

Forty eighth Annual Report For year ended 31st March 1975

ELECTRICITY SUPPLY BOARD
IRELAND

ELECTRICITY SUPPLY BOARD

Lower Fitzwilliam Street, Dublin 2, Ireland.

Telephone: Dublin 765831

Board Members

PROFESSOR C. T. G. DILLON, M.E., C.Eng., F.I.E.I., F.I.E.E., F.I.Mech.E., Chairman.

C. KELLEHER.

C. GORDON LAMBERT, B.A., B.Comm., F.C.A.

T. MacMAHON, B.E., B.Sc.

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

S. SCALLY, B.Sc. (Econ.).

BARBARA SWEETMAN FITZGERALD.

Chief Executive

J. J. KELLY, M.E., C.Eng., F.I.E.I., F.I.Mech.E.

Directors

Personnel **P. J. MORIARTY,** F.C.I.S.

Commercial **M. J. SHIEL,** B.E., B.Sc., M.I.E.E.

Generation-Transmission **S. TINNEY,** B.E., B.Sc., M.I.E.E.

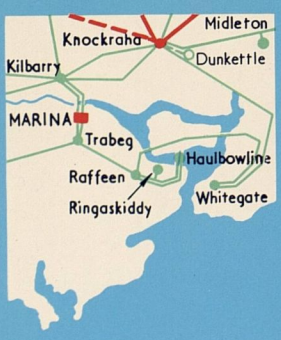
Finance **J. B. O'DONOGHUE,** F.C.C.A., A.C.M.A.

Secretary

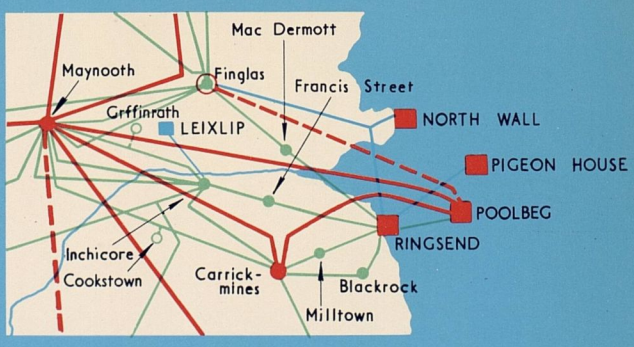
J. G. GARGAN, B.L., F.C.C.A.

GWEEDORE
Kiltoy
CLADY
Letterkenny
CATHALEEN'S FALL
CLIFF
Sligo
BELLACORICK
ARIGNA
Carrick-on-Shannon
Castlebar
LANESBOROUGH
To N.I.E.S.
Shankill
Dundalk
Louth
Navan
Drybridge
Knockumber
Platin
Mullingar
Finglas
Maynooth
Athlone
Griffinrath
See inset 2 below for details
SHANNON-BRIDGE
RHODE
ALLENWOOD
Inchicore
SCREEB
Cashla
FERBANE
Newbridge
Cookstown
Carrick-mines
Derryfrench Tynagh
PORTARLINGTON
Galway
GOLDEN FALLS
POLLAPHUCA
Portlaoise
Carlow
TURLOUGH HILL
Arklow
Ennis
MILTOWN MALBAY
Ahane
Shelton Abbey
Kilkenny
ARDNACRUSHA
Killonan
Thurles
Limerick
TARBERT
Rathkeale
Ballydine
Wexford
Cahir
Charleville
Waterford
GREAT ISLAND
Tralee
Butlerstown
Barrymore
Dungarvan
Mallow
Knockraha
Midleton
Kilbarry
Dunkettle
CAHIRCIVEEN
Macroom
CARRIGADROHID
INNISCARRA
MARINA
Haulbowline
Whitegate
Trabeg
Ringaskiddy
Raffeen
Dunmanway
Bandon
See inset 1 below for details

INSET 1



INSET 2



General outline of the

GENERATION and TRANSMISSION SYSTEMS

31st March, 1975

HYDRO STATIONS
STEAM STATIONS
STEAM STATIONS PROJECTED
PUMPED STORAGE STATION
220 KV TRANSFORMER STATIONS
220 KV TRANSFORMER STATIONS PROJECTED
110 KV TRANSFORMER STATIONS
110 KV TRANSFORMER STATIONS PROJECTED
220 KV LINES
220 KV LINES PROJECTED
110 KV LINES
110 KV LINES PROJECTED
OTHER HIGH VOLTAGE LINES
NORTH/SOUTH INTERCONNECTION

Significant Facts

	1974/75	1973/74
REVENUE		
Electricity	£111,261,000	£73,063,000
Appliance Sales (Net of Taxes)	£3,347,000	£3,530,000
Installations	£1,927,000	£1,554,000
ASSETS	£386,165,000	£345,952,000
PAYROLL	£37,779,000	£31,211,000
SALES (million units)	6,153	6,152
GENERATION CAPACITY (MW)	2,090	1,944
PEAK DEMAND (MW)	1,412	1,384
LOAD FACTOR	59.2%	60.0%
NO. OF CONSUMERS	901,000	873,764
NO. OF EMPLOYEES	11,505	11,643

(Cash figures are rounded off to the nearest thousand)

Cover Picture:

An aerial view of the E.S.B. oil-fired station at Tarbert, Co. Kerry, which is being extended by the addition of 2 x 250MW generating sets.

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To the Minister for Transport and Power

The Board presents the Annual Report and Accounts for the year ended 31st March, 1975, in accordance with the Electricity (Supply) Acts 1927/'74. With Ministerial approval the format of the Accounts has been up-dated to incorporate changes in modern accounting standards as formulated by the various accounting bodies.

The activities and results of the year were dominated by the severe economic recession and by the high level of inflation. Demand for electricity showed almost zero growth – from 6,152 million units to 6,153 million units – compared with the previous long-term growth rate of 10% per annum. The financial result for the year was a deficit of £3,079,629. The deficit brought forward from 1973/'74 was £5,781,494 and the accumulated deficit at 31st March, 1975 was £8,861,123.

In the year under review, demand in the industrial sector increased by 1.2%, in the commercial sector by 1.5%, while in the domestic sector there was a reduction of 1.6%. Total generating capacity was increased to 2,089.5 MW with the commissioning of the second two units at the Turlough Hill pumped storage project. This project has been extremely successful; teething troubles normal for such projects were not experienced.

Action during the year concentrated on coping with the aftermath of the oil crisis of 1973 and with the effects of recession and inflation at home. Whereas the worries about the availability of fuel oil at the beginning of 1974 had been relieved, the year 1974/'75 brought a new quota of problems, among them:

(a) reduced revenue income. An encouraging up-turn in electricity sales at the beginning of the year deteriorated steadily, giving zero growth for the year. Price reaction to the sharp increases which followed the oil crisis and the national campaign to conserve energy contributed to the fall-off in demand.

(b) increased inflationary pressures on wages and on money costs, factors which have been widely commented on elsewhere.

(c) less attractive money markets for capital. High interest rates, short terms for repayment of borrowings and increased currency risks all brought special difficulties. The electricity supply business makes very heavy demands on the capital markets. The Board succeeded, however, in obtaining all of its requirements and has already secured the bulk of the capital required to finance both its £40 million development programme for 1975/'76 and the increased demands for working capital. Investment in material stocks, oil and debtors, including unbilled revenue, is now in excess of £50 million.

(d) curtailment in forward plant programmes. Two years' growth in the Board's normal development programme has been lost to date because of the general economic recession. The Board's strategies of incorporating flexibility into major contracts have facilitated the substantial cut-back necessary.

Notwithstanding these new major problems the Board continues to implement national policy of providing an adequate and economic supply of electricity.

Financial:

The Board regrets that, despite unrelenting efforts to reduce costs, it was necessary to increase electricity prices during the year. Even a 6% increase in electricity demand would have achieved break-even in the revenue account.

The Government has re-confirmed the financial structure laid down in the 1927 Electricity Acts requiring the Board to amortise loan repayments in its revenue account. The Board reiterates its serious concern about the accumulating deficit position and the elimination of reserves, and regrets that its three-year plan for correcting this position was not found acceptable by the National Prices Commission. Deficits must eventually be recovered from customers; postponement of recovery continues to require additional borrowings and interest outgoings.

Customer Service:

During the last decade the rapid growth in demand and the substantial number of new supplies – even in the difficult

circumstances of the past year, 28,000 new customers were connected – placed the work emphasis on high technical standards of electricity service. While this is, of course, a continuing objective, the Board is now concentrating its efforts on improving its standards of personal service to meet the demands of the present time. This involves a reassessment of procedures and practices in customer relations, including customer facilities and communications. It is the Board's objective to achieve the highest standards in these aspects of the electricity service.

Monthly billing was introduced during the year for those domestic customers who have substantial levels of electricity usage. Approximately 20% of domestic customers now receive their bills monthly. Despite the increases in world energy costs during the past eighteen months, it is worth noting that over one-half of the Board's customers still receive bills which average less than £10 per two months.

Energy:
Although the sources of fuel oil had been secured earlier in the year, prices continued at a high level. Following an early easement they have now settled at around four times the level prevailing in 1973. Turf prices have also increased substantially. Following the firm allocation to the Board of approximately 60% of the Kinsale natural gas find, programmes were completed for its utilisation. The Board decided, with Ministerial approval, to re-locate at its Whitegate, Co. Cork site a 270 MW unit originally scheduled for Poolbeg. The allocation of natural gas for electricity generation combined with the down-turn in demand have put back the possible commissioning date for a nuclear station, but the Board is proceeding with all of the planning exercises involved; options have been taken for the purchase of land, and the preliminary planning applications have been made. Unless further substantial gas/oil finds are made within the foreseeable future it will be necessary to build the nuclear plant in order to achieve a desirable level of independence of imported fuel oil.

Capital Programme:
In the circumstances prevailing before the energy crisis, demand for electricity was doubling every seven years. On this basis the installed capacity of 2,000 MW in 1974 would have been increased to 4,000 MW by 1981. The Board has negotiated a curtailment of its commitments to 1,160 MW but is in a position to accelerate its capital programme to meet any future recovery in growth. In the present uncertainties it is not possible to develop firm long-term plans. It has been necessary, instead, to prepare a set of contingency plans for an uncertain future, taking options for new plant as required. There is also uncertainty about the future availability of primary energy sources, and the Board has deemed it prudent to carry out preliminary planning on all possible fronts – including the major sources of coal, peat, oil, gas, and nuclear energy.

The designated date for the closure of the Rural Electrification Programme was 31st March, 1975. During the past four years the Board, as required by the Minister, has re-canvassed every rural area in the country. Applications for subsidised supply closed on the designated date, and it is hoped to complete any outstanding physical work during the coming year. There are now 382,420 consumers on the rural network representing 98% of rural households.

Staff:
The Board continued to implement the recommendations of the Fletcher Committee, correcting its staffing levels through growth in the business and through natural wastage. Since the issue of the Fletcher Report the Board's business has increased by approximately one-third, including the connection of 100,000 additional customers, while staff levels have been reduced by 5.2%.

The reduction in the scale of the capital programme will raise during the next couple of years some added problems for the full employment of staff engaged on new capital programmes. Because of its long-established policy of having its own staffs carry out the design and construction of civil, electrical and mechanical projects the Board has available a substantial pool of expertise. Preliminary investigations have revealed a market for this expertise in Europe, the Middle East, and Africa. The Board has decided to diversify into consulting activity which, in

addition to securing employment for its staffs, will earn valuable foreign currency and contribute to the Board's finances to the benefit of the customer.

The Board takes this opportunity to thank its staff for the manner in which they have performed their duties during a difficult year. With full co-operation of the staff and trade unions the Board faces the future with the confidence that the management of change in its operations is under control and that electricity prices will be contained well within any national level of inflation which emerges.

Board Membership:

Dr. Thomas Murray was Chairman of the Board during the year covered by this report. He was appointed by the Government as Deputy Chairman in 1959 and Chairman on 1st May, 1960. He retired from the Chairmanship with effect as from 1st May, 1975, after a period in office of fifteen years. The Members of the Board now desire to place on record their appreciation of his helpfulness to them during his tenure of office.

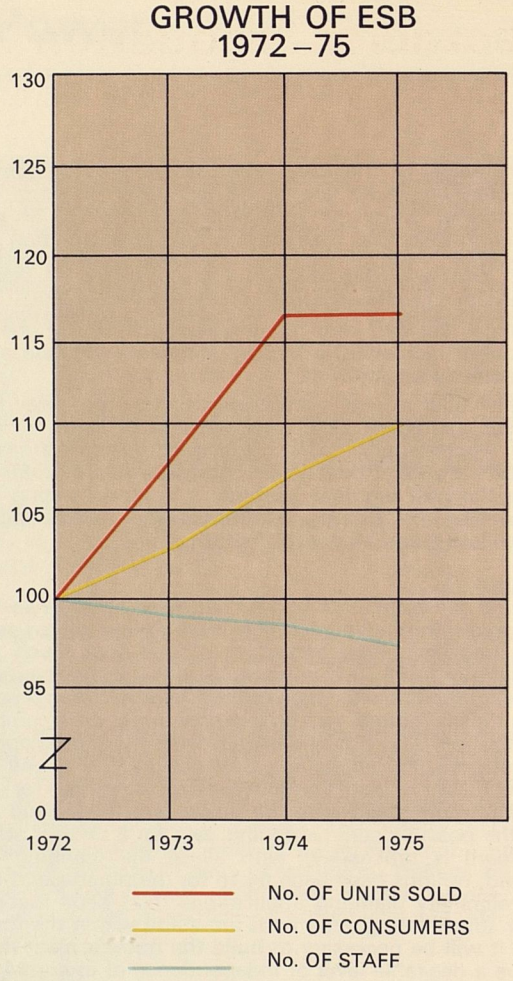
Professor Charles T. G. Dillon was appointed Chairman of the Board on 1st May, 1975. Mr. Cornelius Kelleher was appointed a Member of the Board on 13th August, 1974.

Mr. R. J. Connolly ceased to be a Member of the Board on his nomination as a Member of Seanad Eireann on the 18th March, 1975.

Mr. Seamus Scally was appointed a Member of the Board as from the 24th June, 1975.

(Signed) *C. T. G. Dillon,* Chairman
C. Gordon Lambert
B. Sweetman Fitzgerald
J. A. Ryan
T. MacMahon
C. Kelleher
S. Scally

(Signed) *J. G. Gargan,* Secretary
8th July, 1975



Electricity Production

System demand required the generation of 7,299 million units. There was an increase of 3.6% from April until mid-November, but from then until the end of the year there was a decrease of 4% compared with the corresponding period last year.

The peak demand of 1,412 MW on 17th December was only marginally higher than the previous year, resulting in an annual load factor of 59.2%.

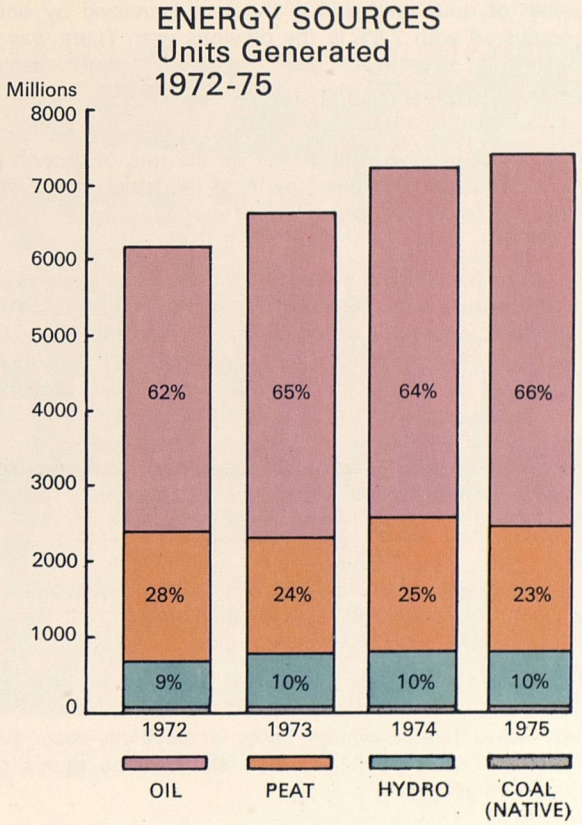
There was a voltage reduction on one day in July and on five days in November due to faults on major items of generation plant.

System frequency was maintained between 49.86 Hz and 50.14 Hz for 95% of the time.

Overall, a very high standard of reliability was achieved during the year.

The two remaining units were commissioned at Turlough Hill and the total installed capacity of the Board is now as follows:

Hydro plant (Conventional)	**219 MW**
Hydro Plant (Pumped Storage)	**292 MW**
Steam Plant (Sod Peat)	**117.5 MW**
Steam Plant (Milled Peat)	**290 MW**
Steam Plant (Oil)	**1128 MW**
Steam Plant (Coal)	**15 MW**
Gas Turbine Plant (Oil)	**28 MW**
	2089.5 MW



Electricity Sales

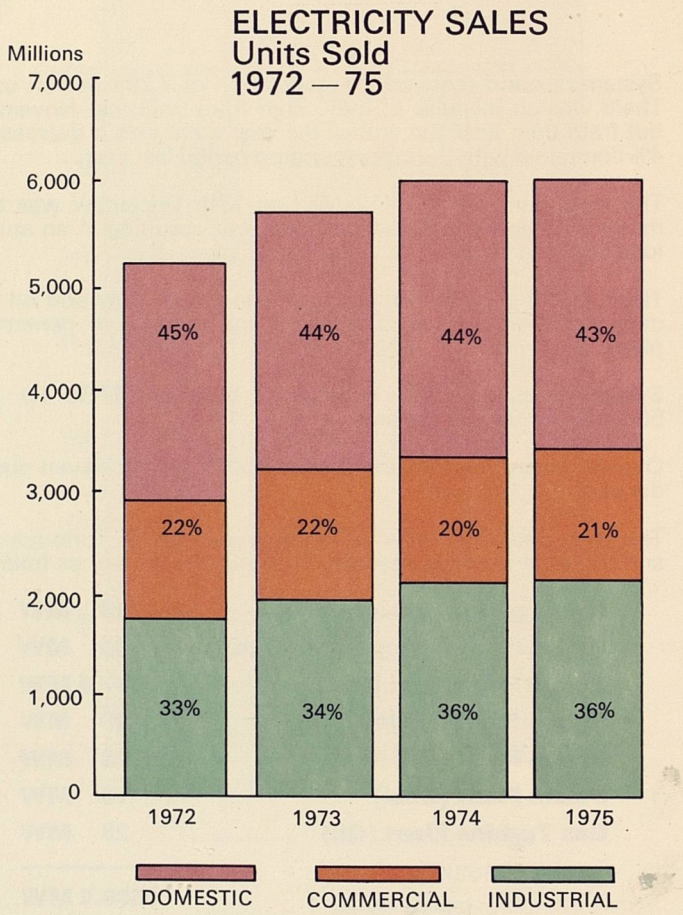
The number of units sold during the year increased by only 0.02%, compared with 7.8% in the previous year. There was a reduction in total sales to domestic consumers – night space-heating sales (down 22.5%) were particularly affected.

The effect of the economic recession on the rate of growth is reflected in the decline in the growth of industrial sales from 13.4% in 1973/'74 to 1.2% in the current year.

The price of electricity over a period of years has increased by less than the general level of prices and also continues to compare favourably with rates abroad. Nonetheless, the Board is concerned with the impact of increased prices on its consumers and has stepped up its efforts to promote the wise and safe use of electricity. To this end, a concerted programme of lectures, publications and displays was initiated and reinforced by advisory services to all classes of consumers. In particular, industry and domestic central heating users received special attention.

The Board's aim is to help its consumers meet the unavoidably increased charges through promoting the more efficient use of electricity, and thereby advancing the national energy conservation programme.

It is worth noting that the average figure for electricity usage per head of the population is still low when related to the figures for European Countries.



Trading

The three trading activities – appliance sales, appliance repairs and installations contracts – showed a combined nett loss of £12,975 on a turnover of £5,771,234. In the previous year there was a combined nett profit of £79,503 on a turnover of £5,465,484.

Appliance Sales:
In a year of increasing energy costs and of reduced disposable incomes, the Board, in common with all electrical appliance retailers, suffered a setback in its shop business. Turnover fell to £3,347,034 from £3,529,876 in the previous year and there was a nett loss of £6,493 on this part of the trading business compared with a nett profit of £190,286 in the previous year.

The fall in turnover was confined to the normally highly profitable early months of the financial year. Turnover was ahead of budget in the later months of the year and the Board is hopeful of a return to profitability in the current year.

Appliance Repairs:
For many years the cost of providing an electrical appliance repair service throughout the country has been subsidised from electricity sales revenue. In 1971 the Board decided to work towards the elimination of such subsidisation and this decision was endorsed in 1972 by the Government-established Fletcher Investigation Committee. The percentage loss has been reduced every year since the 1971 decision and the present target is to eliminate subsidisation in two years.

The loss in 1974/'75 was £143,042 on a turnover of £497,420 compared with a loss of £189,050 on a turnover of £381,122 in the previous year.

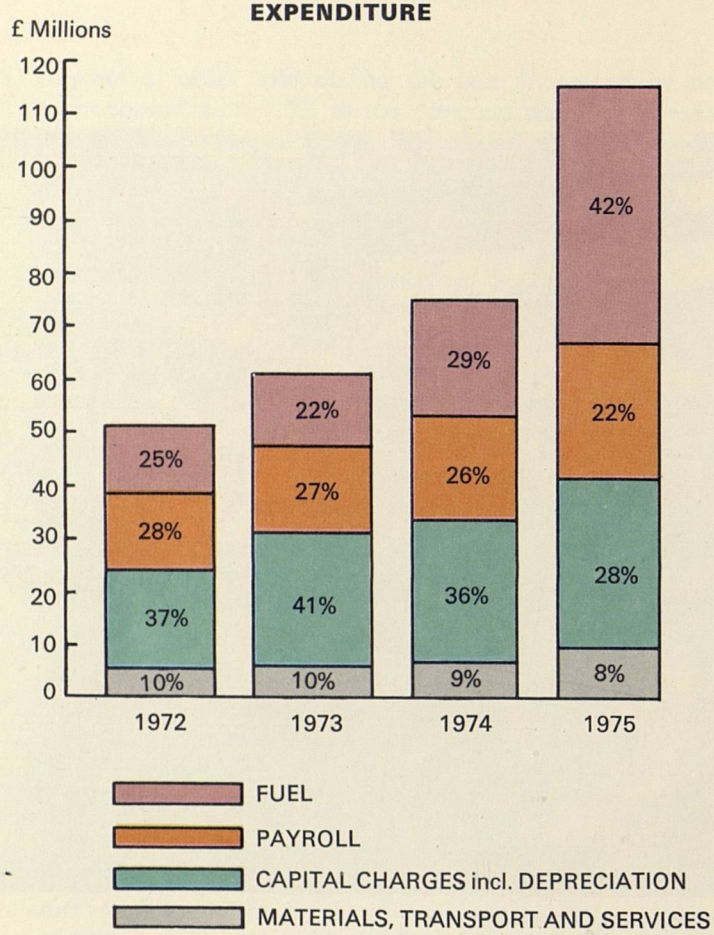
Installations Contracts:
This was a highly satisfactory year for the Board's contracting service. The value of contracts completed at £1,926,780 exceeded the previous year's turnover by 24%. Nett profit advanced by 74% to £136,560.

The year ended with a satisfactory order book.

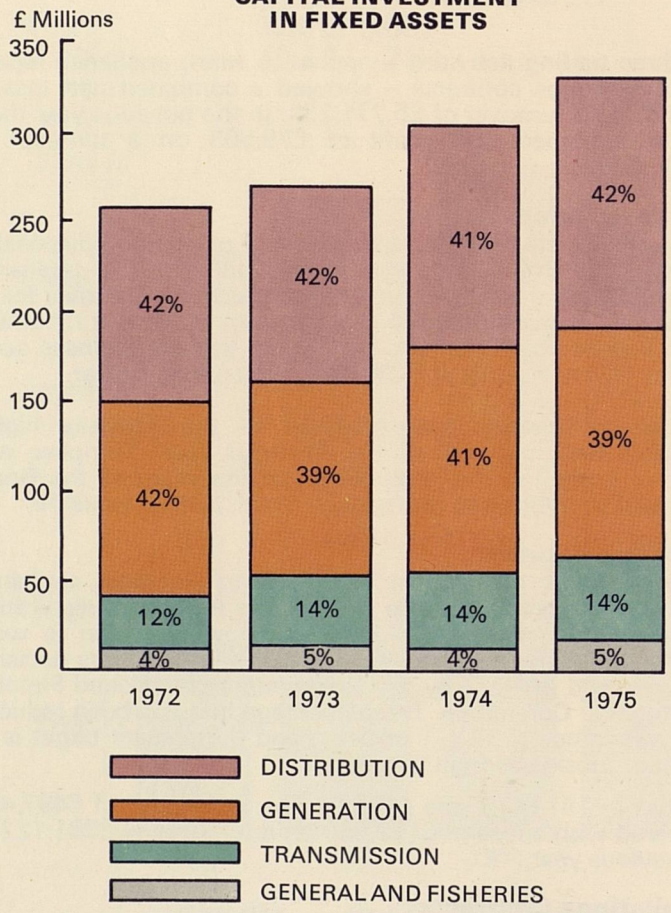


To help promote the sale of Irish goods the E.S.B. made shop space available for special 'Buy Irish' display stands.

EXPENDITURE



CAPITAL INVESTMENT IN FIXED ASSETS



Finance

Revenue and Expenditure:

Revenue from the sales of electricity and miscellaneous revenue totalled £111,692,322, an increase of £38,291,372 over the previous year. Expenditure incurred was £114,671,330, an increase of £38,532,224 over the figure for 1973/'74.

The summarised Electricity Revenue Income and Expenditure figures are as follows:

	Year ended 31st March 1975 £	*Preceding Year* £
Fuel	47,805,481	21,500,044
Payroll and other direct costs	34,414,702	27,305,562
Capital charges including depreciation	32,451,147	27,333,500
	£114,671,330	£76,139,106
Revenue (including miscellaneous income)	£111,692,322	£73,400,950
	£2,979,008 (Deficit)	£2,738,156 (Deficit)

Taking into consideration losses on trading activities and deducting the expenses of loan issues, the result for the year was a deficit of £3,079,629 which increases the total deficit carried forward to 1975/'76 from £5,781,494 to £8,861,123.

Capital Borrowing:

The capital expenditure in the year was financed by:–

(a) borrowings brought forward from the previous year,

(b) internal resources arising mainly from provisions for depreciation and capital contributions,

(c) private placements with European banks,

(d) further instalments of the loans from the World Bank,

(e) medium term credits for purchase and erection of major plant,

(f) rural subsidy from the Minister for Finance.

The Electricity (Supply) (Amendment) Act, 1974 authorises capital expenditure not exceeding £700 million for general purposes including rural electrification. At 31st March, 1975 the Board had approved expenditure totalling £472,192,075 of which £337,284,529 represents electricity assets in commission, the balance of £134,907,546 representing work in progress and work approved.

Capital Expenditure:

New assets to the value of £25,620,093 were brought into commission during the year. Rural electrification accounted for £5,621,091 of this total. The total investment in assets in productive use at 31st March, 1975 was:

	£
Generation	131,481,205
Transmission	47,325,557
Distribution (including Rural £63,518,924)	141,117,668
Premises and General Assets	17,360,099
	£337,284,529

In addition expenditure of £48,880,472 was incurred on capital works still under construction at the end of the year.

Major Construction Works

Part of the first natural gas find has been allocated to the Board and will be available towards the end of the decade. A natural gas fired station at Whitegate, Co. Cork is now at the preliminary design stage and a gas turbine will be installed at Marina Generating Station, Cork. It is intended that one of the 270 MW units originally ordered for Poolbeg will now be used at Whitegate.

There are also plans for additional generating plant using milled peat, arising from the development of further peat bogs by Bord na Mona. The capacity and location of the stations have not yet been finalised.

The possible use of native coal for a further unit at Arigna is being re-examined. The use of imported coal is also being considered. Other less conventional methods of generating electricity are constantly under review, but none has so far proved to be an economic proposition.

Tarbert Generating Station Extension, Co. Kerry (Oil Fired) 2 – 250 MW Sets: (The capacity of the existing Station is 2 – 60 MW Sets)

The original target dates set for the completion of these two units were 1975 and 1976. Despite unforeseen difficulties, including late deliveries of materials, contractors' industrial disputes, shortages of skilled workers, poor weather conditions and low productivity in some sections, the project is still on schedule.

Shannonbridge Generating Station Extension, Co. Offaly (Milled Peat Fired) 1 – 40 MW Set: (The capacity of the existing Station is 1 – 40 MW Set)

The civil engineering work was well advanced and the extension of the main station building was nearing completion. Erection of the boiler and turboalternator plant had commenced.

The project is scheduled for completion in 1976.

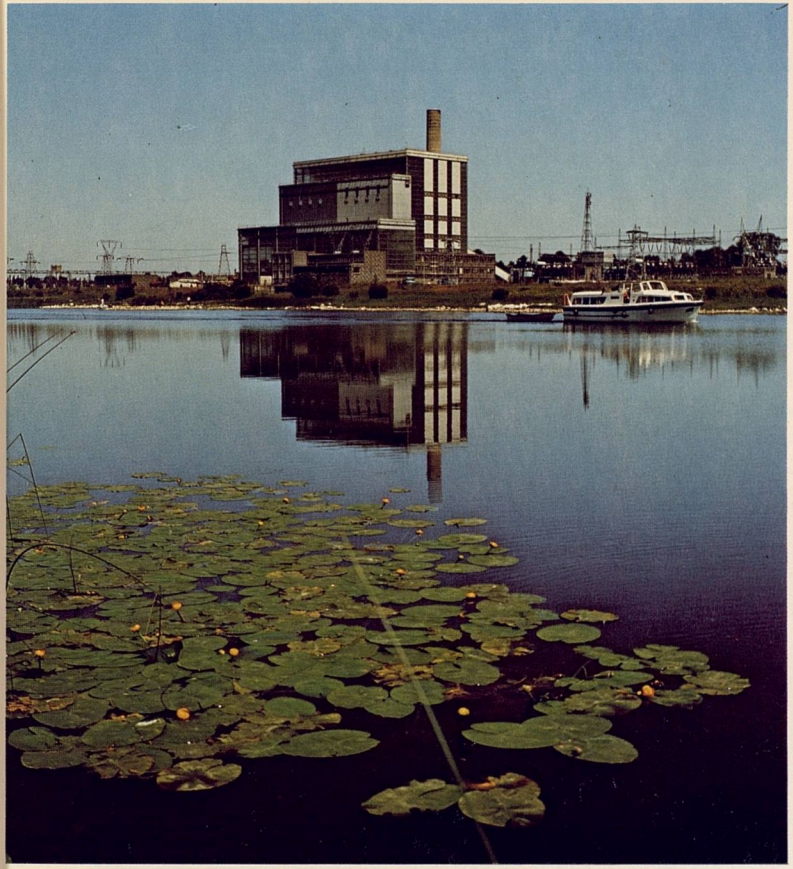
Poolbeg Generating Station Extension, Dublin (Oil Fired) 1 – 270 MW Set: (The capacity of the existing Station is 2 – 120 MW Sets)

The main bored piling contract has been completed. The main civil works contract is now in progress and erection of the structural steel work has commenced.

The scheduled completion date is 1978.

Marina Generating Station Extension, Cork (Gas Fired) 1 – 83 MW Set: (The capacity of the existing Station is 2 – 30 MW Sets and 1 – 60 MW Set)

A gas turbine unit was ordered and is scheduled for commissioning in 1978/'79.



Shannonbridge milled-peat fired station in Co. Offaly where work is well advanced on the installation of an additional 40MW generating set, which will double the station's capacity.

Turlough Hill Pumped Storage Scheme, Co. Wicklow 4 – 73 MW Sets:

The remaining two units were commissioned on schedule in May and July 1974. Some site restoration works continued.

Nuclear Generating Station Project:

Carnsore Point, Co. Wexford, has been selected as the most suitable site for this project and an application for outline planning permission has been submitted to Wexford County Council. Surveys and site investigation are nearing completion and a report on the site has been submitted to the Nuclear Energy Board.

The tentative commissioning date has been deferred until 1985 in view of the decline in the growth rate.

General Investigations:

An investigation into the feasibility of District Heating was carried out during the year and the findings were published.

Transmission

220 kV Transformer Stations:

The station at Carrickmines, Co. Dublin was commissioned and the first phase of the uprating and extension of Knockraha, Co. Cork was completed. The extension of Killonan, Co. Limerick was also completed.

Construction work continued at Tarbert, Co. Kerry, Shannonbridge, Co. Offaly and Knockraha Co. Cork. Design work was in progress on three projects and preliminary construction work commenced on two of these.

110 kV Transformer Stations:

Two new stations, at Midleton and Carrick-on-Suir, were commissioned during the year and work was in progress on three others.

Extensions were completed at five stations and a further extension was nearing completion. The renewal of equipment in older stations continued and a programme of protection changes to cater for the solid earthing of 110 kV neutral commenced.

Lines and Cables:

The Finglas Branch on the 220 kV Line from Maynooth to Louth was completed and work continued on the 220 kV Line from Tarbert to Killonan. Erection work had started on the 220 kV Lines from Tarbert to Knockraha and from Maynooth to Donard. Surveys were in progress on three other 220 kV Lines.

During the year, 284.5 Kms. of new 110 kV lines were erected and commissioned. A total of 142 Kms. of the old 95 mm^2 copper lines were decommissioned, leaving 372 Kms. still in operation.

New industries, creating demands for power at high voltage continued to be a significant factor in the construction programme and at the end of the year a total of 24 Kms. of 110 kV line was in hands to supply such loads.

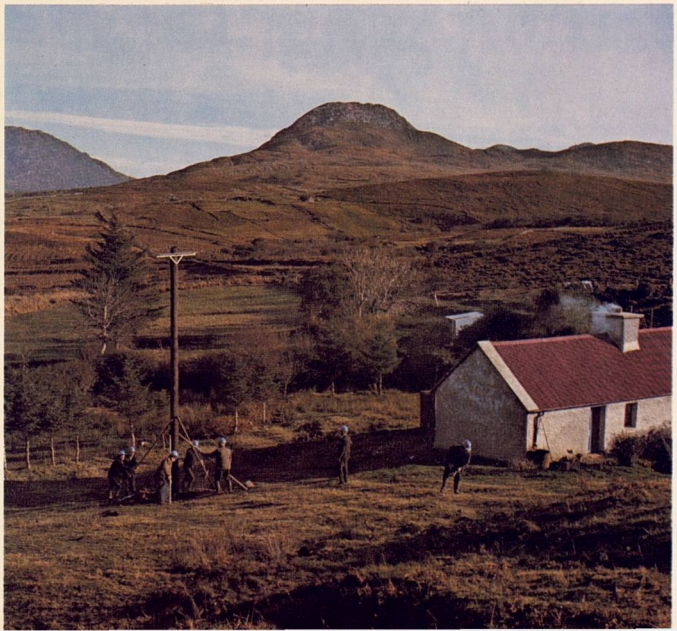
An order was placed for cable and accessories for the proposed 14.0 Km. long Poolbeg – Finglas 220 kV connection and some preliminary survey and design work was carried out on the Shannon 220 kV crossing from Tarbert.

Distribution

During the year a maintenance plan for 10 kV L.T. networks was completed aimed at ensuring that possible weaknesses in this network will be identified at an early stage. Future maintenance will be continued over a seven year cycle.

The problem of identifying, evaluating and solving the special problems associated with the 1.5 million wood poles in the networks is receiving special attention. In Irish conditions wood poles are considered to have an average lifetime of twenty-five years. Inspection of poles forms part of the network patrol on all lines and if the condition of a pole is below standard it is replaced.

Work in progress on the final phase of the Rural Electrification Programme, which has brought electricity to 98% of Ireland's rural homes.



In many cases, however, it is considered that treatment either by injecting fresh preservatives or by applying protective bandages may prolong the life of some poles and field tests on both of these methods have started. The substantial increase in the price of poles over the last two years has given a new impetus to this work.

Very extensive tests on the overload capacity of single phase 10 kV L.T. transformers were completed and these have led to new instructions on the overloading of single phase transformers.

Instructions of this type have been available for some time for the larger units and these tests have enabled the range of instructions to be extended to cover all the transformers in the Board's network with a resulting better utilisation.

An innovation in the cabling of substations ("trefoiling"), which can increase cable capacity by 30% at full load, was introduced during the year.

Rural Electrification Scheme – 1974/'75:

During the year 10,131 new rural consumers were connected and by the end of the year residents in the 792 Rural Areas into which the country is divided had been given an opportunity of applying for supply under the final phase of the subsidised Rural Electrification Programme. All areas are now closed and the remaining construction work will be completed in the coming year.

Personnel

For the third consecutive year there was a reduction in the number of man days lost as a result of industrial action and no dispute during the year affected the supply of electricity to the community. The improvement is due to the development, with the Trade Unions, of effective machinery for dealing with disputes and the commitment of the staff to honouring the "peace clause" which is a feature of all Agreements negotiated with the Trade Unions in recent years. The Industrial Council, under the Chairmanship of Mr. Con Murphy, continues its important role in ensuring that issues on which agreement cannot be reached by direct negotiation are settled without resort to industrial action.

Discussion of worker participation in industry has largely concentrated on formalised arrangements such as supervisory boards and worker directors. It is the Board's view that these should be the ultimate development in an evolutionary chain initiated at work-place level, for effective collective bargaining, consultation, communication and decision making. The Board and the Trade Unions have made considerable progress in advancing such worker participation in recent years. It is now established practice to set up joint study groups and working parties to examine specific problems. A joint working party has developed proposals for a formal structure of local Works Councils to deal with local issues. The proposals include a programme for the subsequent development of Works Councils at national level. A feature of all recent Trade Union Agreements has been the preliminary development by working parties of appropriate productivity measures and special arrangements for inclusion in these agreements designed to increase operational efficiency over the whole range of E.S.B. activities.

Training and Development of staff continued and over 2,000 adults and 600 apprentices received training during the year. Pre-retirement courses were provided for staff who are due to retire. In conjunction with the Irish National Council for Alcoholism (I.N.C.A.) the Board developed a programme for dealing with the problem of alcoholism. The programme received the full support of the Trade Unions and is being implemented in the Dublin area in the first instance.

The total number of staff in the E.S.B. at the end of the year was 11,505.

Fisheries and Environment

The extent of the Board's involvement in the development of the Fisheries and Environment areas under its control is reflected in the expenditure of £261,730 under this heading. Income from the sale of salmon and eels was £101,000.

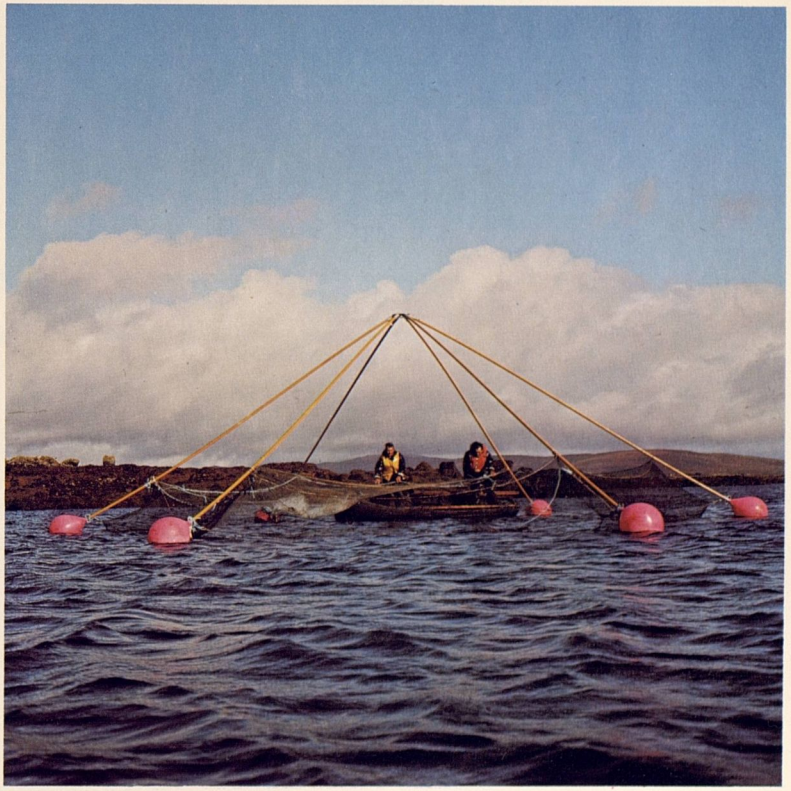
The eel catch for the year was the highest ever at 81,000 lbs.

The experimental project for the rearing of salmon in sea water commenced and will be continued in the coming year.

There was a significant increase in the salmon run in the River Lee as a direct result of the setting up of the Carrigadrohid hatchery and rearing station.

The Board continued its major involvement in water pollution control. Although some areas on the Shannon cause concern, the Board is satisfied that with the full commitment of the administrative authorities, the business and farming communities and the general public, the quality of the waters under its control can be preserved.

The Board's annual Fisheries Report, published separately, deals with these activities in more detail.



On an experimental basis the E.S.B. has been rearing salmon in sea water. The picture shows one of the salmon nets at Carna, Co. Galway.

Account No. 1

Profit and Loss Account

31st March, 1974		31st March, 1975
£000's		£000's
3,819	Electricity Trading before Loan Amortisation, as per Schedule A.	5,161
80	Appliance Sales, Repairs and Installations Contracts Trading, Profit/(Loss) as per Schedule B.	(13)
(412)	Loan Issue expenses	(88)
3,487		5,060
(6,557)	Loan Amortisation, as required by Section 21 (2) of the Electricity (Supply) Act, 1927 (See Note – Schedule K).	(8,140)
(3,070)	Surplus/(Deficit) for Year	(3,080)
(2,711)	Deficit brought forward from previous year	(5,781)
£(5,781)		£(8,861)

Balance Sheet

Account No. 2

31st March, 1974		31st March, 1975		
£000's		£000's	£000's	£000's
345,952	**Total Investment in Capital Assets** including work-in-progress, as per Schedule C		386,165	
111,745	Less Accumulated Depreciation		123,848	
234,207				262,317
4,824	**Loan Sinking Fund Investments,** at cost as per Schedule D			6,720
	Current Assets			
545	Cash at bank and in hand		555	
11,574	Temporary cash investments		4,697	
1,953	Investments, at cost (nominal value £2,726,000) as per Schedule E		1,802	
45,769	Debtors, materials and repayable jobs-in-progress as per Schedule E		55,448	
59,841			62,502	
	Less:			
28,528	**Current Liabilities,** as per Schedule E		30,260	
31,313	**Net Current Assets**			32,242
763	**Deferred Expenditure**			386
£271,107	**Assets less Current Liabilities**			£301,665
	Financed as follows:			
	Borrowings			
201,499	Stocks, bonds and long-term loans, as per Schedule F		228,156	
9,992	Short and medium-term loans, including Hire Purchase Bills block discounted		11,590	
211,491				239,746
	Reserves			
59,894	Capital, as per Schedule H		63,366	
4,928	Loan sinking funds		6,839	
	Revenue Reserves:			
500	Plant, self-insurance	500		
75	Others	75		
			575	
(5,781)	Profit and Loss Account balance (deficit)		(8,861)	
59,616				61,919
£271,107				£301,665

Note: At 31st March, 1975 contractual capital commitments amounted to approximately £36,000,000 (1974 – £40,000,000)

Signed: C. T. G. DILLON *Chairman* *Signed:* J. J. KELLY *Chief Executive*
J. B.O'DONOGHUE *Director Finance*

Schedule A

Electricity Income and Expenditure Account

31st March, 1974 £						31st March, 1975 £
73,062,973	**Income** – Electricity Sales	111,261,190				
337,977	– Miscellaneous Income	431,132				
						111,692,322
73,400,950						
	Expenditure:	**Generation**	**Transmission**	**Distribution**		
21,500,044	Fuel	47,805,481				
21,805,184	Operation, maintenance and local charges	11,429,339	1,523,279	14,124,269		
5,410,416	General charges	3,215,705	861,474	3,105,611		
11,511,000	Depreciation	5,524,320	1,756,761	5,348,919		
89,962	Preservation and operation of fisheries (net cost)	155,025				
60,316,606		68,129,870	4,141,514	22,578,799	94,850,183	
9,265,187	Interest	5,038,872	1,804,965	4,837,559	11,681,396	
69,581,793		73,168,742	5,946,479	27,416,358		106,531,579
3,819,157						5,160,743
6,557,313	Loan amortisation as required by Section 21 (2) of the Electricity (Supply) Act, 1927	3,445,481	1,282,798	3,411,472		8,139,751
£(2,738,156)	Surplus/(Deficit)					£(2,979,008)

Notes:

1. Charges include: Local Rates £562,028 (1973/74 £525,884), Central Transport and Stores Depot Costs £596,276 (1973/74 £481,781), General Publicity £266,120 (1973/74 £328,023), Bad Debts £115,758 (1973/74 £160,010), Purchased Electricity (net) £156,777 (1973/74 £48,982), Audit Fee £11,000 (1973/74 £11,000) Board Members' Renumeration (including full-time Chairman) £15,768 (1973/74 £12,040).
2. Electricity Sales are exclusive of VAT – £7,513,478 (1973/74 £4,563,804).

Trading Account
Appliance Sales, Repairs and Installations Contracting

Schedule B

1973/74								
Appliance Sales	Appliance Repairs	Installations Contracting	Total		Total	Appliance Sales	Appliance Repairs	Installations Contracting
£	£	£	£		£	£	£	£
3,529,876	381,120	1,554,488	5,465,484	Turnover, exclusive of VAT	5,771,234	3,347,034	497,420	1,926,780
2,687,707	422,189	1,247,815	4,357,711	Direct Costs	4,576,364	2,613,078	466,449	1,496,837
842,169	(41,069)	306,673	1,107,773	Gross Profit	1,194,870	733,956	30,971	429,943
				Overheads:				
370,886	147,728	120,335	638,949	Payroll costs	694,385	378,324	173,622	142,439
23,476			23,476	Publicity	47,639	47,639		
67,440			67,440	Property charges	82,203	82,203		
47,561	255	19,821	67,637	Sundry expenses	75,817	55,013	391	20,413
142,520		88,248	230,768	General charges and interest, as apportioned	307,801	177,270		130,531
651,883	147,983	228,404	1,028,270		1,207,845	740,449	174,013	293,383
£ 190,286	£(189,052)	£78,269	£79,503	Profit/(Loss) transferred to Profit and Loss Account	£(12,975)	£(6,493)	£(143,042)	£136,560

Schedule C

Statement of Capital Assets

	Total at 31st March, 1974	Additions Less Retirements	**Total at 31st March, 1975**
	£	£	£
Generation	128,426,588	3,054,617	**131,481,205**
Transmission	43,575,536	3,750,021	**47,325,557**
Distribution	127,616,575	13,501,093	**141,117,668**
General Buildings, Transport and Working Equipment	13,886,540	3,297,767	**17,184,307**
Fisheries	175,792		**175,792**
	313,681,031	£23,603,498	**337,284,529**
Work-in-Progress, including payments on account	32,270,922		**48,880,472**
Total Investment in Capital Assets (at cost)	£345,951,953		**£386,165,001**
Deduct Accumulated Depreciation, as below	111,745,485		**123,848,054**
Net Investment in Capital Assets	£234,206,468		**£262,316,947**

Accumulated Depreciation:	£	£	£
Provision for depreciation of assets, together with proceeds of disposal or stores value of assets retired, less assets retired, as at 31st March, 1974		111,745,485	
Movements in year:			
Depreciation of assets	13,277,321		
Credits arising on disposal of assets retired	841,843		
Assets retired	(2,016,595)	12,102,569	
Total as at 31st March, 1975			**£123,848,054**

Schedule D

Statement of Loan Sinking Fund Investments

Cost £ 1973/1974		**Cost £ 1974/1975**
	ESB Loan Stocks	
2,286,854	(nominal value £2,559,873 – 1973/74 £2,549,808)	2,206,971
	Government Loan Stocks	
2,537,253	(market value £1,920,747 – 1973/74 £1,841,293) (nominal value £2,646,500 – 1973/74 £2,646,500)	2,537,253
—	**Bank Deposits**	1,975,507
£4,824,107		£6,719,731

Statement of Current Assets and Current Liabilities

Schedule E

Current Assets (excluding cash at bank, in hand and temporarily invested)

31st March, 1974 £		£	£	31st March, 1975 £
	Investments, at cost:			
1,422,626	ESB Stocks (nominal value £2,121,176 – 1973/74 £2,061,265)		1,306,464	
530,384	European Units of Account (nominal value £604,465 – 1973/74 £567,255)		495,652	
1,953,010				1,802,116
	Debtors (less provision for doubtful debts):			
	Electricity: billed	11,688,813		
20,405,292	unbilled	12,716,033	24,404,846	
6,301,119	Trading including Hire Purchase		7,072,074	
1,525,558	Miscellaneous		1,865,438	
28,231,969				33,342,358
	Materials at cost:			
7,737,286	Fuel		10,090,540	
8,889,771	Others		11,012,072	
16,627,057				21,102,612
910,200	Repayable Jobs-in-Progress at cost			1,002,779
£47,722,236				£57,249,865

Current Liabilities

11,897,123	Trade Creditors	11,756,488
728,098	Progress Payments on Repayable Jobs-in-Progress	659,564
582,000	Loans – Less than Twelve Month Term	—
5,346,246	Accrued Interest on Borrowings	5,946,616
1,736,647	Consumers' Deposits	2,854,894
8,237,878	Accrued Charges and Provisions	9,042,386
£28,527,992		£30,259,948

Schedule F

Statement of Outstanding Stocks, Bonds and Long Term Loans and their Redemption

Amount of Borrowing		Balance Outstanding 31st Mar. 1974 £	Borrowed during year £	Redeemed during year £	Adjustment for currency changes £	Balance Outstanding 31st Mar. 1975 £
	Minister for Finance:					
£68,450,236	Advances under the Electricity (Supply) Acts and the Shannon Fisheries Act, 1935	**51,770,534**		1,130,702		**50,639,832**
		51,770,534		1,130,702		**50,639,832**
	Public Issues:					
	Stocks:					
£10,000,000	5% redeemable 1966 – 1975	**5,707,504**		275,000		**5,432,504**
£ 5,000,000	6% redeemable 1968 – 1978	**3,066,318**		415,888		**2,650,430**
£12,000,000	6% redeemable 1982 – 1987	**7,966,884**		1,055,335		**6,911,549**
£16,500,000	6% redeemable 1984 – 1989	**11,278,581**		1,037,056		**10,241,525**
£13,000,000	7% redeemable 1986 – 1991	**10,591,367**		696,684		**9,894,683**
£ 7,000,000	7¼% redeemable 1988 – 1993	**6,206,591**		254,029		**5,952,562**
£ 9,250,000	9½% redeemable 1985 – 1990	**8,662,970**		274,793		**8,388,177**
£ 3,250,000	6% Premium, redeemable 1975 (repayable at 20% premium)	**3,035,387**		65,000		**2,970,387**
£ 2,800,000	6% Premium, redeemable 1976 (repayable at 20% premium)	**2,514,814**		104,617		**2,410,197**
£12,000,000	9% redeemable 1992 – 1995	**11,415,560**		478,688		**10,936,872**
		70,445,976		4,657,090		**65,788,886**
	Bonds and Others:					
E.U.A. 15,000,000	European Units of Account 8¼% – repayable by yearly instalments 1972/86	**7,459,702**		530,384	961,412	**7,890,730**
B. Francs 1,000,000,000	Belgian Franc 7½% Registered Bonds – repayable in full 1983	**10,422,095**			1,342,611	**11,764,706**
B. Francs 700,000,000	Belgian Franc 7½% Registered Bonds – repayable in full 1983	**7,295,466**			939,828	**8,235,294**
B. Francs 1,000,000,000	Belgian Franc 8¾% Registered Bonds – repayable by yearly instalments 1980/89	**10,422,095**			1,342,611	**11,764,706**
Sw. Francs 50,000,000	Swiss Franc 7% Bearer Notes – repayable in full 1980	**6,925,208**			1,305,245	**8,230,453**
**$30,000,000	Banking Syndicate – repayable by ½ yearly instalments 1980/84		12,938,846		398,920	**13,337,766**
***$40,000,000	Banking Syndicate – repayable by ½ yearly instalments 1978/82		10,533,163		(–) 116,496	**10,416,667**
		112,970,542	23,472,009	5,187,474	6,174,131	**137,429,208**
	Long Term Loans:					
£500,000	New Ireland Assurance Co. Ltd. 6% – repayable by ½ yearly instalments 1962/87	**347,397**		18,293		**329,104**
£14,865,000	Central Bank of Ireland 7¼% – repayable by ½ yearly instalments 1972/87	**13,673,828**		662,312		**13,011,516**
*$14,500,000	International Bank for Reconstruction and Development 6½% - repayable by ½ yearly instalments 1974/94	**7,257,261**		223,474	162,865	**7,196,652**
*$20,000,000	International Bank for Reconstruction and Development 7¼% – repayable by ½ yearly instalments 1976/87	**2,854,566**	3,186,748		180,162	**6,221,476**
*$15,000,000	International Bank for Reconstruction and Development 7¼% – repayable by ½ yearly instalments 1977/88	**715,564**	1,354,112		8,766	**2,078,442**
$30,000,000	Japanese Banks 7¾% – repayable by yearly instalments 1973/92	**11,909,737**		636,550	(–)23,187	**11,250,000**
		36,758,353	4,540,860	1,540,629	328,606	**40,087,190**
	Total	**£201,499,429**	£28,012,869	£7,858,805	£6,502,737	**£228,156,230**

*Drawdown in various currencies over phased periods.
**$15,000,000 of $30,000,000 loan drawn down in Deutsche Marks, $15,000,000 in U.S. Dollars.
*** $25,000,000 drawn down at 31st March, 1975.

Statement of Interest and Loan Amortisation

Schedule G

1973/1974 £		£	£
	Interest:		
	Interest payable to the Minister for Finance	2,329,919	
	Interest on ESB Stocks and on other loans (less temporary investment earnings)	11,165,462	
	Stock management charges	50,271	
10,898,402			13,545,652
	Loan Amortisation:		
	Repayment of capital advances from the Minister for Finance	1,130,702	
	Sinking fund provisions for redemption of ESB Stocks and other Loans	7,011,588	
6,559,765			8,142,290
£17,458,167			£21,687,942
	Allocated as follows:		
	Interest:		
	Income and Expenditure Account:		
	Generation	5,038,872	
	Transmission	1,804,965	
	Distribution	4,837,559	
	Installations	88,043	
	Appliance Sales	80,300	
	Fisheries	6,378	
	Capital Works	1,689,535	
10,898,402			13,545,652
	Loan Amortisation:		
	Income and Expenditure Account:		
	Generation	3,445,481	
	Transmission	1,282,798	
	Distribution	3,411,472	
	Fisheries	2,539	
6,559,765			8,142,290
£17,458,167			£21,687,942

Schedule H

Statement of Capital Reserves

	£	£	£
Non-Repayable Capital Contributions:			
Contributions from Minister for Finance under Electricity (Supply) Acts towards capital cost of supplying rural areas — as at 31st March, 1974	21,339,826		
Received in year	1,300,000		
		22,639,826	
Other contributions – as at 31st March, 1974	4,233,850		
Received in year	642,162		
		4,876,012	
			27,515,838
Repaid Capital Reserve:			
Loan amortisation, less intangible assets, foreign loans revaluations and loan discounts written off – as at 31st March, 1974		34,320,327	
Movements in year:			
Loan Amortisation	8,162,793		
Borrowing in Foreign Currencies – long and medium term; net changes at year end values – see Note 8 of Accounting Policies, Schedule K.	(6,633,132)		
		1,529,661	
			35,849,988
Total as at 31st March, 1975			**£63,365,826**

Statement of Generation Costs

Schedule I

Generation	Fuel £	Operation £	Maintenance £	Local Charges £	WORKS COST 1974/1975 £	Per Unit Sent Out Pence	WORKS COST 1973/1974 £	Per Unit Sent Out Pence	Depreciation £	TOTAL COST 1974/1975 £	TOTAL COST 1973/1974 £
Coal/Oil											
Marina	3,725,197	325,754	345,443	86,081	**4,482,475**	1.162	2,254,412	0.492	285,613	**4,768,088**	2,538,662
Ringsend	6,955,936	644,301	899,792	119,654	**8,619,683**	1.242	4,015,876	0.490	633,995	**9,253,678**	4,646,436
Arigna	662,695	143,045	86,756	27,873	**920,369**	1.399	692,220	1.081	45,889	**966,258**	737,994
Great Island	8,830,226	320,325	362,757	98,587	**9,611,895**	0.896	3,649,207	0.366	707,647	**10,319,542**	4,338,579
Tarbert	5,959,090	251,918	211,740	67,110	**6,489,858**	0.908	2,628,810	0.327	426,797	**6,916,655**	3,040,345
Poolbeg	12,191,175	373,948	270,246	75,402	**12,910,771**	0.766	3,780,782	0.298	932,496	**13,843,267**	4,709,982
Sod Peat (Machine)											
Portarlington	820,738	257,571	170,252	43,298	**1,291,859**	1.021	1,100,580	0.937	77,661	**1,369,520**	1,178,390
Allenwood	1,036,239	288,896	208,362	51,233	**1,584,730**	0.929	1,403,639	0.818	117,915	**1,702,645**	1,520,530
Lanesborough	475,252	141,869	61,061	23,417	**701,599**	0.784	626,667	0.690	48,789	**750,388**	675,471
Milled Peat											
Ferbane	2,187,021	424,877	560,253	98,851	**3,271,002**	0.812	2,363,889	0.636	278,797	**3,549,799**	2,640,822
Rhode	1,391,276	304,225	454,395	77,212	**2,227,108**	0.760	1,974,874	0.585	219,949	**2,447,057**	2,194,327
Bellacorick	772,266	237,166	201,697	52,146	**1,263,275**	0.777	941,564	0.674	123,696	**1,386,971**	1,065,076
Shannonbridge	674,982	222,475	192,276	47,045	**1,136,778**	0.681	1,043,086	0.542	135,609	**1,272,387**	1,176,611
Lanesborough	669,246	141,869	115,641	30,925	**957,681**	0.568	948,967	0.451	135,001	**1,092,682**	1,083,890
Sod Peat (Hand-Won)											
Four 5MW Stations	272,955	174,667	97,481	29,778	**574,881**	2.489	417,351	1.838	68,043	**642,924**	485,335
Peak Station											
North Wall	830,662	170,133	105,791	34,175	**1,140,761**	—	608,355	—	125,064	**1,265,825**	732,781
Stand-by											
Pigeon House	193,748	151,888	135,886	29,764	**511,286**	—	552,881	—	82,110	**593,396**	634,971
Total Fuel Stations	47,648,704	4,574,927	4,479,829	992,551	**57,696,011**	0.917	29,003,160	0.472	4,445,071	**62,141,082**	33,400,202
Hydro											
Shannon	—	165,991	306,580	107,339	**579,910**	0.173	427,346	0.129	137,813	**717,723**	563,975
Erne	—	100,774	136,075	38,283	**275,132**	0.108	223,045	0.088	197,889	**473,021**	420,889
Liffey	—	22,544	52,897	11,898	**87,339**	0.286	112,189	0.215	48,276	**135,615**	160,601
Lee	—	52,176	68,466	20,893	**141,535**	0.202	117,597	0.133	123,455	**264,990**	241,031
Clady	—	21,920	13,898	3,832	**39,650**	0.270	33,683	0.229	27,137	**66,787**	60,825
Pumped Storage											
Turlough Hill	—	101,165	87,391	36,937	**225,493**	—	107,755	—	544,679	**770,172**	243,921
Total Hydro Stations	—	464,570	665,307	219,182	**1,349,059**	0.218	1,021,615	0.141	1,079,249	**2,428,308**	1,691,242
Total All Stations	47,648,704	5,039,497	5,145,136	1,211,733	**59,045,070**	0.854	30,024,775	0.437	5,524,320	**64,569,390**	35,091,444

Electricity Purchased in bulk (net)	**156,777**	48,982
Central Transport and Stores	**32,973**	21,397
General Charges	**3,215,705**	2,175,197
Fisheries (Net Cost)	**155,025**	89,962
TOTAL COST	**£68,129,870**	£37,426,982

Schedule J

Fisheries—Commercial and Conservation Operations

1973/74 Total Cost £		£	Total Cost £	Analysis of Commercial and Conservation Operations: Commercial £	Conservation £
136,187	*Direct Costs		**205,004**	82,860	122,144
	Overheads and General Charges:				
34,880	Payroll expenses and charges	40,809		11,478	29,331
7,000	Depreciation	7,000		3,441	3,559
8,918	Interest and Loan Amortisation	8,917	**56,726**	3,897	5,020
£186,985			**£261,730**	101,676	160,054
	Less:				
97,023	Sales of fish, letting of fishing rights and miscellaneous income		**106,705**	100,862	5,843
£89,962	**Net Cost as per Electricity Income and Expenditure Account.**		**£155,025**	£814	£154,211

*Commercial Costs include £6,637 for experimental work on salmon rearing.

NOTES ON AND FORMING PART OF THE FINANCIAL ACCOUNTS AND SCHEDULES

The Accounts are prepared in accordance with the Electricity (Supply) Acts. Section 21 (2) of the 1927 Act reads:

"All charges made by the Board after the appointed day for electricity (whether derived from the Shannon works or otherwise) sold by it in bulk or direct to consumers and for goods sold and services rendered by it shall be fixed at such rates and on such scales that the revenue derived in any year by the Board from such sales and services together with its revenue (if any) in such year from other sources will be sufficient and only sufficient (as nearly as may be) to pay all salaries, working expenses and other outgoings of the Board properly chargeable to income in that year (including the payments falling to be made in such year by the Board to the Minister for Finance in respect of interest and sinking fund payments on advances out of the Central Fund) and such sums as the Board may think proper to set aside in that year for reserve fund, extensions, renewals, depreciation, loans and other like purposes."

Accounting Policies

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

2. **Depreciation of Capital Assets:**
Assets are grouped and allotted lifespans in line with international practice. Depreciation is provided on the straight line method on all assets in commission on 1st April each year (other than on new generation stations) even where they have exceeded their allotted lifespans. In the case of new generation stations depreciation commences from the date of commissioning if prior to 31st December.
Assets when retired from service are charged against, and proceeds of disposal or stores value are credited to, Accumulated Depreciation.

3. **Materials:**
Stocks of materials and fuel are valued at average cost; prior to December, 1973 fuel was valued at delivered cost.

4. **Repayable Jobs-in-Progress:**
Installations Contracts are valued at direct cost together with appropriate overheads; sundry jobs at direct cost.

5. **Debtors:**
Bad Debts are written off as they arise. A provision for doubtful debts, considered adequate in relation to the size and nature of the business, is maintained.

6. **Loan Amortisation:**
Long Term Loans and Public Issues (Schedule F) – Amortisation is in line with the contractual agreements.
Medium and Short Term Loans – these are repaid in accordance with the contractual agreements but amortisation is provided on a 15/20 year basis.
Where new loan proceeds are drawndown for a period in excess of six months, revenue is charged with proportionate amortisation.

7. **Capital Borrowings:**
Borrowings are classified in accordance with the total duration of contracted repayment terms, irrespective of phased repayment arrangements, and of the lapsed portion of repayment period.
Discounts on loans are 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 to reflect significant changes in parities. Changes are reflected in the Capital Reserve.

9. **Non-Repayable Capital Contributions:**
Non-Repayable Capital Contributions are credited to Capital Reserves (Schedule H).

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

11. **Apportionments:**
(a) 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 Sales, Installations Contracts and Fisheries bear their relevant proportion of general overhead expenses and interest.
(c) The proportion of Appliance Sales and Installations Contracts overhead expenses related to the promotion of sales of electricity is included in the overhead expenses charged to Electricity Income and Expenditure Account.

12. **Taxation:**
The Board is liable for Income Tax but is exempt from Corporation Profits Tax. 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 1975 are estimated at £67m.). Had a Tax Equalisation Reserve been provided, the accumulated figure would now be an estimated £12.7m.

Other Notes

1. **Deferred Expenditure:**
This represents the revenue element, relating to Electricity Income and Expenditure of lump sum payments, to achieve future benefits under productivity agreements and is being charged to that account over a three year period.

Auditors' Report

As Auditors appointed by the Minister for Transport and Power, with the consent of the Minister for Finance, we have examined the Profit and Loss Account, Balance Sheet and attached Schedules A to K of the Electricity Supply Board.

We have obtained all the information and explanations which we considered necessary for the Audit and the Financial Statements are in agreement with the books of account.

In our opinion:–

(a) Proper books of account have been kept and proper Returns have been received from offices not visited by us.

(b) The Profit and Loss Account and Balance Sheet when read in conjunction with the attached Schedules and the Notes appearing thereon, give a true and fair view of the outcome of the Revenue operations of the Board for the year ended 31st March, 1975, and of the state of the Board's affairs as at that date.

STOKES KENNEDY CROWLEY & CO.
Chartered Accountants

Harcourt House,
Harcourt Street,
Dublin 2.

18th July, 1975

Appendices

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Appendix 1

Number of Consumers and Electricity Sales

District	No. of Consumers at 31st March		Electricity Sales Units sold in year ended 31st March	
	1975	1974	1975 (millions)	1974 (millions)
Athlone	50,798	49,356	214.7	212.8
Cork	101,637	98,537	756.4	751.3
Dublin City	137,517	136,892	1,090.8	1,103.1
Dublin North West	94,656	89,084	809.3	803.3
Dublin South	57,037	54,961	424.6	443.6
Dundalk	69,738	67,612	519.4	523.3
Galway	50,982	49,259	265.4	256.9
Limerick	82,368	80,318	666.7	656.8
Portlaoise	60,481	58,505	378.3	372.6
Sligo	81,700	79,017	282.2	278.6
Tralee	42,693	41,437	196.1	193.6
Waterford	71,393	68,786	549.2	556.1
Total	901,000	873,764	6,153.1	6,152.0

Growth of Electricity Sales and Number of Consumers

Appendix 2

Year Ended 31st March	Units Generated (and Purchased) Millions	Units Sold to Consumers Millions	Revenue from Electricity Sales Thousands	Average Price per Unit sold Pence	Total Consumers
			£		
1930	60.9	43.2	478	1.108	48,606
1935	206.1	157.0	1,258	0.800	103,037
1940	407.0	318.6	1,946	0.612	172,545
1945	406.3	319.0	2,458	0.771	228,008
1950	784.8	626.2	4,774	0.763	310,639
1955	1,461.7	1,192.2	9,522	0.800	461,901
1960	2,096.0	1,692.2	14,724	0.871	610,946
1965	3,240.2	2,682.6	22,488	0.838	697,491
1966	3,546.2	2,953.3	24,077	0.817	716,113
1967	3,851.0	3,238.1	26,690	0.825	726,561
1968	4,246.4	3,570.1	29,898	0.838	745,430
1969	4,749.0	4,012.3	34,457	0.858	765,213
1970	5,245.7	4,411.6	39,400	0.892	786,500
1971	5,921.0	4,862.1	44,082	0.907	805,736
1972	6,234.2	5,271.7	51,750	0.982	818,516
1973	6,749.1	5,705.1	60,321	1.057	845,119
1974	7,253.1	6,152.0	73,063	1.188	873,764
1975	7,298.7	6,153.1	111,261	1.808	901,000

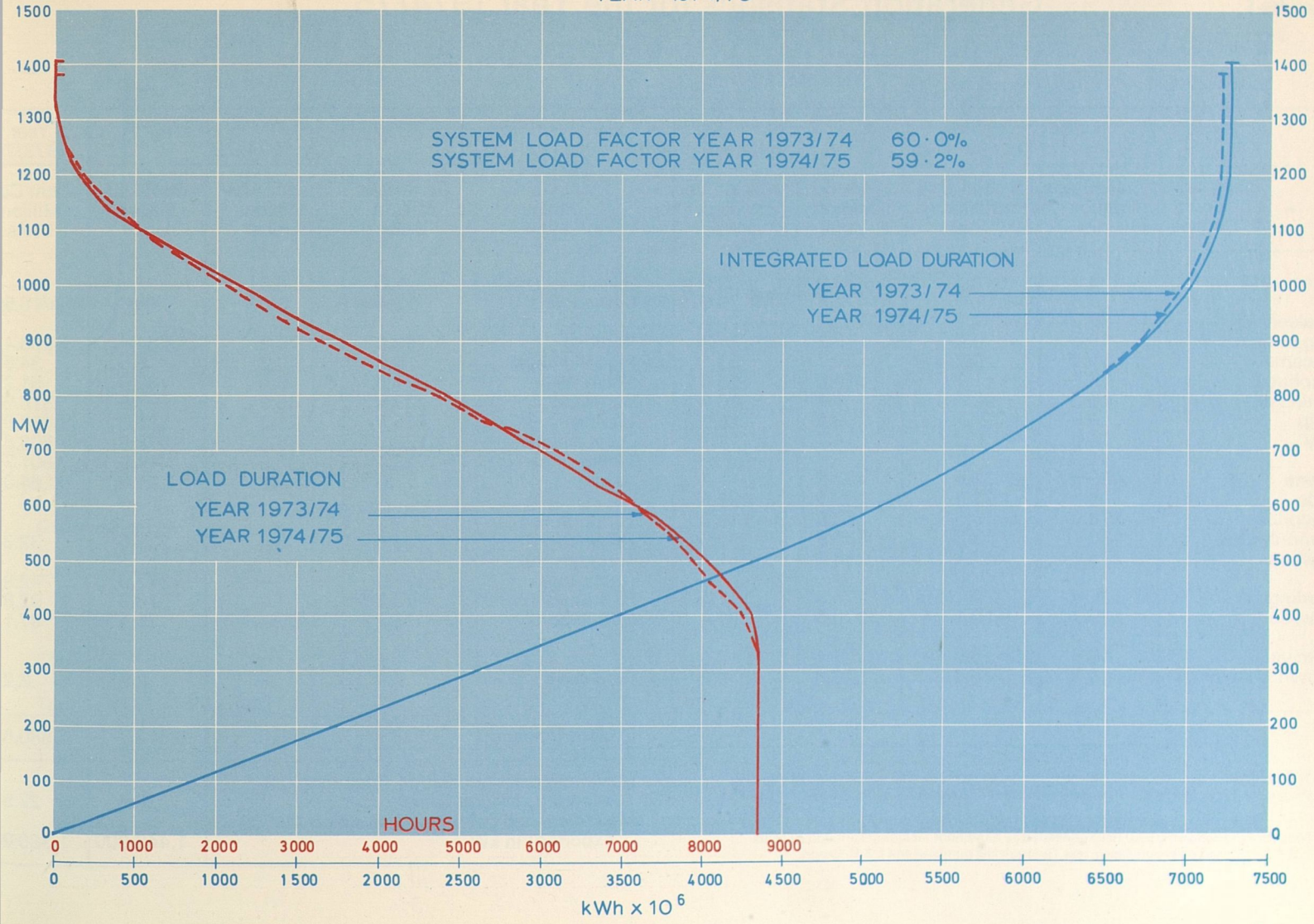
The above table shows, quinquennially from 1930 to 1965, and for each year since, the number of units generated and sold, the revenue, the average price per unit, and the number of consumers.

Appendix 3

Analysis of Units Sold

Class of Supply	Year ended 31st March 1975 (millions)	Year ended 31st March 1974 (millions)	Increase (millions)	Percentage Increase
DOMESTIC				
General Supply	2,393.0	2,362.4	30.6	1.3
Night Space Heating	256.5	330.8	– 74.3	– 22.5
	2,649.5	2,693.2	– 43.7	– 1.6
COMMERCIAL				
Lighting	241.9	235.3	6.6	2.8
Heating, Cooking and Waterheating	319.3	322.5	– 3.2	– 1.0
Motive Power	223.8	219.4	4.4	2.0
Night Space Heating	218.7	228.0	– 9.3	– 4.1
Public Lighting	75.8	69.2	6.6	9.5
Miscellaneous	198.7	184.6	14.1	7.6
	1,278.2	1,259.0	19.2	1.5
INDUSTRIAL				
Maximum Demand	2,070.9	2,032.7	38.2	1.9
Lighting	14.1	14.9	– 0.8	– 5.4
Heating, Cooking and Waterheating	33.1	36.2	– 3.1	– 8.6
Motive Power	96.7	105.7	– 9.0	– 8.5
Night Space Heating	10.6	10.3	0.3	2.9
	2,225.4	2,199.8	25.6	1.2
Total	6,153.1	6,152.0	1.1	0.02

SYSTEM LOAD DURATION AND INTEGRATED LOAD DURATION CURVES YEAR 1974/75



Appendix 5

Generation Statistics for the Year 1974/75

Station	Year 1974/75			Year 1973/74	Station	Year 1974/75			Year 1973/74
	Generated Million Units	Station Use Million Units	Sent Out Million Units	Sent Out Million Units		Generated Million Units	Station Use Million Units	Sent Out Million Units	Sent Out Million Units
Ardnacrusha	338.7	2.7	336.0	329.9	Screeb	1.6	0.3	1.3	—
Cliff	73.8	1.0	72.8	73.5	Gweedore	15.4	1.6	13.8	15.5
Cathaleen's Fall	184.5	1.8	182.7	179.5					
Carrigadrohid	19.6	0.4	19.2	24.8	Poolbeg	1,759.6	75.2	1,684.4	1,266.4
Inniscarra	51.4	0.7	50.7	63.1	Pigeon House	9.9	3.3	6.6	34.5
Pollaphuca	15.7	1.1	14.6	26.6	North Wall	71.5	5.6	65.9	51.2
Golden Falls	6.2	0.1	6.1	10.0	Ringsend	739.8	45.9	693.9	818.9
Leixlip	9.9	0.1	9.8	15.5	Marina	406.8	21.2	385.6	457.8
Clady	14.9	0.2	14.7	14.7	Great Island	1,129.3	56.5	1,072.8	996.8
					Tarbert	748.1	33.6	714.5	801.7
Ferbane	438.0	35.4	402.6	371.3	Arigna	71.0	5.2	65.8	64.0
Rhode	316.4	23.3	293.1	337.5					
Bellacorick	176.0	13.5	162.5	139.5	Turlough Hill				
Shannonbridge	180.1	13.2	166.9	192.5	(generation)	234.6	5.0	229.6	32.3
Lanesboro	275.6	17.4	258.2	301.1	Turlough Hill				
					(pumping)	317.0	—	317.0	42.9
Portarlington	135.9	9.4	126.5	117.4	ESB Import	70.3	—	70.3	92.8
Allenwood	180.7	10.1	170.6	171.4	ESB Export	71.7	—	71.7	87.1
Cahirciveen	8.3	0.9	7.4	7.0					
Miltown Malbay	0.9	0.3	0.6	0.2	Purchased	2.9	—	2.9	3.2
					System Demand	7,298.7	385.0	6,913.7	6,880.6
					Maximum daily generation (including 0.3 exported) Million Units			27.5	27.5
					Maximum load generated (including 48,000 exported) in kW			1,443,000	1,386,000

The total system demand was 7299 million units, an increase of 46 million units (0.6%) over the previous year. Production from native sources provided 34.5% of the total system demand.

Note: System demand is total units generated by all stations including Turlough Hill plus E.S.B. Import and units purchased, less Turlough Hill pumping and E.S.B. Export.

Particulars and Performance of Generating Plant

Hydro Stations

Station	Location	Average annual generation million units	Plant Particulars		Plant Performance in year ended 31/3/'75		
			Generating Sets		Units sent out millions	Plant load factor %	Works cost per unit sent out new pence
			No.	Capacity (MW)			
Ardnacrusha	Shannon	310	4	85	336.0	45.6	0.173
Pollaphuca	Liffey	45	2	30	30.5	6.0	0.286
Golden Falls			1	4		17.7	
Leixlip			1	4		28.3	
Cliff	Erne	275	2	20	255.5	42.2	0.108
Cathaleen's Fall			2	45		46.9	
Carrigadrohid	Lee	77	1	8	69.9	28.0	0.202
Inniscarra			2	19		31.0	
Clady	Clady	13	1	4	14.7	42.6	0.270
Turlough Hill — Pumped Storage	Co. Wicklow	—	4	292	229.6	—	—

Appendix 6 CONT.

Particulars and Performance of Generating Plant

Steam Stations

Station	Location	Plant Particulars					Plant Performance in year ended 31/3/'75			
		Generating Sets		Boilers			Units sent out millions	Plant load factor %	Fuel cost per unit sent out new pence	Works cost per unit sent out new pence
		No.	Total Capacity MW	No.	Total Capacity Tonne/hour	Fuel Type				
Arigna	Co. Roscommon	1	15	1	75	Coal	65.8	54.2	1.007	1.399
Lanesborough	Co. Longford	2	60	1 1	100 173	Sod Peat Milled Peat	89.5 168.7	53.8 51.9	0.531 0.397	0.784 0.568
Rhode	Co. Offaly	3	80	3	364	Milled Peat	293.1	45.3	0.475	0.760
Bellacorick	Co. Mayo	2	40	2	191	Milled Peat	162.5	50.4	0.475	0.777
Shannonbridge Shannonbridge (under construction)	Co. Offaly	1 1	40 40 80	1 1	173 173	Milled Peat Milled Peat	166.9	51.6	0.404	0.681
Great Island	Co. Wexford	3	240	3	853	Oil	1,072.8	53.9	0.823	0.896
Tarbert Tarbert (under construction)	Co. Kerry	2 2	120 500 620	2 2	473 1600	Oil Oil	714.5	71.4	0.834	0.908
Poolbeg	Dublin City	2	240	2	760	Oil	1,684.4	75.2	0.724	0.766
		2	28	Gas Turbine Sets						

Particulars and Performance of Generating Plant

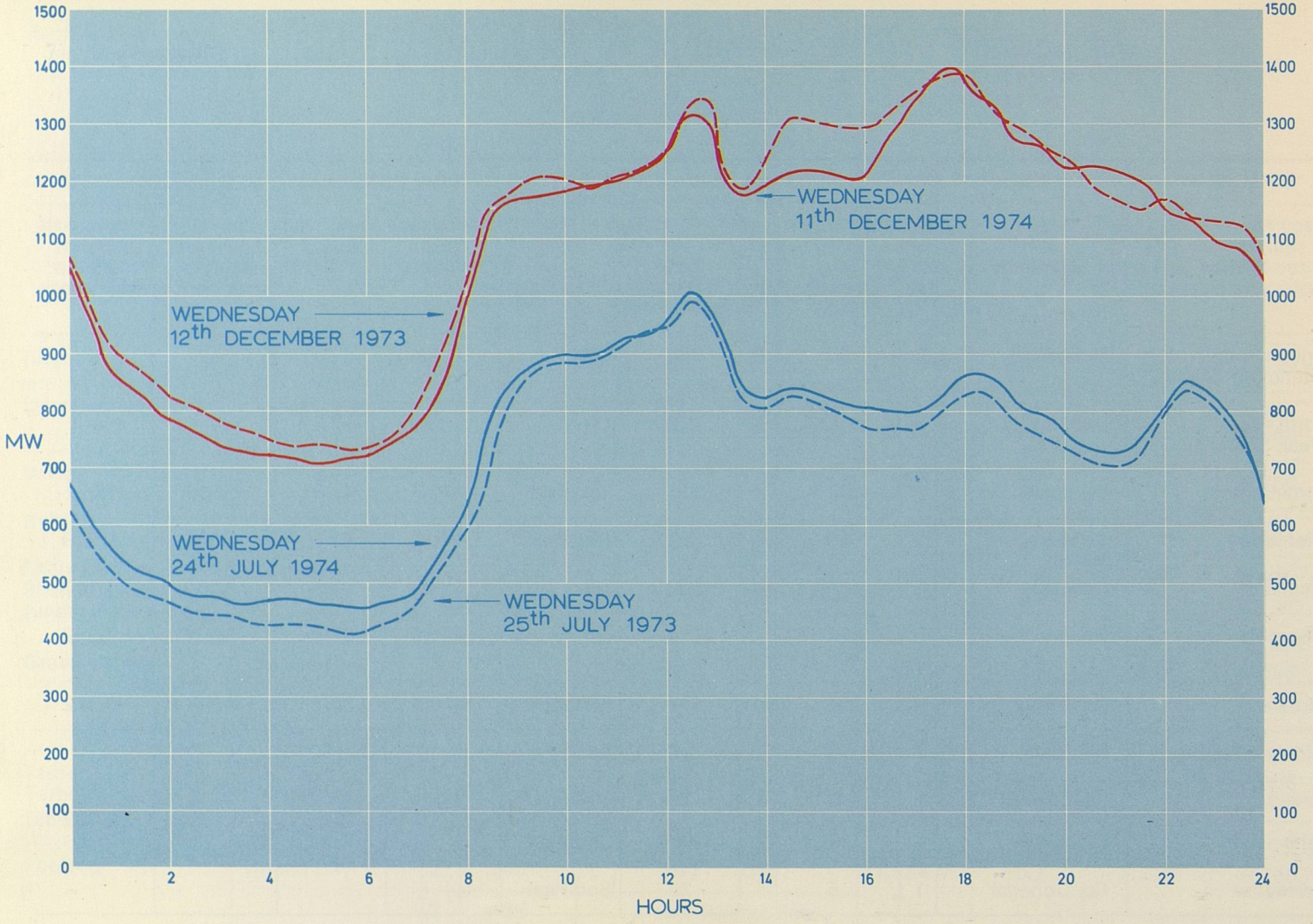
Appendix 6 CONT.

Steam Stations

Station	Location	Plant Particulars					Plant Performance in year ended 31/3/'75			
		Generating Sets		Boilers			Units sent out millions	Plant load factor %	Fuel cost per unit sent out new pence	Works cost per unit sent out new pence
		No.	Total Capacity MW	No.	Total Capacity Tonne/hour	Fuel Type				
Pigeon House (Stand-by Station)	Dublin City	5	90	8	364	Oil	6.6	—	—	—
North Wall (Peak Station)	Dublin City	3	48	3	225	Oil	65.9	17.1	—	—
Portarlington	Co. Laoise	3	37.5	3	205	Sod Peat	126.5	41.5	0.649	1.021
Allenwood	Co. Kildare	2	40	4	273	Sod Peat	170.6	51.7	0.607	0.929
Marina	Cork City	3	120	4	522	Oil	385.6	38.8	0.966	1.162
Ringsend	Dublin City	6	270	7	1114	Oil	693.9	31.4	1.002	1.242
Ferbane	Co. Offaly	4	90	4	430	Milled Peat	402.6	55.7	0.543	0.812
Miltown-Malbay	Co. Clare	1	5	1	28	Sod Peat	23.1	15.0	1.182	2.489
Screeb	Co. Galway	1	5	1	28	Sod Peat				
Cahirciveen	Co. Kerry	1	5	1	28	Sod Peat				
Gweedore	Co. Donegal	1	5	1	28	Sod Peat				

Appendix 7

SYSTEM DAILY LOAD CURVES YEAR 1974/75



Transmission System at 31st March, 1975

Appendix 8

Transmission Stations

Transformer/Switching Stations	No. in commission	Increase for year	Total capacity in kVA	Increase or decrease in capacity for year in kVA
220 kV Stations	10	1	600,000 at 275/220 kV	Nil
			1,690,000 at 220/110 kV	+437,000
			420,000 at 13/220 kV	Nil
			397,000 at 10/220 kV	+175,000
			310,000 at 10/110 kV	Nil
			20,000 at 110/ 6 kV	Nil
110 kV Stations	64	2	2,597,500 at 110/ 38 kV	+45,000
			59,000 at 110/ 10 kV	Nil
			60,000 at 110/ 6 kV	Nil
			110,400 at 38/ 10 kV	Nil
			1,151,000 at 10/110 kV	Nil
			88,000 at 10/38/110 kV	Nil
			5,000 at 10/38 kV	Nil

Transmission Lines and Cables

Lines and cables	Length kms.	Increase or decrease for year kms.	Description
275 kV lines	10.5	Nil	6 x twin 485 sq. mm double circuit SCA
220 kV lines	25.1	+5.0	6 x 600 sq. mm. double circuit SCA
220 kV lines	474.3	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	7.4	Nil	6 x 95 sq. mm. double circuit copper
110 kV lines	372.3	—142.2	3 x 95 sq. mm. single circuit copper
110 kV lines	96.6	+5.0	6 x 200 and 6 x 300 sq. mm. double circuit SCA
110 kV lines	2846.2	+279.5	3 x 200 to 3 x 425 sq. mm. single circuit SCA
220 kV cables	30.6	+0.1	3 single core oil filled
110 kV cables	21.9	+0.9	3 single core oil filled
110 kV cables	17.9	Nil	3 core oil filled
110 kV cables	25.6	Nil	3 core pipe compression

Appendix 9

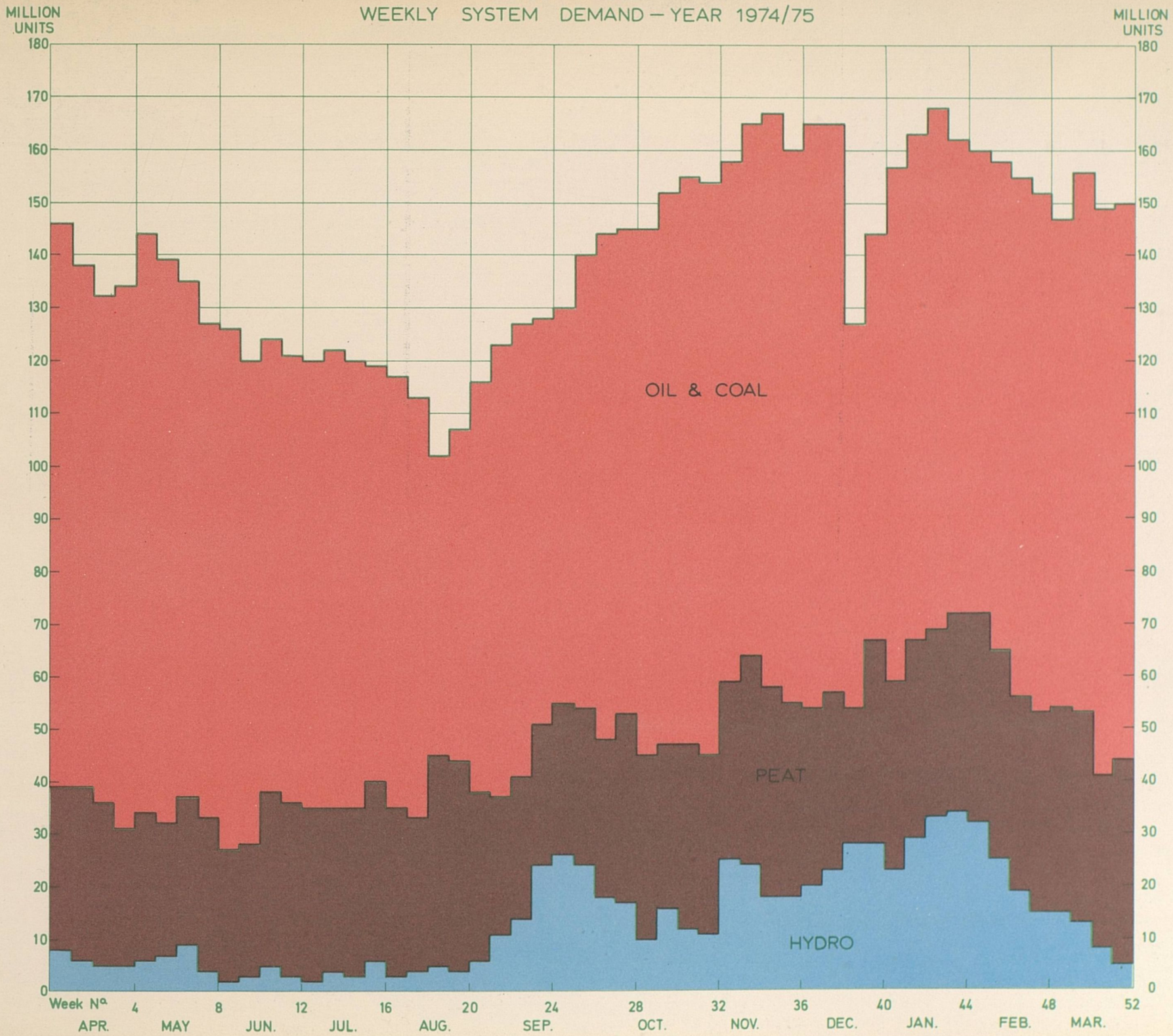
Distribution System at 31st March, 1975

Distribution System (Excluding Rural Networks)

Transformer stations	No. in commission	Increase (+) or Decrease (—) for year	Total Capacity in kVA	Increase (+) or decrease (—) for year in kVA
38kV Stations	316	+8	2,097,700	+ 59,000
10 kV Stations (Excl. U.R.D.)	8,157	+480	1,858,030	+108,700
10 kV Stations U.R.D.	1,606	+68	91,329	+ 3,100
5kV Stations	53	Nil	32,590	Nil

Distribution lines and cables	Length kms.	Increase (+) or Decrease (—) for year kms.	Description
38 kV Lines	4,884.5	+49.0	3 x 25 to 3 x 300 sq. mm. Cu. and SCA.
38kV Cables	241.8	+0.8	3 x 95 to 3 x 680 sq. mm. Solid, oil filled and Polyethelene.
10 kV Lines	6,318.3	+73.0	Single and three phase.
10 kV and 5kV Cables	2,127.5	+92.5	2 x 16 to 3 x 185 sq. mm.
3.3kV Cables	3.7	Nil	3 x 185 sq. mm.

WEEKLY SYSTEM DEMAND — YEAR 1974/75



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