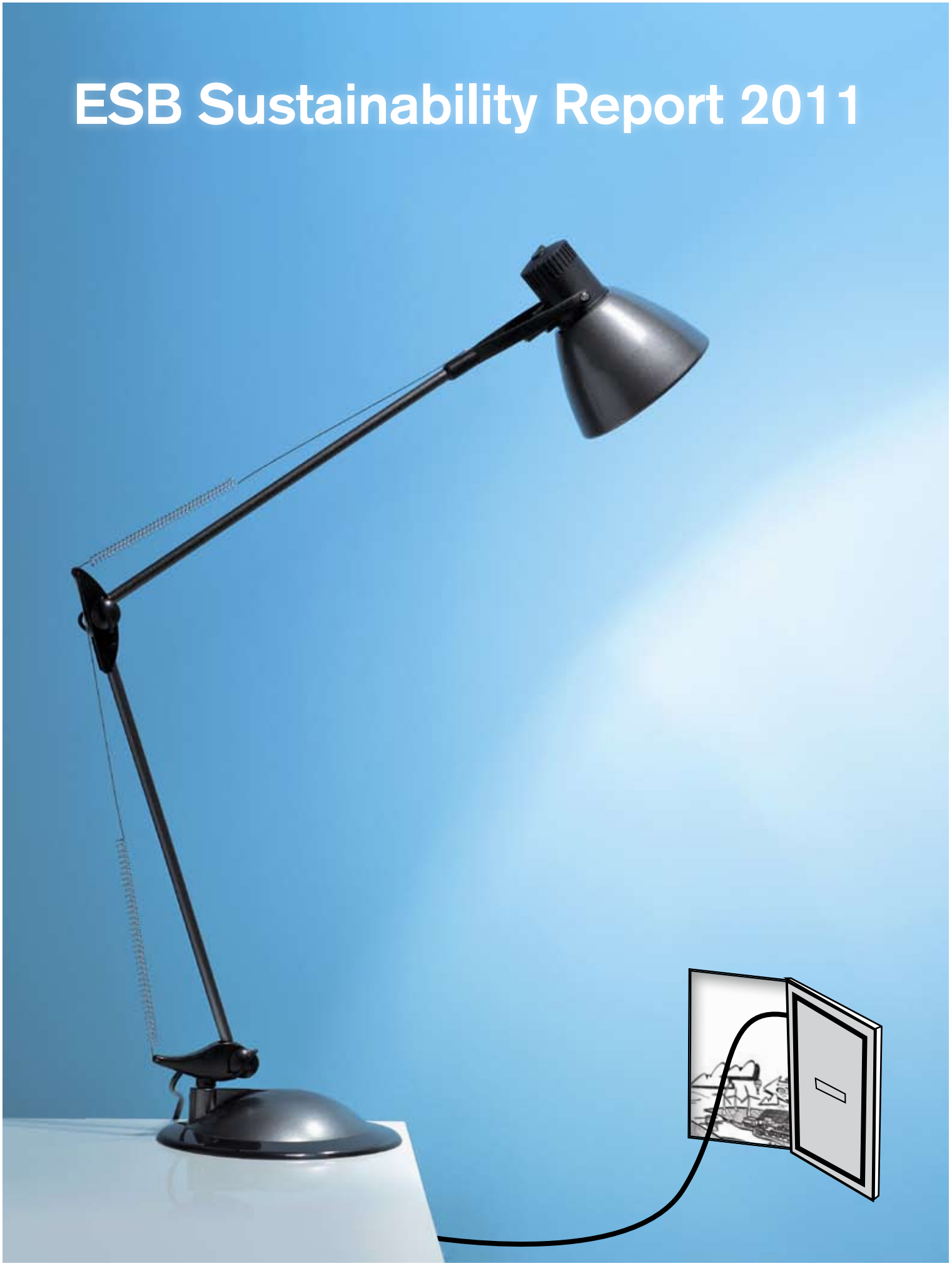
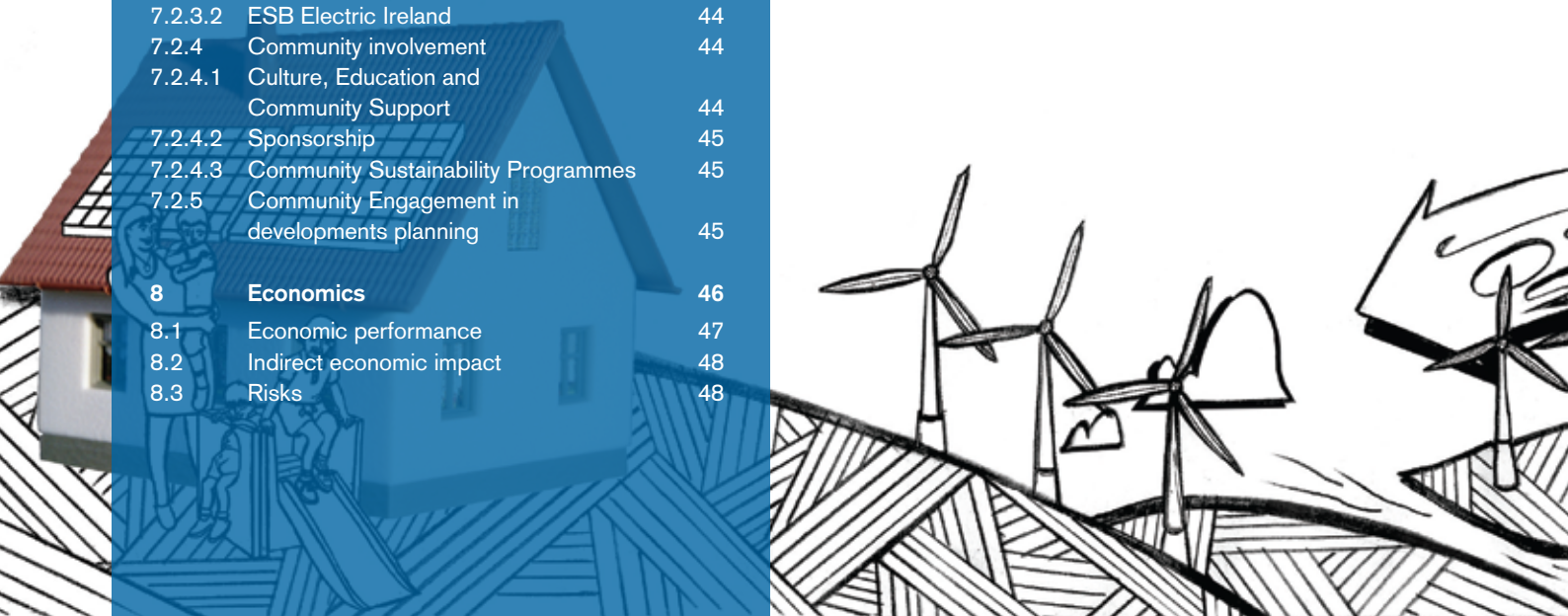
ESB Sustainability Report 2011



www.esb.ie

CONTENTS



ESB has played a vital role in powering our country and our customers for the past 84 years. In everything we do, our people are working together to deliver you a reliable, value for money energy service. We are also very proud of the contribution we have made to Ireland's economic development. Our infrastructure continues to deliver power to you, in your home, your community and your workplace. Our focus is on ensuring that we manage every element of that process in a safe,environmentally responsible and efficient way – for the next 84 years and beyond

Sustainability Goals - Our goals are to:

> maintain ESB's financial strength through a robust cost reduction programme

> maximise the benefits of our status as a vertically integrated, generation, transmission and supply business

> maintain the programme of investment in Networks and Renewable Generation

> develop and provide new energy and innovative service offerings to customers

> meet our annual safety and health and well-being objectives

> deliver emissions reduction, energy efficiency, waste reduction and water conservation targets

> ensure we use physical resources as efficiently as possible

> promote the role of electricity in decarbonising the economy and develop a strong sustainability culture within the organisation to guide and shape our strategies, investments and operational activities

> report our actions in a transparent and open manner and respond to the feedback received.

01 STRATEGY AND ANALYSIS

Pat O'Doherty, Chief Executive

1.1 CHIEF EXECUTIVE STATEMENT

2011 proved a challenging year for ESB and our customers. The economic crisis that started in 2008 continued to have a significant impact, with demand falling a further 3% and a rise in the number of customers experiencing financial difficulty. Notwithstanding these adverse conditions, ESB continued to progress our objectives of meeting society's energy service needs in an affordable, efficient and sustainable manner.

The crisis has also brought into sharp focus the financial performance of utilities in Europe and with that their ability to support new investments. ESB has performed well in this regard delivering a 38% increase in operating profit to €469 million in 2011 . We will continue to meet the financial challenge by a rigorous focus on reducing costs and maintaining the strength of our balance sheet. Our Performance Improvement Programme 2010-2015 has already delivered a cumulative €165 million of the €280 million targeted savings in our annual cost base. Continued progress in this area will provide crucial support to our ongoing sustainable investment programme and delivery of competitive prices to our customers.

We have also made major strides in meeting our sustainability goals, in particular in relation to our target of a net zero carbon emissions generation portfolio by 2035. This is central to our strategic ambition as we move to meet the challenge of securing long-term energy supplies, limiting the risks from climate change and deliver a safe and healthy environment for our staff, contractors and the public.

2011 saw a change in leadership at ESB as Padraig McManus retired as Chief Executive after 37 years with ESB. I wish him and his family every happiness in his retirement and thank him for his huge contribution to ESB's success. It is my objective to continue to make ESB an exemplar sustainable, profitable and customer focused energy utility.

Pat O'Doherty
Chief Executive

13th June 2012

[1] Full details of ESB's financial performance are available in the Annual Report 2011, accessible at www.esb.ie

John Campion, Executive Director Sustainability and Group HR

1.2 EXECUTIVE DIRECTOR SUSTAINABILITY AND GROUP HUMAN RESOURCE STATEMENT

ESB seeks to meet in a sustainable and socially acceptable manner the long-term energy and energy services needs of our customers and the expectations of our shareholders for dividends. In doing so we believe we can also contribute in a fundamental way to the sustainable development of society. In our 2010 Report we outlined how our 2008 corporate strategy "Strategic Framework to 2020" intended to deliver this mission in a sustainable manner.

This Strategy is based on three major drivers:
1. Adapting to EU and national decarbonisation and renewable energy targets,
2. Preparing for the completion of the EU 's regional electricity market, and
3. Maintaining financial strength to invest in critical infrastructure and compete.

These drivers have been strengthened during 2011 as a result of further initiatives taken by policy-makers at EU and national level to enhance the sustainability of electricity supplies.

At the same time, a more difficult financing environment has developed for all utilities in Europe, including ESB. This more difficult environment ensured attention was focused more sharply in 2011 on actions to reduce and control internal costs in all aspects of our business. In this regard, sustainable working has proved itself in terms of efficiency, cost effectiveness and innovative solutions.

I am particularly proud of our achievements in improving the sustainability performance of our business in 2011. Credit must go to our staff, and in particular our cohort of sustainability champions, from all areas of our business, whose commitment and enthusiasm is critical for our success. I was especially pleased, on their behalf, that in October 2011 ESB was one of four companies in Ireland to be accredited to the new Business Working Responsibly Standard (BWR) as it provides external acknowledgement of what we have achieved to date.

John Campion
Executive Director Sustainability and Group HR

In 2011 we continued to make good progress against the five key themes around which our corporate strategy is based. The significant developments in relation to these are summarised below:

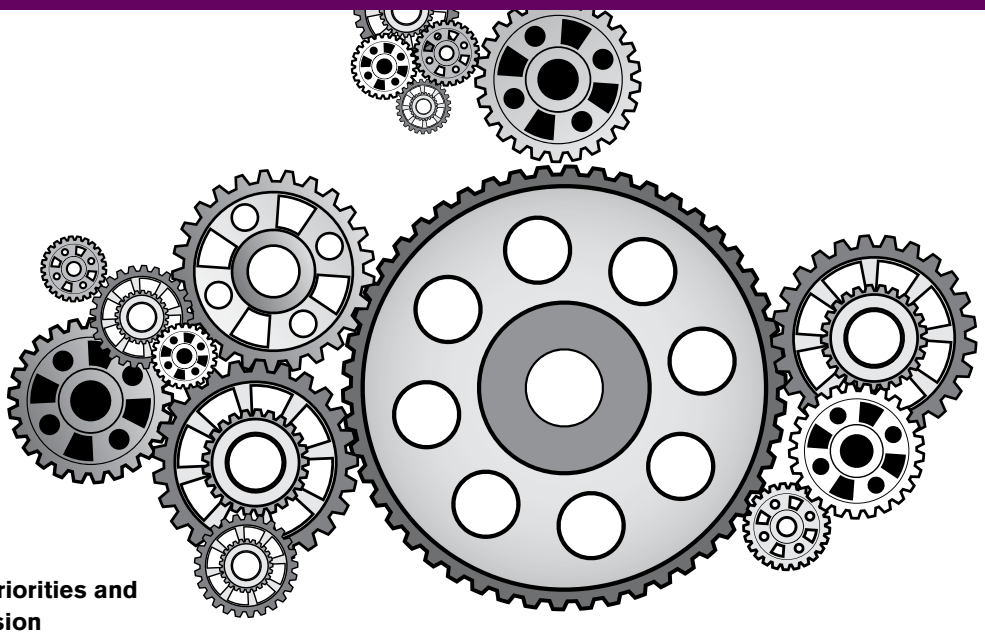
> **A renewables business of scale:** In 2011 we added 96 MW of wind generation to bring our wind capacity to 328 MW, complementing our existing 217 MW of hydroelectric generation and 272 MW of pumped storage.

> **Best practice generation portfolio:** Our 4,100 MW of thermal plant on the island of Ireland and 1,900 MW of thermal plants in Great Britain and Spain performed well.

> **World class sustainable networks:** A further €510 million was invested in the transmission and distribution network in 2011 bringing the total investment in the network since 2008 to €2.3 billion. In addition to strengthening the network infrastructure and supporting new connections this major investment has allowed 1,600 MW of renewable generation to connect to the system.

> **Customer focussed supply business:** The Electric Ireland brand for our supply business was successfully launched in April following the ending of the regulation of our residential supply business by the Commission for Energy Regulation (CER). Further progress was made in developing and promoting our Energy Services business that delivers energy savings and energy efficient products and services for households and businesses.

> **Significant international presence:** ESB strengthened its position in Great Britain with the acquisition in May of the remaining 50% shareholding in the Corby power plant. The expertise and professional reputation developed by our consultancy arm, ESB International (ESBI), over the past 35 years resulted in new consultancy contracts being awarded in key market areas including Bahrain, Malaysia and South Africa, while significant projects continued successfully in Romania, Tanzania, Vietnam and Pakistan.



1.2.1 Strategic priorities and sustainability vision

The policy and regulatory context confronting the EU electricity sector remains challenging. While driven by an overarching need to reduce greenhouse gas emissions, ensure security of supply and maintain competitiveness, a range of factors contribute to increased uncertainty and risk for the sector. The ongoing financial crisis; re-examination of the national energy policies in the wake of Fukishima; the impact of increasing shale gas production; the unsustainability of certain renewable energy support schemes and, in particular, regulatory uncertainty inhibits forward planning and investment, and increases costs.

Key policy and regulatory uncertainties at EU level relate to the setting of targets post 2020 for renewable energy and greenhouse gas emissions, the proposed energy efficiency directive and the perceived need to amend the EU Emissions Trading System to deliver a higher EUA market price. It is apparent that ensuring coherence between policy instruments aimed at multiple objectives requires urgent attention.

In 2011 the EU Commission published a number of 'roadmaps' to guide the evolution of long-term policy to 2050 on the topics of energy, resource efficiency and the low carbon economy. These roadmaps highlight the radical changes in energy production and consumption required if climate change goals are to be achieved. It is apparent that the decarbonisation of electricity production and increased electrification of heating and transport will be needed to achieve a sustainable economy.

ESB's approach to sustainability positions it to benefit from these new challenges and opportunities.

ESB continues to work towards a number of short and medium term strategic objectives directly and through its representative organisations, Eurelectric, the National Electricity Association of Ireland (NEAI) and the Irish Business and Employers Confederation (IBEC), to address the above challenges.

ESB will:

- Maintain its financial strength through a rigorous cost reduction programme
- Maximise the benefits of its status as a vertically integrated, generation, transmission and supply business
- Maintain the programme of investment in networks and renewable generation
- Develop and provide new energy and innovative service offerings for customers
- Meet its annual safety and health and wellbeing objectives
- Deliver its emissions reduction, energy efficiency, waste reduction and water conservation targets
- Ensure that it uses physical resources as efficiently as possible
- Promote the role of electricity in decarbonising the economy and specifically work to remove the barrier to uptake presented by inappropriate primary energy equivalence factors
- Develop a strong sustainability culture within the organisation to guide and shape its strategies, investments and operational activities and drive innovation; and
- Report its actions in a transparent and open manner and respond to the feedback received.

Wind capacity up
96MW
to 328MW in total

€510MILLION
was invested in transmission and distribution

COMMITMENTS & PROGRESS

ESB has also continued to deliver on the commitments set down in its Sustainability Charter, adopted in 2008. Our delivery against target is outlined in the table below:

CHARTER COMMITMENTS:	PROGRESS BY END 2011
Reduce CO2 emissions from generation in Ireland by 30% by 2012; 50% by 2020 and carbon neutral by 2035 (reductions based on 2005 baseline).	We have already reached our 2012 goal to reduce CO2 emissions from generation in Ireland by 30% and we are well on our way to achieving our 2020 target.
Adopting a target of a 30% reduction in carbon emissions from our internal business activities by 2012, in addition to our targets for the performance of Network and Generation assets.	At the end of 2011 ESB's internal carbon footprint had been reduced by 24% against a 2006 baseline.
Committing to leadership in Sustainability through partnership at all levels in the organisation.	We have over 180 local sustainability champions throughout the company, including our overseas locations in the UK, Spain and the Far East. In 2011 staff surveys show a strong commitment to sustainability (over 90% of staff support the Sustainability Programme)
Reducing our impact on the environment to a practicable minimum through the prevention of pollution, reduction of waste and the efficient use of energy, water and other resources.	Formal Environmental Management Systems to ISO 14001 are in place in all our power stations and in our nationwide ESB Networks organisation. A key aspect of ISO 14001 is a requirement for continuous improvement in performance. In 2011 remote electronic water monitoring was installed in all of our major locations.
Identification and dissemination of best practice in Sustainability throughout ESB, including our international operations.	Knowledge management and collaboration tools have been deployed throughout the company based on Microsoft Sharepoint. Last year, we initiated a Sustainability Awards Scheme, which attracted 200 entries from across the company. In 2011 we extended the scheme to our international operations and introduced bi-monthly awards. Our overall sustainability award for 2011 was won by our team in Rousch, Pakistan. By the end of 2011, 50% of ESB staff have completed foundation level training in sustainability – now embedded as a core competency within the company. The training is delivered in an online format.
Integrating sustainability considerations into our procurement activities, as well as in our investment and expenditure decisions.	Our procurement policy continues to require that procurement specifications should take into account best-practice environmental and sustainability standards.
Actively and effectively communicating and involving staff and contractors in identifying and implementing performance improvements.	Sustainability Improvement Plans have been put in place in all ESB locations in Ireland and overseas. In the 2011 staff survey, 74% of staff confirmed they are adequately informed how to be sustainable at work and 71% reported improvements in sustainability in the past year.
Adopting appropriate management structures, management systems and targets.	Our performance is overseen by the Heath, Safety and Environment Committee of the Board. Sustainability targets are included for all ESB directors and business units. Cross company sustainability initiatives are co-ordinated by a central sustainability committee.
Assessing the impact of our operations on biodiversity and implementing opportunities for enhancement.	Following a major biodiversity review completed in 2010, a new Biodiversity Policy was approved in 2011; the plans will be managed through our Environmental Management Systems (EMS) process.
Openly reporting on our environmental performance in a verifiable way.	All ESB generation emissions are reported and verified to the relevant environmental authorities under the Integrated Pollution Prevention and Control licensing regime and EU ETS scheme. ESB produced its first Sustainability Report in 2010. Our 2011 Sustainability Report was aligned to the Global Reporting Initiative (GRI). We report out greenhouse gas emissions to the Carbon Disclosure Project. In October 2011 ESB was one of four companies in Ireland to be accredited to the new Business Working Responsibly Standard (BWR).

1.2.2 Impacts, risks and opportunities

ESB's key sustainability impacts concern:

- The safety of staff, contractors and the public either working on or coming in contact with our assets given, in particular, the dangers posed by electricity, hydroelectric dams and transport
- Minimising our impacts on the environment in particular regarding
  - Emissions of greenhouse gases, sulphur dioxides, nitrogen oxides and particulate matter from the burning of fossil fuels
  - The production and safe management of waste streams including hazardous wastes and ash
- Improving resource efficiency:
  - Internally, through the development of renewable energies and a continuous focus on energy efficiency and waste reduction
  - For our customers through the provision of energy service solutions
- Maintaining the security of energy supply in our generation, supply and networks activities
- Preserving our reputation through compliance with statutory and regulatory obligations and internal policies and standards including governance, financial, operational, health and safety and environmental matters
- Engaging with communities to reflect the trust the place in us as we conduct our various activities
- Dealing fairly and efficiently with our suppliers and maintaining integrity in all procurement and related transactions
- Retaining a strong balance sheet and credit rating to support capital investment and the long-term future of the company
- Creating and developing innovative solutions to the technical challenges presented in making our business and energy use more sustainable

The safety of staff, contractors and the public has been a core value of the company since its foundation. A clear focus on safety, health and wellbeing, lead by successive Chief Executives, has resulted in major performance improvements in the key indicators of fatalities, lost time injuries and staff absenteeism. The challenge is to maintain continuous improvement in our behaviours and performance to deliver a zero-injury environment on an on-going basis. Having tackled the key risk areas and employed a wide range of control systems and procedures, we are now applying behavioural psychology techniques to address those factors that continue to lead to safety incidents and near misses.

Ongoing scientific research reinforces the concern that climate change presents a real and potentially catastrophic risk for our planet. While immediate economic crises have seen this issue fall as a priority for the general public, we continue to implement our corporate strategy which commits us to be carbon neutral by 2035 in our core market. The EU's primary mechanism to address greenhouse gas emissions is the emissions trading system (ETS). However, conflicting policy instruments aimed at delivering the various aspects of the EU's 20-20-20 targets for greenhouse gases, renewables and energy efficiency are undermining the price formation mechanism in the carbon market. The effect of this has been to undermine the credibility of the ETS and to increase the risk for all generation investments in Europe.

Thermal generation is the primary source of other emissions to air and water and in relation to waste management activities. These activities are regulated under the integrated pollution control licensing system. The framework EU legislation establishing this regime was substantively revised in 2010 and establishes new emissions limits and controls. Completion of an environmental retrofit project at Moneypoint (coal) in 2010 and the earlier sale of older plant [Tarbert (oil) and Great Island (oil)] in 2009 enable us to meet the more stringent new requirements.

ESB has sought to be an exemplar in sustainability by setting improvement targets in respect of resource use, including energy. A wide range of programmes to save energy and other resources are in place and we have made significant savings to date against our targets. A challenge in this regard is the way electricity is treated when determining building energy efficiency – usually calculated in terms of primary energy-equivalent savings. The current approach inhibits the use of electricity use for heating despite the emissions savings delivered and, in the case of heat pumps, the renewable energy contribution made. ESB is working at national and EU level to correct this anomaly.

ESB's Electric Ireland business made good progress in selling energy efficiency products through its Home Services 'one-stop shop'. for domestic customers. A full installation service including home insulation, gas boiler upgrades, heat pumps, solar panels and a gas boiler service/repair service is provided.

ESB has sought to be an exemplar in sustainability by setting improvement targets in respect of resource use, including energy.

20%

improvement in national energy efficiency by 2020

The Better Energy Programme is a key component of the National Plan to deliver the EU target of 20% improvement in national energy efficiency by 2020. The Sustainable Energy Authority of Ireland (SEAI) administers the Better Energy Programme. In 2012, energy suppliers including Electric Ireland and the SEAI will participate in a voluntary agreement which commits suppliers to delivering energy efficiency savings, proportionate to their market share.
This approach is consistent with provisions in an energy efficiency Directive which is under negotiation at EU level.

ESB aims to achieve a balanced mix of generation assets to support the security of supply to customers. In 2011 investment in wind generation continued with 96 MW of new wind generating capacity added to our fleet. There was further development of the Networks to support connection of new generation, primarily wind. The challenge for the future will be to balance demand with supply from intermittent renewables, primarily wind. Smart metering has a crucial role to play here. The national Smart Meter Trials, which were completed during the year, resulted in a fall in residential electrical energy consumption by 2.8% on average and enabled load shifting to reduce peak loading by up to 11%. These results are encouraging and the Commission for Energy Regulation (CER) is currently considering a full roll out of the scheme to every customer in the country.

ESB's activities are subject to extensive regulatory control and oversight. Complying with the spirit as well as the letter of the various fiscal, procurement, generation, networks, environmental and safety regulatory regimes under which we operate is critical to protecting our brand and reputation. Policies and procedures are in place and are under constant review to ensure compliance. In addition, roll-out of externally accredited management systems in safety and environment to all activities is nearing completion.

ESB, whose activities extend to all parts of Ireland, has consistently engaged and supported the development of local communities and national organisations. Competition in the electricity sector and the requirement to generate profit, as opposed to its previous 'break-even' mandate, has changed to some extent the nature of the relationship between the company and communities. The challenge of maintaining close links with communities is increasing and new approaches are being implemented across all our businesses.

ESB is subject to EU and Government requirements in respect of the procurement of goods and services. An extensive set of procedures are in place in this regard. A key aspect of these has been the requirement to ensure procurement specifications take into account environmental and sustainability standards. The challenges going forward are to support suppliers meet high environmental and sustainability standards while maintaining competitive price structures.

Notwithstanding the financial challenges facing Ireland and ESB, the company continues to innovate. A more structured approach to Research and Development decision-making and reporting was adopted in 2010. Under this framework, the company continued its investment in the electrification of transport through the ESB eCars Project, the development of ocean energy and, through our venture capital fund Novus Modus, a number of exciting new technologies derived from research undertaken within the national university system. ESB Networks won the '2011 International Project of the Year Award' in the Renewables Integration Category. The projects were described by Powergrid as being "innovative, comprehensive and deeply relevant as wind penetration increases".

ESB aims to achieve a balanced mix of generation assets to support the security of supply to customers.

1.2.3 SUSTAINABILITY TRENDS

The trends in four topics critical for sustainability will determine the long-term prospects and financial performance of ESB. These are:

- Ongoing financial crisis in the Eurozone and Ireland's fiscal situation
- Changing market structures in the context of an integrated EU market
- Portfolio optimisation to meet carbon emission targets and address climate change
- Infrastructure provision to support energy efficiency and renewables

1.2.3.1 Ongoing financial crisis in the Eurozone and Ireland's fiscal situation

The current economic climate is expected to continue to pose significant challenges for our business into 2012. However, the Group has a strong liquidity position as a result of debt facilities agreed in 2010 and 2011. In addition, further progress in the performance improvement initiative will lower costs, maintain competitiveness and preserve strong financial metrics.

This should enable the Group to deliver significant capital expenditure programmes and ensure the supply business competes successfully in the unregulated retail electricity market.

ESB is structured as a vertically integrated utility company – with a presence across the value chain – including the generation, transmission and distribution of electricity, as well as the sale of power, gas and energy services that our customers need. This gives us the scale, operating capabilities, risk management tools and knowledge that we need in order to deliver value for our shareholders, customers and other stakeholders.

1.2.3.2 Changing market structures in the context of an integrated EU market

The European Union is accelerating the completion of internal EU electricity and gas markets to improve economic efficiency and support recovery and growth. A key step in this direction is the early development and adoption of a 'Target Model' for trading across interconnectors (capacity allocation, day ahead and intra-day trading arrangements). Electricity market reform in the Great Britain market is also a priority of the UK Government. These developments will have inevitable impacts on the all-island Single Electricity Market, affecting the operation and profitability of existing plant and new investments.

To address regulatory constraints, ESB progressively reduced its market share in the Irish electricity market in line with Government policy and the requirements of the Commission for Energy Regulation (CER). As a result, in April 2011 ESB was granted full commercial freedom in the supply market. At year end ESB accounted for some 46% of generation output and 39% of electricity sales in the SEM.

1.2.3.3 Portfolio optimisation to meet carbon emission targets and address climate change

ESB's legacy coal, peat and gas-fired plant mean that we face a challenge in delivering the stretching carbon emissions targets contained in our Corporate Strategy. However, significant progress has been made in recent times with the closure of some older plant, increase in wind generating capacity and the construction of a new, high efficiency CCGT plant. We have already achieved our first interim target of a 30% reduction in CO2 emissions by 2012. Our greenhouse gas emissions have reduced from 14.1Mt CO2 in 2005 to 8.8 Mt CO2 in 2011 (-37%) in the SEM area.

1.2.3.4 Infrastructure provision to support energy efficiency and renewables

Over half of ESB's planned investment to 2022 will be in network infrastructure. This will provide new connections to more localised renewable generation and necessary grid reinforcements and continue the refurbishment of existing networks. As part of an overall investment programme worth €4 billion, €510 million was invested in national electricity infrastructure in 2011. Electricity distribution and transmission systems were renewed and extended, providing Ireland with an improved electricity network.

Key network enhancements in 2011 included:

- 200 MVA additional capacity
- Completion of 400 km of High Tension Low Sag (HTLS) to provide additional capacity on the transmission system
- Extension of the Rural Automation Schemes to improve network performance.
- Substantial progress was made in converting the rural network from 10 kV to 20 kV (resulting in double the capacity and a 75% reduction in losses) so by the year end approximately half of the rural network was operating at 20 kV.

02 ESB GROUP PROFILE

ESB was established under Statute in 1927 and, with the exception of Transmission System operations which are the responsibility of the independent operator EirGrid, our activities include the generation, trading, distribution and supply of electricity and the provision of energy services to final customers.

IN THIS SECTION

WE PROVIDE AN OVERVIEW OF ESB GROUP

Our vision is for ESB to be a world-leading, commercially successful and environmentally responsible utility capable of adapting to the changing markets in which we operate

ESB was established under Statute in 1927 and, with the exception of Transmission System operations which are the responsibility of the independent operator EirGrid, our activities include the generation, trading, distribution and supply of electricity and the provision of energy services to final customers. ESB also provides engineering services internationally through our consultancy arm, ESBI. The State holds 95% of the shareholding of the company with the remainder held by staff. In 2010 ESB acquired Northern Ireland Electricity [2] (NIE) which owns the electricity transmission and distribution network and operates the electricity distribution network in Northern Ireland.

In 2011, we employed approximately 8,200 staff, (including 1,240 in NIE) supplying some 1.3 million customers with electricity and achieved €3.0 billion in revenue. The total assets of the company amount to €12.5 billion. In 2011, capital expenditure amounted to €880 million.

Our main businesses are structured as follows:

- ESB Energy International encompasses ESB Group's generating and energy trading operations and the consultancy, asset management and investment businesses of ESB International. We have generation operations in Ireland, Spain and the UK.
- ESB Networks owns the Transmission and Distribution assets in the Republic of Ireland and operates the Distribution system and our Telecoms business
- Electic Ireland is the supply arm of our business and includes the provision of energy efficiency services.
- NIE owns the electricity transmission and distribution network and operates the electricity distribution network in Northern Ireland.

Our 2008 Corporate Strategy places sustainability and carbon emissions reductions at the core of our business and set short, medium and long-term goals in this respect. Our vision is for ESB to be a world-leading, commercially successful and environmentally responsible utility capable of adapting to the changing markets in which we operate.

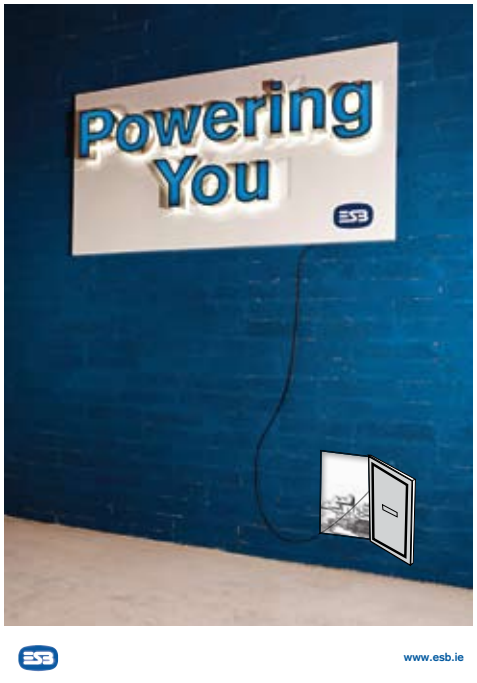
These goals affect not just to our generation activities but also our Networks business, which will provide the infrastructure to support the deployment and integration of renewable technologies and delivery of energy efficiency improvements. At the end of 2011 we had 6.0 GW of thermal generation of which 4.1 GW were located in the SEM. We continue to expand our wind portfolio, adding 96 MW of wind capacity during the year. At the end of 2011 we had 328 MW of operational wind capacity. This adds to our 217 MW of hydro and 292 MW of pumped storage capacity.

Our aim is to continue to invest on average about €0.9billion p.a. over the next decade in the SEM on network development, development of our generation portfolio, the deployment of smart meters and the creation of a national charging system for electric vehicles.

The success of these projects depend on our ability to gain the acceptance of neighbours, customers and the wider society. Since our foundation we have sought, with significant success to work closely with all our stakeholders and provide a positive contribution to society.

In 2011, we commenced a review of our strategy in light of developments since its adoption, in particular the ongoing financial crisis and consequent impact on demand.

Details of our credit rating are set out in our annual report.



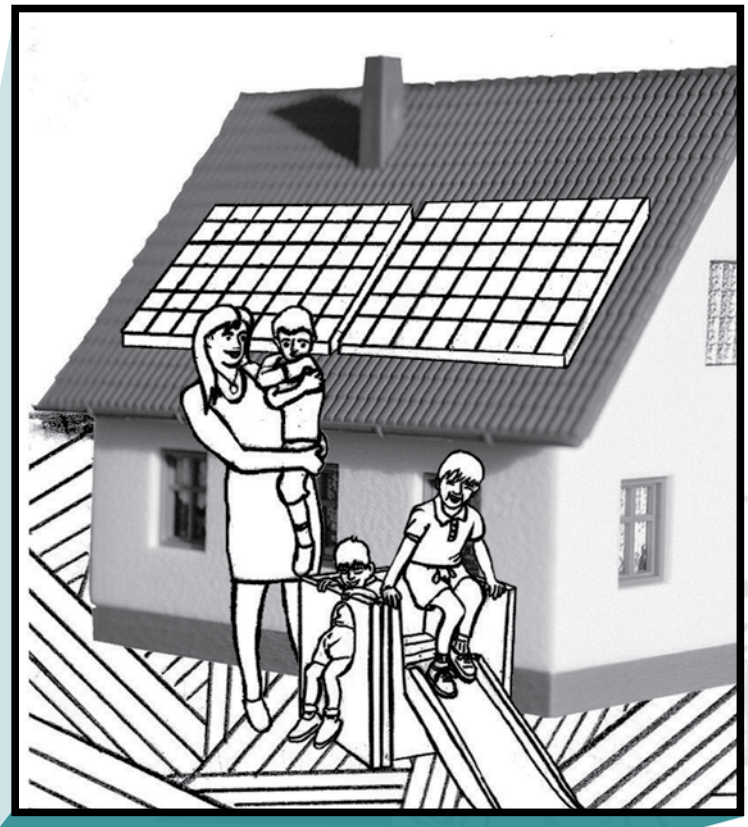
[2] This report does not cover NIE's sustainability performance. Information on NIE is available at www.nie.co.uk

03 REPORT PARAMETERS

The information provided in this document addresses the year 2011 and meets the commitment given in our 2009 Sustainability Report to communicate to our stakeholders on an annual basis. With the exception of NIE, the report covers ESB Group activities where ESB has effective management control (de facto 50%+ ownership).

IN THIS SECTION

WE EXPLAIN THE PARAMETERS OF THE ANNUAL REPORT



This document addresses the year 2011 and meets the commitment given in our 2009 Sustainability Report to communicate to our stakeholders on an annual basis

We have sought to provide a range of indicators that we believe provides the average reader with sufficient information on ESB's sustainability performance. While we base our report on the Global Reporting Initiative (GRI) standard, we note that not all GRI performance indicators are relevant or significant to ESB and its operations.

Our 2010 report was presented for viewing online (netbook format) and also in pdf format (downloaded 240 times). We have yet to put in place a formal consultative process relating to the scope and content of these reports. However, we maintain ongoing dialogue and engagement at multiple levels with our key stakeholders who include:

- Owner and policy-maker [the Minister for Communications, Energy and National Resources (and his Department (DCENR)] and other key Government Departments (Finance, Environment, Community and Local Government and Jobs, Enterprise and Innovation),
- Financers,
- Staff Trade Unions,
- Regulatory agencies (CER, EPA, HSA, NPWS and SEAI),
- Contractors and Suppliers,
- Representative associations (NEAI, Eurelectric and IBEC) and
- Community groups (BITCI, Grian).

From these interactions and in consultation with BiTCI, an organisation promoting good corporate responsibility to businesses, we have sought to evaluate and reflect the interests of key stakeholders in respect of the 2011 report.

240

The number of times the 2012 ESB Sustainability Report was downloaded in Pdf format from our website

FEEDBACK & ACTIONS

Feedback from a small sample of stakeholders, both internal and external, indicates general satisfaction with the content of the report. Suggestions were made to improve the readability of the online version of the report.

STAKEHOLDER CLASS	ENTITIES	CONCERNS	OUR ACTIONS TO ADDRESS CONCERNS
Shareholder	DCENR, Dept. of Finance, Employee Share Ownership Trust.	Commercial performance, investment decisions, strategic plans and long-term sustainability.	> Ongoing dialogue, report submissions and investment approval requests.
Employees and service providers	Staff, contractors and suppliers.	A growing business, a safe work environment, fair employment and trading practices.	> Partnership Groups, Executive – Union Forum, Safety Committees. > Promoting behaviours consistent with our Code of Ethics > Continuous dialogue with employees and contractors on health and safety. > Detailed processes and procedures for purchase tendering, approval and debriefing.
Rating Agencies	Standard and Poor's, Moody's and Fitch Ratings.	Corporate risk, strategy and delivery, core financial performance.	> Reports. > Meetings and presentations. > One-to-one engagements.
Customers	Domestic, commercial and industrial customers.	Price, continuity and quality of electricity supplies.	> Arrangements for fuel-poor customers. > Surveys and direct engagement to determine views. > Timely responses to queries, concerns and requests for information. > Performance standards for supply continuity and service. > Energy services promotion and offerings.

We have sought to provide a range of indicators that we believe provides the average reader with sufficient information on ESB's sustainability performance...

Policymakers	EU Commission, DCENR, other Government Departments, EPA, SEAI, Government Task Forces and Advisory Groups.	Energy, climate and environment policies. Impacts on industrial, economic and social policies.	> Ongoing corporate strategy review in response to external developments. > Ongoing dialogue and representation of ESB's strategic views. > Submissions to consultations.
Sustainability NGOs	BiTCI, CDP, IIEA, Irish Wind Energy Association, Irish, Marine Renewable Industry Association, Grian.	Climate, environment and sustainable development.	> Support, engagement and participation in organisations. > Ongoing dialogue and representation of ESB's strategic views.
Business NGOs	Eurelectric, IETA, NEAI, IBEC, AEP.	EU and national energy, climate and sustainability policy formation.	> Active participation and contribute to industry positions on strategic policy proposals.
Business analysts	Specialist policy advisors, ESRI.	Energy and climate policy development, policy instruments and commercial implications.	> National, EU and global analyses of energy and climate policy developments and future business impacts.
Engineering and scientific researchers	UCD ERC, UL , DIT, TCD, NU I Maynooth, EPRI, SEAI, VGB, industry partners.	Innovation and new technologies in electricity generation, distribution and use, climate science.	> Support and collaboration on research projects. Investments in companies producing leading edge technologies.
Public Representatives, community associations	EU, national and local politicians, local community organisations.	ESB's business development and plans, local impacts of ESB activities.	> Ongoing dialogue and representation of ESB's strategic views. > Communications and dialogues on local activities
Regulators	CER, EPA, HSA, NPWS, SEAI.	Setting and compliance with operating licence and permit conditions.	> Ongoing dialogue, reports, studies. > Representation of ESB's views on regulatory proposals and actions.

04 GOVERNANCE

4.1 OVERVIEW

ESB complies with the Code of Practice for the Governance of State Bodies. The Code sets out principles of corporate governance which the Boards of State Bodies are required to observe. The Group also complies with the corporate governance and other obligations imposed by the Ethics in Public Office Act, 1995 and the Standards in Public Office Act, 2001. ESB also conforms, as far as possible, and on a voluntary basis to the UK Corporate Governance Code.

IN THIS SECTION

WE PROVIDE AN OVERVIEW OF ESB GOVERNANCE

EXPLAIN OUR SUSTAINABILITY AWARDS SCHEME

TAKE A LOOK AT MEMBERSHIPS

ANALYSE STAKEHOLDER ENGAGEMENT

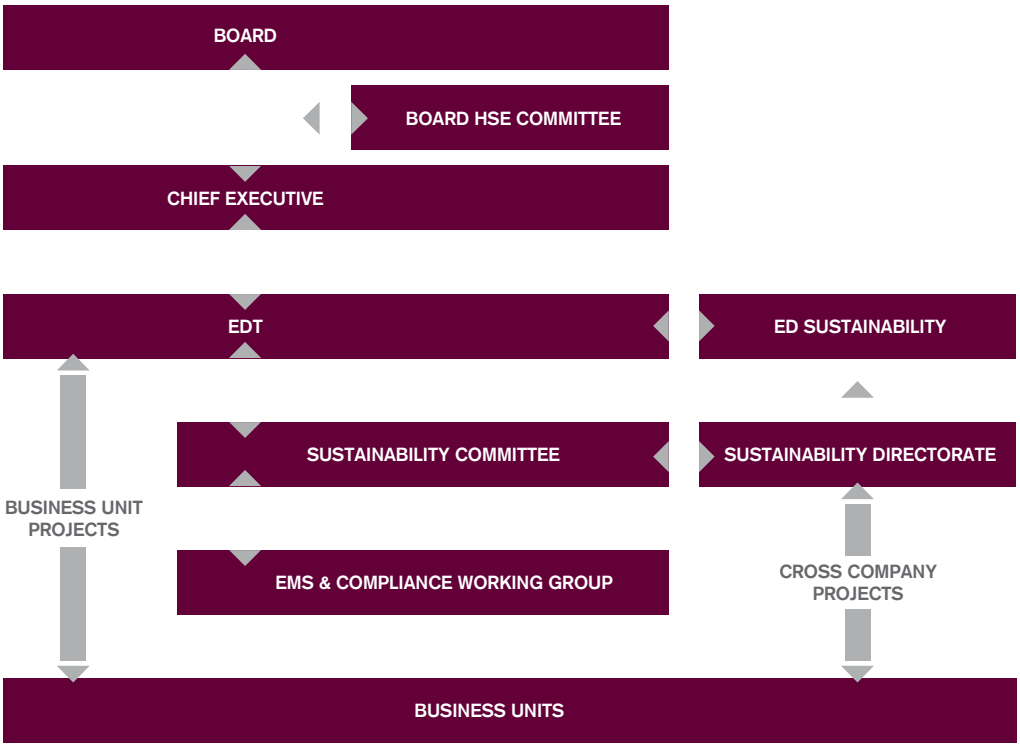
ESB contributes to a significant number of national and international business organisations, holding senior positions in the National Electrcity Association of Ireland and Eurelectric.

The Board and Executive Director memberships and the Board's Governance report for 2011 are detailed in our Annual Report [3]. The Board comprises a Chairperson and six other appointees nominated by Government, the Chief Executive and four Worker Directors elected by staff. There are two female members appointed to the Board. Two members are also UK residents, reflecting the increasing importance of that region to the strategic goals of the company. Other than in respect of the Chief Executive and Worker Directors, there are no specific qualifications or expertise required of appointees to the Board. However, the Government in making appointments is mindful of the strategic importance of the industry for the economic and social development of the country. The Chief Executive is the only Executive member of the Board. As noted previously, overall responsibility for ESB's sustainability performance rests with the Board. The Health, Safety and Environment Committee of Board members, chaired by the senior Worker Director, assists the Board in its evaluation of sustainability performance. The Chief Executive has overall responsibility to the Board for sustainability management within the company.

The State-sponsored structure of the company, the legislative provision for worker membership of the Board and our general partnership arrangement with our Trades Unions permits our owners and staff to have direct input into Board strategies and policies.

In 2011 the Executive Committee comprised the Chief Executive, Deputy Chief Executive, six Executive Directors and the Company Secretary. There was one female member of the Executive Committee. This Committee agrees appropriate objectives, policies, targets and measurement indicators reflecting corporate strategy goals and oversees sustainability performance against these targets and indicators. The Executive Director, Sustainability leads the development of ESB's sustainability strategy, supports the analysis of and responses to external drivers, oversees ESB's research and development programmes, manages the internal Sustainability Programme which aims to embed a sustainability culture within the company and reports on the sustainability performance for the Group.

A Sustainability Committee of senior managers from each business area has been established to assist the Executive Director Sustainability in relation to external developments in policy/strategy, research and development priorities, overall group performance and the delivery of cross-company sustainability projects. A complementary grouping of volunteer Sustainability Champions has been put in place to actively drive culture change across the organisation.



[3] http://www.esb.ie/main/about-esb/ESB_Annual_Report_and_Accounts_2011.pdf

"The Awards were developed as a vehicle to allow us to engage with staff on the very positive things that are being done throughout the business and to showcase how real innovation and fresh thinking is coming to the fore in addressing how we need to 'do more with less' resources in the future." John Campion

Sustainability Awards

A key element of implementing our 2008 Strategic Framework is that of staff engagement.

In 2011 The Sustainability Award Scheme was extended with bi-monthly awards in addition to the annual award. Awards go to individuals and teams in recognition of their sustainability initiatives undertaken in the workplace, in the home and community.

The bi-monthly awards focus on celebrating best practice and faciliate ongoing knowledge sharing and learning.

Bi-monthly award categories include:
> Personal award: For promoting sustainability causes among co-workers
> Innovation award: For developing more sustainable ways of doing things
> SIP Award: For a notable Sustainability Improvement Plan Initiative
> Volunteer award: For a significant volunteering initiative

The bi-monthly and annual awards are open to staff in all locations and the judging panel is made up of Sustainability managers from throughout ESB. The annual award attracted over 200 entries in 2011, reflecting the high level of staff engagement in improving our performance.

Cross Company innovations

Examples of cross company sustainable innovations implemented in 2011 include

> Managed Print Services

ESB entered a 3 year contract for managed print services across the business. This entailed replacing individual PC printers with new multi function networked printers and providing improved service, while reducing costs and paper use.

> Automatic Power down for PCs

This was achieved by installing Nightwatchman software which allows the energy use of PCs be controlled outside office hours. Reduce standby electricity consumption contributes to ESB's energy reduction target.

4.2 MEMBERSHIPS

ESB contributes to a significant number of national and international business organisations, holding senior positions in the National Electricity Association of Ireland and Eurelectric.

ESB also maintains active membership of the Irish Business and Employers Confederation (IBEC), the Irish Wind Energy Association, the Marine Renewable Industry Association, the Association of Electricity Producers (AEP) in the UK, the International Emissions Trading Association (IETA), Eurelectric, the Verband der Großkraftwerks-Betreiber (VGB) the German Boiler-makers Association, the Edison Electric Institute (EEI), the representative organisation for electricity utilities in the USA and the Electric Power Research Institute (EPRI) based in the USA. Through these we participate in national, EU and global policy discussion and formulation and in technology development relevant to all aspects of our business.

In addition, ESB is a member of and provides financial support to a number of research organisations and think-tanks and including the Economic and Social Research Institute (ESRI) and the Institute for International and European Affairs (IIEA).

John Campion, Executive Director Sustainability & HR and Tony Carroll, Sustainability Manager with the Business Working Responsibly Award.

4.3 STAKEHOLDER ENGAGEMENT

During 2010 ESB engaged directly and indirectly with key stakeholders on sustainability strategy and performance. While the nature and intent of these interactions varied they were all conducted on the basis of our underlying principles: that we treat all the people we engage with in an ethical and transparent manner; that we avoid harm to our staff, contractors or the public, and that we minimise our impact on the natural environment.

The overarching expectation of all our stakeholders remains that we undertake all of our activities in a competent and efficient manner that meets the needs of customers, enhances local, regional and national development and minimises environmental impacts, particularly climate change. Our business partners, suppliers and customers expect fairness and integrity when they deal with one of Ireland's leading energy companies. Our customers also expect secure and reliable energy supplies and that we will continue to innovate and add to the economic and social prosperity of the countries and the regions in which we operate.

During 2010, ESB sought a Credit Rating and this required interaction with a new stakeholder grouping; the Credit Rating Agencies. We now provide the data and information they need through the information requests received directly from them supplemented by our annual Sustainability Report. Direct dialogue is backed up with company presentations and one-on-one talks.

BWR - ESB one of first four to receive new Sustainability Accreditation

ESB is one of the first four companies in Ireland to achieve the Business Working Responsibly (BWR) accreditation - a new standard for sustainability and corporate responsibility based on the ISO26000 social responsibility standard. The other three companies in Ireland to receive BWR accreditation are Intel, Microsoft and CRH.

The standard was developed by Business in the Community (BITC) and this is the standard's inaugural year after three years of development. The standard is one of the first of its kind in Europe to be third party verified and audited.

To achieve the accreditation, ESB initially completed a comprehensive online questionnaire with more than 290 questions aimed at analysing the company's performance against more than 26 indicators. Sustainability, customer relations, supply chain management, workplace, community and environment are some of the areas assessed by the certification process. The completed questionnaire was assessed by a Business in the Community Ireland expert who advised us that we had reached the standard to apply for a third-party audit and this was undertaken by the National Standards Authority of Ireland. The certification extends over a two-year period after which the company will need to reapply to retain the accreditation.

Speaking at the presentation of the accreditation, Business in the Community Ireland CEO Tina Roche said, "Having the mark will allow companies to benchmark their responsible practices against others and finally gives a concrete definition to what excellence is in responsible and sustainable business."

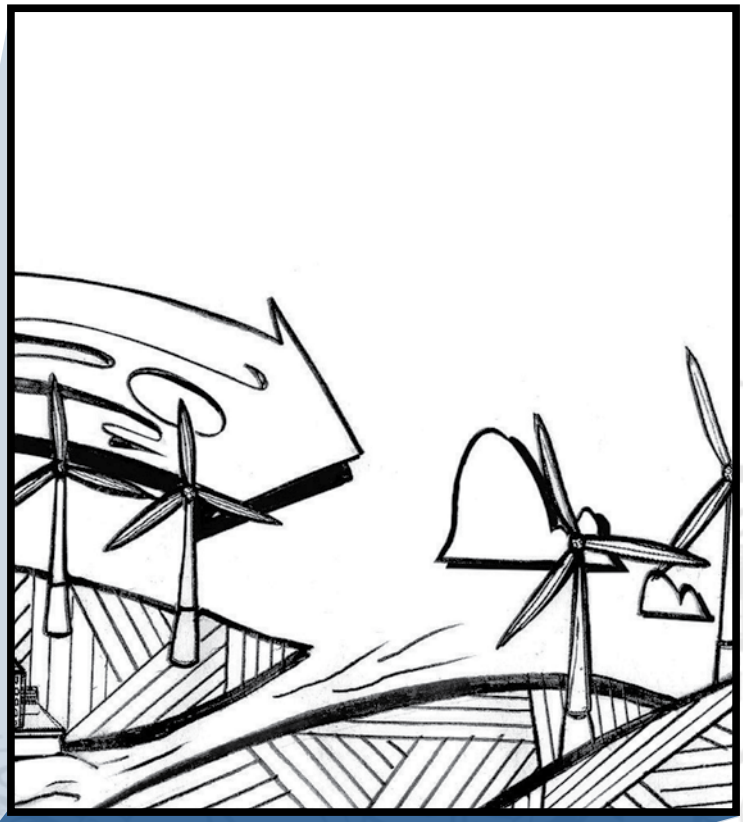
ESB Sustainability and HR Director John Campion said, "We are delighted to receive this accreditation from BITC. The standard is quite onerous and all staff across the company who contributed to its achievement should be congratulated – it reflects both the longstanding commitment of ESB to working responsibility with our communities, customers and stakeholders and also the very significant progress we have made in sustainable working in the three years since we launched our Strategic Framework."

FOR MORE INFORMATION ON THE BWR MARK VISIT THE SUSTAINABILITY SITE ON ESBNET OR WWW.BITC.IE

05 CLIMATE

The ongoing financial crisis continues to dominate policymakers', business and the public's attentions at global, EU and national levels, overshadowing the growing scientific concerns regarding climate change. Notwithstanding the global economic downturn antropogenic CO2 emissions (and the associated concentration of CO2 in the atmosphere) continue to increase strongly. Modest progress was made in international negotiations in Durban addressing a global framework to replace the Kyoto Protocol which expires in 2012. There is a growing concern that without a significant shift from current trends in the near term there is a risk of "locking in" an irreversible global temperature increase of greater than 2 degrees centigrade.

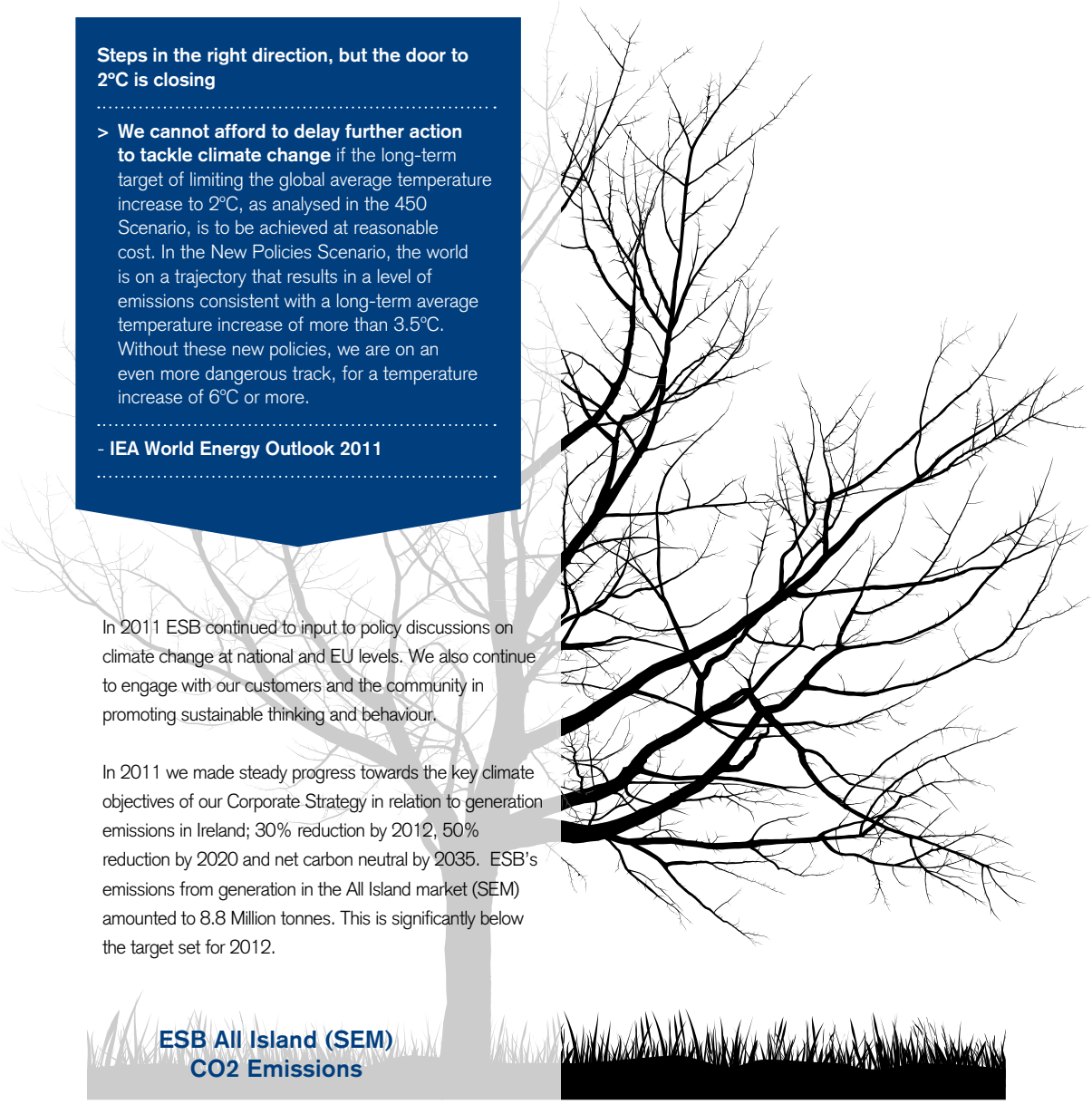
IN THIS SECTION



Steps in the right direction, but the door to 2°C is closing

> **We cannot afford to delay further action to tackle climate change** if the long-term target of limiting the global average temperature increase to 2°C, as analysed in the 450 Scenario, is to be achieved at reasonable cost. In the New Policies Scenario, the world is on a trajectory that results in a level of emissions consistent with a long-term average temperature increase of more than 3.5°C. Without these new policies, we are on an even more dangerous track, for a temperature increase of 6°C or more.

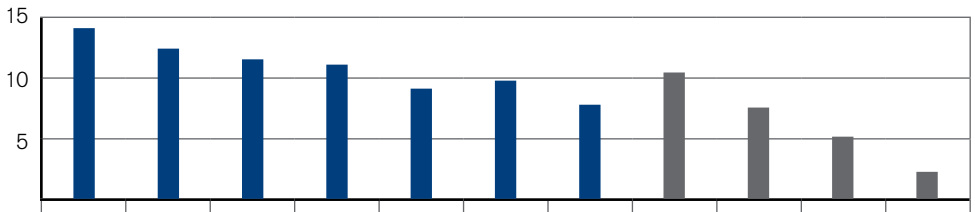
- IEA World Energy Outlook 2011



In 2011 ESB continued to input to policy discussions on climate change at national and EU levels. We also continue to engage with our customers and the community in promoting sustainable thinking and behaviour.

In 2011 we made steady progress towards the key climate objectives of our Corporate Strategy in relation to generation emissions in Ireland; 30% reduction by 2012, 50% reduction by 2020 and net carbon neutral by 2035. ESB's emissions from generation in the All Island market (SEM) amounted to 8.8 Million tonnes. This is significantly below the target set for 2012.

ESB All Island (SEM) CO2 Emissions



	2005	2006	2007	2008	2009	2010	2011	2012	2020	2030	2035
SEM Emissions	14.1	12.4	11.4	11.0	9.3	9.8	8.8				
Target								10.2	7.6	5.0	2.0

Sustainability is not something we do, it's about how we do things - Liam Ring, Sustainability Change Manager

Overall Group CO2 emissions from generation amounted to 10.2 Million tonnes, a significant decrease on the 2010 figure of 11.6 Mt. The decrease reflects a change in fuel mix but also a reduction in demand due to the economic crisis.

MEASURES	PROGRESS IN 2011
Reduce CO2 emissions from generation in Ireland by 30% by 2012 (2005 baseline).	A reduction of 37% has been achieved by 2011 against the baseline.
Invest in renewables	> 328 MW of Wind capacity installed (+96 MW) > 217 MW of hydro (existing) and 292 MW of pumped storage capacity (existing).
Invest in Networks as agreed with CER (to reduce losses and facilitate the connection of dispersed generation).	2006-2010 investment programme (PR2) completed. 2011-2015 networks programme (PR3) agreed with CER.
Progress Smart Networks strategy (with new management and control systems)	ESB Networks continued implementation of a range of Smart Network initiatives. During the year ESB Networks won the "2011 International Project of the Year Award" in the Renewables Integration Category. The projects were described by Powergrid as being "innovative, comprehensive and deeply relevant as wind penetration increases".
Progress the Smart Meter pilot.	Pilot completed in 2011. A decision by the CER regarding a national roll-out of smart meters is awaited.
Reduce the internal carbon footprint through Energy Efficiency measures (transport and heating).	See performance in Table overleaf.
Support electrification of transport: EVs and infrastructure • 1500 charge points nationally by end 2012 • 30 fast charge installations by end 2012 Undertake R&D: • Participate in EU EV infrastructure project • Research consumer response and behaviour	Approx 400 Chargepoints installed including > 25 DC Fast Chargers > Engagement with NI Plugged In Places > First intercity motorway charging infrastructure coverage completed on M7 > Development of charging equipment and infrastructure progressed with a number of Irish companies > ESB continued participation in a number of projects in relation to transport electrification (ENERVATE, MERGE, EPR, Mobi. Europe) > User trials conducted in conjunction with Trinity College Dublin are underway > MoUs signed with leading international IT companies in relation to the development of EV related technologies > Irish launch of Green eMotion EU project > A range of EV user trials were conducted throughout 2011
Support electrification of heating: • Encourage policy-maker support • Demonstrate feasibility	Policy paper initiative promoted to Eurelectric and paper published. Under the SEAI administered Better Energy Workplaces Fund ESB installed a range of energy saving technologies including heat pumps. Performance will be monitored to establish savings made and ensure that lessons are learned with a view to replication.
Develop the energy services business	Electric Ireland's Home Services is now an established one-stop provider of a full range of energy efficiency products and services, including attic and internal and external wall insulation, boiler replacements and heating controls, solar panels and heat pumps. In 2011, Home Services added gas boiler servicing and repairs to the range of products and services offered to householders. Electric Ireland is extending its energy saving programme to help business save energy and reduce costs.
Monitor CCS developments	Dedicated resource to monitor and evaluate CCS developments.
Reduce energy use in electricity supply (reduce distribution network losses to 7.5% by 2010) A new target has been set to reduce losses to 7.0% by 2015.	This target set by the CER was achieved in 2010 (7.4%) Action to reduce losses continued in 2011 with 2,252km of rural network converted to 20kV.

In 2011 we added 96 MW of wind capacity, bringing our total wind portfolio to 328 MW. In addition we had 58 MW wind under construction at year-end.

We have continued to work on reducing our internal carbon footprint in line with our target of a 30% reduction in emissions by 2012 compared to 2006. This is being achieved principally through reducing our use of energy in transport and buildings.

Our internal energy use is provided in the Table below.

ENERGY SOURCE	2011 (GWH)	2006 (GWH)	CHANGE (GWH)
Electricity	30	38	(9)
Electricity (PEE*)	74	96	(22)
Fossil Fuels			
- Natural gas	1	1	-
- Heating oil	-	-	-
- Diesel	54	59	(5)
Renewable Energy	0.3	-	0.3
TOTAL (PEE)	**129**	**156**	**(27)**

* Primary Energy Equivalent (PEE) is used to allow comparison between different forms of energy. It converts electrical energy into an equivalent quantum of primary energy using a using a nominal factor (2.5) which equates to generation efficiency of 40%.

Our internal carbon footprint is calculated as follows:

EMISSION SOURCE	2006 TONNES CO2	2011 TONNES CO2	CHANGE
Vehicle Fleet emissions	16,788	13,856	-17.5%
Building emissions	23,282	15,959	-31.4%
Air travel	1,462	1,432	-2.0%
Car travel	4,591	4,000	-19.2%
TOTAL	**46,482**	**35,247**	**-24.2%**

As in 2010, all air travel emissions in 2011 will be offset under a Government scheme for this purpose.

Transport

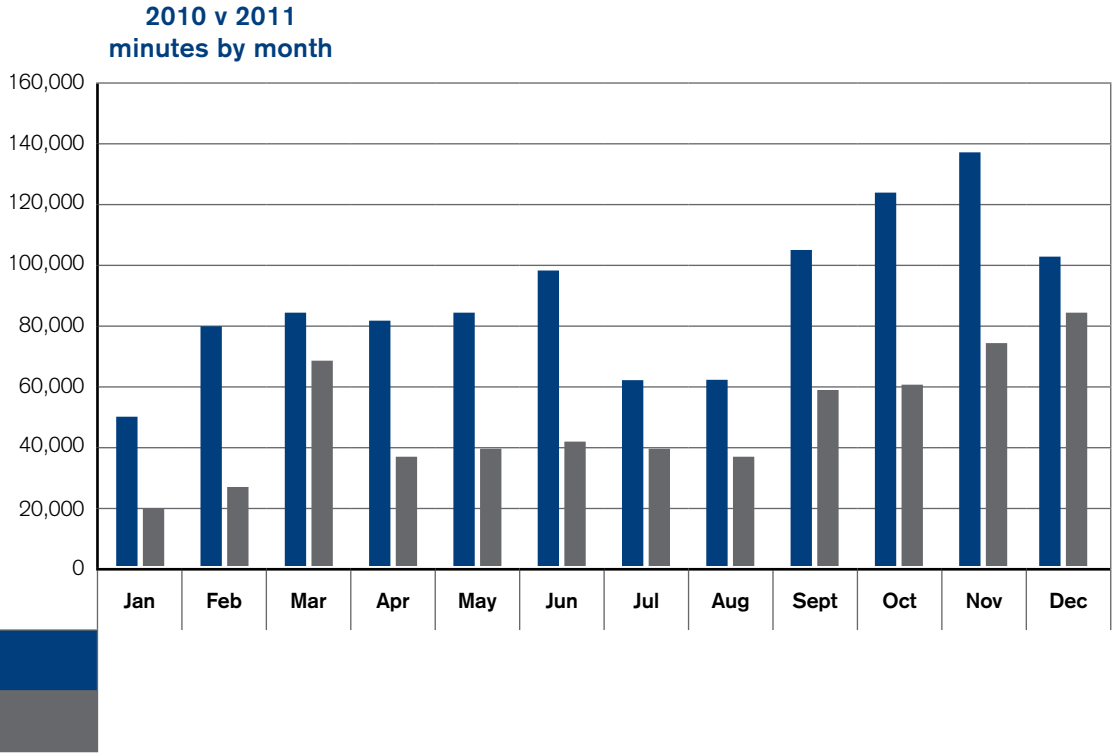
Given that our Networks vehicle fleet is responsible for approximately 40% of ESB's internal carbon footprint reducing transport emissions is a key element in meeting out carbon reduction target.

Progress in reducing transport emissions was maintained in 2011 based on our "Green Fleet" programme. This aims to:

- Reduce the number and optimise the vehicle types in ESB Networks Fleet
- Achieve a 10% penetration of electric vehicles in the Fleet by 2015
- Implement a programme to convert transport auxiliaries (hoists & winches), currently powered from the vehicles engine, to electric battery
- Improve driver behaviour through a continuation of the advanced driver training programme, including eco-driving, and vehicle monitoring
- Research the use of Irish biofuels in conjunction with the University of Limerick (circa 85 vehicles on trial with biofuel mixtures of 20%, 30% and 100%).

Ongoing promotion of our web conferencing facility has seen a substantial increase in its use during 2011 which has continued into 2012. Annual usage increased by 87% compared to 2010.

Increased use of web conferencing gives rise to multiple benefits, increasing productivity and reducing costs, while also reducing our carbon footprint.



Annual usage of our web conferencing facility has increased by 87% compared to 2010.

Building Energy Use

Energy audits have been completed at 130 ESB locations to determine potential savings. The identified measures are being implemented progressively based on cost effectiveness.

The measures implemented include:

- Insulation, boiler, heating systems and heating control upgrades
- Installation of low energy lighting systems and advanced lighting controls
- Energy use awareness campaigns

A Standard for the sustainable and energy efficient design and construction of new buildings has been adopted and a Guideline on the retrofit of existing buildings has been developed.

Targets for building energy use reduction are highlighted in the "STARS" on-line Sustainability Targets and Reporting System which provides up to date performance information thereby ensuring that the issue is effectively managed

Reduction in Network Losses

The considerable investment in improving the "intelligence" of our networks, infrastructure renewal and upgrading the 10kV network to 20kV has resulted in significant reductions in the energy required to transport electricity from the generating stations to final customers. Conversion of a distribution line from 10kV to 20kV doubles the capicity of the line, while losses are reduced by 75%.

Energy audits have been completed at 130 ESB locations to determine potential savings

Adaptation

While focusing our attention primarily on mitigation, it is understood that climate change increases the risk of more frequent and extreme weather conditions which will have implications for electricity systems and requires us also to consider adaptation.

The most significant threat arises in respect of our networks infrastructure, all of which is located in the Single Electricity Market region, and relates in the main to the intensity of future wind and precipitation events.

ESB keeps abreast of developments in relation to adaptation, including participation in national fora on the topic. ESB has yet to undertake a detailed assessment of its requirements for adaptation. We are aware that modelling projections indicate that Ireland, due to its geographic location, will experience less intense consequences from climate change than most other global regions. Results from formal adaptation assessments in the UK [4], which is likely to face similar impacts to Ireland, suggest that the evidence does not support adjusting network infrastructure design standards.Risks posed by flooding are well understood and are managed on an ongoing basis.

[4] Climate Change Adaptation Report by National Grid Electricity Transmission plc, September 2010

INNOVATIVE ESB PROJECT HIGHLIGHTED IN EUROELECTRIC ENERGY WISDOM REPORT*

CASE STUDY
Area-based Retrofit Energy Efficiency

CONTACT PERSON:
Déaglan Ó Dónaill
Project Manager
Tel: + 353 1 893 4459
deaglan.odonaill@esb.ie

Company

Electric Ireland is the energy supply business of ESB. It is the largest electricity supplier in Ireland and is now a dual fuel supplier, having entered the residential gas market at the end of 2011. In the last year, Electric Ireland has commenced an energy services business to complement its energy supply business and to develop the capability to deliver on national energy efficiency targets.

Project

The project retrofitted energy-efficient measures in a 126 housing mixed housing estate (68 private homes, 58 local authority homes) in Dundalk (Aisling Park & Patrick Tierney Crescent) in 2011. The project was a partnership between Electric Ireland, Dundalk Town Council and the Sustainable Energy Authority of Ireland (SEAI). A survey carried out by SEAI in advance of the project indicated that 77.5% of the residents qualified as 'fuel poor'.

Technical Description

The homes in the area were mainly built in the period 1970-1980 when building standards in Ireland were poor. There are a number of different designs, including both bungalows and two-storey houses. Typical construction is timber frame with 2 wall cavity wall construction. Typical Building Energy Ratings (BER) for the homes were D2 - E2 (equivalent to 250-380 kWh/m2/year) although some homes had a BER of F, G. with a >450 kWh/m2/year). Following a detailed survey and technical evaluation of a sample of 20 homes, an optimum package of retrofit measures was identified and the take-up was forecast based on a detailed sample survey. Two information evenings were held to communicate the objectives of the work to the residents. The upgrade package typically consisted of attic insulation, cavity wall insulation, draught-proofing, condensing boiler and full heating controls.

KEY RESULTS	RESULT CALCULATIONS (ROUNDED)
Total Project Energy Savings	1.4 GWh PEE (124 homes)
Expenditure per House (average)	€4000
Average Saving Level per House	140kWh/m^2
Average Saving per House	11,500 kWh PEE/year (50% reduction)
Average Energy Saving per Home	€690/year
Overall reduction in CO_2	262 tonnes CO_2 per year

Key Conclusions

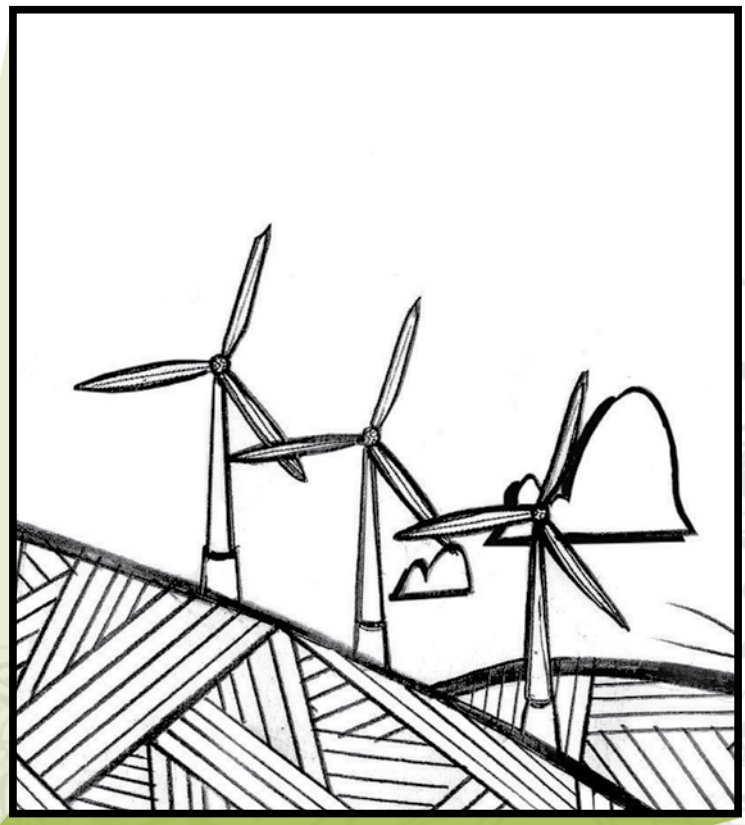
- Area-based retrofits can be delivered quickly and efficiently.
- Technical assessments for all houses rather than a sample should be carried out before work begins (i.e. no surprises).
- Clear criteria for success, e.g. a minimum home BER for all homes or a minimum improvement in each home's BER, should be agreed in advance.
- Good communications with local residents are important for the project to run smoothly.
- This is a cost-effective approach for local authorities.
- Provide the option to residents to switch from kerosene to natural gas.
- This is an effective way to deliver energy efficiency improvements to fuel-poor residents.
- There is enormous potential for replication of this project around Ireland.

*Available at http://www.eurelectric.org/ewp/

06 ENVIRONMENT

Our environmental policy commits us to conduct all our activities in an environmentally responsible manner and aim to continually improve our performance.

IN THIS SECTION



6.1 GENERAL

Progress made in this regard on key aspects is outlined in the Table below.

MEASURE	PROGRESS IN 2011
All operations covered by structured environmental management systems (2011)	complete
Obtain ISO 14001 for all EMSs	ISO 14001 accreditation maintained for all generating stations and ESB Networks. Electric Ireland and Business Services Centre EMS in place with accreditation targeted for 2012
Continue development of the on-line Sustainability Targets and Reporting System (STARS)	STARS system now covers building energy use, waste production and recycling rate, vehicle fleet fuel usage and number of sustainability initiative in progress. This facilitates ready comparison of a work location's performance against targets and in comparison with peers
Meet annual SO2 and NOx emission targets (National Emission Reduction Plan)	Targets achieved
Waste: > 65% recycling of Networks MSW by 2011 > 90% Networks waste diverted from landfill > Maximise recycling/reuse of coal ash	66% achieved (57%in 2010) 95% diverted in 2011 (92% in 2010) 41.5% of coal ash sold in 2011, down from 45.5% in 2010
Energy > No more than 7.5% distribution network losses by 2010 > A new target has been set to reduce losses to 7.0% by 2015	Target achieved Ongoing networks investment, including conversion of the overhead lines from 10 to 20kV brings about a progressive reduction on losses
Biodiversity Complete review of all operations in the Republic of Ireland to assess their impact on designated areas and areas proposed for designation	Following a major biodiversity review completed in 2010, a new Biodiversity Policy was approved in 2011; the plans will be managed through our Environmental Management Systems (EMS) process.
No material breaches of legislation or license conditions	No material non-compliances recorded
No prosecutions	No prosecutions initiated

ISO 1400 accreditation was maintained for all generating stations and ESB Networks

6.2 ENVIRONMENTAL MANAGEMENT

ESB has progressively implemented a structured approach to environmental management since 1993, when our first management system was put in place. This initiated with our generating stations. In 2003 we were successful in accrediting our first generating station to the international standard ISO14001. All our generating stations have since been accredited to this standard.

Our Networks business put significant effort into achieving the ISO 14001 standard during 2010 and were awarded accreditation in early 2011. We have also implemented internal environmental management systems in our customer supply and services businesses in line with the ISO 14001 standard.

A cross-business unit working group monitors developments related to these management systems and also legal compliance.

6.3 MATERIALS

The materials employed in our operations of environmental concern consist of fuels for electricity generation and transport, specialist oils and sulphur hexafluoride (SF6) for use in transformers. The table below lists the amounts consumed:

ENVIRONMENTAL ASPECT	2011
Fuel use (GWh) > Coal > Peat > Oil > Natural Gas > Transport Fuel	 10,619 3,610 303 25,017 54
Other Materials: > SF6 (kg)	908
Significant environmental incidents	0
Fines incurred	Nil

We have also implemented internal environmental management systems in our customer supply and services businesses in line with the ISO 14001 standard

We have been monitoring transformer and other oils for Polychlorinated biphenyls (PCBs) for almost three decades. Accordingly we were confident that the oils in all fluid-filled equipment are either PCB-free or have concentrations of PCB that are below the allowed limit level (50 ppb).

However in 2011 during a major overhaul in Turlough Hill two unit transformers were identified as containing PCB which was at a level that required the station to notify the EPA. As a consequence of this inspection these transformers will be replaced in 2012 and the contaminated oil disposed of in accordance with the EPA Management plan for PCB's.

In addition this has promoted a total review of all transformers in ESB Generation Operations. The oil samples that have been taken from these transformers are being sent to an independent accredited laboratory for analysis. To date all results have indicated that these transformers are PCB free.

6.4 WATER

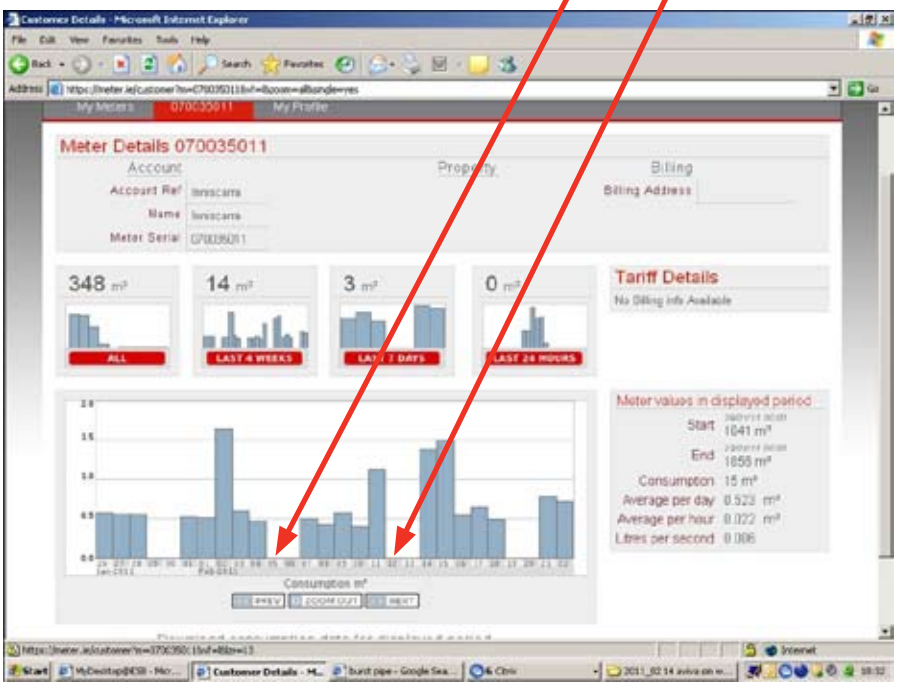
Generation activities account for the vast bulk of our utilisation of water and our aqueous discharges. The volumes attributable to our two largest usages, for hydro production and as cooling water in thermal stations, are not recorded.

The operation of our hydro facilities are subject to a number of constraints reflecting the priorities of other stakeholders. The principal constraints relate to prioritisation for drinking water abstraction at our dams on the Liffey (Dublin/Wicklow) and Lee (Cork) and flood control at all other facilities.

In addition to make-up water for steam generation our estuarine and riverine stations are designed to operate on once-through cooling water systems where water is abstracted, passed through the generation unit's condenser and returned to the abstraction source at an elevated temperature (approx. 9 C temperature increase). Chlorine is added to the cooling water (as hypochlorite) at a controlled rate to prevent microbial growth on condenser parts that reduces the operational efficiency of the plant. Cooling water flow and discharge conditions regarding temperature are subject to conditions set in Integrated Pollution Control Licences. Once through cooling water flow rates are not directly monitored.

In addition to water use in generating stations a pilot project was established in 2010 to meter and record water use in ESB buildings with the objective of reducing consumption and reducing costs. This pilot focussed on identifying the most effective means of monitoring and reducing consumption. The programme produced early results in that over the severe winter period of 2010/2011 it rapidly highlighted water system leaks and allowed prompt remedial action. In 2011 we installed the remote monitoring equipment in all our major locations nationwide. The recording and reporting of water usage is hosted on an external website.

The graphic below shows the benefit of the system. Following repair of a leak at this location water usage is now zero at weekends.



6.5 BIODIVERSITY

The EU Birds and Habitats Directives set out various procedures and obligations in relation to nature conservation management in Member States in general, and of the Natura 2000 sites and their habitats and species in particular.

The Natura 2000 network in the Republic of Ireland is made up of European Sites which include:

> Special Areas of Conservation (SAC);
> Special Protection Areas (SPA);
> candidate Special Areas of Conservation (cSAC);
> Proposed Special Protection Areas (pSPA).

During 2010, we undertook a detailed study of the impact of our operations on sites designated as above and national heritage areas (NHAs) and proposed national heritage areas (pNHAs). The Table, below (updated for 2011) indicates the extent of ESB's activities within these areas in the Republic of Ireland:

In addition to this, two 110kV substations and ten 38kV substations lie within a designated areas. No building premises or 220kV substations are located within a designated area.

A number of initiatives have been developed to address Biodiversity including:

> Incorporating biodiversity aspects into existing environmental management systems
> The adoption in 2009 of Biodiversity Guidelines for HV substations and sample Biodiversity Action Plans
> The preparation of Networks Job Aids addressing biodiversity
> The preparation, with EirGrid, of draft Ecology Guidelines for Electricity Power lines

A new Biodiversity Policy was approved in 2011; the plans will be managed through our Environmental Management Systems (EMS) process. Detailed Guidelines are being developed.

	TOTAL	INSIDE SAC	INSIDE SPA	INSIDE NHA	INSIDE PNHA
Lands under the control of ESB (km2)	90.7	23.4	36.5	5.1	45.6
Low Voltage Stations (No.)	~249,000	2504	1793	102	2312
38kV to400kV Overhead Lines (km)	12,330	291	186	38	254
38kV to 400kV Cable (km)	1,319	16.9	20.0	0	29.0

6.6 EMISSIONS AND EFFLUENTS

The primary source of discharges to the environment (air, water and land) is our generation activities. These activities, other than those in relation to renewable energy (wind and hydro) where emissions are negligible, are subject to control under the EU's Integrated Pollution Prevention and Control (IPPC) Licensing regime as applied in the jurisdictions in which they operate. Detailed information on all emissions from our licensed activities in the Republic of Ireland and information on individual power station environmental programmes are reported to the Environmental Protection Agency (EPA) on an annual basis. All of these reports can be found at http://www.epa.ie/terminalfour/ippc/index.jsp.

Data on the release of significant emission for installations located in the UK may be found at http://prtr.defra.gov.uk/facility_search.php. This information applies a year in arrears. License information may also be found at http://www2.environment-agency.gov.uk/epr/search.asp?id=EP5&&type=register.

The trend in major emissions to air is provided in the Table below:

	2006	2007	2008	2009	2010	2011
NOx kt	26.43	24.47	21.19	11.53	10.31	7.36
SO2 kt	36.31	29.74	23.26	10.85	6.87	7.72
Particulate Matter kt	1.48	1.78	1.13	0.51	0.27	0.32

kt = kilotonnes

During 2010 we undertook a detailed study of the impact of our operations on sites designated as above and national heritage areas (NHAs) and proposed national heritage areas (pNHAs)

ESB continues to seek beneficial uses for waste ash to minimise requirements for landfilling

6.7 WASTE

Ash from the combustion of coal and peat is the largest volume waste material produced by ESB. In 2011, 201kt of ash was produced, comprising 119kt coal ash and 83kt peat ash. In addition, operation of the flue gas desulphurisation (FGD) plant at Moneypoint gave rise to 52kt of FGD by-product waste.

ESB continues to seek beneficial uses for waste ash to minimise requirements for landfilling. Sales of high quality coal ash for use as an additive in cement continued in 2011. However, volumes recycled reflect the ongoing severe downturn in the construction sector and consequent reduction in demand for cement.

6.8 ENVIRONMENTAL EXPENDITURES

Defining what constitutes an environmental expenditure is a subjective matter. For this reason ESB does not separately report capital and operational environmental expenditures.

6.9 COMPLIANCE

There were no material non-compliances with IPPC or other licence conditions or prosecutions arising from our activities in 2011.

STATION	ASH PRODUCTION		RECYCLED	
	2010	2011	2010	2011
Moneypoint	127,200	118,600	45.5%	41.5%
Lough Ree	32,800	50,100	0%	0%
West Offaly	43,100	32,700	0%	0%
Total Ash	203,100	201,400	28.5%	24.4
FGD waste	61,500	52,400	0%	0%

07 SOCIAL

ESB's status as a state company, our role in the social and economic development of Ireland and our extension to every household gives us a unique connection to the communities in which we operate in Ireland. We provide support and sponsorship to these communities directly as a company and through the activities of our staff.

IN THIS SECTION

7.1.1 Employment

The employment statistics for ESB are presented below. All ESB staff are eligible for Trade Union membership, with whom the company strives to work in partnership. Extensive formal arrangements are in place for consultation between management and Trades Unions.

MEASURE	2010	2011
Average Number of Staff	6,980	6,972**
Female (%)	22	23
% management level female	20	20
Permanent contract (%)	89	92
Temporary contract (%)	11	8
Full-time (%)	93	94
Part-time (%)	7	6
Staff with disabilities* (%)	5.2	5.2
Staff with Irish nationality (%)	95	95

* The target set by Government is to achieve a 3% rate of employment of people with disabilities

** Excludes NIE (1,240)

All ESB staff are eligible for Trade Union membership,with whom the company strives to work in partnership.

Safety issues are discussed and addressed through an extensive system of Safety Committees and Partnership Groups in all the businesses including the Chief Executive Health and Safety Committee, a joint staff and management group, including the Chief Executive

7.1.2 Health and Safety

Full details of our workplace health and safety performance can be viewed at www.esb.ie/main/safety/safety-policy.jsp.

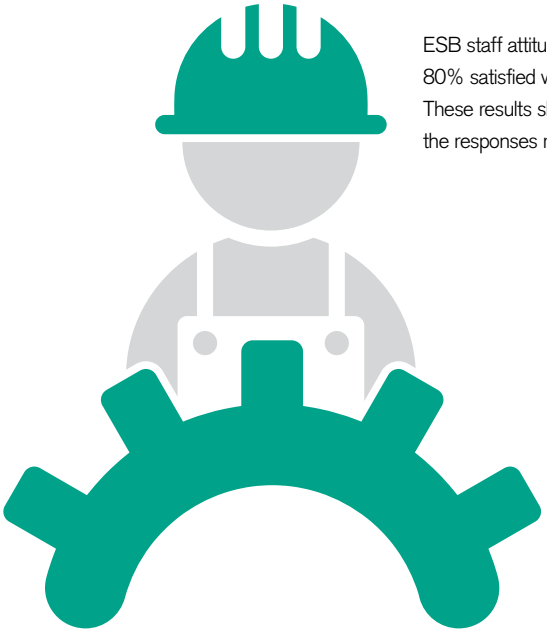
ESB's safety objective is simple – we will have zero injuries. We have pursued this objective relentlessly over the past decades but in 2011 we did not achieve a reduction in staff injuries. The number of lost time staff injuries was 37 against a target of 28 for our workforce of 6,949. This disappointing outcome was the first annual increase since 1997. On a more positive note the majority of the injuries were relatively minor in nature. Sadly, one of our staff colleagues, Manohar Singh was fatally injured when driving for work in Bahrain. This was the first staff fatality since 2003. We achieved a record low outcome in terms of contractor injuries at 8.

Key Safety Objectives

2011 TARGET	2011 OUTCOME	2010 OUTCOME
No staff fatality	1	0
No contractor fatality	0	1
No more than 25 staff LTI*s	37	28
No more than 15 contractor LTIs	8	15
100% OHSAS 18001 coverage (by 2012)	50%	48%
Absenteeism Rate less than 6.87 days/staff	7.54	7.23
Days lost due to injury (no target)	477.5	327.5
Average number of staff	6,972	6,980

* LTI = Lost Time Injury – an injury involving an absence from work of more than one day, excluding the day of the injury.

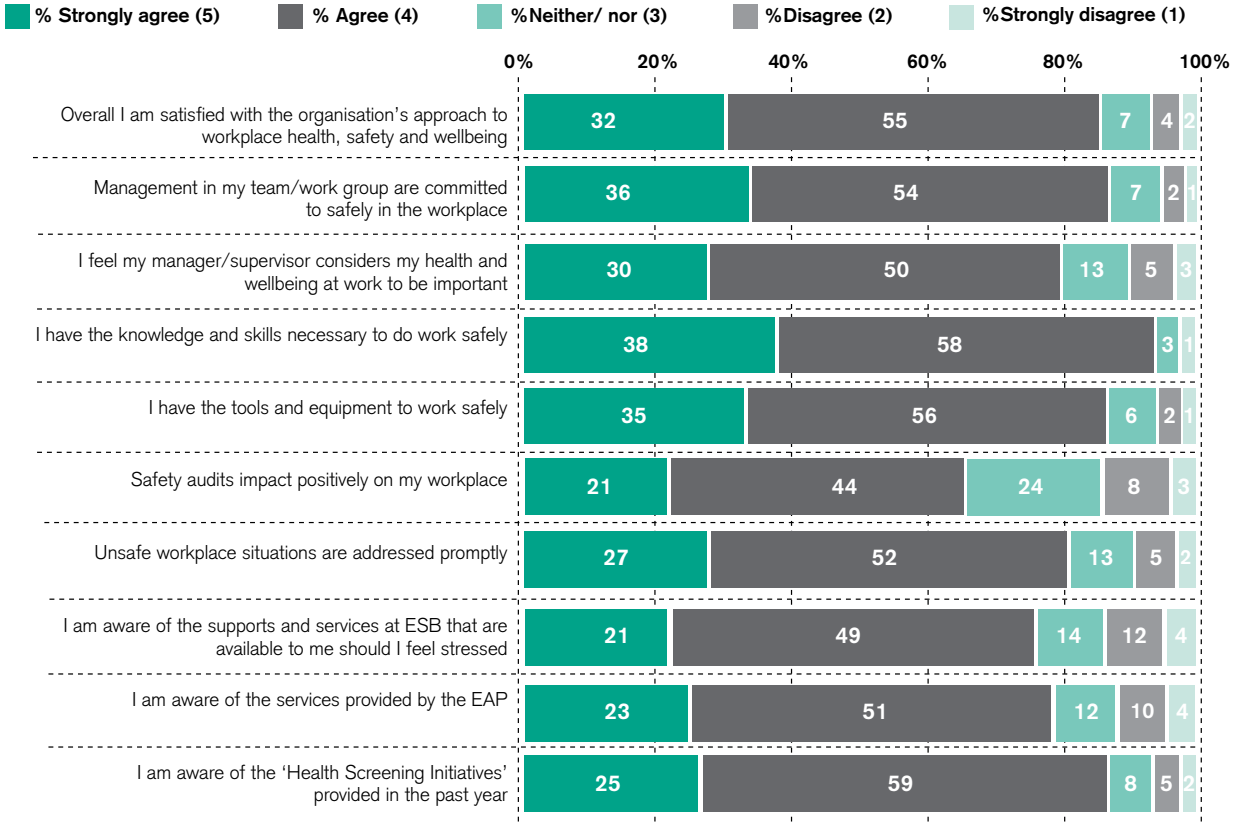
Safety issues are discussed and addressed through an extensive system of Safety Committees and Partnership Groups in all the businesses including the Chief Executive Health and Safety Committee, a joint staff and management group, including the Chief Executive. In this context 100% of staff are represented in formal structures that monitor, advise and respond to health and safety matters. Our risk assessment and behavioural audit systems provide further opportunity for direct input on safety by staff. The outcome of these measures is reflected in our staff survey results.



ESB staff attitude to safety, health and wellbeing is very positive with more than 80% satisfied with safety, health and wellbeing approaches and supports in place. These results show a slight disimprovement on the last survey (2009) but overall the responses remain heartening.

The following details the response percentages to ten statements.

To what extent do you agree or disagree with the following statements about Health, Safety & Wellbeing?



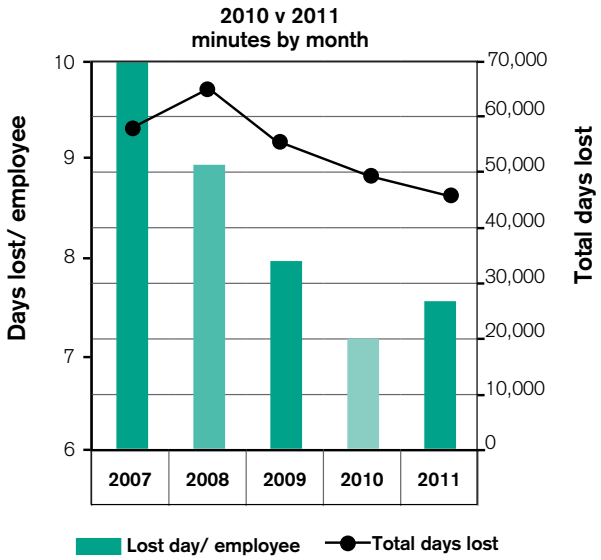
Occupational diseases are addressed as part of our safety management process. However, ESB recognises the benefits of promoting general health and wellbeing of our staff and have continued our structured approach to promoting better health. This is underpinned by a specific Group Policy and Programme on Health and Wellbeing. Included in the programme are:

- Health Screening services for staff and partners
- Health Awareness monthly initiatives, and our
- Employee Assistance Programme that provides support, guidance and counselling to staff on both work and non-work related personal and family issues.

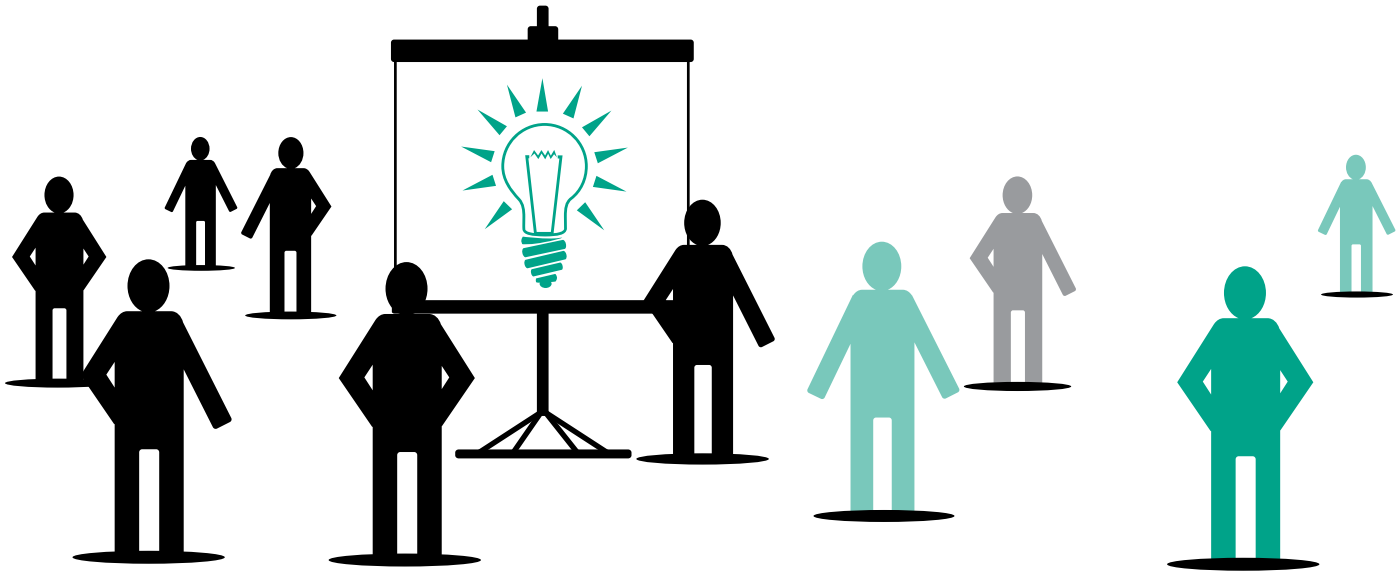
These measures are also supported by our attendance management policy which encourages staff to return to work after illness or injury as soon as they are fit to do so, including taking on 'light' activities. While it is not possible to draw a direct relationship between the measures implemented and improvements in attendance at work, a significant reduction in absences from work has been recorded in ESB over the past years, though the 2011 performance outcome was not as good as that for 2010. (see Table below).

Absenteeism performance

ESB recognises the benefits of promoting general health and wellbeing of our staff and have continued our structured approach to promoting better health



The causes of absences relate mainly to musculo-skeletal injuries and respiratory issues associated mainly with seasonal influenza. ESB has continued efforts to raise awareness of personal hygiene and promotes an annual flu vaccination. Measures to promote awareness of slips, trips and falls and appropriate manual handling techniques were also pursued.



7.1.3 Learning and Development

ESB maintained its Learning and Development programmes in 2011 to ensure the provision of core skills, including mandatory technical and safety training, personal development and competence in emerging areas. Executive coaching is also an integral part of the talent management system in ESB. ESB supports continuous professional development and we work with accrediting professional bodies such as Engineers Ireland to support this.

A three year initiative with Cork Institute of Technology to facilitate the entry of additional qualified electricians into a Level 7 Engineering (Degree) programme ended in 2011. This involved recruitment of 100 new electrical apprentices (50 above our required number) in 2009 and again in 2010. The additional 50 will be routed into funded third level Engineering degree programmes. In 2012 we are recruiting 40 new electrical apprentices, 30 above our required number. The additional 30 will also be routed into funded third level Engineering degree programmes.

We also developed and piloted a training programme on the concepts of Sustainability as applied to ESB. This was made available to all staff on-line in 2011. Our target to ensure that 50% of staff completed the foundation training module was achieved. Sustainability has been now deemed a core competency for staff.

The ESB Traineeship Programme for People with Disabilities continued in 2011. There has been an average of 10 placements opportunities identified each year for this programme. While the programme offers the participants an opportunity to develop workplace skills through temporary placements in ESB locations throughout the country, it also helps to positively alter perceptions throughout the organisation with regards to people with disabilities.

7.1.4 Diversity and equality

Our Equality and Diversity Office supports the delivery of five key aspects of work: Equality, Diversity, Respect and Dignity, Disability and Work-Life Balance. A focus was maintained in 2011 on identifying and addressing bullying and harassment and in assisting victims to cope with their experiences. Training programmes were provided for management, bullying and harassment internal investigators and dignity at work contact persons.

7.1.5 Human rights protection

ESB's primary focus for capital investment is Europe. In this context, the company does not address human rights issues explicitly in its investment contracts given the extensive body of legislation that exists within Europe and the ease of access to remedial measures. We promote respect for human rights to staff through our Charter on Dignity in the Workplace.

Fuel for electricity generation represents our most significant ongoing cost. Coal is a major component of our fuel supply and is sourced from a number of regions including southern Africa and South America. On foot of a review following concerns raised in respect of human rights and environmental degradation we now include in all our contracts either a requirement to respect and act in accordance with the ten Principles of the United Nations Global Compact or specific requirements to comply with all laws in respect of Human Rights, Labour, Health and Safety, Environmental Stewardship and Business Integrity.

7.2 SOCIETY

7.2.1 Public Safety

The main focus of ESB's public safety programme concerns the risk of persons coming in contact with ESB networks or associated plant. We also rigorously address the risks arising from our generation activities, in particular head and tail races associated with hydro-electric power stations.

During 2011, there were no fatalities to members of the public from contact or near contact with the ESB network. There were, however, 2 public fatalities from contact with electricity on the customers side of the meter.

Theft of metals, in particular copper, remains a major concern of electricity, telecommunications and railway utilities in Ireland, UK, Europe and North America in terms of the risk to public safety, the environment, the integrity of electricity networks and the continuity of supplies. Other negative implications include increased costs arising from increased security measures, damage to equipment, environmental clean-up due to oil spillages, distruptions to work programmes etc. ESB continues to work closely with the Garda Metal Theft Stakeholders Forum and other authorities to control the number of incidences arising and the opportunities to dispose of materials following their theft.

Throughout 2011 we focused on implementing our Network Public Safety Plan 2011-2012, in particular targeting construction and farming activities, which present the highest risk of power-line contact, and schoolchildren. The following Public Safety Initiatives were undertaken:

- "KEEP SAFE" safety awareness promotional events for 5th and 6th class primary school children in association with the Health and Safety Authority and other national bodies.
- Advertising in the national and technical press promoting an awareness of the dangers from contact with ESB Networks electricity infrastructure.
- TV advertising in the national agricultural livestock marts focused at the farming community.
- Broadcasting of full range of public safety radio advertisements on local and national radio stations
- Provision of stands in conjunction with the Health and Sasety Authority at the National Ploughing Championships in September and at the National Livestock Show in Tullamore in August 2011.

In addition, the progress made in respect of network renewal has resulted in the continued reduction in the numbers of "line drops" - see table below:

We continued our programme of driver training during the year. This programme responds to the potential risk to other road users presented both by ESB fleet vehicles and private cars used on ESB business.

ESB is not responsible for public safety beyond the customer's meter. However, we run continual public campaigns to alert children, householders, farmers and businesses to the dangers posed by electricity.

Our networks are operated in line with international standards and legislation relating to the risk of harm associated with close contact to electric and magnetic fields.

	2006	2007	2008	2009	2010	2011
Electrical						
No. Notifiable Faults incld. Line Drops	-	-	1174	854	719	694
Transport						
No. collisions	266	230	244	203	210	162
No. vehicles in ESB Fleet	2350	2170	2062	1955	1809	1752
ESB driver fault	93	96	113	111	112	97

The main focus of ESB's public safety programme concerns the risk of persons coming in contact with ESB networks or associated plant.

7.2.2 Public policy engagement

The regulatory, economic and cultural environment in which utility companies operate is a key strategic concern both to themselves, regulators and communities at large. In this context, ESB plays an active role in seeking to shape the regulatory and business environment in the areas in which it operates. This is done through direct contributions from ESB to policy debates and decision making and, as noted previously, through our memberships of a number of industry representative bodies.

ESB does not make contributions to political parties or organisations affiliated to them. We do facilitate staff in seeking election to public office and, in respect of those elected as members of Local Authorities, in carrying out their elected duties.

7.2.3 Customer Service

ESB's customers fall into two classes as a consequence of the fact that we operate both as a supply company and as the Distribution System Operator in Ireland: those who purchase energy services from our supply businesses and, for ESB Networks, all consumers connected to the electricity grid. We address all our customers based on the following principles:

> We always show courtesy and respect
> We listen carefully to determine the customer's needs
> We act on the commitments we give as quickly as possible.

These principles are underpinned by our Customer Codes on: Billing and Payments; Special Services for vulnerable customers; Complaints Handling; and our Marketing Code of Conduct, which also set our standards of service.

7.2.3.1 Networks

ESB Networks service satisfaction surveys undertaken in 2011 returned an average satisfaction figure of 80% - the highest level yet recorded. Our continuity performance has also shown improvement due in part to the delivery of the Distribution Automation programme.

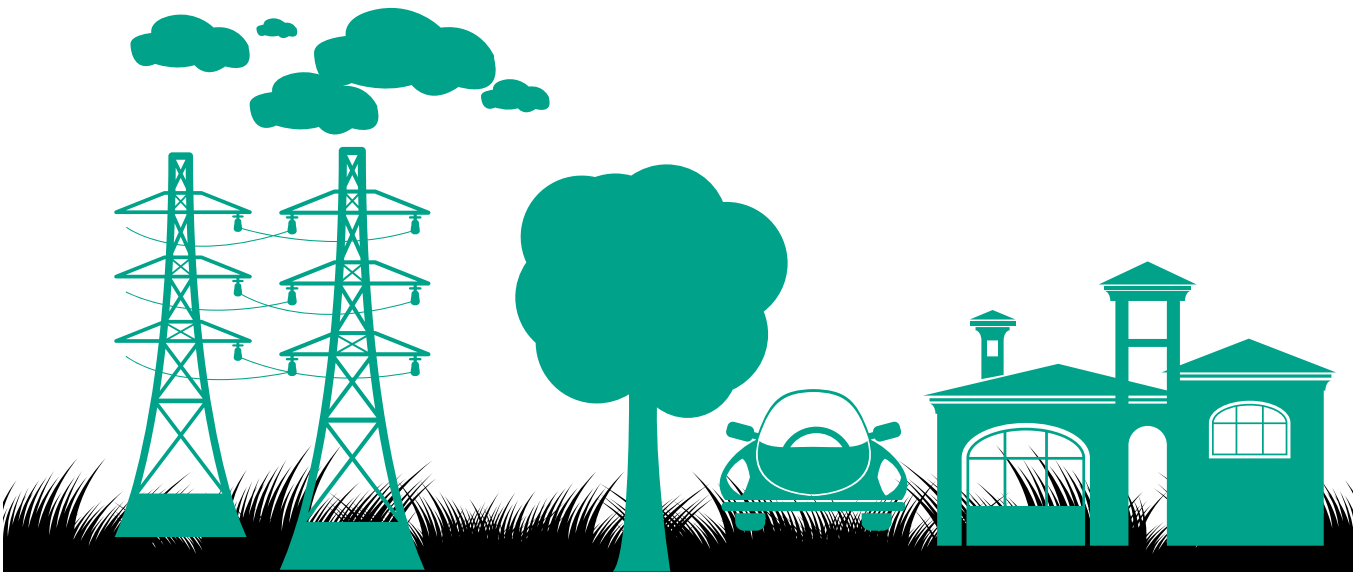
Supply reliability is an essential aspect of distribution system performance. The graph below shows the trend for various voltage levels over the past 4 years.

We have had no complaints regarding breaches of customer privacy or losses of customer data.

In 2011, a total of 15,121 new connections to the Distribution system were completed by ESB Networks. This was a decrease on the number of new connections in 2010 (19,951) and reflects the on-going economic downturn.

ESB Network's Performance Report for 2011 which is submitterd to the Commission for Energy Regulation (CER) may be found at www.esb.ie/esbnetworks/en/download_documents/reports_codes.jsp.

ESB plays an active role in seeking to shape the regulatory and business environment in the areas in which it operates



7.2.3.2 ESB Electric Ireland (Supply Business)

ESB's supply business in the Single Electricity Market (SEM) has operated as two separate entities, one which served the competitive electricity supply market and the other which was regulated by the Commission for Energy Regulation (CER) and served primarily domestic customers. During 2010, negotiations with the CER resulted in an agreement to end the separation between the two supply business activities and a new entity, ESB Electric Ireland, was formed.

Under the agreement ESB progressively reduced its market share in the Irish electricity market in line with CER requirements. As a result, since April 2011 ESB has full commercial freedom in the supply market. At year end ESB accounted for some 46% of generation output and 39% of electricity sales in the SEM.

ESB Electric Ireland is committed to fair marketing and in protecting customers against unwanted, unfair or misleading marketing. We continue to provide special services for customers dependent on electrical medical equipment, who have a visual impairment (e.g. talking bill, Braille bill), who have a mobility difficulty, or who are elderly (over 65). Our supply business works closely with the charity Age Action and sponsors their annual Positive Ageing Week".

Fuel poverty is a reality for a substantial number of our customers. ESB has a long tradition of working with customers to help them to reduce electricity usage and get better value from their electricity consumption. In 2010 we contributed €1m to a national charity to assist it support low income individuals and families having difficulties in meeting their basic needs over the winter months.

7.2.4 Community involvement

ESB's status as a state company, our role in the social and economic development of Ireland and our extension to every household gives us a unique connection to the communities in which we operate in Ireland. Both directly as a company and through the activities of our staff we provide support and sponsorship to these communities.

7.2.4.1 Culture, Education and community support

ESB ElectricAid Ireland
Over the last six years, the company-funded charity ElectricAid Ireland has spent over €6 million on 'a journey of hope' all over the island of Ireland. As chosen in a staff vote, these resources have been committed to the fight against two social problems – homelessness and suicide. A further €970,000 was allocated to 130 projects in 2011.

ESB ElectricAid Ireland supports Depaul Ireland
A recent grant of €28,000 for the fitting-out of new long-stay supported accommodation at Depaul Ireland's Back Lane Hostel in Dublin 8 has been very well received. The money was spent on furniture, beds, bed linen, curtains and TVs. Depaul commented that "this will be the difference between just bricks and mortar, and creating a home." Money well spent and a job well done!

ElectricAid
ElectricAid is a staff-led charity with almost 2,700 contributing members. One hundred and sixty four development projects in forty-two different countries were supported in 2011. The total project funding disbursed amounted to €1.36 million, funding vital education, health, infrastructure, food security and micro-enterprise initiatives, and touching the lives of thousands of the poorest of the poor. In addition, staff contributed to the Horn of Africa Appeal in July 2011. The €120,000 raised by ElectricAid from ESB staff & pensioners was used to fund Irish NGOs relief efforts in the region. ElectricAid also contributed to relief efforts after the 2011Japanese Earthquake and Tsunami

A typical ElectricAid project was their €15,000 grant for SAFE's micro-hydro power project for the villages of Chacha & Quala, in the remote Begal valley of Afghanistan. This project brought light, power, and economic opportunity to 197 rural households – about 1,500 people.

ESB staff and the company continued their support for ESB's project in Ghana. This project was started in 2007 to mark the 80th anniversary of ESB and supports the construction and rehabilitation of schools. In September 2011, 27 ESB volunteers travelled to Accra to work for two weeks on the refurbishment of a school.

Macra Na Feirme – Know Your Neighbour
Know your Neighbour Weekend is organised by Macra na Feirme and sponsored by Electric Ireland. It is a national initiative, aimed at encouraging people to organise or participate in a locally held event or activity in an effort to get to know better the people in their neighbourhood. (2011 was the last year of the sponsorship).

Electric Ireland Energy Services
Following its launch in 2009 with some 20,000 free home energy surveys, Electric Ireland's Home Services is now an established one-stop provider of a full range of energy efficiency products and services. The range of products and services available from Electric Ireland's Home services team includes attic and internal and external wall insulation, boiler replacements and heating controls, solar panels and heat pumps. In 2011, Home Services added gas boiler servicing and repairs to the range of products and services offered to householders. Electric Ireland is extending its energy saving programme to help business save energy and reduce costs.

Electric Ireland €1 Million Winter Charity Programme
In December 2011 Electric Ireland launched its €1 million Winter Charity Programme to support two important Irish charities – St. Vincent de Paul and Alone. Electric Ireland has a long tradition of working with St Vincent de Paul and supported them with a significant cash donation in December 2011. Electric Irealnd also supported Alone by carrying out energy efficiency retrofit work on Alone properties and donating additional funds to support its fuel affordability programme.

ESB's status as a state company, our role in the social and economic development of Ireland and our extension to every household gives us a unique connection to the communities in which we operate in Ireland

7.2.4.2 Sponsorships

Olympics - Team Ireland

Electric Ireland's flagship sponsorship for 2011 and 2012 is its sponsorship of Team Ireland for the 2012 London Olympics. Electric Ireland is the Official Energy Partner to Team Ireland. Electric Ireland's sponsorship supports the Olympics Council of Ireland in providing the necessary funding to support Irish athletes. In addition, Electric Ireland implements marketing programmes to increase the profile of the athletes and help generate interest and support in Team Ireland.

Electric Picnic

Electric Ireland is the Official Energy Partner to Electric Picnic - Ireland's leading sustainability festival, featuring the best in music, comedy and food. Electric Ireland provides 6 km of energy efficient lighting to support the event, in addition to marketing and promotional activity to enhance the experience for all festival goers.

Feis Ceoil

Electric Ireland supports Ireland's longest running classical music festival, where over 5,000 classical musicians aged 18–30 compete each year for the annual Feis Ceoil. Each year a Gala Concert is held to showcase the best talent from the competition.

Age Action Positive Ageing Week

Electric Ireland supported Positive Ageing Week for the seventh year in 2011. This nationwide event is organised by Age Action to highlight the value of older people to society and the positive aspects of ageing. In addition to over 800 individual events which took place in 2011 across Ireland, fifteen towns ran a series of events throughout the week

The Irish Guide Dogs for the Blind

The Irish Guide Dogs for the Blind is dedicated to helping persons who are blind or visually impaired to lead independent lives. In 2005, the organisation introduced the Assistance Dog Programme to assist families of children with autism. This scheme is the very first of its kind in Europe and ESB is proud to support this programme.

Cúl Green

Electric Ireland continued its partnership with Croke Park during 2011 through the Cul Green initiative which is concentrated on achieving sustainability objectives for the stadium.
The programme includes an environmental programme to reduce consumption of energy, waste and water .

Over 35,000 people have pledged their support for the Cúl Green initiative by making energy efficiency savings to offset overall carbon emissions at Croke Park.

7.2.4.3 Community Sustainability Programmes

Community Sustainability Programmes

We have continued to make progress in developing local Sustainability Improvement Programmes (SIPs) across the organisation. An important element of these programmes concerns the direct engagement by local management and staff in promoting and delivering sustainability initiatives within their local community.

Community sustainability initiatives covered a wide range of areas in 2011.
Initiatives included:

- Supporting community projects on energy savings and assisting with grant applications.
- Arranging visits to ESB sites by local community groups and schools.
- Supporting biodiversity improvements on community lands.
- Promoting use of sustainable transport via school visits.
- Staff volunteering their skills to local charitable initiatives.
- Assisting schools achieve the "Green Flag" award, and
- Collaborating with local environmental groups on projects.

7.2.5 Community engagement in development plans and emergency responses

Major development plans with a potential to impact on individuals or local communities are subject to statutory planning processes in the main markets in which we operate (SEM, GB and Spain). These processes, based on EU law, require extensive engagement with stakeholders in advance of making any proposals in respect of planning. ESB takes careful consideration of representations made in respect of major new development projects. Planning decisions, and conditions attached to such decisions, are determined independently, taking local, regional, national and European policies and all representations into account.

The decommissioning of old generating plants requires close consultation with local authorities, public representatives, community associations and the affected individuals where these closures occur. ESB has worked closely with communities in supporting them through the transition and has, where deemed necessary, provided services and financial support to facilitate replacement job creation opportunities.

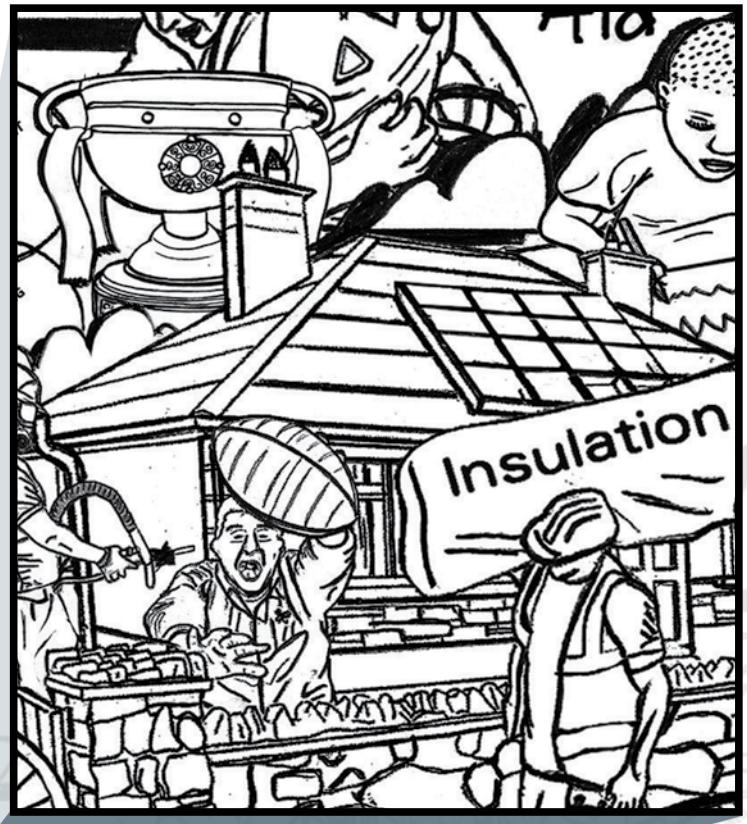
The major risk for communities and the general public from ESB's operations lie with our generation activities. Dams and embankments associated with our hydroelectric facilities represent the most serious threat to public safety. ESB has in place over a lengthy period a formal process of inspections for dam safety which is undertaken by an external Dam Safety Committee which reports annually to the Board. This committee comprises international experts with lengthy experience in this field and is supported by ESB's Chief Civil Engineer's organisation.

Major public risks associated with thermal plant relate to explosion, fire and the release of chemicals in harmful volumes. Our generation stations have detailed asset management and emergency response plans in place that address these risks as part of their environmental management systems and, where required, in accordance with the requirements of the Seveso Directives.

08 ECONOMICS

ESB is the largest and most profitable semi-state organisation and has a significant positive impact for the Irish economy.

IN THIS SECTION



8.1 Economic Performance

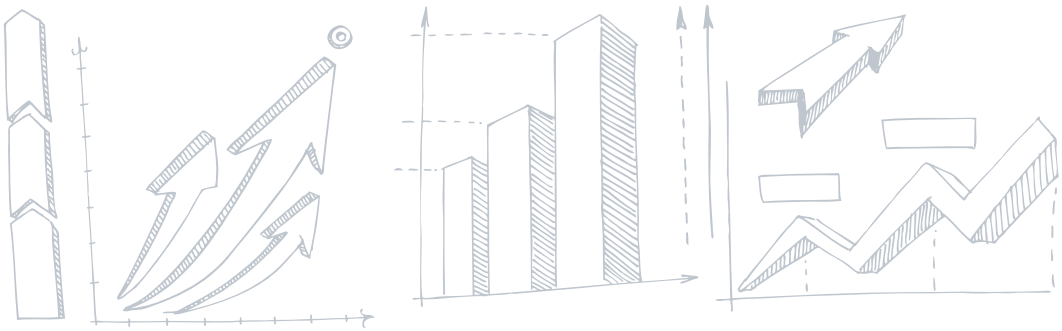
Full details of the economic performance of ESB Group is provided in the 2011 Annual Report and Accounts . The key economic indicators are presented below.

	2011 (€M)	2010 (€M)	% CHANGE
Operating Profit (adjusted)	469	339	+38%
Revenue & Operating Income	2,995	2,740	+9%
Operating Costs	2,526	2,401	+5%
Employee Costs (adjusted)	475	633	-25%
Fuel Costs	734	663	+11%
Capital Expenditure	883	819	+8%
NIE acqusition	N/A	1,223	
Dividend	77	94	-18%
Net Debt	-4,324	-3,944	+10%
Total Assets	12,539	12,112	+4%
Gearing	52%	50%	+4%
Employee numbers	8,212*	7,201	+14%

* includes NIE 1240.

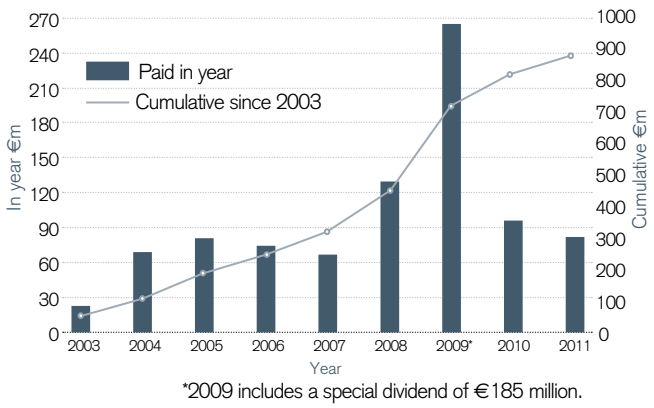
ESB received no State funding or support in respect of its normal operations. A Carbon Emissions Levy was introduced in Ireland in July 2010. The motivation was the fact that generation companies are required to pass through the full cost of their carbon emission in their market bids even though the bulk of the carbon allowances (approximately 65%) were allocated for free.

Climate change and the policy responses advanced to minimise the risk of dangerous levels of change are fundamental to our business in terms of financial risk and business opportunities and are addressed in detail in Chapter 5. Our Strategic Framework to 2020, approved by the Board in 2008 is based on a core objective to decarbonise our electricity generation by 2035. The strategy additionally commits us to build a Renewable Business of scale, to lead the development of Smart Grid and Smart Metering across our Transmission and Distribution networks, to roll out demand management programmes, to enable the electrification of transport and heating and to develop an Energy Services Business focussed on delivering energy efficiency measures to meet emerging customer needs.



8.2 Indirect economic impacts

The company contributed approximately €1.9 billion to the Irish economy through purchases from Irish suppliers, wages, taxes, rates and dividends. Over the last decade ESB has made significant contribution to Government via divdend payments



8.3 Risks

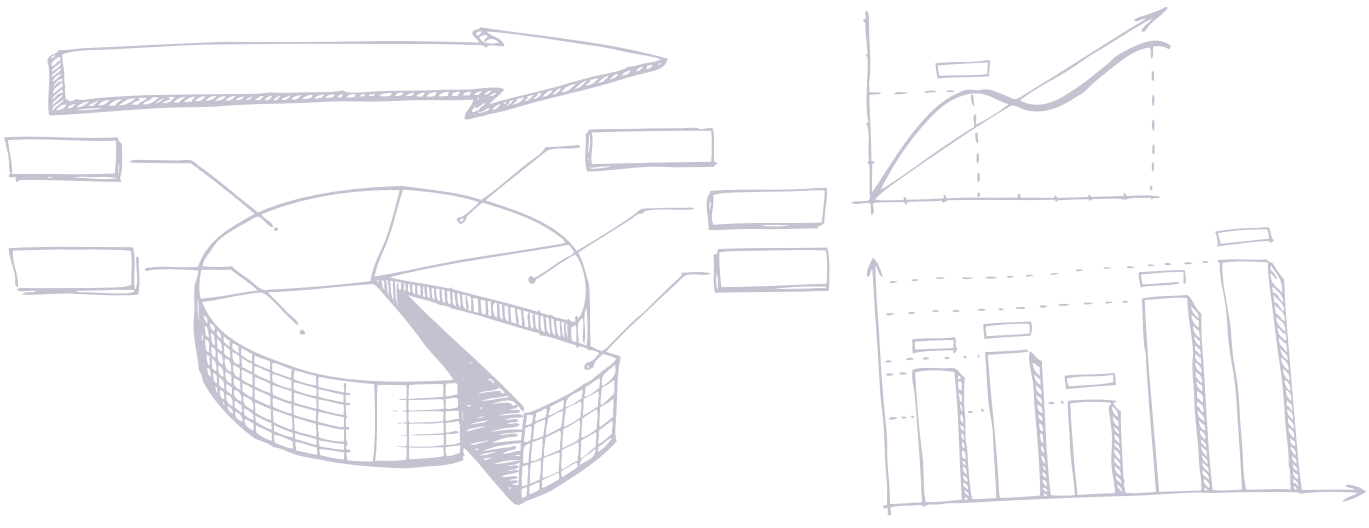
A risk management report forms part of our Annual Report which is available at http://www.esb.ie/main/about-esb/ESB_Annual_Report_and_Accounts_2011.pdf

Risk oversight is carried out by the Board Audit and Risk Committee. The following sets out the principle risks and mitigation strategies.

RISKS	IMPACT	MITIGATION STRATEGIES
SAFETY & ENVIRONMENT RISKS		
Injury to Staff, Contractors and the General Public	As a major energy utility company, ESB is committed to the highest possible safety standards to protect against the risk of injury to staff, contractors and the general public.	ESB rigorously enforces its safety policies and standards to achieve its ultimate target of zero injuries. An extensive Safety Leadership Programme, fully supported by the board and management, is in place throughout ESB to address key safety issues. Staff and management at all levels are involved in undertaking safety audits and reviews. In relation to public safety, ongoing media and direct marketing campaigns are run to increase public awareness of the risks and dangers. ESB has a strategic partnership with the Health and Safety Authority to improve electrical safety in the construction and agricultural sectors.
Environment and Climate Change	Many ESB activities have potential for significant environmental impact and are regulated by relevant national and EU laws.	Strong control and regular compliance auditing are a feature of ESB's environmental protection systems. The Group commits significant resources towards ensuring compliance with applicable planning and environmental laws/ regulations and works closely with all relevant authorities. To address the challenges of climate change, ESB is pursuing an ambitious carbon reductions strategy and investing strongly in renewable energy and environmentally friendly technology.

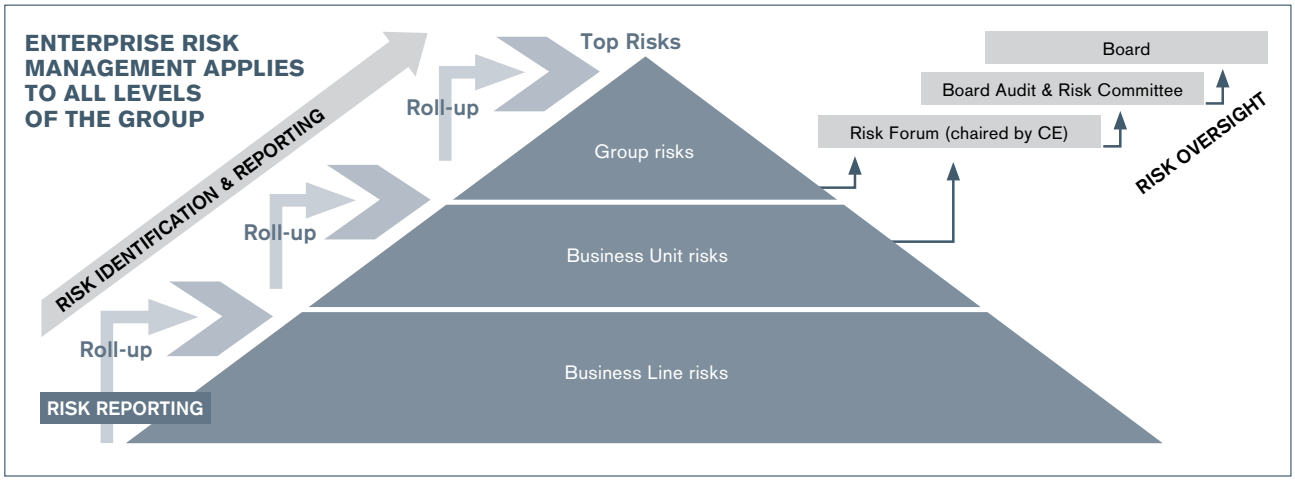
RISKS	IMPACT	MITIGATION STRATEGIES
COMMERCIAL & MARKET RISKS		
Competitor Action	The Group faces strong competition in all its markets. The level of competitor activity in the domestic supply sector has fundamentally altered the nature of this market.	ESB continues to adapt to increased competition, aggressive new entrants and significant loss of market share. ESB has participated in the CER consultation process for further market deregulation in the light of ESB's reduced market share/increased competition. During 2011, ESB established the Electric Ireland brand, progressed its transition to a new organisation structure to further improve its competitiveness/cost base and received commercial freedom from CER to fully compete in the residential sector. ESB is building on its entry to the gas market in 2011 and is developing further pricing and service offerings for its customers.
Economic and Market Conditions	The current economic downturn, reduced business activity generally and consequent reduction in energy demand present risks and challenges to the Group's profitability levels and potentially to delivery of the Group's investment and growth targets.	ESB is addressing the various risks and uncertainty associated with the current economic climate. Our risk management process has helped to identify and manage the increased financial risks. Performance risks specific to each business are identified in individual risk plans, where specific mitigation actions are planned and assigned. As part of this process, new organisational structures have been established to deliver the Group's strategy, adjust to new cost structures and to meet the challenges of the current economic environment. The company is implementing a cost reduction programme across the Group with the aim of taking €280 million out of the cost base by 2015.
Trading Risk	Power prices in the SEM and fuel prices paid by the Group in connection with its electricity generating activities, have shown significant volatility in recent years. ESB's profits can be materially affected by changes in power prices, fuel and CO_2 prices, and by relative movements between prices of different fuel types.	ESB has adopted an appropriate trading and hedging strategy to manage potential price volatility and uncertainty in the SEM. Financial contracts are entered into and trading decisions are taken in line with this strategy. Business units have strengthened their traditional energy trading functions to ensure the full extent of ongoing SEM trading positions is fully understood and managed. In line with regulatory ring-fencing requirements, business units participating in the SEM market maintain the appropriate trading capability, structures and systems for effective management of risk in the SEM. The embedded risk management and controls covering trading activities that apply in the relevant business units are subject to a strict governance and reporting regime, including regular review by Group Internal Audit.

RISKS	IMPACT	MITIGATION STRATEGIES
FINANCIAL RISKS		
Funding and Liquidity	The key financial risk areas facing the Group include exposure to commodity (electricity and fuel) price movements, foreign exchange, interest rates, financial and commodity counterparties, liquidity risk, and reliance on related financial and operational controls.	Group Treasury is responsible for the day-to-day treasury activities of the Group, including the trading of specific derivative instruments to mitigate these risks. Policies and procedures to protect the Group from treasury/financial risks are regularly reviewed, revised and approved by the board as appropriate. In relation to the availability and cost of funding for key investments, ESB maintains an overall financing strategy that maintains a strong credit rating and takes account of market conditions and is appropriate to ESB's strategic plan and targets. There is a firmly established process of ongoing monitoring, reporting, and sensitivity analysis in these areas.



RISKS	IMPACT	MITIGATION STRATEGIES
REGULATORY RISKS		
Compliance and Market Changes	The principal regulatory risks faced by the Group originate from licence compliance, ring-fencing requirements, the impact of price control reviews, and an evolving EU regulatory framework.	ESB manages these risks through a dedicated Regulatory Affairs team which provides ongoing input into the development of the regulatory, trading and pricing regimes, and also monitors compliance with the Group's regulatory and licence requirements. ESB maintains a proactive and structured approach to consultations with regulatory authorities on market developments.

RISKS	IMPACT	MITIGATION STRATEGIES
OPERATIONAL RISKS		
Plant Performance Risk	Failure to achieve the targeted performance and availability of existing generation plant through damage to ESB plant, incidents and breakdowns.	Such plant risks are minimised through ESB's well established plant safety and maintenance regimes, operating and technical procedures, and staff training. The Group also has in place appropriate insurance contracts to protect against financial loss from outages arising from plant damage.
Knowledge and Skills	ESB depends on the technical competence and credibility of its management/staff. The Group needs to maintain high standards of competence in new and developing areas of the business.	ESB is determined to maintain the necessary knowledge and skills for high levels of competitiveness both in the Irish market and abroad. It continues to invest in staff training and development and in ongoing performance improvement, particularly in the context of new technologies such as smart metering, renewables, electric vehicles, smart grids, etc.
Business Processes and IT Systems	ESB's Enterprise Risk processes identify and address (escalating where appropriate) operational risks that could lead to losses or reputational damage from mistakes or shortcomings in the Group's business processes and IT systems.	Each business unit is responsible for limiting and managing operational risks within its area of responsibility, by ensuring that well-documented routines, reliable IT systems and satisfactory internal controls are in place. From a Group perspective, the Chief Information Officer is responsible for ESB's overall IT strategy, including governance arrangements for the security/reliability of IT infrastructure and systems. Internal controls, including IT governance, are subject to internal and external audit. The planning of the Group's internal audit programme takes account of potential operational risks identified by the risk management framework



Our strategy for long-term business success is to integrate our commercial development and our stakeholder relationships, taking account of customer insights and environmental constraints. The continuing difficult economic circumstances in Europe, and in particular Ireland, are creating a challenging business environment for all electricity utility businesses and their customers. ESB views this as an opportunity to further embed sustainability within the organisation. Adopting new technologies and searching for, and applying, innovative solutions, is reducing our use of resources, resulting in efficiency gains and cost savings. These actions have allowed us make progress in delivering on the goals and targets contained in our 2008 "Strategic Framework to 2020" document. It is prudent at this stage to re-examine our strategic direction and priorities, given the continuing economic challenges at domestic and EU level and new initiatives in respect of electricity market integration. This exercise has already started and will be completed early in 2012.

ESB Head Office
27 Lr Fitzwilliam St
Dublin 2
Ireland
t: + 353 (0)1 676 5831
www.esb.ie

Produced by Zahra Media Group
www.zahramediagroup.com
Illustration by Kev Toner