THIRTY-THIRD

ANNUAL REPORT

OF THE

ELECTRICITY SUPPLY BOARD

IRELAND

FOR THE YEAR ENDED

MARCH 31st

1960

INCLUDING REPORT ON FISHERIES

(Pr. 5558)

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Alex Thom & Co., Ltd., Dublin

ELECTRICITY SUPPLY BOARD

●

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

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ELECTRICITY SUPPLY BOARD

ELECTRICITY SUPPLY BOARD

REPORT AND ACCOUNTS

YEAR ENDED 31st MARCH, 1960

(Including Report on the Fisheries)

CONTENTS

REPORT—	Page
Finance and Accounts	7
Capital	11
Borrowing Powers	11
Sale of Electricity and Number of Consumers ...	12
Analysis of Units Sold	12
Sales of Appliances	13
Consumers' Installations	13
Generation	13
Generating Stations	14
Main Transmission System	15
Transmission and Distribution Systems	16
Rural Electrification	17
Water Storage and River Control	18
Water Power Investigations and Hydrometric Survey	19
Premises	19
Permitted Undertakings	20
Superannuation Schemes	20
Tribunals to Determine Disputes	20
Board Membership	20
Staff	20
FISHERIES	22
APPENDICES	*1*
ACCOUNTS	*31*

CONTENTS

REPORT

OF THE

ELECTRICITY SUPPLY BOARD

27 Lower Fitzwilliam Street,
Dublin.

TO THE MINISTER FOR TRANSPORT AND POWER

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, 1960.

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

The lack of rain to the end of October resulted in a reduced production of hydro-electricity during the summer months. This was more than compensated for in the latter portion of the year in which the rainfall was above normal and the output of hydro-electricity for the whole year was some six per cent. above average. The good summer weather facilitated the production of peat and the electricity produced from this source showed a substantial increase on the previous year.

The total units generated and purchased amounted to 2,096 million units, an increase of 198 million units, or approximately 10·4 per cent. above the previous year. Production from water power was 747 million units compared with 782 million in the previous year. Generation from peat rose to 692 million units compared with 418 million units. Expenditure on native fuels increased by over £950,000 while expenditure on imported fuels fell by £340,000.

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

Hydro	37·0%
Peat (sod)	11·3%
Peat (milled)	21·1%
Coal (native)	4·1%
Oil/Coal	26·5%

Generation from native sources amounted to 73·5 per cent. of the total output. The development of significant water power resources has now been virtually completed and future additional power requirements will have to be supplied

exclusively from thermal stations ; there is no new hydro plant in the forward generating programme recently approved by the Government. Since thermal power is more costly than hydro power the average cost of production of electricity will tend to rise year by year from now onwards.

The installed generating plant was adequate for all requirements and provided sufficient reserves to meet contingencies. No special problem was experienced in the maintenance of supply, although the long summer and autumn drought, coinciding with the period normally set aside for plant overhaul, led to a situation in early October when almost all the available plant, including Pigeon House, had to be called into use. This situation continued for only a short period, however, and the total output from Pigeon House Station, which has now become entirely a standby station, was only 26 million units. All plant was maintained in first class condition.

The number of consumers increased by 20,025 to 610,946 and of these 13,458 were from rural areas. Sales of electricity realised £14,724,000, an increase of £940,000 over the preceding year. This represents an increase of 6·8 per cent. in sales revenue and an increase of 9·2 per cent. in the volume of sales. The difference in percentage arises from the fact that, over the range of rates of charge, there are usually lower charges for units in excess of a fixed level of consumption.

The increased use of electricity can contribute greatly, not only to the improvement of the living standards of the community, but also to increased production and efficiency in both industry and agriculture. The Board has, therefore, continued to pursue an active sales policy with the object of extending the use of electricity in ways in which it has not yet been fully developed. There still remain, even in areas in which the supply has been long established, many directions in which an expansion of the use of electricity would be most advantageous to the community. To this end the Board has endeavoured, through its sales promotion and advisory services as well as by means of attractive deferred payment terms, to stimulate the sale of electrical apparatus for domestic and other purposes. The success of its efforts in this direction may be gauged from the fact that sales of merchandise for the year amounted to almost £1 million.

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

	Year ended 31st March, 1960	Year ended 31st March, 1959
	£	£
Gross revenue	14,780,128	13,839,231
Working expenditure on wages, fuel, and other materials and overheads	7,899,604	6,908,060
	6,880,524	6,931,171

This working surplus is subject to the following capital charges :—

	Year ended 31st March, 1960 £	Year ended 31st March, 1959 £
Interest	3,748,446	3,624,056
Provision for plant renewal ...	2,730,000	2,600,000
Capital redemption	834,636	805,998
Leaving Deficiency	432,558	98,883

The sale of electricity has now resulted in deficiencies in three successive years. In the immediately preceding year revenue and revenue expenditure were practically equal. While substantial in themselves, earlier deficiencies represented only a small percentage of the Board's revenue and were capable of being met out of uncommitted balances and unrequired provisions carried forward from earlier years. These were distinct from the general reserve for contingencies referred to elsewhere in this Report, and they were such that, at the commencement of the year under review, there was a credit of some £71,000 to be carried forward on the Net Revenue Account. A deficiency in the year of the order of £430,000, which leaves a net deficit approximating to £350,000 to be disposed of, clearly calls for different treatment. The Board is at present considering how its finances should be ordered in future to meet the situation, and a review of the present financial position and prospects leads to two important conclusions, viz. :—

(i) that the rural development programme involved, and continues to involve, a substantial burden on the Board's finances ;

(ii) that the rate of growth of current expenditure has now overtaken the growth in earnings, and unless present electricity charges are increased, this must lead to continuing and growing losses.

These conclusions suggest that a revision of the present rates of charge will be necessary and the Board is anxious that the position should be fully understood by electricity consumers.

As regards the growth of expenditure, reference has already been made to the increasing dependence on thermal power which, even if fuel prices prove favourable, will inevitably lead to increased production costs. In addition, the Board is faced with a large and continuing volume of capital investment in generation, transmission and distribution equipment at relatively high interest rates, while salaries and wages have also increased substantially since rates of electricity charges were revised in 1956. A regular upward trend in expenditure is inseparable from the operation of a steadily expanding business but the Board will continue, by constant review of its procedures and methods, its efforts to keep costs of production and distribution to a minimum.

When the programme of rural development was decided upon, it was accepted that it would be an unremunerative service and that a 50 per cent. capital subsidy by the State was the minimum necessary to enable the Scheme to be initiated without imposing an undue burden on the Board's finances. State policy regarding the financing of rural electrification was altered, however, when less than one-fifth of the total number of areas had been completed. Payment of State subsidy was discontinued and the Board was required to assume responsibility for the full capital for rural development, apart from the relatively small amount of subsidy which had already been contributed out of tax sources. At the 31st March, 1958, when subsidy at the 50 per cent. rate was reintroduced in respect of the balance of the areas remaining to be electrified, the Board had spent approximately £23,000,000 on rural electrification of which the State had borne only £1,980,000, or 8·6 per cent. of the money spent, instead of 50 per cent. as originally planned. The effect of the loss of almost £9,500,000 in subsidy is to add a continuing annual burden of more than £500,000 on the Board's finances in respect of rural electrification, a burden which has to be borne by the Board's urban and industrial consumers.

Even with a 50 per cent. capital subsidy, the financial returns on the rural areas now being developed are not sufficient to make them remunerative ; each new area completed involves an additional and continuing annual loss to the Board.

The deficiency on the Rural Account, £887,689, has been reduced by the surplus of £327,870 on the Non-rural Account with the effect that a working deficit of £559,819 has been experienced on the year's operations. After taking credit for miscellaneous revenue and for interest receivable, a net debit balance of £432,558 remains to be carried to the Net Revenue Account. After adjusting this figure by installations and merchandise trading profits and by the fisheries loss and making allowance for the credit balance forward from last year, a debit balance of £349,587 remains to be disposed of.

At the close of last year a reserve for contingencies of £1,500,000 existed and was considered at that time to be adequate. It has been decided to utilise £400,000 of this reserve to meet the revenue loss thus reducing the contingencies reserve to £1,100,000 and leaving a credit of £50,413 on the Net Revenue Account to be carried forward to next year. The reduction in the reserve, particularly in a year in which working conditions have been relatively favourable, is a direct indication of the trend in the Board's business.

During the year, the total expenditure chargeable to revenue increased by £1,274,572. Of this £613,081 represented increased fuel costs and £283,028 related to interest, capital repayments and provision for plant renewal. Other working costs grew with the expanding market which is being built up. Costs were also influenced by the higher salary and wage levels which have to be met and by increased charges for some of the commodities and services it is necessary to obtain.

CAPITAL

The value of plant brought into commission was £6,608,568 of which £2,046,119 related to Rural Electrification. The total investment in assets in productive use at the end of the year was :—

	£
Generation	47,893,632
Transmission...	14,087,962
Distribution (incl. Rural £26,306,908) ...	40,045,541
Premises, equipment, transport, etc. ...	3,143,379
	105,170,514

In addition, expenditure of £2,809,222 had been incurred on new capital works still under construction at the end of the year. The fixed capital investment was almost £108,000,000.

BORROWING POWERS

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

The Electricity (Supply) Acts authorise the Board to incur capital expenditure not exceeding £100,000,000 for its general purposes. To enable the Board's development to continue, legislation increasing this authorised amount to £120,000,000 is under consideration. At 31st March, 1960, the Board had approved expenditure totalling £101,105,557 of which £78,863,607 represented electricity assets actually in commission, the balance £22,241,950 representing either work in progress or work authorised.

The amount similarly authorised for rural electrification remains at £30,000,000. This is inclusive of the subsidy for rural development provided by the State. At 31st March, 1960, the amount approved was £28,029,235 of which £26,306,908 represented assets in commission and £1,722,327 work in progress or authorised.

SALE OF ELECTRICITY 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

Appendix I gives details of the number of consumers and certain other particulars relating to supply.

ANALYSIS OF UNITS SOLD

The following table gives an analysis of the units sold in the main categories of supply :—

Class of supply	Units sold		Increase millions	Percentage increase
	Year ended 31st March, 1960 millions	Year ended 31st March, 1959 millions		
Domestic ...	703·259	670·408*	32·851	4·9
General lighting	95·293	90·498*	4·795	5·3
General heating cooking and water heating (excluding night storage heating) ...	178·743	169·451*	9·292	5·5
Night storage heating ...	102·082	98·822	3·260	3·3
Motive power ...	566·104	475·853	90·251	19·0
Public lighting...	33·411	31·944	1·467	4·6
Miscellaneous ...	13·262	12·426	0·836	6·7
Totals ...	1,692·154	1,549·402	142·752	9·2

*Adjusted figure.

SALES OF APPLIANCES

The sales of appliances amounted to £964,529 as compared with £752,524 in the preceding year. The rate of gross profit was 18·7 per cent. The Merchandise Trading Account, having been charged with overhead expenses and interest on working capital, showed a profit of £21,832.

CONSUMERS' INSTALLATIONS

The credit taken for contracts completed and invoiced for work carried out amounted to £409,648 as compared with £401,288 for the preceding year. The rate of gross profit was 18·9 per cent. Having debited to the Installations Trading Account overhead expenses and interest on working capital, there was a net profit of £9,729.

GENERATION

The output statistics for the generating stations and the corresponding figures for the preceding year are shown in the following table :—

Station	Year ended 31st March, 1960			Year ended 31st March, 1959
	Generated million units	Station use million units	Sent out million units	Sent out million units
Ardnacrusha ...	327·650	3·112	324·538	358·963
Cliff	76·258	0·730	75·528	76·365
Cathaleen's Fall	187·818	2·193	185·625	187·543
Carrigadrohid	26·986	0·476	26·510	26·306
Inniscarra ...	68·172	0·604	67·568	66·320
Pollaphuca ...	23·549	0·664	22·885	28·096
Golden Falls ...	9·241	0·133	9·108	10·418
Leixlip	13·685	0·178	13·507	18·454
Clady	13·390	0·127	13·263	0·828
Ferbane ...	243·138	18·260	224·878	215·315
Portarlington ...	139·499	8·475	131·024	63·020
Allenwood ...	208·099	12·259	195·840	71·803
Lanesborough...	52·537	2·899	49·638	19·991
Cahirciveen ...	11·396	1·198	10·198	1·393
Miltown-Malbay	9·322	1·016	8·306	1·827
Screeb	9·657	0·771	8·886	1·367
Gweedore ...	18·539	1·185	17·354	10·418
Pigeon House...	26·381	3·764	22·617	15·162
North Wall ...	72·887	6·428	66·459	56·328
Ringsend ...	309·332	20·537	288·795	337·777
Marina	172·921	10·548	162·373	222·008
Arigna	73·105	3·920	69·185	20·591
Purchased ...	2·465	—	2·465	3·724
Totals ...	2,096·027	99·477	1,996·550	1,814·017
Maximum daily generation, million units			8·318	7·887
Peak load generated in kW ...			476,000	462,000

The units generated and purchased showed an increase of 197·812 million units or 10·4 per cent. higher than the preceding year. The annual load factor, on the basis of units generated, was 50·1 per cent. compared with 46·8 per cent. in the previous year. The units purchased include 1,007,000 units from the Electricity Board for Northern Ireland.

An analysis of the cost of generation appears in the Electricity Production Account. For reference purposes the following information is given in the Appendices :—

Generation load duration, and integrated load duration curves ...	Appendix III
Monthly outputs of the generating stations	Appendix V
Particulars of the generating plant ...	Appendix VI
Performance of generating plant ...	Appendix VII
Typical daily generation load curves ...	Appendix VIII
Weekly generation and peak loads ...	Appendix XIII
Annual generation from 1st April, 1930, to 31st March, 1960 ...	Appendix XIV

GENERATING STATIONS

No new generating plant was commissioned in the year under review. The installed capacity of the Board's generating stations at the 31st March, 1960, amounted to :—

Hydro-electric plant	219 MW
Steam plant (coal/oil)	304·5 MW
,, ,, (sod turf)	105 MW
,, ,, (milled peat)	60 MW
Total installed capacity	688·5 MW

This figure includes 95 MW of old plant in the Pigeon House station which is available for standby purposes and the four 5 MW hand-cut turf fired stations where the supply of fuel is uncertain.

The following additional generating plant is at present in course of construction :—

Rhode Station (Milled Peat) (Installed capacity 80 MW)

The civil engineering work associated with the first two 20 MW generating sets was substantially completed and the boiler plant and generating sets were nearing completion at the end of the year. It is hoped to put these units into commission in the summer of 1960.

Work has commenced on the foundations for the third unit (40 MW) and contracts have been placed for the boiler plant and turbo-alternator set.

Bellacorick Station (Milled Peat) (Installed capacity 40 MW)

Satisfactory progress has been maintained on the construction of this station. Contracts have been placed for the two boiler units and turbo-alternator sets and the structural work on the buildings has proceeded according to plan.

On completion of the above two new milled peat stations at Rhode and Bellacorick the total installed generating plant capacity will have reached a total of 808·5 MW of which 285 MW will be fired by peat (in 1963/64).

Future Plant Programme

With the general approval of the Government the Board has adopted a programme of plant extensions covering the period up to 1968/69. This programme envisages the addition of a further 340 MW of new plant of which 160 MW will be fired by milled peat and 180 MW by coal or oil. This programme provides for the absorption of the output of all the peat bogs which Bord na Mona has planned to develop for fuel supply to electricity stations.

The planning of the first stages of this programme, for completion in 1964/65, is already in hand, i.e. :—

New station at Shannonbridge (Milled Peat)	40 MW
Extension of Ferbane Station (Milled Peat)	30 MW
Extension of Marina (Cork) Station (Coal/Oil)	60 MW

The steps in the programme subsequent to 1964/65 will be subject to periodic review in the light of changing circumstances.

MAIN TRANSMISSION SYSTEM

(a) 110 kV Overhead Lines :

The 425 sq. mm. S.C.A. line from Rhode generating station to Finglas transformer station was completed and put in commission.

The survey and design of a line from Dundalk transformer station to connect with the Carrick-on-Shannon/Drogheda line near Arvagh was completed, and work on the construction of the line was well advanced. This is a steel mast line and represents an advance in design over those previously used. On the completion of the line, the existing portion of line from Arvagh to Drogheda will be taken down for re-erection elsewhere.

The survey of a line from Carrick-on-Shannon to Ballina, which will ultimately connect with the new generating station at Bellacorick, had begun.

(b) 110 kV Transformer Station :

A new station at Limerick was completed and placed in commission with one 30 MVA transformer.

(c) 38 kV Overhead Lines :

About twenty-seven miles of 38 kV lines were erected.

(d) 38 kV Transformer Stations :

Five stations were completed and put into commission :

Lucan, Co. Dublin.
Mallow II, Co. Cork.
Rathmore, Co. Kerry.
Scariff, Co. Clare.
Tipperary II, Co. Tipperary

TRANSMISSION AND DISTRIBUTION SYSTEMS

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

1.	Low tension overhead mains erected ...	23·04 miles
2.	Low tension overhead mains reconstructed or strengthened	13·84 ,,
3.	Low tension underground mains—net increase	12·07 ,,
4.	10 kV underground cables—net increase ...	13·13 ,,
5.	10 kV overhead distribution lines (excluding rural lines)—net increase ...	27·24 ,,
6.	38 kV overhead transmission lines—net increase	22·20 ,,
7.	38 kV underground cables installed ...	0·20 ,,
8.	110 kV overhead transmission lines erected	39·00 ,,
9.	Rural lines erected	2,592·00 ,,

One hundred and sixty-two 10 kV and seven 5 kV transformer stations were completed ; twenty-one 10 kV transformer stations and one 5 kV station were retired from service. The operating voltage in twenty stations was increased from 5 kV to 10 kV.

A further area of Dublin City, in which the operating voltage of the high tension network had been 5 kV, was converted to 10 kV. This is the fifth area converted since the programme was begun in 1955. Approximately one-third of the programme for changeover from 5 kV to 10 kV has been completed.

The new 5 kV distribution station building in Fleet Street, Dublin, was equipped and commissioned. The switchgear installed is of the modern air-blast type and is completely fireproof. The switchgear in the old station, which was used as a distribution station since 1903, was retired from service.

Supply was provided at the Industrial Engineering group of companies in Dundalk, Shannon Free Airport Industrial Estate, Liebherr Crane Factory, Killarney and Scarriff Chipboard factory. An increasing number of large power consumers are taking supply at 10 kV.

Appendix IX tabulates the data for the transmission and distribution systems at the end of the year. A map and a diagram showing the existing and projected transmission lines and stations will be found in Appendices XV and XVI respectively.

RURAL ELECTRIFICATION

The progress of the Rural Electrification Scheme is shown in the table below :—

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
Totals ...	750,724	40,689	243,698	688

The target of 40 areas for the year was reached. As a result of amalgamation of areas the total number of rural areas in the country is now 791. Of this total, 788 have been canvassed, 722 or 91 per cent. have been selected for development and 688, or 87 per cent. were completed. The areas completed during the year, and those under construction or selected for development at the end of the year, are listed in Appendix II.

The areas now completed cover 19,736 square miles or an average of 28·7 square miles per area. The proportion of dwellings connected in the completed areas is approximately 75·0 per cent.

The total value of materials used during the year was approximately £1,285,000 of which 72 per cent., or £925,200, was obtained from home suppliers. The price of poles showed a reduction of about 16 per cent. partly owing to lower shipping freights. Aluminium conductors increased in price by about 1·5 per cent. due to a rise in cost of aluminium ingot, and transformers increased by about 3 per cent. because of increased labour and raw materials costs. Ironwork also advanced by about 3 per cent. on account of increased cost of labour. Other prices in general remained steady.

Capital expenditure was £2,076,200. The total invested in the Scheme at 31st March, 1960, amounted to £27,332,556.

The consumption of electricity by the rural community has continued to increase with the growth of consumers, being 337 million units as against 319 million units last year. The average consumption for all consumers supplied under the rural electrification scheme was 1,351 units as against 1,360

units last year. The average consumption per domestic consumer advanced from 884 to 910 units, an increase of 2·94 per cent. The revenue earned was £4,039,818, representing an average price per unit of 2·88d.

The programme of demonstrations, displays and sales activities was expanded and sales of appliances increased by about 25 per cent.

A second mobile farm kitchen was put into operation and the two units visited 58 locations in all. Interest in kitchen planning, with electricity as a main feature, is being maintained. Special visits were arranged for students attending the local schools (primary, secondary and vocational). In conjunction with a visit of the mobile farm kitchen, evening lectures and demonstrations on a wide variety of subjects were organised by the local guilds of The Irish Countrywomen's Association, Muintir na Tire and Macra na Feirme.

The scholarship courses for girls were continued at An Grianan, the college of the Irish Countrywomen's Association, at Termonfeckin, Co. Louth. The students were selected by the Vocational Education authorities in each county and by Macra na Tuaithe.

Winter Farm Schools under the auspices of the County Committees of Agriculture and Education were organised during the past winter in many centres. Lectures on the applications of electricity in agriculture and horticulture, including soil-heating, were provided at eighteen different centres.

The experimental work on the uses of electricity in agriculture and horticulture was continued at the Faculty of Agriculture Farm of University College, Dublin, at Glasnevin. An advisory service on the artificial curing of hay has been set up and the first field installations were put into operation in the 1959 season. Liaison was established with An Foras Taluntais and advice and assistance are being interchanged on matters of mutual interest.

The Board has installed some group water supply schemes on a trial basis and it is expected that experience of these schemes will help towards the provision of adequate supplies of running water for farms and rural dwellers in general.

Fourteen pilot farms availed of the facilities provided by the Board for the purchase of electrical equipment.

The Board has sponsored a one-year research scholarship in the Faculty of Agriculture in University College, Dublin, for the purpose of investigating the use and value of electricity in the conservation and storage of farm produce.

WATER STORAGE AND RIVER CONTROL

The inflows at the hydro plants varied between about 90 per cent. and 115 per cent. of the long term flows. At the

Shannon and Lee they were above average while those at Erne, Pollaphuca and Clady were below average. From the end of May to mid-October, the inflows were well below the normal. On the other hand, the winter flows were generally above the normal. The utilisation of the available inflows at the power stations varied between 92·4 per cent. and 100 per cent.

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

The total average inflows for the calendar year 1959 were :—

	m^3/sec
River Shannon at Killaloe ...	159·8
,, Liffey at Pollaphuca ...	7·3
,, Liffey at Leixlip	12·9
,, Erne at Ballyshannon ...	76·8
,, Lee at Inniscarra	27·6
,, Clady at Gweedore ...	3·3

WATER POWER INVESTIGATIONS AND HYDROMETRIC SURVEY

In accordance with Section 28 of the Electricity (Supply) Act, 1927, the Board continued its investigations into water power resources.

The first stage of the Board's portion of the engineering investigations of possible improvements for the control of flooding in the Shannon valley was completed and work was in progress on the second or more detailed stage of the investigations. This work is being carried out at the request of the Ministers for Industry and Commerce and Transport and Power.

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.

PREMISES

Progress was maintained in the provision of new and improved office, stores and showrooms accommodation.

The first stage of the building extension at Fleet Street, Dublin, had been completed and the second stage is proceeding. In Cork, extensive premises purchased in Patrick Street are being reconstructed as a District administration and sales headquarters. Extensions to the Galway and Sligo District Offices had reached the final planning stage.

Eleven new service depots were put in commission ; work was proceeding on seventeen others. New sites were being sought at sixteen locations.

The provision of houses for the staffs working at outlying generating stations continued. The houses at Screeb and Gweedore were finished and the schemes at Crossmolina and Rhode were partly completed. Plans had been drawn up for further houses at Portarlington, Clady, Gweedore, Ferbane and Ardnacrusha. Site investigations had been initiated for houses which will be required for Shannonbridge generating station.

PERMITTED UNDERTAKINGS

No new permits were issued during the year. One undertaking supplying three consumers ceased supply. At the 31st March, 1960, there were six electricity undertakings operating under permit from the Board—see Appendix X.

SUPERANNUATION SCHEMES

The number of contributing members in the General Employees' Superannuation Scheme at the end of the year was 1,838 and in the Manual Workers' Superannuation Scheme 2,511.

The total amount of Electricity Supply Board 5 per cent. Stock, 1966/75, and Electricity Supply Board 6 per cent. Stock, 1968/78, held by the Trustees was £1,829,880 and £400,000 respectively.

TRIBUNALS TO DETERMINE DISPUTES

The reports of the proceedings of the General Employees' and of the Manual Workers' Tribunals respectively, for the year ended 31st March, 1960, are reproduced in Appendices XI and XII.

BOARD MEMBERSHIP

Mr. Thomas Murray was appointed Deputy Chairman and Mr. Breandán Ó Cearbhaill a member of the Board as from 1st June, 1959.

Since the end of the year under review, Mr. R. F. Browne has retired from the position of Chairman of the Board which he had filled with distinction for over thirty years. The Board desires to place on record its deep appreciation of the outstanding contribution made by Mr. Browne to the successful development of the Electricity Supply Board, and thus to the economic advancement of the country, over this period.

STAFF

Mr. John G. Gargan, was appointed Secretary as from the 1st June, 1959.

At the 31st March, 1960, the numerical strength of the Board's regular staff was 5,481. In addition there was a casual staff of 2,167.

The Board desires again to express its appreciation of the efficient manner in which the members of 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.
14th June, 1960.

*Mr. T. Murray was appointed Chairman of the Board as from 1st May, 1960.

**Mr. J. C. Tonge, although not a member of the Board during the period covered by this Report, was a member on the date of signing of the Report.

REPORT on the FISHERIES

27 Lower Fitzwilliam Street,
Dublin.

TO THE MINISTER FOR TRANSPORT AND POWER

In accordance with the provisions of the Shannon Fisheries Act, 1935, and the Electricity (Supply) (Amendment) Acts, 1945 and 1958, the Board presents the Annual Report for the year ended 31st March, 1960.

The salmon fisheries development scheme for the River Shannon was expanded. Substantial capital investment is being incurred in the construction of a rearing station. Fisheries development is expensive and slow but with Ardnacrusha fish pass and the salmon hatchery in full production, the value of the salmon fisheries as a profitable investment is expected to increase progressively.

On the Lee and Erne, expenditure was incurred on hatcheries and preservation to meet any adverse effect on fish stocks arising out of hydro-electric development of the rivers.

The financial result of fisheries activities is shown in the Fisheries Account. £38,872 was expended on the general developments programme and the operation of the fisheries. This figure includes reserves for depreciation, renewals and interest on capital repayments. Sales of fish, letting of fishing rights, etc., amounted to £19,191.

SALMON HATCHERIES

Hatchery production figures are as follows :—

1958/59 Season

Hatchery	Salmon ova	Fry planted	Fry retained for rearing
Shannon	602,000	576,000	10,000
Lee	119,000	117,000	—
Erne	366,000	358,000	—

1959/60 Season

Hatchery	Salmon ova	Planted as eyed ova	Stock of fry March, 1960
Shannon	2,809,000	335,000	2,450,000
Lee	657,000	100,000	552,000
Erne	455,000	—	448,000

Mortality rates in the 1958/59 Season up to fry planting varied from 2 per cent. to 2·5 per cent. Mortality from ova to underyearling stage in the trial rearing of 10,000 fry was 28 per cent. This figure compares favourably with experience in other countries. The construction of a station at the Shannon hatchery capable of rearing 500,000 fry to the underyearling stage was started, and will be completed in 1960. As the survival from naturally hatched or planted salmon fry has been assessed at less than 10 per cent. during the first summer, the rearing of fry to the underyearling stage should bring forward the time when a substantial return on hatchery investment may be expected. By planting ova at the eyed stage it was found possible to increase the capacity of the hatcheries.

FISH PASSES

The numbers of salmon ascending through Ardnacrusha, Inniscarra and Cathaleen's Fall fish passes were :—

Fish Pass	Salmon passed during 1959
Ardnacrusha	1,132
Inniscarra	2,994
Cathaleen's Fall	1,850

At Ardnacrusha an estimated seven million elvers and 1,800 trout were also passed upstream. Ardnacrusha fish pass was successful in providing a means for reopening the main Shannon catchment to Shannon.

PREDATOR CONTROL

Netting of pike in Lough Derg, the Lower Shannon and the Erne Reservoir was continued. Nursery streams were cleared of predatory fish prior to the planting of salmon fry. Pike angling competitions organised by the Lough Derg Angling Committee and its member clubs were sponsored by the Board and a grant of £300 was made to the Committee for prizes.

PROTECTION

The Board's Fishery Wardens shared protection work with the staffs of the Boards of Conservators on the Shannon, Lee and Erne. A grant of £235 was made to the Enniskillen Board of Conservators for protection of spawning beds in their area.

COMMERCIAL FISHING

Revenue from the sale of salmon taken at Thomond Weir and at the four estuary stake weirs on the River Shannon was £12,957. The recorded run of salmon at Thomond Weir was 12,047. The average annual run during 1951-1960 was 12,879. Seventy-two per cent. of the run during the commercial season was released upstream for propagation purposes and for angling.

At Killaloe eel weir 20,506 lbs. of eels were taken as compared with 20,186 lbs. in the previous season. Receipts from sales amounted to £3,391. With the approval of the Minister

for Lands the central arch in Killaloe Bridge was fished. This was successful and a permanent catching arrangement for the arch is under consideration. The elver pass at Ardnacrusha will benefit the Shannon eel industry.

The commercial season on the Erne was restricted to the period from 1st June to 20th July. The Board was permitted to retain 12½ per cent. of the recorded run of salmon through the counter at Cathaleen's Fall fish pass during this period. Proceeds from the sale of salmon amounted to £226.

In order to conserve salmon stocks the Board did not operate its commercial fishery on the Lee.

ANGLING

Due to the abnormally dry weather, angling on the Shannon and Mulcair was not good. The main run of salmon did not move in big numbers into the Mulcair until the floods in early October when an unusually heavy run was observed.

Trout angling on Lough Derg improved. Twenty thousand yearling brown trout, purchased from the Inland Fisheries Trust Incorporated, were released in the Lough Derg area in April, 1959.

GENERAL

Fisheries Division, Department of Lands, advised and assisted in the planting of 20,000 salmon fry from the Erne hatchery in Knader Lough as an experiment in controlled rearing under natural conditions. Officers of the Division supervised extensive tagging of kelts at the hatcheries and carried out tests on the passage of smolts through the turbines of the Erne Stations.

Statistical information and scale samples from salmon captured at the commercial fishing stations were made available to the Department.

The Board wishes to place on record its appreciation of the support and assistance which it received from Fisheries Division, and from the Ministry of Commerce, Northern Ireland, as well as from the Inland Fisheries Trust Incorporated, 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.
14th June, 1960.

*Mr. T. Murray was appointed Chairman of the Board as from 1st May, 1960.

**Mr. J. C. Tonge, although not a member of the Board during the period covered by this Report, was a member on the date of signing of the Report.

APPENDICES

LIST OF APPENDICES

Appendix

I—Number of consumers and other particulars relating to areas supplied by the Board

II—Rural electrification

III—Generation load duration and integrated load duration curves

IV—Distribution at high tension of units generated

V—Monthly outputs of the generating stations

VI—Particulars of the generating plant

VII—Performance of generating plant

VIII—Typical daily generation load curves

IX—Transmission and distribution systems in commission

X—Permitted electricity undertakings

XI—Report of the General Employees' Tribunal

XII—Report of the Manual Workers' Tribunal

XIII—Weekly generation and peak loads

XIV—Annual generation from 1st April, 1930, to 31st March, 1960

XV—Map of transmission system

XVI—Diagram of transmission lines

APPENDIX I

Number of consumers and other particulars relating to areas supplied by the Board

District	Approx. Population thousands	No. of Consumers at 31st March		Motive Power* Units sold year ended 31st March	
		1960	1959	1960 thousands	1959 thousands
ATHLONE	**186·1**	**36,044**	**33,867**	**18,954**	**16,599**
Town	44·8	11,423	11,234	17,194	14,969
Rural	*141·3*	*24,621*	*22,633*	*1,760*	*1,630*
CORK No. 1	**112·0**	**28,756**	**28,477**	**40,092**	**39,092**
Town	112·0	28,756	28,477	40,092	39,092
Rural	—	—	—	—	—
CORK No. 2	**186·6**	**39,657**	**37,695**	**40,278**	**25,034**
Town	51·9	14,520	14,732	33,004	17,566
Rural	*134·7*	*25,137*	*22,963*	*7,274*	*7,468*
DUBLIN No. 1	**494·7**	**127,896**	**126,200**	**113,607**	**105,000**
Town	494·7	127,896	126,200	113,607	105,000
Rural	—	—	—	—	—
DUBLIN No. 2	**238·0**	**73,077**	**71,151**	**105,100**	**82,842**
Town	164·4	57,312	55,743	97,126	60,568
Rural	*73·6*	*15,765*	*15,408*	*7,974*	*22,274*
DUNDALK	**226·7**	**45,471**	**42,567**	**72,169**	**59,058**
Town	72·3	18,948	18,597	62,670	52,441
Rural	*154·4*	*26,523*	*23,970*	*9,499*	*6,617*
GALWAY	**192·1**	**34,755**	**33,788**	**9,915**	**9,017**
Town	44·6	10,581	10,434	8,523	7,671
Rural	*147·5*	*24,174*	*23,354*	*1,392*	*1,346*
LIMERICK	**273·4**	**58,287**	**57,048**	**46,426**	**42,844**
Town	95·2	24,174	24,257	38,780	35,986
Rural	*178·2*	*34,113*	*32,791*	*7,646*	*6,858*
PORTLAOISE	**188·4**	**40,879**	**39,271**	**46,579**	**44,065**
Town	65·6	17,703	17,524	40,325	37,561
Rural	*122·8*	*23,176*	*21,747*	*6,254*	*6,504*
SLIGO	**313·5**	**51,360**	**48,602**	**14,101**	**9,783**
Town	45·3	11,813	11,653	6,781	5,953
Rural	*268·2*	*39,547*	*36,949*	*7,320*	*3,830*
TRALEE	**135·7**	**28,328**	**27,008**	**8,497**	**7,634**
Town	28·6	7,486	7,497	3,892	4,986
Rural	*107·1*	*20,842*	*19,511*	*4,605*	*2,648*
WATERFORD	**230·4**	**46,436**	**45,247**	**46,506**	**35,055**
Town	94·9	24,231	24,056	36,328	23,654
Rural	*135·5*	*22,205*	*21,191*	*10,178*	*11,401*
Totals	**2777·6**	**610,946**	**590,921**	**562,224**	**476,023**
Town	1,314·3	354,843	350,404	498,322	405,447
Rural	*1,463·3*	*256,103*	*240,517*	*63,902*	*70,576*

*A few large industries, classified under "rural" in previous years are now included under "town".

Areas and Towns Supplied	Approx. Population thousands	No. of Consumers at 31st March 1960	No. of Consumers at 31st March 1959	Motive Power Units sold year ended 31st March 1960 thousands	Motive Power Units sold year ended 31st March 1959 thousands
ATHLONE DISTRICT					
ATHLONE AREA ...	**27·3**	**5,817**	**5,410**	**4,863**	**4,673**
Athlone	9·0	2,484	2,423	4,671	4,503
Moate	1·3	297	288	115	106
Rural Areas	*17·0*	*3,036*	*2,699*	*77*	*64*
BALLINASLOE AREA ...	**15·3**	**2,450**	**2,436**	**1,850**	**1,762**
Ballinasloe	5·6	835	815	1,412	1,252
Villages under 1,000 population	*·2*	*74*	*77*	*126*	*184*
Rural Areas	*9·5*	*1,541*	*1,544*	*312*	*326*
BIRR AREA	**24·4**	**4,818**	**4,655**	**1,477**	**1,132**
Birr and Crinkle	3·6	856	836	295	320
Villages under 1,000 population	*2·3*	*866*	*882*	*703*	*361*
Rural Areas	*18·5*	*3,096*	*2,937*	*479*	*451*
LONGFORD AREA ...	**34·2**	**6,448**	**6,375**	**1,293**	**1,141**
Granard	1·2	256	260	22	20
Longford...	3·8	1,083	1,054	388	367
Villages under 1,000 population	*1·1*	*340*	*337*	*539*	*468*
Rural Areas	*28·1*	*4,769*	*4,724*	*344*	*286*
MULLINGAR AREA ...	**35·6**	**7,123**	**6,884**	**1,318**	**1,157**
Mullingar	5·6	1,454	1,424	1,125	987
Rural Areas	*30·0*	*5,669*	*5,460*	*193*	*170*
ROSCOMMON AREA ...	**23·8**	**4,569**	**3,950**	**1,833**	**1,130**
Roscommon	2·0	564	563	1,567	870
Rural Areas	*21·8*	*4,005*	*3,387*	*266*	*260*
TULLAMORE AREA ...	**25·5**	**4,819**	**4,157**	**6,320**	**5,604**
Clara	1·7	495	496	2,319	2,141
Tullamore	6·2	1,528	1,487	3,862	3,342
Villages under 1,000 population	*1·2*	*291*	*292*	*50*	*48*
Rural Areas	*16·4*	*2,505*	*1,882*	*89*	*73*
Totals	**186.1**	**36,044**	**33,867**	**18,954**	**16,599**
CORK No. 1 DISTRICT					
CORK CITY AREA ...	**112·0**	**28,756**	**28,477**	**40,092**	**39,092**
Cork City	112·0	28,756	28,477	40,092	39,092
Totals	**112.0**	**28,756**	**28,477**	**40,092**	**39,092**
CORK No. 2 DISTRICT					
BANDON AREA ...	**22·1**	**4,196**	**4,135**	**1,582**	**1,655**
Bandon	3·3	1.090	1,070	662	639
Kinsale	2·1	571	634	141	124
Rural Areas	*16·7*	*2,535*	*2,431*	*779*	*892*

Appendix I—continued.

Areas and Towns Supplied	Approx. Population	No. of Consumers at 31st March		Motive Power Units sold year ended 31st March	
	thousands	1960	1959	1960 thousands	1959 thousands
CORK No. 2 DISTRICT—*continued*					
BANTRY AREA	**12·3**	**2,436**	**2,297**	**217**	**178**
Bantry	2·3	611	604	117	124
Villages under 1,000 population	—	—	*164*	—	*5*
Rural Areas	*10·0*	*1,825*	*1,529*	*100*	*49*
CARRIGALINE AREA ...	**14·0**	**2,655**	**2,533**	**1,586**	**993**
Monkstown	2·7	213	205	1	1
Passage West		437	431	22	20
Villages under 1,000 population	*1·3*	*424*	*404*	*1,088*	*546*
Rural Areas	*10·0*	*1,581*	*1,493*	*475*	*426*
CLONAKILTY AREA ...	**13·0**	**2,373**	**2,250**	**994**	**934**
Clonakilty	2·7	645	628	398	391
Rural Areas	*10·3*	*1,728*	*1,622*	*596*	*543*
COBH AREA	**7·4**	**1,969**	**1,938**	**4,674**	**3,926**
Cobh	5·7	1,625	1,599	4,646	3,901
Rural Areas	*1·7*	*344*	*339*	*28*	*25*
DUNMANWAY AREA ...	**14·0**	**2,966**	**2,229**	**802**	**952**
Dunmanway	1·4	440	425	118	102
Skibbereen	2·3	690	669	165	166
Villages under 1,000 population	*1·3*	*451*	*484*	*135*	*589*
Rural Areas	*9·0*	*1,385*	*651*	*384*	*95*
FERMOY AREA ...	**22·7**	**4,946**	**4,643**	**2,185**	**2,028**
Fermoy	4·0	1,084	1,055	245	216
Mitchelstown	2·1	656	668	1,430	1,239
Villages under 1,000 population	—	—	*160*	—	*69*
Rural Areas	*16·6*	*3,206*	*2,760*	*510*	*504*
KILBARRY AREA ..	**24·0**	**4,765**	**4,654**	**2,840**	**2,691**
Villages under 1,000 population	*1·5*	*506*	*494*	*1,085*	*1,043*
Rural Areas	*22·5*	*4,259*	*4,160*	*1,755*	*1,648*
MACROOM AREA ...	**9·7**	**3,035**	**2,991**	**579**	**563**
Macroom...	2·3	608	598	198	206
Rural Areas	*7·4*	*2,427*	*2,393*	*381*	*357*
MALLOW AREA ...	**21·6**	**4,742**	**4,635**	**4,193**	**3,974**
Mallow	5·6	1,379	1,364	2,995	2,716
Villages under 1,000 population	*1·6*	*512*	*503*	*175*	*161*
Rural Areas	*14·4*	*2,851*	*2,768*	*1,023*	*1,097*
MIDLETON AREA ...	**17·8**	**3,830**	**3,752**	**17,249**	**3,910**
Midleton	2·8	790	784	15,761	1,679
Villages under 1,000 population	*2·1*	*586*	*600*	*267*	*415*
Rural Areas	*12·9*	*2,454*	*2,368*	*1,221*	*1,816*
YOUGHAL AREA ...	**8·0**	**1,744**	**1,638**	**3,377**	**3,230**
Youghal	4·8	1,202	1,189	3,355	3,214
Rural Areas	*3·2*	*542*	*449*	*22*	*16*
Totals	186.6	39,657	37,695	40,278	25,034

Areas and Towns Supplied	Approx. Population	No. of Consumers at 31st March		Motive Power: Units sold year ended 31st March	
	thousands	1960	1959	1960 thousands	1959 thousands
DUBLIN No. 1 DISTRICT					
DUBLIN CITY AREA ...	**494·7**	**127,896**	**126,200**	**113,607**	**105,000**
Dublin City	494·7	127,896	126,200	113,607	105,000
Totals	**494.7**	**127,896**	**126,200**	**113,607**	**105,000**
DUBLIN No. 2 DISTRICT					
BRAY AREA	**24·4**	**6,838**	**6,840**	**4,882**	**2,838**
Bray	15·0	4,162	4,184	4,644	2,603
Shankill–Loughlinstown ...					
Greystones	2·2	789	781	47	43
Delgany-Killincarrig ...	1·6	424	441	15	14
Newtownmountkennedy ...					
Rural Areas	*5·6*	*1,463*	*1,434*	*176*	*178*
CHAPELIZOD AREA ...	**27·3**	**8,065**	**7,880**	**32,397**	**28,735**
Chapelizod	21·5	6,157	5,998	461	439
The Ranch					
Palmerstown					
Clondalkin	2·3	1,075	1,066	31,058	27,649
Bluebell					
Rural Areas	*3·5*	*833*	*816*	*878*	*647*
COOLOCK AREA ...	**28·7**	**15,528**	**14,630**	**20,317**	**17,339**
Ballymun	16·3	10,632	9,916	19,417	16,304
Grange	2·3	2,438	2,285	162	342
Howth–Sutton	5·8	1,351	1,341	391	348
Rural Areas	*4·3*	*1,107*	*1,088*	*347*	*345*
DUN LAOGHAIRE AREA	**75·9**	**24,364**	**23,877**	**5,048**	**4,578**
Dundrum–Milltown ...	74·0	23,665	23,188	4,780	4,363
Dun Laoghaire Borough ...					
Stillorgan–Ballybrack ...					
Kilternan–Scalp					
Rural Areas	*1·9*	*699*	*689*	*268*	*215*
LEIXLIP AREA	**11·7**	**3,711**	**3,619**	**9,919**	**8,685**
Lucan	1·3	456	445	6,478	5,923
Celbridge	1·5	448	426	445	151
Leixlip					
Maynooth	·8	258	258	112	137
Rural Areas	*8·1*	*2,549*	*2,490*	*2,884*	*2,474*
NAAS AREA	**15·4**	**3,032**	**2,987**	**2,087**	**1,991**
Naas	3·7	923	910	510	545
Rural Areas	*11·7*	*2,109*	*2,077*	*1,577*	*1,446*
SKERRIES AREA ...	**13·5**	**2,661**	**2,635**	**814**	**697**
Balbriggan	2·9	730	726	514	411
Skerries	2·5	772	776	107	76
Rural Areas	*8·1*	*1,159*	*1,133*	*193*	*210*
SWORDS AREA ...	**13·4**	**3,769**	**3,687**	**1,319**	**1,258**
Malahide–Portmarnock ...	3·1	890	893	171	121
Rush	1·9	601	589	145	120
Swords	1·1	430	425	183	178
Rural Areas	*7·3*	*1,848*	*1,780*	*820*	*839*

Appendix I—continued

Areas and Towns Supplied	Approx. Population	No. of Consumers at 31st March		Motive Power Units sold year ended 31st March	
	thousands	1960	1959	1960 thousands	1959 thousands
DUBLIN No. 2 DISTRICT—*continued*					
KILCOCK AREA (Rural)	**14·7**	**2,304**	**2,243**	**651**	**504**
Kilcock Rural	*14·7*	*2,304*	*2,243*	*651*	*504*
WICKLOW AREA ...	**13·0**	**2,805**	**2,753**	**27,666**	**16,217**
Rathdrum	1·3	232	231	14	14
Wicklow	3·3	879	864	*27,472	787
Rural Areas	*8·4*	*1,694*	*1,658*	**180*	*15,416*
Totals	**238.0**	**73,077**	**71,151**	**105,100**	**82,842**
DUNDALK DISTRICT					
ARDEE AREA	**11·6**	**2,351**	**2,262**	**5,669**	**4,904**
Ardee	2·5	589	582	2,373	1,942
Villages under 1,000 population	*·6*	*201*	*192*	*1,956*	*1,750*
Rural Areas	*8·5*	*1,561*	*1,488*	*1,340*	*1,212*
CARRICKMACROSS AREA	**16·3**	**3,409**	**2,816**	**1,722**	**1,414**
Carrickmacross	2·1	609	617	260	272
Villages under 1,000 population	*·9*	*398*	*415*	*362*	*454*
Rural Areas	*13·3*	*2,402*	*1,784*	*1,100*	*688*
MONAGHAN AREA ...	**27·9**	**5,024**	**4,787**	**2,017**	**1,863**
Ballybay	1·0	315	323	54	204
Castleblayney	2·2	539	525	558	513
Monaghan	4·7	1,064	1,055	617	594
Rural Areas	*20·0*	*3,106*	*2,884*	*788*	*552*
CAVAN AREA	**32·2**	**6,229**	**5,303**	**2,080**	**1,904**
Belturbet	1·2	312	311	200	207
Cavan	3·6	885	894	643	691
Villages under 1,000 population	*2·8*	*653*	*647*	*466*	*559*
Rural Areas	*24·6*	*4,379*	*3,451*	*771*	*447*
COOTEHILL AREA	**18·3**	**3,489**	**3,129**	**507**	**471**
Clones	2·5	692	689	141	109
Cootehill	1·5	397	392	213	260
Villages under 1,000 population	*·1*	*23*	*23*	*1*	*1*
Rural Areas	*14·2*	*2,377*	*2,025*	*152*	*101*
DROGHEDA AREA ...	**37·2**	**7,513**	**7,167**	**53,315**	**43,139**
Drogheda	16·8	4,220	4,082	49,301	40,246
Villages under 1,000 population	*·6*	*215*	*214*	*42*	*41*
Rural Areas	*19·8*	*3,078*	*2,871*	*3,972*	*2,852*
DUNDALK AREA ...	**40·2**	**9,265**	**9,036**	**4,783**	**3,750**
Dundalk	19·7	4,984	4,791	4,224	3,402
Villages under 1,000 population	*·8*	*230*	*265*	*17*	*29*
Rural Areas	*19·7*	*4,051*	*3,980*	*542*	*319*

*Transfer.

Areas and Towns Supplied	Approx. Population thousands	No. of Consumers at 31st March		Motive Power Units sold year ended 31st March	
		1960	1959	1960 thousands	1959 thousands
DUNDALK DISTRICT—*continued*					
NAVAN AREA	**20·6**	**4,313**	**4,231**	**1,316**	**1,213**
An Uaimh (Navan) ...	4·3	1,170	1,150	838	773
Trim	1·3	395	391	148	137
Rural Areas	*15·0*	*2,748*	*2,690*	*330*	*303*
KELLS AREA	**22·4**	**3,878**	**3,836**	**760**	**400**
Ceannanus Mór (Kells) ...	2·1	634	625	116	114
Villages under 1,000 population	*1·0*	*423*	*414*	*140*	*143*
Rural Areas	*19·3*	*2,821*	*2,797*	*504*	*143*
Totals	**226.7**	**45,471**	**42,567**	**72,169**	**59,058**
GALWAY DISTRICT					
ATHENRY AREA ...	**20·5**	**4,379**	**3,099**	**1,102**	**1,082**
Athenry	1·2	298	304	265	222
Loughrea	2·8	554	543	684	769
Rural Areas	*16·5*	*3,527*	*2,252*	*153*	*91*
CLAREMORRIS AREA ...	**36·6**	**6,473**	**5,980**	**825**	**794**
Ballinrobe	1·2	370	362	82	75
Ballyhaunis	1·1	358	359	142	136
Claremorris	1·1	434	424	332	278
Rural Areas	*33·2*	*5,311*	*4,835*	*269*	*305*
GALWAY AREA ...	**49·8**	**8,873**	**8,717**	**4,278**	**3,963**
Galway	21·3	4,869	4,776	3,586	3,353
Villages under 1,000 population	*·2*	*65*	*64*	*4*	*4*
Rural Areas	*28·3*	*3,939*	*3,877*	*688*	*606*
GORT AREA	**11·5**	**2,157**	**2,951**	**160**	**209**
Gort	1·0	319	317	109	103
Villages under 1,000 population	*·1*	*43*	*41*	*11*	*9*
Rural Areas	*10·4*	*1,795*	*2,593*	*40*	*97*
TUAM AREA	**34·8**	**6,288**	**6,551**	**420**	**344**
Tuam	5·0	1,180	1,169	366	292
Villages under 1,000 population	*·5*	*149*	*148*	*6*	*5*
Rural Areas	*29·3*	*4,959*	*5,234*	*48*	*47*
WESTPORT AREA ...	**38·9**	**6,585**	**6,490**	**3,130**	**2,625**
Castlebar	5·3	1,014	1,004	2,106	1,694
Westport	3·1	809	806	822	723
Villages under 1,000 population	*·7*	*119*	*117*	*8*	*8*
Rural Areas	*29·8*	*4,643*	*4,563*	*194*	*200*
Totals	**192.1**	**34,755**	**33,788**	**9,915**	**9,017**

Appendix I—continued.

Areas and Towns Supplied	Approx. Population	No. of Consumers at 31st March		Motive Power: Units sold year ended 31st March	
	thousands	1960	1959	1960 thousands	1959 thousands
LIMERICK DISTRICT					
CAHIR AREA	**20·7**	**3,857**	**3,830**	**797**	**757**
Cahir	1·6	525	521	194	208
Cashel	2·8	610	612	77	76
Rural Areas	*16·3*	*2,722*	*2,697*	*526*	*473*
ENNIS AREA	**17·2**	**4,003**	**3,807**	**2,945**	**2,465**
Ennis	6·1	1,838	1,832	679	710
Villages under 1,000 population	*·8*	*219*	*211*	*1,419*	*1,022*
Rural Areas	*10·3*	*1,946*	*1,764*	*847*	*733*
ENNISTYMON AREA ...	**10·8**	**2,649**	**2,012**	**258**	**226**
Ennistymon	1·1	346	338	140	156
Villages under 1,000 population	*1·4*	*489*	*544*	*47*	*43*
Rural Areas	*8·3*	*1,814*	*1,130*	*71*	*27*
KILMALLOCK AREA ...	**21·7**	**4,152**	**4,178**	**822**	**852**
Kilmallock	1·1	343	346	177	184
Villages under 1,000 population	*2·2*	*479*	*494*	*102*	*102*
Rural Areas	*18·4*	*3,330*	*3,338*	*543*	*566*
KILRUSH AREA	**14·7**	**3,156**	**3,286**	**1,061**	**1,051**
Kilkee	1·7	452	504	51	54
Kilrush	3·2	746	758	962	953
Rural Areas	*9·8*	*1,958*	*2,024*	*48*	*44*
LIMERICK AREA ...	**78·7**	**17,973**	**17,910**	**33,512**	**31,028**
Killaloe–Ballina	1·0	300	302	81	85
Limerick	50·8	12,294	12,294	32,181	29,788
Villages under 2,000 population	*·8*	*153*	*204*	*80*	*77*
Rural Areas	*26·1*	*5,226*	*5,110*	*1,170*	*1,078*
NENAGH AREA	**20·7**	**4,530**	**4,590**	**1,012**	**1,148**
Nenagh	4·4	1,216	1,210	587	778
Villages under 1,000 population	*·8*	*83*	*81*	*5*	*7*
Rural Areas	*15·5*	*3,231*	*3,299*	*420*	*363*
NEWCASTLE WEST AREA	**14·2**	**3,248**	**3,192**	**1,251**	**1,023**
Newcastlewest	2·6	656	658	161	149
Villages under 1,000 population	*·8*	*246*	*247*	*322*	*175*
Rural Areas	*10·8*	*2,346*	*2,287*	*768*	*699*
RATHKEALE AREA ...	**18·0**	**3,708**	**3,599**	**1,786**	**1,763**
Rathkeale	1·5	353	345	85	90
Villages under 1,000 population	*2·0*	*521*	*511*	*466*	*354*
Rural Areas	*14·5*	*2,834*	*2,743*	*1,235*	*1,319*
RATHLUIRC AREA ...	**11·2**	**2,678**	**2,679**	**843**	**903**
Rathluirc (Charleville) ...	1·9	627	592	277	289
Rural Areas	*9·3*	*2,051*	*2,087*	*566*	*614*
SCARRIFF AREA ...	**10·6**	**1,865**	**1,639**	**734**	**222**
Villages under 1,000 population	*·5*	*136*	*126*	*16*	*16*
Rural Areas	*10·1*	*1,729*	*1,513*	*718*	*206*
TIPPERARY AREA ...	**34·9**	**6,468**	**6,326**	**1,405**	**1,406**
Tipperary	5·1	1,295	1,281	586	581
Villages under 1,000 population	*1·0*	*247*	*246*	*85*	*89*
Rural Areas	*28·8*	*4,926*	*4,799*	*734*	*736*
Totals	**273.4**	**58,287**	**57,048**	**46,426**	**42,844**

Areas and Towns Supplied	Approx. Population thousands	No. of Consumers at 31st March		Motive Power: Units sold year ended 31st March	
		1960	1959	1960 thousands	1959 thousands
PORTLAOISE DISTRICT					
ATHY AREA	**14·2**	**2,507**	**2,406**	**10,698**	**9,816**
Athy	3·8	938	913	10,402	9,556
Rural Areas	*10·4*	*1,569*	*1,493*	*296*	*260*
CARLOW AREA ...	**21·4**	**4,573**	**4,477**	**2,594**	**2,223**
Carlow	7·7	1,892	1,880	1,653	1,336
Muine Bheag	1·9	499	489	243	245
Rural Areas	*11·8*	*2,182*	*2,108*	*698*	*642*
DROICHEAD NUA AREA	**11·9**	**3,035**	**2,952**	**3,840**	**3,348**
Droichead Nua	3·0	1,051	1,022	3,787	3,303
Villages under 1,000 population	*1·1*	*321*	*321*	*23*	*14*
Rural Areas	*7·8*	*1,663*	*1,609*	*30*	*31*
EDENDERRY AREA ...	**6·7**	**2,191**	**2,173**	**810**	**793**
Edenderry	2·6	549	558	673	785
Rural Areas	*4·1*	*1,642*	*1,615*	*137*	*8*
KILDARE AREA ...	**11·4**	**1,835**	**1,807**	**9,726**	**9,521**
Kildare	2·3	631	618	8,242	8,276
Villages under 1,000 population	*·4*	*138*	*136*	*41*	*55*
Rural Areas	*8·7*	*1,066*	*1,053*	*1,443*	*1,190*
KILKENNY AREA ...	**37·5**	**7,951**	**7,577**	**6,881**	**6,776**
Callan	1·5	358	362	209	183
Kilkenny	10·8	2,867	2,885	1,417	1,196
Castlecomer	1·1	320	315	2,927	3,205
Villages under 1,000 population	*1·6*	*486*	*479*	*268*	*263*
Rural Areas	*22·5*	*3,920*	*3,536*	*2,060*	*1,929*
PORTARLINGTON AREA	**13·6**	**2,842**	**2,592**	**3,889**	**3,290**
Mountmellick	2·5	599	597	220	229
Portarlington	2·2	709	701	3,529	2,927
Villages under 1,000 population	*·4*	*173*	*181*	*56*	*52*
Rural Areas	*8·5*	*1,361*	*1,113*	*84*	*82*
PORTLAOISE AREA ...	**21·1**	**5,035**	**4,510**	**2,152**	**2,074**
Mountrath–Castletown ...	1·2	272	271	56	55
Portlaoise	3·8	1,136	1,111	1,680	1,613
Villages under 1,000 population	*2·1*	*668*	*664*	*286*	*298*
Rural Areas	*14·0*	*2,959*	*2,464*	*130*	*108*
ROSCREA AREA ...	**11·9**	**2,768**	**2,720**	**3,182**	**2,798**
Roscrea	3·0	832	812	2,587	2,232
Villages under 1,000 population	*·9*	*345*	*336*	*74*	*61*
Rural Areas	*8·0*	*1,591*	*1,572*	*521*	*505*
THURLES AREA ...	**25·8**	**5,474**	**5,436**	**2,888**	**2,447**
Templemore	2·0	475	467	541	486
Thurles	6·3	1,472	1,447	1,119	883
Villages under 1,000 population	*·5*	*147*	*149*	*57*	*67*
Rural Areas	*17·0*	*3,380*	*3,373*	*1,171*	*1,011*
TULLOW AREA ...	**12·9**	**2,668**	**2,621**	***—81**	**979**
Tullow	1·7	443	429	128	132
Villages under 1,000 population	*1·2*	*382*	*381*	*107*	*109*
Rural Areas	*10·0*	*1,843*	*1,811*	***—316**	*738*
Totals	**188.4**	**40,879**	**39,271**	**46,579**	**44,065**

*Adjustment.

Appendix I—continued.

Areas and Towns Supplied	Approx. Population thousands	No. of Consumers at 31st March		Motive Power Units sold year ended 31st March	
		1960	1959	1960 thousands	1959 thousands
SLIGO DISTRICT					
BALLAGHADEREEN AREA	**17·6**	**3,366**	**3,352**	**350**	**365**
Ballaghadereen	1·4	367	362	140	168
Castlerea	1·2	483	476	160	140
Villages under 1,000 population	*·3*	*38*	*35*	*3*	*3*
Rural Areas	*14·7*	*2,478*	*2,479*	*47*	*54*
BALLINA AREA ...	**44·0**	**7,799**	**7,510**	**1,020**	**494**
Ballina–Crocketstown	6·3	1,625	1,607	294	262
Villages under 1,000 population	*1·5*	*336*	*322*	*87*	*36*
Rural Areas	*36·2*	*5,838*	*5,581*	*639*	*196*
BALLYSHANNON AREA	**12·6**	**2,081**	**2,052**	**258**	**205**
Ballyshannon	2·8	686	693	47	42
Bundoran	1·7	412	397	156	129
Rural Areas	*8·1*	*983*	*962*	*55*	*34*
BUNCRANA AREA ...	**23·2**	**4,465**	**4,322**	**447**	**358**
Buncrana	3·0	711	702	312	266
Rural Areas	*20·2*	*3,754*	*3,620*	*135*	*92*
CARRICK-ON-SHANNON AREA	**42·4**	**6,509**	**5,594**	**1,612**	**1,439**
Carrick-on-Shannon ...	1·5	411	408	591	494
Villages under 1,000 population	*2·4*	*769*	*766*	*191*	*182*
Rural Areas	*38·5*	*5,329*	*4,420*	*830*	*763*
FALCARRAGH AREA (Rural)	**18·9**	**3,609**	**3,512**	**85**	**82**
Rural Areas	*18·9*	*3,609*	*3,512*	*85*	*82*
KILLYBEGS AREA (Rural)	**18·5**	**3,239**	**2,986**	**581**	**479**
Donegal	1·1	*3,239*	*2,986*	*581*	*479*
Rural Areas	*17·4*				
LETTERKENNY AREA	**62·6**	**7,455**	**6,959**	**3,231**	**2,591**
Letterkenny	3·0	890	869	392	365
Villages under 1,000 population	*1·1*	*378*	*380*	*991*	*959*
Rural Areas	*58·5*	*6,187*	*5,710*	*1,848*	*1,267*
SLIGO AREA	**41·1**	**7,847**	**7,376**	**5,746**	**3,161**
Sligo	13·5	3,091	3,037	2,698	2,378
Villages under 1,000 population	*·9*	*304*	*299*	*55*	*27*
Rural Areas	*26·7*	*4,452*	*4,040*	*2,993*	*756*
SWINFORD AREA ...	**32·6**	**4,990**	**4,939**	**771**	**609**
Kiltimagh	1·0	265	264	233	210
Swinford	1·2	335	332	16	16
Villages under 1,000 population	*2·5*	*712*	*704*	*415*	*276*
Rural Areas	*27·9*	*3,678*	*3,639*	*107*	*107*
Totals	**313.5**	**51,360**	**48,602**	**14,101**	**9,783**
TRALEE DISTRICT					
CAHERCIVEEN AREA (Rural)	**7·9**	**1,490**	**979**	**108**	**65**
Caherciveen	1·7	*1,490*	*979*	*108*	*65*
Rural Areas	*6·2*				

Areas and Towns Supplied	Approx. Population	No. of Consumers at 31st March		Motive Power: Units sold year ended 31st March	
	thousands	1960	1959	1960 thousands	1959 thousands
TRALEE DISTRICT—*continued*					
KANTURK AREA ...	**21·0**	**5,343**	**4,293**	**2,972**	**1,394**
Kanturk	1·6	493	493	453	456
Villages under 1,000 population	*1·9*	*580*	*577*	*164*	*155*
Rural Areas	*17·5*	*4,270*	*3,223*	*2,355*	*783*
KILLARNEY AREA ...	**30·1**	**5,046**	**5,672**	**1,153**	**1,909**
Killarney	6·3	1,302	1,282	348	318
Villages under 1,000 population	*·9*	*322*	*397*	*62*	*1,107*
Rural Areas	*22·9*	*3,422*	*3,993*	*743*	*484*
LISTOWEL AREA ...	**28·6**	**6,104**	**5,830**	**1,174**	**1,063**
Abbeyfeale	1·2	348	348	86	79
Listowel	3·1	711	703	360	346
Villages under 1,000 population	*1·1*	*394*	*396*	*163*	*151*
Rural Areas	*23·2*	*4,651*	*4,383*	*565*	*487*
TRALEE AREA	**48·1**	**10,345**	**10,234**	**3,090**	**3,203**
Castleisland	1·5	438	423	439	482
Tralee	11·0	2,898	2,878	1,817	1,892
Dingle	1·5	*7,009*	*6,933*	*834*	*829*
Rural Areas	*34·1*				
Totals	**135.7**	**28,328**	**27,008**	**8,497**	**7,634**
WATERFORD DISTRICT					
ARKLOW AREA ...	**14·2**	**2,954**	**2,834**	**2,120**	**2,273**
Arklow	5·2	1,385	1,372	1,992	2,179
Rural Areas	*9·0*	*1,569*	*1,462*	*128*	*94*
CARRICK-ON-SUIR AREA	**18·5**	**3,371**	**3,283**	**3,577**	**3,528**
Carrick-on-Suir	4·8	1,072	1,045	1,636	1,339
Villages under 1,000 population	*·9*	*263*	*258*	*1,206*	*1,336*
Rural Areas	*12·8*	*2,036*	*1,980*	*735*	*853*
CLONMEL AREA ...	**25·7**	**5,295**	**5,255**	**2,470**	**2,306**
Clonmel	10·5	2,515	2,500	2,002	1,777
Fethard	1·0	290	295	38	41
Villages under 1,000 population	*·5*	*144*	*141*	*58*	*56*
Rural Areas	*13·7*	*2,346*	*2,319*	*372*	*432*
DUNGARVAN AREA ...	**24·0**	**4,510**	**4,445**	**3,251**	**3,040**
Dungarvan	5·4	1,329	1,318	1,696	1,501
Lismore	1·1	327	318	16	16
Villages under 1,000 population	*1·5*	*493*	*491*	*378*	*456*
Rural Areas	*16·0*	*2,361*	*2,318*	*1,161*	*1,067*
ENNISCORTHY AREA ...	**28·7**	**5,622**	**5,439**	**2,507**	**2,149**
Enniscorthy	5·9	1,468	1,456	2,040	1,723
Villages under 1,000 population	*1·5*	*411*	*407*	*109*	*94*
Rural Areas	*21·3*	*3,743*	*3,576*	*358*	*332*
GOREY AREA	**12·2**	**2,340**	**2,169**	**1,196**	**1,135**
Gorey	2·9	695	691	1,016	950
Villages under 1,000 population	*·5*	*124*	*119*	*14*	*28*
Rural Areas	*8·8*	*1,521*	*1,359*	*166*	*157*

Appendix I—continued.

Areas and Towns Supplied	Approx. Population	No. of Consumers at 31st March		Motive Power: Units sold year ended 31st March	
	thousands	1960	1959	1960 thousands	1959 thousands
WATERFORD DISTRICT—*continued*					
NEW ROSS AREA ...	**29·1**	**5,402**	**5,372**	**2,204**	**1,745**
Graiguenamanagh-Tinnahinch	1·4	337	329	262	264
New Ross	4·9	1,159	1,147	1,430	1,096
Villages under 1,000 population	*1·6*	*498*	*502*	*65*	*49*
Rural Areas	*21·2*	*3,408*	*3,394*	*447*	*336*
TRAMORE AREA ...	**9·0**	**2,206**	**2,112**	**495**	**391**
Tramore	2·8	844	850	109	100
Villages under 1,000 population	*·5*	*246*	*294*	*67*	*101*
Rural Areas	*5·7*	*1,116*	*968*	*319*	*190*
WATERFORD AREA ...	**38·8**	**8,924**	**8,790**	**25,531**	**15,653**
Waterford	28·7	7,247	7,171	20,388	8,983
Rural Areas	*10·1*	*1,677*	*1,619*	*5,143*	*6,670*
WEXFORD AREA ...	**30·2**	**5,812**	**5,548**	**3,155**	**2,835**
Wexford	12·0	3,020	2,984	1,704	1,467
Villages under 1,000 population	*1·3*	*364*	*368*	*102*	*98*
Rural Areas	*16·9*	*2,428*	*2,196*	*1,349*	*1,270*
Totals	**230.4**	**46,436**	**45,247**	**46,506**	**35,055**

RURAL ELECTRIFICATION

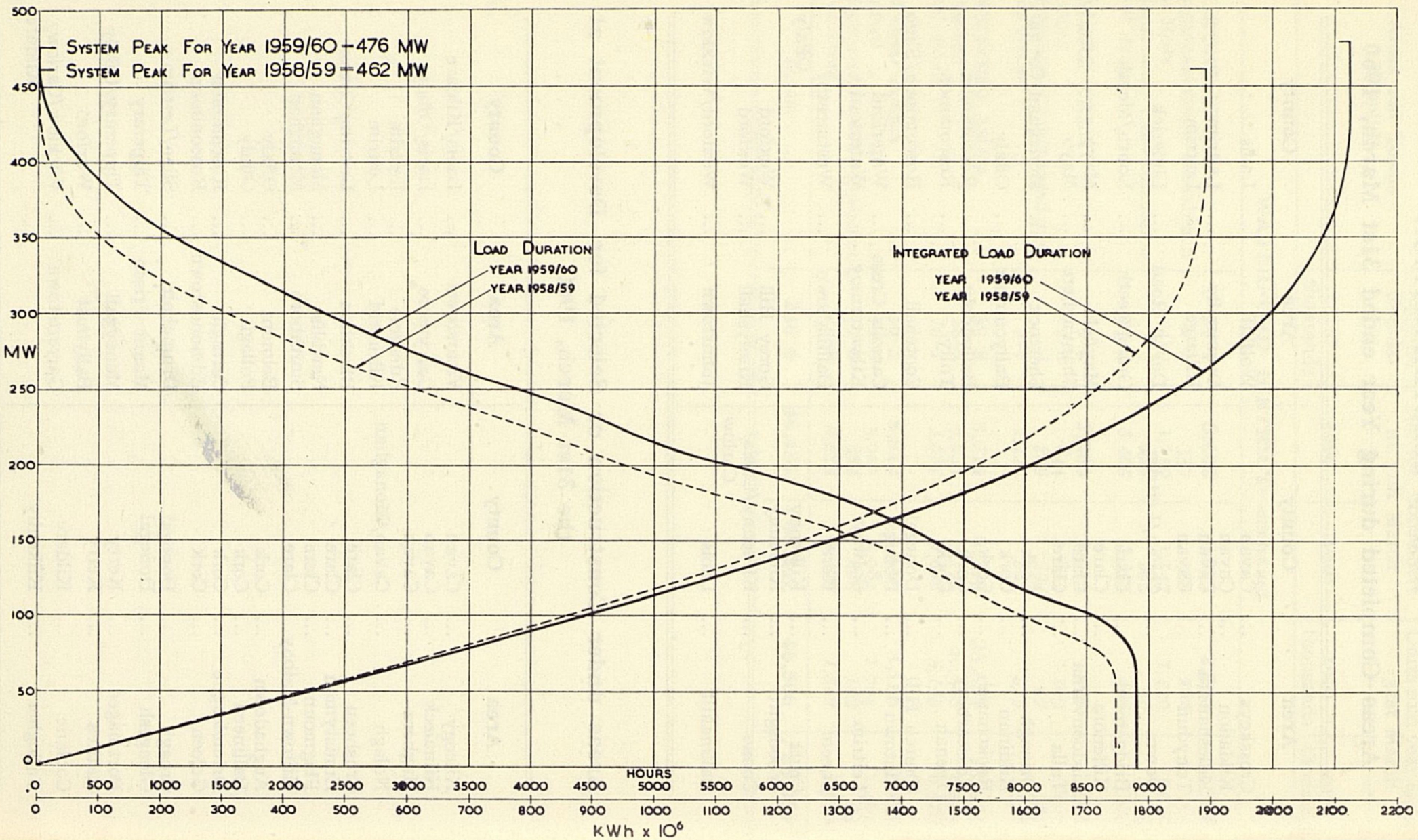
Areas Completed during Year ended 31st March, 1960

Area	County
Crosskeys	Cavan
Kildallon	Cavan
Killeshandra	Cavan
Tonyduff	Cavan
Dowra	Cavan/Leitrim
Bridgetown	Clare
Kilfenora	Clare
Lisdoonvarna	Clare
Tulla	Clare
Drinagh	Cork
Kildinan	Cork
Rockchapel	Cork
Rosscarbery	Cork
Teenah	Cork
Church Hill	Donegal
Fintown	Donegal
Leitrim	Galway
Sneem	Kerry
Crutt	Kilkenny
Woodsgift	Kilkenny
Coone	Kilkenny/Laois/Carlow
Ballinakill	Laois
Wolfhill	Laois
Drumreilly	Leitrim
Killarga	Leitrim
Devon Road	Limerick
Grangegeeth	Louth/Meath
Mayfield	Mayo
Shanvaghera	Mayo
Shercock	Monaghan/Cavan
Ballycumber	Offaly
Ballydooly	Roscommon
Tully	Roscommon
Cootehall	Roscommon/Sligo
Carrolls Cross	Waterford
Kilwatermoy	Waterford
Ballinahown	Westmeath/Offaly
Gorey Hill	Wexford
Kilmyshall	Wexford
Johnstown	Wexford/Wicklow

Areas under Construction or Selected for Development at the 31st March, 1960

Area	County
Kilcogy	Cavan
Kilnaleck	Cavan
Maghera	Cavan
Nolagh	Cavan/Monaghan
Crusheen	Clare
Ennistymon	Clare
Flagmount	Clare
Miltown-Malbay	Clare
Aughadown	Cork
Ballineen	Cork
Drimoleague	Cork
Goleen	Cork
Croagh	Donegal
Glengesh	Donegal
Portmagee	Kerry
Rathea	Kerry
Coolane	Kildare
Tullogher	Kilkenny
Vicarstown	Laois/Kildare
Garrymore	Laois/Offaly
Edergole	Leitrim
Kiltubrid	Leitrim
Blacklion	Leitrim/Cavan
Newbliss	Monaghan
Smithboro	Monaghan
Belmont	Offaly
Pollagh	Offaly
Carraghs	Roscommon
Edmondstown	Roscommon
Drumahair	Sligo/Leitrim
Mount Frisco	Tipperary
Moneygall	Tipperary/Offaly
Ballyhust	Wexford
Garrettstown	Wicklow/Carlow/Kildare

GENERATION LOAD DURATION & INTEGRATED LOAD DURATION CURVES, YEAR ENDED 31st MARCH 1960



Distribution at High Tension of Units Generated Year ended 31st March, 1960.

District, etc.	High tension units kWh x 10^6	Percentage of total
Dublin City 5 kV Supply	230·450	11·0
Dublin City 10 kV Supply	217·740	10·4
Dublin City—Total	448·190	21·4
Athlone District	72·160	3·4
Cork City District	99·940	4·8
Cork No. 2 District	125·430	6·0
Dublin No. 2 District	311·400	14·9
Dundalk District	157·410	7·5
Galway District	65·780	3·1
Limerick District	156·080	7·4
Portlaoise District	118·470	5·7
Sligo District	81·090	3·9
Tralee District	44·960	2·1
Waterford District	139·200	6·6
Generating station auxiliaries	99·477	4·8
High tension losses (110 kV and 38 kV)	176·440	8·4
Total generation of all stations ...	2,093·562	—
Total supply purchased	2·465	—
Total generation of all stations plus supply purchased	2,096·027	100·0

Monthly outputs (kWh x 10^6) of the Generating Stations and supply purchased
Year ended 31st March, 1960

Month (Calendar)	PEAT STATIONS								COAL/OIL STATIONS					Total of Steam Stations
									DUBLIN			CORK	Arigna	
	Ferbane	Portarlington	Allenwood	Lanesborough	Cahirciveen	Miltown-Malbay	Screeb	Gweedore	Pigeon House	North Wall	Ringsend	Marina		
April ...	18·744	4·665	10·290	1·053	—	—	—	—	—	3·604	36·681	26·500	5·489	107·026
May ...	18·306	11·671	14·619	—	—	—	—	0·713	1·876	5·472	28·332	23·509	2·362	106·860
June ...	19·762	13·251	14·147	5·398	0·907	0·393	0·241	1·143	6·159	7·756	18·923	26·515	6·768	121·363
July ...	22·441	15·109	15·214	7·672	1·566	1·297	1·474	1·417	3·537	13·469	16·090	24·524	6·971	130·781
August ...	22·021	12·518	24·472	6·752	1·381	1·207	0·629	1·460	1·792	12·954	18·570	15·419	5·647	124·822
September	16·921	15·775	24·635	6·483	1·584	0·601	1·557	1·213	9·001	12·207	31·505	13·056	7·603	142·141
October ...	23·681	14·567	22·210	7·112	1·589	1·654	1·707	2·425	3·231	4·115	30·182	7·838	3·132	123·443
November ...	17·463	10·682	18·450	5·013	0·563	1·551	1·579	2·289	0·302	1·545	26·294	7·670	4·095	97·496
December ...	17·330	7·950	12·832	7·503	1·065	0·915	1·209	2·048	0·456	1·345	19·656	4·609	6·051	82·969
January ...	24·109	7·548	15·109	4·218	1·294	0·723	0·611	2·150	0·007	3·542	19·364	4·467	8·401	91·543
February ...	20·994	10·204	15·429	—	0·682	0·766	0·629	1·996	0·020	4·231	25·521	8·979	7·741	97·192
March ...	21·366	15·559	20·692	1·333	0·765	0·215	0·021	1·685	—	2·647	38·214	9·835	8·845	121·177
TOTALS ...	243·138	139·499	208·099	52·537	11·396	9·322	9·657	18·539	26·381	72·887	309·332	172·921	73·105	1,346·813

Monthly outputs (kWh x 10^6) of the Generating Stations and supply purchased Year ended 31st March, 1960—*continued*

Month (Calendar)	HYDRO STATIONS												
	River Shannon	River Erne		River Lee		River Liffey			River Clady	Total of Hydro Stations	Total Generation of all Stations	Total Supply Purchased	Total Generation and Supply Purchased
	Ardnacrusha	Cliff	Cathaleen's Fall	Carrigadrohid	Inniscarra	Pollaphuca	Golden Falls	Leixlip					
April	26·621	5·105	12·250	2·148	5·591	0·753	0·332	0·623	0·937	54·360	161·386	0·284	161·670
May	18·234	2·792	6·679	1·650	3·921	0·580	0·283	0·478	0·320	34·937	141·797	0·160	141·957
June	5·686	1·056	2·423	0·315	1·468	0·384	0·216	0·244	0·308	12·100	133·463	0·071	133·534
July	3·172	0·947	1·936	0·330	0·713	0·224	0·180	0·129	0·712	8·343	139·124	0·074	139·198
August	1·469	0·979	1·948	0·248	0·638	0·173	0·165	0·033	0·871	6·524	131·346	0·061	131·407
September	2·023	0·526	1·161	0·170	0·262	0·238	0·172	0·090	0·149	4·791	146·932	0·084	147·016
October	18·976	5·784	14·387	2·140	4·421	1·031	0·434	0·527	1·019	48·719	172·162	0·232	172·394
November	39·449	11·381	29·337	2·952	7·053	4·299	1·556	1·912	2·361	100·300	197·796	0·280	198·076
December	60·076	13·859	34·453	5·046	13·346	5·685	2·093	3·007	2·600	140·165	223·134	0·315	223·449
January	61·612	13·827	33·937	4·241	11·508	3·642	1·381	2·556	1·531	134·235	225·778	0·320	226·098
February	51·994	11·396	28·176	3·245	9·413	4·295	1·570	2·448	1·558	114·095	211·287	0·295	211·582
March	38·338	8·606	21·131	4·501	9·838	2·245	0·859	1·638	1·024	88·180	209·357	0·289	209·646
		76·258	187·818	26·986	68·172	23·549	9·241	13·685					
TOTALS	327·650	264·076		95·158		46·475			13·390	746·749	2,093·562	2·465	2,096·027

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 x 10⁶	Generating sets No.	Generating sets Capacity each kW	Type of turbine
ARDNACRUSHA	Shannon	10,400	178·0	28·3	310	3 1	20,000 25,000 85,000	Francis Kaplan
POLLAPHUCA	Liffey	309	9·4	48·7	25	2	15,000 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 20,000	Kaplan
CATHALEEN'S FALL		4,350	102·1	29·7	205	2	22,500 45,000	Kaplan
CARRIGADROHID	Lee	610	22·1	15·4	22	1	8,000	Kaplan
INNISCARRA		790	27·5	31·9	58	1 1	15,000 4,000 19,000	Kaplan Kaplan
CLADY	Clady	80	3·9	57·8	13	1	4,000	Francis

Particulars of Generating Plant—*continued.*

(*b*) 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 1 4	5,000 10,000 20,000 95,000	250	750	Estuarine ...	11	100	Mech. Stoker and Oil-fired ...	Coal or Oil
NORTH WALL ...	Dublin City ...	1 2	12,500 16,000 44,500	400	800	Estuarine ...	4 2	40 165	Oil-fired ...	Oil
PORTARLINGTON ...	Co. Laoise ...	2	12,500 25,000	400	800	Tower ...	3	150	Mech. Stoker	Sod Peat
ALLENWOOD ...	Co. Kildare ...	2	20,000 40,000	400	800	Tower ...	4	150	Mech. Stoker	Sod Peat
MARINA	Cork City ...	2	30,000 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
RINGSEND	Dublin City ...	3	30,000 90,000	600	850	Estuarine ...	4	200	P.F. and Oil-fired	Coal or Oil

Particulars of Generating Plant—*continued.*

FERBANE	Co. Offaly ...	3	20,000 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 ... ... (under construction)	Co. Offaly ...	2 1	20,000 40,000 80,000	650 900	850 950	Tower ... Tower ...	2 1	210 380	P.F. ...	Milled Peat
BELLACORICK ... (under construction)	Co. Mayo ...	2	20,000 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

(*c*) TOTAL CAPACITY OF TRANSFORMERS IN COMMISSION

Transformation	Step up				Step down		
Voltage, kV ...	10/110	10/38	5/38	38/110	110/38	110/10	38/10
Capacity, kVA ...	595,000	195,400	110,000	90,000	15,000	40,000	3,000

Performance of Generating Plant Year ended 31st March, 1960

(*a*) HYDRO-ELECTRIC STATIONS

Station	River	Rainfall at station inches	Total inflow m³/sec.	Discharge through sets m³/sec.	Water utilisation %	Average available head metres	Water used per unit generated m³.	Installed capacity kW	Units sent out kWh x 10⁶	Plant load factor %	Total cost per unit sent out pence
ARDNACRUSHA ...	Shannon	38·27	186·8	161·3	92·4	28·3	15·57	85,000	324·538	43·9	0·303
POLLAPHUCA ...	Liffey	34·5	9·07	6·9	100·0	48·5	9·35	30,000	22·885	8·9	0·786
GOLDEN FALLS ...		34·5	9·07	7·5	100·0	16·7	25·90	4,000	9·108	26·3	
LEIXLIP		26·8	16·25	11·4	96·5	17·3	26·40	4,000	13·507	39·0	
CLIFF	Erne	44·48	90·4	87·4	99·9	12·1	36·26	20,000	75·528	43·4	0·419
CATHALEEN'S FALL...				88·3	98·2	29·6	14·87	45,000	185·625	47·5	
CARRIGADROHID ...	Lee	46·4	24·6	22·5	93·4	15·5	26·40	8,000	26·510	38·4	0·769
INNISCARRA ...		45·5	31·1	28·6	94·5	31·9	13·25	19,000	67·568	40·8	
CLADY	Clady	56·2	3·72	3·4	100·0	—	8·03	4,000	13·263	38·1	1·005

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 averaged 17·5 million gallons per day (0·92 m³/sec).

Shannon and Erne rainfall represent average of catchment area.

Performance of Generating Plant Year ended 31st March, 1960—*continued*

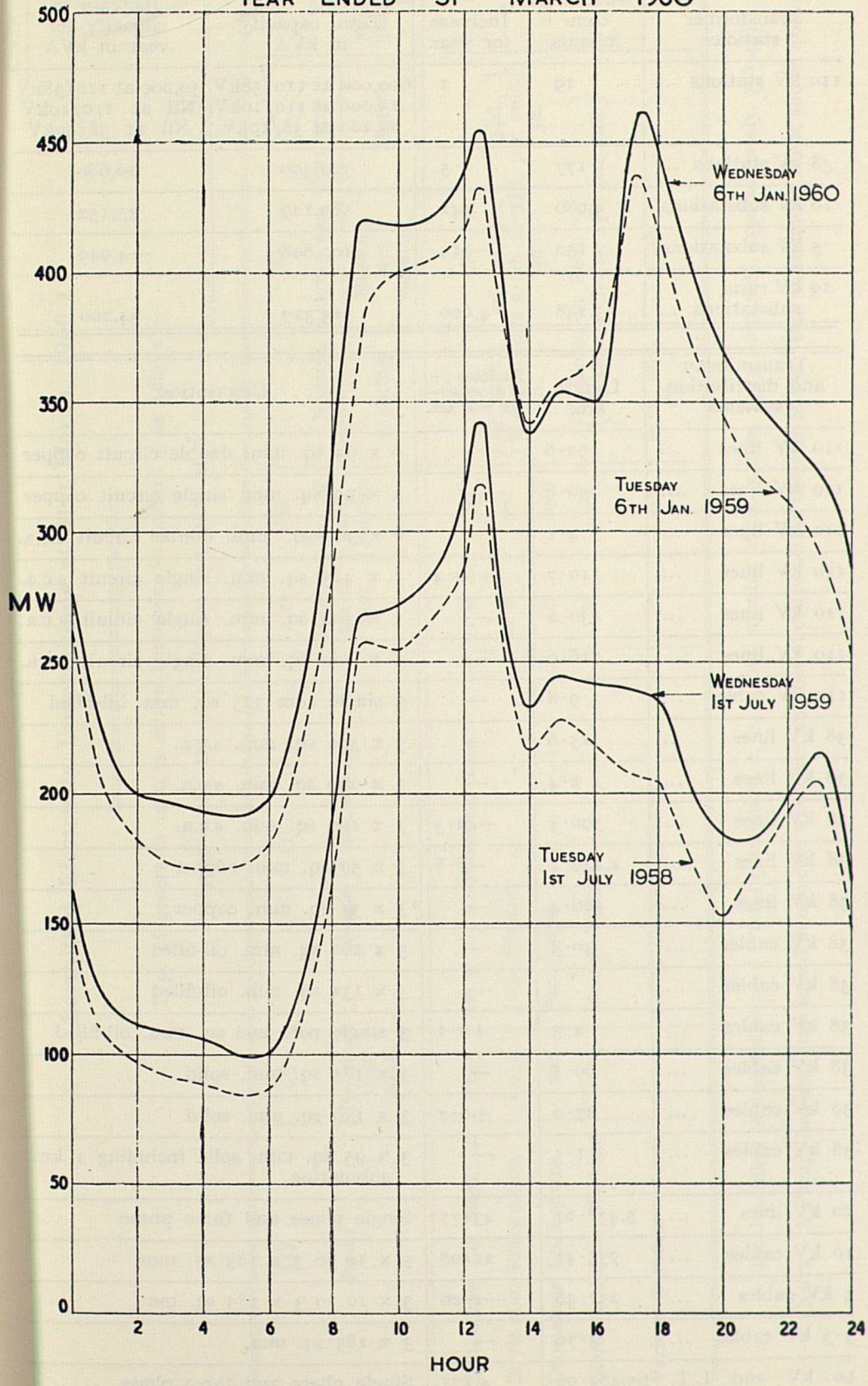
(*b*) STEAM STATIONS

Station	Location	Installed Capacity kW	Units Sent Out kWh x 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	22·617	—	Coal Oil	195 12,900	8,946	—	—
NORTH WALL ...	Dublin City ...	44,500	66·459	18·6	Oil	25,000	177,729	0·641	1·516
PORTARLINGTON ...	Co. Laoise ...	25,000	131·024	63·5	Sod Peat	162,200	454,453	0·826	1·194
ALLENWOOD ...	Co. Kildare ...	40,000	195·840	59·2	Sod Peat	233,200	650,729	0·794	1·161
MARINA ...	Cork City ...	60,000	162·373	32·8	Coal Oil	68,500 15,500	390,893	0·569	1·168
RINGSEND ...	Dublin City ...	90,000	288·795	39·1	Coal Oil	122,600 22,100	637,128	0·516	1·043
FERBANE ...	Co. Offaly ...	60,000	224·878	46·1	Milled Peat Oil	445,000 1,400	599,433	0·633	1·056
FOUR 5 MW STATIONS ...	West Coast ...	20,000	44·744	27·8	Sod Peat	63,700	149,910	0·802	1·760
LANESBOROUGH ...	Co. Longford ...	20,000	49·638	29·9	Sod Peat	55,600	160,337	0·747	1·258
ARIGNA ...	Co. Roscommon	15,000	69·185	55·5	Coal Oil	41,700 200	157,326	0·542	0·881

Milled Peat figures in Ferbane 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 calendar year, but, for convenience, costing figures are for 53 weeks.

TYPICAL DAILY GENERATION LOAD CURVES

YEAR ENDED 31ST MARCH 1960



APPENDIX IX

Transmission and Distribution Systems in Commission at 31st March, 1960

Transformer stations	Number in commission	Increase for year	Total capacity in kVA	Increase in capacity for year in kVA
110 kV stations ...	19	1	610,000 at 110/38kV 15,000 at 110/10kV 64,200 at 38/10kV	30,000 at 110/38kV Nil at 110/10kV Nil at 38/10kV
38 kV stations ...	177	5	722,300	10,680
10 kV substations	4,080	141	569,129	33,152
5 kV substations	152	—14	109,808	—4,940
10 kV rural substations ...	53,248	4,600	315,329	34,200

Transmission and distribution systems	Length km.	Increase (+) or decrease(—) for year km.	Description
110 kV lines ...	192·6	—	6 x 95 sq. mm. double circuit copper
110 kV lines ...	750·8	—	3 x 95 sq. mm. single circuit copper
110 kV lines ...	4·1	—	6 x 300 sq. mm. double circuit s.c.a.
110 kV lines ...	110·7	+62·4	3 x 425 sq. mm. single circuit s.c.a.
110 kV lines ...	430·2	—	3 x 300 sq. mm. single circuit s.c.a.
110 kV lines ...	716·9	—	3 x 200 sq. mm. single circuit s.c.a.
110 kV cables ...	9·8	—	3 single core 325 sq. mm. oil-filled
38 kV lines ...	15·6	—	3 x 300 sq. mm. s.c.a.
38 kV lines ...	2·4	—	3 x 200 sq. mm. s.c.a.
38 kV lines ...	596·4	+42·5	3 x 100 sq. mm. s.c.a.
38 kV lines ...	2,449·2	—6·8	3 x 50 sq. mm. copper
38 kV lines ...	326·4	—	3 x 35 sq. mm. copper
38 kV cables ...	40·5	—	3 x 260 sq. mm. oil-filled
38 kV cables ...	4	—	3 x 130 sq. mm. oil-filled
38 kV cables ...	2·3	+0·1	3 single core 260 sq. mm. oil-filled
38 kV cables ...	69·1	—	3 x 185 sq. mm. solid
38 kV cables ...	27·9	+0·2	3 x 150 sq. mm. solid
38 kV cables ...	1·5	—	3 x 95 sq. mm. solid including 1 km. submarine
10 kV lines ...	5,478·81	43·77	Single phase and three phase
10 kV cables ...	735·41	21·08	3 x 10 to 3 x 185 sq. mm.
5 kV cables ...	237·48	—2·26	3 x 10 to 3 x 185 sq. mm.
3·3 kV cables ...	3·70	—	3 x 185 sq. mm.
10 kV and L.T. rural lines	65,482·00	4,171	Single phase and three phase

Permitted Electricity Undertakings at 31st March, 1960

Type of generator used is shown hereunder in column 4 as follows :—

Hydro = H ; Oil = O ; Hydro and Oil = H & O

(1) Town	(2) Population (1951)	(3) Name of undertaker	(4) Type of generator	(5) No. of consumers	(6) Normal Tariffs per Unit for			(7) Units sold, year ended 31st March, 1960
					Lighting	Heating and cooking	Power	
Ballisodare, Co. Sligo ...	153	W. & G. T. Pollexfen, Ltd. ...	H	64	7½d.	3d.	—	85,507
Boyle, Co. Roscommon	1,934	John Stewart	H & O	588	5d. to 8d.	2d. to 2¼d.	3½d.	582,543
					Miscellaneous 0·6d. to 3½d. per unit			
Dromahair, Co. Leitrim	262	Paul Jeiter	H	60	9d.	3d.	3d.	22,000 Est.
Glendalough, Co. Wicklow	—	Messrs. Wynne	H	17	Included in Rent			93,215
					Maximum charge 1½d. per unit			
Various Districts ...	—	Coras Iompair Eireann	—	17	6·5d. and 8d.	2·2d.	—	7,092

Total number of undertakings, 6 ; total population, 2,384 ; total number of consumers, 747 ; units sold, approximately, 791,457.

NOTE : A Permit has also been issued in one case where the number of consumers is three or under ; this undertaking is not shown above.

APPENDIX XI.

GENERAL EMPLOYEES' TRIBUNAL

REPORT OF PROCEEDINGS IN THE YEAR ENDED 31st MARCH, 1960.

In the year ended 31st March, 1960, the Tribunal dealt with the following disputes :—

(1) A claim by a " transferred officer " for compensation for loss of prospects occasioned by his transfer to the Board's service. The Tribunal rejected the claim but decided that there were special circumstances warranting an increase in salary of £100 per annum as from 12th April, 1958.

(2) A claim by an official for higher grading retrospective to 1952. The Tribunal rejected the claim for higher grading but granted an increase in salary of £50 per annum from the 1st April, 1959.

(3) A claim by the Salaried Staff Conference for the restoration of 1947 purchasing power of the salaries of officer personnel. Following the preliminary hearing the claim was amended. The Tribunal decided to refer back the claim, as submitted in its new form, for further negotiation between the Conference and the Board.

(4) A claim by an official to have been unjustly and unfairly treated as to the terms and conditions of employment by the Board. The Tribunal found that there was no justification for the claim.

(5) A claim by the Amalgamated Transport and General Workers' Union and the Irish Union of Distributive Workers and Clerks for a revision of non-engineering grades up to grade VI. Subsequent to the hearing the Tribunal asked the parties to submit an agreed statement of the matters effectively in dispute. In the light of the agreed documentation the Tribunal suggested that the claim should be re-submitted.

At the close of the period under review two claims were outstanding.

TRIBUNAL MEMBERSHIP.

Under the provisions of Section 3 of the Electricity (Supply) (Amendment) Act, 1949, the five year term of office of the member elected by the General Employees expired on the 14th December, 1959. In pursuance of Electricity Supply Board (Appointment of Member of Tribunal) Regulations, Mr. F. Vaughan Buckley, S.C., Montrose, Thormanby Road, Howth, was duly elected an ordinary member of the Tribunal.

(Signed) J. J. O'LEARY, *Chairman.*

R. F. BROWNE, *Member.*

F. VAUGHAN BUCKLEY, *Member.*

(Signed) J. A. QUINN, *Secretary.*

Date : 27th May, 1960.

MANUAL WORKERS' TRIBUNAL

REPORT OF PROCEEDINGS IN THE YEAR ENDED 31st MARCH, 1960.

In the year ended 31st March, 1960, the Tribunal dealt with ten disputes as follows :—

(1) A claim by the Amalgamated Transport and General Workers' Union for an increase in the subsistence and meal allowances for drivers and tractor assistants at Central Stores. The Tribunal was not satisfied that the duties of these men justified a departure from the rates agreed in the preceding year between the Board and the Union.

(2) A claim by the Workers' Union of Ireland, the Marine Port and General Workers' Union, the Amalgamated Transport and General Workers' Union and the Irish Transport and General Workers' Union for an increase of 6d. per hour for semi-skilled men engaged on stores handling duties in Central Stores. The Tribunal increased the rate by 2¼d. per hour.

(3) A claim by the National Engineering Union for an increase of 3d. per hour for a weighbridge attendant in Allenwood Generating Station. The Tribunal rejected the claim but was of the view that the rate of pay of weighbridge attendants should be reviewed by the Board.

(4) A claim by the E.S.B. group of Unions affiliated to the Provisional United Trade Union Organisation for a minimum overtime rate of time and one half to semi-skilled and unskilled workers outside Dublin. The Tribunal held that the evidence adduced did not warrant a change at present.

(5) A claim by the Irish Congress of Trade Unions (E.S.B. group of Unions) for an increase of 13s. per week for casual rural labourers. The Tribunal granted an increase of 10s. per week.

(6) A claim by the Electrical Trades Union and the Irish Engineering Industrial and Electrical Trades Union for the restoration of the differential of 1½d. per hour for electricians other than those employed in the Board's installation section. It was decided that it was not a function of the Tribunal to fix a national minimum rate of pay for electricians and that the fixing of such a rate was a matter for the National Joint Industrial Council. The Tribunal advised that negotiations should continue, through the Council, to determine this rate.

(7) A dispute between the Board and the Electrical Trades Union referred to the Tribunal by the Board arising out of a claim for an increase in the rate of pay for electricians. As the issue involved the fixing of the national wage rate for electricians, and arose because of the failure of negotiations through the National Joint Industrial Council, the Tribunal referred the matter to the Labour Court for investigation. Agreement was subsequently reached between the parties concerned without the intervention of the Labour Court.

(8) A claim by the Irish Municipal Employees Trade Union that a labourer in Dublin No. 1 District Office who had been dismissed, should be reinstated. The Tribunal rejected the claim.

(9) A claim by the Ancient Guild of Brick and Stone Layers Association for an interpretation of the intention underlying a previous decision of the Tribunal which allowed an additional payment to bricklayers in Pigeon House when engaged on dirty work. The Tribunal decided that in the absence of the conditions under which the previous award was made, the Tribunal would find it difficult to justify any direction to continue the payment.

(10) A claim by the Irish Congress of Trade Unions (E.S.B. group of Unions) that the Board should introduce a 44-hour week for all manual shift workers at a shift rate of time and a quarter. The Tribunal decided that there was justification for admitting the claim for the 44-hour week 3-shift cycle, without loss of pay, in the special circumstances of shift work, and on the evidence that the working week could be reduced without loss of efficiency and at no additional cost in some stations or only at slight extra cost.

At the close of the period under review three claims were *sub judice*.

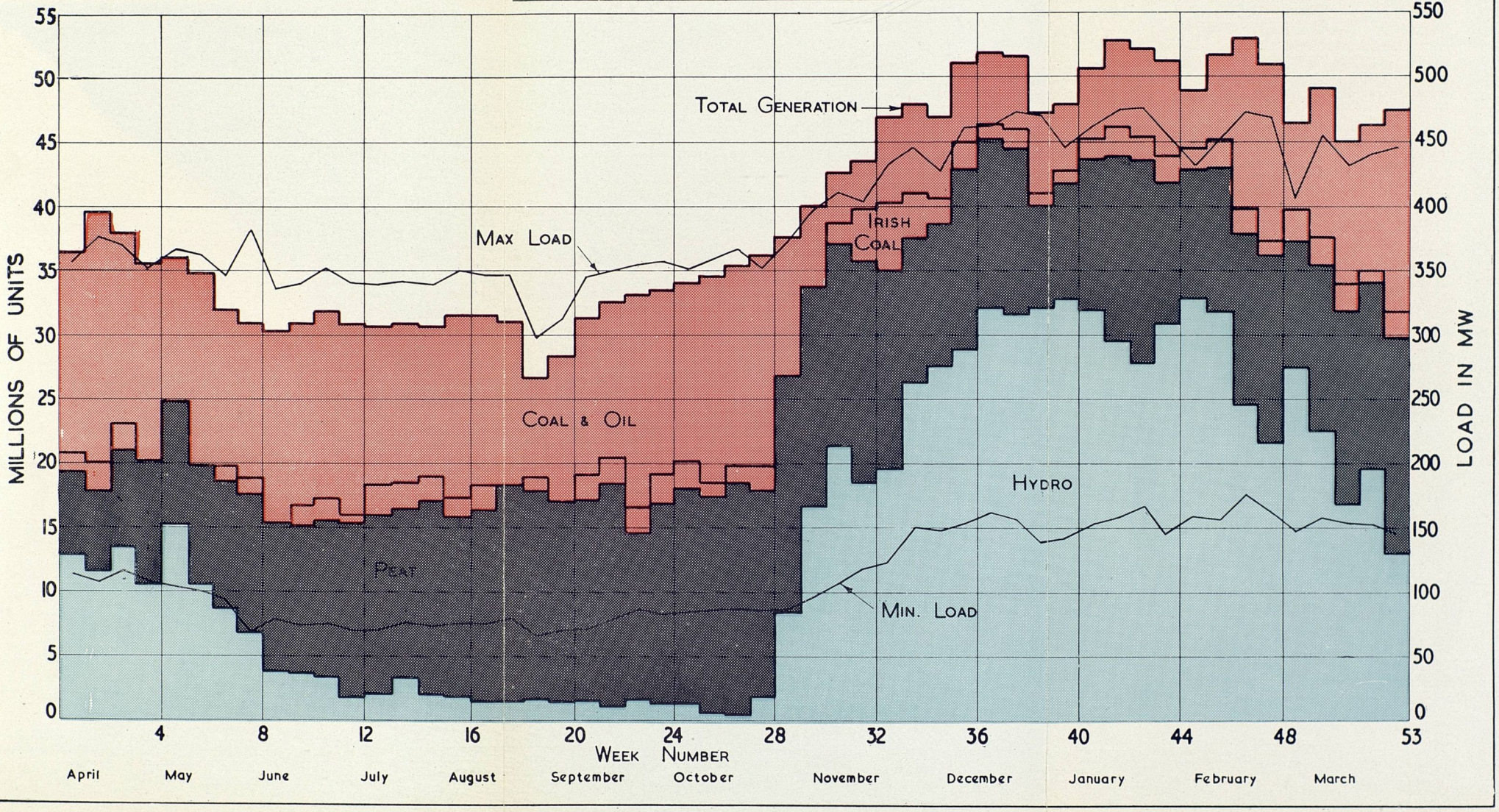
(Signed) J. J. O'LEARY, *Chairman.*
R. F. BROWNE, *Member.*
GILBERT LYNCH, *Member.*

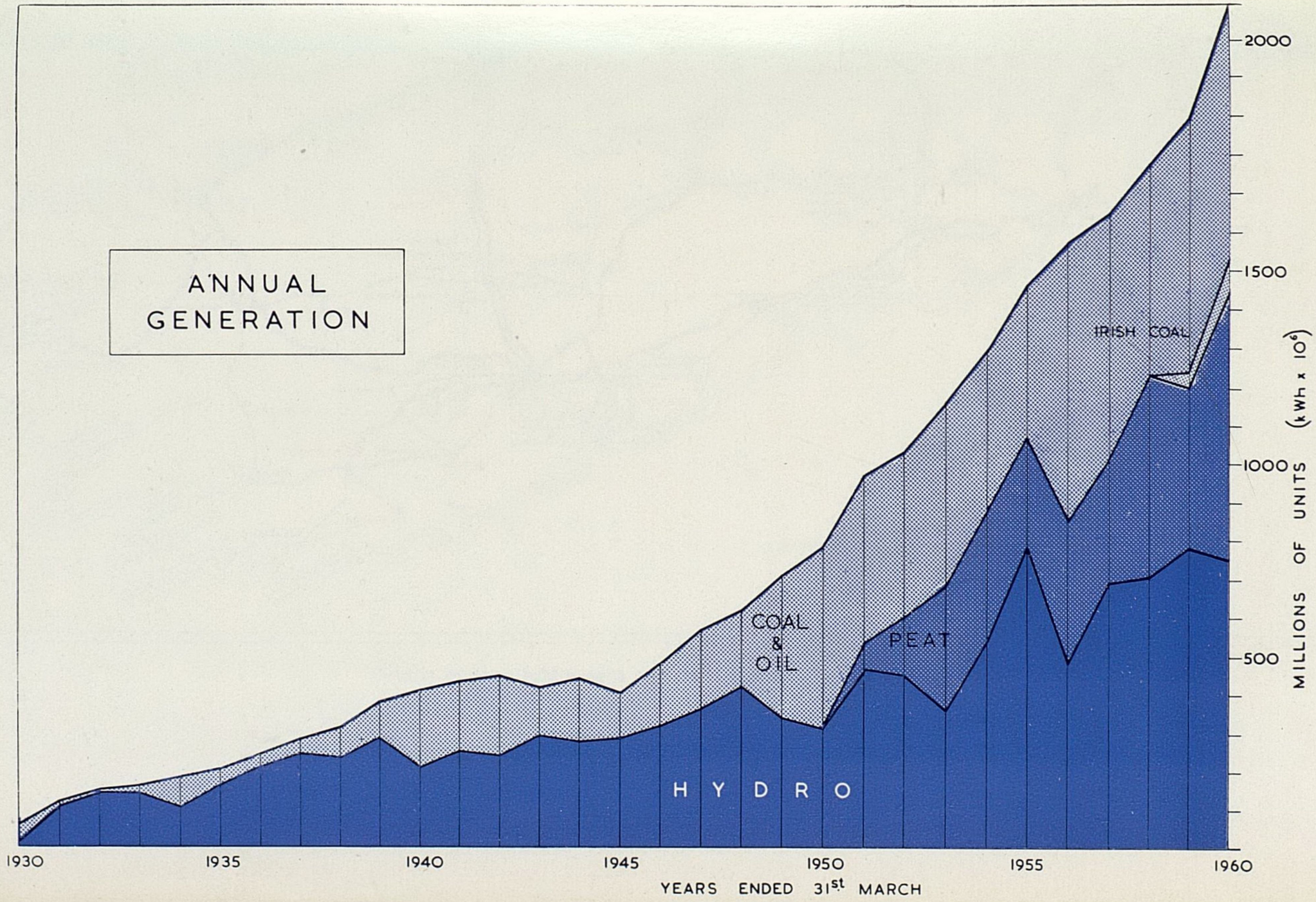
(Signed) J. A. QUINN, *Secretary.*

Date: 27th May, 1960.

WEEKLY GENERATION & MAX/MIN. LOADS

YEAR ENDED 31ST. MARCH 1960



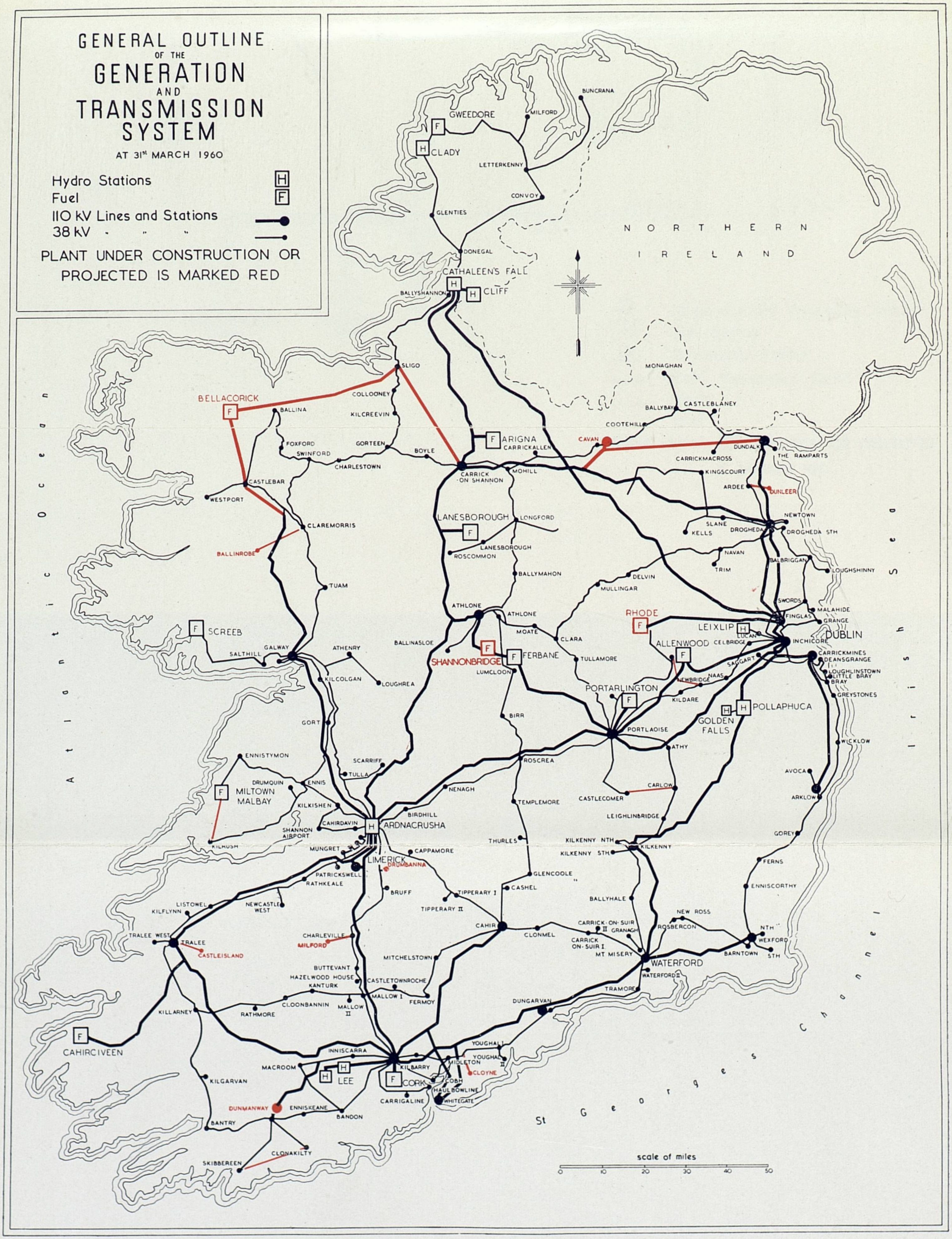

ANNUAL GENERATION
IRISH COAL
COAL & OIL
PEAT
HYDRO
2000
1500
1000
500
MILLIONS OF UNITS (kWh x 10⁶)
1930
1935
1940
1945
1950
1955
1960
YEARS ENDED 31st MARCH

GENERAL OUTLINE OF THE GENERATION AND TRANSMISSION SYSTEM

AT 31ST MARCH 1960

Hydro Stations [H]
Fuel [F]
110 kV Lines and Stations
38 kV " "

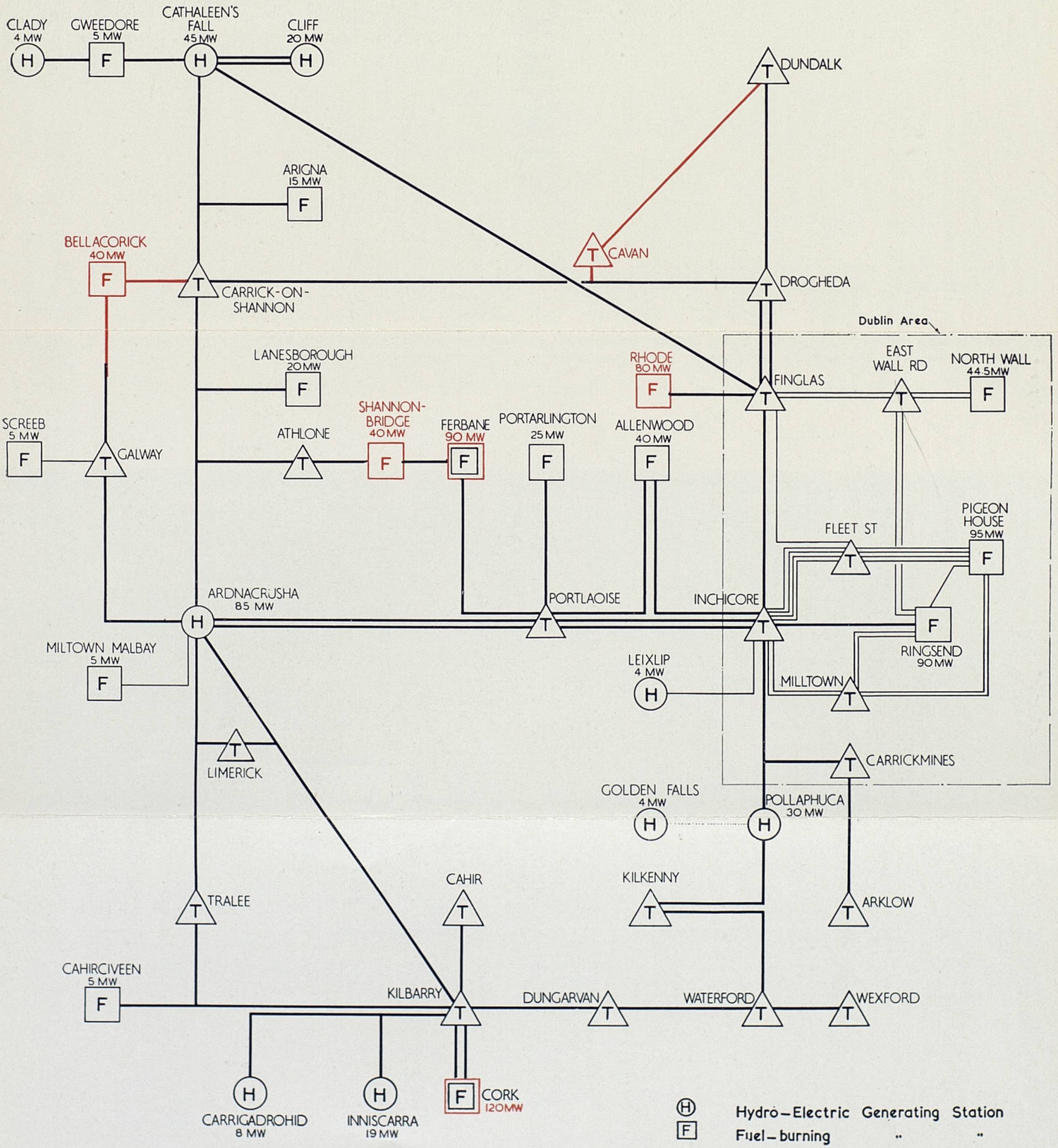
PLANT UNDER CONSTRUCTION OR PROJECTED IS MARKED RED



Details of the Dublin area will be found in Appendix XVI.

GENERATING STATIONS & MAIN TRANSMISSION SYSTEM

AT 31st MARCH 1960



ACCOUNTS

	1 Fuel £	2 Operating Expenses £	3 Maintenance and Repair £	4 Supervision and Local Administration £
GENERATION				
Coal/Oil				
North Wall	177,729	37,940	31,769	8,023
Marina	390,893	65,407	47,743	19,664
Ringsend	637,128	91,136	81,615	18,010
Arigna	157,326	24,129	9,190	5,001
Sod Peat (Machine)				
Portarlington ...	454,453	45,133	33,162	7,366
Allenwood	650,729	51,452	47,256	10,176
Lanesborough ...	160,337	20,273	6,338	4,605
Milled Peat				
Ferbane	599,433	58,498	27,071	11,306
Sod Peat (Hand-won)				
Four 5 MW Stations ...	149,910	47,620	11,684	4,617
Stand-by				
Pigeon House ...	89,468	53,038	39,202	13,377
Total—Fuel Stations ...	3,467,406	494,626	335,030	102,145
Hydro				
Shannon	—	46,351	64,520	17,691
Erne	—	28,903	34,164	11,558
Liffey	—	15,562	17,658	7,331
Lee	—	10,089	15,970	5,686
Clady	—	3,004	2,018	660
Total—Hydro Stations ...	—	103,909	134,330	42,926
Total—All Stations ...	3,467,406	598,535	469,360	145,071
TRANSMISSION ...	—	52,401	168,342	79,131
	3,467,406	650,936	637,702	224,202

*New Stations undergoing test.

THE YEAR ENDED 31st MARCH, 1960.

5 WORKS COST (1–4) £	Per Unit Sent Out (Pence) 1959/60	Per Unit Sent Out (Pence) 1958/59	6 Depreciation and Renewals £	7 Interest and Capital Repayments £	TOTAL 1959/60 £	TOTAL 1959/60 Per Unit Sent Out (Pence)	TOTAL 1958/59 £	TOTAL 1958/59 Per Unit Sent Out (Pence)
255,461	·922	·976	71,000	93,455	419,916	1·516	393,753	1·673
523,707	·762	·750	115,000	163,675	802,382	1·168	972,405	1·051
827,889	·670	·730	180,000	280,293	1,288,182	1·043	1,477,739	1·059
195,646	·675	*	22,000	37,863	255,509	·881	122,303	*
1,802,703	*·724*	*·759*			*2,765,989*	*1·111*	*2,966,200*	*1·124*
540,114	·981	1·143	50,000	67,131	657,245	1·194	421,402	1·584
759,613	·927	1·276	82,000	110,170	951,783	1·161	579,189	1·909
191,553	·892	*	30,000	48,484	270,037	1·258	155,562	*
1,491,280	*·941*	*1·184*			*1,879,065*	*1·186*	*1,156,153*	*1·785*
696,308	·736	·710	124,000	179,046	999,354	1·056	928,698	1·033
213,831	1·145	1·481	46,000	68,897	328,728	1·760	209,274	3·324
195,085	—	—	77,000	103,923	376,008	—	351,763	—
4,399,207	·829	·853	797,000	1,152,937	6,349,144	1·197	5,612,088	1·301
128,562	·094	·077	49,000	238,697	416,259	·303	398,914	·267
74,625	·068	·061	92,000	293,784	460,409	·419	452,330	·413
40,551	·213	·159	26,000	83,197	149,748	·786	146,811	·618
31,745	·079	·092	56,000	217,524	305,269	·769	310,394	·802
5,682	·102	*	8,000	42,353	56,035	1·005	167	*
281,165	·090	·079	231,000	875,555	1,387,720	·446	1,308,616	·407
4,680,372	·556	·523	1,028,000	2,028,492	7,736,864	·919	6,920,704	·920
299,874	—	—	415,000	637,149	1,352,023	—	1,308,025	—
4,980,246	—	—	1,443,000	2,665,641				
ELECTRICITY PURCHASED IN BULK AND OTHER EXPENDITURE ATTRIBUTABLE TO GENERATION					12,132	—	14,684	—
GENERAL ADMINISTRATION :				£				
Generation ...				343,948				
Transmission ...				150,186	494,134	—	440,763	—
Total Production Cost					9,595,153		8,684,176	
TRANSFERRED TO REVENUE ACCOUNTS:								
Non-rural				7,463,473			6,788,147	
Rural				2,131,680			1,896,029	
					9,595,153		8,684,176	

No. 2. **ELECTRICITY (NON-RURAL) REVENUE ACCOUNT**

Dr.

	£	£	1958/59 £
To Electricity Production Account		7,463,473	6,788,147
„ Distribution Charges :			
Operation and maintenance ...	805,517		
Reserve for depreciation and renewals	460,000		
Interest and capital repayments ...	650,957		
Supervision and local administration	580,140		
		2,496,614	2,382,612
„ General Administration :			
Salaries and wages	607,679		
Travelling expenses	32,241		
Stationery	17,826		
Telephones and postage	14,700		
Lighting and heating	14,527		
Rents and rates	10,570		
Insurance	43,281		
Professional fees	13,148		
Publicity	96,847		
Maintenance of office buildings and equipment	17,685		
Staff training	39,290		
Pensions	66,829		
Capital charges—general assets ...	206,785		
Provision for bad debts	26,814		
Sundry expenses	9,115		
	1,217,337		
Less apportionments charged to :			
Production Account	494,134		
Rural Revenue Account ...	235,512		
Capital Works and other accounts ...	91,117		
		396,574	392,310
To Balance, carried to Profit and Loss Account ...		327,870	440,236
		£10,684,531	£10,003,305

FOR THE YEAR ENDED 31st MARCH, 1960.

Cr.

		1958/59
	£	£
By Electricity Charges	10,541,365	9,892,526
„ Meter and other Charges	143,166	110,779
	£10,684,531	£10,003,305

No. 3. **ELECTRICITY (RURAL) REVENUE ACCOUNT**
Dr.

	£	£	1958/59 £
To Electricity Production Account		2,131,680	1,896,029
,, Distribution Charges :			
Operation and maintenance ...	293,861		
Reserve for depreciation and renewals	776,000		
Interest and capital repayments ...	1,182,180		
Supervision and local administration	308,274		
		2,560,315	2,324,356
,, General Administration		235,512	216,169
		£4,927,507	£4,436,554

No. 4.
Dr. **PROFIT AND LOSS ACCOUNT FOR**

	£	£	1958/59 £
To Interest payable to the Minister for Finance	2,873,268		
,, Interest on E.S.B. Stocks (less temporary investment earnings) ...	596,214		
,, Stock management and transfer charges	19,301		
,, Other interest	532,194		
		4,020,977	3,943 510
,, Reserves :			
Repayment of capital advances from the Minister for Finance ...	593,466		
Sinking Fund provision for redemption of E.S.B. Stocks	242,037		
		835,503	806,819
		£4,856,480	£4,750,329
To Balance transferred from Rural Revenue Account		887,689	656,253
		£887,689	£656,253

FOR THE YEAR ENDED 31st MARCH, 1960.

Cr.

		1958/59
	£	£
By Electricity Charges	4,014,409	3,757,399
,, Meter and Other Charges	25,409	22,902
,, Balance, carried to Profit and Loss Account ...	887,689	656,253
	£4,927,507	£4,436,554

THE YEAR ENDED 31st MARCH, 1960.

Cr.

		1958/59
	£	£
By Interest and Capital Repayments :		
Production Account	2,665,641	2,594,551
Non-rural Revenue Account	650,957	630,014
Rural Revenue Account	1,182,180	1,120,871
Administration	155,785	146,127
Fisheries Account	3,773	4,286
Installations Account	7,700	8,200
Merchandise Sales Account	8,869	6,100
Capital Works	181,575	240,180
	£4,856,480	£4,750,329
By Balance transferred from Non-rural Revenue Account	327,870	440,236
,, Miscellaneous revenue	55,779	55,625
,, Interest receivable	71,482	61,509
,, Balance, carried to Net Revenue Account ...	432,558	98,883
	£887,689	£656,253

No. 5. **INSTALLATIONS TRADING ACCOUNT FOR**
Dr.

	£	£	1958/59 £
To Cost value of work for which credit had not been taken at 31st March, 1959		128,308	90,702
„ Cost of installation work carried out during the year		355,306	363,077
„ Gross profit, carried down		77,353	75,817
		£560,967	£529,596
To Salaries, wages and State insurance ...	39,056		
„ Travelling expenses	4,477		
„ Rents and rates	638		
„ Sundry expenses	4,740		
„ General overhead expenses and interest as apportioned	18,713		
		67,624	65,938
„ Balance, carried to Net Revenue Account ...		9,729	9,879
		£77,353	£75,817

No. 6 **MERCHANDISE TRADING ACCOUNT FOR**
Dr.

	£	£	1958/59 £
To Cost of goods sold		717,499	552,042
„ Direct costs in connection with sales		66,398	54,623
„ Gross profit, carried down		180,632	145,859
		£964,529	£752,524
To Salaries, wages, commission and travelling expenses	96,114		
„ General publicity	14,884		
„ Rents and rates	1,880		
„ Sundry expenses	10,219		
„ General overhead expenses and interest as apportioned	35,703		
		158,800	128,938
„ Balance, carried to Net Revenue Account ...		21,832	16,921
		£180,632	£145,859

THE YEAR ENDED 31st MARCH, 1960

Cr.

	£	1958/59 £
By Credit taken for contracts completed and charged	409,648	401,288
„ Cost value of work for which credit has not yet been taken	151,319	128,308
	£560,967	£529,596
By Gross profit, brought down	77,353	75,817
	£77,353	£75,817

THE YEAR ENDED 31st MARCH, 1960.

Cr.

	£	1958/59 £
By Sales	964,529	752,524
	£964,529	£752,524
By Gross profit, brought down	180,632	145,859
	£180,632	£145,859

No. 7 FISHERIES ACCOUNT FOR THE

Dr.

	£
To Operation, preservation and other direct costs	25,677
	£25,677
To Balance, brought down	6,486
„ Salaries and sundry expenses	4,312
„ Fishery rates	2,640
„ Reserve for depreciation and renewals	2,370
„ General overhead expenses and interest	3,005
	£18,813
To Balance, brought down	18,813
„ Capital repayments	868
	£19,681

YEAR ENDED 31st MARCH, 1960.

Cr.

	£
By Sales of fish, letting of fishing rights and miscellaneous income	19,191
„ Balance, carried down	6,486
	£25,677
By Balance, carried down	18,813
	£18,813
By Balance, carried to Net Revenue Account	19,681
	£19,681

No. 8. **NET REVENUE ACCOUNT FOR**

Dr.

	£
To Balance transferred from Profit and Loss Account ...	432,558
To Balance transferred from Fisheries Account	19,681
	£452,239
To Balance, brought down	420,678
,, Transfer to reserve for renewals, of credits (per contra), as additional provision for the renewal of plant ...	181,457
,, Balance, carried forward	50,413
	£652,548

THE YEAR ENDED 31st MARCH, 1960.

Cr.

	£	£
By Installations trading profit	9,729	
,, Merchandise trading profit	21,832	31,561
,, Balance, carried down		420,678
		£452,239
By Balance, brought forward from last year's account ...		71,091
,, Credits arising consequent on the retirement of assets and the sale of scrapped material		181,457
,, Contingencies Reserve		400,000
		£652,548

No. 9. **CAPITAL ACCOUNT FOR THE**

Dr.

	Total at 31st March, 1959 less retirements	Expenditure less retirements during year	Total at 31st March, 1960 less retirements
	£	£	£
To Generation	45,249,404	2,644,228	47,893,632
,, Transmission	13,420,210	667,752	14,087,962
,, Distribution	37,397,000	2,648,541	40,045,541
,, General	2,793,622	259,129	3,052,751
,, Fisheries	69,816	20,812	90,628
	£98,930,052	£6,240,462	£105,170,514
,, Capital Works in Progress, including payments on account to contractors and others			2,809,222
Total of Fixed Assets, carried to Balance Sheet ...			£107,979,736

YEAR ENDED 31st MARCH, 1960.

Cr.

	Total at 31st March, 1960
	£
By Repayable Capital as per Statement No. 10 ...	77,457,500
,, Non-Repayable Capital :	
Contributions from Minister for Finance under Electricity (Supply) Acts towards capital cost of supplying rural areas	4,198,826
Contributions from consumers and others for capital works	1,284,692
,, Capital Reserves :	
Repaid capital, less intangible assets written off ...	5,054,986
Provision for depreciation, renewal and retirement of physical assets, together with proceeds of sale of assets, less physical assets retired (including Capital Assets Adjustment Reserve £270,297 previously shown separately)	25,852,506
Total Capital Reserves (including non-repayable capital)	36,391,010
Total of Capital Receipts and Reserves, carried to Balance Sheet	£113,848,510

Loans and loan stocks, local authority undertakings ... ...

Minister for Finance :

Advances under the Electricity (Supply) Acts and the Shannon Fisheries Act, 1935 ... ...

Electricity Supply Board Stocks :

5% redeemable 1966—1975 ... ...

6% ,, 1968—1978 ... ...

AND REDEMPTION THEREOF TO THE 31st MARCH, 1960.

Total Receipts to 31st March, 1960	Redeemed			Balance Outstanding at 31st March, 1960
	Total to 31st March, 1959	Redeemed during year	Total to 31st March, 1960	
£	£	£	£	£
756,021	756,021	—	756,021	—
68,450,236	4,464,491	593,466	5,057,957	63,392,279
10,000,000	505,700	184,000	689,700	9,310,300
5,000,000	159,235	85,844	245,079	4,754,921
£84,206,257	£5,885,447	£863,310	£6,748,757	£77,457,500

LIABILITIES AND RESERVES		£	31/3/59 £
REPAYABLE CAPITAL, as per CAPITAL ACCOUNT		77,457,500	78,320,810
CAPITAL RESERVES, as per CAPITAL ACCOUNT		36,391,010	31,130,422
		113,848,510	109,451,232
LOANS under the Electricity Supply Board (Superannuation) Act, 1942		—	4,275
THE MUNSTER AND LEINSTER BANK LTD., OVERDRAFT		49,542	144,805
SUNDRY CREDITORS		2,490,247	2,399,778
RESERVES :	£		
Contingencies reserve ...	...1,100,000		
Other reserves and provisions	... 38,500		
		1,138,500	1,540,000
SURPLUS, as per NET REVENUE ACCOUNT ...		50,413	71,091
		£117,577,212	£113,611,181

NOTE :

At 31st March, 1960, there were outstanding contractual commitments in respect of capital and other expenditure, estimated to amount to £3,000,000.

T. MURRAY, *Chairman.*
J. G. GARGAN, *Secretary.*

AT 31st MARCH, 1960.

ASSETS	£	31/3/59 £
FIXED ASSETS, as per CAPITAL ACCOUNT ...	107,979,736	102,982,670
ELECTRICITY SUPPLY BOARD STOCKS (nominal £180,270), at cost, held by The Munster and Leinster Bank Nominees Ltd., as depositaries of the Board	177,223	54,334
STOCKS ON HAND AND IN TRANSIT	2,957,978	2,967,492
COST VALUE OF INSTALLATION AND OTHER REPAYABLE WORK IN PROGRESS	217,216	184,064
SUNDRY DEBTORS, after providing for bad and doubtful debts and including advances for goods not yet delivered	4,633,318	4,365,843
TEMPORARY CASH INVESTMENT	1,600,000	3,047,945
CASH IN HAND AND WITH BANKS	11,741	8,833
	£117,577,212	£113,611,181

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. We certify, subject to the note thereon and the undermentioned qualifications, that the Balance Sheet as at the 31st March, 1960, 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.

Costs of Generation, Transmission and purchase of Electricity set out in the Electricity Production Account are allocated to Non-rural and Rural Revenue Accounts in accordance with estimates made by the Board's officials, and approved of by the Board.

Various charges in each of the foregoing accounts are similarly approved allocations :—

(*a*) Overhead Expenses are apportioned to the Electricity Production Account, the Electricity (Non-rural) Revenue Account, the Electricity (Rural) Revenue Account, the Installations Trading Account, the Merchandise Trading Account, the Fisheries Account and to Capital Expenditure on new works.

(*b*) The Interest chargeable to the Electricity Profit and Loss Account has been apportioned and transferred to Electricity Production Account, Electricity (Non-rural) Revenue Account, Electricity (Rural) Revenue Account, Installations Trading Account, Merchandise Trading Account, Fisheries Account and to Capital Expenditure on new works. The amount of Capital repaid in respect of advances from the Minister for Finance and others chargeable to Electricity Profit and Loss Account has been apportioned and transferred to Electricity Production Account, Electricity (Non-rural) Revenue Account, Electricity (Rural) Revenue Account and Fisheries Account.

(*c*) Credit has been given to Merchandise Trading Account for a sum representing a proportion of the expenses regarded as relating to the sale of Electricity, and this has been charged to Electricity (Non-rural) Revenue Account and Electricity (Rural) Revenue Account.

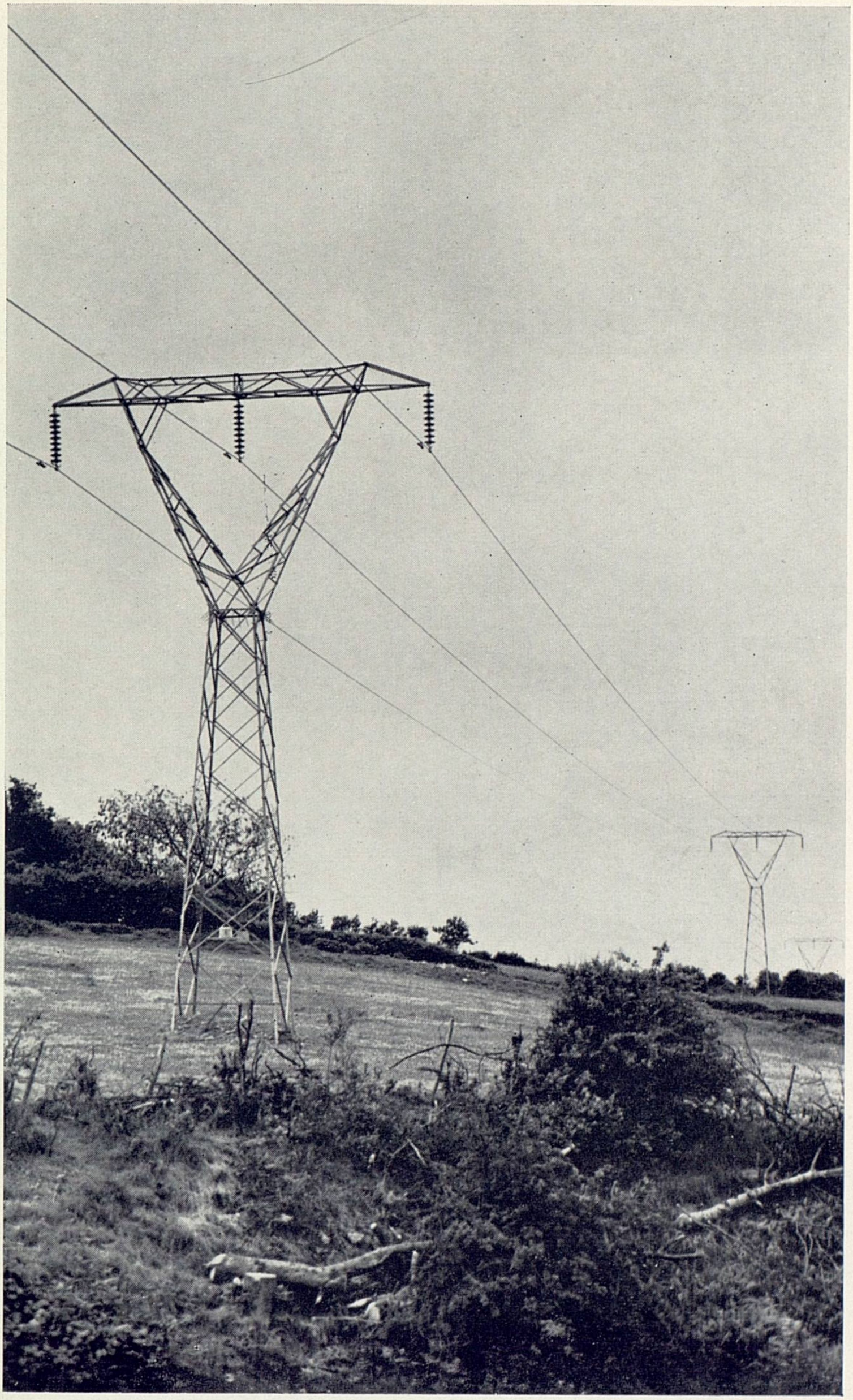
Depreciation has been charged in the foregoing Accounts on the physical assets on the same basis as heretofore, and additions have been made to the reserve to provide a fund for the increase in costs of renewals of physical assets, the original cost of which has been fully covered by the amounts already set aside to Depreciation Reserve.

The value of certain intangible assets as classified by the Board's officials has been written off out of the amounts at credit of Capital Reserves with the approval of the Board.

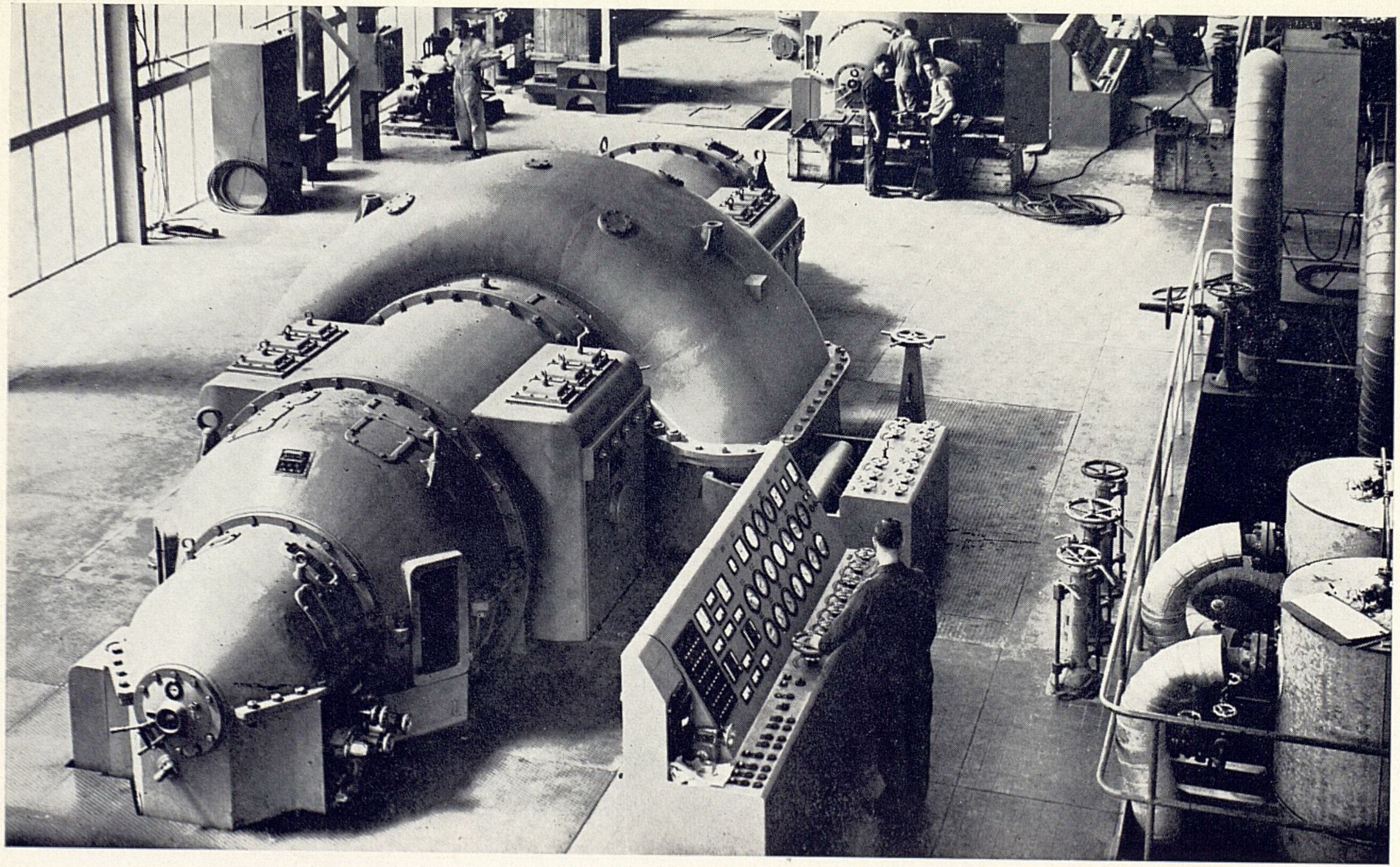
KENNEDY, CROWLEY & CO.,
Auditors.

4 AND 5 WESTMORELAND STREET,
DUBLIN.

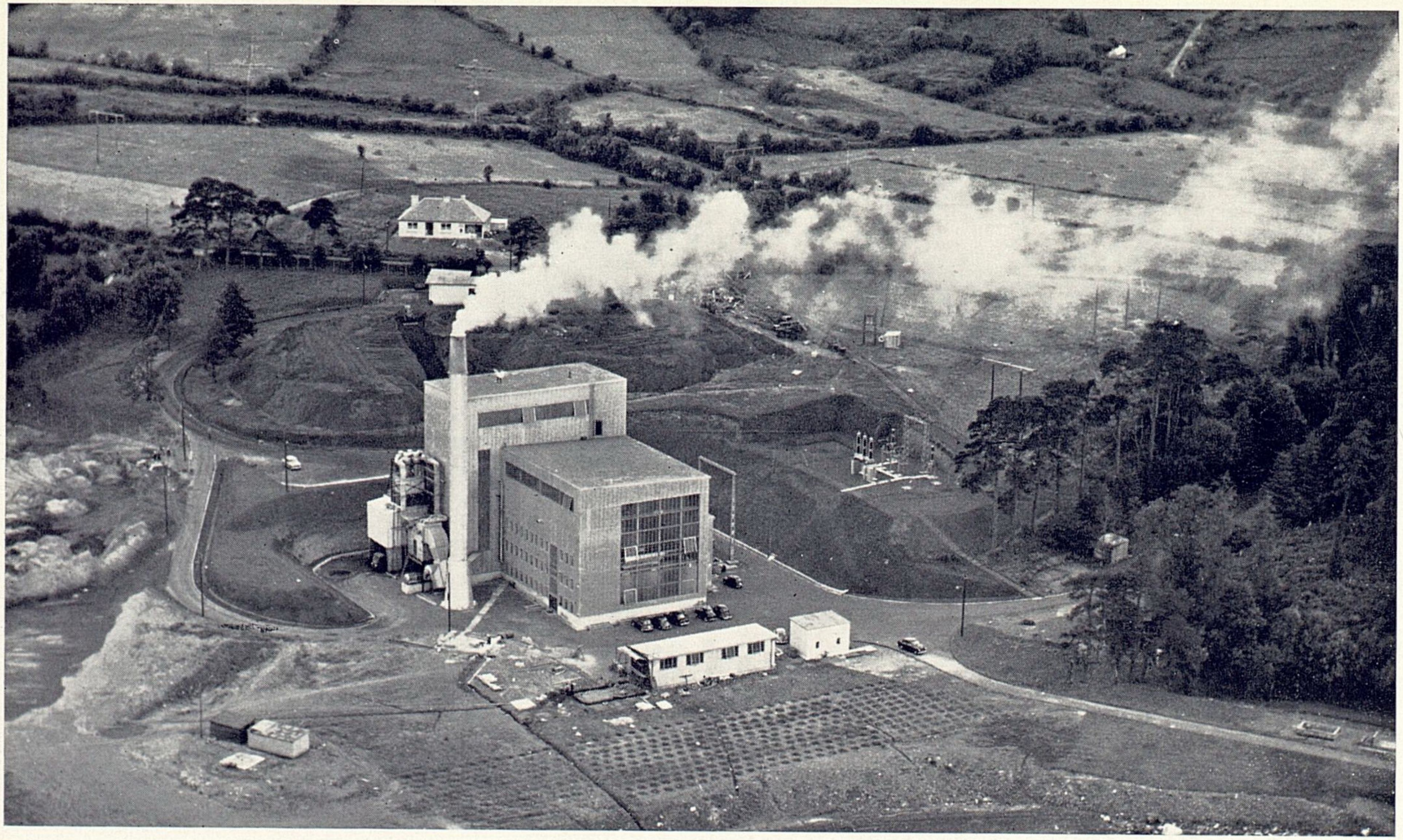
22nd June, 1960.



Arvagh—Dundalk 110 kV Line Showing New Type Steel Mast Construction.



Turbine Hall at Rhode Generating Station.



Small Station at Arigna to Burn Irish Coal.