1931.

VICTORIA.

STATE ELECTRICITY COMMISSION OF VICTORIA.

TWELFTH ANNUAL REPORT

FOR THE

FINANCIAL YEAR ENDED 30TH JUNE, 1931;

TOGETHER WITH

APPENDICES.

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

[*Cost of Report.*—Preparation, not given. Printing (650 copies), £132.]

By Authority.

H. J. GREEN, GOVERNMENT PRINTER, MELBOURNE.

No. 13.—10308.—PRICE 3s. 6D.]

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THE LATE GENERAL SIR JOHN MONASH, G.C.M.G., K.C.B., V.D., D.Eng.

Death of General Sir John Monash

With deep sorrow and a sense of immeasurable loss, the Commission records the death, on the 8th October, 1931, of its distinguished Chairman, General Sir John Monash, G.C.M.G., K.C.B., V.D., B.A., D.C.L., LL.D., D.Eng., M.Inst.C.E.

First as General Manager, and then as Chairman, the Commission had the full benefit of his genius and prestige; and Victoria's national scheme of brown coal development and electricity supply is, and will be regarded always as, a monument to his capacity for organization and administration, his amazing industry, and his zeal for the public welfare and the advancement of the State.

Great even in small things, and pre-eminent in great things, Sir John Monash left behind him a record alike distinguished as a leader in peace and war. To those associated with him, his success in all he undertook caused no surprise. It was but the natural corollary of a rich store of useful knowledge, applied with a thoroughness which left nothing to chance. He was an idealist, with a practical constructive mind, and he planned and builded in orderly sequence. In all he did, the qualities of courage, initiative, and industry were combined with an infinite capacity for taking pains. And, having set his course, he followed it with a lofty and singleness of purpose, seeing only the good of the public as the final objective.

The impress of his genius upon what is popularly known as the Yallourn Scheme will last for all time; and the Commission is firmly of the opinion that the continued success of the Scheme is dependent upon adherence to the policy and principles which he did so much to frame, and which he upheld as a shining exemplar of the spirit of service. Besides giving service, he possessed the supreme gift of inspiring it in others, not simply as a reaction of his own devotion to duty, but by an impelling and gracious personality, and by a genuine recognition of all on his staff, from the highest to the lowest, as co-operators with him in the work to be done. Between himself and his staff there was a bond of very deep affection, and to everyone throughout the Commission's service his death came, not simply as the removal of an able official head, but as the loss of a well-loved chief, whose amiable and distinguished qualities made him as much revered as he was honoured.

He was accorded a State funeral, which took place on the 11th October, 1931, and was perhaps the most impressive ever witnessed in Australia. It marked the passing of a great and world-famous figure, and the solemn grandeur of the ceremony was in keeping with both his rank and achievements. But the most eloquent tribute to his memory was the silent homage of the people, who, with reverent bearing, lined the whole route of the funeral procession from Parliament House to the Brighton Cemetery.

TWELFTH ANNUAL REPORT.

The Hon. John Cain, M.L.A.,
Minister in Charge of Electrical Undertakings,
Melbourne.

SIR,

As directed by section 35 (*b*) of the *State Electricity Commission Act* 1928 (No. 3776), we have the honour to present our Twelfth Annual Report, covering the financial year ended the 30th June, 1931, with Profit and Loss Accounts and Balance-sheet.

PART I.—ADMINISTRATION.

MAJOR EXTENSION—MAIN SUPPLY SYSTEM.

Two sections of the major extension of the main supply system, as approved by Parliament in 1928, were brought into operation during the year, viz., the new Terminal Station at Richmond, and the new 132,000-volt transmission line from Yallourn to Richmond. These works were executed with the utmost expedition in order to provide the necessary reserve and assistance for the original main transmitting and receiving facilities, which had been operating at full capacity for a number of years, frequently under severe overload conditions. Apart from the important considerations of convenience in maintenance, and the safety, reliability, and flexibility of the main supply and distribution system, the new facilities will meet the requirements of the extended power station at Yallourn.

Additional switchgear and transformers have been installed in the Yallourn switchyard for operation in conjunction with the second main transmission line, which is at present fitted with a single circuit; the second circuit will be installed when required. The carrying capacity of the new transmission line will then probably be nearly double that of the original 132,000-volt line, which was designed for a normal load of 50,000 kilowatts.

It was originally intended that the first of the three 25,000 kw. units of new generating plant to be installed at Yallourn should be ready for operation in the winter of 1931, and that the remainder should be installed progressively, in later years, as required, but that all should be available before 1935.

The normal increment in demand upon the system, immediately following the Commission's report to Parliament in 1928, conformed to estimates, and contracts were let in accordance with the programme outlined. Although the depression subsequently manifested itself, and caused a curtailment of industrial development and demand for power at the same time that limitation of loan funds precluded extensions of supply to country centres, the maximum demand upon the Commission's system continued to increase, rising from 97,000 kilowatts in 1930 to 103,600 kilowatts in 1931, which is beyond the normal capacity of the existing generating plant. However, by working up to the full margin of safety, and deferring expenditure as much as possible, the Commission has been enabled to postpone the installation of the first section of the work, which will not be completed until the middle of 1932, although it will be in partial operation about the end of 1931.

The expenditure on the various sections of the installation at 30th June, 1930, was as follows :—

	£
Power Station extension	821,366
132,000-volt Transmission Line	205,165
Richmond Terminal Station	211,271
	1,237,802

At that date, the savings effected on the terminal station and transmission line, as compared with estimates, was approximately £40,000.

METROPOLITAN AND GEELONG ELECTRICITY SUPPLY.

Full details were given in the Eleventh Annual Report of the conditions attaching to the transfer to the Commission, on 1st September, 1930, of the undertakings in Melbourne and Geelong of the Melbourne Electric Supply Company Ltd. The metropolitan section of the undertakings

was combined with the Essendon–Flemington area to form Metropolitan Electricity Supply, while the Geelong section became Geelong Electricity Supply. The change was effected without any public inconvenience or confusion, and both the undertakings have continued to function smoothly.

The staff of Metropolitan Electricity Supply is at present insufficiently accommodated at 19 Queen-street, in the premises formerly occupied by the Melbourne Electric Supply Company Ltd. As soon as the Commission's new premises, now in course of erection at Flinders-street, on the site of Sargood's building, are completed, the staff of Metropolitan Electricity Supply will be transferred thereto. The new building will provide the necessary accommodation, and its more central situation, opposite the Flinders-street Railway Station, will represent a distinct convenience to consumers. It should be ready for occupation about the middle of 1932.

BALLARAT AND BENDIGO ELECTRIC SUPPLY AND TRAMWAY UNDERTAKINGS.

On the 1st July, 1931, the Ballarat and Bendigo Electric Supply and Tramway undertakings of the Electric Supply Company of Victoria Ltd. came under the direction of the Commission, in accordance with its agreement with the Company, concluded in June, 1929, and ratified by Parliament in December, 1929. The terms of the agreement were fully explained in the Tenth and Eleventh Annual Reports. The Commission now exercises control over matters affecting tariffs, capital expenditure and general policy ; but the internal management of the undertakings remains with the Company until the Commission actually enters into possession ; and thus, meanwhile, the Company's ordinary dealings with its consumers and the public will not be affected.

The Commission's first act under its powers of control was the introduction of its standard two-part domestic tariff into Ballarat and Bendigo. The Commission also introduced into Bendigo a new schedule of public lighting rates, providing for reduced charges, combined with all-night lighting. The Bendigo City Council decided to expend the savings (approximately £500 per annum) in providing more and better lights, so that, without increasing its expenditure on public lighting, the city has now a more extensive and efficient system, with the hours of burning greatly increased. Negotiations have been opened up with the City of Ballarat, where the public lighting at present is about equally divided between electricity and gas. Under the Commission's offer, the Ballarat Council would be able to make substantial savings on its present cost of public lighting.

It was mentioned in the Eleventh Annual Report that, following upon the passing of an enabling Act to empower the Commission to operate the tramways in the Ballarat, Bendigo and Geelong municipal areas, the Councils mentioned, which are the licensing authorities for their respective urban areas under the *Motor Omnibus Act* 1928, had, with the approval of the Commission, prepared uniform by-laws governing the licensing of motor omnibuses, and setting forth the routes in respect of which licences may be granted. During the financial year under review each city finalized and gazetted its by-law. Regulations under the *Motor Omnibus Act* 1928, as amended by the *Motor Omnibus Act* 1929, relating to urban motor omnibuses, were also gazetted during the year.

Kangaroo Flat.—The Order in Council held by the Marong Shire Council for the supply of electricity to Kangaroo Flat, 3½ miles from Bendigo, and which expired on the 18th February, 1931, was extended to the 30th June, 1931, upon which date the assets of the undertaking were acquired by the Commission under an agreement concluded with the council in April last. The Kangaroo Flat undertaking had been managed for the council by the Electric Supply Company of Victoria Ltd., which will perform a similar office for the Commission until the Commission enters into possession of the Bendigo undertaking.

WARRAGUL.

On the 1st December, 1930, the Commission acquired the Warragul and Buln Buln portions of the undertaking of the River Latrobe Hydro-Electric Company, which will continue to supply Neerim South, Algiers and Noojee from its existing hydro plant at Noojee.

The acquisition permits of the more economical management of the Commission's Gippsland district. The local company came into existence immediately before the creation of the Commission, and its franchise was not due for expiry until 1949. The Commission's mains were run past Warragul in 1924, in order to serve Drouin ; at a later stage they were extended to serve several small centres as far west as Tynong, yet Warragul, which is the most important town between Yallourn and Dandenong, remained the only country centre in Victoria within range of existing mains of the Commission that was not served by the State scheme. The result was that for some years the capital expenditure on the extension from Yarragon to Tynong was deprived of revenue that would, ordinarily, have been available. This position has now been remedied, and all towns along the Commission's mains from Yallourn to Tynong are now receiving a supply of transmitted energy.

HEALESVILLE.

Towards the end of 1930, the Commission agreed with the Healesville Shire Council to take over the local municipal electric supply undertaking on the 1st January, 1932. The Healesville plant is approaching the limit of its capacity, and investigation proved that an extension from Lilydale of the Commission's mains is the most logical and economical means of supplying the future requirements of the town. Owing to the absence of funds for capital works the Commission has had to arrange with the council for postponement of this agreement, which will be reviewed in April, 1932, in the light of the then prospects of securing moneys for the work.

PROPOSED MOE–YALLOURN DEVIATION OF MAIN GIPPSLAND LINE.

On the 17th February, 1931, the Honorable the Minister of Railways submitted to the Parliamentary Standing Committee on Railways a memorandum prepared by Mr. C. H. Perrin, Chief Engineer for Railway Construction, in which it was suggested that funds might be made available under the Unemployment Relief Act to carry out portion of the work of placing Yallourn on the main Gippsland line, thus limiting the capital cost on which interest should be borne.

The Committee, in reviewing the whole matter, expressed the opinion that while a great deal of importance should be attached to the briquetting traffic, consideration should also be given to the importance of Yallourn itself, in the area of which there is at present a population of 3,600. The Committee pointed out that the passenger traffic is now not great, because of the very inconvenient train service, and the necessity of changing trains at Moe. Although it had not been taken into account in the figures submitted relating to the anticipated traffic on the line, the Committee considered that the regular passenger and tourist traffic to Yallourn would be greatly augmented following upon the town being served in each direction by main line trains, and that a considerable amount of additional revenue would be received from this source.

After dealing with the increased production of the briquette factory to 1,200 tons a day, and the fact that the State Electricity Commission had reduced prices of household briquettes from 51s. per ton to 46s. per ton, at which latter price the Commission anticipates holding the household market in face of the competition of wood or black coal (an anticipation which was fully realized under the depressed conditions which prevailed throughout the winter of 1931), the Committee proceeded to state :—

> " The outstanding new feature in connexion with the proposal is, of course, the changed financial aspect. It was originally proposed that interest should be charged on the full capital cost, then estimated at £107,500. With the use of money from Unemployment Relief Funds, reducing materially the capital and interest charges, the proposal assumes a new complexion, and can be regarded with gradually increasing favour as the capital debit decreases. On a traffic of 1,200 tons of briquettes a day, and with an interest capital expenditure of £70,000, the Railways Commissioners estimate the loss will be £1,019 per annum, without increasing freights and fares to stations east of Yallourn on account of the slightly larger mileage to Melbourne. With a capital debit of only £50,000, there would be an estimated profit immediately of £181 per annum. In fact, on an output of only 1,000 tons per day, there would still be a profit of £103 per annum on a £50,000 capital debit. In these circumstances, the Committee feels that with the combined factors of briquette production promising to reach 1,000 or 1,200 tons per day almost at once, and the increase in railway passenger and tourist traffic that would accrue to the town of Yallourn by virtue of being on the main line, the deviation should be sanctioned."

The Committee recommended the deviation, via Yallourn, of the section of the main Gippsland line between Moe and Morwell, subject to the utilization of Unemployment Relief Funds for portion of the work, and subject also to no additional mileage being charged for fares and freights in respect of stations east of Yallourn.

The Committee's report was presented to Parliament on the 6th May, 1931. The debate on the matter now stands adjourned.

YALLOURN POWER STATION BOILERS.

Early in 1931 faults were detected in certain of the boiler drums in the original steam-raising installation at the Yallourn Power Station, and immediately steps were taken to transfer load to other stations on the system so that an investigation and any necessary reconditioning work could be carried through with the utmost expedition. At one stage it was necessary to make a slight reduction in the bulk supply to the Melbourne City Council, which co-operated wholeheartedly with the Commission in making up the deficiency from its own Spencer-street Station.

The Commission's complete report on the whole matter, following upon the conclusion of its investigations into the defects, was presented to Parliament by the Honorable the Minister in Charge of Electrical Undertakings on the 28th July, 1931.

NEW REGULATIONS.

Amendments and additions to the Wiring Regulations were gazetted on the 18th February, 1931, dealing with the following matters :—

1. Access to roofs in which wiring is installed.
2. Earth clips.
3. Wiring in conduits.
4. Wiring in wood casing.
5. Temperature rise, rupturing capacity and testing of switches and circuit breakers.
6. The carrying capacity, construction and control of wall plugs and sockets.
7. Unsafe and disused cables, fittings, &c.
8. Repairs to installations.
9. Radio receiving equipment.
10. Inert gas tube lighting systems (Neon signs).

DEMAND FOR ELECTRICAL ENERGY WITHIN RANGE OF THE STATE SCHEME AS AT PRESENT DEVELOPED.

The graphs appearing in the following pages illustrate the progress of the Commission's electric supply business and also of the demand for electrical energy in the metropolitan area.

Graph No. 1 shows the loading in the metropolitan area during the whole 24 hours on a typical winter day in 1931. It will be noticed that a big drop occurs during the early hours of the morning, with a subsequent sharp rise and peak at 8 a.m., mainly due to the heavy railway traffic at this time ; another and bigger peak occurs at between 5 and 6 p.m., due to the coincidence of the domestic lighting and traction loads. Apart from railway traction (which the Railways Department itself provides) the electrical demand in the metropolitan area during 1931 was 95,000 kw., a drop of about 3,000 kw. on the previous year's figures.

Graph No. 2 illustrates the total amount of energy sent out of power stations or terminal stations by all generating authorities in the metropolitan area and indicates also the dependence of the metropolis on the Commission's supplies.

Graph No. 3 shows the delivery of bulk energy from the Commission's system to the various distributing authorities in the metropolitan area. The big increase in the energy delivered to the Commission's districts and the decrease in that delivered to the Melbourne Electric Supply Company in 1930–31 are explained by the fact that, on the 1st September, 1930, the Melbourne Electric Supply Company was absorbed by the Commission.

Graph No. 4 shows the maximum demand on each of the Commission's power stations for the past six years ; these demands were not coincident. The highest instantaneous demand on the Commission's generating stations during 1930–31 was 103,600 kw. Although this was the highest yet recorded, and is slightly beyond the normal capacity of the existing system, the load factor for the year dropped from 52 per cent. to 45.8 per cent. The unfavorable position created by the decrease in the number of kilowatt hours sold is emphasized by the fact that an increment in sales is normally looked for.

Appendices Nos. 2 and 3 give details of the Commission's transmission and distribution systems.

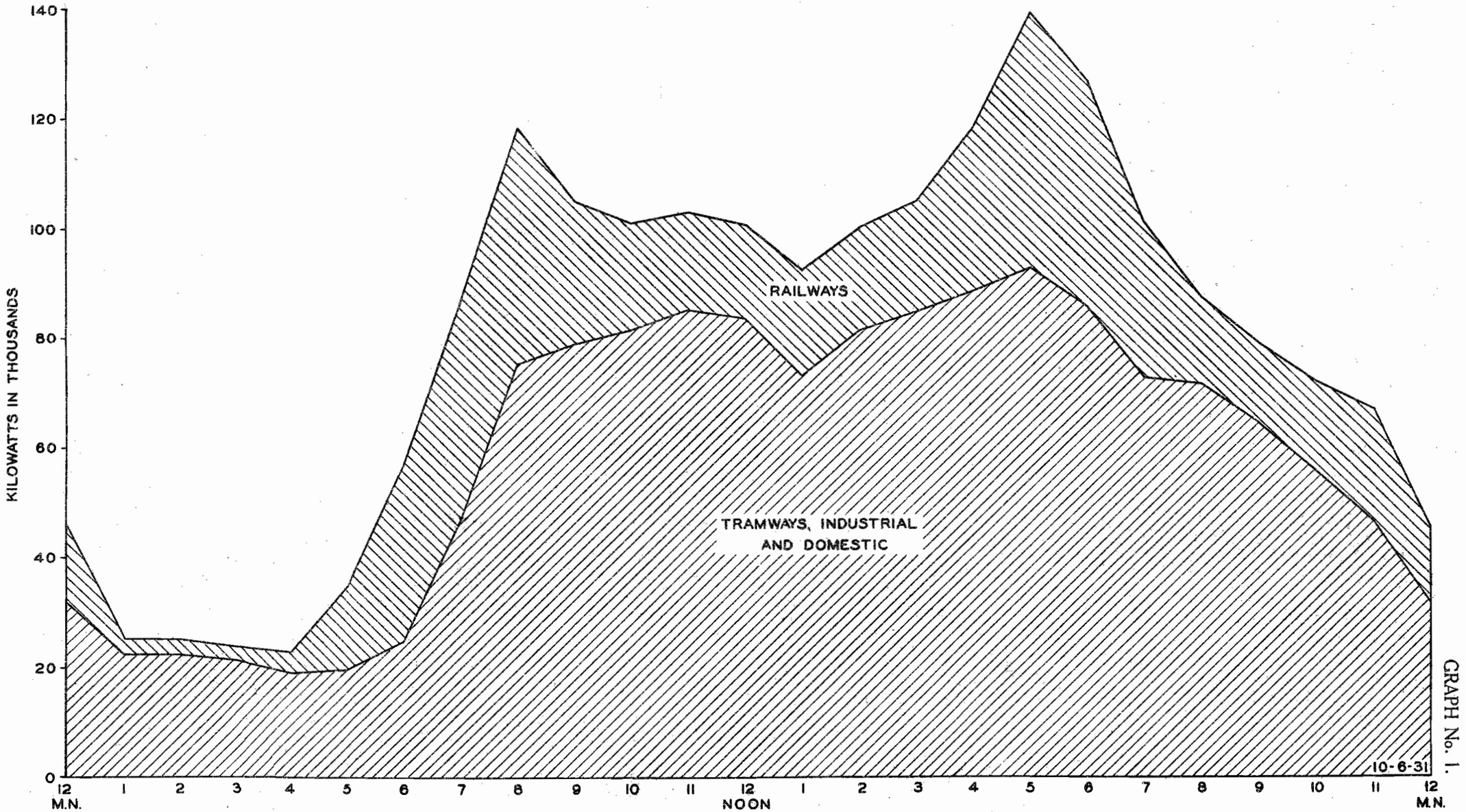
Appendix No. 4 gives details of the amount of energy distributed by all undertakers in the metropolitan area.

Area supplied with Energy.—The following undertakings within the metropolis are supplied by the Commission in bulk:—The city councils of Box Hill, Brunswick, Coburg, Footscray, Melbourne, Northcote, Port Melbourne, Preston and Williamstown, and the Shire of Heidelberg.

The local distribution of electricity is undertaken by the Commission in the following metropolitan municipalities :—Fitzroy, Collingwood, Camberwell, Kew, Hawthorn, Richmond, South Melbourne, Prahran, Malvern, St. Kilda, Caulfield, Oakleigh, Brighton, Sandringham, Melbourne (Flemington), Moorabbin, Mordialloc, Essendon, and Braybrook (Sunshine).

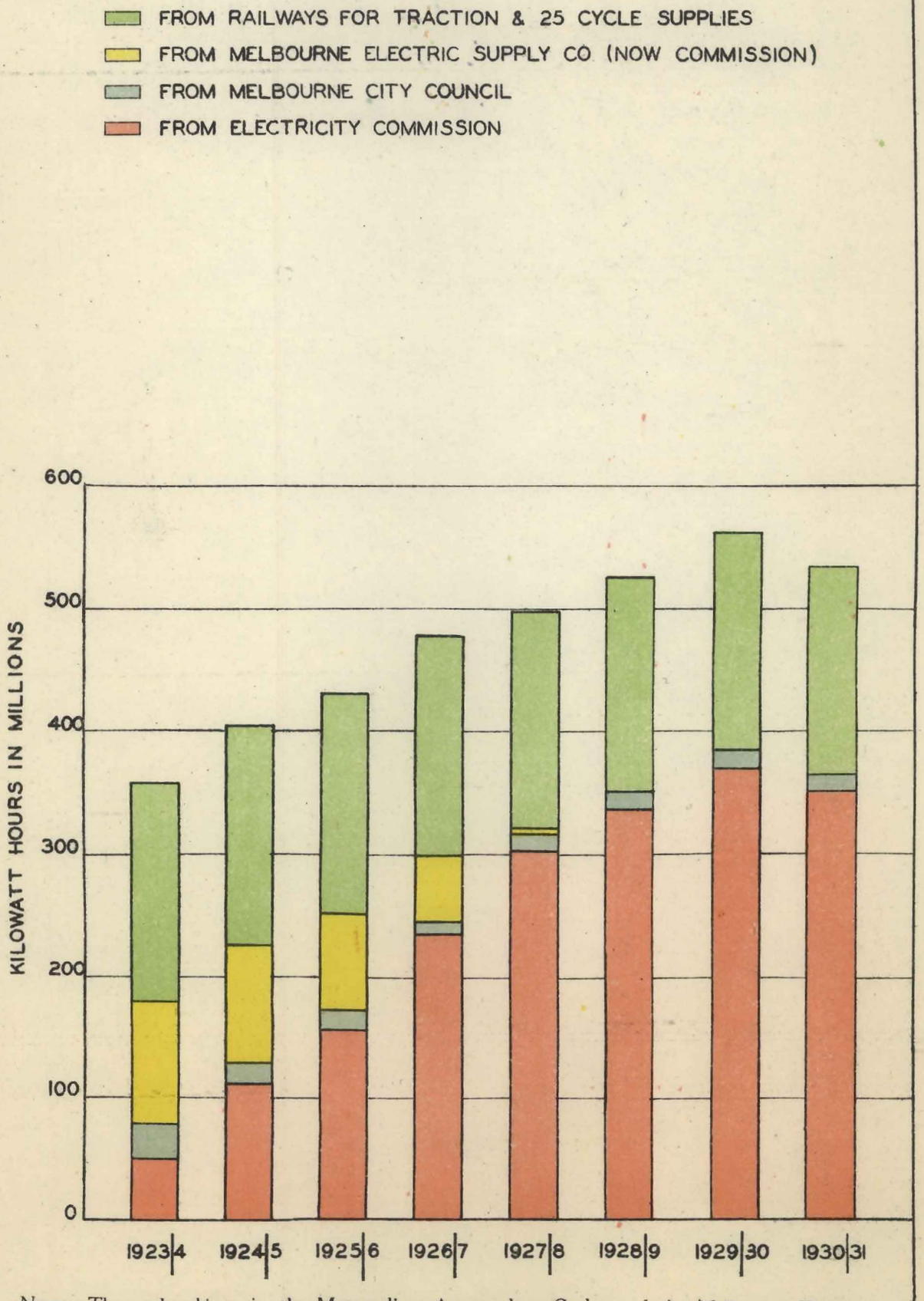
Extensions of Supply.—Owing to the financial stringency, no extensions of supply could be initiated during the year, any work in this direction being confined to the completion of new lines in hand at the beginning of the term, viz., Bruthen, Mossiface, Wiseleigh, Bena, Loch, Poowong, Kongwak, and Jumbunna, while the Warragul undertaking was acquired. On the 1st October, 1931, the Numurkah and Nathalia undertakings of the Numurkah Shire Council were also acquired by the Commission, bringing the number of centres served by the State Scheme to 180.

TYPICAL WINTER DAILY LOAD
WITHIN THE METROPOLITAN AREA.



GRAPH No. 1.

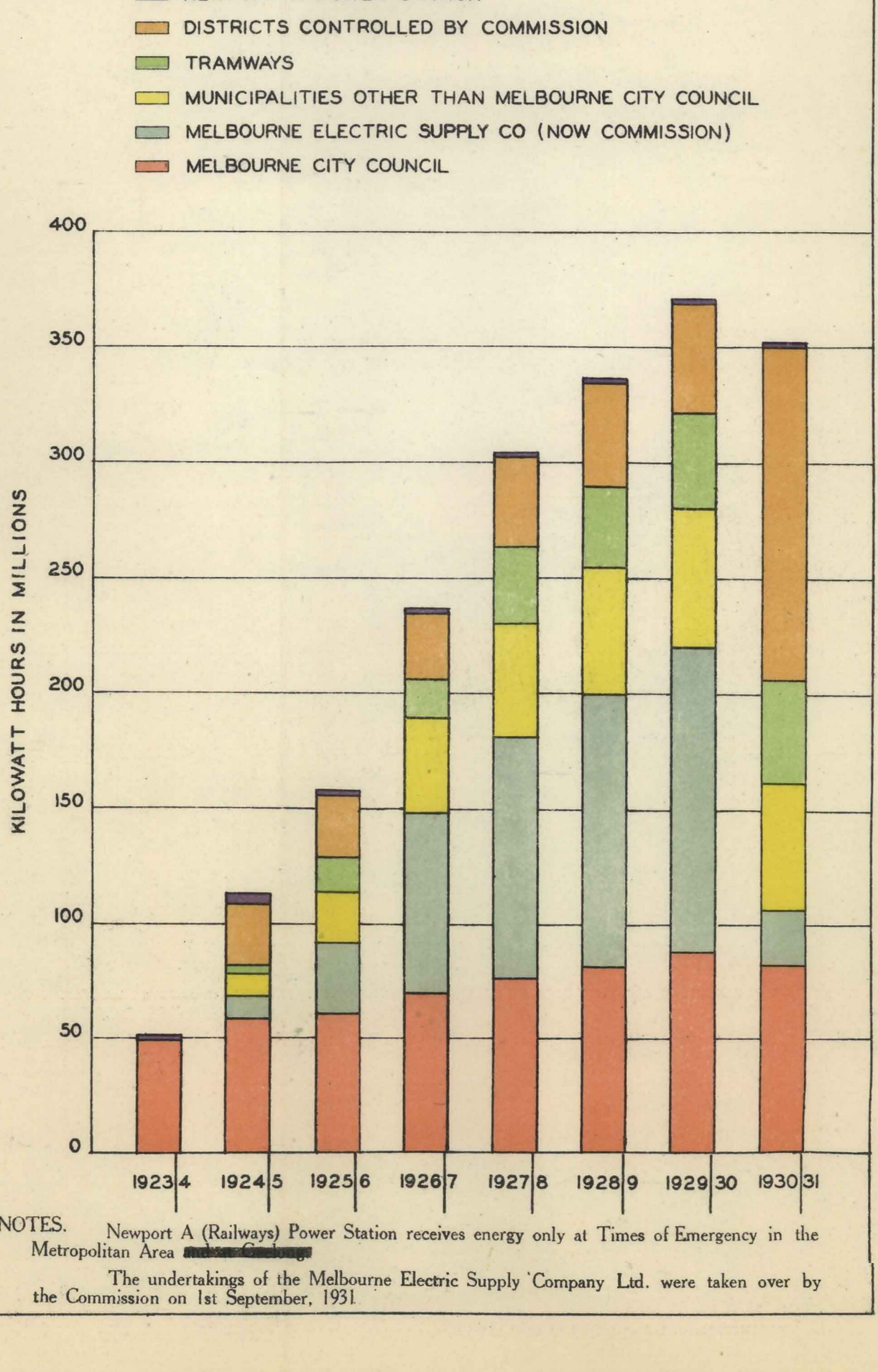
ENERGY MADE AVAILABLE FROM ALL SOURCES FOR USE IN THE METROPOLITAN AREA FOR ALL PURPOSES



NOTE.—The undertakings in the Metropolitan Area and at Geelong of the Melbourne Electric Supply Company Ltd. were taken over by the Commission on 1st September, 1930.

ENERGY DELIVERED TO DISTRIBUTING AUTHORITIES AND OTHER CONSUMERS IN METROPOLITAN AREA

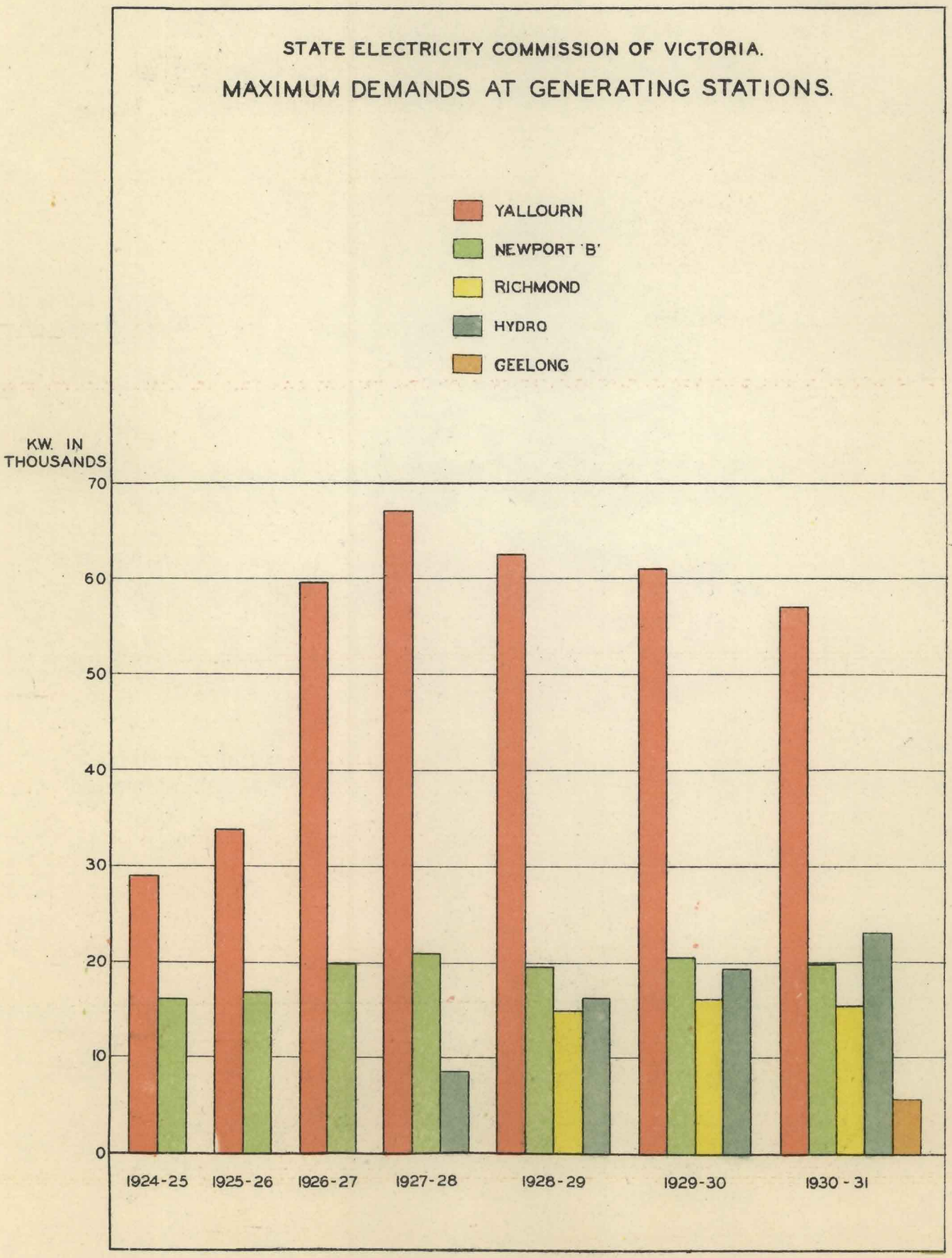
STATE ELECTRICITY COMMISSION'S SYSTEM



NOTES. Newport A (Railways) Power Station receives energy only at Times of Emergency in the Metropolitan Area and at Geelong.

The undertakings of the Melbourne Electric Supply Company Ltd. were taken over by the Commission on 1st September, 1931.

GRAPH No. 4.


STATE ELECTRICITY COMMISSION OF VICTORIA.
MAXIMUM DEMANDS AT GENERATING STATIONS.
YALLOURN
NEWPORT 'B'
RICHMOND
HYDRO
GEELONG
KW. IN THOUSANDS
70
60
50
40
30
20
10
0
1924-25
1925-26
1926-27
1927-28
1928-29
1929-30
1930-31

TOWN OF YALLOURN.

Town Development.—The continued financial stringency restricted building operations at Yallourn during the year to the provision of 28 new houses, or about one-third of actual requirements, 50 applicants being left on the waiting list. Contracts for the houses erected during the year had been entered into some time prior to the commencement of the period. The settled conditions of the locality enable a reliable forecast to be made of housing requirements during the next five years, and, on a conservative basis, it will be necessary to erect in this period 160 new houses to afford the required accommodation in the town for married employees.

The new houses erected during the year bring the total number of dwellings at Yallourn to 527 of all classes, exclusive of 23 houses occupied by non-employees of the Commission. With the exception of three, all of the new houses are of wood, and consist of five rooms each. The remaining three houses are of six rooms each, in wood, but faced externally with concrete sheets and rough-cast, a form of construction which, while being relatively cheap, adds variety to the general appearance of the town.

The population of the town increased by 104 during the year, but that of the territory as a whole decreased by 44. The figures at 30th June, 1931, were as follows :—

Yallourn Town	2,376
Western Camp	322
South Camp	181
Old Brown Coal Mine	711
Outlying Areas	27
	3,617

The natural development of the various plantations, &c., already in existence represents a progressive improvement in the appearance of the town. This was very marked in the period under review, especially as it was associated with more than usual pains on the part of the residents to beautify the surroundings of their homes.

The interest Yallourn possesses for oversea and interstate visitors, and for residents in other parts of Victoria, is evidenced by the fact that, during the year ended 30th June, 1931, 8,555 visitors were personally conducted over the works and town.

Hospital.—The Yallourn Hospital, for the maintenance and management of which the Yallourn Medical and Hospital Society is responsible, had a useful and satisfactory year. The grounds of the institution were considerably improved during the term. This in itself is an evidence of the very active interest taken by the residents in the welfare and appearance of the hospital. The Health Centre, adjacent to the Town Square, is a valuable auxiliary service that is also administered by the Medical and Hospital Society.

Educational Facilities.—These were greatly improved during the year. An Infants' School, which was erected on the site originally set apart for a Technical School, relieved the congestion at the Higher Elementary School.

The Technical School is now functioning more satisfactorily than previously ; makeshift premises were temporarily equipped, making it possible to give apprentices and others a reasonably sound training. The two cottages which had been used for Higher Elementary School purposes were transferred to the Technical School, thus relieving the congestion at the latter school.

St. Therese's Roman Catholic Church Hall was altered during the year for use as a school for children of that denomination.

The question of finding suitable employment for boys and girls leaving school at Yallourn has been engaging the attention of a local vocational committee. This committee has been empowered by the residents to arrange for the formation of a larger committee to embrace Moe, Morwell, and Yinnar, thus including agricultural interests, which may enlarge the scope for employment of boys at Yallourn.

Reserves and Gardens.—The main playing oval on the Melbourne Swamp area, which was drained in the previous financial year, was used for cricket last season. The No. 2 oval was prepared during the year.

The drainage of this area has materially increased the available level building ground in the town, provided proper and much-needed playing grounds, and, incidentally, greatly improved the approach to Yallourn from the Prince's Highway.

Community and Welfare.—The community spirit was again much in evidence, and another year of active progress was registered.

Lectures under the auspices of the Workers Educational Association were held, and a sub-branch of the League of Nations Union, a branch of the Country Women's Association, and a branch of the Housewives' Association were formed during the year.

The Scouts' Hall, erected last year, proved of the greatest service to the Yallourn scouts. The Yallourn troop forms part of the Strezlecki district, which also includes Trafalgar, Moe, Morwell, Boolara, and Mirboo.

The Bowling Club terminated a successful season with 57 members. Its club house was completed in the early part of the season.

The Golf Club made considerable improvements to the course during the year, and the membership increased from 74 to 90.

The tennis courts at Yallourn, Brown Coal Mine, and the Western Camp continue to be well patronized, and the clubs have large memberships.

A Carpet Bowls Association was formed during the year. Ten teams competed in a competition, which created a good deal of interest and enthusiasm.

The Yallourn Brass Band had a very successful year, and in contests at Echuca and Bendigo won £129 in prize money. The Band is in a sound financial position.

The Yallourn Rifle Club also had a successful year.

The efficiency of the Fire Brigade is being well maintained, and the keenness of its members was rewarded by success at the Country Fire Brigades' Demonstration at Ballarat in March last, when the "B" class four-men reel event was won, and second places secured in the "B" class five-men hose and ladder event and the one-man Marshall event.

INDUSTRIAL.

Disposition of the Commission's labour forces as at 30th June, 1931 :—

	Operation.	Construction.
Yallourn	885	167
Metropolitan	616	214
Transmission lines..	18	41
Districts	420	19
Sugarloaf–Rubicon Hydro-Electric Scheme ..	17	..
	1,956	441

As figures for Metropolitan Electricity Supply and Geelong came into the records for the first time, the foregoing statement is not comparable with those in previous annual reports. On a comparable basis, the maximum number of men employed by the Commission during 1930–1931 was 500 less than the maximum number during 1929–1930, mainly as a result of the reduction in construction works.

Arbitration.—During the year, on an application by employers, a 10 per cent. reduction in wages rates was decided on by the Commonwealth Court of Conciliation and Arbitration. The first decision of the Court, affecting certain of the Commission's employees, became effective on the 1st February last. Later, the reduction was applied by the Court to other Commission employees, and about 83 per cent. are covered by it. The remainder of the Commission's employees are subject to State Wages Board determinations, which have been reduced from time to time, the average reduction now being in the region of 10 per cent.

A brief interruption of industrial peace at Yallourn occurred during the last week of the financial year, 21 carpenters ceasing work. The men resumed on the conditions against which they protested, pending the result of deliberations by a Board of Reference constituted by the Court.

ELECTRIC LIGHT AND POWER ACT 1928.

Since the passing of the *Electric Light and Power Act* 1896, 212 Orders in Council have been granted. Of these, 121 have been issued to municipal councils and 91 to companies or persons. Seventy-seven Orders in Council have been revoked, including a number relating to undertakings which have passed to the control of the Commission.

The Orders in Council which have been recommended by the Commission during the year, and approved by the Governor in Council, authorizing the supply of electricity in the areas indicated, are as under :—

Supply Authority.	Area.	Maximum Prices Authorized.	
		Lighting per Unit.	Power per Unit.
		s. d.	*s. d.*
C. W. Wyeth	Township of Inverloch	1 6	1 0
*Casterton Electric Supply Co. Pty. Ltd.	Town of Casterton	1 0	0 7½

* This Order extends the term of the existing Order for ten years from June, 1939.

LICENSING OF ELECTRIC WIREMEN.

The number of wiremen's licences issued to 30th June, 1931, and also the number issued during the twelve months previous to this date, are given below :—

Grade.	Number issued to 30th June, 1930.	Number issued from 1st July, 1930, to 30th June, 1931.	Totals.
"A"	1,547	74	1,621
"B1"	165	26	191
"B"	1,092	82	1,174
"C"	1,482	50	1,532
Special Licences	56	9	65
Permits	3,206	145	3,351
"A" Provisional	8	..	8
"B1" Provisional	1	..	1

During the year two examinations in theory and practice were held, and the Board of Examiners reports that, although there was a slight decrease in the number of candidates who attended, there was an increase in the percentage of passes, excepting in "B1" grade, in which the percentage of passes decreased slightly.

ELECTROLYSIS RESEARCH—METROPOLITAN AREA.

The Electrolysis Committee, consisting of representatives of—

The Postmaster-General's Department,
The Victorian Railways Commissioners,
The Melbourne City Council,
The Melbourne and Metropolitan Board of Works,
The Melbourne and Metropolitan Tramways Board,
The Metropolitan Gas Company,
The State Electricity Commission of Victoria,

has, in conjunction with its Technical Sub-Committee, operating through the Electrolysis Research Engineer, investigated a large number of cases of alleged electrolysis which have been reported to it from within the metropolitan area. The total number of cases brought to the notice of the Committee during the year was 243.

As a result of the large amount of investigation and research undertaken since the formation of the Committee three years ago, certain remedial measures have been applied to definitely ascertained cases of electrolysis. As a result of the continued application of such measures, the Committee confidently anticipates being able to record shortly a substantial diminution in the number of cases of electrolysis disclosed annually.

PART II.—FINANCIAL AND COMMERCIAL.

GENERAL REVIEW OF FINANCIAL AND TRADING CONDITIONS.

For purposes of record, and to enable the financial results for the year to be studied in their right relationships, it is necessary to preface this section of the report with a brief analysis of the adverse trading and financial conditions suffered during 1930–31 by Victoria, in common with other parts of Australia, and with the world at large. It has been authoritatively stated that in no period of its history has Australia been faced with a period of greater difficulty than during the six months ended 31st December, 1930, due to the shrinkage of the national income as a result of the disastrous decline in the world's prices for the exportable products of the country, combined with delay in reducing national expenditure and internal costs of production. The authoritative note is less sombre for the remaining period of the financial year, as prospects of improvement are discerned following the courageous and comprehensive measures taken to rehabilitate the national finances; but the low world prices for primary products continued to be the great obstacle in the way of recovery To fully quote the authoritative summing up of the position at the time: "Unfortunately the world outlook, and the world capacity to buy, are so poor that relief in this direction must necessarily be slow. In the meantime industry in Australia is necessarily passing through a period of considerable difficulty, which only those in strong positions can withstand, and already the process of elimination of the weakest is taking place."

Some indication of these difficulties is afforded by the official returns for building, unemployment, and overseas and internal trade, viz.:—In Greater Melbourne the number of dwellings and other buildings erected in 1930–31 was 2,184, compared with 5,855 in 1929–30 and 6,923 in 1928–29, the respective values being £874,000, £4,090,000, and £5,830,000. In the country districts served by the Commission the number of building permits issued fell from 1,273 in 1929–30 to 434. The percentage of Victorian Trade Unionists recorded as unemployed increased from 8·6 per cent. in March, 1929, to 26·5 per cent. in June, 1931. In the same period the percentage of unemployed unionists throughout the Commonwealth increased from 9·3 per cent. to 27·6 per cent. Victorian overseas trade in 1930–31 showed a reduction in value of imports of 52 per cent. on 1929–30 figures, and a reduction in exports of 29 per cent. over the same period. The published results of a selected number of well-established companies operating largely in Victoria, and representative of financial and industrial undertakings generally in the State, showed that, considered as a group, their net profits fell by over 50 per cent., compared with their 1929–30 results.

As far as the Commission itself is concerned, the year's difficulties were aggravated by the fact that coincident with this situation there were completed and brought into operation works which, although essential to the safety and reliability of supply—as the year's operations confirmed—were not afforded the opportunity to provide an adequate return on the new investment, since both the system load and load factor were materially reduced as the result of the general conditions. Even more seriously aggravating the position was the adverse rate of exchange on overseas payments, which included for the first time substantial interest remittances on debentures for which the Commission assumed responsibility under the terms of acquisition of the assets of the Melbourne Electric Supply Company.

It will thus be seen that the Commission, while subject to the general difficulties, had also to face consequential difficulties of a nature peculiar to itself. The extent to which all these circumstances adversely affected both electricity supply and briquetting is further discussed in this section of the report.

ANNUAL ACCOUNTS.

The General Profit and Loss Account and Balance-sheet, accompanied by summarized Profit and Loss Accounts and Balance-sheets of the District Undertakings of the Commission, are contained in Appendix No. 1.

CAPITAL EXPENDITURE.

The following table shows the growth of fixed capital since the Commission commenced its activities :—

	£	s.	d.
1919–20	**1,980**	**8**	**11**
1920–21	**213,238**	**2**	**11**
1921–22	**1,645,790**	**12**	**3**
1922–23	**3,993,825**	**12**	**1**
1923–24	**6,036,422**	**15**	**11**
1924–25	**7,246,767**	**11**	**1**
1925–26	**8,347,818**	**3**	**0**
1926–27	**9,586,181**	**15**	**6**
1927–28	**11,147,771**	**18**	**10**
1928–29	**12,220,583**	**19**	**1**
1929–30	**13,891,711**	**17**	**6**
1930–31	**18,501,539**	**16**	**4**

Apart from writings off and minor adjustments, the actual capital expenditure for the year was £5,307,874 10s. 7d.

The abnormal increase during the year under review arises from the inclusion of the assets of the Melbourne Electric Supply Company, which passed to the Commission on 1st September, 1930. Melbourne assets of the Company amount to £3,485,627, and the Geelong assets £776,255. The balance of £1,045,993 represents the expenditure on capital works in all other territories where the Commission operates. Details of this expenditure will be found in the appropriate schedule in the Annual Accounts.

RESULTS OF OPERATIONS OF ALL ACTIVITIES FOR FINANCIAL YEAR ENDED 30TH JUNE, 1931.

	1930–31.
Operation Expenses	**£1,209,919**
Interest	**939,922**
Depreciation	**354,041**
Total Expenditure	**2,503,882**
Total Revenue	**2,544,894**
Profit	**£41,012**
Less Exchange on overseas remittances	**58,964**
Net Loss	**£17,952**

The following facts should be noted :—

(*a*) The profit of £41,012 earned on the year's operations was eliminated by the extraordinarily high cost of transmitting moneys abroad ; thus, the net result was a loss of £17,952.

(*b*) During the year major expansion occurred both in the electricity supply and briquetting businesses ; consequently it is of no value to repeat the comparison of total revenue and expenditure with preceding years, as recorded in previous annual reports. The transfer of the Melbourne and Geelong undertakings of the Melbourne Electric Supply Company, with total revenues exceeding £1,160,000 per annum, and the commencement of the extended briquette factory in the last quarter of the year, have, in essence, created a new set of conditions in the Commission's finances as a whole. Expenditure naturally has increased in keeping with the larger responsibilities thereby entailed. Prior to the change in control, the Company's Melbourne Undertaking was the largest bulk supply customer of the Commission.

(*c*) Full depreciation on the whole capital investment has been charged in the accounts for the year. The amount thus charged was £354,040 against £275,845 provided last year. This includes contribution to the Sinking Fund created by the State in accordance with its financial agreement with the Commonwealth of Australia, dated 12th December, 1927.

(*d*) Since 1st September, 1930, the redemption of debentures forming part of the purchase price of the assets acquired from the Melbourne Electric Supply Company has been made from revenue, the amount involved being £27,023 15s. 4d.

ELECTRICITY SUPPLY—CONDITIONS OF SYSTEM LOADING, 1930-31.

Electricity supply is very sensitive to business fluctuations, and the load curve at all times affords a reliable index of the effect on the community of general financial and trading conditions. This is especially so in Victoria, where State-generated energy supplies 95·2 per cent. of the total electricity required for all purposes. It is, therefore, of particular interest to reproduce the graph which appeared in the Eleventh Annual Report, because it enables the variations in demand (kilowatts) on the generating plants of the Commission's system to be traced week by week from January, 1929, to September, 1931. The graph reveals the main load movements, and, when considered in conjunction with the percentage variations in the actual production of energy (kilowatt-hours), presents the overall position even more clearly and completely. It was about the end of May, 1930, that the electricity supply business began to feel the effects of the financial and industrial stress, and, although the figures relating to energy received into the Central Supply System (Melbourne) for June were not altogether unfavorable, compared with those for the corresponding month in 1929, there then set in a steady decrease in the demand, reaching 5·6 per cent. in November, 1930.

Taking the figures for 1931, the energy received into the Central Supply System (Melbourne) showed a falling off of 6·7 per cent., compared with the corresponding month in 1930. This drop was increased to 8·1 per cent. in February, but there was a gradual recovery in March and April, 1931, the figures for the latter month being 3·8 per cent. better than those for the same period in 1930. May figures dropped again, being 2·4 per cent. worse than those for May, 1930, but there was a very slight improvement in the figures for the succeeding months, excepting for an adverse variation of 0·6 per cent. in July, compared with this month of 1930. Taking the figures as a whole, in comparison with the preceding year, they represent a reduction in the total energy sales of 18,646,109 kwh.

Financial Result.

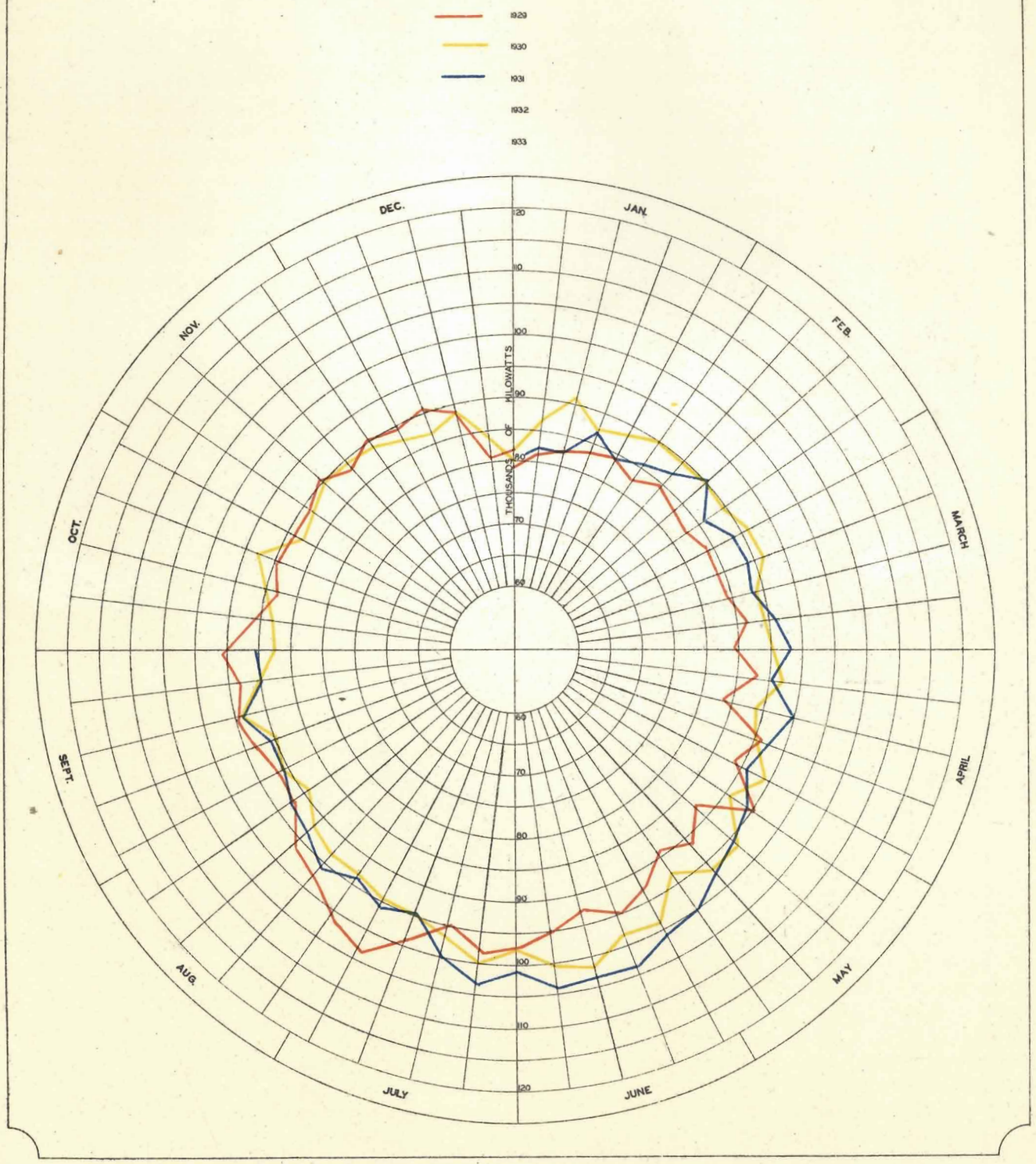
	Financial Year, 1930-31.
Revenue	**£2,234,757**
Expenditure	**2,087,870**
Surplus	**£146,887**
Energy sold during year	**379,572,140** kwh.

The surplus does not represent the final return on electricity supply operations. A number of items of expense for accounting reasons are not taken through the books in determining the total electricity supply expenditure, but are debited direct to the General Profit and Loss Account, which, of course, shows the actual financial result for the year.

The contribution of the several branches to the year's result is shown in the published accounts, and the results of each branch are commented on later in this section of the report. The Commission regards the results as highly satisfactory in the adverse circumstances which prevailed.

STATE ELECTRICITY COMMISSION OF VICTORIA.

WEEKLY MAXIMUM DEMAND ON S.E.C. SYSTEM



VARIATIONS IN CONSUMPTION OF CONSUMER CLASSES AND BULK SUPPLY AUTHORITIES.

Clearly there could be no possibility of expanding the industrial and commercial use of energy, and the Commission's efforts were directed towards reducing the drop in the demand as much as possible, by securing what small amount of new business was offering, and by minimizing the lag in the existing load by every conceivable stimulus. Although the unavoidable contraction of load was serious, it bears favorable comparison with general industrial experience.

The following table shows the very substantial drop in energy used for industrial purposes in the districts served by the Commission and indicates that the very small increment in the requirements of commercial consumers came from development in rural districts and minimized somewhat the lack of development in the principal centres of demand.

INDUSTRIAL AND COMMERCIAL CLASSES—PERCENTAGE VARIATION IN TOTAL KWH. SOLD IN 1930–31 COMPARED WITH 1929–30.

Territory.	Industrial.	Commercial.
	%	%
Metropolitan Electricity Supply	— 8·3	+ 0·1
Geelong	—19·6	— 2·3
Country Districts (exclusive of Geelong) ..	+ 3·4	+11·1
Overall	— 8·7	+ 1·9

METROPOLITAN MUNICIPAL DISTRIBUTING AUTHORITIES.

The following table shows that all excepting three of the metropolitan municipal distributing authorities purchased less energy in 1930–31 than they did in 1929–30.

Municipality.	Percentage Variation in Kwh. Purchased in 1930–31 Compared with 1929–30.
	%
Box Hill	— 3·7
Brunswick	— 1·1
Coburg	— 8·1
Footscray	—17·4
Heidelberg	+ 0·4
*Melbourne	— 7·1
Northcote	— 7·4
Port Melbourne	+ 0·4
Preston	+ 0·3
Williamstown	—14·3

* Because loading on the Commission's system had to be reduced in February–April, when operating troubles occurred in the boiler house of the Yallourn Power Station, energy purchased by the Melbourne City Council was five and a quarter million kwh. less than normally would have been the case. The City Council supplied this deficiency from its own generating plant.

The net result is that the Commission sold to this group of bulk supply customers 11,342,903 kwh. less than in the previous year, or a reduction of 7·6 per cent.

As a group, those territories which are substantially residential—Box Hill, Heidelberg and Preston—record less unfavorable results than the group of authorities serving centres primarily devoted to industry. This represents the Commission's own experience, but with an important difference. The Commission's policy of holding and building upon the domestic portion of its business by intensively promoting the sale of electrical appliances has brought about striking increases in household consumption of energy in all territories served by it, as the subjoined table reveals. In the absence of necessary statutory authority, similar efforts are lacking on the part of the municipal supply authorities, and the effect is at once apparent in a comparison of this table with the results of the residential group of municipalities referred to above.

DOMESTIC CLASS—PERCENTAGE INCREASE IN KWH. SOLD IN 1930–31 COMPARED WITH 1929–30.

Territory.	Percentage Increase.
	%
Metropolitan Electricity Supply	11·5
Geelong	8·2
Country Districts (exclusive of Geelong)	23·8

Having regard to the Commission's experience in the industrial and commercial classes, it will be apparent that the outstanding feature of the year's result is the material increase in the consumption of its household customers. Compared with 1929–30, an increase overall of no less than 13 per cent. was recorded. Expressed as an increase in the consumption per consumer, the improvement is 10·8 per cent., the average number of kilowatt hours used per domestic consumer rising from 333 in 1929–30 to 369 in 1930–31.

The growing appreciation of the economies and other advantages derivable from a liberal use of electricity under the two-part tariff is reflected in the domestic demand, but it does not account for the improvement set out above; nor can this improvement be attributed to natural increase, especially when studied in relation to the figures of unemployment and building detailed in this section of the report. It represents a direct return on the Commission's efforts to develop its household demand—efforts that were vital to its financial well-being, especially in a year of adversity, when it had to face serious losses in revenue due to the drop in the industrial demand, plus the inability of industrial and commercial consumers to provide their normal increment in load.

Thus, by actively promoting the sale of electrical appliances, a permanent increase in energy sales, representing approximately £21,000 per annum, was gained during the year. The accumulated financial benefits of this activity to the State scheme may be gauged by the fact that a revenue of £15,000 per annum was added in 1929–30, which, with the £21,000 for 1930–31, provides an increment of £36,000 for the financial year now current, apart from the new load which will be secured during that period.

BRIQUETTE MANUFACTURE AND DISTRIBUTION.

	1930–31.
Revenue	**£276,930**
Expenditure	**297,966**
Loss	**£21,036**
Sales	**216,723 tons**

The expenditure covers all charges including interest and depreciation. The estimated loss for 1930–31 was £13,000, budgeted for in June, 1930. This expectation took account of the general business outlook for 1930–31 as then envisaged. The problem of gauging the trend of the Australian fuel market, difficult enough at any time, was so complicated this year that accurate forecasting proved impossible, and all estimates were rendered nugatory.

Conditions could not have been more unpropitious for the Commission to bring into operation the extended Yallourn factory, which triplicated original output. The set-back which general business has experienced, and continues to experience, is without parallel in the financial and economic life of the Commonwealth.

That the Commission sold its entire output under these conditions, combined with the difficulties inseparable from commencement of operation of any large scale factory, must be regarded as highly satisfactory. The result is the more striking because the financial forecast was based on the expectation that the extended factory, with its substantially reduced production costs, would be available not later than 1st January, 1931, whereas it was not complete and in operation until 1st April, 1931.

Consideration of the following review will enable a proper conception of the trading operations for the period to be formed:—

Competition.—Most marked falls occurred in the mimimum prices of competitive fuels on both the industrial and household markets. The comparative figures are:—

Fuel.	July, 1930.	June, 1931.
Newcastle coal—large	40s. per ton free on wharf Melbourne	28s. per ton free on wharf Melbourne
,, slack	34s. per ton free on wharf Melbourne	24s. per ton free on wharf Melbourne
Wonthaggi coal	22s. per ton f.o.r. Wonthaggi	16s. 9d. per ton f.o.r. Wonthaggi
Fuel oil	85s. per ton	81s. per ton
Best grey box blocks	47s. 6d. per ton delivered to public	41s. per ton delivered to public
Mallee Roots—large	45s. per ton delivered to public	40s. per ton delivered to public
,, small	50s. per ton delivered to public	45s. per ton delivered to public

Briquette Selling Rates.—The prices for household briquettes were reduced in March, 1931, from 30s. to 25s. 6d. per ton f.o.r. Yallourn, and adjustments were made in the retail prices charged by fuel merchants.

Despite the substantially reduced prices for wood offered by the regular fuel merchant, and the availability of wood of poor quality placed on the market at low prices by persons who would not otherwise have been employed, briquettes maintained their established position on the household market.

To meet the intensive competition in the industrial field as revealed in the price table above, the Commission, prior to the commencement of the financial year, introduced rates which anticipated the lower production costs of the extended factory. These costs were not realized as soon as anticipated, because of the delay in completing the extended factory; consequently, losses on operation were incurred. Notwithstanding the unprecedented downward trend of black coal prices throughout the financial year, the Commission was able to secure and hold the new business necessary to absorb the enlarged output without further reducing its prices, a fact which indicates the recognized value of briquettes as industrial fuel.

Restriction of Market.—It is unnecessary further to stress the effect of the times in reducing the fuel requirements of industrial and commercial concerns. A similar situation had to be faced in the household market where the total requirements fell from 385,000 tons in 1929–30 to 289,000 tons in 1930–31, the latter figure being exclusive of 50,000 tons of firewood distributed free to householders by the Government in relief of distress.

The difficulties of a restricted market have been added to by the fact that sea-borne black coal interests, faced with grave limitations in their own natural spheres of supply, have been entering into keen price competition with Victorian fuel in an effort to maintain output. Should this policy continue, the Commission will be forced to consider the adoption of suitable action to safeguard the future of its own business. In ordinary circumstances, the subsidy paid by New South Wales to its coal industry re-acts against the Commission, whose briquetting operations have no such benefit.

BRANCH UNDERTAKINGS.

Statistical data relating to main Branch Undertakings appear in this section of the report. From these details the following summary is extracted :—

(*a*) The total number of consumers served at the end of the year was 183,478.

(*b*) Sixteen metropolitan municipal districts previously served by the Melbourne Electric Supply Company Ltd., and thirteen new country centres, were added to the Commission's districts during the year. The metropolitan centres, with the Essendon–Flemington district, Melbourne District and Sunshine, now form the Commission's Metropolitan Electricity Supply District. Of the country centres, Geelong City, Geelong West, Newtown-Chilwell, portion of the Shires of Corio and South Barwon, and Torquay were taken over from the Melbourne Electric Supply Company Ltd. Mornington was acquired from the local Shire Council, and Warragul from the River Latrobe Hydro-Electric Company. The other eight country centres did not previously enjoy electricity service.

(*c*) The total number of towns and localities in which the local reticulation is undertaken by the Commission is 178 ; of these, 108 had no service until supplied by the State Scheme. On the 1st October, 1931, the number of centres served was increased to 180 by the acquisition of the Numurkah and Nathalia Undertakings of the Numurkah Shire Council.

(*d*) Sales of energy for all purposes within the Commission's districts amounted to 200,415,675 kwh. ; the total including Metropolitan Electricity Supply and Geelong for ten months only.

(*e*) The revenue from sales of energy within the districts amounted to £1,752,711, and the average price per kwh. was 2·1d. These figures include those of Metropolitan Electricity Supply and Geelong for ten months only.

(*f*) The connected load within the districts amounted to 442,994 kw.

Metropolitan Electricity Supply.—The figures for the branch, which was constituted on the 1st September, 1930, include a full year's operation of the Essendon–Flemington section, but excludes Sunshine, which, in the year's accounts, remains with Western Metropolitan District. The population of the supply area is 626,300, and the total number of consumers 143,338. Sales of energy amounted to 159,765,238 kwh. After providing £73,009 for depreciation, the net profit for the year was £167,048.

Eastern Metropolitan District.—After providing £7,484 18s. 5d. for depreciation, operations gave a net profit of £6,672 14s. 3d. for the year. The number of consumers increased from 7,189 to 7,845, sales of energy from 5,939,032 kwh. to 6,109,930 kwh., and the connected load from 16,626 kw. to 19,244 kw.

Western Metropolitan District.—This district includes Werribee, Point Cook, Altona, and Deer Park. In the year's accounts, figures are included for Sunshine, which now forms part of Metropolitan Electricity Supply. Operations showed a loss of £4,406 19s. 9d., after providing £1,766 8s. 3d. for depreciation. The number of consumers fell from 1,997 to 1,919, and sales of energy from 4,538,018 kwh. to 3,521,314 kwh., the latter decrease being accounted for by the serious drop in the industrial demand.

Geelong Electricity Supply.—The figures show ten months' operations, the centre being taken over from the Melbourne Electric Supply Company Ltd. on 1st September, 1930. After providing £6,570 for depreciation, operations gave a net profit on electricity supply of £12,836 13s. 9d., which, however, is eliminated by a loss of £19,346 9s. 2d. on the tramways section of the undertaking.

Castlemaine District.—This district, which has been in operation for three years, following upon the erection of the first section of the Ballarat–Bendigo–Geelong ring main, maintained a steady rate of progress during the last financial period, there being an increase in the number of consumers, in the sales of energy, and in the connected load. After providing £2,644 15s. 3d. for depreciation, the loss for the year was £1,550 8s. 6d., compared with £463 in the previous period, when depreciation amounted to only £706.

South-Western District.—The loss for the year decreased from £830 to £256 5s. 6d., after allowing £4,672 1s. 4d. for depreciation. Consumers increased from 5,741 to 6,001, sales of energy from 3,942,946 kwh. to 4,699,900 kwh., and the connected load from 10,960 kw. to 12,892 kw.

Gippsland District.—Good progress was again recorded. Warragul was added to the system, and extensions were made to the following centres :—Bruthen, Mossiface, Wiseleigh, Bena, Loch, Poowong, Kongwak, and Jumbunna. The number of consumers increased from

5,534 to 6,315, sales of energy from 4,389,198 kwh. to 5,192,209 kwh., and the connected load from 12,127 kw. to 14,468 kw. The provision for depreciation was £5,294 17s., after which there was a loss on operations of £1,333 1s. 8d., compared with a loss of £1,270 in the previous period.

North-Eastern District.—Operations showed a profit of £1,325 7s., after providing £5,671 4s. 5d. for depreciation, the result comparing unfavorably with that of the previous year, when a profit of £6,456 was earned. Although the number of consumers increased by 25, sales of energy fell from 9,099,435 kwh. to 8,737,180 kwh., and the gross revenue by nearly £2,000. The drop in the demand for energy was most marked in the case of large industrial users.

COMMISSION'S ELECTRIC SUPPLY UNDERTAKINGS FOR LOCAL DISTRIBUTION.

METROPOLITAN ELECTRICITY SUPPLY.

	1930–31*
Population of Supply Area	626,300
Number of Consumers	143,338
Percentage of Consumers to Population	22·88 per cent.
Sales of Energy, in Classes—	
Bulk Supplies (Excluding adjustment for unread meters and service charges paid in advance at end of year)	237,630 kw. hrs
Street Lighting	7,964,045 „
Domestic	37,771,450 „
Industrial	96,854,280 „
Commercial	16,937,833 „
	159,765,238 „
Revenue	£1,252,167
Average Revenue per kwh. sold	1·88d.
Maximum Demand of District in kw.	66,560
Total Connexions in kw. (Excluding Bulk Supplies)	345,900
Total h.p. of Motors (Excluding Bulk Supplies)	108,010

* Covers mainly ten months' operations, since the area concerned was not transferred to the Commission until 1st September, 1930.

EASTERN METROPOLITAN DISTRICT.

	1926–27.	1927–28.	1928–29.	1929–30.	1930–31.
Population of Supply Area	16,918	25,753	25,943	26,200	28,300
Number of Consumers	3,519	5,800	6,545	7,189	7,845
Percentage of Consumers to Population	20·8 per cent.	22·5 per cent.	25·22 per cent.	27·4 per cent.	27·72 per cent.
Sales of Energy, in classes—					
Bulk Supplies	514,554 kw. hrs.	438,233 kw. hrs.	164,810 kw. hrs.	199,330 kw. hrs.	15,450 kw. hrs.
Street Lighting	84,747 „	119,257 „	173,445 „	187,373 „	215,993 „
Domestic	541,319 „	1,011,195 „	1,726,876 „	2,331,636 „	2,826,097 „
Industrial— (Excluding adjustments for unread meters and service charges paid in advance at end of year)					
Large			2,610,613 „	1,396,087 „	1,142,864 „
Small	1,140,795 „	2,093,786 „	754,357 „	772,412 „	706,851 „
Commercial			789,906 „	1,052,194 „	1,202,675 „
	2,281,415 „	3,662,471 „	6,220,007 „	5,939,032 „	6,109,930 „
Revenue	£39,869	£58,999	£78,563	£88,046	£90,362
Average Revenue per kw. hr. sold	5·4d.	3·87d.	3·03d.	3·558d.	3·558d.
Maximum Demand of District in kws.	634	1,230	1,778 (estd)	2,082	2,014
Total Connexions in kws. (Excluding Bulk Supplies)	4,755	8,000	11,732	16,626	19,244
Number of Motors (Excluding Bulk Supplies)	131	216	337	439	469
Total h.p. of Motors (Excluding Bulk Supplies)	1,566	1,835	3,544	3,979	3,545

WESTERN METROPOLITAN DISTRICT.

	1928–29.	1929–30.	1930–31.
Population of Supply Area	10,300	10,300	10,300
Number of Consumers	1,928	1,997	1,919
Percentage of Consumers to Population	18·718 per cent.	19·4 per cent.	18·63 per cent.
Sales of Energy, in classes—			
Street Lighting	82,410 kw. hrs.	97,105 kw. hrs.	94,317 kw. hrs.
Domestic	433,157 „	517,811 „	560,000 „
Industrial— (Excluding adjustments for unread meters and service charges paid in advance at end of year)			
Large	3,113,383 „	3,431,601 „	2,433,345 „
Small	342,283 „	326,983 „	267,062 „
Commercial	152,531 „	164,518 „	166,590 „
	4,123,764 „	4,538,018 „	3,521,314 „
Revenue	£27,749	£29,921	£26,662
Average Revenue per kw. hr. sold	1·615d.	1.582d.	1·817d.
Maximum Demand of District in kws.	1,742	1,916	1,885
Total Connexion in kws.	6,726	7,886	8,020
Number of Motors	342	389	391
Total h.p. of Motors	4,604	5,136	5,222

COMMISSION'S ELECTRIC SUPPLY UNDERTAKINGS FOR LOCAL DISTRIBUTION—*continued.*

GEELONG ELECTRICITY SUPPLY.

	1930–31. Ten months' Operation.
Population of Supply Area	45,000
Number of Consumers	9,619
Percentage of Consumers to Population	21·37 per cent.
Sales of Energy, in Classes—	
Bulk Supplies	..
Street Lighting	177,072 kw. hrs.
Domestic	1,411,679 ,,
Industrial—	
Large	8,112,887 ,,
Small	..
Commercial	1,535,921 ,,
(Excluding adjustments for unread meters and service charges paid in advance at end of year)	11,237,559 ,,
Revenue	£102,366
Average Revenue per kw. hr. sold	2·186d.
Maximum Demand of District in kw.	3,402
Total Connexions in kws. (Excluding Bulk Supplies)	27,296
Number of Motors (Excluding Bulk Supplies)	1,672
Total h.p. of Motors (Excluding Bulk Supplies)	16,697

CASTLEMAINE DISTRICT.

	1928–29.	1929–30.	1930–31.
Population of Supply Area	5,470	13,550	13,550
Number of Consumers	528	2,275	2,361
Percentage of Consumers to Population	9·65 per cent.	16·8 per cent.	17·4 per cent.
Sales of Energy, in classes—			
Street Lighting	15,694 kw. hrs.	76,450 kw. hrs.	107,058 kw. hrs.
Domestic	42,069 ,,	256,065 ,,	483,290 ,,
Industrial—			
Large	136,200 ,,	127,604 ,,	45,870 ,,
Small	..	34,384 ,,	55,578 ,,
Commercial	126,802 ,,	361,079 ,,	460,553 ,,
(Excluding adjustments for unread meters and service charges paid in advance at end of year)	320,765 ,,	855,582 ,,	1,152,349 ,,
Revenue	£6,601	£23,620	£29,505
Average Revenue per kw. hr. sold	4·938d.	6·625d.	6·15d.
Maximum Demand of District in kws.	160	350	350
Total Connexions in kws.	820	4,000	4,811
Number of Motors	41	166	183
Total h.p. of Motors	330	683	769

SOUTH-WESTERN DISTRICT.

	1926–27.	1927–28.	1928–29.	1929–30.	1930–31.
Population of Supply Area	26,970	26,970	31,200	31,200	31,200
Number of Consumers	4,321	4,677	5,485	5,741	6,011
Percentage of Consumers to Population	16·02 per cent.	17·34 per cent.	17·58 per cent.	18·4 per cent.	19·26 per cent.
Sales of Energy, in classes—					
Street Lighting	124,222 kw. hrs.	136,030 kw. hrs.	144,438 kw. hrs.	156,438 kw. hrs.	163,343 kw. hrs.
Domestic	660,227 ,,	739,519 ,,	937,125 ,,	1,202,741 ,,	1,380,442 ,,
Industrial—					
Large			496,110 ,,	807,520 ,,	1,430,273 ,,
Small	1,649,581 ,,	2,034,165 ,,	722,845 ,,	784,271 ,,	761,204 ,,
Commercial			908,531 ,,	991,976 ,,	964,634 ,,
(Excluding adjustments for unread meters and service charges paid in advance at end of year)	2,434,030 ,,	2,909,714 ,,	3,209,049 ,,	3,942,946 ,,	4,699,900 ,,
Revenue	£49,747	£55,347	£62,236	£73,166	£75,943
Average Revenue per kw. hr. sold	4·90d.	4·56d.	4·654d.	4·454d.	3·878d.
Maximum Demand of District in kws.	(*a*) 882	(*a*) 1,035	(*a*) 1,212	(*a*) 1,340	(*a*) 1,570
	(*b*) 124·5	(*b*) 177	(*b*) 211	(*b*) 211	(*b*) 211
Total connexions in kws.	5,900	6,340	7,769	10,960	12,892
Number of Motors	443	479	578	597	767
Total h.p. of Motors	1,888	1,812	2,160	2,951	3,490

(*a*) Belmont Sub station. (*b*) Supply to Bellarine Peninsula

COMMISSION'S ELECTRIC SUPPLY UNDERTAKINGS FOR LOCAL DISTRIBUTION—*continued.*

GIPPSLAND DISTRICT.

	1926–27.	1927–28.	1928–29.	1929–30.	1930–31.
Population of Supply Area	23,825	25,230	26,670	26,870	30,200
Number of Consumers	4,209	4,637	5,180	5,534	6,315
Percentage of Consumers to Population	17·67 per cent.	18·38 per cent.	19·4 per cent.	20·59 per cent.	20·91 per cent.
Sales of Energy, in classes—					
Street Lighting	97,303 kw. hrs.	121,658 kw. hrs.	134,763 kw. hrs.	163,600 kw. hrs.	189,833 kw. hrs.
Domestic	483,730 ,,	822,916 ,,	1,007,627 ,,	1,257,630 ,,	1,566,443 ,,
Industrial—					
Large	1,479,929 ,,	2,111,136 ,,	122,468 ,,	288,840 ,,	414,806 ,,
Small			1,583,993 ,,	1,749,864 ,,	2,011,040 ,,
Commercial			844,021 ,,	929,264 ,,	1,010,087 ,,
(Excluding adjustments for unread meters and service charges paid in advance at end of year)					
	2,060,962 ,,	3,065,710 ,,	3,692,877 ,,	4,389,198 ,,	5,192,209 ,,
Revenue	£39,545	£52,883	£60,384	£69,489	£78,319
Average Revenue per kw. hr. sold ..	4·605d.	4·14d.	3·924d.	3·8d.	3·62d.
Maximum Demand of District in kws.	970	1,200	1,610	1,730	2,020
Total Connexions in kws.	5,708	7,249	8,484	12,127	14,468
Number of Motors	406	487	555	699	686
Total h.p. of Motors	1,910	2,365	2,710	3,260	3,647

NORTH-EASTERN DISTRICT.

	1926–27.	1927–28.	1928–29.	1929–30.	1930–31.
Population of Supply Area	27,760	30,650	32,700	34,200	34,200
Number of Consumers	4,137	5,238	5,777	6,045	6,070
Percentage of Consumers to Population	14·9 per cent.	17·09 per cent.	17·66 per cent.	17·7 per cent.	17·74 per cent.
Sales of Energy, in classes—					
Bulk Supplies	2,939,350 kw. hrs.	3,414,580 kw. hrs.	4,014,310 kw. hrs.	4,396,140 kw. hrs.	4,213,321 kw. hrs.
Street Lighting	91,030 ,,	127,381 ,,	156,147 ,,	158,142 ,,	161,598 ,,
Domestic	273,173 ,,	598,412 ,,	874,619 ,,	1,102,004 ,,	1,216,506 ,,
Industrial—					
Large	842,514 ,,	1,686,663 ,,	208,898 ,,	881,210 ,,	773,527 ,,
Small			1,125,129 ,,	1,365,785 ,,	1,147,536 ,,
Commercial			1,024,044 ,,	1,196,154 ,,	1,224,692 ,,
(Excluding adjustments for unread meters and service charges paid in advance at end of year)					
	4,146,067 ,,	5,827,036 ,,	7,403,147 ,,	9,099,435	8,737,180 ,,
Revenue	£51,660	£74,086	£85,585	£99,534	£97,387
Average Revenue per kw. hr. sold ..	2·99d.	3·05d.	2·774d.	2·625d.	3·021d.
Maximum Demand of District in kws.	1,736 (approx.)	1,750 (approx.)	2,640	2,559	2,995
Total Connexions in kws. (Excluding Bulk Supplies)	4,937	6,192	7,777	11,607	10,358
Number of Motors (Excluding Bulk Supplies)	337	428	471	537	560
Total h.p. of Motors (Excluding Bulk Supplies)	1,430	1,763	2,131	3,023	3,385

DEVELOPMENT OF THE USE OF ELECTRICITY.

The generally unfavourable condition of business during the year made the promotion of electricity sales a matter of prime and urgent importance, especially as the economics of electricity supply are such that with a preponderance of fixed charges a supply authority is unable to make corresponding adjustments on the expenditure side in order to offset losses due to conditions of falling load. In the circumstances, an aggressive policy of promoting new and additional business was followed, appreciably minimizing the effect of the acute trade depression.

(*a*) *Industrial.*—New industrial loads aggregating 3,100 kw. were secured during the year. Despite this new business, the total sales of energy to industrial users showed a material falling off for the year, and until the depression lifts little improvement can be expected, especially as the opportunity for expansion of the Commission's activities in the industrial field is distinctly limited, electricity already representing 70 per cent. of the total power used in Victorian factories, including those which are beyond economic range of the Commission's supply.

During the year the Commission published a brochure, "Industrial Victoria," which set out, in comprehensive and attractive form, the advantages possessed by this State as a favourable location for the establishment of new works. The publication was sent direct to 1,600 concerns which trade with Victoria, and was also effectively used to further personal canvass of visiting representatives of overseas interests. Good results were gained early in the year, when many English and foreign concerns were considering the establishment of Australian works.

(*b*) *Rural Service.*—Much attention was paid during the year to rural development in building up load, and making electricity advantageous to the farmer, from the point of view of economical working, as well as convenience.

The rural activities of the Commission are concerned, primarily, with ascertaining what electricity can do or cannot do under widely varying conditions; how it compares in costs with animal and human power, and what types of motors and farm machines are necessary. Such research effects a definite saving to the farmer, by enabling him to avoid the cost of experimentation and is analagous and forms an adjunct to the valuable work of the Agricultural Department in the interests of agrarian science. Practical investigations have already established the marked advantages of electricity in its application to dairy water heating, brooding, incubating, milking, feed grinding, &c.

The largest single experiment was conducted in Wangaratta to prove the commercial possibilities of curing tobacco leaf by electric heating. Special kilns were designed and constructed by the Commission, and a series of experiments was conducted during the last six weeks of the season. Although the early part of the season was missed, the tests definitely proved that the electrical method of curing tobacco produces a better and more uniform sample, with a minimum of attention. Next season, with the co-operation of the growers, it will be possible to concentrate wholly on the commercial aspect.

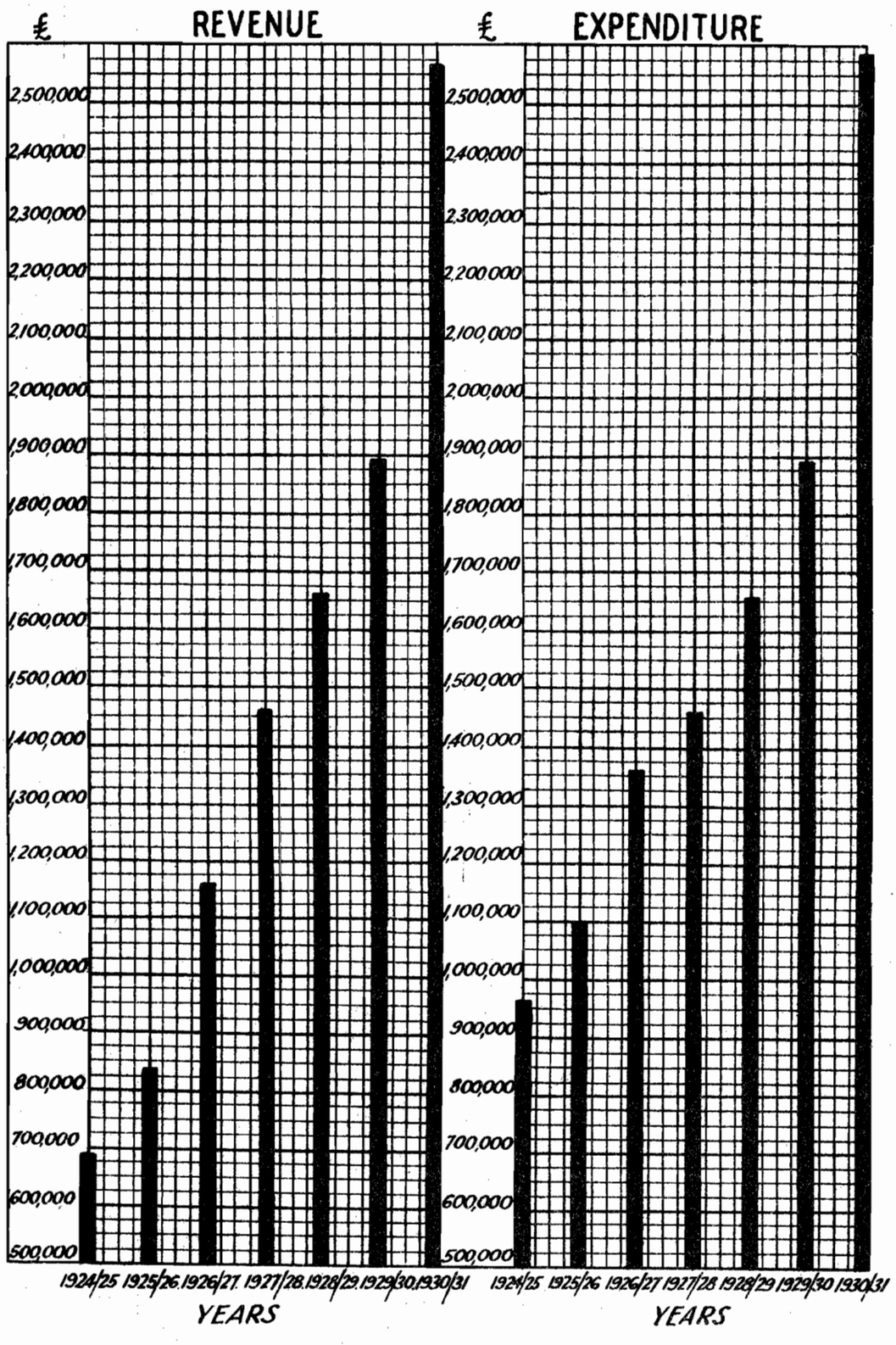
(*c*) *Domestic.*—The domestic consumption increased during the past year, despite disconnexions and the unfavourable conditions generally.

The increased domestic consumption was most marked in territories where the sale of appliances has been undertaken by the Commission for the greatest period. During the year displays were arranged at the new district headquarters, Benalla, and also at the Kyabram office. Upon the transfer of the Metropolitan Electricity Supply Undertaking to the Commission, a showroom was opened in the city. At the end of the financial year the showroom at Moonee Ponds was closed, when the Essendon–Flemington District activities were merged in those of Metropolitan Electricity Supply.

After negotiations extending over a considerable length of time, the Commission during the year prevailed upon the manufacturer of the "Moffat" electric ranges to produce within Australia the stoves required for the local market, so that now the manufacture of these ranges for the whole of the Commonwealth is undertaken at North Melbourne, Victoria. Similarly, the Commission supported the enterprise of a local manufacturer in producing an electric washing machine in Victoria, and it has since been instrumental in selling a large number of these locally-made, labour-saving appliances. At the present time, over 80 per cent. of the electric appliances which the Commission sells are manufactured in Australia, a position which sharply contrasts with that which previously prevailed, when imported appliances largely preponderated in the supplies available to consumers of electricity.

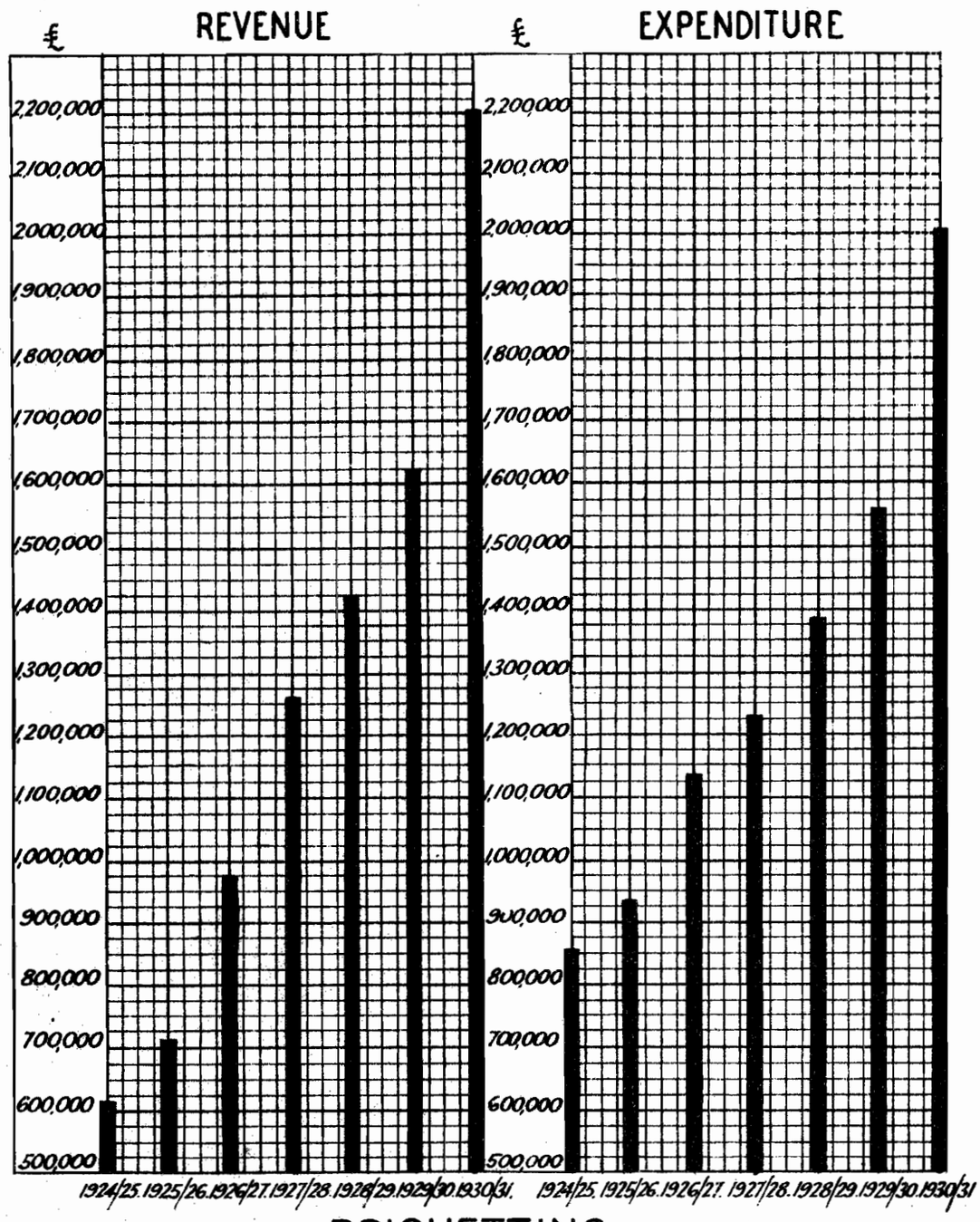
STATE ELECTRICITY COMMISSION

FINANCIAL RESULTS OF ALL ACTIVITIES

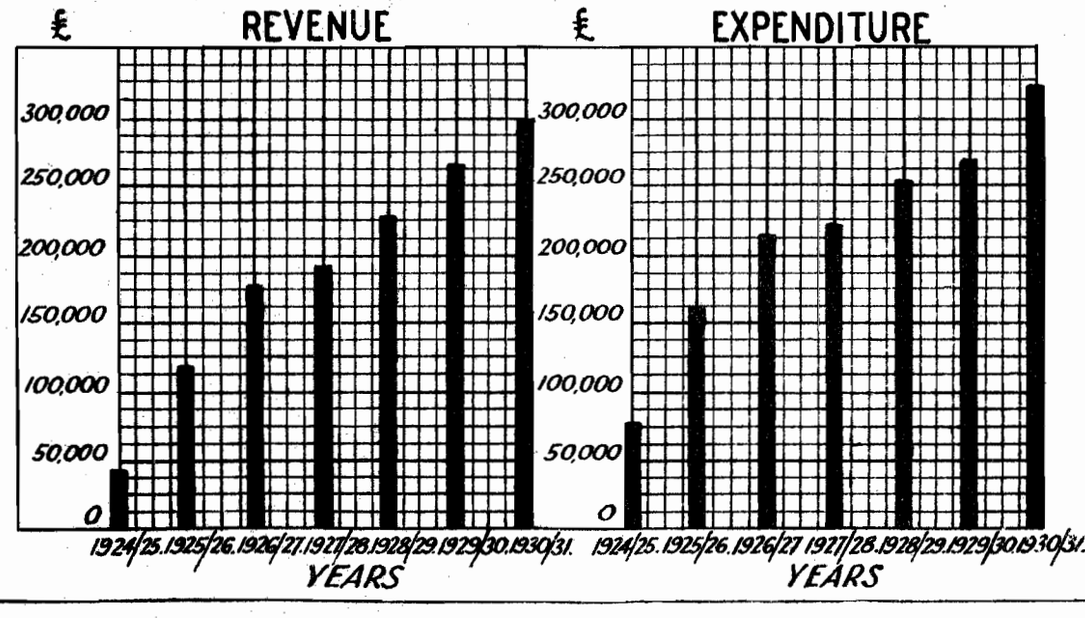


STATE ELECTRICITY COMMISSION

ELECTRIC SUPPLY



BRIQUETTING



PART III.—DESIGN, CONSTRUCTION, AND OPERATION.

COAL SUPPLY.

Yallourn Open Cut.

Overburden Removal.—The removal of overburden at the Yallourn open cut during the year was continued by the dredge on a two-shift basis. The quantity of overburden removed was 947,700 cubic yards, compared with 969,800 cubic yards in the previous period, when three shifts were worked by the dredge for two months, and two shifts for the remainder of the year. The quantity of overburden removed since operations were commenced is 6,085,890 cubic yards. The area of the open cut on the ground surface is now 130 acres, and on the coal surface 117 acres.

During the year a levee bank was constructed along the Latrobe and Morwell rivers, thus enabling an area of 45 acres of land to be used as a sludge dump.

Coal Winning.—During the year 1,850,859 tons of coal were excavated, compared with 1,767,261 tons in the previous year. The total quantity of coal excavated since the commencement of operations is 8,431,092 tons.

Most of the coal was excavated by No. 1 deep dredge, working two shifts throughout the year. The Ruston shovel worked one shift, reducing the level of the cut to 90 feet from the coal surface, and, at the same time, supplying the requirements of the briquetting factory by means of the remaining rope haulage in the cut. The Ruston shovel now forms the reserve of coal-winning plant. The briquetting factory is supplied by No. 1 deep dredge at a track hopper which receives the coal from the electric railway and transfers it to the factory rope haulage.

A second deep dredge (No. 2) was installed in March, 1931. It is on the 90-ft. level of the coal, works in conjunction with an inclined steep haulage, and is to dig all coal to the bottom of the deposit. Similar in all respects to No. 1 coal dredge, it has a normal capacity of 4,000 tons in eight hours. The steep haulage raises the coal from the working level of No. 2 dredge to that of the 1,500-ton terminal bunker at the power station, a difference in level of 160 feet, and representing a grade of 1 in 7. The haulage consists of a large electrically operated double drum winding engine, which can raise a net load of 120 tons of coal in six 20-ton trucks. The capacity of the plant is 6,000 tons in eight hours, but by additions to the shunting arrangements at the top and bottom stations its effective capacity can be increased to 10,000 tons in eight hours. The haulage represents the most modern and economical method of transporting open-cut coal.

Owing to the increased amount of track shifting required on the various dredge tracks, an additional track shifter of Australian manufacture was ordered during the year. Its construction is nearing completion.

Old Brown Coal Open Cut.

This cut was closed in September, 1930, up to which date 9,494 tons of coal had been excavated since the commencement of the financial year. The coal won from this mine since the Commission took it over is 1,093,433 tons.

Boring.

Boring operations were continued during the year in the area between the railway line and the Morwell River, at distances 9,000 to 12,000 feet south of the Latrobe River. In all, 30 bores were put down, representing 7,818 feet. The results were satisfactory, showing an average depth of 38 feet of overburden and 212 feet of coal.

ELECTRICITY SUPPLY.

Yallourn "A" Power Station.

Maximum load during year ended 30th June, 1931	..	**57,000 kw.**
Generated during year ended 30th June, 1931 ..	..	**238,273,400 kwh.**
Purchased from briquetting factory during year	..	**13,586,150 kwh.**
Total	..	**251,859,550 kwh.**

The production corresponds to a load factor of 54 per cent., compared with 57 per cent. in the previous year, when the output was about 60,000,000 kwh. greater. The reduction was due to the development of defects in the boilers, mentioned elsewhere in this report.

Supply from the station was maintained continuously throughout the year, which was entirely free from breakdowns of major electrical equipment.

Boiler Plant.—The permanent reconstruction of the boiler plant, necessitates the replacement of drums, and thus much investigation has been carried out, with the object of utilizing all existing equipment and available space to best advantage. A four-drum arrangement was designed for combination with air preheaters of the tubular type, while those boilers already equipped with air preheaters will be restored with the original six-drum arrangement.

The programme of development which had been proceeding from year to year with the object of increasing the efficiency and output of the boilers was brought to completion. The additional items of equipment installed during the year consisted of Howden-Ljungstrom air preheaters on No. 5 boiler and tubular air preheater and oil pressure gear for step-grate actuation on No. 6 boiler. The improvements effected proved eminently satisfactory, and are a complete and permanent solution of the problem of obtaining the highest efficiency from the original installation in the burning of the low grade lignite from the Yallourn open cut.

Newport "B" Power Station.

Maximum load during the year ended 30th June, 1931 ..		**19,800 kw.**
Generated during the year ended 30th June, 1931	..	**38,419,152 kwh.**

The output from the station during the year was appreciably less, due to the fact that unusually favorable conditions at Sugarloaf-Rubicon enabled the hydro-stations to supply a much greater portion of the daily requirements in the summer months.

Richmond Power Station.

Maximum load during the year ended 30th June, 1931 ..		**15,520 kw.**
Generated during the year ended 30th June, 1931	..	**26,621,800 kwh.**

The station gave excellent results throughout the year; briquettes are now being used exclusively at this station.

Sugarloaf–Rubicon Hydro Stations.

Maximum load during the year ended 30th June, 1931 ..		**23,100 kw.**
Generated during the year ended 30th June, 1931	..	**120,860,500 kwh.**

In consequence of the favorable seasons, the Sugarloaf station was available for the greater part of the year, and the output from the whole of the hydro group of stations was the highest yet recorded. The load factor was almost 60 per cent. compared with 46 per cent. in the previous year.

The turbine plant at the various stations performed satisfactorily.

Yallourn–Yarraville 132,000-Volt Transmission Line.

The performance of this line was again satisfactory; no interruption of supply occurred.

Replacements of insulators for the year were the lowest recorded, viz., four 10-inch suspension discs.

The newer method of jointing the heavy ground wire on this line, by the use of a steel sleeve pressed on to the cable, was tested for maintenance purposes during the year, with satisfactory results.

Yallourn–Richmond 132,000-Volt Transmission Line.

This line was first put into service in the early part of the year, so as to release portion of one of the Yarraville circuits for maintenance, and, later, for its normal function of transmitting power from Yallourn to Richmond.

Thomastown–North Eastern 66,000-Volt Transmission Line.

No transmission failure occurred during the year. On two occasions insulator flash-overs occurred, but the isolation of the faulty line prevented extension to other circuits. On one occasion two insulators were shattered by lightning in the Rubicon "A"—Sugarloaf section, without any interruption to the system, and on another occasion a lightning storm caused a four-minutes interruption of supply to Wangaratta.

Seven defective disc insulators were replaced during the year, six being detected by the aislometer, and the other being broken. Disc insulators were substituted for defective pin type insulators on the structures at the Sugarloaf and Delatite crossings.

TERMINAL STATIONS.

Yarraville.—No failure of equipment occurred to interrupt supply during the year, when the reliability of the station was further secured by the installation of current differential protection on the 22,000 and 6,000-volt buses.

A comprehensive programme of oil circuit breaker overhaul and adjustment was carried out during the year, a total of 63 equipments being treated. Oil filtering was a feature of every overhaul. This practice has been found to maintain the oil in good condition and free from heavy deposit of sludge, not necessarily of oxidized oil, but of dust, carbon and the heavier constituents of the oil which gravitate to the bottom of the tank. All 22,000 and 6,600-volt 800-ampere and 1,200-ampere circuit breaker bushings received special attention, because a failure had occurred in the previous year of a bushing of this type, due to moisture entering through the terminal cap. A skirt was fitted to the top cap to prevent further possibility of entry of moisture. The reconditioning of all 6,600-volt transformer and oil circuit breaker bushings was completed during the year, a total of 224 being thus treated.

The synchronous condensers and frequency changers were overhauled, and the bearing oil filtered at four-monthly intervals.

Thomastown.—This station operated satisfactorily and without interruption during the year. Improvements in the 66,000-volt bus structure were effected, suspension discs being substituted for the pin-type bus supports. The latter were used for reinforcing the insulation of the gang-operated disconnecting switches.

Directional features were added during the year to the protection of the outgoing feeders to Preston and Collingwood sub-stations, and bus protection installed to isolate sections in the event of faults.

Richmond.—This new station, which has operated most satisfactorily since it commenced to function, began to receive energy from Yallourn at the end of May, 1931.

CENTRAL SUPPLY DISTRIBUTION.

In order to deal with the increased Melbourne City Council loading, two 10,000 kva. three-phase transformers were installed at the Spencer-street ("J") sub-station. This work released one of the existing 6,000 kva. banks for use elsewhere. The new transformers are forced-oil, water-cooled units, with external coolers, which entirely overcomes the limitations imposed on ventilation by the adjacent refuse destructor.

An interesting feature of the installation is the application, for the first time on the system of devices integral to the transformers which enable voltage changes to be effected at will without any interruption of supply. This is a distinct advantage to the Melbourne City Council in the manipulation of voltage to suit loading conditions.

The 6,000 kva. transformer bank released from Spencer-street was installed at the Brunswick "C" sub-station, to increase its installed capacity to 9,000 kva. By an appropriate substitution of transformers at the Ascot Vale "D" sub-station, an outdoor 3,000 kva. bank was made available for installation at Ringwood, where the existing transformers had been taxed to their full capacity for some time previously.

At Preston, Oakleigh and Sunshine, the existing oil circuit breakers were replaced by others of higher rupturing capacity to meet the demands imposed by the growth of the system.

At Camberwell " K " sub-station an additional 22,000-volt oil circuit breaker was installed to control the third feeder from Richmond terminal station.

The plant at all sub-stations continues to function satisfactorily.

The protective measures applied to the system were added to and improved during the year, and a very satisfactory relay performance was achieved.

Bus differential protection was provided at terminal stations and at several of the major distributing sub-stations.

Improvements and refinements in the impedance relay installation gave excellent performance during a series of staged tests in the field, and greater consistency and correctness of the selective features of the installation is anticipated.

In order to avoid the unnecessary isolation through faults, the differential protection of the Yarraville terminal station machines was fitted with " biassing " transformers designed and manufactured by the Commission.

With the establishment of Richmond terminal station as a main distributing centre a number of alterations were rendered necessary to existing 22,000-volt underground feeders. The cables feeding the St. Kilda (" H ") and Camberwell (" K ") sub-stations were transferred from Richmond (" R ") sub-station, and the Collingwood (" B ") sub-station feeders were extended to the Richmond terminal station. Two feeders from Yarraville terminal station, which previously terminated at South Melbourne (" G ") sub-station were brought out and extended to Richmond, thus constituting a direct link between the two terminal stations. A through feeder from Yarraville to Spencer-street, via South Melbourne, was sub-divided into two sections —Yarraville to South Melbourne, and South Melbourne to Spencer-street. The Richmond sub-station is now supplied by two cables from Richmond terminal station, instead of from South Melbourne as heretofore.

Two failures of 22,000-volt cables occurred during the year, both in those portions of the cables which are taken up a structure to the trifurcating box for connexion to an overhead line, being thereby raised above the general level of the adjoining section of cable. There were definite indications that the impregnating oil had been draining from the cable at such positions to the cable and joints at the lower levels. A method of replenishing the oil in such cases was devised, and it is possible that a conservator, or oil reservoir, may be installed as a permanent feature, to permit of close observation of movement of oil in this manner, and ensure no partial or localised loss to the detriment of the cable.

Insulation of cables and boxes were treated periodically, the value of this routine being proved by the detection of faults in time to prevent actual failure in service.

MAIN DISTRIBUTION AND SUB-STATIONS.

South-Western.—The duplication of the 44,000-volt transmission line from Belmont to Warrnambool was completed during the year, and was followed by a thorough examination of the insulators that have been in service since the inception of the district supply, resulting in removal of insulators which exhibited cracks in the porcelain, apparently due to " cement growth ". By fitting new locally-made porcelain top sheds, these insulators can be again made serviceable at a low cost, suitable provision being made for expansion. The line gave very satisfactory performance throughout the year.

The capacity of the Belmont sub-station was increased from 1,500 kva. to 3,000 kva. by the installation of transformers and regulators, while structural and bus additions were provided for the control of the second 44,000-volt line to Colac.

The Terang sub-station was augmented by the substitution of a 750 kva. transformer for the existing 300 kva. which was installed at Camperdown. The 225 kva. transformer thus released at Camperdown was installed at Colac, to increase the capacity of that sub-station to 450 kva.

Gippsland.—The capacity of the Traralgon sub-station was increased from 100 kva. to 200 kva.

At Maffra, the Johnson Street sub-station was changed to take supply from the 22,000-volt instead of the 6,600-volt mains, thus relieving the Maffra main sub-station of excessive loading.

The supply to Korumburra was converted from 6,600 volts to 22,000 volts.

The district suffered no interruptions of supply due to failure of lines or sub-station plant.

North-Eastern.—The 2,500 kva. transformer bank released during the previous year from Wangaratta was installed at Shepparton, replacing the existing 1,500 kva. bank at the latter centre.

The Dookie main sub-station, which had been operating temporarily at 6,600 volts, was changed to 22,000 volts.

Interruptions of supply occurred during the year due to extraneous causes. On one occasion a magpie and on another a cat was responsible for a flash-over. A failure of the transformer at the Dookie sub-station was caused by lightning, and the insulation of the transformer was immediately reinforced to enable it better to withstand surges.

Eastern Metropolitan.—Routine inspections and maintenance of the 22,000-volt lines and sub-stations were carried out during the year, which was marked by an absence of failures or interruptions.

Castlemaine.—One interruption of 21 minutes occurred on one occasion, due to a tree falling on the line; on a second occasion supply was cut off for ten minutes during a lightning storm.

MAIN AND BRANCH DISTRIBUTION SYSTEMS—BRANCH UNDERTAKINGS.

Metropolitan Electricity Supply.—The capacity of distribution sub-stations in the area of Metropolitan Electricity Supply was increased during the year by 6,965 kva. to 104,980 kva. The Metropolitan and Extra-Metropolitan sections are catered for by a total of 699 sub-stations, aggregating 112,740 kva.

Eastern Metropolitan.—Nine new sub-stations were installed, bringing the total installed capacity to 5,582 kva., spread over 138 sub-stations.

South-Western.—The augmentation of the Terang sub-station enabled the full requirements of the Trufood Factory to be met, and regulators were installed in the outgoing feeder to maintain voltage.

Three new sub-stations were installed, and the total capacity of the 78 distribution sub-stations is 3,777 kva.

Gippsland.—The number of distributing sub-stations was increased from 89 to 117, and the installed capacity now aggregates 4,505 kva.

North-Eastern.—Four new sub-stations were erected during the year, of a combined capacity of 200 kva. This district is now served by 57 sub-stations with a total capacity of 4,215 kva.

Castlemaine.—Four rural type sub-stations were added during the year, making the total 38, with a combined capacity of 1,355 kva.

WATER POWER INVESTIGATIONS.

Only a limited amount of work was carried out on new investigations during the year.

Continuance of accurate records of stream flow is essential, and considerable attention was given to maintaining and improving the reliability and accuracy of these records. Satisfactory designs for automatic recording gauges of local manufacture have been developed.

Several of these gauges have now been installed at a very satisfactory cost and are giving excellent service, the results of which will be of inestimable value in the future.

These new gauges are installed on the Mitta Mitta and Kiewa Rivers, at points where records were previously either unobtainable or seriously deficient in accuracy.

At the end of the year, the Commission was maintaining 19 regular gauging stations, 13 of which were equipped with automatic recording gauges, and 5 with measuring cableways.

In connexion with the Hume-Mitta Scheme, surveys were carried out on the Benambra Tableland, and geological examinations were made of that area and of some of the probable sites for high dams on the Mitta Mitta River.

Further office investigation of this scheme was also carried out.

As regards the Kiewa Scheme, some minor field work was carried out, and this, with the results of diamond drilling previously carried out and the later stream flow records, has made it possible to re-cast the design with considerable improvements. Investigations on these lines are still in hand.

BRIQUETTING AND RESEARCH.

The Yallourn factory produced 225,470 tons of briquettes during the year, an increase of 63,762 tons on the output of 161,708 tons for the preceding year.

The large increase in production during the year was due to the coming into operation of factory extensions, on which construction had been in progress since 1929.

The expectation that the extensions would be operating before the end of 1930 was not realized, owing to delay in the completion of one of the major contracts. The increase in output commenced in the middle of March. The output has gradually increased until it now approximates the rated output of 1,200 tons per day.

The factory is at present generating about 7,500 kw., of which 2,000 kw., is used by the factory, and approximately 5,500 kw. is available for delivery to the main system. When the new boiler and turbine plants, which are still in the hands of the contractors, have been raised to their rated capacities, the delivery of power to the main system will be increased to between 7,000 and 8,000 kw.

Practically all the plant described in the last annual report has been completed and is functioning satisfactorily. Minor portions of plant, such as the loading shed and its equipment, were delayed owing to the difficulty in obtaining loan funds. However, the loading shed is now under construction; other outstanding work will be taken in hand when funds are available.

Notwithstanding the increase in output, operation on Sundays, which had been in progress for eighteen months and which had been discontinued on the completion of the factory extensions, had to be resumed on several occasions since March to meet the heavy winter demand for domestic briquettes.

PART IV.—GENERAL.

RE-APPOINTMENT OF COMMISSIONERS.

On the 31st December, 1930, the Governor in Council approved of the re-appointment of Sir Thomas R. Lyle, K.B., M.A., D.Sc., F.R.S., and Sir Robert Gibson, K.B.E., as Commissioners of the State Electricity Commission of Victoria, for a further period of three years, commencing on the 10th January, 1931.

LEAVE OF ABSENCE TO LATE CHAIRMAN.

With the approval of the Government, the late Chairman of the Commission (Sir John Monash) was granted leave of absence from the 5th Jannary, 1931, to the 7th April, 1931, to enable him to visit India as the representative of the Commonwealth Government at the official opening of New Delhi, where, on the 9th February, 1931, he unveiled the Australian column at India's capital city.

During his absence, Mr. Commissioner F. W. Clements acted as Deputy Chairman of the Commission.

SUCCESSOR TO THE LATE SIR JOHN MONASH.

On the 21st October, 1931, the Governor in Council appointed Mr. Commissioner F. W. Clements, M. Inst. C.E., M.I.E.E., M.I.E. (Aust.), to succeed the late Sir John Monash, as Chairman of the Commission. Mr. Clements has had a wide experience in almost every branch of electrical engineering from the pioneering days of electricity right up to the present time, and supervised the installations of important electrical undertakings in England and on the continent of Europe. He became associated with the staff of the Melbourne Electric Supply Company Ltd., in 1900, and for some years, and at the time of the transfer of that undertaking to the Commission, occupied the position of managing director and chief engineer. He was appointed a member of the State Electricity Commission in 1926.

STAFF.

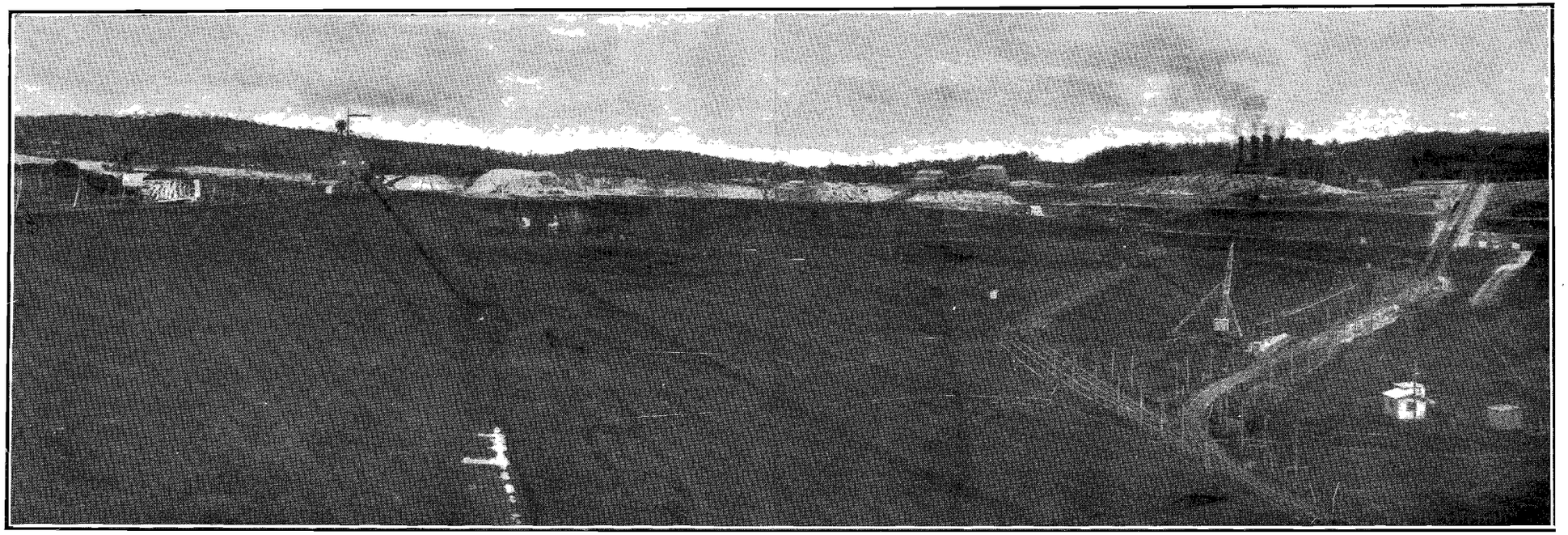
The Commission acknowledges the whole-hearted co-operation of the staff and employees in a year of difficulty and retrenchment. It is with particular pleasure, therefore, that it again records its appreciation of the loyal and efficient service rendered.

(Sgd.) F. W. CLEMENTS, Chairman.
THOMAS R. LYLE, Commissioner.
ROBERT GIBSON, Commissioner.

(Sgd.) W. J. PRICE,
Secretary.

2nd November, 1931.

YALLOURN OPEN CUT.



Yallourn Open Cut, September, 1931, showing, on the right, the second deep dredge installed on the 90 feet level, and also the electric steep haulage, which conveys the coal direct from the dredge to the power station bunker, a difference in level of 160 feet.

10308.

APPENDIX No. 1.

AUDITOR-GENERAL.—VICTORIA.

Melbourne.

AUDITOR-GENERAL'S CERTIFICATE.

I certify that the accounts have been examined with the books and vouchers, and I am of the opinion the Balance-sheet fairly exhibits a true and correct view of the undertaking at the 30th June, 1931. The values of the stores have been accepted on the certificates of the storekeeper.

J. A. NORRIS,
Auditor-General,
27th October, 1931.

APPENDIX No. 1.

STATE ELECTRICITY COMMISSION OF VICTORIA.

GENERAL BALANCE-SHEET AS AT 30TH JUNE, 1931.

LIABILITIES.

	£	£ s. d.	£ s. d.
CAPITAL LIABILITIES—			
Victorian Government Advances—			
Loan Act No. 3029	355,000		
,, ,, 3101	1,430,000		
,, ,, 3160	2,006,000		
,, ,, 3234	1,576,000		
,, ,, 3306	1,447,000		
,, ,, 3381	1,569,500		
,, ,, 3433	1,841,000		
,, ,, 3478	1,918,334		
,, ,, 3565	1,750,000		
,, ,, 3606	2,050,000		
,, ,, 3831	1,874,000		
,, ,, 3934	1,160,000		
	18,976,834		
Expenditure under above Acts		10,826,553 7 8	
Add Expenditure under Treasury Act 3598		650,000 0 0	
,, ,, ,, ,, ,, 3825		250,852 17 7	
,, ,, ,, ,, ,, 3274		2,500,000 0 0	
,, ,, ,, ,, ,, 3345		1,500,000 0 0	
,, ,, ,, ,, ,, 3598/3200		563,247 19 4	
,, ,, ,, ,, ,, 3825/3200		749,000 0 0	
,, ,, ,, ,, ,, 3934/3200		372,000 0 0	
,, ,, ,, ,, ,, 3565/3200		64,750 3 8	
		17,476,404 8 3	
Deduct Redeemed or cancelled Securities		228,913 14 11	
		17,247,490 13 4	
Advances by Treasury from Public Account (Sections 5 and 6, Act 3239)		107,854 0 4	
Other Advances		7,500 0 0	
Debentures (as per Schedule)		1,923,583 0 9	
			19,286,427 14 5
CURRENT AND ACCRUED LIABILITIES—			
Sundry Creditors		92,445 16 3	
Sundry Creditors' Retentions		70,456 3 3	
Consumers' Deposits		21,450 16 0	
Service Charges received in Advance		51,793 6 9	
Unclaimed Wages		456 7 2	
Consumers' Advances for Construction		9,016 8 1	
Other Deposits and Trust Moneys		10,574 4 8	
Interest Accrued		200,654 0 7	
Salaries and Wages Accrued		29,886 2 6	
Insurances, Telephone Charges, and Rents Accrued		6,664 10 0	
Miscellaneous Current and Accrued Liabilities		26,579 14 5	
			519,977 9 8
RESERVES—			
Depreciation and Sinking Fund		1,589,275 5 8	
Doubtful Debts		2,310 5 7	
Miscellaneous		1,876 10 8	
			1,593,462 1 11
			£21,399,867 6 0

ASSETS.

	£ s. d.	£ s. d.	£ s. d.
FIXED CAPITAL—			
Coal Supply Works	900,793 12 7		
Briquette Works	1,213,959 16 1		
Power Stations—			
Steam	4,135,846 1 2		
Hydro.	819,695 17 9		
Transmission Lines	2,127,052 6 2		
Terminal Stations	699,950 8 11		
Transmission Sub-stations	580,278 3 5		
Distributing Systems	4,901,530 7 3		
Tramways	198,674 6 2		
Townships	722,154 18 7		
General	833,350 1 5		
Unfinished Construction	1,375,872 6 7		
	18,509,158 6 1		
Deduct Proportion of cost of extensions payable by consumers	7,618 9 9		
		18,501,539 16 4	
CURRENT AND ACCRUED ASSETS—			
Cash	182,618 11 11		
Sundry Debtors	431,472 16 9		
Stores	446,338 15 0		
Advances	53,762 8 10		
Investments	1,876 6 11		
Miscellaneous Current and Accrued Assets	315 10 2		
		1,116,384 9 7	
RESERVE FUNDS—			
Sinking Funds		11,655 13 2	
SUSPENSE—			
Overburden Removal and Disposal	594,107 12 2		
Preliminary Investigations	2,634 15 11		
Chargeable Work	1,067 17 0		
Paid in Advance Accounts	399 1 0		
Unamortised Loan Flotation Expense	194,859 7 3		
Work in Progress	989 1 7		
Amount charged to Commission by Treasury in accordance with decision of Cabinet, 22nd July, 1922	57,023 6 8		
Hospital and Health Centre, Yallourn	34,460 6 0		
Miscellaneous	89,178 1 3		
Profit and Loss—Deficit	795,567 18 1		
		1,770,287 6 11	
			£21,399,867 6 0

There is a contingent asset and liability in respect of securities lodged as bona fides under Contracts to the extent of £36,625 4s. 0d., and held by the Bank on the Commission's behalf.

R. LIDDELOW,
Commercial Manager.

STATE ELECTRICITY COMMISSION OF VICTORIA.

GENERAL PROFIT AND LOSS ACCOUNT FOR YEAR ENDED 30TH JUNE, 1931.

Dr. *Cr.*

To Expenditure—	£ s. d.	£ s. d.	By *Income*—	£ s. d.	£ s. d.
Electric Supply—			Electric Supply—		
Purchased Power	52,863 5 3		Bulk Supply	498,834 2 11	
Generation and Transmission	1,196,497 18 0		Street Lighting	107,070 16 7	
Distribution	853,420 3 8		Domestic	721,689 4 1	
Bulk Supply Expenses	836 15 0		Industrial	489,748 8 7	
	2,103,618 1 11		Commercial	396,882 0 11	
Deduct Cost of Power transferred to Works	15,748 0 3		Miscellaneous	21,938 9 3	
		2,087,870 1 8		2,236,163 2 4	
Briquetting—			*Add* Meters unread 30th June, 1931, and Service Charges received in advance 30th June, 1930	145,541 2 4	
Manufacturing	203,246 6 5			2,381,704 4 8	
Distribution and Selling	117,455 0 4		*Deduct* Meters unread 30th June, 1930, and Service Charges received in advance 30th June, 1931	146,947 2 9	
Add Briquettes on hand 30th June, 1930	4,817 18 10				2,234,757 1 11
	325,519 5 7		Briquetting—		
Deduct Cost of Briquettes transferred to Works	22,735 5 8		Briquette Sales	269,055 11 7	
		302,783 19 11	*Add* Briquettes on hand 30th June, 1931	12,692 10 2	
Brown Coal—					281,748 1 9
Coal Winning	3,116 9 6		Brown Coal—		
Distribution and Selling	72 14 10		Sales		1,115 17 9
	3,189 4 4		Tramways		30,970 14 1
Deduct Cost of Coal transferred to Works	2,129 9 4		Miscellaneous		1,120 8 10
		1,059 15 0			
Tramways		50,317 3 3			
Sinking Fund Contributions		21,086 17 6			
Trustees' Fees, Commissions, &c.		7,635 7 0			
Provident Fund Contributions		26,441 8 8			
Loan Flotation Expenses		6,505 8 0			
Proportion of Amount Charged to Commission by Treasury in accordance with decision of Cabinet, 22nd July, 1922		5,000 0 0			
Profit carried down		41,012 3 4			
		2,549,712 4 4			2,549,712 4 4
To Exchange on Overseas Remittances		58,964 15 1	By Balance brought down		41,012 3 4
		58,964 15 1	Net Loss for year		17,952 11 9
					58,964 15 1
To Balance as at 30th June, 1930		777,615 6 4			
Loss for year		17,952 11 9	By Balance as at 30th June, 1931, carried to Balance-sheet		795,567 18 1
		795,567 18 1			795,567 18 1

STATE ELECTRICITY COMMISSION OF VICTORIA.

SCHEDULE OF FIXED CAPITAL AS AT 30TH JUNE, 1930, AND 30TH JUNE, 1931.

—	Expenditure to 30th June, 1930.	Expenditure for 1930–31.	Total at 30th June, 1931.	Less Written Off During 1930–31.	Expenditure to 30th June, 1931.	Total at 30th June, 1931.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
COAL SUPPLY WORKS—						
Yallourn	1,044,061 8 6	357,579 17 9	1,401,641 6 3	526,408 5 2	875,233 1 1	
Brown Coal Mine	24,828 1 10	732 9 8	25,560 11 6	..	25,560 11 6	
						900,793 12 7
BRIQUETTE FACTORY—YALLOURN—	604,068 7 1	637,795 0 4	1,241,863 7 5	27,903 11 4	1,213,959 16 1	
						1,213,959 16 1
POWER STATIONS—STEAM—						
Yallourn	2,711,087 14 10	129,561 17 2	2,840,649 12 0	3,584 10 7	2,837,065 1 5	
Newport "B"	836,201 3 0	20 10 4	836,221 13 4	..	836,221 13 4	
Richmond	146,495 12 5	5 18 4	146,501 10 9	..	146,501 10 9	
Geelong	..	316,057 15 8	316,057 15 8	..	316,057 15 8	
						4,135,846 1 2
POWER STATIONS—HYDRO.—						
Sugarloaf Rubicon	819,233 6 10	462 10 11	819,695 17 9	..	819,695 17 9	
						819,695 17 9
TRANSMISSION LINES—						
Yallourn to Yarraville and Richmond	492,698 9 4	217,863 17 11	710,562 7 3	..	710,562 7 3	
Newport to Yarraville	26,785 18 5	..	26,785 18 5	..	26,785 18 5	
Sugarloaf to Thomastown	202,622 18 7	*Cr.* 123 10 1	202,499 8 6	..	202,499 8 6	
Sugarloaf–Rubicon Area	33,451 3 0	..	33,451 3 0	..	33,451 3 0	
Central Supply System	484,549 17 3	39,852 1 7	524,401 18 10	..	524,401 18 10	
Castlemaine District	79,857 3 11	200 6 4	80,057 10 3	..	80,057 10 3	
Eastern Metropolitan District	58,023 7 4	776 18 8	58,800 6 0	..	58,800 6 0	
Gippsland District	113,920 0 4	10,952 7 3	124,872 7 7	..	124,872 7 7	
North-Eastern District	233,023 3 5	773 7 5	233,796 10 10	..	233,796 10 10	
South-Western District	123,784 3 9	108 16 11	123,893 0 8	..	123,893 0 8	
Western Metropolitan District	7,931 14 10	..	7,931 14 10	..	7,931 14 10	
						2,127,052 6 2
TERMINAL STATIONS—						
Yarraville	532,427 18 2	1,596 5 6	534,024 3 8	..	534,024 3 8	
Thomastown	100,630 17 1	123 3 9	100,754 0 10	..	100,754 0 10	
Rubicon "A"	65,172 4 5	..	65,172 4 5	..	65,172 4 5	
						699,950 8 11
TRANSMISSION SUB-STATIONS—						
Central Supply System	412,469 5 8	68,680 17 4	481,150 3 0	..	481,150 3 0	
Gippsland District	4,598 17 6	*Cr.* 19 17 11	4,578 19 7	..	4,578 19 7	
North-Eastern District	63,127 18 7	*Cr.* 2,232 1 0	60,895 17 7	..	60,895 17 7	
South-Western District	33,465 7 7	187 15 8	33,653 3 3	..	33,653 3 3	
						580,278 3 5
DISTRIBUTING SYSTEMS—						
Metropolitan Electricity Supply	264,629 8 3	3,203,643 8 7	3,468,272 16 10	9,453 12 8	3,458,819 4 2	
Geelong Electricity Supply	..	258,235 2 10	258,235 2 10	..	258,235 2 10	
Castlemaine District	92,660 6 6	25,878 7 9	118,538 14 3	1,015 0 0	117,523 14 3	
Eastern Metropolitan District	290,824 13 11	20,383 14 5	311,208 8 4	1,428 0 0	309,780 8 4	
Gippsland District	193,522 13 10	43,869 18 9	237,392 12 7	982 0 0	236,410 12 7	
North-Eastern District	210,549 16 8	16,674 11 3	227,224 7 11	8,750 19 2	218,473 8 9	
South-Western District	223,110 15 3	5,604 9 7	228,715 4 10	15,807 12 10	212,907 12 0	
Western Metropolitan District	71,914 7 8	1,321 4 4	73,235 12 0	666 18 10	72,568 13 2	
Yallourn	13,086 12 3	2,708 3 7	15,794 15 10	193 3 9	15,601 12 1	
Brown Coal Mine	543 4 8	666 14 5	1,209 19 1	..	1,209 19 1	
						4,901,530 7 3
Carried forward						

Schedule of Fixed Capital as at 30th June, 1930, and 30th June, 1931—*continued.*

—	Expenditure to 30th June, 1930.	Expenditure for 1930–31.	Total at 30th June, 1931.	Less Written Off During 1930–31.	Expenditure to 30th June, 1931.	Total at 30th June, 1931.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Brought forward						
TRAMWAYS—						
Geelong	..	198,674 6 2	198,674 6 2	..	198,674 6 2	198,674 6 2
TOWNSHIPS—						
Yallourn	605,408 12 1	107,629 9 8	713,038 1 9	..	713,038 1 9	
Brown Coal Mine	9,371 17 8	*Cr.* 74 12 11	9,297 4 9	180 7 11	9,116 16 10	722,154 18 7
GENERAL—						
Metropolitan Electricity Supply	1,881 12 8	19,741 15 1	21,623 7 9	..	21,623 7 9	
Geelong Electricity Supply	..	3,345 8 1	3,345 8 1	..	3,345 8 1	
Castlemaine District	4,677 4 9	*Cr.* 535 18 5	4,141 6 4	..	4,141 6 4	
Eastern Metropolitan District	15,884 2 11	*Cr.* 546 7 3	15,337 15 8	..	15,337 15 8	
Gippsland District	8,111 11 1	*Cr.* 772 5 7	7,339 5 6	..	7,339 5 6	
North-Eastern District	14,454 19 10	145 2 7	14,600 2 5	..	14,600 2 5	
South-Western District	11,761 0 1	*Cr.* 134 7 8	11,626 12 5	..	11,626 12 5	
Western Metropolitan District	790 5 3	*Cr.* 129 17 9	660 7 6	..	660 7 6	
Yallourn	501,528 4 5	19,139 6 0	520,667 10 5	34,571 10 3	486,096 0 2	
Metropolitan Area	269,039 5 9	*Cr.* 459 10 2	268,579 15 7	..	268,579 15 7	833,350 1 5
	12,058,266 19 2	5,705,964 12 10	17,764,231 12 0	630,945 12 6	17,133,285 19 6	17,133,285 19 6
UNFINISHED CONSTRUCTION—						
Beginning of year—*Add*	1,773,681 0 6	..	..	..	..	..
Deduct	..	1,773,681 0 6	..	..	..	..
	13,831,947 19 8	3,932,283 12 4	17,764,231 12 0	630,945 12 6	17,133,285 19 6	17,133,285 19 6
UNFINISHED CONSTRUCTION—						
End of year—*Add*	..	1,375,872 6 7	1,375,872 6 7	..	1,375,872 6 7	1,375,872 6 7
	13,831,947 19 8	5,308,155 18 11	19,140,103 18 7	630,945 12 6	18,509,158 6 1	18,509,158 6 1
Deduct Proportion of Cost of Extensions payable by Consumers ..	7,337 1 5	281 8 4	7,618 9 9	..	7,618 9 9	7,618 9 9
Total FIXED CAPITAL	13,824,610 18 3	5,307,874 10 7	19,132,485 8 10	630,945 12 6	18,501,539 16 4	18,501,539 16 4

SCHEDULE OF DEBENTURES GUARANTEED BY STATE ELECTRICITY COMMISSION OF VICTORIA.

Branch.	Undertaking.	Details.	Rate.	Original Issue.	Date of Acquisition.	Outstanding at Date of Acquisition.	Redeemed Since Date of Acquisition.	Outstanding at 30th June, 1931.	Total Outstanding.
			%	£ s. d.		£ s. d.	£ s. d.	£ s. d.	£ s. d.
METROPOLIS.									
Metropolitan Electricity Supply	Melbourne Electric Supply Company Ltd.	First Mortgage Debenture Stock ..	5	250,000 0 0	1.9.30	197,463 0 0	2,513 14 0	194,949 6 0	
		Consolidated Debenture Stock ..	5	250,000 0 0	..	188,596 0 0	11,920 0 0	176,676 0 0	
		Gold Bonds	7½	513,769 0 0	..	472,602 14 10	8,126 4 7	464,476 10 3	
		General Mortgage Debenture Stock ..	6	300,000 0 0	..	275,595 0 0	4,463 16 9	271,131 3 3	
		Debenture Stock	6½	300,000 0 0	..	300,000 0 0	..	300,000 0 0	
		,, ,, ...	7	400,000 0 0	..	400,000 0 0	..	400,000 0 0	
				2,013,769 0 0	..	1,834,256 14 10	27,023 15 4	1,807,232 19 6	1,807,232 19 6
COUNTRY.									
Castlemaine	Gisborne	Gisborne Shire .. .. Loan No. 3	6½	900 0 0	1.10.28	781 15 5	143 4 9	638 10 8	
	Kyneton	Kyneton Shire .. .. ,, 3	5¾	12,000 0 0	1.10.29	10,830 0 0	315 0 0	10,515 0 0	
	,, ...	,, ,, ... ,, 5	6	3,800 0 0	..	3,084 15 2	222 1 10	2,862 13 4	
	Sunbury	Bulla Shire .. .. ,, A	4¼	5,000 0 0	1.5.26	2,500 0 0	1,000 0 0	1,500 0 0	
	Woodend	Newham and Woodend Shire ,, 1	4	2,000 0 0	1.8.29	200 0 0	200 0 0	..	
	,, ...	,, ,, ,, ,, 2	5	750 0 0	..	750 0 0	..	750 0 0	
	,, ...	,, ,, ,, ,, 4	6	1,500 0 0	..	1,500 0 0	..	1,500 0 0	
	,, ...	,, ,, ,, ,, 5	6	1,000 0 0	..	1,000 0 0	..	1,000 0 0	
				26,950 0 0	..	20,646 10 7	1,880 6 7	18,766 4 0	18,766 4 0
Eastern Metropolitan ..	Dandenong	Dandenong Shire .. .. Loan No. 19	6¼	6,600 0 0	1.10.23	5,941 7 1	2,709 3 3	3,232 3 10	
	,, ...	,, ,, ... ,, 20	6	4,000 0 0	..	3,946 19 0	1,016 5 6	2,930 13 6	
	Frankston	Frankston and Hastings Shire ,, 10	6½	5,000 0 0	21.2.28	3,690 16 11	1,107 11 7	2,583 5 4	
	,, ...	,, ,, ,, ,, 11	6	3,000 0 0	..	2,277 2 3	649 7 0	1,627 15 3	
	,, ...	,, ,, ,, ,, 13	6¼	4,000 0 0	..	3,366 6 2	786 0 1	2,580 6 1	
	,, ...	,, ,, ,, ,, 15	6½	3,000 0 0	..	2,290 0 0	1,015 0 0	1,275 0 0	
	,, ...	,, ,, ,, ,, 16	6½	5,000 0 0	..	4,665 15 5	478 8 10	4,187 6 7	
	Lilydale	Lilydale Shire .. .. ,, 16	6½	3,000 0 0	1.4.25	2,869 12 7	333 9 4	2,536 3 3	
	Mornington	Mornington Shire .. .. ,, 7	6½	4,445 0 0	1.8.30	3,195 0 0	205 0 0	2,990 0 0	
	,, ...	,, ,, ... ,, 9	6½	1,200 0 0	..	630 0 0	125 0 0	505 0 0	
	,, ...	,, ,, ... ,, 11	5¾	1,000 0 0	..	895 16 8	33 15 3	862 1 5	
	Ringwood and Croydon ..	Lilydale Shire .. .. ,, 11	5	2,100 0 0	..	1,100 0 0	700 0 0	400 0 0	
	,, ,, ..	,, ,, ... ,, 13	6	1,200 0 0	..	1,200 0 0	..	1,200 0 0	
	,, ,, ..	,, ,, ... ,, 16	6½	2,000 0 0	..	1,913 1 7	222 6 3	1,690 15 4	
	,, ,, ..	,, ,, ... ,, 17	6	4,000 0 0	..	3,600 0 0	1,200 0 0	2,400 0 0	
	Sorrento and Portsea ..	Flinders Shire .. .. ,, 3	6	3,600 0 0	1.10.27	2,700 0 0	700 0 0	2,000 0 0	
	,, ,, ..	,, ,, ... ,, 4	6½	5,000 0 0	..	4,185 0 0	790 0 0	3,395 0 0	
	,, ,, ..	,, ,, ... ,, 5	6	3,500 0 0	..	3,356 10 7	388 13 3	2,967 17 4	
				61,645 0 0	..	51,823 8 3	12,460 0 4	39,363 7 11	39,363 7 11
		Carried forrwed		88,595 0 0	..	72,469 18 10	14,340 6 11	58,129 11 11	58,129 11 11

Schedule of Debentures Guaranteed by State Electricity Commission of Victoria—*continued.*

Branch.	Undertaking.	Details.	Rate.	Original Issue.	Date of Acquisition.	Outstanding at Date of Acquisition.	Redeemed Since Date of Acquisition.	Outstanding at 30th June, 1931.	Total Outstanding.
			%	£ s. d.		£ s. d.	£ s. d.	£ s. d.	£ s. d.
				Country—*continued.*					
		Brought forward	..	88,595 0 0	..	72,469 18 10	14,340 6 11	58,129 11 11	58,129 11 11
Gippsland	Korumburra	Korumburra Shire .. Loan No. 4	4	2,500 0 0	1.12.24	2,500 0 0	..	2,500 0 0	
	,, ...	,, ,, .. ,, 5	4	700 0 0	..	700 0 0	..	700 0 0	
	,, ...	,, ,, .. ,, 7	4	1,000 0 0	..	1,000 0 0	..	1,000 0 0	
	,, ...	,, ,, .. ,, 8	5	700 0 0	..	700 0 0	..	700 0 0	
	Maffra	Maffra Shire .. .. ,, 1	4¾	6,500 0 0	1.9.24	5,660 0 11	783 6 3	4,876 14 8	
	,, ...	,, ,, ... ,, 2	5½	1,000 0 0	..	877 5 7	169 11 9	707 13 10	
	Morwell	Morwell Shire .. .. ,, 2	7	1,500 0 0	1.4.26	1,015 0 0	1,015 0 0	..	
	,, ...	,, ,, ... ,, 3	6	500 0 0	..	265 0 0	265 0 0	..	
				14,400 0 0	..	12,717 6 6	2,232 18 0	10,484 8 6	10,484 8 6
North-Eastern ..	Alexandra	Alexandra Shire .. Loan No. 1	6	4,500 0 0	11.4.27	3,832 18 10	455 10 0	3,377 8 10	
	Benalla	Benalla Shire .. .. ,, A	6	15,000 0 0	1.5.26	15,000 0 0	..	15,000 0 0	
	,, ...	,, ,, ... ,, B	6½	3,000 0 0	..	3,000 0 0	..	3,000 0 0	
	Euroa	Euroa Shire .. .. ,, 3	5	600 0 0	20.3.28	311 4 0	140 10 0	170 14 0	
	,, ...	,, ,, ... ,, 4	7	2,000 0 0	..	967 5 10	831 6 8	135 19 2	
	,, ...	,, ,, ... ,, 7	6½	1,200 0 0	..	939 4 0	275 0 11	664 3 1	
	,, ...	,, ,, ... ,, 9	6¼	1,500 0 0	..	1,320 4 0	314 16 0	1,005 8 0	
	Mansfield	Mansfield Shire .. .. ,, 6	6	1,200 0 0	1.6.28	1,200 0 0	..	1,200 0 0	
	,, ...	,, ,, ... ,, 8	6	800 0 0	..	800 0 0	150 0 0	650 0 0	
	Mooroopna	Rodney Shire .. .. ,, 1	5	3,000 0 0	1.10.26	2,286 7 8	397 4 1	1,889 3 7	
	Rutherglen	Rutherglen Shire .. ,, 2	4½	3,000 0 0	15.10.26	2,094 3 8	489 6 7	1,604 17 1	
	Wahgunyah	,, ,, .. ,, 4	6	350 0 0	1.2.26	296 1 8	48 4 1	247 17 7	
	Wangaratta	Wangaratta Borough .. ,, 8	6½	6,500 0 0	12.3.27	6,078 12 8	513 9 4	5,565 3 4	
	,, ...	,, ,, .. ,, 9	6	1,500 0 0	..	1,412 2 5	127 3 9	1,284 18 8	
	Yarrawonga	Yarrawonga Shire .. ,, 3	4	3,500 0 0	1.8.25	2,600 0 0	600 0 0	2,000 0 0	
	,, ...	,, ,, .. ,, 4	4½	800 0 0	..	576 3 8	155 18 8	420 5 0	
	,, ...	,, ,, .. ,, 5	5	500 0 0	..	387 11 1	89 10 3	298 0 10	
	,, ...	,, ,, .. ,, 6	5	500 0 0	..	406 1 8	83 2 4	322 19 4	
				49,450 0 0	..	43,508 1 2	4,671 2 8	38,836 18 6	38,836 18 6
South-Western ..	Camperdown	Hampden Shire .. .. Loan No. 1	4	8,000 0 0	8.1.24	2,600 0 0	900 0 0	1,700 0 0	
	,, ...	,, ,, ... ,, 3	4	1,400 0 0	..	750 0 0	350 0 0	400 0 0	
	Koroit	Koroit Borough .. .. ,, 1	4¼	6,500 0 0	1.12.28	4,000 0 0	700 0 0	3,300 0 0	
	Terang	Hampden Shire .. .. ,, 2	4	3,000 0 0	4.3.24	1,600 0 0	700 0 0	900 0 0	
	,, ...	,, ,, ... ,, 4	4	1,500 0 0	..	850 0 0	350 0 0	500 0 0	
				20,400 0 0	..	9,800 0 0	3,000 0 0	6,800 0 0	6,800 0 0
Western Metropolitan	Werribee	Werribee Shire .. .. Loan No. 1	5	4,000 0 0	10.4.24	2,200 0 0	1,400 0 0	800 0 0	
	,, ...	,, ,, ... ,, 3	4¾	1,000 0 0	..	818 1 5	196 14 5	621 7 0	
	,, ...	,, ,, ... ,, 4	5½	1,000 0 0	..	856 16 2	179 0 10	677 15 4	
	,, ...	,, ,, ... ,, 5	6½	1,000 0 0	..	760 0 0	760 0 0	..	
				7,000 0 0	..	4,634 17 7	2,535 15 3	2,099 2 4	2,099 2 4
	Total for Country		..	179,845 0 0	..	143,130 4 1	26,780 2 10	116,350 1 3	116,350 1 3
	Total for Metropolis		..	2,013,769 0 0	..	1,834,256 14 10	27,023 15 4	1,807,232 19 6	1,807,232 19 6
	GRAND TOTAL		..	2,193,614 0 0	..	1,977,386 18 11	53,803 18 2	1,923,583 0 9	1,923,583 0 9

STATE ELECTRICITY COMMISSION OF VICTORIA.

BRANCH UNDERTAKINGS.

PROFIT AND LOSS ACCOUNT FOR YEAR ENDED 30TH JUNE, 1931.

	Metropolitan Electricity Supply.	Castlemaine District.	Eastern Metropolitan District.	Geelong Electricity Supply.	Gippsland District.	North-Eastern District.	South-Western District.	Western Metropolitan District.
EXPENDITURE.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
To Power	561,285 19 9	3,931 14 0	21,190 7 0	47,768 6 9	20,695 11 11	13,786 14 4	21,987 3 1	16,537 11 0
Transmission	..	7,887 8 6	8,482 8 8	..	12,866 7 2	30,601 16 7	17,404 6 2	1,614 18 10
Generation	..	53 14 6	..	..	..	4,726 9 9	..	..
Overhead and Underground Lines	50,674 4 6	1,039 11 3	6,691 19 0	4,727 16 8	3,927 10 4	3,937 12 3	4,869 15 2	1,983 14 10
Sub-stations	21,283 9 2	444 4 1	2,590 7 3	437 12 7	2,156 14 0	1,682 11 4	896 6 5	300 0 9
Meters	12,261 19 2	133 12 2	830 8 10	1,822 4 4	510 14 11	413 9 10	365 13 6	28 9 10
Consumers' Premises	17,429 2 8	479 2 5	1,852 13 3	968 14 7	1,100 0 9	312 12 5	306 3 10	144 12 0
Commercial Lamps	3,142 18 10	..	..	..	..	19 19 11	..	..
Public Lighting	24,439 7 7	462 0 10	1,100 15 8	1,577 19 6	835 11 9	548 16 9	619 8 5	408 9 11
Meter Reading, Billing, and Collecting	52,776 2 2	510 13 10	3,570 4 11	3,305 9 2	2,168 18 3	1,761 5 5	1,107 14 0	815 13 4
Promotion of Business	16,773 18 5	1,035 15 10	2,627 2 5	2,026 0 10	2,586 13 7	3,447 9 8	1,353 13 9	706 10 10
Administration—								
Local	41,336 7 0	4,976 2 9	9,557 1 3	6,002 18 8	12,906 9 10	14,446 15 3	9,753 16 3	2,125 17 4
Head Office	15,433 1 9	585 10 11	1,705 3 7	1,221 9 0	1,586 4 2	1,603 15 3	1,162 3 9	409 3 4
Superintendence Head Office	815 18 1	256 10 7	549 17 10	..	262 7 4	275 7 1	293 12 0	132 11 10
Interest	187,854 15 3	6,382 13 4	16,420 17 7	11,986 11 9	12,252 9 6	11,879 3 10	11,278 12 8	4,028 9 5
Depreciation	73,008 17 5	2,644 15 3	7,484 18 5	6,570 0 0	5,294 17 0	5,671 4 5	4,672 1 4	1,766 8 3
Insurance	729 3 9	16 15 0	13 16 3	167 4 8	6 16 8	50 12 8	16 3 4	6 18 0
Workers' Compensation Insurance	839 4 11	31 17 11	107 3 1	76 6 8	81 1 5	111 19 7	73 9 2	28 4 0
Uncollectable Accounts	3,841 12 7	59 18 4	229 6 6	226 6 6	146 5 7	181 19 3	145 17 10	34 2 7
Total	1,083,926 3 0	30,932 1 6	85,004 11 6	88,885 1 8	79,384 14 2	95,459 15 7	76,306 0 8	31,071 16 1
INCOME.								
By Sales	1,250,974 7 6	29,381 13 0	91,677 5 9	101,721 15 5	78,051 12 6	96,785 2 7	76,049 15 2	26,664 16 4
Total	1,250,974 7 6	29,381 13 0	91,677 5 9	101,721 15 5	78,051 12 6	96,785 2 7	76,049 15 2	26,664 16 4
Profit transferred to Head Office	167,048 4 6	..	6,672 14 3	12,836 13 9	..	1,325 7 0	..	..
Loss transferred to Head Office	..	1,550 8 6	..	..	1,333 1 8	..	256 5 6	4,406 19 9

BRANCH UNDERTAKINGS.

BALANCE-SHEET AS AT 30TH JUNE, 1931

—	Metropolitan Electricity Supply.	Castlemaine.	Eastern Metropolitan.	Geelong Electricity Supply.	Gippsland.	North-Eastern.	South-Western.	Western Metropolitan.
ASSETS.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Fixed Capital—								
Power Stations—Steam	..	..	..	316,057 15 8	..	..	..	..
Transmission Lines	..	80,057 10 3	58,800 6 0	..	124,872 7 7	233,796 10 10	123,893 0 8	7,931 14 10
Transmission Sub-stations	..	..	..	..	4,578 19 7	60,895 17 7	33,653 3 3	..
Distributing Systems	3,458,819 4 2	117,523 14 3	309,780 8 4	258,235 2 10	236,410 12 7	218,473 8 9	212,907 12 0	72,568 13 2
Tramways	..	..	..	198,674 6 2	..	..	..	..
General	21,623 7 9	4,141 6 4	15,337 15 8	3,345 8 1	7,339 5 6	14,600 2 5	11,626 12 5	660 7 6
Unfinished Construction	259,033 6 4	..	..	..	..	883 16 0	24,290 6 3	..
	3,739,475 18 3	201,722 10 10	383,918 10 0	776,312 12 9	373,201 5 3	528,649 15 7	406,370 14 7	81,160 15 6
Deduct Proportion of Cost of Extensions Payable by Consumers	1,708 3 3	..	4,271 2 5	57 15 0	1,190 16 1	151 1 0	239 12 0	..
	3,737,767 15 0	201,722 10 10	379,647 7 7	776,254 17 9	372,010 9 2	528,498 14 7	406,131 2 7	81,160 15 6
Current and Accrued Assets—								
Cash	7,543 17 2	269 8 1	304 7 4	3,252 1 1	301 0 6	368 6 10	942 9 9	202 12 11
Sundry Debtors	244,762 0 10	5,070 19 3	16,624 0 9	19,455 19 11	12,088 17 10	14,684 0 6	12,076 14 7	3,701 5 6
Stores	109,503 0 4	5,191 17 5	10,495 19 5	47,152 1 9	10,978 2 7	13,104 2 7	8,856 1 4	1,343 18 4
Miscellaneous Current and Accrued Assets	152 15 6	20 19 4	20 0 8	0 4 6	24 15 11	25 4 7	3 15 10	5 19 3
Reserve Funds—								
Sinking Funds	..	3,344 13 2	421 15 1	..	3,650 3 11	4,181 2 5	57 18 7	..
Suspense—								
Preliminary Investigations	..	..	..	..	29 3 3	..	..	47 13 8
Chargeable Work	144 1 7	..	4 18 10	262 12 11	20 1 8	..	..	..
Paid in Advance Accounts	2 11 6	..	12 2 2	..	..	..	15 5 0	..
Miscellaneous Suspense	..	..	..	..	276 16 4	..	..	..
Work in Progress	928 10 2	..	..	..	..	..	..	..
Total	4,100,804 12 1	215,560 8 1	407,530 11 10	846,377 17 11	399,379 11 2	560,861 11 6	428,083 7 8	86,462 5 2
LIABILITIES.								
Capital Liabilities—								
Head Office	2,070,730 2 9	186,665 5 4	326,120 10 0	818,034 6 1	342,654 17 7	466,822 7 3	368,982 3 10	74,108 9 0
Debentures	1,807,232 19 6	18,766 4 0	39,363 7 11	..	10,484 8 6	38,836 18 6	6,800 0 0	2,099 2 4
Current and Accrued Liabilities	110,399 4 7	4,945 19 7	13,571 12 4	8,569 11 10	15,623 1 8	13,124 17 8	9,791 17 11	2,416 17 9
Reserves—								
Depreciation	112,442 5 3	5,123 15 9	28,475 1 7	19,774 0 0	30,340 1 5	41,786 11 10	42,392 12 1	7,726 19 10
Doubtful Debts	..	59 3 5	..	..	277 2 0	290 16 3	116 13 10	110 16 3
Total	4,100,804 12 1	215,560 8 1	407,530 11 10	846,377 17 11	399,379 11 2	560,861 11 6	428,083 7 8	86,462 5 2

APPENDIX No. 2.

OVERHEAD TRANSMISSION LINES.

District.	Erected prior to 30th June, 1930.		Erected during Year ended 30th June, 1931.		Total Erected to 30th June, 1931.	
	Route Miles.	Miles of Cable.	Route Miles.	Miles of Cable.	Route Miles.	Miles of Cable.
132,000 Volt Lines.						
Yallourn–Yarraville	110	660	..	..	190	900·0
Yallourn–Richmond	80	240	..	..		
North-Eastern.						
66,000 Volt Lines	223·7	696·1	..	..	223·7	696·1
22,000 Volt Lines	108·3	452·0	1·880	5·640	110·18	457·64
6,600 Volt Lines	9·7	25·0	..	..	9·7	25·0
North-Western.						
66,000 Volt Lines	52·5	157·5	..	..	52·5	157·5
22,000 Volt Lines	37·2	107·7	..	..	37·2	107·7
South-Western.						
44,000 Volt Lines	116·1	348·3	..	136·5	116·1	484·8
22,000 Volt Lines	20·5	61·5	..	..	20·5	61·5
6,600 Volt Lines	138·3	363·6	0·18	3·36	138·48	366·96
Geelong.						
6,600 Volt Lines	78·7	236·2	1·2	3·6	79.9	239·9
Gippsland.						
22,000 Volt Lines	231·7	673·3	39·62	88·78	271·32	762·08
6,600 Volt Lines	13·7	33·6	..	..	13·7	33·6
Metropolitan.						
22,000 Volt Lines	141·0	423·0	..	..	141·0	423·0
6,600 Volt Lines	161·2	483·6	4	12	165·2	496·6
Eastern Metropolitan.						
22,000 Volt Lines	110·6	302·6	0·25	0·75	110·85	303·35
6,600 Volt Lines	71·6	199·9	5·675	12·95	77·275	212·85
Western Metropolitan.						
22,000 Volt Lines	29·0	87·0	..	..	29·0	87·0
6,600 Volt Lines	29·5	88·7	..	..	29·5	88·7
Yallourn.						
11,000 Volt Lines	..	..	1·415	8·490	1·415	8·49

SUMMARY OF OVERHEAD LINE CONSTRUCTION.

Voltage.	Erected prior to 30th June, 1930.		Erected during Year ended 30th June, 1931.		Total Erected to 30th June, 1931.	
	Route Miles.	Miles of Cable.	Route Miles.	Miles of Cable.	Route Miles.	Miles of Cable.
132,000 Volts	190	900	..	..	190	900
66,000 Volts	276·2	853·6	..	..	276·2	853·6
44,000 Volts	116·1	348·3	..	136·5	116·1	484·8
22,000 Volts	678·3	2,107·1	41·75	95·170	720·05	2,202·270
11,000 Volts	..	..	1·415	8·49	1·415	8·49
6,600 Volts	424	1,194·4	9·855	28·31	433·855	1,222·71
Totals	1,684·6	5,403·4	53·020	268·47	1,817·62	5,671·87

UNDERGROUND CABLES.

Class of Cable.	Route Miles Cable Laid prior to 30th June, 1930.	Route Miles Cable Laid during Year ended 30th June, 1931.	Total Route Miles Laid at 30th June, 1931.
22,000 Volt	103·987	1·714	105·701
6,600 Volt	381	2·013	383·013
400 Volt	3·88	0·192	4·072
Pilot and Telephone	56·57	1·885	58·455
Supervisory Control Cable	12·864	0·148	13·012
Miscellaneous	12·525	1·444	13·969
Total	570·827	7·396	578·222

APPENDIX No. 3.

TABLE SHOWING NUMBER AND CAPACITY OF SUB-STATIONS AS AT 30TH JUNE, 1931.

	No.		*Kva.*
Terminal Stations	4	..	186,900
Central Supply Transmission Sub-stations	16	..	164,750
Distribution Subs. at Line Voltage	16	..	20,330
Transformer Distribution Sub-stations (Melbourne and Extra Metropolitan)—			
Melbourne	7	3,105	
Metropolitan Electricity Supply	430	104,980	
Extra Metropolitan	20	4,655	
Eastern Metropolitan	138	5,582	
			118,322
GEELONG ELECTRICITY SUPPLY.			
Transformer Distribution Sub-stations	47	..	8,170
WESTERN DISTRICT.			
Transmission Sub-stations	5	..	5,250
Transformer Distribution Sub-stations	78	..	3,777
GIPPSLAND DISTRICT.			
Transmission Sub-stations	3	..	900
Transformer Distribution Sub-stations	117	..	4,505
NORTH-EASTERN DISTRICT.			
Transmission Sub-stations	7	..	10,750
Transformer Distribution Sub-stations	57	..	4,215
CASTLEMAINE DISTRICT.			
Transformer Distribution Sub-stations	38	..	1,355
SUGARLOAF-RUBICON AREA.			
Transformer Distribution Sub-stations	2	..	450
TOWN OF YALLOURN, ETC.			
Transformer Distribution Sub-stations	27	..	6,825
Total Installed	1,012	..	536,499

APPENDIX No. 4.

ENERGY MADE AVAILABLE FROM ALL SOURCES FOR USE IN THE METROPOLITAN AREA FOR ALL PURPOSES.

—	State Electricity Commission.	Melbourne City Council.	Melbourne Electric Supply.	Totals for General Purposes.	Railway Purposes Newport "A" Power Station.	Grand Total for all Purposes.
	Kwh.	Kwh.	Kwh.	Kwh.	Kwh.	Kwh.
1925–26 ..	157,035,322	15,600,000	80,616,400	253,251,722	177,695,192	430,946,914
1926–27 ..	235,010,590	12,240,000	52,375,000	299,625,590	178,126,299	477,751,889
1927–28 ..	303,087,822	14,071,976	4,380,550	321,540,348	176,135,807	497,676,155
1928–29 ..	337,761,176	15,769,915	..	353,531,091	173,020,880	526,551,971
1929–30 ..	370,601,767	14,396,740	..	384,998,507	175,993,998	560,992,505
1930–31 ..	350,121,825	13,927,480	..	364,049,305	169,631,912	533,681,217

APPENDIX No. 5.

METROPOLITAN DISTRICTS SERVED BY STATE ELECTRICITY COMMISSION OF VICTORIA.

District.	Population.	System of Supply.	Number of Consumers.	Domestic Light and Power.		Other Tariffs
				Service Charge per Room per Month.	Unit Charge.	
				s. d.		
Brighton	676,300	A.C., 1 ph., 200–400 v. ..		1 0	1¼d.	See Standard Metropolitan Tariffs at foot of page
Collingwood		A.C., 3 ph., 230–400 v. ..				
Camberwell		A.C., 1 ph., 200–400 v. ..				
Caulfield		,, ,, ..				
Cheltenham		,, ,, ..				
Essendon		A.C., 3 ph., 230–400 v. ..				
Flemington		,, ,, ..				
Fitzroy		,, ,, ..				
Hawthorn		A.C., 1 ph., 200–400 v. ..				
Kew		,, ,, ..				
Mentone		,, ,, ..				
Malvern		,, ,, ..				
Mordialloc		,, ,, ..				
Oakleigh		,, ,, ..				
Prahran		,, ,, ..				
Richmond		A.C., 3 ph., 230–400 v. ..				
St. Kilda		A.C., 1 ph., 200–400 v. ..				
Sandringham		,, ,, ..				
South Melbourne		A.C., 3 ph., 230–400 v. ..				
Sunshine		,, ,, ..				

METROPOLITAN DISTRICTS SERVED BY MUNICIPAL UNDERTAKINGS PURCHASING BULK SUPPLY FROM COMMISSION.

District.	Population.	Supply Authority.	System of Supply.	Number of Consumers.	Tariffs.
City of Melbourne	102,000	Melbourne City Council ..	D.C., 230–460 v. / A.C., 3 ph., 230–400 v.	25,462	The Commission's Standard Metropolitan Tariffs (see statement below) apply in all these centres. The Melbourne City Council has the Standard Two-part Domestic Tariff in operation, but its power tariffs are :—Block Rate : First 500 units in any one month, 1¾d. per unit; next 500 units in any one month, 1d.; all further consumption in any one month, 0·8d. per unit. Restricted Hour Flat Rate : Up to 500 units during any one month, 1¾d. per unit; for next 500 units in any one month, 1d. per unit; for next 9,000 units, 0.8d. per unit; all further consumption, 0·65d. per unit. Maximum Demand Rate : 2d. per unit for the quantity of electricity equivalent to 90 hours' use per month of consumers' maximum demand, and 0·3d. per unit for all units over that quantity.
Box Hill ..	13,400	Box Hill City Council ..	A.C., 3 ph., 230-400 v.	5,500	
Brunswick ..	56,200	Brunswick City Council ..	,, ,, ..	13,092	
Coburg ..	40,200	Coburg City Council ..	,, ,, ..	9,279	
Footscray ..	51,800	Footscray City Council ..	,, ,, ..	10,900	
Heidelberg ..	25,500	Heidelberg Shire Council	,, ,, ..	6,044	
Northcote ..	41,500	Northcote City Council ..	,, ,, ..	10,380	
Port Melbourne	13,100	Port Melbourne City Council	,, ,, ..	2,700	
Preston ..	29,200	Preston City Council ..	,, ,, ..	7,500	
Williamstown ..	20,200	Williamstown City Council	,, ,, ..	6,200	

STANDARD METROPOLITAN TARIFFS.

Commercial and Industrial Supplies—Lighting.—Tariff "A" Block Rate for electricity consumed between two consecutive monthly meter readings:—

Up to and including 500 kilowatt-hours	5¾d. per kilowatt-hour.
For all further consumption in the same period	3d. ,,

Power and Heating.—Tariff "C" Block Rate for electricity consumed between two consecutive monthly meter readings:—

Up to and including 500 kilowatt-hours	2d. per kilowatt-hour.
For the next 4,500 kilowatt-hours	1¼d. ,,
For the next 20,000 kilowatt-hours	0·9d. ,,
For all further consumption in the same period	0·8d. ,,

Tariff "D" Maximum Demand Rate—

Not applicable to any consumer whose monthly consumption is less than 5,000 kilowatt-hours.

For each kilowatt of Maximum Demand recorded during the month in respect of which the charge is made	17s. per month.
and for all electricity consumed	0·3d. per kilowatt-hour.

Any consumer applying to be charged under this tariff shall be deemed to have agreed to his being charged accordingly for a period of not less than twelve consecutive calendar months.

In the event of the consumption in any one month being less than 5,000 kilowatt-hours, the Commission may thereupon discontinue the application of this Tariff "D."

Tariff "E"—Restricted Hour—Two Rate—

For electricity consumed between 10 p.m. and 7 a.m.	0·5d. per kilowatt-hour.
For electricity consumed during other periods of the day of 24 hours	2d. ,,

Tariff "F"—Commercial Cooking—

For electricity consumed in connexion with the use of electric cooking ranges	1¼d. per kilowatt-hour.

Tariff "G"—Domestic.—For all purposes in dwellings, i.e., lighting, heating, cooking, power, &c. Service charge per room per month, payable quarterly in advance, 1s., and for all electricity consumed, 1¼d. per kilowatt-hour. No meter rent. Passages, pantries, cupboards, bathrooms, lavatories, cellars, entrance halls, porches, cloak rooms, sculleries, workshops, motor garages and wash-houses, and also vestibules and verandahs (unless such vestibules and verandahs are used as living rooms), are not counted as rooms. Outside lighting is exempt from the service charge, excepting in the cases of lighting for tennis courts, bowling greens and croquet lawns, the service charge for which is 5s. per month for each electrically-lighted tennis court, bowling green and croquet lawn.

Water Heating—Domestic, Commercial, and Industrial.—Tariff "H" for continuously operated heating elements. Fixed and only charge payable in advance for every 100 watts of element or part thereof in continuous service—3s. 9d. per month.

APPENDIX No. 5.—*continued.*

COUNTRY CENTRES SERVED BY STATE ELECTRICITY COMMISSION OF VICTORIA.

District.	Population.	System of Supply. Single-Ph. 230/460-V. Three-Ph. 230/400-V.	No. of Consumers.	Domestic Light and Power.		Commercial Light and Power. (*c*)		(*a*) Industrial Power and Heating Two-part Tariff. (*b*) Industrial Power and Heating Restricted Hour Tariff. (See Notes.)					(*d*) Commercial and Industrial Lighting.	(*e*) Intermittent Power.
				Service Charge per Room per Month.	Charge per Unit.	Service Charge per Room per Month.	Charge per Unit.	Service Charge per H.P. per Month.				Charge per Unit.	Charge per Unit.	Charge per Unit.
								H.P., 1–50.	H.P., 51–100.	H.P., 101–200.	H.P., 201–500.			
				s. d.	*d.*	*s. d.*	*d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*d.*	*s. d.*	*d.*
Alexandra ..	850	A.C., 3 ph.	211	1 6	1¾	2 0	1¾	6 0	5 6	5 0	4 6	1	1 0	6
Allansford ..	296	A.C., 1 ph.	32	1 6	1¾	2 0	1¾	7 0	6 6	6 0	5 6	1¼	1 0	6
Altona ..	1,500	,,	215	1 4	1½	1 10	1½	5 6	5 0	4 6	4 0	1	1 0	4½
Alvie	150	,,	70	1 6	1¾	2 0	1¾	7 0	6 6	6 0	5 6	1¼	1 0	6
Ardmona ..	..	A.C., 3 ph.	..	1 6	1¾	2 0	1¾	6 0	5 6	5 0	4 6	1	1 0	6
Bairnsdale ..	4,000	,,	733	1 3	1½	1 9	1½	5 0	4 6	4 0	3 6	1	0 9	4
Bayswater ..	450	A.C., 1 ph.	69	1 6	1½	2 0	1½	6 0	5 6	5 0	4 6	1	0 10	5
Barnawartha ..	240	,,	19	1 6	1¾	2 0	1¾	6 0	5 6	5 0	4 6	1	1 0	6
Barwon Heads ..	600	,,	144	1 6	1½	2 0	1½	6 6	6 0	5 6	5 0	1¼	1 0	5½
Beaconsfield ..	150	,,	11	1 6	1½	2 0	1½	6 0	5 6	5 0	4 6	1	0 10	5
Beeac	300	,,	100	1 6	1¾	2 0	1¾	7 0	6 6	6 0	5 6	1¼	1 0	6
Belgrave ..	800	A.C., 3 ph.	437	1 6	1½	2 0	1½	6 0	5 6	5 0	4 6	1	0 10	5
Bena	800	,,	27	1 6	1½	2 0	1½	6 0	5 6	5 0	4 6	1	1 0	5
Benalla ..	4,000	,,	567	1 3	1¾	1 9	1¾	5 0	4 6	4 0	3 9	1	0 9	5
Berwick ..	650	A.C., 1 ph.	203	1 6	1½	2 0	1½	6 0	5 6	5 0	4 6	1	0 10	5
Birregurra ..	400	,,	89	1 6	1¾	2 0	1¾	7 0	6 6	6 0	5 6	1¼	1 0	6
Boolarra ..	685	A.C., 3 ph.	48	1 6	1½	2 0	1½	6 0	5 6	5 0	4 6	1	1 0	5
Bostock Creek ..	50	A.C., 1 ph.	18	1 6	1¾	2 0	1¾	7 0	6 6	6 0	5 6	1¼	1 0	6
Boronia ..	700	,,	49	1 6	1½	2 0	1½	6 0	5 6	5 0	4 6	1	0 10	5
Briar Hill ..	200	,,	44	1 6	1½	2 0	1½	6 0	5 6	5 0	4 6	1	0 10	5
Bruthen ..	580	,,	..	1 6	1½	2 0	1½	6 0	5 6	5 0	4 6	1	1 0	5
Bunyip ..	600	,,	54	1 6	1½	2 0	1½	6 0	5 6	5 0	4 6	1	1 0	5
Camperdown ..	3,500	A.C., 3 ph.	592	1 3	1¾	1 9	1¾	6 0	5 6	5 0	4 9	1¼	1 0	5
Castlemaine ..	5,650	,,	708	1 3	1¾	1 9	1¾	6 0	5 6	5 0	4 9	1¼	1 0	5
Chiltern ..	1,500	,,	110	1 6	1¾	2 0	1¾	6 0	5 6	5 0	4 6	1	1 0	6
Clayton ..	250	A.C., 1 ph.	78	1 6	1½	2 0	1½	6 0	5 6	5 0	4 6	1	0 10	5
Cobden ..	650	A.C., 3 ph.	118	1 6	1¾	2 0	1¾	7 0	6 6	6 0	5 6	1¼	1 0	6
Cobram ..	850	D.C. ..	149	1 6	1¾	2 0	1¾	..	..	..	..	..	1 6	6
Colac	4,950	A.C., 3 ph.	1,092	1 3	1¾	1 9	1¾	6 0	5 6	5 0	4 9	1¼	0 8	5
Cororooke ..	150	,,	..	1 6	1¾	2 0	1¾	7 0	6 6	6 0	5 6	1¼	1 0	6
Cowwarr ..	200	,,	68	1 6	1½	2 0	1½	6 0	5 6	5 0	4 6	1	1 0	5
Cranbourne ..	300	A.C., 1 ph.	80	1 6	1½	2 0	1½	6 0	5 6	5 0	4 6	1	0 10	5
Crib Point ..	150	,,	62	1 6	1¾	2 0	1¾	6 0	5 6	5 0	4 6	1	1 0	6
Croydon ..	1,800	A.C., 3 ph, and 1 ph.	518	1 0	1¼	1 6	1¼	5 0	4 6	4 0	3 6	1	0 7	3
Dandenong ..	5,700	,,	1,062	1 2	1¼	1 9	1½	5 0	4 6	4 0	3 6	1	0 9	4
Darnum ..	100	A.C., 3 ph.	27	1 6	1½	2 0	1½	6 0	5 6	5 0	4 6	1	1 0	5
Deer Park ..	100	,,	13	1 4	1¾	1 10	1¾	6 6	6 0	5 6	5 0	1¼	1 0	5½
Dennington ..	310	A.C., 1 ph.	..	1 6	1¾	2 0	1¾	7 0	6 6	6 0	5 6	1¼	1 0	6
Diamond Creek ..	100	,,	66	1 6	1½	2 0	1½	6 0	5 6	5 0	4 6	1	0 10	5
Diggers Rest ..	50	,,	10	1 6	1¾	2 0	1¾	7 0	6 6	6 0	5 6	1¼	1 0	6
Dingley ..	100	,,	29	1 6	1½	2 0	1½	6 0	5 6	5 0	4 6	1	0 10	5
Dromana ..	350	A.C., 3 ph.	75	1 6	1¾	1 6	1¾	6 0	5 6	5 0	4 6	1	1 0	6
Drouin ..	850	,,	159	1 6	1½	2 0	1½	6 0	5 6	5 0	4 6	1	0 9	5
Drysdale ..	800	A.C., 1 ph.	67	1 6	1½	2 0	1½	6 6	6 0	5 6	5 0	1¼	1 0	5½
Echuca ..	4,032	A.C., 3 ph.	714	1 3	1¾	1 9	1¾	5 0	4 6	4 0	3 9	1	1 0	5
Eltham ..	700	A.C., 1 ph.	106	1 6	1½	2 0	1½	6 0	5 6	5 0	4 6	1	0 10	5
Evelyn (see Silvan)														
Euroa	2,300	D.C., 230 v	375	1 4	1¾	1 10	1¾	..	..	..	..	..	0 9	6
Ferntree Gully ..	1,200	A.C., 3 p.h and 1 ph.	160	1 6	1½	2 0	1½	6 0	5 6	5 0	4 6	1	0 10	5
Ferny Creek ..	50	A.C., 1 ph.	16	1 6	1½	2 0	1½	6 0	5 6	5 0	4 6	1	1 0	5
Frankston ..	3,000	A.C., 3 ph.	1,072	1 2	1¼	1 9	1½	5 0	4 6	4 0	3 6	1	0 9	4
Garfield ..	200	A.C., 1 ph.	48	1 6	1½	2 0	1½	6 0	5 6	5 0	4 6	1	1 0	5
Geelong ..	29,700	A.C., 3 ph. D.C. 3 wire	9,624	(See Schedule at foot hereof)										
Gisborne ..	770	A.C., 3 ph.	126	1 6	1¾	2 0	1¾	7 0	6 6	6 0	5 6	1¼	1 0	6
Glengarry ..	120	,,	18	1 6	1½	2 0	1½	6 0	5 6	5 0	4 6	1	1 0	5
Glen Waverley ..	350	A.C., 3 ph. and 1 ph.	..	1 6	1½	2 0	1½	6 0	5 6	5 0	4 6	1	0 10	5
Greensborough ..	930	A.C., 3 ph.	449	1 6	1½	2 0	1½	6 0	5 6	5 0	4 6	1	0 10	5
Hastings ..	488	A.C., 1 ph.	82	1 6	1¾	2 0	1¾	6 0	5 6	5 0	4 6	1	1 0	6
Heyfield ..	700	A.C., 3 ph.	125	1 6	1½	2 0	1½	6 0	5 6	5 0	4 6	1	1 0	5
Jumbunna ..	400	,,	..	1 6	1½	2 0	1½	6 0	5 6	5 0	4 6	1	1 0	5
Kallista ..	150	A.C., 1 ph.	29	1 6	1½	2 0	1½	6 0	5 6	5 0	4 6	1	1 0	5
Kangaroo Flat ..	835	A.C., 3 ph.	60	(Lighting 1s. per unit. Power 6d. per unit)										
Kilsyth ..	150	A.C., 1 ph.	32	1 0	1¼	1 6	1¼	5 0	4 6	4 0	3 6	1	0 7	3
Kolora and supply *en route*	..	,,	50	1 6	1¾	2 0	1¾	7 0	6 6	6 0	5 6	1¼	1 0	6
Kongwak ..	..	..	..	1 6	1½	2 0	1½	6 0	5 6	5 0	4 6	1	1 0	5
Koroit ..	2,000	A.C., 3 ph.	201	1 4	1¾	1 10	1¾	6 6	6 0	5 6	5 0	1¼	1 0	5½
Korumburra ..	3,000	,,	550	1 4	1½	1 10	1½	5 6	5 0	4 6	4 0	1	0 10	4½
Kyabram ..	1,700	,,	384	1 4	1¾	1 10	1¾	5 6	5 0	4 6	4 0	1	1 0	5½
Kyneton ..	3,195	,,	620	1 3	1¾	1 9	1¾	6 0	5 6	5 0	4 9	1¼	0 9	5
Lakes Entrance ..	900	A.C., 1 ph.	108	1 6	1½	2 0	1½	6 0	5 6	5 0	4 6	1	1 0	5
Lancefield ..	600	A.C., 3 ph.	89	1 6	1¾	2 0	1¾	7 0	6 6	6 0	5 6	1¼	1 0	6
Leongatha ..	1,700	,,	410	1 4	1½	1 10	1½	5 6	5 0	4 6	4 0	1	0 10	4½
Lilydale ..	1,800	,,	260	1 4	1½	1 10	1½	5 6	5 0	4 6	4 0	1	0 10	4
Loch	130	A.C., 1 ph.	48	1 6	1½	2 0	1½	6 0	5 6	5 0	4 6	1	1 0	5
Longwarry ..	300	A.C., 3 ph.	36	1 6	1½	2 0	1½	6 0	5 6	5 0	4 6	1	1 0	5½
Lower Plenty ..	50	A.C., 1 ph.	27	1 6	1½	2 0	1½	6 0	5 6	5 0	4 6	1	0 10	5
Macedon ..	250	A.C., 3 ph.	152	1 6	1¾	2 0	1¾	7 0	6 6	6 0	5 6	1¼	1 0	6

APPENDIX No. 5—*continued.*

COUNTRY CENTRES SERVED BY STATE ELECTRICITY COMMISSION OF VICTORIA—*continued.*

District.	Population.	System of Supply. Single-Ph. 230/460-V. Three-Ph. 230/400-V.	No. of Consumers.	Domestic Light and Power.		Commercial Light and Power. (c)		(a) Industrial Power and Heating Two-part Tariff. (b) Industrial Power and Heating Restricted Hour Tariff. (See Notes.)					(d) Commercial and Industrial Lighting.	(e) Intermittent Power.
				Service Charge per Room per Month.	Charge per Unit.	Service Charge per Room per Month.	Charge per Unit.	Service Charge per H.P. per Month. H.P., 1–50.	H.P., 51–100.	H.P., 101–200.	H.P., 201–500.	Charge per Unit.	Charge per Unit.	Charge per Unit.
				s. d.	*d.*	*s. d.*	*d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*d.*	*s. d.*	*d.*
Maffra.. ..	2,000	A.C., 3 ph.	496	1 4	1½	1 10	1½	5 6	5 0	4 6	4 0	1	0 10	4½
Mansfield ..	650	A.C., 1 ph.	208	1 6	1¾	2 0	1¾	6 0	5 6	5 0	4 6	1	1 0	6
Merrigum ..	200	A.C., 3 ph.	50	1 6	1¾	2 0	1¾	6 0	5 6	5 0	4 6	1	1 0	6
Mirboo North ..	600	,,	110	1 6	1½	2 0	1½	6 0	5 6	5 0	4 6	1	1 0	5
Moe	400	,,	140	1 6	1½	2 0	1½	6 0	5 6	5 0	4 6	1	1 0	5
Monegeetta ..	50	A.C., 1 ph.	13	1 6	1¾	2 0	1¾	7 0	6 6	6 0	5 6	1¼	1 0	6
Montrose ..	100	,,	54	1 0	1¼	1 6	1¼	5 0	4 6	4 0	3 6	1	0 7	3
Mooroopna ..	1,500	A.C., 3 ph.	215	1 4	1¾	1 10	1¾	5 6	5 0	4 6	4 0	1	0 11	5½
Montmorency ..	400	A.C., 1 ph.	41	1 6	1½	2 0	1½	6 0	5 6	5 0	4 6	1	0 10	5
Mornington ..	3,250	A.C., 3 ph.	602	1 4	1½	1 10	1½	5 6	5 0	4 6	4 0	1	0 10	4
Mortlake ..	1,000	,,	199	1 6	1¾	2 0	1¾	7 0	6 6	6 0	5 6	1¼	1 0	6
Morwell ..	1,365	,,	261	1 4	1½	1 10	1½	5 6	5 0	4 6	4 0	1	0 9	4½
Mulgrave ..	350	,,	154	1 6	1½	2 0	1½	6 0	5 6	5 0	4 6	1	0 10	5
Nalangil ..	..	,,	61	1 6	1¾	2 0	1¾	7 0	6 6	6 0	5 6	1¼	1 0	6
Narre Warren ..	100	,,	..	1 6	1½	2 0	1½	6 0	5 6	5 0	4 6	1	0 10	5
Nathalia ..	860	D.C. 230–460 v.	200	1 6	1¾	2 0	1¾	7 6	..	..	..	1¾	1 0	6
Newry ..	300	,,	32	1 6	1½	2 0	1½	6 0	5 6	5 0	4 6	1	1 0	5
Nilma	100	A.C., 1 ph.	19	1 6	1½	2 0	1½	6 0	5 6	5 0	4 6	1	1 0	5
Noble Park ..	500	,,	95	1 6	1½	2 0	1½	6 0	5 6	5 0	4 6	1	0 10	5
Noorat ..	120	A.C., 3 ph.	59	1 6	1¾	2 0	1¾	7 0	6 6	6 0	5 6	1¼	1 0	6
Numurkah ..	1,350	D.C., 230 v.	300	1 4	1¾	1 10	1¾	7 6	..	..	..	1¾	0 9	5
Ocean Grove ..	50	A.C., 1 ph.	41	1 6	1½	2 0	1½	6 6	6 0	5 6	5 0	1¼	1 0	5½
Officer	50	,,	2	1 6	1½	2 0	1½	6 0	5 6	5 0	4 6	1	0 10	5
Olinda ..	250	,,	48	1 6	1½	2 0	1½	6 0	5 6	5 0	4 6	1	1 0	5
Pakenham ..	400	,,	39	1 6	1½	2 0	1½	6 0	5 6	5 0	4 6	1	0 10	5
Pomborneit ..	50	,,	17	1 6	1¾	2 0	1¾	7 0	6 6	6 0	5 6	1¼	1 0	6
Poowong ..	..	,,	45	1 6	1½	2 0	1½	6 0	5 6	5 0	4 6	1	1 0	5
Portarlington ..	600	,,	118	1 6	1½	2 0	1½	6 6	6 0	5 6	5 0	1¼	1 0	5½
Port Fairy ..	2,000	A.C., 3 ph.	206	1 4	1¾	1 10	1½	6 6	6 0	5 6	5 0	1¼	1 0	5½
Portsea ..	150	,,	98	1 6	1¾	2 0	1¾	6 0	5 6	5 0	4 6	1	1 0	6
Point Lonsdale ..	700	A.C., 1 ph.	97	1 6	1½	2 0	1½	6 6	6 0	5 6	5 0	1¼	0 10	5½
Queenscliff ..	1,900	A.C., 3 ph.	395	1 4	1½	1 10	1½	6 0	5 6	5 0	4 9	1¼	0 10	5
Riddell ..	350	A.C., 1 ph.	17	1 6	1¾	2 0	1¾	7 0	6 6	6 0	5 6	1¼	1 0	6
Ringwood ..	3,000	A.C., 3 ph.	610	1 0	1¼	1 6	1¼	5 0	4 6	4 0	3 6	1	0 7	3
Romsey ..	600	,,	86	1 6	1¾	2 0	1¾	7 0	6 6	6 0	5 6	1¼	1 0	6
Rosebud ..	200	,,	79	1 6	1¾	2 0	1¾	6 0	5 6	5 0	4 6	1	1 0	6
Rosedale ..	520	A.C., 1 ph.	67	1 6	1½	2 0	1½	6 0	5 6	5 0	4 6	1	1 0	5
Ruby	50	,,	8	1 6	1½	2 0	1½	6 0	5 6	5 0	4 6	1	1 0	5
Rutherglen ..	1,160	A.C., 3 ph.	256	1 4	1¾	1 10	1¾	5 6	5 0	4 6	4 0	1	0 11	5½
Rye	50	,,	11	1 6	1¾	2 0	1¾	6 0	5 6	5 0	4 6	1	1 0	6
Sale	3,971	,,	738	1 3	1½	1 9	1½	5 0	4 6	4 0	3 6	1	0 9	4
Sassafras Area ..	500	A.C., 3 ph. and 1 ph.	269	1 6	1½	2 0	1½	6 0	5 6	5 0	4 6	1	1 0	5
Shepparton ..	6,000	A.C., 3 ph.	1,036	1 3	1¾	1 9	1¾	5 0	4 6	4 0	3 9	1	0 10	5
Sherbrooke ..	..	A.C., 1 ph.	..	1 6	1½	2 0	1½	6 0	5 6	5 0	4 6	1	1 0	5
Silvan Line and Evelyn	650	A.C., 3 ph. and 1 ph.	55	1 6	1½	2 0	1½	6 0	5 6	5 0	4 6	1	0 10	
Springhurst ..	100	A.C., 3 ph.	17	1 6	1¾	2 0	1¾	6 0	5 6	5 0	4 6	1	1 0	6
Springvale ..	1,250	,,	286	1 6	1½	2 0	1½	6 0	5 6	5 0	4 6	1	0 10	5
Somerville ..	200	,,	52	1 6	1¾	2 0	1¾	6 0	5 6	5 0	4 6	1	1 0	6
Sorrento ..	500	,,	271	1 6	1¾	2 0	1¾	6 0	5 6	5 0	4 6	1	1 0	6
Stratford ..	800	,,	96	1 6	1½	2 0	1½	6 0	5 6	5 0	4 6	1	1 0	5
Sunbury ..	1,100	,,	187	1 4	1¾	1 10	1½	6 6	6 0	5 6	5 0	1¼	1 0	5½
St. Albans ..	600	A.C., 2 ph. of 3 ph.	64	1 4	1¾	1 10	1¾	6 6	6 0	5 6	5 0	1¼	1 0	5½
Swan Reach ..	..	.. ..	..	1 6	1½	2 0	1½	6 0	5 6	5 0	4 6	1	1 0	5
Tally Ho ..	110	.. ..	..	1 6	1½	2 0	1½	6 0	5 6	5 0	4 6	1	0 10	5
Tatura ..	1,300	A.C., 3 ph.	242	1 4	1½	1 10	1½	5 6	5 0	4 6	4 0	1	0 11	5½
Terang ..	2,255	,,	439	1 4	1¾	1 10	1¾	7 0	6 6	6 0	5 6	1¼	1 0	5½
Thornton ..	150	A.C., 1 ph.	37	1 6	1¼	2 0	1¼	6 0	5 6	5 0	4 6	1	1 0	6
Tinamba ..	50	,,	18	1 6	1½	2 0	1½	6 0	5 6	5 0	4 6	1	1 0	5
Tongala ..	250	A.C., 3 ph.	80	1 6	1¾	2 0	1¾	6 0	5 6	5 0	4 6	1	1 0	6
Toongabbie ..	150	A.C., 1 ph.	15	1 6	1½	2 0	1½	6 0	5 6	5 0	4 6	1	1 0	5
Traralgon ..	2,300	A.C., 3 ph.	469	1 4	1½	1 10	1½	5 6	5 0	4 6	4 0	1	0 8	4½
Trafalgar ..	700	,,	215	1 6	1½	2 0	1½	6 0	5 6	5 0	4 6	1	1 0	5
Tremont ..	200	A.C., 1 ph.	41	1 6	1½	2 0	1½	6 0	5 6	5 0	4 6	1	1 0	5
Tyabb.. ..	..	A.C., 1 ph.	..	1 6	1¾	2 0	1¾	6 0	5 6	5 0	4 6	1	1 0	6
Tyers	250	,,	46	1 9	1½	2 3	1½	6 0	5 6	5 0	4 6	1	1 0	6
Tynong ..	50	,,	15	1 6	1½	2 0	1½	6 0	5 6	5 0	4 6	1	1 0	5
Upwey ..	200	A.C., 3 ph.	105	1 6	1½	2 0	1½	6 0	5 6	5 0	4 6	1	0 10	5
Wahgunyah ..	500	,,	72	1 6	1¾	2 0	1¾	6 0	5 6	5 0	4 6	1	0 9	6
Wangaratta ..	4,300	,,	702	1 3	1¾	1 9	1¾	5 0	4 6	4 0	3 9	1	0 9	5
Warrion ..	..	A.C., 1 ph.	..	1 6	1¾	2 0	1¾	7 0	6 6	6 0	5 6	1¼	1 0	6
Warrnambool ..	8,000	A.C., 3 ph.	1,158	1 3	1¾	1 9	1¾	6 0	5 6	5 0	4 9	1¼	0 9	5
Warragul ..	4,700	,,	..	1 4	1½	1 10	1½	5 6	5 0	4 6	4 0	1	0 9	4
Werribee ..	1,700	,,	447	1 4	1½	1 10	1½	5 6	5 0	4 6	4 0	1	1 0	4½
Winchelsea ..	705	A.C., 1 ph.	99	1 6	1¾	2 0	1¾	7 0	6 6	6 0	5 6	1¼	1 0	6
Wiseleigh ..	..	.. ..	..	..	..	..	..	..	..	..	..	..	..	..
Woodend ..	1,000	A.C., 3 ph.	225	1 6	1¾	2 0	1¾	7 0	6 6	6 0	5 6	1¼	1 0	6
Yarragon ..	400	,,	71	1 6	1½	2 0	1½	6 0	5 6	5 0	4 6	1	1 0	5
Yarrawonga ..	1,650	D.C., 230 v	333	1 4	1¾	1 10	1¾	7 6	..	..	..	1¾	1 0	6
Yinnar ..	50	A.C., 1 ph.	26	1 6	1½	2 0	1½	6 0	5 6	5 0	4 6	1	1 0	5

APPENDIX No. 5—*continued.*

NOTES.

(*a*) Service charge subject to discount of 5 per cent. if three motors, 10 per cent. if four motors, 15 per cent. if five motors, and 20 per cent. if six or more motors are installed.
Energy charge subject to discount of 5 per cent. if more than 5,000 units, 10 per cent. if more than 25,000 units, and 11 per cent. if more than 50,000 units be consumed per month.

(*b*) Supply between the hours of 10 p.m. and 7 a.m.—
Service charge subject to the same discounts as for Commercial Power Tariff and to special discount of 10 per cent.

(*c*) Applicable to licensed hotels and boarding-houses.

(*d*) Unit charge subject to the following consumption discounts:—Up to 300 units per month, no discount; over 300 units per month, 10 per cent. on all units supplied; over 500 units per month, 20 per cent. on all units supplied; over 1,000 units per month, 40 per cent. on all units supplied.

(*e*) Applicable to the supply of small quantities of electricity for intermittent power, cooking or heating in shops, offices, or to motive power users with an installed capacity of not less than five horse-power.
Subject to following consumption discounts:—Up to 250 units per month, no discount; over 250 units per month, 10 per cent. on all units supplied; over 400 units per month, 20 per cent. on all units supplied; over 600 units per month, 30 per cent. on all units supplied; over 800 units per month, 40 per cent. on all units supplied.

GEELONG TARIFFS.

CLASS 1.—COMMERCIAL AND INDUSTRIAL SUPPLIES.

Lighting.—

Tariff "A"—Block Rate—

For electricity consumed between two consecutive monthly meter readings—

Up to and including 500 kilowatt-hours	6½d. Per kilowatt-hour.
For all further consumption in the same period	4d. ,,

Power and Heating.—

Tariff "C"—Block and Maximum Demand Rates—

For electricity consumed between two consecutive monthly meter readings—

Up to and including 500 kilowatt-hours	2⅝d. per kilowatt-hour.
For the next 1,000 kilowatt-hours	1¾d. ,,

For all further consumption in the same period the Consumer shall have the option of being charged according to one of the following alternatives:—

1. At the rate of 1¾d. per kilowatt-hour.
2. At the rate of 8s. 4d. per kilowatt of maximum demand, and 0·6d. per kilowatt-hour consumed.
Provided that for each 1s. increase above or decrease below the standard cost of 30s. per ton, for black coal delivered into the bunkers at the Commission's Power Station, the sum of 0·01d. shall be respectively added to or subtracted from the above sum of 0·6d.
Any Consumer electing to be charged under Option 2 above, shall be deemed to have agreed to his being charged accordingly for a period of not less than twelve consecutive calendar months.

Tariff "E"—Restricted Hour—Two Rate—

For electricity consumed between 10 p.m. and 7 a.m.	0·75d. per kilowatt-hour.
For electricity consumed during other periods of the day of 24 hours	2½d. ,,

Tariff "F"—Commercial Cooking—

For electricity consumed in connexion with the use of electric cooking ranges	1½d. per kilowatt-hour.

CLASS 2.—DOMESTIC SUPPLY—PRIVATE HOUSES AND FLATS.

Lighting, Power, Heating, and Cooking—

Tariff "G"—Two-part Rate (Service Plus Energy Charge)—

Service Charge—

1s. 3d. per month per room (minimum charge 5s. per month), to be paid whether room is lighted or not, and whether it is erected at the time this application is made, or at some time thereafter; payable quarterly in advance and whether any or no electricity is consumed during the period in respect of which the charge is made.

Each room is assessed on the basis that every 350 square feet of floor area or part thereof constitute one room.

Maximum charge in respect of any one room, 3s. 9d. per month.

Exemptions.—Passages, pantries, cupboards, bathrooms, lavatories, cellars, entrance halls and porches, cloak rooms, scalleries, workshops, motor garages and wash-houses, and also vestibules and verandahs, unless such vestibules and verandahs are used as living rooms.

Energy Charge—

1½d. per kilowatt-hour, payable quarterly upon rendering of account; no meter rental.

CLASS 3.—COMMERCIAL, INDUSTRIAL, AND DOMESTIC SUPPLIES.

Water Heating—

Tariff "H"—Continuously Operated Heating Elements—

For each 100 watts rating or part thereof of water heating element continuously operated throughout the year—
A fixed charge, including electricity, of 4s. 6d. per month, payable quarterly in advance. (No meter rental.)

APPENDIX No. 5—*continued.*

COUNTRY ELECTRIC SUPPLY UNDERTAKINGS OPERATED BY MUNICIPAL AND PRIVATE UNDERTAKERS.

Locality.	Population.	Supply Authority.	System of Supply.	No. of Consumers.		Price per Unit.	
				Light.	Power.	Lighting.	Power.
Ararat ..	5,200	Ararat Borough Council	A.C., 230–400 v. ..	750	(total)	1s.	6d.
*Aspendale, Chelsea, and Carrum	7,000	Carrum E.S. Co.	,, ..	1,600	..	8d.	4d.
Avoca ..	800	Avoca E.S. Co.	,, ..	130	40	1s.	6d.
Bacchus Marsh	1,450	Bacchus Marsh Shire Council ..	,, ..	343	(total)	1s.	6d.
Ballarat ..	40,000	Electric Supply Co. of Victoria Ltd.	,, ..	4,500	(total)	9d., and 9d. to 5d.	3½d. to 1½d., with fuel clause
Ballan ..	450	Ballan E.S. Co. Ltd.	,, ..	109	..	1s. 3d. ..	9d.
Beaufort ..	1,400	Ripon Shire Council	,, ..	200	..	1s. 6d. ..	9d.
Beechworth ..	2,600	Beechworth Borough Council ..	,, ...	300	..	1s.	6d. (maximum)
Bendigo ..	35,000	Electric Supply Co. of Victoria Ltd.	A.C., 230–400 v. and D.C., 220–440 v.	5,253	(total)	9d., and 9d. to 5d.	4d. and 1½d., with fuel clause
Beulah ..	550	Karkarooc Shire Council	D.C., 230–460 v. ..	129	25	1s. 6d. ..	9d.
Birchip ..	1,031	Birchip E.S. Co. Ltd.	D.C., 230 ..	220	..	1s. ..	6d.
Boort ..	750	Boort Co-op. Butter and Ice Co. ..	,, ..	175	56	1s. 3d. to 9d. ..	6d. to 4½d.
Broadford ..	1,000	Broadford Shire Council	,, ..	200	..	9d.	
Casterton ..	1,900	Casterton E.S. Co.	,, ..	250	15	1s.	7½d.
Charlton ..	1,215	Charlton E.L. Co.	D.C., 230 v. ..	350	(total)	1s. to 9d. ..	4½d.
Cohuna ..	..	Federal Milk Pty. Ltd.	,, ..	210	(total)	1s.	9d.
Coleraine .	900	Coleraine and W.D.B.F. Co. Ltd. ..	,, ..	161	13	1s. 2d.	
Daylesford ..	3,200	India Rubber G.P. and T.W. Co. ..	D.C., 230–460 v. ..	495	..	10d. ..	5d.
Dimboola ..	1,500	Dimboola Shire Council	,, ..	400	94	1s. 2d. ..	7d.
Donald ..	1,800	Donald Shire Council	D.C., 230 v. ..	400	..	1s.	6d.
†Doncaster ..	3,200	Doncaster Shire Council	A.C. 1 ph., 200–400 v.	350	..	8d.	4d.
Dunolly ..	580	Shire of Bet Bet	,, ..	105	..	1s. 3d. ..	9d.
Eaglehawk ..	4,719	Eaglehawk Borough Council ..	D.C., 230–460 v. ..	630	..	9d.	5½d., and 4½d. to 1½d.
Elmore ..	700	Elmore Elec. Supply Co. ..	D.C., 230 v. ..	162	..	1s.	
Foster ..	650	Toora-Foster Elec. Co.	A.C., 230–400 v. ..	See Toora		1s. ..	4d. to 1d.
Goroke ..	200	W. A. Bland	D.C., 230 v. ..	..	..	1s. 6d. ..	6d.
Hamilton ..	5,098	Hamilton E.S. Co.	D.C., 230 v. ..	1,008	(total)	10d. to 8d. ..	7d. to 1½d.
Healesville ..	2,400	Healesville Shire Council ..	A.C., 230–400 v. ..	363	127	10d. to 6d. ..	4d. to 3d.
Heathcote ..	1,200	McIvor Shire Council	D.C., 230 v. ..	235	..	1s. 1d. ..	6d.
Hepburn ..	200	Hepburn Springs E.S. Co. ..	A.C., 230–400 v. ..	132	..	1s. 3d. ..	10d.
Hopetoun ..	800	Karkarooc Shire Council	D.C., 230 v. ..	94	41	1s. 6d. ..	9d.
Horsham ..	5,129	Horsham E.S. Co.	D.C. 230–460 v. ..	905	124	10d. ..	5d.
Inglewood ..	1,100	Inglewood Borough Council ..	D.C., 230 v. ..	180	..	1s.	
Inverloch ..	120	C.W. Wyett	D.C. 110 v. ..	12	..	1s. 6d. ..	1s.
Jeparit ..	800	H. J. W. Block	,, ..	225	(total)	1s.	6d.
Kaniva ..	550	Lawloit Shire Council	A.C., 230–400 v. ..	130	6	1s. 3d. ..	6d.
Kerang ..	2,750	Kerang Shire Council	D.C., 230 v. ..	550	(total)	10d. ..	5d. to 4d.
Kilmore ..	900	Kilmore Shire Council	,, ..	180	(total)	1s. to 6d. ..	7d.
Koondrook ..	400	Koondrook Shire Council ..	A.C., 230–400 v. ..	60	..	1s. 3d. ..	9d.
Koo-wee-rup ..	500	Koo-wee-rup E. L. Co.	A.C. 1 ph., 230 v. ..	70	..	Domestic light, 2s. per room per month, and 2d. per unit	
Korong Vale ..	500	Korong Shire Council	A.C., 230–400 v. ..	182	4	1s.	6d.
Lorne ..	250	Winchelsea Shire Council	D.C., 230 v. ..	120	..	1s. 6d. to 1s.	
Maryborough ..	5,175	Maryborough Borough Council ..	A.C., 230–400 v. ..	1,130	(total)	1s.	5d.
Mildura ..	6,000	Mildura Town Council	D.C., 230–460 v. ..	1,200	(total)	11d. ..	2½d., and 6d. to 1.49d.
Minyip ..	700	Dunmunkle Shire Council ..	D.C., 230 v. ..	165	(total)	1s. 2d. ..	8d.
Murrayville ..	400	Walpeup Shire Council	A.C., 230–400 v. ..	80	..	1s. 6d. ..	1s.
Murchison ..	600	Waranga Shire Council	A.C., 230–400 v. ..	100	..	1s. 3d. ..	6d.
Nagambie ..	750	Goulburn Shire Council	D.C., 230 v. ..	150	..	10d. ..	6d. to 5d.
Natimuk ..	559	H. C. Woolmer	A.C., 230–400 v. ..	105	..	1s. 6d ..	9d.
Nhill	1,700	Lowan Shire Council	D.C., 230–460 v. ..	400	..	1s. 3d. ..	9d. to 5d.
Nyah ..	600	Swan Hill Shire Council	A.C., 230–400 v. ..	40	..	1s. 3d. ..	6d.
Orbost ..	2,000	Orbost Butter and Cheese Co. ..	D.C., 230 v. ..	300	20	10d. ..	6d.
Ouyen ..	950	Walpeup Shire Council	,, ..	160	..	1s.	
Pyramid ..	475	Gordon Shire Council	A.C., 230–400 v. ..	78	12	1s. 6d. ..	9d.
Phillip Island ..	1,000	Phillip Island Shire Council ..	A.C., 230–400 v. ..	50	..	1s. 3d. ..	7d.
Portland ..	2,700	Portland Borough Council ..	A.C., 230–400 v. ..	..	..	1s.	6d.
Quambatook ..	500	Kerang Shire Council	D.C., 230 v. ..	100	4	1s. 3d. ..	9d.
Rainbow ..	900	Rainbow E.L. Co.	,, ..	145	4	1s.	1s. to 8d.
Rochester ..	1,487	Commonwealth E.S. Co. ..	,, ..	360	12	1s. to 10d. ..	7d. to 6d.
Rupanyup ..	700	Dunmunkle Shire Council ..	,, ..	125	..	1s. 3d. ..	8d.
Rushworth ..	1,200	Waranga Shire Council	,, ..	275	(total)	11d. ..	6d. to 1½d.
Sea Lake ..	600	Wycheproof Shire Council ..	D.C., 230 v. ..	175	(total)	1s. 4d. ..	6d. to 4½d
Seymour ..	2,525	Seymour Shire Council	A.C., 230–400 v. ..	450	(total)	10d. to 6d. ..	5d. to 2d.
Stawell ..	5,000	Stawell Borough Council ..	A.C., 230–400 v. ..	510	85	10d. ..	5d.
St. Arnaud ..	3,500	St. Arnaud Borough Council ..	A.C., 230–400 v. ..	434	..	1s. and 11d. ..	6d. and 5d.
Swan Hill ..	3,031	Swan Hill Shire Council	,, ..	450	100	1s. to 3d. ..	5d. to 1d., and 3½d.

APPENDIX No. 5—*continued.*

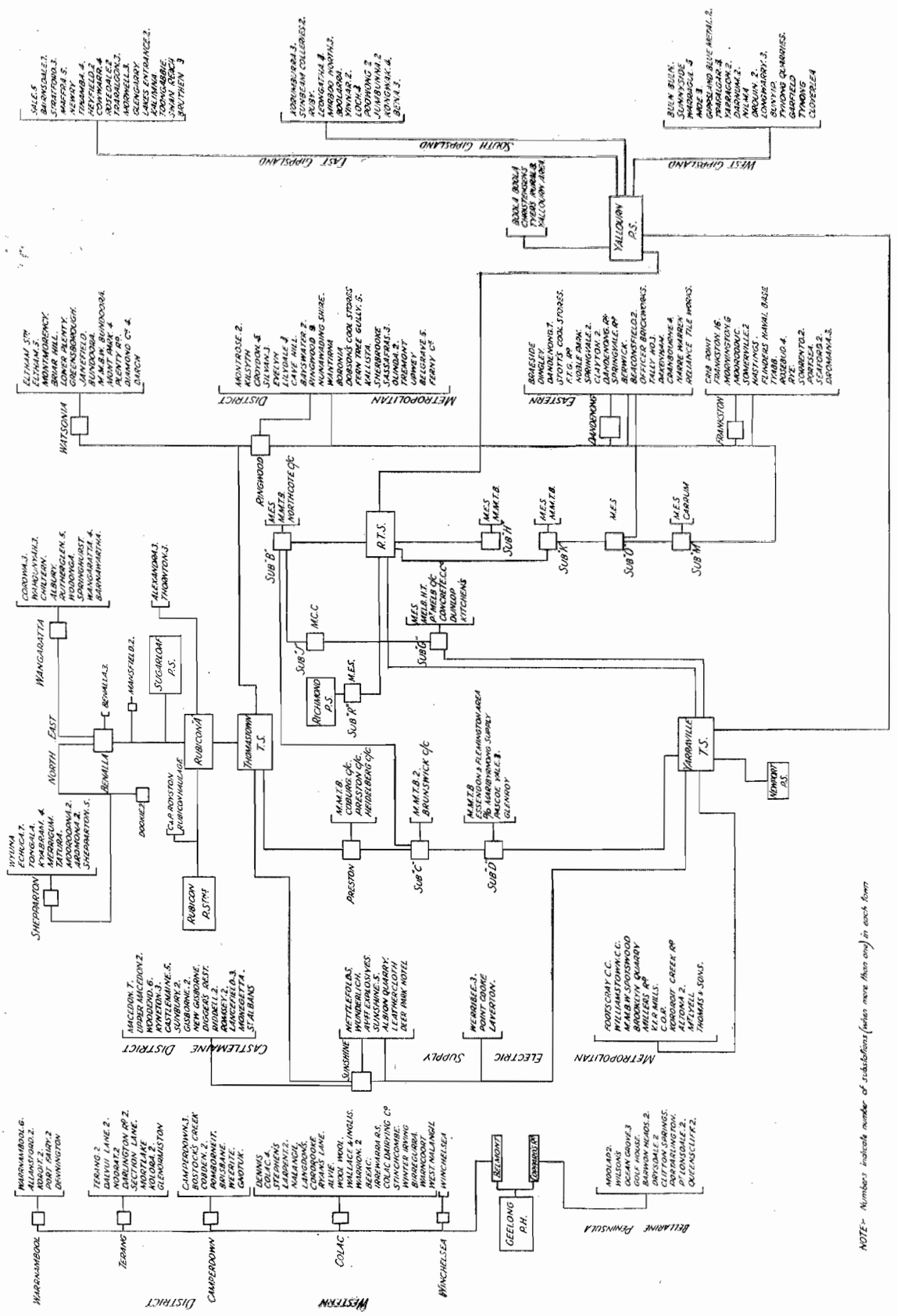
COUNTRY ELECTRIC SUPPLY UNDERTAKINGS OPERATED BY MUNICIPAL AND PRIVATE UNDERTAKERS—*continued.*

Locality.	Population.	Supply Authority.	System of Supply.	No. of Consumers.		Price per Unit.	
				Light.	Power.	Lighting.	Power.
Toora ..	350	Toora Foster Elec. Co. Ltd. ..	A.C., 230–400 v. ..	170	(total)	1s. ..	4d. to 1d.
Trentham ..	750	Kyneton Shire Council	,, ..	120	..	1s. 3d. ..	6d.
Ultimo ..	250	Swan Hill Shire Council	,, ..	30	..	1s. 3d.	6d.
Violet Town ..	600	Violet Town Shire Council ..	D.C., 400 v. ..	91	23	1s. 6d. ..	6d. and 3d.
Warburton ..	1,000	Yuthong Electric Coy.	D.C., 230 v. ..	140	..	1s. per month per 25 c.p. lamp	9d.
Warracknabeal	2,875	Warracknabeal E.L. Co.	A.C., 230–400 v. ..	350	..	1s.	6d.
Wedderburn ..	1,000	Korong Shire Council	,, ..	182	4	1s.	6d.
Wodonga ..	2,300	Wodonga E.S. Co.	A.C., 230–400 v. ..	216	..	9d.	7d. to 6d.
Wonthaggi ..	6,000	State Coal Mine	A.C., 415–240 v. ..	1,100	194	7d.	3d. to 1½d.
Wycheproof ..	800	Wycheproof Shire Council ..	D.C., 230 v. ..	160	(total)	1s. 3d. ..	6d. to 4½d.
Yarram ..	1,200	Yarram H.E. Co.	A.C., 230–400 v. ..	250	..	11d. ..	5d. to 4d., and 2d.
Yea	950	Yea Shire Council	,, ..	70	..	1s. (maximum)	

* The lighting tariff is applicable to commercial and industrial lighting, and the power tariff to intermittent power; the unit rate in both instances being subject to consumption discounts as set out under country centres served by the Commission. The other tariffs available at Carrum are similar to those for Frankston.

† The industrial power and heating two part tariff for Mulgrave (served by Commission) is also available at Doncaster.

APPENDIX No. 6.



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