1958-59

VICTORIA

STATE ELECTRICITY COMMISSION OF VICTORIA

THIRTY-NINTH ANNUAL REPORT

FOR THE

FINANCIAL YEAR ENDED 30TH JUNE, 1958

TOGETHER WITH

APPENDICES

PRESENTED TO PARLIAMENT PURSUANT TO SECTION 35 (*b*) OF STATE ELECTRICITY COMMISSION ACT No. 3776.

By Authority:
A. C. BROOKS, GOVERNMENT PRINTER, MELBOURNE.

No. 29.—2s. 9d.—2125/59.

COMMISSIONER SIR ANDREW W. FAIRLEY, K.B.E., C.M.G.

Appointed 1937, retired 31st December, 1957.

Table of Contents

Appendices

STATE ELECTRICITY COMMISSION OF VICTORIA

FEATURES OF 1957-58 OPERATIONS

	1957–58	1956–57	Increase or Decrease	Percentage
FINANCIAL				
INCOME—				
Electricity Sales .. .. £	37,155,517	33,823,207	+ 3,332,310	+ 9·9
Briquette Sales .. .. £	1,997,650	1,803,658	+ 193,992	+ 10·8
Brown Coal Sales .. .. £	782,524	800,535	— 18,011	— 2·2
Tramways .. .. £	104,707	107,854	— 3,147	— 2·9
Miscellaneous .. .. £	21,993	12,741	+ 9,252	+ 72·6
TOTAL INCOME .. .. £	40,062,391	36,547,995	+ 3,514,396	+ 9·6
EXPENDITURE (incl. interest and other expenditure during construction) .. .. £	40,042,209	35,763,387	+ 4,278,822	+ 12·0
PROFIT .. .. £	20,182	784,608	— 764,426	— 97·4
FIXED ASSETS—At 30th June—				
Expenditure .. .. £	258,552,762	235,943,064	+ 22,609,698	+ 9·6
Less Provision for Depreciation .. .. .. £	31,239,071	26,823,242	+ 4,415,829	+ 16·5
£	227,313,691	209,119,822	+ 18,193,869	+ 8·7
RESERVES—At 30th June .. .. £	8,929,998	8,922,189	+ 7,809	+ 0·1
ELECTRICITY PRODUCTION AND SALES				
MAXIMUM COINCIDENT DEMAND ON POWER STATIONS (1958 winter compared with 1957 winter) kW	1,102,800 (11.7.58)	1,016,860 (3.7.57)	— 85,940	— 8·5
ELECTRICITY GENERATED .. .. kWh–millions	5,113·1	4,763·1	+ 350·0	+ 7·3
ELECTRICITY SALES .. .. .. kWh–millions	4,184·5	3,859·6	+ 324·9	+ 8·4
NUMBER OF CONSUMERS (excl. Bulk Supplies)—At 30th June	619,969	590,906	+ 29,063	+ 4·9
AVERAGE kWh SOLD PER CONSUMER—				
Domestic .. .. kWh	2,363	2,255	+ 108	+ 4·8
Commercial .. .. kWh	5,358	5,170	+ 188	+ 3·6
All Consumers (excl. Bulk Supplies) .. .. kWh	4,867	4,718	+ 149	+ 3·2
Per Head of Population (Victoria) .. .. kWh	1,461	1,389	+ 72	+ 5·2
AVERAGE PRICE PER kWh SOLD—				
Domestic .. .. d.	2·27	2·29	— 0·02	— 0·9
Commercial .. .. d.	3·87	3·79	+ 0·08	+ 2·1
Industrial .. .. d.	2·06	2·03	+ 0·03	+ 1·5
All Consumers (excl. Bulk Supplies) .. .. d.	2·30	2·29	+ 0·01	+ 0·4
MOTORS CONNECTED—At 30th June—				
Number	152,081	144,626	+ 7,455	+ 5·2
Horse-power	802,992	772,088	+ 30,904	+ 4·0
NUMBER OF FARMS SERVED—At 30th June	38,999	35,852	+ 3,147	+ 8·8
BRIQUETTES—				
Produced .. .. tons	626,173	617,989	+ 8,184	+ 1·3
Sold and used at Power Stations .. .. tons	645,254	597,732	+ 47,522	+ 8·0
BROWN COAL PRODUCED—				
Yallourn Open Cut .. .. tons	*7,714,688	8,209,806	— 495,118	— 6·0
Yallourn North Open Cut .. .. .. tons	1,647,553	1,594,510	+ 53,043	+ 3·3
Morwell Open Cut .. .. tons	*607,726	55,233	+ 552,493	..
TRAMWAY PASSENGERS	6,138,785	6,278,354	— 139,569	— 2·2

* 607,726 tons of coal produced during the development of the Morwell Open Cut was used in the Yallourn Power Station in lieu of Yallourn coal.

39TH

Honourable G. O. Reid, M.L.A.,
Minister of Electrical Undertakings,
Melbourne.

Sir,

In conformity with the provisions of Section 82 (b) of the State Electricity Commission Act No. 6377, we have the honour to present the Thirty-ninth Annual Report of the Commission, covering the financial year ended 30th June, 1958, together with Balance Sheet and Profit and Loss Account.

1. The main features of the year's activities are these:—

- The year's operating results again were financially satisfactory. Revenue — £40 million — was 9.6 per cent higher than in the preceding year.
- Electricity sales increased by 325 million kWh., or 8.4 per cent.
- The Commission supplied 99 per cent. of electricity used in Victoria.
- The maximum demand on the interconnected system reached 1,102,800 kW. on 11th July, 1958.
- Available generating plant was sufficient to meet this demand by operating for a short period on overload and with the assistance of 7,000 kW. from the New South Wales grid.
- At Yallourn "D" Power Station, two 50,000 kW. turbo generators with four of the six associated boilers are in operation. The remaining two boilers are scheduled for service in 1959.

  Work on the Yallourn "E" extension — 240,000 kW — has commenced.
- The first two generating sets at the new Morwell Power and Fuel Project will be available by January, 1959. The first of the two briquette factories is to commence production in mid-1959.
- The number of consumers served is 619,969 (plus 171,607 through bulk supply authorities). 29,063 new consumers were connected by the Commission this year, including 3,117 farms.
- Brown coal production at nearly 10 million tons was the highest yet recorded.
- Briquette production was 626,173 tons.

FINANCIAL

2. The profit for the year was £20,182, after providing full interest and depreciation on assets in service and writing off £1,910,000 in respect of interest and other expenditure during construction incurred in prior years and temporarily carried in a suspense account with the intention that it should be written off over a short period of years.

3. The substantial increase in sales of electricity — 325 million kWh. (8.4 per cent) — has contributed largely to the additional income of £3.5 million (9.6 per cent.), while increased expenditure reflects the higher outputs required to meet this demand and higher depreciation charges. — (See Financial Review, pages 8-10).

4. Last year it was forecast that unless capital finance became more freely available for the power and fuel projects vital to this State's development it would be necessary to obtain a higher proportion of capital from the Commission's own revenues (operating surplus and moneys available from depreciation and other reserves). The borrowing authority has not been increased; accordingly it has been necessary to raise retail electricity charges in recent months by about 8 per cent., for the specific purpose of obtaining additional capital to provide for the expanding electricity needs of Victoria.

5. The Commission is gravely concerned that—along with other semi-Governmental entities — it continues to approach a most unfavourable loan market in which other types of investment are more attractive than loans at semi-Governmental interest rates and conditions. It is now over two years since a public loan of the Commission was fully subscribed, and, in the interim, under-subscriptions to eight loans have been met by the underwriters.

6. Having covered this whole matter of capital finance in a special reference in its 38th Annual Report, the Commission does not propose to emphasise it in this current report. But, in fact, the problems of securing capital sufficient for the Victorian power system to hold its place in the march of national development are no nearer solution.

FUTURE DEVELOPMENT OF STATE GENERATING SYSTEM

7. The Commission's estimates of total system demand (1,773,000 kW expected by 1965) and the annual capital cost of meeting that demand, rising to something over £40 million in 1964-65 (confirmed by the eminent engineering consultants, Ebasco Services Incorporated of New York) were referred to at length in the last two Annual Reports.

8. In 1958 the total system demand had already passed 1,100,000 kW. As mentioned earlier, the increasing demand was met this winter only by overloading the system and with some small assistance from New South Wales. There exists at present no margin of reserve plant, although a margin of 10 per cent. at least should be maintained.

9. The major power project to follow extensions to the Yallourn "E" Power Station (orders for which have been placed) is the proposed Hazelwood Power Station, to the south of and based on the Morwell Open Cut. Ultimately this station is to have a capacity of 1,000,000-1,200,000 kW, and construction must commence in 1958-59 so that the first of its units (200,000 kW) will be available by 1964.

ELECTRICITY SUPPLY TARIFFS

10. As explained in para. 4, tariffs have been increased to provide an additional 8 per cent. revenue as from September-October, 1958.

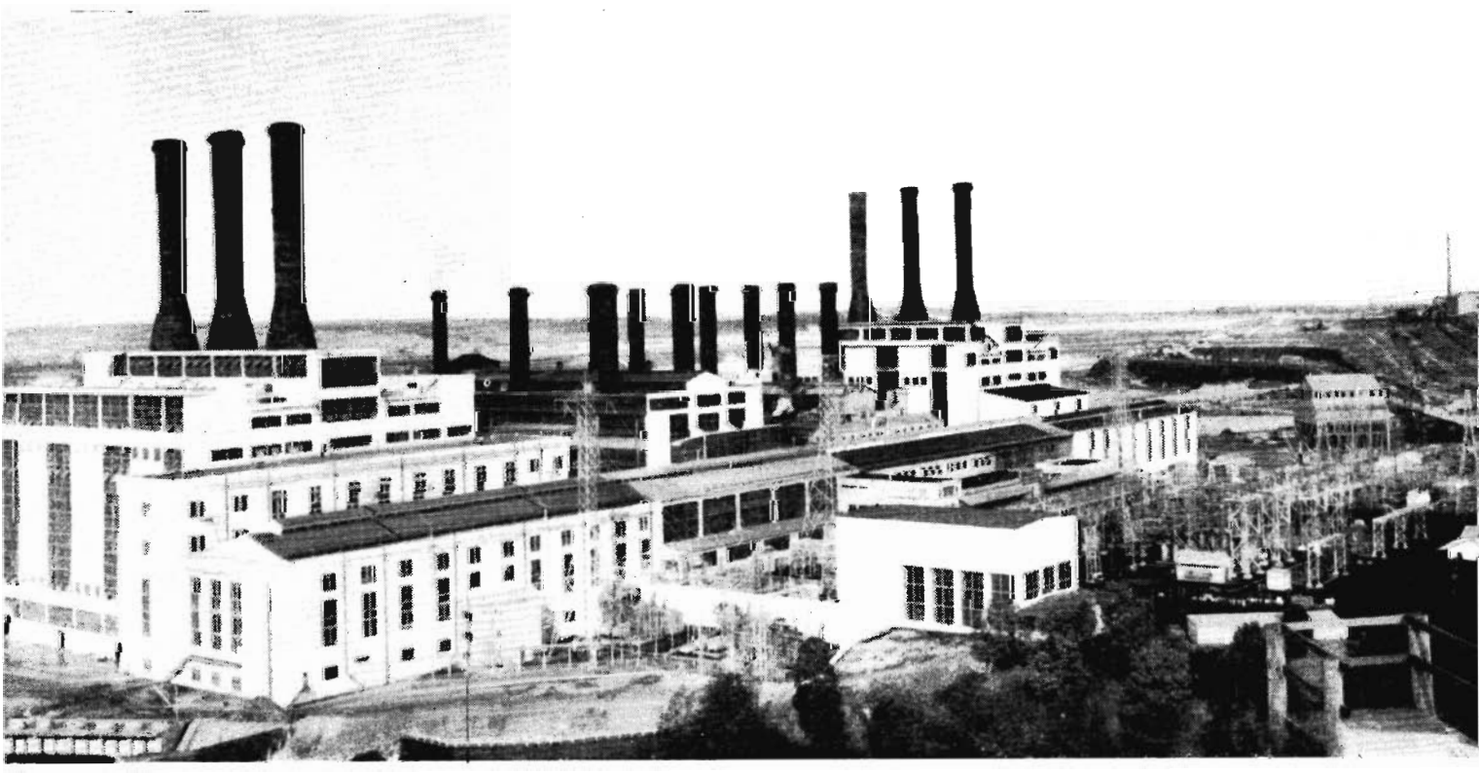
11. For the residential and commercial consumers instead of three major groups there will, in future, be only two -- metropolitan and country — except that for certain rapidly developing areas bordering on the metropolis a new intermediate tariff schedule has been introduced. Since 1946 industrial tariffs have been uniform in all areas served by the interconnected State system, and since 1948 there has been a uniform farm tariff in the country.

WORLD POWER CONFERENCE

12. In his capacity as Chairman of the Australian National Committee, and also representing the Commonwealth Government, the Chairman, Mr. W. H. Connolly, B.E.E., B.Com., M.I.E. Aust., attended the World Power Conference held at Montreal, Canada, from 7th to 11th September, 1958. The next plenary session of the World Power Conference will be held in Melbourne in 1962: its theme will be "The Changing Pattern of Power."

YALLOURN

Power station capacity 381,000 kWh—extensions in progress, 240,000 kW and switchyard in foreground; open cut (centre background); briquette factory (right background).



CONFERENCE ON ATOMIC ENERGY — GENEVA

13. The Chairman of the Commission's Planning Group (Mr. W. B. Nelson, B.E., F.S.A.S.M., A.M.I.E. Aust.) attended the United Nations Organisation Conference on the Peaceful Uses of Atomic Energy, in Geneva, held from 1st-13th September, 1958, as a member of the Australian delegation.

NEW LEGISLATION

14. Since the close of the year the State Electricity Commission Act 1958 (No. 6377) and the Electric Light and Power Act 1958 (No. 6241), have been passed as part of an overall consolidation of Victorian legislation; this was last carried out in 1928.

15. The State Electricity Commission (Borrowing) Act 1957 (No. 6163) was passed by Parliament on 6th December, 1957, increasing the Commission's borrowing authority by £50 million to £265,500,000, and making minor amendments to the machinery provisions relating to the issue of debentures.

16. The Snowy Mountains Hydro-Electric Agreements Act 1958 (No. 6180) was passed on 2nd April, 1958; this Act ratifies the execution on behalf of the State of Victoria of Agreements between the Commonwealth, New South Wales and Victorian Governments, setting out the terms and conditions upon which the State water and electricity authorities will participate in the scheme. (On page 11 of the last Anual Report a summary of the main Agreement was given.)

VICE-REGAL VISIT TO YALLOURN AND MORWELL

17. As part of their tour of Gippsland, His Excellency the Governor of Victoria, Sir Dallas Brooks, and Lady Brooks inspected the Commission's undertakings at Yallourn and Morwell on 1st and 2nd October, 1958.

YALLOURN POWER STATION

Excavation and foundation work for "E" Extension (two 120,000 kW. turbo-generators).

Financial Review

INCOME, EXPENDITURE AND PROFIT

In round figures, and compared with 1956-57, the year's income and expenditure were:—

INCOME

1956-57 £m.		£m.	£m.
33.82	Electricity Sales	37.16	
1.80	Briquette Sales	2.09	
.80	Brown Coal Sales	.78	
.11	Tramways' Income	.10	
.01	Miscellaneous Income	.02	
36.54			40.06

EXPENDITURE

18.66	Operation and Maintenance (inc. Fuel)	20.06	
7.38	Interest (excl. Morwell)	7.95	
2.81	Depreciation	4.84	
2.91	Administration and General Expense	3.10	
1.44	General Services and Special Personnel Expenditure	1.67	
.46	Loan Flotation and Miscellaneous Expenditure	.51	
2.10	Interest on Morwell and Other Expenditure on Works Under Construction written off	1.91	
35.76			40.04
.78	PROFIT		.02

Of the 9.9% increase in electricity income £0.45m. (1.3%) is attributable to the higher commercial and industrial tariffs introduced in October, 1956, operating for nine months only in 1956-57. The remaining 8.6% represents normal growth of electricity sales — domestic 9.6%, industrial 9%, bulk supplies 9%, commercial 8.1%, public lighting 7.9%.

An 11.8% increase in sales is the chief contributing factor in the £0.20m. improvement in Briquette income.

As announced in last year's Report, the calculation of depreciation was changed in 1957-58 from the sinking fund method to the now more widely used straight line method; this year's expenditure includes £1.60m. additional depreciation on this account. (Under both of these accepted methods the accumulated provision over the estimated lives of the assets is the same, viz., the cost of the assets: the change varies only the amounts provided as between individual years.)

The other increases are related to the normal growth of the Commission's business and comprise chiefly:—

	£m.	
Fuel for generation	0.65	(7%)
Other operation and maintenance	0.75	(8%)
Interest and depreciation	1.00	(10%)

CONSTRUCTION EXPENDITURE AND FINANCE

Payments on account of construction expenditure totalled £25.15m.

To finance this expenditure, the Commission raised in the loan market £16.62 and received an advance of £1m. from the State Treasury. Consumers' advances under the "self-help" scheme for extension of supply totalled £2.31m. The balance of £5.22m. was met from internal funds (depreciation charges recovered as part of the operating costs, profits, salvage proceeds, etc.).

Loan raisings by the Commission included three public loans totalling £7½m. The underwritings were met by the underwriters.

Underwriting	Terms	Interest % p.a.	Subscription	
£m.			£m.	%
2.55	7/10/20 years	5½	1.78	70.0
2.35	7/10/20 years	5½	1.04	44.3
2.60	7/10/20 years	5½	1.61	62.1

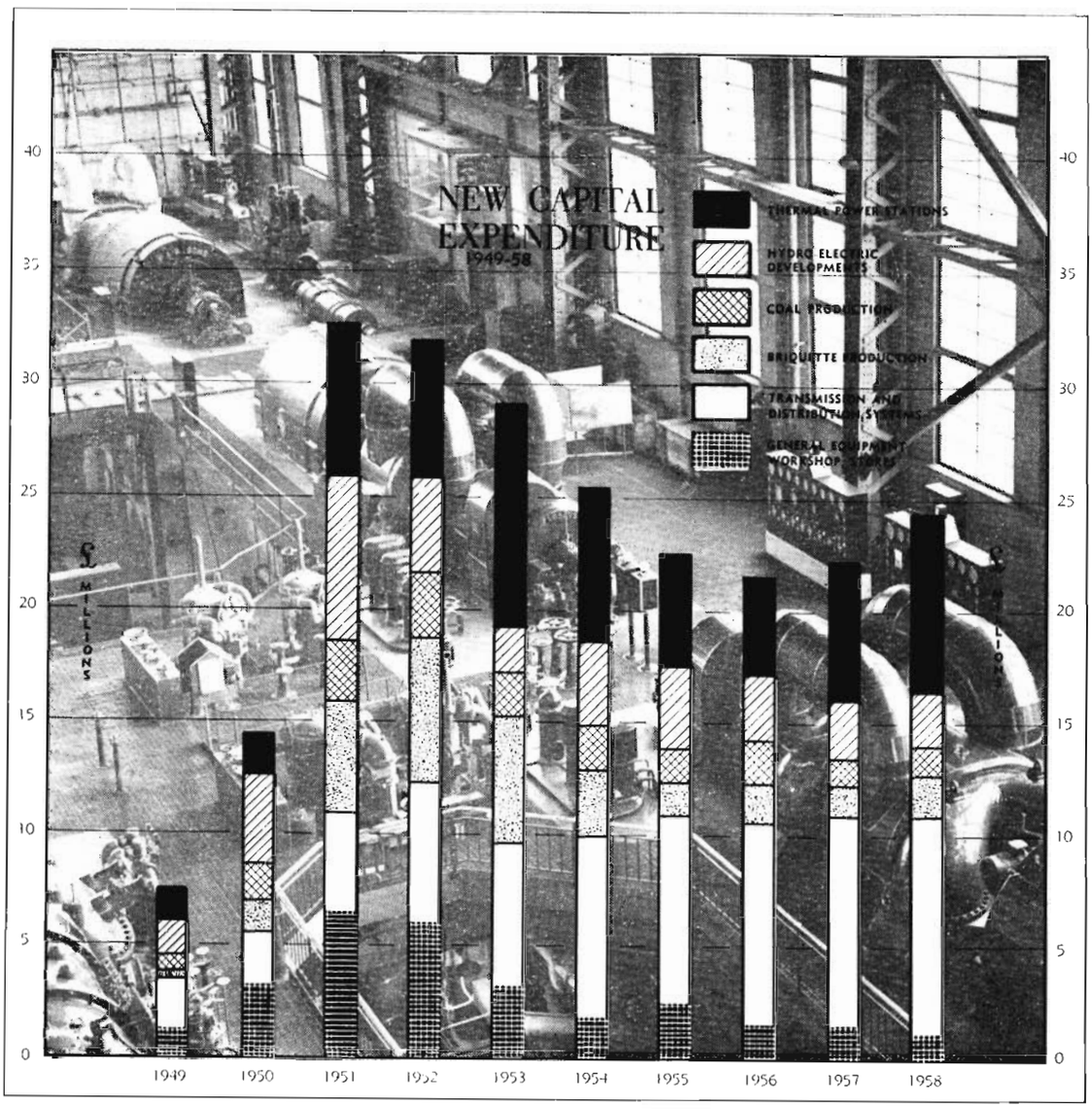
New loan moneys received in each of the last five years (excluding conversions and short term loans redeemed within the year) were:—

Year Ended 30th June	Public Loans £m.	Private Loans £m.	Total Loans £m.	State Treasury Advances £m.
1954	11.9	11.6	23.5	6.0
1955	11.0	7.3	18.3	2.0
1956	7.3	1.0	11.3	1.0
1957	10.1	6.6	16.7	3.1
1958	7.8	8.4	16.2	1.0

(NOTE: Actual receipts vary slightly from loan raisings — for example, some lenders pay by instalments.)

* * *

New capital expenditure on fixed assets in each of the last ten years is illustrated in the following graph:



RESERVES

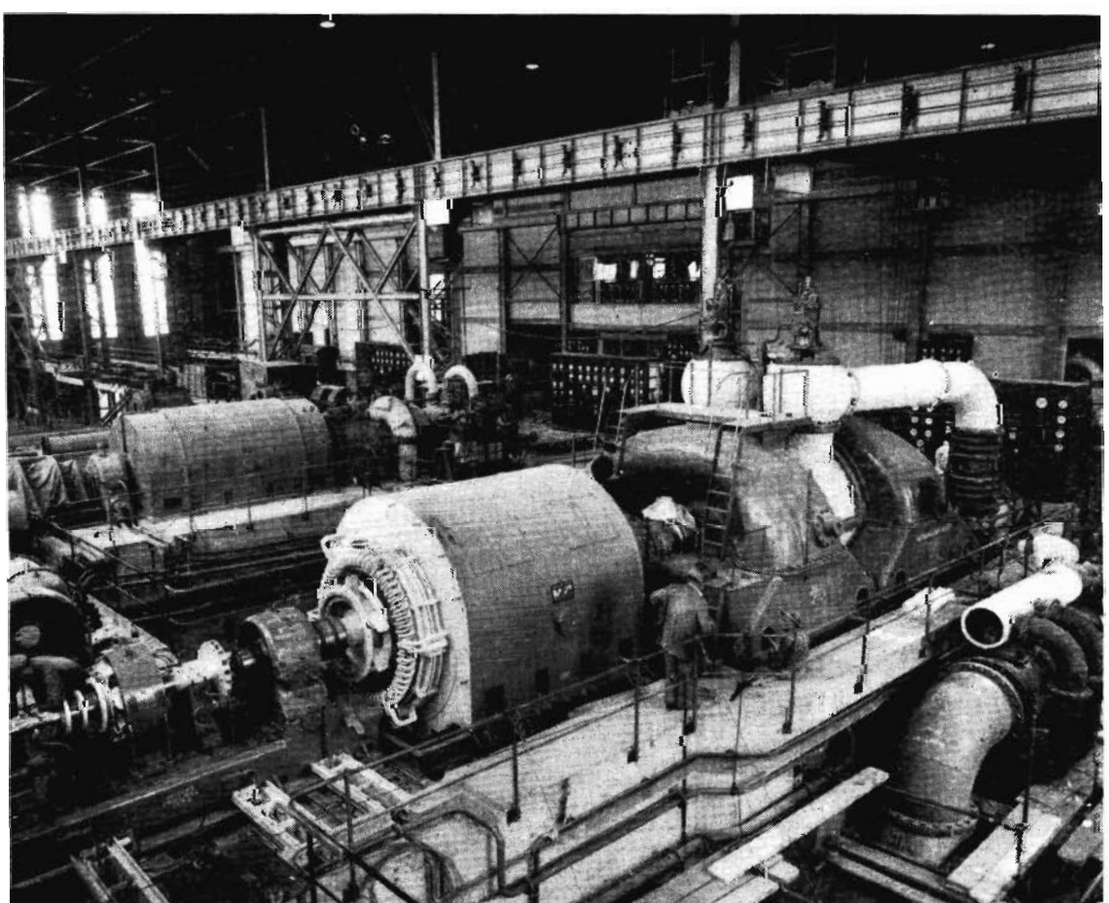
Reserves at 30th June, 1958, stood at £8,929,998.

ASSETS AND LIABILITIES

At 30th June, 1958, assets totalled £246.3m., and comprised: –

	£m	£m
Fixed Assets	258.5	
less Accumulated Provision for Depreciation	31.2	
		227.3
Current Assets and Investments	14.6	
less Current Liabilities	13.1	
		1.5
Unamortised Charges (chiefly expenditure already incurred in uncovering brown coal yet to be won)		7.9
Deferred Charges (chiefly interest on works under construction)		9.6
		246.3
The funds for this capital expenditure were obtained from		
Loans –		
Commission Stock and Debentures	183.2	
Victorian Government Advances	46.1	
Acquired Undertakings' Debentures	0.7	
		230.3
Reserves		8.9
Consumers' Advances for Construction		7.1
		246.3

The form of the General Profit and Loss Account and Balance Sheet has been changed this year to a more modern accounting presentation. These main statements, supported by supplementary information (Appendices 1-5), add to the financial detail hitherto published by the Commission.



MORWELL POWER STATION

First units of Morwell Power Station, shortly to commence operation, 30,000 kW turbo-generator (right) and 20,000 kW turbo-generator (left).

Connection of New Consumers

FINAL PHASE OF ELECTRIFICATION OF THE STATE

Further progress has been made on the final phase of the electrification of the State; at 30th June, 1958, approximately 691,000 dwellings were supplied with electricity. There remains the dual task of connecting as many as possible of the 50,500 homes not yet supplied with electricity, and at the same time extending the supply to the 21,000 new homes which are being erected each year.

SUMMARY OF PROGRESS — 151,000 NEW CONSUMERS IN FIVE YEARS

Year ended 30th June	Total	Metropolitan Area	Outside Metropolitan Area	Farms Connected
1954	33,033	7,713 (23 per cent.)	25,320 (77 per cent.)	4,756
1955	30,283	8,539 (28 per cent.)	21,744 (72 per cent.)	3,049
1956	29,615	9,835 (33 per cent.)	19,780 (67 per cent.)	2,603
1957	29,014	8,596 (30 per cent.)	20,418 (70 per cent.)	3,118
1958	29,063	8,287 (29 per cent.)	20,776 (71 per cent.)	3,147
Total for 5 years	151,008	42,970 (28 per cent.)	108,038 (72 per cent.)	16,673

During these years 8,344, 3,159, 1,630, 1,889 and 1,848 consumers respectively were from undertakings acquired (including, in 1953-54, 2,219 farms).

The number of extra-metropolitan consumers has more than doubled, and the number of farms has almost trebled during the last decade. The extent of country electrical development is evident from the following statistics and further information in the Ten Year Statistical Review Graphs 7 and 9 (frontispiece):—

Financial Year	Total Consumers served directly by the Commission	Extra Metropolitan Consumers	Farms Supplied
1937-38	249,241	75,690	4,030
1942-43	296,717	99,670	7,032
1947-48	355,258	142,968	13,181
1952-53	468,961	219,164	22,326
1957-58	619,969	327,202	38,999

During 1957-58 more than twice as many consumers were added to the Commission's system in country areas as in that part of the metropolitan area supplied directly by the Commission.

The extent of work undertaken in country districts is emphasised by the following comparison:—

	Outside Metropolitan Area	Metropolitan Area
Poles erected	23,755	2,326
High Voltage lines erected	2095.9 miles	36.1 miles
Low Voltage lines erected	328.1 miles	54.8 miles
Substations erected	2,666	125

This rural extension programme has continued to depend on the "self-help" plan whereby prospective consumers advance the capital cost of construction, such advances being repaid by offsetting quarterly accounts for electricity consumed; interest is credited on advances.

But for the splendid response by large numbers of prospective consumers, it would not have been possible to maintain such a steady rate of progress. The Commission expresses appreciation of this co-operative effort by consumers; it is a very practical answer to the problem of maintaining its rural development programme in the face of the general shortage of capital funds.

The Commission is constantly being pressed to accept advance subscriptions by prospective consumers. However, if it were to do so, it would have to forgo during the repayment period cash income, which, in effect, reduces the amount it is able to devote from its internal resources towards the construction programme. The amount of repayments is increasing from year to year, and therefore it is not possible to extend the self-help programme without limit.

Major Extensions Programme

SYSTEM GENERATING CAPACITY

Generating plant on order or in course of construction (including associated boiler plant), its location and planned dates for operation, are as follows:—

Plant	Planned Date as at 30/6/58
Yallourn Power Station —	
Two 120,000 kW turbo-generators	1961-62
Kiewa Hydro-Electric Project —	
No. 1 Power Station — six 16,000 kW turbo-generators	1960-61
Morwell Power and Fuel Project —	
To produce — First Stage — 12,000 kW	1959
Second Stage — 24,000 kW	1960
Third Stage — 25,000 kW	1961
Spencer Street Power Station (Melbourne City Council) —	
One 30,000 kW turbo-generator	1959
Cairn Curran Hydro-Electric Power Station —	
One 2,000 kW turbo-generator	1960

It is expected also that this State will commence to receive its share of Snowy electricity in 1959.

YALLOURN POWER STATION

(Approved Development — Two 50,090 kW Sets and Two 120,000 kW Sets)

Yallourn "D"

This extension, comprising two 50,000 kW turbo-generators and six 200,000 lb. per hour boilers, is nearing completion. The first turbo-generator was placed in service in March, 1957, and the second in January, 1958. At the 30th June, 1958, two boilers were in operation and two have been placed in service since the close of the year; the final two are expected to be in service in May and August, 1959, respectively.

Yallourn "E"

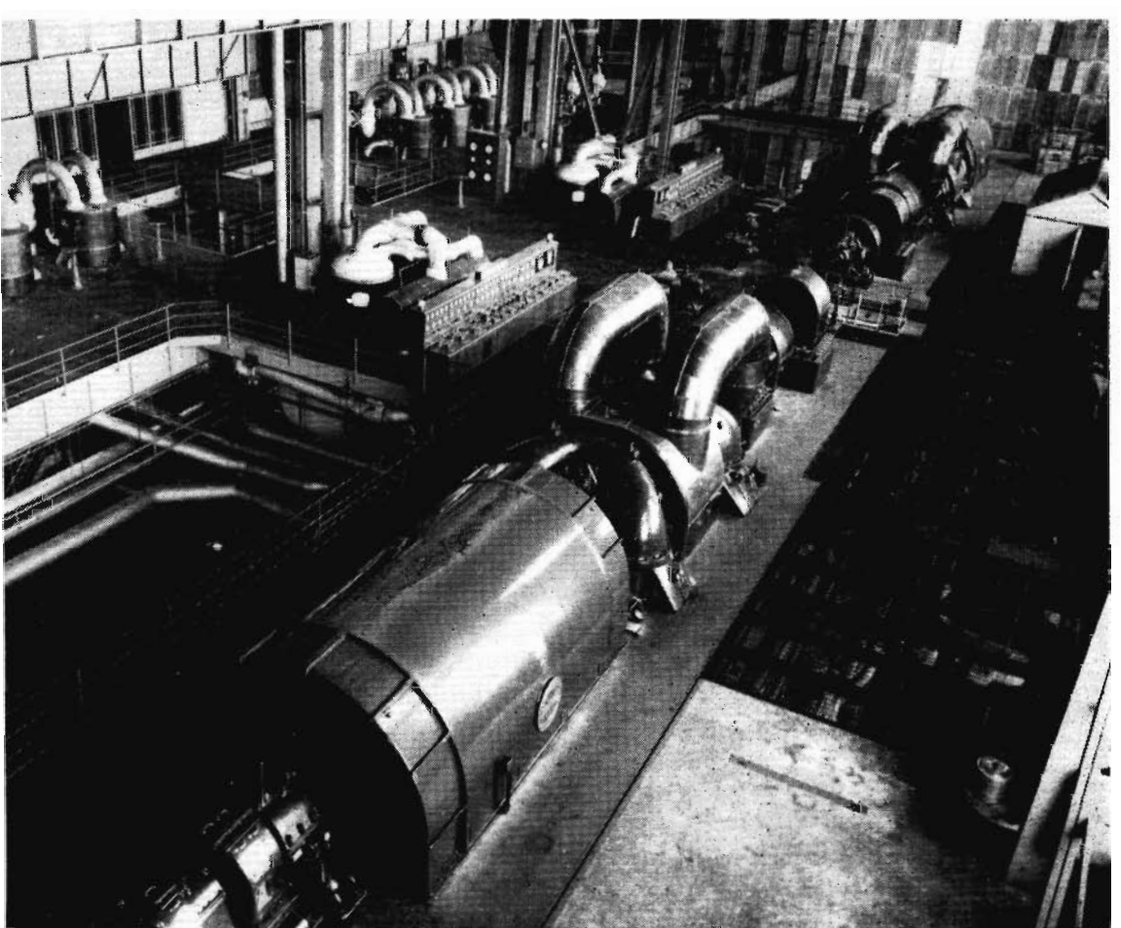
The "E" Extension will comprise two 120,000 kW turbo-generators and two 950,000 lb. per hour mill fired boilers. Orders have been placed for the boilers, turbo-generators, transformers and switchgear, the first set to be in service by March, 1961, and the second by March, 1962.

Diversion of railways and roadways has been completed to allow site works to commence. Excavation and foundation works for boiler house, turbine room and circulating water pump are in progress.

General

Work on coal handling plant for the new extensions is almost completed. The final section of the coal conveyors from ditch bunkers to power station slot bunkers was installed during the year. This plant will also serve the needs of the "E" Station.

412 men were employed by the Commission and 522 by contractors on these power station extensions at 30th June, 1958.



YALLOURN POWER STATION — "D" EXTENSION

Two new 50,000 kW turbo-generators in operation since March, 1957, and January, 1958, respectively.

Latrobe River Water Storage

Reference was made in the last Annual Report to the proposal to construct a storage of 8,500 acre feet on the Latrobe River just upstream from Yallourn to provide, in conjunction with cooling towers, the condensing water requirements for the augmented Yallourn Power Station and, at the same time, enable satisfactory river flows to be maintained.

Concern was expressed locally that the storage, if constructed, would have an adverse effect on farm lands and adjacent drainage and sewerage works. The Government appointed Mr. J. R. Dridan, C.M.G. B.E., A.M.I.E. Aust., Engineer in Chief, Engineering and Water Supply Department, South Australia, to review the matter and it has adopted his report.

Mr. Dridan confirmed the soundness of the Commission's proposals and that they represented the most economical overall solution to the Yallourn cooling water problem; also that none of the major objections to the scheme could be sustained. The Commission is giving effect to a recommendation by Mr. Dridan that the storage capacity be reduced by 1,500 acre feet and that the size of the flood gates be increased. Mr. Dridan reported that by adopting these recommended modifications the Commission would have taken all reasonable measures to design and build a dam in a manner which would cause a minimum loss of production and interference with local activities.

MORWELL POWER AND FUEL PROJECT

Power Output to System — 91,000 kW (First 3 Stages) with 1,564,000 Tons of Briquettes per annum.

The installation of the first two sets — a 20,000 kW low pressure turbo-generator and a 30,000 kW back pressure turbo-generator — is nearing completion; these will be available for service by 1st January, 1959. Erection of two 30,000 kW sets for Stages 2and 3 is in progress. Installation of associated boiler plant is proceeding; two boilers are nearing completion.

Deliveries of materials for the first two briquette factories have been completed. Building construction is well advanced and the installation of plant is in progress: erection of the main mechanical components of seven briquette presses has been completed. The first factory is planned to commence production in mid-1959.

Coal conveyors from the open cut to the power station and briquette factories are virtually completed; conveyors for the transport of briquettes from the factories to loading points and a transfer station to supply the Gas and Fuel Corporation are under construction.

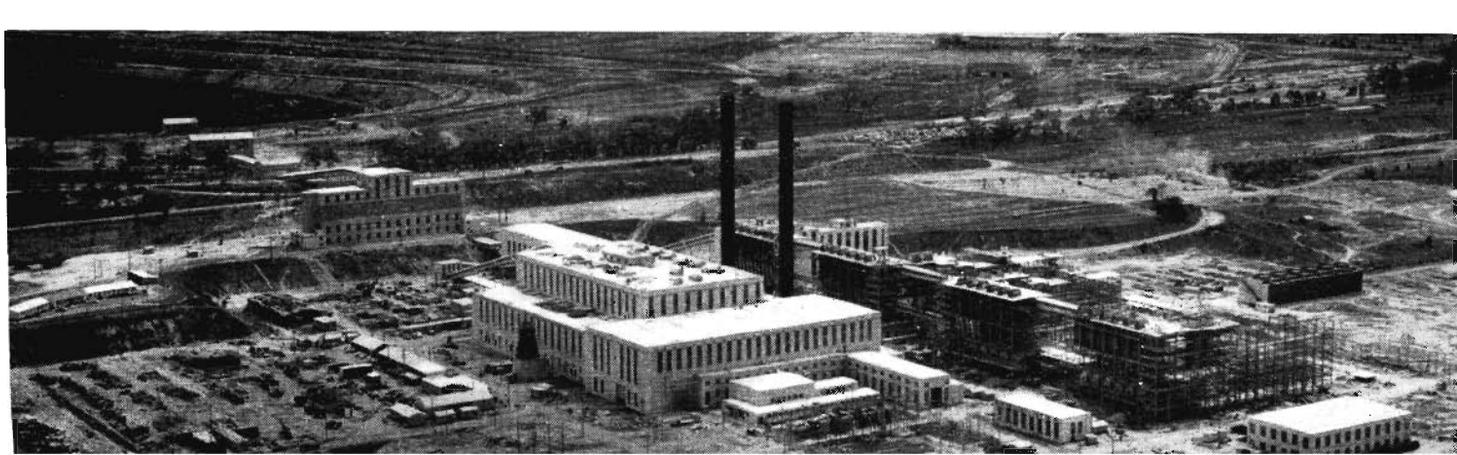
A bucket chain dredger, originally designed for overburden removal, is being modified for coal winning (capacity 900 tons per hour) and a bucket wheel coal dredger (capacity 640 tons per hour) will be transferred from Yallourn to Morwell next summer.

On this project 911 men were employed by contractors at 30th June, 1958, and 214 by the Commission on construction work. 178 personnel engaged on coal winning activities and 379 general service employees are now classed as operating personnel.

●

MORWELL POWER AND FUEL PROJECT

Boiler and turbine house building nearing completion (centre foreground); briquette factory steelwork (right); new coal bunkers, capacity 7,500 tons (left); open cut (left background).



KIEWA HYDRO-ELECTRIC PROJECT

Water Storage on the High Plains

Work continued during the summer period on the cut-off wall (now completed) and the placing of selected earth and rock fill (60% complete) at Rocky Valley Dam (capacity 23,600 acre feet).

No. 1 (Upper) Development — Approved Capacity 96,000 kW

The head race tunnel has been completed and work is proceeding on the pipeline (two contracts) - the upper section is 85% complete: deliveries of pipes for the lower section have commenced.

The excavation of the underground power station is 40% complete and concrete lining of the roof arch has been completed since the close of the year. Excavation and concrete lining of the pressure shaft and tail race tunnel are proceeding. The station, which will comprise six 16,000 kW. turbo-generators, is planned for operation during 1960-61; the six turbines and four of the generators have been delivered.

No. 4 Development — Installed Capacity 61,600 kW

The main components of this development have been in service since April, 1956.

The concrete lining of the tunnel diverting water from the West Kiewa River to No. 4 Power Station was carried out during the summer, thus completing the No. 4 Development.

* * *

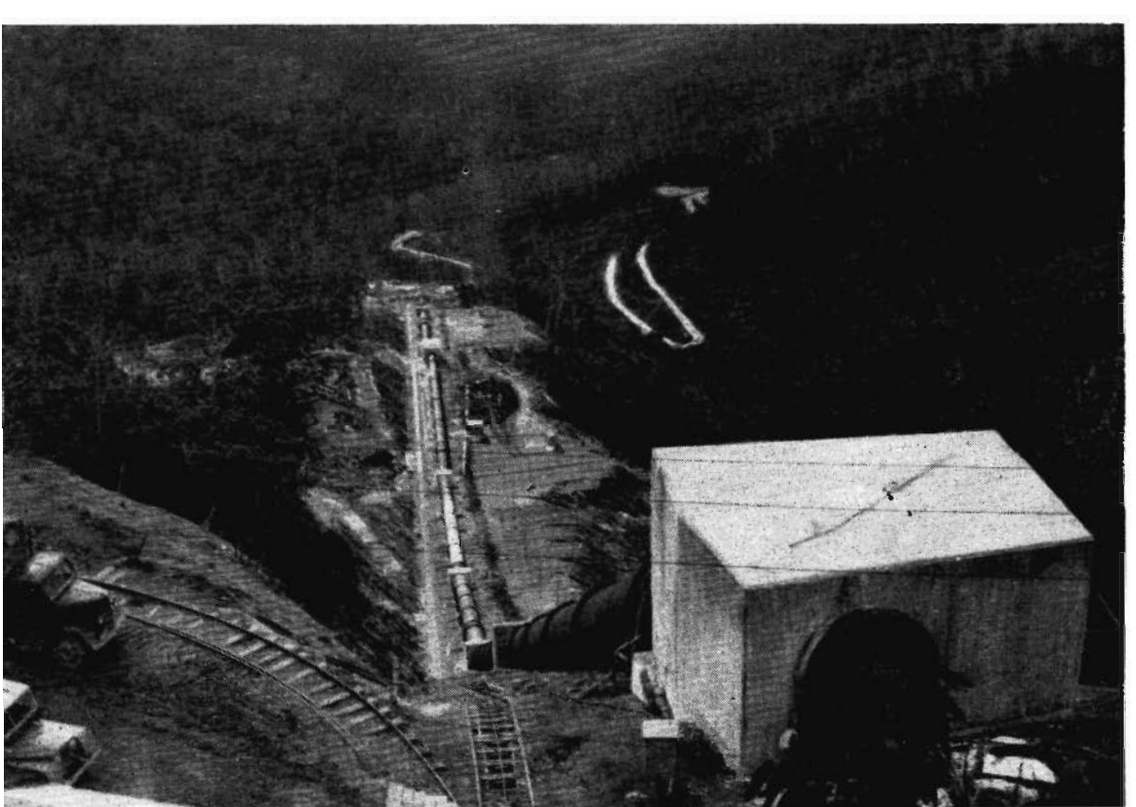
Altogether, 782 men were employed by the Commission on the Kiewa Project at 30th June, 1958.

* * *

CAIRN CURRAN RESERVOIR HYDRO-ELECTRIC DEVELOPMENT

Under an agreement with the State Rivers and Water Supply Commission, all water released for irrigation purposes from the enlarged Cairn Curran Reservoir at Baringhup (Central Victoria) will be available for electricity generation through a 2,000 kW turbo-generator to be installed by 1960.

•



KIEWA HYDRO-ELECTRIC SCHEME
Penstock (pipeline) under construction above No. 1 Power Station — six 16,000 kW turbo-generators planned for operation during 1960-61.

MAIN TRANSMISSION AND DISTRIBUTION

Work is proceeding on the Victorian section of a 330 kV transmission line from Dederang to the River Murray to link with the Snowy Mountains Hydro-Electric Scheme; the New South Wales section has been commenced and both sections should be in operation by May, 1959.

The installation of equipment to receive Snowy power into the Victorian 220 kV system is in progress at Dederang Switching Station.

The Geelong-Colac section of the Melbourne-Geelong-Colac 220 kV transmission line was completed and placed in service at 66kV and work is well advanced on the Keilor-Geelong section. Clearing work is in progress on the Mt. Beauty-Shepparton section of the 220 kV transmission line between Kiewa, Shepparton and Bendigo.

A 66 kV line between Ballarat and Horsham, linking the Wimmera scheme with the interconnected State system, was placed in service; 66 kV lines between Terang and Hamilton, Morwell and Tyers and Maffra and Bairnsdale were also completed.

Work is in progress at the Richmond Terminal Station which is to receive power from Yallourn previously transmitted to Yarraville. The conversion of Yarraville Terminal Station to 66 kV operation for the metropolitan network was commenced.

The 66 kV transmission line from Hume Hydro-Electric Power Station to Wodonga was reinforced and augmentation of the Wodonga-Wangaratta section is in progress.

New main substations were placed in service at Horsham, Rosebud, Charlton and Lilydale; transformer capacity has been augmented at Richmond, Sunshine and Thomastown Terminal Stations and at ten main substations.

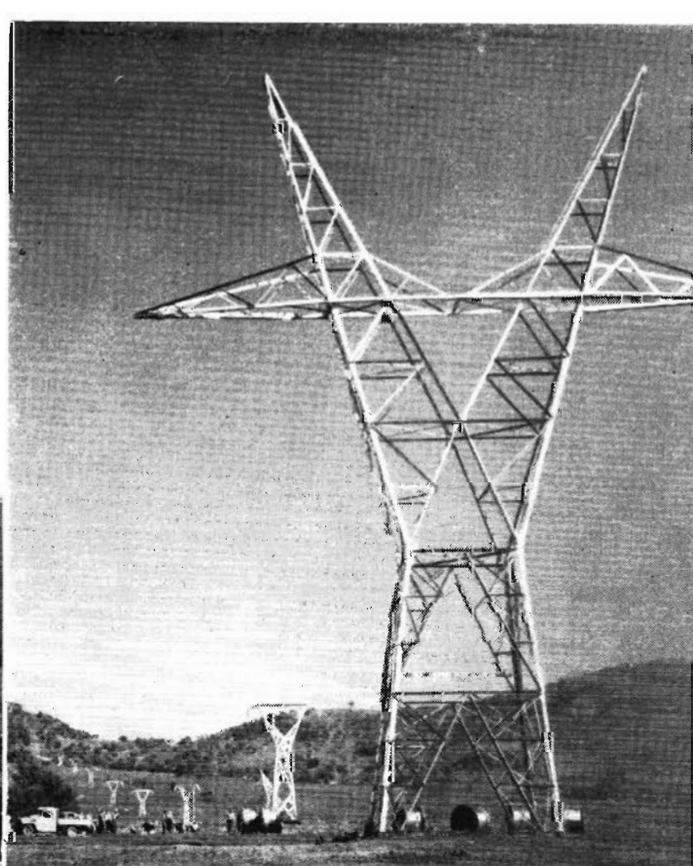
• • •

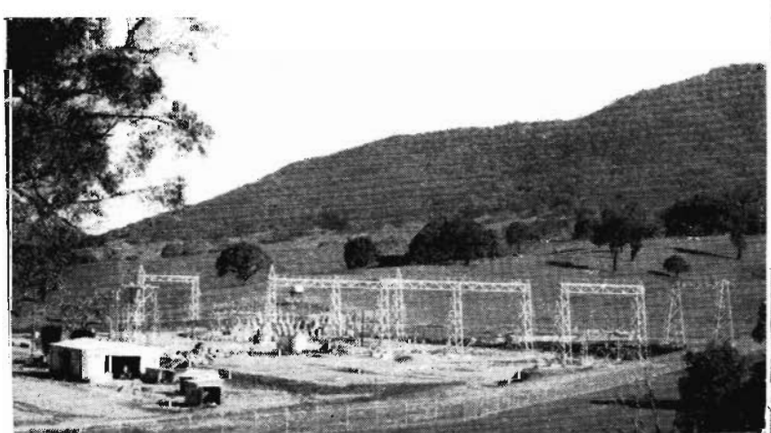
The construction of the new Main Control Centre for the State System adjacent to Richmond Terminal Station is well advanced; the centre is planned for service early in 1959.

ELECTRICITY FROM SNOWY MOUNTAINS SCHEME

(Right) 330 kV transmission line from River Murray to Dederang Switching Station to link with Snowy Mountains Hydro-Electric Scheme, under construction near Corryong.

(Below) Dederang Switching Station where power from the Snowy scheme is transformed from 330 kV to 220 kV and switched to Kiewa and the State grid.





Power Production

The State generating system comprises interconnected power stations at Yallourn, Melbourne (Newport, Richmond and Spencer Street, City), Kiewa, Eildon-Rubicon, Geelong, Ballarat, Shepparton, Warrnambool, Hamilton and Horsham. The Commission also operates regional stations at Mildura-Redcliffs.

Terminal stations are located at Richmond, West Melbourne, Yarraville, Brunswick, Clifton Hill, Thomastown, East Malvern, Sunshine, Ringwood, Rowville (near Dandenong), Geelong and Springvale.

From these generating and terminal stations, electricity is transmitted to the Commission's various Electricity Supply Branches, Melbourne and country, and also to those Melbourne municipal undertakings which purchase in bulk.

STATE GENERATING SYSTEM
INSTALLED CAPACITY AND LOADING AT COMMISSION POWER STATIONS

Power Station	Installed Capacity of Generators 30/6/58	Maximum Demand		kWh. Generated (millions)	
		1957-58	1956-57	1957-58	1956-57
	kW	kW	kW		
1. Interconnected State System					
(a) Thermal Stations —					
Yallourn (including 8,000 kW. allowance for Briquette factory)	389,000	335,000	313,000	2,151.8	2,085.0
Melbourne —					
Newport	311,000	303,200	316,400	1,517.6	1,108.7
Spencer Street	81,750	91,000	95,000	260.0	273.0
Richmond	53,000	53,000	52,000	212.1	206.4
Geelong "A"	10,500	12,200	12,100	11.2	12.3
Geelong "B"	30,000	36,200	34,700	197.6	187.9
Ballarat "A"	5,900	5,200	5,500	0.1	2.2
Ballarat "B"	20,000	26,000	26,400	61.1	55.6
Shepparton	10,530	10,200	10,220	26.1	22.4
Warrnambool	1,980	1,980	1,980	8.1	5.0
Hamilton	3,020	2,480	2,400	9.6	8.0
Horsham	2,261	1,580	—	0.5	—
(b) Hydro Stations —					
Eildon-Rubicon	118,915	133,500	133,500	333.7	212.5
Kiewa	87,600	90,000	90,000	175.1	228.3
Hume	25,000	25,500	12,000	76.2	5.8
(c) Interchange with N.S.W. (net)	—	—	—	14.0	
Total Interconnected System	1,186,459	1,067,450*	943,330	5,058.7	4,713.1
2. Not Connected to State System					
Thermal Stations —					
Redcliffs Interconnected	17,550	12,100	10,600	19.3	40.7
Mildura	7,000	3,400	4,200	0.8	3.4
Horsham	—	1,350	1,260	3.8	5.0
Murtoa	—	350	345	0.5	0.9
Sub-Total	24,550	—	—	54.1	50.0
TOTAL	1,211,009	—	—	5,113.1	4,763.1

* Maximum coincident demand for the year under review was on 11th June, 1958. On 11th July, 1958, the maximum demand on the interconnected system reached 1,102,800 kW.

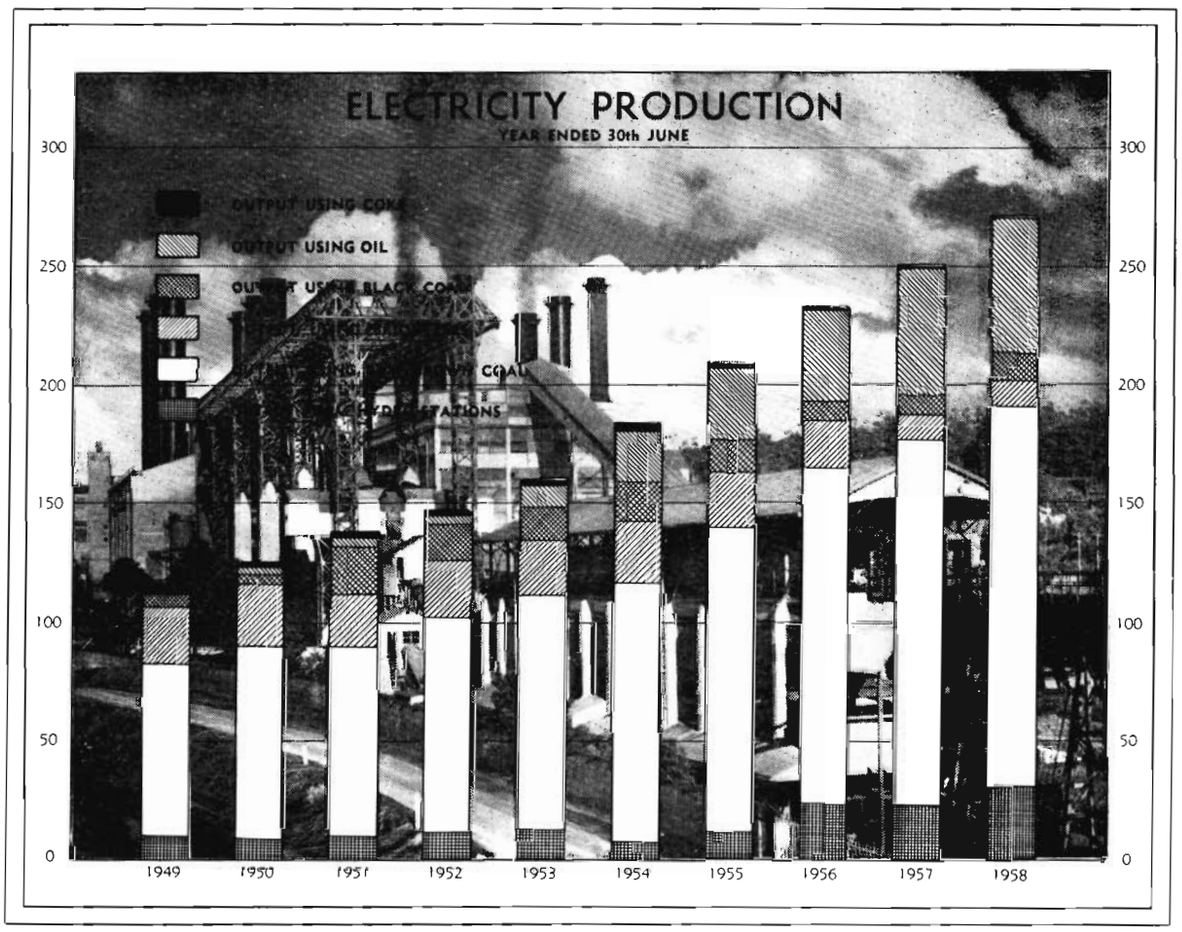
NOTES:

1. The effective capacity of generators is reduced because:—
   (a) at Yallourn, generators have been completed ahead of their related boilers;
   (b) at Newport, Ballarat "A" and Mildura, there are some limitations on boiler capacity;
   (c) at Eildon, the two 8,000 kW sets cannot be operated when the reservoir is at high level.
2. Hume — the second 25,000 kW set commenced operation October, 1957. Under agreement, the Electricity Commissions of New South Wales and Victoria share the electricity output and the operating cost. A limited interchange of energy between New South Wales and Victoria is now practicable.
3. Horsham was linked with the State system on 1st March, 1958, and Murtoa ceased operation on 2nd March, 1958.

The higher requirements of electricity were met principally by Yallourn (new plant installed), Eildon (additional water released for irrigation), and Newport.

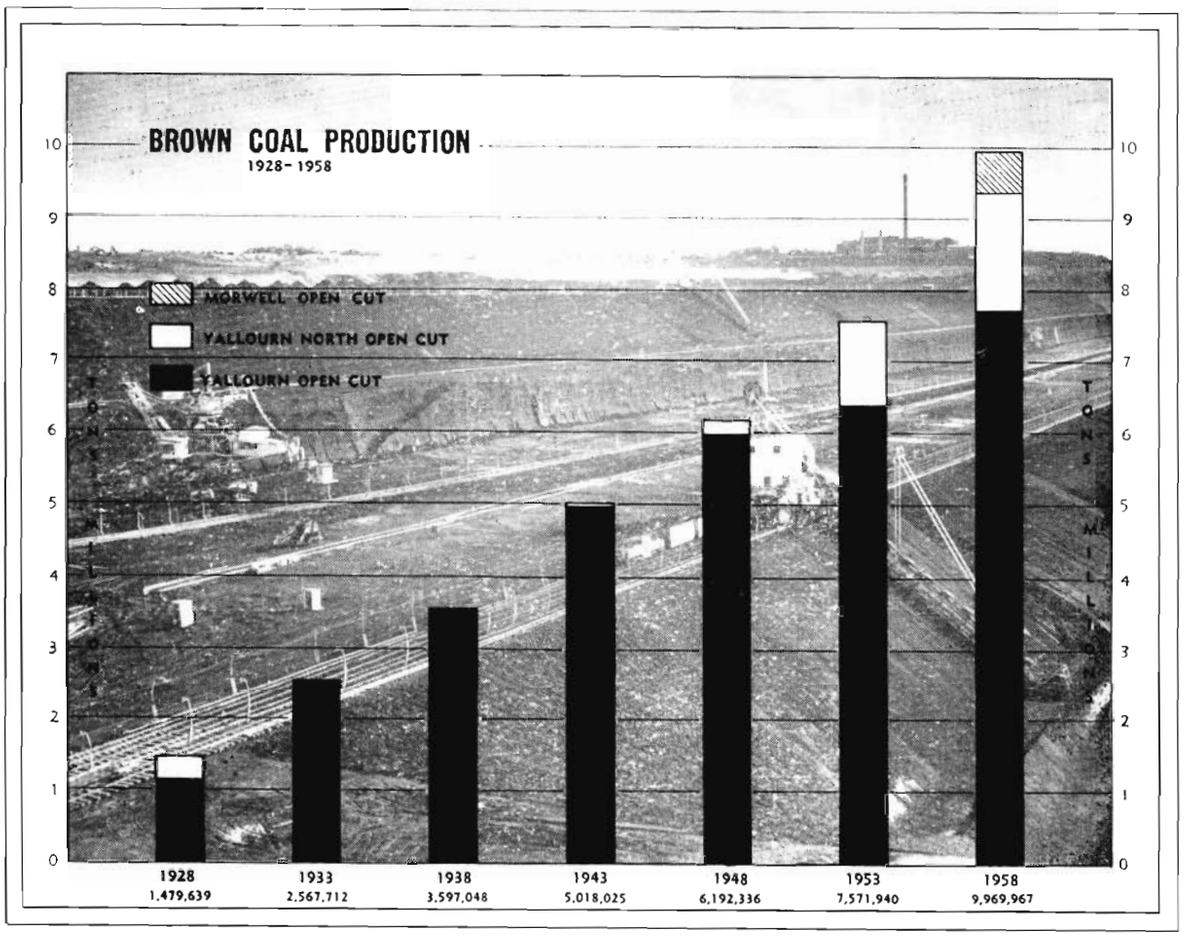
FUEL SUPPLIES

Over the last decade, the output from the Commission's power stations has almost trebled. The fuel needed for this increased production has been met substantially from Victoria's brown coal resources. In recent years, the use of oil has played an important part in meeting these demands (see accompanying graph), but as supplies of briquettes become available from Morwell, Commission power stations will rely less on fuel oil.



As previously reported, the only practicable extension of the State generating system during the war and the immediate post-war years was at stations designed originally for peak load operation. These plants still operate at relatively high load factors -- and will continue to do so for some years. During the year, 1,124,784 tons of brown coal (principally from Yallourn North), 174,522 tons of black coal and 352,191 tons of fuel oil were used at peak load stations. Fuel supplies were adequate for power station requirements.

Coal Production



YALLOURN OPEN CUT

Coal Winning

The year's operations brought the total coal excavated since the commencement of operations to over 146 million tons. Of the 7,711,688 tons won during the year, 5,285,592 tons were delivered to the Yallourn Power Station, and 2,429,096 tons to the Briquette Factory. On 16th May, 1958, 29,297 tons of coal were produced – the highest daily output yet achieved.

Overburden Removal

2,951,360 cubic yards were removed, compared with 2,878,200 cubic yards in the previous year, bringing the total removed to 30th June, 1958, to over 55 million cubic yards.

The area of the open cut has increased from 965 to 1,006 acres at grass level, and from 861 to 894 acres at coal surface level.

Plant

To provide fuel for the extensions of the Yallourn Power Station, the annual output of coal will have to be progressively increased to some 12½ million tons; additional dredgers are required to cope with this increase and for the ultimate replacement of two of the older dredgers. The manufacture of an additional bucket chain coal dredger (output 1,750 tons per hour) is nearing completion and erection work has commenced; it is planned for service early in 1960.

The bucket wheel dredger (capacity 1,350 tons per hour) extensively damaged by fire in 1956, has been repaired and placed in service since the close of the year.

Deviation of the Princes Highway and Gippsland Railway

The development of the open cut is now proceeding in a southerly direction and will impinge on the existing Princes Highway during 1961 and on the main Gippsland Railway during 1965. The Parliamentary Public Works' Committee examined alternative proposals and approved the routes finally selected.

YALLOURN NORTH OPEN CUT

1,647,553 tons of coal were won during the year (1,273,663 tons from Yallourn North Open Cut and 373,890 tons from the Yallourn North Extension) for power generation at Newport Power Station and industry, compared with 1,594,510 tons last year. To date, the Commission has excavated 13,197,784 tons from this seam.

The Gas and Fuel Corporation at Morwell received 18,526 tons of this coal during the year, compared with 19,701 tons last year.

MORWELL OPEN CUT

Overburden removal continued during the year; 2,074,878 cubic yards were removed, bringing the total to date to 7,365,355 cubic yards.

As part of the developmental process, 607,726 tons of coal were won and used at Yallourn Power Station; the total output to date is 677,653 tons.

Briquette Production and Distribution

	Tons Produced
1932-33	307,952
1937-38	116,515
1942-43	114,959
1947-48	515,236
1952-53	544,973
1957-58	626,173

Production was 8,184 tons more than last year.

DISTRIBUTION

Sales (excluding Commission Power Stations — 166,342 tons)	178,912 tons
Revenue	£1,997,650
Expenditure	£1,973,330
Profit	£24,320

The profit on operations (£24,320) compares with the profit in the previous year of £17,373. Deliveries to the Gas and Fuel Corporation at Morwell this year totalled 126,088 tons, compared with 57,847 tons last year.

A special release of 50,000 tons of briquettes was made to the public to assist in meeting the winter demand for fuel.

MORWELL OPEN CUT

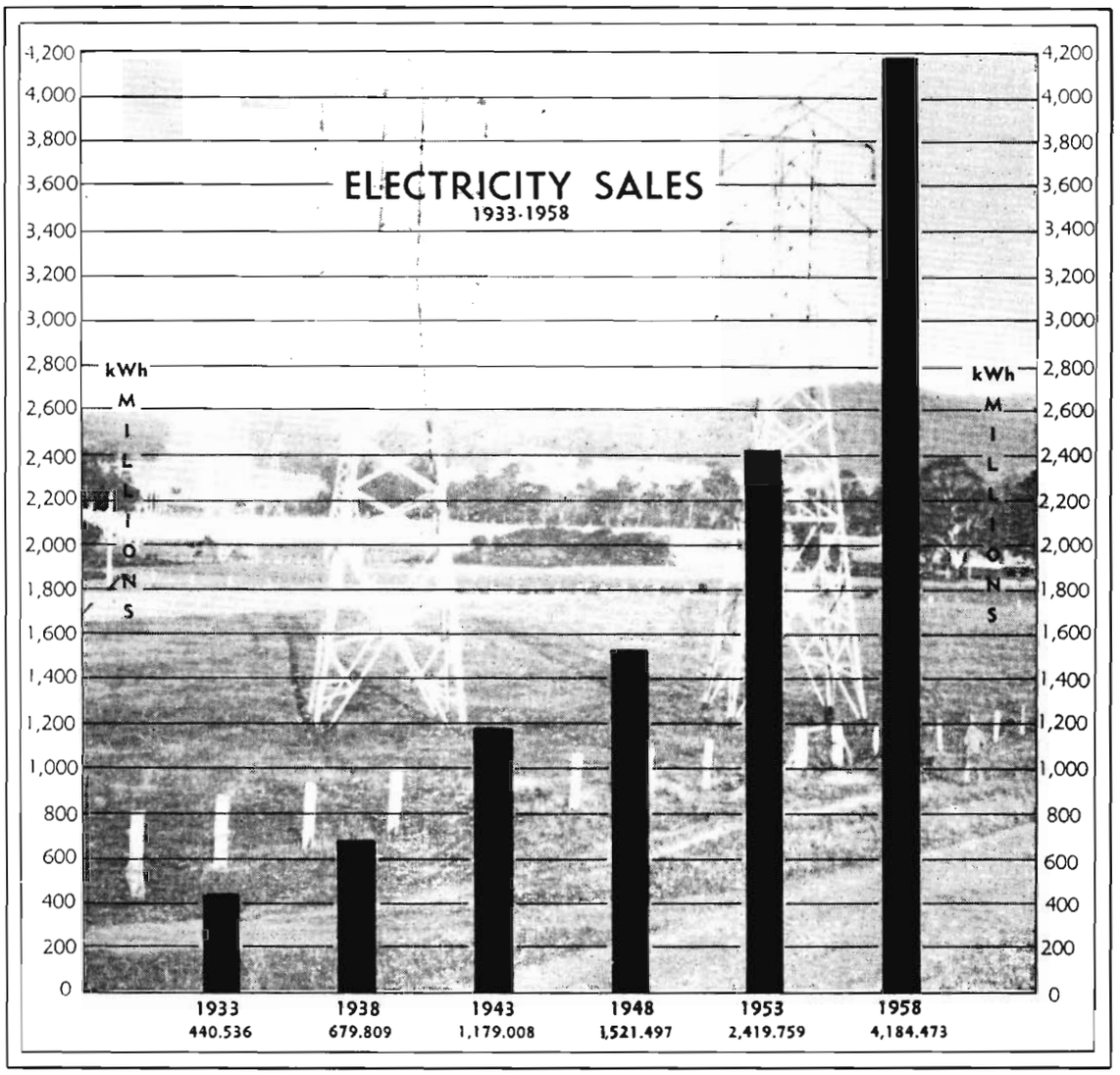
Coal winning by Bucket Wheel Dredger (capacity 800 tons per hour).

Electricity Supply

ANALYSIS OF DEVELOPMENT

Electricity sold to all consumers, retail and bulk, totalled 4,184 million kWh. – an increase of 8.4 per cent.

This rate of increase, which compares with 7 per cent. in 1956-57, resulted partly from an increase of 1.9 per cent. in the number of consumers, but continued to reflect greater use of electricity, particularly for power and heating in industry and commerce and for general purposes in the home.



Sales by the Commission to domestic consumers increased by 9.6 per cent.; there were 23,592 new consumers in this class. The average consumption per domestic consumer for each of the last five years is as follows:—

	Average Consumption per Domestic Consumer kWh.	Annual Increase kWh.
1953-54	1,770	170
1954-55	1,921	151
1955-56	2,144	223
1956-57	2,255	111
1957-58	2,363	108

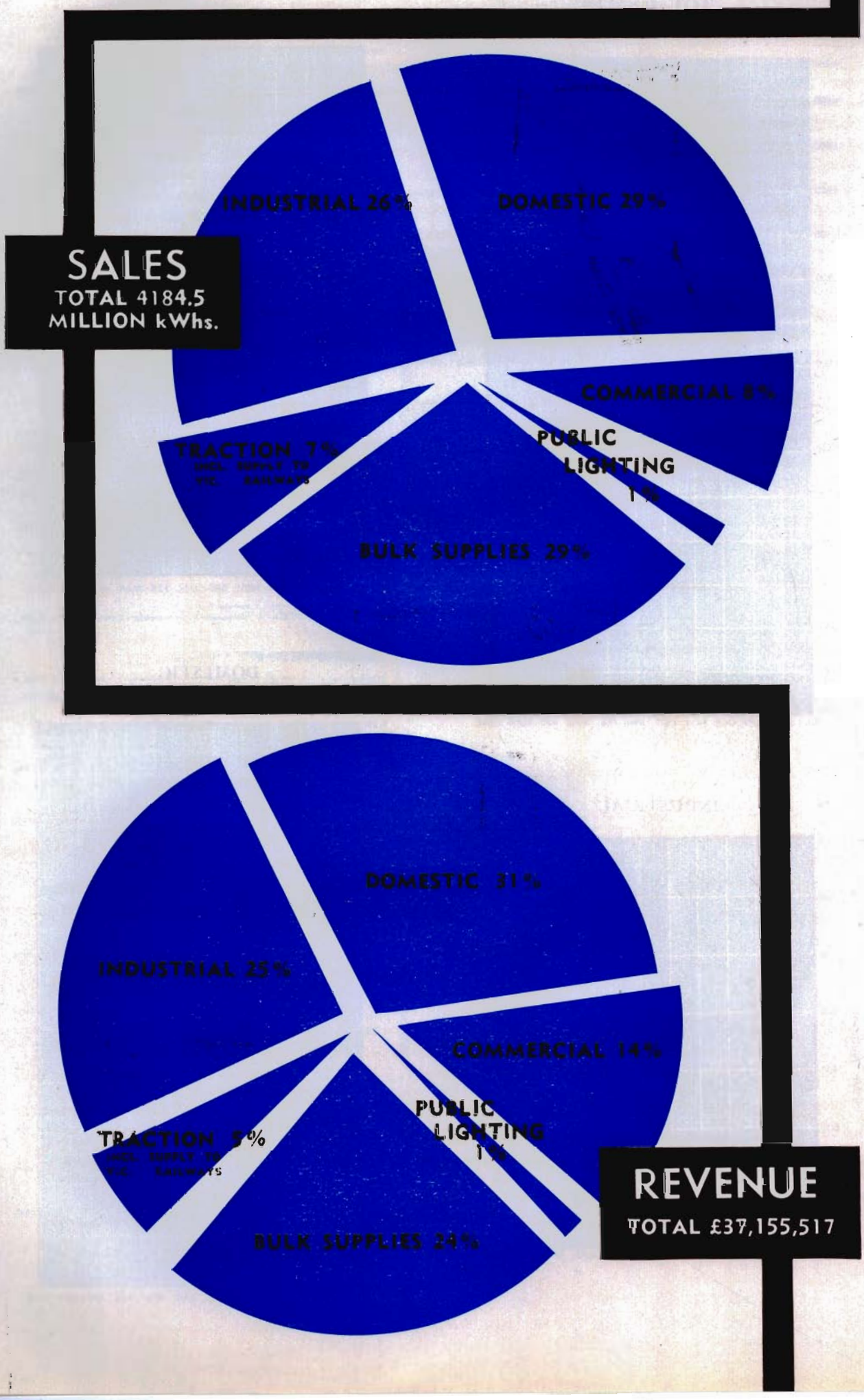
The average revenue for each kilowatt-hour sold to the domestic consumer for all household purposes is today lower than in the pre-war period, whereas, since 1939, the basic wage has trebled. This favourable comparison is largely the result of greater use of electricity by consumers, particularly at the lower off-peak rates. The trend over the last ten years is shown in Graph 6 — "Ten Year Statistical Review."

Sales to commercial and industrial consumers increased by 8.1 per cent. and 9.0 per cent. respectively. The number of consumers in these classes increased by 5,461, and an additional 30,904 h.p. of motors was connected.

ELECTRICITY SALES AND REVENUE

SUBDIVISION ACCORDING TO CLASSES OF CONSUMERS

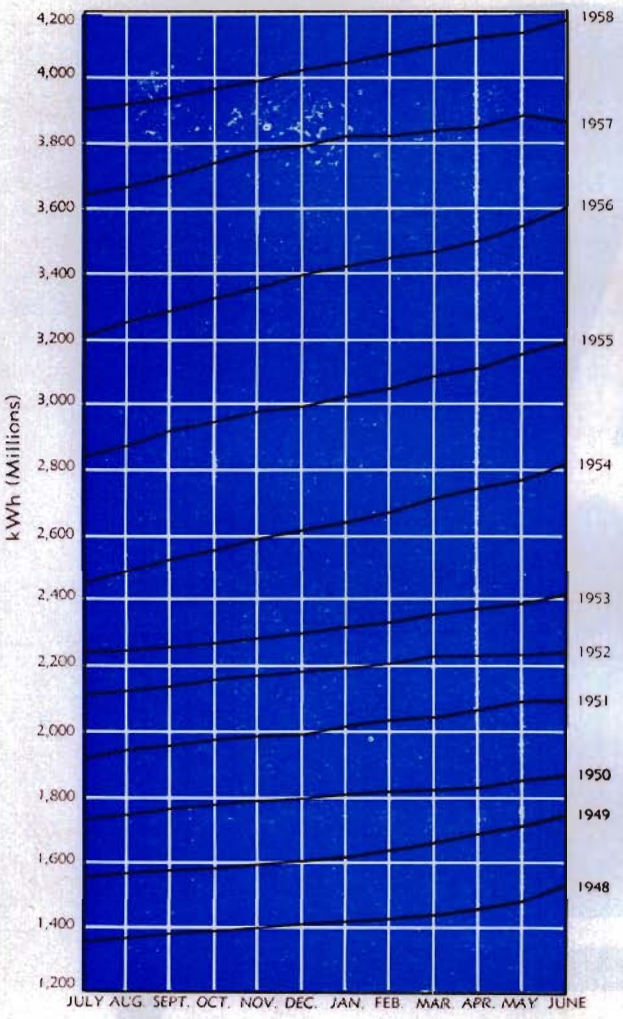
YEAR ENDED 30th JUNE, 1958



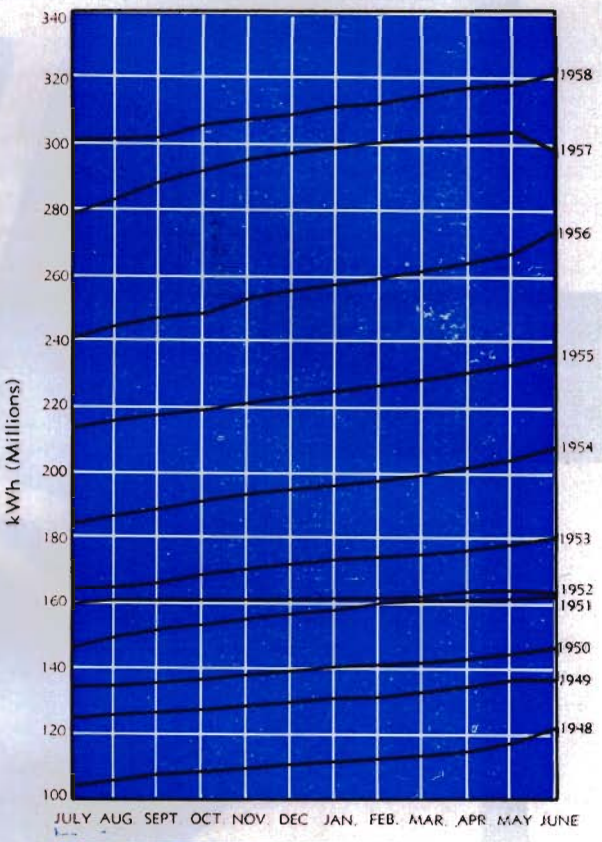
ELECTRICITY SALES

MOVING ANNUAL TOTALS

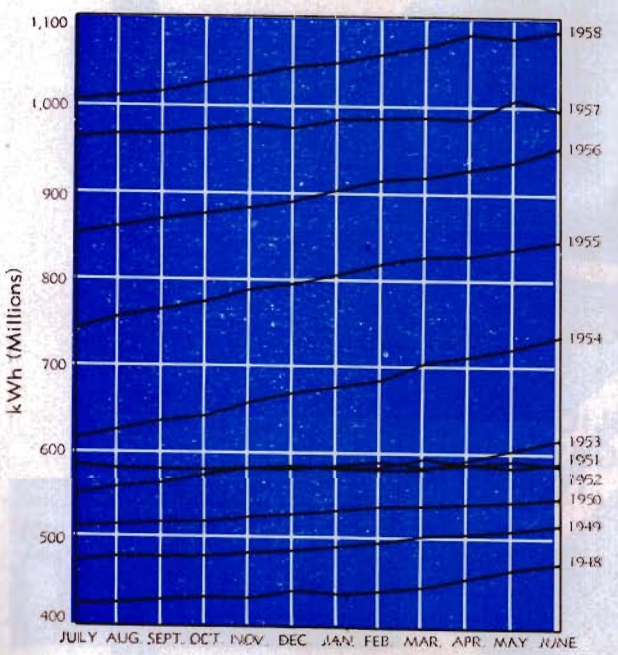
RETAIL AND BULK
TOTAL SALES



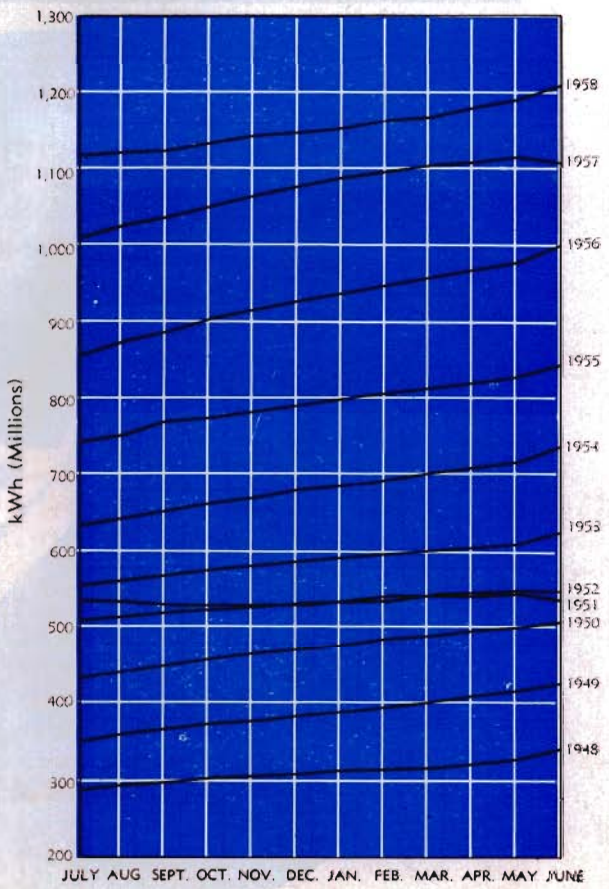
COMMERCIAL



INDUSTRIAL



DOMESTIC



COMMISSION'S UNDERTAKINGS FOR LOCAL DISTRIBUTION

The following summary of statistical data relating to the nine branches of the Commission's Electricity Supply Department is compiled from information contained in this report:—

Revenue increased by £2,331,213 (9.0%) to £28,307,860.

Sales of Electricity increased by 222,858,688 (8.2%) to 2,949,862,340 kWh.

Consumers increased by 29,063 (4.9%) to 619,969.

Farms increased by 3,147 (8.8%) to 38,999.

Branch or Region	Area of Supply (sq. miles)	No. of Consumers	Electricity Sold kWh. (Millions)	Increase This Year				No. of Farms Supplied
				Substations		Distribution Lines		
				No.	Capacity kVA.	H.V. Route Miles	L.V. Route Miles	
Metropolitan	374.8	292,767	1,733,296	125	60,475	36.1	54.8	952
Ballarat	755.0	23,391	74,728	161	7,800	127.6	15.2	1,911
Eastern Metropolitan	1,193.0	88,189	341,007	271	37,545	112.3	126.4	5,680
Geelong	383.1	32,371	112,370	100	18,515	62.2	16.2	1,389
Gippsland (Inc. Yallourn)	3,512.2	48,879	219,899	703	11,643	378.5	53.3	8,321
Midland	990.5	15,718	38,035	116	1,915	133.7	13.3	2,178
North Eastern (inc. Kiewa)	3,751.0	19,227	201,285	110	32,095	222.9	32.0	7,343
North Western	1,838.2	35,601	98,308	380	37,051	670.7	62.5	1,593
South Western	2,196.0	33,196	100,934	192	19,771	388.0	9.2	6,599
Total	15,293.3	619,969	2,949,862	2,791	229,810	2,132.0	382.9	38,999

BRANCH DISTRIBUTION

In the year under review the following larger country extensions were completed or nearing completion at 30th June, 1958:—

Ballarat Branch

Mt. Wallace-Beremboke; Mannibada-Wallinduc-Willowvale.

North Western Region

Kinypanial; Fernihurst; Watchem; Ballapur; Wild Duck Creek; Karyrie-Kinnabulla-Curyo-Watchupga; Rheola-Kingower; Nullawil West; Warmur; Richmond Plains; Lallat North.

Geelong Branch

Murgheboluc.

KIEWA HYDRO-ELECTRIC SCHEME

No. 1 DEVELOPMENT

Excavation of underground chamber and concrete lining of roof arch in progress, No. 1 Power Station — six 16,000 kW. Turbo-generators — planned for operation in 1960-61.

Eastern Metropolitan Branch

The Patch-Fairy Dell; Yarrambat; Panton Hill-Kangaroo Ground.

Gippsland Branch

Carrajung; Yarung Soldier Settlement, Perry Bridge; Willung; Coalville - Narracan - Narracan South; Nyora Soldier Settlement.

Midland Branch

Pyalong; Woodstock West Stage 1.

North Eastern Branch

Wooragee; Barmah Stage 1; Boggy Creek, Moyhu; Whitfield-King Valley; Bylands; Tarnook; Mooney's Soldier Settlement, Moyhu.

South Western Branch

Tatyoon; Yalla-Y-Poora Stage 1; Bessiebelle; Ellerslie; Wickliffe-Narrepumelap; Moyston Area.

* * *

Cohuna, Woomelang, Quambatook, Dimboola (North Western Region) and Apollo Bay (South Western Branch) local electricity supply undertakings were acquired following the extension of transmitted supply.

Negotiations have been completed for the extension of transmitted supply to Portland and district and for the acquisition of the local undertaking. Work has commenced and it is expected that Portland will be linked to the State supply system by September, 1959.

●

Tramways

BALLARAT AND BENDIGO

Revenue — £104,707 Loss — £141,453

The Commission sees no prospect of any financial improvement in respect of these tramway services; they have never been economically justified. It is convinced that alternative forms of transport would provide more adequately for the convenience of the travelling public at Ballarat and Bendigo. The patronage of local residents continues to show a steady decline in both cities.

An absurd position has been reached in that for every passenger carried the average fare is just over 1d., while the cost of the service averages 10½d. at Bendigo and 9d. at Ballarat.

	Revenue		Expenditure		Passengers	
	£	%	£	%		%
Ballarat	63,351	(—2.9)	140,889	(—5.2)	3,810,840	(—2.2)
Bendigo	41,356	(—2.9)	105,271	(—19.3)	2,327,945	(—2.3)
Total	104,707	(—2.9)	246,160	(—10.8)	6,138,785	(—2.2)

The reduction in expenditure at Bendigo is attributable to the fact that special non-recurring items were included last year.

Personnel

Total Personnel

	30/6/58	30/6/57
Staff	6,767	6,552
Wages	11,576	11,581
	18,343	18,133

Wages employees as at 30th June, 1958–

Location	Operation	Construction
Power Generation	2,218	1,186
Main Transmission Lines, Terminal and Sub-Stations	116	191
Electricity Supply – Metropolitan Branch Distribution	376	177
Electricity Supply – Country Branch Distribution	790	730
Briquette Production and Distribution	418	18
Coal Winning, Yallourn and Morwell	1,115	19
General Services, Town and Workshops – Yallourn	1,272	325
General Services, Workshops – Elsewhere	1,262	543
Tramways – Ballarat, Bendigo	160	
Total	8,057	3,519
GRAND TOTAL	11,576	

Education and Training

The Commission's scholarship scheme now provides up to ten scholarships for engineering courses at the University and ten for diploma courses at Technical Schools each year, subject to the total number at any one time not exceeding 42. The engineering scholarships are available to University and Technical School students as well as to Commission trainees. Also, a limited number of scholarships is granted to enable Commission engineers to gain overseas experience.

The scheme has been extended to provide up to two scholarships each year for selected commercial officers from within the Commission's service to enable them to study full-time at the University for Commerce or Arts Degrees (approved subjects).

Within the Commission 69 cadet engineers are receiving special training; 170 men successfully completed the course at the Training School for Linesmen; there are 565 apprentices, principally in the engineering trades. Special courses are being held for commercial executives, commercial trainees, junior officers, draftsmen, power station personnel, operators, assistant officers-in-charge of electricity supply districts, meter testers, electrical testers, chemical assistants, storemen and linesmen.

A general education course was introduced to give clerical officers a better understanding of the Commission's organisation and its main commercial functions; 607 personnel are enrolled.

Safety

Industrial safety and accident prevention measures are being constantly reviewed by Section, Branch and Departmental Committees: special emphasis has been given to safety education. Another 236 personnel qualified as First Aiders.

Public Safety and Other Regulatory Responsibilities

ELECTRIC LIGHT AND POWER ACT 1928

At the close of the financial year 47 electricity supply undertakings (29 municipal and 18 owned by companies or persons) were operating in Victoria under the provisions of the Act.

The Governor in Council approved the following Orders in Council authorising supply of electricity:—

Order No.	Undertakers	Area of Supply
302	Harrow Electric Supply Co. Pty. Ltd.	Township of Harrow (new)
303	Northcote City Council	Limited to enable bulk supply to be taken from the Commission's substation "BK" Brunswick (new).
304	S. F. Block	Township of Jeparit (renewal)
306	Dawson's (Rainbow) Pty. Ltd.	Township of Rainbow (renewal)

Orders in Council for the supply of electricity by local authorities were revoked following the transfer of the following undertakings to State ownership — Gunbower, Cohuna, Apollo Bay, Woomelang, Quambatook, Dimboola.

Extensions (totalling 726 kW) to generating plants at Beulah, Casterton, Robinvale and Serviceton were approved.

Inspections were made of 21 electricity supply undertakings in addition to newly installed generating plants and high voltage systems. Complaints of unsatisfactory service were also investigated.

Licensing of Electrical Mechanics

Licences in force as at 30th June, 1958:— Grade "A" — 4,892; Grade "B1" — 168; Grade "B" — 1,301; Grade "C" — 1,658. Two licensing examinations (including theory and practice) were held.

Special conditional permits were issued — 1,356 for periods not exceeding six months and 558 for periods not exceeding twelve months.

Registration of Electrical Contractors

At 30th June, 1958, 1,612 registrations were in force, 80 more than at the end of the previous year.

Electrical Approvals Board

Under the Board's constitution, two of its members retire each year. Mr. A. Renshaw, representing the electrical contractors and Mr. E. B. Foster, representing the wholesale electrical traders were re-appointed as members of the Board for the ensuing three years.

Since the inception of the Board in 1935, 5,431 prototypes have been tested and approval given to 4,339; in addition, approximately 5,030 other articles were voluntarily submitted for examination and testing.

* * *

Of the 19 electrical fatalities during the year, eleven (including two Commission employees) resulted from contact with overhead or other conductors; four (including two Commission employees) from contact with live metal behind switchboards; three from lack of maintenance of flexible cords or consumers, installations and one from interference with an appliance plug.

Electrolysis Mitigation

The Electrolysis Technical Sub-Committee continued its work of investigating and mitigating stray current electrolysis. Co-operation was maintained with the Australian Association for Corrosion Prevention to ensure co-ordination of cathodic protection measures for underground metallic structures.

Commissioners

RETIREMENT OF COMMISSIONER SIR ANDREW FAIRLEY, K.B.E., C.M.G.

Commissioner Sir Andrew Fairley retired on 31st December, 1957, after an association with the Commission of almost 21 years. The Commission, on 9th January, 1958, recorded the following minute in appreciation of his services to the State and the Commission:—

"On the occasion of the retirement on 31st December, 1957, of Commissioner Sir Andrew Fairley, K.B.E., C.M.G., the Commission records its high appreciation of the invaluable service which Sir Andrew has given both to the State and the Commission during a period of almost 21 years.

"The Commission counts itself privileged to have had for so long the full benefit of Sir Andrew's extensive knowledge and business experience, coupled with the wise counsel and sound judgment which he brought to bear on the many problems arising out of the Commission's activities, and it pays tribute to the very substantial contribution that he has made towards the successful growth and expansion of electricity supply in Victoria.

"In his association with the Commission, extending over more than half of its history, Sir Andrew has seen great developments in all facets of the organisation. Major projects planned or commenced during his term of office included the Kiewa Hydro-Electric Scheme, the Morwell Power and Fuel Project, and extensions to the Yallourn Power Station. Over the same period, capital expenditure of the undertaking increased more than tenfold to £250 million — annual revenue rose from £4 million to £37 million — installed plant capacity was quadrupled to 1,100 MW, and the total number of consumers reached nearly 600,000 — an increase of nearly 150%. This progress continued despite the difficulties attendant upon World War II and the post-war problems particularly related to the shortages of manpower and adequate capital finance. Of especial interest and most satisfying to Sir Andrew in view of his close contact with the life of the rural community and his desire to see the advantages of electricity supply spread throughout the State, the total number of farms connected has increased from 2,600 to 36,000.

"The bestowal of the honour of a knighthood on Sir Andrew Fairley by His Late Majesty King George VI in the 1951 New Year's Honours List, in recognition of distinguished public service in various spheres over a long period, was viewed with very great pleasure and pride by the Commission.

"Sir Andrew's service to the Commission, the State and the Commonwealth represents to those who are to follow, a splendid example of willing and unselfish public service. The Commission is much indebted to one whose name for all time will be specially identified with this undertaking."

APPOINTMENT OF NEW COMMISSIONER

The Governor in Council appointed Mr. B. A. Morris, B.E.E., E.D., as a Commissioner for a period of five years from 1st January, 1958, to fill the vacancy caused by the retirement of Sir Andrew Fairley.

AWARD OF KERNOT MEDAL TO CHAIRMAN — MR. W. H. CONNOLLY, B.E.E., B.Com., M.I.E.Aust.

His colleagues record with pleasure the award by the University of Melbourne to the Chairman, Mr. W. H. Connolly, of the Kernot Medal for 1957 for "distinguished engineering achievement in Australia."

Staff

With a deep sense of loss, the Commission reports the death of two of its valued senior officers:—

Mr. E. W. Broben, Dip. Elect. Eng., Deputy Power Station Superintendent, Newport, died on 18th July, 1957; Mr. Broben joined the Commission in 1924.

Mr. J. A. P. Gerrard, Industrial Superintendent, died on 18th February, 1958; Mr. Gerrard joined the Commission in 1924.

Retirements

The Commission records its high appreciation of the services rendered over long periods by the following senior officers:—

Mr. H. E. G. Tuck, F.A.S.A., Chief Accountant, retired on 24th September, 1957; he joined the Commission in 1920 as a member of the Accountancy staff. Mr. Tuck later served as Assistant Chief Accountant, Deputy Chief Accountant and from 1953 as Chief Accountant.

Mr. L. A. Cunnington, Purchasing Officer, retired because of ill health on 8th December, 1957, after 35 years' service with the Commission.

Mr. H. D. Burford, Manager, Commercial Division, Electricity Supply Department, retired on 23rd May, 1958; he joined the Melbourne Electric Supply Company Ltd., in 1913, and transferred to the Commission when that undertaking was acquired in 1930.

Mr. H. S. Martin, A.M.I.E. Aust., A.I.E.E. (Lond.), Superintendent, Meter and Tests, Electricity Supply Department, retired on 12th October, 1957, after 43 years' service with the Melbourne Electric Supply Co. Ltd., and the Commission.

Mr. R. P. Dixon, A.M.I.E. Aust., Chief Draftsman, Electricity Supply Department, retired on 6th November, 1957, after 41 years' service with the Melbourne Electric Supply Co. Ltd., and the Commission.

Appointments

Accounting, budgeting, statistical and allied functions are now grouped within the new Finance Department. Mr. J. L. Pepperell, B.Com. (previously Deputy Chief Accountant), and Mr. R. Maver (previously Chief Budgetary Officer), were appointed Chief Finance Officer and Assistant Chief Finance Officer respectively as from 25th September, 1957.

Other principal appointments were as follows:—

Mr. T. B. Jensen, B.E. (Mining), A.M.I.E. Aust., A.M.M.I.M., joined the Commission's service as Assistant General Superintendent, Yallourn, as from 4th November, 1957.

Mr. A. C. S. Hughston, Dip. Elect. Engr., was appointed as Assistant Project Manager and Construction Engineer, Morwell, as from 20th September, 1957; Mr. Hughston was previously Deputy Construction Engineer, Morwell.

* * *

The Commission again has pleasure in placing on record its appreciation of the efficient and loyal service which is being rendered to the community by the personnel engaged throughout the many phases of its activities. The vast programme of new works and the development and operation of the power and fuel projects referred to in this report indicate the magnitude of the task so willingly accepted by all.

* * *

We have the honour to be, Sir, your obedient servants,

W. H. CONNOLLY, Chairman.

A. W. HENDERSON, Commissioner.

A. A. FITZGERALD, Commissioner.

B. A. MORRIS, Commissioner.

D. H. MUNRO,

Secretary.

10th November, 1958.

PROFIT AND LOSS ACCOUNT

BALANCE SHEET

AND

FINANCIAL STATISTICS

General Profit & Loss Account

FOR YEAR ENDED 30th JUNE, 1958

Last year £		£	£
	Operating Income		
	Electricity Sales		
10,493,346	Domestic	11,386,723	
4,703,998	Commercial	5,183,867	
8,445,448	Industrial	9,312,387	
7,846,560	Bulk Supplies	8,847,657	
1,942,121	Traction	1,997,310	
391,734	Public Lighting and Miscellaneous	427,573	
33,823,207		37,155,517	
1,803,658	Briquette Sales	1,997,650	
800,535	Brown Coal Sales (Yallourn North)	782,524	
107,854	Tramways Income	104,707	
£36,535,254			**40,040,398**
	Operating Expenditure		
18,658,262	Operation and Maintenance (incl. Fuel)	20,063,691	
2,809,087	Depreciation (Appendix No. 3B)	4,840,366	
2,907,622	Administration and General Expenses (Appendix No. 3C)	3,105,550	
1,438,776	General Services and Special Personnel Expenditure (Appendix No. 3C)	1,666,385	
£25,813,847			**£29,675,992**
10,721,507	**Excess of Operating Income over Operating Expenditure**		10,364,406
12,741	*Add:* Miscellaneous Income		21,993
10,734,248			**10,386,399**
	Deduct:		
7,385,495	Interest (Appendix No. 3B)	7,949,331	
210,000	Loan Flotation Expense (Appendix No. 3B)	260,000	
254,145	Miscellaneous Expenditure (Appendix No. 3E)	246,886	
£7,849,640			£8,456,217
2,884,606	**Profit for Year before Special Write Off**		**1,930,182**
	Deduct:		
2,100,000	Proportion of Interest on Morwell and Other Expenditure on Works under Construction Written Off (Appendix No. 4E)		1,910,000
£784,608	**Profit for Year, after Special Write Off— Available for Appropriation**		**£20,182**
	(For results of separate operations see Appendix No. 3A)		
	Appropriations to		
400,000	Obsolescence Reserve		—
100,000	Rural Development Reserve		100,000
405,858	Contingency and General Reserve		84,682
905,858			184,682
	Deduct:		
121,250	Transfer from Rural Development Reserve to meet year's loss on Marginal Rural Extensions		164,500
£784,608			**£20,182**

General Balance Sheet

AS AT 30th JUNE, 1958

Last Year £		£	£
	Current Assets		
165,869	Balances at Bank and Cash in Hand	363,885	
3,326,457	Consumers' and Other Accounts Receivable	3,759,505	
2,125,056	Unread Meters—Estimated Income	2,313,583	
7,480,516	Materials and Fuel—at Cost (Appendix No. 4A)	5,560,621	
13,097,898			11,997,594
	Investments (incl. Loan Redemption and "Self-help") at Cost		
2,421,640	(Appendix No. 4B)		2,606,416
	Unamortised Charges		
	Overburden Removal and Disposal—		
5,803,096	Balance of Cost (Appendix No. 4C)	6,660,194	
1,252,871	Loan Flotation Expense (Appendix No. 4D)	1,231,295	
7,055,967			7,891,489
	Deferred Charges		
	Interest and Other Expenditure on Works under Construction,		
6,673,403	carried forward (Appendix No. 4E)	6,672,948	
1,201,486	Preliminary Investigations and Other Deferred Charges ...	2,963,217	
7,874,889			9,636,165
	Fixed Assets (Appendix No. 4F)		
236,406,379	Assets—at Cost	259,087,468	
26,823,242	Deduct—Provision for Depreciation	31,239,071	
209,583,137		227,848,397	
463,315	Deduct—Consumers' Contributions	534,706	
209,119,822			227,313,691
£239,570,216			**£259,445,355**
	Current Liabilities		
2,743,970	Bank Overdraft	2,826,779	
5,533,407	Accounts Payable and Accruals (Other than Interest)	7,503,329	
2,058,369	Interest Accrued	2,351,139	
367,732	Consumers' Deposits and Service Charges in Advance ...	397,966	
10,703,478			13,079,213
5,683,673	**Consumers' Advances for Construction**		7,138,855
	Reserves (Appendix No. 4G)		
2,247,775	Obsolescence	2,124,856	
932,136	Rural Development	867,636	
5,742,278	Contingency and General	5,937,506	
8,922,189			8,929,998
	Capital Liabilities (Appendix No. 4H)		
	Inscribed Stock and Debentures—		
167,882,381	Issued by the Commission	183,219,858	
638,534	Issued by Acquired Undertakings	673,931	
	Victorian Government Advances (incl. £3,249,811 Stg. without		
45,739,961	exchange)	46,403,500	
214,260,876			230,297,289
£239,570,216			**£259,445,355**

J. L. PEPPERELL, Chief Finance Officer

W. H. CONNOLLY, Chairman
31st October, 1958

AUDITOR-GENERAL'S CERTIFICATE

The accounts of the State Electricity Commission of Victoria have been audited for the year ended 30th June, 1958. For the purpose of the audit, the detailed examinations and checks carried out by the Commission's Internal Audit Staff have been accepted by my officers. In my opinion, the above Balance Sheet presents a correct view of the affairs of the undertaking at the 30th June, 1958, and the Profit and Loss Account properly summarizes the operations of the Commission for the year.

R. W. GILLARD, Auditor-General
21st November, 1958

PROFIT AND LOSS SUPPLEMENTARY INFORMATION

A. Results of Separate Operations

Last year £		£	£	£
	Electricity			
33,823,207	**Income from Sales**		37,155,517	
	Expenditure			
18,023,628	Generation	20,530,942		
1,820,149	Purchased Electricity	1,849,242		
9,776,087	Transmission and Distribution	11,597,108		
29,619,864			33,977,292	
4,203,343	Profit			3,178,225
	Briquettes			
1,803,658	**Income from Sales**		1,997,650	
	Expenditure			
1,288,268	Manufacture	1,466,521		
498,017	Freight and Distribution	506,809		
1,786,285			1,973,330	
17,373	Profit			24,320
	Brown Coal (Yallourn North)			
800,535	**Income from Sales**		782,524	
	Expenditure			
496,490	Production	505,528		
52,406	Freight and Distribution	33,774		
548,896			539,302	
251,639	Profit			243,222
	Tramways			
276,545	**Expenditure**		246,160	
107,854	**Income**		104,707	
168,691	Loss			141,453
4,303,664	**Profit from Above Operations**			3,304,314
12,741	*Add:* Miscellaneous Income			21,993
4,316,405				3,326,307
	Deduct:			
1,177,652	Interest during Construction in Operating Areas			
254,145	Yallourn, Kiewa, etc.		1,149,239	
	Miscellaneous Expenditure		246,886	
2,100,000	Proportion of Interest on Morwell and Other Expenditure on Works under Construction Written Off		1,910,000	
3,531,797				3,306,125
784,608	**Profit for Year after Special Write Off**			20,182

Analysis of Electricity Expenditure

Commission Fuel (incl. capital charges and overheads)	5,155,375	
Purchased Fuel	4,546,189	
Operation and Maintenance (excl. Fuel)	4,341,963	4,435,004
Interest	2,656,248	2,963,760
Depreciation	2,093,386	1,349,983
Administration, Customers' Accounting and Sales Promotion	640,310	2,282,078
General Services and Special Personnel Expenditure	978,103	447,478
Loan Flotation Expense	119,368	118,805
	£20,530,942	£11,597,108

B. Capital Charges

Last year £		£
	Interest	
8,699,444	On Capital Liabilities	9,723,908
187,492	On Consumers' Advances for Construction	287,980
213,948	On Current Liabilities	56,249
9,100,884		10,068,137
94,160	*Deduct:* Interest earned on Investments	99,290
9,006,724		9,968,847

Last year £	*Allocated to—*	£	£
	Profit and Loss Account—		
5,046,678	Power Stations, Lines, Substations, etc.	5,620,008	
580,761	Coal and Briquette Production	574,800	
580,404	Service Assets	605,284	
6,207,843	Interest on Assets in Operation		6,800,092
1,177,652	**Interest during Construction in Operating Areas**—Yallourn, Kiewa, etc.		1,149,239
7,385,495			7,949,331
1,260,890	**Deferred Charges**—Morwell Interest during Construction		1,683,400
360,339	**Fixed Assets**—Component of charges for services		336,116
£9,006,724			£9,968,847

Depreciation

Depreciation in accordance with pre-assessed asset lives has been allocated to—

	Profit and Loss Account—		
1,898,548	Power Stations, Lines, Substations, etc.	3,443,369	
367,698	Coal and Briquette Production	717,584	
542,841	Service Assets	679,413	
2,809,087	Depreciation of Assets in Operation		4,840,366
142,109	**Deferred Charges**—Morwell		—
553,361	**Fixed Assets**—Component of charges for services		672,207
£3,504,557			£5,512,573

Approximately £1,600,000 of the increase over the previous year is attributable to the change from the sinking fund method to the more widely used straight line method in calculating the depreciation of long life assets.

Loan Flotation Expense

This expense approximates the cost of raising all loans current divided by the average period of these loans and has been allocated to—

	Profit and Loss Account—		
191,623	Power Stations, Lines, Substations, etc.	238,173	
18,377	Coal and Briquette Production	21,827	
210,000			260,000

C. General Overheads

Administration and General Expenses

This overhead including Customers' Accounting and Sales Promotion Expenses has been allocated to—

2,907,428	**Profit and Loss Account**	3,105,550
773,311	**Fixed Assets**	796,017
3,680,739		3,901,567

General Services and Special Personnel Expenditure

This overhead, which includes Superannuation, Long Service Leave, Training and Education, Safety, Medical, Recreational, Bus Services, Townships and Municipal Services, Hostels, Camps, etc., has been allocated to—

1,500,460	**Profit and Loss Account**	1,666,385
801,995	**Fixed Assets**	981,811
2,302,455		2,648,196

D. Sale of Electrical Appliances

722,213	Income	720,422
718,312	Expenditure	726,794
3,901	Profit / Loss	6,372

This result is included in Sales Promotion Expense.

E. Miscellaneous Expenditure

95,696	Brown Coal Investigations	94,066
57,499	Electrical Inspection and Regulations for State of Victoria	60,768
60,000	Restoration of Geelong roads following abandonment of tramway system	60,000
40,950	Other items	32,052
254,145		246,886

BALANCE SHEET — SUPPLEMENTARY INFORMATION

A. Materials and Fuel

	30/6/57	30/6/58
	£	£
Construction and Maintenance Stocks	5,614,974	4,163,149
Briquettes, coal and fuel oil	1,495,471	1,072,392
Electrical appliances for sale	171,495	180,203
Manufactures in progress	198,576	144,877
	£7,480,516	£5,560,621

B. Investments at 30th June, 1958

	Government Securities			Bank Deposits	Total Cost
	Market Value	Face Value	Cost		
	£	£	£	£	£
Loan Redemption Fund	1,204,199	1,263,500	1,236,554	—	1,236,554
"Self-help" Contributions not yet spent ...	177,610	182,640	182,640	1,157,979	1,340,619
Contractors' and Consumers' Deposits ...	22,590	22,653	22,653	6,590	29,243
	1,404,399	1,468,793	1,441,847	1,164,569	2,606,416

C. Overburden Removal and Disposal—Balance of Cost

	Total	Yallourn Open Cut	Yallourn North Open Cut	Morwell Open Cut
	£	£	£	£
Balance at 30th June, 1957	5,803,096	2,889,407	454,715	2,458,974
Cost of removal and disposal 1957/58	2,256,490	1,010,848	516,251	729,391
	8,059,586	3,900,255	970,966	3,188,365
Deduct—Overburden loading in cost of coal won 1957/58	1,399,392	900,047	494,266	5,079
Balance at 30th June, 1958 (Cost of uncovering coal still to be won)	6,660,194	3,000,208	476,700	3,183,286

D. Loan Flotation Expense

Balance at 30th June, 1957	£1,252,871
Expenditure during year to 30th June, 1958	238,424
	1,491,295
Deduct—Amount charged to Profit and Loss Account for year to 30th June, 1958 (Appendix No. 3B)...	260,000
Balance at 30th June, 1958	£1,231,295

E. Interest and Other Expenditure on Works Under Construction carried forward

	£	£
Balance at 30th June, 1957		6,673,403
Expenditure during year to 30th June, 1958		
Interest—Morwell	1,683,400	
Other expenses	226,145	1,909,545
		8,582,948
Deduct—Amount written off against profit for year to 30th June, 1958		1,910,000
Balance at 30th June, 1958		£6,672,948

Only an amount equivalent to the year's expenditure could be written out on this occasion but the Commission has adopted a settled policy to write off the £6,673,000 balance at 30th June, 1958, over a maximum period of 5 years. As initial operation of the large project at Morwell will take place in 1958/59, no more interest charges and other expense on works under construction will be deferred.

APPENDIX No. 4 *(Continued)*

F Fixed Assets Schedule—Expenditure for Year and Cost at 30th June, 1958

	YALLOURN		MORWELL		ELECTRICITY SUPPLY DEPARTMENT		KIEWA		OTHER AREAS AND GENERAL		TOTAL	
	New Expenditure	Cost at 30/6/53	New Expenditure	Cost at 30/6/58	New Expenditure	Cost at 30/6/58	New Expenditure	Cost at 30/6/58	New Expenditure	Cost at 30/6/58	New Expenditure	Cost at 30/6/58
	£	£	£	£	£	£	£	£	£	£	£	£
Coal Production ...	1,002,618	**11,649,338**	307,601	**5,717,060**	...	...	...	...	...	...	1,310,219	**17,366,398**
Briquette Production and Storage	61,850	**2,996,617**	1,525,177	**13,718,725**	...	...	...	...	21,561	**200,517**	1,608,588	**16,915,859**
Thermal Power Production												
Yallourn	4,623,183	**31,986,918**	...	...	...	...	...	...	...	...	...	...
Newport	...	...	...	...	...	...	...	...	69,820	**10,615,517**	...	...
Morwell	...	...	2,851,921	**11,408,872**	...	...	...	...	...	...	...	...
Richmond	...	...	...	...	...	...	...	...	4,035	**3,569,753**	...	...
Geelong	...	...	...	...	...	...	...	...	13,632	**4,095,002**	...	...
Ballarat	...	...	...	...	...	...	...	...	5,143	**3,198,134**	...	...
Mildura-Redcliffs ...	...	...	...	...	...	...	...	...	31,775	**2,426,299**	...	...
Internal Combustion Stations (4) ...	...	...	...	...	...	...	...	...	10,664	**1,805,201**	...	...
Land for Future Power Stations	...	...	...	...	...	...	...	...	15,543	**25,194**	7,625,716	**69,130,890**
Hydro Power Production												
Kiewa	...	...	...	...	...	...	2,319,124	**32,025,055**	...	...	...	...
Eildon-Rubicon ...	...	...	...	...	...	...	...	...	177,260	**4,230,327**	2,496,384	**36,255,382**
Transmission System ...	93,047	**2,272,450**	40,629	**989,216**	...	...	4,701	**2,360,993**	1,689,286	**13,647,614**	1,827,663	**19,270,273**
Terminal Transformation System	...	...	...	...	...	...	...	...	1,454,346	**15,005,183**	1,454,346	**15,005,183**
Distribution System												
Metropolitan Branch ...	...	...	...	...	1,446,799	**14,700,980**	...	...	...	...	...	...
Provincial and Country Branches	4,990	**102,684**	...	...	5,046,529	**37,466,438**	...	...	...	...	6,498,318	**52,270,102**
General												
Offices, Stores, Workshops etc.	128,785	**3,704,480**	174,743	**1,068,366**					80,840	**2,652,196**	...	...
Plant and Equipment ...	67,425	**2,016,196**	900	**1,330,699**	Included in Distribution System		Included in Hydro Power Production		445,292	**6,065,015**	...	...
Accommodation, Townships, Hostels, etc. ...	171,705	**5,881,905**	818	**1,170,730**					3,002	**442,794**	...	...
Miscellaneous Services (Roads, Railways, Sewerage, Electricity, Telephones, Fire Services, etc.) ...	78,751	**3,307,747**	287,380	**3,553,055**	...	...	...	...	115,525	**1,680,198**	1,555,166	**32,873,381**
Total Cost of Fixed Assets	6,232,354	**63,918,335**	5,189,169	**38,956,723**	6,493,328	**52,167,418**	2,323,825	**34,386,048**	4,137,724	**69,658,944**	24,376,400	**259,087,468**
Deduct—Provision for Depreciation	...	**11,774,988**	...	**963,188**	...	**4,779,992**	...	**1,418,152**	...	**12,302,751**	...	**31,239,071**
Depreciated Cost of Fixed Assets	...	**52,143,347**	...	**37,993,535**	...	**47,387,426**	...	**32,967,896**	...	**57,356,193**	...	**227,848,397**

The cumulative Depreciation Provision movements were:—

Balance brought forward from last year ...	£26,823,242
Add—Provision for year to 30th June, 1958 ...	5,512,573
	32,335,815
Deduct—Retirements applied during the year	1,096,744
Balance at 30th June, 1958	£31,239,071

G Reserves

Obsolescence Reserve

	£
Balance at 30th June, 1957	2,247,775
Deduct—Irrecoverable expenditure on sale of surplus materials	122,919
Balance at 30th June, 1958	£2,124,856

Rural Development Reserve

Balance at 30th June, 1957	932,136
Add—Appropriation of profit for year to 30th June, 1958	100,000
	1,032,136
Deduct—Transfer to Profit and Loss Account to meet losses for the year upon marginal rural extensions	164,500
Balance at 30th June, 1958	£867,636

Contingency and General Reserve

Balance at 30th June, 1957	5,742,278
Add—Appropriation of balance of profit for year to 30th June, 1958	84,682
Contributions by the Commonwealth Government, etc., to the Commission's equity in the National Debt Sinking Fund	110,546
Balance at 30th June, 1958	£5,937,506

APPENDIX No. 4 *(Continued)*

H Capital Liabilities

Inscribed Stock and Debentures

	Total	Issued by	
		Commission	Acquired Undertakings
	£	£	£
Balance at 30th June, 1957	168,520,915	167,882,381	638,534
Commission issues and acquisitions during year to 30th June, 1958	18,706,849	18,586,650	120,199
	187,227,764	186,469,031	758,733
Deduct—Redeemed or repaid during the year	3,333,975	3,249,173	84,802
Balance at 30th June, 1958	£183,893,789	£183,219,858	£673,931

The Commission's stock and debenture borrowings are subject to sinking fund provision of 10/– per cent. per annum cumulative (in a few instances, 20/– per cent. per annum cumulative), but because of their comparatively short currency, there remain at maturity substantial balances to be re-borrowed in the form of conversions and new subscriptions in renewal loans or to be redeemed from the Commission's internal funds.

The sinking fund for redemption of Commission stock and debentures stands as follows:

	£
Balance at 30th June, 1957	4,531,439
Add—Sinking Fund requirements for the year to 30th June, 1958	1,111,827
	5,643,266
Deduct—Amount attributable to loans which matured during the year	316,000
Balance at 30th June, 1958	£5,327,266
At the 30th June, 1958, this fund was comprised as under—	
Investments at face value	1,263,500
Loans repurchased in the open market and repaid prior to maturity	3,840,567
Moneys temporarily employed in the business	223,199
	£5,327,266

The minor acquired stock and debentures are fully repaid by annual sinking fund contributions over the remaining periods of the loans.

Victorian Government Advances

	£	£
Balance at 30th June, 1957		45,739,961
Advances during the year to 30th June, 1958—		
New Loans	1,000,000	
Transfer of assets from other Government authorities	29,100	
Loan flotation expense—new and renewal loans	79,752	
		1,108,852
		46,848,813
Deduct—Repayments during the year (Increase in Commission's equity in National Debt Sinking Fund)		445,313
Balance at 30th June, 1958		£46,403,500

Victorian Government advances are repaid over periods of 53–58 years through annual contributions to the National Debt Sinking Fund.

* * *

Sinking Fund requirements in respect of both Inscribed Stock and Debentures and Victorian Government advances are met from Depreciation moneys. The remainder, and by far the larger part of these moneys, is invested in construction works.

I Capital Commitments

Outstanding contract commitments for capital expenditure at 30th June, 1958, not taken up in the accounts, were estimated at approximately £27 million (1957 £23 million).

TEN YEARS OF FINANCIAL STATISTICS

Profit and Loss Account

	1958	1957	1956	1955	1954	1953	1952	1951	1950	1949
	£m.	£m.	£m.	£m.	£m.	£m.	£.m	£m.	£m.	£m.
Operating Income										
Electricity Sales	37·155	33·823	28·887	24·839	22·117	19·190	15·100	11·524	9·446	8·130
Briquette Sales	1·998	1·804	1·297	·960	1·000	·883	·622	·480	·413	·350
Brown Coal Sales (Yall. Nth.)	·782	·800	·735	·551	·484	·422	·295	·203	·244	·195
Tramways	·105	·108	·159*	·182	·185	·185	·181	·175	·172	·148
	40·040	36·535	31·078	26·532	23·786	20·680	16·198	12·382	10·275	8·823
Deduct—										
Operating Expenditure	29·676	25·813	23·107	20·432	18·490	16·013	13·314	10·595	9·056	7·562
EXCESS OF OPERATING INCOME OVER OPERATING EXPENDITURE	**10·364**	**10·722**	**7·971**	**6·100**	**5·296**	**4·667**	**2·884**	**1·787**	**1·219**	**1·261**
Deduct—										
Interest	7·949	7·386	5·492	4·746	3·228	2·550	2·218	1·611	1·388	1·181
Loan Flotation Expense & Miscellaneous	·485	·451	·367	·213	·208	·209	·457	·174	·180	·154
Deferred Interest and Other Expenditure on Works under Construction Written Off	1·910	2·100	1·750	·381	1·250	1·050	—	—	—	—
PROFIT (+) LOSS (—) AFTER SPECIAL WRITE OFF	**+ ·020**	**+ ·785**	**+ ·362**	**+ ·760**	**+ ·610**	**+ ·858**	**+ ·209**	**+ ·002**	**— ·349**	**— ·074**
Add—										
Transfers from Special Reserves ...	·165	·121	—	—	—	—	—	—	·100	·103
	+ ·185	+ ·906	+ ·362	+ ·760	+ ·610	+ ·858	+ ·209	+ ·002	— ·249	+ ·029
Deduct—										
Appropriations to Special Reserves ...	·100	·500		·400	·250	·515	—	—	—	—
BALANCE TRANSFERRED TO CONTINGENCY AND GENERAL RESERVE ...	**+ ·085**	**+ ·406**	**+ ·362**	**+ ·360**	**+ ·360**	**+ ·343**	**+ ·209**	**+ ·002**	**— ·249**	**+ ·029**

*Geelong Tramways ceased operation on 25th March, 1956.

Balance Sheet

Fixed Assets Expenditure	258·553	235·943	215·800	192·635	173·313	150·386	124·011	93·097	61·359	47·327
Deduct—										
Provision for depreciation	31·239†	26·823	24·200*	18·840	17·390	16·591	15·387	14·291	13·321	12·287
Fixed Assets (Depreciated)	227·314	209·120	191·600	173·795	155·923	133·795	108·624	78·806	48·038	35·040
Current Assets	11·997	13·097	13·953	12·487	11·887	14·518	15·956	12·160	8·485	4·088
Investments	2·606	2·422	2·234	1·753	·496	·324	·520	·825	·395	·689
Unamortised Charges	7·892	7·056	6·286	5·717	5·330	5·021	4·316	2·908	1·872	1·257
Deferred Charges	9·636	7·875	7·857	6·218	4·085	2·903	2·004	·862	·576	·758
TOTAL ASSETS	**259·445**	**239·570**	**221·930**	**199·970**	**177·721**	**156·561**	**131·420**	**95·561**	**59·366**	**41·832**
Capital Liabilities	230·297	214·261	194·998	183·708	164·086	139·128	117·049	83·647	51·270	33·830
Reserves	8·930	8·922	8·163	7·731	7·144	6·636	5·572	5·171	5·031	5·562
Current Liabilities	13·079	10·703	14·740	5·265	4·296	9·474	8·330	6·580	2·897	2·284
Consumers' Advances for Construction ...	7·139	5·684	4·029	3·266	2·195	1·323	·469	·163	·168	·156
TOTAL LIABILITIES	**259·445**	**239·570**	**221·930**	**199·970**	**177·721**	**156·561**	**131·420**	**95·561**	**59·366**	**41·832**

†Includes approx. £1·600 mil. due to change from "sinking fund" to "straight line" depreciation of long life assets.
*After £3·672 mil. depreciation of short life assets applied in reduction of capital expenditure was brought back and transferred to depreciation provision.

STATISTICS

POWER PRODUCTION

STATE OF VICTORIA

GENERATION OF ELECTRICITY

State Electricity Commission of Victoria

Station	Interconnected System																				Other Stations		Total	Other Undertakings	Total for Victoria
	Yallourn*		Newport		Richmond		Spencer Street (Melbourne City Council)		Regional Stations: Geelong "A" & "B"		Regional Stations: Ballarat "A" & "B"†		Regional Stations: Shepparton, Warrnambool Hamilton, and Horsham		Eildon-Rubicon		Kiewa		Hume (output shared with N.S.W.)		Total Interconnected System		Mildura, Redcliffs, Horsham and Murtoa				
Year	kWh (mills.)	M.D.kW	kWh (mills.)	M.D.kW	kWh (mills.)	M.D.kW	kWh (mills.)	M.D.kW	kWh (mills.)	M.D.kW summated	kWh (mills.)	M.D.kW summated	kWh (mills.)	M.D.kW summated	kWh (mills.)	M.D.kW	kWh (mills.)	M.D.kW	kWh (mills.)	M.D.kW	kWh (mills.)	M.D.kW Coincident	kWh (mills.)	M.D.kW summated	kWh (mills.)	kWh (mills.)	kWh (mills.)
	Operation commenced 15.6.24		Operation commenced 12.10.23 Newport "A" acquired 21.1.51		Station acquired and reconditioned Restarted 6.5.29		Station operated as part of State system from 1.1.41		"A" Station acquired 1.9.30		"A" Station acquired 1.7.34		Operation commenced Shepparton 7.3.51 Warrnamb'l 7.4.52 Hamilton and Horsham connected to State system from 3.2.55 and 1.3.58 respectively		Operation commenced 14.3.28		Operation commenced 1.9.44		Operation commenced 14.4.57				Hamilton acquired 1.7.46 Mildura acquired 1.10.53 Redcliffs commenced operation 16.1.54				
1924–25	48·4	29,000	53·4	15,800	…	…	…	…	…	…	…	…			…	…	…	…	…	…	101·8	40,500	Horsham acquired 1.6.55		101·8	345·5	447·3
1925–26	142·7	37,500	46·0	16,800	…	…	…	…	…	…	…	…			…	…	…	…	…	…	188·7	50,000	Murtoa acquired 1.3.56		188·7	333·8	522·5
1926–27	238·8	61,000	45·4	19,800	…	…	…	…	…	…	…	…			…	…	…	…	…	…	284·2	76,000	Ceased operation 2.3.58		284·2	302·1	586·3
1927–28	**319·7**	**68,500**	**54·3**	**20,800**	…	…	…	…	…	…	…	…			4·8	**11,500**	…	…	…	…	**378·8**	**87,500**			**378·8**	**252·3**	**631·1**
1928–29	304·5	64,000	49·0	20,000	3·5	15,000	…	…	…	…	…	…			65·3	16,310	…	…	…	…	422·3	95,500			422·3	248·5	670·8
1929–30	310·6	62,500	50·8	21,000	21·9	16,200	…	…	…	…	…	…			77·9	19,300	…	…	…	…	461·2	103,160	…	…	461·2	245·0	706·2
1930–31	**251·9**	**63,000**	**38·4**	**19,800**	**26·6**	**15,520**	…	…	**20·5**	**5,570**	…	…	…	…	**120·9**	**23,100**	…	…	…	…	**458·3**	**109,013**	…	…	**458·3**	**211·1**	**669·4**
1931–32	320·1	80,000	9·8	18,800	25·7	15,000	…	…	26·9	6,510	…	…	…	…	122·4	23,400	…	…	…	…	504·9	116,959	…	…	504·9	194·7	699·6
1932–33	386·2	88,500	2·8	14,400	22·5	15,360	…	…	27·1	6,560	…	…	…	…	111·1	23,400	…	…	…	…	549·7	123,404	…	…	549·7	197·9	747·6
1933–34	**429·3**	**95,000**	**7·6**	**18,500**	**22·6**	**15,120**	…	…	**29·5**	**6,690**	…	…	…	…	**101·0**	**22,800**	…	…	…	…	**590·0**	**127,621**	…	…	**590·0**	**206·2**	**796·2**
1934–35	310·8	94,000	54·0	18,200	56·5	15,500	…	…	30·8	6,980	12·7	3,711	…	…	155·3	25,300	…	…	…	…	620·1	141,993	…	…	620·1	235·3	855·4
1935–36	487·6	107,500	16·7	19,300	29·8	15,100	…	…	34·1	7,930	13·2	3,825	…	…	134·7	25,400	…	…	…	…	716·1	158,862	…	…	716·1	228·9	945·0
1936–37	**531·2**	**122,500**	**27·2**	**19,000**	**25·3**	**15,400**	…	…	**32·1**	**7,930**	**12·5**	**3,750**	…	…	**141·4**	**25,490**	…	…	…	…	**769·7**	**173,300**	…	…	**769·7**	**233·9**	**1,003·6**
1937–38	654·8	140,500	27·1	18,600	24·2	15,300	…	…	34·4	8,620	10·0	3,797	…	…	85·6	25,090	…	…	…	…	836·1	181,847	…	…	836·1	240·4	1,076·5
1938–39	696·6	136,500	23·9	19,600	26·7	15,200	…	…	38·0	9,230	9·4	2,716	…	…	103·2	24,300	…	…	…	…	897·8	198,000	…	…	897·8	240·2	1,138·0
1939–40	**776·1**	**168,000**	**39·3**	**35,000**	**16·2**	**15,400**	…	…	**31·5**	**7,710**	**11·6**	**2,988**	…	…	**149·5**	**25,400**	…	…	…	…	**1,024·2**	**218,600**	…	…	**1,024·2**	**227·5**	**1,251·7**
1940–41	939·5	171,500	44·6	45,300	21·2	15,360	16·0	26,000	21·7	10,050	14·3	3,820	…	…	97·8	20,800	…	…	…	…	1,155·1	261,820	…	…	1,155·1	222·5	1,377·6
1941–42	1,027·3	187,500	45·2	54,800	35·2	15,540	44·1	35,000	30·7	10,600	14·6	4,140	…	…	133·4	25,600	…	…	…	…	1,330·5	297,696	…	…	1,330·5	202·3	1,532·8
1942–43	**1,110·1**	**186,000**	**45·8**	**63,000**	**38·6**	**15,600**	**55·4**	**33,000**	**34·3**	**11,800**	**15·0**	**5,960**	…	…	**156·2**	**26,100**	…	…	…	…	**1,455·4**	**319,300**	…	…	**1,455·4**	**188·1**	**1,643·5**
1943–44	1,088·0	188,000	83·3	71,600	44·5	15,600	63·8	40,650	44·8	12,200	20·8	5,400	…	…	130·4	25,700	…	…	…	…	1,475·6	328,000	…	…	1,475·6	193·0	1,668·6
1944–45	1,133·2	187,000	92·1	89,500	40·2	15,530	59·3	35,070	38·8	11,200	18·9	5,000	…	…	101·1	25,500	18·7	24,000	…	…	1,502·3	351,600	…	…	1,502·3	207·4	1,709·7
1945–46	**1,136·7**	**190,500**	**136·9**	**93,500**	**33·1**	**15,600**	**55·0**	**34,200**	**31·2**	**11,900**	**16·0**	**5,350**	…	…	**134·3**	**25,650**	**51·4**	**26,000**	…	…	**1,594·6**	**377,100**	…	…	**1,594·6**	**202·8**	**1,797·4**
1946–47	1,180·6	185,000	181·6	88,000	23·5	15,520	51·1	29,820	26·9	11,800	18·0	5,150	…	…	144·7	25,850	61·5	26,700	…	…	1,687·9	364,750	2·8	1,000	1,690·7	208·9	1,899·6
1947–48	1,223·9	195,500	299·0	134,000	29·6	15,400	66·3	34,500	33·1	11,750	18·8	5,650	…	…	161·8	25,850	68·3	26,400	…	…	1,900·8	449,500	3·6	1,140	1,904·4	252·3	2,156·7
1948–49	**1,291·6**	**194,000**	**513·6**	**138,000**	**26·1**	**15,600**	**77·0**	**35,220**	**32·9**	**11,800**	**18·8**	**5,850**	…	…	**139·1**	**25,550**	**44·4**	**28,000**	…	…	**2,143·5**	**436,930**	**4·5**	**1,290**	**2,148·0**	**254·6**	**2,402·6**
1949–50	1,287·6	186,500	717·8	175,000	26·6	15,600	105·4	41,910	28·6	11,950	15·6	6,000	…	…	129·2	26,050	46·8	28,500	…	…	2,357·6	504,090	5·2	1,382	2,362·8	260·5	2,623·3
1950–51	1,241·8	187,000	990·5	242,800	19·5	15,000	105·6	38,700	30·6	11,400	16·7	6,100	0·8	1,663	146·0	26,050	48·2	28,000	…	…	2,599·7	497,370	5·8	1,488	2,605·5	158·2	2,763·7
1951–52	**1,282·4**	**196,000**	**1,085·5**	**249,400**	**28·7**	**14,800**	**94·2**	**39,450**	**45·8**	**12,100**	**16·7**	**5,900**	**5·4**	**4,083**	**160·6**	**26,150**	**65·8**	**28,000**	…	…	**2,785·1**	**533,370**	**6·6**	**1,580**	**2,791·7**	**59·0**	**2,850·7**
1952–53	1,326·6	202,500	1,205·2	305,000	72·2	52,000	93·6	35,400	46·1	12,000	22·5	6,000	12·3	12,000	168·2	25,950	66·7	28,000	…	…	3,013·4	602,310	7·0	1,800	3,020·4	64·5	3,084·9
1953–54	1,394·0	243,000	1,322·7	304,400	202·0	51,900	212·4	73,000	103·6	47,400	53·4	29,800	30·2	15,230	92·6	26,950	62·3	28,000	…	…	3,473·2	701,650	29·2	12,800	3,502·4	50·3	3,552·7
1954–55	**1,668·1**	**260,000**	**1,249·9**	**303,000**	**175·2**	**52,000**	**306·6**	**83,000**	**182·0**	**47,200**	**99·2**	**31,850**	**34·6**	**17,240**	**141·5**	**31,250**	**77·8**	**61,000**	…	…	**3,934·9**	**836,020**	**35·5**	**13,720**	**3,970·4**	**45·5**	**4,015·9**
1955–56	1,887·8	279,000	1,278·7	298,400	200·1	52,500	269·3	94,000	178·6	47,700	77·2	31,500	32·0	17,630	171·1	31,170	288·2	90,000	…	…	4,383·0	897,190	46·4	14,670	4,429·4	43·4	4,472·8
1956–57	2,085·0	313,000	1,408·7	316,400	206·4	52,000	273·0	95,000	200·2	46,800	57·8	31,900	35·4	17,600	212·5	133,500	228·3	90,000	5·8	12,000	4,713·1	943,330	50·0	16,405	4,763·1	43·1	4,806·2
1957–58	**2,151·8**	**335,000**	**1,517·6**	**303,200**	**212·1**	**53,000**	**260·0**	**94,000**	**211·8**	**48,400**	**61·5**	**31,200**	**44·6**	**19,240**	**333·7**	**133,500**	**175·4**	**90,000**	**76·2**	**25,500**	**‡5,058·7**	**1,067,450**	**54·4**	**17,200**	**5,113·1**	**43·6**	**5,156·7**

* Including electricity transferred from Briquette Factory. † Including Bendigo, acquired 1/7/34 closed down 31/12/37.
‡ Includes 14 million kWh received by Victoria through interchange of energy with N.S.W.

STATE ELECTRICITY COMMISSION OF VICTORIA

(a) LOAD FACTORS AT POWER STATIONS

Based on Appendix No. 6

Year Ended 30th June	Interconnected System										Other Stations
					Regional Stations						
	Yallourn (including electricity from Briquette Factory)	Newport (including 25 cycle "A" Station from 21.1.51)	Richmond	Spencer St. (Melbourne City Council)	Geelong "A" and "B"	Ballarat "A" and "B"	Shepparton, Warrnambool and Hamilton	Eildon-Rubicon	Kiewa	Total Interconnected System	Mildura and Redcliffs
	%	%	%	%	%	%	%	%	%	%	%
1928	53·1	29·7	...	...	...	...	...	16·0	...	49·3	...
1933	49·8	2·2	16·7	...	47·2	...	...	54·2	...	50·9	...
1938	53·2	16·6	18·1	...	45·6	30·1	...	38·9	...	52·5	...
1943	68·1	8·3	28·2	19·2	33·2	28·7	...	68·3	...	52·0	...
1948	71·3	25·4	21·9	21·9	32·1	37·9	...	71·3	29·4	48·2	...
1953	74·8	45·1	15·9	30·2	43·9	42·8	11·7	74·0	27·2	57·1	44·4
1954	65·5	49·6	44·4	33·2	24·9	20·5	22·6	39·2	25·4	56·5	26·0
1955	73·2	47·1	38·5	42·2	44·0	35·6	22·9	51·7	14·6	53·7	29·5
1956	77·0	48·8	43·4	32·6	42·6	27·9	20·7	62·5	36·5	55·6	36·4
1957	76·0	50·8	45·3	32·8	48·8	20·7	23·0	40·3	29·0	57·0	34·0
1958	73·3	57·1	45·7	31·6	50·0	22·5	28·5	28·5	22·2	54·1	36·9

(b) FUEL USED AT POWER STATIONS (tons)

Station	Type of Fuel	1957-58	1956-57	1955-56	1954-55	1953-54	1952-53	1951-52	1950-51	1949-50	1948-49
Yallourn	Brown Coal	5,895,574*	5,846,396*	5,432,123*	4,846,876	4,380,080	4,203,197	4,154,742	3,968,509	4,075,675	4,035,535
	Briquettes	9,837	15,702	22,774	36,740	13,061	10,265	18,698	15,408	10,416	6,421
	Oil	...	43	1,414	3,021	397	...	...	...	...	...
Newport	Brown Coal	855,653	836,233	852,950	794,668	742,472	722,884	562,198	358,148	332,676	94,155
	Briquettes	111,169	107,721	210,627	221,442	253,352	217,028	244,083	222,066	273,034	279,956
	Black Coal ...	166,350	134,837	118,846	216,836	259,640	220,935	241,733	263,001	46,173	62,569
	Oil	164,338	157,439	82,566	25,306	26,303	38,498	26,332	25,359	18,551	2,266
Richmond	Briquettes ...	11,317	13,701	23,017	30,563	29,662	25,103	32,695	23,180	30,564	29,783
	Oil	60,765	57,977	54,658	44,613	51,740	15,739	...	...	...	...
	Coke ...	...	...	...	...	...	154	...	...	...	...
Spencer Street (Melbourne City Council)	Briquettes ...	6,088	8,137	16,641	22,225	41,547	60,364	65,935	69,261	71,610	49,475
	Black Coal ...	8,172	2,856	1,810	8,994	8,706	1,223	15	6,008	221	276
	Oil	81,961	84,731	82,970	84,484	37,017	19	22	23	18	17
	Coke ...	8,000	26,450	21,840	35,365	52,113	40,088	35,903	37,828	42,014	41,403
Geelong "A" and "B"	Brown Coal	269,131	260,093	231,933	219,164	106,955	7,378	66,906	11,356	...	...
	Briquettes ...	15,234	11,494	14,958	18,711	26,431	43,036	10,544	26,012	31,093	35,407
Ballarat "A" and "B"	Brown Coal	...	...	...	38,085	77,318	...	...	...	...	...
	Briquettes ...	836	3,143	6,872	11,161	18,531	25,144	19,628	19,747	18,135	22,772
	Oil	22,525	20,477	27,192	26,942	1,386	...	...	...	...	...
Shepparton	Oil	6,566	5,588	4,611	4,952	5,975	2,099	1,173	177	...	...
Warrnambool ...	Oil	1,935	1,157	1,510	1,728	1,448	829	100	...	...	...
Hamilton	Oil	2,265	1,846	1,693	1,737	1,799	1,650	1,565	1,317	1,132	975
	Wood ...	...	...	...	...	...	...	697	1,277	1,352	1,311
Mildura	Briquettes ...	1,240	5,897	7,896	4,828	14,284	...	...	...	...	...
	Oil	...	...	...	7	...	...	...	...	...	...
Redcliffs	Briquettes ...	14,399	13,912	28,793	26,292	8,434	...	...	...	...	...
	Oil	10,578	8,997	6	25	9	...	...	...	...	...
Horsham	Oil ...	1,258	1,546	1,266	108	...	...	...	...	...	...
Murtoa†	Oil ...										

* Includes 607,726 tons, 55,233 tons, and 14,694 tons of Morwell Coal respectively.

† Ceased operation 2/3/58.

APPENDIX No. 8

STATE ELECTRICITY COMMISSION OF VICTORIA
STATE GENERATING SYSTEM

(a) TOTAL INSTALLED PLANT CAPACITY

	kW
(i) Interconnected System	
Maximum continuous rating of plant installed at 30/6/58	1,153,459
Add—Available from Yallourn Briquette Factory	8,000
,, ,, Hume Power Station	25,000
Total	1,186,459
(ii) Not connected to State System	24,550

(b) GENERATORS INSTALLED AT POWER STATIONS

(i) Interconnected System

Power Station	Set No.	Make	Maximum Continuous Rating	Voltage	R.P.M.	Year Installed
STEAM—			kW			
Yallourn	1	Metropolitan Vickers	12,500	11,000	3,000	1924
	2		12,500	11,000	3,000	1924
	3		12,500	11,000	3,000	1924
	4		12,500	11,000	3,000	1924
	5		12,500	11,000	3,000	1925
	6		12,500	11,000	3,000	1928
	7		25,000	11,000	3,000	1932
	8		25,000	11,000	3,000	1935
	9		25,000	11,000	3,000	1938
	10		25,000	11,000	3,000	1938
	C1		50,000	11,000	3,000	1955
	C2		50,000	11,000	3,000	1954
	C3		6,000	3,300	3,000	1956
	D1		50,000	11,000	3,000	1958
	D2		50,000	11,000	3,000	1957
Newport	A1*	Parsons	12,500	3,300	1,500	1918
	A2*		30,000	20,000	1,500	1951
	A3*		14,000	3,300	1,500	1922
	A4*		30,000	20,000	1,500	1943
	A5*		12,500	3,300	1,500	1921
	A6*		14,000	3,300	1,500	1923
	1	Brown Boveri	15,000	6,600	3,000	1923
	2		15,000	6,600	3,000	1923
	3		30,000	22,000	3,000	1939
	4	Parsons	30,000	22,000	3,000	1945
	5		30,000	11,000	3,000	1946
	6		30,000	11,000	3,000	1948
	7		30,000	11,000	3,000	1950
	8	Brush Ljungstrom	18,000	6,600	3,000	1944
Richmond	1	Metropolitan Vickers	15,000	6,600	3,000	1929
	2	Brown Boveri	38,000	11,000	3,000	1952
Geelong	1	Brush Ljungstrom	1,500	6,600	3,000	1921
	2	Metropolitan Vickers	3,000	6,600	3,000	1922
	3		3,000	6,600	3,000	1923
	4		3,000	6,600	3,000	1925
	B1	Westinghouse	10,000	11,500	3,000	1953
	B2		10,000	11,500	3,000	1954
	B3		10,000	11,500	3,000	1954
Ballarat	1	Brush Ljungstrom	1,400	6,600	3,000	1925
	2		1,400	6,600	3,000	1925
	3		1,400	6,600	3,000	1937
	4		1,400	6,600	3,000	1940
	5*	Brush Electrical	300	500	2,400	1912
	B1	Westinghouse	5,000	6,900	3,000	1954
	B2		5,000	6,900	3,000	1954
	B3		5,000	6,900	3,000	1953
	B4		5,000	6,900	3,000	1953
Spencer St (Melb. City Council)	1	English Electric	5,500	6,600	3,000	1927
	6	Parsons	5,500	6,600	3,000	1935
	7	A.S.E.A.	6,875	6,600	3,000	1939
	8		6,875	6,600	3,000	1939
	9	Parsons	15,000	6,600	3,000	1949
	10		15,000	6,600	3,000	1954
	11		30,000	22,000	3,000	1953
INTERNAL COMBUSTION—						
Shepparton	1	Brush (Mirrlees Engine)	830	6,600	375	1951
	2		830	6,600	375	1951
	3		830	6,600	375	1951
	4		830	6,600	375	1952
	5		830	6,600	375	1952
	6		830	6,600	375	1952
	7	Electric Construction Co. (Sulzer Engine)	1,850	6,600	250	1953
	8		1,850	6,600	250	1953
	9		1,850	6,600	250	1953
Warrnambool	1	Brush (Mirrlees Engine)	830	6,600	375	1952
	2		830	6,600	375	1952
	3		830	6,600	375	1953
	4		830	6,600	375	1953
	5		830	6,600	375	1953
	6		830	6,600	375	1953
Hamilton	2	Brush (Crossley Engine)	550	415	375	1947
	4		200	415	230	1946
	5	Brush (Mirrlees Engine)	310	415	300	1937
	6	Bruce Peebles (Mirrlees Engine)	420	415	300	1937
	7		770	415	375	1950
	8	Brush (Mirrlees Engine)	770	415	375	1951
Horsham (connected to State system from 1.3.58)	1	Laurence Scott (Ruston & Hornsby Engine)	132	415	300	1949
	2		132	415	300	1949
	3		220	415	428	1951
	4		400	415	428	1950
	5	Harland (Bellis & Morcom Engine)	300	415	375	1943
	6		520	415	375	1943
	7	Brush (Ruston & Hornsby Engine)	560	400/440	428	1952
HYDRO—						
Rubicon Falls	1	A.S.E.A. (Boving Turbine)	275	6,600	500	1926
Lower Rubicon	1	Westinghouse (Boving Turbine)	2,700	6,600	750	1928
Royston	1		840	6,600	1,000	1928
Rubicon	1		4,550	6,600	500	1928
	2		4,550	6,600	500	1928
Eildon	1	British Thomson-Houston (Boving Turbine)	60,000	11,000	150	1957
	2		60,000	11,000	150	1956
	3	Brown Boveri (Boving Turbine)	8,000	6,600	250	Re-installed 1954
	4		8,000	6,600	250	Re-installed 1954
Kiewa No. 3	1	English Electric	13,000	11,000	428	1944
	2		13,000	11,000	428	1945
Kiewa No. 4	1	Metropolitan Vickers (Boving Turbine)	15,400	11,000	600	1956
	2		15,400	11,000	600	1955
	3		15,400	11,000	600	1955
	4		15,400	11,000	600	1955
			1,153,459			

*Newport Nos. A1 to A6 inclusive-25 cycle; Ballarat No. 5-D.C.; all others A.C., 3 phase, 50 cycl

APPENDIX No. 8 continued

STATE ELECTRICITY COMMISSION OF VICTORIA

STATE GENERATING SYSTEM

(ii) Not connected to State System

Power Station	Set No.	Make	Maximum Continuous Rating	Voltage	R.P.M.	Year Installed
STEAM—			kW			
Mildura	1	Metropolitan Vickers	1,000	6,600	1,000	1932
	2	Metropolitan Vickers	1,000	6,600	1,000	1934
	3	S.T.A.L.	2,500	6,600	3,000	1940
	4	Metropolitan Vickers	2,500	6,600	1,500	1950
Redcliffs	A1	Metropolitan Vickers	1,000	6,600	1,500	1937
	A2	Metropolitan Vickers	1,000	6,600	1,500	1943
	C1	Westinghouse	5,000	6,900	3,000	1954
	C2	Westinghouse	5,000	6,900	3,000	1954
INTERNAL COMBUSTION—						
Redcliffs	B1	Electric Construction Co. (Sulzer Engine)	1,850	6,600	250	1957
	B2	Electric Construction Co. (Sulzer Engine)	1,850	6,600	250	1957
	B3	Electric Construction Co. (Sulzer Engine)	1,850	6,600	250	1957
			24,550			

Murtoa Power Station ceased operation 2.3.58.

(Appendix No. 8 continued next page)

APPENDIX No. 8 continued

STATE ELECTRICITY COMMISSION OF VICTORIA

STATE GENERATING SYSTEM

(c) BOILERS INSTALLED AT POWER STATIONS

(i) Interconnected System

Power Station	Boiler No.	Make	Rated Evaporative Capacity of each Boiler lb./per hour	Working Pressure of each Boiler lb. (gauge) per sq. in.	Total Steam Temperature including Superheat Deg. F.	Year Installed
Yallourn	1	John Thompson	68,600	270	650	1924
	2		68,600	270	650	1924
	3		68,600	270	650	1924
	4		68,600	270	650	1925
	5		98,000	270	650	1925
	6		98,660	270	650	1928
	7		78,800	270	650	1927
	8		98,000	270	650	1925
	9		98,000	270	650	1925
	10		77,400	270	650	1925
	11		68,600	270	650	1924
	12		68,600	270	650	1924
	13		75,000	270	750	1931
	14		75,000	270	750	1931
	15		75,000	270	750	1937
	16		75,000	270	750	1937
	17		75,000	270	750	1938
	18		75,000	270	750	1938
	19		75,000	270	750	1937
	20		75,000	270	750	1937
	21		75,000	270	750	1932
	22		75,000	270	750	1932
	C1		200,000	645	840	1954
	C2		200,000	645	840	1955
	C3		200,000	645	840	1956
	C4		200,000	645	840	1957
	C5		200,000	645	840	1955
	C6		200,000	645	840	1954
	D1		200,000	645	840	1958
	D6		200,000	645	840	1958
Newport	A1	Babcock & Wilcox	30,000	200	600	1918
	A2		30,000	200	600	1918
	A3		30,000	200	600	1918
	A10		30,000	200	600	1918
	A11		30,000	200	600	1918
	A12		30,000	200	600	1918
	A13		30,000	200	600	1918
	A14		30,000	200	600	1918
	A15		30,000	200	600	1918
	A16		30,000	200	600	1918
	A17		30,000	200	600	1918
	A18		30,000	200	600	1918
	A19	International Combustion	54,000	200	600	Reconstd. 1927
	A20	Babcock & Wilcox	30,000	200	600	1918
	A21		30,000	200	600	1918
	A22		30,000	200	600	1918
	A23		30,000	200	600	1918
	A24		30,000	200	600	1918
	A1M	International Combustion	187,500	400	780	1952
	A2M		187,500	400	780	1951
	A3M		187,500	400	780	1943
	A4M		187,500	400	780	1943
	1	Babcock & Wilcox	43,000	270	650	1923
	2		43,000	270	650	1923
	3		43,000	270	650	1923
	4		43,000	270	650	1923
	5		43,000	270	650	1923
	6	John Thompson	60,000	270	750	1939
	7		60,000	270	750	1939
	8		60,000	270	750	1939
	9		60,000	270	750	1939
	10		60,000	270	750	1939
	11		160,000	620	820	1945
	12		160,000	620	820	1945
	13		160,000	620	820	1947
	14		160,000	620	820	1943
	15		160,000	620	820	1950
	16		160,000	620	820	1950
	17		160,000	620	820	1950
	18		160,000	620	820	1949
Richmond	1	Babcock & Wilcox	20,000	160	570	1917
	2		20,000	160	570	1919
	15		20,000	160	570	1921
	16		20,000	160	570	1920
	17		20,000	160	570	1921
	18		20,000	160	570	1920
	Velox No. 1	Brown Boveri	165,500	650	850	1953
	Velox No. 2		165,500	650	850	1952
Geelong	1	John Thompson	27,000	200	588	1921
	2		27,000	200	588	1921
	3		27,000	200	588	1922
	4		27,000	200	588	1922
	5		27,000	200	588	1924
	6		27,000	200	588	1924
	B1	Combustion Engineering	110,000	625	825	1953
	B2		110,000	625	825	1954
	B3		110,000	625	825	1954
Ballarat	1	Stirling	11,000	160	600	1906
	2		11,000	160	600	1906
	3		11,000	160	600	1906
	4		11,000	160	600	1913
	5		11,000	160	600	1937
	B1	Combustion Engineering	70,000	430	760	1954
	B2		70,000	430	760	1954
	B3		70,000	430	760	1953
	B4		70,000	430	760	1953
Spencer Street ... ... (Melbourne City Council)	6	John Thompson	55,000	160	570	1938
	8	Babcock & Wilcox	55,000	160	570	1934
	10	John Thompson	55,000	160	570	1937
	12		55,000	160	570	1939
	14		55,000	160	570	1940
	16		55,000	160	570	1936
	22		60,000	165	620	1941
	24		60,000	165	620	1941
	B1		150,000	275	775	1954
	B2		150,000	275	775	1955
	C1		300,000	620	820	1953

(ii) Not connected to State System

Mildura	1		14,000	260	650	1939
	2		14,000	260	650	1939
	3		14,000	260	650	1940
	4		30,000	260	700	1951
Redcliffs	A1	Babcock & Wilcox	20,000	215	520	1940
	A2		13,500	215	520	1944
	A3		13,500	215	520	1944
	A4		13,500	215	520	1948
	A5		13,500	215	520	1948
	A6		13,500	215	520	1953
	C1	Combustion Engineering	70,000	430	760	1954
	C2		70,000	430	760	1954

STATISTICS
ELECTRICITY SUPPLY

APPENDIX No. 9

ELECTRICITY SUPPLY UNDERTAKINGS—STATE OF VICTORIA

STATISTICAL SUMMARY AT 30th JUNE, 1958 — CONSUMERS AND SALES

	Population Area Served	Consumers		Retail Sales	
		Number	Percentage of Grand Total	kWh	Percentage of Grand Total
State Electricity Commission of Victoria—					
Metropolitan } excl. adjacent rural areas	1,079,010	292,059	35.77	1,730,414,702	43.19
Provincial Cities } excl. adjacent rural areas	181,545	55,227	6.77	230,077,299	5.74
Country	783,309	272,683	33.40	989,370,339	24.70
Total	2,043,864	619,969	75.94	2,949,862,340	73.63
Other Undertakings—					
Metropolitan (receiving Bulk Supply from State Electricity Commission of Victoria)	578,968	174,607	21.39	1,020,383,817	25.47
Country (Local Undertakings)	72,470	21,835	2.67	35,884,907	0.90
Total	651,438	196,442	24.06	1,056,268,724	26.37
Grand Total	2,695,302	816,411	100.00	4,006,131,064	100.00

Total population of Victoria 2,741,397
Electricity Sales per head of population 1,461 kWh.

APPENDIX No. 10

STATE ELECTRICITY COMMISSION OF VICTORIA

CONSUMER STATISTICS

(a) AGGREGATES FOR ALL BRANCHES 1939-1958

Year Ended 30th June	Population of Area of Supply	Number of Consumers				Percentage of Consumers to Population	kWh Sold per Consumer (Average)			Motors Connected		Number of Farms Supplied
		Domestic	Industrial	Commercial	Total (all classes except Bulk)		Domestic	Industrial	Commercial	Number	H.P.	
1939	1,050,000	220,419	5,386	34,781	260,733	24·8	566	42,158	1,734	36,282	245,697	4,985
1940	1,080,000	230,312	6,101	35,178	271,749	25·2	626	43,483	1,917	41,530	275,458	5,785
1941	1,104,000	242,035	6,746	35,428	284,373	25·8	658	47,604	2,081	46,114	299,988	6,410
1942	1,123,000	251,185	7,169	33,840	292,341	26·0	703	53,236	2,245	50,465	322,283	6,785
1943	**1,141,000**	**255,701**	**7,457**	**33,408**	**296,717**	**26·0**	**756**	**56,911**	**2,626**	**54,285**	**345,924**	**7,032**
1944	1,149,000	258,447	8,073	33,781	300,465	26·1	793	51,656	2,769	59,483	365,746	7,467
1945	1,193,000	266,463	9,594	34,944	311,172	26·1	838	43,189	2,934	65,983	401,085	8,772
1946	1,200,000	273,382	11,542	36,529	321,631	26·8	928	35,663	3,104	71,796	430,452	10,209
1947	1,253,000	287,188	13,416	38,496	339,286	27·1	1,015	33,209	2,769	77,735	454,901	11,680
1948	**1,300,000**	**300,671**	**14,845**	**39,544**	**355,258**	**27·3**	**1,151**	**32,813**	**3,132**	**84,361**	**481,408**	**13,181**
1949	1,353,000	315,191	16,200	40,539	372,135	27·5	1,370	33,061	3,400	90,896	505,877	14,419
1950	1,414,000	331,506	17,476	41,813	391,005	27·7	1,556	32,301	3,555	96,150	528,618	15,741
1951	1,496,000	353,239	19,160	43,066	415,682	27·8	1,566	32,171	3,817	101,988	565,298	17,572
1952	1,574,000	376,977	21,285	44,527	443,014	28·1	1,496	29,025	3,736	107,234	590,164	19,953
1953	**1,651,000**	**399,171**	**23,228**	**46,334**	**468,961**	**28·4**	**1,600**	**27,601**	**3,976**	**112,173**	**613,855**	**22,326**
1954	1,753,000	426,461	25,882	49,410	501,994	28·6	1,770	29,844	4,330	121,664	657,970	27,082
1955	1,841,000	451,223	28,218	52,582	532,277	28·9	1,921	31,014	4,654	129,136	702,898	30,131
1956	1,949,000	475,192	30,549	55,877	561,892	28·8	2,144	32,233	5,083	136,078	728,263	32,734
1957	1,977,000	498,528	33,339	58,750	590,906	29·9	2,255	31,051	5,170	144,626	772,088	35,852
1958	**2,044,000**	**522,120**	**36,074**	**61,476**	**619,969**	**30·3**	**2,363**	**31,103**	**5,358**	**152,081**	**802,992**	**38,999**

(b) ELECTRICITY SUPPLY BRANCHES — 1957 AND 1958

Branch or Region		Population of Area of Supply	Number of Consumers				Percentage of Consumers to Population	kWh Sold per Consumer (Average)			Motors Connected		Number of Farms Supplied
			Domestic	Industrial	Commercial	Total (all classes except Bulk)		Domestic	Industrial	Commercial	Number	H.P.	
Metropolitan ...	1958	1,087,491	261,050	6,515	25,157	292,767	26·92	2,662	92,347	6,377	76,986	395,665	952
...	1957	1,064,015	253,668	6,420	24,348	284,480	26·74	2,496	87,533	6,013	74,666	386,124	1,138
Ballarat ...	1958	70,906	19,141	1,468	2,766	23,391	32·99	1,333	25,780	4,863	6,840	32,861	1,941
...	1957	68,945	18,433	1,302	2,701	22,452	32·57	1,288	27,513	4,856	6,333	30,899	1,732
Eastern Metropolitan	1958	261,821	77,345	3,818	7,297	88,489	33·80	2,578	24,515	5,287	9,524	58,335	5,680
	1957	241,894	70,855	3,554	6,824	81,263	33·59	2,495	20,430	5,182	8,819	56,026	5,100
Geelong ...	1958	114,815	27,681	1,166	3,511	32,371	28·19	1,730	69,014	4,705	9,321	59,337	1,389
...	1957	112,472	26,435	1,080	3,366	30,895	27·47	1,711	69,203	4,478	9,212	58,441	1,293
Gippsland ... (incl. Yallourn)	1958	148,144	36,147	7,248	5,455	48,879	32·99	2,199	14,782	4,037	12,272	64,480	8,324
	1957	144,891	34,637	6,720	5,210	46,596	32·16	2,122	15,336	3,913	11,839	62,812	7,651
Midland ...	1958	42,557	12,062	1,565	2,100	15,748	37·00	1,430	9,015	3,393	3,684	19,962	2,178
...	1957	41,957	11,614	1,425	2,050	15,109	36·01	1,402	10,503	3,319	3,533	19,450	1,998
North Eastern (incl. Kiewa)	1958	130,847	36,425	6,414	6,347	49,227	37·62	2,003	14,168	6,459	16,512	90,624	7,343
	1957	126,948	34,813	5,928	6,153	46,935	36·97	1,998	13,452	6,529	15,784	85,832	6,814
North Western ...	1958	98,239	28,270	2,400	4,855	35,601	36·24	1,481	18,506	3,570	8,952	55,289	4,593
...	1957	90,791	25,851	2,054	4,382	32,353	35·63	1,436	19,321	3,471	7,044	48,420	4,204
South Western ...	1958	89,044	23,999	5,480	3,988	33,496	37·62	2,213	7,169	3,062	7,990	26,439	6,599
...	1957	85,009	22,222	4,856	3,716	30,823	36·26	2,178	8,359	2,931	7,396	24,084	5,922
Total ...	1958	2,043,864	522,120	36,074	61,476	619,969	30·33	2,363	31,103	5,358	152,081	802,992	38,999
...	1957	1,976,922	498,528	33,339	58,750	590,906	29·89	2,255	31,051	5,170	144,626	772,088	35,852

APPENDIX No. 11

STATE ELECTRICITY COMMISSION OF VICTORIA

ELECTRICITY SALES AND REVENUE

(a) AGGREGATES FOR ALL BRANCHES, 1939-1958

Year Ended 30th June	Sales—kWh (Millions)							Revenue			
	Bulk Supplies	Public Lighting	Domestic	Industrial	Traction	Commercial	Total	Total	Per kWh Sold		
									Domestic	Industrial	Commercial
								£	d.	d.	d.
1939	257·394	14·282	122·134	215·175	58·197	59·915	727·097	3,685,533	2·420	0·922	2·567
1940	285·031	16·804	141·172	252·072	59·844	67·224	822·147	3,881,022	2·165	0·883	2·338
1941	311·546	16·516	155·726	307·239	60·199	73·547	924·773	4,241,264	2·059	0·842	2·262
1942	369·236	10·509	173·951	377·439	64·295	78·168	1,073·598	4,657,452	1·973	0·817	2·112
1943	**404·121**	**11·694**	**192·067**	**417·220**	**66·085**	**87·821**	**1,179·008**	**4,935,602**	**1·869**	**0·799**	**1·908**
1944	422·287	15·984	203·979	400·129	66·008	92·938	1,201·325	5,101,631	1·822	0·830	1·835
1945	417·193	16·782	220·247	387·365	65·299	100·790	1,207·676	5,259,890	1·783	0·852	1·781
1946	447·005	17·255	250·245	383·018	66·605	110·413	1,274·541	5,605,333	1·700	0·883	1·814
1947	449·380	17·614	285·596	421·887	65·107	104·539	1,344·123	5,835,194	1·606	0·868	1·900
1948	**506·780**	**18·106**	**339·025**	**468·238**	**66·900**	**122·448**	**1,521·497**	**6,543,089**	**1·506**	**0·874**	**1·905**
1949	563·296	18·607	422·681	516·071	68·181	136·179	1,725·015	8,129,973	1·517	0·977	2·070
1950	613·552	14·253	504·311	546·607	54·998	146·450	1,880·171	9,446,008	1·554	1·057	2·148
1951	656·488	17·982	536·844	592·261	135·548	162·219	2,101·342	11,524,389	1·679	1·141	2·178
1952	679·665	20·451	547·213	590·871	236·265	163·636	2,238·101	15,099,864	2·063	1·415	2·639
1953	**729·369**	**21·228**	**623·067**	**617·150**	**248·115**	**180·830**	**2,419·759**	**19,189,514**	**2·343**	**1·697**	**3·078**
1954	844·749	22·508	734·281	739·596	265·443	208·114	2,814·691	22,117,381	2·297	1·685	3·120
1955	955·610	23·832	842·951	844·048	280·117	236·970	3,183·528	24,838,401	2·214	1·679	3·114
1956	1,058·771	25·843	994·824	952·383	297·839	275·805	3,605·465	28,887,195	2·221	1·759	3·291
1957	1,132·597	28·193	1,100·551	996·296	304·291	297·672	3,859·600	33,823,207	2·288	2·034	3·793
1958	**1,234·611**	**30·423**	**1,206·715**	**1,086·352**	**304·448**	**321·924**	**4,184·473**	**37,155,517**	**2·265**	**2·057**	**3·865**

Note.—Above figures do not include allowances for unread meters prior to 1941.

(b) ELECTRICITY SUPPLY BRANCHES — 1957 AND 1958

Year Ended 30th June		Sales—kWh (Millions)							Revenue			
		Bulk Supplies	Public Lighting	Domestic	Industrial	Traction	Commercial	Total	Total	Per kWh Sold		
										Domestic	Industrial	Commercial
									£	d.	d.	d.
Metropolitan	1958	1,181·871	21·272	685·681	596·561	271·781	158·001	2,915·167	23,491,023	1·976	2·025	3·642
(Incl. Metropolitan Bulk Supplies)	1957	1,076·306	19·681	624·828	555·482	273·462	144·830	2,694·589	21,362,315	2·016	1·990	3·590
Ballarat	1958	...	0·607	25·028	35·808	...	13·285	74·728	843,512	2·955	2·016	4·011
	1957	...	0·561	23·289	33·731	...	12·906	70·487	789,363	2·983	1·981	3·901
Eastern Metropolitan	1958	...	2·701	191·952	90·975	17·891	37·488	341·007	3,573,499	2·441	2·155	4·059
	1957	...	2·367	169·645	70·135	16·189	34·002	292·338	3,085,051	2·454	2·186	3·948
Geelong	1958	...	1·054	46·883	78·193	...	16·240	142·370	1,483,232	2·802	1·890	4·463
	1957	...	0·977	44·332	71·763	...	14·782	131·854	1,343,383	2·732	1·859	4·319
Gippsland	1958	...	1·463	78·042	104·022	14·776	21·596	219·899	2,196,797	2·586	1·944	4·041
(Incl. Yallourn) ...	1957	...	1·409	71·880	100·251	14·640	19·993	208·173	2,074,030	2·578	1·971	3·955
Midland	1958	...	0·433	16·952	13·594	...	7·056	38·035	482,797	3·066	2·370	4·189
	1957	...	0·422	16·001	14·316	...	6·704	37·443	462,016	3·054	2·250	4·137
North-Eastern (Incl. N.S.W. Bulk Supplies and Kiewa)	1958	48·118	1·213	71·516	88·111	...	40·445	249·403	2,542,594	2·678	2·081	3·423
	1957	52·070	1·197	67·784	76·917	...	39·269	237·237	2,377,121	2·672	2·080	3·348
North Western ...	1958	4·622	1·075	39·498	41·675	...	16·060	102·930	1,388,683	3·185	2·602	4·936
	1957	4·221	0·996	35·767	35·223	...	14·484	90·691	1,249,052	3·222	2·681	4·929
South Western ...	1958	...	0·605	51·163	37·413	...	11·753	100·934	1,153,375	2·592	2·267	4·782
	1957	...	0·583	47·025	38·478	...	10·702	96·788	1,080,876	2·583	2·181	4·758
Total	1958	1,234·611	30·423	1,206·715	1,086·352	304·448	321·924	4,184·473	37,155,517	2·265	2·057	3·865
	1957	1,132·597	28·193	1,100·551	996·296	304·291	297·672	3,859·600	33,823,207	2·288	2·034	3·793

APPENDIX No. 12

STATE ELECTRICITY COMMISSION OF VICTORIA
TRANSMISSION AND DISTRIBUTION SYSTEMS

Description		Increase during Year ended 30th June, 1958		Total at 30th June, 1958	
		Route Miles	Cable Miles	Route Miles	Cable Miles
OVERHEAD LINES					
Kiewa to Brunswick	220 kV	...	...	153·0	699·6
Yallourn to Malvern	220 kV	...	...	74·0	444·0
Rowville to Thomastown	220 kV	...	...	23·7	71·1
‡Geelong to Colac	220 kV	45·5	136·5	45·5	136·5
†Yallourn to Yarraville	132 kV	...	...	110·0	660·0
Yallourn to Richmond	132 kV	...	...	80·5	483·0
Newport to Geelong	66 kV	...	...	83·7	270·9
Yallourn to Warragul	66 kV	...	...	24·8	74·4
Sunshine to Ballarat	66 kV	...	...	55·5	165·5
Kiewa No. 3 P.S. to Eildon	66 kV	...	...	143·8	605·3
Eildon to Thomastown	66 kV	...	...	62·0	372·0
Eildon P.S. to Eildon Substation	66 kV	...	...	0·5	1·5
Kiewa No. 3 P.S. to Howman's Gap	66 kV	...	...	4·0	12·0
Yallourn to Morwell	66 kV	...	...	9·1	54·6
Morwell Area	66 kV	...	...	0·3	1·5
Thomastown to Bendigo	66 kV	...	...	93·4	560·7
Hume to Wodonga	66 kV	12·0	72·0	12·0	72·0
Kiewa Area	22 kV	...	...	7·8	23·4
Morwell Area	22 kV	0·2	0·8	0·5	2·3
Morwell Substation to Substation "GF"	11 kV	...	...	2·2	9·9
Eildon P.S. to Eildon Substation	6·6 kV	...	...	0·5	1·5
Main Metro. Transmission Lines	66 kV	10·0	40·6	84·8	229·9
Main Metro. Transmission Lines	22 kV	—5·5	—27·1	262·0	890·0
Main Metro. Transmission Lines	6·6 kV	0·4	1·1	6·3	20·6
Branches—					
Metropolitan	22 kV	16·9	48·3	185·5	534·3
	7·2, 6·6, 4·0 kV	16·2	54·5	443·7	1,330·8
	Low tension	53·0	265·6	2,419·6	9,457·5
Ballarat	22 kV	18·9	42·2	554·7	1,351·1
	12·7 kV	107·8	107·8	218·7	218·7
	6·6 kV	0·9	0·9	22·1	65·6
	Low tension	15·2	49·1	498·8	1,696·0
Eastern Metropolitan	66 kV	15·4	46·2	34·2	102·7
	22 kV	103·8	236·7	1,161·2	3,012·9
	6·6 kV	—7·0	—19·7	31·8	86·7
	Low tension	126·4	500·0	1,811·3	6,776·8
Geelong	22 kV	64·3	143·4	477·3	1,126·3
	6·6 kV	—2·1	—8·6	65·1	231·6
	Low tension	16·1	57·3	456·1	1,618·6
Gippsland	66 kV	7·8	23·4	116·3	348·9
	22 kV	148·5	359·8	2,070·4	4,822·5
	12·7 kV	222·2	222·2	307·9	307·9
	6·6 kV	...	...	0·8	1·6
	Low tension	52·7	137·9	1,692·9	5,502·2
Midland	22 kV	66·0	157·7	939·9	2,416·2
	12·7 kV	67·7	67·7	70·9	70·9
	Low tension	13·3	34·7	473·3	1,471·2
North-Eastern	66 kV	...	...	226·2	790·7
	22 kV	119·1	289·8	2,624·5	6,346·8
	12·7 kV	103·8	103·8	163·9	163·9
	Low tension	32·0	95·1	1,177·6	4,072·2
* North-Western	66 kV	178·7	536·2	178·7	536·2
	22 kV	122·8	320·0	1,176·4	3,163·4
	12·7 kV	370·2	370·2	850·7	850·7
	11 kV	...	...	33·4	33·4
	6·6 kV	—1·0	—3·0	30·4	82·5
	Low tension	62·4	188·4	826·9	2,607·1
South-Western	66 kV	2·6	7·9	122·0	636·4
	22 kV	80·1	211·8	2,158·1	4,775·2
	12·7 kV	305·3	305·3	755·3	755·3
	Low tension	9·2	30·3	760·9	2,061·4
Yallourn	6·6 kV	...	...	14·2	42·6
	Low tension	0·3	0·8	26·6	90·5
Kiewa	22 kV	...	...	8·3	24·8
	Low tension	...	...	5·6	32·7
Summary	220 kV	45·5	136·5	296·2	1,351·2
	132 kV	...	...	190·5	1,143·0
	66 kV	226·5	726·3	1,251·3	4,835·2
	22 kV	735·1	1,783·4	11,626·6	28,489·2
	12·7 kV	1,177·0	1,177·0	2,367·4	2,367·4
	11 kV	...	...	35·6	43·3
	7·2, 6·6, 4·0 kV	7·4	25·2	614·9	1,863·5
	Low tension	380·6	1,359·2	10,149·6	35,386·2
		2,572·1	5,207·6	26,532·1	75,479·0

‡ Operating at 66 kV at present.
† One circuit between Wheeler's Hill and Yarraville operates at 66 kV and is also connected to Thomastown and Ringwood Terminal Stations.
* Includes Bendigo Branch, Mildura and Wimmera Sub-branches.

APPENDIX No. 12 continued

STATE ELECTRICITY COMMISSION OF VICTORIA

TRANSMISSION AND DISTRIBUTION SYSTEMS

Description	Increase during Year ended 30th June, 1958		Total at 30th June, 1958	
	Cable Miles		Cable Miles	
UNDERGROUND CABLES				
60 kV	...		0·62	
22 and 20 kV	0·78		168·94	
11, 7·2, 6·6, 4·0, 3·3, and 2·2 kV	2·96		382·62	
Pilot, telephone, and supervisory	1·72		267·98	
Low tension	2·57		97·14	
	6·47		917·30	
	Number	Capacity kVA	Number	Capacity kVA
SUBSTATIONS				
Terminal Stations	...	65,500	12	1,116,500
Switching Stations	...	20,000	5	90,500
Main Metropolitan and Transmission Substations	...	70,500	60	1,049,000
Branches—				
Metropolitan	125	60,475	1,538	524,360
Ballarat	164	7,800	919	43,335
Eastern Metropolitan	271	37,545	1,855	249,848
Geelong	100	18,515	691	89,595
Gippsland	701	11,615	2,941	117,060
Midland	146	4,945	1,060	49,385
North-Eastern	410	32,095	3,612	215,766
* North-Western	380	37,051	1,790	153,261
South-Western	492	19,771	3,594	129,183
Yallourn	2	28	27	4,308
Kiewa	...	...	9	2,000
	2,791	385,840	18,113	3,834,101

* Includes Bendigo Branch, Mildura and Wimmera Sub-branches.

STATE ELECTRICITY COMMISSION OF VICTORIA

STANDARD TARIFFS FOR AREAS SERVED FROM THE INTERCONNECTED SYSTEM.

Effective as from 1st. September, 1958.

TARIFFS FOR NON-RESIDENTIAL PREMISES

Tariffs	Residential and Commercial: Metropolitan	Residential and Commercial: Intermediate	Residential and Commercial: Extra Metropolitan (See Column 6)	Farming: Farming Operations only — Intermediate and Extra-Metropolitan Areas only	Industrial: Factories and Other Industrial Establishments — All Areas Supplied Interconnected System
	1	2	3	4	5
Residential Tariff (Domestic and Commercial Residential Premises) Service Charge a month for each assessable room Rate a kWh Maximum overall rate a kWh	1s. 6d. 2.2d. 7.0d.	1s. 9d. 2.5d. 7.0d.	1s. 11d. 2.7d. 7.0d.		
Lighting— Block Tariff—rates a kWh (based on monthly consumption)	First 20 at 9.2d. Balance at 7.4d.	First 20 at 10.3d. Next 80 at 9.4d. Balance at 7.7d.	First 100 at 11.4d. Next 200 at 8.4d. Balance at 7.9d.		First 20 at 9.2d. Balance at 7.4d.
Power and Heating— Block Tariff—rates a kWh (based on monthly consumption) Rental a month for each set of two-rate metering equipment	First 200 at 4.9d. Next 4,800 at 2.8d. ,, 20,000 at 2.3d. Balance at 2.2d. 11 p.m.-7 a.m.—1.12d. 10s. 0d.	First 200 at 5.1d. Next 4,800 at 3.1d. Balance at 2.3d. 11 p.m.-7 a.m.—1.13d. 10s. 0d.	First 50 at 5.6d. Next 150 at 5.2d. ,, 4,800 at 3.4d. Balance at 2.3d. 11 p.m.-7 a.m.—1.13d. 10s. 0d.		First 200 at 4.9d. Next 4,800 at 2.8d. ,, 20,000 at 2.3d. Balance at 2.2d. 11 p.m.-7 a.m.—1.12d. 10s. 0d.
Power, Heating and Lighting— Block Tariff—rates a kWh (based on monthly consumption) Rental a month for each set of two-rate metering equipment	Commercial General Service First 20 at 9.2d. Next 980 at 7.4d. ,, 1,000 at 4.9d. ,, 3,000 at 4.3d. ,, 20,000 at 2.3d. Balance at 2.2d. 11 p.m.-7 a.m.—1.12d. (Power & Heating only) 10s. 0d.	Commercial General Service First 20 at 10.3d. Next 80 at 9.4d. ,, 900 at 7.7d. ,, 1,000 at 5.1d. ,, 3,000 at 4.8d. Balance at 2.3d. 11 p.m.-7 a.m.—1.13d. (Power & Heating only) 10s. 0d.	Commercial General Service First 100 at 11.4d. Next 200 at 8.4d. ,, 700 at 7.9d. ,, 4,000 at 5.2d. Balance at 2.3d. 11 p.m.-7 a.m.—1.13d. (Power & Heating only) 10s. 0d.	Farming General Service First 4 at 10.8d. Next 196 at 4.9d. ,, 4,800 at 3.0d. Balance at 2.2d. 11 p.m. 7 a.m.—1.13d. 10s. 0d.	Industriol All-Purpose First 20 at 9.2d. Next 480 at 7.4d. ,, 4,500 at 4.6d. ,, 20,000 at 2.3d. ,, 100,000 at 2.2d. Balance at 2.15d. 11 p.m.-7 a.m.—1.12d. (See Note 2 below) 10s. 0d.
Industrial Maximum Demand (See Note 3 below) **Power, Heating and Lighting**					£1/15/11 a month for each kW of maximum demand plus 0.93d. a kWh. (500 kW Minimum demand charge). Reset monthly.
Commercial Range (Electric Cooking)—Rate a kWh	2.2d.	2.5d.	2.7d.		
Water Heating—Night Rate Tariff a kWh } See Note 4 Interim Rate Tariff a kWh } below	1.05d. 1.45d.	1.15d. 1.6d.	1.15d. 1.6d.	1.15d. 1.6d.	1.05d. 1.45d.
Minimum Charge—a month	3s. 6d.	4s. 0d.	4s. 0d.	4s. 0d.	3s. 6d.

Miscellaneous Details on Supply Centres

A. AREAS ISOLATED FROM THE INTERCONNECTED SYSTEM

Mildura Area:— Tariffs shown in Columns 1 to 5 inclusive are not available in Mildura area. Tariffs applicable will be supplied on request.

B. AREAS SERVED FROM THE INTERCONNECTED SYSTEM.

1. Ringwood:— The majority of the consumers in the more densely settled part of the Borough of Ringwood (which includes most of the Heathmont area) is served under the Metropolitan Tariffs as shown in Columns numbers 1 and 5.

2. Subject to the foregoing; in certain areas of the following centres the tariffs for non-residential consumers are as stated in Columns numbers 3, 4 and 5 respectively, but the tariff shown for residential consumers (Column 3) does not apply:

Croydon
Heathmont (see Note 1 above)
Kilsyth
Montrose
Ringwood (see Note 1 above).

Details of the Residential Tariff for the areas concerned will be supplied on request.

Notes.—1. Details regarding the application of the above tariffs are shown in the Commission's published tariff schedules, which are available on request. 2. A consumer adopting the Industrial All-Purpose Tariff must agree to pay a special minimum charge of £25/3/- per month. 3. The Industrial Maximum Demand Tariff is available only to consumers entering into a five-year agreement providing for high voltage supply and for monthly payments based on the minimum demand indicated or half the stipulated rate of supply, whichever is the greater. 4. Until additional generating plant (using low cost raw brown coal) is installed, new hot water services connected (excluding dairy water heaters) are charged for a period of eighteen months at the Interim Rate Tariff after which they are transferred automatically to the lower Night Rate Tariff.

Printed by Invincible Press, 402 Latrobe St., Melbourne.

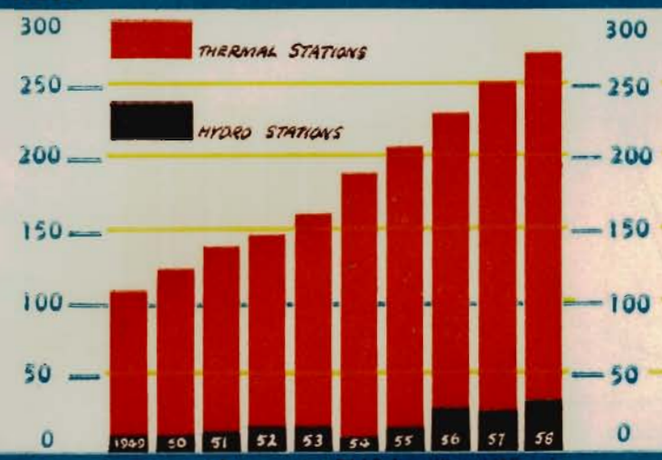
TEN YEAR STATISTICAL REVIEW

BASE YEAR (1947-48 = 100)

MAIN FEATURES OVER THE DECADE

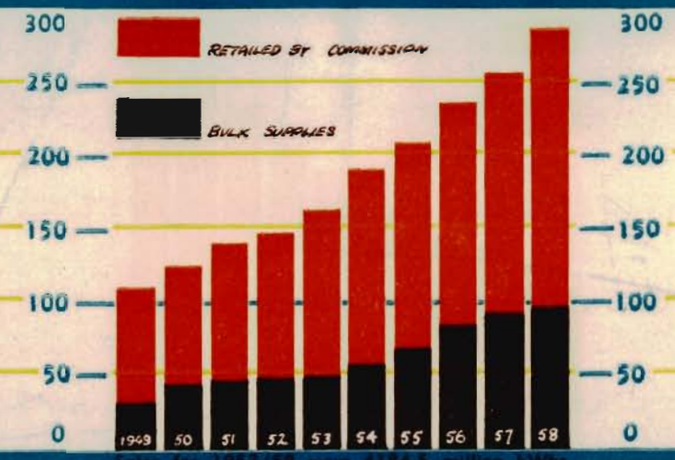
1. Electricity production and sales have almost trebled.
2. New generators installed have no more than kept pace with demand.
3. Despite major increases in cost levels, the cost per kWh of domestic electricity is only 50% higher than 10 years ago, largely because of the substantial increase in the use of electricity per consumer.
4. Active rural electrical development has more than doubled country consumers (farms supplied have almost trebled).

1. PRODUCTION



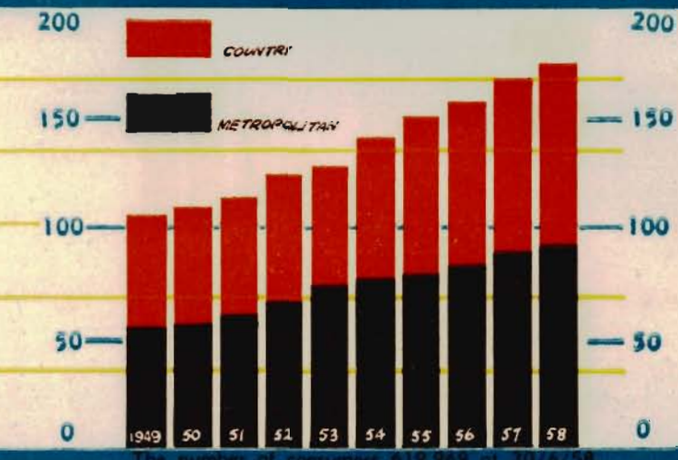
Production of electricity 5113.1 million kWhs in 1957-58, has almost trebled over the decade. (Statistics App. 6.)

4. ELECTRICITY SALES



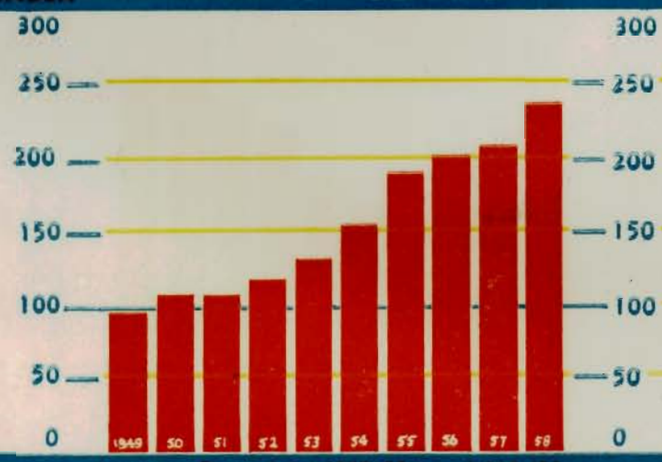
Sales for 1957/58 were 4184.5 million kWhs, an increase of 8.4 per cent. over last year. (Statistics App. 11.)

7. CONSUMERS



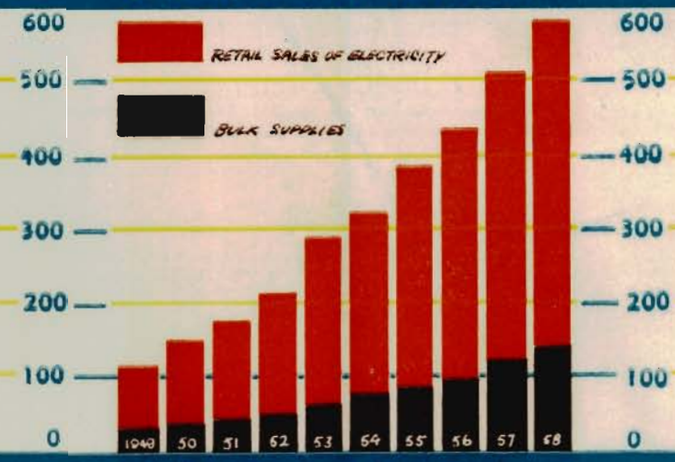
The number of consumers 619,989 at 30/6/58 has increased steadily over the decade. Country consumers have more than doubled. (Statistics App. 10.)

2. MAXIMUM DEMAND



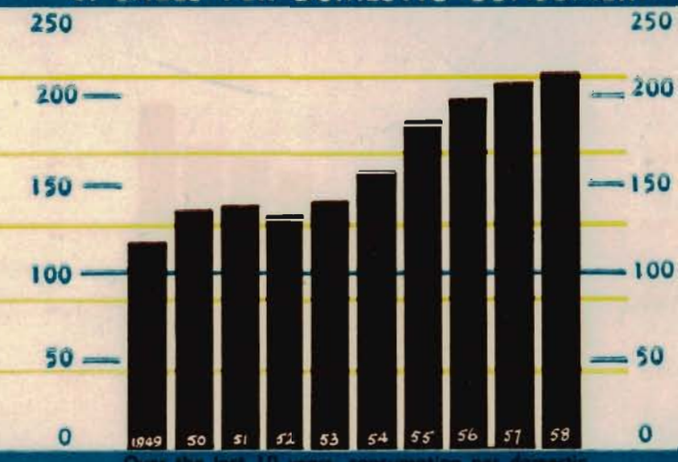
Maximum Demand for 1957/58 was 1,067,450 kW (M.D. on 11/7/58 reached 1,102,800 kW). Statistics App. 6.

5. ELECTRICITY REVENUE



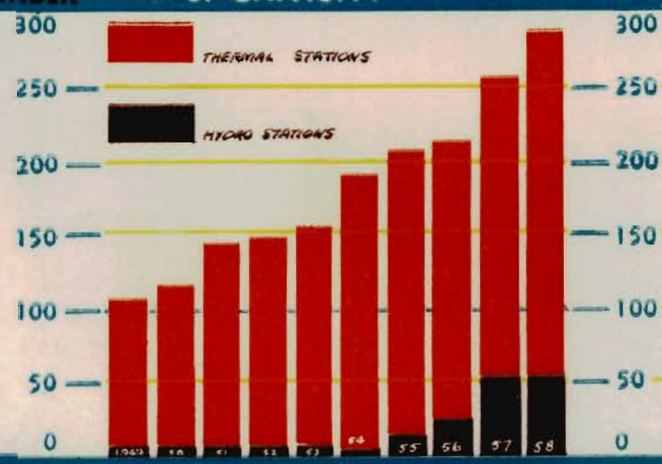
Over the decade revenue has increased almost sixfold.

8. SALES PER DOMESTIC CONSUMER



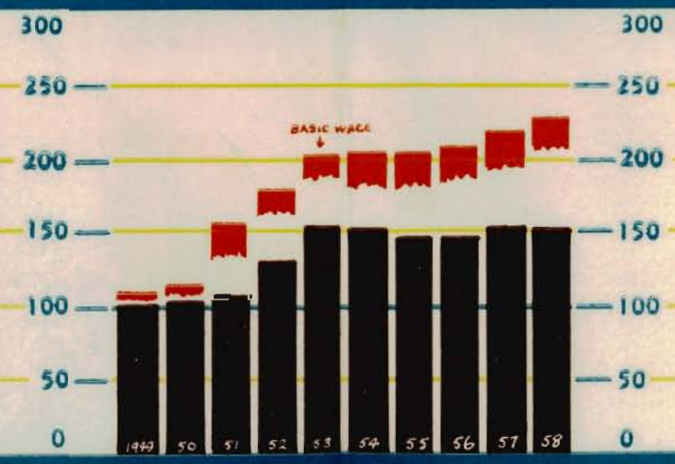
Over the last 10 years, consumption per domestic consumer has increased from 1,151 to 2,363 kWhs (Statistics App. 10.)

3. CAPACITY



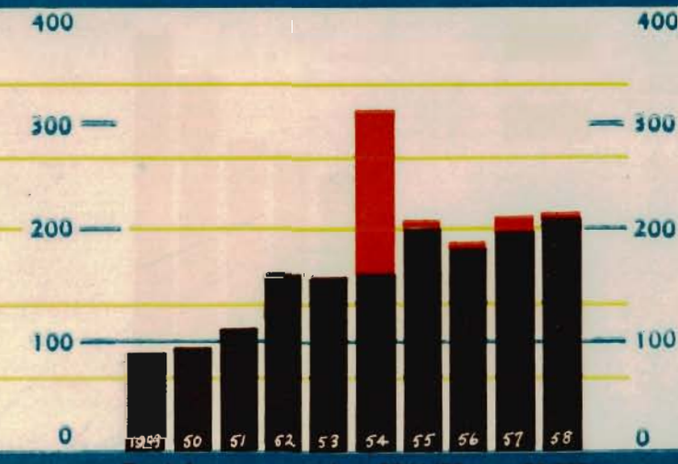
The installed capacity of generators was 1,211,009 kW at 30/6/58, an increase of 74,410 for year (Statistics App. 8). Interconnected system 1,186,459 kW. Regional Stations 24,550 kW.

6. COST PER kWh. FOR DOMESTIC CONSUMERS



As a result of increased use of electricity, revenue per kWh. is only 50 per cent. higher than 10 years ago, notwithstanding that the basic wage has increased 135 per cent. (Statistics App. 11.)

9. FARMS CONNECTED EACH YEAR

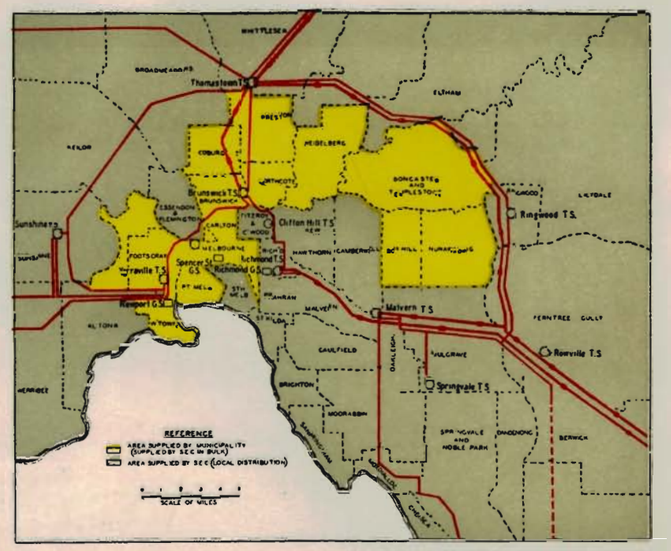


Total farms connected at 30/6/58 was 38,999 an increase of 3,147 for the year. Lighter portion of the graph represents farms previously supplied by undertakings acquired. (Statistics App. 10.)

STATE ELECTRICITY COMMISSION OF VICTORIA

ELECTRICITY SUPPLY

GENERATION
TRANSMISSION
H.V. DISTRIBUTION



REFERENCE

- TERMINAL STATIONS
- GENERATING STATIONS (THERMAL)
- GENERATING STATIONS (HYDRO)
- MAIN TRANSMISSION LINE KIEWA - MELBOURNE 220KV
- MAIN TRANSMISSION LINE YALLOURN - MELBOURNE 132KV & 220KV
- MAIN TRANSMISSION LINES 66KV
- BRANCH TRANSMISSION & DISTRIBUTION LINES

TRANSMISSION AND DISTRIBUTION LINES UNDER CONSTRUCTION ARE REPRESENTED BY BROKEN LINES.

- ELECTRIC SUPPLY UNDERTAKINGS (MUNICIPAL & PRIVATE) GENERATING OWN SUPPLY
- ELECTRIC SUPPLY UNDERTAKINGS (MUNICIPAL & PRIVATE) SUPPLIED IN BULK BY S.E.C.
- ELECTRICITY SUPPLY (BRANCH OFFICES)
- ELECTRICITY SUPPLY (DISTRICT OFFICES)

SCALE OF MILES

DRG. No. OM 46/30/10