

ELECTRICITY SUPPLY BOARD
BORD SOLÁTHAIR AN LEICTREACHAIS

Annual Report for year ended 31 December 1991

OUR MISSION...



We will provide our customers with quality energy services



at competitive prices with due care for the natural environment



We will also support national economic progress



by engaging in profitable ancillary activities

Annual Report for year ended 31 December 1991

HIGHLIGHTS

Financial Outcome-Surplus	£3.9m
Income	£860m
Assets in Commission (before depreciation)	£2,346m
Sales (Million Units)	12,370
Effective Generating Capacity (MW)	3,932
Peak Load (MW)	2,628
Customers	1,302,061

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Tá leagan Gaeilge den Tuarascáil seo le fáil, ach é a iarraidh

Pl. 8746

OUR MISSION ...

We will provide our customers with quality energy services

as competitors expect with due care for the natural environment

We will safeguard national economic progress

by exploiting profitable ancillary activities

Annual Report for year ended 31 December 1991

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Pl. 8746

Bruce Collins

To the Minister for Energy

In accordance with the provisions of the Electricity Supply Acts 1927/1988 the Board presents its Annual Report and Accounts for the year ended 31st December 1991.

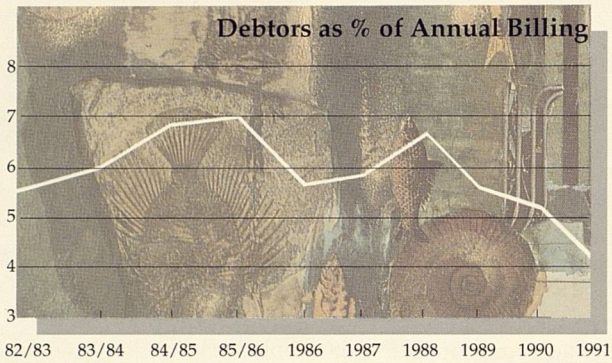
It was a challenging and eventful year. Internationally the early months were dominated by the Gulf War, while later on recession gripped the major economies, with consequent effects for Ireland. Economic growth, which had been remarkably strong in Ireland in recent years, was reported by the ESRI to have fallen to 2% in 1991. Despite this, growth in the demand for electricity was similar to the high levels experienced in 1989 and 1990.




FREE

Financial Outcome

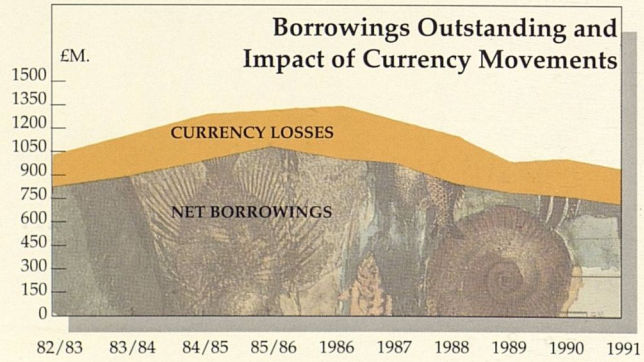
The Board is pleased to report a surplus for the year of £3.9 million. This is a very satisfactory performance when account is taken of the fact that, again, there was no price increase during 1991.



The continuing high growth required increasing investment in the replacement, refurbishment and enhancement of plant and networks. The overall level of borrowings as a proportion of net assets stood at 57% at year end, which is very high by international standards. This is a matter for concern when ESB is confronting substantial investment decisions in the near future, if it is to be in a position to meet the increasing demand for electricity.

The Board believes that it is very important that a substantial part of the financing requirements created by such investment should be funded from internal sources.

As a result, ESB will be seeking to agree a pricing formula with Government which will reflect this particular need and which will operate over a number of years. Such a formula will help to ensure the long term financial viability of ESB while keeping electricity prices competitive and highlighting our pricing targets clearly to all our customers.



Customer Service

ESB exists to provide a reliable and competitively-priced electricity service to the people of Ireland. Our fundamental objective is to serve. This must be at the top of the agenda for all management and staff in the Company, all of the time. ESB has a strong reputation among customers for the quality of its service and for its commitment to customer care.

This commitment was shown in the response of management and staff to the major storm which struck the whole country on the first weekend in 1991 – January 5th and 6th. At its height over 100,000 customers were without supply. ESB staff worked in appalling conditions late into the nights to get supply back. Their efforts did not go unnoticed by our customers, many of whom either telephoned or wrote letters to commend them.



Less obvious, but certainly important in terms of service, is the very substantial investment which ESB has made over the years in new computer technology and systems. During 1991 we continued this programme with the commencement of installation of a new cash receipting system in all our shops. This on-line computer system will ensure the speedy updating of payments on customers' accounts and will eliminate many enquiries and complaints. This is just the latest in a series of developments which have been implemented, and which are aimed at providing a speedy, informed and efficient service to our customers.



An increased level of capital expenditure was undertaken to provide distribution networks to supply new customers, to reinforce the existing system, to cater for high load growth and maintain acceptable standards of supply quality. In addition, there is an increasing requirement to replace and refurbish ageing networks. This is particularly so in the case of networks constructed in the early stages of Rural Electrification, nearly fifty years ago. Replacement of these, on a phased basis, will require considerable investment in the years immediately ahead.



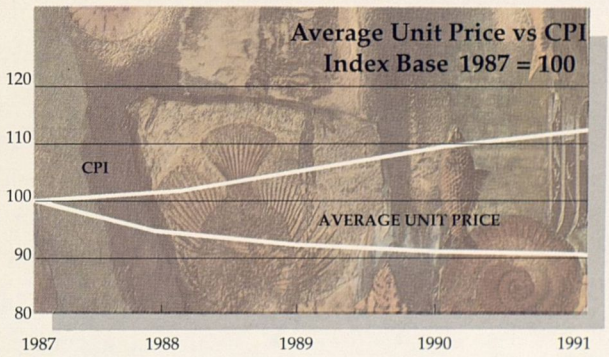
Price of Electricity

The price of electricity for industry, business and the general customer has great significance for a small, open economy, like Ireland's. Growth and development are dependent on the national capacity to be competitive, to sell our products abroad and to attract new industry to our shores. Since the early 1980s ESB has engaged in a sustained programme to improve the price of electricity in Ireland relative to our European partners. This has been very successful. ESB has reduced prices on five occasions since 1984. Now, in real terms, our industrial customers are paying 38% less for electricity and our residential customers 31% less, than they were in 1984.

With the end of 1991 we have also fulfilled the promise which we made in 1989 that there would be no price increases over a three year period.

Electricity prices in Ireland, compared to those in other European countries, have continued to improve. Industrial prices are now 9% and residential prices 19% below the European Community average.

Our objective continues to be to keep electricity prices competitive with those charged by other European utilities. This is a considerable challenge for a small, island utility operating an isolated electricity system.



stone-clad powerhouse
he Lough Curramore
all hydro station
West Cork.

Growth in Demand

Contrary to the slowdown in the economy, demand for electricity continued its strong growth of recent years. In 1991 demand grew by 5.1%, following increases of 5.2% and 5.4% in 1989 and 1990 respectively. The increased demand was spread over all sectors, industrial, commercial and domestic. Not surprisingly, the rate of increase from the industrial sector was less strong than in previous years, at 3.4%.

This high level of growth in demand has important implications for ESB and, indeed, the country. In our strategy document "Connecting with the Future", published in 1990, we indicated that a long term growth rate averaging no higher than 3% is desirable, given both the scale of capital investment required to service high demand and the serious environmental implications that would ensue.

The efficient use of electricity by industry, business and the general customer has an important role to play in containing the growth in demand. During 1991 ESB launched a wide ranging series of programmes aimed at helping customers to get the best use from electricity. These will, of course, take time to achieve their full impact but in due course are expected to make an important contribution to the management of demand for electricity.



Towards year end there was some indication of a reduction in the growth rate, reflecting the economic climate. Nevertheless, the likely growth in the Irish economy and the consequent increase in electricity demand indicate the need to accelerate plans for new production facilities. Bearing in mind the lead time required for the planning, construction and commissioning of new generating plant, even with modern technological advances, the time for making such decisions is very near. Investment in new generating plant will be very costly and will inevitably impact on electricity prices.


babytec
games

Generation Strategies

It is the responsibility of ESB to meet the electricity needs of the nation and to support its social and economic development. Our strategy is to retain the maximum degree of flexibility in relation to major investment decisions. There are a number of initiatives within this strategy, chief of which are:

: Optimising the utilisation of existing plant and networks.
: Bringing surplus plant, unused in recent years, back into service.
: Promoting the more efficient use of electricity to contain growth in demand.
: Commissioning new plant and networks.

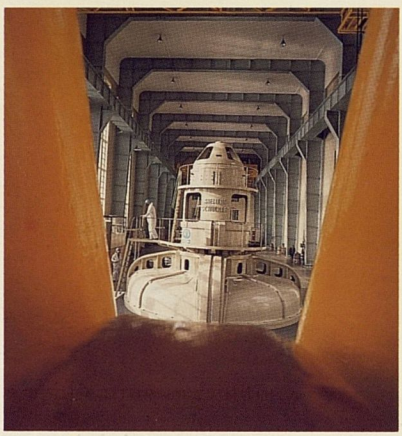
Availability is a measure of the percentage of time an asset is able to perform to its full capacity. Our objective is, therefore, to achieve greater utilisation of existing assets, improving their availability and thereby increasing the output of our most efficient generating stations. Much progress has been made already. In 1991 plant availability was the highest ever recorded at 81.9%. Further progress will require a substantial programme of change in generating stations. This will include the introduction of new technology and, most importantly, new work methods and practices. These changes are designed to reduce the time during which production units are out of service for overhaul. Initiatives have already been taken to bring the necessary changes to fruition and these are being pursued through negotiation and consultation with the staff concerned and their Trades Unions. Success in improving the availability of plant is essential and will be pursued as a major corporate objective.



Tarbert power station, Co. Kerry, where refurbishment work on tw 60MW units is in progress

A utility which is almost 65 years in existence inevitably has ageing assets. ESB has, therefore, initiated a number of programmes to improve the performance of generating stations, including significant investment to extend the working life of older thermal and hydro plant units.

In this regard the Board approved a major refurbishment of Ardnacrusha, which is now over 60 years old. The work will be done over a period of years and will have the added benefit of increasing the capacity at Ardnacrusha by almost 28%, from 86MW to 110MW. Refurbishment of thermal plant will be progressed in a number of stations, over the next few years. This programme, when completed, will have contributed significantly to the upgrading of the plant performance and to its longevity.



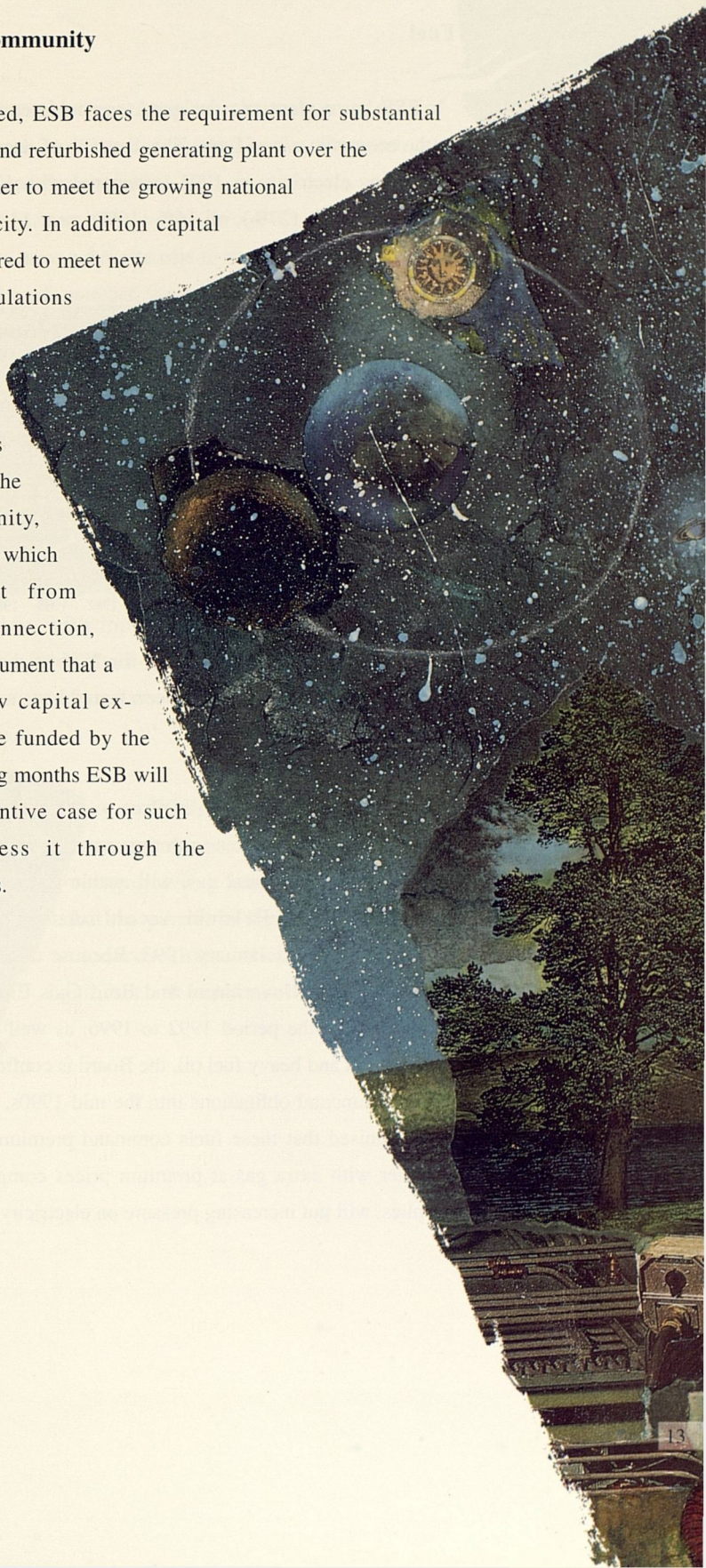
The re-commissioning of plant, which has been in storage for some time, is proceeding. This work will enable ESB to add significant extra generating capacity at relatively low cost. The restoration of two 60MW units at Great Island power station (Co. Wexford), will be completed in Spring 1992. The recall of two units of similar size at Tarbert (Co. Kerry) will come on stream in Summer 1993 and a 60MW unit at Marina (Co. Cork) may also be re-commissioned.

Last December, ESB submitted an application to Dublin Corporation for permission to build a combined cycle power plant on the Poolbeg Station site. This location was selected as the optimum solution to make use of transmission capacity available on the site. The proposed new plant will be designed for gas firing, but would also be able to use low-sulphur gas oil.

During the year ESB and the National Grid Company in the UK jointly completed a preliminary feasibility study on interconnection between the two electricity systems. The results indicated that an interconnector was economically viable provided a sufficient subsidy was available from EC funds to support it. Further detailed study will be carried out during 1992 to determine the ultimate viability of the project.

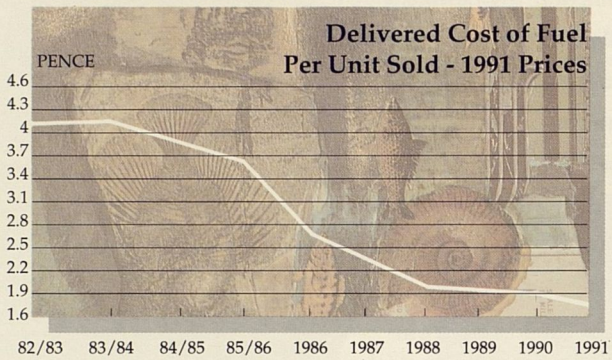
The European Community

As already stated, ESB faces the requirement for substantial investment in new and refurbished generating plant over the coming years in order to meet the growing national demand for electricity. In addition capital expenditure is required to meet new environmental regulations which derive from international agreements. In view of Ireland's unique position in the European Community, as the only country which does not benefit from electricity interconnection, there is a strong argument that a proportion of new capital expenditure should be funded by the EC. Over the coming months ESB will develop the substantive case for such funds and progress it through the appropriate channels.



Fuel

ESB has a plant mix designed to provide considerable flexibility in the economic use of fuels. The diversity of energy sources used for generating electricity in 1991 (compared with 1990) was coal 40% (42%); gas 25% (27%); oil 16% (10%); peat 14% (16%); hydro and others 5% (5%).



The fuel bill, which accounts for 28% of the cost of electricity, was lower than had originally been feared because of the fall back in fuel prices after the Gulf War.

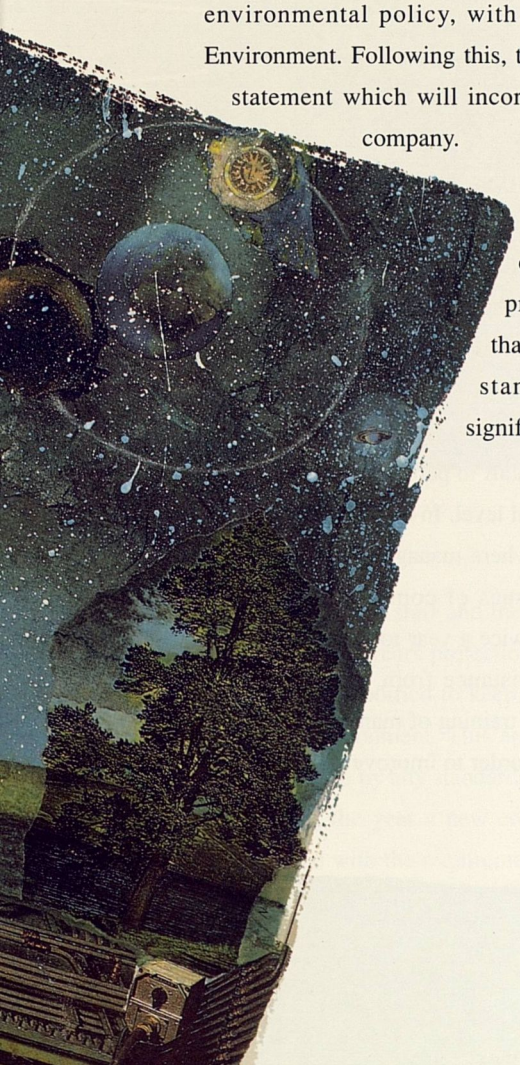
Detailed plans are now in place to switch from higher to lower sulphur fuels which, taken with the recent agreement with Bord Gais Eireann for extra natural gas, will enable ESB to meet the stringent limitations of the Helsinki Accord relating to sulphur dioxide emissions from 1st January 1993. Because of additional gas quota agreed with the Government and Bord Gais Eireann in 1991 to be delivered over the period 1992 to 1996, as well as purchase of low sulphur coal and heavy fuel oil, the Board is confident that it can meet its environmental obligations into the mid-1990s. However, it should be recognised that these fuels command premium prices. Their use, together with extra gas at premium prices compared with existing supplies, will put increasing pressure on electricity prices.

The Environment

The natural environment continues to receive a great deal of attention at national and international levels. Concern on environmental issues continues to grow.

Electricity utilities have a definite role to play in the resolution of some of the principal environmental issues. In ESB we have a record of responsible performance in relation to environmental matters for over 60 years. We are proud of our achievements and accept without reservation that a company of our stature and reputation is required to play a leading role in environmental stewardship. In this context, during the year ESB established an environmental unit with corporate responsibility for environmental matters.

ESB is at present in the process of further developing its environmental policy, with input from the Department of the Environment. Following this, the Board will set out a revised policy statement which will incorporate specific commitments for the company.

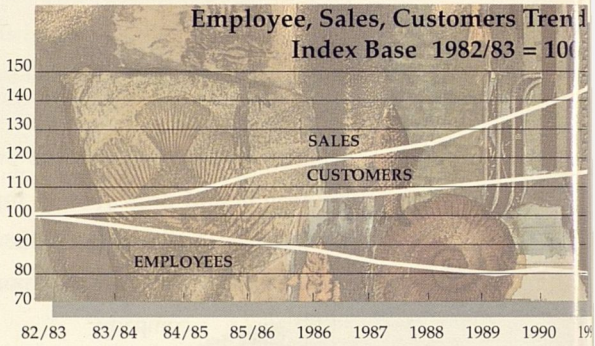


While measures to protect the environment are desireable and progressive, it must also be accepted that the pursuit of higher environmental standards than other countries has significant cost implications.

Employee Relations

The organisation's commitment to service and customer care comes into question when there is a serious industrial dispute, as happened last April. For almost a week our customers throughout the country suffered power cuts and disruption of daily life.

In the circumstances of the issues at stake, the Board had no option but to resist the demands of those who had taken strike action. Despite this, it must be recognised that the fact that our customers were left without supply represented a serious failure, for both the company and its staff.



The Board regrets that failure, and wants to assure customers that action has been taken which will reduce the possibility of similar disruption of service in future. An urgent review of dispute procedures has been undertaken with the unions. In addition, ESB invited Mr. Peter Cassells, General Secretary of the Irish Congress of Trade Unions, to chair a joint management/unions steering committee to review the comprehensive relationships within the company. We are hopeful that these initiatives will lead to improved and effective relationships within ESB.

The Board continues to encourage staff to participate in the affairs of the company at both central and local level. In each of 44 locations there is a Joint Participation Council where managers and staff meet regularly to review work-related issues of common concern. A National Participation Council meets twice a year to debate issues of company-wide importance. With assistance from unions and the ICTU, ESB invests heavily in the joint training of managers and staff in effective participation techniques in order to improve the quality of the process within the company.

Training and Development

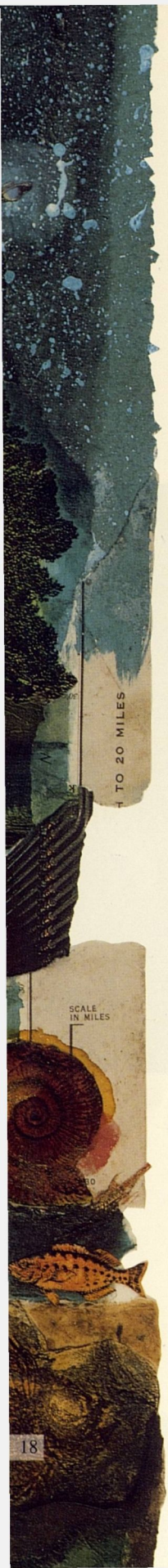
ESB places a high value on the training and development of staff. During 1991 expenditure of £13 million was undertaken. Special attention was given both to ensuring that training programmes were meeting specific business needs and to providing a comprehensive range of training and development opportunities to staff across the company. ESB's Education Support policy was revised to make it easier for staff to further their education and to help in the removal of barriers to career development.



Safety

The safety of staff and the public is a top priority at all times for ESB. Over the years protection and prevention techniques have been adapted and modified to keep pace with safety law and the changing working environment. This approach has ensured an accident record which is good by any standards, either at home or abroad.

During the year a new corporate safety statement was issued in accordance with the requirements of the Safety Health and Welfare at Work Act, 1989.



Ancillary Activities

During the past three years, ESB has made great strides into the development of new ancillary business lines. Our objective is the establishment of a successful group of subsidiary companies which can contribute strongly to the creation of new wealth and employment, placing emphasis on exported goods and services as well as on import substitution. This has been a new departure for ESB, which maximises the use of the company's many skills and resources, to further the national economic interest. Our investment in this area directly supports Government policy and we have been fully supported and actively encouraged by Government in this development.

Since 1988, we have developed our ancillary activities in four separate areas: International Engineering Consultancy, Financial Services, Industrial Manufacturing and Salmon Farming. We have four wholly-owned subsidiary companies, each of which has a series of subsidiaries of its own, some of which are jointly owned with private sector interests.

Total employment in investee companies now stands at over 900 and their combined turnover in 1991 amounted to £55 million. The early years of a major development of this kind are, inevitably, highly challenging. Now that this phase has been completed we look forward to the consolidation and growth of these businesses in the years ahead.

ESB International Limited had a successful year despite recession in some overseas markets and the serious problems in the Middle East arising from the Gulf War. Important contracts undertaken during the year included: Indonesian power plant working with Sumitomo; distribution refurbishment in Ghana; electrical work on the Channel Tunnel; computer software projects with Cable and Wireless and Northern Ireland Electricity.


DART

New marketing initiatives were taken in Eastern Europe and in Mexico. On the international scene, the ESB International name is becoming better known, a factor which facilitates the recruitment of the high calibre staff essential for success in this business.

ESB Financial Services Limited now has three subsidiary companies in operation:

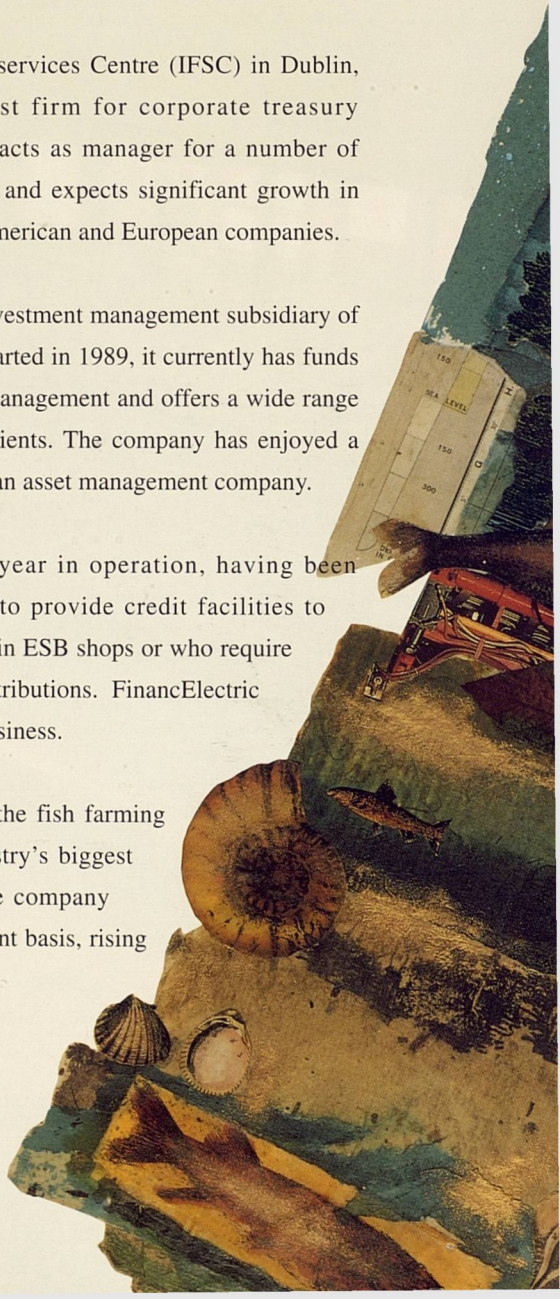
* **FTI** provides financing consulting services to an extensive client base in Ireland and the UK. It specialises in debt financing, cash management and the management of interest rate and exchange risk.

  In the International Financial services Centre (IFSC) in Dublin, FTI is the leading specialist firm for corporate treasury management and services. It acts as manager for a number of major international companies and expects significant growth in this work on behalf of North American and European companies.

* **ESB Fund Managers** is the investment management subsidiary of ESB Financial Services Ltd. Started in 1989, it currently has funds valued at £330 million under management and offers a wide range of investment services to its clients. The company has enjoyed a very successful second year as an asset management company.

* **FinancElectric** is just one year in operation, having been established in January 1991 to provide credit facilities to customers who buy appliances in ESB shops or who require instalment terms on capital contributions. FinancElectric had a successful first year in business.

Salmara Fisheries Limited, the fish farming subsidiary of ESB, was the industry's biggest producer in Ireland in 1991. The company employs 150 people on a permanent basis, rising to 190 during seasonal peaks.





Medite of Europe Ltd, Clonmel, Co. Tipperary, winners of the National Eta Award in 1991.

In the second half of 1991 the market for farmed salmon began to lift as supply and demand started to come into balance. The salmon farming industry, both at home and abroad, is being rapidly rationalised as market forces take their toll. Changes in Salmara's operations over the past twelve months have been positive and beneficial.

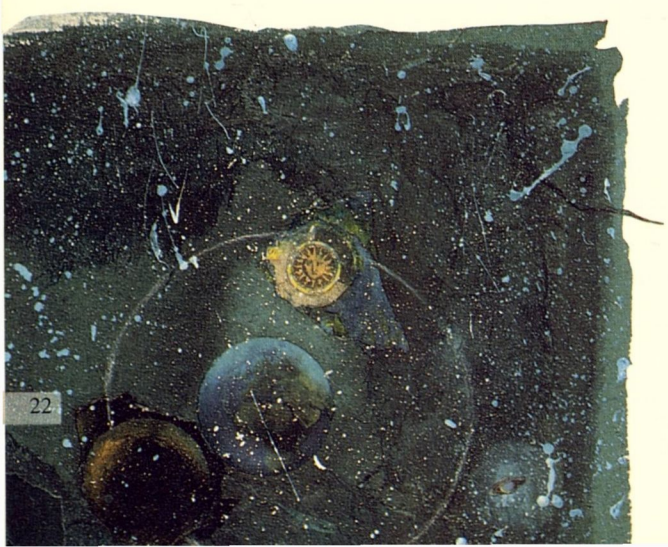
ESB Industrial Holdings Limited (ESBIH) has a commitment to assisting the development of soundly managed export-orientated Irish manufacturing companies through equity participation. During the year the focus was on firms in the engineering, energy and electronics sectors. ESBIH has an equity stake in three companies: Top Tech Ireland Limited, Renley Limited and Hoermann Electronics Limited. Together these employ approximately 350 people. Turnover and profits for 1991 were satisfactory.

To reach maturity and to achieve their potential, both in terms of business and employment creation, it is essential that the subsidiary companies have the necessary commercial freedom compatible with the business criteria to which they are expected to operate.

Dublin City of Culture 1991

The summer of 1991 saw the completion and formal opening by the Lord Mayor of Dublin, Councillor Michael Donnelly, of the restored Georgian houses at Upper Mount Street and Lower Fitzwilliam Street. The ten houses have been restored to their original proportions and the quality of work displayed has been highly acclaimed by visitors.

A very special feature was the restoration of one of the houses, 29 Lower Fitzwilliam Street, as a merchant's home of the period 1790-1820. This project was undertaken jointly by ESB and the National Museum of Ireland. It has proved to be enormously popular with the public and in the six months it was open in 1991 was visited by over 20,000 people. Without doubt it is now a major attraction for tourists, school groups, Dubliners and visitors to the city.





Restructuring of the Electricity Industry

Privatisation of State-held assets has become the trend in Europe in recent years. It has been undertaken for a variety of reasons both ideological and practical.

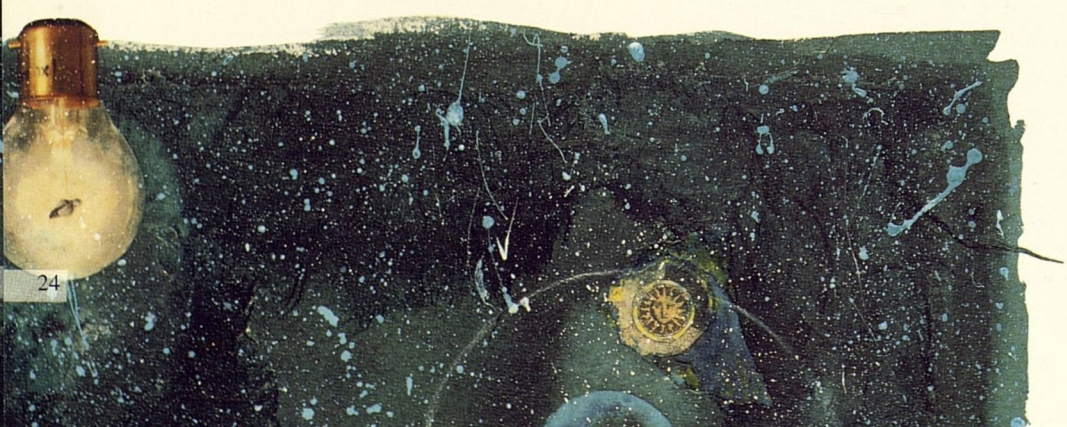
Inevitably, there has been public comment about the possible privatisation of major semi-state companies in Ireland, including ESB.

While recognising that this is an issue of public policy and is, therefore, reserved to Government, the Board holds the view that before any position is adopted in relation to major restructuring of the electricity industry there should be a careful, thorough examination of the implications and results of any change. Furthermore, the Board advises that a full scale public debate, with genuine involvement of all sections of the community, would be essential before any substantial change in the present arrangements should be countenanced.

Staff

The number of regular staff employed in ESB on electricity supply was 10,096 at year end.

The Board wishes to acknowledge the efforts and achievements of the staff of ESB and its subsidiary companies and to commend them for the positive spirit with which they undertake their responsibilities.




EI-BFH

The Board

The following were the Members of the Board at 31 December, 1991:

P. J. Moriarty (18)
R. Coen (10)
S. Geraghty (18)
D. Holland (18)
E. Kelly (18)
P. J. Kevans (14)
J. LaCumbre (17)
W. M. McCann (17)
C. McCarthy (12)
D. J. Moran (12)
E. O'Kelly (17)
J. Wrynn (16)

The warrant of Professor Charles T. G. Dillon, Chairman, expired on the 31st March, 1991. Professor Dillon was first appointed to the position on 1st May, 1975, and the Members of the Board would like to place on record their appreciation of his helpfulness to them during his 16 years' tenure of office.

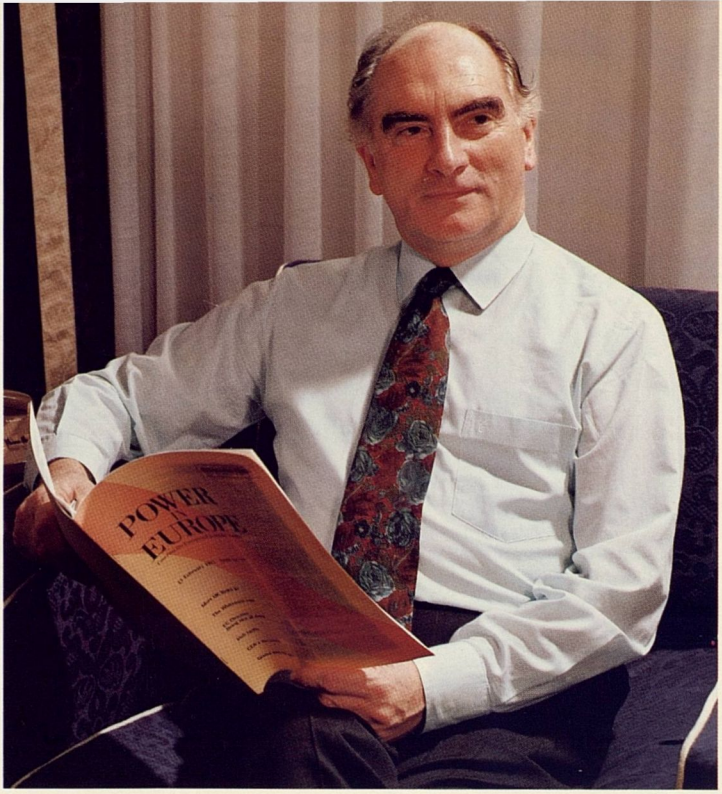
Dr. P. J. Moriarty, former Chief Executive and Board Member, was appointed by the Government as Member and part-time Chairman of the Board, to succeed Professor Dillon, as from 1st April, 1991, for a period of five years.

The Government appointed Professor E. O'Kelly, as Deputy Chairman for the remainder of his five year period of office ending on 22nd March, 1995.

Mr. D. J. Moran, former Director, Finance, was appointed Chief Executive on 1st April, 1991 to succeed Dr. P. J. Moriarty, and was appointed by the Government as a Member of the Board for the period commencing 11th April, 1991, ending 10th April, 1996.
Ms B. Dillon Hall's warrant expired on 14th April, 1991, and the Members of the Board wish to record their appreciation of her services as a Board Member.



The Board: L to R Colm McCarthy; Denis Holland; William McCann; Edmond O'Kelly, Deputy Chairman; Eamon Kelly; Seán Geraghty; Caitríona Murphy; Rynal Coen; Joseph LaCumbre; seated: Joe Moran, Chief Executive and Patrick J. Moriarty, Chairman. Patrick J. Kevan is not included in picture.



Mr. Joe Moran who was appointed Chief Executive on April 1st 1991 to succeed Dr. P.J. Moriarty.

Mr. Rynal Coen was appointed as a Board Member from 15th April, 1991, for a period of five years.

Board Member, Mr. W. M. McCann's warrant expired on the 12th November, 1991, and the Government re-appointed him as Board Member from 15th November, 1991, for a period of five years.

There were eighteen Meetings of the Board during the year ended 31st December, 1991. The numbers in brackets opposite each name are the number of Meetings attended by each Board Member.

This report was approved by the Board at its Meeting on 26th February, 1992, for submission to the Minister for Energy.

Signed by :

P. J. Moriarty, Chairman.

D. J. Moran, Chief Executive.

E. F. O'Mahony, Secretary.

Board Members

Patrick J. Moriarty, *Chairman*

Rynal Coen

Sean Geraghty

Denis Holland

Eamon Kelly

Patrick J. Kevans

Joseph LaCumbre

William M. McCann

Colm McCarthy

Joe Moran, *Chief Executive*

Caitríona Murphy

Edmond O'Kelly, *Deputy Chairman*

Executive Directors

Personnel

Lorcan Canning

Generation and Transmission Operations

John Duffy

New Business Investment

Michael Hayden

Finance

Joe Maher

Corporate Services

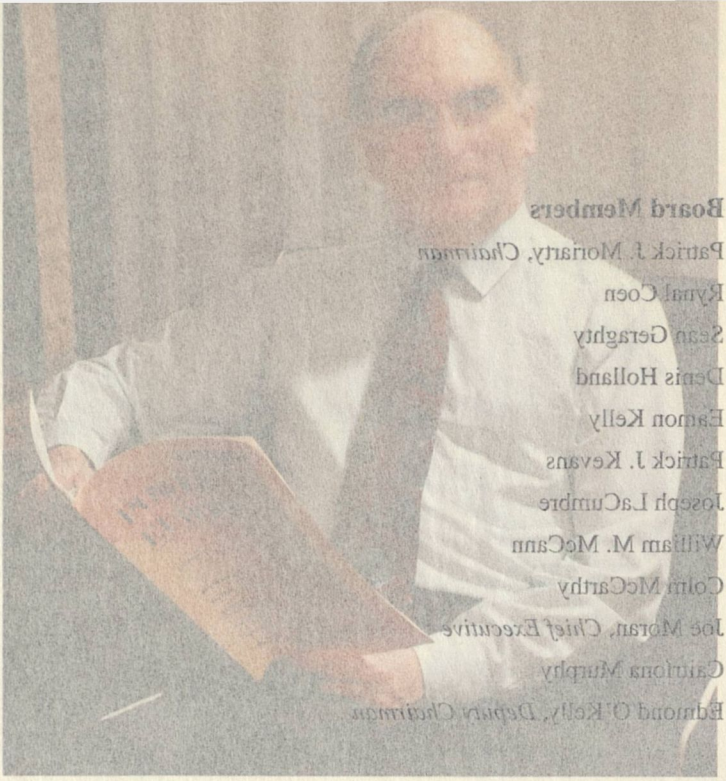
Kieran O'Brien

Customer Operations

Ken O'Hara

Secretary

Finbar O'Mahony



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Accounts for year ended 31 December 1991

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Consolidated Profit and Loss Account

Year ended 31 December 1991

	Notes	1991 £000's	1990 £000's
Turnover	1	**859,818**	819,414
Operating Costs	2	**(741,346)**	(702,253)
Net Interest Cost	3	**(83,993)**	(84,790)
Operating Surplus		**34,479**	32,371
Provision for Repayment of Borrowings (See Policy Note 3.)		**(30,843)**	(30,588)
		3,636	1,783
Share of Associated Companies' Profit/(Loss)		**89**	(255)
Surplus before Taxation		**3,725**	1,528
Taxation	5	**(65)**	(158)
Surplus after Taxation		**3,660**	1,370
Minority Interests		**225**	237
Surplus for Year	17	**3,885**	1,607
Deficit from Previous Year		**(52,688)**	(54,295)
Deficit to Next Year	17	**(£48,803)**	(£52,688)

Signed: P.J. Moriarty, *Chairman*

Signed: D.J. Moran, *Chief Executive*
J.P. Maher, *Director, Finance*

26 February 1992

Balance Sheets as at 31 December 1991

	Notes	Consolidated 1991 £000's	Consolidated 1990 £000's	Parent 1991 £000's	Parent 1990 £000's
Assets Employed:					
Fixed Assets:					
Intangible Assets	6	**507**	570	–	–
Tangible Assets	7	**1,571,467**	1,548,411	**1,565,656**	1,540,812
Financial Assets	8	**52,210**	51,011	**80,188**	71,129
		1,624,184	1,599,992	**1,645,844**	1,611,941
Current Assets:					
Stocks	9	**116,986**	114,959	**111,276**	111,171
Debtors	10	**268,913**	229,761	**237,709**	227,656
Investments	11	**781**	1,136	**781**	1,136
Cash at Bank and In Hand		**14,591**	37,892	**8,999**	32,576
		401,271	383,748	**358,765**	372,539
Creditors – Amounts falling due within one year	12	**(291,732)**	(280,046)	**(288,696)**	(279,306)
Net Current Assets		**109,539**	103,702	**70,069**	93,233
Total Assets less Current Liabilities		**1,733,723**	1,703,694	**1,715,913**	1,705,174
Creditors – Amounts falling due after more than one year	13	**(892,761)**	(941,615)	**(871,931)**	(940,493)
Provisions for Liabilities and Charges	14	**(95,761)**	(61,342)	**(95,621)**	(60,830)
Net Assets		**£745,201**	£700,737	**£748,361**	£703,851
Financed By:					
Reserves:					
Sinking Fund for Repayment of Borrowings	15	**49,342**	49,542	**49,342**	49,542
Other Reserves	16	**744,116**	703,341	**744,152**	703,393
Profit and Loss Account		**(48,803)**	(52,688)	**(45,133)**	(49,084)
Minority Interests		**546**	542	–	–
		£745,201	£700,737	**£748,361**	£703,851

Signed: P.J. Moriarty, *Chairman*

Signed: D.J. Moran, *Chief Executive*
J.P. Maher, *Director, Finance*

26 February 1992

Consolidated Statement of Source and Application of Funds

Year ended 31 December 1991

	Notes	1991 £000's	1990 £000's
Source of Funds:			
Net Funds Generated by Operations	18	**97,021**	101,414
New Borrowings (Net of Discount on ESB Stock Issues)	13	**107,674**	98,469
Interest Income (incl. gains) on Sinking Fund Investments	15	**4,816**	14,228
Non-Repayable Supply Contributions	16	**13,171**	14,424
Net Proceeds on Disposal of Tangible Fixed Assets		**3,822**	3,345
Net Credits on Stock Cancellations	15	**23**	–
Decrease in Sinking Fund Investments	8	**529**	–
Decrease in Financial Investments other than Sinking Fund Investments	8	–	65
		227,056	231,945
Application of Funds:			
Purchase of Tangible Fixed Assets	7	**115,993**	92,060
Acquisition of Associated Companies	8	**1,201**	502
Creditors falling due after more than one year (excluding Long Term Borrowings)	13	**1,504**	1,999
Increase in Sinking Fund Investments	8	–	1,053
Increase in Financial Investments other than Sinking Fund Investments	8	**500**	–
Redemption of Borrowings	13	**122,684**	107,144
Premium paid on Redemption of ESB Stocks	15	**8,475**	–
Net Premiums on Stock Cancellations	15	–	43
		250,357	202,801
Net (Outflow)/Inflow of Funds		**(£23,301)**	£29,144
Movement in Net Liquid Funds:			
(Decrease)/Increase in Cash at Bank and in Hand		**(£23,301)**	£29,144

Consolidated Value Added Statement

Year ended 31 December 1991

	Notes		1991 £000's		1990 £000's
Sources of Income:					
Turnover	1	**859,818**		819,414	
Share of Associated Companies' Profit/(Loss)	P & L	**89**		(255)	
			859,907		819,159
Less Costs of:					
Fuel	2	**221,938**		226,549	
Materials and Services	2	**199,634**		170,488	
Depreciation of Assets	2	**88,938**		80,642	
			510,510		477,679
Value Added			**£349,397**		£341,480
Distribution of Value Added:					
Employees – Payroll	2		**211,761**		203,763
Lenders:					
Interest	P & L	**83,993**		84,790	
Provision for Repayment of Borrowings	P & L	**30,843**		30,588	
Provision for Currency Movement on Borrowings	2	**19,075**		20,811	
			133,911		136,189
Taxation	P & L		**65**		158
Minority Interests	P & L		**(225)**		(237)
Reduction in Deficit brought forward			**3,885**		1,607
			£349,397		£341,480

ESB and Subsidiaries Statement of Accounting Policies

1. BASIS OF ACCOUNTING

The financial statements have been prepared under the Historical Cost Convention.

Section 21 (2) of the Electricity (Supply) Act 1927 requires ESB (Parent) to fix charges made for the sale of electricity and for goods and services rendered by it so that the revenue derived in any year from such sales and services will be sufficient and only sufficient (as nearly as may be) to pay all salaries, working expenses, and other outgoings properly chargeable to income in that year and such sums as the Board may think proper to set aside in that year for reserve fund, extensions, renewals, depreciation, loans and other like purposes. The accounting policies adopted in these financial statements reflect this requirement.

2. BASIS OF CONSOLIDATION

The group financial statements include the financial statements of the parent and of all subsidiaries together with the group's share of the net assets of associated companies. Where a subsidiary or an interest in an associated company is acquired during the financial year, the group financial statements include the attributable results from the date of acquisition. A separate profit and loss account for the parent is not presented.

3. PROVISION FOR REPAYMENT OF BORROWINGS

An amount is included in the profit and loss account each year, and transferred to the sinking fund reserve, so as to set aside such sums as are considered proper for the repayment of borrowings as is required under the terms of the Electricity (Supply) Act 1927. The amount is reviewed periodically and at present consists of:

: An amount for repayment of ESB stock issues in accordance with contractual obligations.

: An amount for repayment of other borrowings calculated at 3% of their Irish Pound value as at the previous year end.

Interest earned on sinking fund investments is credited directly to the sinking fund reserve.

4. FOREIGN CURRENCY

(a) ESB (Parent) Borrowings

Foreign currency borrowings and related hedging contracts are translated at exchange rates ruling at the year end, and differences, including those realised during the year, are charged/credited against the provision for currency movements on borrowings. An amount is included in the profit and loss account under operating costs, and is transferred to the provision for currency movements on borrowings. The amount is calculated on the basis of average historic experience over the preceding 10 years. This treatment, while not following SSAP 20, is considered more appropriate for ESB, as provision is made for probable exchange losses on a systematic basis so as to meet ESB's rate fixing responsibility.

(b) Subsidiaries

The balance sheets of foreign subsidiaries are translated at year end rates and the profit and loss accounts are translated at average rates for purposes of consolidation. Translation gains or losses arising are disclosed as a movement on reserves.

5. NON-REPAYABLE SUPPLY CONTRIBUTIONS

Non-repayable supply contributions from customers towards the cost of providing or upgrading electricity supply, which are levied in order to provide permanent capital, are credited directly to capital reserves.

6. TANGIBLE FIXED ASSETS AND DEPRECIATION

Tangible fixed assets are stated at cost. Cost includes prime cost, overheads and interest during construction.

Depreciation is designed to recover historical cost over allotted lifespans. Methods used are appropriate to the nature of the Group's business and to the character and extent of all its tangible fixed assets.

Assets are grouped and allotted lifespans in line with international practice. Major asset classifications and their allotted lifespans are:–

: Generation Plant and Thermal Station Structures (other than Moneypoint Station) 20 years

: Distribution Plant and Structures 25/30 years
: Transmission Plant and Structures and Moneypoint Station Plant 30 years
: General Buildings, Hydro Stations and Moneypoint Station Structures 50 years

Depreciation is provided:–

: on the straight-line method for Transmission, Distribution and General Assets.
: on a projected plant usage basis for Generating Units.
: on all assets from date of commissioning.

7. FINANCE LEASES

ESB leases entered into prior to 1988 are not capitalised and payments made under such leases are charged to the Profit and Loss Account as incurred. The capital element outstanding at 31 December 1991 in respect of such leases was £0.14m. From 1988, the cost of assets acquired under finance leases is included in tangible fixed assets. Depreciation is provided at rates designed to recover this cost over the shorter of the allotted lifespans of the assets and the period of the leases. The capital element of future rentals is treated as a liability and the interest is charged to the Profit and Loss Account over the period of the leases in proportion to the balances outstanding.

8. STOCKS

Stocks are valued at the lower of average cost and net realisable value. Spares held to provide for major plant breakdowns are capitalised as part of generating plant and depreciated accordingly.

Provision is made for obsolete, slow moving or defective items where appropriate.

9. FINANCIAL FIXED ASSETS

Listed Investments are shown at cost with a note as to market value. Unlisted investments are shown at cost unless in the opinion of the Directors there has been a permanent diminution in value.

10. DEFERRED PAYMENT/HIRE PURCHASE SALES

Profit on deferred payment/hire purchase sales is taken in the year of sale. Credit for interest is taken on a reducing balance basis over the deferred payment/hire purchase term.

11. TAXATION

Corporation tax payable is provided on taxable profits at the current rates.

Deferred tax is accounted for in respect of all material timing differences only to the extent that it is probable that a liability will arise in the foreseeable future. Unutilised capital allowances/losses forward at 31 December 1991 are estimated at £554m. The potential tax liability deferred as a consequence of accelerated capital allowances is estimated at £78m. (31 December 1990 £73m).

12. FUEL COMMITMENTS

ESB (Parent) policy is to hedge exchange rates applicable to a significant proportion of its estimated future requirements for fuel by means of appropriate hedging contracts.

The exchange rate used in the cost of hedged US Dollars for fuel purchases is the average exchange rate of the hedging contracts in place. Other fuel purchases are recorded at the spot rate or at the actual rate arising on related short term hedging contracts.

This treatment is consistent with ESB's rate fixing responsibility and is reviewed annually.

13. SUPERANNUATION SCHEME

ESB (Parent) operates a defined benefit scheme for its established employees and for the majority of the employees of its subsidiaries, which is externally funded. Pension costs and liabilities are assessed in accordance with the advice of professionally qualified actuaries.

The date of the most recent valuation is 31 March 1990. Actuarial valuations are advised to members of the scheme but are not available for public inspection.

ESB and Subsidiaries – Notes to the Financial Statements

Year ended 31 December 1991

1. TURNOVER – £000's

Turnover which comprises the value of sale of goods and services, excluding intra-group transactions, is attributable as follows:

		1991	1990
(a)	*Business Activity:*		
	Electricity	**787,871**	759,548
	Appliance Sales and Contracting	**43,509**	43,828
	Other Activities	**28,438**	16,038
		859,818	819,414
(b)	*Geographic Markets (Originating primarily in Ireland):*		
	Ireland	**847,806**	808,200
	Europe	**3,849**	4,115
	Others	**8,163**	7,099
		859,818	819,414

(c) *Criteria for Segmental Reporting do not apply.*

2. OPERATING COSTS – £000's

	1991	1990
Operating Costs include:		
Fuel (incl. purchased electricity of £0.725m.–£0.485m. in 1990)	**221,938**	226,549
Payroll	**211,761**	203,763
Depreciation	**88,938**	80,642
Provision for Currency Movements on Borrowings	**19,075**	20,811
Materials/Others*	**199,634**	170,488
	741,346	702,253
* Included under Materials/Others are the following:		
Charges payable under operating leases	**2,639**	5,193
ESB (parent) Board Members' Fees (including remuneration of Chairman)	**9**	38
Audit fees	**150**	130
Bad Debts	**2,218**	1,711
Expenses on New Borrowings	**25**	–

3. NET INTEREST COST – £000's

	1991	1990
Total Interest Payable:		
On loans repayable within 5 years	**44,406**	44,782
On other loans	**45,966**	47,243
	90,372	92,025
Provision for Premium on ESB Stocks:		
On loans repayable within 5 years	**181**	1,217
Interest Receivable*	**(3,148)**	(6,592)
	87,405	86,650
Less		
Amount allocated to Capital Work	**(3,412)**	(1,860)
	83,993	84,790

*Included in interest receivable is an amount of £0.074m. (£0.081m. in 1990) in respect of listed investments.

4. EMPLOYEES

	1991	1990
(a)Average number of employees in year by business activity and total:		
Electricity Supply	**9,870**	9,943
Appliance Sales and Contracting	**316**	360
Other Activities	**490**	477
	10,676	10,780
(b)Employee Costs in year – £000's		
Pay (Salaries/Wages)	**206,670**	196,318
Social Welfare Costs (PRSI)	**5,191**	4,945
Pension Costs	**20,566**	20,210
Other Payroll Costs	**15,241**	14,130
	247,668	235,603

5. TAXATION – £000's

	1991	1990
Corporation Tax	**38**	–
Deferred Tax	**–**	140
	38	140
Share of Associated Companies Tax	**27**	18
	65	158

6. INTANGIBLE FIXED ASSETS – £000's

	1991	1990
Goodwill		
Cost		
Balance at start of year	**652**	652
Additions	**–**	–
Balance at end of year	**652**	652
Amounts written off		
Balance at start of year	**82**	16
Written off in year	**63**	66
Balance at end of year	**145**	82
Net Book Value	**507**	570

Note: Goodwill arises on acquisition of a Subsidiary and is being written off, on a straight-line basis over ten years, from date of acquisition.

7. TANGIBLE FIXED ASSETS – £000's

	Land and Buildings	Plant and Machinery	Total Assets in Commission	Payments on Account and Assets in Course of Construction	Total
Consolidated					
Cost					
Balance at start of year	468,727	1,801,665	2,270,392	39,343	2,309,735
Movements during year:					
Additions/Transfers	6,523	85,997	92,520	23,473	115,993
Retirements/Disposals	(1,908)	(15,355)	(17,263)	–	(17,263)
Balance at end of year	473,342	1,872,307	2,345,649	62,816	2,408,465
Depreciation					
Balance at start of year	135,952	625,372	761,324	–	761,324
Movements during year:					
Charge	12,813	76,125	88,938	–	88,938
Retirements/Disposals	(495)	(12,769)	(13,264)	–	(13,264)
Balance at end of year	148,270	688,728	836,998	–	836,998
Net Book Value – at 31 Dec, 1991	325,072	1,183,579	1,508,651	'62,816	1,571,467
– at 31 Dec, 1990	332,775	1,176,293	1,509,068	39,343	1,548,411

The net book value of tangible fixed assets includes an amount of £35m. (£31.6m. in 1990) in respect of assets held under finance leases. Depreciation charged on such assets during the year amounted to £1.4m. (£1.2m. in 1990). The non-depreciable element of land and building amounts to £3.7m. (£3.3m. in 1990).

Parent					
Cost					
Balance at start of year	466,043	1,794,636	2,260,679	39,343	2,300,022
Movements during year:					
Additions/Transfers	7,258	84,602	91,860	23,383	115,243
Retirements/Disposals	(1,092)	(14,934)	(16,026)	–	(16,026)
Balance at end of year	472,209	1,864,304	2,336,513	62,726	2,399,239
Depreciation					
Balance at start of year	135,804	623,406	759,210	–	759,210
Movements during year:					
Charge	12,736	74,874	87,610	–	87,610
Retirements/Disposals	(392)	(12,845)	(13,237)	–	(13,237)
Balance at end of year	148,148	685,435	833,583	–	833,583
Net Book Value – at 31 Dec, 1991	324,061	1,178,869	1,502,930	62,726	1,565,656
– at 31 Dec, 1990	330,239	1,171,230	1,501,469	39,343	1,540,812

The net book value of tangible fixed assets includes an amount of £35m. (£31.6m. in 1990) in respect of assets held under finance leases.
Depreciation charged on such assets during the year amounted to £1.4m. (£1.2m. in 1990).
The non depreciable element of land and buildings amounts to £3.1m. (£3.3m. in 1990).

8. FINANCIAL FIXED ASSETS – £000's

	Associated Companies			Other	
	Shares	Loans	Total	Investments	Total
Consolidated					
Balance at start of year	1,124	588	1,712	49,299	51,011
Additions/(Disposals)	914	287	1,201	(29)	1,172
Share of retained Profit	27	–	27	–	27
Balance at end of year	2,065	875	2,940	49,270	52,210

	Subsidiary Companies			Other	
	Shares	Loans	Total	Investments	Total
Parent					
Balance at start of year	8,138	13,792	21,930	49,199	71,129
Additions/(Disposals)	2,615	7,511	10,126	(529)	9,597
Provision for write down	(538)	–	(538)	–	(538)
Balance at end of the year	10,215	21,303	31,518	48,670	80,188

Analysis of Other Investments

	Consolidated and Parent		
(a) Financial fixed assets held for sinking fund purposes	Listed	Bank Accounts	Total
Cost			
Balance at start of year	8,668	40,531	49,199
Movement	24,758	(25,287)	(529)
Balance at end of year	33,426	15,244	48,670
Market value at end of year (including Bank Accounts)			50,290

(b) Others (Unlisted)	Consolidated Total
Cost	
Balance at start of year	100
Movement	500
Balance at end of year	600

9. STOCKS – £000's

	Consolidated		Parent	
	1991	**1990**	**1991**	**1990**
Fuel	**46,833**	49,135	**46,833**	49,135
Goods for Resale (Appliances)	**2,275**	2,296	**2,275**	2,296
Plant/Network Stocks, Miscellaneous Spares and Sundries	**62,168**	59,740	**62,168**	59,740
Others	**5,710**	3,788	**–**	–
	116,986	114,959	**111,276**	111,171

The replacement cost of stocks is not significantly different from their balance sheet values.

10. DEBTORS – £000's

	Consolidated		Parent	
	1991	**1990**	**1991**	**1990**
Amounts falling due within one year				
Trade Debtors	**151,360**	141,572	**147,806**	137,010
Deferred Payments/Hire Purchase Contracts	**16,445**	10,912	**9,432**	10,912
Amounts owed by:				
Subsidiary Companies	**–**	–	**4,321**	4,992
Associated Companies	**2,112**	160	**–**	–
Other Debtors	**77,815**	54,654	**74,971**	52,279
	247,732	207,298	**236,530**	205,193
Amounts falling due after more than one year				
Deferred Payments/Hire Purchase Contracts	**21,181**	22,463	**1,179**	22,463
Total Debtors	**268,913**	229,761	**237,709**	227,656

11. CURRENT ASSET INVESTMENTS – £000's

	Consolidated and Parent	
	1991	1990
Listed	**781**	1,136
Market Value of Listed Investments	**827**	1,167

12. CREDITORS – AMOUNTS FALLING DUE WITHIN ONE YEAR – £000's

	Consolidated		Parent	
	1991	1990	**1991**	1990
Long Term Borrowings (Note 13)	**127,367**	109,330	**127,167**	109,330
Bank Overdrafts	**1,674**	9,199	**699**	9,030
Other Borrowings	**838**	21,353	**838**	21,070
Progress Payments on Work in Progress	**2,961**	4,100	**2,961**	3,618
Trade Creditors	**58,699**	47,261	**55,956**	46,440
Finance Leases (Note 13)	**4,762**	4,564	**4,754**	4,562
Other Creditors (incl. tax and social welfare)	**43,095**	37,669	**42,719**	37,373
Accruals and Deferred Income	**28,003**	22,592	**26,211**	20,826
Accrued Interest on Borrowings	**24,333**	23,978	**24,249**	23,978
Amounts owed to Subsidiary Companies	**–**	–	**3,142**	3,079
	291,732	280,046	**288,696**	279,306
Tax and social welfare included in Other Creditors:				
PAYE	**5,445**	4,458	**5,445**	4,416
VAT	**19,359**	14,196	**19,239**	14,138
	24,804	18,654	**24,684**	18,554
Social Welfare (PRSI)	**1,175**	929	**1,175**	922
	25,979	19,583	**25,859**	19,476

13. CREDITORS – AMOUNTS FALLING DUE AFTER MORE THAN ONE YEAR – £000's

	Consolidated		Parent	
	1991	1990	**1991**	1990
Long Term Borrowings				
Balance at start of year	**1,031,798**	1,025,651	**1,030,693**	1,025,256
Movements during year:				
New Borrowings	**107,674**	98,469	**87,536**	97,759
Adjustment for all Currency Changes	**(14,715)**	14,615	**(14,715)**	14,615
Repayment cost – at opening book value	**(122,684)**	(107,144)	**(122,459)**	(107,144)
– currency changes (within year)	**412**	207	**412**	207
Total Long Term Borrowings (£637.3m. of the above Borrowings is guaranteed by the State – £741.2m. 1990)	**1,002,485**	1,031,798	**981,467**	1,030,693
Repayment Profile:				
Wholly repayable within five years	**470,446**	490,677	**449,428**	489,572
Due wholly or in part by instalment after five years	**532,039**	541,121	**532,039**	541,121
	1,002,485	1,031,798	**981,467**	1,030,693
Less				
Amount included in Creditors falling due within one year (Note 12)	**127,367**	109,330	**127,167**	109,330
Amount due for repayment after more than one year	**875,118**	922,468	**854,300**	921,363
Finance Leases				
Repayable before five years	**17,234**	20,451	**17,214**	20,432
Repayable after five years	**12,934**	11,220	**12,934**	11,220
	30,168	31,671	**30,148**	31,652
Less				
Future finance charges	**7,763**	7,960	**7,763**	7,960
	22,405	23,711	**22,385**	23,692
Included in Creditors falling due within one year (Note 12)	**4,762**	4,564	**4,754**	4,562
Amounts due for repayment after more than one year	**17,643**	19,147	**17,631**	19,130
Total Creditors falling due after more than one year	**892,761**	941,615	**871,931**	940,493

14. PROVISIONS FOR LIABILITIES AND CHARGES – £000's

	Provision for Currency Movements	Provision for Generating Station Dismantling	Deferred Tax	Others	Total
Consolidated					
Balance at start of year	**45,714**	**15,116**	**140**	**372**	**61,342**
Transfer from Profit and Loss Account	**19,075**	**1,000**	**–**	**–**	**20,075**
Revaluation differences	**14,716**	**–**	**–**	**(372)**	**14,344**
Balance at end of year	**79,505**	**16,116**	**140**	**–**	**95,761**
Parent					
Balance at start of year	**45,714**	**15,116**	**–**	**–**	**60,830**
Transfer from Profit and Loss Account	**19,075**	**1,000**	**–**	**–**	**20,075**
Revaluation differences	**14,716**	**–**	**–**	**–**	**14,716**
Balance at end of year	**79,505**	**16,116**	**–**	**–**	**95,621**

15. SINKING FUND FOR REPAYMENT OF BORROWINGS – £000's

	Consolidated and Parent	
	1991	1990
Balance at start of year	**49,542**	49,466
Movements during year:		
Provision for Repayment of Borrowings	**30,843**	30,588
Provision for Premium on ESB Stocks (Note 3)	**181**	1,217
Net Credits/(Premiums) on cancellation of ESB Stocks	**23**	(43)
Interest income (incl. gains) on Sinking Fund Investments	**4,816**	14,228
Premium paid on Redemption of ESB Stocks	**(8,475)**	–
Sinking Fund applied to repay borrowings (Note 16)	**(27,588)**	(45,914)
Balance at end of year	**49,342**	49,542
Represented by:		
Sinking Fund Investments (Note 8)	**48,670**	49,199
Interest Accrued	**672**	343
	49,342	49,542

16. OTHER RESERVES – £000's

	Non-Repayable Supply Contributions	Repaid Capital Reserve	Others	Total Reserves
Consolidated				
Balance at start of year	**199,472**	**503,921**	**(52)**	**703,341**
Movements during year:				
Non-Repayable Supply Contributions	**13,171**	**–**	**–**	**13,171**
Borrowings repaid ex Sinking Fund	**–**	**27,588**	**–**	**27,588**
Translation differences on consolidation of Foreign Subsidiaries	**–**	**–**	**16**	**16**
Balance at end of year	**212,643**	**531,509**	**(36)**	**744,116**
Parent				
Balance at start of year	**199,472**	**503,921**	**–**	**703,393**
Movements during year:				
Non-Repayable Supply Contributions	**13,171**	**–**	**–**	**13,171**
Borrowings repaid ex Sinking Fund	**–**	**27,588**	**–**	**27,588**
Balance at end of year	**212,643**	**531,509**	**–**	**744,152**

17. CONSOLIDATED PROFIT AND LOSS ACCOUNT

Surplus for Year
Of the surplus for the year, £3.951m. is dealt with in the accounts of the Parent (£3.983m. in 1990).

Deficit to Next Year
Of the deficit to next year, £45.133m. is dealt with in the accounts of the Parent (£49.084m. in 1990).

18. NET FUNDS GENERATED BY OPERATIONS – £000's

	Notes	1991	1990
Surplus for Year	P&L	**3,885**	1,607
Add/(deduct) items not involving cash flow:			
Depreciation	7	**88,938**	80,642
Loss/(Profit) on Disposal of Tangible Fixed Assets	–	**177**	(967)
Provision for Repayment of Borrowings	15	**30,843**	30,588
Provision for Premium on ESB Stocks	15	**181**	1,217
Provisions for Liabilities and Charges	14	**34,419**	4,716
Unrealised exchange differences on borrowings	13	**(14,303)**	14,822
Translation differences on consolidation of Foreign Subsidiaries	16	**16**	6
Goodwill written off	6	**63**	66
(Surplus)/Deficit retained in Associated Companies	8	**(27)**	273
Minority Interests		**4**	(237)
(Absorbed)/Released by Working Capital:			
Stocks	9	**(2,027)**	(23,439)
Debtors	10	**(39,152)**	(37,570)
Creditors falling due within one year (excl. current element of Long Term Borrowings)	12	**(6,351)**	29,499
Investments	11	**355**	191
		97,021	101,414

19. ACCOUNTING YEAR

Income and expenditure are aligned on a 52 or 53 week year as appropriate.
1991 is a 52 week year (1990 – 52 weeks).

20. CONTRACTUAL CAPITAL COMMITMENTS – £000's

	Consolidated		Parent	
	1991	1990	**1991**	1990
Capital Expenditure				
Contracted for	**21,767**	13,647	**18,141**	13,647
Authorised but not contracted for	**53,238**	35,600	**51,800**	34,000
	75,005	49,247	**69,941**	47,647

21. COMPARATIVE FIGURES

Where appropriate, previous year's figures are regrouped/restated.

22. CONTINGENT LIABILITY

ESB has guaranteed a loan of £20m. taken out by its subsidiary FinancElectric Limited.

23. APPROVAL OF ACCOUNTS

The Board approved the accounts on 26 February 1992.

24. SUBSIDIARY AND ASSOCIATED COMPANIES

Subsidiary Companies	Registered Office	Group Share %	Nature of Business
ESB International Ltd.	Stephen's Court 18-21 St. Stephen's Green Dublin 2.	100	International Engineering, Consultancy & Computing Services
ESBI Engineering Ltd.	Stephen's Court 18-21 St. Stephen's Green Dublin 2.	100	Engineering
ESBI Consultants Ltd.	Stephen's Court 18-21 St. Stephen's Green Dublin 2.	100	Consultancy
ESB International Consultants Ltd.	122 London Road Kingston on Thames Surrey KP26-QJ, England.	100	Engineering & General Consultancy
ESBI Computing Ltd.	Stephen's Court 18-21 St. Stephen's Green Dublin 2.	100	Computer Services
Salmara Fisheries Ltd.	39 Merrion Square Dublin 2.	100	Commercial Fisheries
Kealincha Salmon Ltd.	39 Merrion Square Dublin 2.	51	Fish Farming
Fleet Fish Farm Ltd.	39 Merrion Square Dublin 2.	100	Fish Farming
ESB Financial Services Ltd.	37 Upper Fitzwilliam St. Dublin 2.	100	Financial Services
Strategic Finance & Treasury International Ltd.	Russell Court St. Stephen's Green Dublin 2.	82	Treasury Management Services
ESB Fund Managers Ltd.	37 Upper Fitzwilliam St. Dublin 2.	100	Funds Management
FinancElectric Ltd.	37 Upper Fitzwilliam St. Dublin 2.	100	Customer Credit
ESB Industrial Holdings Ltd.	27 Lower Fitzwilliam St. Dublin 2.	100	Industrial & Commercial Projects
Canal Construction Ltd.	27 Lower Fitzwilliam St. Dublin 2.	100	Canal Construction
Associated Companies			
Irish Salmon Producers Group Ltd.	Kilkieran Connemara, Co. Galway	37	Salmon Marketing
Top Tech Ireland Ltd.	Poppintree Ind. Est. Finglas, Dublin 11.	50	Supply of special processes to Computer Industry
Sevent Industries Ltd.	27 Lower Fitzwilliam St. Dublin 2.	49	Electrical Distribution Material Manufacture
ESBI Energy Company	2800 Post Oak Road Houston, Texas 77056, USA	50	Engineering Consultancy
ESBI Atkins International Ltd.	16-18 St. Stephen's Green Dublin 2.	50	Civil Engineering

Auditor's Report

As Auditors appointed by the Minister for Energy, with the consent of the Minister for Finance, we have audited the financial statements of Electricity Supply Board on pages 30 to 48 in accordance with auditing standards and have obtained all the information and explanations we considered necessary.

In our opinion, the financial statements, when read in conjunction with the note on the provision for repayment of borrowings on page 34, give a true and fair view of the results and source and application of funds of the Group for the year ended 31 December 1991 and of the state of affairs of the Group and of the Parent as at that date.

In our opinion, the Parent has kept proper books of account with which the balance sheet of the Parent at 31 December 1991 is in agreement.

KPMG Stokes Kennedy Crowley
Chartered Accountants
DUBLIN

26 February 1992

Fisheries Report for Year ended 31 December 1991

To the Minister for the Marine

ESB continues to be represented on the Central Fisheries Board, the Shannon Regional Fisheries Board, the River Erne Trout Protection Committee, the Shannon Forum and the Lough Sheelin Management Committee. The Blessington Lake Consultative Committee and the River Shannon Management Programme Committee are chaired and serviced by ESB and are proving to be successful.

The River Shannon Salmon Management Programme which was initiated in May 1990, continued in 1991. The Programme has been developed to establish the current status of salmon stocks and the capability of the river to support them. Considerable progress was made during the year on important areas of research including a survey of juvenile salmon, assessment of salmon smolt output, assessment of adult escapement at Ardnacrusha and Parteen and assessment of salmon rod catch in recreational fisheries.

The Programme has the active participation of the Central Fisheries Board; the Department of Zoology, UCG; the Fisheries Research Centre, Dept. of the Marine; Aztec Consultants and Salmara Fisheries Ltd. Their co-operation and input is greatly appreciated by ESB. The Programme will also address other problems including smolt output, migration, fish counts at hydro stations and predation control.

Optimisation of Shannon catchment for smolt production and an experimental rehabilitation programme will be initiated during 1992 and the results will be monitored in future years.

Assessment of rod catch in recreational fisheries (the analysis of rod-caught fish) was continued in 1991. Efforts were made to improve angler co-operation by the initiation of a reward scheme. The analysis of the rod catch is an important element of the overall programme as it is vital to have an estimate of the contribution of ranched smolt (all of which were coded-wire tagged in 1991) to the

rod catch in the various recreational fisheries. During 1991 ESB released 350,000 smolts in the Lower Shannon which should have significant impact on the returns in 1993/94 seasons.

Nationally it was a poor year for salmon. The validated count on the Shannon was the lowest since 1984.

The Clady/Crolly systems were surveyed and a development programme has been prepared for the Crolly river and will be in operation before the 1992 season. A licence was issued to a community based co-operative to operate the fishing boats and pleasure boat on the upper and lower Nacung with ESB retaining the fishing rights and control of the issue of fishing permits.

ESB continued to be involved in a joint venture with the Fisheries Research Centre, Department of the Marine and the South Western Regional Fisheries Board on the Sullane river smolt ranching programme. During the year 120,000 smolts were released in the lower sections of the Lee systems.

During the 1991 season 50,000 smolts and 40,000 unfed fry were planted in the upper and lower Erne systems.

A licence was issued to a private company to carry out leisure pursuits and activities on Blessington Lakes during 1991 which will contribute to the development of the tourist industry in the area with consequent advantages for the local economy.

ESB continued to give all possible assistance to Local Authorities, Regional Fisheries Boards and the Central Fisheries Board in carrying out investigations of pollution incidents and in the implementation of remedial measures.

In the area of our protection activities, 1991 was a very busy year. On the Upper Shannon 60 fyke nets and 12 monofiliment nets on the Lower Shannon were seized by ESB protection staff. ESB referred a number of cases with full reports to the Shannon Regional Fisheries Board for prosecution.

Total expenditure on fisheries conservation was £1.380 million and income from the letting of fishing rights, etc. amounts to £65,000. Further development/maintenance work was carried out at Castleconnell on the Shannon and Nenagh rivers.

The recorded salmon runs were as follows:

Shannon	-	3,415
Lee	-	866
Clady	-	212
Erne	-	1,788
Liffey	-	Not available

Fisheries – Conservation Operations

Year ended 31 December 1991

	1991	1990
	£000's	£000's
Direct Costs/Overheads	**1,380**	1,372
Less:		
Letting of fishing rights and miscellaneous income	**65**	45
Net Cost for year	**1,315**	1,327

Auditors' Report to Electricity Supply Board

We have examined the above figures which have been extracted from the accounting records of Electricity Supply Board. In our opinion, the above extracts are consistent with the financial statements for the year ended 31 December 1991 set out on pages 30 to 48.

KPMG Stokes Kennedy Crowley
Chartered Accountants
DUBLIN

26 February 1992

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ESB Input to Ireland's Economy

	1987 £m	1988 £m	1989 £m	1990 £m	**1991 £m**
Fuel: Natural Gas, Peat, Native Coal	117	119	133	141	**132**
Irish Suppliers of Goods and Services including Capital Work	120	129	138	175	**185**
Rates	27	28	27	27	**29**
Payroll Costs including Capital Projects	223	223	224	235	**247**
Interest paid to Irish Lenders & Stockholders	40	28	25	26	**25**
TOTAL	527	527	547	604	**618**

Data Summary

		1990		**1991**
Financial Outcome – Surplus		£1.6m		**£3.9m**
Income		£819m		**£860m**
Assets in Commission (before Depreciation)		£2,270m		**£2,346m**
Sales (Million Units)		11,768		**12,370**
Effective Generating Capacity (MW)		3,932		**3,932**
Peak Load (MW)		2,600		**2,628**
Customers		1,278,870		**1,302,061**
Group average number of employees in year		10,780		**10,676**
Operations	8,783		**8,508**	
New Works	1,283		**1,467**	
Apprentices	237		**211**	
Electricity Service		10,303		**10,186**
Consultancy/Secondment		327		**309**
Salmara		150		**181**
Group Payroll				
Pay		£196m		**£207m**
ESB Contribution to Pension Fund/ PRSI and Expenses		£40m		**£41m**

FINANCE

5 Year Summary – Financial Statistics

	1987	1988	1989	1990	**1991**
FINANCIAL STATISTICS	£m	£m	£m	£m	**£m**
OPERATIONS:					
Income	780	756	789	819	**860**
Expenditure	785	751	777	818	**856**
Surplus/(Deficit)	(5)	5	12	1	**4**
Cumulative (Deficit)	(71)	(66)	(54)	(53)	**(49)**
FUNDING CAPITAL DEVELOPMENT PROGRAMME:					
Requirements:					
Capital Expenditure	93	87	85	92	**116**
Working Capital Movement (excl. long-term debt repayable within 12 months)	(12)	(10)	13	62	**24**
	81	77	98	154	**140**
Financing:					
Internal Resources (after debt repayment)	8	–	40	53	**30**
Borrowings	73	77	58	101	**110**
	81	77	98	154	**140**
SOURCES AND EMPLOYMENT OF CAPITAL:					
Sources:					
* Debt Liabilities Outstanding	1,153	1,103	1,004	1,007	**977**
Reserves	534	573	638	700	**745**
	1,687	1,676	1,642	1,707	**1,722**
Employment:					
Net Fixed Assets	1,496	1,508	1,511	1,512	**1,513**
Capital Work-in-Progress	39	38	31	39	**63**
Net Current Assets (excl. long-term debt repayable within 12 months) and Provisions	152	130	100	156	**146**
	1,687	1,676	1,642	1,707	**1,722**
* Inclusive of Cumulative Currency (Loss)	(122)	(119)	(74)	(76)	**(48)**

FINANCE

5 Year Summary – Key Ratios

	1987	1988	1989	1990	1991
Return on Average Net Assets (%)	10.2	9.5	9.2	8.0	7.5
Debt/Net Assets (%)	68.0	66.0	61.0	59.0	57.0
Current Ratio (Times)	2.1	2.0	2.1	2.3	2.5
Interest Cover (Times) (excl. interest Capitalised)	1.7	1.6	1.8	1.6	1.6
Foreign/Total Borrowings (%)	71.0	76.0	74.0	68.0	68.0
Internal Resources/ Capital Expenditure (%)	9.0	–	47.0	58.0	26.0
Average Electricity Credit Period (Days from Date Billed)	23.7	27.7	23.4	21.5	23.4

Annual Capital Expenditure (£m)

Year	Distribution	Transmission	Generation
1987	50	11	40
1988	50	10	18
1989	54	5	12
1990	62	2	12
1991	70	2	24

Analysis of Cumulative Investment in Fixed Assets (%)

	1982/ 1983	1983/ 1984	1984/ 1985	1985/ 1986	1986 (9 months)	1987	1988	1989	1990	1991
Distribution	36	34	35	27	25	24	25	26	31	32
Generation	43	44	42	53	54	56	54	53	51	50
Transmission	13	14	15	14	15	15	15	14	11	11
General	8	8	8	6	6	5	6	7	7	7

Analysis of Electricity Expenditure (%)

	1982/ 1983	1983/ 1984	1984/ 1985	1985/ 1986	1986 (9 months)	1987	1988	1989	1990	1991
Fuel	42	42	42	39	30	29	27	29	30	28
Payroll	22	20	19	19	22	23	24	24	24	24
Capital Charges	25	26	27	29	33	33	32	30	27	27
Materials & Others	11	12	12	13	15	15	17	17	19	21

FINANCE

Summarised Statement of Borrowings (Parent)

	Balance Outstanding 31 Dec. 1990	Borrowed during Year	Redeemed during Year	Adjustment for currency changes	**Balance Outstanding 31 Dec. 1991**
	£000's	£000's	£000's	£000's	**£000's**
Total – Irish Pound Borrowings	218,886	30,704	(55,539)	–	**194,051**
Total – Foreign Borrowings	811,807	56,832	(66,508)	(14,715)	**787,416**
TOTAL – ALL BORROWINGS	1,030,693	87,536	(122,047)	(14,715)	**981,467**

Currency and Repayment Profile

	Repayable Within 1 Year	Repayable Within 2 to 5 Years	Repayable Within 6 to 10 Years	Repayable After 10 Years	Total	Currency as % of Total Borrowings
	£000's	£000's	£000's	£000's	£000's	%
Irish Pounds	60,992	122,248	46,064	56,154	285,458	29
European						
Deutsche Marks	16,007	28,684	17,713	–	62,404	6
Swiss Francs	36,893	176,433	38,262	–	251,588	26
French Francs	2,142	7,788	32,241	1,123	43,294	4
Dutch Guilders	3,604	5,510	17,052	–	26,166	3
Luxembourg Francs	4,408	21,625	17,898	–	43,931	4
ECU's	2,849	78,493	176,200	5,869	263,411	27
Others						
Miscellaneous	272	2,804	2,139	–	5,215	1
	127,167	443,585	347,569	63,146	981,467	
Repayment Profile	13%	45%	36%	6%		100%

Where debt swaps apply, Irish Pound values are based on currency liability under the swap arrangement.

FINANCE

Detailed Statement of Borrowings (Parent)

Amount Borrowed		Year(s) of Borrowing		Year(s) of Maturity	Balance Outstanding 31 Dec. 1991	
£000's			**Irish Pound Borrowings**		**£000's**	
IEP	7,000	1968	Stock – 7.25%	1988/93	**IEP**	**1,296**
IEP	12,000	1972	Stock – 9%	1992/95	**IEP**	**2,697**
IEP	12,000	1978	Stock – 13%	1990/92	**IEP**	**8,025**
IEP	20,000	1983	Stock – 13.5%	2006/08	**IEP**	**19,779**
IEP	30,000	1988	Stock – 8.25%	2003	**IEP**	**30,000**
IEP	183,000	1982-91	Domestic Banks	1989/99	**IEP**	**120,254**
IEP	12,000	1990	European Investment Bank	1995/2004	**IEP**	**12,000**
£000's			**Foreign Currency Borrowings**		**£000's**	
		1978/91	European Investment Bank	1983/2004		
USD	76,666*		– United States Dollars		**USD**	**48,970**
DEM	240,215		– Deutsche Marks		**DEM**	**134,011**
NLG	148,894		– Netherlands Guilders		**NLG**	**78,161**
CHF	285,201		– Swiss Francs		**CHF**	**173,376**
JPY	10,205,000*		– Japanese Yen		**JPY**	**7,464,438**
GBP	20,185*		– Sterling		**GBP**	**19,834**
XEU	82,641		– European Currency Unit		**XEU**	**75,437**
LEC	2,761,636		– Luxembourg Francs		**LEC**	**2,406,542**
ITL	8,145,000		– Italian Lira		**ITL**	**7,249,865**
FRF	149,600		– French Francs		**FRF**	**140,594**
USD	14,500*	1969/73	I.B.R.D. Washington	1974/94	**USD**	**2,935**
USD	30,000*	1972	Japanese Banks	1973/92	**USD**	**1,400**
FRF	376,961	1973/85	French Banks	1977/2004	**FRF**	**72,735**
USD	12,000*	1977	U.S. Syndicates	1983/92	**USD**	**1,200**
CHF	125,625	1981/85	Swiss Export Agency	1986/97	**CHF**	**60,738**
USD	78,806*	1981/86	Export Import Bank of the United States	1983/2000	**USD**	**40,834**
DEM	120,000	1982	Banking Syndicate	1983/92	**DEM**	**12,000**
JPY	5,000,000*	1983	Japanese Banks	1987/92	**JPY**	**950,000**
DEM	50,000	1984	German Bank	1988/93	**DEM**	**16,667**
CHF	50,000	1985	Swiss Banks	1992	**CHF**	**50,000**
CHF	110,000	1987	Swiss Banks	1995	**CHF**	**110,000**
JPY	3,400,000*	1988	Japanese Bank	1998	**JPY**	**3,400,000**
JPY	2,540,000*	1988	Japanese Bank	1993	**JPY**	**2,540,000**
USD	25,000*	1984	Middle East Bank	1993	**USD**	**25,000**
GBP	20,000*	1986	Sterling Acceptance Credit	1992	**GBP**	**20,000**
USD	25,000*	1988	Middle East Bank	1993	**USD**	**25,000**
USD	42,989*	1988	Banking Syndicate	1995	**USD**	**42,989**
DEM	135,000*	1988	Banking Syndicate	1993	**DEM**	**135,000**
CHF	37,800	1988	German Bank	1995	**CHF**	**37,800**
JPY	2,500,000*	1989	Japanese Bank	1999	**JPY**	**2,500,000**
XEU	33,390*	1989/91	U.S. Agency	1999	**XEU**	**33,390**
XEU	12,244*	1990/91	U.S. Agency/Swiss Bank	2001	**XEU**	**12,244**
LUF	1,200,000*	1990	Banking Syndicate	1993	**LUF**	**1,200,000**
JPY	2,600,000*	1991	Japanese Bank	1996	**JPY**	**2,600,000**
FRF	180,000	1991	German Bank	2001	**FRF**	**180,000**

•Currency debt swap contracts in place.

MARKETING

Analysis of Units Sold

Class of Supply	**1991 (Millions)**	1990 (Millions)	Increase (Millions)	% Increase
Domestic				
General Supply	**4,377.8**	4,236.7	141.1	3.3
Night Rate	**412.2**	332.4	79.8	24.0
	4,790.0	4,569.1	220.9	4.8
Commercial				
General Supply	**1,263.2**	1,151.0	112.2	9.7
Heating, Cooking & Water Heating	**193.0**	199.4	-6.4	-3.2
Night Space Heating	**210.7**	188.8	21.9	11.6
Public Lighting	**140.7**	137.9	2.8	2.0
Maximum Demand	**1,176.7**	1,075.0	101.7	9.5
Miscellaneous	**43.8**	43.3	0.5	1.2
	3,028.1	2,795.4	232.7	8.3
Industrial				
Maximum Demand				
Medium & High Voltage	**3,606.8**	3,480.5	126.3	3.6
Low Voltage	**757.4**	752.4	5.0	0.7
Miscellaneous	**187.8**	170.6	17.2	10.1
	4,552.0	4,403.5	148.5	3.4
TOTAL	**12,370.1**	11,768.0	602.1	5.1

MARKETING

Growth of ESB 1930-1991

Year	Units Generated (and purchased)*	Units sold to Customers	Revenue from Electricity Sales	Average price per unit sold	Customers
	Millions	Millions	£000	Pence	Total
1929/30	60.9	43.2	478	1.108	48,606
1939/40	407.0	318.6	1,946	0.612	172,545
1949/50	784.8	626.1	4,774	0.763	310,639
1959/60	2,096.0	1,692.2	14,724	0.871	610,946
1969/70	5,245.7	4,411.6	39,400	0.892	786,500
1979/80	10,213.6	8,560.3	300,024	3.505	1,043,428
1990	13,895.4	11,768.0	756,074	6.425	1,278,870
1991	14,634.6	12,370.1	785,205	6.348	1,302,061

*Excluding Units absorbed by Storage Pumping

Electricity Sales by Sector (Million Units)

Year	Domestic	Commercial	Industrial	Total
1982/83	3,599	1,911	3,009	8,519
1983/84	3,703	2,002	3,198	8,903
1984/85	3,795	2,074	3,405	9,274
1985/86	4,001	2,234	3,553	9,788
9 mths 1986	2,821	1,635	2,840	7,296
1987	4,230	2,437	3,839	10,506
1988	4,204	2,466	3,946	10,616
1989	4,328	2,601	4,240	11,169
1990	4,569	2,795	4,404	11,768
1991	4,790	3,028	4,552	12,370

DISTRIBUTION

Distribution System at 31 December 1991 (including Rural Networks)

Transformer Stations	No. in Commission	Change in year	Total Capacity in kVA	Change in year (kVA)
110 kV	81	+2	4,639,400	+31,500
38 kV	401	+4	3,125,300	+72,000
20 kV	386	+287	11,198	+9,064
10 kV/5kV (excl. U.R.D.)	141,249	+2198	4,693,582	+137,725
10 kV U.R.D.	1,882	Nil	108,811	Nil

Lines & Cables	Length km	Change in year	Description
110 kV Lines	3,704	+17	3 x 95 to 3 x 425 sq.mm (Cu. + SCA)
110 kV Cables	85	Nil	3 x 185 to 3 x 2,000 sq.mm (Cu. + A1)
38 kV Lines	5,684	+10	3 x 35 to 3 x 300 sq.mm (Cu. + SCA)
38 kV Cables	292	+2	3 x 95 to 3 x 680 sq.mm (Cu. + A1)
20 kV Lines	134	+74	2 x 25 to 3 x 92 sq.mm (Cu. + SCA)
10 kV Lines	78,589	+738	2 x 25 to 3 x 92 sq.mm (Cu. + SCA)
10 kV/5 kV Cables	3,746	+124	2 x 16 to 3 x 240 sq.mm (Cu. +A1)

Distribution System Trends – Cumulative Data

Transformers(kVA)	1987	1988	1989	1990	1991
110 kV	4,646,900	4,671,400	4,646,400	4,607,900	4,639,400
38 kV	2,932,100	2,978,100	3,014,900	3,053,300	3,125,300
20 kV	–	–	–	2,134	11,198
10 kV/5 kV	4,307,953	4,392,958	4,525,947	4,664,668	4,802,393

Networks (km)					
110 kV	3,727	3,751	3,751	3,772	3,789
38 kV	5,890	5,939	5,983	5,964	5,976
20 kV	–	–	–	60	134
10 kV/5 kV	79,664	80,244	80,882	81,473	82,335

TRANSMISSION

Transmission System at 31 December 1991

Stations

Transformer/Switching Stations	No. in Commission	Change in Year	Total Capacity in kVA	Change in year kVA
400 kV Stations	3	Nil	990,000 at 17/400 kV	Nil
			1,500,000 at 400/220 kV	Nil
220 kV Stations	18	Nil	600,000 at 275/220 kV	Nil
			4,253,000 at 220/110 kV	Nil
			1,180,000 at 20/220 kV	Nil
			420,000 at 13/220 kV	Nil
			1,072,000 at 10/220 kV	Nil
			708,000 at 110/38 kV	Nil
			31,500 at 110/10 kV	Nil
			412,000 at 10/110 kV	Nil
			20,000 at 110/6 kV	Nil

Lines and Cables

Lines and Cables	Length km.	Increase for Year – km.	Description
400 kV Lines	438	Nil	3 x twin 600 sq. mm single circuit SCA
275 kV Lines	11	Nil	6 x twin 485 sq. mm. double circuit SCA
220 kV Lines	141	Nil	6 x 600 sq. mm. double circuit SCA
220 kV Lines	1,134	Nil	3 x 600 sq. mm. single circuit SCA
220 kV Lines	277	Nil	3 x 425 sq. mm. single circuit SCA
220 kV Lines	4	Nil	3 x 425 sq. mm. twin, SCA
220 kV Lines	13	Nil	3 x 600 sq. mm. twin, single circuit SCA
400 kV Cables	2	Nil	Oil filled
220 kV Cables	19	Nil	High pressure oil pipe-type
220 kV Cables	44	Nil	Oil filled

TRANSMISSION

Transmission System Trends

Station Capacity in kVA – Cumulative Data

Year	220 kV	400 kV
1982/83	7,682,000	–
1983/84	7,900,000	–
1984/85	8,400,000	–
1985/86	8,400,000	830,000
1986 (9 mths)	8,650,000	1,660,000
1987	8,650,000	2,490,000
1988	8,681,500	2,490,000
1989	8,696,500	2,490,000
1990	8,696,500	2,490,000
1991	8,696,500	2,490,000

Kilometres of Lines/Cables – Cumulative Data

Year	220 kV	275 kV	400 kV
1982/83	1,427	11	–
1983/84	1,453	11	–
1984/85	1,453	11	1
1985/86	1,468	11	230
1986 (9 mths)	1,560	11	440
1987	1,578	11	440
1988	1,632	11	440
1989	1,632	11	440
1990	1,632	11	440
1991	1,632	11	440

Plant Availability

Year	Availability %	Year	Availability %
1982/83	96.4	1987	95.8
1983/84	97.0	1988	94.9
1984/85	97.4	1989	96.1
1985/86	95.3	1990	96.1
1986 (9 mths)	95.0	1991	94.7

Note: From 1990, due to a re-classification, 110kV data appears under "Distribution.".

OPERATIONS

Statement of Generation Costs

GENERATING STATIONS	Fuel £000's	Operation £000's	Maintenance £000's	Local Charges £000's	WORKS COST 1991 £000's	WORKS COST 1990 £000's	Depreciation £000's	TOTAL COST 1991 £000's	TOTAL COST 1990 £000's
Coal/Oil/Gas									
Marina	7,395	1,704	2,183	1,398	**12,680**	14,039	761	**13,441**	14,788
Arigna	2,430	768	513	280	**3,991**	4,812	24	**4,015**	4,827
Great Island	2,625	1,509	1,984	1,322	**7,440**	5,700	469	**7,909**	6,149
Tarbert	20,621	2,872	7,445	2,283	**33,221**	25,799	1,471	**34,692**	27,348
Poolbeg	28,072	3,087	3,949	3,232	**38,340**	41,514	2,715	**41,055**	44,514
Aghada	23,106	2,005	2,788	2,152	**30,051**	31,386	3,597	**33,648**	34,276
North Wall	8,859	1,563	1,726	1,137	**13,285**	12,741	1,969	**15,254**	14,716
Moneypoint	61,975	5,566	14,072	9,131	**90,744**	91,308	23,093	**113,837**	113,044
Sod Peat (Machine)									
Allenwood	1,725	1,203	760	600	**4,288**	4,339	37	**4,325**	4,364
Milled Peat									
Ferbane	9,579	2,466	3,070	942	**16,057**	18,204	104	**16,161**	18,272
Rhode	11,769	1,980	2,361	832	**16,942**	15,537	82	**17,024**	15,594
Bellacorick	7,165	1,396	1,405	577	**10,543**	11,569	86	**10,629**	11,636
Shannonbridge	19,834	2,475	2,936	1,211	**26,456**	25,437	2,248	**28,704**	27,656
Lanesboro	15,196	1,921	2,026	902	**20,045**	20,890	2,118	**22,163**	22,979
Sod Peat (Hand-Won)									
Two 5MW Stations	773	724	425	354	**2,276**	2,327	22	**2,298**	2,342
Total – Fuel Stations	221,124	31,239	47,643	26,353	**326,359**	325,602	38,796	**365,155**	362,505
Hydro									
Shannon		952	2,576	1,779	**5,307**	4,435	147	**5,454**	4,489
Erne		451	1,292	1,198	**2,941**	2,819	145	**3,086**	2,956
Liffey		86	799	326	**1,211**	1,600	41	**1,252**	1,638
Lee		344	1,183	640	**2,167**	2,567	82	**2,249**	2,647
Clady		67	128	132	**327**	256	22	**349**	276
Turlough Hill (Pumped Storage)		718	1,201	1,831	**3,750**	2,915	625	**4,375**	3,523
Total – Hydro Stations		2,618	7,179	5,906	**15,703**	14,592	1,062	**16,765**	15,529
Total – All Stations	221,124	33,857	54,822	32,259	**342,062**	340,194	39,858	**381,920**	378,034

NOTE: Station works cost per unit sent-out is included with the Generating Statistics under the heading 'Particulars and Performance of Plant'.

OPERATIONS

Installed Capacity

Year	MW	Year	MW
1982/83	3,175	1987	4,009
1983/84	3,260	1988	3,937
1984/85	3,247	1989	3,932
1985/86	3,547	1990	3,932
1986 (9 mths)	3,852	1991	3,932

Percentage Installed Capacity Analysed by Fuel

Year	Oil	Peat	Hydro	Coal	Gas
1982/83	46	15	16	–	23
1983/84	27	15	16	–	41
1984/85	24	15	16	–	45
1985/86	22	14	14	9	41
1986 (9 mths)	20	13	13	16	38
1987	15	12	13	23	36
1988	16	12	13	24	35
1989	16	12	13	24	35
1990	16	12	13	24	35
1991	16	12	13	24	35*

*Of the plants classified as gas, 81% can also burn Oil.

Energy Sources of Units Generated (% share of production)

	1982/ 1983	1983/ 1984	1984/ 1985	1985/ 1986	1986	1987	1988	1989	1990	1991
Oil	26	20	20	26	48	21	8	5	10	16
Gas	50	54	53	47	16	18	27	31	27	25
Peat	16	18	21	17	12	15	17	15	16	14
Hydro	7	7	5	7	7	6	7	5	5	5
Coal	1	1	1	3	17	40	41	44	42	40

Percentage Plant Forced Outage Rate

Year	%	Year	%
1982/83	12.1	1987	7.9
1983/84	8.0	1988	7.5
1984/85	6.2	1989	7.2
1985/86	12.3	1990	7.9
1986 (9 mths)	12.9	1991	5.7

OPERATIONS

Thermal Efficiency Percentage (of Conversion of Primary Energy to Electricity)

	1982/ 1983	1983/ 1984	1984/ 1985	1985/ 1986	1986 (9 mths)	1987	1988	1989	1990	1991
Gas	35.1	37.3	38.7	38.7	35.2	37.0	39.0	38.6	38.7	38.9
Oil	34.6	35.2	36.5	36.2	36.8	36.5	33.6	35.1	36.3	36.8
Milled Peat	23.8	24.0	25.2	24.8	24.8	24.8	25.1	25.1	25.6	25.3
Sod Peat	21.2	21.5	22.6	22.0	19.6	19.0	20.8	22.8	22.7	21.6
Coal	–	–	–	–	35.5*	37.6*	37.5*	37.7*	37.8*	38.0*
Overall	32.1	33.3	34.2	34.4	34.2	34.4	34.5	35.1	35.1	35.4

*includes native coal

Station Staff Numbers per MW of Installed Capacity

Year	Peat	Oil	Gas	Coal
1982/83	2.46	0.62	0.48	–
1983/84	2.21	0.51	0.45	–
1984/85	2.20	0.50	0.45	–
1985/86	2.04	0.59	0.45	–
1986 (9 mths)	2.05	0.49	0.45	–
1987	1.96	0.59	0.46	0.46
1988	1.89	0.58	0.46	0.46
1989	1.95	0.58	0.46	0.50
1990	1.91	0.58	0.46	0.49
1991	1.90	0.60	0.46	0.50

Age of Generating Plant at Year-End 1991

Age / Fuel Type	Under 5 Years MW	5 to 10 Years MW	10 to 15 Years MW	15 to 20 Years MW	20 to 25 Years MW	25 to 30 Years MW	Over 30 Years MW	Total MW
Oil	–	–	250	370	–	–	–	620
Peat	–	90	–	40	–	190	150	470
Gas	–	*335	*825	–	240	–	–	1400
Hydro	–	–	1	292	–	–	219	512
Coal	305	610	–	–	–	–	15	930
Total MW	305	1035	1076	702	240	190	384	3932

*Combined cycle plant at Marina and North Wall incorporates refurbished steam turbines.

Frequency Range (Hertz)

Year	Frequency Range	Year	Frequency Range
1982/83	49.79 to 50.21	1987	49.83 to 50.17
1983/84	49.78 to 50.22	1988	49.87 to 50.13
1984/85	49.80 to 50.20	1989	49.89 to 50.11
1985/86	49.82 to 50.18	1990	49.91 to 50.09
1986 (9 mths)	49.82 to 50.18	1991	49.90 to 50.10

The frequency was maintained within the range shown for 95% of the time.

OPERATIONS

Generation Statistics for 1991

STATION	Year 1991			Year 1990
	Generated Million Units	Station Use Million Units	Sent Out Million Units	Sent Out Million Units
Ardnacrusha	332.5	2.8	329.7	286.8
Erne	254.4	3.0	251.4	270.4
Lee	79.1	1.2	77.9	67.9
Liffey	42.6	1.3	41.3	28.7
Clady	14.3	0.1	14.2	17.2
Moneypoint	5,795.3	402.4	5,392.9	5,434.9
Arigna	35.9	2.9	33.0	52.2
Poolbeg	1,914.7	101.7	1,813.0	1,720.0
North Wall	569.0	13.2	555.8	388.8
Aghada	1,550.4	70.7	1,479.7	1,460.9
Marina	474.3	5.7	468.6	484.1
Tarbert	1,381.6	88.0	1,293.6	814.1
Great Island	160.5	12.3	148.2	121.7
Shannonbridge	634.0	61.8	572.2	566.4
Lanesboro	554.0	44.9	509.1	536.0
Ferbane	264.6	25.1	239.5	300.7
Rhode	367.5	30.9	336.6	299.1
Bellacorick	208.5	15.2	193.3	221.7
Allenwood	50.2	4.0	46.2	53.9
Cahirciveen	14.5	1.6	12.9	16.7
Gweedore	7.1	0.7	6.4	5.5
Turlough Hill (Generating)	218.4	4.0	214.4	281.6
Turlough Hill (Pumping)	-311.1	–	-311.1	-405.8
Purchased from Small Suppliers	22.6	–	22.6	16.8
System Demand	14,634.6	893.2	13,741.4	13,040.3
Maximum Daily Generation – Million Units			50.2	49.0
Maximum Load Generated in MW			2,628	2,600

Note: System Demand is total units generated by all stations including Turlough Hill (generating) plus Units Purchased, less Turlough Hill (pumping).

OPERATIONS

Particulars and Performance of Generating Plant (Thermal Stations)

Station	Plant Particulars					Plant Performance 1991			
	Generating Sets		Boilers			Units sent out millions	Plant load factor %	Fuel cost per unit sent out (pence)	Works cost per unit sent out (pence) *
	No.	Total Capacity MW	No.	TOTAL Capacity Tonne/hr	Fuel Type				
Bellacorick	2	40	2	191	Milled Peat	193.3	59.7	3.706	5.454
Ferbane A	3	60	3	300	Milled Peat	120.8	25.9	4.535	7.752
Ferbane B	1	30	1	130	Milled Peat	118.7	49.2	3.454	5.637
Shannonbridge	3	125	3	522	Milled Peat	572.2	58.1	3.466	4.624
Lanesboro	2	85	2	349	Milled Peat	509.1	74.6	2.984	3.937
Allenwood	2	40	4	273	Sod Peat	46.2	14.4	3.733	9.281
Cahirciveen	1	5	1	28	Sod Peat	19.2	24.7	4.026	11.854
Gweedore	1	5	1	28	Sod Peat				
Rhode A	2	40	2	191	Milled Peat	139.4	43.7	3.986	5.840
Rhode B	1	40	1	173	Milled Peat	197.2	61.5	3.150	4.660
Moneypoint	3	915	3	2808	Coal	5392.9	72.5	1.149	1.683
Arigna	1	15	1	75	Coal	33.0	27.4	7.363	12.094
Great Island	1	120	1	250	Oil	148.2	15.3	1.771	5.020
Marina	1	30	1	132	HR**	468.6	47.2	1.578	2.706
	1	85	Combustion Turbine		Gas				
Aghada	1	270	1	800	Gas	1479.7	64.4	1.561	2.031
	3	255	Combustion Turbines		Gas/Oil		1.4		
Poolbeg	3	510	3	1560	Gas/Oil	1813.0	43.0	1.548	2.115
Tarbert	2	500	2	1600	Oil	1293.6	31.6	1.594	2.568
North Wall	1	104	Combustion Turbine		Gas/Oil	555.8	3.73	1.593	2.390
	3	42	1	174	HR**				
	1	104	Combustion Turbine		Gas/Oil		42.0		

Excludes 8 x 60 MW Decommissioned units in long term storage – Great Island (2), Marina (1), Ringsend (3), Tarbert (2), and other plant being retired – Ringsend (3 x 30 MW), Lanesboro (20 MW), Milltown Malbay (5 MW), Marina (3 x 30 MW Boilers), Screeb (5 MW)

* Works costs per unit is affected by items such as load factor and load profile; the figures in this column cannot, therefore, be used directly for comparing station performances.

** Heat recovery: Operated on combined cycle with associated combustion turbine.

OPERATIONS

Particulars and Performance of Generating Plant (Hydro Stations)

Station	Standard Annual Generation million units	Plant Particulars		Plant Performance for 1991		
		Generating Sets		Units sent out Millions	Plant load factor %	Works cost per unit sent out (pence)
		No.	Capacity (MW)			
Ardnacrusha	332.5	5	86	329.7	43.9	1.609
Pollaphuca	42.6	2	30	21.0	8.2	2.932
Golden Falls		1	4	6.9	20.0	
Leixlip		1	4	13.4	39.2	
Cliff	254.4	2	20	73.6	42.0	1.169
Cathaleen's Fall		2	45	177.8	44.1	
Carrigadrohid	79.1	1	8	21.1	30.7	2.781
Inniscarra		2	19	56.8	34.7	
Clady	14.3	1	4	14.2	40.5	2.302
Turlough Hill – Pumped Storage	–	4	292	214.4	–	–

Peak Load Trends

Year	MW	Year	MW
1982/83	1,924	1987	2,351
1983/84	1,994	1988	2,313
1984/85	2,092	1989	2,466
1985/86	2,130	1990	2,600
1986 (9 mths)	2,178	1991	2,628

System Demand Trends

Year	Million Units	Year	Million Units
1982/83	10,194	1987	12,491
1983/84	10,559	1988	12,563
1984/85	10,973	1989	13,187
1985/86	11,465	1990	13,895
1986 (9 mths)	8,657	1991	14,635

Generating Plant Availability

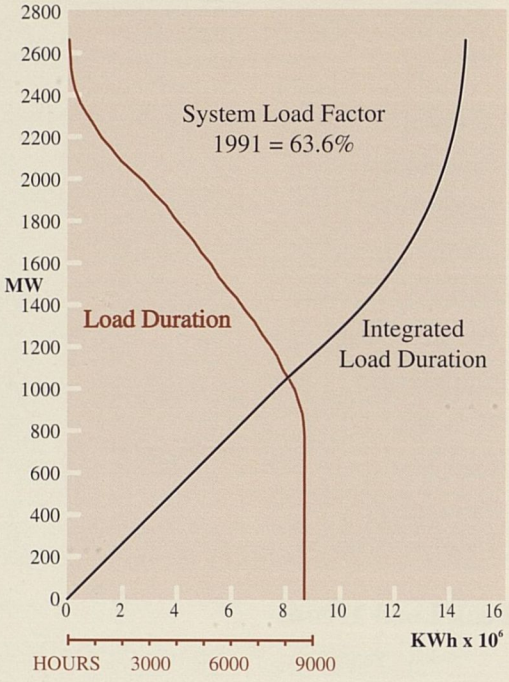
Year	Availability %	Year	Availability %
1982/83	74.6	1987	74.7
1983/84	76.0	1988	76.8
1984/85	78.6	1989	76.9
1985/86	75.5	1990	78.0
1986 (9 mths)	73.2	1991	81.9

OPERATIONS

Weekly Energy Sources (GWh)

Week	Hydro	Peat	Gas	Coal	Oil
1	33.2	33.3	74.8	125.6	20.5
2	33.2	31.2	80.9	130.3	45.0
3	32.0	44.1	74.7	146.1	25.4
4	30.8	50.4	64.3	149.0	17.0
5	24.8	43.6	67.3	149.4	35.2
6	18.4	42.7	59.1	140.6	69.4
7	13.1	45.0	54.5	101.6	109.2
8	17.5	38.7	35.6	142.1	79.7
9	26.8	40.2	37.7	145.6	55.0
10	27.0	35.0	81.9	140.3	20.2
11	22.1	38.1	71.9	140.2	20.8
12	30.5	44.0	58.4	131.2	19.0
13	26.3	54.3	68.6	115.3	20.6
14	27.6	48.9	69.3	88.1	35.8
15	32.5	44.0	64.1	91.0	57.9
16	22.2	44.8	57.2	91.3	68.4
17	19.1	13.0	88.6	21.9	100.1
18	15.2	46.6	72.4	70.6	75.5
19	9.0	47.0	89.7	63.4	63.3
20	7.1	38.8	101.2	62.9	54.9
21	4.6	30.9	87.2	101.9	35.6
22	3.2	31.3	81.0	131.6	8.5
23	3.3	40.1	66.4	117.2	20.8
24	4.1	36.9	55.0	92.7	70.9
25	3.3	33.9	95.8	94.5	32.6
26	4.3	36.8	72.5	83.3	61.5
27	6.4	42.3	20.9	94.2	93.4
28	4.7	46.8	31.3	91.9	81.3
29	4.3	47.0	69.4	85.1	48.2
30	1.3	50.1	75.2	86.4	33.0
31	1.4	44.8	59.5	67.8	65.1
32	3.3	45.9	51.6	90.2	38.1
33	5.2	40.1	66.6	59.3	75.5
34	2.3	44.2	55.6	96.2	61.3
35	3.6	45.9	59.0	98.7	55.4
36	2.6	44.1	65.3	66.9	85.7
37	1.4	42.0	61.3	94.4	68.1
38	1.7	45.5	67.6	108.6	45.3
39	4.5	40.3	85.7	124.7	19.9
40	4.6	34.3	80.0	135.5	27.4
41	5.2	39.8	89.8	139.9	10.2
42	5.3	36.6	84.8	143.3	20.9
43	4.9	30.6	89.4	147.5	27.1
44	9.5	32.8	85.0	145.3	14.9
45	20.0	26.8	79.7	141.9	41.7
46	25.6	44.7	77.5	146.5	23.8
47	25.2	40.2	75.7	145.1	34.6
48	23.8	32.4	77.2	139.2	41.2
49	14.8	40.0	81.9	103.9	79.6
50	9.4	44.8	79.2	137.5	58.2
51	14.8	44.8	80.9	146.2	37.2
52	26.1	40.2	60.1	127.0	0.0

System Load Duration and Integrated Load Duration Curves 1991



System Daily Load Curves 1991

