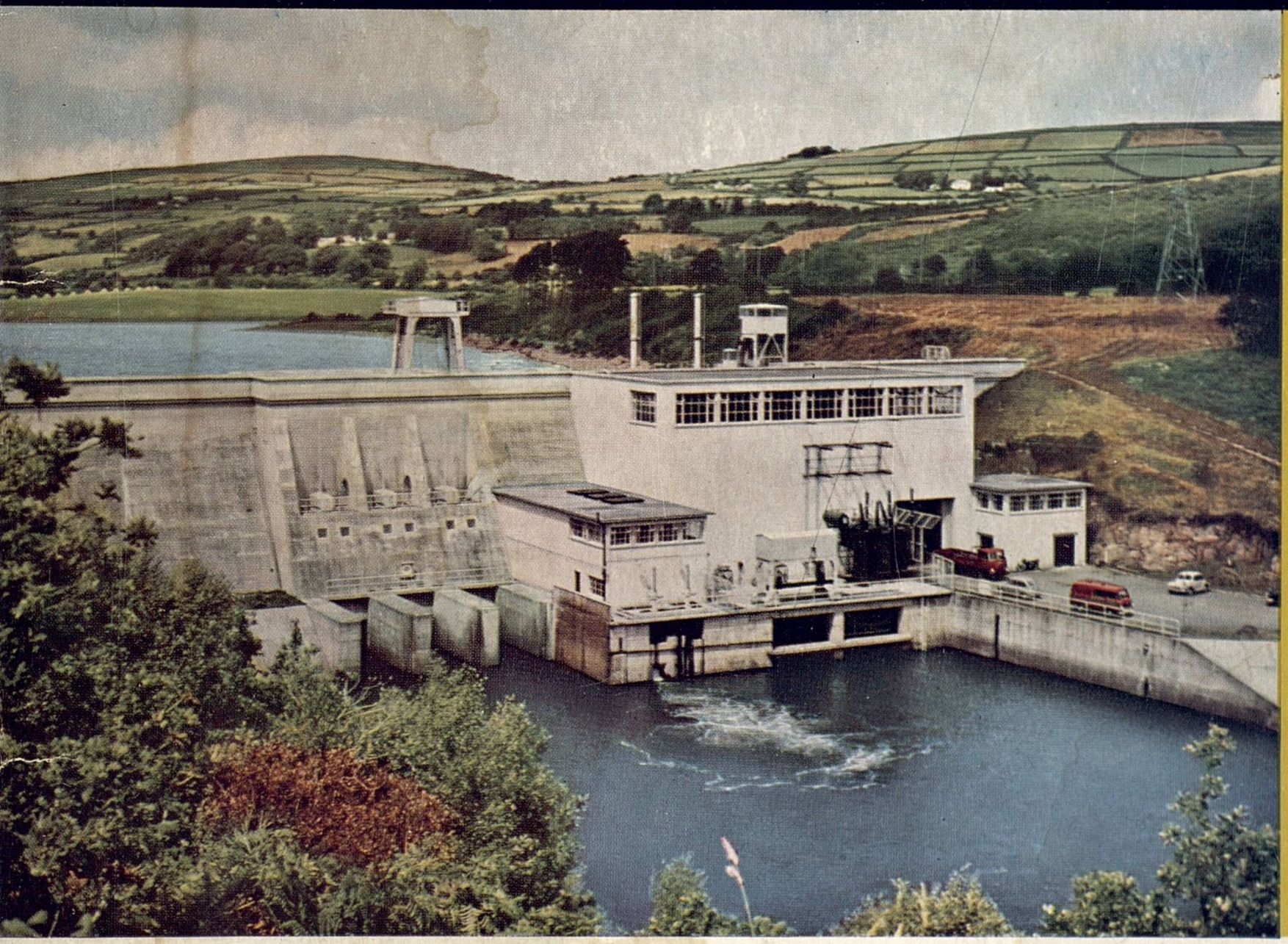
34th

# ANNUAL REPORT

ELECTRICITY SUPPLY BOARD · IRELAND



For the year
ended 31st March
1961

INCLUDING REPORT ON FISHERIES

*Board Members*

**T. MURRAY**, B.A., *Chairman*

**J. P. DIGBY**

**HENRY KENNEDY**, M.A., D.Sc.

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

**B. O'CARROLL**, B.A., LL.B.

**J. A. RYAN**

**J. C. TONGE**, F.C.W.A.

*Secretary*

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

*Chief Engineer*

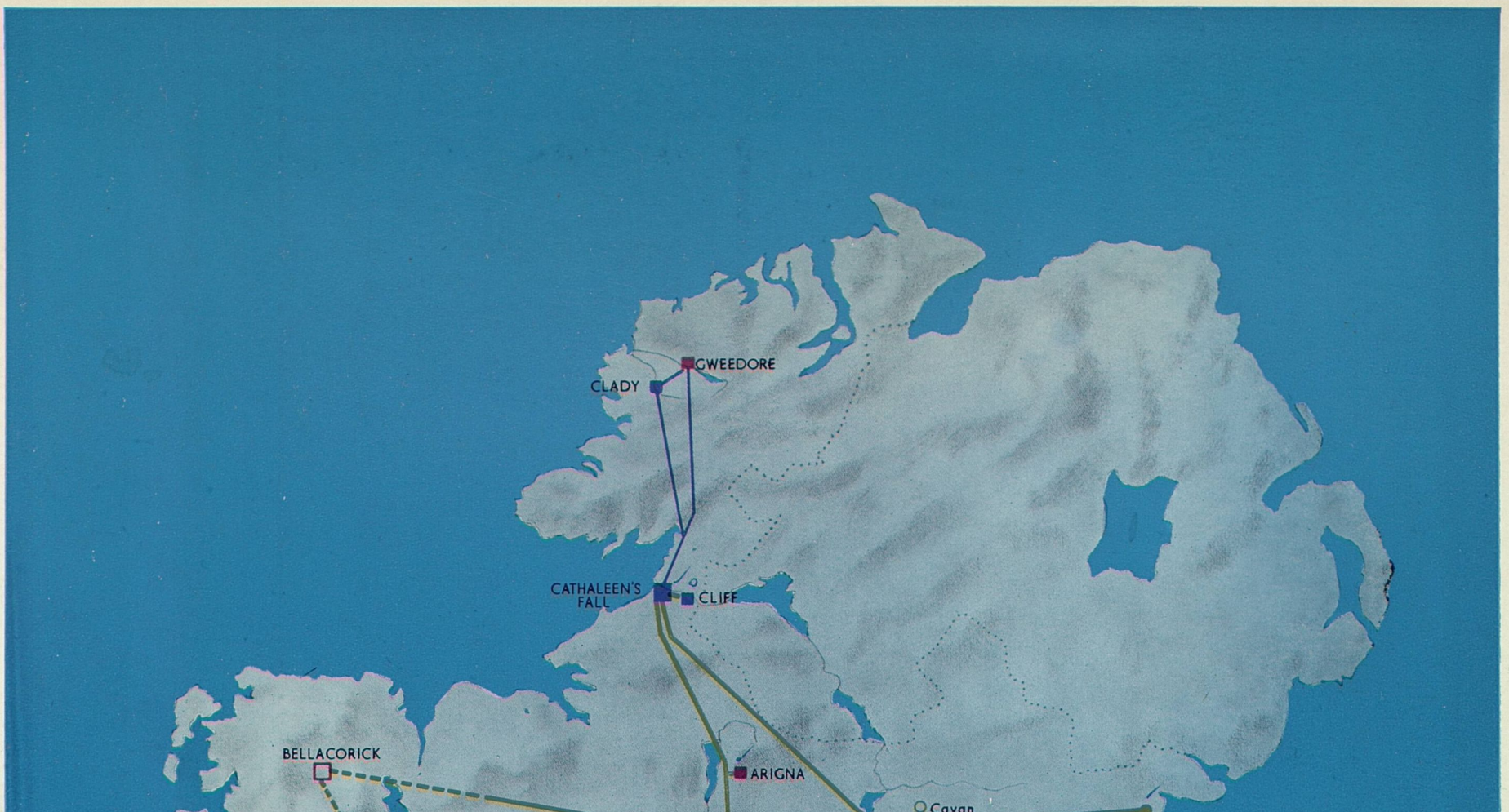
**P. G. MURPHY**, M.E., B.Sc., M.I.E.E., M.I.Mech.E.

*Chief Accountant*

**JOSEPH FOGARTY**, B.Comm., A.C.A.

Pr. 6050

**ELECTRICITY SUPPLY BOARD**
**27 LOWER FITZWILLIAM STREET · DUBLIN · IRELAND**




# GENERAL OUTLINE OF THE GENERATION AND TRANSMISSION SYSTEM

**31st March 1961**

| | |
|---|---|
| HYDRO GENERATING STATIONS ... ... ... | ■ |
| THERMAL GENERATING STATIONS ... ... ... | ■ |
| THERMAL GENERATING STATIONS PROJECTED | □ |
| 110KV TRANSFORMER STATIONS ... ... ... | ● |
| 110KV TRANSFORMER STATIONS PROJECTED ... | ○ |
| 110KV LINES ... ... ... ... | ——— |
| 110KV LINES PROJECTED ... ... | - - - - - |
| 220KV LINES PROJECTED ... ... | ▬ ▬ ▬ |
| OTHER LOW VOLTAGE LINES ... | ——— |

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# TO THE MINISTER FOR TRANSPORT AND POWER

REPORT of the ELECTRICITY SUPPLY BOARD
27 LOWER FITZWILLIAM STREET
DUBLIN

In accordance with Section 7 (4) and Section 32 (1) of the Electricity (Supply) Act, 1927, the Board presents the Annual Report and Accounts for the year ended 31st March, 1961.

The operating conditions in the year were on the whole favourable.

The generation of electricity at the hydro stations exceeded 900 million units for the first time. Whilst the water inflow at the Erne and Clady hydro-electric plants was about average, the inflow at Shannon, Liffey and Lee plants varied between 130% and 140% of average.

The total units generated and purchased amounted to 2,262 million units, an increase of 166 million units. This represented an increase of approximately 7·9% over the previous year, and followed an increase of 10·4% in 1959/60. Production from water power was 932 million units compared with 747 million units in the previous year. Generation from peat rose to 755 million units compared with 692 million units.

The electricity supplied to the system was provided as follows :—

| | |
|---|---|
| Hydro .. .. | 42·8% |
| Peat (sod) .. .. | 19·7% |
| Peat (milled) .. .. | 12·8% |
| Coal (native) .. | 4·4% |
| Oil/coal .. .. | 20·3% |

Generation from native sources amounted to 79·7% of the total output.

The installed generating plant was adequate for all requirements and provided sufficient reserves to meet contingencies.

The demand for electricity is still growing steadily. Sales realised £16,263,000, an increase of £1,539,000 over the preceding year. This represents an increase of 10·4% in electricity revenue. While all classes of supply continue to show satisfactory growth, the principal increases were in motive power for industry and in domestic supplies.

As foreshadowed in its Report for the year ended 31st March, 1960, the Board found it necessary to introduce increased rates of charge during the year. On the average the increase in price approximated to 5%.

The summarised revenue and expenditure figures in respect of electricity are :—

| | Year ended 31st March 1961 | Preceding Year |
|---|---|---|
| | £ | £ |
| Gross revenue .. .. | 16,311,509 | 14,780,128 |
| *Less* Working expenditure on wages, fuel and other materials and overheads | 8,038,961 | 7,899,604 |
| Working surplus .. | 8,272,548 | 6,880,524 |
| This working surplus is subject to the following capital charges :— | | |
| Interest .. | 3,894,021 | 3,748,446 |
| Provision for plant renewal .. | 2,924,000 | 2,730,000 |
| Capital redemption | 884,330 | 834,636 |
| | £7,702,351 | £7,313,082 |
| Leaving balance .. | £570,197 Surplus | £432,558 Deficit |

Taking credit for merchandise and installations profits, and allowing for the deficit on fisheries the result for the year as shown in the net revenue account is a surplus of £577,828. A special feature of the year was the correction of the revenue deficits which had persisted for some time.

The surplus of £577,828, together with £50,413 carried forward from the previous year, permits the replacement of £400,000 withdrawn last year from the contingencies reserve. It has also been decided, in view of the large financial commitments in plant and the increase in sizes of individual units, that a separate fund should be established to provide cover for special operational risks which are not covered by the general insurance arrangements. The fund which is entitled " Plant Self Insurance—Special Risks Fund " has been established by an allocation of £200,000 from earned surplus. Although this amount is relatively substantial the character of the risks is such that it would not be sufficient to meet the losses likely to arise should a major plant failure occur. In the circumstances the Board has also decided that the fund should be augmented in future years as the revenue position permits. A balance of £28,241 remains to be carried forward to next year.

The satisfactory revenue position could not have been achieved, despite the introduction of higher rates of charge during the year, were it not that operating conditions were favourable. Because of the very wet year, production from water power reached a record high figure, exceeding the average by about 200 million units. It is estimated that the extra production from water power resulted in a saving in fuel cost of the order of £500,000.

The increase in recent years in the rate of growth of demand for electricity necessitated a review of future plant requirements and a revised programme of extensions of generating plant up to 1966/67 was prepared by the Board and approved by the Minister for Transport and Power. This programme includes peat-fired stations at Bellacorick (Co. Mayo) and Shannonbridge (Co. Offaly) as well as extensions of the peat-fired stations at Ferbane, Rhode, Lanesborough and Portarlington and of the coal/oil fired stations at Marina (Cork) and Ringsend (Dublin).

The steady growth in demand has also caused a considerable increase in the burden on the main transmission lines and within the next few years substantial capital expenditure will be required on the extension and strengthening of the transmission system. In addition, the Board has under consideration the erection of a new high voltage transmission network at 220,000 volts to provide for development in the demand for electricity.

The effect on future costs of the new capital programme is difficult to assess. There are many trends which point to higher operational expenditure in the future. While plant efficiencies are constantly improving and larger sized generation units are more economic to operate, the tendencies for labour costs and materials prices to increase have been so persistent that higher efficiencies can hardly be expected to absorb them indefinitely.

Apart from the cost of the capital needed to meet the increased demand for electricity, there is the question of providing the capital itself. During the coming ten years substantial sums of capital must be obtained. The provision of new plant capacity requires forward planning ; commitments must be entered into well in advance and before the precise sources and the cost of long-term capital funds can be determined. This is a matter which receives the constant consideration of the Board. It is important to note that the problem of capital provision for public utilities has received special study in other countries, and the conclusion reached is that rates of charge for services to consumers should be fixed to yield a significant contribution to capital investment as well as depreciation on the assets. The Board has available for reinvestment in its capital programme the annual depreciation provision on its assets but this, while substantial on a capital investment now exceeding £112,000,000, is insufficient to meet the full cost of current and projected capital development. In 1960/61 the capital required was derived mainly from the reinvestment of moneys set aside for depreciation supplemented by temporary Bank accommodation. These sources will also be availed of to meet capital requirements in 1961/62 and, in addition, arrangements have been made for a substantial long-term loan from the New Ireland Assurance Company, Limited.

The extension of electricity supply to rural areas continued as planned and 40 areas were completed during the year. The rural electrification programme is expected to be virtually complete by the end of the year 1961/62. The revenue potential of the areas developed in more recent years is so meagre that each new area completed throws a fresh and continuing burden on the Board's resources. The deficit on the Rural Account for the year amounted to £736,166.

## BOARD MEMBERSHIP

Mr. T. Murray, Deputy Chairman, was appointed Chairman of the Board and Mr. J. C. Tonge a member of the Board. Both appointments were effective as from 1st May, 1960.

## STAFF

At the 31st March, 1961, the numerical strength of the Board's regular staff was 5,681. In addition there was a temporary staff of 2,204.

The Board again wishes to record its appreciation of the efficient manner in which the staff performed their duties.

(Signed) *T. Murray, Chairman*
*J. P. Digby*
*Henry Kennedy*
*T. MacMahon*
*Breandán Ó Cearbhaill*
*J. A. Ryan*
*J. C. Tonge*

(Signed) *J. G. Gargan, Secretary*
20th June, 1961.

## CAPITAL

The value of plant brought into commission was £4,469,174 of which £2,094,340 related to Rural Electrification. The total investment in assets in productive use at the end of the year was :—

| | £ |
|---|---|
| Generation .. .. .. | 48,443,846 |
| Transmission .. .. .. | 14,413,381 |
| Distribution (includes rural £28,400,662) | 42,869,538 |
| Premises, equipment, transport etc. .. | 3,352,399 |
| | £109,079,164 |

In addition, expenditure of £3,436,557 had been incurred on new capital works still under construction at the end of the year. The fixed capital investment was over £112,500,000.

## BORROWING POWERS

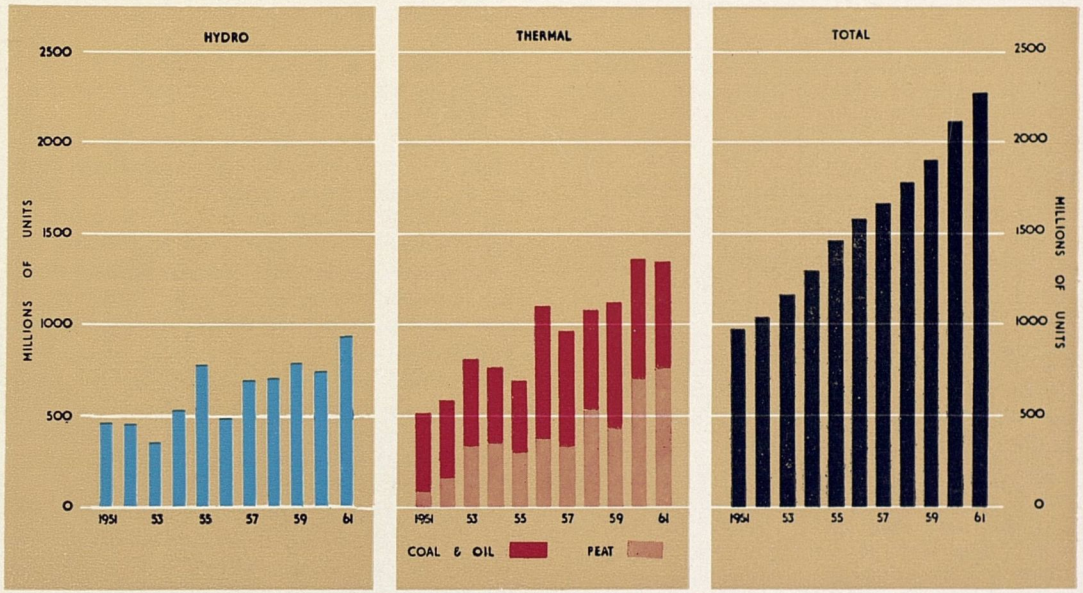
The capital requirements for the year were provided mainly from internal resources such as depreciation funds, and no new external borrowing was required. Part of the proceeds of the Electricity Supply Board 6% Stock issue of March, 1958, is still available.

The Electricity (Supply) Acts authorise the Board to incur capital expenditure not exceeding £120,000,000 for its general purposes. At 31st March, 1961, the Board had approved expenditure totalling £111,188,329 of which £80,678,542 represented electricity assets actually in commission, the balance £30,509,787 representing either work in progress or work approved.

The amount similarly authorised for Rural Electrification is £32,000,000, inclusive of the subsidy for rural development provided by the State. At 31st March, 1961, the amount approved was £29,985,988 of which £28,400,662 represented assets in commission and £1,585,326 work in progress or approved.

# ELECTRICITY PRODUCTION

The diagram below illustrates the output of the generating stations each year since 1951.



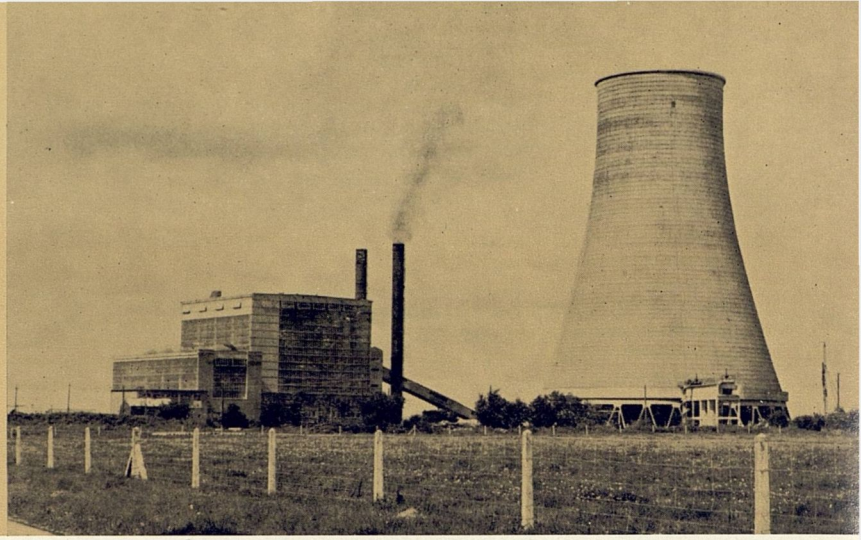

**INCREASE IN UNITS GENERATED AND PURCHASED**

**166,280,000**

The units generated and purchased showed an increase of 166·28 million units or 7·9% higher than the preceding year. The annual load factor, on the basis of units generated, was 47·8% compared with 50·1% in the previous year. The units purchased include 140,000 units from the Electricity Supply Board for Northern Ireland.

An analysis of the cost of generation appears in the Electricity Production Account.

# GENERATION



The milled peat station at Rhode, Co. Offaly, will be doubled in capacity by 1963/64.

The installed capacity of the Board's generating stations on the 31st March, 1961, amounted to :

| | MW |
|---|---|
| Hydro-electric plant .. | 219 |
| Steam plant (coal/oil) .. | 299·5 |
| Steam plant (sod peat) .. | 105 |
| Steam plant (milled peat) | 100 |
| Total .. | 723·5 |

This figure includes 90 MW of old plant in the Pigeon House station, Dublin, which is available for stand-by purposes, and the four 5 MW stations fired by hand-cut peat.

New plant placed in commission comprised two 20 MW units at Rhode station, Co. Offaly. The first unit went into operation on the 16th May, 1960 and the second on the 16th July, 1960. The following additional generating plant, amounting to 386 MW, is under construction or in the course of being planned.

## RHODE STATION, Co. Offaly

Milled Peat

The existing station, which consists of two 20 MW sets, will be completed by the addition of a further set of 40 MW which is being manufactured. The civil constructional work on site is progressing satisfactorily ; the foundations have been sunk and erection of the structural steelwork for the bunker bay is almost complete.

Foundations for the second cooling tower were completed and erection of the tower is in progress.

Scheduled completion date 1963/64.

## BELLACORICK STATION, Co. Mayo

Milled Peat

This is a new station with an installed capacity of two 20 MW sets. The civil engineering work on the engine room, boiler house, office block and control building was well advanced and construction of the tippler pit was proceeding satisfactorily. The shell of the cooling tower was practically complete.

Work on erection of boiler units on site had commenced.

Scheduled completion date 1962/63.

## SHANNONBRIDGE STATION, Co. Offaly

Milled Peat

This is also a new station with an initial installation consisting of a single set of 40 MW. Contracts have been placed for the turbo-alternator and boiler unit and tenders for site development work and construction of the approach road to the station were invited.

Scheduled completion date 1964/65.

## FERBANE STATION, Co. Offaly

Milled Peat

The present installation which consists of three 20 MW sets is being extended by the addition of one 30 MW set. Orders have been placed for the turbo-alternator and boiler unit and preparatory work on the site has commenced.

A contract has been placed for the piling of the foundations.

Scheduled completion date 1964.

### MARINA STATION, Cork City

Coal/Oil

Progress continued in the design work for the extension of this station by a 60 MW generating set fed by an oil-fired boiler. This will increase the station capacity to 120 MW. Contracts have been placed for the generating set and boiler unit and for the piling of the foundations.

Scheduled completion date 1963/64.

### RINGSEND STATION, Dublin City

Coal/Oil

Tenders were received for two 60 MW generating sets and two boilers designed for oil-firing. These, with the existing three 30 MW sets (coal/oil), will increase the station capacity to 210 MW. Preliminary work on the design of the civil engineering works was in progress.

Scheduled completion date 1965/66.

### LANESBOROUGH STATION, Co. Longford

Sod and Milled Peat

The installation in this station consists of one 20 MW set designed for burning sod peat. It is intended to add a new unit of 40 MW suitable for burning milled peat and enquiries have been issued for this plant. Preliminary work on the design of the civil engineering works was in progress.

Scheduled completion date 1965/66.

### PORTARLINGTON STATION, Co. Laoise

Sod Peat

The capacity of this station, which consists of two 12·5 MW sets, will be increased by transferring a 12·5 MW set from North Wall station to Portarlington. This extension provides for the use of additional sod peat which Bord na Mona has available.

Scheduled completion date 1962/63.

### NORTH WALL STATION, Dublin City

Oil

The 12·5 MW set which it is proposed to transfer to Portarlington will be replaced by a 16 MW turbo-alternator and quick-starting boiler unit similar to the two existing sets already installed. The contract for the new plant has been placed.

Scheduled completion date 1963/64.

## WATER STORAGE AND RIVER CONTROL

The inflows to the catchments at the Shannon, Liffey and Lee hydro stations varied between 130% and 140% of the long term average flows. The inflow to the Shannon was slightly higher than in 1954/55 which was one of the wettest years on record. While inflows for May and June were about average, those for the months July to February inclusive were well above average. Inflows to the Erne and Clady catchments were about average. The utilisation of the available inflows at the power stations varied between 84·6 and 100%.

The important hydrometric figures at the hydro-electric stations are given in Appendix 9.

The total average inflows for the calendar year 1960 were :—

| | $m^3$/sec |
|---|---|
| River Shannon at Killaloe .. | 236·6 |
| ,, Liffey at Pollaphuca .. | 12·6 |
| ,, Liffey at Leixlip .. | 21·1 |
| ,, Erne at Ballyshannon .. | 106·0 |
| ,, Lee at Inniscarra .. | 37·9 |
| ,, Clady at Gweedore .. | 3·6 |

## WATER POWER INVESTIGATIONS AND HYDROMETRIC SURVEY

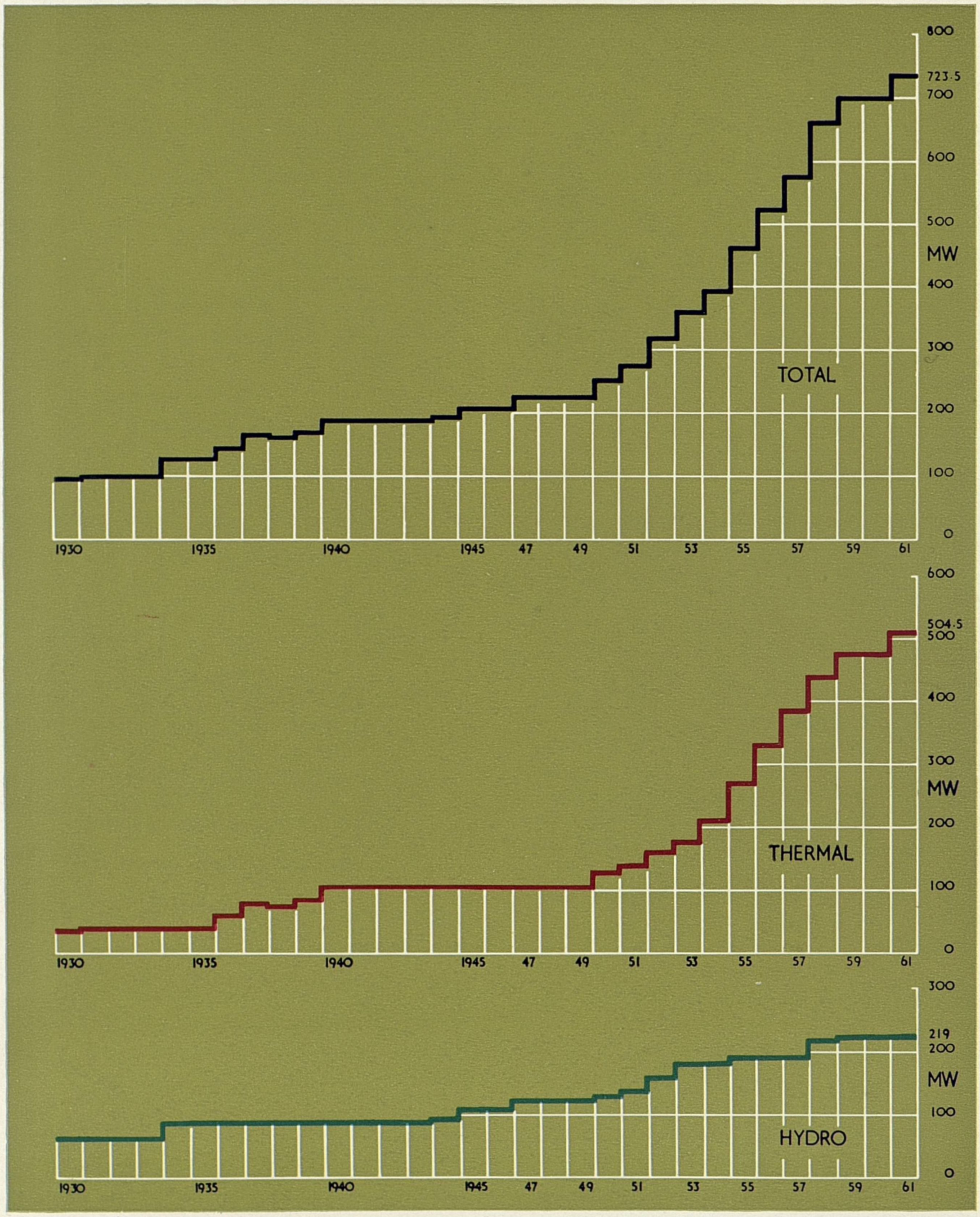
The investigations of possible improvements for the control of flooding in the Shannon valley carried out at the request of the Ministers for Industry and Commerce and Transport and Power have been completed and a report drafted jointly by the Board and the Office of Public Works is being prepared for submission to the Government.

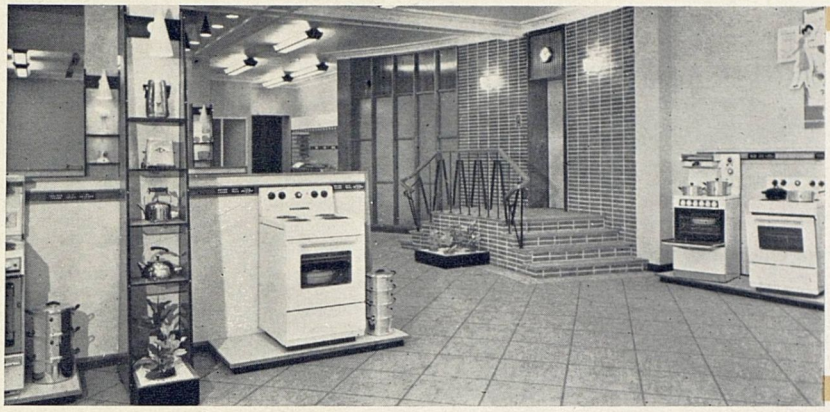
The collection of data with a view to the investigation and possible later development of the further water power resources continued. The total number of undeveloped rivers under observation was seventeen.

The collection of hydrometric data on the Rivers Shannon, Liffey, Erne, Lee and Clady was also continued.

# INSTALLED GENERATION CAPACITY

## 1930–1961





## SALES OF APPLIANCES AND CONSUMERS' INSTALLATIONS

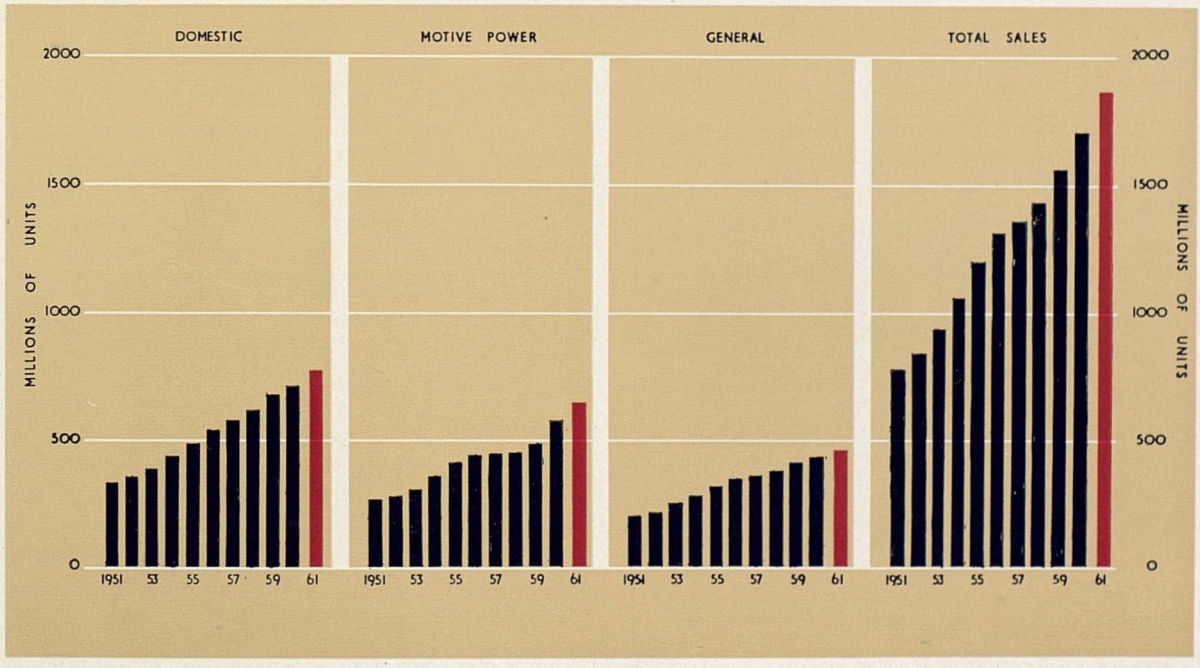
The interior of the new showrooms at Patrick Street, Cork, which was opened officially by the Minister for Industry and Commerce in November, 1960.

The sales of appliances amounted to £1,106,173 as compared with £964,529 in the preceding year. The gross profit amounted to £212,964 representing a rate of 19·3%. The Merchandise Trading Account, having been charged with overhead expenses and interest on working capital, showed a net profit of £8,006.

The value of contracts completed amounted to £462,902 as compared with £409,648 for the preceding year. The gross profit amounted to £84,474 representing a rate of 18·3%. The Installations Trading Account, having been charged with overhead expenses and interest on working capital, showed a net profit of £21,959.

## ANALYSIS OF UNITS SOLD

The following diagram illustrates the analysis of units sold, from 1951 to 1961.



## MAIN TRANSMISSION SYSTEM

The following extensions to the high tension networks were carried out :—

38 kV overhead lines—
net increase 33 miles

110 kV overhead lines—
net increase 50 miles

The new type steel mast line from the Dundalk transformer station to connect with the Carrick-on-Shannon / Drogheda 110 kV line was completed.

The construction of a 110 kV line from Carrick-on-Shannon to Bellacorick generating station was completed as far as Ballina, and the remainder of the line was surveyed and designed.

The 110 kV extension at Dundalk transformer station was completed, and work was commenced on new 110 kV stations at Cavan, Carrigaline and Haulbowline, and on extensions at Carrick-on-Shannon and Galway.

38 kV transformer stations were completed and put into commission at Buttevant (Co. Cork), Dundrum (Co. Dublin), Dunleer (Co. Louth) and Gloucester Place (Dublin City).



Transformer substations are designed to blend with the locality.

## DISTRIBUTION SYSTEMS

Distribution systems in urban areas were extended by 56 miles of low tension overhead and underground mains and 52 miles of 10 kV overhead and underground lines and cables.

2,322 miles of rural lines were erected.

The programme of raising the operating voltage of the Dublin City high tension network from 5 kV to 10 kV continued.

# RURAL ELECTRIFICATION




The Rural Electrification Farm Exhibit at the Simmonscourt Extension of the R.D.S. Showgrounds, has been one of the most popular displays there for several years.

The target of 40 areas for the year was reached. Of the total number of 791 rural areas in the country, 789 have been canvassed, 758 or 96% have been selected and 728 or 92% completed.

The areas now completed cover 21,118 square miles or an average of 29 square miles per area. The proportion of dwellings connected in the completed areas is approximately 75%.

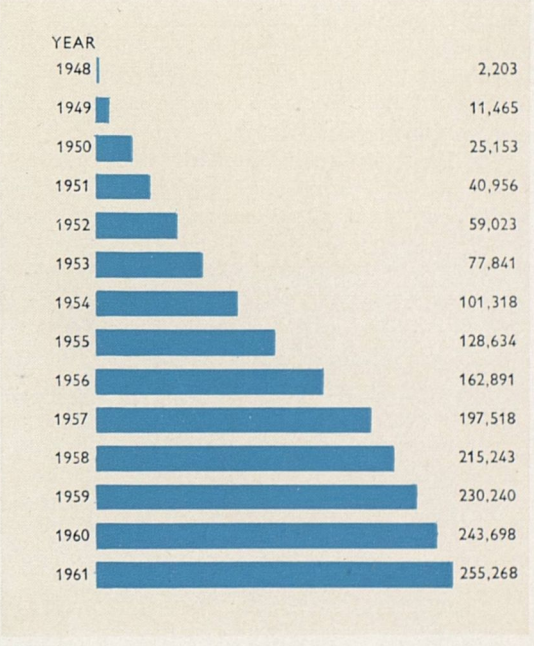
The total value of materials used during the year was approximately £1,220,000 of which about 82% or £1,000,400 was obtained from home suppliers. Price changes resulted in an overall net increase of approximately 3%.

Capital expenditure was £1,921,990. The total invested in the Scheme at 31st March, 1961, amounted to £29,253,966, of which £5,150,826 was by way of State subsidy.

The consumption of electricity by the rural community amounted to 388 million units as against 337 million units last year. The average consumption for all consumers supplied under the rural electrification scheme was 1,479 units as against 1,351 units in the preceding year—an increase of 9·5%. The average consumption per domestic consumer advanced from 910 to 943 units, an increase of 3·6%. The revenue earned was £4,529,497, representing an average price per unit of 2·8d.

Demonstration of the domestic applications of electricity has in the main been carried out by utilising the two mobile kitchens both of which were engaged in extensive itineraries during the year. A new feature of interest was the introduction of the "farm house of the future"

The following diagram illustrates the cumulative total of consumers connected, under the Rural Electrification Scheme, at the 31st March each year from 1948 to 1961.



which was erected at the Board's permanent stand " Electricity Farm " in the Royal Dublin Society's showgrounds at Ballsbridge, Dublin. This house, which is built of the most up-to-date materials, is fully equipped electrically, and has electric floor warming installed.

In the farmyard the home grinding of grain has now become well established. Electric milking machines are used for almost all the larger dairy herds and their use for smaller herds is on the increase.

Infra-red lamps for the rearing of chickens and bonhams is accepted by all classes of producers. A warmed floor-slab with a high heat-retention value for the same purpose has been developed and some initial installations are already in use.

Group water schemes are receiving wider interest and at the close of the year, 55 such schemes were in various stages of preparation or construction.

Following discussions with the Executive of the Irish Countrywomen's Association the scope of the Board's scholarship courses at the Association's College at " An Grianan," Termonfeckin, Co. Louth, was revised to provide five different types of scholarships.

The Board appreciates the co-operation which it receives from the various University Authorities, An Foras Taluntais and the County Committees of Agriculture in the development of the use of electricity in rural areas.

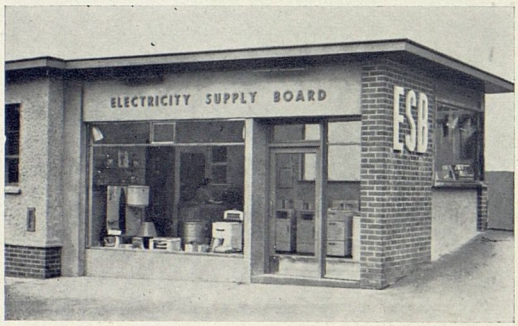
## PREMISES

The buildings at Lower Fitzwilliam Street, Dublin, which form part of the Board's headquarters, are now over one hundred and fifty years old. Their continued deterioration, despite extensive and costly maintenance, is causing concern and the future policy in regard to these buildings is at present under consideration.

The main section of the Fleet Street building extension was in use and the final stage was under construction. Cork administrative and sales headquarters were transferred to the reconstructed premises in Patrick Street. The extension of Galway district office was nearing completion and plans for altering and extending the district offices at Sligo, Tralee and Athlone were under consideration.

Seven new service depots were opened and fourteen other depots were under construction or were being planned.

Work continued on the construction of houses for staffs at Rhode, Ferbane, Clady and Gweedore generating stations. Houses were also under construction at Crossmolina for staff attached to Bellacorick generating station.



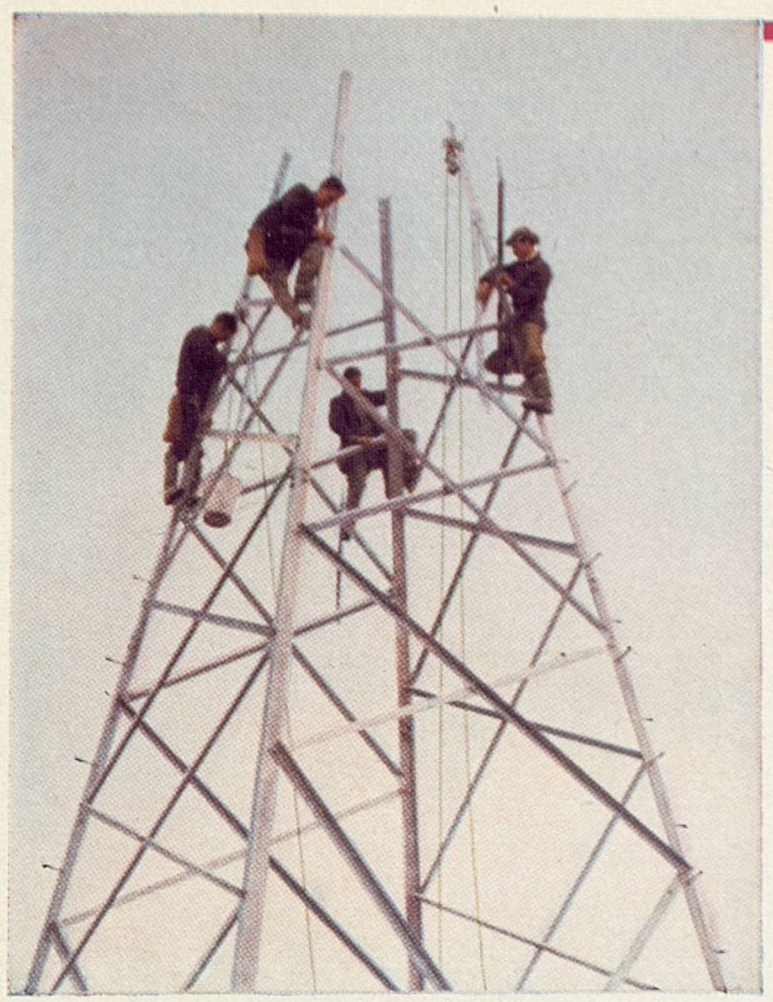

A typical example of a modern service centre in a provincial town.

### SUPERANNUATION SCHEMES AND TRIBUNALS

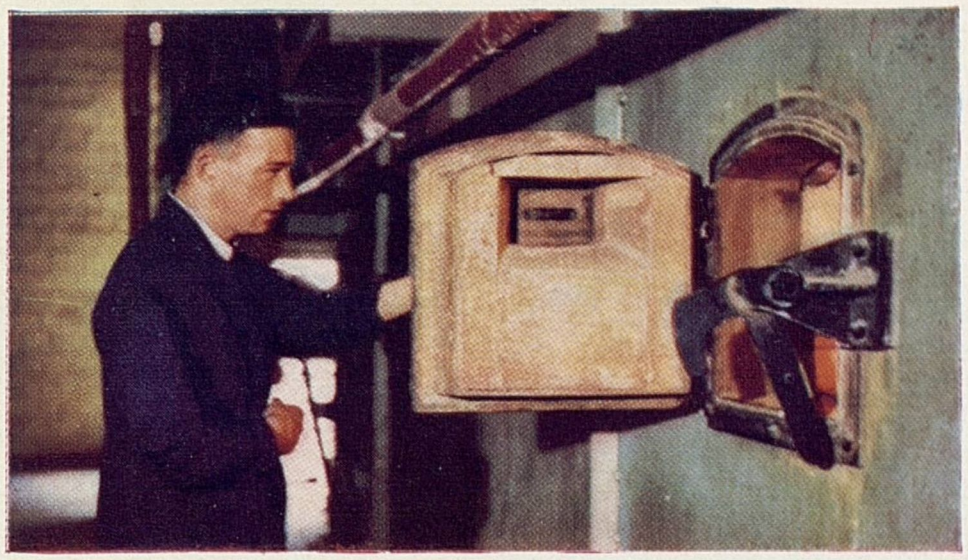
The number of contributing members in the General Employees' Superannuation Scheme at the end of the year was 1,925 and in the Manual Workers' Superannuation Scheme 2,501.

The Manual Workers' Tribunal, established under the Electricity Supply Board (Superannuation) Act, 1942, dealt with seven cases during the year and the General Employees' Tribunal, established under the Electricity (Supply) (Amendment) Act, 1949, dealt with eight cases.

# Serving the Nation's Needs



A construction crew at work on the high tension line near Bellacorick, Co. Mayo.

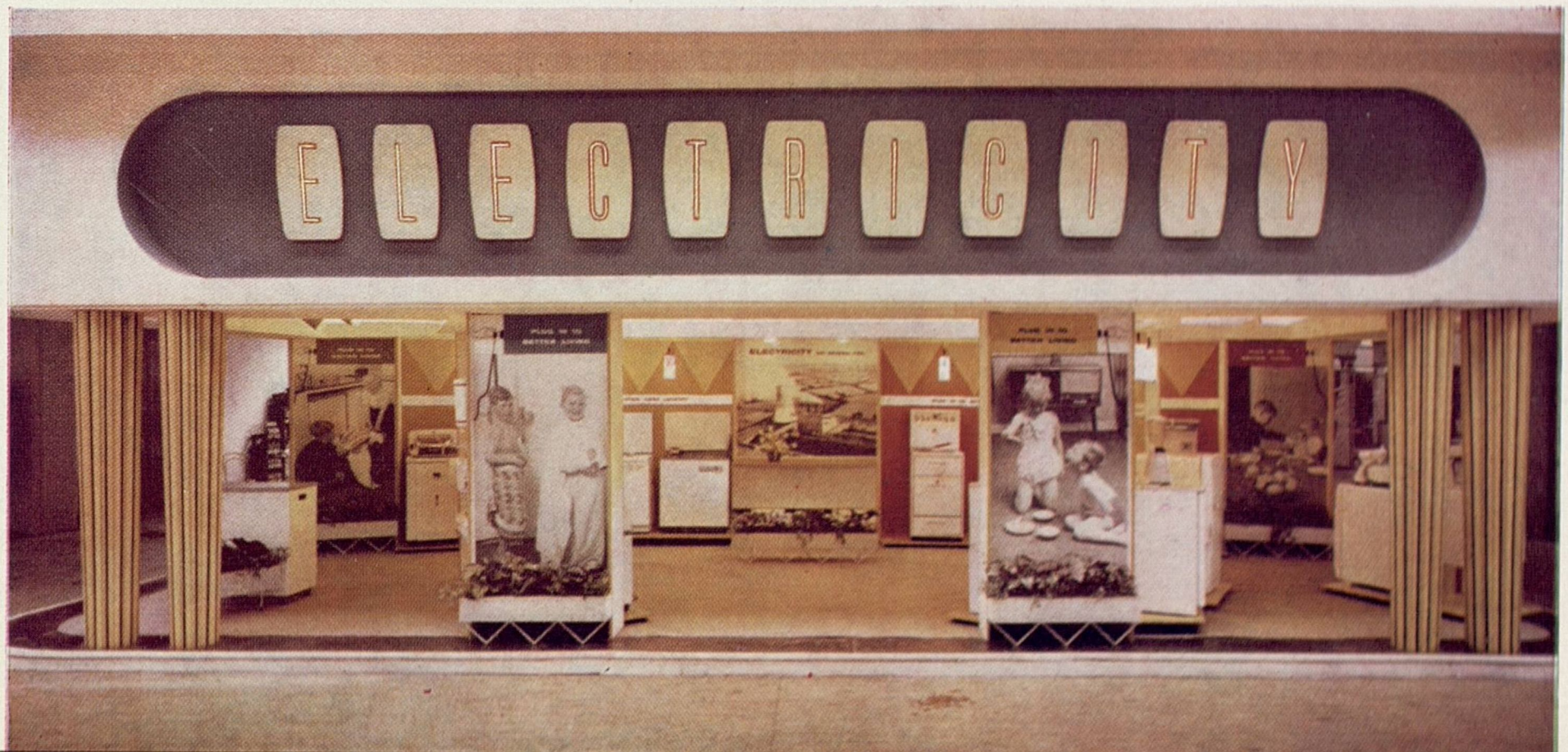


A member of the boiler room staff inspects the furnace at the Allenwood peat-fired generating station.

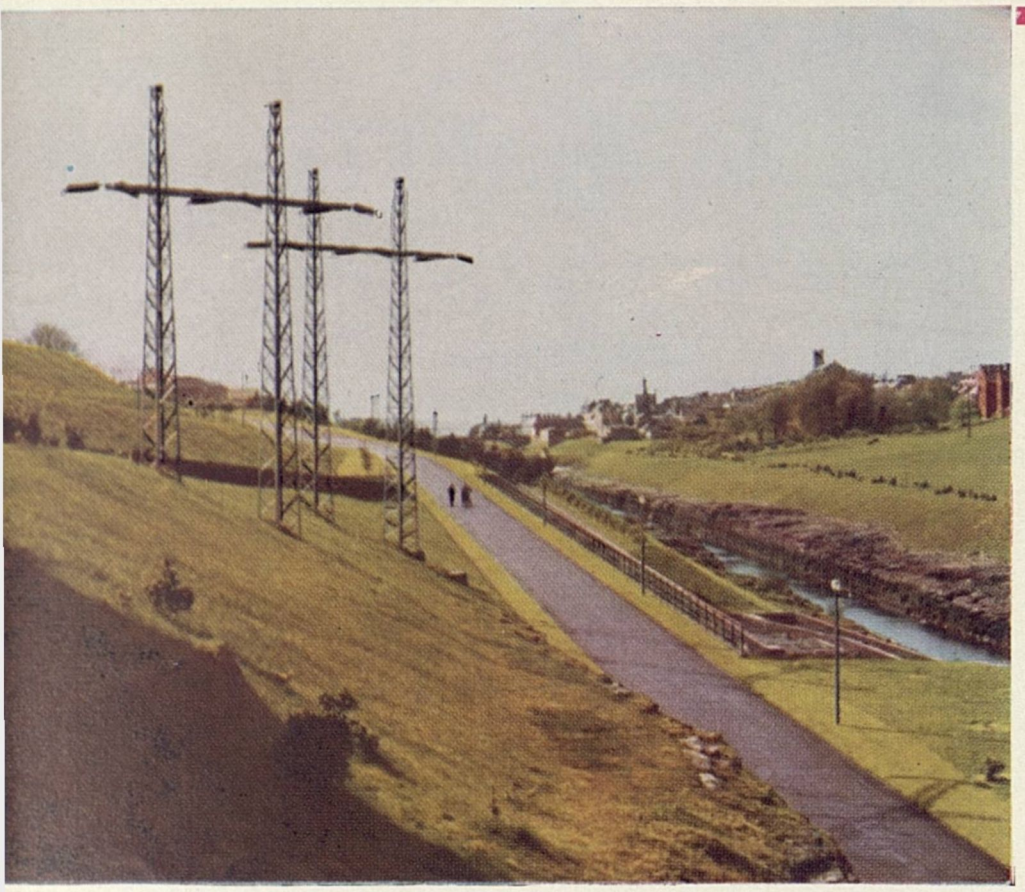



Radio equipped vans operate in all districts bringing faster - than - ever service to consumers.

At both the Spring and Horse Shows in Dublin customers may see the latest equipment in attractive settings.



# Building for the Nation's Future



Careful landscaping has brought a new beauty to Cathaleen's Fall Generating Station at Ballyshannon.



An unusual view through the base of the cooling tower of the new power station at Bellacorick, Co. Mayo.




This attractive area headquarters at Letterkenny, Co. Donegal, houses showrooms, stores, administrative staff and construction crews.

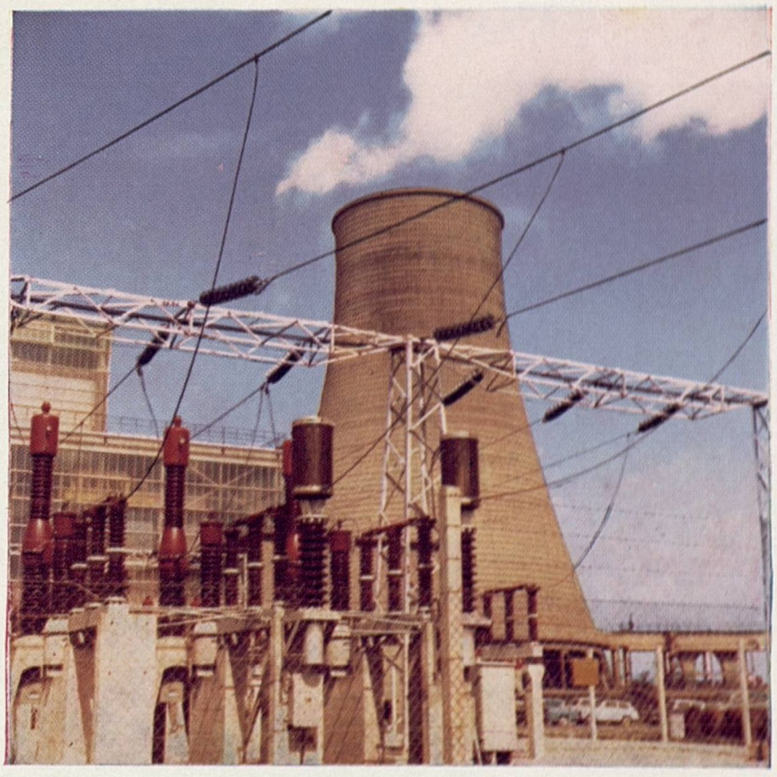


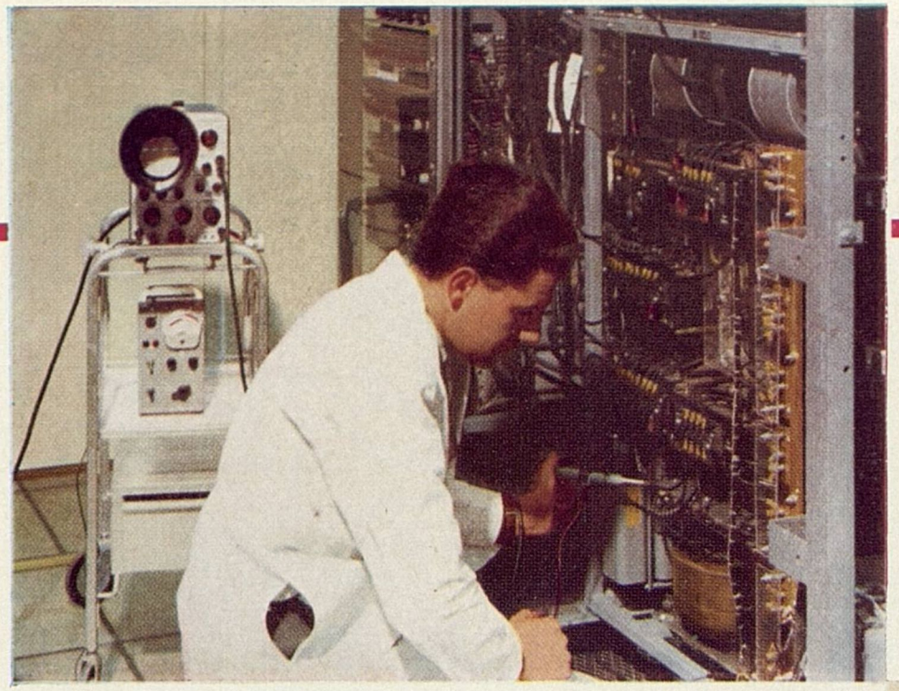
Cliff hydro-electric station on the Erne, last year achieved a record output of electricity.



At March 31st, 1961, over 255,000 rural consumers had been connected, making possible higher standards of living for rural dwellers.

The generating station at Ferbane, Co. Offaly, which pioneered the generation of electricity by milled peat.





The recently-installed electronic computer and associated equipment, which is used for the production of electricity accounts and management statistics.

## ACCOUNTS



Electric billing machines are used to produce almost four million consumers' accounts per year.

# Electricity Production Account for the Year Ended 31st March 1961

ACCOUNT No. 1

| | Fuel | Operating Expenses | Maintenance and Repair | Supervision and Local Administration | *Works Cost* | Per Unit Sent Out 1960/61 | Per Unit Sent Out 1959/60 | Depreciation and Renewals | Interest and Capital Repayments | *Total* 1960/61 | Per Unit Sent Out 1960/61 | *Total* 1959/60 | Per Unit Sent Out 1959/60 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | £ | £ | £ | £ | £ | Pence | | £ | £ | £ | Pence | £ | Pence |
| *GENERATION* | | | | | | | | | | | | | |
| *Coal/Oil* | | | | | | | | | | | | | |
| North Wall | 101,874 | 40,090 | 23,692 | 8,563 | **174,219** | 1·077 | ·922 | 71,000 | 93,631 | **338,850** | **2·094** | **419,916** | **1·516** |
| Marina | 284,423 | 60,991 | 45,203 | 15,739 | **406,356** | ·720 | ·762 | 115,000 | 163,677 | **685,033** | **1·213** | **802,382** | **1·168** |
| Ringsend | 500,191 | 95,117 | 81,524 | 18,185 | **695,017** | ·615 | ·670 | 180,000 | 280,686 | **1,155,703** | **1·022** | **1,288,182** | **1·043** |
| Arigna | 204,534 | 28,504 | 13,754 | 5,691 | **252,483** | ·700 | ·675 | 29,000 | 41,262 | **322,745** | ·895 | **255,509** | ·881 |
| | | | | | **1,528,075** | ·689 | ·724 | | | **2,502,331** | **1·128** | **2,765,989** | **1·111** |
| *Sod Peat (Machine)* | | | | | | | | | | | | | |
| Portarlington | 411,196 | 45,680 | 43,873 | 9,849 | **510,598** | 1·074 | ·981 | 50,000 | 67,135 | **627,733** | **1·320** | **657,245** | **1·194** |
| Allenwood | 607,191 | 52,783 | 44,722 | 11,735 | **716,431** | ·969 | ·927 | 82,000 | 111,028 | **909,459** | **1·230** | **951,783** | **1·161** |
| Lanesborough | 280,101 | 26,786 | 6,047 | 5,164 | **318,098** | ·779 | ·892 | 33,000 | 50,861 | **401,959** | ·985 | **270,037** | **1·258** |
| | | | | | **1,545,127** | ·952 | ·941 | | | **1,939,151** | **1·195** | **1,879,065** | **1·186** |
| *Milled Peat* | | | | | | | | | | | | | |
| Ferbane | 531,253 | 60,000 | 43,324 | 12,132 | **646,709** | ·818 | ·736 | 125,000 | 180,070 | **951,779** | **1·204** | **999,354** | **1·056** |
| Rhode | 216,591 | 31,864 | 8,204 | 6,965 | **263,624** | ·738 | — | 66,000 | 85,385 | **415,009** | **1·161** | — | — |
| | | | | | **910,333** | ·793 | | | | **1,366,788** | **1·190** | | |
| *Sod Peat (Hand-won)* | | | | | | | | | | | | | |
| Four 5MW Stations | 129,841 | 37,229 | 20,444 | 4,856 | **192,370** | 1·308 | 1·145 | 47,000 | 69,670 | **309,040** | **2·101** | **328,728** | **1·760** |
| *Stand-by* | | | | | | | | | | | | | |
| Pigeon House | 3,403 | 47,085 | 30,456 | 13,264 | **94,208** | — | — | 77,000 | 104,205 | **275,413** | — | **376,008** | — |
| *TOTAL—FUEL STATIONS* | 3,270,598 | 526,129 | 361,243 | 112,143 | **4,270,113** | ·832 | ·829 | 875,000 | 1,247,610 | **6,392,723** | **1·246** | **6,349,144** | **1·197** |
| *Hydro* | | | | | | | | | | | | | |
| Shannon | — | 48,036 | 85,360 | 21,746 | **155,142** | ·087 | ·094 | 53,000 | 243,232 | **451,374** | ·254 | **416,259** | ·303 |
| Erne | — | 31,485 | 37,740 | 13,400 | **82,625** | ·065 | ·068 | 92,000 | 294,221 | **468,846** | ·371 | **460,409** | ·419 |
| Liffey | — | 16,567 | 22,745 | 8,320 | **47,632** | ·168 | ·213 | 26,000 | 83,285 | **156,917** | ·553 | **149,748** | ·786 |
| Lee | — | 10,560 | 16,176 | 5,905 | **32,641** | ·072 | ·079 | 56,000 | 219,635 | **308,276** | ·679 | **305,269** | ·769 |
| Clady | — | 4,987 | 3,074 | 854 | **8,915** | ·161 | ·102 | 10,000 | 44,215 | **63,130** | **1·138** | **56,035** | **1·005** |
| *TOTAL—HYDRO STATIONS* | — | 111,635 | 165,095 | 50,225 | **326,955** | ·085 | ·090 | 237,000 | 884,588 | **1,448,543** | ·378 | **1,387,720** | ·446 |
| *TOTAL—ALL STATIONS* | 3,270,598 | 637,764 | 526,338 | 162,368 | **4,597,068** | ·513 | ·556 | 1,112,000 | 2,132,198 | **7,841,266** | ·874 | **7,736,864** | ·919 |
| *TRANSMISSION* | — | 55,245 | 180,399 | 104,974 | 340,618 | — | — | 437,000 | 661,028 | **1,438,646** | — | **1,352,023** | — |
| | 3,270,598 | 693,009 | 706,737 | 267,342 | **4,937,686** | — | — | 1,549,000 | 2,793,226 | | | | |

| | | | |
|---|---|---|---|
| **Electricity Purchased in Bulk and Other Expenditure Attributable to Generation** | | **6,930** | — **12,132** — |
| **General Administration :** | £ | | |
| Generation | 372,719 | | |
| Transmission | 176,819 | | |
| | | **549,538** | — **494,134** — |
| Total Production Cost | | **9,836,380** | **9,595,153** |
| **Transferred to Revenue Accounts :** | £ | | |
| Non-Rural | 7,621,138 | | **7,463,473** |
| Rural | 2,215,242 | | **2,131,680** |
| | | **9,836,380** | **9,595,153** |

ACCOUNT No. 2

# Electricity (Non-Rural) Revenue Account for the Year Ended 31st March, 1961

*Dr.* *Cr.*

| | £ | 1960/61 £ | 1959/60 £ | | 1960/61 £ | 1959/60 £ |
|---|---|---|---|---|---|---|
| **To Electricity Production Account** .. .. | | 7,621,138 | 7,463,473 | **By Electricity Charges** .. .. .. .. | 11,588,490 | 10,541,365 |
| **„ Distribution Charges :** | | | | **„ Meter and Other Charges** .. .. .. | 144,908 | 143,166 |
| Operation and maintenance .. | 764,837 | | | | | |
| Reserve for depreciation and renewals | 477,000 | | | | | |
| Interest and capital repayments .. | 682,701 | | | | | |
| Supervision and local administration | 609,573 | | | | | |
| | | 2,534,111 | 2,496,614 | | | |
| **To General Administration :** | | | | | | |
| Salaries and Wages .. .. | 655,948 | | | | | |
| Travelling expenses .. .. | 34,725 | | | | | |
| Stationery .. .. .. | 21,924 | | | | | |
| Telephones and postage .. .. | 14,132 | | | | | |
| Lighting and heating .. .. | 15,025 | | | | | |
| Rents and rates .. .. .. | 10,487 | | | | | |
| Insurance .. .. .. | 44,794 | | | | | |
| Professional fees .. .. .. | 11,585 | | | | | |
| Publicity .. .. .. .. | 103,152 | | | | | |
| Maintenance of office buildings and equipment .. .. .. | 22,576 | | | | | |
| Staff training .. .. .. | 55,285 | | | | | |
| Pensions .. .. .. .. | 88,377 | | | | | |
| Capital charges—general assets .. | 222,905 | | | | | |
| Provision for bad debts .. .. | 15,020 | | | | | |
| Sundry expenses .. .. | 7,206 | | | | | |
| | 1,323,141 | | | | | |
| *Less* apportionments charged to : | | | | | | |
| Production account .. .. | 549,538 | | | | | |
| Rural Revenue Account .. .. | 263,106 | | | | | |
| Capital Works and other accounts .. | 98,069 | | | | | |
| | | 412,428 | 396,574 | | | |
| **To Balance,** carried to Profit and Loss Account .. | | 1,165,721 | 327,870 | | | |
| | | £11,733,398 | £10,684,531 | | £11,733,398 | £10,684,531 |

ACCOUNT No. 3

# Electricity (Rural) Revenue Account for the Year Ended 31st March, 1961

*Dr.* *Cr.*

| | £ | 1960/61 £ | 1959/60 £ | | 1960/61 £ | 1959/60 £ |
|---|---|---|---|---|---|---|
| **To Electricity Production Account** .. .. | | 2,215,242 | 2,131,680 | **By Electricity Charges** .. .. .. .. | 4,501,977 | 4,014,409 |
| **„ Distribution Charges :** | £ | | | **„ Meter and Other Charges** .. .. .. | 27,520 | 25,409 |
| Operation and maintenance .. | 363,891 | | | **„ Balance,** carried to Profit and Loss Account .. | 736,166 | 887,689 |
| Reserve for depreciation and renewals | 844,000 | | | | | |
| Interest and capital repayments .. | 1,225,547 | | | | | |
| Supervision and local administration .. | 353,877 | | | | | |
| | | 2,787,315 | 2,560,315 | | | |
| **„ General Administration** .. .. .. | | 263,106 | 235,512 | | | |
| | | £5,265,663 | £4,927,507 | | £5,265,663 | £4,927,507 |

ACCOUNT No. 4

# Profit and Loss Account for the Year Ended 31st March, 1961

| Dr. | £ | 1960/61 £ | 1959/60 £ | Cr. | 1960/61 £ | 1959/60 £ |
|---|---|---|---|---|---|---|
| To Interest payable to the Minister for Finance | 2,847,287 | | | By Interest and Capital Repayments : | | |
| ,, Interest on E.S.B. Stocks (*less* temporary investment earnings) .. .. .. .. | 650,011 | | | Production Account .. .. .. .. | 2,793,226 | 2,665,641 |
| ,, Stock management and transfer charges .. | 18,962 | | | Non-rural Revenue Account .. .. .. | 682,701 | 650,957 |
| ,, Other interest .. .. .. .. | 612,212 | | | Rural Revenue Account .. .. .. .. | 1,225,547 | 1,182,180 |
| | | 4,128,472 | 4,020,977 | Administration .. .. .. .. .. | 168,905 | 155,785 |
| ,, Reserves : | | | | Fisheries Account .. .. .. .. | 4,747 | 3,773 |
| Repayment of capital advances from the Minister for Finance .. .. .. | 619,159 | | | Installations Account .. .. .. .. | 6,100 | 7,700 |
| Sinking Fund provision for redemption of E.S.B. Stocks .. .. .. | 266,219 | | | Merchandise Sales Account .. .. .. | 9,700 | 8,869 |
| | | 885,378 | 835,503 | Capital Works .. .. .. .. .. | 122,924 | 181,575 |
| | | 5,013,850 | 4,856,480 | | 5,013,850 | 4,856,480 |
| ,, Balance, transferred from Rural Revenue Account .. | | 736,166 | 887,689 | By Balance, transferred from Non-Rural Revenue Account.. | 1,165,721 | 327,870 |
| ,, Balance, carried to Net Revenue Account .. .. | | 570,197 | — | ,, Miscellaneous revenue .. .. .. .. | 48,614 | 55,779 |
| | | | | ,, Interest receivable .. .. .. .. .. | 92,028 | 71,482 |
| | | | | ,, Balance, carried to Net Revenue Account .. .. | — | 432,558 |
| | | £1,306,363 | £887,689 | | £1,306,363 | £887,689 |

ACCOUNT No. 5

# Fisheries Account for the Year Ended 31st March, 1961

| Dr. | 1960/61 £ | 1959/60 £ | Cr. | 1960/61 £ | 1959/60 £ |
|---|---|---|---|---|---|
| To Operation, preservation and other direct costs .. | 25,231 | 25,677 | By Sales of fish, letting of fishing rights and miscellaneous income | 21,062 | 19,191 |
| | | | ,, Balance, carried down .. .. .. .. | 4,169 | 6,486 |
| | £25,231 | 25,677 | | £25,231 | £25,677 |
| To Balance, brought down .. .. .. .. | 4,169 | 6,486 | By Balance, carried down .. .. .. .. | 21,286 | 18,813 |
| ,, Salaries and sundry expenses .. .. .. | 6,178 | 4,312 | | | |
| ,, Fishery rates .. .. .. .. .. | 2,640 | 2,640 | | | |
| ,, Reserve for depreciation and renewals .. .. | 4,500 | 2,370 | | | |
| ,, General overhead expenses and interest .. .. | 3,799 | 3,005 | | | |
| | £21,286 | £18,813 | | £21,286 | £18,813 |
| To Balance, brought down .. .. .. .. | 21,286 | 18,813 | By Balance, carried to Net Revenue Account .. .. | 22,334 | 19,681 |
| ,, Capital repayments .. .. .. .. .. | 1,048 | 868 | | | |
| | £22,334 | £19,681 | | £22,334 | £19,681 |

# Installations Trading Account for the Year Ended 31st March, 1961

ACCOUNT No. 6

*Dr.* *Cr.*

| | | 1960/61 | 1959/60 | | 1960/61 | 1959/60 |
|---|---|---|---|---|---|---|
| | | £ | £ | | £ | £ |
| To Cost value of work for which credit had not been taken at 31st March 1960 .. .. | | 151,319 | 128,308 | By Credit taken for contracts completed and charged .. .. .. .. | 462,902 | 409,648 |
| ,, Cost of installation work carried out during the year .. .. .. .. | | 359,153 | 355,306 | ,, Cost value of work for which credit has not yet been taken .. .. .. .. | 132,044 | 151,319 |
| ,, Gross profit, carried down .. .. .. | | 84,474 | 77,353 | | | |
| | | £594,946 | £560,967 | | £594,946 | £560,967 |
| | £ | | | | | |
| To Salaries, wages and State insurance .. | 36,449 | | | By Gross profit, brought down .. .. | £84,474 | £77,353 |
| ,, Travelling expenses .. .. | 4,418 | | | | | |
| ,, Rents and rates .. .. .. | 219 | | | | | |
| ,, Sundry expenses .. .. .. | 3,117 | | | | | |
| ,, General overhead expenses and interest as apportioned .. .. .. | 18,312 | | | | | |
| | | 62,515 | 67,624 | | | |
| ,, Balance, carried to Net Revenue Account .. | | 21,959 | 9,729 | | | |
| | | £84,474 | £77,353 | | £84,474 | £77,353 |

# Merchandise Trading Account for the Year Ended 31st March, 1961

ACCOUNT No. 7

*Dr.* *Cr.*

| | | 1960/61 | 1959/60 | | 1960/61 | 1959/60 |
|---|---|---|---|---|---|---|
| | | £ | £ | | £ | £ |
| To Cost of goods sold .. .. .. | | 829,703 | 717,499 | By Sales .. .. .. .. .. | 1,106,173 | 964,529 |
| ,, Direct cost in connection with sales .. | | 63,506 | 66,398 | | | |
| ,, Gross profit, carried down .. .. .. | | 212,964 | 180,632 | | | |
| | | £1,106,173 | £964,529 | | £1,106,173 | £964,529 |
| | £ | | | | | |
| To Direct salaries, wages, commission and travelling expenses .. .. | 123,970 | | | By Gross profit, brought down .. .. | 212,964 | 180,632 |
| ,, Publicity .. .. .. | 16,822 | | | | | |
| ,, Rents, rates and maintenance of premises | 12,414 | | | | | |
| ,, Other expenses .. .. .. | 11,524 | | | | | |
| ,, General administrative expenses and interest as apportioned .. .. | 40,228 | | | | | |
| | | 204,958 | 158,800 | | | |
| ,, Balance, carried to Net Revenue Account .. | | 8,006 | 21,832 | | | |
| | | £212,964 | £180,632 | | £212,964 | £180,632 |

# Net Revenue Account for the Year ended 31st March, 1961

ACCOUNT No. 8

| Dr. | | | Cr. | | |
|---|---|---|---|---|---|
| | | £ | | | £ |
| To Balance, transferred from Fisheries Account .. | | 22,334 | By Balance, transferred from Profit and Loss Account .. | | 570,197 |
| ,, Balance, carried down .. .. .. .. | | 577,828 | | £ | |
| | | | ,, Installations trading profit .. .. | 21,959 | |
| | | | ,, Merchandise trading profit .. .. | 8,006 | |
| | | | | | 29,965 |
| | | £600,162 | | | £600,162 |
| To Transfer to reserve for renewals of credits (per contra) as additional provision for the renewal of plant .. | | 250,541 | By Balance, brought down .. .. .. .. | | 577,828 |
| ,, Plant self-insurance (special risks) reserve .. | | 200,000 | ,, Balance, brought forward from last year's account .. | | 50,413 |
| ,, Contingencies reserve .. .. .. .. | | 400,000 | ,, Credits arising consequent on the retirement of assets and the sale of scrapped material .. .. | | 250,541 |
| ,, Balance, carried forward .. .. .. .. | | 28,241 | | | |
| | | £878,782 | | | £878,782 |

# Capital Account to the 31st March, 1961

ACCOUNT No. 9

*Dr.* *Cr.*

| | Total at 31st March 1960 less retirements | Expenditure less retirements during year | Total at 31st March 1961 less retirements |
|---|---|---|---|
| | £ | £ | £ |
| **To Generation** .. | 47,893,632 | 550,214 | **48,443,846** |
| **,, Transmission** .. | 14,087,962 | 325,419 | **14,413,381** |
| **,, Distribution** .. | 40,045,541 | 2,823,997 | **42,869,538** |
| **,, General** .. .. | 3,052,751 | 211,225 | **3,263,976** |
| **,, Fisheries** .. | 90,628 | (—) 2,205 | **88,423** |
| | £105,170,514 | £3,908,650 | **£109,079,164** |
| **,, Capital Works in progress,** including payments on account to contractors and others .. | | | **£3,436,557** |
| **Total of Fixed Assets carried to Balance Sheet** .. | | | **£112,515,721** |

| | | Total at 31st March 1961 |
|---|---|---|
| | | £ |
| **By Repayable Capital as per Statement No. 10** .. | | **£76,550,137** |
| **,, Non-Repayable Capital :** | | |
| Contributions from Minister for Finance under Electricity (Supply) Acts towards capital cost of supplying rural areas .. | **5,150,826** | |
| Contributions from consumers and others for capital works | **1,387,681** | |
| **,, Capital Reserves :** | | |
| Repaid capital, less intangible assets written off .. .. | **5,939,943** | |
| Provision for depreciation, renewal and retirement of physical assets, together with proceeds of sale of assets, less physical assets retired .. | **29,126,929** | |
| Total Capital Reserves (including non-repayable Capital) .. .. .. .. | | **£41,605,379** |
| **Total of Capital Receipts and Reserves** carried to **Balance Sheet** .. .. .. .. | | **£118,155,516** |

# Statement of Repayable Capital and Redemption thereof to the 31st March, 1961

ACCOUNT No. 10

| | Total Receipts to 31st March 1961 | Redeemed | | | Balance Outstanding 31st March 1961 |
|---|---|---|---|---|---|
| | | Total to 31st March 1960 | Redeemed during year | Total to 31st March 1961 | |
| | £ | £ | £ | £ | £ |
| Loans and loan stocks, local authority undertakings .. .. | **756,021** | 756,021 | — | 756,021 | — |
| Minister for Finance : | | | | | |
| Advances under the Electricity (Supply) Acts and the Shannon Fisheries Act, 1935 .. .. .. .. .. .. | **68,450,236** | 5,057,957 | 619,159 | 5,677,116 | **62,773,120** |
| Electricity Supply Board Stocks : | | | | | |
| 5% redeemable 1966–1975 .. .. .. .. .. | **10,000,000** | 689,700 | 197,150 | 886,850 | **9,113,150** |
| 6% „ 1968–1978 .. .. .. .. .. | **5,000,000** | 245,079 | 91,054 | 336,133 | **4,663,867** |
| | **£84,206,257** | £6,748,757 | £907,363 | £7,656,120 | **£76,550,137** |

ACCOUNT No. 11

# Balance Sheet as at 31st March, 1961

| Liabilities and Reserves | | 31/3/61 | 31/3/60 |
|---|---|---|---|
| | | £ | £ |
| **Repayable Capital as per Capital Account** | | 76,550,137 | 77,457,500 |
| **Capital Reserves as per Capital Account** | | 41,605,379 | 36,391,010 |
| | | 118,155,516 | 113,848,510 |
| **The Munster and Leinster Bank Limited Overdraft** .. .. .. .. | | 514,696 | 49,542 |
| **Sundry Creditors** .. .. .. | | 2,479,967 | 2,490,247 |
| **Reserves :** | £ | | |
| Contingencies reserve .. | 1,500,000 | | |
| Plant self-insurance—special risks .. .. .. | 200,000 | | |
| Other reserves and provisions | 38,500 | | |
| | | 1,738,500 | 1,138,500 |
| **Surplus : per Net Revenue Account** .. .. | | 28,241 | 50,413 |
| | | £122,916,920 | £117,577,212 |

*Note :*

At 31st March, 1961 there were outstanding contractual commitments, in respect of capital and other expenditure, estimated to amount to £6,000,000 .. ..

| Assets | 31/3/61 | 31/3/60 |
|---|---|---|
| | £ | £ |
| **Fixed Assets, as per Capital Account** .. | 112,515,721 | 107,979,736 |
| **Electricity Supply Board Stocks** (nominal £93,855) at cost, held by the Munster and Leinster Bank Nominees Ltd., as depositaries of the Board .. .. | 88,822 | 177,223 |
| **Stocks on Hand and in Transit** .. | 3,459,112 | 2,957,978 |
| **Cost Value of Installation and Other Repayable Work in Progress** .. | 172,653 | 217,216 |
| **Sundry Debtors,** after providing for bad and doubtful debts and including advances for goods not yet delivered .. .. | 5,669,392 | 4,633,318 |
| **Temporary Cash Investment** .. | 1,000,000 | 1,600,000 |
| **Cash in Hand and with Banks** .. .. | 11,220 | 11,741 |
| | £122,916,920 | £117,577,212 |

*Signed:* T. Murray, *Chairman*

J. G. Gargan, *Secretary*

*Signed:* Joseph Fogarty, *Chief Accountant*

## AUDITORS REPORT

As Auditors appointed by the Minister for Transport and Power, with the consent of the Minister for Finance, we have examined the foregoing Accounts and Balance Sheet.

Allocations to the various Accounts, made by the Board's officials and approved by the Board, covering Overhead Expenses, Interest and Capital Repayments and Costs of Generation, Transmission and Distribution have been made on the same basis as in previous years.

Additions have continued to be made to the Depreciation Reserve towards increased costs of renewals of physical assets, the original cost of which has already been fully provided.

We certify that the Balance Sheet as at 31st March, 1961, with the note thereon, exhibits a true and correct view of the state of the Board's affairs according to the best of our information and the explanations given to us, and as shown by the Books of the Board.

KENNEDY, CROWLEY & CO.
*Auditors.*

4 and 5 Westmoreland Street,
Dublin, 2.
19*th June*, 1961.

# APPENDICES


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Appendix I

## NUMBER OF CONSUMERS AND OTHER PARTICULARS RELATING TO AREAS SUPPLIED BY THE BOARD

| District | Approximate population | No. of consumers at 31st March | | Motive power units sold year ended 31st March | |
|---|---|---|---|---|---|
| | | | | thousands | |
| | thousands | 1961 | 1960 | 1961 | 1960 |
| ATHLONE .. | **191·9** | **36,839** | **36,044** | **21,245** | **18,954** |
| Town .. | 44·7 | 11,519 | 11,423 | 19,377 | 17,194 |
| Rural .. | 147·2 | 25,320 | 24,621 | 1,868 | 1,760 |
| CORK .. | **303·0** | **69,692** | **68,413** | **94,375** | **80,370** |
| Town .. | 163·0 | 43,482 | 43,276 | 86,266 | 73,096 |
| Rural .. | 140·0 | 26,210 | 25,137 | 8,109 | 7,274 |
| DUBLIN No. 1 .. | **494·7** | **129,422** | **127,896** | **120,579** | **113,607** |
| Town .. | 494·7 | 129,422 | 127,896 | 120,579 | 113,607 |
| DUBLIN No. 2 .. | **238·0** | **75,051** | **73,077** | **120,333** | **105,100** |
| Town .. | 164·5 | 59,097 | 57,312 | 110,211 | 97,126 |
| Rural .. | 73·5 | 15,954 | 15,765 | 10,122 | 7,974 |
| DUNDALK .. | **246·4** | **48,501** | **45,471** | **76,141** | **72,169** |
| Town .. | 72·3 | 19,047 | 18,948 | 62,209 | 62,670 |
| Rural .. | 174·1 | 29,454 | 26,523 | 13,932 | 9,499 |
| GALWAY .. | **193·7** | **35,670** | **34,755** | **10,781** | **9,915** |
| Town .. | 44·6 | 10,719 | 10,581 | 9,192 | 8,523 |
| Rural .. | 149·1 | 24,951 | 24,174 | 1,589 | 1,392 |
| LIMERICK .. | **279·9** | **60,216** | **58,287** | **53,484** | **46,426** |
| Town .. | 94·0 | 24,369 | 24,174 | 43,823 | 38,780 |
| Rural .. | 185·9 | 35,847 | 34,113 | 9,661 | 7,646 |
| PORTLAOISE .. | **195·7** | **42,173** | **40,879** | **51,130** | **46,579** |
| Town .. | 65·6 | 17,855 | 17,703 | 43,867 | 40,325 |
| Rural .. | 130·1 | 24,318 | 23,176 | 7,263 | 6,254 |
| SLIGO .. | **327·4** | **53,280** | **51,360** | **15,456** | **14,101** |
| Town .. | 45·3 | 11,929 | 11,813 | 7,147 | 6,781 |
| Rural .. | 282·1 | 41,351 | 39,547 | 8,309 | 7,320 |
| TRALEE .. | **142·7** | **29,796** | **28,328** | **8,911** | **8,497** |
| Town .. | 28·6 | 7,530 | 7,486 | 4,055 | 3,892 |
| Rural .. | 114·1 | 22,266 | 20,842 | 4,856 | 4,605 |
| WATERFORD .. | **235·1** | **47,601** | **46,436** | **53,227** | **46,506** |
| Town .. | 94·6 | 24,414 | 24,231 | 39,632 | 36,328 |
| Rural .. | 140·5 | 23,187 | 22,205 | 13,595 | 10,178 |
| TOTALS .. | **2,848·5** | **628,241** | **610,946** | **625,662** | **562,224** |
| TOWN .. | 1,311·9 | 359,383 | 354,843 | 546,358 | 498,322 |
| RURAL .. | 1,536·6 | 268,858 | 256,103 | 79,304 | 63,902 |

Appendix 2

# GROWTH OF ELECTRICITY SALES AND NUMBER OF CONSUMERS

The following table shows, quinquennially from 1930 to 1950 and for each year since, the number of units generated and sold, the revenue, the average price per unit and the number of consumers.

| Year ended 31st March | Units generated (and purchased) (millions) | Units sold (millions) | Revenue from sales of energy (thousands) | Average price in pence per unit sold | Total consumers |
|---|---|---|---|---|---|
| | | | £ | | |
| 1930 .. .. .. | 60·948 | 43·177 | 478 | 2·66 | 48,606 |
| 1935 .. .. .. | 206·106 | 156·964 | 1,258 | 1·92 | 103,037 |
| 1940 .. .. .. | 406·999 | 318·552 | 1,946 | 1·47 | 172,545 |
| 1945 .. .. .. | 406·273 | 319·010 | 2,458 | 1·85 | 228,008 |
| 1950 .. .. .. | 784·776 | 626·174 | 4,774 | 1·83 | 310,639 |
| 1951 .. .. .. | 972·951 | 770·377 | 5,584 | 1·74 | 343,376 |
| 1952 .. .. .. | 1,032·697 | 835·326 | 6,531 | 1·88 | 372,743 |
| 1953 .. .. .. | 1,163·616 | 929·641 | 7,628 | 1·97 | 402,395 |
| 1954 .. .. .. | 1,295·520 | 1,051·746 | 8,517 | 1·94 | 435,985 |
| 1955 .. .. .. | 1,461·736 | 1,192·172 | 9,522 | 1·92 | 461,901 |
| 1956 .. .. .. | 1,573·150 | 1,306·642 | 10,465 | 1·92 | 509,546 |
| 1957 .. .. .. | 1,647·713 | 1,352·642 | 11,555 | 2·05 | 547,910 |
| 1958 .. .. .. | 1,774·821 | 1,424·645 | 12,903 | 2·17 | 570,345 |
| 1959 .. .. .. | 1,898·215 | 1,549·402 | 13,784 | 2·14 | 590,921 |
| 1960 .. .. .. | 2,096·027 | 1,692·154 | 14,724 | 2·09 | 610,946 |
| 1961 .. .. .. | 2,262·307 | 1,863·578 | 16,263 | 2·09 | 628,241 |

Appendix 3

# ANALYSIS OF UNITS SOLD

| Class of supply | Units sold | | Increase | Percentage increase |
|---|---|---|---|---|
| | Year ended 31st March, 1961 millions | Year ended 31st March, 1960 millions | millions | |
| Domestic .. .. | 769·203 | 703·259 | 65·944 | 9·4 |
| General lighting .. | 103·843 | 95·293 | 8·550 | 9·0 |
| General heating, cooking and water heating .. | 187·305 | 178·743 | 8·562 | 4·8 |
| Night storage heating .. | 115·982 | 102·082 | 13·900 | 13·6 |
| Motive power .. .. | 639·521 | 566·104 | 73·417 | 13·0 |
| Public lighting .. .. | 34·617 | 33·411 | 1·206 | 3·6 |
| Miscellaneous .. .. | 13·107 | 13·262 | —0·155 | —1·2 |
| TOTAL .. | 1,863·578 | 1,692·154 | 171·424 | 10·1 |

Appendix 4

# DISTRIBUTION AT HIGH TENSION OF UNITS GENERATED

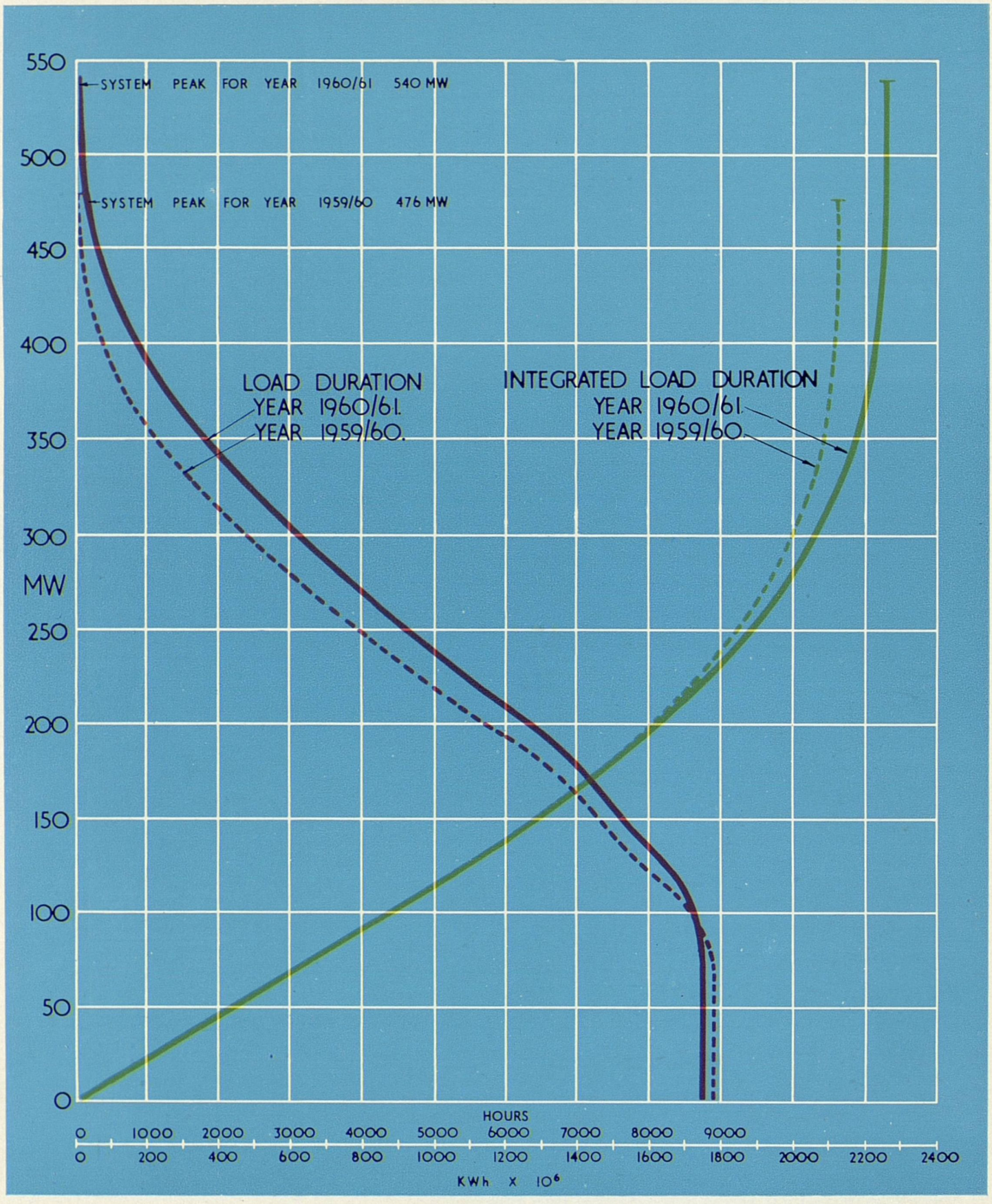
**Year Ended 31st March, 1961**

| District | | High tension units kWh × $10^6$ | Percentage of total |
|---|---|---|---|
| DUBLIN CITY 5 kV Supply .. .. .. .. | | 201·84 | 8·9 |
| DUBLIN CITY 10 kV Supply .. .. .. .. | | 274·06 | 12·1 |
| DUBLIN CITY — TOTAL .. .. .. .. | | 475·90 | 21·0 |
| ATHLONE DISTRICT .. .. .. .. .. | | 77·68 | 3·4 |
| CORK DISTRICT* .. .. .. .. .. | | 245·82 | 10·9 |
| DUBLIN NO. 2 DISTRICT .. .. .. .. | | 348·75 | 15·4 |
| DUNDALK DISTRICT .. .. .. .. .. | | 173·89 | 7·7 |
| GALWAY DISTRICT .. .. .. .. .. | | 71·66 | 3·2 |
| LIMERICK DISTRICT .. .. .. .. .. | | 166·77 | 7·4 |
| PORTLAOISE DISTRICT .. .. .. .. .. | | 124·56 | 5·5 |
| SLIGO DISTRICT .. .. .. .. .. | | 87·64 | 3·9 |
| TRALEE DISTRICT .. .. .. .. .. | | 49·70 | 2·2 |
| WATERFORD DISTRICT .. .. .. .. .. | | 154·74 | 6·8 |
| Generating station auxiliaries .. .. .. .. | | 100·546 | 4·4 |
| High tension losses (110 kV and 38 kV) .. .. | | 184·651 | 8·2 |
| Total generation of all stations: .. | 2,260·211 | | |
| Supply purchased: .. .. .. | 2·096 | | |
| TOTAL GENERATION OF ALL STATIONS PLUS SUPPLY PURCHASED | | 2,262·307 | 100·0 |

*During the year, the Cork City and Cork No. 2 Districts were amalgamated.

Appendix 5

# GENERATION LOAD DURATION
## AND INTEGRATED LOAD DURATION CURVES
### Year Ended 31st March, 1961



# GENERATION STATISTICS FOR THE YEAR AND THE NUMBER OF UNITS SENT OUT IN THE PRECEDING YEAR

| Station | Year ended 31st March, 1961 | | | Year ended 31st March, 1960 |
|---|---|---|---|---|
| | Generated million units | Station use million units | Sent out million units | Sent out million units |
| Ardnacrusha .. .. | 431·707 | 3·346 | 428·361 | 324·538 |
| Cliff .. .. | 89·142 | 0·764 | 88·378 | 75·528 |
| Cathaleen's Fall .. | 217·958 | 2·292 | 215·666 | 185·625 |
| Carrigadrohid .. | 31·080 | 0·439 | 30·641 | 26·510 |
| Inniscarra .. .. | 79·841 | 0·572 | 79·269 | 67·568 |
| Pollaphuca .. .. | 36·261 | 0·697 | 35·564 | 22·885 |
| Golden Falls .. .. | 13·235 | 0·139 | 13·096 | 9·108 |
| Leixlip .. .. | 19·789 | 0·148 | 19·641 | 13·507 |
| Clady .. .. | 13·388 | 0·123 | 13·265 | 13·263 |
| Ferbane .. .. | 209·003 | 17·500 | 191·503 | 224·878 |
| Rhode .. .. | 91·442 | 6·317 | 85·125 | — |
| Portarlington .. .. | 122·578 | 7·942 | 114·636 | 131·024 |
| Allenwood .. .. | 189·733 | 11·877 | 177·856 | 195·840 |
| Lanesborough .. .. | 103·103 | 4·786 | 98·317 | 49·638 |
| Cahirciveen .. .. | 8·352 | 0·917 | 7·435 | 10·198 |
| Miltown–Malbay .. | 2·935 | 0·437 | 2·498 | 8·306 |
| Screeb .. .. | 3·084 | 0·430 | 2·654 | 8·886 |
| Gweedore .. .. | 24·296 | 1·484 | 22·812 | 17·354 |
| Pigeon House .. | 0·929 | 1·793 | —0·864 | 22·617 |
| North Wall .. .. | 42·822 | 4·130 | 38·692 | 66·459 |
| Ringsend .. .. | 292·721 | 19·978 | 272·743 | 288·795 |
| Marina .. .. | 145·402 | 9·403 | 135·999 | 162·373 |
| Arigna .. .. | 91·410 | 5·032 | 86·378 | 69·185 |
| Purchased .. .. | 2·096 | — | 2·096 | 2·465 |
| TOTALS .. | 2,262·307 | 100·546 | 2,161·761 | 1,996·550 |
| Maximum daily generation, million units .. .. | | | 9·298 | 8·318 |
| Maximum load generated in kW .. .. | | | 540,000 | 476,000 |

# MONTHLY OUTPUTS GENERATED (kWh × $10^6$) AND SUPPLY PURCHASED

## Year ended 31st March, 1961



| Month (Calendar) | PEAT STATIONS | | | | | | | | | COAL/OIL STATIONS | | | | | Total of Steam Stations |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | DUBLIN | | | CORK | | |
| | Ferbane | Rhode | Port-arlington | Allen-wood | Lanes-borough | Cahir-civeen | Miltown-Malbay | Screeb | Gwee-dore | Pigeon House | North Wall | Rings-end | Marina | Arigna | |
| April .. | 19·518 | — | 13·004 | 5·866 | 12·468 | 0·625 | 0·459 | 0·195 | 1·418 | — | 1·529 | 29·651 | 11·107 | 8·809 | 104·649 |
| May .. | 17·185 | 0·620 | 15·246 | 16·886 | 12·332 | 1·187 | 0·510 | 0·316 | 1·647 | — | 6·229 | 32·220 | 19·319 | 7·992 | 131·689 |
| June .. | 26·100 | 3·620 | 10·950 | 22·905 | 1·172 | 1·515 | — | — | 0·729 | — | 5·309 | 22·738 | 15·224 | 9·338 | 119·600 |
| July .. | 30·229 | 6·469 | 5·280 | 16·511 | 7·366 | 0·433 | — | 0·023 | 0·492 | 0·028 | 4·252 | 14·525 | 18·219 | 9·716 | 113·543 |
| August .. | 18·029 | 8·677 | 7·895 | 18·683 | 12·516 | — | — | — | 2·638 | 0·023 | 2·066 | 18·836 | 4·008 | 8·726 | 102·097 |
| September .. | 15·582 | 9·046 | 5·738 | 10·667 | 5·262 | 0·607 | 0·403 | 0·287 | 2·395 | — | 1·528 | 11·381 | 7·244 | 5·695 | 75·835 |
| October .. | 22·082 | 12·959 | 11·343 | 17·314 | 10·926 | 1·394 | 0·453 | 0·542 | 2·395 | — | 1·327 | 20·089 | 8·606 | — | 109·430 |
| November .. | 19·700 | 9·499 | 10·253 | 11·077 | 7·128 | 1·210 | 0·723 | 0·694 | 2·550 | 0·034 | 2·295 | 16·736 | 6·781 | 6·563 | 95·243 |
| December .. | 16·256 | 15·249 | 9·234 | 15·830 | 8·651 | 0·551 | 0·387 | 0·482 | 2·569 | 0·013 | 3·038 | 17·925 | 11·672 | 7·567 | 109·424 |
| January .. | 9·261 | 5·789 | 10·000 | 18·725 | 8·770 | 0·688 | — | 0·545 | 2·614 | 0·097 | 4·483 | 31·538 | 14·694 | 9·670 | 116·874 |
| February .. | 6·770 | 4·249 | 7·469 | 13·565 | 7·035 | 0·142 | — | — | 2·242 | 0·019 | 4·414 | 24·607 | 8·521 | 7·305 | 86·338 |
| March .. | 8·291 | 15·265 | 16·166 | 21·704 | 9·477 | — | — | — | 2·607 | 0·715 | 6·352 | 52·475 | 20·007 | 10·029 | 163·088 |
| TOTALS .. | 209·003 | 91·442 | 122·578 | 189·733 | 103·103 | 8·352 | 2·935 | 3·084 | 24·296 | 0·929 | 42·822 | 292·721 | 145·402 | 91·410 | 1,327·810 |

| Month (Calendar) | HYDRO STATIONS | | | | | | | | | | Total Generation of all Stations | Total Supply Purchased | Total Generation and Supply Purchased |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | River Shannon | River Erne | | River Lee | | River Liffey | | | River Clady | Total of Hydro Stations | | | |
| | Ardnacrusha | Cliff | Cathaleen's Fall | Carrigadrohid | Inniscarra | Pollaphuca | Golden Falls | Leixlip | | | | | |
| April .. | 32·778 | 6·319 | 15·282 | 2·423 | 6·657 | 2·072 | 0·793 | 1·322 | 0·557 | 68·203 | 172·852 | 0·275 | 173·127 |
| May .. | 13·495 | 1·398 | 3·360 | 0·946 | 2·973 | 0·274 | 0·194 | 0·128 | 0·058 | 22·826 | 154·515 | 0·116 | 154·631 |
| June .. | 12·074 | 2·039 | 4·715 | 0·483 | 0·806 | 1·268 | 0·432 | 0·646 | 0·392 | 22·855 | 142·455 | 0·070 | 142·525 |
| July .. | 16·768 | 4·696 | 11·303 | 0·772 | 1·241 | 0·272 | 0·129 | 0·205 | 1·538 | 36·924 | 150·467 | 0·138 | 150·605 |
| August .. | 19·055 | 5·383 | 12·896 | 1·220 | 3·316 | 0·829 | 0·336 | 0·432 | 1·077 | 44·544 | 146·641 | 0·116 | 146·757 |
| September .. | 41·120 | 9·782 | 23·948 | 2·068 | 5·088 | 4·193 | 1·479 | 2·257 | 0·761 | 90·696 | 166·531 | 0·211 | 166·742 |
| October .. | 36·096 | 6·444 | 15·881 | 3·349 | 9·089 | 7·618 | 2·582 | 2·957 | 0·520 | 84·536 | 193·966 | 0·168 | 194·134 |
| November .. | 54·875 | 9·893 | 25·279 | 5·209 | 13·192 | 7·203 | 2·462 | 2·961 | 1·672 | 122·746 | 217·989 | 0·207 | 218·196 |
| December .. | 62·046 | 13·359 | 32·803 | 4·121 | 11·535 | 5·576 | 2·050 | 3·035 | 2·368 | 136·893 | 246·317 | 0·208 | 246·525 |
| January .. | 63·178 | 13·039 | 32·434 | 5·023 | 12·499 | 3·154 | 1·239 | 2·677 | 1·896 | 135·139 | 252·013 | 0·215 | 252·228 |
| February .. | 54·911 | 12·810 | 30·356 | 3·694 | 10·621 | 3·410 | 1·292 | 2·402 | 1·762 | 121·258 | 207·596 | 0·183 | 207·779 |
| March .. | 25·311 | 3·980 | 9·701 | 1·772 | 2·824 | 0·392 | 0·247 | 0·767 | 0·787 | 45·781 | 208·869 | 0·189 | 209·058 |
| | | 89·142 | 217·958 | 31·080 | 79·841 | 36·261 | 13·235 | 19·789 | | | | | |
| TOTALS .. | 431·707 | 307·100 | | 110·921 | | 69·285 | | | 13·388 | 932·401 | 2,260·211 | 2·096 | 2,262·307 |

# PARTICULARS OF GENERATING PLANT

## (a) Hydro-Electric Stations

| Station | River | Catchment area km.² | Average annual flow m³/sec. | Average available head metres | Average annual generation kWh × 10⁶ | Generating sets | | Type of turbine |
|---|---|---|---|---|---|---|---|---|
| | | | | | | No. | Capacity each kW | |
| ARDNACRUSHA .. | Shannon | 10,400 | 178·0 | 28·3 | 310 | 3<br>1 | 20,000<br>25,000<br>85,000 | Francis<br>Kaplan |
| POLLAPHUCA .. | Liffey | 309 | 9·4 | 48·7 | 25 | 2 | 15,000<br>30,000 | Kaplan |
| GOLDEN FALLS .. | | 312 | 9·4 | 16·6 | 9 | 1 | 4,000 | Propellor |
| LEIXLIP .. | | 843 | 14·7 | 17·3 | 13 | 1 | 4,000 | Kaplan |
| CLIFF .. | Erne | 4,320 | 102·1 | 12·1 | 85 | 2 | 10,000<br>20,000 | Kaplan |
| CATHALEEN'S FALL | | 4,350 | 102·1 | 29·7 | 205 | 2 | 22,500<br>45,000 | Kaplan |
| CARRIGADROHID .. | Lee | 610 | 22·1 | 15·4 | 22 | 1 | 8,000 | Kaplan |
| INNISCARRA .. | | 790 | 27·5 | 31·9 | 58 | 1<br>1 | 15,000<br>4,000<br>19,000 | Kaplan<br>Kaplan |
| CLADY .. | Clady | 80 | 3·9 | 57·8 | 13 | 1 | 4,000 | Francis |

## Steam Stations

| Station | Location | Generating Sets | | | | | Boilers | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | No. | Capacity each kW | Pressure Psi | Temp. °F | Type of cooling | No. | Capacity each k.lb./hour | Type of firing | Fuel type |
| Pigeon House .. | Dublin City | 1<br>1<br>4 | 5,000<br>10,000<br>20,000<br>**95,000** | 250 | 750 | Estuarine .. | 11 | 100 | Mech. Stoker and Oil-fired .. | Coal or Oil |
| North Wall .. | Dublin City | 1<br>2 | 12,500<br>16,000<br>**44,500** | 400 | 800 | Estuarine .. | 4<br>2 | 40<br>165 | Oil-fired .. | Oil |
| Portarlington .. | Co. Laoise | 2 | 12,500<br>**25,000** | 400 | 800 | Tower .. | 3 | 150 | Mech. Stoker | Sod Peat |
| Allenwood .. | Co. Kildare | 2 | 20,000<br>**40,000** | 400 | 800 | Tower .. | 4 | 150 | Mech. Stoker | Sod Peat |
| Marina .. | Cork City | 2 | 30,000<br>**60,000** | 600 | 850 | Tidal River | 3 | 200 | P.F. and Oil-fired | Coal or Oil |
| Marina .. (under construction) | | 1 | **60,000** | 1,150 | 950 | | 1 | 550 | Oil-fired .. | Oil |

## Steam Stations



| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| RINGSEND .. | Dublin City | 3 | 30,000<br>**90,000** | 600 | 850 | Estuarine .. | 4 | 200 | P.F. and Oil-fired | Coal or Oil |
| FERBANE .. | Co. Offaly .. | 3 | 20,000<br>**60,000** | 400 | 800 | Tower .. | 3 | 220 | P.F. .. | Milled Peat |
| FERBANE .. (under construction) | | 1 | 30,000 | 900 | 950 | | 1 | 285 | P.F. .. | Milled Peat |
| MILTOWN MALBAY .. | Co. Clare | 1 | **5,000** | 400 | 800 | Tower .. | 1 | 60 | Mech. Stoker | Sod Peat |
| SCREEB .. | Co. Galway | 1 | **5,000** | 400 | 800 | Sea .. | 1 | 60 | Mech. Stoker | Sod Peat |
| CAHIRCIVEEN .. | Co. Kerry | 1 | **5,000** | 400 | 800 | Tower .. | 1 | 60 | Mech. Stoker | Sod Peat |
| GWEEDORE .. | Co. Donegal | 1 | **5,000** | 400 | 800 | River .. | 1 | 60 | Mech. Stoker | Sod Peat |
| ARIGNA .. | Co. Roscommon. | 1 | **15,000** | 400 | 880 | Lake .. | 1 | 165 | P.F. .. | Coal |
| LANESBOROUGH .. | Co. Longford | 1 | **20,000** | 400 | 800 | River .. | 1 | 220 | Mech Stoker | Sod Peat |
| RHODE .. | Co. Offaly .. | 2 | 20,000<br>**40,000** | 650 | 850 | Tower .. | 2 | 210 | P.F. .. | Milled Peat |
| RHODE .. (under construction) | | 1 | **40,000** | 900 | 950 | | 1 | 380 | P.F. .. | Milled Peat |
| BELLACORICK .. (under construction) | Co. Mayo | 2 | 20,000<br>**40,000** | 650 | 850 | Tower .. | 2 | 210 | P.F. .. | Milled Peat |
| SHANNONBRIDGE .. (under construction) | Co. Offaly .. | 1 | **40,000** | 900 | 950 | River .. | 1 | 380 | P.F. .. | Milled Peat |

# PERFORMANCE OF GENERATING PLANT

## Year ended 31st March, 1961



### Hydro-Electric Stations

| Station | River | Rainfall at station | Total inflow | Discharge through sets | Water utilisation | Average available head | Water per unit generated | Installed capacity | Units sent out | Plant load factor | Total cost per unit sent out |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | inches | $m^3$/sec | $m^3$/sec | % | metres | $m^3$ | kW | kWh $\times 10^6$ | % | pence |
| ARDNACRUSHA .. | Shannon | 48·07 | 237·3 | 214·1 | 94·8 | 27·8 | 15·64 | 85,000 | 428·361 | 58·0 | 0·254 |
| POLLAPHUCA .. | Liffey | 45·80 | 11·9 | 10·7 | 100·0 | 48·8 | 9·28 | 30,000 | 35·564 | 13·8 | 0·553 |
| GOLDEN FALLS .. | | 45·80 | 11·9 | 10·9 | 100·0 | 16·8 | 26·00 | 4,000 | 13·096 | 37·8 | |
| LEIXLIP .. .. | | 40·60 | 20·4 | 16·4 | 84·6 | 17·4 | 26·15 | 4,000 | 19·641 | 56·5 | |
| CLIFF .. .. | Erne | 46·86 | 102·7 | 99·8 | 100·0 | 12·1 | 35·29 | 20,000 | 88·378 | 50·9 | 0·371 |
| CATHALEEN'S FALL.. | | | | 101·7 | 100·0 | 29·6 | 14·72 | 45,000 | 215·666 | 55·3 | |
| CARRIGADROHID .. | Lee | 57·00 | 28·7 | 26·1 | 91·0 | 15·2 | 26·45 | 8,000 | 30·641 | 44·3 | 0·679 |
| INNISCARRA .. | | 59·50 | 36·5 | 33·3 | 91·7 | 32·2 | 13·15 | 19,000 | 79·269 | 48·0 | |
| CLADY .. | Clady | 63·50 | 3·7 | 3·2 | 98·7 | — | 7·52 | 4,000 | 13·265 | 38·2 | 1·138 |

The percentage utilisation of the total discharge for generation is exclusive of river compensation water, and in the case of the River Liffey, of the draw-off for the Dublin City Water Supply from Pollaphuca Reservoir which averages 17·3 million gallons per day (0·91 $m^3$/sec).

Shannon and Erne rainfall represent average of catchment area.

# PERFORMANCE OF GENERATING PLANT

## Year ended 31st March, 1961



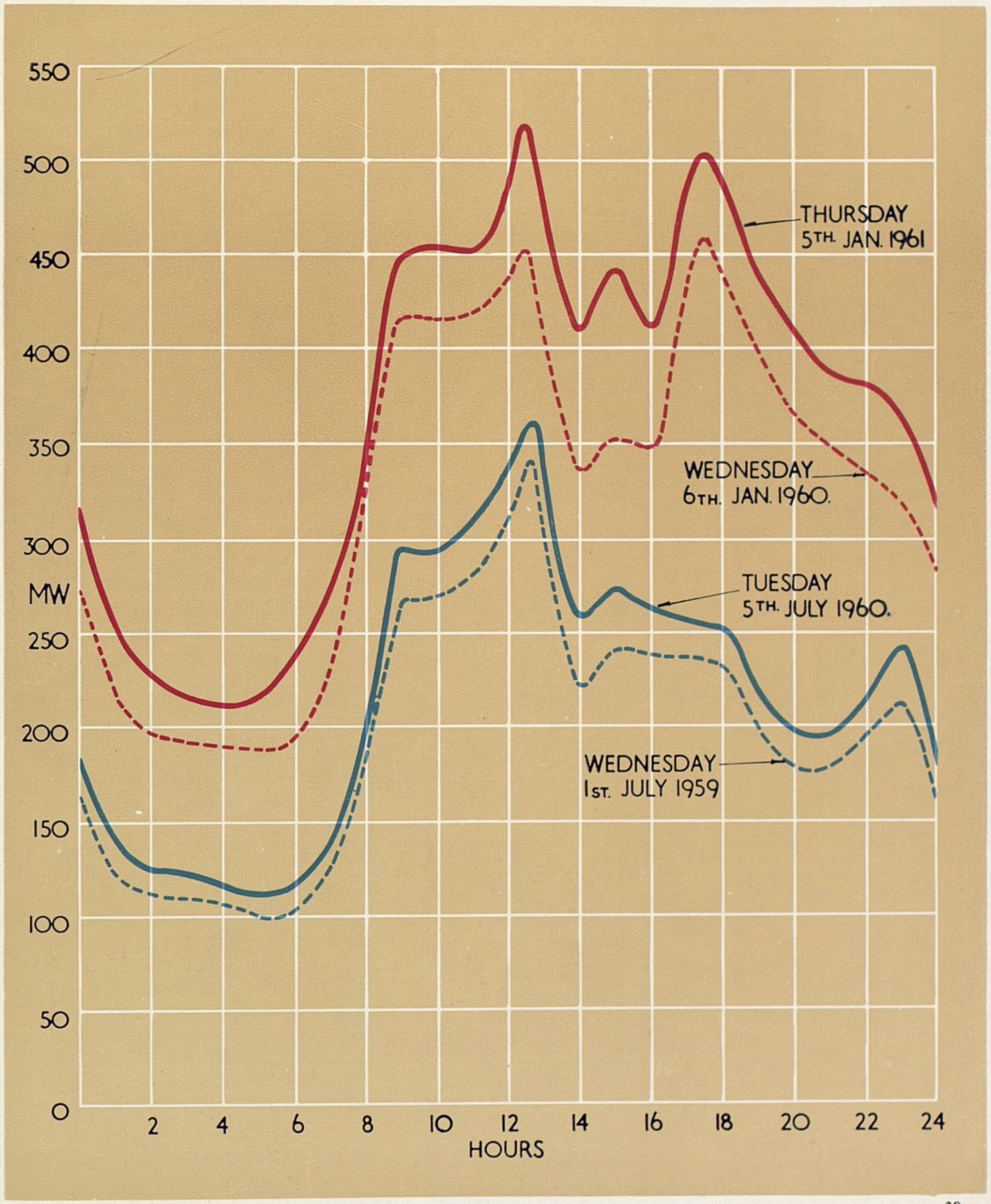
### Steam Stations

| Station | Location | Installed capacity kW | Units sent out kWh $\times 10^6$ | Plant load factor % | Fuel type | Total fuel used Tons | Total fuel cost £ | Fuel cost per unit sent out Pence | Total cost per unit sent out Pence |
|---|---|---|---|---|---|---|---|---|---|
| Pigeon House (Stand-by Station) | Dublin City | 95,000 | — | — | Coal<br>Oil | —<br>— | — | — | — |
| North Wall | Dublin City | 44,500 | 38·692 | 11·0 | Oil | 15,400 | 101,874 | 0·630 | 2·094 |
| Portarlington | Co. Laoise | 25,000 | 114·636 | 56·0 | Sod Peat | 149,400 | 411,196 | 0·865 | 1·320 |
| Allenwood | Co. Kildare | 40,000 | 177·856 | 54·1 | Sod Peat | 220,000 | 607,191 | 0·821 | 1·230 |
| Marina | Cork City | 60,000 | 135·999 | 27·7 | Coal<br>Oil | 65,300<br>9,300 | 284,423 | 0·504 | 1·213 |
| Ringsend | Dublin City | 90,000 | 272·743 | 37·1 | Coal<br>Oil | 122,900<br>14,500 | 500,191 | 0·442 | 1·022 |
| Ferbane | Co. Offaly | 60,000 | 191·503 | 39·8 | Milled Peat<br>Oil | 393,300<br>2,100 | 531,253 | 0·672 | 1·204 |
| Four 5MW Stations | West Coast | 20,000 | 35·399 | 22·1 | Sod Peat | 54,900 | 129,841 | 0·883 | 2·101 |
| Lanesborough | Co. Longford | 20,000 | 98·317 | 58·8 | Sod Peat | 102,100 | 280,101 | 0·686 | 0·985 |
| Arigna | Co. Roscommon | 15,000 | 86·378 | 69·6 | Coal<br>Oil | 54,500<br>300 | 204,534 | 0·567 | 0·895 |
| Rhode | Co. Offaly | 40,000 | 85·125 | 32·8 | Milled Peat<br>Oil | 155,600<br>1,100 | 216,591 | 0·606 | 1·161 |

Milled Peat figures in Ferbane and Rhode are for equivalent standard fuel of 55% moisture content. Sod Peat figures in Portarlington, Allenwood and Lanesborough are for equivalent standard fuel of 30% moisture content. Sod Peat figures in Miltown-Malbay, Screeb, Cahirciveen and Gweedore are actual tonnages as received. The outputs are given for the year ended 31st March, but for convenience, costing figures are for 52 weeks.

# TYPICAL DAILY GENERATION LOAD CURVES

Appendix 10



Appendix II

# TRANSMISSION SYSTEM IN COMMISSION

## At 31st March, 1961

| Transformer stations | No. in commission | Increase for year | Total capacity in kVA | Increase in capacity for year in kVA |
|---|---|---|---|---|
| 110 kV Stations .. .. | 19 | — | 610,000 at 110/38 kV<br>15,000 at 110/10 kV<br>67,200 at 38/10 kV | nil at 110/38 kV<br>nil at 110/10 kV<br>3,600 at 38/10 kV |
| 38 kV Stations .. .. | 181 | 4 | 754,300 | 32,000 |

| Transmission system | Length km. | Increase (+) or Decrease (—) for year km. | Description |
|---|---|---|---|
| 110 kV Lines .. .. | 192·6 | — | 6×95 sq. mm. double circuit copper |
| 110 kV Lines .. .. | 748·2 | —2·6 | 3×95 sq. mm. single circuit copper |
| 110 kV Lines .. .. | 4·1 | — | 6×300 sq. mm. double circuit SCA |
| 110 kV Lines .. .. | 110·7 | — | 3×425 sq. mm. single circuit SCA |
| 110 kV Lines .. .. | 430·2 | — | 3×300 sq. mm. single circuit SCA |
| 110 kV Lines .. .. | 799·9 | +83 | 3×200 sq. mm. single circuit SCA |
| 110 kV Cables .. .. | 9·8 | — | 3 single core 325 sq. mm. oil-filled |
| 38 kV Lines .. .. | 15·6 | — | 3×300 sq. mm. SCA |
| 38 kV Lines .. .. | 6·8 | + 4·4 | 3×200 sq. mm. SCA |
| 38 kV Lines .. .. | 651·4 | +55 | 3×100 sq. mm. SCA |
| 38 kV Lines .. .. | 2,443·5 | — 5·7 | 3×50 sq. mm. copper |
| 38 kV Lines .. .. | 326·4 | — | 3×35 sq. mm. copper |
| 38 kV Cables .. .. | 40·5 | — | 3×260 sq. mm. oil-filled |
| 38 kV Cables .. .. | 4 | — | 3×130 sq. mm. oil-filled |
| 38 kV Cables .. .. | 2·3 | — | 3 single core 260 sq. mm. oil-filled |
| 38 kV Cables .. .. | 69·1 | — | 3×185 sq. mm. solid |
| 38 kV Cables .. .. | 27·9 | — | 3×150 sq. mm. solid |
| 38 kV Cables .. .. | 1·5 | — | 3×95 sq. mm. solid including 1 km. submarine |

Appendix 12

# PROGRESS OF THE RURAL ELECTRIFICATION SCHEME

| Period | Poles erected | Miles of line strung | Consumers connected | Areas completed |
|---|---|---|---|---|
| Year ended 31st March | | | | |
| 1947 .. | 1,300 | 39 | Nil | Nil |
| 1948 .. | 15,986 | 721 | 2,203 | 7 |
| 1949 .. | 32,002 | 1,730 | 9,262 | 30 |
| 1950 .. | 40,972 | 2,083 | 13,688 | 45 |
| 1951 .. | 42,423 | 2,232 | 15,803 | 49 |
| 1952 .. | 46,008 | 2,466 | 18,067 | 49 |
| 1953 .. | 48,059 | 2,703 | 18,818 | 49 |
| 1954 .. | 68,382 | 3,769 | 23,477 | 60 |
| 1955 .. | 91,391 | 4,977 | 27,316 | 75 |
| 1956 .. | 112,616 | 6,196 | 34,257 | 99 |
| 1957 .. | 91,794 | 5,149 | 34,627 | 80 |
| 1958 .. | 61,696 | 3,332 | 17,725 | 60 |
| 1959 .. | 50,113 | 2,700 | 14,997 | 45 |
| 1960 .. | 47,982 | 2,592 | 13,458 | 40 |
| 1961 .. | 43,757 | 2,322 | 11,570 | 40 |
| TOTALS .. .. | 794,481 | 43,011 | 255,268 | 728 |

# TO THE MINISTER FOR LANDS

REPORT ON FISHERIES
27 LOWER FITZWILLIAM STREET
DUBLIN

In accordance with the provisions of Section 10 of the Electricity (Supply) (Amendment) Act, 1961, the Board presents the Annual Report and Fisheries Account for the year ended 31st March, 1961.

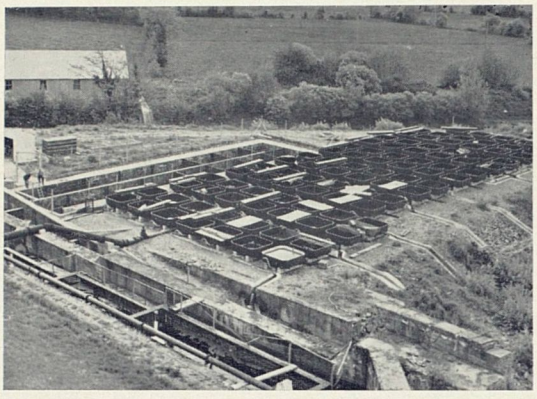
The scheme for the rehabilitation of the River Shannon salmon fisheries progressed satisfactorily. Preservation works to conserve the fish stocks in the Rivers Lee, Erne and Clady continued. The Fisheries Account shows an expenditure of £43,396. Increased operational costs and capital charges arising from the salmon hatcheries more than offset an increase in revenue. While direct costs and fishery rates remained unchanged, capital charges increased by £3,104 and sundry expenses by £1,866. After deducting commercial fisheries revenue the debit balance of £22,334 is transferred to the Net Revenue Account.

## SALMON HATCHERIES

The construction of the outdoor rearing tanks attached to the Parteen hatchery was completed. The 1960 fry in all hatcheries were planted satisfactorily but a small quantity was retained at Parteen to gain operational experience in rearing and to test the tanks. Valuable information was obtained on parr survivals, tank densities, growth rates and feeding costs. These fish were retained experimentally throughout the winter. The results were satisfactory and there was evidence that a proportion would reach the smolt stage in the spring of 1961.

The hatchery production figures for 1960/61 were as follow :—

| Hatchery | Salmon ova | Planted as eyed ova | Stock of fry March, 1961 | Losses during incubation |
|---|---|---|---|---|
| Shannon .. | 1,351,000 | — | 1,329,000 | 1·6% |
| Lee .. | 715,000 | 160,000 | 552,000 | 0·3% |
| Erne .. | 601,000 | — | 594,000 | 1·1% |



The construction of outdoor rearing tanks at the Parteen hatchery was completed during the year.

## FISH PASSES

The numbers of salmon ascending through the fish passes were :—

| *Fish Pass* | *Salmon passed during* 1960 |
|---|---|
| Ardnacrusha .. .. | 1,148 |
| Parteen .. .. | 280 |
| Inniscarra .. .. | 803 |
| Cathaleen's Fall.. .. | 5,056 |
| Gweedore Weir, River Clady | 187 |

An electronic fish counter was installed experimentally at Leixlip on the River Liffey but was not in operation through the full season.

At Ardnacrusha an estimated 1¼ million elvers and 452 trout were also passed upstream.

## PRESERVATION

The Board's Fishery Wardens shared protection work with the staffs of the Boards of Conservators on the Rivers Shannon, Lee and Erne. The successful operation of the new Ardnacrusha fish pass has resulted in the distribution of salmon over a very large catchment. The Board's policy is designed to avoid immediate exploitation and to permit the maximum number to spawn.

On the River Erne the Board was represented on the joint protection body for the river and contributed £323 to the Enniskillen Fishery Board for the protection of the River Erne tributaries in Northern Ireland.

Predation control work continued in the Lough Derg area, the nursery streams, and smolt rearing areas on the Shannon and the Board continued its liaison with local groups in sponsoring pike angling competitions. In addition, netting of pike was continued on the Erne reservoir.

## COMMERCIAL FISHING

Revenue from the sale of salmon taken at Thomond Weir and at the four estuary stake weirs on the River Shannon was £12,685. The recorded run of salmon at Thomond Weir was 8,223. The average annual run during 1952/1961 was 12,262. Seventy-two per cent of the run during the commercial season was released upstream for propagation purposes and for angling.

At Killaloe eel weir 28,022 lbs. of eels were taken as compared with 20,506 lbs. in the previous season. Receipts from sales amounted to £5,116. A programme for the development of the eel fisheries based on the collection of elvers from other rivers and their transfer to the Shannon Lakes was agreed by Fisheries Division, Department of Lands.

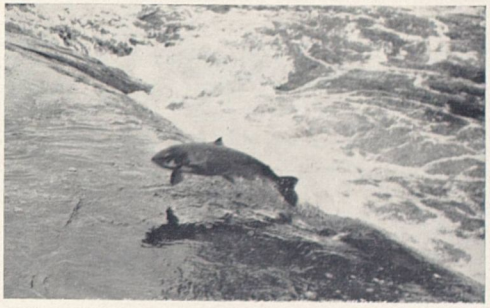
The commercial season on the Erne was restricted to the period from the 29th June to the 19th August. During this period the Board was permitted to retain 20% of the recorded run of salmon through the counter at Cathaleen's Fall fish pass. The receipts from the sale of salmon amounted to £729.

The Board continued its policy of not operating its commercial fishery on the Lee.

## ANGLING

The grilse run was late in entering the tributaries of the Shannon but excellent catches were recorded on the Mulcair in August and September.

The development of coarse fish angling sponsored by Board Failte and the Inland Fisheries Trust, Incorporated was continued in many areas of the Shannon.



Because of the new fish pass at Ardnacrusha, salmon have been observed in the northern reaches of the river where they had not been seen for many years.

## GENERAL

Officers of Fisheries Division, Department of Lands, carried out extensive tagging of kelts at Parteen and on the Erne. They also continued tests on the passage of smolts through turbines on the Erne and Lee.

The experimental planting of salmon fry in Knader Lough was kept under review. No smolts have appeared so far.

The Board wishes to record its appreciation of the co-operation and assistance which it received from Fisheries Division, Department of Lands, from the Ministry of Commerce, Northern Ireland, Bord Failte, the Inland Fisheries Trust, Incorporated, and from the Boards of Conservators and local Angling Clubs.

(Signed) *T. Murray, Chairman*
*J. P. Digby*
*Henry Kennedy*
*T. MacMahon*
*Breandán Ó Cearbhaill*
*J. A. Ryan*
*J. C. Tonge*

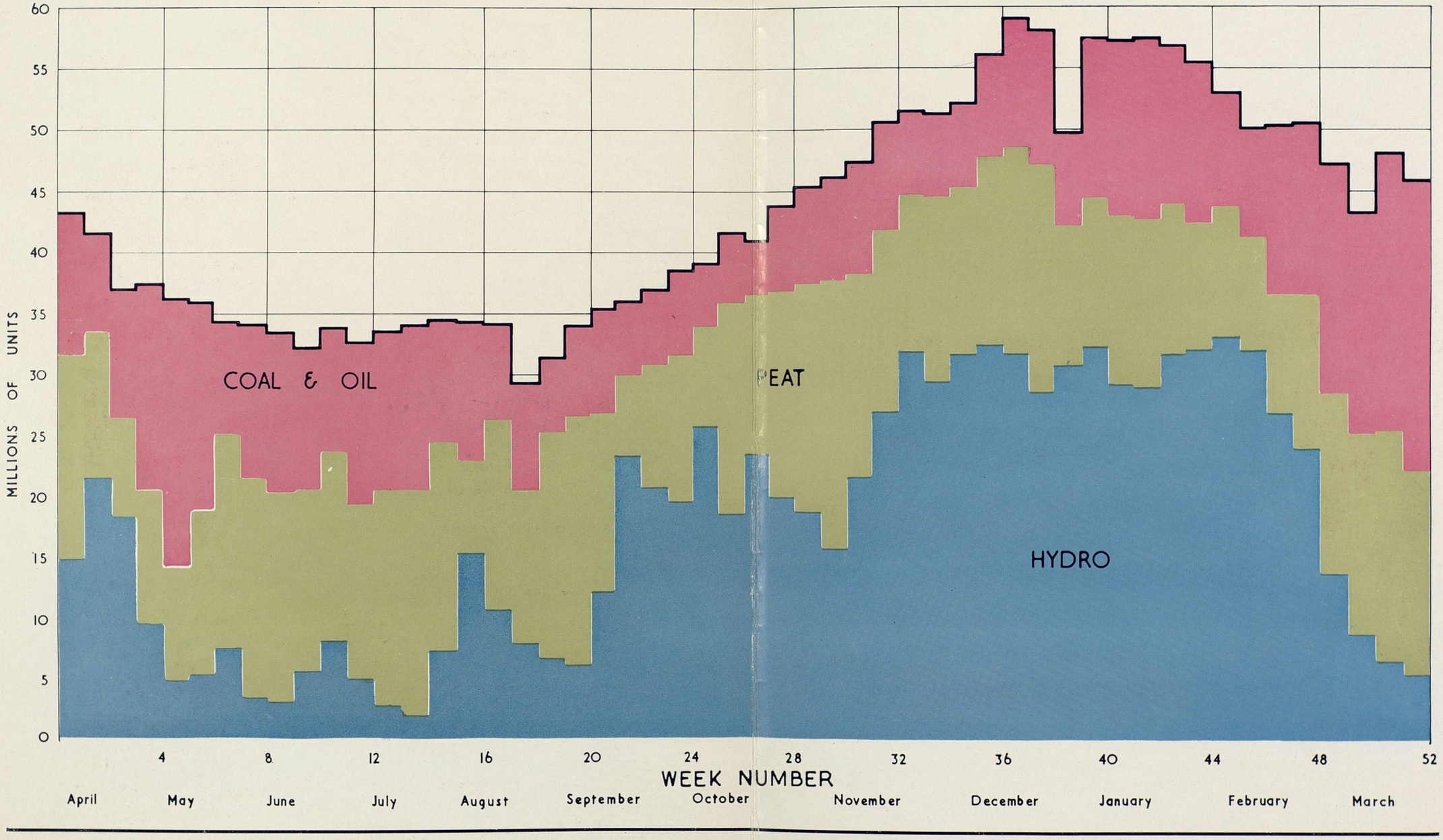
(Signed) *J. G. Gargan, Secretary*
20th June, 1961.

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# WEEKLY GENERATION

Year ended 31st March, 1961

Appendix 13



# DISTRICT OFFICES
# and
# DISTRICT MANAGERS

**ATHLONE**

W. CALLANAN, B.E.
10 Church Street
Telephone: Athlone 2611

**CORK**

J. WARE, B.E.
113 Patrick Street
Telephone: Cork 25294

**DUBLIN CITY**

P. HARKIN, B.Sc., B.E., A.R.C.Sc.I.
49 Fleet Street
Telephone: Dublin 72961

**DUBLIN NO. 2**

J. J. HANNA, B.E., A.R.C.Sc.I.
41 Merrion Square
Telephone: Dublin 71821

**DUNDALK**

J. O'GRADY, B.E.
Chapel Street
Telephone: Dundalk 4765

**GALWAY**

T. McCARTHY, M.E., A.M.I.E.E.
Newtownsmyth
Telephone: Galway 2111

**LIMERICK**

P. G. COLLIER, B.E., A.R.C.Sc.I.
41 O'Connell Street
Telephone: Limerick 45599

**PORTLAOISE**

W. P. FOX, A.R.C.Sc.I.
Abbeyleix Road
Telephone: Portlaoise 27

**SLIGO**

K. McLAREN, B.A., B.A.I., B.E.
Castle Street
Telephone: Sligo 2071

**TRALEE**

T. RYLE, B.E., A.R.C.Sc.I.
22 Bridge Street
Telephone: Tralee 501

**WATERFORD**

E. C. ENRIGHT, B.E.
Gracedieu Road
Telephone: Waterford 4896