

Electricity Supply Board

Fifty fourth Annual Report

for year ended 31st March 1981

Prl. 9902

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

Report and Accounts for year ended 31st March 1981

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

R. B. GODSIL

D. HATCH

C. KELLEHER

P. J. MORIARTY, F.C.I.S., M.I.P.M., **Chief Executive**

G. N. POWER, F.C.A.

J. A. RYAN, M.A., LL.D.

A. RYDER

J. P. WYLEY, B.Comm.

Directors

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 **J. B. O'DONOGHUE,** F.C.C.A., A.C.M.A.

Personnel **T.V. FAHY,** B.E.

Commercial/Distribution **C. McCABE,** B.E., F.I.E.I., C.Eng.

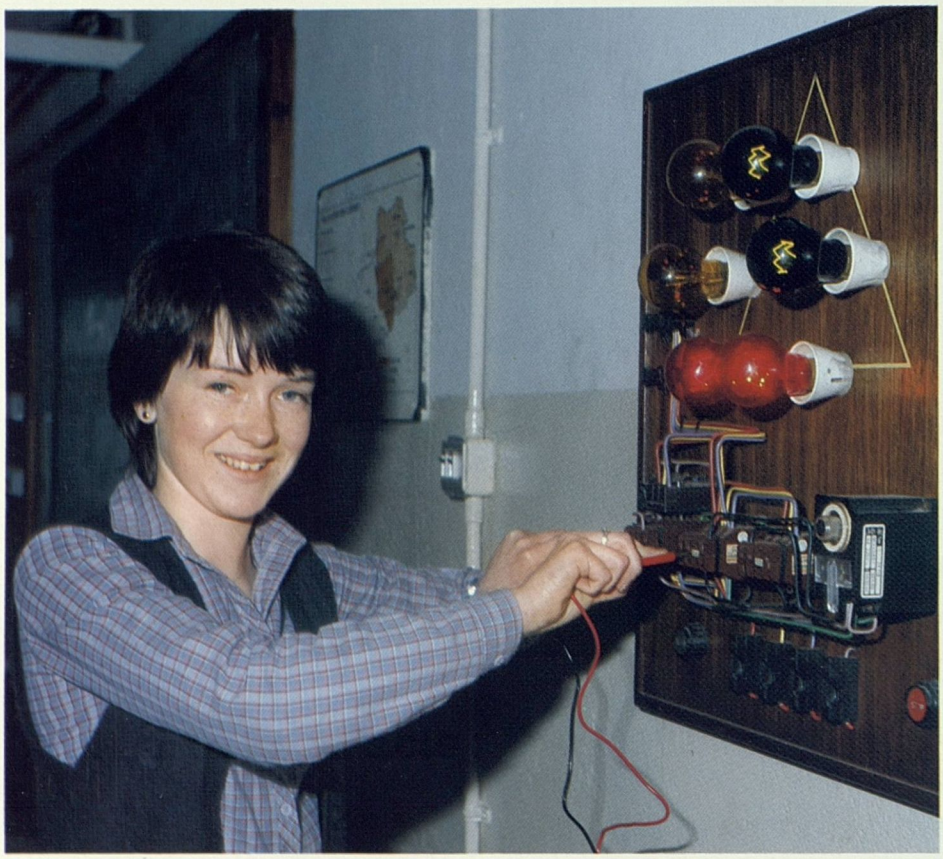
Generation/Transmission **A. G. KELLY,** B.E., PhD., F.I.Mech.E., Mem.A.S.M.E., M.I.E.I.

Advance Projects **S. TINNEY,** B.E., B.Sc., M.I.E.E.

Secretary

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

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



Significant Facts

	1980/81	1979/80
REVENUE Electricity	£409,862,000	£300,470,000
Appliance Sales (Net of Taxes)	£6,908,000	£7,841,000
Installations	£3,500,000	£3,336,000
ASSETS	£835,991,000	£689,873,000
PAYROLL	£111,479,000	£92,022,000
SALES (Million Units)	8,365	8,560
GENERATION CAPACITY(MW)	3,117	2,862
PEAK DEMAND (MW)	1,892	1,971
LOAD FACTOR	60.7%	59.3%
CUSTOMERS	1,070,049	1,043,428
EMPLOYEES	12,441	11,912

(Cash figures are rounded off to the nearest thousand)

Pictured above:
One of the first ESB girl apprentice electricians under instruction in Cork District.



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Pictured above:

A scenic view of the Shannonbridge milled-peat-fired station.

To the Minister for Energy

In accordance with the provisions of the Electricity Supply Acts 1927/79, the Annual Report and Accounts for the year ended 31st March, 1981 are presented.

FINANCIAL:

The Accounts for the year show a surplus of £6.3 million. Although modest in the scale of the ESB business, this outcome is welcome in these difficult times. It was achieved notwithstanding the delay in official approval to the new price levels recommended by the National Prices Commission, coupled with the severe downturn in the demand for electricity. As in previous years, ESB management implemented positive actions to achieve economies in operation/maintenance costs, capital investment and financing operations. The accumulated deficit of £21.25 million, brought forward from previous years, is now reduced to £15 million. The Board regards any accumulated deficit as unsatisfactory which, unless corrected quickly, will jeopardise its ability to finance the major development programmes planned to provide the country with the sound electricity system needed for economic and social development. There is worldwide recognition that the price of electricity should cover not just its short-run cost but should also provide a significant level of self-financing of the large investment at greatly inflated costs required for future growth. This is not a question of paying now for the needs of posterity but is a recognition of the real costs of the business in times of high inflation and reflects the same concern as the case for current cost accounting, recommended by all the accounting bodies. With this year's accounts the Board has included a statement based on the current cost accounting principles issued by these bodies. The statement reveals a deficit of £27.3 million, and this is a measure of the inadequacy of price levels of the last decade to sustain the financial health of the ESB.

The most serious consequence of the circumstances imposed on the Board in recent years is the reduction in internal financing from about 40% of capital expenditure to 20%. This has created unavoidable and undue reliance on borrowings of foreign currencies. The proportion of foreign to domestic borrowings has increased from 53% to 70% in the last two years. Reliance on foreign borrowings was justifiable when a favourable interest differential existed, but the worldwide increase in interest rates has greatly minimised the justification. The ESB is now very exposed to the risks inherent in currency fluctuations and, with the continued weakness of the Irish Pound, it is incurring substantially increased liabilities. A measure of this risk is the fact that adverse currency movements alone in the past year increased foreign borrowing liabilities by £35 million.

During the year fuel price increases were the main pressure on ESB costs. The rising cost of imported fuel oil was increased by the weakness of the Irish Pound in relation to the U.S. dollar which is the trading currency of oil. The Government granted Bord Gais Eireann an energy-related price for Kinsale gas supplied to the ESB, and Bord na Mona was allowed a substantial retrospective increase in the price of its products. The Board sought to recover these additional costs through the Fuel Cost Variation charge. This charge is an essential element in electricity prices in times of unstable fuel prices. In January 1981 the National Prices Commission recommended the Board's application but at year-end the Government had not given approval to the implementation of the recommended new level of charges. In April 1981 the Government informed the Board of its intention to defer implementation of the National Prices Commission recommendation as part of a package to control inflation and to stabilise the economy. The loss of revenue income was of the order of £1 million per week. The Board was given an undertaking that this loss would be recouped, through subsidy, from the Exchequer. The Board was very concerned that direct subsidisation of the ESB would run the risk of introducing a subsidy mentality in an organisation which has not previously had to call on the taxpayer for subvention. The Board is pleased that the Government, in July 1981, restored factual pricing of electricity services by authorising the implementation of the recommendations of the National Prices Commission.

Everything possible is done to contain the effects of worldwide inflation of energy costs on electricity prices, and the ESB record in this respect is good. Comparative figures independently prepared show charges to be competitive with the best European utilities, many of which have cheaper sources of native energy. It is not perhaps as well known as it should be that the ESB has a statutory obligation to break even under the 1927 Act. For the greater part of its existence the ESB has met those strict standards, and this has placed a great emphasis on efficiency and created a climate which encouraged change and innovation. Despite its best efforts electricity prices continue to rise in common with those of other goods and services. To alleviate the impact of this on its customers the Board is continuously modifying its collection policies to introduce many new payment methods.

ELECTRICITY SALES:

Total sales of electricity were less by 2.3% in 1980/81 than in the previous year. This is the first time for 40 years that this has happened. The main reason for this was the recession but of course price increases, energy conservation, and the mild winter all contributed to the drop in sales. The steepest decline was in the industrial sector, followed by the domestic sector, with the commercial sector showing a moderate increase.

The ESB marketing strategy continues to be to

promote the wise use of electricity, to encourage use of electricity for purposes for which it is most suitable and most economical, and to shift demand from peak to off-peak hours.
Investment in new generating plant is largely determined by the increase in peak demand. To reduce capital expenditure, the Board has been pursuing load management policies for a number of years to contain growth in peak demand, and it is encouraging to note that in 1980/81 peak loads during the winter period were less than they were two years ago.

ENERGY:
The development and implementation of long-term plans for the construction of generating stations, networks and other facilities are always complex due to long lead-times, capital intensity, sources and relative costs of fuels. The problems are compounded by the uncertainty about the length of the present recession and the likely pace of recovery from it. In last year's report the Board outlined its strategy for dealing with these uncertainties to be maximum readiness to respond quickly to change in the economy and to diversify sources and types of fuel. No change in this strategy is envisaged in the foreseeable future. Good progress can be reported in all the Board's construction projects and in its efforts to increase the use of native fuels and alternative energy sources such as wind, biomass, and waste forestry products. The feasibility and economics of combined electricity generation/district heating and refuse incineration are being investigated. These are described in greater detail in a later section of this report.
The Board is happy to record that it had the capacity to use an increase in the allocation of Kinsale gas for electricity generation for 1981 and 1982. This total allocation of gas to the ESB is reducing the balance of payments deficit by some £120 million each year by substituting for expensive imported oil. It is also making a significant contribution towards a measure of energy independence as well as to the containment of electricity prices. The Board sees no alternative use for Kinsale gas of the same magnitude as electricity generation nor any use with the same national significance. In these circumstances and in the light of the proven increased reserves in the Kinsale Gas Field the Board considers that it would be opportune for the Government to guarantee long-term availability of gas so that forward planning of electricity generation can be done with assurance of a major native source of primary energy. The Board believes that such a guarantee would not affect the distribution of gas to Dublin or to any other centre.

SUPPORT FOR IRISH INDUSTRY:
In times of great difficulty for Irish industry the Board considers it worthwhile to report on its policies and practices in relation to national economic development. It has been ESB policy since its foundation to promote and support Irish industry. Commitment to this policy is such that it is an accepted management culture throughout the organisation. There is unremitting pressure in all management areas to ensure the maximum use of Irish resources. Technical support, product design, help in the early stages of production, and minimum quantity assurances are given to Irish firms. Potential Irish manufacturers are given full information on ESB requirements and, where firms have not the capability themselves, initial design and production assistance is given. The Board is proud that several firms now competing successfully in export markets, largely owe their existence or early development to the ESB. At present 70% of the value of ESB annual purchasing contracts go to Irish sources. Generating station construction contracts are sub-divided to facilitate Irish firms. This approach has been so outstandingly successful that at the recently completed Aghada generating station 60% of the total investment was channelled directly into the Irish economy as compared with 10% for generating stations built in the 1950's. This proportion is now close to saturation point because many of the remaining imports relate to plant, such as turbines, which is not suitable for local production. Nevertheless, every opportunity is exploited to the full. For example, a U.S. supplier of plant for the power station under construction at Moneypoint was encouraged to set up a new factory in Galway, in association with an Irish company, to manufacture boiler tubes for the home and overseas markets.

CONSULTANCY:
The ESB consultancy operations are a substantial and profitable business, having yielded earnings largely in foreign currencies of over £17 million since 1976. Spin-off benefits to Irish Industry and to the country generally from increased export orders have been considerable and are increasing. The ESB now proposes to enlarge this activity to the full employment of over three hundred personnel over the next three or four years.

FISHERIES:
The salmon industry is of considerable importance nationally, especially in areas comparatively deprived of economic activity. The ESB will use its special fishery resources and expertise in the production of young salmon to help the industry by significantly increasing its production of young fish to be released in all salmon rivers of the country. In addition, the ESB will support and encourage local cooperatives and others around the coast interested in developing a mariculture industry.

INDUSTRIAL RELATIONS:

The Board is happy to record that there were no industrial relations difficulties during the year which threatened the supply of electricity or caused any serious upset. The Board wishes to thank the trade unions, staff and management for this and for their continuing commitment to providing a vital public service efficiently.

Since 1978, detailed and complex negotiations have been in progress with all of the nineteen trade unions representing ESB staff to conclude a comprehensive agreement which would include the whole workforce. Shortly after year-end, the negotiations were successfully concluded with the assistance of the ESB Industrial Council, under the Chairmanship of Mr. Con Murphy, to resolve a number of outstanding issues in dispute. The benefits of industrial peace and of the orderly introduction of change in a technologically complex industry are of incalculable value, not alone to the ESB but to the whole nation. The comprehensive agreement marks a new departure in industrial relations. The Board believes that the conditions of employment and salary levels provided in the agreement not alone reflect the value of the agreement itself but also the importance and performance of the electricity industry in Ireland and the need to attract and retain staff of the highest calibre in such a vital industry.

The Ministers for Energy, Labour and the Public Service encouraged the negotiations, and prior Government approval was given to the general range and scope of the agreement. The Board is confident that its staff and the trade unions will also honour the terms of the agreement so as to make it a valuable contribution to the community and to the cause of improving industrial relations in Ireland generally.

STAFF:

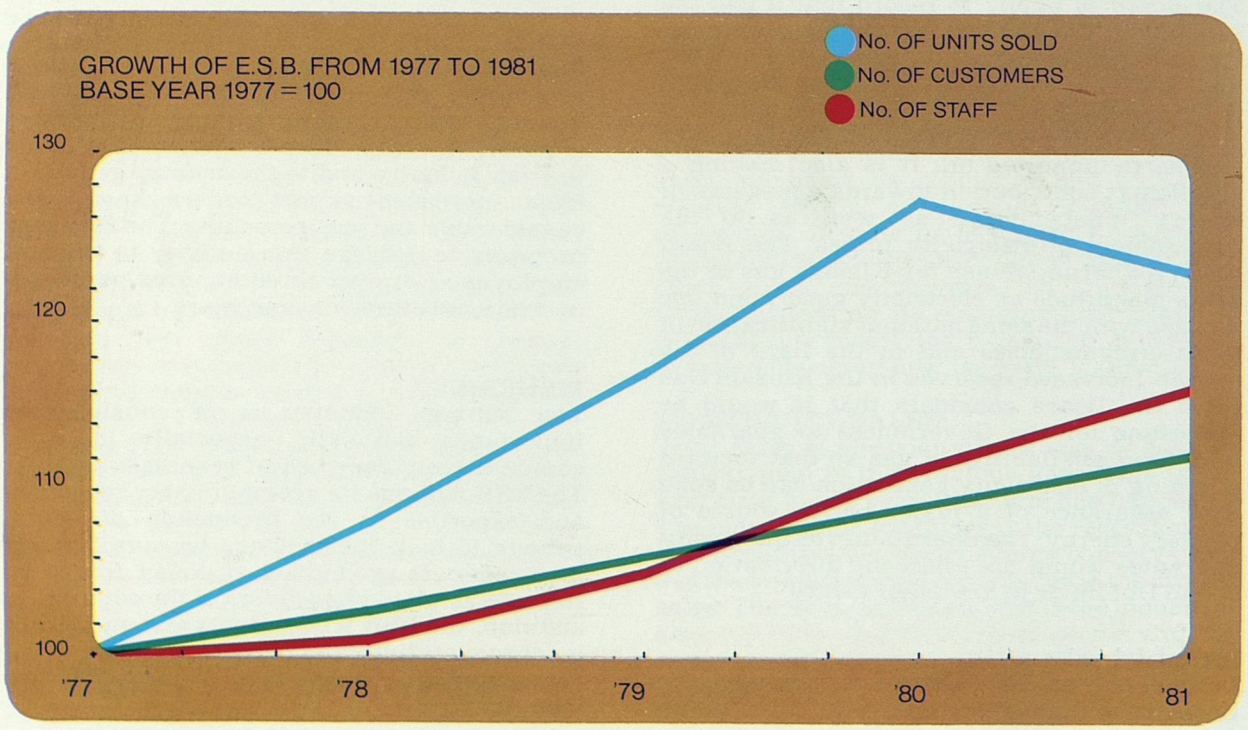
At year-end the total staff numbered 12,441. Of these, 2,600 were engaged in the construction of new projects, 81 on consultancy activities, and 9,760 on the generation, transmission and distribution of electricity and associated accounting and administrative work.

The Board notes with deep regret the death on 18th June of Dr. J. J. Kelly, Board Member and Chief Executive of the ESB from 1970 until his retirement on 4th April, 1981. He has been succeeded by Mr. P. J. Moriarty. The Board wishes to place on record its appreciation of Dr. Kelly's commitment and dedication during a lifetime of service in the ESB, particularly during the last decade of uncertainties and upheavals in world energy markets. It is sufficient to say that his contribution was outstanding, not alone to the ESB but to the entire public service.

(Signed) Charles T. G. Dillon,
Chairman

Liam Boyd
J. Cohalan
Thomas Gilmartin
R. B. Godsil
Denis Hatch
Cornelius Kelleher
Patrick J. Moriarty
Gerard N. Power
J. A. Ryan
Anthony Ryder
John P. Wyley

(Signed) J. F. Williams, Secretary
14th July, 1981



Energy

GENERATION:

Production:

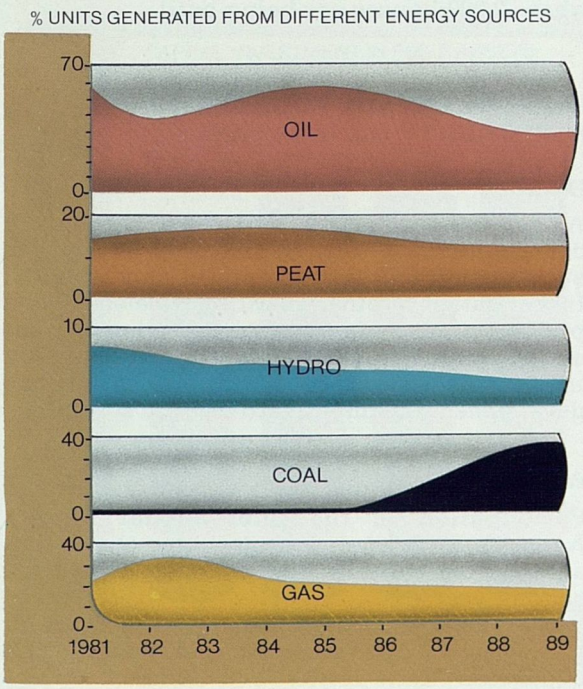
System demand during the year totalled 10,038 million units, a decrease of 1.7% on the previous year. This is the first time there has been a decrease in system demand since 1945.
There was some fall in demand in the early part of the year but the greatest reduction occurred in January and February 1981.
The peak demand of 1892 MW was 4% down on last year and occurred on Tuesday, 9th December. The annual load factor improved to 60.7%.

Fuel Sources:

The use of oil for the production of electricity declined again this year. 55.8% of system demand was generated from oil compared with 64% last year. Gas generation replaced these units and increased from 10.7% to 20.3%.
The 60 MW gas-fired unit at Marina attained an annual load factor of 93.7%.
Charts showing historic and expected future sources of energy for electricity production are shown below.

Capacity:

The first generating unit in the new Aghada station was commissioned in July 1980. This unit is rated at 270 MW and burns natural gas from the Kinsale Head field.
Also in July, a small 0.6 MW hydro set was commissioned at Parteen on the Shannon.
The last remaining set (16 MW) in the North Wall station was decommissioned in May. A new combustion turbine station is being built on the North Wall site.



The installed capacity of generating plant at 31st March, 1981 was as follows:

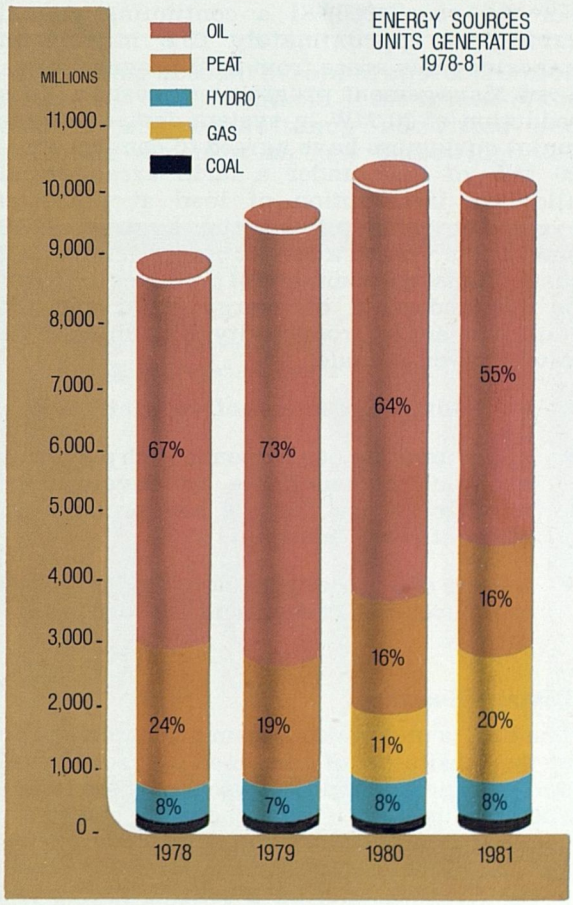
Hydro (conventional)	219.6 MW
Hydro (pumped storage)	292 MW
Steam (sod peat)	117.5 MW
Steam (milled peat)	330 MW
Steam (oil)	1640 MW
Steam (coal)	15 MW
Steam (natural gas)	390 MW
Combustion turbine (natural gas)	85 MW
Combustion turbine (oil)	28 MW
Total:	3117.1 MW

Efficiency of Conversion:

The overall thermal efficiency of conversion of primary energy to electricity was 32.4% compared with 32.9% last year.

Hydro:

Hydro inflow was 116.6% of standard and hydro generation was 14.8% above the historic average. Inflows during the first half of the year were below normal and in the second half above normal, with a period in December when a small amount of spilling occurred.
The new set at Parteen generated a total of 3144 MWhr, a satisfactory output.



Maintenance of Supplies:

Temporary faults on two large units, and the continuing loss of the interconnector to the Northern Ireland Electricity Service caused minor problems with maintaining normal supplies on a few occasions during the year.
Advantage was taken of the low demand during the year to carry out additional maintenance and all major plant is now in good condition.

Sales:

The unprecedented fall of 2.3% in electricity sales from 8,560 million units in 1979/'80 to 8,365 million units in 1980/'81 reflected the depth of the economic recession. Mild weather, energy price increases and an intensified energy conservation programme contributed to the drop in demand.
Domestic sales decreased by 2.4% and industrial sales by 5%. Commercial sales increased by 3%. (The reduction of energy consumption from 1979 to 1980 for the Community of Nine was 4.6%).

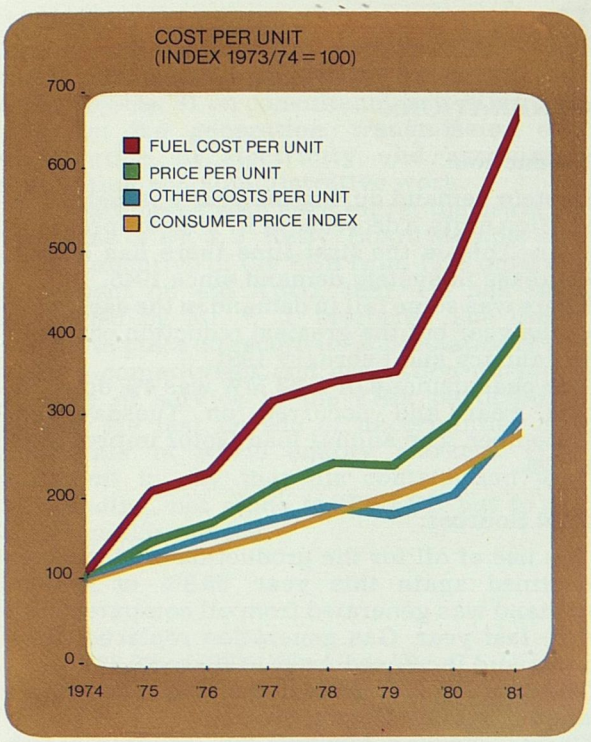
Energy Conservation/Load Management:

The system load factor improved from 59.3% in 1979/'80 to 60.7% in 1980/'81, due principally to the active promotion of Energy Conservation and Load Management programmes and to the mild winter, offset to some degree by the downturn in high load factor industrial usage.
Investigations were intensified into systems, materials, appliances and controls necessary to support the promotion of energy conservation.
For the year 1980/'81 a continuing annual saving of approximately £3.8 million in imported fuels arose from ESB programmes.
Load Management programmes resulted in a reduction of 30 MW in system demand. Some major customers have agreed to connect some 20 MW of load under a tariff arrangement allowing interruption of load at times of excessive demand on the system. ESB specialists visited a large number of factories, institutions and commercial premises to advise on the reduction of energy costs and the improvement of productivity. Examples of the advice given include:

- More advantageous use of electricity tariffs.
- appointment of one person in each plant with specific responsibility to develop and monitor energy budgets and promote the efficient use of energy.
- the use of advanced technological processes to reduce product costs and improve product quality.

District Heating:

The ESB is undertaking a comprehensive study of the feasibility of combined district heating and electricity production schemes for Dublin and Cork using existing generating stations as heat sources.
In a District Heating Scheme hot water is used to distribute heat from a central source to a whole district. The source of heat for a heating scheme may be an electrical power station, in which case the scheme is usually referred to as a Combined Heat and Power Scheme. Some of the electricity generating potential of the primary energy is deliberately sacrificed in order to provide heat energy for district heating. The electricity production lost in the process is more than compensated for by the gain in useful heat which is achieved.
The scheme under investigation in Cork envisages using existing plant at Marina to produce district heat for the Mahon peninsula where 2,000 houses are being built.



SUPPLEMENTARY SOURCES OF ELECTRICITY GENERATION:

Hydro:

A feasibility study of hydro-electric development on the Ballisodare River was started and will be completed during 1981. Investigation of other small hydro-electric and pumped storage sites continued. During the year an informal advisory service was given to many individuals and firms interested in private development of small hydro-electric schemes.

Wave Power:

Participation in the International Energy Agency's wave energy project was continuing and a report on the first phase is due in the coming year.
Wave measurements in Irish waters were in progress on an experimental basis and expansion of this activity was planned.

Tidal Power:

Studies of a scheme for power extraction in the Shannon estuary continued.

Hydro-Aero:

A study was undertaken on the feasibility of combining a large number of wind turbine generators, each of approx. 3 MW capacity, with a storage reservoir for hydro-electric generation.

Biomass and Fuel Mixes:

Research and development continued with a view to extending the use of native and new energy sources. Considerable success has been achieved in the use of a mixture of coal slack and wood chips from manufacturing waste or forest thinnings. Feasibility studies are also being carried out on the use of coal slack/milled peat mixtures at Bellacorick and Lanesboro stations. Preliminary investigations are taking place into the potential of burning a coal-oil mixture in existing oil fired boilers.

Irish Coal:

Research was completed satisfactorily on the possibility of burning the deposits of inferior coal at Arigna, known as "crow coal". This coal is there in large quantities. At year end tenders were received for a 45 MW atmospheric fluidised bed combustion boiler at Arigna. The technical and economic feasibility of the project continues to be investigated preparatory to submission of the project for Government approval.

A fluidised bed combustion test rig is being installed at the National Institute for Higher Education, Limerick, to carry out combustion and emission control testing of native fuels. E.E.C. funding has been obtained for this programme.

Refuse Incineration:

A feasibility study has been completed by the ESB for Dublin Corporation into refuse incineration combined with electricity/heat production. Also a heat recovery scheme has been investigated for an industrial firm.

Finance

SUMMARY OF RESULTS

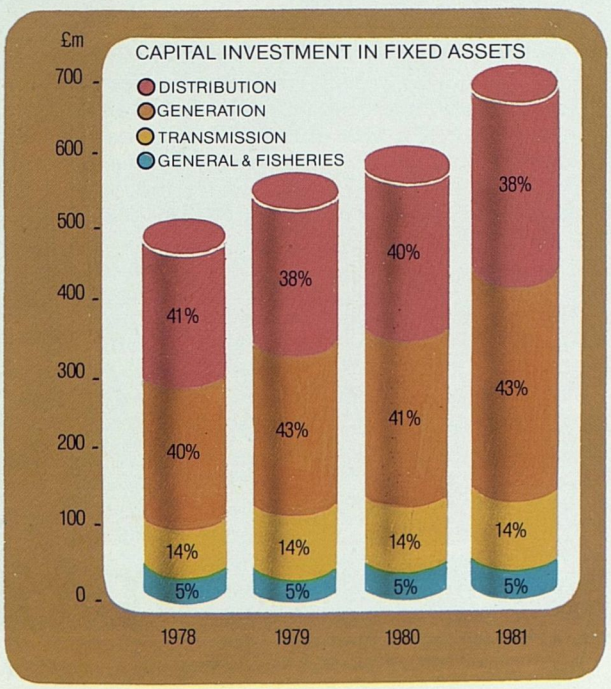
Revenue:

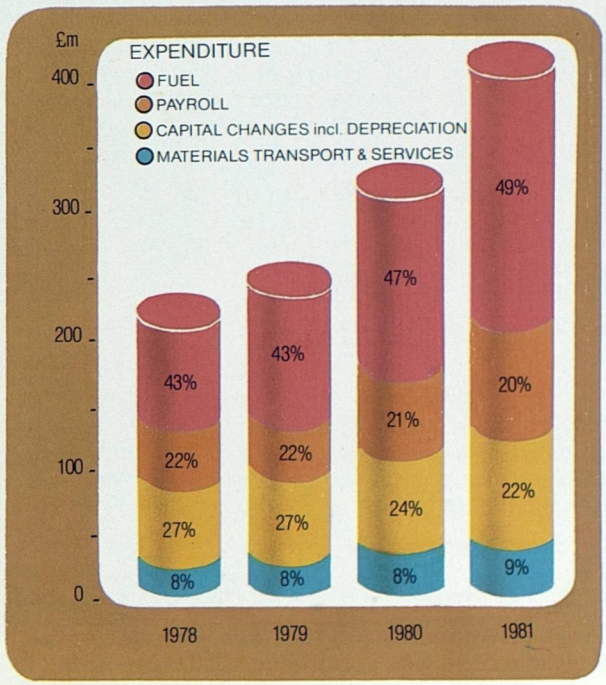
Revenue Income was £409,862,000 an increase of £109,392,000 over the previous year while expenditure at £402,756,000 showed an increase in the year of £93,161,000.

Summarised figures are as follows:

	Year Ending 1981 £	Preceding Year £
Expenditure:		
Fuel	197,904,350	144,877,179
Payroll and Other Direct Costs	115,155,558	89,537,437
Capital charges including depreciation	89,695,830	75,180,545
	402,755,738	309,595,161
Revenue Income	409,862,167	300,469,681
	7,106,429 (Surplus)	9,125,480 (Deficit)

After taking account of capital appreciation on temporary investment and of the results of the trading and consultancy activities and deducting expenses on new borrowings, the





result for the year was a surplus of £6,265,000 which decreases the total deficit carried forward to 1981/82 from £21,248,000 to £14,983,000.

Capital:

Expenditure in the year was £150,619,000. After allowing for retirements of assets of £4,501,000, investment in capital assets increased to £835,991,000 (see Sch. F).
Assets brought into commission during the year were £108,884,000 bringing the total value of assets in service at year end to £672,523,000. Work in progress was £163,468,000.

RAISING OF CAPITAL:

The continued expansion of the system requires a heavy investment of capital. Investment in 1980/'81 was £150 million and in future years it will run at well over £200 million annually. The capital programme in 1980/'81 was financed by a stock issue and bank loan in the Irish market; from abroad by project finance from Banks and other Institutions and private placements from Banks; from internal resources, by charges for depreciation of assets and by supply contributions.

GOVERNMENT WORKING PARTY:

The agreed report from the Working Party established by the Minister for Industry, Commerce and Energy to review and recommend on ESB Accounting Practice is still under consideration. The report was prepared in June 1979 and reference has been made to it in previous Annual Reports.
The report discusses the restoration of adequate internal resources to assist in the financing of the capital development programme.

WHERE THE MONEY GOES:

The charts on page 9 analyse the total revenue expenditure for each of the last four years indicating the proportions spent on fuel, payroll, capital charges and materials, services, etc., and also the capital expenditure over the same period under Generation, Transmission, Distribution and General/ Fisheries.

Construction

GENERATING STATIONS:

Aghada Generating Station, Co. Cork: (Gas Fired)

1 x 270 MW Steam Set. The plant went into commercial operation in December, 1980 and has performed satisfactorily since then.

Aghada Generating Station Extension, Co. Cork:
(Oil/Gas Fired)

3 x 85 MW combustion turbines. Erection of the first machine was completed whilst erection of the second machine continued on programme. Plant manufacture of the third machine was also on programme. Machines Nos. 1 and 2 are due to go into commercial operation by October, 1981; machine No. 3 is scheduled for commercial operation in October, 1982.

Shannonbridge Generating Station Extension, Co. Offaly: (Milled Peat Fired)

1 x 40 MW Set. (The capacity of the existing station is 80 MW). Construction work was well advanced, the chimney was completed and the main buildings were nearing completion. Turbine generator erection was due to start in accordance with programme. The extension is planned to be completed in 1982/'83.

Lanesboro Generating Station Extension, Co. Longford: (Milled Peat Fired)

1 x 40 MW Set. (The capacity of the existing station is 60 MW.) Construction work on the main foundations was in progress. Manufacture of main plant items was advancing to meet requirements. The extension is due to be completed in 1983/'84.

Moneypoint Generating Station, Co. Clare:

(Coal Fired)
3 x 300 MW Sets. The site development contract was completed. Construction of the station foundations was on schedule and erection of the main station structural steel had commenced. The jetty construction was proceeding. The third 300 MW set was ordered and the design and selection of plant systems continued. The scheduled completion dates are 1985/'86, 1986/'87 and 1987/'88.

North Wall Generating Station Extension, Dublin:
(Oil Fired)
2 x 100 MW Combustion Turbines. The order was placed for a heat recovery boiler and the design and selection of plant systems were proceeding. On site, the piling was completed and the main civil engineering contractor had started work on the station foundation. The scheduled operational dates are 1982/'83 for No. 1 and 1983/'84 for No. 2.

Parteen Weir, Co. Tipperary: (Hydro)
0.6 MW Set. The set went into commercial operation in July, 1980 and has operated satisfactorily. The station was officially opened by the Tanaiste and Minister for Energy.

Wind Turbine Generators:

Four Wind Turbine Generators in the range 10 to 120 kW, were ordered and planning permission applications were made. The initial demonstration and test programme for these machines is scheduled for completion in Autumn, 1982. The machines will be erected in



Aerial view of Marina, Cork, gas-fired generating station.

the year 1981/'82 at four different locations in Pollaphuca, Co. Wicklow, Bellacorick, Co. Mayo, Milltown Malbay, Co. Clare and Portlaoise, Co. Laois. The programme is a step in the overall programme of assessment of the potential of Wind Energy in Ireland and is being conducted in close co-operation with the Department of Energy.

THE DISTRIBUTION SYSTEM:

The Year's Activities:

Total direct expenditure in the Distribution area during the year was £62m., of which some 86% was spent in Ireland.
This expenditure was incurred in providing new networks to supply an additional 26,621 customers during the year and also in the operation, maintenance and renewal of existing networks. New dwellings accounted for 26,043 of the additional connections as against 26,213 for last year. Seven new 38/10 kV transformer stations were commissioned at Ballinclea (Co. Dublin); Mountrath, (Co. Laois); Inchera, Newmarket and Kilmoney (Co. Cork); Kenmare (Co. Kerry) and Coe's Road (Dundalk, Co. Louth).

The Next Decade:

The Board approved a plan for the development of the Distribution System over the next decade. This plan covers new investment in plant and networks and maintenance activities for both planned and emergency conditions to provide an acceptable quality of electricity supply.

Dublin Suburban Rail Electrification:

Plans have been agreed with C.I.E. for the provision of supply to feed the proposed Dublin Suburban Electrical Railway between Howth and Bray. There will be five separate 38kV supply points of 4 MVA each at Sutton Cross, Fairview, Ballsbridge, Dun Laoghaire and Shankill.
Most of the equipment and materials required have been ordered and work is due to commence shortly.

Cooperation:

Under the terms of a Convention for Cooperation between the ESB and Electricite de France covering all areas of technical, financial and general management in the fields of electrical energy, a delegation of senior personnel visited the ESB to exchange information and compare practices in both utilities.

Electricity Supply to Off-Shore Islands:

An electricity supply to Inis Turc, Clare and Inisboffin islands is in hands. The ESB, in association with local co-operative societies has assumed responsibility for maintenance of supply to five other Gaeltacht islands, which already had electricity.

THE TRANSMISSION SYSTEM:

A decision was made to move to the higher transmission level at 400kV

400kV Transformer Stations:

Design of the three 400kV stations associated with the Moneypoint coal-fired generation development was proceeding on schedule and enquiries for major equipment were to issue.

220kV Transformer Stations:

The new station at Flagford, near Carrick-on-Shannon, was completed and was being phased into service. It will provide a major boost in supply to the north-western counties.
Work continued on four new stations. In two of these, at Inchicore (Dublin) and Arklow, the use of metalclad totally enclosed switchgear allows the new stations to be built on the sites of existing 110kV stations with maximum use of existing equipment and facilities.

110kV Transformer Stations:

Five new stations were completed and construction was in progress of a further five at Aughinish, Monaghan, Limerick, Listowel and Killarney. Transformer capacity was increased in the stations at Cork, Galway, Kilkenny, Newbridge and Letterkenny.
Design of the first 110/10kV indoor station for Dublin using metalclad SF6 switchgear was well advanced.

440kV Lines:

Survey work was nearly completed on the line from Moneypoint to Woodlands, near Dunboyne, and has started on the line from Moneypoint to Dunstown, near Kilcullen.

220kV Lines:

The lines from Cashla to Flagford, Aghada to Knockraha and Knockraha to Raffeen were completed. These lines involved the crossing of tidal rivers on three occasions. To protect the conductor and to minimise delays to shipping, the crossings were strung under high tension using new techniques.

110kV Lines:

35 km. of new lines were erected and construction was in progress on a further 88 km.
Supply to new industrial consumers continued to be a significant part of the work with 14 km. of single circuit line and 3 km. of double circuit line under construction.



ESB staff set out from Sligo on their charity marathon walk in aid of the Cystic Fibrosis Association.

H.V.Cables:

Laying of a major 220kV cable connection from Poolbeg Generating Station to Inchicore Transformer Station continued. The first cross-linked polyethylene cable at 110kV on the system was commissioned.

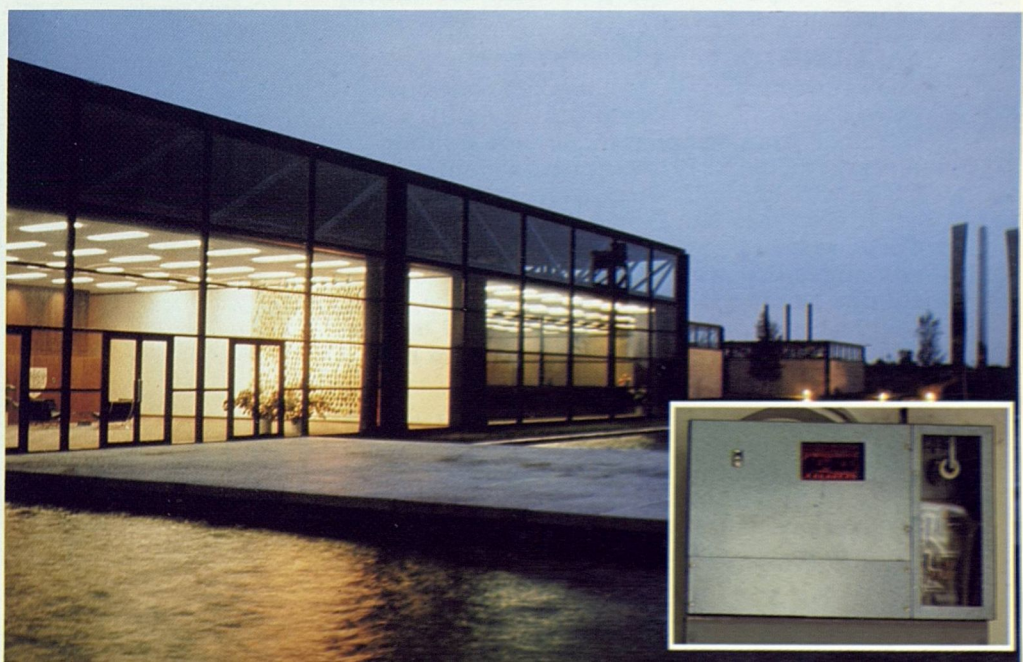
PREMISES:

Construction of an extension to Head Office, incorporating the new National System Control Centre, progressed satisfactorily during the year. The installation of a new telephone exchange at Head Office was near completion. Work was completed on a new Personnel Centre in Mount Street. Refurbishment of the Central Stores was put in hands. Substantial progress was made on the construction of the new District Headquarters at Cork. Work commenced in Limerick on a new city customer centre and offices. Additional workshop and office accommodation was being pro-vided at Shannonbridge Generating Station. Work was about to commence on new headquarters at Marina, Cork for Southern Generation Region.

New operation and customer service centres were completed at Arklow, New Ross, Bandon, Nenagh, Scariff, Kilrush and Navan and improvements were effected in eight other centres around the country. Work continued in four locations at the year end and planning was well advanced for new facilities at Castlebar, Carlow, Shannon Town, Clondalkin, Cavan, Carrick-on-Suir and Roscommon.

Trading

The overall results of ESB trading acitivities for the year were very disappointing. In common with business generally the appliance selling activity suffered greatly from the recession with turnover down by 12% on the previous year and volume sales down by an estimated 22%. The activity is at present being reorganised in consultation with the Trade Unions to establish it on a profitable basis for the future as well as to accomplish the ESB



Carrolls, Dundalk were the first to install a high tension demand manager as part of their energy saving programme.

objectives to promote energy conservation through the sale of insulation materials and to provide an advisory service to consumers on the efficient use of electricity in the home. The deficiency in the appliance repair activity reflects the difficulty of providing a repair service, at reasonable cost, to consumers particularly those in rural areas in the face of increasing labour, material and travelling costs. In the installation contracting activity the ESB is now concentrating in the higher technology work where its expertise is acknowledged and welcomed and the surplus for the year is a reflection of this and represents a considerable improvement on the previous year's financial results.

Fisheries and Conservation

SMOLT-REARING EXPANSION:

Surveys carried out by the Department of Fisheries and Forestry of landings of commercially caught salmon have shown a continuing rise in the incidence of hatchery-reared salmon in the national salmon stocks. In this context, the Board has approved a major expansion of its smolt-rearing production by an additional 1.5 million smolts each year. These smolts will be used primarily in the re-stocking of salmon rivers around the country and will benefit the whole salmon industry. They will also be made available to fish farmers to encourage the mariculture industry.

It is intended to construct a smolt-rearing station in Co. Donegal on the River Erne and to enlarge the existing stations at Parteen and Carrigadrohid.

The ESB's supply of smolts to the sea farm operated in cooperation with Udaras na Gaeltachta was increased from 30,000 to 60,000 smolts. Encouraged by progress in this venture the Board decided to carry out its own sea farming operations and after investigating a number of sites, established a salmon farm at Mulroy Bay, Co. Donegal, with an initial installation of 20 cages.

SALMON STOCKS:

The salmon count on the Shannon continued to show a decline and accordingly the ESB again refrained from commercial salmon fishing.

A report on the Erne Catchment, commissioned by the Minister for Foreign Affairs, the Minister of State for Northern Ireland and the Commission of European Communities recommended, inter alia, the construction of a salmon rearing station at Ballyshannon.

The Lee salmon stock is satisfactory but the Erne and Clady stocks are dangerously low.

EELS:

A preliminary report by a consultant on the rearing of eels in warm water at thermal generating stations was received. Catch of eels in the Shannon was 74,000 lbs. compared to the record catch of 97,000 lbs. in 1979/'80 and prices were slightly lower.

NUMBER OF CUSTOMERS AND ELECTRICITY SALES

District	No. of Customers at 31st March		Electricity Sales Units sold in year ended 31st March	
	1981	1980	1981 (Millions)	1980 (Millions)
Athlone	59,577	58,263	357.1	343.4
Cork	120,501	117,519	1,089.2	1,118.0
Dublin City	145,623	143,934	1,271.7	1,280.2
Dublin North West	130,840	125,227	1,080.8	1,126.3
Dublin South	67,825	66,418	535.7	544.3
Dundalk	83,054	80,938	852.6	844.6
Galway	63,901	61,762	356.8	377.4
Limerick	96,015	93,971	797.0	821.1
Portlaoise	71,450	69,651	528.4	526.7
Sligo	96,033	93,716	482.3	499.8
Tralee	51,354	49,944	324.8	329.8
Waterford	83,876	82,085	688.2	748.7
TOTAL	1,070,049	1,043,428	8,364.6	8,560.3

GROWTH OF ELECTRICITY SALES AND NUMBER 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
1971	5,921.0	4,862.1	44,082	0.907	805,736
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

*Excluding Units absorbed by Storage Pumping.

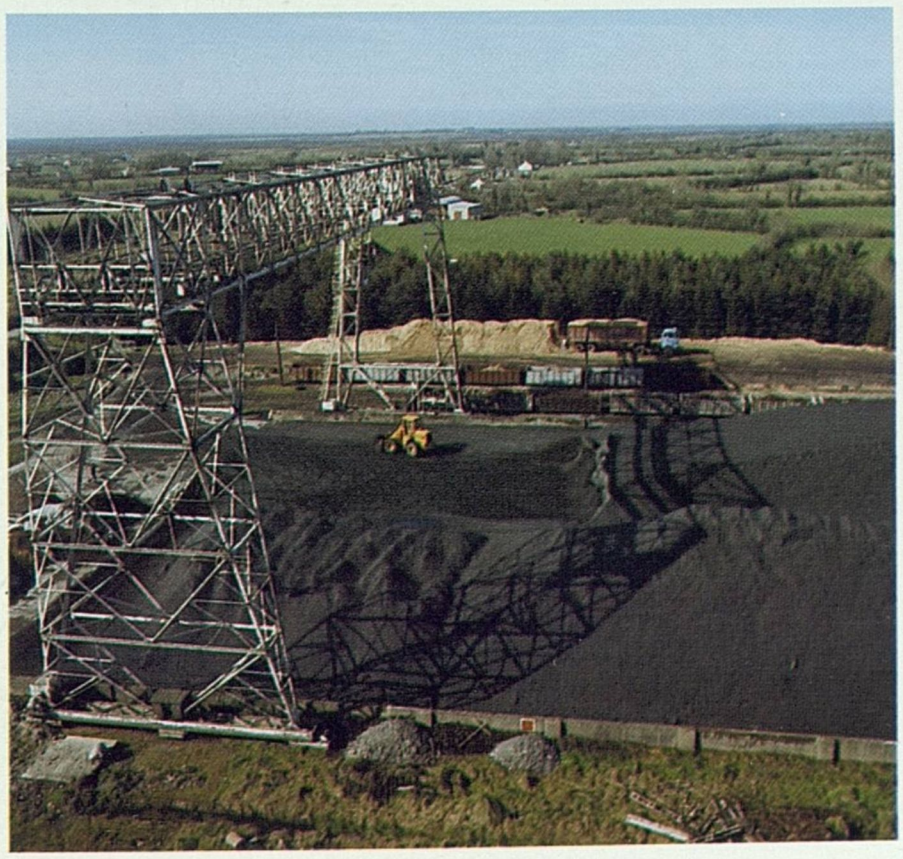
ANALYSIS OF UNITS SOLD

Class of Supply	Year ended 31st March 1981 (millions)	Year ended 31st March 1980 (millions)	Increase (millions)	% Increase
DOMESTIC				
General Supply	3,369.1	3,412.1	—43.0	—1.3
Night Rate	145.4	187.6	—42.2	—22.5
	3,514.5	3,599.7	—85.2	—2.4
COMMERCIAL				
Lighting	276.1	270.2	5.9	2.2
Heating, Cooking and Waterheating	352.0	361.6	—9.6	—2.7
Motive Power	241.0	242.9	—1.9	—0.8
Night Space Heating	192.0	210.9	—18.9	—9.0
Public Lighting	107.9	102.5	5.4	5.3
Maximum Demand	378.4	301.2	77.2	25.6*
Miscellaneous	226.4	233.1	—6.7	—2.9
	1,773.8	1,722.4	51.4	3.0
INDUSTRIAL				
Maximum Demand				
High Tension	2,237.8	2,386.7	—148.9	—6.2
Low Tension	707.4	706.9	0.5	0.1
Miscellaneous	131.1	144.6	—13.5	—9.3
	3,076.3	3,238.2	—161.9	—5.0
TOTAL	8,364.6	8,560.3	—195.7	—2.3

*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 of new customers on maximum demand.

▲

Allenwood generating station, Kildare, where surplus domestic coal slack and wood chippings are being burned on a trial basis as part of the biomass experiments.



◀ *The biomass bunker at Allenwood.*



Young angler holding the trout she caught at the ESB reservoir at Pollaphuca. A re-stocking programme success story.



View of the 270 MW gas-fired station at Aghada, across the site of the 3 x 85 MW combustion turbines in course of construction.

FINANCIAL RESULTS:

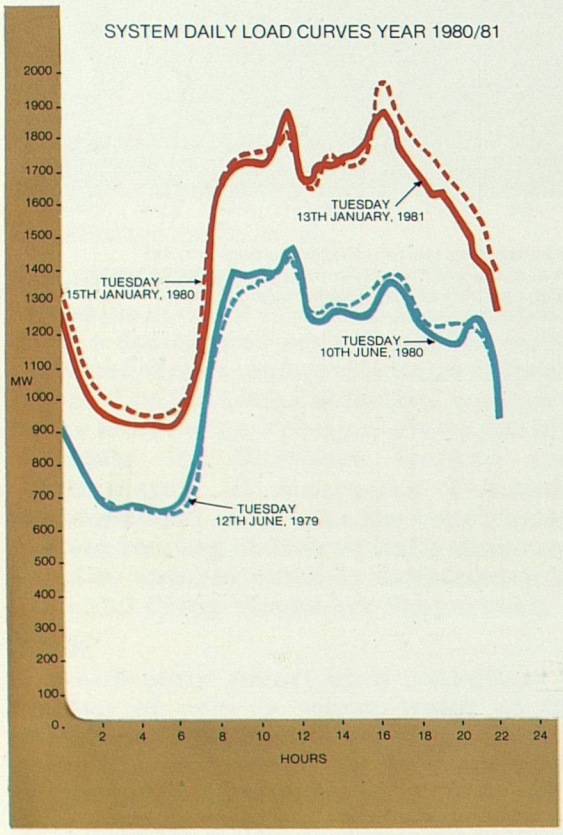
The ESB spent £683,766 on its fisheries activities during the year. When sales of fish and income from angling are taken into account there was a nett cost on fisheries and conservation of £528,640. The Board's Annual Fisheries Report published separately deals with these activities in more detail.

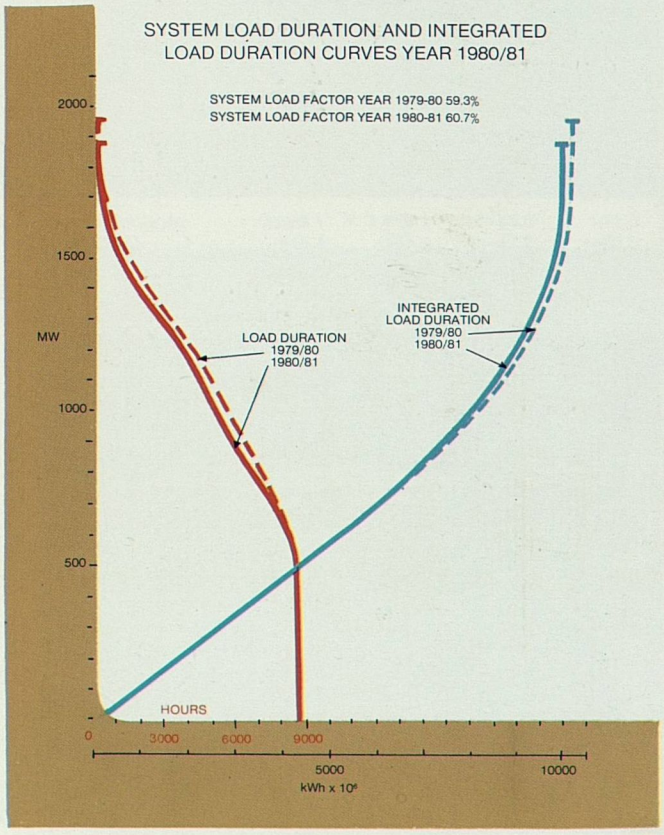
Manpower

The number of employees at 31st March, 1981 was 12,441 compared with 11,912 the previous year.

Many influences affected the number of staff employed. There was a need to strengthen the rural distribution network. Increased investment was required to improve the availability of generating stations. Planned construction of new generating stations and transmission systems continued. Extra staff were required to ensure meter security and to discover and eradicate illegal connections for the theft of electricity.

In manpower planning the emphasis was on identifying possible future shortages of key categories and on updating medium term manpower plans to 1985. The number of trainees in technical categories has been





increased significantly to ensure that a sufficient number of skilled people will be available.

TRAINING AND DEVELOPMENT:

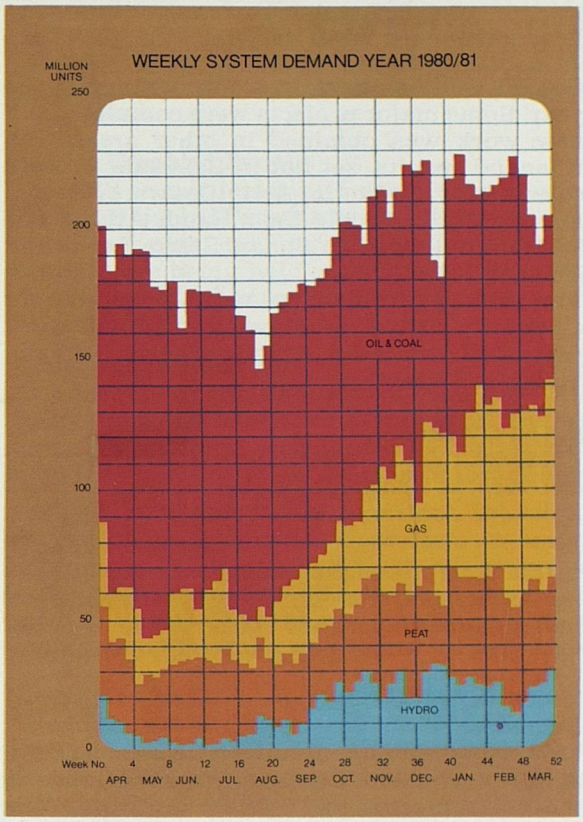
During 1980/'81, 4,600 staff attended internal courses and training presentations while 500 staff attended external courses.

The internal training resources will be greatly increased by the new Training Centre in Mount Street, Dublin, and the additional operational training facilities at the Line School, Portlaoise. These will ensure the maintenance of the high quality of training required by the ESB and by overseas power utilities with whom the ESB has Consultancy assignments.

HEALTH:

In 1975, the ESB pioneered in Ireland, in cooperation with the Trade Unions and the National Council for Alcoholism, an Alcoholism Programme. During the year this programme was enlarged with special emphasis on education of new recruits and supervisors. Staff in the Dublin area took part in health surveys organised by the Irish Cancer Society. The Irish Heart Foundation concluded a 3-year Mediscan survey of staff aged 25 and over.

The overall sickness absence in 1980 was just under 5%. This compares very favourably with the National figures.



RECRUITMENT:

This year the ESB recruited nearly 900 staff to cover replacements and to fill new positions.

A plan for more effective employment of existing staff who became handicapped was developed and a positive programme for the recruitment of handicapped people was implemented. Liaison was established with the National Rehabilitation Board and other agencies.

A complete set of Careers Exhibitions was organised in cooperation with local organisations, such as V.E.C.'s, Junior Chambers and schools. Liaison with colleges and universities continued and presentations on ESB job opportunities were given for engineering and business studies students.

Assistance was provided to school leavers through paid work experience. Vacation work experience was also provided for university under-graduates on engineering and on accounting/administrative activities.

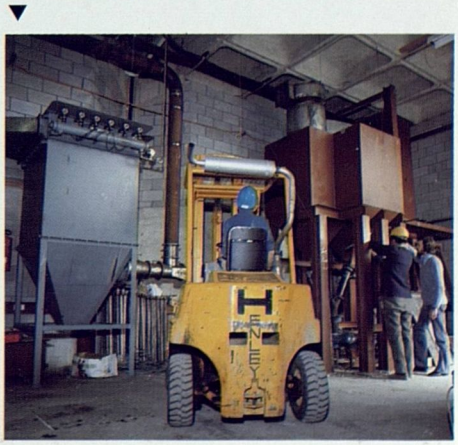
ESB post-graduate engineering scholarships were re-introduced for M.Eng. students.



◀ *A section of the computer suite in the ESB Head Office.*

Coal testing rig at the N.I.H.E. in Limerick.

▼



Consultancy

Consultancy assignments continued during the year. Some major projects were completed and new work was obtained in other areas. The financial results, set out in Schedule C, were satisfactory. Marketing activities were directed mainly to the Middle East, Saudi Arabia and Bahrain, followed by Sudan, Sierra Leone and Indonesia.
Training in Ireland in various aspects of electricity utility practices was provided for personnel from Saudi Arabia, Nigeria, Bahrain, Sudan and Lesotho.

MANPOWER:
There was a drop in the number of staff working on overseas assignments as Saudi Arabian and Bahraini contracts were completed. At peak, some 40 staff were working abroad. Back-up services on training, design, planning and marketing provided by staff in Ireland involved a further 40 on average. The activity is being extended for major new contracts negotiated.

MAIN CONTRACTS:
Bahrain:
This assignment continues with reduced ESB staff involvement. Good progress was made on the Transmission and System Control Centre projects.
It is expected that ESB involvement in Bahrain will continue until 1985 at earliest.

Lesotho:
The ESB continued to provide senior management experts to the Lesotho Electricity Corporation.
A rural project in the Hololo Valley was completed. This was an interesting example of the ESB aim to transfer technical expertise, as the job design and construction were carried out jointly by L.E.C. and ESB staff.

The French made Aerowatt 120 KW wind generator of the type which is being erected at Bellacorick, Co. Mayo. It is 30 meters high with a blade span of 18 meters.





The Cork exhibit of special electrical aids for disabled people.

Sierra Leone:
The ESB was chosen by the United Nations Development Programme and the World Bank to assist the Government of Sierra Leone with a hydro electric scheme in Bumbuna. The assignment is for co-ordinating preparatory work, advising on management structures, training staff, preparing financial forecasts and reports and drafting legislation to establish a National Power Authority.

Saudi Arabia:
The projects at Al Baha and Al Kharj were completed. Work continued on the 220kV transmission cabling project for Saudi Consolidated Electric Company and had started on a customer services assignment.

Saudi Consulting House:
An important development was the setting up of a partnership agreement between the ESB and the Government-owned Saudi Consulting House, whose Chairman is the Minister of Industry and Electricity.
A number of bids for additional consultancy work in Saudi Arabia have been submitted and a favourable response is expected.

Egypt:
A contract for a Load Research and Management Assignment for the Egyptian Electricity Authority is awaiting signature by both parties. This project is being financed by the World Bank.

Other Activities:
A small-scale assignment on the use of peat for power generating was completed during the year for an American client, in association with Bord na Mona. Further work is expected.

During the year a fact-finding team from the Republic of Senegal visited a number of ESB installations in connection with the development of peat technology for electricity generation.

Irish Assignments:
A number of small specialised consultancy projects for clients in Ireland were carried out during the year.

Social Responsiveness

Of its nature, electricity supply impacts extensively on the community and the Board endeavours to discharge its obligations responsibly. In 1973 the Board formally set out its ideas and acknowledged Social Responsibility as a key element in the management of the business.
During the current year a formal statement of policy was adopted for the guidance and encouragement of managers. This policy is set in the context of the Board's primary responsibility and recognises:—
"that the most important social contribution which the ESB can make to the Irish community is the effective performance of its corporate task".
Opportunities for social responsiveness by the ESB arise in two main areas of managing the interaction of its operations with society and of enlarging its contribution to the community by acting as a positive agent of development.
Some of the consequences of these are:—

Employment Opportunities:
During 1980/81 direct employment was provided for approximately 900 people within the ESB. In addition, the support for Irish industry, detailed earlier, allows considerable opportunities for employment in associated Irish firms.

Aid for Disabled People:
The ESB is participating in the International Year of Disabled Persons by exhibiting special electrical aids for disabled people. These exhibits are being held at over twenty centres throughout the country during the Summer and Autumn of 1981.

Consultancy Activities:
In addition to the creation of jobs for Irish people and the benefit of earnings in foreign currencies, Consultancy is seen by the Board as a major opportunity for transfer of technology to developing countries.

Public Relations:
The Board continues to maintain emphasis on an open and frank communications policy as a means of gaining the understanding and support of the community.

Energy Savings:
The high cost of all forms of energy is a severe burden for the community. The Board continues to assist its customers to reduce this cost, without loss of efficiency or comfort, by providing practical support through its advisory services and by making available energy efficient appliances and insulation material. For example, ESB sales of complete house insulation and D.I.Y. material in 1980/81 were equivalent to the insulation of approximately 10,000 houses.





Aerial view of the site of Moneypoint coal-fired station showing construction of the jetty.

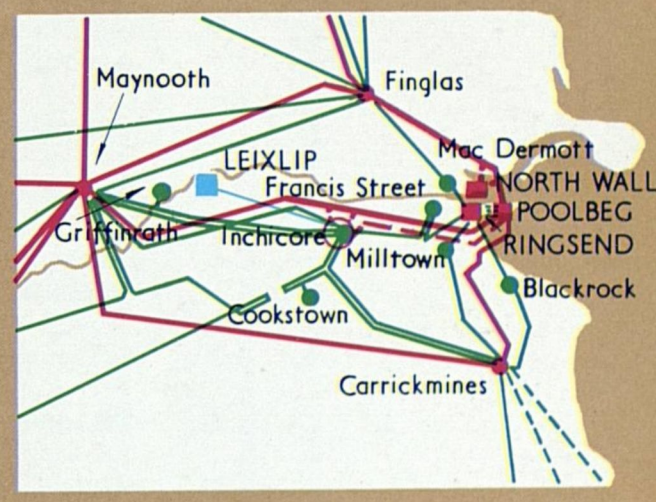
General outline of the GENERATION and TRANSMISSION SYSTEMS

31st March, 1981

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



Financial Accounts and Schedules for year ended 31st March, 1981

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Profit and Loss Account

Account No. 1

1979/1980 £000's		1980/1981 £000's	1980/1981 £000's
	Operations		
11,646	Electricity Income and Expenditure Account (Schedule A)		33,192
(289)	Appliance and Contracts Income and Expenditure Account (Schedule B)		(1,070)
663	Consultancy Income and Expenditure Account (Schedule C)		508
12,020			32,630
—	Appreciation of Temporary Investments		116
(560)	Expenses on New Borrowings		(395)
11,460	Operations Surplus/(Deficit)		32,351
(20,771)	Amortisation Charge (Schedule A)		(26,086)
	Non-Operating Items		
18,774	Income and Credits (Net)*	20,547	
(18,774)	Transferred to Capital Reserves and Sinking Fund	(20,547)	—
(746)	Depreciation Adjustment	(1,432)	
746	Transferred from Asset Renewal Reserve (Schedule K)	1,432	—
(9,311)	Surplus/(Deficit) for Year		6,265
(11,937)	Surplus/(Deficit) brought forward from previous year		(21,248)
£(21,248)	Surplus/(Deficit) carried forward to next year		£(14,983)

*Details in Schedule E.

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, 1980				31st March, 1981	
£000's	*Reference*		£000's	£000's	£000's
689,873	Schedule F	**Total Investment in Capital Assets** including work-in-progress		835,991	
202,079	Schedule F	Less Accumulated Depreciation		226,329	
487,794					609,662
212,052	Schedule G	**Current Assets**		291,308	
		Less:			
94,139	Schedule G	**Current Liabilities**		127,541	
117,913		**Net Current Assets**			163,767
50,397	Schedule H	**Sinking Fund Investments,** at cost			65,729
£656,104					£839,158
		Financed as follows:			
501,494	Schedule I	**Borrowings**			668,171
		Reserves			
123,636	Schedule K	Capital		118,148	
51,647	Schedule H	Sinking funds for borrowings		67,247	
		Revenue Reserves:			
500	—	Plant, self-insurance	500		
75	—	Others	75	575	
(21,248)	Account No. 1	Profit and Loss Account balance (deficit)		(14,983)	
154,610					170,987
£656,104					£839,158

Note: At 31st March, 1981 contractual capital commitments amounted to approximately £259,000,000 (1980 — £189,000,000)

Signed: Charles T. G. Dillon *Chairman*

Signed: P. J. Moriarty *Chief Executive*

J. B. O'Donoghue *Director, Finance*

14th July, 1981

Electricity Income and Expenditure Account

Schedule A

1979/1980						1980/1981
£		£	£	£	£	£
300,023,964	**Income** — Electricity Sales	408,965,410				
445,717	— Miscellaneous	896,757				
300,469,681						409,862,167
	Expenditure:	**Generation**	**Transmission**	**Distribution**		
144,877,179	Fuel	197,904,350				
74,322,824	Operation, maintenance and local charges	44,838,156	4,173,349	44,999,832		
14,936,192	General charges	9,492,104	2,758,066	8,368,574		
22,562,700	Depreciation	13,548,910	3,109,340	9,092,550		
278,421	Fisheries net cost	525,477				
256,977,316		266,308,997	10,040,755	62,460,956	338,810,708	
31,846,666	Interest	17,135,770	5,576,396	15,146,565	37,858,731	
288,823,982		283,444,767	15,617,151	77,607,521		376,669,439
11,645,699						33,192,728
20,771,179	Amortisation Charge (Schedule N — Note 9)	11,403,885	3,986,074	10,696,340		26,086,299
£(9,125,480)	Surplus/(Deficit)					£7,106,429

Notes:

Charges include: Local Rates £1,275,316 (£1,098,590), Central Transport and Stores Depot Costs £1,442,537 (£1,255,903), General Publicity £660,050 (£1,012,814), Bad Debts £512,996 (£254,644), Audit Fee £47,500 (£35,500), Board Members' Remuneration (including full-time Chairman) £36,084 (£31,021), Depreciation of Tools and Vehicles £1,564,238 (£1,302,443). Transfer from Appliance and Contracts Income and Expenditure Account £1,456,000 (£1,267,100).

Fuel includes purchased electricity £71,639 (£56,262).

The previous year's figures are shown in brackets.

Appliance and Contracts Income and Expenditure Account

Schedule B

1979/1980					1980/1981			
Appliance Sales	Appliance Repairs	Installations Contracts	Total		Total	Appliance Sales	Appliance Repairs	Installations Contracts
£	£	£	£		£	£	£	£
7,840,748	1,114,812	3,335,557	12,291,117	Income, exclusive of VAT	11,651,525	6,908,345	1,243,600	3,499,580
6,268,681	928,221	2,703,170	9,900,072	Direct Costs	9,508,929	5,713,318	1,005,732	2,789,879
1,572,067	186,591	632,387	2,391,045	Gross Profit	2,142,596	1,195,027	237,868	709,701
				Overheads:				
1,127,255	416,236	308,418	1,851,909	Payroll costs	2,054,304	1,202,124	468,704	383,476
31,507	—	—	31,507	Publicity	88,535	88,535	—	—
272,854	—	—	272,854	Premises costs	831,562	540,561	245,000	46,001
66,160	9,528	31,567	107,255	Sundry expenses	118,565	79,844	6,683	32,038
860,900	417,600	404,814	1,683,314	General charges and interest, as apportioned	1,575,767	796,900	363,000	415,867
2,358,676	843,364	744,799	3,946,839		4,668,733	2,707,964	1,083,387	877,382
(677,200)	(543,400)	(46,500)	(1,267,100)	Less: transfer to Electricity Income and Expenditure Account (See Schedule N — Note 13)	(1,456,000)	(591,000)	(674,150)	(190,850)
1,681,476	299,964	698,299	2,679,739		3,212,733	2,116,964	409,237	686,532
£(109,409)	£(113,373)	£(65,912)	£(288,694)	Surplus/(Deficit) transferred to Profit and Loss Account	£(1,070,137)	£(921,937)	£(171,369)	£23,169

Consultancy Income and Expenditure Account

Schedule C

1979/1980		Consultancy and Advisory Services	Training		1980/1981
£		£	£	£	£
4,185,464	**Income:**	3,124,674	358,579		3,483,253
	Expenditure:				
3,124,976	Direct Costs	2,245,004	326,528	2,571,532	
	Overheads:				
271,936	Directly allocated	262,297	38,158	300,455	
125,000	General charges and interest, as apportioned	89,832	13,068	102,900	
3,521,912					2,974,887
£663,552	Surplus transferred to Profit and Loss Account				£508,366

Statement of Source and Application of Funds

Schedule D

1979/1980 £	Reference		1980/1981 £
		Source:	
11,460,215	Account No. 1	Operations before Amortisation Charge	32,351,794
911,620	Schedule J	Provision towards premium on Stock Redemption	1,067,287
23,869,143	Schedule F	Depreciation	27,319,038
1,490,629	Schedule E	Credits on disposal of assets	1,931,321
5,385,693	Schedule E	Interest on Sinking Fund Investments	7,197,146
43,117,300			69,866,586
11,572,930	Schedule E	Non-Repayable Supply Contributions	10,427,038
124,929,352	Schedule I	Borrowings	170,302,855
£179,619,582			£250,596,479
		Application:	
92,293,086	Schedule F	Capital expenditure	150,619,291
14,583,157	Schedule I	Redemption of Borrowings (net of credits £991,483 on Stock Cancellation).	36,480,076
—	Schedule H	Payment of premium on Premium Stock	1,962,182
—	Schedule K	Discounts/Premiums on Borrowings	348,949
14,180,294	Schedule H	Increase in Sinking Fund Investments	15,332,065
58,563,045	Schedule G	Net movement in Current Assets/Current Liabilities	45,853,916
£179,619,582			£250,596,479

Statement of Non-Operating Items—Profit and Loss Account

Schedule E

1979/1980 £		£	1980/1981 £
	Income and Credits		
11,572,930	Non-Repayable Supply Contributions (Schedule K)	10,427,038	
325,181	Credits arising on ESB Stock Cancellations (Schedule H)	991,483	
5,385,693	Interest on Sinking Fund Investments (Schedule H)	7,197,146	
1,490,629	Credits arising on disposal of Assets Retired (Schedule K)	1,931,321	
£18,774,433			£20,546,988
(13,388,740)	To Capital Reserves	(13,349,842)	
(5,385,693)	To Sinking Fund	(7,197,146)	
£(18,774,433)			£(20,546,988)

Statement of Capital Assets

Schedule F

	Total at 31st March, 1980	Additions Less Retirements during year	**Total at 31st March, 1981**
	£	£	£
Generation	231,781,384	55,729,992	**287,511,376**
Transmission	78,807,913	14,105,873	**92,913,786**
Distribution	225,661,582	28,053,661	**253,715,243**
General Buildings, Transport and Working Equipment	31,712,124	6,482,255	**38,194,379**
Fisheries	177,222	10,800	**188,022**
	568,140,225	£104,382,581	**672,522,806**
Work-in-Progress, including payments on account	121,732,679		**163,468,334**
Total Investment in Capital Assets (at cost)	689,872,904		**835,991,140**
Deduct Accumulated Depreciation, as below	202,079,039		**226,328,820**
Net Investment in Capital Assets	£487,793,865		**£609,662,320**

Note: Work carried out in the year amounted to £150,619,291 (1979/1980 £92,293,086)

Accumulated Depreciation:	£	£	£
Provision for depreciation of assets less assets retired as at 31st March, 1980		202,079,039	
Movements in year:			
Depreciation of assets	27,319,038		
Assets retired	(4,501,055)	22,817,983	224,897,022
Transfer from Asset Renewal Reserve (Schedule K)			1,431,798
Total as at 31st March, 1981			**£226,328,820**

	Accumulated Depreciation as at 31st March, 1981
	£
Generation:	**102,615,936**
Transmission:	**26,484,909**
Distribution:	**88,068,568**
General Buildings, Transport & Working Equipment:	**9,060,601**
Fisheries:	**98,806**
	£226,328,820

Statement of Current Assets and Current Liabilities

Schedule G

31st March, 1980 £						31st March, 1981 £
	Current Assets			£	£	£
2,783,079	Cash at bank and in hand				1,626,466	
12,614,345	Temporary cash deposits				39,963,536	
15,397,424						41,590,002
		Nominal Value				
	Investments at cost:	£				
1,558,992	ESB Stocks	1,157,543	(1979/1980 £1,853,248)		1,133,084	
—	Government Stocks	7,900,000	(1979/1980 £ —)		6,669,480	
5,001,207	Euro Bonds	274,801	(1979/1980 £5,214,517)		239,764	
416,389	Units of Account	—	(1979/1980 £476,761)		—	
6,976,588						8,042,328
	Accounts Receivable:					
	Electricity: billed			36,938,631		
	unbilled			56,353,131		
79,321,789					93,291,762	
14,692,962	Appliance and Contracts (including £13.3m Hire Purchase, maximum term 5 years).				14,868,659	
17,473,273	Others				27,156,353	
111,488,024						135,316,774
	Inventories:					
50,349,726	Fuel (including advance payments for gas)				70,799,819	
23,984,034	Plant/Network Stocks and Miscellaneous Spares and Sundries				31,859,890	
2,110,159	Appliances				1,733,832	
76,443,919						104,393,541
1,745,876	Repayable Work-in-Progress at cost					1,965,287
£212,051,831						£291,307,932
	Current Liabilities					
48,337,736	Accounts Payable					78,535,582
2,195,033	Progress Payments on Repayable Work-in-Progress					2,500,727
5,997,124	Borrowings to finance Trading Debtors					4,754,101
4,786,553	Supply Contributions and Deposits					5,132,938
20,544,032	Accrued Charges and Provisions					20,723,472
12,278,348	Accrued Interest on Borrowings					15,894,191
£94,138,826						£127,541,011

Statement of Sinking Funds for Borrowings

Schedule H

1979/1980 £		£	1980/1981 £
36,216,863	Opening Balance — Investments	50,397,157	
625,442	— Interest Accrued	1,249,640	
36,842,305			51,646,797
	Additions:		
20,771,179	Amortisation charge in year (Account No. 1)	26,086,299	
911,620	Provision for premium on E.S.B. Stocks (Schedule J)	1,067,287	
325,181	Credits on cancellation of E.S.B. Stocks	991,483	
5,385,693	Interest for year (including interest accrued)	7,197,146	35,342,215
64,235,978			86,989,012
	Utilisation:		
	Redemption of borrowings from:		
11,882,188	Amortisation (Schedule J)	13,560,807	
381,812	Sinking Fund Investments	3,227,169	
325,181	Credits on cancellation of E.S.B. Stocks	991,483	
(12,589,181)	Reflected in Repaid Capital Reserve (Schedule K)		(17,779,459)
—	Premium Paid on Stock Redemption		(1,962,182)
	Closing Balance: (as per Balance Sheet)		
50,397,157	Investments	65,729,222	
1,249,640	Interest accrued	1,518,149	
£51,646,797			£67,247,371

	Redemption of Borrowings:	
12,589,181	Funded Redemption, as above	17,779,459
2,319,157	Non-Funded Redemption	19,692,100
£14,908,338	Total, as per Schedule I	£37,471,559

Sinking Fund Investments:

	Nominal £	Market £	Cost £
E.S.B. Stocks	16,231,140	15,863,243	16,348,876
Government Stocks	44,981,813	35,711,108	39,405,040
Euro Bonds	11,187,604	9,646,727	9,975,306
Total (as per Balance Sheet)			£65,729,222

Statement of Borrowings

Schedule I

Amount of Borrowing £			Balance Outstanding 31st March, 1980 £	Borrowed during year £	Redeemed during year £	Adjustment for currency changes £	Balance Outstanding 31st March, 1981 £
	Irish Pound Borrowings:						
68,450,236	Advances	— Minister for Finance	44,181,060	—	1,470,914	—	42,710,146
500,000	Loan	— New Ireland Assurance Co. Ltd. 6% — 1962/87	219,514	—	26,080	—	193,434
14,865,000	Loan	— Central Bank of Ireland 7.25% — 1972/87	8,890,349	—	1,015,400	—	7,874,949
12,000,000	Stock	— 6% — 1982/87	3,939,549	—	500,000	—	3,439,549
16,500,000	Stock	— 6% — 1984/89	6,515,401	—	550,000	—	5,965,401
13,000,000	Stock	— 7% — 1986/91	8,250,130	—	1,000,000	—	7,250,130
7,000,000	Stock	— 7.25% — 1988/93	4,709,306	—	150,000	—	4,559,306
9,250,000	Stock	— 9.5% — 1985/90	7,472,102	—	150,000	—	7,322,102
12,000,000	Stock	— 9% — 1992/95	8,681,225	—	200,000	—	8,481,225
11,300,000	Stock	— 13% — 1983/85	9,279,612	—	300,000	—	8,979,612
10,750,000	Stock	— 10% — Premium (20%) 1980	9,810,909	—	9,810,909	—	—
6,000,000	Stock	— 9.5% — Premium (20%) 1981	4,932,528	—	325,114	—	4,607,414
8,200,000	Stock	— 9% — Premium (20%) 1983	7,057,426	—	300,000	—	6,757,426
16,800,000	Stock	— 13% — 1988	14,724,978	—	350,000	—	14,374,978
6,000,000	Stock	— 9% — Premium (20%) 1984	5,684,107	—	200,000	—	5,484,107
12,000,000	Stock	— 13% — 1990/92	12,000,000	—	200,000	—	11,800,000
16,500,000	Stock	— 12% — Premium (25%) 1985	—	16,500,000	450,505	—	16,049,495
19,500,000*	Revolving Credits	— Domestic Banks — 1981/88	19,500,000	—	1,000,000	—	18,500,000
22,500,000*	Revolving Credits	— Domestic Banks — 1987/89	—	22,500,000	—	—	22,500,000
			175,848,196	39,000,000	17,998,922	—	196,849,274
	Foreign Currency Borrowings:						
Project Finance							
IR£20,000,000*	— European Investment Bank 9.2% — 1983/98		20,190,698	—	—	2,163,374	22,354,072
IR£10,000,000*	— European Investment Bank 9.35% — 1983/99		10,166,138	—	—	747,832	10,913,970
IR£15,000,000*	— European Investment Bank 9.45% — 1983/99		15,278,812	—	—	1,851,874	17,130,686
IR£20,000,000*	— European Investment Bank 9.45% — 1983/99		20,373,502	—	—	2,470,112	22,843,614
IR£10,785,000*	— European Investment Bank 8.45% — 1985/94		10,759,049	—	—	372,531	11,131,580
IR£5,715,000*	— European Investment Bank 12.0% — 1985/96		6,075,365	—	—	850,409	6,925,774
IR£3,000,000*	— European Investment Bank 8.75% — 1984/95		—	2,994,965	—	80,710	3,075,675
IR£20,000,000*	— European Investment Bank 8.75% — 1985/95		—	19,954,195	—	537,648	20,491,843
US$14,500,000*	— International Bank for Reconstruction and Development 6.5% — 1974/94		8,089,964	—	371,039	1,181,962	8,900,887
US$20,000,000*	— International Bank for Reconstruction and Development 7.25% — 1976/87		8,553,435	—	1,005,534	1,011,787	8,559,688
US$15,000,000*	— International Bank for Reconstruction and Development 7.25% — 1977/88		7,189,739	—	674,190	504,348	7,019,897
US$16,397,000	— Export-Import Bank of the United States 8% — 1986/98		—	9,184,658	—	398,867	9,583,525
US$4,155,000	— Export-Import Bank of the United States 8.375% — 1983/91		—	2,369,181	—	59,206	2,428,387
Sw. Fr.1,338,080	— Swiss Bank 6.5% — 1975/81		107,282	—	55,760	6,055	57,577
F. Fr. 284,667,000	— French Banks		20,974,681	7,833,647	2,699,465	407,961	26,516,824
Stg.£12,944,000	— British Banks/Suppliers		5,299,465	5,122,280	2,108,384	1,224,698	9,538,059
Sp. Pes.32,909,875	— Spanish Bank		155,113	—	45,053	(—) 7,421	102,639
			133,213,243	47,458,926	6,959,425	13,861,953	187,574,697

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

—continued overleaf

Statement of Borrowings

Foreign Currency Borrowings: (contd.)

Amount of Borrowing			Balance Outstanding 31st March 1980	Borrowed during year	Redeemed during year	Adjustment for currency changes	Balance Outstanding 31st March 1981
			£	£	£	£	£
Fixed Term Loans:							
Registered Notes/Bonds and Bearer Bonds							
US$30,000,000	— Japanese Banks 7.75%	— 1973/92	9,997,437	—	796,390	1,319,117	10,520,164
US$12,000,000	— U.S. Syndicate 9.25%	— 1983/92	6,152,268	—	—	861,174	7,013,442
Sw.Fr.50,000,000	— Swiss Banks 4.625%	— 1985	14,030,755	—	—	1,029,486	15,060,241
Sw.Fr.25,000,000	— Banking Syndicate 5.25%	— 1980/83	7,015,377	—	—	514,743	7,530,120
Sw.Fr.25,000,000	— Banking Syndicate 5.75%	— 1980/86	7,015,378	—	—	514,742	7,530,120
U.A.15,000,000	— Units of Account 8.25%	— 1972/86	7,962,049	—	7,962,049	—	—
B.Fr.1,000,000,000	— Belgian Banks 7.5%	— 1983	16,020,506	—	—	372,937	16,393,443
B.Fr.700,000,000	— Belgian Banks 7.5%	— 1983	11,214,354	—	—	261,056	11,475,410
B.Fr.1,000,000,000	— Belgian Banks 8.75%	— 1980/89	14,818,968	—	1,251,047	366,505	13,934,426
D.M.75,000,000	— German Bank 8.5%	— 1988	—	20,128,711	—	481,347	20,610,058
			94,227,092	20,128,711	10,009,486	5,721,107	110,067,424
Revolving Credits:							
US$40,000,000*	— Banking Syndicate	— 1980/88	20,507,562	—	2,503,726	2,452,038	20,455,874
US$30,000,000*	— Banking Syndicate	— 1981/88	15,380,672	—	—	2,152,934	17,533,606
US$10,000,000	— U.S. Bank	— 1985	—	4,715,869	—	1,128,666	5,844,535
US$20,000,000*	— Banking Syndicate	— 1984/87	—	10,659,867	—	1,029,204	11,689,071
US$20,000,000*	— Domestic Banks	— 1984/88	—	10,428,282	—	1,260,789	11,689,071
D.M.150,000,000	— Banking Syndicate	— 1982	39,840,637	—	—	1,379,478	41,220,115
Stg.£20,500,000*	— Domestic Banks	— 1981/88	22,476,906	—	—	3,250,366	25,727,272
D.G.100,000,000*	— Banking Syndicate	— 1983	—	24,437,138	—	376,758	24,813,896
CAN$30,000,000	— Canadian Bank	— 1987/89	—	13,474,062	—	1,231,820	14,705,882
			98,205,777	63,715,218	2,503,726	14,262,053	173,679,322
TOTAL — FOREIGN CURRENCY BORROWINGS			325,646,112	131,302,855	19,472,637	33,845,113	471,321,443
TOTAL — IRISH POUND BORROWINGS (See previous page)			175,848,196	39,000,000	17,998,922	—	196,849,274
TOTAL — ALL BORROWINGS			£501,494,308	£170,302,855	£37,471,559	£33,845,113	£668,170,717

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

Summarisation of Borrowings

	Repayable Within 1 year £000	Repayable Within 2 to 5 yrs. £000	Repayable Within 6 to 10 yrs. £000	Repayable After 10 yrs. £000	Total £000	Currency as % of Total Borrowings %
Irish Pounds	9,488	58,404	71,536	57,421	196,849	30
Sterling	6,090	22,777	5,056	354	34,277	5
U.S. Dollars	6,666	52,755	44,511	44,292	148,224	22
Deutsche Marks	1,022	49,781	41,680	25,947	118,430	18
Swiss Francs	58	30,451	2,817	3,992	37,318	6
Belgian Francs	1,276	32,600	8,411	—	42,287	6
French Francs	3,165	11,132	4,910	7,310	26,517	4
Dutch Guilders	39	26,123	2,464	6,883	35,509	5
Canadian Dollars	—	—	14,706	—	14,706	2
Others	596	3,580	4,227	5,651	14,054	2
	28,400	287,603*	200,318	151,850	668,171	
Repayment Profile	4%	43%	30%	23%		100%

See note No. 9 — Amortisation of Borrowings.

*Options are held under arrangements to convert £65 million approximately into long term fixed rate loans.

Statement of Interest and Amortisation of Borrowings

Schedule J

1979/1980 £		£	£	1980/1981 £
	Interest on:			
	Advances from Minister for Finance		1,985,775	
	Borrowings in Irish pounds	14,777,281		
	Add: Provision for funding of premium on redemption of ESB Stock (below)	1,067,287	15,844,568	
	Borrowings in other currencies		33,138,820	
			50,969,163	
	Less: Interest from temporary investment		3,217,389	
37,515,784				**47,751,774**
	Amortisation of Borrowings:			
	Redemptions:			
	Minister for Finance		1,470,914	
	Others		12,089,893	
			13,560,807	
	Investments for sinking funds	13,592,779		
	Less: Provision for funding of premium on redemption of ESB Stocks	1,067,287	12,525,492	
20,771,179				**26,086,299**
£58,286,963				**£73,838,073**
	Allocated as follows:			
	Interest:			
	Income and Expenditure Accounts:			
	— Electricity		37,858,731	
	— Appliance and Contracts		464,311	
	Fisheries		5,746	
	Capital Works		9,422,986	
37,515,784				**47,751,774**
	Amortisation:			
20,771,179	Electricity Income and Expenditure Account			**26,086,299**
£58,286,963				**£73,838,073**

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, 1980	27,889,826		
Received in year	—		
		27,889,826	
Other contributions — as at 31st March, 1980	34,373,436		
Transferred in year	10,427,038		
		44,800,474	
			72,690,300
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, 1980		52,259,154	
Movements in year:			
Amortisation of Borrowings (Schedule H)	17,779,459		
Discounts/Premiums on Borrowings	(348,949)		
Adjustment for changes in currency parities (Schedule N — Note 8)	(33,845,113)		
		(16,414,603)	
			35,844,551
Asset Renewal Reserve:			
Balance as at 31st March, 1980		9,113,942	
Credits arising on disposal of assets retired (Schedule E)		1,931,321	
Depreciation Adjustment (Schedule F)		(1,431,798)	
			9,613,465
Total as at 31st March, 1981 (as per Balance Sheet)			**£118,148,316**

Statement of Generation Costs

Schedule L

Generation	Fuel	Operation	Maintenance	Local Charges	WORKS COST 1980/1981	Per Unit Sent Out	WORKS COST 1979/1980	Per Unit Sent Out	Depreciation	TOTAL COST 1980/1981	TOTAL COST 1979/1980
	£	£	£	£	£	Pence	£	Pence	£	£	£
Coal/Oil/Gas											
Marina	15,551,297	1,127,666	1,188,419	270,070	**18,137,452**	1.311	13,961,547	1.309	756,067	**18,893,519**	14,676,855
Ringsend	11,725,626	1,880,411	5,049,726	440,028	**19,095,791**	5.912	15,192,457	3.143	348,573	**19,444,364**	15,540,576
Arigna	1,834,755	363,361	275,414	62,271	**2,535,801**	3.981	2,246,557	3.494	6,783	**2,542,584**	2,262,800
Great Island	16,617,621	961,269	1,564,390	260,772	**19,404,052**	3.165	15,665,171	2.183	702,515	**20,106,567**	16,369,918
Tarbert	53,391,658	1,563,498	2,887,817	448,254	**58,291,227**	2.801	47,376,555	1.940	4,099,903	**62,391,130**	51,308,081
Poolbeg	55,742,391	1,524,509	2,417,283	474,905	**60,159,088**	2.680	48,882,350	1.852	3,869,154	**64,028,242**	52,517,875
Aghada	8,506,420	558,023	538,448	292,782	**9,895,673**	1.689	— *	—	1,877,175	**11,772,848**	—
Sod Peat (Machine)											
Portarlington	1,587,873	588,378	548,223	107,871	**2,832,345**	4.337	1,890,965	3.030	9,407	**2,841,752**	1,901,114
Allenwood	3,072,811	852,418	695,791	121,549	**4,742,569**	4.006	2,945,015	2.541	3,954	**4,746,523**	2,949,819
Lanesborough	1,034,782	487,946	291,699	63,106	**1,877,533**	3.995	1,099,770	2.182	1,993	**1,879,526**	1,108,937
Milled Peat											
Ferbane	6,876,992	1,116,436	2,094,229	252,065	**10,339,722**	3.710	6,896,556	2.123	92,715	**10,432,437**	6,993,149
Rhode	8,960,804	926,887	1,261,563	168,279	**11,317,533**	2.840	5,887,541	1.664	114,367	**11,431,900**	6,107,072
Bellacorrick	2,461,897	628,209	1,468,278	147,381	**4,705,765**	3.726	2,867,329	2.528	122,198	**4,827,963**	2,989,739
Shannonbridge	6,657,065	752,604	1,249,790	156,731	**8,816,190**	2.677	5,404,627	1.567	501,622	**9,317,812**	5,901,735
Lanesborough	2,894,356	275,453	297,853	52,058	**3,519,720**	2.077	1,963,445	1.327	134,218	**3,653,938**	2,098,000
Sod Peat (Hand-Won)											
Four 5MW Stations	944,551	568,312	488,862	84,900	**2,086,625**	16.430	1,059,012	12.034	2,338	**2,088,963**	1,062,477
Peak Station											
North Wall	111,376	330,498	93,115	70,906	**605,895**	—	1,071,080	—	42,373	**648,268**	1,114,945
Adjustment of previous year's estimated figure**	(139,564)				**(139,564)**					**(139,564)**	
Total — Fuel Stations	197,832,711	14,505,878	22,410,900	3,473,928	**238,223,417**	2.691	174,409,977	1.947	12,685,355	**250,908,772**	184,903,092
Hydro											
Shannon		505,353	1,246,500	189,792	**1,941,645**	0.535	1,353,680	0.329	46,021	**1,987,666**	1,468,832
Erne		222,047	451,781	93,450	**767,278**	0.262	679,390	0.215	115,398	**882,676**	796,162
Liffey		28,524	187,822	26,277	**242,623**	0.471	211,034	0.412	28,166	**270,789**	239,340
Lee		141,333	184,787	44,625	**370,745**	0.384	294,263	0.333	69,141	**439,886**	363,512
Clady		36,743	35,422	3,849	**76,014**	0.507	71,987	0.470	19,018	**95,032**	93,042
Pumped Storage											
Turlough Hill		345,268	531,607	114,569	**991,444**	—	998,067	—	585,811	**1,577,255**	1,584,183
Total — Hydro Stations		1,279,268	2,637,919	472,562	**4,389,749**	0.725	3,608,421	0.528	863,555	**5,253,304**	4,545,071
Total — All Stations	197,832,711	15,785,146	25,048,819	3,946,490	**242,613,166**	2.564	178,018,398	1.847	13,548,910	**256,162,076**	189,448,163
					Electricity Purchased in bulk (net)					**71,639**	56,262
					Central Transport and Stores					**57,701**	50,236
					General Charges					**9,492,104**	6,718,229
					Fisheries (Net Cost before Amortisation)					**525,477**	278,421
					TOTAL COST					**£266,308,997**	£196,551,311

* Recently commissioned

**Estimate arose out of retroactive fuel price adjustment.

Fisheries — Commercial and Conservation Operations

Schedule M

Total Cost 1979/1980 £		£	Total Cost 1980/1981 £	Commercial £	Conservation £
369,586	Direct Costs		**553,944**	199,450	354,494
	Overheads and General Charges:				
96,142	Payroll expenses and charges	120,076			
4,000	Depreciation	4,000			
5,864	Interest on Borrowings	5,746	**129,822**	56,945	72,877
475,592			**683,766**	256,395	427,371
	Less:				
197,171	Sales of fish, letting of fishing rights and miscellaneous income.		**158,289**	133,649	24,640
278,421	Net Cost before Amortisation, as per Electricity Income and Expenditure Account		**525,477**	122,746	402,731
3,046	Amortisation Charge		**3,163**	694	2,469
£281,467	**Net Cost for Year**		**£528,640**	£123,440	£405,200

1. The Accounts are prepared under the terms of the Electricity (Supply) Acts, 1927-1979 and are stated in Irish Pounds (£): the Historic Cost Convention is used in Accounts 1 and 2 and Schedules A to M to which the notes in this Schedule relate.
In accordance with S.S.A.P.16, a supplementary Current Cost Statement is appended (Schedules 0 to Q).

2. **Capital Assets:**
Capital Assets are valued at cost. Cost includes prime cost, overheads and interest costs during construction.

3. **Depreciation of Capital Assets:**
Depreciation is designed to recover historic 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.

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.

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 Reserves (Schedule K) via the Profit and Loss Account (Account No. 1).

12. **Hire Purchase Transactions:**
Profit on Hire Purchase sales is taken in the year of sale. Credit for interest is taken in equal instalments over the Hire Purchase term.

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:
An appropriate proportion of the Appliance and Installations Contracts Overhead Expenses has been transferred to the Electricity Income & Expenditure Account. This transfer is separately identified in the Appliance and Contracts Income & Expenditure Account, and includes an amount, calculated at 50p per customer, in recognition of the total safety and social role of Appliance Repairs and Installations Contracts. Appropriate General and Premises charges have been made on a measurement basis. (Previously estimates of Premises costs were included under General Charges).
(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 specified in Section 79 of the Corporation Tax Act 1976. 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, 1981, are estimated at £276.1m.). Had a Tax Equalisation Reserve been provided, the accumulated figure would now be an estimated £45.1m. (31st March, 1980 — £35.2m.)

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.

16. **Accounting Year:**
Income and Expenditure are aligned on a 52 or 53 week year as appropriate. The year 1980/81 is a 52 week year (1979/80 — 52 weeks).

Current Cost Profit and Loss Account

Schedule O

	£000's	1980/1981 £000's
Surplus as per Profit and Loss Account, after Interest and Amortisation		**6,265**
Less: Current Cost Operating Adjustments:		
Depreciation	35,096	
Cost of Sales	15,092	
Monetary Working Capital	10,630	**(60,818)**
		(54,553)
Gearing Adjustment		**27,246**
Current Cost Surplus/(Deficit)		**£(27,307)**

Current Cost Balance Sheet

Schedule P

			31st March, 1981
	£000's	£000,s	£000's
Fixed Assets (Note 2)		1,060,130	
Net Current Assets		176,068	
Sinking Fund Investments		65,729	**£1,301,927**
Financed by:			
Borrowings		668,171	
Reserves			
Current Cost Reserve (See below)	496,341		
Other Reserves	137,415	633,756	**£1,301,927**

Current Cost Reserve

Balance Sheet Items — Revaluations:	£000's	£000's
Fixed Assets (Incl. W.I.P.)	450,468	
Inventories	12,301	**462,769**
Profit and Loss Account Items:		
Cost of Sales Adjustment	15,092	
Monetary Working Capital Adjustment	10,630	
Depreciation Adjustment	35,096	
	60,818	
Less: Gearing Adjustment	(27,246)	**33,572**
		£496,341

Other Reserves	£000's
Total reserves per Historic Balance Sheet	**170,987**
Net current cost adjustment to Profit and Loss Account	**(33,572)**
Other Reserves per Current Cost Balance Sheet	**£137,415**

1. **Introduction**
The principles and method used in the calculation of the Current Cost Statement (Schedules O. & P.) 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 historic 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 1981 except for non specialised buildings which have been valued by a qualified internal valuer.

Fixed Assets and Work-in-Progress

Fixed Assets	Gross £000's	Depreciation £000's	Net £000's
Historical Value	672,523	226,329	446,194
Revaluation	1,151,694	714,605	437,089
Curent Cost Value	£1,824,217	£940,934	£883,283
Work-in-Progress			
Historical Value			163,468
Revaluation			13,379
Current Cost Value			£176,847
Current Cost Value of Fixed Assets and Work-in-Progress			£1,060,130

Net Current Assets

	£000's
Historical Value	163,767
Revaluation	12,301
Current Cost Value	£176,068

3. **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 £35.096m. is the difference between the depreciation charge in the historical cost and current cost accounts.

4. **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 actual replacement cost; for other stocks the adjustment uses an internal index based on actual input data.

5. **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.

6. **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.

7. This being the first year in which Current Cost Accounts are produced there are no comparative figures for the preceding year.

Auditors' Report

As Auditors appointed by the Tanaiste and Minister for Energy, with the consent of the Minister for Finance, we have audited the Profit and Loss Account, Balance Sheet, and attached schedules A to N 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, 1981, 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, 1981, together with the notes thereon, as set out on Schedules O to Q, 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.

Harcourt House,
Harcourt Street,
Dublin 2.
14 July, 1981.

Stokes Kennedy Crowley & Co.
Chartered Accountants.

Generation Statistics for the Year 1980/81

Station	Year 1980/81			Year 1979/80
	Generated Million Units	Station Use Million Units	Sent Out Million Units	Sent Out Million Units
Ardnacrusha	365.5	2.7	362.8	410.9
Cliff	84.2	1.0	83.2	89.2
Cathaleen's Fall	211.6	1.9	209.7	226.6
Carrigadrohid	26.6	0.4	26.2	22.4
Inniscarra	71.1	0.8	70.3	66.0
Pollaphuca	26.5	0.8	25.7	25.1
Golden Falls	9.1	0.2	8.9	9.4
Leixlip	17.1	0.2	16.9	16.7
Clady	15.1	0.1	15.0	15.3
Ferbane	308.0	29.3	278.7	324.9
Rhode	435.1	36.6	398.5	353.9
Bellacorick	136.8	10.5	126.3	113.4
Shannonbridge	360.6	31.3	329.3	344.8
Lanesboro	234.7	18.2	216.5	198.4
Portarlington	71.5	6.2	65.3	62.4
Allenwood	128.7	10.3	118.4	115.9
Cahirciveen	9.6	1.1	8.5	3.9
Milltown Malbay	3.0	0.6	2.4	—

Station	Year 1980/81			Year 1979/80
	Generated Million Units	Station Use Million Units	Sent Out Million Units	Sent Out Million Units
Screeb	3.0	0.5	2.5	—
Gweedore	13.1	1.3	11.8	4.9
Marina (Gas)	1,420.1	36.8	1,383.3	1,066.6
Aghada	619.8	33.9	585.9	—
Poolbeg	2,365.8	121.0	2,244.8	2,638.8
North Wall	2.2	0.3	1.9	20.6
Ringsend	353.9	30.9	323.0	483.3
Marina (Oil)	—	—	—	—
Great Island	652.9	39.8	613.1	717.7
Tarbert	2,229.2	147.9	2,081.3	2,443.0
Arigna	68.3	4.6	63.7	64.3
Turlough Hill (generation)	329.2	5.4	323.8	357.9
Turlough Hill (pumping)	537.2	—	537.2	556.3
ESB Import	—	—	—	—
ESB Export	—	—	—	—
Purchased	3.3	—	3.3	4.1
System Demand	10,038.4	574.6	9,463.8	9.644.1

Note: 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.

Maximum daily Generation Million Units	35.2	36.7
Maximum load Generated in MW	1,892	1,971

Particulars and Performance of Generating Plant

Hydro Stations

Station	Location	Average annual generation million units	Plant Particulars		Plant Performance for year ended 31/3/81		
			Generating Sets		Units sent out millions	Plant load factor %	Works cost per unit sent out (pence)
			No.	Capacity (MW)			
Ardnacrusha	Shannon	310	5	86	362.8	48.6	0.535
Pollaphuca	Liffey	45	2	30	51.5	10.1	0.471
Golden Falls			1	4		26.0	
Leixlip			1	4		48.9	
Cliff	Erne	275	2	20	292.9	48.2	0.262
Cathaleen's Fall			2	45		53.8	
Carrigadrohid	Lee	77	1	8	96.5	38.1	0.384
Inniscarra			2	19		42.9	
Clady	Clady	13	1	4	15.0	43.2	0.507
Turlough Hill — Pumped Storage	Co. Wicklow	—	4	292	323.8	—	—

Particulars and Performance of Generating Plant

Steam Stations

Station	Location	Plant Particulars					Plant Performance for year ended 31/3/'81			
		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	63.7	52.2	2.880	3.981
Great Island	Co. Wexford	3	240	3	853	Oil	613.1	31.1	2.710	3.165
Marina	Cork City	3	120	4	522	Oil/Gas	1383.3	79.3	1.124	1.311
		1	85	Combustion Turbine		Gas				
Aghada	Co. Cork	1	270*	1	800	Gas	585.9	37.5	1.452	1.689
North Wall (Peak Station)	Dublin City	3	16†	3	75	Oil	1.9	—	—	—
Poolbeg	Dublin City	2	240	2	760	Oil	2244.8	50.3	2.483	2.680
		1	270	1	800	Oil				
		2	28	Combustion Turbines		Oil				
Ringsend	Dublin City	6	270	7	1114	Oil	323.0	15.0	3.630	5.912
Tarbert	Co. Kerry	2	120	2	473	Oil	2081.3	41.2	2.565	2.801
		2	500	2	1600	Oil				
			620							

*Station in commission for part of the year.

†Capacity limited to 16 MW as 2 Boilers decommissioned.

Particulars and Performance of Generating Plant

Appendix 2 contd.

Steam Stations

Station	Location	Plant Particulars					Plant Performance for year ended 31/3/81			
		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	126.3	39.2	1.949	3.726
Ferbane	Co. Offaly	4	90	4	430	Milled Peat	278.7	39.2	2.468	3.710
Rhode	Co. Offaly	3	80	3	364	Milled Peat	398.5	62.3	2.249	2.840
Shannonbridge	Co. Offaly	2	80	2	346	Milled Peat	329.3	51.6	2.022	2.677
Lanesboro	Co. Longford	2	60	1 1	100 173	Sod Peat Milled Peat	47.0 169.4	29.3 52.5	2.202 1.708	3.995 2.077
Portarlington	Co. Laoise	3	37.5	3	205	Sod Peat	65.3	21.8	2.432	4.337
Allenwood	Co. Kildare	2	40	4	273	Sod Peat	118.4	36.8	2.595	4.006
Cahirciveen	Co. Kerry	1	5	1	28	Sod Peat	8.5			
Gweedore	Co. Donegal	1	5	1	28	Sod Peat	11.8	16.4	3.748	16.430
Miltown Malbay	Co. Clare	1	5	1	28	Sod Peat	2.4			
Screeb	Co. Galway	1	5	1	28	Sod Peat	2.5			

Distribution System in Commission at 31st March, 1981

Distribution System (Including Rural Networks)

Trafo. Station	No. in Commission	Increase (+) or Decrease (—) for year	Total Capacity in KVA	Increase (+) or Decrease (—) for year in KVA
38kV Stations	348	+7	2,523,100	+124,200
10kV Stations (excl. U.R.D.)	111,571	+3363	3,228,855	+99,881
10 kV Stations U.R.D.	1,879	Nil	108,436	Nil
5 kV Stations	53	Nil	32,590	Nil

Distribution Lines and Cables	Length kM	Increase (+) or Decrease (—) for year kM	Description
38 kV Lines	5314	+63.8	3 x 25 to 3 x 300 sq.mm. Cu. & SCA
38 kV Cables	252.3	+ 1.0	3 x 95 to 3 x 680 sq.mm. copper and aluminium
10 kV Lines	71,562	+662	Single and three phase
10 kV & 5 kV Cables	2,779	+ 99	2 x 16 to 3 x 240 sq.mm. copper and aluminium
3.3 kV Cables	3.7	Nil	3 x 185 sq.mm.

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