ESB

Bord Soláthair an Leictreachais

# Electricity Supply Board
# Fifty Seventh Annual Report
# for year ended 31st March 1984

P.L. 2315

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




# Electricity Supply Board
# Fifty Seventh Annual Report
# for year ended 31st March 1984



*Hard at work on a gas filled cable.*

# Report and Accounts for year ended 31st March 1984

*Board Members*
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*ESB International Finance Seminar, October–November 1983 — Some of the participants and organisers.*

| DATA SUMMARY | 1983/84 | 1982/83 |
|---|---|---|
| **FINANCIAL** | | |
| Financial Outcome. Surplus/(Deficit) | £(23)m | £(6)m |
| Income | £669m | £598m |
| Assets in Commission (before Depreciation) | £1,037m | £900m |
| Sales (Million Units) | 8,904 | 8,518 |
| Effective Generating Capacity (MW) | 3,260 | 2,875 |
| Peak Load | 1,994 | 1,924 |
| Customers | 1,145,818 | 1,122,461 |
| **EMPLOYMENT** | | |
| Total Employment | 12,792 | 13,215 |
| *Operations* | *9,388* | *9,560* |
| *Construction* | *2,619* | *2,795* |
| *Consultancy and Secondment* | *250* | *239* |
| *Apprentices* | *535* | *621* |
| Pay | £163m | £156m |
| ESB Contribution to Pension Fund, PRSI and Expenses | £32m | £30m |

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*A night study of RTE Studios, Montrose, Dublin.*



# To the Tanaiste and Minister for Energy

In accordance with the provisions of the Electricity Supply Acts 1927/1982, the Board presents its Annual Report and Accounts for the year ended 31st March, 1984.

## FINANCIAL OUTCOME

The Accounts for the year show a deficit of £23 million to 31st March, 1984. It is the worst trading result ever experienced by the ESB and brings the cumulative deficit at that date to over £37 million; this amount will have to be recovered through tariffs over future years.
Although the trading result is most disappointing, it was not unexpected, mainly as the implementation of the approved price increase for 1983/'84 was delayed. It would have been worse were it not for the return of growth in electricity sales, a 4% increase by Government in the allocation of natural gas to the ESB, the stabilisation of peat prices and the achievement of substantial internal economies.
A progressively deteriorating position has been indicated in each of the Annual Reports since 1980. Factors which have caused this pressure have been commented on in detail in these reports and the analyses made are still valid. Seventy–two per cent (72%) of total ESB costs arises from:–

: fuel, interest, rates levy, hydrocarbon tax, provision for loan repayments (inclusive of currency losses) and depreciation.

In general, the level of these costs arises from decision–making which is external to the ESB. Over the past years, increases in these costs have not been fully compensated for by timely price increases. Neither has there been any positive response to the Board's repeated requests that costs which are determined within the country should be fixed at levels which would give lower electricity prices to the community at large as well as contributing to the financial stability of the ESB.
The remaining twenty–eight per cent (28%) of total costs arises from payroll, materials and services of many sorts. These cost factors are immediately and directly responsive to internal actions which the Board has been firmly implementing for the past four years.

For the year under review escalation in these costs has been curtailed to a level which is approximately half of the recorded increase of 10% in the Consumer Price Index over the same period. The Board considers this to be a very creditable performance. While the management and staff of the ESB strive to achieve maximum efficiency in every direction, the Board must record that there is no achievable level of internal efficiency which would balance, over the past three years, the escalation of externally determined costs.
The Board's Annual Accounts are presented on the basis of historical costs. Statements of results based on Current Cost Accounting principles are included and show a deficit for the year of forty–eight million pounds (£48m). This is both a confirmation and a measure of the continuing financial pressures.
It highlights the need for action to sustain over time the financial health of the ESB.

## SALES

After three years of no growth the sales of electricity increased by 4.5% in the year. The resulting increased revenue contributed to reducing the level of deficit.
The overall sales increase is made up of an increase of 3% in the domestic sector, 5% in the commercial sector and almost 6% in the industrial sector. In this latter sector, electricity used by the 50 largest customers increased by over 9% in contrast to reductions of 5% and 8% in the two previous years.
Like the retail trade generally, Appliance Sales was affected by declining disposable incomes in the community. Sales volume continued to fall and further trading losses were incurred.
The Board considers that selling appliances contributes to the proper marketing of electricity through shaping load and setting standards of safety and energy efficiency for the trade.
Rationalisation of the entire appliance retail business is necessary to bring about a return to profitability. Discussions are taking place with the trade unions and the Board is hopeful that there will be an early and satisfactory outcome.

## EXTERNAL ACTIVITIES

The foreign consultancy activities of the ESB continue to be successful. Turnover at £12 million was marginally up on last year. This reflects very difficult market conditions caused by the world recession and particularly by the fall of oil revenues in the producing countries, which are the ESB's principal market. There is also intense competition from consulting firms based in the developed countries. That ESB staff and also representatives of other Irish

industries hold their own in this tough competitive environment is evidence of a depth of talent and potential.
At present over 80% of ESB consultancy fees is earned in the Middle East. The major client is the Ministry of Works, Power & Water in Bahrain and the well established relationship with the Electricity Directorate continued throughout the year. In the Kingdom of Saudi Arabia the Association of Saudi Consult House/ ESB had a satisfactory year allowing for the prevailing economic situation. Assignments were also successfully undertaken in the following countries:–

| | | |
|---|---|---|
| Egypt | Norway | Grenada |
| Nigeria | Bhutan | Burundi |
| Lesotho | Sudan | Vietnam |
| Cyprus | North Yemen | Gulf States |
| Senegal | Zimbabwe | |

With a view to expanding overseas business a strong marketing programme continued and close liaison was maintained with the international funding agencies. At year end some 240 staff were involved in external activities.

*Trainees from Saudi Arabia learning skills at the ESB line school at Portlaoise.*



## ISSUES OF PUBLIC DEBATE

### Electricity Prices

Scarcely a week passed over the last twelve months without public debate on the topic of electricity prices. The level of electricity prices is of serious concern to the Board. It has stressed in successive Annual Reports that the competitiveness of the generality of Irish industry could be damaged if national energy prices are too high compared with other EEC countries. It is a lesson of economic history that there is a close connection between cheap or comparatively cheap energy and economic and industrial progress. In this context it is understandable and logical for the National Planning Board to propose that electricity tariffs should be brought into line with selling prices in other EEC countries. It is, however, unrealistic to propose that this "parity should be achieved by improving efficiency".

Ireland has severe disadvantages in supplying electricity – an isolated system, low density of population, differences in personal affluence and habits of customers, commitment to use native fuels, age and quality of assets, financial structure and basic capital charges, few opportunities for economies of scale. All of these impede the achievement of price alignment with EEC countries; their totality cannot be overcome by "improving efficiency". At the end of the day electricity prices to any sector in any country are largely determined by what respective national governments wish them to be. For instance, application of consumer taxes on electricity supply brings prices in some European countries to levels in excess of those charged to Irish domestic customers.
Moreover, international comparisons of electricity prices are inexact; they are distorted in their validity by:–

: movements in currency exchange rates;

: overall national energy policies;

: extent of State subvention;

: incidence of covert/overt taxation on energy.

Three years ago the Board established as its specific corporate financial target for the eighties and nineties "to contain escalation in electricity charges to a level well below the national level of inflation while fulfilling its statutory obligation to break even". In deciding

on this target the Board was aware of defects inherent in setting unattainable conceptual targets. The Board's target has the obvious deficiency of assuming that externally determined costs will not exceed inflation levels. Nevertheless, the target is pragmatic and what is more, it is readily applicable to and understandable by customers.

Performance against the stated target is:

| | Tariff Index | C.P.I Index | £m. Financial Outcome |
|---|---|---|---|
| 1979/'80 | 100.0 | 100.0 | 9.3 deficit |
| 1980/'81 | 119.5 | 118.2 | 6.3 surplus |
| 1981/'82 | 150.0 | 145.7 | 5.9 surplus |
| 1982/'83 | 154.6 | 163.7 | 5.7 deficit |
| 1983/'84 | 169.5 | 180.6 | 23.3 deficit |

While the financial target on prices has been achieved, the statutory financial requirement on the ESB to break even on its operations has not been fulfilled. The statutory requirement would have been substantially achieved without additional price increases if recommended price adjustments had been applied from the start of each financial year, and not from dates too late to ensure adequate income in the year.
The Board will continue to do its utmost to achieve its corporate objective of substantial price improvement for the eighties but it must be generally realised that some major cost factors are not responsive to ESB decision-making or action.

**Plant Programme**

Despite all the information which has been provided over the past few years, the opinion still persists that excess plant capacity is the main reason for the present level of electricity prices.
The Board is satisfied that the basic methodology of generation and transmission planning is as good in the ESB as it is in any other utility. The problem is that the future, since 1973, has been less predictable. National governments, worldwide, or their agencies cannot commit themselves to long-term forecasts of key planning criteria – economic growth, availability and price of fuel, inflation, currency value, employment, disposable income, regional development and a host of others. The ESB has to make its own assumptions about these matters from the best information available to attempt to achieve, over a ten-year horizon, enough plant capacity for whatever happens but without having over-capacity at any time.

Since 1973 the ESB has planned investment in generation and transmission plant within three separate parameters:–

: investment to secure economies through using secure, cheap fuel – initially natural gas and then coal;

: investment to secure diversification from oil – natural gas and peat, with coal to replace natural gas when its allocation for electricity usage ends in 1988;

: flexibility to cater for unpredictable variations in demand.

There would be no plant over-capacity if the gas plant and the extensions to Shannonbridge and Lanesboro had not been built. However, without this plant – the substance of the over-capacity – the position to date would be:–

: electricity prices to-day would be 11% higher. Electricity customers' money – £264 million – has been saved;

: the Exchequer would be poorer by £155 million; its current income would be £75 million per annum less;

: oil imports would have cost the country £410 million more than they have;

: the cashflow from ESB use would not have been available to develop the Kinsale gas field and to build the pipeline to Dublin.

The ESB investment, with the approval of Government, has brought the benefit of indigenous natural gas to homes and industries throughout the entire country which otherwise would be confined to communities privileged to have a gas pipeline.
The Board wishes to state again that rather than the investment in present excess capacity being a cost to the electricity customer and to the country it is a significant positive national benefit giving substantial economies.
It is a matter of satisfaction for the Board that, despite all the controversy, the Government has endorsed the decision to build three units of coal-fired generation at Moneypoint. The Moneypoint coal project was conceived both to give major fuel economies and to become more independent from imported oil as a basis of electricity generation. It is not a threat to nor a substitute for the use of peat.
Steam coal is considerably cheaper than oil and it is a conservative estimate that this price




*An ESB apprentice explaining the mysteries of electricity to school children.*

differential will continue long–term. The price difference gives a rate of return over the life of the plant, on the investment in three coal–fired units at Moneypoint, which comfortably exceeds Government guidelines even for high–risk investment. The Board's economic and financial assessment of the Moneypoint project, specifically the third unit, has been verified independently by an accounting firm of international standing.

Every country has had a policy since 1973 to diversify from oil as a fuel for electricity generation. The Board has the statutory responsibility to plan for the long–term security of Ireland in terms of electricity supply. It would have been failing in its duty, in the face of recurring oil crises, not to have obtained Government approval to the major diversification from oil which Moneypoint represents. The alternative would have been to commit Ireland long–term to expensive oil from insecure sources used inefficiently in many old, small generating units resulting in very high electricity charges. This is not a realistic option for a country which aspires to economic prosperity.

**Performance Indices and Targets**

The National Planning Board has recommended that specific financial performance indices and targets should be stated and published for State–sponsored bodies. The Board endorses this recommendation and had already included in last year's Annual Report a five–year summary of financial statistics and key ratios. This year, statistical information has been further expanded.

While the Board fully subscribes to the implied discipline and assessment in the setting of targets, it is essential that such targets must be in harmony with statutory financial and service obligations. Consequently, it could not agree that measurement by a rate of return on investment, as now often advocated, is fully applicable to a national electricity utility, especially in the Irish environment. A rate of return concept assumes a commercial freedom in product pricing and investment decisions which is not permitted to the ESB. There is incompatibility between an imposed rate of return target and the ESB mission to sell

electricity to every citizen at the lowest possible price without cross subsidisation between sectors. Specifically, the rigid application of target rates of return to investments in electricity distribution assets would leave a substantial proportion of Irish communities without electricity supply and others with an inadequate and unreliable service. The same reservation applies to many other main areas of ESB capital investment. An example is the supply obligations to the offshore western islands, at standard tariffs and without subsidy of costs.

**Staffing Levels**

The total number of people employed by the ESB will diminish over the next four or five years due to a combination of factors:–

: completion of major construction projects;

: decommissioning of old, obsolete plant (and mothballing of surplus plant, depending on growth in demand);

: transition from an era of high growth, which lasted for 50 years, to an era of low or moderate growth.

Staffing levels are currently 868 less than they were at July 1982. The last decade has been one of steadily improving productivity within the organisation. Orderly change is an accepted ESB culture and important issues of redeployment, relocation and voluntary early retirement, to address current staffing problems, are under active discussion with the trade unions. The Board knows that its staff throughout the country have a continuing commitment to their public responsibility to give an effective, vital service to the community. For its part the Board will ensure that the changes which must take place in its organisation will occur within policies and plans which are sensitive to the human issues involved and particularly that the time–scale of change will permit satisfactory arrangements to be negotiated with trade unions which would avoid compulsory redundancy in the years ahead.

## INDUSTRIAL RELATIONS

The Board is happy to record that 1983/'84 was another year in which high standards of industrial relations were maintained. The Board wishes to thank all those involved in the collective bargaining process both on the trade union and management sides for their efforts in a most difficult economic environment. In particular, the Board thanks the Chairman of the Industrial Council, Mr. Con Murphy, and members who serve on that body for ensuring that it continues to be an effective institution for the peaceful resolution of disputes.
The Board is committed to the development of joint structures of participation at local and national level. Discussions with the trade unions are at an advanced stage and the Board hopes that progress on implementation will be made in the current year.



*Christmas lights in Henry Street, Dublin.*

## TRAINING AND DEVELOPMENT

During the year 34,000 mandays of training were given to ESB staff and 15,000 mandays to staff from other organisations in Ireland and abroad. The close co–operation between AnCO and the ESB on apprentice training continues. Direct training involvement with primary schools started in conjunction with the Department of Education.
The Board considers it important to continue its policy of investing heavily in training and development for all categories of staff. This policy has made the ESB self–sufficient in all the professions and skills necessary for the complex technical and administrative organisation providing an electricity service to the whole community. The policy has been the foundation on which expansion into foreign consultancy has been possible. Continuation of the policy is justified in the national interest to ensure that the core skills and expertise now present can be preserved

intact in the face of the current economic recession with reduced demand for electricity.

## REVENUE COLLECTION

Considerable improvement has been achieved in the speed of collection of electricity accounts. The average account collection period, expressed as equivalent days' sales, has been reduced from 43 days in 1978 to 26 days now. This has been secured through revisions of the meter reading and billing systems to issue bills earlier and through the introduction of new customer directed payment facilities and incentives such as WinElectric, Budget Plan, Autopay, Credit Cards, Saving Stamps and, particularly, Easipay. Side by side with these developments, strong liaison is maintained with social welfare workers, community care officers and voluntary organisations, such as the Society of St. Vincent de Paul, to provide advice and guidance to needy customers. The Board takes this opportunity to express its appreciation and thanks to them all for their help and co–operation.

## THEFT OF ELECTRICITY

A small but significant number of customers interfere with meters to steal electricity. The Board is concerned, not only with the loss of revenue, but also with the risks of serious accidents. In every district ESB staff are employed full–time on the detection of electricity theft. Better detection methods are resulting in increasing prosecutions, convictions and recovery of money. The minority of dishonest customers are a burden on the community and the Board is determined to have them all identified and prosecuted.

## GENERATION OF ELECTRICITY

### Production

System demand required the generation of 10,559 million units, an increase of 3.6% over last year. Most of this growth occurred in the early part of the year. The temperature up to mid–June was below normal, April being the coldest on record for over sixty years. This cold spell was followed by an abnormally warm period with temperatures more than two degrees above normal during July and August.
The peak demand of 1,994 MW was 3.6% up on last year and occurred on Monday, 12th December, 1983. There was no change in the annual load factor which remained high at 60.6%

### Fuel Sources

A feature of the year's operations was the further reduction in the proportion of units produced in stations fired by heavy fuel oil to 20% of output, compared with 73% in 1979.

*The new National System Control Centre in Bahrain for which the ESB acted as consulting engineers.*





*Coal station construction at Moneypoint, Co. Clare.*

Production from natural gas increased by 4% to 54% and from peat by 2% to 18% of total output. The balance came from hydro and native coal.
Further efficient gas firing plant became available with the extension of the pipeline to Dublin.
Exceptional load factors were again obtained from the gas firing plant at Aghada (85.5% – conventional steam) and Marina (87.4% – combined cycle).

**Capacity**

Two new 104 MW combustion turbines, capable of using gas or oil, were commissioned in North Wall during the year. The existing steam turbines were refurbished to run in conjunction with a newly commissioned 42 MW heat recovery boiler. A new 45 MW peat burning unit was also commissioned in Lanesboro.
In Poolbeg, 390 MW of plant was converted so that it can now burn gas or oil, or both fuels simultaneously. Preparations were in hand for similarly converting the remaining 120 MW boiler. Plant totalling 210 MW was decommissioned during the year at Ringsend and Marina.

**Efficiency of Conversion**

The overall thermal efficiency of conversion of primary energy to electricity was 33.3% compared to 32.1% last year. The increase is largely attributable to the commissioning of efficient gas burning plant at North Wall and recommissioning of Poolbeg plant on gas, in conjunction with continuing good performance of that already in commission. The performance of the ESB stations that have been converted compares well with the best in the world. North Wall had an efficiency of 41.44%, Marina 40.71% and Aghada 'A' 40.30%. All three had load factors of over 85%.

**Maintenance of Supply**

Due to the warm summer, the incidence of thunderstorms was much above normal and particularly affected the south of the country. On the 12th and 17th July very severe storms occurred, the latter causing extensive outages in the Cork area.
Reduction of production costs to a minimum involves loading fully the large efficient units, especially those burning gas. There is accordingly increased operating risk which resulted in supply interruptions on seventeen occasions during the year. The interruptions

were of very short duration and restoration was automatic. This high risk–taking in the interests of achieving operating economies is a feature of isolated electricity systems which have no external interconnection to rely on.

## CONSTRUCTION PROJECTS

### GENERATING STATIONS

**Lanesboro Extension, Co. Longford (Milled Peat)**
1 x 45 MW Unit. The extension was commissioned in November, 1983

**Moneypoint, Co. Clare (Coal Fired)**
3 x 300 MW Units. Excellent progress was maintained on this project. Construction of the coal–receiving jetty and of the ancillary marine works was completed. Erection of the coal–handling systems and development of the coal–yard and ashing areas continued. Work on the main station buildings was largely completed and plant erection on the first unit was on schedule for commercial operation in 1985/'86. Erection of the remaining units was progressing satisfactorily. Work on the superstructure for the administrative block and other ancillary buildings was about to commence.

**North Wall Extension**
2 x 104 MW Combustion Turbines. The commissioning of the heat recovery boiler and the refurbishment and recommissioning of the existing 3 x 15 MW steam turbo–generator units were completed. Full commercial operation was achieved in August 1983.

**Poolbeg Gas Conversion**
Boiler No. 3 was converted and the 270 MW Unit was synchronised in September, 1983. Completion of commissioning and optimisation was scheduled for April, 1984.

Boiler No. 2 was converted and the 120 MW Unit was synchronised in December, 1983. Full load operation on gas was achieved in February, 1984 and on oil in March, 1984. Commissioning and optimisation tests were in progress at year end.
Conversion of Boiler No. 1 had started.

### TRANSMISSION SYSTEM

The construction programme was revised last year in the light of recent and projected demand for electricity. The revised programme was on target at year end.

**400kV System**

Progress on the construction of the three 400kV stations at Moneypoint, Woodland (Co. Meath) and Dunstown (Co. Kildare) was satisfactory. Deliveries of all major materials and equipment were on schedule.
The erection of the masts of the 400kV line from Moneypoint to Woodland was almost completed and over half of the conductor had been strung. Survey of the line from Moneypoint to Dunstown was completed, all steelwork was delivered and construction was in progress. The 400kV cable for installation at Moneypoint Station was ordered.

**220kV System**

The extension of Poolbeg 220kV Station and developments at Inchicore and Arklow Stations were commissioned. Commissioning testing of the new station at Raffeen (Co. Cork) and further developments at Inchicore and Arklow were proceeding. These will be commissioned in 1984/'85.
The 220kV lines into Woodland 400kV Station were completed and commissioned.
Completion of the line from Great Island to Arklow was awaiting clearance of an outstanding wayleave. Survey was in progress on the loop lines into Dunstown 400kV Station.
The major 220kV cable circuit from Poolbeg to Inchicore was commissioned.

**110kV System**

Three new 110kV stations were commissioned and work continued on three more. The installation of automatic frequency restoration equipment in stations was completed.
128km of new 110kV lines were erected and 8km of old lines were retired. 72km were in the course of erection. Survey was progressing on a further 33km and eight short cable circuits were commissioned.

### DISTRIBUTION SYSTEM

The number of new houses connected to the distribution system, almost 26,000, was marginally up on the figure for the previous year but the net increase of 23,357 in the number of customers was the lowest since 1972.
The total expenditure on the system (capital, operation and maintenance work) was the same as last year at £95m approximately.
A programme of strengthening the rural networks commenced during the year. An experimental scheme for increasing network capacity by uprating the operating voltage from 10kV to 17.3kV was commissioned during the year.

Construction work was practically completed on the 20 MVA supply to CIE for the Dublin suburban rail electrification scheme and supply was available at all five feeding points, i.e. Dun Laoghaire, Fairview, Bayside (Sutton), Shankill, and Hollywood Park (Sandymount). The Board continued to make supply available to the offshore islands. A programme was started to increase the installed capacity on the Aran Islands, to cater for increased demand and to provide greater security.

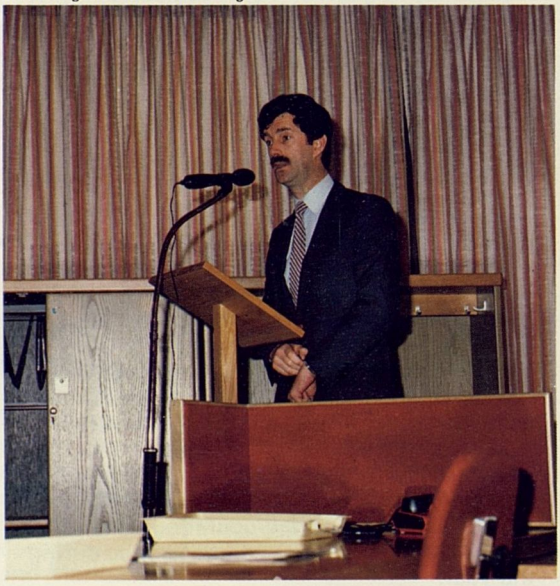
## PREMISES

Work on the new Headquarters extension at East James' Street, Dublin progressed satisfactorily during the year and occupation was planned for early in the current year. The designated accommodation for the new National System Control Centre was handed over for installation of equipment scheduled for commissioning in 1985/'86.
The completion of the East James' Street project is the last major premises development for the foreseeable future.

## CAPITAL EXPENDITURE

Capital expenditure for 1983/'84 was £227 million and reflects the approach to peak of expenditure on Moneypoint coal fired plant and the associated transmission lines and stations. It is expected that this major investment will be completed on schedule and within budget.
Included in the capital expenditure is £46.5 million for reinforcement of the existing distribution network and providing supply to new customers.

*The Tánaiste and Minister for Energy, Mr. Dick Spring, launching the Fitzwilliam Range of office furniture.*



### Borrowings

New borrowings negotiated during the year were as follows:

| | £m |
|---|---|
| Irish Banks | 55 |
| Stock Issues on Irish Markets | 34 |
| European Investment Bank | 47 |
| Trade Credits | 21 |
| Sterling Acceptances | 15 |
| Continental Banks | 21 |
| Middle East Financial Institutions | 30 |
| Total | 223 |

Although there was a substantial increase in funds raised on the Irish market, the Irish pound proportion of total borrowings deteriorated from 24% to 23%. This was caused mainly by the £55 million adjustment for currency changes at year end.
The rate of internal financing has declined to 16% – an extremely low level by international standards for electricity utilities. This low level directly results in increased foreign borrowings. However, capital expenditure on the present capital programme will peak in 1984/'85. As the completion of the present major projects approaches, there will be a rapid decrease in annual capital expenditure with a consequential reduction in annual borrowings over the remainder of the decade.

## SUPPORT FOR THE IRISH ECONOMY

The Board continues to seek and promote opportunities for import substitution and support for Irish goods and services. It is estimated that in 1983/'84 the ESB contribution directly into the economy for fuel, salaries, expenses, goods and services amounted to £570 million.
The Board is particularly proud of the efforts of its staff to stimulate Irish industry. While it is not possible to mention all the initiatives which were taken, it is appropriate to compliment the joint management/staff working party which developed the 'Fitzwilliam' range of office furniture with an Irish manufacturer. This furniture range was launched by The Tanaiste, Mr. Dick Spring in March, 1984 and it appears to have good commercial potential in home and export markets.

## SUPPLEMENTARY SOURCES OF ELECTRICITY GENERATION

### Hydro

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

### Wave Power

The International Energy Agency prepared plans for a second phase of its wave energy project. Of the original participating countries, only one, Japan, was prepared to allocate additional substantial funding. The Japanese are anxious to preserve the international and co–operative nature of the project and have proposed that the other participants take part on an advisory, information sharing and task sharing basis. The possibility of taking part on this basis is under review by the Board.

### Wind Power

The wind power test and demonstration programme continues. A total of 60,000 hours experience has been recorded. This included 7,000 running hours and generation of 100,000kWh of electricity. The machines have continued to suffer from control and mechanical problems but have withstood this year's stormy wind conditions satisfactorily.

### Biomass

As part of an EEC funded research programme to investigate the use of biomass for electricity production, Miltown Malbay Generating Station was operated for one month on sawmill wastes.

### Irish Coal

The test programme on fluidised bed combustion of native high sulphur anthracites was completed successfully in July, 1983. This test programme was partially funded by the EEC. The final report was presented to the EEC in November, 1983.

### Geothermal

The two–year study of the Galway granite by University College Galway was continuing. The second year's field work was successfully completed. This study is jointly funded by the National Board for Science and Technology and the ESB.

## FISHERIES AND CONSERVATION

One of the unhappy consequences of technical developments in modern offshore and estuary fishing methods is the threatened elimination of the salmon species in its wild state from overfishing. In the face of this threat the Board's policy has been to expand and develop hatcheries for smolt rearing and fish farming. The Board believes that this policy and the associated policy of environmental protection and amenity development are in the national interest.
The Board's separate Annual Report on its fisheries and conservation activities gives a detailed account of the progress made in the year ending 31st March, 1984.

*Stringing of the Moneypoint–Woodlands 400 kV line.*



## EXTERNAL REVIEWS OF ESB

The Board considers it opportune to draw attention to the extent to which its operations are open to scrutiny by independent external bodies.
The Committee of Inquiry into Electricity Prices, appointed by the Minister for Industry and Energy, commenced its review on 6th September, 1983. The ESB has provided this Committee with a very large volume of detailed information on all aspects of its business. Although the Committee is precluded from inquiring into the reasons and policies behind costs imposed by Governments on the ESB, the Board is nevertheless hopeful that the Committee's work will contribute towards alleviating the particular burdens on the industry.
In addition to this Committee of Inquiry the ESB is also being reviewed at present by two other Government appointed Committees, viz, the Joint Committee of the Houses of the Oireachtas on State–sponsored Bodies and an Inter–Departmental Committee on ESB Debt. Added to this is the extensive annual review of ESB costs by the National Prices Commission to which an application for a price increase was submitted on 14th February, 1984.

## THE FUTURE

Social and economic progress are inextricably linked to the availability of electricity. Electricity, in every country, is increasing its penetration of energy markets because of its flexibility, its efficiency and the quality of service which electricity companies give. The planning of the ESB has ensured that the security of electricity supply in Ireland is guaranteed long–term. The Board considers that it is in the national interest to promote the use of electricity to achieve higher levels of productivity in all sections of the economy. The Board will continue to market its product aggressively and will compete with other fuels in every market. The Board considers competition to be a healthy challenge, encouraging efficiency and innovation. Assuming moderate growth of 3% to 5% per annum and success in reducing costs and in phasing–in new organisational structures relevant to the changed times, the Board looks forward to steadily improving trading performance through the eighties and recovery of the accumulated deficit without any undue pressure on electricity prices. Indeed, moderation of electricity prices in real terms could be forecast if increases in external costs behaved in line with inflation.

## BOARD MEMBERS

Mr. Colm McCarthy was appointed a Member of the Board from 1st December 1983.
Mr. Arthur Ryan resigned his Membership of the Board on 10th April, 1984, and Mr. John Cohalan completed his term of office on 30th April, 1984. The Board wishes to record its appreciation of their services.

## STAFF

Staff employed by the ESB at year end:–

| | |
|---|---|
| Total | 12,792 |
| Day–to–day Operations | 9,388 |
| New Construction | 2,619 |
| Foreign Consultancy and Secondment | 250 |
| Apprentices–in–training | 535 |

All the staff continue to serve the community well. The Board is proud of their achievements and thanks them sincerely for their efforts.

*(Signed) Charles T.G. Dillon, Chairman*
*Liam Boyd*
*Thomas Gilmartin*
*Denis Hatch*
*Patrick Kevans*
*Colm McCarthy*
*Patrick J. Moriarty*
*J.A. Ryan*
*Anthony Ryder*
*John P. Wyley*
*(Signed) J.F. Williams, Secretary*
*10th July, 1984*

ESB

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# Accounts and Schedules for year ended 31st March, 1984

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Auditors' Report

# Profit and Loss Account

Account No. 1

| 1982/1983 £000's | | | 1983/1984 £000's |
|---|---|---|---|
| | **Operations** | | |
| 42,281 | Electricity Income and Expenditure Account (Schedule A) | | 38,477 |
| (1,936) | Appliance and Contracts Income and Expenditure Account (Schedule B) | | (1,169) |
| 820 | Consultancy Income and Expenditure Account (Schedule C) | | 745 |
| 41,165 | | | 38,053 |
| (607) | Expenses on New Borrowings | | (1,089) |
| 40,558 | Operations Surplus | | 36,964 |
| (46,216) | Amortisation Charge (Schedule A) | | (60,262) |
| | **Non-Operating Items** | | |
| 28,526 | Income and Credits (Net) (Schedule E) | 30,303 | |
| (28,526) | Transferred to Capital Reserves and Sinking Fund | (30,303) | – |
| (5,658) | Surplus/(Deficit) for Year | | (23,298) |
| (8,475) | Deficit brought forward from previous year | | (14,133) |
| £(14,133) | Deficit carried forward to next year | | £(37,431) |

*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, 1983 | | | | 31st March, 1984 |
|---|---|---|---|---|
| | | **Assets Employed:** | | |
| £000's | Reference | | £000's | £000's |
| 988,279 | Schedule F | **Net Investment in Capital Assets** including work-in-progress | | 1,169,333 |
| 304,858 | Schedule G | **Current Assets** | 313,582 | |
| | | *Less:* | | |
| 161,390 | Schedule G | **Current Liabilities** | 204,072 | |
| 143,468 | | **Net Current Assets** | | 109,510 |
| 98,494 | Schedule H | **Sinking Fund Investments,** at cost (including interest accrued £4,856) | | 83,180 |
| £1,230,241 | | | | £1,362,023 |
| | | **Financed as follows:** | | |
| 1,014,886 | Schedule I | **Borrowings** | | 1,135,634 |
| | | **Reserves** | | |
| 130,994 | Schedule K | Capital | 180,640 | |
| 98,494 | Schedule H | Sinking funds for borrowings | 83,180 | |
| (14,133) | Account No. 1 | Profit and Loss Account balance (deficit) | (37,431) | |
| 215,355 | | | | 226,389 |
| £1,230,241 | | | | £1,362,023 |

*Note:* At 31st March, 1984 contractual capital commitments amounted to approximately £207,000,000 (1983 – £275,000,000)

*Signed:* Charles T. G. Dillon *Chairman*

*Signed:* P. J. Moriarty *Chief Executive*

D. Connaughton *Director, Finance*

19th June, 1984

# Electricity Income and Expenditure Account

Schedule A

| 1982/1983 | | | | | | 1983/1984 |
|---|---|---|---|---|---|---|
| £ | | £ | £ | £ | £ | £ |
| 571,991,736 | **Income** – Electricity Sales | 641,460,441 | | | | |
| 1,346,287 | – Miscellaneous | 1,594,580 | | | | |
| 573,338,023 | | | | | | 643,055,021 |
| | **Expenditure:** | **Generation** | **Transmission** | **Distribution** | **Total** | |
| 233,691,856 | Fuel (including purchased electricity) | 279,467,431 | | | 279,467,431 | |
| 131,117,538 | Operation, maintenance and local charges | 58,671,326 | 6,179,000 | 77,359,051 | 142,209,377 | |
| 15,000,000 | Rates Levy | 12,300,000 | 3,690,000 | 4,510,000 | 20,500,000 | |
| 39,283,935 | General charges | 17,619,459 | 4,772,993 | 21,262,789 | 43,655,241 | |
| 15,157,897 | Stations now decommissioned | 6,882,679 | | | 6,882,679 | |
| 34,916,323 | Depreciation | 22,203,860 | 4,901,640 | 13,159,140 | 40,264,640 | |
| 588,441 | Fisheries net cost | 726,862 | | | 726,862 | |
| 469,755,990 | | 397,871,617 | 19,543,633 | 116,290,980 | 533,706,230 | |
| 61,300,734 | Interest | 32,538,488 | 10,414,673 | 27,918,791 | 70,871,952 | |
| 531,056,724 | | 430,410,105 | 29,958,306 | 144,209,771 | | 604,578,182 |
| 42,281,299 | | | | | | 38,476,839 |
| 46,216,120 | Amortisation Charge (Schedule O - Note 9) | 26,981,526 | 9,228,483 | 24,052,445 | | 60,262,454 |
| £(3,934,821) | Surplus/(Deficit) | | | | | £(21,785,615) |

*Notes:*

Fuel includes: Excise Duty on Mineral Hydrocarbon Oil £8,547,379 (Previous Year £10,317,973).

Charges include: Local Authority Rates £2,119,260 (£1,779,371), Bad Debts £958,873 (£811,835), Audit Fee £70,000 (£65,000), Board Members' Remuneration including full-time Chairman £47,775 (£45,470).

# Appliance and Contracts Income and Expenditure Account

Schedule B

| 1982/1983 Appliance Sales | 1982/1983 Appliance Repairs | 1982/1983 Installations Contracts | 1982/1983 Total | | 1983/1984 Total | 1983/1984 Appliance Sales | 1983/1984 Appliance Repairs | 1983/1984 Installations Contracts |
|---|---|---|---|---|---|---|---|---|
| £ | £ | £ | £ | | £ | £ | £ | £ |
| 8,772,368 | 1,465,719 | 3,364,258 | 13,602,345 | Income, exclusive of VAT | 13,984,114 | 8,862,825 | 1,518,157 | 3,603,132 |
| 7,077,360 | 1,208,478 | 2,534,768 | 10,820,606 | Direct Costs | 11,088,950 | 6,925,900 | 1,305,091 | 2,857,959 |
| 1,695,008 | 257,241 | 829,490 | 2,781,739 | Gross Profit | 2,895,164 | 1,936,925 | 213,066 | 745,173 |
| | | | | Overheads: | | | | |
| 1,268,358 | 578,633 | 348,497 | 2,195,488 | Payroll costs | 2,221,377 | 1,254,679 | 611,417 | 355,281 |
| 351,259 | – | – | 351,259 | Publicity | 147,348 | 147,348 | – | – |
| 608,109 | 276,817 | 41,637 | 926,563 | Premises costs | 883,580 | 562,901 | 272,997 | 47,682 |
| 112,355 | 76,500 | 82,614 | 271,469 | Sundry expenses | 184,430 | 109,398 | 44,002 | 31,030 |
| 1,031,881 | 470,000 | 311,815 | 1,813,696 | General charges and interest, as apportioned | 1,485,365 | 800,000 | 428,000 | 257,365 |
| 3,371,962 | 1,401,950 | 784,563 | 5,558,475 | | 4,922,100 | 2,874,326 | 1,356,416 | 691,358 |
| – | 766,825 | 73,538 | 840,363 | Less: transfer to Electricity Income and Expenditure Account (See Schedule O – Note 12) | 858,235 | – | 782,729 | 75,506 |
| 3,371,962 | 635,125 | 711,025 | 4,718,112 | | 4,063,865 | 2,874,326 | 573,687 | 615,852 |
| £(1,676,954) | £(377,884) | £118,465 | £(1,936,373) | Surplus/(Deficit) transferred to Profit and Loss Account | £(1,168,701) | £(937,401) | £(360,621) | £129,321 |

# Consultancy Income and Expenditure Account

Schedule C

| 1982/1983 | | | 1983/1984 |
|---|---|---|---|
| £ | | £ | £ |
| 11,204,816 | **Income** | | 12,085,390 |
| | **Expenditure:** | | |
| 8,686,923 | Direct Costs | 9,094,651 | |
| | Overheads: | | |
| 717,824 | Directly allocated | 845,688 | |
| 980,333 | General charges and interest, as apportioned | 1,400,000 | |
| 10,385,080 | | | 11,340,339 |
| £819,736 | Surplus transferred to Profit and Loss Account | | £745,051 |

*Note:* This Account includes the result of ESB Joint Venture with Saudi Consulting House up to 31st December, 1983; no material items have arisen since that date.

# Statement of Source and Application of Funds

Schedule D

| 1982/1983 £ | *Reference* | | 1983/1984 £ |
|---|---|---|---|
| | | **Source:** | |
| 40,557,879 | Account No. 1 | Operations before Amortisation Charge | 36,964,626 |
| 1,922,881 | Schedule J | Provision towards premium on Stock Redemption | 2,201,709 |
| 38,723,782 | Schedule F | Depreciation | 44,763,566 |
| 1,980,391 | Schedule E | Credits on disposal of assets | 1,991,177 |
| 12,097,888 | Schedule E | Interest on Sinking Fund Investments | 12,487,439 |
| – | Schedule H | Decrease in Sinking Fund | 15,314,646 |
| 95,282,821 | | | 113,723,163 |
| 13,991,008 | Schedule E | Non-Repayable Supply Contributions | 12,773,933 |
| 190,312,651 | Schedule I | Borrowings | 157,680,640 |
| £299,586,480 | | | £284,177,736 |
| | | **Application:** | |
| 240,887,430 | Schedule F | Capital expenditure | 226,963,359 |
| | Schedule I | Redemption of Borrowings | |
| 63,911,525 | | (net of credits £3,050,462 on Stock Cancellation) | 89,142,043 |
| – | Schedule H | Payment of premium on Premium Stock | 1,124,205 |
| 37,170 | Schedule K | Discounts/Premiums on Borrowings | 905,682 |
| 9,222,679 | Schedule H | Increase in Sinking Fund | – |
| | Schedule G | Net Movement in Current Assets/Current Liabilities: | |
| | | – Cash/Temporary Investments 13,957,990 | |
| | | – Debtors/Creditors (32,625,803) | |
| | | – Inventories (15,289,740) | |
| (14,472,324) | | | (33,957,553) |
| £299,586,480 | | | £284,177,736 |

# Statement of Non-Operating Items — Profit and Loss Account

Schedule E

| 1982/1983 | | 1983/1984 | |
|---|---|---|---|
| £ | | £ | £ |
| | **Income and Credits** | | |
| 13,991,008 | Non-Repayable Supply Contributions (Schedule K) | 12,773,933 | |
| 456,977 | Credits arising on ESB Stock Cancellations (Schedule H) | 3,050,462 | |
| 12,097,888 | Interest on Sinking Fund Investments (Schedule H) | 12,487,439 | |
| 1,980,391 | Credits arising on disposal of Assets Retired (Schedule K) | 1,991,177 | |
| £28,526,264 | | | £30,303,011 |
| (16,428,376) | To Capital Reserves | (17,815,572) | |
| (12,097,888) | To Sinking Fund | (12,487,439) | |
| £(28,526,264) | | | £(30,303,011) |

# Statement of Capital Assets
## (Including Analysis of Depreciation)

Schedule F

| | Total at 31st March, 1983 £ | Additions less Retirements during year £ | Total at 31st March, 1984 £ |
|---|---|---|---|
| **ASSETS** | | | |
| **Generation** | 389,383,165 | 67,147,744 | **456,530,909** |
| **Transmission** | 120,985,982 | 23,060,202 | **144,046,184** |
| **Distribution** | 322,261,265 | 27,667,859 | **349,929,124** |
| **General Buildings, Transport and Working Equipment** | 66,907,712 | 19,001,739 | **85,909,451** |
| **Fisheries** | 273,152 | 748,044 | **1,021,196** |
| | 899,811,276 | £137,625,588 | **1,037,436,864** |
| **Work-in-Progress,** including payments on account | 380,368,790 | | **465,239,948** |
| **Total Investment in Capital Assets (at cost)** | 1,280,180,066 | | **1,502,676,812** |
| **Deduct Accumulated Depreciation,** as below | 291,901,001 | | **333,343,679** |
| **Net Investment in Capital Assets** | £988,279,065 | | **£1,169,333,133** |

Work carried out in the year amounted to £226,963,359 (1982/83 £240,887,430)

**DEPRECIATION**

**Accumulated Depreciation:**

| | £ | £ | £ | | **Accumulated Depreciation as at 31st March, 1984 £** |
|---|---|---|---|---|---|
| Provision for depreciation of assets less assets retired as at 31st March, 1983 | | | 291,901,001 | Generation: | **160,299,020** |
| Movements in year: | | | | | |
| Depreciation of assets – Plant and Buildings | 40,276,640 | | | Transmission: | **38,975,833** |
| – Tools, Vehicles and Decommissioned Stations | 4,486,926 | **44,763,566** | | Distribution: | **118,012,998** |
| Assets Retired – Generation | 336,587 | | | General Buildings, Transport & Working Equipment: | **15,938,762** |
| – Transmission | 398,648 | | | | |
| – Distribution | 2,272,230 | | | Fisheries: | **117,066** |
| – General Buildings, Transport & Working Equipment | 1,459,148 | | | | |
| – Fisheries | – | | | | |
| | | **(4,466,613)** | 40,296,953 | | |
| | | | 332,197,954 | | |
| Transfer from Asset Renewal Reserve (Schedule K) | | | 1,145,725 | | |
| **Total as at 31st March, 1984** | | | **£333,343,679** | | **£333,343,679** |

# Statement of Current Assets and Current Liabilities

Schedule G

| 31st March, 1983 | | Current Assets | | | | 31st March, 1984 |
|---|---|---|---|---|---|---|
| £ | | | | £ | £ | £ |
| 41,237,156 | Cash at bank and in hand (net) | | | | | 46,529,159 |
| | | | Nominal Value | | | |
| | Investments at cost: | £ (1982/1983) | £ | | | |
| 7,073,639 | ESB Stocks | 7,635,964 | 15,213,606 | | 15,135,697 | |
| 2,458,817 | Government Stocks | 3,300,000 | 15,469,868 | | 13,825,426 | |
| 10,762,680 | Euro Bonds | 12,070,055 | – | | – | |
| 20,295,136 | | | | | | 28,961,123 |
| | Accounts Receivable: | | | | | |
| | Electricity: billed | | | 45,737,746 | | |
| 105,490,046 | : unbilled | | | 72,932,119 | 118,669,865 | |
| 16,562,255 | Appliance and Contracts (including £15.3m. Hire Purchase, maximum term 5 years) | | | | 16,115,590 | |
| | Others: VAT Refund Due | | | 6,695,107 | | |
| | : Sundry (completed) Repayable Work | | | 9,998,268 | | |
| | : Miscellaneous | | | 13,610,905 | | |
| 33,434,457 | | | | | 30,304,280 | |
| 155,486,758 | | | | | | 165,089,735 |
| | Inventories: | | | | | |
| 40,960,326 | Fuel | | | 27,713,289 | | |
| 41,777,439 | Plant/Network Stocks and Miscellaneous Spares and Sundries | | | 39,717,394 | | |
| 2,409,081 | Appliances | | | 2,426,423 | | |
| 85,146,846 | | | | | | 69,857,106 |
| 2,692,481 | Repayable Work-in-Progress at cost | | | | | 3,145,078 |
| £304,858,377 | | | | | | £313,582,201 |
| | **Current Liabilities** | | | | | |
| 86,075,555 | Accounts Payable | | | | | 92,824,814 |
| 2,668,988 | Progress Payments on Repayable Work-in-Progress | | | | | 2,643,876 |
| 14,249,073 | Temporary Borrowings and Borrowings for Hire Purchase financing | | | | | 20,683,644 |
| – | Revolving Credit Facility | | | | | 21,186,441 |
| 6,016,929 | Supply Contributions and Deposits | | | | | 6,001,974 |
| 27,726,147 | Accrued Charges and Provisions | | | | | 27,768,944 |
| 24,653,558 | Accrued Interest on Borrowings | | | | | 32,961,934 |
| £161,390,250 | | | | | | £204,071,627 |

# Statement of Sinking Funds for Borrowings

Schedule H

| 1982/1983 | | | 1983/1984 |
|---|---|---|---|
| £ | | £ | £ |
| 87,421,566 | Opening Balance – Investments | 94,454,212 | |
| 1,850,170 | – Interest Accrued | 4,040,203 | |
| 89,271,736 | | | 98,494,415 |
| | Additions: | | |
| 46,216,120 | Amortisation charge in year (Account No. 1) | 60,262,454 | |
| 1,922,881 | Provision for premium on ESB Stocks (Schedule J) | 2,201,709 | |
| 456,977 | Credits on cancellation of ESB Stocks | 3,050,462 | |
| 12,097,888 | Interest for year (including interest accrued) | 12,487,439 | |
| 60,693,866 | | | 78,002,064 |
| 149,965,602 | | | 176,496,479 |
| | Utilisation: | | |
| | Redemption of borrowings viz:– | | |
| 1,606,733 | – Minister for Finance | 1,679,475 | |
| 8,175,259 | – ESB Stocks (including credits on cancellation) | 22,443,106 | |
| 41,689,195 | – Other Borrowings | 68,069,924 | |
| (51,471,187) | Reflected in Repaid Capital Reserve (Schedule K) | | (92,192,505) |
| – | Premium Paid on Stock Redemption | | (1,124,205) |
| | Closing Balance: (as per Balance Sheet) | | |

| | Market £ | Cost £ | | |
|---|---|---|---|---|
| Investments – ESB Stocks | 6,505,210 | 6,283,509 | | |
| – Government Stocks | 40,140,515 | 37,359,123 | | |
| – Euro Bonds | 42,577,952 | 34,681,376 | | |
| | | | 78,324,008 | |
| 94,454,212 | | | | |
| 4,040,203 | Interest accrued | | 4,855,761 | |
| £98,494,415 | | | | £83,179,769 |

*Note:* Redemption of individual Borrowings appears in Schedule I.

# Statement of Borrowings

Schedule I

| Amount Borrowed £ | Year(s) of Borrowing | | | Balance Outstanding 31st March, 1983 £ | Borrowed during year £ | Redeemed during year £ | Adjustment for currency changes £ | **Balance Outstanding 31st March, 1984 £** |
|---|---|---|---|---|---|---|---|---|
| **Irish Pound Borrowings:** | | | | | | | | |
| 68,450,000 | 1928-59 | Advances | – Minister for Finance | 39,566,149 | – | 1,679,475 | – | **37,886,674** |
| 500,000 | 1962 | Loan | – New Ireland Assurance Co. Ltd. 6% – 1962/87 | 136,412 | – | 31,141 | – | **105,271** |
| 14,865,000 | 1972 | Loan | – Central Bank of Ireland 7.25% – 1972/87 | 5,613,763 | – | 1,257,258 | – | **4,356,505** |
| 12,000,000 | 1962-63 | Stock | – 6% – 1982/87 | 3,364,549 | – | 404,040 | – | **2,960,509** |
| 16,500,000 | 1964-65 | Stock | – 6% – 1984/89 | 5,765,401 | – | 338,387 | – | **5,427,014** |
| 13,000,000 | 1966-67 | Stock | – 7% – 1986/91 | 7,020,130 | – | 2,228,823 | – | **4,791,307** |
| 7,000,000 | 1968 | Stock | – 7.25% – 1988/93 | 4,009,306 | – | 2,114,808 | – | **1,894,498** |
| 9,250,000 | 1970 | Stock | – 9.5% – 1985/90 | 7,242,102 | – | 3,361,381 | – | **3,880,721** |
| 12,000,000 | 1972 | Stock | – 9% – 1992/95 | 7,556,225 | – | 3,403,393 | – | **4,152,832** |
| 11,300,000 | 1975-76 | Stock | – 13% – 1983/85 | 8,269,612 | – | 2,097,479 | – | **6,172,133** |
| 8,200,000 | 1977 | Stock | – 9% – Premium (20%) 1983 | 5,621,024 | – | 5,621,024 | – | **–** |
| 16,800,000 | 1977 | Stock | – 13% – 1988 | 11,503,197 | – | 1,565,297 | – | **9,937,900** |
| 6,000,000 | 1978 | Stock | – 9% – Premium (20%) 1984 | 4,891,905 | – | 100,000 | – | **4,791,905** |
| 12,000,000 | 1978 | Stock | – 13% – 1990/92 | 10,418,570 | – | 456,474 | – | **9,962,096** |
| 16,500,000 | 1980 | Stock | – 12% – Premium (25%) 1985 | 14,929,649 | – | 400,000 | – | **14,529,649** |
| 21,000,000 | 1981 | Stock | – 13% – Premium (30%) 1986 | 19,300,000 | – | – | – | **19,300,000** |
| 14,000,000 | 1983 | Stock | – 10% – Premium (25%) 1988 | – | 14,000,000 | 352,000 | – | **13,648,000** |
| 20,000,000 | 1983 | Stock | – 13.5% – 2006/2008 | – | 20,000,000 | – | – | **20,000,000** |
| 19,500,000* | 1978 | Floating Rate Facility | – Domestic Banks – 1981/88 | 15,250,000 | – | 2,125,000 | – | **13,125,000** |
| 30,000,000* | 1981 | Floating Rate Facility | – Domestic Banks – 1987/89 | 30,000,000 | – | – | – | **30,000,000** |
| 15,000,000 | 1982 | Floating Rate Note Issue | – Domestic Banks – 1988 | 15,000,000 | – | – | – | **15,000,000** |
| 30,000,000* | 1982 | Floating Rate Facility | – Domestic Banks – 1988/92 | 30,000,000 | – | – | – | **30,000,000** |
| 10,000,000 | 1983 | Floating Rate Facility | – Domestic Bank – 1987/91 | – | 10,000,000 | – | – | **10,000,000** |
| 598,000 | 1982 | Project Finance | – 1982/87 | 538,272 | – | 119,616 | – | **418,656** |
| | | | | 245,996,266 | 44,000,000 | 27,655,596 | – | **262,340,670** |
| **Foreign Currency Borrowings:** | | | | | | | | |
| **Project Finance:** | | | | | | | | |
| IR£20,000,000* | 1978 | – European Investment Bank 9.2% | – 1983/98 | 28,357,056 | – | 862,268 | 2,350,605 | **29,845,393** |
| IR£10,000,000* | 1979 | – European Investment Bank 9.35% | – 1983/99 | 13,279,902 | – | 198,698 | 850,894 | **13,932,098** |
| IR£15,000,000* | 1979 | – European Investment Bank 9.45% | – 1983/99 | 20,605,784 | – | 789,200 | 1,769,839 | **21,586,423** |
| IR£20,000,000* | 1979 | – European Investment Bank 9.45% | – 1983/99 | 27,477,205 | – | 1,052,362 | 2,360,406 | **28,785,249** |
| IR£10,785,000* | 1979 | – European Investment Bank 8.45% | – 1985/94 | 12,835,177 | – | – | 409,165 | **13,244,342** |
| IR£5,715,000* | 1979 | – European Investment Bank 12.0% | – 1985/96 | 9,115,384 | – | – | 926,988 | **10,042,372** |
| IR£3,000,000* | 1980 | – European Investment Bank 8.75% | – 1984/95 | 3,614,602 | – | – | 155,611 | **3,770,213** |
| IR£20,000,000* | 1980 | – European Investment Bank 8.75% | – 1985/95 | 24,082,140 | – | – | 1,036,550 | **25,118,690** |
| IR£30,000,000* | 1981 | – European Investment Bank 7.65% | – 1986/96 | 35,787,626 | – | – | 2,405,121 | **38,192,747** |
| IR£17,000,000* | 1981 | – European Investment Bank 9.3% | – 1985/2001 | 18,893,191 | – | – | 3,217,836 | **22,111,027** |
| IR£22,000,000* | 1981 | – European Investment Bank 10.55% | – 1987/2001 | 25,207,882 | – | – | 1,878,729 | **27,086,611** |
| IR£18,000,000* | 1981 | – European Investment Bank 14.0% | – 1987/2001 | 19,760,934 | – | – | 841,897 | **20,602,831** |
| IR£16,000,000* | 1982 | – European Investment Bank 11.375% | – 1985/92 | 16,875,263 | – | – | 523,606 | **17,398,869** |
| IR£20,000,000* | 1982 | – European Investment Bank 12.0% | – 1995/2002 | 17,648,063 | – | – | 1,282,908 | **18,930,971** |

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

– Continued overleaf

# Statement of Borrowings

Schedule I (Continued)

| Amount Borrowed | Year(s) of Borrowing | | | Balance Outstanding 31st March, 1983 £ | Borrowed during year £ | Redeemed during year £ | Adjustment for currency changes £ | **Balance Outstanding 31st March, 1984 £** |
|---|---|---|---|---|---|---|---|---|
| **Project Finance (Continued):** | | | | | | | | |
| IR£8,000,000* | 1982 | – European Investment Bank 7.0% | – 1986/94 | 8,986,149 | – | – | 603,918 | **9,590,067** |
| IR£18,500,000* | 1983 | – European Investment Bank 6.4% | – 1988/98 | – | 18,475,319 | – | 624,799 | **19,100,118** |
| IR£8,250,000* | 1983 | – European Investment Bank 6.5% | – 1984/95 | – | 8,261,760 | – | (–) 78,867 | **8,182,893** |
| IR£6,750,000* | 1983 | – European Investment Bank 12.15% | – 1989/98 | – | 6,716,458 | – | 41,479 | **6,757,937** |
| IR£14,010,000* | 1983 | – European Investment Bank 10.4% | – 1989/98 | – | 13,976,598 | – | 146,326 | **14,122,924** |
| US$14,500,000* | 1969-73 | – I.B.R.D., Washington 6.5% | – 1974/94 | 9,166,166 | – | 420,744 | 872,491 | **9,617,913** |
| US$20,000,000* | 1971-76 | – I.B.R.D., Washington 7.25% | – 1976/87 | 8,129,045 | – | 1,391,207 | 780,767 | **7,518,605** |
| US$15,000,000* | 1972-77 | – I.B.R.D., Washington 7.25% | – 1977/88 | 6,411,011 | – | 777,409 | 375,209 | **6,008,811** |
| US$37,509,000 | 1981-84 | – Export-Import Bank of the United States 8.0% | – 1986/98 | 26,918,642 | 2,036,663 | – | 2,831,747 | **31,787,052** |
| US$10,840,000 | 1981-82 | – Export-Import Bank of the United States 8.375% | – 1983/91 | 7,817,387 | – | 573,672 | 794,502 | **8,038,217** |
| US$17,776,000 | 1981-84 | – Export-Import Bank of the United States 8.0% | – 1988/2000 | 12,563,234 | 1,224,109 | – | 1,276,979 | **15,064,322** |
| F.Fr.376,441,000 | 1973-83 | – French Banks | – 1977/2004 | 26,346,661 | 683,133 | 3,110,813 | 97,795 | **24,016,776** |
| Stg.£20,530,000 | 1971-84 | – United Kingdom Banks/Suppliers | – 1975/90 | 9,032,012 | 3,087,434 | 2,730,858 | 686,722 | **10,075,310** |
| Sw.Fr.55,587,000 | 1971-84 | – Swiss Export Agency | – 1986/97 | 6,824,108 | 14,691,526 | – | 394,867 | **21,910,501** |
| IR£735,000* | 1977-81 | – Other Borrowings | | 430,776 | – | 115,283 | (–) 647 | **314,846** |
| | | | | 396,165,400 | 69,153,000 | 12,022,514 | 29,458,242 | **482,754,128** |
| **Fixed Term Loans:** | | | | | | | | |
| **Registered Notes/Bonds and Bearer Bonds** | | | | | | | | |
| US$30,000,000 | 1972 | – Japanese Banks 7.75% | – 1973/92 | 10,769,230 | – | 1,238,938 | 1,147,674 | **10,677,966** |
| US$12,000,000 | 1977 | – U.S. Syndicate 9.25% | – 1983/92 | 9,230,769 | – | 1,051,248 | 973,021 | **9,152,542** |
| US$10,000,000 | 1980 | – U.S. Bank 11.375% | – 1985 | 7,692,307 | – | – | 782,269 | **8,474,576** |
| Sw.Fr.50,000,000 | 1973 | – Swiss Banks 4.625% | – 1985 | 18,467,220 | – | – | 1,241,096 | **19,708,316** |
| Sw.Fr.25,000,000 | 1980 | – Banking Syndicate 5.75% | – 1984/86 | 9,233,610 | – | 3,021,273 | 685,573 | **6,897,910** |
| B.Fr.700,000,000 | 1973 | – Belgian Banks 7.5% | – 1983 | 10,987,286 | – | 11,111,269 | 123,983 | **–** |
| B.Fr.1,000,000,000 | 1973-74 | – Belgian Banks 8.75% | – 1980/89 | 10,987,286 | – | 1,166,861 | (–) 178,340 | **9,642,085** |
| D.M.75,000,000 | 1980 | – German Bank 8.5% | – 1988 | 23,764,258 | – | – | 757,566 | **24,521,824** |
| D.M.150,000,000 | 1979 | – Banking Syndicate 9.2% | – 1986/91 | 47,528,517 | – | – | 1,515,131 | **49,043,648** |
| D.M.120,000,000 | 1982 | – Banking Syndicate 9.75% | – 1983/92 | 38,022,813 | – | 3,863,811 | 1,152,425 | **35,311,427** |
| Yen5,000,000,000 | 1982 | – Japanese Bond Issue 9.1% | – 1987/92 | 16,134,236 | – | – | 2,747,939 | **18,882,175** |
| Yen5,000,000,000 | 1983 | – Japanese Banks 8.5% | – 1987/92 | 16,134,236 | – | – | 2,747,939 | **18,882,175** |
| D.G.75,000,000 | 1983 | – Dutch Banks – Note Issue 8.75% | – 1988 | – | 21,114,865 | – | 633,721 | **21,748,586** |
| | | | | 218,951,768 | 21,114,865 | 21,453,400 | 14,329,997 | **232,943,230** |

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

# Statement of Borrowings

Schedule I (Continued)

| Amount Borrowed | Year(s) of Borrowing | | | Balance Outstanding 31st March, 1983 £ | Borrowed during year £ | Redeemed during year £ | Adjustment for currency changes £ | **Balance Outstanding 31st March, 1984 £** |
|---|---|---|---|---|---|---|---|---|
| **Floating Rate Facilities:** | | | | | | | | |
| US$40,000,000* | 1977 | – Banking Syndicate | – 1980/88 | 19,230,769 | – | 4,302,938 | 2,021,321 | **16,949,152** |
| US$30,000,000* | 1974 | – Banking Syndicate | – 1981/88 | 17,307,692 | – | 3,048,781 | 1,630,919 | **15,889,830** |
| US$20,000,000* | 1980-81 | – Banking Syndicate | – 1984/87 | 15,384,615 | – | – | 1,564,537 | **16,949,152** |
| US$20,000,000* | 1980 | – Domestic Banks | – 1984/88 | 15,384,615 | – | – | 1,564,537 | **16,949,152** |
| US$20,000,000* | 1981 | – Floating Rate Note Issue | – 1987 | 15,384,615 | – | – | 1,564,537 | **16,949,152** |
| Stg.£20,500,000* | 1978 | – Domestic Banks | – 1981/88 | 15,686,028 | – | 2,594,411 | 1,162,098 | **14,253,715** |
| D.G.100,000,000* | 1980 | – Banking Syndicate | – 1983 | 21,094,079 | – | 21,114,865 | 20,786 | **–** |
| CAN$30,000,000 | 1981 | – Canadian Bank | – 1987/89 | 18,709,073 | – | – | 1,211,245 | **19,920,318** |
| CAN$25,000,000 | 1982 | – Canadian Bank | – 1989 | 15,590,894 | – | – | 1,009,371 | **16,600,265** |
| US$10,000,000 | 1983 | – Middle East Bank | – 1988/91 | – | 8,581,481 | – | (–) 106,905 | **8,474,576** |
| Stg.£12,000,000 | 1983 | – Sterling Acceptance Credit | – 1989/91 | – | 14,831,294 | – | (–) 170,329 | **14,660,965** |
| | | | | 153,772,380 | 23,412,775 | 31,060,995 | 11,472,117 | **157,596,277** |
| **TOTAL – FOREIGN CURRENCY BORROWINGS** | | | | 768,889,548 | 113,680,640 | 64,536,909 | 55,260,356 | **873,293,635** |
| **TOTAL – IRISH POUND BORROWINGS** | | | | 245,996,266 | 44,000,000 | 27,655,596 | – | **262,340,670** |
| **TOTAL – ALL BORROWINGS** | | | | £1,014,885,814 | £157,680,640 | £92,192,505 | £55,260,356 | **£1,135,634,305** |

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

– Continued overleaf

# Statement of Borrowings

Schedule I (Continued)

**Currency and Repayment Profile of Borrowings**

| | Repayable Within 1 Year £000 | Repayable Within 2 to 5 Years £000 | Repayable Within 6 to 10 Years £000 | Repayable After 10 Years £000 | Total £000 | Currency as % of Total Borrowings % |
|---|---|---|---|---|---|---|
| Irish Pounds | 10,675 | 135,285 | 71,806 | 44,575 | 262,341 | 23 |
| Sterling | 6,188 | 18,464 | 16,283 | 23,978 | 64,913 | 6 |
| U.S. Dollars | 20,725 | 119,984 | 54,515 | 51,051 | 246,275 | 22 |
| Deutsche Marks | 5,802 | 86,243 | 72,189 | 20,088 | 184,322 | 16 |
| Swiss Francs | 4,275 | 47,083 | 56,420 | 32,013 | 139,791 | 12 |
| Belgian Francs | 2,039 | 7,952 | – | – | 9,991 | 1 |
| French Francs | 3,013 | 8,965 | 6,303 | 5,736 | 24,017 | 2 |
| Dutch Guilders | 478 | 33,109 | 13,238 | 18,256 | 65,081 | 6 |
| Canadian Dollars | – | 19,920 | 16,600 | – | 36,520 | 3 |
| Japanese Yen | 836 | 15,758 | 39,685 | 24,254 | 80,533 | 7 |
| Luxembourg Francs | 3 | 12 | 5,792 | 8,331 | 14,138 | 1 |
| ECU's | – | – | 2,636 | 4,122 | 6,758 | 1 |
| Others | 87 | 413 | 406 | 48 | 954 | – |
| | 54,121 | 493,188 | 355,873 | 232,452 | 1,135,634 | |
| Repayment Profile | 5% | 43% | 31% | 21% | | 100% |

See Note No. 9 – Amortisation of Borrowings

**Redemption of Borrowings during Year**

| 1982/1983 £ | | 1983/1984 £ |
|---|---|---|
| 51,471,187 | Funded Redemption, as per Schedule H | 92,192,505 |
| 12,897,315 | Other Redemption | – |
| £64,368,502 | Total (See previous page) | £92,192,505 |

# Statement of Interest

Schedule J

| 1982/1983 £ | | £ | £ | 1983/1984 £ |
|---|---|---|---|---|
| | **Interest on:** | | | |
| | Advances from Minister for Finance | | 1,779,805 | |
| | Borrowings in Irish pounds | 30,059,734 | | |
| | Add: Provision for funding of premium on redemption of ESB Stocks | 2,201,709 | | |
| | | | 32,261,443 | |
| | Borrowings in other currencies | | 77,958,249 | |
| | | | 111,999,497 | |
| | Less: Interest from temporary cash investment | | 9,000,801 | |
| £86,810,392 | | | | **£102,998,696** |
| | Allocated as follows: | | | |
| | **Interest:** | | | |
| | Income and Expenditure Accounts: | | | |
| | – Electricity | | 70,871,952 | |
| | – Appliance and Contracts | | 300,329 | |
| | – Consultancy | | 538,000 | |
| | Fisheries | | 50,194 | |
| | Capital Works | | 31,238,221 | |
| £86,810,392 | | | | **£102,998,696** |

# 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, 1983 | | 27,889,826 | |
| Other contributions – as at 31st March, 1983 | 73,190,088 | | |
| Transferred in year | 12,773,933 | | |
| | | 85,964,021 | |
| | | | **113,853,847** |
| **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, 1983 | | 18,058,483 | |
| Movements in year: | | | |
| Amortisation of Borrowings (Schedule H) | 92,192,505 | | |
| Discounts on Borrowings | (905,682) | | |
| Adjustment for changes in currency parities (Schedule O – Note 8) | (55,260,356) | | |
| | | 36,026,467 | |
| | | | **54,084,950** |
| **Asset Renewal Reserve:** | | | |
| Balance as at 31st March, 1983 | | 11,855,821 | |
| Credits arising on disposal of assets retired (Schedule E) | | 1,991,177 | |
| Less amount allocated to depreciation fund (Schedule F) | | (1,145,725) | |
| | | | **12,701,273** |
| **Total as at 31st March, 1984** (as per Balance Sheet) | | | **£180,640,070** |

# Statement of Generation Costs

Schedule L

| Generating Stations | Fuel | Operation | Maintenance | Local Charges | WORKS COST 1983/1984 | WORKS COST 1982/1983 | Depreciation | TOTAL COST 1983/1984 | TOTAL COST 1982/1983 |
|---|---|---|---|---|---|---|---|---|---|
| | £ | £ | £ | £ | £ | £ | £ | £ | £ |
| Coal/Oil/Gas | | | | | | | | | |
| Marina | 26,020,866 | 1,889,165 | 2,213,056 | 479,120 | **30,602,207** | 30,221,839 | 844,852 | **31,447,059** | 31,043,736 |
| Arigna | 2,079,888 | 637,184 | 365,612 | 95,339 | **3,178,023** | 3,547,157 | 9,367 | **3,187,390** | 3,552,722 |
| Great Island | 12,395,618 | 1,497,606 | 1,527,469 | 352,711 | **15,773,404** | 17,369,935 | 736,774 | **16,510,178** | 18,107,324 |
| Tarbert | 40,979,097 | 1,783,252 | 3,224,892 | 640,432 | **46,627,673** | 33,947,847 | 2,911,035 | **49,538,708** | 37,736,597 |
| Poolbeg | 45,568,214 | 2,409,789 | 5,218,838 | 977,787 | **54,174,628** | 56,827,326 | 2,867,719 | **57,042,347** | 59,337,024 |
| Aghada | 74,618,562 | 1,448,453 | 1,988,730 | 406,335 | **78,462,080** | 67,868,490 | 8,292,854 | **86,754,934** | 76,188,850 |
| North Wall | 18,269,431 | 1,004,208 | 492,429 | 463,138 | **20,229,206** | 960,781 | 2,333,510 | **22,562,716** | 1,280,635 |
| Sod Peat (Machine) | | | | | | | | | |
| Portarlington | 2,476,742 | 1,033,451 | 659,367 | 148,949 | **4,318,509** | 4,889,083 | 5,048 | **4,323,557** | 4,903,185 |
| Allenwood | 4,257,604 | 1,371,612 | 1,066,352 | 186,792 | **6,882,360** | 6,538,217 | 6,832 | **6,889,192** | 6,543,377 |
| Milled Peat | | | | | | | | | |
| Ferbane | 12,480,665 | 1,999,162 | 2,109,605 | 355,989 | **16,945,421** | 15,802,754 | 96,424 | **17,041,845** | 15,896,922 |
| Rhode | 10,882,322 | 1,537,482 | 2,036,193 | 281,477 | **14,737,474** | 15,213,019 | 19,502 | **14,756,976** | 15,330,657 |
| Bellacorick | 6,495,664 | 1,236,796 | 981,925 | 181,095 | **8,895,480** | 7,401,471 | 74,980 | **8,970,460** | 7,469,337 |
| Shannonbridge | 14,378,320 | 1,793,614 | 1,594,510 | 283,730 | **18,050,174** | 13,662,893 | 2,004,622 | **20,054,796** | 14,721,809 |
| Lanesborough | 6,990,938 | 1,323,962 | 1,087,294 | 226,936 | **9,629,130** | 6,337,984 | 1,024,928 | **10,654,058** | 6,494,691 |
| Sod Peat (Hand-Won) | | | | | | | | | |
| Four 5MW Stations | 1,351,275 | 1,062,685 | 408,753 | 166,203 | **2,988,916** | 2,603,016 | 18,449 | **3,007,365** | 2,621,466 |
| **Total – Fuel Stations** | 279,245,206 | 22,028,421 | 24,975,025 | 5,246,033 | **331,494,685** | 283,191,812 | 21,246,896 | **352,741,581** | 301,228,332 |
| Hydro | | | | | | | | | |
| Shannon | | 781,057 | 1,555,480 | 306,982 | **2,643,519** | 2,810,234 | 52,371 | **2,695,890** | 2,861,363 |
| Erne | | 378,166 | 689,397 | 175,176 | **1,242,739** | 1,137,494 | 132,936 | **1,375,675** | 1,269,977 |
| Liffey | | 103,358 | 388,623 | 60,151 | **552,132** | 418,059 | 38,002 | **590,134** | 457,145 |
| Lee | | 251,172 | 282,561 | 85,419 | **619,152** | 534,401 | 78,909 | **698,061** | 614,086 |
| Clady | | 64,381 | 68,848 | 11,623 | **144,852** | 117,237 | 21,219 | **166,071** | 138,399 |
| Pumped Storage | | | | | | | | | |
| Turlough Hill | | 507,237 | 546,746 | 165,470 | **1,219,453** | 1,335,589 | 633,527 | **1,852,980** | 1,970,817 |
| **Total – Hydro Stations** | | 2,085,371 | 3,531,655 | 804,821 | **6,421,847** | 6,353,014 | 956,964 | **7,378,811** | 7,311,787 |
| **Total – All Stations** | 279,245,206 | 24,113,792 | 28,506,680 | 6,050,854 | **337,916,532** | 289,544,826 | 22,203,860 | **360,120,392** | 308,540,119 |
| **Electricity Purchased in bulk (net)** | | | | | | | | **222,225** | 124,830 |
| **Rates Levy** | | | | | | | | **12,300,000** | 9,000,000 |
| **General Charges** | | | | | | | | **17,619,459** | 15,898,730 |
| **Costs (current and remaining) of Stations now decommissioned** | | | | | | | | **6,882,679** | 15,157,897 |
| **Fisheries (Net Cost before Amortisation)** | | | | | | | | **726,862** | 588,441 |
| **TOTAL COST** | | | | | | | | **£397,871,617** | **£349,310,017** |

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

# Fisheries – Commercial and Conservation Operations

Schedule M

| Total Cost 1982/1983 £ | | £ | Total Cost 1983/1984 £ | Commercial £ | Conservation £ |
|---|---|---|---|---|---|
| 1,033,338 | Direct Costs | | **999,433** | 443,779 | 555,654 |
| | Overheads and General Charges: | | | | |
| 200,874 | Payroll expenses and charges | 216,762 | | | |
| 4,000 | Depreciation | 12,000 | | | |
| 7,003 | Interest on Borrowings | 50,194 | **278,956** | 113,042 | 165,914 |
| 1,245,215 | | | **1,278,389** | 556,821 | 721,568 |
| | Less: | | | | |
| 656,774 | Sales of fish, letting of fishing rights and miscellaneous income | | **551,527** | 532,065 | 19,462 |
| 588,441 | Net Cost before Amortisation, as per Electricity Income and Expenditure Account | | **726,862** | 24,756 | 702,106 |
| 3,755 | Amortisation Charge | | **6,956** | 1,660 | 5,296 |
| £592,196 | **Net Cost for Year** | | **£733,818** | £26,416 | £707,402 |

# Value Added Statement

Schedule N

| 1982/1983 £000's | | £000's | 1983/1984 £000's |
|---|---|---|---|
| | Sources of Income: | | |
| 571,992 | Electricity Sales (Schedule A) | 641,460 | |
| 13,602 | Appliance and Contracts Trading (Schedule B) | 13,984 | |
| 11,205 | Consultancy (Schedule C) | 12,085 | |
| 1,346 | Miscellaneous | 1,595 | |
| 598,145 | | | **669,124** |
| | Less Costs of: | | |
| 233,692 | Fuel (including Excise Duty on Mineral Hydrocarbon Oil £8,547) | 279,467 | |
| 81,869 | Materials and Services (including Rates Levy £20,500) | 86,834 | |
| 38,724 | Depreciation of Assets | 44,764 | |
| 354,285 | | | **411,065** |
| £243,860 | **Value Added** | | **£258,059** |
| | Distribution of Value Added: | | |
| 141,296 | Employees – Payroll (Inclusive of deductions for PAYE/PRSI etc.) | | **149,334** |
| | Lenders | | |
| 62,006 | – Interest | 71,761 | |
| 46,216 | – Amortisation of Borrowings | 60,262 | |
| 108,222 | | | **132,023** |
| (5,658) | Reduction/(Increase) in Deficit brought forward | | **(23,298)** |
| £243,860 | | | **£258,059** |

**Basis of Accounting:**

1. The Financial Statements are prepared in accordance with generally accepted accounting principles; however, an amortisation charge is made which is calculated to spread recovery from Income of amounts borrowed together with the effect of any currency movements on such borrowings. This treatment is considered to be appropriate to a public utility and is consistent with the requirements of the Electricity (Supply) Acts 1927 - 1982.
   The Financial Statements are expressed in Irish pounds (£s).

**Principal Accounting Policies:**

2. **Capital Assets:**
   Capital Assets are valued at cost. Cost includes prime cost, overheads and interest costs during construction. Assets include land (£17.0m) most of which is held freehold.

3. **Depreciation of Capital Assets:**
   Depreciation is designed to recover historical cost over allotted lifespans.
   Methods used are appropriate to the nature of the Board's business and to the character and extent of its capital assets.
   Assets are grouped and allotted lifespans in line with international practice. Major asset classifications and their allotted lifespans are:–
   : Generation Plant (including Thermal Station Structures) 20 years
   : Transmission and Distribution Plant and Structures 25 years
   : General Buildings and Hydro Station Structures 50 years
   Depreciation is provided:
   : On the straight-line method for Transmission, Distribution and General Assets.
   : On a projected plant usage basis for Generating Units.
   : On all assets from date of commissioning.
   Assets when retired from service are charged against Accumulated Depreciation and any shortfalls thereby arising in the depreciation fund are recovered from Asset Renewal Reserve (Schedule K) to which proceeds of disposal or stores value of assets retired have been credited.

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

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

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

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

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

9. **Amortisation of Borrowings:**
   This charge is made to reflect certain provisions of Section 21 (2) of the Electricity (Supply) Act, 1927.
   It is determined as follows:
   : The charge for ESB stock issues is in accordance with contractual commitments.
   : The charge for other borrowings is calculated at 5% of their Irish Pound value as at the previous year-end.
   : The charge to cover cumulative effect of exchange rates adjustments is calculated at 5% of the aggregate adjustment for changes in currency parities over the previous five years.
   This determination of the charge for Amortisation of Borrowings represents a change from practice applied up to 31st March 1983. The change has no material effect on the final results for the year 1983/84.
   The sinking fund provison towards the premium element payable on redemption of ESB Premium Stock is included in the charge for interest.

   Sinking Fund Investments are stated at cost.

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

**11. Hire Purchase Transactions:**
Profit on Hire Purchase sales is taken in the year of sale. Credit for interest is taken on a reducing balance basis over the Hire Purchase term.
Hire Purchase financing operations are reflected in the Appliance Sales Activity, and from 1st April, 1983 have been included with income (previously included with "General Charges and Interest (net)").

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

**13. Taxation:**
The Board is liable for Corporation Tax at the reduced rate applicable to manufacturing companies. Because of large continuing capital expenditure, liability to tax will not arise in the foreseeable future and a tax equalisation reserve is not deemed necessary (unutilised capital allowances at 31st March, 1984 are estimated at £610m). Had a tax equalisation reserve been provided, the accumulated figure would now be an estimated £17.2m (31st March, 1983 – £15.5m).

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

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

**16. Accounting Year:**
Income and Expenditure are aligned on a 52 or 53 week year as appropriate. The year 1983/1984 is a 52 week year (1982/1983 – 52 weeks).

# Current Cost Profit and Loss Account

Schedule P

| 1982/1983 £000's | | £000's | 1983/1984 £000's |
|---|---|---|---|
| (5,658) | **Surplus/(Deficit) as per Profit and Loss Account,** after Interest and Amortisation | | **(23,298)** |
| | Current Cost Operating Adjustments: | | |
| 40,463 | Depreciation | 42,896 | |
| 2,250 | Cost of Sales | 8,000 | |
| 10,231 | Monetary Working Capital | 9,980 | |
| (52,944) | | | **(60,876)** |
| (58,602) | | | **(84,174)** |
| 29,013 | Gearing Adjustment | | **35,734** |
| £(29,589) | **Current Cost Surplus/(Deficit)** | | **£(48,440)** |

# Current Cost Balance Sheet

Schedule Q

| 31st March, 1983 | | | | 31st March, 1984 | |
|---|---|---|---|---|---|
| | **Assets Employed:** | | | | |
| £000's | | | £000's | £000's | **£000's** |
| 1,470,920 | **Fixed Assets** | | | 1,663,492 | |
| 147,638 | **Net Current Assets** | | | 113,699 | |
| 98,494 | **Sinking Fund Investments** | | | 83,180 | |
| £1,717,052 | | | | | **£1,860,371** |
| | **Financed as follows:** | | | | |
| 1,014,886 | **Borrowings** | | | 1,135,634 | |
| | **Reserves (See below):** | | | | |
| 568,856 | Current Cost Reserve | | 605,535 | | |
| 133,310 | Other Reserves | | 119,202 | | |
| 702,166 | | | | 724,737 | |
| £1,717,052 | | | | | **£1,860,371** |

**Current Cost Reserve**

| | £000's | **£000's** |
|---|---|---|
| Opening Balance | | **568,856** |
| Balance Sheet Items – Revaluations: | | |
| Cumulative to this year – Fixed Assets (Incl. W.I.P.) – Note 2 | 494,159 | |
| – Inventories – Note 3 | 4,189 | |
| | 498,348 | |
| Less cumulative to last year – Included in Opening Balance | (486,811) | **11,537** |
| Profit and Loss Account Items: | | |
| Cost of Sales Adjustment | 8,000 | |
| Monetary Working Capital Adjustment | 9,980 | |
| Depreciation Adjustment | 42,896 | |
| | 60,876 | |
| Less: Gearing Adjustment | (35,734) | **25,142** |
| | | **£605,535** |

**Other Reserves**

| | £000's | **£000's** |
|---|---|---|
| Total Reserves per Historical Balance Sheet | | **226,389** |
| Net current cost adjustment to Profit and Loss Account – Cumulative to Last Year | (82,045) | |
| – This Year's Items | (25,142) | **(107,187)** |
| Other Reserves per Current Cost Balance Sheet | | **£119,202** |

*Signed:* Charles T. G. Dillon *Chairman*

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

19th June, 1984

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

2. **Fixed Assets:**
Valuation of assets is based on indexation calculated by reference to the Transportable Goods Index issued by the Central Statistics Office as at February 1984 except for non specialised buildings which have been valued by a qualified internal valuer.

**Fixed Assets and Work-in-Progress**

| **31st March, 1984** | | | | **1983** |
|---|---|---|---|---|
| **Fixed Assets:** | **Gross £000's** | **Depreciation £000's** | **Net £000's** | **Net £000's** |
| Historical Value | 1,037,437 | 333,344 | 704,093 | 607,910 |
| Revaluation Change | 1,478,811 | 1,024,888 | 453,923 | 455,979 |
| Current Cost Value | £2,516,248 | £1,358,232 | £1,158,016 | £1,063,889 |
| **Work-in-Progress:** | | | | |
| Historical Value | | | 465,240 | 380,369 |
| Revaluation Change | | | 40,236 | 26,662 |
| Current Cost Value | | | £505,476 | £407,031 |
| Current Cost Value of Fixed Assets and Work-in-Progress | | | £1,663,492 | £1,470,920 |

3. **Net Current Assets:**

| **31st March, 1984** | **£000's** | **1983 £000's** |
|---|---|---|
| Historical Value | 109,510 | 143,468 |
| Revaluation Change | 4,189 | 4,170 |
| Current Cost Value | £113,699 | £147,638 |

4. **Depreciation:**
Total depreciation charged in the Current Cost Profit and Loss Account represents the current cost of the proportion of fixed assets consumed during the year. The depreciation adjustment of £42.896m. (£40.463m. in 1982/83) is the difference between the depreciation charge in the Historical Cost and Current Cost Accounts.

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

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

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

# Auditors' Report

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

In our opinion, the Profit and Loss Account and Balance Sheet, together with the Statement of Source and Application of Funds (Schedule D), which have been prepared under the Historical Cost Convention, give, when read in conjunction with the relevant schedules and notes appearing thereon, the basis of accounting and principal accounting policies, a true and fair view of the results of the Board for the year ended 31st March, 1984 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, 1984, together with the notes thereon, as set out on Schedules P to R, has been properly prepared in accordance with the policies and methods described in the notes, to give the information required by Statement of Standard Accounting Practice number 16.

1 Stokes Place,
St. Stephen's Green,
DUBLIN 2.
19th June, 1984

Stokes Kennedy Crowley & Co.,
Chartered Accountants

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## Installed Capacity MW

Appendix i

| 1979/80 | 1980/81 | 1981/82 | 1982/83 | 1983/84 |
|---|---|---|---|---|
| 2862 | 3117 | 3287 | 3175 | 3260 |

## Plant Availability

Appendix ii

| 1979/80 | 1980/81 | 1981/82 | 1982/83 | 1983/84 |
|---|---|---|---|---|
| 65.3% | 69.3% | 74.1% | 74.6% | 76% |

## Plant Forced Outage Rate

Appendix iii

| 1979/80 | 1980/81 | 1981/82 | 1982/83 | 1983/84 |
|---|---|---|---|---|
| 21.3% | 15.9% | 11.4% | 12.1% | 8.0% |

## Thermal Efficiency (Exported)

Appendix iv

| | 1979/80 | 1980/81 | 1981/82 | 1982/83 | 1983/84 |
|---|---|---|---|---|---|
| Gas | 34.6 | 36.0 | 37.0 | 35.1 | 37.3 |
| Oil | 36.1 | 35.8 | 35.8 | 34.6 | 35.2 |
| Milled Peat | 23.7 | 23.4 | 23.0 | 23.8 | 24.0 |
| Sod Peat | 21.5 | 20.8 | 20.0 | 21.2 | 21.5 |
| Overall | 32.9 | 32.4 | 33.2 | 32.1 | 33.3 |

## Station Staff Numbers per MW of Installed Capacity

Appendix v

| | 1979/80 | 1980/81 | 1981/82 | 1982/83 | 1983/84 |
|---|---|---|---|---|---|
| Peat | 2.39 | 2.49 | 2.67 | 2.46 | 2.21 |
| Oil | 0.61 | 0.60 | 0.61 | 0.62 | 0.51 |
| Gas | 1.02 | 0.66 | 0.54 | 0.48 | 0.45 |

# Age of Generating Plant 31/3/1984

| Fuel Type \ Age | Under 5 Years MW | 5 to 10 Years MW | 10 to 15 Years MW | 15 to 20 Years MW | 20 to 25 Years MW | 25 to 30 Years MW | Over 30 Years MW | Total MW |
|---|---|---|---|---|---|---|---|---|
| Oil | – | 500 | 268 | 120 | – | – | – | 888 |
| Peat | 90 | 40 | – | 80 | 150 | 92.5 | 52.5 | 505 |
| Gas | 775** | 385** | 120 | – | – | 60* | – | 1340 |
| Hydro | 1 | 146 | 146 | – | – | 41 | 178 | 512 |
| Coal | – | – | – | – | – | 15 | – | 15 |
| Total MW | 866 | 1071 | 534 | 200 | 150 | 208.5 | 230.5 | 3260 |

* 60MW Converted from Oil to Gas at Marina

** Combined Cycle plant at Marina and North Wall uses new heat recovery boilers to drive refurbished turbines.

# Generation Statistics for the Year 1983/84

| Station | Year 1983/84 Generated Million Units | Year 1983/84 Station Use Million Units | Year 1983/84 Sent Out Million Units | Year 1982/83 Sent Out Million Units |
|---|---|---|---|---|
| Ardnacrusha | 367.2 | 2.7 | 364.5 | 343.2 |
| Cliff | 77.7 | 0.9 | 76.8 | 74.7 |
| Cathaleen's Fall | 192.3 | 1.7 | 190.6 | 187.3 |
| Carrigadrohid | 23.6 | 0.4 | 23.2 | 25.9 |
| Inniscarra | 64.5 | 0.8 | 63.7 | 71.3 |
| Pollaphuca | 25.2 | 0.8 | 24.4 | 19.4 |
| Golden Falls | 8.7 | 0.1 | 8.6 | 6.3 |
| Leixlip | 16.4 | 0.2 | 16.2 | 13.9 |
| Clady | 12.1 | 0.1 | 12.0 | 14.9 |
| Ferbane | 356.3 | 32.3 | 324.0 | 300.5 |
| Rhode | 362.2 | 29.1 | 333.1 | 362.7 |
| Bellacorick | 210.3 | 15.1 | 195.2 | 170.7 |
| Shannonbridge | 467.1 | 43.5 | 423.6 | 329.2 |
| Lanesboro | 260.5 | 21.4 | 239.1 | 188.3 |
| Portarlington | 64.8 | 6.2 | 58.6 | 58.6 |
| Allenwood | 122.5 | 8.9 | 113.6 | 110.2 |
| Cahirciveen | 9.8 | 1.2 | 8.6 | 8.7 |
| Miltown Malbay | 3.1 | 0.6 | 2.5 | 0.4 |
| Screeb | 5.0 | 0.6 | 4.4 | 2.9 |
| Gweedore | 15.2 | 1.4 | 13.8 | 6.3 |

| Station | Year 1983/84 Generated Million Units | Year 1983/84 Station Use Million Units | Year 1983/84 Sent Out Million Units | Year 1982/83 Sent Out Million Units |
|---|---|---|---|---|
| Marina | 1,122.9 | 21.8 | 1,101.1 | 1,442.6 |
| Aghada | 3,059.4 | 99.1 | 2,960.3 | 3,571.0 |
| Poolbeg | 1,604.3 | 85.5 | 1,518.8 | 1,351.8 |
| North Wall | 795.1 | 11.5 | 783.6 | 0.1 |
| Great Island | 320.5 | 18.8 | 301.7 | 353.1 |
| Tarbert | 1,118.1 | 81.1 | 1,037.0 | 738.4 |
| Arigna | 60.4 | 4.3 | 56.1 | 61.9 |
| Turlough Hill (generation) | 385.1 | 5.2 | 379.9 | 397.1 |
| Turlough Hill (pumping) | 578.3 | – | 578.3 | 602.4 |
| ESB Import | – | – | – | – |
| ESB Export | – | – | – | – |
| Purchased | 6.5 | – | 6.5 | 4.2 |
| System Demand [1] | 10,559.2 [2] | 503.9 [2] | 10,055.3 [2] | 9,719.6 [2] |
| Maximum daily Generation Million Units | | | 37.3 | 35.7 |
| Maximum Load Generated in MW | | | 1,994 | 1,924 |

Note 1 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.

Note 2 This figure includes a small number of units related to plant decommissioned.

# Particulars and Performance of Generating Plant

## Hydro Stations

| Station | Location | Average annual generation million units | Plant Particulars | | Plant Performance for year ended 31/3/84 | | |
|---|---|---|---|---|---|---|---|
| | | | Generating Sets | | Units sent out millions | Plant load factor % | Works cost per unit sent out (pence) |
| | | | No | Capacity (MW) | | | |
| Ardnacrusha | Shannon | 315 | 5 | 86 | 364.5 | 48.9 | 0.725 |
| Pollaphuca | Liffey | 45 | 2 | 30 | 24.4 | 9.6 | 1.122 |
| Golden Falls | | | 1 | 4 | 8.6 | 24.9 | |
| Leixlip | | | 1 | 4 | 16.2 | 46.9 | |
| Cliff | Erne | 275 | 2 | 20 | 76.8 | 44.5 | 0.465 |
| Cathaleen's Fall | | | 2 | 45 | 190.6 | 48.9 | |
| Carrigadrohid | Lee | 77 | 1 | 8 | 23.2 | 33.8 | 0.712 |
| Inniscarra | | | 2 | 19 | 63.7 | 38.9 | |
| Clady | Clady | 13 | 1 | 4 | 12.0 | 34.6 | 1.207 |
| Turlough Hill – Pumped Storage | Co. Wicklow | – | 4 | 292 | 379.9 | – | – |

Continued overleaf

# Particulars and Performance of Generating Plant

## Steam Stations

| Station | Location | Plant Particulars | | | | | Plant Performance for year ended 31/3/'84 | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | 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 | 56.1 | 46.1 | 3.709 | 5.665 |
| Great Island | Co. Wexford | 3 | 240 | 3 | 853 | Oil | 301.7 | 15.3 | 4.109 | 5.228 |
| Marina | Cork City | 1 | 60 | 1 | 250 | Gas/Oil | 1,101.1 | 46.7 | 2.363 | 2.779 |
| | | 1 | 30 | 1 | 132 | HR** | | | | |
| | | 1 | 85 | Combustion Turbine | | Gas/Oil | | 87.4 | | |
| Aghada | Co. Cork | 1 | 270 | 1 | 800 | Gas | 2,960.3 | 85.5 | 2.521 | 2.650 |
| | | 3 | 255 | Combustion Turbines | | Gas/Oil | | 46.8 | | |
| Poolbeg | Dublin City | 1 | 120 | 1 | 380 | Oil | 1,518.8 | 34.1 | 3.000 | 3.567 |
| | | 2 | 390 | 2 | 1180 | Gas/Oil | | | | |
| | | 2 | 28 | Combustion Turbines | | Oil | | | | |
| Tarbert | Co. Kerry | 2 | 500 | 2 | 1600 | Oil | 1,037.0 | 25.6 | 3.952 | 4.496 |
| North Wall | Dublin City | 1 | 104 | Combustion Turbine | | Gas/Oil | 783.6 | 12.4 | 2.331 | 2.582 |
| | | 3 | 42 | 1 | 174 | HR** | | | | |
| | | 1 | 104 | Combustion Turbine | | Gas/Oil | | 60.8 | | |

Excludes plant decommissioned as of the end of the year : Ringsend 270MW, Tarbert 120MW, Marina 30MW.

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

**Heat Recovery: Operated on combined cycle with associated combustion turbine. North Wall operated for part of year only.

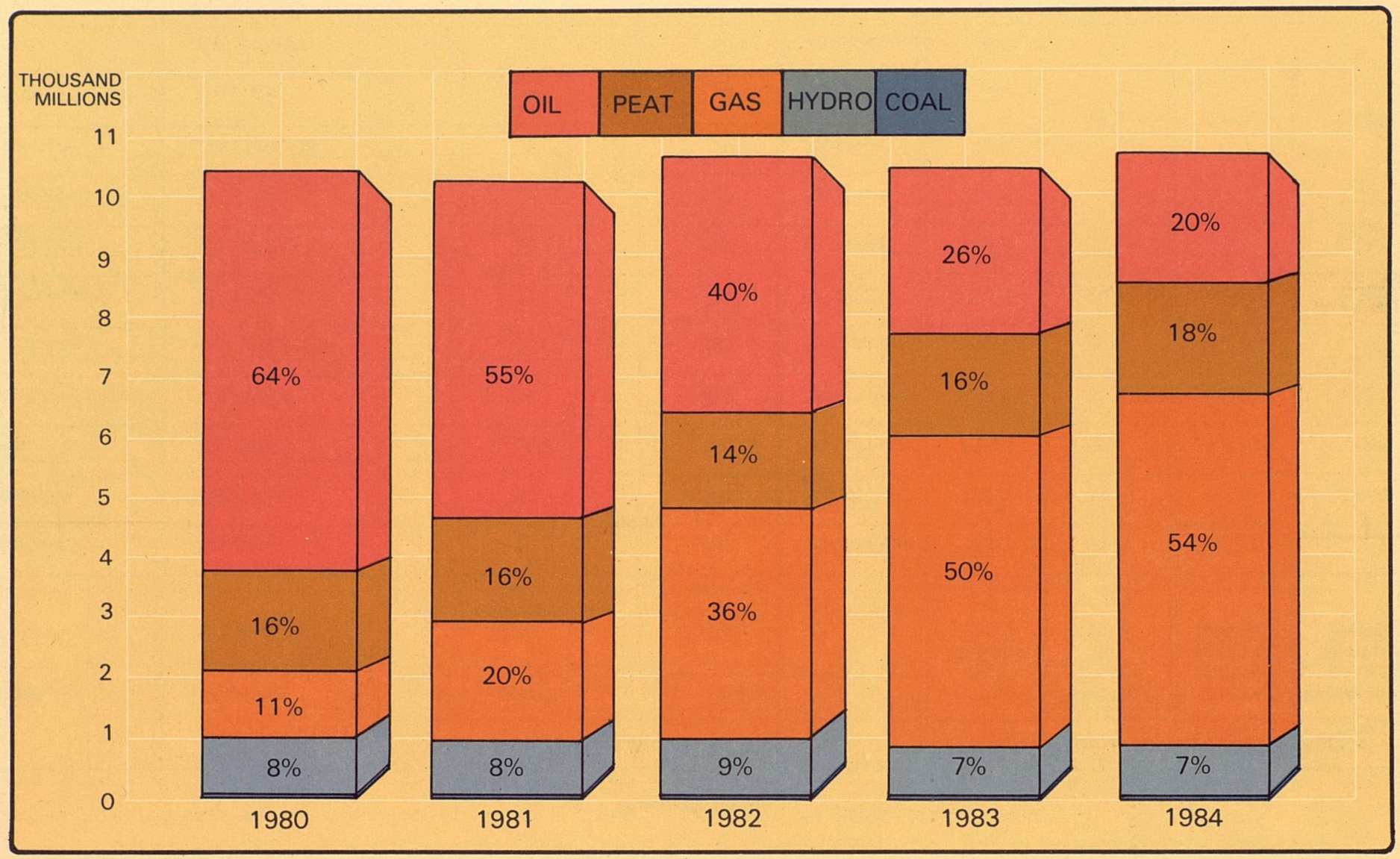
**Steam Stations**

| Station | Location | Plant Particulars | | | | | Plant Performance for year ended 31/3/'84 | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | 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 | 195.2 | 60.2 | 3.328 | 4.557 |
| Ferbane A | Co. Offaly | 3 | 60 | 3 | 300 | Milled Peat | 188.5 | 39.7 | 4.224 | 5.645 |
| Ferbane B | Co. Offaly | 1 | 30 | 1 | 130 | Milled Peat | 135.5 | 56.5 | 3.334 | 4.653 |
| Shannonbridge | Co. Offaly | 3 | 125 | 3 | 522 | Milled Peat | 423.6 | 42.8 | 3.395 | 4.261 |
| Lanesboro | Co. Longford | 2 | 85 | 2 | 349 | Milled Peat | 239.1 | 49.1 | 2.924 | 4.027 |
| Portarlington | Co. Laoise | 2 | 25 | 2 | 136 | Sod Peat | 58.6 | 29.7 | 4.225 | 7.369 |
| Allenwood | Co. Kildare | 2 | 40 | 4 | 273 | Sod Peat | 113.6 | 35.1 | 3.749 | 6.058 |
| Cahirciveen | Co. Kerry | 1 | 5 | 1 | 28 | Sod Peat | 8.6 | 19.0 | 4.610 | 10.201 |
| Gweedore | Co. Donegal | 1 | 5 | 1 | 28 | Sod Peat | 13.8 | | | |
| Miltown Malbay | Co. Clare | 1 | 5 | 1 | 28 | Sod Peat | 2.5 | | | |
| Screeb | Co. Galway | 1 | 5 | 1 | 28 | Sod Peat | 4.4 | | | |
| Rhode A | Co. Offaly | 2 | 40 | 2 | 191 | Milled Peat | 99.0 | 30.9 | 3.981 | 5.927 |
| Rhode B | Co. Offaly | 1 | 40 | 1 | 173 | Milled Peat | 234.1 | 72.8 | 2.965 | 3.788 |

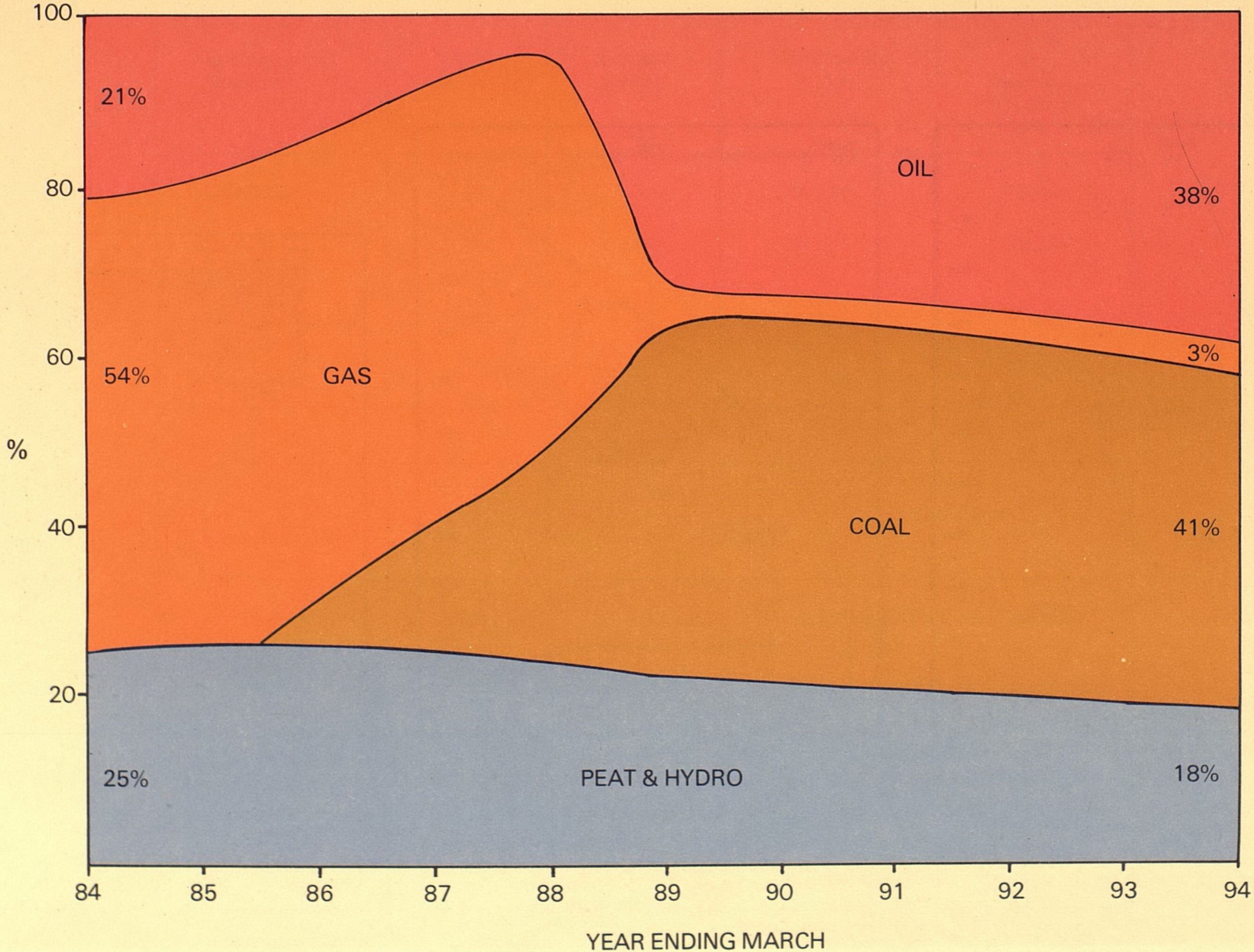
Excludes plant decommissioned as of the end of the year : Lanesboro 20MW; Portarlington 12.5MW.

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

## Energy Sources - Units Generated 1980 to 1984

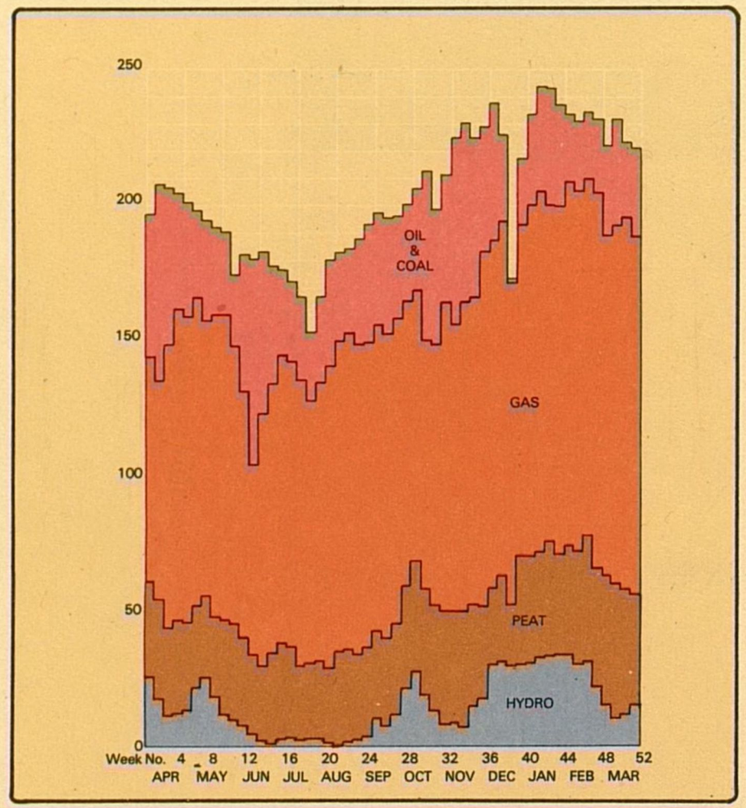


## Projected Fuel Mix - Assuming 3% p.a. Demand Growth



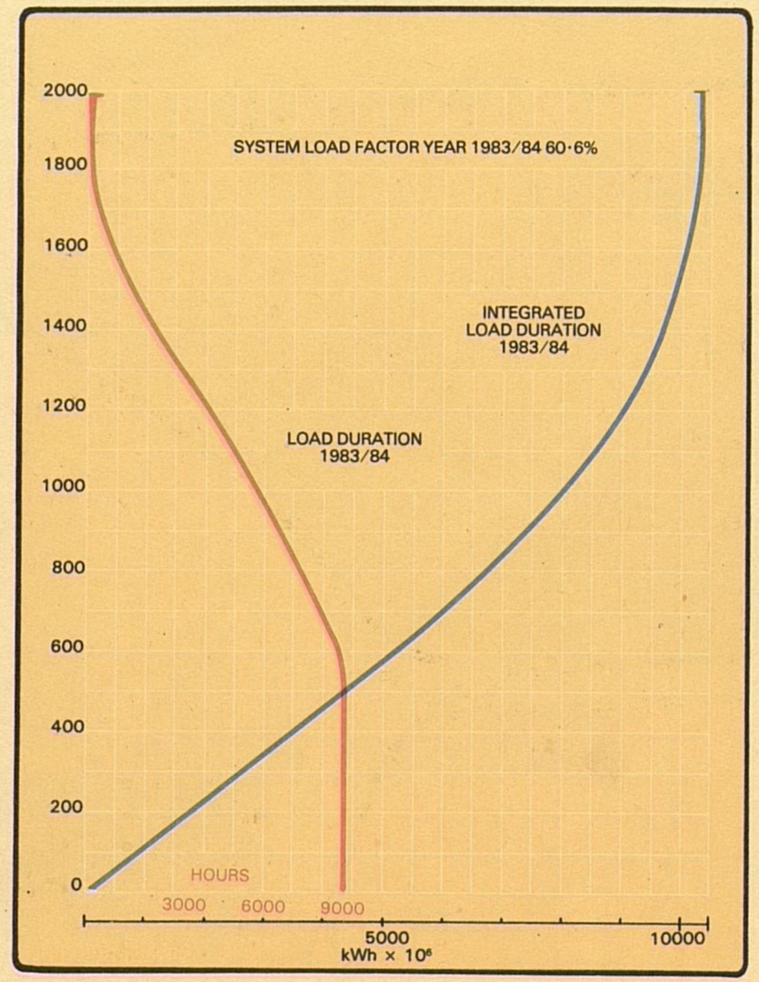
Appendix xi

## Weekly System Demand. 1983/84



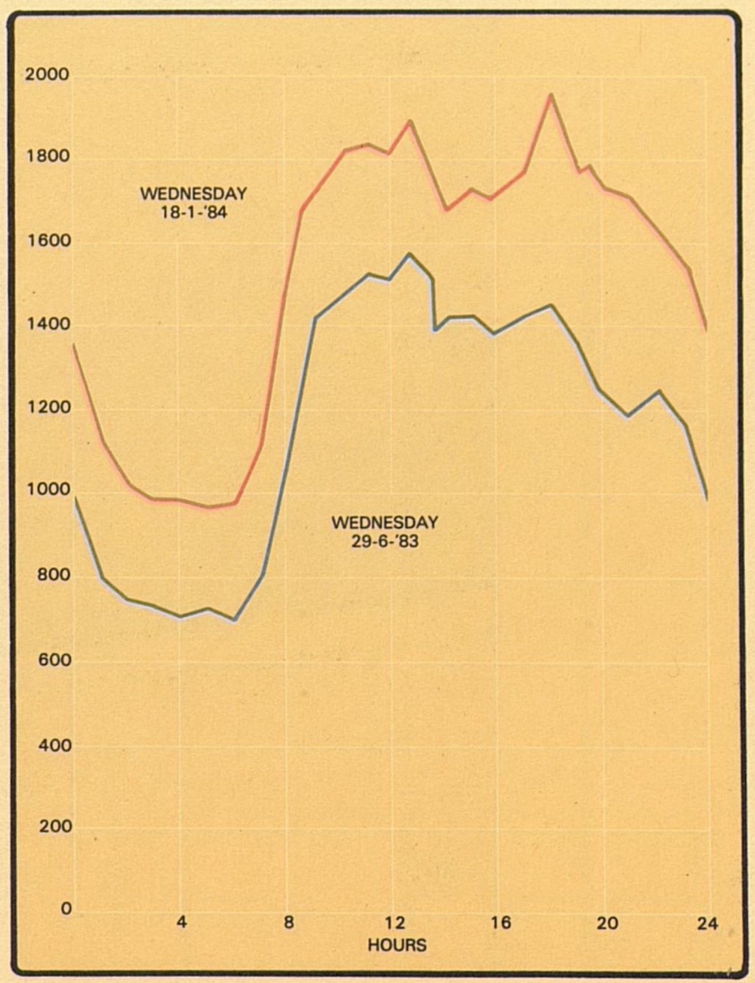

Appendix xii

## System Load Duration and Integrated Load Duration Curves. 1983/84




Appendix xiii

## System Daily Load Curves. 1983/84



# Distribution System in Commission at 31st March, 1984

## (Including Rural Networks)

### Stations

| Transformer Stations | No. in Commission | Increase for Year | Total Capacity in kVA | Increase or Decrease for Year in kVA |
|---|---|---|---|---|
| 38kV Stations | 374 | +8 | 2,792,500 | +75,800 |
| 10kV Stations (excl. U.R.D.) | 121,735 | +3,796 | 3,734,241 | +159,841 |
| 10kV Stations U.R.D. | 1,881 | +1 | 108,686 | +75 |
| 5kV Stations | 7 | Nil | 900 | Nil |

### Lines and Cables

| Lines and Cables | Length km. | Increase for Year km. | Description |
|---|---|---|---|
| 38kV Lines | 5,529.1 | +73.8 | 3 x 25 to 3 x 300 sq. mm. Cu. & SCA |
| 38kV Cables | 278.1 | +8.7 | 3 x 95 to 3 x 680 sq. mm. copper and aluminium |
| 10kV Lines | 73,740.1 | +711.9 | Single and three phase |
| 10kV & 5kV Cables | 3,106.7 | +96.3 | 2 x 16 to 3 x 240 sq. mm. copper and aluminium |
| 3.3kV Cables | 3.7 | Nil | 3 x 185 sq. mm. |

## Stations

| Transformer/Switching Stations | No. in Commission | Increase for Year | Total Capacity in kVA | Increase or Decrease in Capacity for Year in kVA |
|---|---|---|---|---|
| 220 kV Stations | 15 | Nil | 600,000 at 275/220 kV<br>3,503,000 at 220/110 kV<br>1,180,000 at 20/220 kV<br>420,000 at 13/220 kV<br>1,072,000 at 10/220 kV<br>693,000 at 110/ 38 kV<br>412,000 at 10/110 kV<br>20,000 at 110/ 6kV | Nil<br>+ 250,000<br>Nil<br>Nil<br>Nil<br>− 32,000<br>Nil<br>Nil |
| 110 kV Stations | 76 | + 3 | 2,983,500 at 110/ 38 kV<br>136,500 at 110/ 10 kV<br>40,000 at 110/ 6kV<br>112,400 at 38/ 10 kV<br>1,191,500 at 10/110 kV<br>88,000 at 10/38/110 kV<br>5,000 at 10/ 38 kV | + 48,000<br>Nil<br>Nil<br>Nil<br>Nil<br>Nil<br>Nil |

## Lines and Cables

| Lines and Cables | Length km. | Increase for Year km. | Description |
|---|---|---|---|
| 275 kV Lines | 10.5 | Nil | 6 x twin 485 sq. mm. double circuit SCA |
| 220 kV Lines | 68.0 | + 14.6 | 6 x 600 sq. mm. double circuit SCA |
| 220 kV Lines | 1041.1 | Nil | 3 x 600 sq. mm. single circuit SCA |
| 220 kV Lines | 276.8 | Nil | 3 x 425 sq. mm. single circuit SCA |
| 220 kV Lines | 3.9 | Nil | 3 x 425 sq. mm. twin, SCA |
| 110 kV Lines | 1.8 | Nil | 6 x 95 sq. mm. double circuit copper |
| 110 kV Lines | 69.8 | Nil | 3 x 95 sq. mm. single circuit copper |
| 110 kV Lines | 109.6 | + 1.2 | 6 x 200 and 6 x 300 sq. mm. double circuit SCA |
| 110 kV Lines | 3416.8 | + 119.0 | 3 x 200 to 3 x 425 sq. mm. single circuit SCA |
| 220 kV Cables | 19.2 | Nil | High pressure oil pipe-type |
| 220 kV Cables | 44.3 | + 11.5 | Oil filled |
| 110 kV Cables | 43.6 | + 1.6 | Oil filled |
| 110 kV Cables | 25.6 | Nil | Pipe compression |
| 110 kV Cables | 1.4 | + 0.6 | Cross-linked polyethylene |

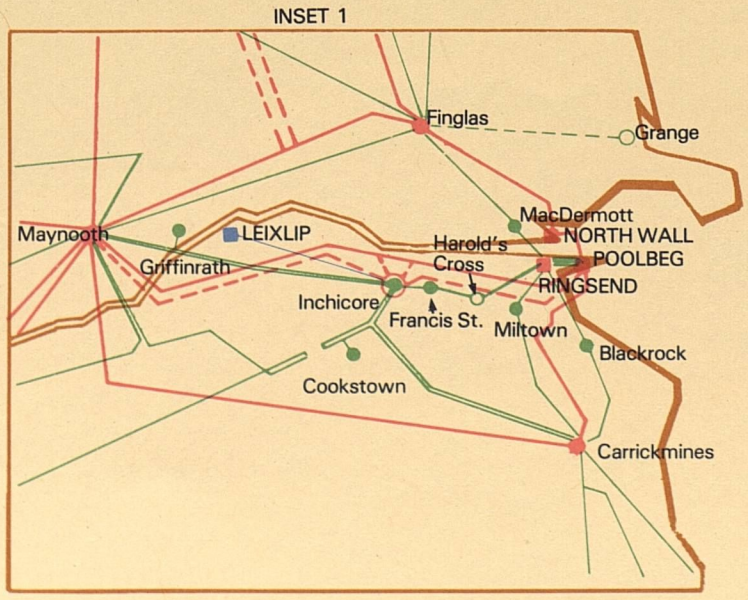
- Hydro Stations
- Steam Stations
- Steam Stations Projected
- Pumped Storage Station
- 400 kV Transformer Stations Projected
- 220 kV Transformer Stations
- 220 kV Transformer Stations Projected
- 110 kV Transformer Stations

# General outline of the Generation and Transmission Systems 31st March, 1984

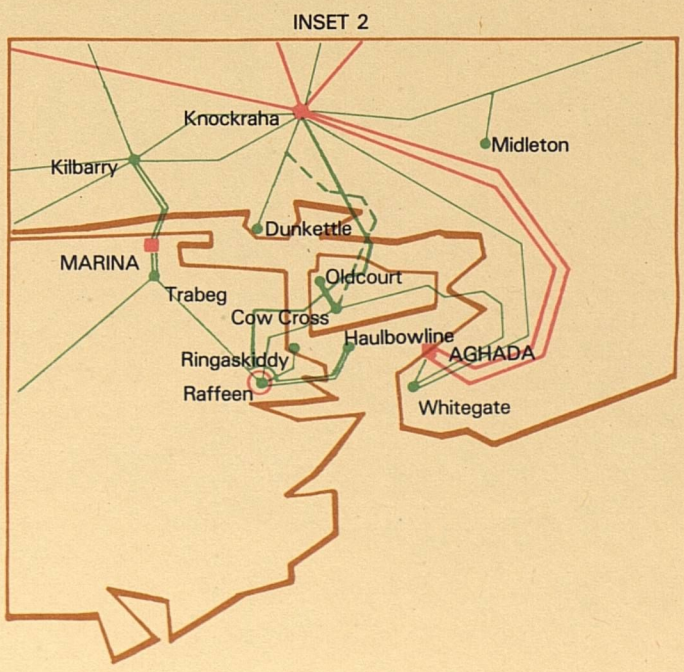
- 110 kV Transformer Stations Projected
- 400 kV Lines Projected
- 220 kV Lines
- 220 kV Lines Projected
- 110 kV Lines
- 110 kV Lines Projected
- Other High Voltage Lines
- 275 kV Lines




INSET 1




INSET 2



**1930 to 1984**

| 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 | 626.1 | 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 |
| 1973 | 6,749.1 | 5,705.1 | 60,321 | 1.057 | 845,119 |
| 1974 | 7,253.1 | 6,152.0 | 73,063 | 1.188 | 873,764 |
| 1975 | 7,298.7 | 6,153.1 | 111,261 | 1.808 | 901,000 |
| 1976 | 7,534.6 | 6,259.0 | 136,277 | 2.177 | 931,469 |
| 1977 | 8,160.5 | 6,783.2 | 173,429 | 2.557 | 959,428 |
| 1978 | 8,828.4 | 7,329.9 | 210,029 | 2.865 | 986,256 |
| 1979 | 9,602.7 | 7,965.3 | 222,768 | 2.797 | 1,015,636 |
| 1980 | 10,213.6 | 8,560.3 | 300,024 | 3.505 | 1,043,428 |
| 1981 | 10,038.4 | 8,364.6 | 408,965 | 4.889 | 1,070,049 |
| 1982 | 10,385.9 | 8,661.7 | 517,029 | 5.969 | 1,096,950 |
| 1983 | 10,194.4 | 8,518.3 | 571,992 | 6.715 | 1,122,461 |
| 1984 | 10,559.2 | 8,903.5 | 641,460 | 7.205 | 1,145,818 |

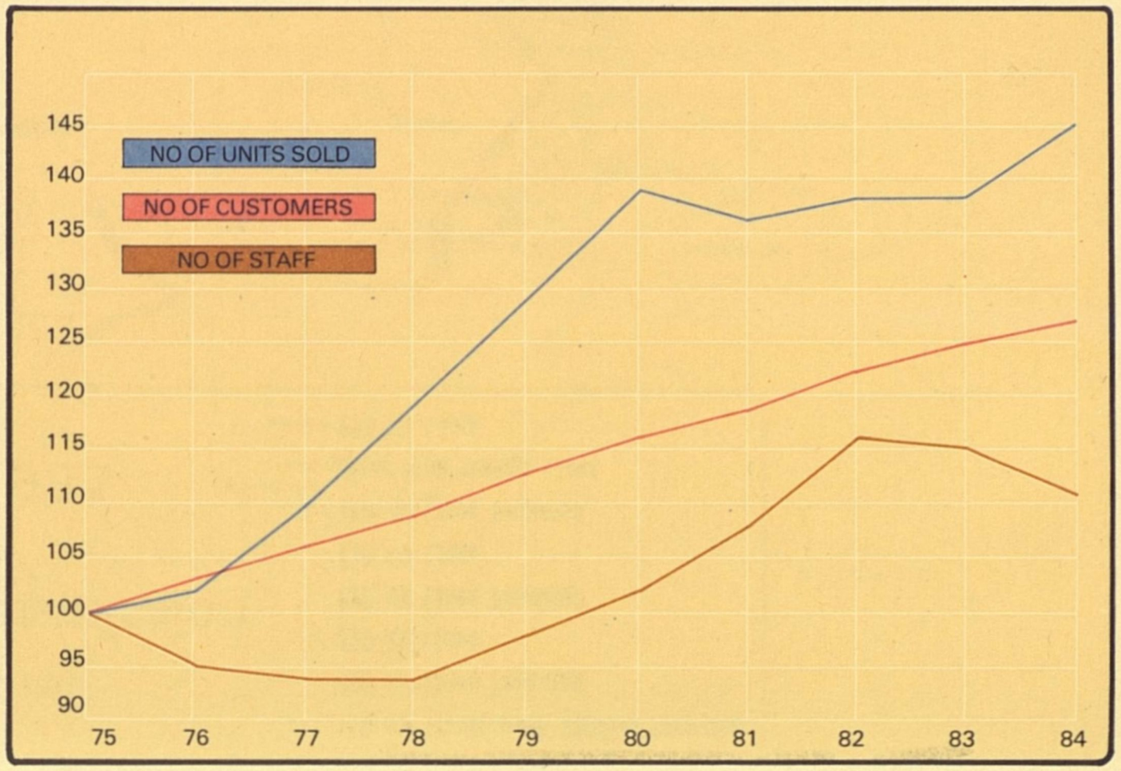
*Excluding Units absorbed by Storage Pumping





# Growth of ESB

**1975 to 1984**
(Base Year 1974/75 100)



Appendix xix

## System Load Factor Percentage

| | | | |
|---|---|---|---|
| 1975 | 59.2 | 1980 | 59.3 |
| 1976 | 57.1 | 1981 | 60.7 |
| 1977 | 57.1 | 1982 | 58.3 |
| 1978 | 56.1 | 1983 | 60.6 |
| 1979 | 56.8 | 1984 | 60.6 |

## Analysis of Units Sold

Appendix xx

| Class of Supply | Year ended 31st March 1984 (Millions) | Year ended 31st March 1983 (Millions) | Increase (Millions) | % Increase |
|---|---|---|---|---|
| DOMESTIC | | | | |
| General Supply | 3565.9 | 3468.8 | 97.1 | 2.8 |
| Night Rate | 137.4 | 129.7 | 7.7 | 5.9 |
| | 3703.3 | 3598.5 | 104.8 | 2.9 |
| COMMERCIAL | | | | |
| Lighting and Motive Power | 534.0 | 518.2 | 15.8 | 3.0 |
| Heating, Cooking and Waterheating | 351.8 | 350.8 | 1.0 | 0.3 |
| Night Space Heating | 183.5 | 178.5 | 5.0 | 2.8 |
| Public Lighting | 121.2 | 118.1 | 3.1 | 2.6 |
| Maximum Demand | 617.6 | 540.4 | 77.2 | 14.3* |
| Miscellaneous | 194.3 | 204.8 | – 10.5 | – 5.1 |
| | 2002.4 | 1910.8 | 91.6 | 4.8 |
| INDUSTRIAL | | | | |
| Maximum Demand | | | | |
| High Tension | 2342.4 | 2160.0 | 182.4 | 8.4 |
| Low Tension | 739.7 | 731.7 | 8.0 | 1.1 |
| Miscellaneous | 115.7 | 117.3 | – 1.6 | – 1.4 |
| | 3197.8 | 3009.0 | 188.8 | 6.3 |
| TOTAL | 8903.5 | 8518.3 | 385.2 | 4.5 |

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

# 5-Year Summary—Financial Statistics and Key Ratios

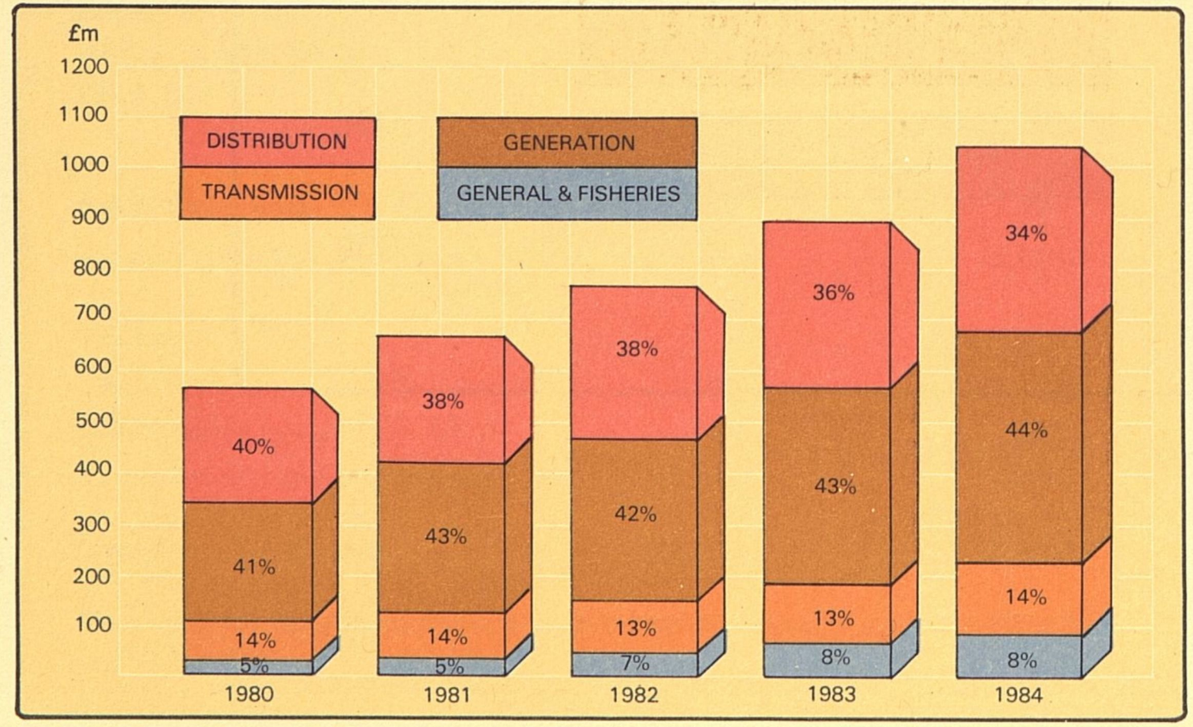


**(On Historical Cost Accounting Basis)**

| | 1979/'80 £m. | 1980/'81 £m. | 1981/'82 £m. | 1982/'83 £m. | 1983/'84 £m. |
|---|---|---|---|---|---|
| **FINANCIAL STATISTICS** | | | | | |
| **OPERATIONS:** | | | | | |
| Income | 317 | 425 | 538 | 598 | 669 |
| Expenditure | 326 | 419 | 532 | 604 | 692 |
| Surplus/(Deficit) | (9) | 6 | 6 | (6) | (23) |
| Cumulative Surplus/(Deficit) | (20) | (14) | (8) | (14) | (37) |
| **FUNDING CAPITAL DEVELOPMENT PROGRAMME:** | | | | | |
| **Requirements:** | | | | | |
| Capital Expenditure | 92 | 151 | 210 | 241 | 227 |
| Working Capital Movement | 58 | 46 | (4) | (14) | (34) |
| | 150 | 197 | 206 | 227 | 193 |
| **Financing:** | | | | | |
| Internal Resources | 27 | 46 | 54 | 49 | 35 |
| Borrowings | 123 | 151 | 152 | 178 | 158 |
| | 150 | 197 | 206 | 227 | 193 |
| **SOURCES AND EMPLOYMENT OF CAPITAL:** | | | | | |
| **Sources:** | | | | | |
| *Debt Liabilities Outstanding | 450 | 601 | 750 | 916 | 1052 |
| Reserves | 155 | 171 | 195 | 215 | 226 |
| | 605 | 772 | 945 | 1131 | 1278 |
| **Employment:** | | | | | |
| Net Fixed Assets in Commission | 366 | 446 | 500 | 608 | 704 |
| Capital Work-in-Progress | 122 | 164 | 287 | 380 | 465 |
| Net Current Assets | 117 | 162 | 158 | 143 | 109 |
| | 605 | 772 | 945 | 1131 | 1278 |
| *Inclusive of Cumulative Currency Gain/(Loss) | (48) | (67) | (109) | (147) | (188) |
| **KEY RATIOS** | | | | | |
| Return on Average Net Assets (%) | 8.1 | 10.3 | 11.6 | 9.9 | 9.0 |
| Debt/Net Assets (%) | 74.0 | 78.0 | 79.0 | 81.0 | 82.0 |
| Current Ratio (Times) | 2.3 | 2.3 | 2.1 | 1.9 | 1.5 |
| Interest Cover (Times) (excl. interest Capitalised) | 1.4 | 1.8 | 1.8 | 1.7 | 1.5 |
| Foreign/Total Borrowings (%) | 65.0 | 71.0 | 75.0 | 76.0 | 77.0 |
| Internal Resources/Cap. Expenditure (%) | 30.0 | 30.0 | 26.0 | 20.0 | 16.0 |
| Average Electricity Credit Period (Days from Date Billed) | 32.6 | 33.0 | 26.5 | 26.2 | 26.0 |

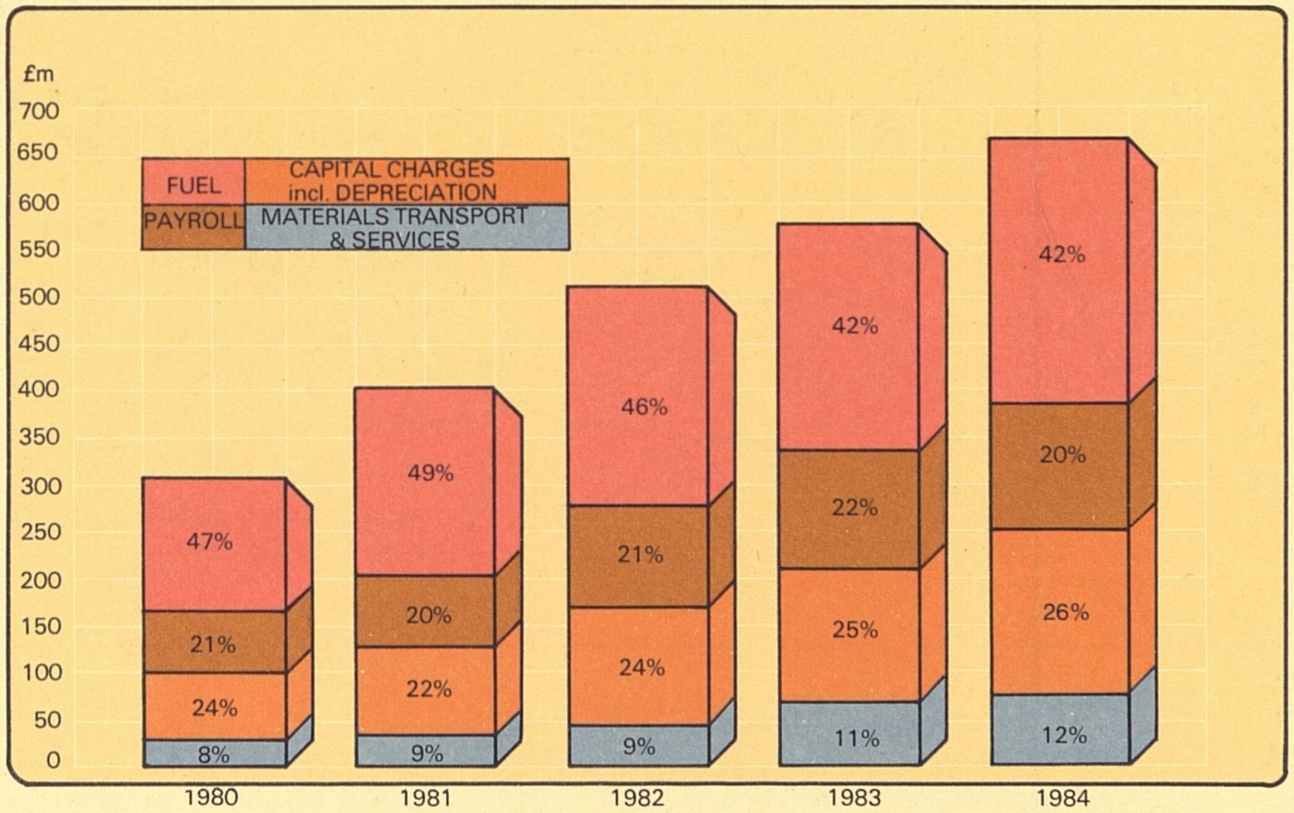
Appendix xxii

## Cumulative Investment in Fixed Assets

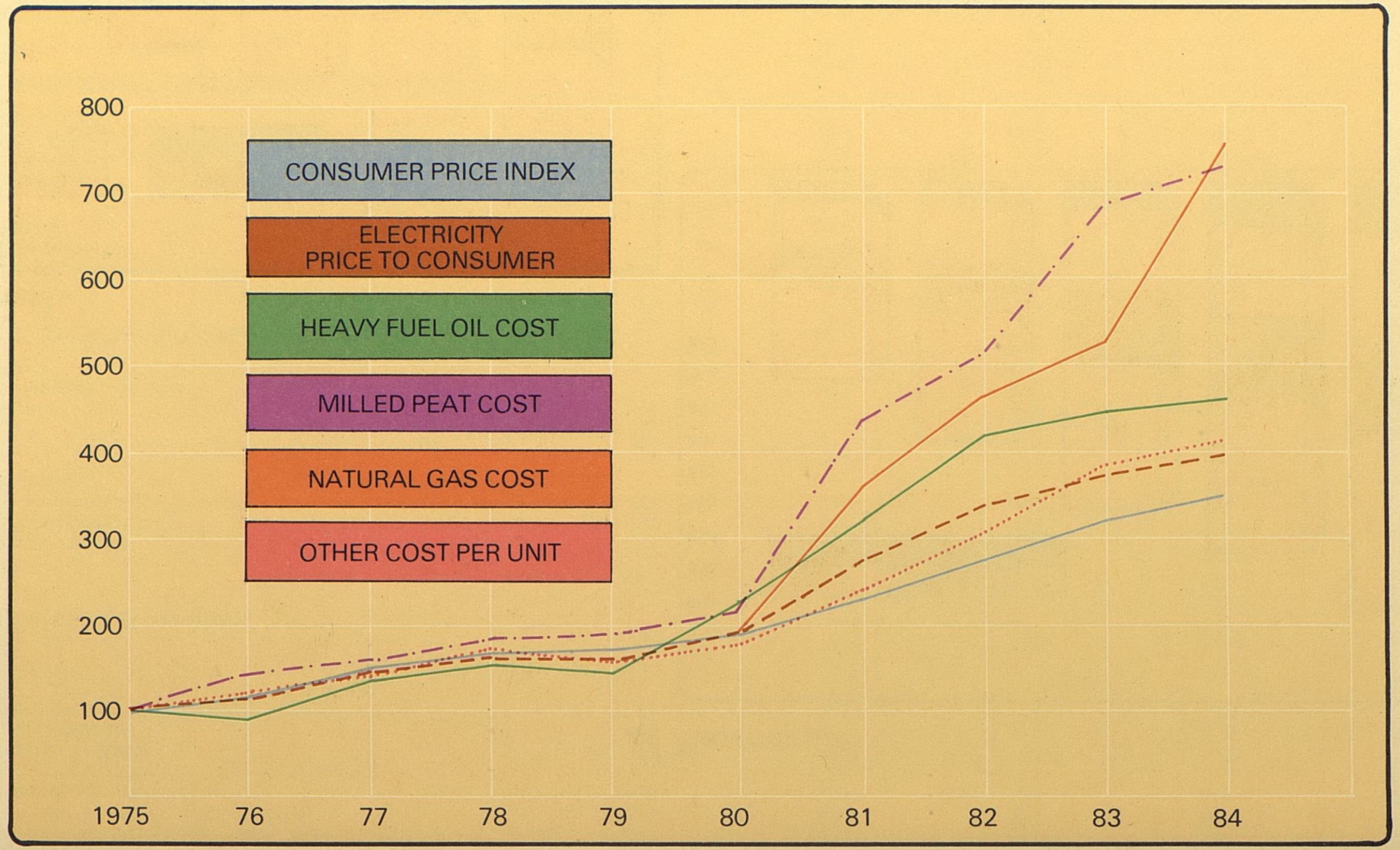





## Expenditure



## Unit Price Indices 1983/84 (Base Year 1974/75 100)



Appendix xxv

## Summary of Electricity and Trading Figures

| | Year Ending 31st March, 1984 | Year Ending 31st March, 1983 |
|---|---|---|
| **Electricity** | | |
| Expenditure: | £000's | £000's |
| Fuel | 279,467 | 233,692 |
| Payroll | 134,897 | 127,775 |
| Capital Charges including Depreciation | 171,399 | 142,433 |
| Other Costs | 79,077 | 73,373 |
| | 664,840 | 577,273 |
| Revenue Income | 643,055 | 573,338 |
| Surplus/(Deficit) (Sch. A) | (21,785) | (3,935) |
| **Trading etc.** | | |
| Trading Results (Sch. B) | (1,169) | (1,936) |
| Consultancy Result (Sch. C) | 745 | 820 |
| Expenses on New Borrowings | (1,089) | (607) |
| Result for all Activities | (23,298) | (5,658) |

The result for the year increases the total deficit carried forward to 1984/85 to £37,431,000.



## ESB Input to Ireland's Economy

| | 1981/82 £ | 1982/83 £ | 1983/84 £ |
|---|---|---|---|
| Fuel: | millions | millions | millions |
| Natural Gas, Peat, Oil, Native Coal | 97 | 150 | 199 |
| Irish Suppliers of Goods and Services including Capital Work | 107 | 115 | 111 |
| Government Tax on Oil | 16 | 10 | 9 |
| Rates Levy and Local Rates | 1 | 17 | 23 |
| Payroll Costs including Capital Projects | 159 | 186 | 194 |
| Interest paid to Irish Lenders & Stockholders | 22 | 27 | 34 |
| | 402 | 505 | 570 |

# DISTRICT OFFICES AND DISTRICT MANAGERS

| | |
|---|---|
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