhouse gas emissions by weight.	Respect for the Environment section: p41	
EN18	Initiatives to reduce greenhouse gas emissions and reductions achieved.	Respect for the Environment section: p45	Partially reported
EN19	Emissions of ozone-depleting substances by weight.	Respect for the Environment section: p41	

Standard Disclosures Part III Performance Indicators: Environmental (Continued)			
EN20	NOx, SOx, and other significant air emissions by type and weight.	Respect for Environment section: p58	
EN21	Total water discharge by quality and destination.	None	Not available – Metering yet to be installed at some EW sites
EN22	Total weight of waste by type and disposal method.	Respect for Environment section: p67	
EN23	Total number and volume of significant spills.	Respect for Environment section: p103	
EN24	Weight of transported, imported, exported, or treated waste deemed hazardous under the terms of the Basel Convention Annex I, II, III, and VIII, and percentage of transported waste shipped internationally	None	n/a
EN25	Identity, size, protected status, and biodiversity value of water bodies and related habitats significantly affected by the reporting organization's discharges of water and runoff.	None	Not Available
EN26	Initiatives to mitigate environmental impacts of products and services, and extent of impact mitigation.	None	Not available
EN27	Percentage of products sold and their packaging materials that are reclaimed by category.	None	n/a
EN28	Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with environmental laws and regulations.	None	n/a in 2009
EN29	Significant environmental impacts of transporting products and other goods and materials used for the organization's operations, and transporting members of the workforce.	Respect for the Environment section: pp81-82	Partially reported
EN30	Total environmental protection expenditures and investments by type.	Economic Results section	Summary info only

Standard Disclosures Part III Performance Indicators: Social – Labour Practices and Decent Work			
Performance Indicator	Description	Cross Reference	Comment
LA1	Total workforce by employment type, employment contract, and region.	Sense of Belonging and Trust section: p119	
LA2	Total number and rate of employee turnover by age group, gender, and region.	Sense of Belonging and Trust section: p119	
LA3	Benefits provided to full-time employees that are not provided to temporary or part-time employees, by major operations.	None	Not Available
LA4	Percentage of employees covered by collective bargaining agreements.	Sense of Belonging and Trust section: p128	
LA5	Minimum notice period(s) regarding significant operational changes, including whether it is specified in collective agreements.	None	Not Available
LA6	Percentage of total workforce represented in formal joint management-worker health and safety committees that help monitor and advise on occupational health and safety programs.	Sense of Belonging and Trust section: p128	
LA7	Rates of injury, occupational diseases, lost days, and absenteeism, and number of work-related fatalities by region.	Safety and Reliability section, Sickness Absence: p158 and Accidents and Injuries: p161	
LA8	Education, training, counseling, prevention, and risk-control programs in place to assist workforce members, their families, or community members regarding serious diseases.	Safety and Reliability section: p158	
LA9	Health and safety topics covered in formal agreements with trade unions.	None	Not Available
LA10	Average hours of training per year per employee by employee category.	Sense of Belonging and Trust section: p132	Not broken down by category
LA11	Programs for skills management and lifelong learning that support the continued employability of employees and assist them in managing career endings.	Sense of Belonging and Trust section: pp130-132	Not reported in detail
LA12	Percentage of employees receiving regular performance and career development reviews.	None	Not Available. Percentage is high but data not formally collected.
LA13	Composition of governance bodies and breakdown of employees per category according to gender, age group, minority group membership, and other indicators of diversity.	Corporate Ethics & Responsibility section: pp13-15 Sense of Belonging and Trust: p119	Partially reported
LA14	Ratio of basic salary of men to women by employee category.	None	Not Available

Standard Disclosures Part III Performance Indicators: Social – Human Rights			
Performance Indicator	Description	Cross Reference	Comment
HR1	Percentage and total number of significant investment agreements that include human rights clauses or that have undergone human rights screening.	None	n/a – no such agreements in 2009
HR2	Percentage of significant suppliers and contractors that have undergone screening on human rights and actions taken.	Corporate Ethics & Responsibility section: p18	No percentage given – majority of contracts from EU, but human rights screening takes place for some non-EU coal contracts
HR3	Total hours of employee training on policies and procedures concerning aspects of human rights that are relevant to operations, including the percentage of employees trained.	None	Not Available – security contractor changed
HR4	Total number of incidents of discrimination and actions taken.	Sense of Belonging and Trust section: p127	
HR5	Operations identified in which the right to exercise freedom of association and collective bargaining may be at significant risk, and actions taken to support these rights.	None	n/a in the UK
HR6	Operations identified as having significant risk for incidents of child labor, and measures taken to contribute to the elimination of child labor.	None	n/a in the UK
HR7	Operations identified as having significant risk for incidents of forced or compulsory labor, and measures taken to contribute to the elimination of forced or compulsory labor.	None	n/a in the UK
HR8	Percentage of security personnel trained in the organization's policies or procedures concerning aspects of human rights that are relevant to operations.	Corporate Ethics & Responsibility section: p16	
HR9	Total number of incidents of violations involving rights of indigenous people and actions taken.	None	n/a in the UK



Standard Disclosures Part III Performance Indicators: Social – Society			
Performance Indicator	Description	Cross Reference	Comment
SO1	Nature, scope, and effectiveness of any programs and practices that assess and manage the impacts of operations on communities, including entering, operating, and exiting.	Respect for Environment section: pp108-109, p117	
SO2	Percentage and total number of business units analyzed for risks related to corruption	None	Not Available
SO3	Percentage of employees trained in organization's anti-corruption policies and procedures.	None	Not Available
SO4	Actions taken in response to incidents of corruption.	Corporate Ethics & Responsibility section: p16	N/a in 2009
SO5	Public policy positions and participation in public policy development and lobbying.	Corporate Ethics & Responsibility section: p20	
SO6	Total value of financial and in-kind contributions to political parties, politicians, and related institutions by country.	Corporate Ethics & Responsibility section: p20	
SO7	Total number of legal actions for anti-competitive behavior, anti-trust, and monopoly practices and their outcomes.	Customer Focus section – Sales & Marketing:	n/a in 2009
SO8	Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with laws and regulations.	None	n/a in 2009

Standard Disclosures Part III Performance Indicators: Social – Product Responsibility			
Performance Indicator	Description	Cross Reference	Comment
PR1	Life cycle stages in which health and safety impacts of products and services are assessed for improvement, and percentage of significant products and services categories subject to such procedures.	Safety and Reliability section – Safety Programmes: pp182-183	
PR2	Total number of incidents of non-compliance with regulations and voluntary codes concerning health and safety impacts of products and services during their life cycle, by type of outcomes.	None	n/a
PR3	Type of product and service information required by procedures, and percentage of significant products and services subject to such information requirements.	None	n/a
PR4	Total number of incidents of non-compliance with regulations and voluntary codes concerning product and service information and labeling, by type of outcomes.	None	n/a
PR5	Practices related to customer satisfaction, including results of surveys measuring customer satisfaction.	Customer Focus section: p174	
PR6	Programs for adherence to laws, standards, and voluntary codes related to marketing communications, including advertising, promotion, and sponsorship.	Customer Focus section: p172	
PR7	Total number of incidents of non-compliance with regulations and voluntary codes concerning marketing communications, including advertising, promotion, and sponsorship by type of outcomes.	Customer Focus section: p172	No incidences of non compliance in 2009
PR8	Total number of substantiated complaints regarding breaches of customer privacy and losses of customer data.	Customer Focus section: p173	
PR9	Monetary value of significant fines for non-compliance with laws and regulations concerning the provision and use of products and services.	None	n/a in 2009

Electric Utilities Supplement			
Performance Indicator	Description	Cross Reference	Comment
EU1	Installed capacity, broken down by primary energy source and by regulatory regime.	Welcome section: p10	Total installed capacity only – for individual plant detail see: <a href="http://www.spenergywholesale.com">www.spenergywholesale.com</a>
EU2	Net energy output broken down by primary energy source and by regulatory regime.	Respect for Environment section: p38	
EU3	Number of residential, industrial, institutional and commercial customer accounts.	Customer Focus section: p169	Total net live services for electricity and gas only
EU4	Length of above and underground transmission and distribution lines by regulatory regime	Welcome section: p10	Total length overhead lines and underground cables
EU5	Allocation of CO2e emissions allowances or equivalent, broken down by carbon trading framework.	Respect for Environment section: p42	
EU6	Management approach to ensure short and long-term electricity availability and reliability.	Safety and Reliability section: pp164-167	
EU7	Demand-side management programs including residential, commercial, institutional and industrial programs.	Respect for Environment section, Climate Change: p46	Commercial, institutional and industrial initiatives not reported
EU8	Research and development activity and expenditure aimed at providing reliable electricity and promoting sustainable development.	Respect for Environment section, Climate Change: p45, pp47-49	
EU9	Provisions for decommissioning of nuclear power sites.	None	n/a
EU10	Planned capacity against projected electricity demand over the long term, broken down by energy source and regulatory regime.	Safety and Reliability section: pp165-167 Respect for Environment section: pp115-116	Partially reported – summary of strategy only
EU11	Average generation efficiency of thermal plants by energy source and by regulatory regime.	Respect for Environment section: p45	
EU12	Transmission and distribution losses as a percentage of total energy	Respect for Environment section: p48	
EU13	Biodiversity of offset habitats compared to the biodiversity of the affected areas.	Respect for Environment section: p90	Applies to Damhead Creek only
EU14	Programs and processes to ensure the availability of a skilled workforce.	Sense of Belonging and Trust section: pp130-132	
EU15	Percentage of employees eligible to retire in the next 5 and 10 years broken down by job category and by region.	None	Not Available
EU16	Policies and requirements regarding health and safety of employees and employees of contractors and subcontractors.	Safety and Reliability section:	
EU17	Days worked by contractor and subcontractor employees involved in construction, operation & maintenance activities.	None	Not Available
EU18	Percentage of contractor and subcontractor employees that have undergone relevant health and safety training.	Safety and Reliability section: pp155-157	
EU19	Stakeholder participation in the decision making process related to energy planning and infrastructure development.	Respect for Environment section: p108	
EU20	Approach to managing the impacts of displacement.	None	n/a

Electric Utilities Supplement (Continued)			
EU21	Contingency planning measures, disaster/emergency management plan and training programs, and recovery/restoration plans.	Safety and Reliability section: p164	Summary only
EU22	Number of people physically or economically displaced and compensation, broken down by type of project.	None	n/a
EU23	Programs, including those in partnership with government, to improve or maintain access to electricity and customer support services.	Respect for Environment section, Climate Change: pp37-38 Sites and Infrastructure section: pp109-116 Customer Focus section: pp173-174	
EU24	Practices to address language, cultural, low literacy and disability related barriers to accessing and safely using electricity and customer support services.	Customer Focus section: p189	
EU25	Number of injuries and fatalities to the public involving company assets, including legal judgments, settlements and pending legal cases of diseases.	Safety & Reliability section: p181	
EU26	Percentage of population unserved in licensed distribution or service areas.	None	n/a
EU27	Number of residential disconnections for non-payment, broken down by duration of disconnection and by regulatory regime.	Customer Focus section: p184	
EU28	Power outage frequency.	Safety & Reliability section: p164	
EU29	Average power outage duration.	None	n/a
EU30	Average plant availability factor by energy source and by regulatory regime.	Safety & Reliability section: p164	

## Independent Assurance Statement

### Scope and objectives

Two Tomorrows (Europe) Limited has undertaken independent assurance of the ScottishPower 2009 CSR Annual Review. The assurance process was conducted in accordance with AA1000AS (2008). We were engaged to provide Type 2 assurance, which covers

- Evaluation of adherence to the AA1000APS (2008) principles of inclusivity, materiality and responsiveness (the Principles) and
- The reliability of specified sustainability performance information.

The performance information included in scope was all data and key claims in the Review, with checking processes prioritised according to materiality. The assurance scope excluded financial information taken from annual reporting processes, financial investment data, and any data already submitted to regulatory audit or other third party checks. We used the Global Reporting Initiative (GRI) Quality of Information Principles as Criteria for evaluating performance information. The scope of our work excluded Company reporting relating to the operations of ScottishPower Renewables, and the material included under 'TV Station'.

### Responsibilities of the directors of ScottishPower and of the assurance providers

The directors of ScottishPower have sole responsibility for the preparation of the Report. We were not involved in the preparation of any part of the Report. We have no other contract with SP and this is the eighth year that we have provided assurance. Our statement represents our independent opinion and is intended to inform all of ScottishPower stakeholders including management. We adopt a balanced approach towards all ScottishPower stakeholders. Our team comprised Jon Woodhead, Elvin Ozensoy,

Vicky McAllister and Alex Nichols. Further information, including individual competencies relating to the team can be found at: [www.twotomorrow.com](http://www.twotomorrow.com)

## **Basis of our opinion**

Our work was designed to gather evidence with the objective of providing moderate assurance as defined in AA1000AS (2008). We undertook the following activities:

- Review of the current sustainability issues that could affect ScottishPower and are of interest to stakeholders
- Interviews with selected directors and senior managers responsible for management of sustainability issues and review of selected evidence to support issues discussed. We were free to select these interviewees as we saw fit.
- Review of ScottishPower's approach to stakeholder engagement and recent outputs. As part of this, we attended the Stakeholder Sessions held by the company in Chester in November 2009 and in Glasgow in December 2009.
- Review of information provided to us by ScottishPower on its reporting and management processes relating to the Principles
- A site visit to Kirkintilloch Operations and Controls Centre, part of Energy Networks business, to review process and systems for preparing site level sustainability data and implementation of sustainability strategy. We were free to choose the site.
- Review of supporting evidence for key claims in the report
- Review of the processes for gathering and consolidating data and, for a sample, checking the data consolidation
- An independent assessment of ScottishPower Reporting against the B Application Level for the Global Reporting Initiative (GRI) G3 Guidelines.

## **Findings**

We reviewed and provided feedback on drafts of the Report and where necessary changes were made. On the basis of the work undertaken, nothing came to our attention to suggest that the Report does not properly describe ScottishPower's adherence to the Principles or its performance, with the following exception:

- Evidence was not available to support data relating to customer privacy complaints and we provide no assurance over these data.

## **Observations**

Without affecting our assurance opinion we also provide the following observations.

- ScottishPower has continued to provide highly detailed reporting on its corporate responsibility impacts, this year using a new structure based around six value areas. The new structure of reporting has improved the ability to access information on the company's approach and performance on the most significant issues. Future reports should provide greater clarity on ScottishPower's performance against its key CR performance indicators and targets, for example through provision of a summary page. Inclusivity concerns the participation of stakeholders in developing and achieving an accountable and strategic response to sustainability.
- ScottishPower has conducted a range of stakeholder consultation activities during the year, including

stakeholder workshops. The feedback generated from these events was typically focussed on local community initiatives, with other material issues receiving only limited attention. ScottishPower also uses various other stakeholder engagement platforms, including the Environmental Forum, to gather feedback on the management approach to environmental issues from external stakeholders. We recommend that ScottishPower should obtain and report on stakeholder feedback on the company's approach to reporting, focussed on the most material issues, including climate change, atmospheric emissions reductions, pricing, affordability and vulnerable customers, and safety.

- We recommend that future reports include information on stakeholders' views on the impacts of ScottishPower's management approach and actions on issues such as social tariffs, prices, and customer service, and how these views have been included in relevant decision making processes. Material issues are those which are necessary for stakeholders to make informed judgments concerning ScottishPower and its impacts.
- This year's report includes much improved levels of information concerning issues relating to customer debt, customer disconnection and reconnection rates, and the company's actions to protect vulnerable customers.
- We recommend that future reports should provide more information on actions taken by ScottishPower to address future shortages in skilled employees as new technologies such as carbon capture and storage are being implemented.
- In our statements since 2008 we have recommended that future reports should set out a clear vision for how the company expects to manage its carbon footprint for the period up to 2012 and the possibilities for the period 2012-2020. Whilst we understand that new carbon and other emissions targets are being determined at Iberdrola Group level, we restate this recommendation, as there is a need to inform stakeholders' views on the opportunities and constraints which could shape the company's management approach to reducing its emissions over the short and long term. Responsiveness concerns the extent to which an organisation responds to stakeholder issues
- In our statements in previous years we have recommended that the Review would be improved through explanation of the company's understanding of the concerns of its stakeholders, and explicit links to where the Review provides information on the company's response. We re-state this recommendation.
- This year's Review continues to include key information on carbon capture and storage, and other carbon management technologies that will contribute towards emissions reductions targets.

## Performance Information

- In terms of data accuracy, nothing came to our attention to suggest that these data have not been properly collated from information reported at operational level, nor that the assumptions utilised were inappropriate. We are not aware of any errors that would materially affect the ScottishPower corporate data.
- Without affecting this opinion, we observed some instances where data collection and reporting arrangements could be improved, particularly within Energy Networks, and the process for tracking customer privacy complaints within Energy Retail. We observed improvements in data collection arrangements within Energy Wholesale, and we recommend that ScottishPower should seek to extend these improvements across other business units.
- We recommend that ScottishPower should attempt to streamline reporting requirements for specific key performance indicators that are used for multiple reporting requirements. Currently some of these data are collated outside the CR data collection system, requiring manual transfers between systems that can lead to errors.

- We recommend that ScottishPower should consider re-instating the involvement of internal audit to check the accuracy of data collated for reporting purposes, working in conjunction with the external assurance process.
- Our review of the GRI index indicates ScottishPower broadly meets the requirements of a B level GRI application, and some profile disclosures and disclosures on management approach can be further enhanced in the future.

**Two Tomorrows (Europe) Limited**  
**London, June 2010**



Jon Woodhead  
Group Director



Vicky McAllister  
Senior Consultant



Elvin Ozensoy  
Consultant



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Towards sustainable business

Two Tomorrows (Europe) Limited trading as Two Tomorrows is an international consultancy that helps companies to perform better and create value by doing business in a sustainable way [www.twotomorrow.com](http://www.twotomorrow.com)

## Glossary

We acknowledge that energy supply companies sometimes use industry terminology that may not be immediately understandable to those outside our sector and while we strive to avoid the use of jargon wherever possible, we have included a glossary in this section, to help our readers understand terms they may not be familiar with.

<b>BAP</b>	Biodiversity Action Plan
<b>Biomass</b>	Biological material, such as wood, agricultural crops and other plant substances that can be used as a fuel source
<b>BOFA</b>	Boosted Overfire Air – a technique used to reduce emissions of oxides of nitrogen during coal combustion
<b>CAR</b>	Controlled Activities Regulations – these govern activities relating to water
<b>CCGT</b>	Combined Cycle Gas Turbine – system used to generate electricity from gas
<b>CCS</b>	Carbon Capture and Storage
<b>Community Energy Partnership</b>	An area based scheme designed to reduce fuel poverty
<b>CERT</b>	Carbon Emissions Reduction Target – a government scheme to reduce CO <sub>2</sub> emissions, where energy suppliers fund home energy improvements
<b>CESP</b>	Community Energy Savings Programme – a scheme funded by suppliers and generators to install energy efficiency measures in the homes of people living in areas of social deprivation
<b>CI</b>	Customer interruptions – one of the measures we use to assess performance of our electricity networks
<b>CFCs</b>	Chlorinated Fluorocarbons – ozone depleting gases
<b>CML</b>	Customer minutes lost – one of the measures we use to assess performance of our electricity networks
<b>DEFRA</b>	Department for Environment Food and Rural Affairs
<b>EMAS</b>	Eco-Management and Audit Scheme: a European certification scheme for Environmental Management Systems
<b>EMS</b>	Environmental Management System



<b>EU ETS</b>	European Union Emissions Trading Scheme
<b>FGD</b>	Flue Gas Desulphurisation: Process used to reduce emissions of sulphur dioxide from fossil fuelled power generation
<b>GWh</b>	Gigawatt Hour – unit of power = 10 <sup>6</sup> Watt Hours
<b>HCFC</b>	Hydrochlorinated Fluorocarbons – ozone depleting refrigerant gases
<b>IED</b>	Industrial Emissions Directive
<b>IPPC</b>	European Commission Directive on Integrated Pollution Prevention and Control
<b>ISO14001</b>	International standard for Environmental Management Systems
<b>IUCN</b>	International Union for Conservation of Nature
<b>kTonnes</b>	kTe – kilotonnes: 1,000 tonnes
<b>KPI</b>	Key Performance Indicator
<b>KWh</b>	Kilowatt hour: Unit of power – 10 <sup>3</sup> watt hours
<b>LCPD</b>	Large Combustion Plant Directive
<b>Low NO<sub>x</sub> Burners</b>	Equipment to reduce emissions of oxides of nitrogen from coal-fired power stations
<b>MTU</b>	Mobile Test Unit
<b>MW</b>	Megawatt: Unit of power. One million Watts.
<b>MWh</b>	One million Watt hours.
<b>NO<sub>x</sub></b>	Oxides of nitrogen, gases produced from the combustion of fossil fuels in power generation and transport that contribute to acid rain and poor air quality
<b>Ofgem</b>	The UK electricity and gas regulator
<b>OHSAS 18001</b>	Occupational Health and Safety Standard
<b>PFA</b>	Pulverised Fuel Ash. A by-product from the combustion of coal

<b>Ramsar site</b>	A designation denoting wetlands of importance, following an inter government treaty, the Convention of Wetlands, signed in Ramsar, Iran
<b>ROCs</b>	Renewable Obligation Certificates
<b>RoSPA</b>	Royal Society for the Prevention of Accidents
<b>RSPB</b>	Royal Society for the Protection of Birds
<b>SEPA</b>	Scottish Environment Protection Agency
<b>SCA</b>	Special Conservation Area
<b>SCR</b>	Selective Catalytic Reduction: a method of NOx abatement
<b>SPA</b>	Special Protection Area
<b>SSSI</b>	Site of Special Scientific Interest
<b>SO<sub>2</sub></b>	Sulphur dioxide, a gas from the combustion of coal, which contributes to acid rain and can affect air quality
<b>Warm Zone</b>	An area based initiative run by National Energy Action to reduce fuel poverty and achieve affordable warmth

## Feedback

We welcome feedback on our CSR Annual Review. Please email us:

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