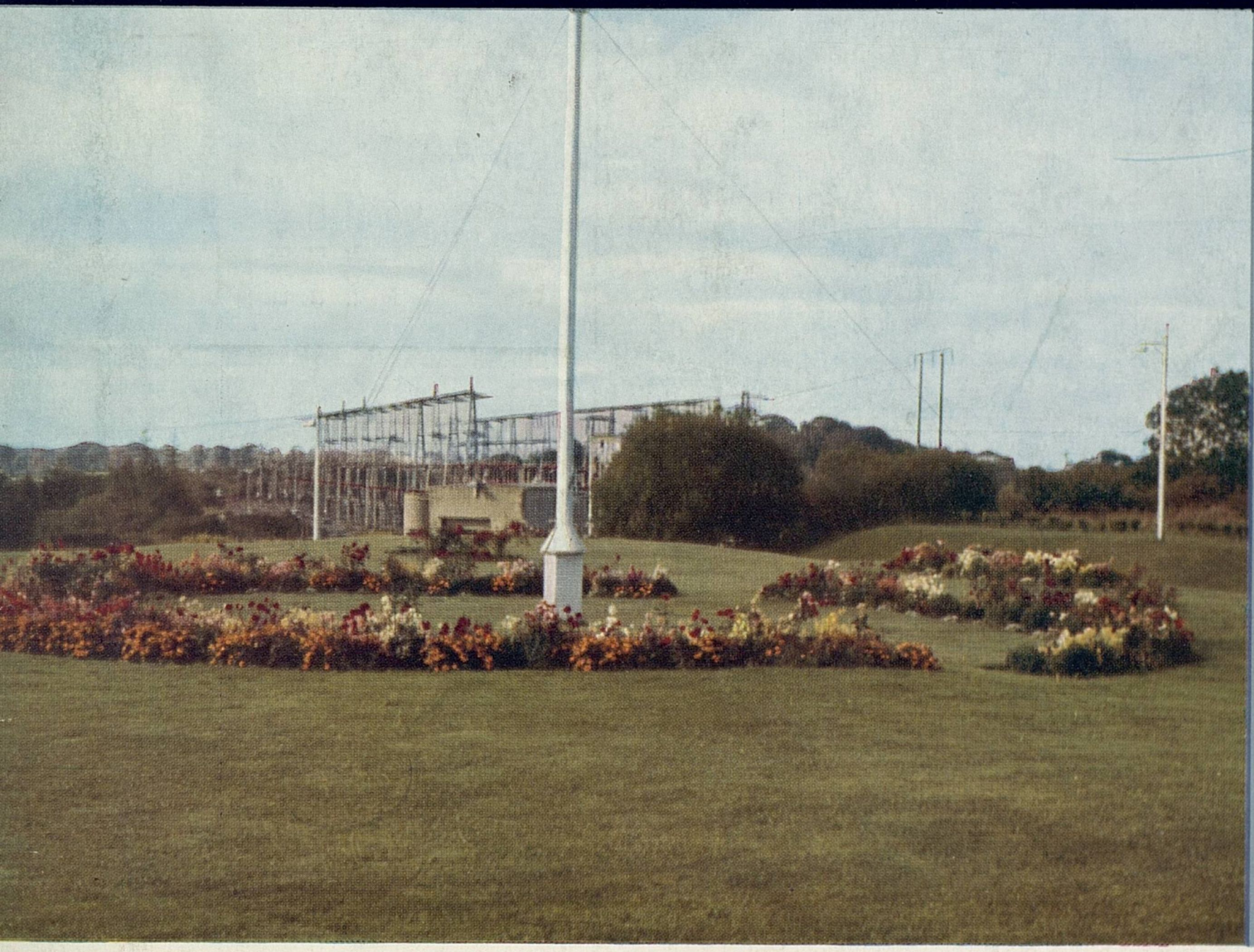
36th

ANNUAL REPORT

ELECTRICITY SUPPLY BOARD · IRELAND



For the year
ended 31st March
1963

INCLUDING REPORT ON FISHERIES

Board Members

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

J. P. DIGBY

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

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

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

J. A. RYAN

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

Secretary

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

Chief Engineer

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

Chief Accountant

L. J. BARRY, F.A.C.C.A.

Pr.7053

ELECTRICITY SUPPLY BOARD
27 LOWER FITZWILLIAM STREET · DUBLIN 2 · IRELAND



General Outline of the

GENERATION and TRANSMISSION SYSTEM

31st March 1963

HYDRO STATIONS	■
STEAM STATIONS	■
STEAM STATIONS PROJECTED	□
110KV TRANSFORMER STATIONS	●
110KV TRANSFORMER STATIONS PROJECTED	○
220KV TRANSFORMER STATION PROJECTED	○
110KV LINES	———
110KV LINES PROJECTED	- - - -
220KV LINES PROJECTED	- - - -
OTHER HIGH VOLTAGE LINES	———

CONTENTS

The cover picture shows garden landscaping at Ardnacrusha Generating Station.

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8	Water power investigations and hydrometric survey
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10	Analysis of units sold
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TO THE MINISTER FOR TRANSPORT AND POWER

REPORT of the ELECTRICITY SUPPLY BOARD
27 LOWER FITZWILLIAM STREET
DUBLIN 2

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, 1963.

The total units generated and purchased during the year were 2,715 millions. This represented an increase of 262 million units, or 10·7% over the previous year. Production from water power, which was considerably below average, amounted to 660 million units compared with 737 million units in the previous year. Generation from peat rose to 1,100 million units compared with 928 million units. During the year the Bellacorick (Co. Mayo) generating station, having an installed capacity of 40 MW, was put into commission.

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

hydro	25·2%
peat (sod)	20·8%
peat (milled)	19·1%
coal (native)	3·7%
oil/coal	31·2%

Generation from native sources amounted to 68·8% of the output.

The demand for electricity continues to grow vigorously. The increase in total units sold was 233 millions, an increase of 11·6% over the previous year. Of this increase 111 million units were for domestic consumption and 50 millions for motive power ; the increase in domestic consumption was due in part to the increased use of electricity for space heating during the abnormally cold spell.

The year was exceptional in that the severe cold weather experienced from the end of December to early March coincided with a period of water shortage at the hydro stations. During this period the demand for electricity was abnormally high. It was possible to maintain supply without load shedding although at times the margin of reserve plant capacity was negligible.

Sales of electricity realised £19,445,000, an increase of £1,714,000 over the preceding year. This represents an increase of 9·7% in the electricity revenue.

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

	Year ended 31st March 1963	Preceding Year
	£	£
Gross revenue (including miscellaneous revenue)	19,495,777	17,773,987
Less working expenditure on wages, fuel and other materials and overheads	10,677,941	9,336,774
Balance	£8,817,836	£8,437,213
From this balance the following charges are met :—		
Interest (Net)	3,959,270	3,906,899
Provision for plant renewal	3,169,000	3,041,000
Capital redemption	1,070,215	923,314
	£8,198,485	£7,871,213
Leaving residue—surplus	£619,351	£566,000

Taking credit for merchandise and installations profits, and allowing for the deficit on fisheries, the result for the year, as shown in the net revenue account, is a surplus of £635,872.

Against this surplus the flotation costs of the 6% Development Stock issued in March, 1963, have been written off. From the balance then remaining together with £89,647 brought forward from the previous year, £500,000 has been allocated towards the amortisation of certain Board Stocks the sinking funds for which do not provide for full amortisation within the loan periods. The residue carried forward to next year is £116,890.

The Commission of Inquiry under the Electricity (Temporary Provisions) Act, 1961, submitted its

report in November, 1962. It recommended, inter alia, that

" The E.S.B. should negotiate with the organisations concerned comprehensive national agreements to consolidate the existing wage and salary structure in the Electricity Supply Industry and to clarify rates of remuneration, overtime rates, allowances, hours of duty, leave, discipline and all such regulations bearing on employment."

With a view to implementing the above recommendation, negotiations have been commenced by the Board with the Unions representing the manual workers.

The blizzards experienced from December to February caused widespread damage to overhead lines and interruptions in supply to consumers in numerous areas, particularly in the south-east of the country. The maintenance crews in these areas had to face the most trying conditions over a period of many weeks. In carrying out their work they had to battle continuously against deep snow drifts while the persistence of ice conditions not only hindered access to broken lines but also made it more difficult and more hazardous to effect repairs. The staffs in the badly hit areas were reinforced by the transfer of constructional crews from the less affected areas and, despite the unprecedented conditions, their combined efforts resulted in the restoration of supply in a reasonable time.

Many compliments have been paid to the unselfish and devoted spirit displayed by the repair crews during this difficult period and the Board is pleased to endorse these well-deserved tributes.

The increase in recent years in the rate of growth of demand for electricity necessitated a review of future plant requirements and a revised programme of extensions of the generating plant up to 1968/69 was prepared by the Board and approved by the Minister for Transport and Power. This programme includes a new peat-fired station at Shannonbridge (Co. Offaly) as well as extensions of the peat-fired stations at Ferbane, Rhode and Lanesborough. A new oil-fired station at Great Island (Co. Wexford) is also provided for as well as extensions of the coal/oil fired stations at Marina (Cork) and Ringsend (Dublin).

Work on the extension of rural electrification continued throughout the year. At the end of the year 773 areas out of 792 projected under the Rural Electrification Scheme had been completed.

The Electricity (Supply) (Amendment) Act, 1962, made provision for increased capital subsidy in the case of unconnected houses in the developed areas and also in respect of the development of the remaining " uneconomic " areas. During the year development work was in progress in 12 areas leaving work yet to be started in a further 6. The deficit on the Rural Account for the year amounted to £801,391.

During the year the Board issued £7 million Stock entitled "E.S.B. 6% Development Stock 1982/87 " to finance the construction programme for the coming year. The Stock, issued at par, was fully subscribed on the date of issue.

STAFF

At the 31st March, 1963, the numerical strength of the Board's regular staff was 5,860. In addition there was a temporary staff of 2,827.

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

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

(Signed) *J. G. Gargan*, SECRETARY
11th June, 1963.

CAPITAL

The value of the capital assets brought into commission was £6,522,876 of which £1,293,933 related to rural electrification. The total investment in assets in productive use at 31st March, 1963, was :—

	£
Generation	52,465,800
Transmission	8,543,443
Distribution (includes rural £31,259,059)	54,817,506
Premises, equipment, transport, etc.	3,746,671
	£119,573,420

In addition, expenditure of £8,302,812 had been incurred on new capital works still under construction at the end of the year. The fixed capital investment was almost £128,000,000.

BORROWING POWERS

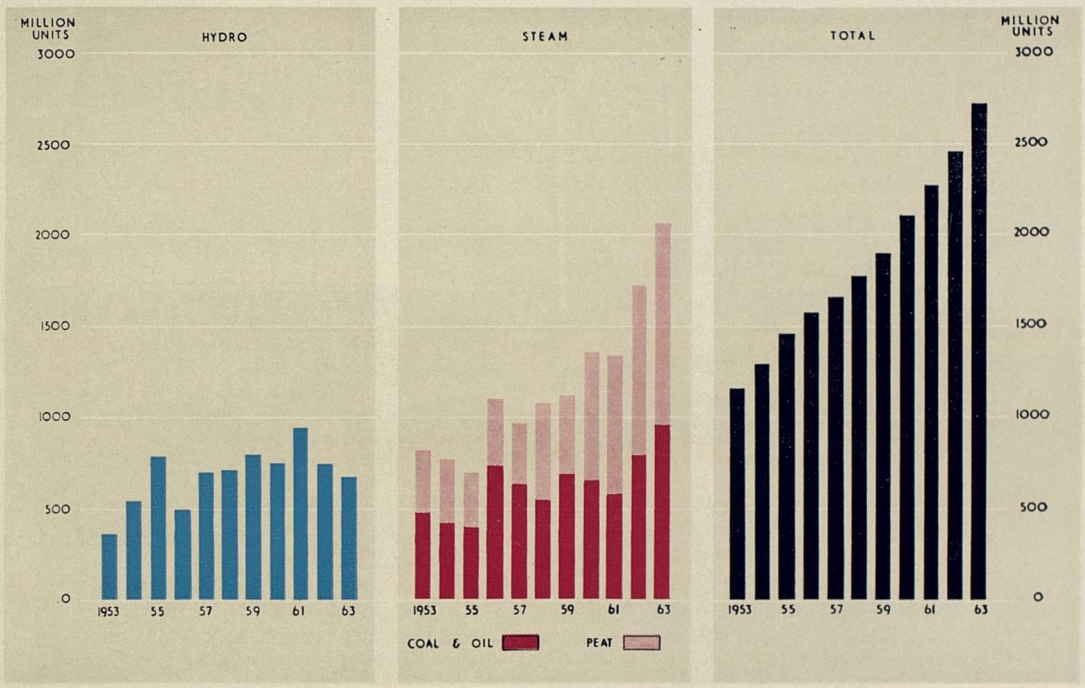
The capital requirements for the year were provided from internal resources, by temporary advances from the Trustees of the Superannuation Funds and from the proceeds of an issue in March, 1962, of £5 million 6% Development Stock 1982/87. To provide for the capital programme in 1963/64, a further issue of £7 million 6% Stock 1982/87, entitled "A" Stock, was made in March, 1963. After the first interest payment on 1st July, 1963, the "A" Stock will be amalgamated with the existing 6% Development Stock.

The Electricity (Supply) (Amendment) Act, 1962, authorises a capital expenditure not exceeding £135 millions for general purposes, excluding rural electrification. At 31st March, 1963, the Board had approved expenditure totalling £132,676,359 of which £88,314,361 represented electricity assets in commission, the balance, £44,361,998 representing either work in progress or work approved. In view of the considerable expansion programme which the Board envisages, legislation is being sought to raise the authorised limit of capital expenditure.

The legislative limit to expenditure on rural electrification is £37 millions inclusive of the subsidy for rural development provided by the State. At the 31st March, 1963, the amount approved was £32,678,588 of which £31,259,059 represents assets in commission and £1,419,529 work in progress or approved.

ELECTRICITY PRODUCTION

The diagram below illustrates the output of the generating stations each year since 1953.



INCREASE IN UNITS GENERATED AND PURCHASED

The units generated and purchased showed an increase of 262 million units or 10·7% higher than the preceding year. The annual load factor, on the basis of units generated, was 48·9% compared with 46·2% in the previous year.

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



Bellacorick Generating Station, Co. Mayo.

GENERATION

With the addition of 40 MW of milled peat fired plant brought into commission at Bellacorick station, Co. Mayo, during the year and the transfer of a 12·5 MW set from North Wall to Portarlington, the installed capacity of the Board's generating stations at 31st March, 1963 was :

	MW
hydro plant	219
steam plant (coal/oil)	287
steam plant (sod peat)	117·5
steam plant (milled peat)	140
	763·5

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

The following additional generating plant, amounting to 526 MW, was under construction or being planned.

RHODE STATION, Co Offaly

Milled Peat

The extension of the station by an additional 40 MW unit was nearing completion.

Scheduled completion date summer 1963.

SHANNONBRIDGE STATION, Co. Offaly

Milled Peat

This is a new station designed for an ultimate capacity of 80 MW. Constructional work on the buildings and the first generating unit was in progress.

Scheduled completion date for the first 40 MW set, 1964/65.

FERBANE STATION, Co. Offaly

Milled Peat

The existing station is being extended by the addition of a single 30 MW unit. Buildings were nearing completion and plant erection was in progress.

Scheduled completion date 1964.

MARINA STATION, Cork City

Oil

The existing station is being extended to house an additional 60 MW unit. Building work was nearly completed and the erection of the plant was well advanced.

Scheduled completion date 1963/64.

RINGSEND STATION, Dublin City

Oil

Work was proceeding on the building to house two additional 60 MW units and the manufacture of the plant was in progress.

Scheduled completion date 1965/66.

A further extension of this station by a 60 MW unit was decided upon and orders for the main plant were placed.

Scheduled completion date 1966/67.

LANESBOROUGH STATION, Co. Longford

Milled Peat

This station is being extended and a 40 MW unit, fired by milled peat, installed. Site development work was completed and the main civil engineering contract was placed.

Scheduled completion date 1965/66.

NORTH WALL STATION, Dublin City

Oil

To replace the set transferred to Portarlington, a new quick-starting 16 MW unit is being installed. The civil construction works were nearing completion and erection of the plant had started.

Scheduled completion date 1963/64.

GREAT ISLAND, Co. Wexford

Oil

This is a new station with an initial installation of two 60 MW units. Site investigation and design work were in progress.

Scheduled completion dates, 1967/68 for No. 1 unit and 1968/69 for No. 2 unit.

WATER STORAGE AND RIVER CONTROL

The inflows to the catchments at the Shannon, Erne, Lee and Clady varied between about 75% and 85% of the long term average flows. Generally the inflows from May to July and for January and February were well below the average. The inflow to the Liffey catchment for the year was about average. The utilisation of the available flows was practically 100% at all stations except Carrigadrohid and Inniscarra.

The important hydrometric figures for the hydro stations are given in Appendix 9.

The total average inflows for the calendar year 1962 were :—

	m^3/sec.
River Shannon at Killaloe	168·2
,, Liffey at Pollaphuca	7·7
,, Liffey at Leixlip	12·1
,, Erne at Ballyshannon	88·1
,, Lee at Inniscarra	21·9
,, Clady at Gweedore	3·7

WATER POWER INVESTIGATIONS AND HYDROMETRIC SURVEY

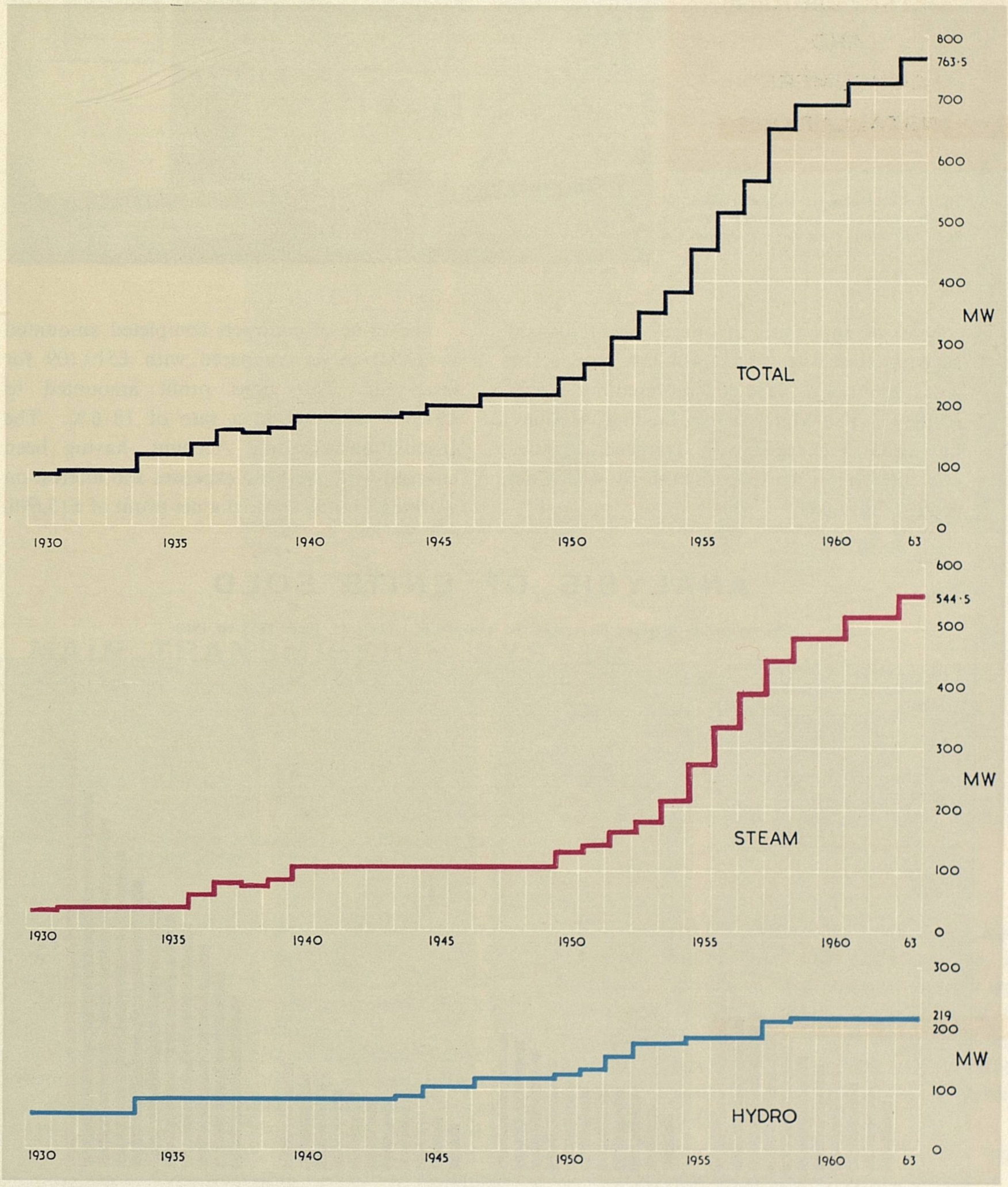
The collection of data with a view to the investigation and possible later development of further water power resources continued.

An examination of the ordnance maps of the country to locate potential sites for the possible future development of pumped storage projects was completed.

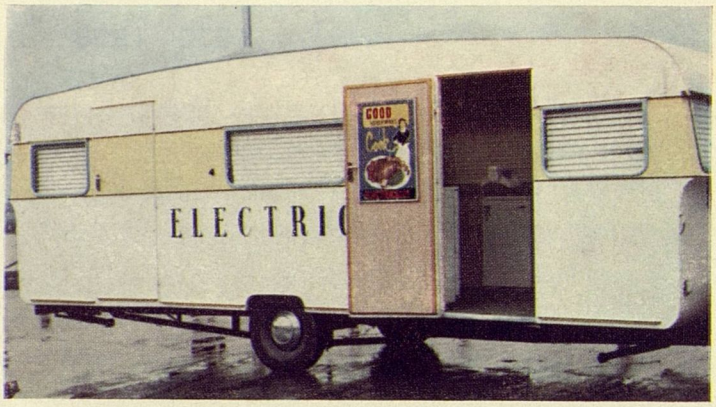
The collection of hydrometric data on the Rivers Shannon, Liffey, Erne, Lee and Clady was continued.

INSTALLED GENERATION CAPACITY

1930—1963



SALES OF APPLIANCES AND CONSUMERS' INSTALLATIONS.



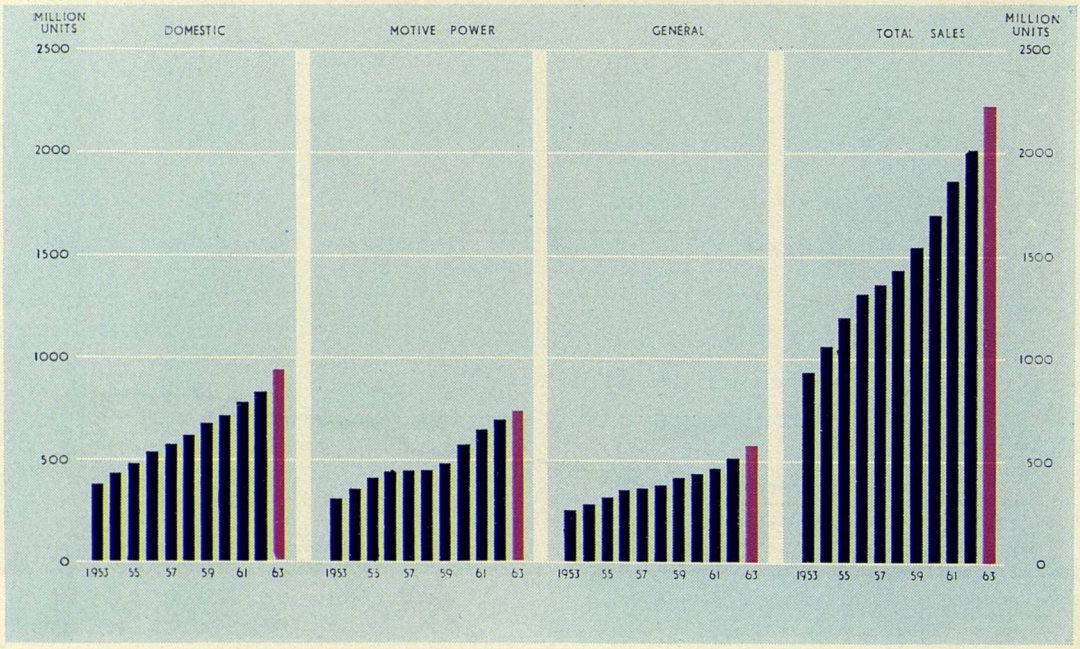
The E.S.B. Demonstration Caravan, in which cookery and home laundry demonstrations are given throughout the country.

Sales of appliances amounted to £1,204,630 as compared with £1,115,414 last year. The gross profit was £236,605 representing a rate of 19·6%. The Merchandise Trading Account, having been charged with overhead expenses and interest on working capital, showed a net profit of £15,938.

The value of contracts completed amounted to £493,736 as compared with £510,109 for last year. The gross profit amounted to £91,689 representing a rate of 18·6%. The Installations Trading Account, having been charged with overhead expenses and interest on working capital, showed a net profit of £15,696.

ANALYSIS OF UNITS SOLD

The following diagram illustrates the analysis of units sold, from 1953 to 1963



MAIN TRANSMISSION SYSTEM



Snow and ice caused severe damage to power lines in all parts of the country during the worst winter in years.

Plans were completed for the 220 kV line from Shannonbridge to Cork on which work is due to commence in the summer of 1963. Orders were placed for materials for the proposed 220 kV line Shannonbridge to Dublin.

Ninety-four miles of 110 kV overhead line were constructed. They included a section between Cathaleen's Fall generating station and Donegal town, an extension to Haulbowline Island and a line from Ferbane to Cahir. Work was practically completed on the line from Arklow to Wexford and work began on certain extensions and re-arrangements in the greater Dublin area.

The new 110 kV stations at Carrigaline, Castlebar and Haulbowline and extensions to the stations at Carrick-on-Shannon and Galway were completed. Work in hand at the close of the year included extensions to the existing stations at Cahir, Carrickmines, Limerick and Wexford, in addition to the underground cable tie between Ringsend and Carrickmines.

This is a noteworthy advance on the older types of oil-filled cable systems in that the cable is installed in steel pipes filled with an inert gas maintained at a pressure of several atmospheres.



DISTRIBUTION SYSTEM

Repair work being carried out on a 120 foot 38 kV mast outside Waterford City damaged during the blizzards in early January.

The following extensions of the high tension and low tension networks were carried out :

38 kV overhead lines	net increase 104 miles
10 kV overhead lines and underground cables	net increase 47 miles
low tension overhead and underground mains	net increase 52 miles

Three 38 kV transformer stations were completed and put into commission at Carlow, Kingsbridge (Dublin City), and Milltown (Co. Kerry).

One hundred and ninety-two 10 kV and four 5 kV transformer stations were completed ; fifteen 10 kV and two 5 kV transformer stations were retired from service.

The operating voltage in eleven stations was increased from 5 kV to 10 kV.

RURAL ELECTRIFICATION



A section of the Rural Display at the Spring Show : the exhibit shows how fluorescent lighting controls the sprouting of seed potatoes.

During the year construction work was completed in nineteen areas. These included the final areas to be developed in the Board's Athlone, Dundalk, Limerick and Waterford Districts.

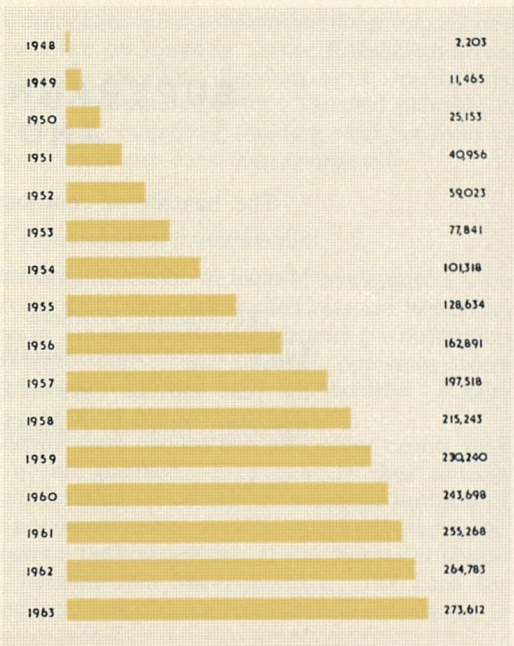
All of the 792 rural areas in the country have been canvassed, 788 (99·5%) have been selected and 773 (97·6%) have been completed. The areas now completed cover 22,626 square miles or an average of 29 square miles per area. The proportion of dwellings connected in the completed areas is approximately 76·3%.

The total value of materials used during the year was approximately £820,000 of which about £680,000, or 83% approximately, was obtained from home suppliers. The only significant price change during the year occurred in pole costs which increased by 6%.

Capital expenditure during the year was £1,561,867. The total invested in the Scheme at 31st March, 1963, amounted to £32,348,049, of which £6,894,826 was by way of subsidy.

Under the provisions of the Electricity (Supply) (Amendment) Act, 1962, the Board is enabled to extend the benefits of the rural scheme to areas hitherto classified "uneconomic" and, on improved terms, to unconnected houses in developed areas.

The following diagram illustrates the cumulative total of consumers connected, under the rural electricfication scheme, as at 31st March each year from 1948 to 1963 :—



The consumption of electricity by rural consumers amounted to 478 million units as against 420 million units last year. The average consumption for all consumers supplied under the rural electrification scheme was 1,684 units as against 1,535 units in the preceding year—an increase of 9·7%. The average consumption per domestic consumer advanced from 972 to 1,069 units. The revenue earned was £5,489,587, representing an average price per unit of 2·76 d.

The use of electricity for farm purposes continued to increase. The outstanding feature was the successful development of artificial illumination for the control of sprouting of seed potatoes. About 1,000 fluorescent fittings specially designed for this purpose were installed in 150 farms. The majority of the farms are located in the relatively frost free areas of the country where the production of early potatoes for the export market is being developed. Experimental work on the barn drying of hay continued.

A significant expansion took place during the year in the development of co-operative water schemes. At the end of the year, 64 of these schemes had been completed and 55 were in various stages of design or construction. Present indications are that this activity will continue to increase.

The Board again sponsored five different types of educational courses run by the Irish Countrywomen's Association at " An Grianan," Termonfeckin, Co. Louth.

The Board appreciates the co-operation it received from the Government Departments, University Authorities, An Foras Taluntais, County Committees of Agriculture and the various Rural Organisations in its efforts in promoting the use of electricity in rural areas.

SUPERANNUATION SCHEMES AND TRIBUNALS

The number of contributing members in the General Employees' Superannuation Scheme at the end of the year was 2,092 and in the Manual Workers' Superannuation Scheme 2,676.

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



The design which was awarded first prize in the E.S.B.'s Architectural Competition for a new Head Office building.

PREMISES

HEAD OFFICE BUILDINGS

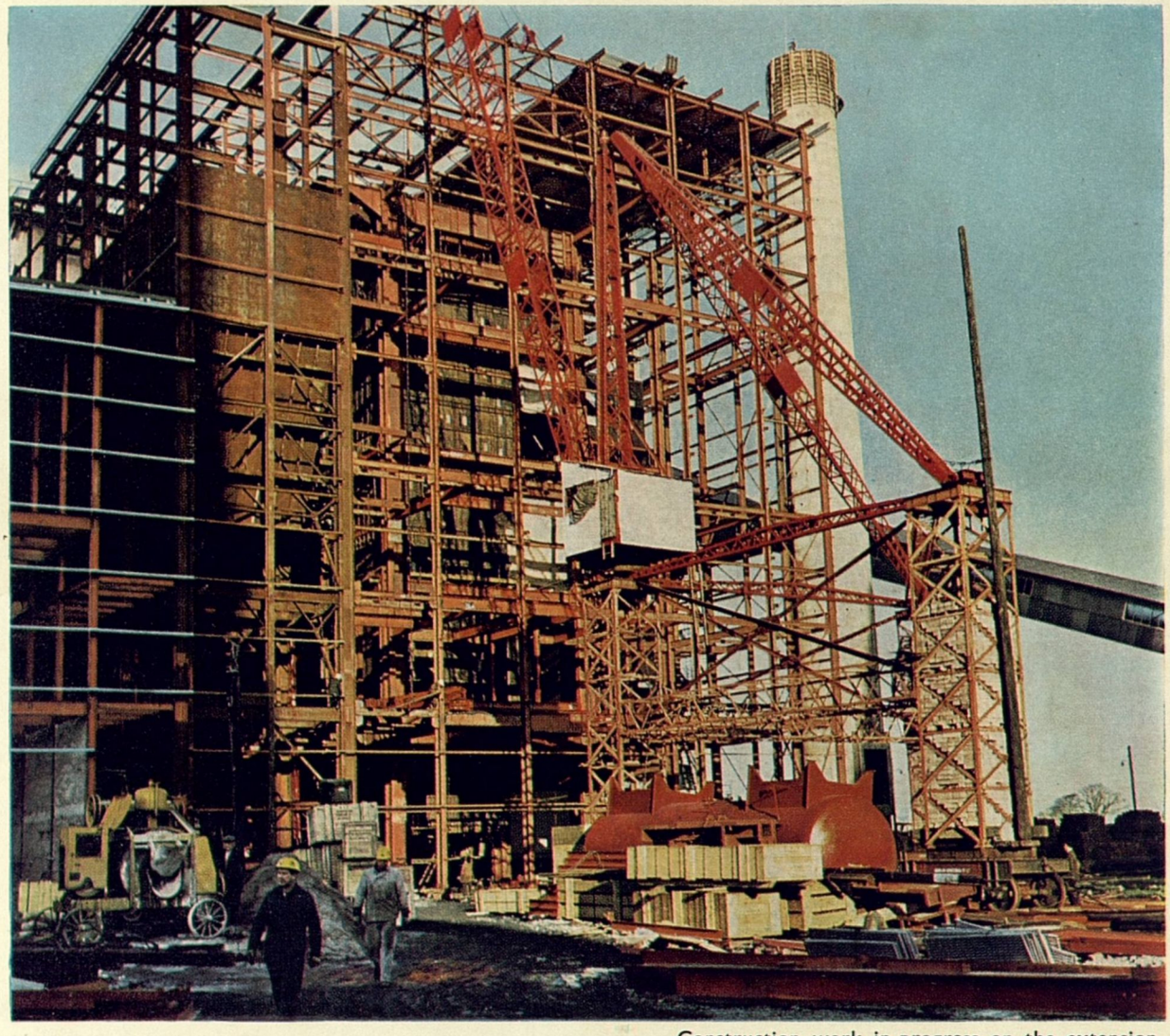
The architectural competition for a design for the proposed new frontage of the head office buildings in Lower Fitzwilliam Street resulted in the Assessors awarding the first prize to Messrs. Stephenson, Gibney and Associates, Dublin. Detailed planning is proceeding with a view to commencing building work as soon as the necessary statutory procedures have been completed.

GENERAL

Extensions to the Sligo and Athlone district headquarters were in progress and improvements were made at the Cork and Waterford premises ; extensions to Tralee premises are planned ; construction work is expected to start soon on the Limerick operation/stores depot and on staff canteens at Ferbane and Ardnacrusha. A sales training centre was provided at Merrion Square.

Six new service depots were opened and nine other depots were under construction or are planned. Extensions to four existing depots are under consideration. Premises in a central position in Dun Laoghaire were purchased and renovation works will start soon.

Work is in progress on the construction of staff houses at Gweedore, Ardnacrusha, Ferbane and Shannonbridge. The need for more houses at other locations, arising from station extensions, is being examined.



Construction work in progress on the extension to the boiler house at Ferbane Generating Station.

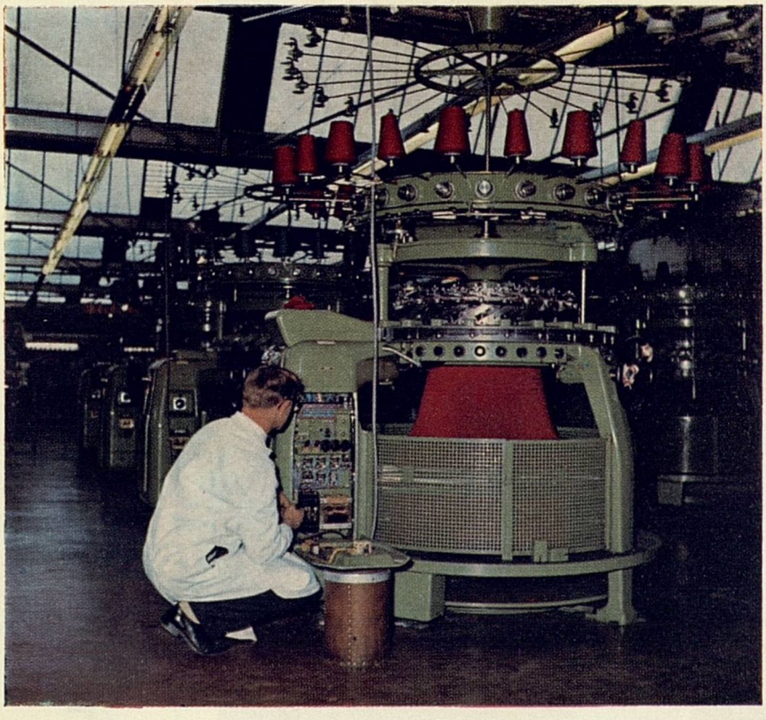
ELECTRICITY LOOKS TO THE FUTURE

The E.S.B.'s programmes of expansion and training are designed to meet the industrial, agricultural and domestic demands of the years ahead.





A chemist at work in a power station laboratory.



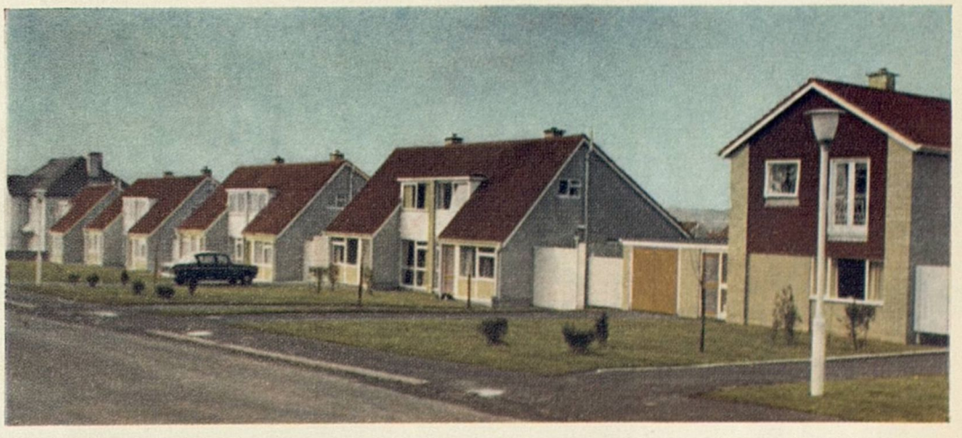
The Chairman presents E.S.B. scholarship awards to students who successfully completed Hotel and Institutional Management Courses.

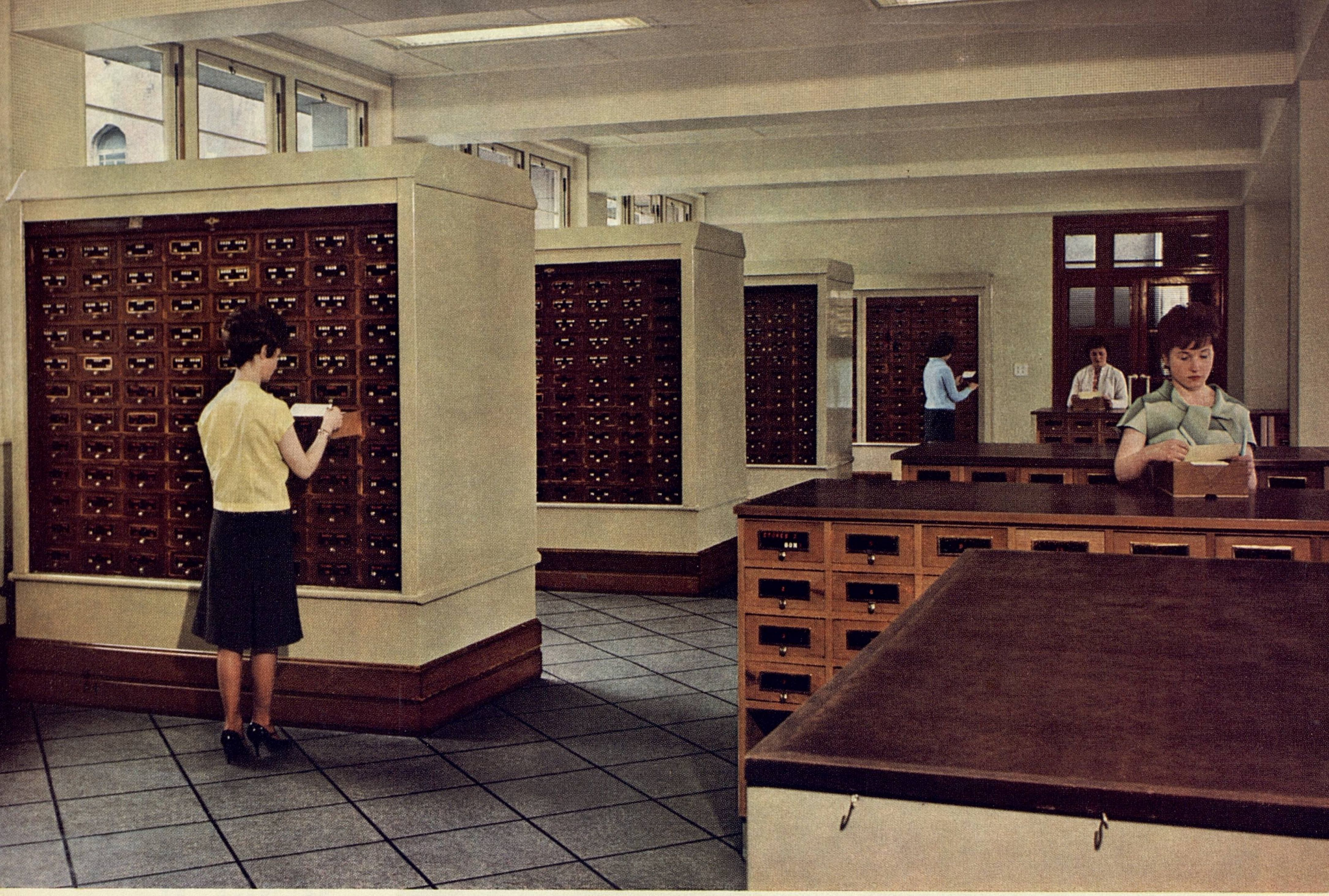


Top left—Demonstrator trainees attend special courses at the E.S.B. Training School.

Above—Electric power plays a prominent part in industrial development. This photo was taken at one of the textile factories on the Shannon Industrial Estate.

Right—Portion of a building scheme where over 60 houses feature the Warm Home Plan.





An E.S.B. Ledger Room.

ACCOUNTS 1962-1963

ACCOUNT No. 1

Electricity Production Account for the Year Ended 31st March, 1963

	Fuel	Operating Expenses	Maintenance and Repair	Supervision and Local Administration	Works Cost	Per Unit Sent Out 1962/63	Per Unit Sent Out 1961/62	Depreciation and Renewals	Allocation of Interest and Capital Repayments	Total 1962/63	Per Unit Sent Out	Total 1961/62	Per Unit Sent Out
	£	£	£	£	£	Pence		£	£	£	Pence	£	Pence
GENERATION													
Coal/Oil													
North Wall	127,380	44,033	69,707	10,529	**251,649**	1·018	·859	71,000	85,840	**408,489**	**1·652**	**359,322**	**1·586**
Marina	419,228	67,026	69,677	16,251	**572,182**	·570	·612	115,000	155,328	**842,510**	**·839**	**775,216**	**·956**
Ringsend	729,260	103,281	78,417	17,843	**928,801**	·513	·564	180,000	313,154	**1,421,955**	**·785**	**1,360,158**	**·854**
Arigna	244,503	31,615	24,965	5,596	**306,679**	·780	·743	31,000	43,925	**381,604**	**·971**	**320,574**	**·953**
					2,059,311	·596	·620			**3,054,558**	**·884**	**2,815,270**	**·949**
Sod Peat (Machine)													
Portarlington	577,623	55,956	36,452	8,938	**678,969**	1·023	·969	50,000	67,659	**796,628**	**1·200**	**673,264**	**1·173**
Allenwood	837,827	62,646	53,079	11,205	**964,757**	·955	·963	82,000	105,426	**1,152,183**	**1·140**	**928,178**	**1·216**
Lanesborough	239,532	24,593	21,011	5,898	**291,034**	·885	·814	33,000	50,065	**374,099**	**1·137**	**399,336**	**1·031**
					1,934,760	·966	·931			**2,322,910**	**1·160**	**2,000,778**	**1·160**
Milled Peat													
Ferbane	835,684	76,736	61,385	14,539	**988,344**	·874	·788	127,000	196,715	**1,312,059**	**1·161**	**1,065,521**	**1·107**
Rhode	520,318	51,193	22,633	9,584	**603,728**	·824	·720	76,000	113,890	**793,618**	**1·083**	**680,029**	**·947**
Bellacorick	121,784	26,894	5,478	4,241	**158,397**	†	—	30,000	42,192	**230,589**	†	—	—
					1,750,469	·855	·759			**2,336,266**	**1·141**	**1,745,550**	**1·038**
Sod Peat (Hand-won)													
Four 5MW stations	193,739	55,091	36,539	5,828	**291,197**	1·312	1·311	47,000	72,210	**410,407**	**1·849**	**372,672**	**1·909**
Stand-by													
Pigeon House	221,355	73,056	50,884	15,144	**360,439**	—	—	77,000	90,273	**527,712**	—	**380,631**	—
TOTAL—FUEL STATIONS	5,068,233	672,120	530,227	125,596	**6,396,176**	·798	·776	919,000	1,336,677	**8,651,853**	**1·080**	**7,314,901**	**1·096**
Hydro													
Shannon	—	51,611	95,330	21,373	**168,314**	·139	·121	55,000	232,674	**455,988**	**·377**	**466,980**	**·336**
Erne	—	34,843	42,600	12,375	**89,818**	·094	·074	92,000	337,358	**519,176**	**·544**	**471,384**	**·410**
Liffey	—	17,397	21,313	8,162	**46,872**	·249	·391	26,000	79,104	**151,976**	**·807**	**162,089**	**1·202**
Lee	—	16,698	14,506	5,614	**36,818**	·121	·108	56,000	228,319	**321,137**	**1·056**	**307,860**	**1·063**
Clady	—	5,477	2,813	752	**9,042**	·209	·142	11,000	54,186	**74,228**	**1·715**	**63,974**	**·991**
TOTAL—HYDRO STATIONS	—	126,026	176,562	48,276	**350,864**	·130	·114	240,000	931,641	**1,522,505**	**·564**	**1,472,287**	**·486**
TOTAL—ALL STATIONS	5,068,233	798,146	706,789	173,872	**6,747,040**	·630	·570	1,159,000	2,268,318	**10,174,358**	**·950**	**8,787,188**	**·906**
*TRANSMISSION**	—	38,947	89,122	76,153	**204,222**	—	—	253,000	368,808	***826,030**	—	***1,485,537**	—
	5,068,233	837,093	795,911	250,025	**6,951,262**	—	—	1,412,000	2,637,126				
Electricity Purchased in Bulk										**12,952**	—	**6,961**	—
General Administration :							£						
Generation							416,087						
Transmission							166,395						
										582,482	—	**616,427**	—
Total Cost										**11,595,822**	**1·082**	**10,896,113**	**1·123**
Transferred to Revenue Accounts :							£						
Non-rural							8,892,753					**8,486,007**	
Rural							2,703,069					**2,410,106**	
										11,595,822		**10,896,113**	

† *Station recently commissioned*

* *See note on Capital Account*

Electricity (Non-Rural) Revenue Account for the Year Ended 31st March, 1963

ACCOUNT No. 2

Dr. *Cr.*

	£	1962/63 £	1961/62 £		1962/63 £	1961/62 £
To Electricity Production Account		8,892,753	8,486,007	**By Electricity Charges**	13,800,438	12,545,838
„ Distribution Charges :				**„ Meter and Other Charges**	155,447	148,406
Operation and maintenance	1,004,319					
Reserve for depreciation and renewals	686,378					
Interest and capital repayments	1,007,132					
Supervision and local administration	648,175					
		3,346,004	2,663,814			
To General Administration :						
Salaries and wages	734,761					
Travelling expenses	35,442					
Stationery	21,912					
Telephones and postage	12,949					
Lighting and heating	17,839					
Rents and rates	14,628					
Insurance	52,073					
Professional fees	17,879					
Publicity	112,903					
Maintenance of office buildings and equipment	39,224					
Staff training	81,988					
Pensions	72,213					
Capital charges—general assets	239,229					
Provision for bad debts	17,876					
Sundry expenses	15,857					
	1,486,773					
Less apportionments charged to :						
Production account	582,482					
Rural Revenue Account	301,727					
Capital Works and other accounts	147,871					
		454,693	433,858			
To Balance, carried to Profit and Loss Account		1,262,435	1,110,565			
		£13,955,885	£12,694,244		£13,955,885	£12,694,244

Electricity (Rural) Revenue Account for the Year Ended 31st March, 1963

ACCOUNT No. 3

Dr. *Cr.*

	£	1962/63 £	1961/62 £		1962/63 £	1961/62 £
To Electricity Production Account		2,703,069	2,410,106	**By Electricity Charges**	5,455,619	5,004,969
„ Distribution Charges :	£			**„ Meter and Other Charges**	33,968	31,994
Operation and maintenance	536,710			**„ Balance,** carried to Profit and Loss Account	801,391	689,681
Reserve for depreciation and renewals	1,009,622					
Interest and capital repayments	1,315,000					
Supervision and local administration	424,850					
		3,286,182	3,018,745			
„ General Administration		301,727	297,793			
		£6,290,978	£5,726,644		£6,290,978	£5,726,644

ACCOUNT No. 4

Profit and Loss Account for the Year Ended 31st March, 1963

Dr.	£	1962/63 £	*1961/62 £*	Cr.	1962/63 £	*1961/62 £*
To Interest payable to the Minister for Finance	2,791,777			By Interest and Capital Repayments :		
,, Interest on funded loan and E.S.B. loan stocks (*less* temporary investment earnings)	797,265			Production Account	2,637,126	*2,811,576*
,, Stock management and transfer charges	26,267			Non-rural Revenue Account	1,007,132	*698,430*
,, Other interest	775,176			Rural Revenue Account	1,315,000	*1,247,367*
		4,390,485	*4,212,769*	Administration	178,229	*175,176*
,, Reserves :				Fisheries Account	4,746	*4,747*
Repayment of capital advances from the Minister for Finance	674,050			Installations Account	10,300	*7,800*
Repayment of Funded Loan	8,998			Merchandise Sales Account	18,000	*14,100*
Sinking Fund provision for redemption of E.S.B. Stocks	388,309			Capital Works	291,309	*177,981*
		1,071,357	*924,408*			
		£5,461,842	*£5,137,177*		£5,461,842	*£5,137,177*
To Balance, transferred from Rural Revenue Account		801,391	*689,681*	By Balance, transferred from Non-Rural Revenue Account	1,262,435	*1,110,565*
,, Balance, carried to Net Revenue Account		619,351	*566,000*	,, Miscellaneous revenue	50,305	*42,780*
				,, Interest receivable	108,002	*102,336*
		£1,420,742	*£1,255,681*		£1,420,742	*£1,255,681*

ACCOUNT No. 5

Fisheries Account for the Year Ended 31st March, 1963

Dr.	1962/63 £	*1961/62 £*	Cr.	1962/63 £	*1961/62 £*
To Operation, preservation and other direct costs	33,927	*28,145*	By Sales of fish, letting of fishing rights and miscellaneous income	32,944	*19,819*
			,, Balance, carried down	983	*8,326*
	£33,927	*£28,145*		£33,927	*£28,145*
To Balance, brought down	983	*8,326*	By Balance, carried down	13,971	*21,356*
,, Salaries and sundry expenses	4,136	*4,725*			
,, Fishery rates	3,248	*2,652*			
,, Reserve for depreciation and renewals	1,900	*1,900*			
,, General overhead expenses and interest	3,704	*3,753*			
	£13,971	*£21,356*		£13,971	*£21,356*
To Balance, brought down	13,971	*21,356*	By Balance, carried to Net Revenue Account	15,113	*22,450*
,, Capital repayments	1,142	*1,094*			
	£15,113	*£22,450*		£15,113	*£22,450*

ACCOUNT No. 6

Installations Trading Account for the Year Ended 31st March, 1963

Dr.		1962/63	1961/62		Cr. 1962/63	1961/62
		£	£		£	£
To Cost value of work for which credit had not been taken at 31st March, 1962		146,035	132,044	By Credit taken for contracts completed and charged	493,736	510,109
,, Cost of installation work carried out during the year		419,357	434,035	,, Cost value of work for which credit has not yet been taken	163,345	146,035
,, Gross profit, carried down		91,689	90,065			
		£657,081	£656,144		£657,081	£656,144
	£					
To Salaries, wages and State Insurance	43,299			By Gross profit, brought down	£91,689	£90,065
,, Travelling expenses	4,815					
,, Rents and rates	324					
,, Sundry expenses	3,773					
,, General overhead expenses and interest as apportioned	23,782					
		75,993	74,538			
,, Balance, carried to Net Revenue Account		15,696	15,527			
		£91,689	£90,065		£91,689	£90,065

ACCOUNT No. 7

Merchandise Trading Account for the Year Ended 31st March, 1963

Dr.		1962/63	1961/62		Cr. 1962/63	1961/62
		£	£		£	£
To Cost of goods sold		932,030	843,737	By Sales	1,204,630	1,115,414
,, Direct cost in connection with sales		35,995	51,718			
,, Gross profit, carried down		236,605	219,959			
		£1,204,630	£1,115,414		£1,204,630	£1,115,414
	£					
To Direct salaries, wages, commission and travelling expenses	115,696			By Gross profit, brought down	£236,605	£219,959
,, Publicity	21,494					
,, Rents, rates and maintenance of premises	17,188					
,, Other expenses and provisions	15,966					
,, General administrative expenses and interest as apportioned	50,323					
		220,667	206,714			
,, Balance, carried to Net Revenue Account		15,938	13,245			
		£236,605	£219,959		£236,605	£219,959

Net Revenue Account for the Year ended 31st March, 1963

ACCOUNT No. 8

Dr.		Cr.	
	£		£
To Balance, transferred from Fisheries Account	15,113	By Balance, transferred from Profit and Loss Account	619,351
		£	
,, Balance, carried down	635,872	,, Installations trading profit 15,696	
		,, Merchandise trading profit 15,938	
			31,634
	£650,985		£650,985
To Transfer to reserve for renewals of credits (per contra) as additional provision for the renewal of plant	381,912	By Balance, brought down	635,872
,, E.S.B. 6% Development "A" Stock: Flotation expenses	108,629	,, Balance, brought forward from last year's account	89,647
,, E.S.B. Stocks Amortisation Reserve	500,000	,, Credits arising consequent on the retirement of assets and the sale of scrapped material	381,912
,, Balance, carried forward	116,890		
	£1,107,431		£1,107,431

Capital Account to the 31st March, 1963

ACCOUNT No. 9

Dr.

	Total at 31st March 1962 less retirements	Expenditure less retirements during year (a) and revision of Classfications (b)	Total at 31st March 1963 less retirements
	£	£	£
To Generation	50,173,927	2,291,873(a)	**52,465,800**
,, Transmission	14,902,080	484,322(a) (–)6,842,959(b)	**8,543,443**
,, Distribution	45,123,877	2,850,670(a) (+)6,842,959(b)	**54,817,506**
,, General	3,454,599	188,345(a)	**3,642,944**
,, Fisheries	88,423	15,304(a)	**103,727**
	£113,742,906	£5,830,514	**£119,573,420**
,, Capital Works in progress, including payments on account to contractors and others			**£8,302,812**
Total of Fixed Assets carried to Balance Sheet			**£127,876,232**

Note:
The revision of classifications refers to the transfer of the 38 kv system from Transmission to Distribution.

Cr.

		Total at 31st March 1963
		£
By Repayable Capital as per Statement No. 10		**£86,421,435**
,, Non-Repayable Capital :		
Contributions from Minister for Finance under Electricity (Supply) Acts towards capital cost of supplying rural areas	**6,894,826**	
Contributions from consumers and others for capital works	**1,590,614**	
,, Capital Reserves :		
Repaid capital, less intangible assets written off	**7,903,944**	
Provision for depreciation, renewal and retirement of physical assets, together with proceeds of sale of assets, less physical assets retired	**36,402.361**	
Total Capital Reserves (including non-repayable Capital)		**£52,791,745**
Total of Capital Receipts and Reserves carried to Balance Sheet		**£139,213,180**

ACCOUNT No. 10

Statement of Repayable Capital and Redemption thereof to the 31st March, 1963

	Total Receipts to 31st March 1963	Redeemed			Balance Outstanding 31st March 1963
		Total to 31st March 1962	Redeemed during year	Total to 31st March 1963	
	£	£	£	£	£
Minister for Finance :					
Advances under the Electricity (Supply) Acts and the Shannon Fisheries Act, 1935	**68,450,236**	6,323,136	674,050	6,997,186	**61,453,050**
Electricity Supply Board Stocks :					
5% redeemable 1966–1975	**10,000,000**	1,103,850	227,000	1,330,850	**8,669,150**
6% ,, 1968–1978	**5,000,000**	432,740	43,203	475,943	**4,524,057**
6% ,, 1982–1987	**5,000,000**	—	106,500	106,500	**4,893,500**
6% 'A' ,, 1982–1987	**6,390,676***	—	—	—	**6,390,676**
Funded loans and loan stocks :					
Local authority undertakings	**756,021**	756,021	—	756,021	—
New Ireland Assurance Co. Ltd.	**500,000**	—	8,998	8,998	**491,002**
	£96,096,933	£8,615,747	£1,059,751	£9,675,498	**£86,421,435**

* £7,000,000 stock issued. Further calls due on 25th April and 1st June, 1963.

Balance Sheet as at 31st March, 1963

Liabilities and Reserves		31/3/63	*31/3/62*
		£	£
Repayable Capital as per Capital Account		86,421,435	*79,889,144*
Capital Reserves as per Capital Account		52,791,745	*46,945,826*
		139,213,180	*126,834,970*
Loans under the Electricity Supply Board (Superannuation) Act, 1942		281,000	*218,604*
The Munster and Leinster Bank Limited Overdraft		—	*187,343*
Sundry Creditors		4,689,181	*3,284,690*
Electricity Supply Board 6% Stock 1968-78 Sinking Fund. (Incl. interest due but unpaid)		60,003	—
Reserves :	£		
Contingencies reserve	1,500,000		
Plant self-insurance—special risks	500,000		
Electricity Supply Board Stocks amortisation reserve	500,000		
Other reserves and provisions	38,500		
		2,538,500	*2,038,500*
Surplus :			
per Net Revenue Account		116,890	*89,647*
		£146,898,754	*£132,653,754*

Note :
At 31st March, 1963, there were outstanding contractual commitments in respect of capital and other expenditure, estimated to amount to £7,750,000

Assets	31/3/63	*31/3/62*
	£	£
Fixed Assets, as per Capital Account	127,876,232	*118,727,507*
Electricity Supply Board Stocks (nominal £397,841) at cost, held by the Munster and Leinster Bank Nominees Ltd., as depositaries of the Board	385,616	*225,422*
Sinking Fund Investment, at cost	59,100	—
Stocks on Hand and in Transit	4,711,549	*4,343,579*
Cost Value of Installation and Other Repayable Work in Progress	210,886	*182,394*
Sundry Debtors, after providing for bad and doubtful debts and including advances for goods not yet delivered	6,950,137	*5,912,640*
Temporary Cash Investment	6,000,000	*3,250,000*
Cash in Hand and with Banks	705,234	*12,212*
	£146,898,754	*£132,653,754*

Signed: T. Murray, *Chairman*
J. G. Gargan, *Secretary*

Signed: L. J. Barry, *Chief Accountant*

AUDITORS' REPORT

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

Allocations to the various Accounts, made by the Board's officials and approved by the Board, covering Overhead Expenses and Costs of Generation, Transmission and Distribution have been made on the same basis as in previous years. Interest and Capital Repayments have been allocated in accordance with a revised basis made by the Board's officials and approved by the Board. Additions have continued to be made to the Depreciation Reserve towards increased costs of renewals of physical assets, the original cost of which has already been fully provided.

We certify that the Balance Sheet as at 31st March, 1963, with the note thereon, exhibits a true and correct view of the state of the Board's affairs according to the best of our information and the explanations given to us, and as shown by the Books of the Board.

KENNEDY, CROWLEY & CO.
Auditors

4 and 5 Westmoreland Street,
Dublin 2.
18*th June*, 1963.

APPENDICES

No.

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

2 Growth of electricity sales and number of consumers.

3 Analysis of units sold.

4 Distribution at high tension of units generated.

5 Generation load duration and integrated load duration curves.

6 Generation statistics for the year and the number of units sent out in the preceding year.

7 Monthly outputs generated (kWh x 10^6) and supply purchased.

8 Particulars of generating plant.

9 Performance of generating plant.

10 Typical daily generation load curves.

11 Transmission system in commission at 31st March, 1963.

12 Progress of the rural electrification scheme.

13 Weekly generation (inside back cover).

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

District	Approximate population	No. of consumers at 31st March		Motive power units sold year ended 31st March	
				thousands	
	thousands	1963	1962	1963	1962
ATHLONE	**177·1**	**38,788**	**37,683**	**23,998**	**22,645**
Town	50·4	11,232	11,353	20,372	19,885
Rural	126·7	27,556	26,330	3,626	2,760
CORK	**302·1**	**73,876**	**72,254**	**110,902**	**102,549**
Town	167·3	44,946	44,278	97,725	91,376
Rural	134·8	28,930	27,976	13,177	11,173
DUBLIN NO. 1	**486·0**	**133,107**	**130,902**	**136,138**	**127,999**
Town	486·0	133,107	130,902	136,138	127,999
DUBLIN NO. 2	**305·7**	**80,907**	**77,329**	**135,135**	**134,455**
Town	228·0	64,267	61,078	120,549	121,669
Rural	77·7	16,640	16,251	14,586	12,786
DUNDALK	**227·0**	**51,513**	**50,522**	**94,465**	**84,955**
Town	75·2	19,276	19,023	74,951	67,318
Rural	151·8	32,237	31,499	19,514	17,637
GALWAY	**166·9**	**36,220**	**35,614**	**13,882**	**11,452**
Town	47·1	10,967	10,692	11,057	9,542
Rural	119·8	25,253	24,922	2,825	1,910
LIMERICK	**270·7**	**62,375**	**60,989**	**77,829**	**65,062**
Town	94·7	24,867	24,337	63,267	53,059
Rural	176·0	37,508	36,652	14,562	12,003
PORTLAOISE	**196·8**	**44,553**	**43,311**	**61,903**	**55,056**
Town	75·0	18,222	17,952	52,666	46,070
Rural	121·8	26,331	25,359	9,237	8,986
SLIGO	**252·0**	**57,036**	**54,704**	**15,543**	**14,550**
Town	46·4	12,144	11,923	8,663	7,381
Rural	205·6	44,892	42,781	6,880	7,169
TRALEE	**143·3**	**31,868**	**30,973**	**11,069**	**10,192**
Town	31·1	7,721	7,592	4,683	4,357
Rural	112·2	24,147	23,381	6,386	5,835
WATERFORD	**210·6**	**49,689**	**48,472**	**52,793**	**51,984**
Town	95·4	24,873	24,471	37,630	37,880
Rural	115·2	24,816	24,001	15,163	14,104
TOTALS	**2,738·2**	**659,932**	**642,753**	**733,657**	**680,899**
TOWN	1,396·6	371,622	363,601	627,701	586,536
RURAL	1,341·6	288,310	279,152	105,956	94,363

Appendix 2

GROWTH OF ELECTRICITY SALES AND NUMBER OF CONSUMERS

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

Year ended 31st March	Units generated (and purchased) millions	Units sold millions	Revenue from sales of energy thousands	Average price in pence per unit sold	Total consumers
			£		
1930 ..	60·948	43·177	478	2·66	48,606
1935 ..	206·106	156·964	1,258	1·92	103,037
1940 ..	406·999	318·552	1,946	1·47	172,545
1945 ..	406·273	319·010	2,458	1·85	228,008
1950 ..	784·776	626·174	4,774	1·83	310,639
1951 ..	972·951	770·377	5,584	1·74	343,376
1952 ..	1,032·697	835·326	6,531	1·88	372,743
1953 ..	1,163·616	929·641	7,628	1·97	402,395
1954 ..	1,295·520	1,051·746	8,517	1·94	435,985
1955 ..	1,461·736	1,192·172	9,522	1·92	461,901
1956 ..	1,573·150	1,306·642	10,465	1·92	509,546
1957 ..	1,647·713	1,352·642	11,555	2·05	547,910
1958 ..	1,774·821	1,424·645	12,903	2·17	570,345
1959 ..	1,898·215	1,549·402	13,784	2·14	590,921
1960 ..	2,096·027	1,692·154	14,724	2·09	610,946
1961 ..	2,262·307	1,863·578	16,263	2·09	628,241
1962 ..	2,453·001	2,005·098	17,731	2·12	642,753
1963 ..	2,714·903	2,238·536	19,445	2·08	659,932

Appendix 3

ANALYSIS OF UNITS SOLD

Class of supply	Units sold		Increase millions	Percentage increase
	Year ended 31st March, 1963 millions	Year ended 31st March, 1962 millions		
Domestic	933·168	821·575	111·593	13·6
General lighting ..	125·083	111·850	13·233	11·8
General heating, cooking and water heating ..	241·098	212·178	28·920	13·6
Night storage heating ..	152·697	126·445	26·252	20·8
Motive power	734·500	684·373	50·127	7·3
Public lighting	35·543	34·863	0·680	2·0
Miscellaneous	16·447	13·814	2·633	19·1
TOTALS	2,238·536	2,005·098	233·438	11·6

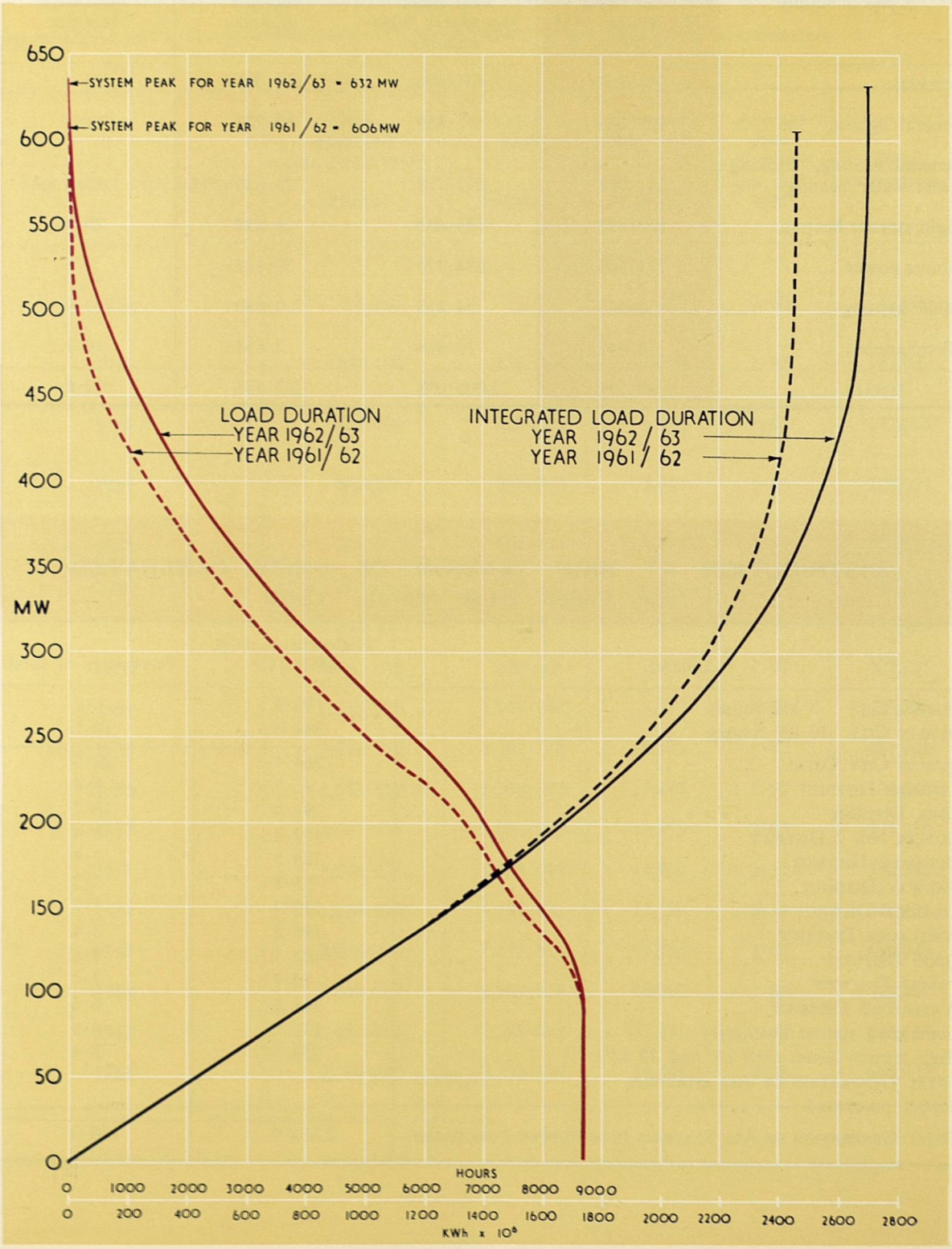
Appendix 4

DISTRIBUTION AT HIGH TENSION OF UNITS GENERATED
Year Ended 31st March, 1963

District		High tension units kWh × 10^6	Percentage of total
DUBLIN CITY 5 kV Supply		180·4	6·7
DUBLIN CITY 10 kV Supply		384·0	14·1
DUBLIN CITY TOTAL		564·4	20·8
ATHLONE DISTRICT		91·7	3·4
CORK DISTRICT		291·4	10·7
DUBLIN NO. 2 DISTRICT		419·4	15·4
DUNDALK DISTRICT		208·3	7·7
GALWAY DISTRICT		85·8	3·2
LIMERICK DISTRICT		210·4	7·7
PORTLAOISE DISTRICT		146·8	5·4
SLIGO DISTRICT		102·3	3·8
TRALEE DISTRICT		65·7	2·4
WATERFORD DISTRICT		168·2	6·2
Generating station auxiliaries		131·8	4·9
High tension losses (110 kV and 38 kV)		228·7	8·4
TOTAL GENERATION OF ALL STATIONS ..	2,709·0		
Supply purchased	5·9		
TOTAL GENERATION OF ALL STATIONS PLUS SUPPLY PURCHASED		2,714·9	100·0

Appendix 5

GENERATION LOAD DURATION
AND INTEGRATED LOAD DURATION CURVES
Year ended 31st March, 1963



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

Station	Year ended 31st March, 1963			Year ended 31st March, 1962
	Generated million units	Station use million units	Sent out million units	Sent out million units
ARDNACRUSHA	295·265	3·135	292·130	333·957
CLIFF	66·447	0·750	65·697	79·986
CATHALEEN'S FALL	166·391	2·267	164·124	196·486
CARRIGADROHID	21·010	0·362	20·648	20·109
INNISCARRA	53·154	0·674	52·480	49·455
POLLAPHUCA	23·948	0·777	23·171	14·931
GOLDEN FALLS	9·009	0·156	8·853	6·415
LEIXLIP	13·724	0·216	13·508	11·047
CLADY	10·576	0·172	10·404	15·580
FERBANE	295·693	24·211	271·482	231·006
RHODE	188·387	12·351	176·036	173·048
BELLACORICK	47·559	3·062	44·497	—
PORTARLINGTON	170·461	10·829	159·632	138·337
ALLENWOOD	257·909	15·129	242·780	183·611
LANESBOROUGH	82·926	3·626	79·300	93·343
CAHIRCIVEEN	15·299	1·399	13·900	14·084
MILTOWN-MALBAY	10·025	1·039	8·986	7·841
SCREEB	8·092	0·656	7·436	4·074
GWEEDORE	24·492	1·531	22·961	20·856
PIGEON HOUSE	76·352	7·621	68·731	24·837
NORTH WALL	64·405	5·068	59·337	54·503
RINGSEND	456·053	20·927	435·126	383·801
MARINA	251·611	10·262	241·349	195·115
ARIGNA	100·235	5·606	94·629	81·076
PURCHASED	5·880	—	5·880	3·044
TOTALS	2,714·903	131·826	2,583·077	2,336·542
Maximum daily generation, million units			11·163	10·363
Maximum load generated in kW			632,000	606,000

MONTHLY OUTPUTS (kWh × 10^6) OF THE GENERATING STATIONS AND SUPPLY PURCHASED

Year ended 31st March, 1963

Appendix 7

Month (Calendar)	PEAT STATIONS										COAL/OIL STATIONS					Total of steam stations
											DUBLIN			CORK		
	Ferbane	Rhode	Bella-corick	Port-arlington	Allen-wood	Lanes-borough	Cahir-civeen	Miltown-Malbay	Screeb	Gwee-dore	Pigeon House	North Wall	Rings-end	Marina	Arigna	
April	18·043	12·108	—	15·894	18·935	5·920	0·629	0·643	—	1·809	1·156	2·664	30·846	14·307	9·450	132·404
May	29·924	17·721	—	15·830	23·759	—	0·992	0·692	—	2·934	6·918	6·067	34·892	16·964	11·058	167·751
June	24·985	15·275	—	15·876	21·932	11·239	0·934	1·206	0·473	2·943	7·436	7·551	25·991	15·182	9·956	160·979
July	17·434	21·812	—	14·409	22·086	8·850	—	—	1·083	1·254	8·356	9·104	39·217	16·187	8·775	168·567
August	31·458	9·253	—	9·317	22·936	—	0·261	1·207	1·487	—	2·527	5·740	40·906	9·812	7·848	142·752
September	23·277	6·675	—	10·697	17·359	0·046	1·751	1·447	0·919	—	0·546	2·104	34·550	12·419	5·449	117·239
October	20·315	21·166	0·024	13·187	20·159	12·461	2·503	1·161	0·584	1·909	5·416	2·178	38·141	14·226	—	153·430
November	32·423	14·060	4·544	8·346	21·643	9·856	2·453	—	0·782	2·676	5·556	3·539	42·619	22·228	8·286	179·011
December	27·688	13·420	6·506	13·925	19·139	7·714	1·378	0·886	0·581	3·041	4·981	3·991	40·251	21·453	9·365	174·319
January	39·310	23·460	9·307	20·891	27·930	3·547	1·782	1·638	0·867	2·814	22·107	13·368	52·745	41·958	11·564	273·288
February	20·905	18·864	16·064	20·091	24·213	12·961	1·503	0·759	0·963	1·965	10·318	5·509	46·434	35·237	8·697	224·483
March	9·931	14·573	11·114	11·998	17·818	10·332	1·113	0·386	0·353	3·147	1·035	2·590	29·461	31·638	9·787	155·276
TOTALS	295·693	188·387	47·559	170·461	257·909	82·926	15·299	10·025	8·092	24·492	76·352	64·405	456·053	251·611	100·235	2,049·499

Month (Calendar)	HYDRO STATIONS										Total generation of all stations	Total supply purchased	Total generation and supply purchased
	River Shannon	River Erne		River Lee		River Liffey			River Clady	Total of hydro stations			
	Ardnacrusha	Cliff	Cathaleen's Fall	Carrigadrohid	Inniscarra	Pollaphuca	Golden Falls	Leixlip					
April	38·146	6·594	15·953	2·290	5·938	0·799	0·374	0·923	1·617	72·634	205·038	1·163	206·201
May	11·502	1·824	4·066	0·901	1·603	0·171	0·157	0·323	0·042	20·589	188·340	0·632	188·972
June	4·182	0·683	1·494	0·392	1·252	0·401	0·199	0·235	0·064	8·902	169·881	0·389	170·270
July	3·909	0·531	1·271	0·571	1·242	0·181	0·150	0·096	0·303	8·254	176·821	0·109	176·930
August	9·951	2·922	7·130	1·070	2·586	1·003	0·415	0·436	1·477	26·990	169·742	0·171	169·913
September	27·015	10·731	26·208	1·492	3·807	1·966	0·713	0·932	1·110	73·974	191·213	0·518	191·731
October	31·194	7·426	18·491	1·654	4·209	2·760	1·000	1·441	0·640	68·815	222·245	0·541	222·786
November	34·744	7·262	19·186	2·275	6·072	3·624	1·297	1·851	1·468	77·779	256·790	0·647	257·437
December	47·117	10·949	28·126	2·244	5·937	2·887	1·107	1·969	1·883	102·219	276·538	0·660	277·198
January	24·952	4·576	11·899	0·799	2·504	0·704	0·336	1·060	0·321	47·151	320·439	0·381	320·820
February	21·743	4·457	11·495	2·303	5·987	3·205	1·136	1·808	0·310	52·444	276·927	0·471	277·398
March	40·810	8·492	21·072	5·019	12·017	6·247	2·125	2·650	1·341	99·773	255·049	0·198	255·247
		66·447	166·391	21·010	53·154	23·948	9·009	13·724					
TOTALS	295·265	232·838		74·164		46·681			10·576	659·524	2,709·023	5·880	2,714·903

PARTICULARS OF GENERATING PLANT

Hydro Stations

Station	River	Catchment area km.²	Average available head metres	Average annual generation kWh × 10⁶	Generating sets		Type of turbine
					No.	Capacity each kW	
ARDNACRUSHA	Shannon	10,400	28·3	310	3 1	20,000 25,000 **85,000**	Francis Kaplan
POLLAPHUCA	Liffey	309	48·7	45	2	15,000 **30,000**	Kaplan
GOLDEN FALLS		312	16·6		1	**4,000**	Propeller
LEIXLIP		843	17·3		1	**4,000**	Kaplan
CLIFF	Erne	4,320	12·1	275	2	10,000 **20,000**	Kaplan
CATHALEEN'S FALL		4,350	29·7		2	22,500 **45,000**	
CARRIGADROHID	Lee	610	15·4	77	1	**8,000**	Kaplan
INNISCARRA		790	31·9		1 1	15,000 4,000 **19,000**	
CLADY	Clady	80	57·8	13	1	**4,000**	Francis

Steam Stations

Station	Location	Generating Sets					Boilers			
		No.	Capacity each kW	Pressure Psi	Temp. °F	Type of cooling	No.	Capacity each k.lb./hour	Type of firing	Fuel type
Pigeon House	Dublin City	1 4	10,000 20,000 **90,000**	250	750	Estuarine	10	100	Mech. Stoker and Oil-fired	Coal and Oil
North Wall	Dublin City	2	16,000 **32,000**	400	800	Estuarine	4 2	40 165	Oil-fired	Oil
North Wall (under construction)		1	**16,000**				1	165		
Portarlington	Co. Laoise	3	12,500 **37,500**	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
Ringsend (under construction)		3	60,000 **180,000**	1,150	950		3	550	Oil-fired	Oil

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
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	800	Lake	1	165	P.F.	Coal
Lanesborough	Co. Longford	1	**20,000**	400	800	River	1	220	Mech. Stoker	Sod Peat
Lanesborough (under construction)		1	**40,000**	900	950		1	380	P.F.	Milled Peat
Rhode	Co. Offaly	2	20,000 **40,000**	650	850	Tower	2	210	P.F.	Milled Peat
Rhode (under construction)		1	**40,000**	900	950		1	380		
Bellacorick	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
Great Island (under construction)	Co. Wexford	2	60,000 **120,000**	1,150	950	Estuarine	3	520	Oil-fired	Oil

PERFORMANCE OF GENERATING PLANT

Year ended 31st March, 1963

Hydro-electric Stations

Station	River	Rainfall at station	Total inflow*	Discharge through sets	Water utilisation	Average available head	Water per unit generated	Installed capacity	Units sent out	Plant load factor	Total cost per unit sent out
		inches	m^3/sec	m^3/sec	%	metres	m^3	kW	kWh $\times 10^6$	%	pence
ARDNACRUSHA	Shannon	37·09	152·3	142·2	100·0	28·6	15·19	85,000	292·130	39·7	0·377
POLLAPHUCA		34·80	9·3	7·1	100·0	48·9	9·38	30,000	23·171	9·1	
GOLDEN FALLS	Liffey	34·80	9·3	8·0	100·0	16·6	27·60	4,000	8·853	25·7	0·807
LEIXLIP		25·75	13·8	11·6	99·1	17·4	26·58	4,000	13·508	39·2	
CLIFF	Erne	38·21	79·3	74·8	100·0	12·1	35·49	20,000	65·697	37·9	0·544
CATHALEEN'S FALL				77·5	99·8	29·9	14·69	45,000	164·124	42·2	
CARRIGADROHID	Lee	42·93	19·0	17·6	95·4	15·2	27·46	8,000	20·648	30·0	1·056
INNISCARRA		43·09	23·6	22·1	96·0	33·2	13·33	19,000	52·480	31·9	
CLADY	Clady	50·50	3·0	2·5	98·4	—	7·50	4,000	10·404	30·2	1·715

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 18·2 million gallons per day (0·96 m^3/sec).

Shannon and Erne rainfall represent average of catchment area.

*Based on discharge through sets.

PERFORMANCE OF GENERATING PLANT

Year ended 31st March, 1963

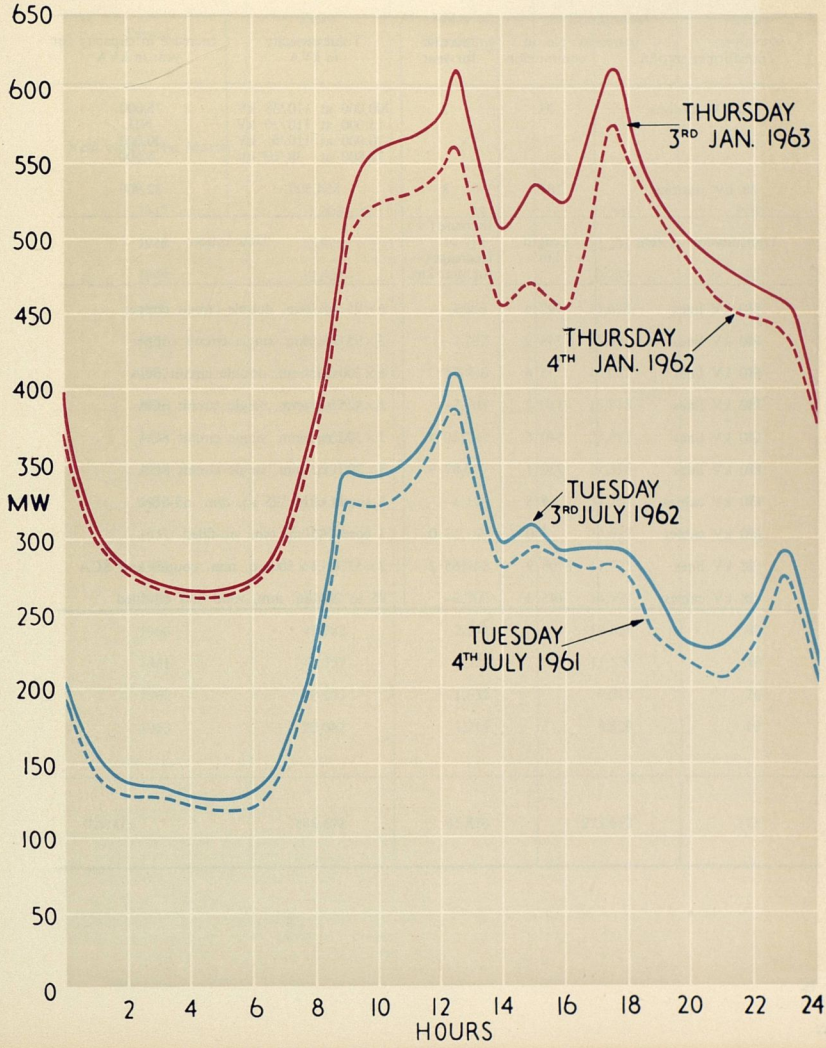
Steam Stations

Station	Location	Installed capacity kW	Units sent out kWh × 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	90,000	68·731	—	Coal Oil	13,900 31,500	—	—	—
North Wall	Dublin City	32,000	59·337	23·0	Oil	22,400	127,380	0·515	1·652
Portarlington	Co. Laoise	37,500	159·632	67·2	Sod Peat	193,500	577,623	0·870	1·200
Allenwood	Co. Kildare	40,000	242·780	73·6	Sod Peat	280,400	837,827	0·829	1·140
Marina	Cork City	60,000	241·349	47·8	Coal Oil	— 77,800	419,228	0·418	0·839
Ringsend	Dublin City	90,000	435·126	57·9	Coal Oil	1,600 131,000	729,260	0·403	0·785
Ferbane	Co. Offaly	60,000	271·482	56·3	Milled Peat Oil	551,500 2,900	835,684	0·739	1·161
Four 5 MW Stations	West Coast	20,000	53·283	33·1	Sod Peat	77,800	193,739	0·873	1·849
Lanesborough	Co. Longford	20,000	79·300	47·3	Sod Peat	80,200	239,532	0·728	1·137
Arigna	Co. Roscommon	15,000	94·629	76·3	Coal Oil	56,600 200	244,503	0·622	0·971
Rhode	Co. Offaly	40,000	176·036	53·8	Milled Peat Oil	343,500 1,400	520,318	0·710	1·083
Bellacorick	Co. Mayo	40,000	44·497	*	Milled Peat Oil	76,900 800	121,784	0·660	*

Milled peat figures in Ferbane, Rhode and Bellacorick 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 the Four 5 MW Stations are actual tonnages as received. The outputs are given for the year ended 31st March, but for convenience, costing figures are for 52 weeks.

**Station recently commissioned.*

TYPICAL DAILY GENERATION LOAD CURVES



Appendix II

TRANSMISSION SYSTEM IN COMMISSION

At 31st March, 1963

Transformer station	No. in commission	Increase for year	Total capacity in kVA	Increase in capacity for year in kVA
110 kV stations	23	3	700,000 at 110/38 kV 15,000 at 110/10 kV 20,000 at 110/6 kV 72,800 at 38/10 kV	75,000 NIL 20,000 5,600
38 kV stations	187	3	854,500	32,900

Transmission system	Length km.	Increase (+) or Decrease (—) for year km.	Description
110 kV lines	192·6	—	6×95 sq. mm. double circuit copper
110 kV lines	748·2	—	3×95 sq. mm. single circuit copper
110 kV lines	5·4	+1·3	6×300 sq. mm. double circuit SCA
110 kV lines	110·7	—	3×425 sq. mm. single circuit SCA
110 kV lines	540·6	+110·4	3×300 sq. mm. single circuit SCA
110 kV lines	930·1	+37·9	3×200 sq. mm. single circuit SCA
110 kV cables	9·8	—	3 single core 325 sq. mm. oil-filled
110 kV cables	3·0	3·0	3 core 185 sq. mm. oil-filled
38 kV lines	3708·9	+165·2	3×35 to 3×300 sq. mm. copper and SCA
38 kV cables	145·3	—	95 to 260 sq. mm. solid and oil-filled

Appendix 12

PROGRESS OF THE RURAL ELECTRIFICATION SCHEME

Period	Poles erected	Miles of line strung	Consumers connected	Areas completed
Year ended 31st March				
1947	1,300	39	Nil	Nil
1948	15,986	721	2,203	7
1949	32,002	1,730	9,262	30
1950	40,972	2,083	13,688	45
1951	42,423	2,232	15,803	49
1952	46,008	2,466	18,067	49
1953	48,059	2,703	18,818	49
1954	68,382	3,769	23,477	60
1955	91,391	4,977	27,316	75
1956	112,616	6,196	34,257	99
1957	91,794	5,149	34,627	80
1958	61,696	3,332	17,725	60
1959	50,113	2,700	14,997	45
1960	47,982	2,592	13,458	40
1961	43,757	2,322	11,570	40
1962	30,155	1,652	9,515	26
1963	22,062	1,215	8,829	19
TOTALS	846,698	45,878	273,612	773

TO THE MINISTER FOR LANDS

REPORT ON FISHERIES
27 LOWER FITZWILLIAM STREET
DUBLIN 2

In accordance with the provisions of Section 10 of the Electricity (Supply) (Amendment) Act, 1961, the Board presents the Annual Report on its fisheries and the Fishery Account for the year ended 31st March, 1963.

The run of salmon in the Shannon was the greatest since the hydro-electric development at Ardnacrusha over thirty years ago. The exceptionally heavy run of large grilse occurred in June and was still in progress at the end of the commercial fishing season in late July.

21,120 salmon were counted at Thomond Weir and 4,224 passed above Killaloe into the new spawning areas. Since 1959 over 6½ million salmon fry from the Board's hatchery have been released into the middle stretches of the Shannon. The Board is satisfied that the vast potential of the river as a rearing ground for Atlantic salmon is relatively untouched. A further substantial increase in the spawning stocks can be achieved only by the application of effective conservation measures and the Board has submitted proposals with this objective in view.

The Board is also engaged in the rehabilitation of the Erne Fisheries. To promote the development of the salmon fisheries on the Rivers Clady and Liffey, it is about to implement a programme which will include the expansion of its rearing station for young salmon.

Negotiations are in progress for the acquisition of the rod fishery on the River Clady.

In view of the serious depletion in the stocks of salmon in the River Lee, the Board decided to undertake immediately a five year development project designed to rebuild these stocks. The large-scale investigation, undertaken in conjunction with Fisheries Division, into smolt movement at the hydro-electric dams on that river was further extended.

HATCHERIES AND REARING STATIONS

The small stock of 1961 fry which had been retained in Parteen rearing station was successfully planted and the rearing station was in full production. This station was designed to rear young salmon for three months but operational experience made it possible to utilise it more efficiently as a production unit for a large turnover not only in young parr but also in salmon smolts.

The Board, in co-operation with the Dublin Board of Fishery Conservators, released in the River Liffey one-year-old salmon parr which had been purchased from the Salmon Research Trust. The 1962 Lee hatchery production was transferred to Parteen and reared to parr stage. In the autumn, these parr were returned to the River Lee with a proportion of previously imported stock.

Hatchery production figures for 1962/63 were as follows :

Hatchery	Salmon ova	Planted as eyed ova	Stock of ova/fry March '63	Losses during incubation
Shannon	1,212,000	Nil	1,182,000	2·5%
Lee ..	100,000	Nil	97,000	3·0%
Erne ..	759,000	Nil	751,000	1·0%

During 1962 great difficulty was experienced in obtaining adequate quantities of salmon ova. 150,000 ova were obtained from the state hatchery at Glenties and a further 50,000 were purchased from the Lismore hatchery. It was not possible to procure supplies from any source outside Ireland.

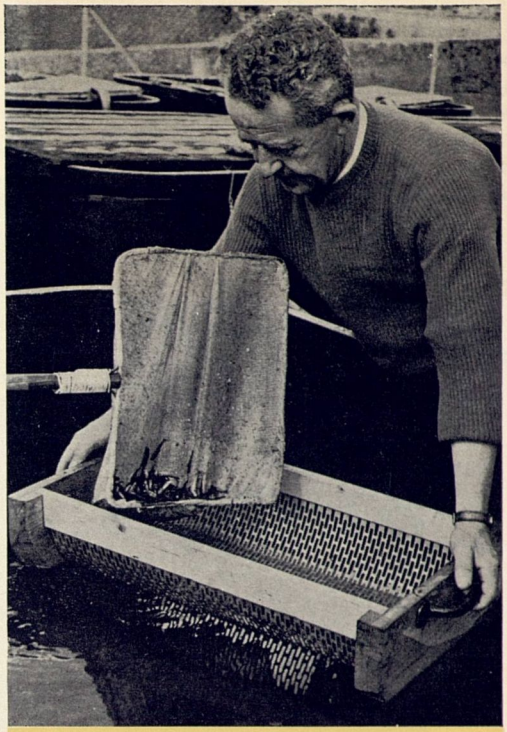
COMMERCIAL FISHING

72% of the salmon reaching Thomond Weir at Limerick continued to be released for propagation purposes and for angling. Owing to the heavy supply of grilse the prices in 1962 were seriously depressed in the traditional salmon markets. The Board was, however, fortunate in obtaining new continental outlets for its salmon and revenue from the sale of salmon from the Shannon rose from £12,534 in the previous year to £24,225.

There was also a good run of grilse in the river Erne. After 3,000 salmon had been counted at Cathaleen's Fall, netting was opened to the public. The revenue from the sale of the small number of fish which the Board took realised £1,697.

In the interests of stock conservation the Board did not operate its commercial fishery on the River Lee.

The development of the eel fisheries on the Shannon continued. 4,500,000 elvers passed upstream at Ardnacrusha and 1,600,000 were transferred from other rivers to the Shannon for feeding. Sales of eels from the commercial eel weir at Killaloe realised £5,224.

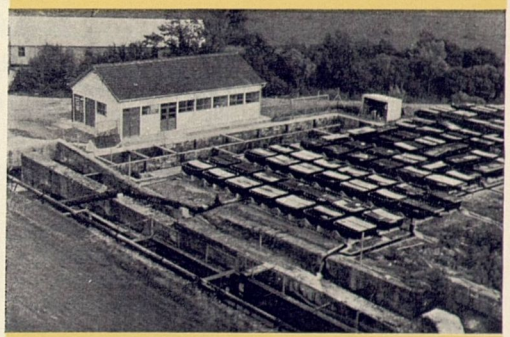


Young salmon are graded at Parteen.

CONSERVATION

The Liaison Committee, representative of the Fisheries Division, the Inland Fisheries Trust, Bord Failte and the Board continued to deal with the problems arising from the simultaneous development of the Shannon for salmon, trout and coarse fishing. Investigations into the Pollaphuca trout fishery continued.

The Board again contributed £500 to the Enniskillen Board of Fishery Conservators for the protection of the Erne fisheries.



Hatchery and rearing station at Parteen on River Shannon

ANGLING

Notwithstanding the heavy stocks of salmon in the Shannon in 1962, good sport was not provided until late in the season. Fishing in the spring of 1963 was reported to be the best since the hydro-electric development of the river.

The trout fisheries in the midlands are largely administered by the Inland Fisheries Trust and

local angling clubs. Generally weather conditions were reported unsuitable for good trout fishing. The development of coarse fish angling which has been sponsored by Bord Failte and the Inland Fisheries Trust continued successfully in many areas on the Shannon.

COUNT OF SALMON

The numbers of salmon counted during 1962 were as follows :

Thomond Weir, Limerick	21,120
Ardnacrusha Fish Pass	3,407
Parteen Fish Pass	817
Inniscarra Fish Pass	370
Carrigadrohid Fish Pass	94
Cathaleen's Fall Fish Pass	9,802
Gweedore Weir, River Clady	113
Leixlip	1,105

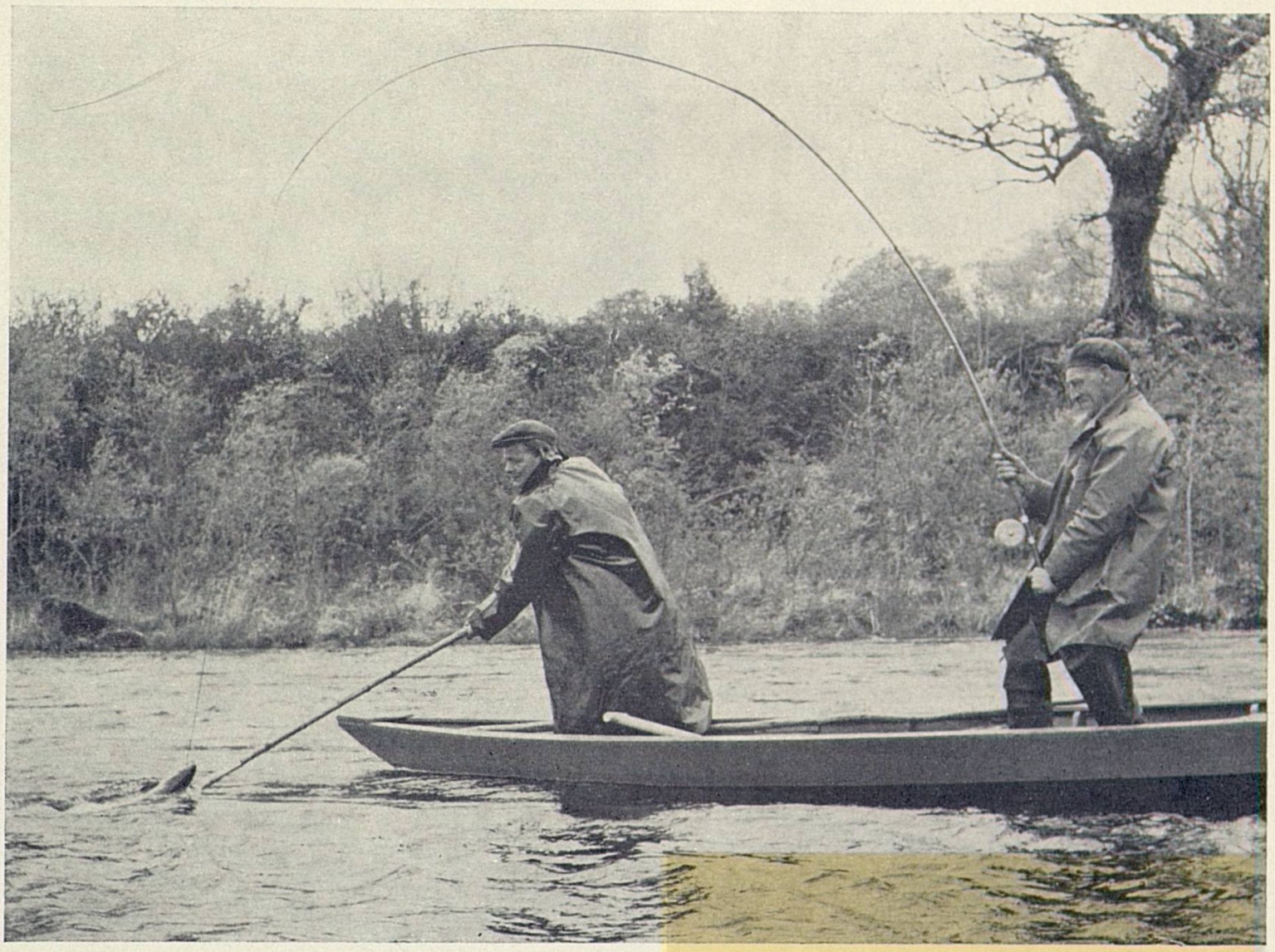
FINANCIAL

The financial aspects of the fisheries activities now being undertaken on the five river systems are shown in the Fisheries Account. Revenue rose from £19,819 to £32,944, almost entirely due to an increase in the sales of salmon from the River Shannon. The substantial costs now arising on hatcheries and preservation works are included in the total costs of £48,057 incurred during the year. A balance of £15,113 which represents promotional and development costs of the various fisheries is transferred to the Net Revenue Account.

The work was carried out during the year with the closest help and assistance of the staff of Fisheries Division, Department of Lands, and the Board wishes again to record its appreciation of the co-operation it received from the officers of the Division, the Ministry of Commerce Northern Ireland, Bord Failte Eireann, the Inland Fisheries Trust Incorporated and from the Boards of Conservators and many 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
11th June, 1963.

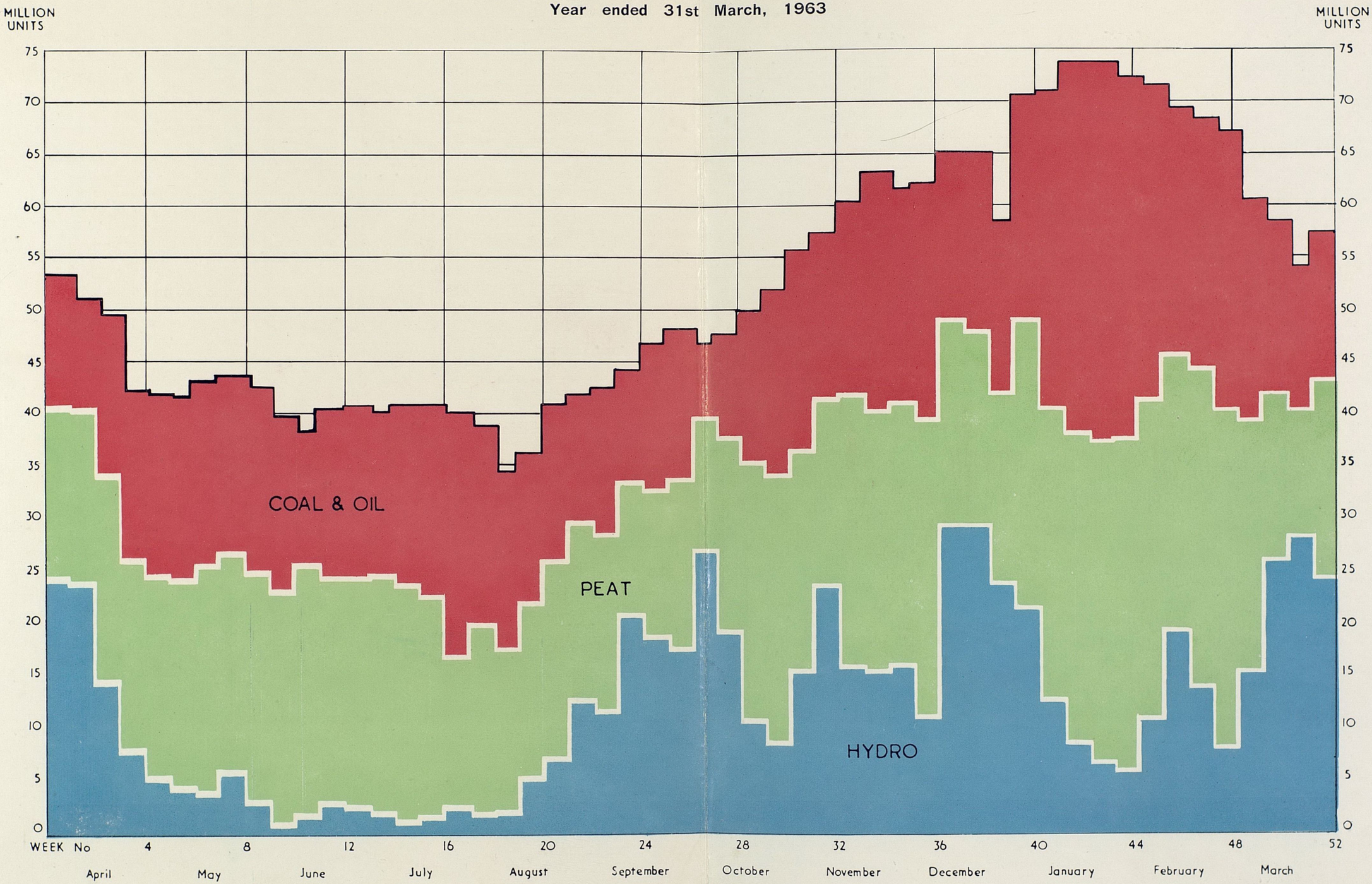


A salmon catch at Castleconnell —one of the well-known angling stretches on the River Shannon.

Appendix
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WEEKLY GENERATION

Year ended 31st March, 1963



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