

# ESB Networks

## Review

### Sustainable Networks

€6.5 billion spend to facilitate renewables including smart metering and smart networks.

2007 was a successful year for ESB Networks in operational terms, with a significant investment in the national electricity infrastructure and the second highest number of customers ever connected to the electricity network.



### Operational review

2007 was a successful year for ESB Networks in operational terms, with a significant investment in the national electricity infrastructure and the second highest number of customers ever connected to the electricity network. The ongoing investment programme to upgrade, develop and renew the Distribution and Transmission networks continued, with over €600 million invested in the infrastructure and other capital assets, including new IT systems.

Profit after tax for Networks at €139 million was up €70 million on 2006. Excluding the contribution from property disposals, profit after tax was €125 million. Under the regulatory income formula, the return earned by ESB Networks is the minimum required to fund the capital investment in the distribution and transmission networks. Profits in 2007 therefore reflect the consistently high investment in these networks over the last number of years.

### Customers

Delivering excellent service to customers continues to be a key objective of the business. During 2007 the five year customer service improvement plan (2006 – 10) provided a clear focus for the business and phase one of the plan was successfully delivered on schedule. Significant customer service improvements were made in the areas of customer communication, connection lead times, continuity of supply performance through the use of live line working and other measures and the timely provision of metering services to electricity suppliers on behalf of customers. This improvement in customer service is illustrated by a significant drop in the number of customer charter defaults and customer complaints during the year. The ESB Networks internet site was also updated to provide an easier to navigate and more friendly interface with our customers.

### Safety

Safety is a core value for ESB Networks in dealing with staff, contractors, and the public. In planning and completing all work programmes, safety is a key element and there is a continuing drive to build awareness with all stakeholders. Different media and direct marketing campaigns were run in 2007 to increase public awareness of the risks and dangers of inadvertent contact with electricity networks.

Internal staff safety campaigns included special near-miss briefings, the development of a Safety Excellence Audit Companion and a Team Safety Charter.

During 2007 there were a total of 28 Lost Time Injuries to staff and the drive to achieve the business goal of no injuries to staff continues.

### Energy & Environment Sustainability

During 2007, ESB Networks launched the *Sustainable Networks* programme. This is an ambitious programme, with nine individual initiatives. Together they touch every aspect of our operations and our interaction with our environment.

Through *Sustainable Networks*, we aim to provide every customer with a Smart Meter, enabling them to reduce electricity demand and carbon emissions, as well as saving money. The first phase, to include a technology trial and roll-out to the first 25,000 customers commenced in 2007 and will be rolled out during 2008.

By the end of 2007, over 800MW of wind generation was connected to ESB Networks transmission and distribution systems. Nearly 1,300MW of additional wind generation will be offered terms for connection under the Gate 2 process. This will position ESB Networks as supporting one of the highest rates of wind penetration in the world.

Further savings in carbon emissions will emerge through a Gate 3 process, expected to commence in 2008.

Projects were established in 2007 to introduce all-electric vehicles and bio-diesel fuel to our 2,600 strong vehicle fleet. Most of our fleet were using a 5% bio-diesel (B5) fuel mix. During 2008 we aim to establish operational pilots running on 30% and 100% bio-diesel, using our in-house maintenance network and vehicle technologists to overcome any technical challenges we encounter.

By end of 2007, over 21,000 kilometres of our network were converted from 10kV to 20kV, saving 75,000 tonnes of CO<sub>2</sub> per annum.

In future, our networks will be smarter, more flexible and more sustainable. To deliver this potential, ESB are supporting the Dundalk 2020 project, part of Sustainable Energy Ireland's Research and Development programme.

Other key initiatives include:

- Reduction of our in-house energy consumption by 30%,
- Increasing our waste reuse/recycling rate from 87% to 95%,
- Certification of our Environmental Management System to ISO 14001 standard, and
- Adapting our field operations to harmonise with the local ecology and heritage.

### Infrastructure Investment

In 2007, ESB Networks invested over €600 million in the transmission and distribution infrastructure, IT systems and other assets, bringing the total spend since 2001 to €4.3 billion. This nationwide investment has been made in order to support the continuing high growth levels in electricity demand in the Irish economy, refurbish the Irish networks to world class standards and also to facilitate regional development.

During the year, 94,400 new customers were connected to the electricity networks. This is the second highest level of new connections ever made in a year and brings the level of new connections between 2001 and 2007 to over 580,000.

The new investment includes the building of necessary infrastructure to connect new electricity generation plant, including wind farms, to the networks, as well as the renewal and refurbishment of existing infrastructure. This work will improve the quality of supply to customers and the reliability and safety of the networks.

“ During the year, 94,400 new customers were connected to the electricity networks. This is the second highest level of new connections ever made in a year and brings the level of new connections between 2001 and 2007 to over 580,000. ”

As part of an on-going programme to reduce network losses and improve voltage quality to customers, during 2007 ESB Networks converted 2,727 km of 10kV network to operate at 20kV. The total length of network converted to 20kV now stands at 21,250 km. The conversion of these lines to a higher voltage level reduces the amount of electricity lost as it passes through the networks, with an annual saving of approximately 75,000 tonnes of CO<sub>2</sub>, in terms of electricity generation avoided.

Approximately 170 old outdoor oil-filled medium-voltage switches were also replaced with new compact switches which do not contain oil. In addition, 90 km of old 38kV network were rebuilt using a more efficient design which improves voltage quality and reliability, and reduces the losses incurred on these lines.

### Regulation

2007 was the second year of the Regulatory Price Control covering the period 2006 to 2010. This Price Control was set in 2005, following a detailed review by the CER of the planned investment and expenditure by ESB Networks over the five years to 2010. This review resulted in a significant reduction in the revenues and profits of the Networks business over the five year period.

Performance improvement plans are being implemented to address the financial and operational challenges posed by the Regulator. These plans include agreements with staff around greater organisational flexibility and future reductions in numbers employed through a process of voluntary exits.

### Looking Ahead

Looking forward to 2008 and beyond, key business challenges include:

- Continued focus on improvements in safety. ESB Networks is committed to safety as a core value of the business and this focus will continue in 2008.
- Maintaining a strong and viable business. The financial health and strength of the business is essential to the achievement of the challenging investment, customer service and safety programmes.
- Delivering the Sustainable Networks programme. During 2008, ESB Networks will implement the initiatives necessary to deliver this programme, such as the introduction of Smart Meters and the connection of increased wind generation to the system.
- Continuing to deliver the capital investment programmes. The upgrading and extension of the existing electricity infrastructure will continue in 2008. This will be of benefit to all electricity customers, as well as facilitating economic growth and expansion throughout the country.
- Improving customer service. A key objective of the business in 2008 and beyond will be the delivery of excellent service to customers and the achievement of challenging customer service targets.
- Meeting customer demand for connection to the network. As part of the overall capital investment programme, ESB Networks will devote the internal and external resources required to meet the high levels of demand for connection by new customers.
- Achieving the current regulatory targets and preparing for the next Price Review. The achievement of the current regulatory targets and the preparation for future challenges is integral to the strategic objective of the business.

