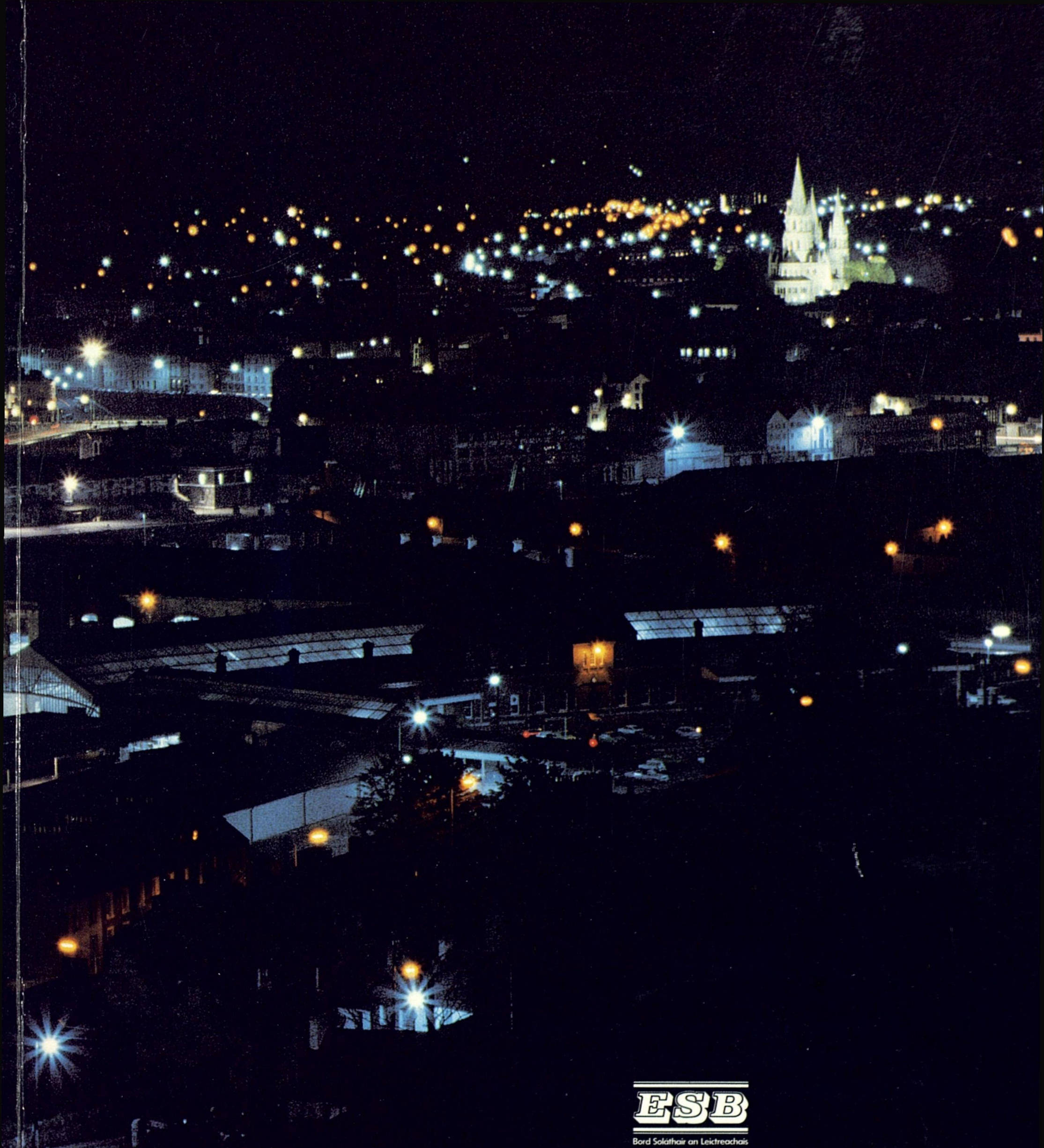


ESB

Bord Soláthair an Leictreachais

Electricity Supply Board
Fifty Sixth Annual Report
for year ended 31st March 1983

Cover: Cork City at night

PL 1487

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



Report and Accounts for year ended 31st March 1983

Board Members
PROFESSOR C. T. G. DILLON, M.E., C. Eng., F.I.E.I., F.I.E.E., F.I.Mech.E., **Chairman**
L. BOYD, F.C.I.T.
J. COHALAN, M.Sc. (Econ.)
T. GILMARTIN
D. HATCH
PATRICK J. KEVANS
P. J. MORIARTY, F.C.I.S., F.I.P.M., **Chief Executive**
A. ST. J. RYAN
J. A. RYAN, M.A., LL.D.
A. RYDER
J. P. WYLEY, B. Comm.

Directors
Generation/Transmission **A. G. KELLY,** B.E., Ph.D., F.I.Mech.E., Mem.A.S.M.E., F.I.E.I.
Advance Projects **S. TINNEY,** B.E., B.Sc., M.I.E.E.
Energy Resources **J. F. LANG,** M.E., C.Eng., F.I.Mech.E., M.I.E.I., M.I.E.E., M.Inst.E.
Finance **M. D. CONNAUGHTON,** B.Comm.
Personnel **T. V. FAHY,** B.E., F.I.P.M.
Commercial/Distribution **C. McCABE,** B.E., F.I.E.I., C.Eng.

Secretary
J. F. WILLIAMS, F.C.I.S.

Electricity Supply Board,
Lower Fitzwilliam Street, Dublin 2, Ireland.
Telephone: Dublin 765831 and 771821.
Telex: Dublin 25313

ESB

Bord Soláthair an Leictreachais

5-Year Summary—Financial Statistics and Key Ratios

(On Historical Cost Accounting Basis)

	1978/'79 £m.	1979/'80 £m.	1980/'81 £m.	1981/'82 £m.	1982/'83 £m.
FINANCIAL STATISTICS					
OPERATIONS:					
Income	238	317	425	538	598
Expenditure	245	326	419	532	604
Surplus/(Deficit)	(7)	(9)	6	6	(6)
Cumulative Surplus/(Deficit)	(11)	(20)	(14)	(8)	(14)
FUNDING CAPITAL DEVELOPMENT PROGRAMME:					
Requirements:					
Capital Expenditure	70	92	151	210	241
Working Capital Movement	11	59	46	(4)	(12)
	81	151	197	206	229
Financing:					
Internal Resources	29	27	46	54	49
Borrowings	52	124	151	152	180
	81	151	197	206	229
SOURCES AND EMPLOYMENT OF CAPITAL:					
Sources:					
*Debt Liabilities Outstanding	348	451	602	752	920
Reserves	131	155	171	195	216
	479	606	773	947	1136
Employment:					
Net Fixed Assets in Commission	353	366	446	500	608
Capital Work-in-Progress	67	122	163	287	380
Net Current Assets	59	118	164	160	148
	479	606	773	947	1136
*Inclusive of Cumulative Currency Gain/(Loss)	(42)	(48)	(67)	(109)	(147)
KEY RATIOS					
Return on Average Net Assets (%)	8.1	8.1	10.3	11.6	9.9
Internal Resources as % of Cap. Exp.	42.0	30.0	30.0	26.0	20.0
Debt/Net Assets (%)	73.0	74.0	78.0	79.0	81.0
Current Ratio (Times)	1.7	2.3	2.3	2.1	1.9
Average Electricity Debt Collection Period (Days from Date Billed)	43.0	33.0	33.0	26.0	26.0
Interest (excl. interest on Capital W.I.P.) Cover (Times)	1.5	1.4	1.8	1.8	1.7
Foreign Borrowings/Total Borrowings %	53.0	65.0	71.0	75.0	76.0



A glimpse of the past, craftsmen jointing a 110 kV oil filled cable in 1961.

DATA SUMMARY	1982/ 83	1981/ 82
FINANCIAL		
Electricity Revenue	£573.3m	£517.8m
Consultancy Income	£11.2m	£6.8m
Assets in Commission (before depreciation)	£899.8m	£756.5m
Pay	£155.8m	£137.6m
ESB Contributions to Pension Fund & PRSI & Expenses	£30.3m	£21.8m
Sales (Million Units)	8518	8662
Effective Generating Capacity (MW)	2875	3287
Peak Load (MW)	1924	1999
Customers	1,122,461	1,096,950
EMPLOYMENT		
Operation & Maintenance	9101	9171
New Capital Works	2769	2886
Appliance Sales & Contracts	423	416
Consultancy	239	177
Fisheries	62	53
Apprentices	621	598

Note: 1981/'82 was a 53 week accounting year.
1982/'83 was a 52 week accounting year.

Contents

Page

4 Report to the Minister for Industry and Energy

6 Energy

8 Finance

9 Construction

11 Supplementary Sources of Electricity

12 People in the ESB

14 Consultancy

16 Fisheries and Conservation

16 Customer Service

16 Trading

18 Maps of Systems

20 Appendix I

Generation Statistics

21 Appendix 2

Particulars and Performance of Generating Plant

24 District Offices and District Managers

25 Accounts and Accounts Schedules

50 Auditors' Report



A smile for visitors from Deirdre, one of our Head Office Receptionists.

To the Minister for Industry and Energy

In accordance with the provisions of the Electricity (Supply) Acts 1927/'82, the Board presents its Annual Report and Accounts for the year ended 31st March, 1983.

OUTCOME FOR YEAR 1982/'83

Following the surplus of the previous two years it is disappointing for the Board to have to report a deficit of £5.7 million for this year. Nevertheless, the Board regards the year's operations as having been particularly successful because what appeared twelve months ago as the prospect of the largest deficit in the history of the ESB was averted by positive management action. The accumulated deficit is now £14.133 million.

More flexible operational risk-taking in relation to generation system plant enabled a maximisation of gas usage, with additional gas having been allocated by Government during the year. Availability of over 95% in the two gas-burning stations at Cork increased gas usage beyond expectations. The plant performance was exceptional and unprecedented by any standard and reflects favourably on the quality of ESB design and the operational skill of its staff. This superior performance reduced fuel costs substantially.

In addition, a wide range of savings has been secured, including the curtailment of overtime, the reduction of inventory, improved billing and better collection, and economies in items such as rentals, postage, telephones, etc. These savings amounted to approximately £10 million of which interest savings through improved billing and management of debtors/inventory was about £6 million.

In December 1981 the Board declared that price improvement was to be its corporate objective for the 1980's. It is pleased to be able to report that the actions taken since then have resulted in the foregoing significant contributions to this objective.

PRICE OF ELECTRICITY

The Board is keenly aware of the high cost of electricity. Its representatives have explained many times how major segments of ESB costs are caused by Government decisions on national policy, including the price structure of native fuels. Such costs are not within the control of management or staff and inevitably, they impinge heavily on the price of electricity. The Board has explained previously also the unique circumstances which arise in supplying electricity in Ireland and which cause costs to be higher than in other countries. Despite these circumstances, the rates of charge for domestic and commercial customers here are still in the middle range of EEC countries.

OPERATIONS

The on-going operations of the ESB are concerned with generating electricity twenty-four hours a day and distributing it to over a million customers throughout the country. This involves continuous plant operation, planned maintenance and repair of equipment and networks to achieve acceptable standards of continuity of supply, voltage and frequency. It also includes a wide range of services for customer attendance, meter-reading, billing and collection. There are 9,586 staff engaged on the operations activity of the ESB and 452 apprentices in training. The financial results of the day to day operation of the system are reflected in the Revenue and Profit and Loss Accounts.

NEW WORKS

The new works activity currently involves:

- the completion of construction work on Moneypoint, Shannonbridge, Lanesboro and North Wall power stations, together with the associated new transmission networks;
- system improvements to cater for regional shifts in load demand which affect the capacity of existing networks;
- replacement and refurbishing of obsolescent plant and equipment;
- servicing of new customers who currently average 25,500 a year.

There are 2,769 staff presently engaged on the new works activity and 169 apprentices in training.

CONSULTANCY

Vigorous marketing of consultancy services continued during the year. Turnover at £11.2 million was twice that of the previous year and three times that earned two years ago. The net surplus on the activity was £0.8 million.

Two hundred and thirty-nine staff are employed full-time on the consultancy activity, and 60 of these are working abroad at any one time. The consultancy projects include not only sophisticated technological work but also work on a variety of other activities such as accounting systems, administration and long-range planning for other utilities.

The Board is pleased to record the ESB's success in this enterprising activity which started only a few years ago and which has already become a sizeable business. The Board plans to expand the activity over the next few years to an employment level of some 500 to 600 with a turnover of around £25 million to £30 million per annum. The activity benefits the ESB, provides employment for staff who could otherwise be surplus, and has a valuable spin-off effect for the country and for Irish industry.

NEW LEGISLATION

During the year, the Electricity (Supply) (Amendment) Act, 1982, was passed. This Act updates the ESB capital and borrowing arrangements. It also imposes on the Board a levy in lieu of the payment of rates on the generation, transmission and distribution systems which had been exempt from rates since the ESB was formed in 1927.

THE FUTURE

In its report last year the Board reviewed in detail the threat it saw to its future financial standing. This arises from the actions of successive Governments in imposing heavy cost burdens on the ESB to such an extent that prices have had to be increased to the detriment of all customers, and which affect the competitiveness of the whole economy. Last year's report could be repeated in full this year because to date no Government commitment has been forthcoming in respect of the long-term decisions necessary to ensure the continued financial soundness of the ESB. In fact, during the year ended last March, the position was worsened considerably by the doubling of the rates levy from £10 million to £20 million and by a 42% increase in the price of gas, costing the electricity customer an extra £38 million per annum from 1st April, 1983. In contrast, the Board itself has since December 1981 achieved significant cost reductions and is implementing comprehensive strategies, the sole objective of which is to achieve long-term price improvement.

One aspect of these strategies concerns change. The major changes planned over the next five years have been identified. They cover every sector of ESB business and are concerned with achieving maximum economy and efficiency. The Board has set itself a formidable task but its efforts to bring about substantial price improvement cannot succeed without a clear and positive commitment from Government to take the necessary actions to maintain the long-term financial viability and effectiveness of the ESB in the national interest. The Board wishes to record publicly that the whole philosophy within the ESB has always been aimed at ensuring that the organisation should never become a burden on the tax-payer through requiring the subvention of its operations or free equity capital towards its development. Its strategies are designed to uphold the standards of financial soundness which have been maintained since the foundation of the ESB. The Board, together with the management and staff, have confidence in Ireland's future and are committed to making a significant contribution to its development.

BOARD MEMBERS

Mr. Patrick J. Kevans and Mr. Arthur St. J. Ryan were appointed by the Government to be members of the Board from November, 1982.
Mr. Gerard N. Power completed his term of office on the 30th April, 1983 and the Board wishes to record its appreciation of his services.

STAFF

The Board wishes once again to thank all its staff for the manner in which they performed their duties in a very difficult year.

(Signed) *Charles T. G. Dillon,* Chairman
Liam Boyd
John Cohalan
Thomas Gilmartin
Denis Hatch
Patrick Kevans
Patrick J. Moriarty
Arthur Ryan
J. A. Ryan
Anthony Ryder
John P. Wyley

(Signed) *J. F. Williams,* Secretary
25th July, 1983

Energy

GENERATION

Production

System demand required the generation of 10,194 million units. This is virtually the same figure as for the first 52 weeks of the previous 53 week accounting year and is still below the level achieved in 1979/'80. Demand was down early in the year but from August there was some growth and by early October demand had reached the level of the previous year where it remained for the rest of the year.

The peak demand of 1924 MW occurred on Tuesday, 14th December, 1982. This was 75 MW lower than that of the previous year and as a result the annual load factor improved to 60.6%.

Fuel Sources

Due to the exceptional performance of the gas-fired plant in Cork it was possible to use the substantial temporary increase in the allocation of natural gas approved by the Government for 1982 and, accordingly, the proportion of electricity generated by gas increased to 49.4%. Generation by peat increased to 16% and as a result the proportion generated by oil decreased to 26%.

The gas-fired plant achieved an overall load factor of 82.2% and a running load factor of 95.2%.

The benefits, both nationally and to the ESB customer, from this plant have been very significant. By March, 1984 the operation of gas-burning plant will have:

- saved the electricity customer, in aggregate, some £262 million compared with oil generation;
- contributed over £145 million to the Exchequer;
- reduced the Balance of Payments by £355 million.

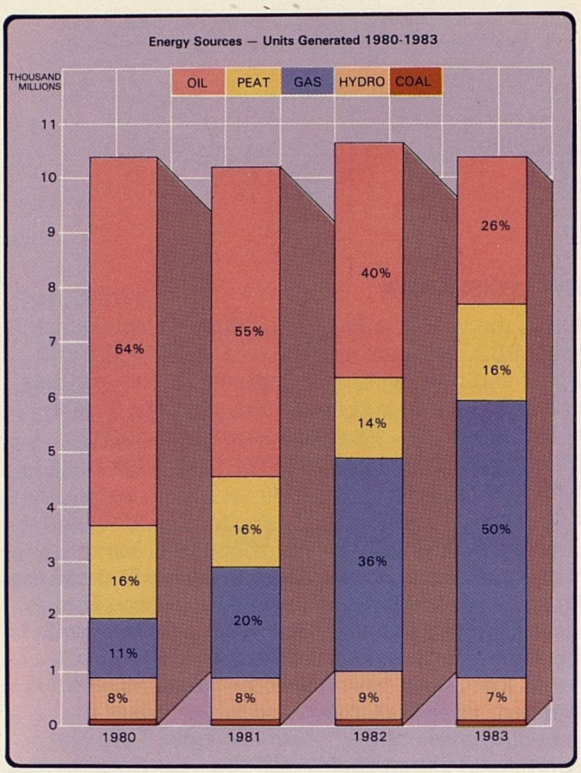
The total investment in this plant was £100 million and it has already paid its way separately to the ESB customer and to the nation.

Capacity

The third of three 85 MW combustion turbines was commissioned at Aghada in July 1982. A new 45 MW turboset was commissioned in Shannonbridge. Plant totalling 242.5 MW was decommissioned in Ringsend, Tarbert, Lanesboro and Portarlington. The total installed capacity at 31st March, 1983 was as follows:

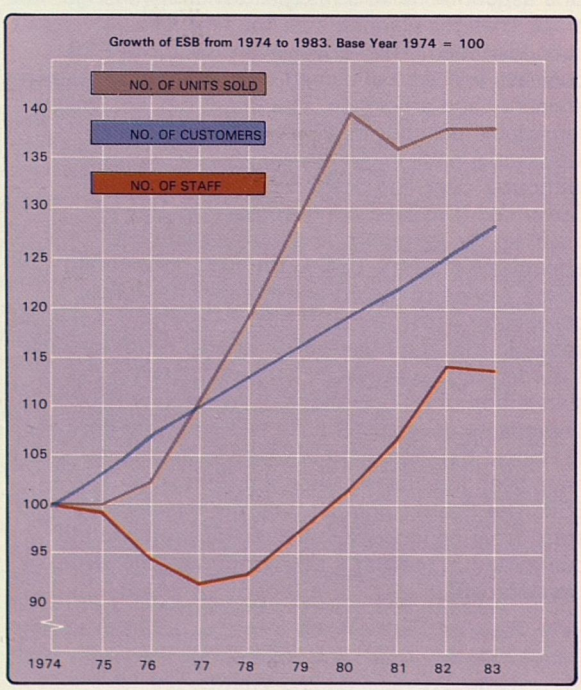
	MW	%
Hydro (conventional)	220	6.9
Hydro (pumped storage)	292	9.2
Steam (sod peat)	85	2.7
Steam (milled peat)	375	11.8
Steam (oil)	1,430	45.0
Steam (coal)	15	0.5
Steam (natural gas)	390	12.3
Combustion turbine (natural gas)	340	10.7
Combustion turbine (oil)	28	0.9
	3,175	100.0

A further 300 MW of plant was in the process of being decommissioned at 31st March, 1983 thus reducing the plant capacity to 2,875 MW.



Efficiency of Conversion

The overall thermal efficiency of conversion of primary energy to electricity declined from 33.1% to 32.1% compared to last year, due principally to the damage, by a hydrogen explosion, to the 270 MW unit at Poolbeg in June, 1982. This unit was not available for the rest of the year. At the same time as the explosion damage is being repaired, the boiler is being converted so that it can burn natural gas or oil or both fuels simultaneously.

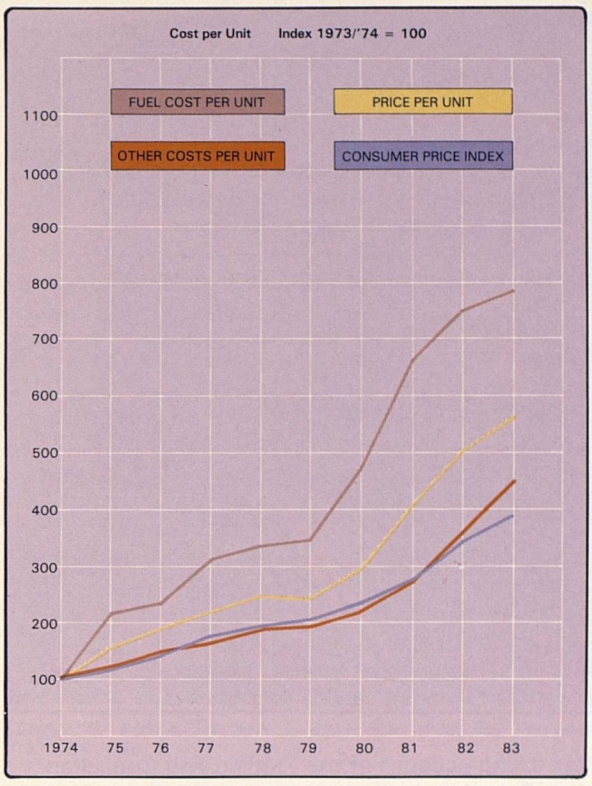


Maintenance of Supply
Continuing the policy of substituting as much as possible for imported oil and of obtaining lowest generation costs, large efficient units, especially those burning gas, were loaded more than normal. The increased risk to supplies that this entails resulted in supply to some customers being interrupted for short periods on seven occasions. Automatic equipment to reduce the length of these outages has been installed in a number of stations and has already operated successfully.
System frequency was maintained between 50.21 Hz and 49.79 Hz for 95% of the year.

ELECTRICITY SALES

Total sales of electricity, at 8,518 million units for the 1982/'83 accounting year (52 weeks) were 1.7% lower than in 1981/'82 (53 weeks). On a 52 week basis 1982/'83 unit sales show an increase of 0.2% on 1981/'82. This increase was due almost entirely to an increase in commercial sales (3.2%). Domestic sales were marginally up (0.2%) while sales to industry showed an overall decline of 1.6%. This decline in industrial sales was most marked among large customers — usage by the fifty largest companies declined by 5.6% in 1982/'83; this follows on a decline of 8.2% in 1981/'82.

Marketing
The ESB share of the energy market increased from 33.5% in 1981 to 34.4% in 1982. Once again, this increased share is in the context of a declining total market.
The active promotion of electricity as a premium fuel for efficiency and economy was continued during the year and the results in the commercial and domestic areas were encouraging in that there was an increase in units sold despite the decline in the market. The reduction of 12.8% in the price of night rate units and the unique benefits of electricity for summer water heating were highlighted. Independent tests were commissioned on comparative costs of cooking to combat unfair claims in this regard by sellers of other fuels.



District Heating
A major study of the technical and economic feasibility of combined heating and electricity production in Dublin and Cork was completed and presented to the Minister.



A study of Lanesboro peat fired generating station reflected in the river Shannon.

Finance

Revenue

Income at £573,338,000 was £55,501,000 higher than the previous year while expenditure at £577,273,000 was £66,392,000 higher.

Summary of Electricity Revenue/Expenditure Figures

	Year Ending 31st March, 1983 £	Preceding Year £
Expenditure		
Fuel	239,711,411	232,722,209
Payroll and other Direct Costs	194,331,079	155,338,899
Capital Charges including Depreciation	143,230,354	122,819,632
	577,272,844	510,880,740
Revenue Income	573,338,023	517,837,029
	3,934,821 (Deficit)	6,956,289 (Surplus)

Note: 1981/'82 was a 53 week Accounting Year
1982/'83 was a 52 week Accounting Year

After taking account of the Trading and Consultancy activities and deducting expenses on new borrowings, the result for the year was a deficit of £5,658,000 which increases the total deficit carried forward to 1983/'84 to £14,133,000.

Capital

Expenditure in the year was £240,887,000. After allowing for retirements of assets of £4,024,000, investment in capital assets increased to £1,280,180,000 (see Schedule F). Assets brought into commission during the year were £147,361,000, bringing the total value of assets in service at year end to £899,811,000. Work in progress was £380,369,000.

RAISING OF CAPITAL

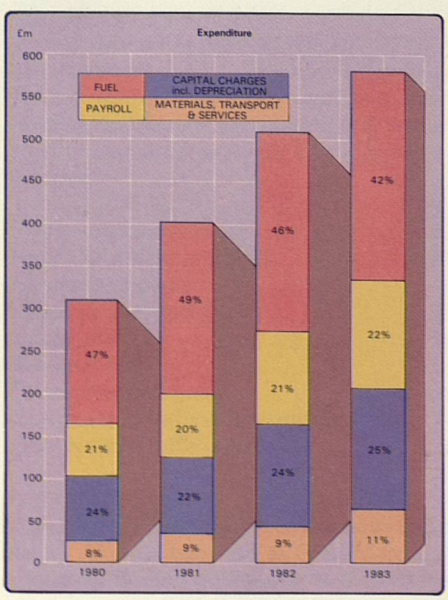
The major element in the present ESB capital development programme is the construction of a coal-burning station at Moneypoint and the associated transmission system. Apart from the highly desirable diversification of fuel sources involved, the favourable differential between the costs of coal and oil will provide benefits in electricity prices to our customers and in the balance of payments to the country at large. Loans of up to 50% of the cost have been approved in principle by the European Investment Bank. As a result of these borrowings the Government has availed of subsidies of over IR£25m. Another important element of the capital development programme is the provision of supply for over 25,000 new customers who are added to the network annually and also the strengthening of networks to ensure acceptable standards of continuity and quality of supply to all our customers.

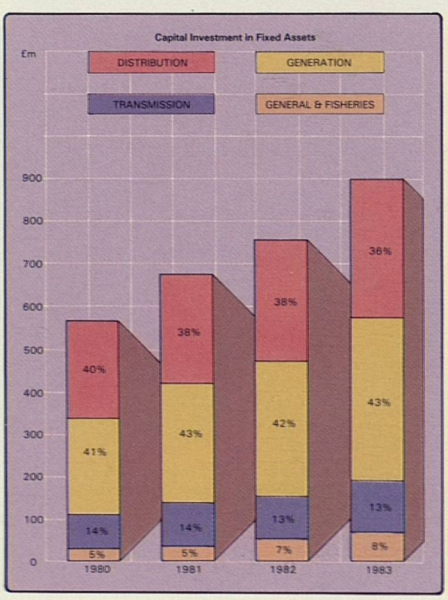
Capital expenditure at £241 million in 1982/'83 is reaching its peak and will decline significantly in the latter half of the 1980's. This expenditure was financed:—

(i) from the Irish market by a syndicated bank loan and a note purchase facility;
(ii) from abroad by the European Investment Bank, trade credits and syndicated loans and private placements on the German and Japanese markets (the first time on the Tokyo market);
(iii) from internal resources by charges for depreciation of assets and by contributions for supply.

INTERNAL RESOURCES

The current rate of internal financing continues at 20% but even this low level will not be sustainable unless adequate and timely price increases are sanctioned. The decline in internal resources ratio (from an earlier level of 45%) has forced the ESB into a heavy reliance on foreign borrowings which could impact adversely on finances towards the end of the decade.





Construction

GENERATING STATIONS

Aghada, Co. Cork (Gas/Oil Fired)
3 × 85 MW combustion turbines. The third 85 MW combustion turbine was commissioned at Aghada in July 1982.

Shannonbridge Extension, Co. Offaly (Milled Peat Fired)
1 × 45 MW set. This extension was commissioned in December 1982.

Lanesboro Extension, Co. Longford (Milled Peat Fired)
1 × 45 MW set. Erection of this set was at an advanced stage and completion is scheduled for November 1983.

Moneypoint, Co. Clare (Coal Fired)
3 × 300 MW sets. Construction of the jetty continued and work commenced on the coalyard foundations and on the cooling water pumphouse. Main station structural steelwork and cladding for the station were largely completed. Work on the first boiler progressed and the erection started on the first turbo-alternator, on the second boiler and on the coal handling plant. The first set is scheduled for completion in 1985/'86.



Learning the skills of the trade — apprentices at the ESB Personnel Training Centre.

Transmission System at 31st March, 1983

TRANSMISSION STATIONS

Transformer/ Switching Stations	No. in commission	Increase for year	Total capacity in kVA	Increase or decrease in capacity for year in kVA
220 kV Stations	15	+1	600,000 at 275/220 kV	Nil
			3,253,000 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	+425,000
			725,000 at 110/ 38 kV	+315,000
			412,000 at 10/110 kV	+55,000
			20,000 at 110/ 6 kV	Nil
110 kV Stations	73	−3*	2,935,500 at 110/ 38 kV	−131,500
			136,500 at 110/ 10 kV	−47,500
			40,000 at 110/ 6 kV	−15,000
			112,400 at 38/ 10 kV	−2,000
			1,191,500 at 10/110 kV	+40,500
			88,000 at 10/38/110 kV	Nil
			5,000 at 10/ 38 kV	Nil

*Four former 110 kV Stations changed category. Three became 220 kV Stations and one became the property of an industrial customer.

TRANSMISSION LINES AND CABLES

Lines and Cables	Length km	Increase or decrease for year km	Description
275 kV Lines	10.5	Nil	6 × twin 485 sq. mm. double circuit SCA
220 kV Lines	53.4	Nil	6 × 600 sq. mm. double circuit SCA
220 kV Lines	1,041.1	Nil	3 × 600 sq. mm. single circuit SCA
220 kV Lines	276.8	Nil	3 × 425 sq. mm. single circuit SCA
220 kV Lines	3.9	Nil	3 × 425 sq. mm. twin, SCA
110 kV Lines	1.8	Nil	6 × 95 sq. mm. double circuit copper
110 kV Lines	69.8	Nil	3 × 95 sq. mm. single circuit copper
110 kV Lines	108.4	Nil	6 × 200 and 6 × 300 sq. mm. double circuit SCA
110 kV Lines	3,297.8	+69.7	3 × 200 to 3 × 425 sq. mm. single circuit SCA
220 kV Cables	19.2	+ 2.7	High pressure oil pipe-type
220 kV Cables	32.8	+ 0.3	Oil filled
110 kV Cables	42.0	Nil	Oil filled
110 kV Cables	25.6	Nil	Pipe compression
110 kV Cables	0.8	+ 0.1	Cross-linked polyethylene

North Wall Extension, Dublin (Gas/Oil Fired)
2 × 105 MW combustion turbines. Two combustion turbines, one on open cycle and one with combined cycle in conjunction with existing 3 × 15 MW steam turbo-generator units, are being installed. The combustion turbines were substantially completed and the combined cycle plant was almost completed and all will be ready for commercial operation in early 1983/'84.

Arigna Extension
Due to the continuing stagnation in electricity sales and the lack of need for extra generating capacity to meet projected demand, this project has been deferred. Possible alternative uses for Arigna crow coal are being investigated.

TRANSMISSION SYSTEM

In common with other activities, the transmission construction programme was revised in the light of the continued absence of growth in demand. Projects estimated to cost £78 million over the period to 1988 have been cancelled or deferred.
A 400kV station at Cork and a 400kV connecting line from Moneypoint to Cork were cancelled and two 220kV stations and ten 110kV stations were deferred.

Transformer Stations and Lines

400kV
Work continued on the 400kV station at Woodland near Dunboyne and had started on those at Moneypoint and Dunstown, near Kilcullen. Orders were placed for the switchgear and transformers for the three stations.

The majority of the pylons of the 400kV line from Moneypoint to Woodland had been erected and stringing of conductor had started, using special tension stringing equipment. Survey of the line from Moneypoint to Dunstown was almost complete and construction had started.
A series of meetings was held along the routes of both lines to discuss with interested parties any problems arising and also to allay fears of health hazards due to the presence of the lines.

220kV
The 220kV station at North Wall, Dublin, was completed and commissioned. Those at Inchicore in Dublin, Arklow, Raffeen near Cork, and the extension at Poolbeg, Dublin, were completed and commissioning was in progress. Most of these stations are equipped with the latest low-maintenance, space-saving, gas-insulated switchgear. The 220kV line from Arklow to Great Island was almost complete and the loop lines into the Woodland 400kV station were well advanced.

110kV
The 110kV station required at Moneypoint for start-up of the Generating Station was completed and work continued on four other stations. Ten stations were extended and the transformer capacity was increased at five others. A station for a major customer was built on contract and to time.
Design was completed and equipment ordered for two new indoor stations for the Greater Dublin Area. These will be equipped with metalclad switchgear.
Automatic frequency restoration equipment was installed in twenty-five stations and work had started on a further thirty.
70 km. of new lines were erected and commissioned. 148 km. were in course of erection and survey was progressing on a further 40 km.

H.V. Cable
The looping-in of North Wall Generating Station to the 220kV grid was completed. Work continued on the major 220kV circuit from Poolbeg to Inchicore. Installation started on the 110kV pipe-type gas compression cable from Finglas to Grange, near Baldoyle.

DISTRIBUTION SYSTEM
Over 25,500 new customers, mostly in urban areas, were connected to the distribution system during the year. Total expenditure on capital, operating and maintenance work was approximately £95 million. The number of new connections was the lowest since 1972, reflecting the depressed state of the economy.
Nine new 38/10kV transformer stations were commissioned as part of the general reinforcement of the system.
Approximately 86% of the total distribution expenditure was spent in Ireland on labour, materials and services. Efforts were continued to substitute home produced for imported materials and the Board co-operated in an exhibition of a further range of imported goods which could possibly be manufactured in Ireland. Interest shown by Irish

Preparing for the future — electrification of the Dublin suburban railway system.



manufacturers was encouraging. Also, a change was made in the method of impregnating wood poles against rot, resulting in a reduction in the amount of imported creosote being used.
Construction work continued on schedule on the provision of a 20 MVA supply to CIE for the Dublin Suburban Rail Electrification Scheme and supply was made available at Dun Laoghaire, Fairview and Bayside (Sutton).
Under Government directive, supply to islands is being made available at the same charge as for mainland users. The ESB assumed this responsibility in January 1981 and the continuing subsidy involved, carried by the ESB, had exceeded £500,000 in total at 31st March, 1983.
At Aranmore Island, off the coast of Donegal, a more reliable supply was made available from the mainland by ploughing new underground cables into the sea bed to replace older cables which had failed, mainly due to mechanical damage caused by abrasion on rocks and sand over the years.

Distribution System in Commission at 31st March, 1983 (Incl. Rural Networks)

STATIONS

Trafo. Station	No. in Commission	Increase (+) or Descrease (−) for year	Total Capacity in kVA	Increase (+) or Decrease (−) for year in kVA
38kV Stations	366	+6	2,716,700	+69,400
10kV Stations (excl. U.R.D.)	117,939	+3,101	3,574,400	+152,071
10kV Stations U.R.D.	1,880	Nil	108,611	Nil
5kV Stations	7	−46	900	−31,690

LINES

Distribution Lines & Cables	Length km	Increase (+) or Decrease (−) for year km	Description
38kV Lines	5,455.3	+68.1	3 × 25 to 3 × 300 sq. mm. Cu. & SCA
38kV Cables	269.4	+11.1	3 × 95 to 3 × 680 sq. mm. copper and aluminium
10kV Lines	73,028.2	+775.6	Single and three phase
10kV & 5kV Cables	3,010.4	+95.6	2 × 16 to 3 × 240 sq. mm. copper and aluminium
3.3kV Cables	3.7	Nil	3 × 185 sq. mm.

PREMISES

With a view to containing capital expenditure in an era of minimal growth, premises development plans have been reviewed. Development over the next 5 years will be concentrated in areas essential to the improvement of technical efficiency or customer service.
The Headquarters extension, which will incorporate the new National System Control Centre, progressed to fitting-out stage. This centre is scheduled for commissioning in 1985/'86.
The new Cork District Headquarters at Wilton, and a customer service centre at Limerick were completed together with new operation and customer service centres at Carrick-on-Suir, Kanturk and Shannon.
Work is nearing completion on a new customer service centre in Cork, a new Regional Headquarters at Marina and an extension to South Lotts Road, Dublin premises.
New offices are being equipped with the "Fitzwilliam Range" of office furniture designed and manufactured in Ireland to the ESB's specification. Manufacturing rights have been awarded to the Co. Carlow firm which completed the initial contracts. As part of its marketing strategy for the range, agreed with the ESB, the firm was preparing to launch the range in the U.K. at the International Interior Design Exhibition in London in association with Coras Trachtala. Initial probes in Middle East markets were encouraging.
The Board is pleased to be associated with private industry in this venture, particularly having regard to the export potential of the product. The Board acknowledges the assistance and expertise made available by Coras Trachtala Teo.

SUPPLEMENTARY SOURCES OF ELECTRICITY GENERATION

Hydro

The ESB continued to provide an advisory service to individuals and firms interested in private development of small hydro electric schemes.

Wave Power

The International Energy Agency's report on the first phase of its wave power project has been published. It indicates a need for substantial improvements in efficiency and a reduction in the cost of wave energy devices if they are to be economic. The wave measurement programme in Irish waters has been concluded.

Wind Power

The wind power demonstration and test programme continues and over 30,000 hours experience has been recorded since commissioning. A number of machine teething problems which are being solved in conjunction with the manufacturers have resulted in low availabilities. When available and operational the wind turbine generators' performance compares favourably with those predicted for the chosen sites.

Biomass

The ESB is taking part in an EEC funded research programme to demonstrate the use of short rotation forestry and forest residue for electricity production. Screeb Generating Station fuel reception facilities were extended and the boiler combustion system was modified in preparation for the demonstration programme.

Irish Coal

The EEC funded test programme on fluidised bed combustion of native high sulphur anthracites continued at the NIHE in Limerick and will be completed in early 1983/'84.

Geothermal

A two year study of the Galway granite, jointly funded by the National Board for Science and Technology and the ESB, is in progress in University College in Galway.

People in the ESB

EMPLOYMENT

The number of people employed at 31st March, 1983 was:

By Category		By Activity	
Engineers and other Technical	2,388	Operation and Maintenance	9,101
Administrative/ Clerical	2,335	New Works	2,769
Craft and General Workers	8,492	Trading	423
		Consultancy	239
		Fisheries	62
		Apprentices	621
	13,215		13,215

This figure compares with 13,301 the previous year. Early in the year under review a decision was taken to suspend all recruitment, except for apprentices, in view of the continuing lack of growth in demand.

INDUSTRIAL RELATIONS

The dominant characteristic of the year for the business as a whole was retrenchment as the ESB faced the major economic problems attendant on recession and stagnant demand. This situation was reflected in the main thrust of industrial relations planning and activity during the year, which centred on the need to achieve objectives important to the development of the business, the improvement of the service and the containment of costs. The normal flow of claims and representations from the trade unions was handled successfully within the agreed procedural arrangements. The Industrial Council issued recommendations on 125 claims during the year; all save three were accepted by the unions involved. There was minimal incidence of industrial action; some support was given by staff to the trade union organised PAYE/PRSI work stoppages but these were not specifically related to ESB employment and electricity service was not affected. The inter-union Demarcation Disputes Committee, established under the 1981 Comprehensive Agreement to promote resolution of demarcation issues, functioned effectively and was instrumental in achieving a solution in several demarcation issues which had hitherto been intractable.

HEALTH

The participation of members of the staff in voluntary health programmes continued at a high level and efforts to encourage them to avail of health provident cover for themselves and their families were most successful.
There was a further improvement in the overall level of absenteeism.

TRAINING AND DEVELOPMENT

The high level of technological and other skills required in the electricity supply industry and continuing development in the relevant fields require the provision of significant resources for the training and development of staff even in times of static demand. During the year 5,200 staff attended internal training courses and 430 attended external courses.

The number of apprentices in training (621) is the highest for many years. This reflects the ESB's commitment to the interests of the nation and its young people and is a continuation of the policy which saw it initiate the first formal scheme of apprenticeship almost fifty years ago. During the year a new programme was introduced, incorporating the most up-to-date teaching material. In this context it is worthy of note that ESB apprentices have taken the first three places in the House Wiring Section of the National Apprentice Competition in each of the last four years and also two first prizes, two second prizes and one third prize in the Industrial Wiring Section of the same competition within the past five years.
The new Operations Training Centre at Portlaoise enables technical staff to be trained on networks energised at high voltage. The equipment in the Centre is identical to that on the system.
The range of Management and Supervisory programmes was greatly extended during the year and although primarily designed for ESB staff the programmes are now being successfully marketed elsewhere.
Extended English language and technical courses were provided for a total of 62 Saudi Arabian trainees. Technical courses were also provided for some major Irish companies including Aughinish Alumina.

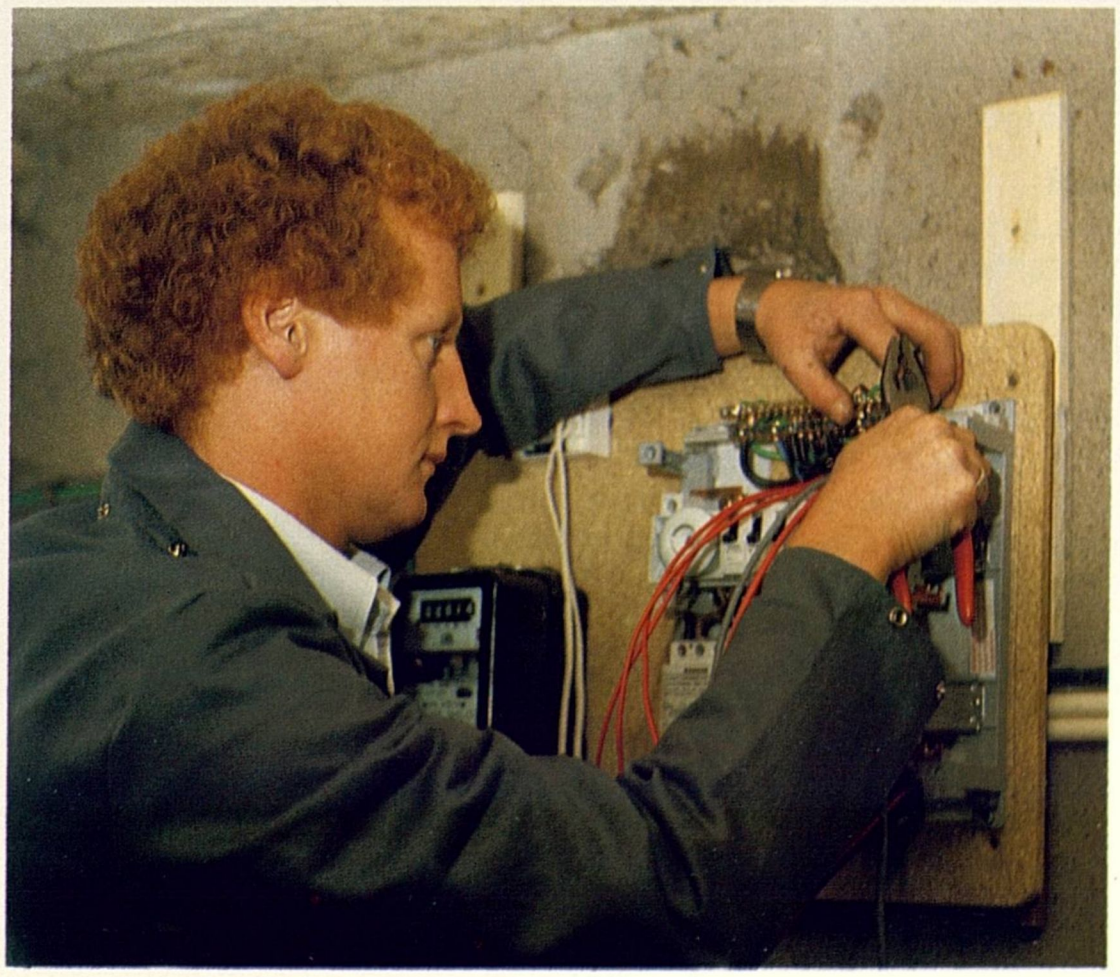
RECRUITMENT

The suspension of all external recruitment early in the year, except for apprentices, has been referred to. Vacancies arising in certain categories were filled, where possible, by redeployment of staff from non-priority areas. This aspect will assume increasing importance during the current year as staff become available from stations being de-commissioned and from other areas affected by cuts in work plans. Efforts are being devoted to the development of consultancy openings in the recruitment field.

ESB INPUT TO IRELAND'S ECONOMY

	1981/82 £ millions	1982/83 £ millions
Fuel: Natural Gas, Peat, Oil, Native Coal	97	150
Irish Suppliers of Goods and Services including Capital Work	107	115
Government Tax on Oil	16	10
Rates Levy and Local Rates	1	17
Payroll Costs including Capital Projects	159	186
Interest paid to Irish Lenders & Stockholders	22	27
	402	505

Fit and ready — a group of ESB staff pictured before the start of the 1982 Dublin City Marathon.



Completing supply to one of our customers.

Consultancy

GENERAL

During the year consultancy assignments were undertaken in Saudi Arabia, Bahrain, Lesotho, Sudan, Egypt, Cyprus, Grenada and North Yemen. Marketing of consultancy services was conducted vigorously during the year with the objective of significantly increasing work in existing markets and developing new markets in other countries and on other types of work. The results of this marketing campaign are very encouraging and considerable new business is being generated.
Regular contact was maintained with the international funding agencies and World Bank officials paid a number of visits to Ireland during the year.
A successful seminar for senior managers from Asian electrical utilities was held in association with DEVCO (the organisation promoting the transfer of skills from State-sponsored bodies to developing countries).
Income from the consultancy activity at over £11 million represented an increase of 65% over the previous year.

STAFF

The number of staff employed on consultancy projects continued to rise during the year and future prospects for further expansion are good. At peak, 239 staff were employed full-time; 80 of these overseas.

MAIN CONTRACTS

Bahrain

There are three main existing work areas, Transmission, System Control and General Services. A project to computerise billing and customer information services commenced at year end. Good progress was made on all projects during the year.

Saudi Arabia

The partnership with Saudi Consulting House, an organisation wholly owned by the Government of Saudi Arabia, continued to operate very satisfactorily and has produced an increased volume of business in the Kingdom.

Jubail
Good progress was made on this project which is for the planning, design and site supervision of the electrical distribution system for the major industrial city and port under construction there.

Tabouk
Work continued on the expansion of supply to Tabouk City. Design and preparation of tender documents for the Tabouk Regional Electrification continued.

Electricity Western Region
Two specialists on Generation and Distribution were assigned to this project. A five-year master plan for the expansion of the system was completed.

Saudi Consolidated Electric Companies (East and West)
The personnel organisation and manpower project continued. Technical assistance on 230kV Transmission Cables was provided and a Training Manager assigned to initiate and develop a staff training programme.

Electricity Corporation, Riyadh
Four Specialist engineers were provided for the Electricity Corporation, mainly for the evaluation of new capital works.

Lesotho

The long-term assignment of the Managing Director and Chief Accountant for Lesotho Electricity Corporation under the Government's Bilateral Aid Programme continued.

Sudan

Work started on proposals covering the complete reorganisation and development of new management structures for the National Electricity Corporation of Sudan.
Work continued on the provision of a training centre in association with an Irish firm of architects.

Egypt

A load management project for the Egyptian Electricity Authority is presently being implemented with three resident staff in Cairo and the provision of specialist technical service from Dublin.

Cyprus

A load control/management project was completed during the year for the Electricity Authority of Cyprus and follow-on work is developing.

Grenada

An engineer took up duty as Chief Engineer with Grenada Electricity Company.

North Yemen

An engineer took up an assignment as System Operation Specialist for Yemen Electric Company.

TRAINING

Engineering, technical and accounting training was provided in Ireland during the year for overseas staff from Saudi Arabia, Bahrain, Malawi, South Yemen, Quatar and Sierra Leone. At the year end, sixty staff members from overseas utilities were on training courses with ESB in Ireland.



Sharing our expertise — a trainee from Saudi Arabia works on an ESB control panel.

An ESB presence in the Middle East — consultancy project in Bahrain.



CUSTOMERS BY DISTRICT AND UNIT SALES

District	No. of Customers at 31st March		Electricity Sales Units sold in year ended 31st March	
	1983	1982	1983 (Millions)	1982 (Millions)
Athlone	62,304	60,947	385.6	378.2
Cork	125,822	123,502	1,150.5	1,138.0
Dublin City	149,446	147,372	1,284.9	1,325.8
Dublin North West	141,465	136,353	1,075.4	1,096.5
Dublin South	71,677	69,969	532.8	555.3
Dundalk	86,401	84,717	869.7	842.1
Galway	67,796	65,848	356.8	374.2
Limerick	100,673	98,363	841.5	848.2
Portlaoise	74,828	73,267	528.1	548.6
Sligo	100,330	98,124	512.7	526.3
Tralee	54,023	52,736	319.4	337.3
Waterford	87,696	85,752	660.9	691.2
Total	1,122,461	1,096,950	8,518.3	8,661.7

GROWTH OF ELECTRICITY SALES AND NO. OF CUSTOMERS

Year ended 31st March	Units generated (and purchased)* Millions	Units sold to Customers Millions	Revenue from Electricity Sales Thousands £	Average Price per Unit sold Pence	Total Customers
1930	60.9	43.2	478	1.108	48,606
1940	407.0	318.6	1,946	0.612	172,545
1950	784.8	626.2	4,774	0.763	310,639
1960	2,096.0	1,692.2	14,724	0.871	610,946
1970	5,245.7	4,411.6	39,400	0.892	786,500
1972	6,234.2	5,271.7	51,750	0.982	818,516
1973	6,749.1	5,705.1	60,321	1.057	845,119
1974	7,253.1	6,152.0	73,063	1.188	873,764
1975	7,298.7	6,153.1	111,261	1.808	901,000
1976	7,534.6	6,259.0	136,277	2.177	931,469
1977	8,160.5	6,783.2	173,429	2.557	959,428
1978	8,828.4	7,329.9	210,029	2.865	986,256
1979	9,602.7	7,965.3	222,768	2.797	1,015,636
1980	10,213.6	8,560.3	300,024	3.505	1,043,428
1981	10,038.4	8,364.6	408,965	4.889	1,070,049
1982	10,385.9	8,661.7	517,029	5.969	1,096,950
1983	10,194.4	8,518.3	571,992	6.715	1,122,461

*Excluding Units absorbed by Storage Pumping

ANALYSIS OF UNITS SOLD

Class of Supply	Year ended 31st March 1983 (Millions)	Year ended 31st March 1982 (Millions)	Increase (Millions)	% Increase
DOMESTIC				
General Supply	3,468.8	3,518.2	– 49.4	–1.4
Night Rate	129.7	140.7	– 11.0	–7.8
	3,598.5	3,658.9	– 60.4	–1.7
COMMERCIAL				
Lighting and Motive Power	518.2	521.3	– 3.1	–0.6
Heating, Cooking and Waterheating	350.8	360.5	– 9.7	–2.7
Night Space Heating	178.5	196.1	– 17.6	–9.0
Public Lighting	118.1	115.7	2.4	2.1
Maximum Demand	540.4	469.8	70.6	15.0*
Miscellaneous	204.8	223.6	– 18.8	–8.4
	1,910.8	1,887.0	23.8	1.3
INDUSTRIAL				
Maximum Demand				
High Tension	2,160.0	2,238.9	– 78.9	–3.5
Low Tension	731.7	751.1	– 19.4	–2.6
Miscellaneous	117.3	125.8	– 8.5	–6.8
	3,009.0	3,115.8	–106.8	–3.4
TOTAL	8,518.3	8,661.7	–143.4	–1.7

*The increase arises mainly from transfer to maximum demand of customers whose consumption was recorded in previous years under other headings and from the connection on maximum demand of new customers.

Note: 1981/'82 was a 53 week accounting year.
1982/'83 was a 52 week accounting year.

Fisheries and Conservation

Alarm must be expressed at the small runs of salmon stocks in the Board's rivers. Despite the fact that the ESB maintained its policy of refraining from commercial fishing and pursued various remedial measures which at best are a stop-gap arrangement, the numbers of fish reaching our rivers were exceedingly low. This year for the first time sufficient spawning salmon were not available to sustain hatchery operations and it was found necessary to import disease-free salmon ova.

The new salmon smolt rearing station at Ballyshannon was completed and salmon fry which were hatched out at a temporary hatchery on the Erne are being reared to smolt stage.

The number of smolts produced in the rearing stations at Parteen and Carrigadrohid was up on previous years at 500,000.

Sixty one tonnes of salmon were harvested at Mulroy Bay Salmon Farm. Low mortality and above average growth rate resulted in the production figure exceeding the target. All of the fish have been disposed of on commercial markets.

There was a record catch of 74 tonnes of silver eels. The previous best catch was 44 tonnes in the winter of 1979/'80. A revenue of £360,000 was realised on the sale of eels, including sale of purchased eels.

The ESB maintained its policy of environmental development and a number of new amenity areas is being examined. Sporting and recreational programmes were assisted and encouraged.

The expenditure on fisheries activities during the year was £1,249,000. Revenue from the sale of eels, farmed salmon and other income amounted to £657,000 leaving a net cost of £592,000 which is a very satisfactory situation in a year of increasing costs. The Board's Annual Fisheries Report, published separately, deals in greater detail with fisheries activities.

Customer Service

Major ESB offices throughout the country have now installed visual terminals linked to the computer. These provide staff with immediate access to details of accounts, electricity consumption, etc. Further extensions of these facilities to meet customers' information needs are planned.

There has been an extensive programme of staff training on new payment facilities, special emphasis being placed on modern electronic fund transfer systems (EFTS). There are now three EFTS (Direct Debit) methods of payment, namely, Monthly Budget Plan, Autopay and Access/Visa Credit Card, which are used by 50,000 customers and this number is expanding steadily.

ELECTRICITY THEFT

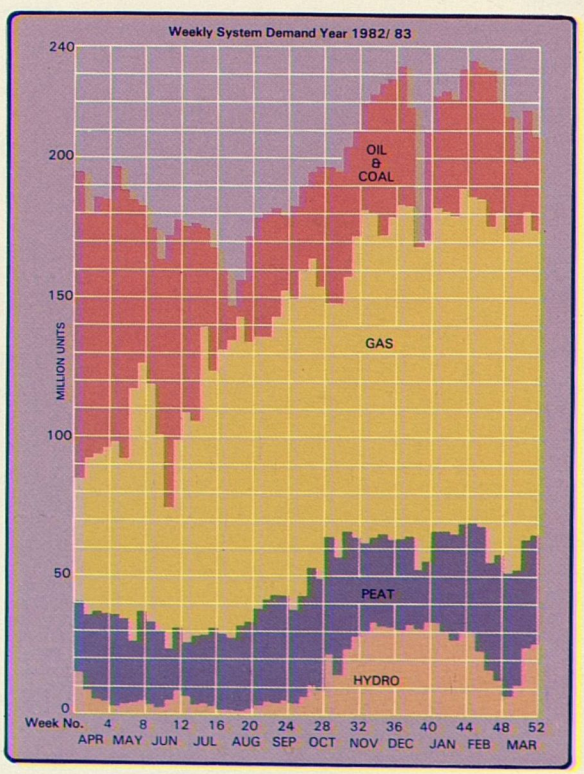
Reference was made last year to the problem of theft of electricity. This problem has continued unabated; in fact, the number of incidents detected during the year was over 50% up on the previous year and a number of convictions was secured in the Courts. The ESB intends to pursue and intensify its campaign against such thefts.

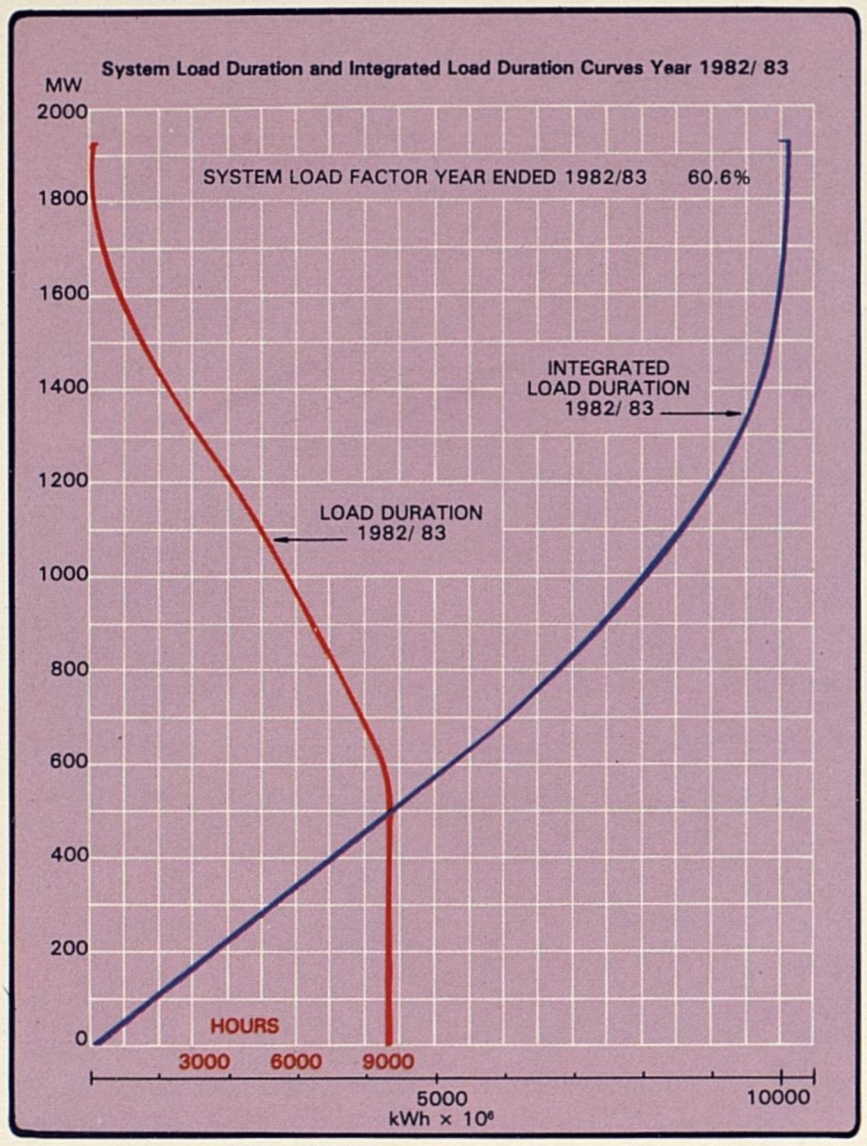
Trading

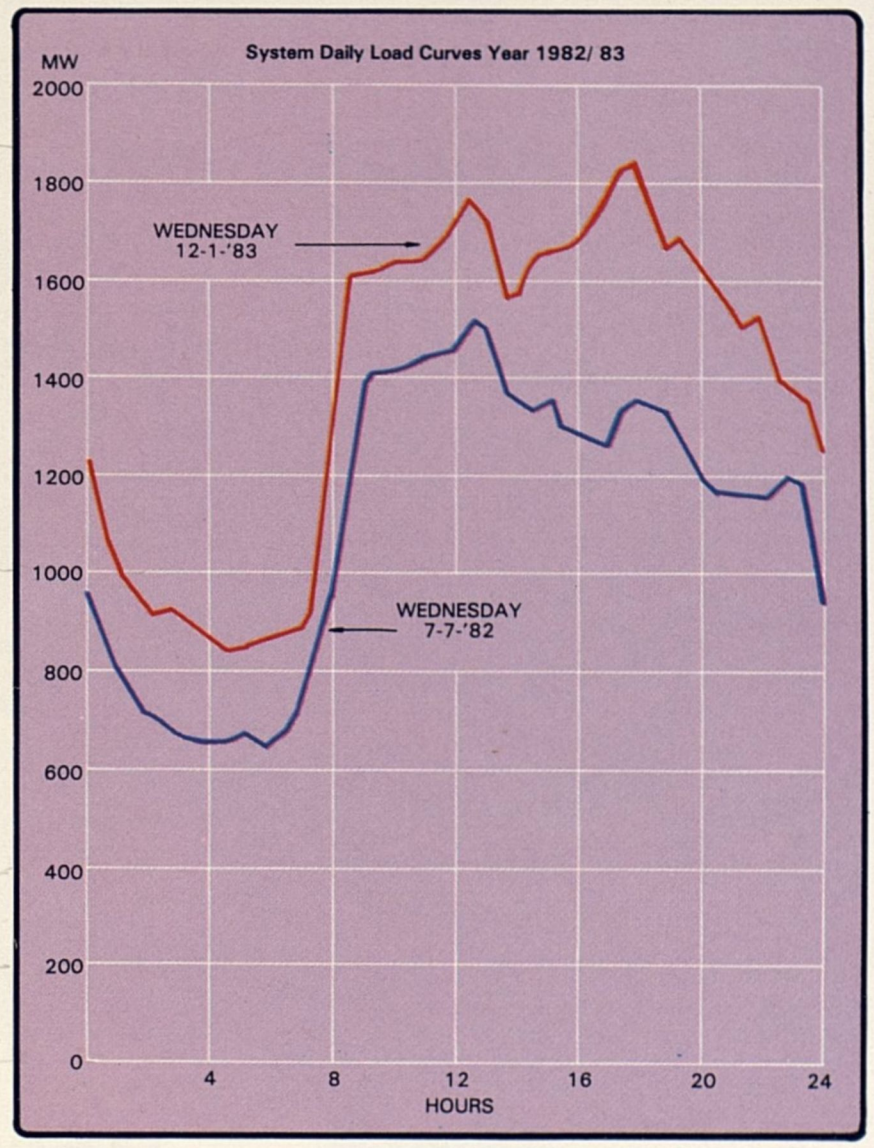
Trading conditions in 1982/'83 were extremely difficult. The continued recession and the overall reduction in disposable income were reflected in the official Retail Sales Index which records a drop in volume sales of the order of 10% in this particular sector. Against this background, ESB sales of appliances held up reasonably well with a marginal decrease in volume sales. The loss on appliance trading, however, increased due to higher costs and tighter margins.

Another feature of the recession was the impact on the Appliance Repairs activity which suffered a severe drop in workload as customers deferred expenditure on repairs. Despite this reduction, the loss on the activity was contained to less than last year.

The Contracting activity which continued to concentrate on special projects and material intensive work, showed an improved profit on a slightly increased turnover.







Work in progress on the Fitzwilliam Range of office furniture designed to ESB specifications.



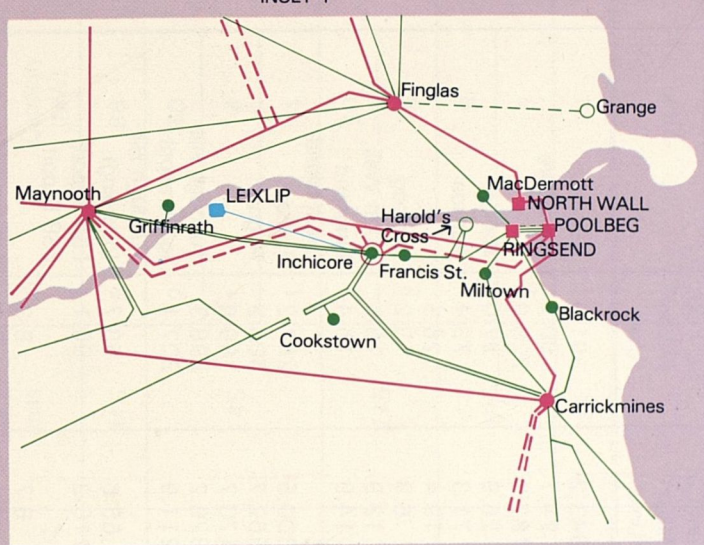
General outline of the Generation and Transmission Systems

31st March, 1983



- Hydro Stations
- Steam Stations
- Steam Stations Projected
- Pumped Storage Station
- 220 kV Transformer Stations
- 220 kV Transformer Stations Projected
- 110 kV Transformer Stations
- 110 kV Transformer Stations Projected
- 400 kV Lines Projected
- 220 kV Lines
- 220 kV Lines Projected
- 110 kV Lines
- 110 kV Lines Projected
- Other High Voltage Lines
- 275 kV Lines

INSET 1



INSET 2



Generation Statistics for the Year 1982/83

Station	Year 1982/83			Year 1981/82	Station	Year 1982/83			Year 1981/82
	Generated Million Units	Station Use Million Units	Sent Out Million Units	Sent Out Million Units		Generated Million Units	Station Use Million Units	Sent Out Million Units	Sent Out Million Units
Ardnacrusha	346.0	2.8	343.2	391.9	Screeb	3.3	0.4	2.9	5.3
Cliff	75.6	0.9	74.7	90.2	Gweedore	7.1	0.8	6.3	8.0
Cathaleen's Fall	189.0	1.7	187.3	228.9					
Carrigadrohid	26.3	0.4	25.9	27.0	Marina	1,478.2	35.6	1,442.6	1,356.4
Inniscarra	72.1	0.8	71.3	73.4	Aghada	3,665.9	94.9	3,571.0	2,282.9
Pollaphuca	20.0	0.6	19.4	26.3					
Golden Falls	6.4	0.1	6.3	9.2	Poolbeg	1,429.4	77.6	1,351.8	2,156.0
Leixlip	14.1	0.2	13.9	16.5	North Wall	0.1	—	0.1	—
Clady	15.0	0.1	14.9	15.4	Ringsend	98.3	14.6	83.7	136.6
					Great Island	374.2	21.1	353.1	385.7
Ferbane	330.1	29.6	300.5	267.2	Tarbert	804.8	67.3	737.5	1,261.1
Rhode	396.5	33.8	362.7	308.2	Arigna	66.5	4.6	61.9	43.6
Bellacorick	183.8	13.1	170.7	99.6					
Shannonbridge	361.8	32.6	329.2	298.3	Turlough Hill (generation)	402.5	5.4	397.1	382.2
Lanesboro	230.0	18.1	211.9	207.1					
					Turlough Hill (pumping)	602.4	—	602.4	610.6
Portarlington	65.1	6.5	58.6	59.7					
Allenwood	119.9	9.7	110.2	99.1	ESB Import	—	—	—	—
					ESB Export	—	—	—	—
Cahirciveen	9.9	1.2	8.7	8.3					
Miltown Malbay	0.7	0.3	0.4	2.8	Purchased	4.2	—	4.2	3.8
					System Demand	10,194.4	474.8	9,719.6	9,640.1
					Maximum daily Generation Million Units			35.7	37.5
					Maximum Load Generated in MW			1,924	1,999

Note: Figures for 1981/82 are for the first 52 weeks of a 53 week accounting year.
System demand is total units generated by all stations including Turlough Hill plus ESB Import and units purchased, less Turlough Hill pumping and ESB Export.

Particulars and Performance of Generating Plant

Hydro Stations

Station	Location	Average annual generation million units	Plant Particulars		Plant Performance for year ended 31/3/83		
			Generating Sets		Units sent out millions	Plant load factor %	Works cost per unit sent out (pence)
			No	Capacity (MW)			
Ardnacrusha	Shannon	315	5	86	343.2	46.1	0.819
Pollaphuca	Liffey	45	2	30	19.4	7.6	1.056
Golden Falls			1	4	6.3	18.3	
Leixlip			1	4	13.9	40.4	
Cliff	Erne	275	2	20	74.7	43.3	0.434
Cathaleen's Fall			2	45	187.3	48.1	
Carrigadrohid	Lee	77	1	8	25.9	37.6	0.550
Inniscarra			2	19	71.3	43.4	
Clady	Clady	13	1	4	14.9	42.9	0.787
Turlough Hill — Pumped Storage	Co. Wicklow	—	4	292	397.1	—	—

Particulars and Performance of Generating Plant

Steam Stations

Station	Location	Plant Particulars					Plant Performance for year ended 31/3/'83			
		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/ hour	Fuel Type				
Arigna	Co. Roscommon	1	15	1	75	Coal	61.9	50.7	4.087	5.731
Great Island	Co. Wexford	3	240**	3	853	Oil	353.1	17.8	3.941	4.919
Marina	Cork City	3	120	4	522	Oil/Gas	1,442.6	82.5	1.768	2.095
		1	85	Combustion Turbine		Gas				
Aghada	Co. Cork	1	270	1	800	Gas	3,571.0	79.9	1.797	1.901
		3	255	Combustion Turbines		Gas				
Poolbeg	Dublin City	2	240	2	760	Oil	1,351.8	30.4	3.545	4.204
		1	270	1	800	Oil				
		2	28	Combustion Turbines		Oil				
Ringsend	Dublin City	6	270**	7	1114	Oil	83.7	4.2	6.151	14.058
Tarbert	Co. Kerry	2	120*	2	473	Oil	737.5	14.9	3.954	4.727
		2	500	2	1600	Oil				

* De-commissioned during year: Ringsend 90 MW, Tarbert 120 MW

** Being de-commissioned at year end: Great Island 120 MW, Ringsend 180 MW

Particulars and Performance of Generating Plant

Steam Stations

Station	Location	Plant Particulars					Plant Performance for year ended 31/3/'83			
		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/ hour	Fuel Type				
Bellacorick	Co. Mayo	2	40	2	191	Milled Peat	170.7	52.6	3.045	4.336
Ferbane	Co. Offaly	4	90	4	430	Milled Peat	300.5	42.0	3.708	5.259
Rhode	Co. Offaly	3	80	3	364	Milled Peat	362.7	56.7	3.176	4.194
Shannonbridge	Co. Offaly	3	125	3	522	Milled Peat	329.2	43.6	3.140	4.150
Lanesboro	Co. Longford	2	60*	1 1	100 173	Sod Peat Milled Peat	23.7 188.2	14.9 58.4	3.320 2.710	7.117 3.367
Portarlington	Co. Laoise	3	37.5*	3	205	Sod Peat	58.6	19.9	4.084	8.343
Allenwood	Co. Kildare	2	40	4	273	Sod Peat	110.2	34.3	3.523	5.933
Cahirciveen	Co. Kerry	1	5	1	28	Sod Peat	8.7	12.0	4.871	14.224
Gweedore	Co. Donegal	1	5	1	28	Sod Peat	6.3			
Miltown Malbay	Co. Clare	1	5	1	28	Sod Peat	0.4			
Screeb	Co. Galway	1	5	1	28	Sod Peat	2.9			

* De-commissioned during year: Lanesboro Sod Peat 20 MW, Portarlington Sod Peat 12.5 MW

DISTRICT OFFICES AND DISTRICT MANAGERS

ATHLONE 6-8 Church Street Telephone: Athlone 2611	T. P. Haugh, B.E., B.Sc., D.P.A., M.I.E.E.
CORK 113 Patrick Street Telephone: Cork 26851	K. J. O'Hara, B.E., M.I.E.
DUBLIN CITY 49 Fleet Street Telephone: Dublin 772961	J. J. McEvoy, B.E., C. Eng.
DUBLIN NORTH-WEST Clanwilliam House, Mount Street Bridge Telephone: Dublin 688933	S. Nolan, B.E., M.I.E.E.
DUBLIN SOUTH Leopardstown Road, Foxrock Telephone: Dublin 881683	T. C. Costello, B.E., C. Eng.
DUNDALK Chapel Street Telephone: Dundalk 32211	S. V. Gallagher, B.E.
GALWAY Sean Mulvoy Road Telephone: Galway 7641	P. Osborne, B.E., B.Sc., C. Eng., M.I.E.I.
LIMERICK Bishop's Quay Telephone: Limerick 45599	D. P. Greene, B.E., M.I.E.I.
PORTLAOISE Abbeyleix Road Telephone: Portlaoise 21327	J. F. Heslin, B.E., B.Sc.
SLIGO Castle Street Telephone: Sligo 5261	D. Gallagher, B.Sc.
TRALEE Edward Street Telephone: Tralee 21333	A.F. Kelly, B.E., B.Sc.
WATERFORD The Mall Telephone: Waterford 73301	B. Rafferty, B.Sc., C. Eng., M.I.E.I.

ESB

Bord Soláthair an Leictreachais

Accounts and Schedules for year ended 31st March, 1983

Contents

ACCOUNTS

1. Profit and Loss Account
2. Balance Sheet

SCHEDULES

A. Electricity Income and Expenditure Account
B. Appliance and Contracts Income and Expenditure Account
C. Consultancy Income and Expenditure Account
D. Statement of Source and Application of Funds
E. Statement of Non-Operating Items — Profit and Loss Account
F. Statement of Capital Assets
G. Statement of Current Assets and Current Liabilities
H. Statement of Sinking Funds for Borrowings
I. Statement of Borrowings
J. Statement of Interest and Amortisation of Borrowings
K. Statement of Capital Reserves
L. Statement of Generation Costs
M. Fisheries — Commercial and Conservation Operations
N. Value Added Statement
O. Notes on Accounts

P. Current Cost Profit and Loss Account
Q. Current Cost Balance Sheet
R. Notes on Current Cost Accounts

Auditors' Report

Profit and Loss Account

Account No. 1

1981/1982 £000's			1982/1983 £000's
	Operations		
44,103	Electricity Income and Expenditure Account (Schedule A)		42,281
(1,522)	Appliance and Contracts Income and Expenditure Account (Schedule B)		(1,936)
808	Consultancy Income and Expenditure Account (Schedule C)		820
43,389			41,165
(309)	Expenses on New Borrowings		(607)
43,080	Operations Surplus		40,558
(37,147)	Amortisation Charge (Schedule A)		(46,216)
	Non-Operating Items		
27,330	Income and Credits (Net) (Schedule E)	28,526	
(27,330)	Transferred to Capital Reserves and Sinking Fund	(28,526)	—
5,933	Surplus/(Deficit) for Year		(5,658)
(14,408)	Deficit brought forward from previous year		(8,475)
£(8,475)	Deficit carried forward to next year		(£14,133)

Note: Adjustments in year-end parities of foreign borrowings have been reflected in Repaid Capital Reserve (Schedule K)

Balance Sheet

Account No. 2

31st March, 1982				31st March, 1983	
			Assets Employed:		
£000's	Reference			£000's	£000's
787,223	Schedule F	**Net Investment in Capital Assets** including work-in-progress			988,279
307,008	Schedule G	**Current Assets**		308,898	
		Less:			
147,218	Schedule G	**Current Liabilities**		161,390	
159,790		**Net Current Assets**			147,508
87,422	Schedule H	**Sinking Fund Investments,** at cost			94,454
£1,034,435					£1,230,241
			Financed as follows:		
839,374	Schedule I	**Borrowings**			1,014,886
		Reserves			
114,264	Schedule K	Capital		130,994	
89,272	Schedule H	Sinking funds for borrowings		98,494	
(8,475)	Account No. 1	Profit and Loss Account balance (deficit)		(14,133)	
195,061					215,355
£1,034,435					£1,230,241

Note: At 31st March, 1983 contractual capital commitments amounted to approximately £275,000,000 (1982 — £305,000,000)

Signed: Charles T. G. Dillon *Chairman*

Signed: P. J. Moriarty *Chief Executive*

D. Connaughton *Director, Finance*

12th July, 1983

Electricity Income and Expenditure Account

Schedule A

1981/1982						1982/1983
£		£	£	£	£	£
517,028,926	**Income** — Electricity Sales	571,991,736				
808,103	— Miscellaneous	1,346,287				
517,837,029						573,338,023
	Expenditure:	**Generation**	**Transmission**	**Distribution**		
232,722,209	Fuel	239,711,411				
121,344,945	Operation, maintenance and local charges	64,318,965	5,692,238	69,447,500		
—	Rates Levy	9,000,000	2,700,000	3,300,000		
33,286,952	General charges	15,898,730	4,612,828	18,772,377		
29,497,300	Depreciation	19,792,470	4,163,800	11,757,230		
707,002	Fisheries net cost	588,441				
417,558,408		349,310,017	17,168,866	103,277,107	469,755,990	
56,175,809	Interest	27,222,643	8,958,220	25,119,871	61,300,734	
473,734,217		376,532,660	26,127,086	128,396,978		531,056,724
44,102,812						42,281,299
37,146,523	Amortisation Charge (Schedule O – Note 9)	19,753,341	7,020,086	19,442,693		46,216,120
£6,956,289	Surplus/(Deficit)					£(3,934,821)

Notes:

Fuel includes: Excise Duty on Mineral Hydrocarbon Oil £10,317,973 (Previous Year £16,149,419).
: Purchased electricity £124,830 (£107,044).

Charges include: Local Authority Rates £1,779,371 (£1,459,678), Bad Debts £811,835 (£1,357,051), Audit Fee £65,000 (£58,000), Board Members' Remuneration including full-time Chairman £45,470 (£38,050).

Appliance and Contracts Income and Expenditure Account

Schedule B

1981/1982 Appliance Sales	1981/1982 Appliance Repairs	1981/1982 Installations Contracts	1981/1982 Total		1982/1983 Total	1982/1983 Appliance Sales	1982/1983 Appliance Repairs	1982/1983 Installations Contracts
£	£	£	£		£	£	£	£
8,459,055	1,526,754	3,059,419	13,045,228	Income, exclusive of VAT	13,354,345	8,524,368	1,465,719	3,364,258
6,872,801	1,308,592	2,375,324	10,556,717	Direct Costs	10,820,606	7,077,360	1,208,478	2,534,768
1,586,254	218,162	684,095	2,488,511	Gross Profit	2,533,739	1,447,008	257,241	829,490
				Overheads:				
1,055,664	464,117	270,556	1,790,337	Payroll costs	2,195,488	1,268,358	578,633	348,497
219,519	—	—	219,519	Publicity	351,259	351,259	—	—
530,630	261,170	36,795	828,595	Premises costs	926,563	608,109	276,817	41,637
106,562	6,606	27,084	140,252	Sundry expenses	271,469	112,355	76,500	82,614
831,300	405,000	342,993	1,579,293	General charges and interest (net), as apportioned	1,565,696,	783,881	470,000	311,815
2,743,675	1,136,893	677,428	4,557,996		5,310,475	3,123,962	1,401,950	784,563
—	499,376	47,931	547,307	Less: transfer to Electricity Income and Expenditure Account (See Schedule O – Note 13)	840,363	—	766,825	73,538
2,743,675	637,517	629,497	4,010,689		4,470,112	3,123,962	635,125	711,025
£(1,157,421)	£(419,355)	£54,598	£(1,522,178)	Surplus/(Deficit) transferred to Profit and Loss Account	£(1,936,373)	£(1,676,954)	£(377,884)	£118,465

Consultancy Income and Expenditure Account

Schedule C

1981/1982			1982/1983
£		£	£
6,798,446	**Income**		11,204,816
	Expenditure:		
4,955,053	Direct Costs	8,686,923	
	Overheads:		
658,502	Directly allocated	717,824	
377,000	General charges and interest, as apportioned	980,333	
5,990,555			10,385,080
£807,891	Surplus transferred to Profit and Loss Account		£819,736

Note: This Account includes the result of ESB Joint Venture with Saudi Consulting House up to 31st December, 1982; no material items have arisen since that date.

Statement of Source and Application of Funds

Schedule D

1981/1982 £	Reference		1982/1983 £
		Source:	
43,079,865	Account No. 1	Operations before Amortisation Charge	40,557,879
1,438,400	Schedule J	Provision towards premium on Stock Redemption	1,922,881
31,730,871	Schedule F	Depreciation	38,723,782
2,349,494	Schedule E	Credits on disposal of assets	1,980,391
9,973,401	Schedule E	Interest on Sinking Fund Investments	12,097,888
88,572,031			95,282,821
14,398,606	Schedule E	Non-Repayable Supply Contributions	13,991,008
158,880,713	Schedule I	Borrowings	190,312,651
£261,851,350			£299,586,480
		Application:	
210,271,497	Schedule F	Capital expenditure	240,887,430
32,988,926	Schedule I	Redemption of Borrowings (net of credits £456,977 on Stock Cancellation)	63,911,525
874,883	Schedule H	Payment of premium on Premium Stock	—
—	Schedule K	Discounts/Premiums on Borrowings	37,170
21,692,344	Schedule H	Increase in Sinking Fund Investments	7,032,646
	Schedule G	Net movement in Current Assets/Current Liabilities	
		— Cash/Temporary Investments (9,577,094)	
		— Debtors/Creditors (2,105,267)	
		— Inventories (599,930)	
(3,976,300)			(12,282,291)
£261,851,350			£299,586,480

Statement of Non-Operating Items — Profit and Loss Account

Schedule E

1981/1982		1982/1983	
£		£	£
	Income and Credits		
14,398,606	Non-Repayable Supply Contributions (Schedule K)	13,991,008	
608,275	Credits arising on ESB Stock Cancellations (Schedule H)	456,977	
9,973,401	Interest on Sinking Fund Investments (Schedule H)	12,097,888	
2,349,494	Credits arising on disposal of Assets Retired (Schedule K)	1,980,391	
£27,329,776			£28,526,264
(17,356,375)	To Capital Reserves	(16,428,376)	
(9,973,401)	To Sinking Fund	(12,097,888)	
£(27,329,776)			£(28,526,264)

Statement of Capital Assets

(Including Analysis of Depreciation)

Schedule F

	Total at 31st March, 1982	Additions less Retirements during year	**Total at 31st March, 1983**
	£	£	**£**
ASSETS			
Generation	319,186,872	70,196,293	**389,383,165**
Transmission	101,263,883	19,722,099	**120,985,982**
Distribution	286,056,028	36,205,237	**322,261,265**
General Buildings, Transport and Working Equipment	49,783,231	17,124,481	**66,907,712**
Fisheries	183,949	89,203	**273,152**
	756,473,963	£143,337,313	**899,811,276**
Work-in-Progress, including payments on account	286,843,312		**380,368,790**
Total Investment in Capital Assets (at cost)	1,043,317,275		**1,280,180,066**
Deduct Accumulated Depreciation, as below	256,094,533		**291,901,001**
Net Investment in Capital Assets	£787,222,742		**£988,279,065**

Note: Work carried out in the year amounted to £240,887,430 (1981/82 £210,271,497)

DEPRECIATION

Accumulated Depreciation:

	£	£	£
Provision for depreciation of assets less assets retired as at 31st March, 1982		256,094,533	
Movements in year:			
Depreciation of assets	38,723,782		
Assets retired	(4,024,639)	34,699,143	290,793,676
Transfer from Asset Renewal Reserve (Schedule K)			1,107,325
Total as at 31st March, 1983			**£291,901,001**

	Accumulated Depreciation as at 31st March, 1983
	£
Generation:	**137,626,987**
Transmission:	**34,061,309**
Distribution:	**107,120,343**
General Buildings, Transport & Working Equipment:	**12,987,440**
Fisheries:	**104,922**
	£291,901,001

Note: Depreciation total of £38,723,782 includes £3,006,282 in respect of Tools and Vehicles.

Statement of Current Assets and Current Liabilities

Schedule G

31st March, 1982 £		Nominal Value £ (1981/1982)	£	£	31st March, 1983 £
	Current Assets				
57,879,694	Cash at bank and in hand (net)				41,237,156
	Investments at cost:				
4,825,448	ESB Stocks	5,410,698	7,635,964	7,073,639	
3,567,900	Government Stocks	4,950,000	3,300,000	2,458,817	
4,836,344	Euro Bonds	5,254,164	12,070,055	10,762,680	
13,229,692					20,295,136
	Accounts Receivable:				
	Electricity: billed		41,007,596		
	unbilled		64,482,450		
100,915,697				105,490,046	
15,784,559	Appliance and Contracts (including £15.8m. Hire Purchase, maximum term 5 years)			16,562,255	
30,734,978	Others			37,474,660	
147,435,234					159,526,961
	Inventories:				
46,032,194	Fuel			40,960,326	
37,812,834	Plant/Network Stocks and Miscellaneous Spares and Sundries			41,777,439	
1,901,748	Appliances			2,409,081	
85,746,776					85,146,846
2,716,617	Repayable Work-in-Progress at cost				2,692,481
£307,008,013					£308,898,580
	Current Liabilities				
68,180,156	Accounts Payable				86,075,555
2,294,306	Progress Payments on Repayable Work-in-Progress				2,668,988
30,659,439	Temporary Borrowings and Borrowings for Hire Purchase financing				14,249,073
6,497,662	Supply Contributions and Deposits				6,016,929
20,089,663	Accrued Charges and Provisions				27,726,147
19,496,166	Accrued Interest on Borrowings				24,653,558
£147,217,392					£161,390,250

Statement of Sinking Funds for Borrowings

Schedule H

1981/1982		1982/1983	
£		£	£
65,729,222	Opening Balance — Investments	87,421,566	
1,518,149	— Interest Accrued	1,850,170	
67,247,371			89,271,736
	Additions:		
37,146,523	Amortisation charge in year (Account No. 1)	46,216,120	
1,438,400	Provision for premium on E.S.B. Stocks (Schedule J)	1,922,881	
608,275	Credits on cancellation of E.S.B. Stocks	456,977	
9,973,401	Interest for year (including interest accrued)	12,097,888	
49,166,599			60,693,866
116,413,970			149,965,602
	Utilisation:		
	Redemption of borrowings from:		
17,151,541	Amortisation (Schedule J)	26,209,644	
8,507,535	Sinking Fund Investments	24,804,566	
608,275	Credits on cancellation of E.S.B. Stocks	456,977	
(26,267,351)	Reflected in Repaid Capital Reserve (Schedule K)		(51,471,187)
(874,883)	Premium Paid on Stock Redemption		
	Closing Balance: (as per Balance Sheet)		
87,421,566	Investments	94,454,212	
1,850,170	Interest accrued	4,040,203	
£89,271,736			£98,494,415

Sinking Fund Investments:

	Nominal	Market	Cost
	£	£	£
E.S.B. Stocks	14,995,980	16,407,583	15,094,095
Government Stocks	51,340,813	47,262,363	44,409,075
Euro Bonds	26,732,530	27,617,563	23,196,419
Bank Deposits			11,754, 623
Total (as per Balance Sheet)			£94,454,212

Note: Redemption of Borrowings appears in Schedule I.

Statement of Borrowings

Schedule I

Amount Borrowed £		Irish Pound Borrowings:	Balance Outstanding 31st March, 1982 £	Borrowed during year £	Redeemed during year £	Adjustment for currency changes £	**Balance Outstanding 31st March, 1983 £**
68,450,000	Advances	— Minister for Finance	41,172,882	—	1,606,733	—	**39,566,149**
500,000	Loan	— New Ireland Assurance Co. Ltd. 6% — 1962/87	165,766	—	29,354	—	**136,412**
14,865,000	Loan	— Central Bank of Ireland 7.25% — 1972/87	6,784,597	—	1,170,834	—	**5,613,763**
12,000,000	Stock	— 6% — 1982/87	3,364,549	—	—	—	**3,364,549**
16,500,000	Stock	— 6% — 1984/89	5,865,401	—	100,000	—	**5,765,401**
13,000,000	Stock	— 7% — 1986/91	7,120,130	—	100,000	—	**7,020,130**
7,000,000	Stock	— 7.25% — 1988/93	4,509,306	—	500,000	—	**4,009,306**
9,250,000	Stock	— 9.5% — 1985/90	7,242,102	—	—	—	**7,242,102**
12,000,000	Stock	— 9% — 1992/95	7,556,225	—	—	—	**7,556,225**
11,300,000	Stock	— 13% — 1983/85	8,769,612	—	500,000	—	**8,269,612**
8,200,000	Stock	— 9% — Premium (20%) 1983	6,121,024	—	500,000	—	**5,621,024**
16,800,000	Stock	— 13% — 1988	13,799,978	—	2,296,781	—	**11,503,197**
6,000,000	Stock	— 9% — Premium (20%) 1984	5,344,107	—	452,202	—	**4,891,905**
12,000,000	Stock	— 13% — 1990/92	11,700,000	—	1,281,430	—	**10,418,570**
16,500,000	Stock	— 12% — Premium (25%) 1985	15,674,495	—	744,846	—	**14,929,649**
21,000,000	Stock	— 13% — Premium (30%) 1986	21,000,000	—	1,700,000	—	**19,300,000**
19,500,000*	Floating Rate Facility	— Domestic Banks — 1981/88	16,875,000	—	1,625,000	—	**15,250,000**
30,000,000*	Floating Rate Facility	— Domestic Banks — 1987/89	30,000,000	—	—	—	**30,000,000**
15,000,000	Floating Rate Note Issue	— Domestic Banks — 1988	—	15,000,000	—	—	**15,000,000**
30,000,000*	Floating Rate Facility	— Domestic Banks — 1988/92	—	30,000,000	—	—	**30,000,000**
598,000	Project Finance	— 1982/87	—	598,080	59,808	—	**538,272**
			213,065,174	45,598,080	12,666,988	—	**245,996,266**

Project Finance:	**Foreign Currency Borrowings:**						
IR£20,000,000*	— European Investment Bank 9.2%	— 1983/98	25,742,107	—	—	2,614,949	**28,357,056**
IR£10,000,000*	— European Investment Bank 9.35%	— 1983/99	12,136,599	—	—	1,143,303	**13,279,902**
IR£15,000,000*	— European Investment Bank 9.45%	— 1983/99	18,935,496	—	347,208	2,017,496	**20,605,784**
IR£20,000,000*	— European Investment Bank 9.45%	— 1983/99	25,249,752	—	462,992	2,690,445	**27,477,205**
IR£10,785,000*	— European Investment Bank 8.45%	— 1985/94	11,732,895	—	—	1,102,282	**12,835,177**
IR£5,715,000*	— European Investment Bank 12.0%	— 1985/96	8,232,025	—	—	883,359	**9,115,384**
IR£3,000,000*	— European Investment Bank 8.75%	— 1984/95	3,376,561	—	—	238,041	**3,614,602**
IR£20,000,000*	— European Investment Bank 8.75%	— 1985/95	22,495,833	—	—	1,586,307	**24,082,140**
IR£30,000,000*	— European Investment Bank 7.65%	— 1986/96	34,980,144	—	—	807,482	**35,787,626**
IR£17,000,000*	— European Investment Bank 9.3%	— 1985/2001	16,481,351	—	—	2,411,840	**18,893,191**
IR£22,000,000*	— European Investment Bank 10.55%	— 1987/2001	23,293,131	—	—	1,914,751	**25,207,882**
IR£18,000,000*	— European Investment Bank 14.0%	— 1987/2001	19,121,487	—	—	639,447	**19,760,934**
IR£16,000,000*	— European Investment Bank 11.375%	— 1985/92	—	15,796,541	—	1,078,722	**16,875,263**
IR£20,000,000*	— European Investment Bank 12.0%	— 1995/2002	—	19,534,796	—	(–)1,886,733	**17,648,063**
IR£8,000,000*	— European Investment Bank 7.0%	— 1986/94	—	8,297,807	—	688,342	**8,986,149**
US$14,500,000*	— International Bank for Reconstruction and Development 6.5%	— 1974/94	8,945,518	—	425,013	645,661	**9,166,166**
US$20,000,000*	— International Bank for Reconstruction and Development 7.25%	— 1976/87	8,574,082	—	1,197,717	752,680	**8,129,045**
US$15,000,000*	— International Bank for Reconstruction and Development 7.25%	— 1977/88	6,781,416	—	803,284	432,879	**6,411,011**

* Multi-Currency Facilities (Equivalent to amount of indicated currency).

— Continued overleaf

Statement of Borrowings

Schedule I (Continued)

Amount Borrowed			Balance Outstanding 31st March, 1982 £	Borrowed during year £	Redeemed during year £	Adjustment for currency changes £	**Balance Outstanding 31st March, 1983 £**
Project Finance (Continued):							
US$34,994,000	— Export-Import Bank of the United States 8.0%	— 1986/98	22,245,530	2,087,330	—	2,585,782	**26,918,642**
US$10,840,000	— Export-Import Bank of the United States 8.375%	— 1983/91	7,530,469	—	521,520	808,438	**7,817,387**
US$16,332,000	— Export-Import Bank of the United States 8.0%	— 1988/2000	5,627,454	5,784,884	—	1,150,896	**12,563,234**
F.Fr.369,983,000	— French Banks — 1977/2004		28,532,706	2,988,040	3,699,268	(−)1,474,817	**26,346,661**
Stg.£18,051,000	— United Kingdom Banks/Suppliers — 1975/90		10,290,355	2,419,796	2,803,378	(−)874,761	**9,032,012**
Sw.Fr.18,476,000	— Swiss Export Agency — 1986/97		237,961	6,252,358	—	333,789	**6,824,108**
IR£735,000*	— Other Borrowings		560,588	—	143,183	13,371	**430,776**
			321,103,460	63,161,552	10,403,563	*22,303,951	**396,165,400**
Fixed Term Loans:							
Registered Notes/Bonds and Bearer Bonds							
US$30,000,000	— Japanese Banks 7.75%	— 1973/92	10,698,159	—	1,035,503	1,106,574	**10,769,230**
US$12,000,000	— U.S. Syndicate 9.25%	— 1983/92	8,336,228	—	—	894,541	**9,230,769**
US$10,000,000	— U.S. Bank 11.375%	— 1985	6,946,857	—	—	745,450	**7,692,307**
Sw.Fr.50,000,000	— Swiss Banks 4.625%	— 1985	18,050,542	—	—	416,678	**18,467,220**
Sw.Fr.25,000,000	— Banking Syndicate 5.25%	— 1983	9,025,271	—	8,532,354	(−)492,917	—
Sw.Fr.25,000,000	— Banking Syndicate 5.75%	— 1984/86	9,025,271	—	—	208,339	**9,233,610**
B.Fr.1,000,000,000	— Belgian Banks 7.5%	— 1983	13,698,630	—	14,508,824	810,194	—
B.Fr.700,000,000	— Belgian Banks 7.5%	— 1983	9,589,041	—	—	1,398,245	**10,987,286**
B.Fr.1,000,000,000	— Belgian Banks 8.75%	— 1980/89	10,616,438	—	1,110,244	1,481,092	**10,987,286**
D.M.75,000,000	— German Bank 8.5%	— 1988	21,723,389	—	—	2,040,869	**23,764,258**
D.M.150,000,000**	— Banking Syndicate 9.2%	— 1986/91	43,446,778	—	—	4,081,739	**47,528,517**
D.M.120,000,000	— Banking Syndicate 9.75%	— 1983/92	—	35,253,679	—	2,769,134	**38,022,813**
Yen5,000,000,000	— Japanese Bond Issue 9.1%	— 1987/92	—	15,397,744	—	736,492	**16,134,236**
Yen5,000,000,000	— Japanese Banks 8.5%	— 1987/92	—	15,887,861	—	246,375	**16,134,236**
			161,156,604	66,539,284	25,186,925	16,442,805	**218,951,768**
Floating Rate Facilities:							
US$40,000,000*	— Banking Syndicate	— 1980/88	20,840,570	—	3,629,633	2,019,832	**19,230,769**
US$30,000,000*	— Banking Syndicate	— 1981/88	18,235,498	—	2,680,869	1,753,063	**17,307,692**
US$20,000,000*	— Banking Syndicate	— 1984/87	13,893,713	—	—	1,490,902	**15,384,615**
US$20,000,000*	— Domestic Banks	— 1984/88	13,893,713	—	—	1,490,902	**15,384,615**
US$20,000,000*	— Floating Rate Note Issue	— 1987	13,893,713	—	—	1,490,902	**15,384,615**
Stg.£20,500,000*	— Domestic Banks	— 1981/88	20,133,540	—	2,982,448	(−)1,465,064	**15,686,028**
D.G.100,000,000*	— Banking Syndicate	— 1983	26,160,889	—	6,818,076	1,751,266	**21,094,079**
CAN$30,000,000	— Canadian Bank	— 1987/89	16,997,167	—	—	1,711,906	**18,709,073**
CAN$25,000,000	— Canadian Bank	— 1989	—	15,013,735	—	577,159	**15,590,894**
			144,048,803	15,013,735	16,111,026	10,820,868	**153,772,380**
TOTAL — FOREIGN CURRENCY BORROWINGS			626,308,867	144,714,571	51,701,514	49,567,624	**768,889,548**
TOTAL — IRISH POUND BORROWINGS			213,065,174	45,598,080	12,666,988	—	**245,996,266**
TOTAL — ALL BORROWINGS			£839,374,041	£190,312,651	£64,368,502	£49,567,624	**£1,014,885,814**

* Multi-Currency Facilities (Equivalent to amount of indicated currency).
** Previously classified with Floating Rate Facilities: terms now changed.

Statement of Borrowings

Currency and Repayment Profile of Borrowings

	Repayable Within 1 Year £000	Repayable Within 2 to 5 Years £000	Repayable Within 6 to 10 Years £000	Repayable After 10 Years £000	Total £000	Currency as % of Total Borrowings %
Irish Pounds	10,834	99,652	101,816	33,694	245,996	24
Sterling	5,054	18,825	3,013	22,580	49,472	5
U.S. Dollars	12,460	108,599	50,747	52,197	224,003	22
Deutsche Marks	5,260	47,325	104,159	26,342	183,086	18
Swiss Francs	2,770	34,736	32,542	24,438	94,486	10
Belgian Francs	11,973	8,719	2,114	—	22,806	2
French Francs	3,993	9,250	6,830	6,274	26,347	3
Dutch Guilders	363	8,555	35,762	18,742	63,422	6
Canadian Dollars	—	12,472	21,827	—	34,299	3
Japanese Yen	622	7,923	37,769	22,774	69,088	7
Others	208	933	554	186	1,881	—
	53,537	356,989	397,133	207,227	1,014,886	
Repayment Profile	5%	35%	39%	21%		100%

See Note No. 9 — Amortisation of Borrowings.

Redemption of Borrowings during Year

1981/1982 £		1982/1983 £
26,267,351	Funded Redemption, as per Schedule H	51,471,187
7,329,850	Non-Funded Redemption	12,897,315
£33,597,201	Total (See previous page)	£64,368,502

Statement of Interest and Amortisation of Borrowings

Schedule J

1981/1982 £		£	£	1982/1983 £
	Interest on:			
	Advances from Minister for Finance		1,842,170	
	Borrowings in Irish pounds	23,613,490		
	Add: Provision for funding of premium on redemption of ESB Stocks (below)	1,922,881		
			25,536,371	
	Borrowings in other currencies		66,991,435	
			94,369,976	
	Less: Interest from temporary investment		7,559,584	
72,825,099				**86,810,392**
	Amortisation of Borrowings:			
	Redemptions:			
	Minister for Finance		1,606,733	
	Others		24,602,911	
			26,209,644	
	Investments for sinking funds	21,929,357		
	Less: Provision for funding of premium on redemption of ESB Stocks	1,922,881	20,006,476	
37,146,523				**46,216,120**
£109,971,622				**£133,026,512**
	Allocated as follows:			
	Interest:			
	Income and Expenditure Accounts:			
	— Electricity		61,300,734	
	— Appliance and Contracts		426,832	
	— Consultancy		271,333	
	Fisheries		7,003	
	Capital Works		24,804,490	
72,825,099				**86,810,392**
	Amortisation:			
37,146,523	Electricity Income and Expenditure Account			**46,216,120**
£109,971,622				**£133,026,512**

Statement of Capital Reserves

Schedule K

	£	£	£
Non-Repayable Supply Contributions:			
Contributions from State under Electricity (Supply) Acts towards capital cost of supplying rural areas — as at 31st March, 1982	27,889,826		
Received in year	—		
Other contributions — as at 31st March, 1982	59,199,080	27,889,826	
Transferred in year	13,991,008	73,190,088	**101,079,914**
Repaid Capital Reserve:			
Amortisation of Borrowings, less write-off of intangible assets, adjustment for changes in currency parities and discounts on stock issues — as at 31st March, 1982		16,192,090	
Movements in year:			
Amortisation of Borrowings (Schedule H)	51,471,187		
Discounts on Borrowings	(37,170)		
Adjustment for changes in currency parities (Schedule O — Note 8)	(49,567,624)	1,866,393	**18,058,483**
Asset Renewal Reserve:			
Balance as at 31st March, 1982		10,982,755	
Credits arising on disposal of assets retired (Schedule E)		1,980,391	
Less amount allocated to depreciation fund (Schedule F)		(1,107,325)	**11,855,821**
Total as at 31st March, 1983 (as per Balance Sheet)			**£130,994,218**

Statement of Generation Costs

Schedule L

Generating Stations	Fuel	Operation	Maintenance	Local Charges	WORKS COST 1982/1983	WORKS COST Per Unit Sent Out	WORKS COST 1981/1982	WORKS COST Per Unit Sent Out	Depreciation	TOTAL COST 1982/1983	TOTAL COST 1981/1982
	£	£	£	£	**£**	Pence	£	Pence	£	**£**	£
Coal/Oil/Gas											
Marina	25,511,031	1,735,482	2,320,009	655,317	**30,221,839**	2.095	26,223,520	1.889	821,897	**31,043,736**	27,009,768
Ringsend	5,148,285	2,825,837	3,227,034	565,089	**11,766,245**	14.058	14,937,572	10.872	377,787	**12,144,032**	15,291,241
Arigna	2,530,008	570,103	359,986	87,060	**3,547,157**	5.731	2,607,469	5.833	5,565	**3,552,722**	2,614,584
Great Island	13,914,918	1,371,604	1,733,442	349,971	**17,369,935**	4.919	17,845,857	4.541	737,389	**18,107,324**	18,562,396
Tarbert	29,157,922	2,054,709	3,057,941	588,275	**34,858,847**	4.727	50,416,128	3.966	4,206,750	**39,065,597**	54,558,249
Poolbeg	47,920,807	2,305,997	5,752,282	848,240	**56,827,326**	4.204	75,579,702	3.453	2,509,698	**59,337,024**	79,637,106
Aghada	64,157,136	1,341,599	1,635,028	734,727	**67,868,490**	1.901	37,694,262	1.605	8,320,360	**76,188,850**	41,195,231
North Wall*	—	590,423	134,399	235,959	**960,781**	—	—	—	319,854	**1,280,635**	—
Sod Peat (Machine)											
Portarlington	2,392,948	978,369	1,340,926	176,840	**4,889,083**	8.343	3,769,860	6.140	14,102	**4,903,185**	3,780,020
Allenwood	3,881,980	1,249,244	1,216,823	190,170	**6,538,217**	5.933	5,798,933	5.713	5,160	**6,543,377**	5,802,764
Lanesborough	785,270	586,967	236,872	74,366	**1,683,475**	7.117	2,256,565	5.188	1,390	**1,684,865**	2,257,595
Milled Peat											
Ferbane	11,142,298	1,825,310	2,481,887	353,259	**15,802,754**	5.259	12,245,531	4.474	94,168	**15,896,922**	12,339,417
Rhode	11,517,898	1,428,563	1,989,849	276,709	**15,213,019**	4.194	12,047,595	3.849	117,638	**15,330,657**	12,165,110
Bellacorick	5,197,066	980,549	1,058,261	165,595	**7,401,471**	4.336	4,863,387	4.749	67,866	**7,469,337**	4,987,761
Shannonbridge	10,337,957	1,452,510	1,593,837	278,589	**13,662,893**	4.150	10,448,498	3.399	1,058,916	**14,721,809**	10,962,266
Lanesborough	5,099,667	595,809	522,202	120,306	**6,337,984**	3.367	4,390,187	2.667	156,707	**6,494,691**	4,538,497
Sod Peat (Hand-Won)											
Four 5MW Stations	891,390	863,878	718,253	129,495	**2,603,016**	14.224	2,874,008	11.731	18,450	**2,621,466**	2,876,749
Peak Station											
North Wall**	—	—	—	—	—	—	552,468	—	—	—	573,048
Total — Fuel Stations	239,586,581	22,756,953	29,379,031	5,829,967	**297,552,532**	3.247	284,551,542	3.105	18,833,697	**316,386,229**	299,151,802
Hydro											
Shannon		716,582	1,762,037	331,615	**2,810,234**	0.819	2,352,220	0.582	51,129	**2,861,363**	2,400,319
Erne		347,158	621,842	168,494	**1,137,494**	0.434	981,296	0.300	132,483	**1,269,977**	1,099,049
Liffey		96,566	277,095	44,398	**418,059**	1.056	341,745	0.650	39,086	**457,145**	370,538
Lee		214,579	245,737	74,085	**534,401**	0.550	530,821	0.524	79,685	**614,086**	601,425
Clady		53,431	57,220	6,586	**117,237**	0.787	103,027	0.665	21,162	**138,399**	122,434
Pumped Storage											
Turlough Hill		485,105	678,508	171,976	**1,335,589**	—	1,072,461	—	635,228	**1,970,817**	1,669,615
Total —Hydro Stations		1,913,421	3,642,439	797,154	**6,353,014**	1.152	5,381,570	0.806	958,773	**7,311,787**	6,263,380
Total — All Stations	239,586,581	24,670,374	33,021,470	6,627,121	**303,905,546**	3.128	289,933,112	2.949	19,792,470	**323,698,016**	305,415,182
										124,830	107,044
										9,000,000	—
										15,898,730	14,732,387
										588,441	707,002
										£349,310,017	**£320,961,615**

Electricity Purchased in bulk (net)
Rates Levy
General Charges (including Central Transport and Stores)
Fisheries (Net Cost before Amortisation)
TOTAL COST

* Being commissioned
** Retired

Fisheries — Commercial and Conservation Operations

Schedule M

Total Cost 1981/1982 £		£	Total Cost 1982/1983 £	Commercial £	Conservation £
828,019	Direct Costs		**1,033,338**	558,528	474,810
	Overheads and General Charges:				
175,867	Payroll expenses and charges	200,874			
4,000	Depreciation	4,000			
5,621	Interest on Borrowings	7,003	**211,877**	83,163	128,714
1,013,507			**1,245,215**	641,691	603,524
	Less:				
306,505	Sales of fish, letting of fishing rights and miscellaneous income		**656,774**	640,616	16,158
707,002	Net Cost before Amortisation, as per Electricity Income and Expenditure Account		**588,441**	1,075	587,366
3,286	Amortisation Charge		**3,755**	842	2,913
£710,288	**Net Cost for Year**		**£592,196**	£1,917	£590,279

Value Added Statement

Schedule N

1981/1982 £000s		£000s	1982/1983 £000s
	Sources of Income:		
517,029	Electricity Sales (Schedule A)	571,992	
13,045	Appliance and Contracts Trading (Schedule B)	13,354	
6,799	Consultancy (Schedule C)	11,205	
808	Miscellaneous	1,346	
537,681			**597,897**
	Less Costs of:		
232,722	Fuel	239,711	
54,780	Materials and Services	75,602	
31,731	Depreciation of Assets	38,724	
319,233			**354,037**
£218,448	**Value Added**		**£243,860**
	Distribution of Value Added:		
118,790	Employees — Payroll (Inclusive of deductions for PAYE etc.)		**141,296**
	Lenders		
56,578	— Interest	62,006	
37,147	— Amortisation of Borrowings	46,216	
93,725			**108,222**
5,933	Reduction/(Increase) in Deficit brought forward		**(5,658)**
£218,448			**£243,860**

1. **Electricity (Supply) Acts:**
The Accounts are prepared under the terms of the Electricity (Supply) Acts, 1927-1982 and are stated in Irish Pounds (£): the Historical Cost Convention is used in Accounts 1 and 2 and Schedules A to N to which the notes in this Schedule relate.
In accordance with Statement of Standard Accounting Practice No. 16 supplementary Current Cost Accounts are provided (Schedules P to R).

2. **Capital Assets:**
Capital Assets are valued at cost. Cost includes prime cost, overheads and interest costs during construction. Assets include land (£16.8m) most of which is held freehold.

3. **Depreciation of Capital Assets:**
Depreciation is designed to recover historical cost over allotted lifespans.
Methods used are appropriate to the nature of the Board's business and to the character and extent of its capital assets.
Assets are grouped and allotted lifespans in line with international practice. Major asset classifications and their allotted lifespans are:—
: Generation Plant (including Thermal Station Structures) 20 years
: Transmission and Distribution Plant and Structures 25 years
: General Buildings and Hydro 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.
Assets when retired from service are charged against Accumulated Depreciation and any shortfalls thereby arising in the depreciation fund are recovered from Asset Renewal Reserve (Schedule K) to which proceeds of disposal or stores value of assets retired have been credited.

4. **Inventories:**
Stocks are valued at average cost.

5. **Repayable Work-in-Progress:**
Installations Contracts are valued at direct cost together with appropriate overheads; sundry works at direct cost.

6. **Accounts Receivable:**
The figure for Accounts Receivable in the Statement of Current Assets and Current Liabilities is net of a provision for doubtful debts, considered adequate in relation to the size and nature of the business. Bad debts are written off as they arise.

7. **Capital Borrowings:**
The Statement of Borrowings includes borrowings initially contracted for a period in excess of twelve months, irrespective of phased repayment arrangements, and of the lapsed portion of repayment period.
Discounts on Borrowings have been charged against the Repaid Capital Reserve. Other borrowing costs are charged against Profit and Loss Account.

8. **Borrowings in Foreign Currencies:**
Irish Pound Equivalent is at exchange rates ruling at year end. Changes are reflected in the Capital Reserve.

9. **Amortisation of Borrowings:**
This charge is made to reflect certain provisions of Section 21 (2) of the Electricity (Supply) Act, 1927.
It is determined as follows:
: The charge for ESB stock issues is in accordance with contractual commitments.
: The charge for other borrowings is calculated with a view to full repayment for those with a lifetime of twelve years and over and 50% repayment at least for those with lesser lifetimes.
Proportionate amortisation is charged on borrowings utilised in year.
The sinking fund provision towards the premium element payable on redemption of ESB Premium Stock is included in the charge for interest.
Sinking Fund Investments are stated at cost since policy is to hold them until maturity or to switch to other investments on advantageous terms.

10. **Temporary Investment:**
Transfers of temporary investments in stocks/securities to Sinking Fund Investments are costed at prices current at the time of transfer.

11. **Non-Repayable Supply Contributions:**
Non-Repayable Supply Contributions are credited to Capital Reserve (Schedule K) via the Profit and Loss Account (Account No. 1).

— Continued overleaf

12. **Hire Purchase Transactions:**
Profit on Hire Purchase sales is taken in the year of sale. As from 1st April, 1982 credit for interest is taken on a reducing balance basis over the Hire Purchase term (previously equal instalment method applied) — the effect of this change is not material.
From 1st April, 1982 Hire Purchase financing operations are reflected in the Appliance Sales Activity. (Previously reflected in the Electricity Income and Expenditure Account.)

13. **Apportionments:**
(a) Capital Expenditure:
Capital Expenditure bears interest on the average value of (1) Work-in-Progress (2) stocks held and (3) advances made to suppliers in respect of capital works at the rates appropriate to the financing of individual projects, and a proportion of general overhead expenses calculated at a percentage rate on the prime cost of work paid for during the year.
(b) Appliance and Contracts Income and Expenditure Account:
This account bears appropriate proportions of general overhead expenses and interest; premises costs include a charge for depreciation.
Overhead elements of Appliance and Installations Contracts which are appropriate to the Electricity Income and Expenditure Account have been allocated directly as they occur. An amount, calculated at 75p per customer, is transferred to the latter account, in recognition of the total safety and social role of Appliance Repairs and Installations Contracts.
(c) Consultancy and Fisheries bear appropriate proportions of general overhead expenses and interest.

14. **Taxation:**
The Board is liable for Corporation Tax at the reduced rate applicable to manufacturing companies. Because of large continuing capital expenditure, liability to tax will not arise in the foreseeable future and a tax equalisation reserve is not deemed necessary (unutilised capital allowances at 31st March, 1983 are estimated at £479m.) Had a tax equalisation reserve been provided, the accumulated figure would now be an estimated £15.5m. (31st March, 1982 — £12.8m.).

15. **Exceptional Expenditure:**
Essential maintenance and repairs are charged to the Electricity Income and Expenditure Account in the year in which the liability arises, on an estimated basis if necessary. Costs incurred to improve system efficiency are charged to the Electricity Income and Expenditure Account over the number of years corresponding to the benefits secured: similar treatment is applied to the revenue element of lump sum payments under the 1981-1984 Comprehensive Agreement.

16. **Superannuation Scheme:**
The Board contributes towards a pension scheme for staff under the provisions of the Electricity Supply Board (Superannuation) Act 1942 as amended: the scheme is subject to regular actuarial review. The Board's liability is confined to such contributions.

17. **Accounting Year:**
Income and Expenditure are aligned on a 52 or 53 week year as appropriate. The year 1982/1983 is a 52 week year (1981/1982 — 53 weeks).

Current Cost Profit and Loss Account

Schedule P

1981/1982			1982/1983
£000's		£000's	**£000's**
5,933	**Surplus/(Deficit) as per Profit and Loss Account,** after Interest and Amortisation		**(5,658)**
	Current Cost Operating Adjustments:		
38,601	Depreciation	40,463	
6,697	Cost of Sales	2,250	
2,356	Monetary Working Capital	10,231	
(47,654)			**(52,944)**
(41,721)			**(58,602)**
23,112	Gearing Adjustment		**29,013**
£(18,609)	**Current Cost Deficit**		**£(29,589)**

Current Cost Balance Sheet

Schedule Q

31st March, 1982				31st March, 1983
	Assets Employed:			
£000's		£000's	£000's	**£000's**
1,281,349	**Fixed Assets**		1,470,920	
163,549	**Net Current Assets**		151,678	
87,422	**Sinking Fund Investments**		94,454	
£1,532,320				**£1,717,052**
	Financed by:			
839,374	**Borrowings**		1,014,886	
	Reserves (See below):			
555,999	Current Cost Reserve	568,856		
136,947	Other Reserves	133,310		
692,946			702,166	
£1,532,320				**£1,717,052**

Current Cost Reserve

	£000's	**£000's**
Opening Balance		**555,999**
Balance Sheet Items — Revaluations:		
Cumulative to this year — Fixed Assets (Incl. W.I.P.) — Note 2	482,641	
— Inventories — Note 3	4,170	
	486,811	
Less cumulative to last year — Included in Opening Balance	(497,885)	**(11,074)**
Profit and Loss Account Items:		
Cost of Sales Adjustment	2,250	
Monetary Working Capital Adjustment	10,231	
Depreciation Adjustment	40,463	
	52,944	
Less: Gearing Adjustment	(29,013)	**23,931**
		£568,856

Other Reserves

	£000's	**£000's**
Total Reserves per Historical Balance Sheet		**215,355**
Net current cost adjustment to Profit and Loss Account — Cumulative to Last Year	(58,114)	
— This Years Items	(23,931)	**(82,045)**
Other Reserves per Current Cost Balance Sheet		**£133,310**

Signed: Charles T. G. Dillon *Chairman*

Signed: P. J. Moriarty *Chief Executive*
D. Connaughton *Director, Finance*

12th July, 1983

1. **Introduction:**
The principles and method used in the calculation of the Current Cost Accounts (Schedules P. & Q.) are in compliance with Statement of Standard Accounting Practice No. 16. Apart from the particular features covered in these notes the accounting policies, bases and methods are the same as in the Historical Cost Accounts.
The current cost system, while not a system of accounting for general inflation, takes account of price changes specific to a business in both Profit and Loss Account and Balance Sheet. It aims to determine, by means of certain adjustments to the historical cost results, the current cost profit or loss after allowing for the impact of price changes on the funds needed to maintain the productive assets of the business.

2. **Fixed Assets:**
Valuation of assets is based on indexation calculated by reference to the Transportable Goods Index issued by the Central Statistics Office as at February 1983 except for non specialised buildings which have been valued by a qualified internal valuer.

Fixed Assets and Work-in-Progress

31st March, 1983				**1982**
Fixed Assets:	**Gross £000's**	**Depreciation £000's**	**Net £000's**	**Net £000's**
Historical Value	899,811	291,901	607,910	500,380
Revaluation Change	1,372,404	916,425	455,979	471,098
Current Cost Value	£2,272,215	£1,208,326	£1,063,889	£971,478
Work-in-Progress:				
Historical Value			380,369	286,843
Revaluation Change			26,662	23,028
Current Cost Value			£407,031	£309,871
Current Cost Value of Fixed Assets and Work-in-Progress			£1,470,920	£1,281,349

3. **Net Current Assets:**

31st March, 1983	**£000's**	**1982 £000's**
Historical Value	147,508	159,790
Revaluation Change	4,170	3,759
Current Cost Value	£151,678	£163,549

4. **Depreciation:**
Total depreciation charged in the Current Cost Profit and Loss Account represents the average current cost of the proportion of fixed assets consumed during the year. The depreciation adjustment of £40.463m. (£38.601m. in 1981/82) is the difference between the depreciation charge in the Historical Cost and Current Cost Accounts.

5. **Stocks and Cost of Sales Adjustment:**
Stocks are stated at value to the business at Balance Sheet date. The Cost of Sales adjustment is the difference between the replacement cost (at date of consumption) and the corresponding historical cost of stocks consumed. For fuel, the adjustment is the average replacement cost; for other stocks the adjustment uses an internal index based on actual input data.

6. **Monetary Working Capital Adjustment:**
The Monetary Working Capital Adjustment represents the additional monetary working capital required by a business as a consequence of price changes during the year in order to maintain its operations. Computation of the adjustment uses an internal index developed from the Board's actual recorded cost data.

7. **Gearing Adjustment:**
A proportion of the net operating assets of a business is financed by borrowings. The gearing adjustment dilutes the operating adjustments to reflect the effect of these borrowed funds. A gearing adjustment has been included as being reasonable in the overall context of the Board's financing.

Auditors' Report

As Auditors appointed by the Minister for Industry and Energy, with the consent of the Minister for Finance, we have audited the Profit and Loss Account, Balance Sheet, and attached schedules A to O of the Electricity Supply Board, in accordance with approved Auditing Standards, and have obtained all the information and explanations which we considered necessary.

In our opinion, the Profit and Loss Account and Balance Sheet, together with the Statement of Source and Application of Funds (Schedule D), which have been prepared under the Historical Cost Convention, give, when read in conjunction with the relevant schedules and the notes appearing thereon, a true and fair view of the results of the Board for the year ended 31st March, 1983 and of the state of the Board's affairs as at that date.

In our opinion, the Board has kept proper books with which the above-mentioned financial statements are in agreement.

In our opinion, the supplementary current cost statement for the year ended 31st March, 1983, together with the notes thereon, as set out on Schedules P to R, has been properly prepared in accordance with the policies and methods described in the notes, to give the information required by Statement of Standard Accounting Practice number 16.

1 Stokes Place
St. Stephen's Green
DUBLIN 2.
12th July, 1983

Stokes Kennedy Crowley & Co.,
Chartered Accountants

Designed and produced by ESB.
Phototypeset by Computer Graphics Ltd.
Printed by Irish Printers Ltd., Dublin.

