1927.

VICTORIA.

STATE ELECTRICITY COMMISSION OF VICTORIA.

EIGHTH ANNUAL REPORT

FOR THE

FINANCIAL YEAR ENDED 30TH JUNE, 1927;

TOGETHER WITH

APPENDICES

PRESENTED TO PARLIAMENT PURSUANT TO SECTION 25 (*b*) OF STATE ELECTRICITY COMMISSION ACT No. 2996.

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EIGHTH ANNUAL REPORT.

The Honorable T. Tunnecliffe, M.L.A.,
Minister i/c Electrical Undertakings,
Melbourne.

SIR,

As directed by section 25 (*b*) of the *State Electricity Commission Act* 1918, No. 2996, we have the honour to present our Eighth Annual Report, covering the financial year ended 30th June, 1927, with Profit and Loss Accounts and Balance-sheet.

PART I.—ADMINISTRATION.

NEW WORKS OF POWER GENERATION.

Yallourn.—The very rapid growth in the public demand for electricity having exceeded the most sanguine expectations, a situation arose at the close of the financial year which demanded immediate action in the direction of providing additional generating plant. The unexpected increment of load during the winter of 1927 amounted to 8,000 kilowatts, and at the times of peak demand it became necessary to overload the Yallourn Power Station, as well as, occasionally, to run the fifth, or standby, set.

The provision of additional generating plant being made elsewhere to meet the progressive demand on the State scheme is designed to serve only the normal anticipated increment of load during the years 1928–29, and thus the unexpected increment of load necessitated the immediate installation of a sixth turbo-generator of 12,500 kilowatts at the Yallourn Power Station, as offering the only means of avoiding a shortage of power in the winter of 1928.

When the Yallourn Power Station was designed in 1920, provision was made for the possible future installation of a sixth generator as an insurance against this very situation. The building was constructed of the necessary size to accommodate an additional turbo-generator, and all subterranean work and auxiliary plant were similarly designed, so that, when the occasion arose, nothing should remain but to place such generator in its pre-arranged position and connect it to the remainder of the plant.

The existing boiler installation is capable of producing sufficient steam to operate a sixth set.

The Commission's decision to install this additional set was endorsed by the Power Advisory Board, and subsequently the Government authorized the acceptance of the tender of the Metropolitan-Vickers Electrical Company, of Trafford Park, England, to supply and erect a turbo-generator of 12,500 kilowatts capacity for the sum of £38,500, including £13,200 for appurtenant condensers and pumps, which the Commission stipulated should be manufactured in this State, and which will be supplied by Messrs. Thompson Engineering and Pipe Company Ltd., of Castlemaine. This unit will be similar to the present generating sets, which were likewise supplied by Metropolitan-Vickers Ltd.

The total cost of the additional plant, ready for operation, is estimated to be £90,000, and of this amount £65,000 will be expended in this State.

Richmond.—As indicated in the Seventh Annual Report of the Commission, it became necessary, during the financial year under review, to complete all preparations for a minor extension of generating plant to supplement the supply from the State systems, and be in readiness to meet the anticipated additional public demand for energy during the years 1929 and 1930.

An exhaustive examination of the whole position proved it to be advisable, for various reasons, economic and otherwise, to install this new plant in Melbourne. After consideration of various alternatives, the choice of location ultimately lay between Newport and the Melbourne Electric Supply Company's Power Station at Richmond, which is to be shut down as a single-phase station during 1927, when its disposal will be at the direction of the Commission, under its agreement with the Company. The Newport alternative was finally rejected because its cost would be much greater and it would not add to the total installed generating capacity of the system

as would Richmond, since it would only make use of the spare 15,000 kw. turbo-generator, thus leaving insufficient stand-by plant for emergencies. Moreover, valuable and useful plant at Richmond, consisting of buildings, boilers, circulating water system, &c., would have to be remain idle and unproductive.

A scheme was then drawn up on the basis of reconditioning the Richmond Power Station and installing therein a three-phase 18,500 kw. turbo-generator. This scheme is designed to be in operation early in 1929, and is estimated to cost £138,000.

After receiving the concurrence of the Power Advisory Board, the proposal was presented to the Government on the 2nd December, 1926, and duly sanctioned. Arrangements have been made by the Commission to give full effect to the scheme.

MAJOR EXTENSION OF PLANT AFTER 1930.

As previously explained, Parliament has already approved of progressive installations of generating plant to meet the yearly increments of load up to and including the winter of 1930. It is imperative that a complete scheme, providing for a major installation of plant capable of meeting the increase in demand for a period extending to, say, 1935, shall be authorized during 1927.

The necessity for this plant was endorsed by Mr. Willits H. Sawyer, Royal Commissioner, who also agreed that it should be of a major order. The form it should take, in type, location, character and capacity, has been the subject of the closest investigation by the Commission, based upon the following considerations, viz. :—

(*a*) The first portion of such installation must be in operation by the winter of 1931.

(*b*) At the outset it is not likely that more than 25,000 kilowatts capacity would be required.

At the close of the financial year, the investigations had reached a stage which disclosed that the alternative of duplicating the present capacity of the Yallourn Power Station by the provision there of a further 50,000 kilowatts of plant is, upon both technical and economic grounds, the most appropriate means of meeting the position. Such major extension of generating plant would be based on the exclusive use of brown coal from the Yallourn New Open Cut, and would involve the duplication of the transmission line from Yallourn to Melbourne, with a terminal station at Richmond. The Commission will present considered recommendations to the Government upon this basis at an early date.

POWER ADVISORY BOARD.

In the foregoing announcements regarding the provision of new generating plants, references are made to the Power Advisory Board. This Board was created during the financial year under review, following upon a recommendation made by Mr. Willits H. Sawyer, Royal Commissioner. In his report on the activities of the Commission, Mr. Sawyer advised that such a Board should consist of at least one representative each of the Electricity Commission, the Victorian Railways Commissioners, and the Melbourne and Metropolitan Tramways Board, the opinion being expressed by Mr. Sawyer that it would " be a mistake for any one of these three organizations to go ahead on power matters without at least getting the advice of the others interested," and that " such a Board, as proposed, should work for the mutual benefit of all contributing parties and the State at large."

The Commission, late in 1926, duly appointed such Power Advisory Board, composed of the following members, viz. :—

Mr. H. R. Harper, Chief Engineer of the State Electricity Commission.
Mr. H. P. Colwell, Chief Electrical Engineer, Victorian Railways.
Mr. T. P. Strickland, Chief Engineer, Melbourne and Metropolitan Tramways Board.

The duties of the Board are as follow :—

(*a*) To collect data regarding the growth of the electric load upon State-owned generating systems, and to prepare and keep up to date forecasts of the future growth of such load.

(*b*) To investigate and report to the Commission upon the increments of generating plant required to be installed from time to time to meet the anticipated growth of load, and to determine the date or dates by which such increments should be ready for operation, and the location of such generating plant.

(*c*) To investigate and report upon specific scheme or schemes of electricity generation which may be referred to the Board by the Electricity Commission.

(*d*) To investigate and report, from time to time, upon the best and most economic distribution of the available load upon the several Power Houses owned by the State authorities.

(*e*) It is a definite instruction to the Board that every question is to be considered from the point of view of the broad interests, financial and economic, of the State as a unity, and not from the point of view of the interests only of any one Department of the State.

YALLOURN OPEN CUT.

Technical data relating to the actual development of the Yallourn Open Cut are contained in Part III. of this report. As, however, important and far-reaching proposals are pending in regard to the future development of this Cut, it is desirable to make a survey of the whole position as it affects future coal-winning operations, and to give an indication of the policy and programme which have been prepared by the Commission in connexion therewith.

It is evident that the development of coal-winning operations at Yallourn must not only keep pace with, but must effectually anticipate the steadily increasing consumption of coal. As the demand increases, additional plant must be provided to remove overburden, dig coal, and convey both to their respective points of disposal. This necessity is independent of the type of plant and character of operation adopted. While this is so, the policy of the Commisssion is to obtain that type of plant which it considers will result in the most economic methods of operation, with due regard to its adaptability as part of a progressive scheme of extension. It has, at different times, therefore, despatched its technical experts abroad to make a close study of every phase of the question, and the information which has been thus collected will be a valuable guide in the major extensions of plant that will require to be made in the future.

When the works at Yallourn were originally planned in 1920, the coal field was laid out so as to provide for a progressive development, whereby an output of 10,000 tons of coal per day might be attained in ten years. The selection and lay-out of the site, the location and capacity of all railways and ropeways, and the position of all roads, drainage, dumps, &c., as well as the unit capacities of the various items of plant, were all governed by this underlying policy, the plan being to install, at the beginning, only such items of plant as were requisite to provide the initially required output, and to supplement such plant from time to time as the demand for coal increased. This policy has been closely followed, and, if the limit of 10,000 tons per day has to be increased in the more remote future, it may be done at no very serious increment of cost.

The decision to install an additional 12,500 kilowatt turbo-generator in the Yallourn Power Station, together with the proposed duplication of that station and the projected extension of the Briquetting Factory, have made the question of increased coal-winning plant capacity one of immediate importance. As the result of a close study of the economics of the matter, fortified by a first-hand knowledge of methods in operation in other parts of the world, the Commission is firmly of the opinion that the highest success of the Yallourn enterprise depends upon all coal-winning plant to be acquired in the future being of the general type in use on the open cut brown coal fields of Central Europe, with such improvements thereto as may come into recognized practice.

Plans have been made and works initiated to ensure the availability, not only of adequate supplies of uncovered accessible coal, but also that all coal faces shall be of depths and lengths requisite to give the output which will be called for in 1930 and 1931.

The programme which has been prepared by the Commission provides for a total output of 10,000 tons being reached by 1931. The coal-winning plant designed to be available at that date comprises two coal dredgers, each having a capacity of 2,500 tons per shift, and the present electric power shovel. There will thus be provided a total output capacity of 15,000 tons per day of two shifts, which will give the Commission a very necessary and desirable standby provision in the event of major breakdowns of any of the machines.

An important part of the preparations which have been indicated is the provision of plant to increase the rate of overburden removal. Following upon the preparations which were nearing completion at the close of the previous financial year, as described in the Seventh Annual Report, the Commission has acquired a bucket type dredge of the most modern type in use in the German coal fields, with the necessary locomotives, tracks and other appurtenances. The operations of the bucket type dredge differ from those of power shovels in that the spoil is delivered to the trucks in a continuous stream. The dredge, which is being supplied by the Maschinenfabrik Buckau, Magdeburg, Germany, at a cost of £16,930, has a guaranteed output of 6,500 cubic yards place measurement in two eight-hour shifts, allowing for all reasonable delays in the transport plant. It will be electrically operated, and will discharge the spoil into 20 cubic yard trucks, hauled by electric locomotives. The dredge will not only accelerate the rate of overburden removal, but appreciably reduce the cost of such work. (Photographs of the type of dredge acquired and also of the open cut appear in Appendix No. 7.)

INVESTIGATIONS ABROAD.

In pursuance of its policy of sending senior officers abroad for the purpose of gaining first-hand knowledge of similar large undertakings in other parts of the world, the officers mentioned below were despatched on missions during the period under review :—

Mr. C. Boehm, Manager of the Commission's Briquette Factory, left Australia in January, 1927, for the purpose of making full enquiries into the methods which obtain at the largest and most modern of such factories in Germany. An incidental, but important, part of his mission was the inspection of all kinds of commercial and experimental electrical plant for the precipitation of brown coal dust. Following upon his investigations, the Commission has arranged to install at its Briquette Factory an electrical dust precipitation plant of the latest and most approved type, by means of which the waste entailed by the dissemination of coal dust in the atmosphere will be eliminated.

Mr. Boehm returned from his mission at the end of the financial year, and the information he has gained will be of considerable value, especially in regard to the projected extension of the Briquette Factory.

Three of the Commission's senior administrative officers—Messrs. R. Liddelow (Secretary), F. W. Robinson (Internal Auditor), and D. E. Williams (Fuel Sales Manager)—left Australia in May, 1927. Messrs. Liddelow and Robinson are enquiring into the latest methods and systems in use in Great Britain, Europe and America, in regard to administration, organization, accounting, costing, and general procedure relating to the management of electrical undertakings and brown coal workings, and the marketing of electrical appliances, while Mr. Williams' special study will be the marketing of briquettes.

The mission has a wide scope, and is expected to yield important results, especially in view of the ever-expanding operations of the Commission. Apart from a close study of the information available as to the practices followed by large electrical undertakings in other parts of the world, the extensive administrative organization necessitated by the operations of the Commission has been based on purely local knowledge and experience. The results achieved have been satisfactory, but the progression of the Commission is so rapid, and the possibilities in regard to electricity and fuel supply are so vast, that it is considered the Commission and its senior administrative officers should be fortified by a first-hand knowledge of the best practices followed by similar large undertakings in other countries.

Mr. H. L. Lewis, an Assistant Engineer of the Commission, also left Australia in May last. He will prosecute full enquiries into high-pressure steam plant, and important decisions concerning boiler installations at the Briquette Factory, Yallourn, await the completion of his investigations.

STANDARDIZING METROPOLITAN ELECTRICITY TARIFFS.

The question of rectifying the unsatisfactory position which exists with reference to the supply of electricity in the metropolitan area—and which is probably peculiar to Melbourne alone amongst the large cities of the world, excepting London—has for a considerable time been engaging the attention of the Commission. Although the whole of the area in question is almost entirely supplied with electricity in bulk from the State Power Stations at Yallourn and Newport, there exist twelve distinct distributing authorities, viz :—

(1) State Electricity Commission ..	in Essendon, Flemington, Kensington and Sunshine.
(2) Box Hill City Council	within their respective municipal districts.
(3) Brunswick City Council	
(4) Coburg City Council	
(5) Footscray City Council	
(6) Heidelberg Shire Council	
(7) Melbourne City Council	in the greater part of its municipal area.
(8) Northcote City Council	within their respective municipal districts.
(9) Port Melbourne City Council ..	
(10) Preston City Council	
(11) Williamstown City Council ..	
(12) Melbourne Electric Supply Co. Ltd.	in the remainder of the metropolis.

Each of these twelve distributing authorities has a different schedule of charges, which vary widely in their character and incidence, leading to many undesirable anomalies and much dissatisfaction as between area and area. Moreover, the different supply authorities apply varying policies in the administration of their respective undertakings, and the whole position operates against the scientific and economic development of electricity supply in the metropolis as a whole.

Ten of the undertakings are municipally-owned, and, as the result of the availability of bulk supply energy generated by the State at a cost substantially below that which previously obtained, they are effecting considerable savings. The time has arrived when it is imperative that these savings must be passed on to individual consumers, especially as the majority of the metropolitan municipal undertakings are financially prosperous, and are thus in a position to make substantial concessions.

The legislature has imposed on the Commission the obligation and duty to standardize the electrical industry: to promote and encourage the use of electricity, and to ensure that the service reaches consumers as a whole at the lowest possible cost. To effect these objects, Parliament has prescribed that the prices charged by undertakers supplied in bulk by the Commission shall be subject to the approval and control of the Commission.

During the year, the Commission addressed itself very closely to the problem of framing electricity charges on uniform principles and standardized lines throughout the metropolis, in order: (1) that electricity users might obtain the reductions rendered possible by the State scheme: (2) that the extended use of electricity both for industrial and domestic purposes might be encouraged: and, (3) that the anomalous position arising out of twelve different tariffs might be eliminated as soon as practicable.

The Commission decided, after close study of local conditions and full inquiries into the practices obtaining in other countries, that the standard industrial and domestic tariffs for the metropolis of Melbourne should have the following main characteristics, viz.:—

(*a*) Lighting charges on any existing or block rate system to remain as at present, but substantial reductions to be introduced where the consumption exceeds a stated monthly minimum, as in large shops, factories, public halls, picture theatres, and the like.

(*b*) Power for all purposes (commercial, industrial and domestic) to be provided at rates per kw. hr., which in no case should exceed existing rates, but which should offer substantial reductions upon present rates as the consumption increases.

(*c*) That for domestic users there should be a two-part tariff applicable to all the purposes for which electricity is employed in the home. This tariff is designed to encourage the use of electricity in the home, by offering energy at the extremely low charge of 1¼d. per unit for all purposes, the increased use of domestic electricity, and the consequential improvement in the standard of living and comfort being prohibitive under the existing block or "flat" rate charges.

(*d*) Special alternative tariffs to be provided for cooking, water-heating, night-hour and long-hour industrial consumers.

As a first step in the direction of standardizing tariffs in the metropolitan area, the Governor in Council approved of the introduction of a uniform optional two-part domestic tariff in the ten municipal undertakings already referred to, viz.:—Cities of Brunswick, Box Hill, Coburg, Footscray, Melbourne, Northcote, Port Melbourne, Preston and Williamstown, and the Shire of Heidelberg.

The essential features of the tariff are as follows:—

Service charge, 1s. per room per month, passages, pantries, bathrooms, lavatories, verandahs and the like being excluded from the count. Where the number of rooms is less than four, that number will form the basis of the service charge.

Energy charge, 1¼d. per kw. hr. of electricity actually consumed.

Meter rent—Nil.

This two-part domestic tariff has been in operation in the Commission's Essendon–Flemington undertaking since January, 1925.

The Melbourne Electric Supply Co. Ltd. also intimated its intention of introducing the standard domestic two-part tariff within its own area, as from 1st September, 1927, and the Melbourne City Council, shortly after the close of the year, likewise decided to adopt the tariff.

Thus, authorities whose territories cover approximately 70 per cent. of Melbourne have adopted the standard domestic tariff, and thereby much has already been accomplished in the highly important work of standardizing tariffs within the metropolitan area.

Since the close of the financial year, the Commission has convened a conference of the Metropolitan Undertakers to consider the application of these Standard Tariffs, having regard to the principles above outlined, the two-part domestic tariff forming one of the standards. It was arranged that each Council would review the financial effect on its undertaking of the application of the whole of such tariffs, and advise the Commission of the result of its investigations. The question of the application of these standards in the municipal undertakings will reach finality very shortly.

STANDARD ELECTRICITY SUPPLY TARIFFS FOR METROPOLITAN AREA.

For purposes of record the standard tariffs adopted by the Commission for introduction as and where justified in the metropolis of Melbourne are set out hereunder :—

(*a*) *Domestic* :—For all purposes in dwellings (i.e., light, heat, cooking, power, &c.)—
Service charge per room per month, payable quarterly in advance—1s. ; and
For all energy consumed—1¼d. per kw. hr.
No meter rent.
Passages, pantries, verandahs, porches, and the like not counted as rooms.
Minimum—Four rooms.
Outdoor Lighting.—The service charge for outdoor lighting in the cases of garages, barns, dairies or yards, &c., is calculated on the basis that lamps having a consumption equivalent to 100 watts, or any part thereof, represent one room.

(*b*) *Power and Heating* :—
(i) Block Rate.—

For the first 500 kw. hrs. per month ..	..	2d. per kw. hr.
For the next 4,500 kw. hrs. per month ..	..	1¼d. ,, ,,
For the next 20,000 kw. hrs. per month	..	0·9d. ,, ,,
For the balance of consumption during month	..	0·8d. ,, ,,

(ii) Maximum Demand Rate. (optional where consumption exceeds 5,000 kw. hrs. per month).—
For every kw. of maximum demand as recorded in any month—17s. per month : and
For all energy consumed—0·3d. per kw. hr.
Maximum demand meter to be re-set each quarter.

(iii) Restricted Hour Rate (optional where the principal consumption takes place as a rule at night)—
During the hours between 10 p.m. and 7 a.m. on the following day—0.5d. per kw. hr.
During all other hours—2d. per kw. hr.

(*c*) *Lighting* (other than street lighting) :—
Block Rate—
For the first 500 kw. hrs. per month —the same rate per kilowatt hour for the first block of the lighting tariff as is at present in force in the respective undertakings.
For the balance of consumption during month—3d. per kw. kr.

(*d*) *Cooking* (other than where provided under (*a*)) :—1¼d. per kw. hr.

(*e*) *Water Heating* (Continuous)—Optional :—
Rate alternative to those under (*a*) and (*b* (i.)) as follows—
For the continuous heating element of a water heater, a fixed charge of 3s 9d. per month per 100 watts capacity—payab'e quarterly in advance.

SUPPLY TO BALLARAT AND BENDIGO.

The supply of electricity to the cities of Ballarat and Bendigo is being carried out by the Electric Supply Company of Victoria Limited, under Orders-in-Council which expire in 1931. During the year this Company opened up negotiations with the Ballarat and Bendigo City Councils with the object of bringing about an extension of its franchises governing the electricity and tramways undertakings in both cities.

The law provides that any Order authorizing electrical supply will be granted by the Governor in Council only on the recommendation of the Commission.

The Commission informed the Company, in 1923, when it decided to install new generating plant in preference to taking a supply of bulk energy from the State system, that under no circumstances would an extension of the franchises be approved.

In approaching the Councils for their support, the Company offered each of them certain considerations, in the event of an extension of the franchises being obtained, but the Councils decided to consult the Commission before proceeding further in the matter. Immediately after the close of the financial year under review the Councils jointly conferred with the Commission, and the former submitted a list of questions dealing with the offers and proposals of the Company. After full discussion of the issues raised, the Commission agreed to set out its views thereon in writing for submission to both Councils. This was accordingly done, and the following is a summary of the Commission's report to the Councils on the subject, viz. :—

(1) It is against the public policy of the State, as declared by Parliament, to permit the continued exercise of a private monopoly in dealing with the public utility of electricity supply.

(2) It is the expressed will of Parliament that the services of the State scheme shall be made available as quickly as possible to every part of the State within economic range of the system. The extension of the franchises of the Electric Supply Company of Victoria Limited, as desired by it, would operate to exclude a very large and important area of the State from the service which the State Electricity Commission was constituted to provide. In the opinion of the Commission it would be impossible to justify the continuance of a private monopoly which would deprive one of the most important sections of the State of Victoria of the benefits of a super scheme of electric supply.

3. The Company is not entitled, as of right, to an extension of its franchises and there is no obligation on the part of anybody to acquire its assets. When, in 1923 the Company sought the Commission's approval of the installation of new generating plant, it was informed :—

(*a*) that under no circumstances would an extension of its franchises be considered ;

(*b*) that the Commission would not be prepared to acquire the undertakings as going concerns, and would be willing to acquire only those assets of the Company which would be of use in continuing the services to the public ; but that the tramways undertakings were to be considered as definitely included in such assets ;

(*c*) that in the event of any alternative agreement not being arrived at between the Commission and the Company not later than two years prior to the expiration of the present franchises, the Commission would take the necessary steps to ensure, by other means, the subsequent continuance of electric services to the consumers within the area of the Company's orders.

The Commission then left the Company with two options—(1) the installation by it of alternating current generating plant, and (2) the purchase of bulk energy from the State scheme. The Company chose the first alternative, and in view of the definitely expressed intention of the Commission, it cannot now claim any rights, moral or legal, to an extension of its franchises.

(4) The Company's offer of annual payments to the Councils in consideration of an extension of its franchises is fundamentally wrong in principle, because it represents a tax on a section of the community (the consumers of electricity) for general municipal purposes.

(5) The question of the future operation of the tramways cannot dominate the question of the future electrical development of territories containing a population of, say, 150,000. The Commission informed the Company as long ago as 1923 that it was prepared to acquire the tramway assets, and the legislation bearing on the matter shows that Parliament has, in effect, undertaken the responsibility for the continued operation of such tramways.

(6) The Commission is quite satisfactorily transmitting energy from the State scheme to such far distant places as Albury (178 miles), Corowa (165 miles) and Echuca (196 miles), besides nearly 100 places of varying distances in all parts of the State other than the Ballarat and Bendigo districts. This quite disposes of the Company's argument that supplies of transmitted energy are any less reliable or efficient than those generated locally, and emphasises the urgent need of similar development in the Ballarat and Bendigo districts.

(7) The Commission gives the absolute and unequivocal assurance that, under no circumstances, will its charges be higher in any respect or in any particular than the prices now being charged by the Company. Subject to there being no change in the industrial, economical or financial conditions between now and 1931, the Commission would introduce into both cities an entirely optional two-part domestic tariff, providing for a service charge of 1s. 3d. per room and a charge for electricity actually consumed of 1½d. per unit. The charge for industrial power, subject to the same qualification, would be based on a block tariff in which the lowest step governing supply to large consumers would not be higher than 1d. per unit.

(8) The Commission would have in each district its own superintendent, office and staff, its policy being decentralized control and local responsibility.

Subsequently, the Bendigo City Council passed a resolution to follow the policy of the Commission, as set out above, and which had been verbally explained at the Conference.

At the date of this report, the Ballarat City Council had not finally considered the matter.

MILDURA.

Reference was made in the Sixth Annual Report of the Commission to the proposals which had been sanctioned and furthered by the Commission for the inauguration of a comprehensive central scheme of electricity supply for the whole of the Mildura district.

In order that effect might be given to these proposals, the Mildura Electricity Loan Act was passed, for the purpose of enabling the Mildura Town Council to borrow the necessary money. Since that time, the Mildura Shire Council has constantly urged the claims of Merbein, Irymple, and Red Cliffs to electricity supply. The Mildura Town Council has, however, been deterred, by considerations of the initial losses involved, from extending supply.

In the course of the discussions which have taken place on various occasions, independent systems of supply have been suggested for the different centres concerned, but these proposed isolated installations have been discountenanced by the Commission for the reason that the townships affected are too small in size to permit of local plants being operated as economically and satisfactorily as a central scheme at Mildura.

The Commission has, by reason of its responsibility for fostering the electrical services of the State on sound lines, always actively associated itself with the question of supply to the Mildura district, and towards the close of the year arranged a conference between the Town and Shire Councils, presided over by Mr. Commissioner F. W. Clements.

As a result, definite proposals for the extension of supply to Merbein, Irymple and Red Cliffs were considered, on the basis that the Town and Shire of Mildura should share in equal proportions whatever losses might accrue during the initial operations, and that these losses should be made good when the load reached the payable stage.

It was agreed that such works if and when undertaken by the Town of Mildura would conform to the major scheme, to be undertaken when such is warranted by the development of the whole territory.

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

The growth and nature of the demand within range of the present development of the State scheme as at 30th June, this year are summarized hereunder.

Electric Supply Requirements for all Purposes.

Interesting data are contained in the graphs appearing amongst the appendices showing the generation and distribution of energy and the growth of the demand for all purposes, since 1918.

Appendix No. 2 (*a*) shows the typical winter daily load curve, 1927.

Appendix No. 2 (*b*) shows energy sent out from terminal stations and district supply stations.

Appendix 2 (*c*) shows energy delivered to distributing authorities and other consumers in metropolitan area.

Appendix 2 (*d*) shows energy made available from all sources for use in the metropolitan area for all purposes.

Appendix No. 3 is a tabulation showing the actual growth in distribution and demand in the nine years from 1918–26.

Appendix No. 4 gives details of overhead transmission lines erected, &c.

Appendix No. 5 gives details of number and capacity of sub-stations installed, &c.

Metropolitan Area.

Generation of Electricity in Financial Year 1926–27 *and Comparison with year* 1925–26.

—	Year 1926–27.	Year 1925–26.
	kw. hrs.	kw. hrs.
(*a*) Railway purposes	155,500,000	155,000,000
(*b*) General and tramways	356,000,000	308,000,000
Total	511,500,000	463,000,000

METROPOLITAN AREA.—*Generation of Electricity, &c.*—continued.

Distribution of Energy for General and Tramway Purposes.	Year 1926–27.	Year 1925–26.
	kw. hrs.	kw. hrs.
Melbourne City Council—		
Generated	13,000,000	16,500,000
Purchased	70,000,000	61,500,000
Melbourne Electric Supply Company—		
Generated	38,500,000	35,000,000
Purchased	92,000,000	95,000.000
State Electricity Commission (other than that purchased by Melbourne City Council and Melbourne Electric Supply Company)—		
Generated	120,000,000	77,000,000
Railways Department (Newport "A")—		
Generated	22,500,000	23,000,000
Total	356,000,000	308,000,000

Consumption per Capita, Metropolitan Area.

	Population.		Maximum Demand.		Consumption per Capita.	
	1926–27.	1925–26.	1926–27.	1925–26.	1926–27.	1925–26.
			kw.	kw.	kw. hrs.	kw. hrs.
Inclusive railway traction	965,000	920,000	127,000	112,000	495	468
Exclusive railway traction			88,000	73,000	334	300

Distribution of Energy.—Within the metropolis the following undertakings are supplied in bulk from the State scheme, viz.:—The City Councils of Box Hill, Brunswick, Coburg, Footscray, Melbourne, Northcote, Port Melbourne, Preston, and Williamstown, and Shire of Heidelberg, and the Melbourne Electric Supply Company Limited.

The Melbourne City Council and the Melbourne Electric Supply Company Limited do not receive the whole of their supplies from the Commission, both still having generating plants in operation, although the latter will, during the early part of the financial year 1927-28, have the whole of its requirements supplied from the State scheme.

The Commission directs and controls the local distribution of electricity in the City of Essendon and the Hopetoun Ward of the City of Melbourne, these areas being included in the Commission's Essendon-Flemington district. The results of the operations of this district are dealt with in the relative portions of this report.

The Commission also supplies a number of industrial consumers with 25-cycle energy generated at the Newport "A" Station.

During the year the Commission took over the local distribution of electricity at Sunshine from H. V. McKay Pty. Ltd., which Company previously distributed bulk energy received from the State scheme.

Extensions of Supply.—The extensions of supply from the State scheme made during the year are detailed elsewhere in this report, together with a number of authorized extensions which will come into operation in the next financial period. The number of centres in the extra-metropolitan and country districts linked up with the State scheme during the year, and which previously did not enjoy service, is seven, while eight undertakings were transferred to the Commission by local distributing authorities, thus bringing the number of centres apart from the metropolitan area served by the Commission at the end of the financial period under review to 88. Of these centres, 56 did not previously have a supply of electricity.

CONTINUITY OF SUPPLY.

Freedom from transmission failures has again been a marked feature of the year's operations. As explained elsewhere in this Report, not the slightest interruption occurred on the main 132,000-volt transmission line from Yallourn to Yarraville, and on the branch transmission lines the brief and infrequent interruptions which occurred were due to violent storms and other exceptional atmospheric conditions and the fouling of conductors, &c., by birds and animals.

TOWN OF YALLOURN.

Town Development.—During the year the town grew in size and attractiveness. Several dwellings were erected on the higher ground to the north-west, while most of the vacant allotments in other parts of the town were built upon, the only sites now reserved in the developed area being those set apart for special purposes, including important public utilities.

The substantial and ornamental public and church buildings, to which reference was made in the Seventh Annual Report of the Commission, add grace and dignity to the appearance of the town, and combine with the pleasing and varied types of architecture of the various dwelling-houses, the well-kept private gardens, and the avoidance of monotony in the lay-out of the streets to make Yallourn an interesting example of applied town-planning ideals.

The planting of shade and ornamental trees in streets and reserves was continued successfully on an extensive scale throughout the season, and each succeeding year their development will add to the beauty of the town and its surroundings.

A photograph of the town appears in Appendix No. 7.

New Dwellings.—Building operations during the year were concentrated principally on a programme of wooden houses. Over 50 of such dwellings were erected during the period. Each house contains three rooms, a kitchenette, and a combined laundry and bathroom. These houses are of attractive design and in very great demand.

Good progress was also made with the construction of 36 dwellings of a larger type, each containing five rooms and conveniences. Twelve of these houses were designed as two-story buildings, partly for the sake of ensuring more economical construction on sloping ground, and partly for the purpose of imparting variety to the appearance of the streets.

In addition to the wooden houses, a few brick dwellings were erected.

The number of dwellings erected and in occupation in the town is 305. When the programme on which the Commission is at present engaged is completed, the number will be 370.

Hospital.—The question of a permanent hospital at Yallourn, designed and equipped in accordance with the best medical and surgical practice, has been engaging the attention of the Commission for some considerable time.

After considerable preliminary discussions with the British Medical Association, plans of a hospital to suit all requirements were prepared, and tenders for the necessary buildings will shortly be invited. The operating section will include a routine laboratory for bacteriological and blood tests, &c., and X-ray work.

An ample area is reserved for the hospital opposite the Golf Links, near the Prince's Highway.

An adjunct of the hospital will be a Medical Health Centre, which is to be erected in the town centre, alongside the Fire Brigade Station. This centre will comprise dental clinic, dispensary, patients' consulting rooms, and baby health centre.

The cost of erecting, equipping, and furnishing the building will be borne by the Commission, but the management and maintenance of the hospital, when completed, will be undertaken by the Medical Fund Committee, in the same way as the present medical services are financed and administered.

Higher Elementary School and Technical School.—The reservations made by the Commission at Yallourn for public purposes include an area of about 8 acres as the site of a Higher Elementary School and Technical School. With the growing number of children who pass beyond the educational facilities afforded by the State School, the need of higher elementary and technical classes becomes more marked each year, and early in 1927 a very definite movement was made in the direction of their establishment. On the 1st June, 1927, Messrs. Donald Clark, Chief Inspector of Technical Schools, and E. P. Eltham, Inspector of Technical Schools, visited Yallourn for the purpose of enquiring into the whole question. Since that time the matter progressed rapidly, and at the close of the financial year the indications were that the extended educational facilities desired would be provided at an early date.

Hotel and Boarding-house.—The need of suitable accommodation for visitors was further emphasized during the year, and is now most pressing. The problem will become more and more accentuated as time goes on, because the town and its associated activities have become objects of very great interest to overseas and interstate visitors, as well as to the general public of the State itself. There are, as indicated in previous reports, exceedingly important considerations which render the provision of licensed premises for the regulated sale of liquor both necessary and desirable. The Commission is, therefore, once more forced to the conclusion that the erection of the hotel mentioned in its Seventh Annual Report is the only satisfactory means of overcoming the present difficulties in regard to accommodation and the evils of an illicit liquor traffic.

Accommodation for single men must also be provided in the town, and, as a commencement in helping to solve this problem, the erection of a boarding-house was started during the year on a site opposite the Accommodation House.

Fire Brigade.—The efficiency and enthusiasm of the Fire Brigade were splendidly maintained during the year, and the Commission has pleasure in again recording appreciation of its work The brigade has also earned the appreciation of the residents who raised £350 during the year for the purpose of purchasing uniforms, competing gear, &c. During the year the brigade competed at Ballarat and Leongatha, and it is the intention to hold a demonstration at Yallourn at an early date.

The only serious outbreak of fire during the year was at the screening house, and this was dealt with successfully.

Reserves and Gardens.—The sports oval, east of the railway station, was put into good order for cricket and football. The improvements include a pavilion.

The golf links on the main entrance road were further developed, and, although a good deal of preparatory work remains to be done, the existing facilities for play are fully availed of by votaries of the game. The tennis courts are well patronized, and a further contribution towards the recreational facilities of the town, in the shape of a bowling-green, is now contemplated.

The nursery is fulfilling its functions admirably. Apart from the propagation of shrubs, hedge plants, and seedlings for residential allotments, it produced 6,000 trees during the year for planting in streets and reserves.

The excellence of private gardens was well maintained, the pride and enthusiasm of residents being stimulated by exhibitions and special spring and autumn shows organized by the local Horticultural Society, as well as by a competition for the best kept garden, for which prizes are donated by the Commission.

Roads and Streets.—Street construction to the north and north-west of the town proceeded concurrently with the erection of new buildings and the development of those areas.

Clubs, Societies, &c.—The town possesses football, soccer, cricket, tennis, and golf clubs, which, with the Glee Society, the Horticultural Society, and the various church societies, contribute in an important degree to the amenities of the town, and help to make it a self-contained community in every way.

General Store.—Considerable and very necessary additions were made to the Commission's General Store, which now extends to the Broadway frontage. The additions provide room for several new departments, and at the same time meet the requirements of the grocery and drapery sections, which had for some time been hampered by lack of facilities to cope with an ever-expanding volume of business.

A photograph of the Store appears in Appendix No. 7.

The butchery, opened in the Western Camp during the year, operated so successfully that it was decided to open more extensive premises in the town centre. Abattoirs were established adjacent to the road south of the Briquetting Factory, and should appreciably assist in sustaining the success of the butchery, which will be a most important branch of the operations of the General Store.

The reductions in the prices of meat combined with reductions in rentals (which operated from the 1st July, 1926), to effect a sensible drop in the cost of living at Yallourn, with the consequence that the Commonwealth Statistician's figures for food, groceries and housing for the town have been for some time below those for the metropolitan area, as the following figures will show, viz. :—

	Melbourne Index No.	Yallourn Index No.
1926 June Quarter	1854	1945
1926 September Quarter	1794	1747
1926 December Quarter	1777	1729
1927 March Quarter	1757	1730

Old Brown Coal Open Cut Settlement.—The extensive programme of improvements at the Old Brown Coal Open Cut Settlement, indicated in the Seventh Annual Report of the Commission, was carried into effect. The improvements include an accommodation block for single men, the formation of streets, and the provision of lighting and water reticulation and sanitary conveniences.

INDUSTRIAL.

The following table shows the distribution of the Commission's labour forces :—

	1927 Operation.	1927 Construction.
Yallourn	1,142	317
Metropolitan Area	55	195
Transmission Lines	22	165
District Undertakings	127	40
Rubicon Hydro-Electric Scheme	..	84
Water Power Surveys	..	13
Totals	1,346	814

In addition to the above, the Civil Engineering Construction Company Limited, Contractors for the Rubicon Hydro-Electric Scheme, had approximately 360 men in their employ.

Arbitration.—No new Award covering the operations of the Commission was made during the year.

The Commission was cited as a respondent in regard to an application made by the Amalgamated Engineering Union to the reconstituted Commonwealth Court of Conciliation and Arbitration for an award to provide for a 44-hour week, instead of a 48-hour week. The award was granted, as applying to engineers in all normal industries.

Subsequently Mr. Justice Beeby granted an application of the Commission for exemption from the award, subject to his further consideration and final award. This final award was made after the close of the financial year under review, and the Commission was included therein as from the 19th September, 1927.

Wages.—Wages fluctuated slightly during the year, in accordance with variations in the Commonwealth Statistician's Cost of Living Index figures. There was a rise over and above the rate prevailing at the close of the last financial year, but subsequently the rate fell, and at the close of the year wages were generally 1s. a week lower than at the corresponding period of 1926.

At the present time, the Commission's employees are governed by nine Federal Awards, one Federal Award under Private Arbitration (Coal Winning) and sixteen State Wages Board determinations.

Dislocations.—Three strikes occurred at Yallourn during the year, resulting in partial stoppage of work, viz. :—

Federated Engine Drivers and Firemen's Association and Australian Worker's Union	3 days
Australian Workers' Union (Coal Winning)	20 ,,
Australian Workers' Union (Coal Winning)	1½ ,,

In the first case (F.E.D. & F.A. & A.W.U., Coal Winning), the reason for striking was objection to a shift boss at the Screen House. This strike proved to be very serious, inasmuch as it became necessary to impose restrictions on the use of power in the metropolitan area. The Commission held a special inquiry at Yallourn into the matter, and after hearing the evidence of all concerned, decided that the charge was not sustained.

In the second case (A.W.U., Coal Winning), the men struck in connexion with a demand for a 44-hour week. The matter was settled by voluntary arbitration, and the men resumed on the basis of a 48-hour week.

In the third case, (A.W.U., Coal Winning), the men ceased work under a misapprehension, demanding the reinstatement of a labourer at the Old Brown Coal Open Cut, who, it transpired, left the works of his own account.

The number of working shifts lost on account of strikes was 21,000, involving an approximate loss of wages to strikers of £15,290 and of £2,490 to others affected, or a total of £17,780. Of this amount, approximately £14,000 was due to the A.W.U. Coal Winning Strike of 20 days, late in November 1926, when there were 870 on strike, while 147 others were rendered idle in consequence.

ELECTROLYSIS.

Following upon recurring statements in the daily press, alleging damage to underground and other structures by leakage currents from railway and tramway systems, as well as specific complaints received by the Commission from the Metropolitan Gas Company, the Melbourne and Metropolitan Board of Works, the Postmaster-General's Department and some electricity supply undertakings that injury was being caused to gas, water and electric mains by electrolytic action, the Commission, by virtue of the powers conferred upon it by section 17 of Act No. 2996, initiated discussions with the various bodies concerned, with a view of determining the precautions which should be taken against electrolysis. As a result, an Electrolysis Investigation Board, consisting of the Chief Engineers of the State Electricity Commission and the Melbourne and Metropolitan Tramways Board and the Chief Electrical Engineer of the Victorian Railways, was in the first instance constituted for the purpose of inquiring into the whole question and of drafting suitable regulations for adoption by the State Electricity Commission.

The Electrolysis Investigation Board held a number of meetings, and took evidence from various bodies regarding damage to underground structures by electrolysis. No evidence was brought before the Board of any electrolytic attack upon ferro-concrete buildings, with the exception of one railway structure, due to the unauthorized and injudicious bonding of the reinforcement material to the electric track rails.

Late in the financial year under review, the Electrolysis Investigation Board submitted a report on the whole question, summarizing the conclusions drawn from the evidence submitted to it, and outlining a scheme of investigation and control of the problems of electrolysis as they

arise in the future. Upon receipt of the report, the Commission took up the question of the formation of a permanent Electrolysis Committee, consisting of its representative and representatives of the Victorian Railways, the Melbourne and Metropolitan Tramways Board, the Melbourne and Metropolitan Board of Works, the Postmaster-General's Department, and the Metropolitan Gas Company. The recommendations of the Electrolysis Investigation Board were duly submitted to the bodies mentioned, and each of them has accepted representation on the Electrolysis Committee. It is anticipated that the co-operation between these various authorities will do much to ensure the application of satisfactory remedial measures, and generally to assist in solving a problem that has to be faced in all large cities of the world.

FOOTSCRAY CENTRAL STORE.

Late last year the need of additional accommodation and improved facilities at the Commission's Central Store, Footscray, came under consideration, in view of the desirability of amalgamating the Dandenong Depot therewith and the increased amount of stores requiring to be handled, consequent upon the normal growth of the Commission's activities. It was decided, therefore, to duplicate the main store, and, in conjunction therewith, to provide cable stores as well as further facilities for the more efficient and economical handling of heavy material, such as poles, cables, transformers, steel work, &c., held on account of metropolitan and country distribution and transmission lines.

The transfer of the Dandenong Store and Construction Depot was almost complete at the close of the financial year.

ELECTRIC LIGHT AND POWER ACT 1915.

A request was received from the Boort Co-operative Butter and Ice Company, the supply authority at Boort, for permission to increase its charges from 1s. to 1s. 3d. and 1s. for lighting; and from 4½d. to 6d. and 4½d. for power. It was decided to recommend such application for the approval of the Governor in Council.

Since the passing of the Electric Light and Power Act in 1896, 196 Orders-in-Council, authorizing the supply of electricity, have been granted, of which 114 were issued to municipal councils and 82 to companies or persons. Forty-seven Orders-in-Council have been revoked, including a number which related to undertakings that have passed to the control of the Commission.

The following is a list of Orders-in-Council which have been recommended by the Commission during the year, and approved by the Governor-in-Council, authorizing the establishment of electric supply undertakings in the areas indicated :—

Supply Authority.	Area.	Maximum Prices Authorized.	
		Lighting. Per Unit.	Power. Per Unit.
		s. d.	s. d.
Martin O'Donohue	Township of Garfield	1 0	0 6
Marong Shire Council	Township of Kangaroo Flat	1 0	0 6
Kerang Shire Council	Township of Koondrook	1 3	0 9
Swan Hill Shire Council	Ultima, Nyah, Lake Boga, &c.	1 3	0 6
H. C. Woolmer	Township of Natimuk	1 6	0 9
Ripon Shire Council	Township of Beaufort	1 6	0 9
Gordon Shire Council	Township of Pyramid	1 6	0 9
Ballan Electric Supply Co. Ltd. ..	Township of Ballan, &c.	1 3	0 9 (Heating)

LICENSING OF ELECTRIC WIREMEN.

The following statement sets out the number of Licences issued to 30th June, 1927, and also the number issued during the period covered by this report :—

Grade.	Number issued to 30th June, 1926.	Number issued from 1st July, 1926, to 30th June, 1927.	Total.
"A"	1,345	49	1,394
"B1"	79	17	96
"B"	780	51	831
"C"	994	149	1,143
Special Licences	42	4	46
Permits	2,416	238	2,654

During the year two examinations in theory and practice were held, and the Board of Examiners reports that, although the percentage of passes was not so high as usual, the number seeking to qualify was large, and that the Licensing of Wiremen Rules is continuing to have a beneficial effect in raising the standard of wiring work in the State.

PART II.—FINANCIAL AND COMMERCIAL.

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 and of other activities of the Commission, are contained in Appendix No. 1.

CAPITAL EXPENDITURE.

The following tabulation shows the capital expenditure from the inception of the Commission to 30th June, 1927 :—

	£	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

These figures do not include interest during construction which, at 30th June, 1927, amounted to £553,400 3s. 2d.

Also included in Appendix No. 1 is a detailed statement of Capital expenditure incurred during the period under review, with details of the expenditure at 30th June, 1927, on the whole of the activities.

RESULTS OF OPERATIONS OF ALL ACTIVITIES FOR FINANCIAL YEAR ENDED 30TH JUNE, 1927.

Item,	1926–27.	1925–26.	Increase.	Decrease.
	£	£	£	£
Operating Expenses	705,890	669,515	36,375	..
Interest	483,476	420,273	63,203	..
Depreciation	188,281	21,694	166,587	..
Total Expenditure	1,377,647	1,111,482	266,165	..
Total Revenue	1,180,993	842,605	338,388	..
Net Loss	196,654	268,877	..	72,223

Referring to the above statement and by way of summary of the year's operations, it should be noted :—

(*a*) That during the year 1926–27 the increase of *Revenue* over the preceding year was £338,388, whilst the increase in *Expenditure* (exclusive of depreciation) for the same period was £98,492. Thus the actual betterment on the year's operations compared with 1925–26 was £239,896.

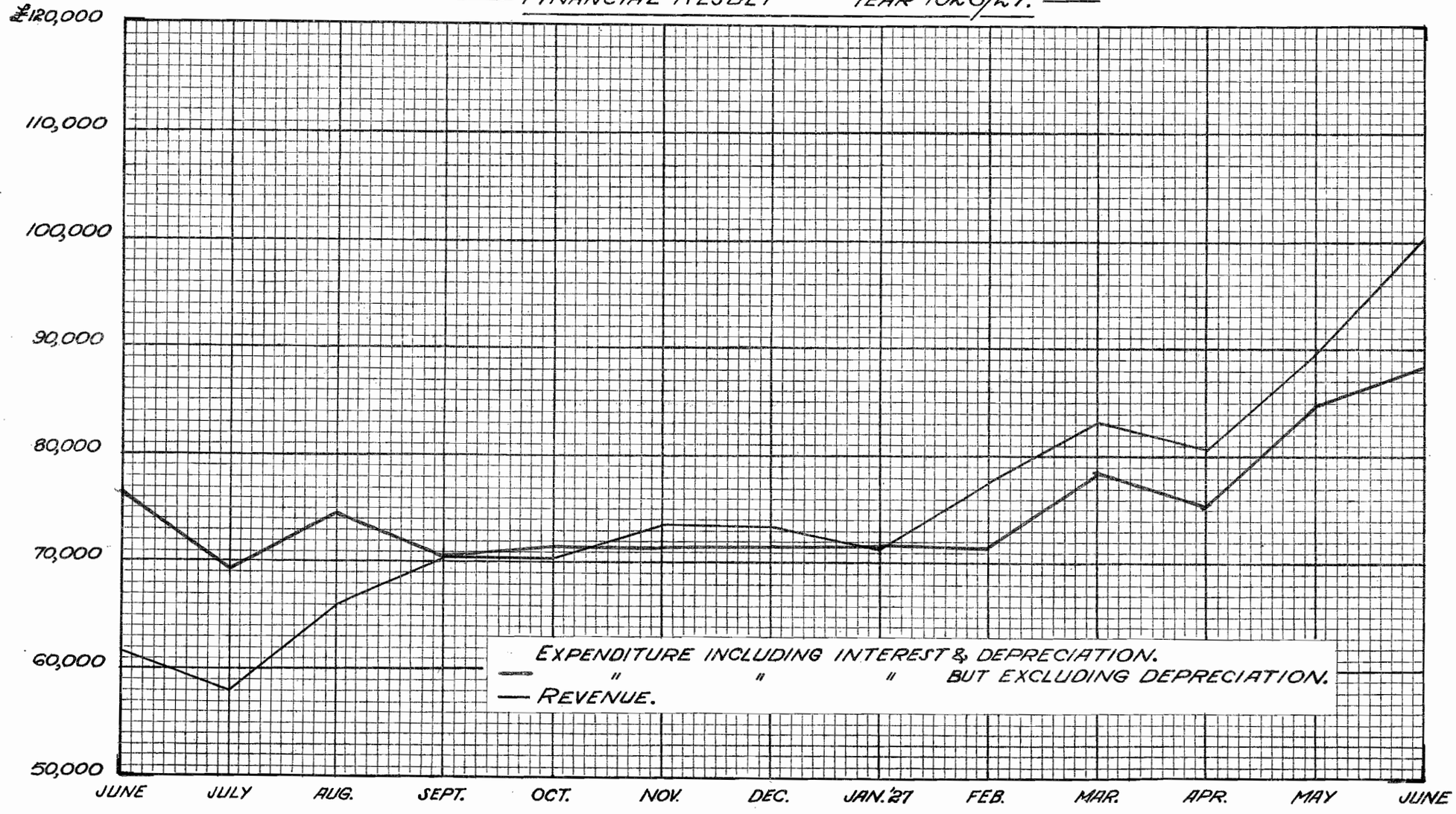
(*b*) The relatively small increase in the expenditure was accompanied by an increase of nearly 50 per cent in the output of electricity, as compared with the year 1925–26.

(*c*) In the year 1926–27 *full* depreciation was charged in the Commission's accounts for the first time, in accordance with the decision announced in the last Annual Report. The loss on the year's operations of £196,654 is almost equivalent to the amount included in the year's accounts for depreciation.

(*d*) There is every likelihood that the financial year 1927–28 will experience a further large growth of revenue almost if not fully sufficient to cover all expenditure, i.e., including full depreciation. This result has already been achieved for the first quarter of the new financial year, and there is still a substantial demand waiting to be transferred to the Commission's system as soon as the necessary works of distribution can be brought to completion.

— ELECTRIC SUPPLY UNDERTAKING —

— FINANCIAL RESULT YEAR 1926/27. —



ELECTRICITY SUPPLY.

—	Financial Year, 1926–27.	Financial Year, 1925–26.	Financial Year, 1924–25.
	£	£	£
EXPENDITURE.			
Metropolitan Bulk Supplies (50 cycle)	807,036	598,238	495,611
,, ,, ,, (25 cycle) .. .. .. (In conjunction with Victorian Railways)	47,389	135,968	190,023
District Undertakings	284,244	203,725	159,677
Total	**1,138,669**	**937,931**	**845,311**
REVENUE.			
Metropolitan Bulk Supplies (50 cycle)	624,623	357,388	259,542
,, ,, ,, (25 cycle) .. .. .. (In conjunction with Victorian Railways)	48,066	135,968	190,023
District Undertakings	302,674	219,896	167,721
Total	**975,363**	**713,252**	**617,286**
Loss for Year	**163,306**	**224,679**	**228,025**
	Kw. Hrs.	Kw. Hrs.	Kw. Hrs.
Energy sold during year	**245,752,546**	**161,990,327**	**101,000,000**

NOTE : The expenditure for 1926–27 includes provision for full depreciation for the first time, and this item in the electricity supply accounts was therefore increased to £165,045 compared with £21,694 in 1925–26.

Opposite is a graph showing the financial result month by month for the financial year under review, showing that in September, 1926, this undertaking had commenced to meet its full interest charges and that by June, 1927, the revenues had so increased that full depreciation was almost being met.

The net result of the year's operations was a surplus of £1,739 exclusive of depreciation. Were it not for the fact that substantial losses were sustained by industrial disputes at Yallourn in December and March, 1927, this department would have contributed £14,081 towards depreciation.

Other financial data are contained in Appendix No. I.

Metropolitan Bulk Supplies (25 cycle).—(In conjunction with Victorian Railways).—

These supplies are merely " book entries " in the accounts of the Commission, the revenues being paid to the Railways Commissioners, who bear the cost of production at Newport " A " Power Station. Large bulk consumers in the metropolis are supplied from this source under contracts transferred to and administered by the Commission as the sole statutory authority for the sale of electricity generated in State-owned Power Stations. Such supplies continue to be gradually transferred to the 50 cycle system of the Commission. Thus the revenue therefrom receded from £190,023 in 1924–25 to £48,066 in 1926–27.

District Undertakings.—A total profit of £18,430 resulted from the year's operations. The results in the various districts in comparison with preceding years have been dealt with in a separate section of the Report (page 20).

BRIQUETTE MANUFACTURE.

	1926–27.	1925–26.	1924–25.
Expenditure	**£228,859** ..	**£169,278** ..	**£83,991**
Revenue	**195,510** ..	**129,353** ..	**47,734**
Loss	**£33,349** ..	**£39,925** ..	**£36,257**

Operating expenses and interest totalled £202,175 against a revenue of £195,510, or a deficiency of £6,665. Had it not been for the losses caused by the strikes in December, 1926, and March, 1927, this undertaking would have contributed £3,936 towards depreciation.

As in the case of the Electricity Supply undertaking, depreciation was provided in this year's briquetting accounts for the first time, £26,683 being included against this item. The above results thus disclose a marked improvement on the year's operations as compared with 1925–26.

The total output for the year was 109,475 tons. This represents an average monthly production of 9,123 tons, notwithstanding that no briquettes were manufactured in December, 1926, owing to industrial trouble. The average monthly output for the year 1925–26 was 7,214 tons.

The following comparative figures relating to the sales of briquettes during the principal winter months, i.e., June, July, and August, clearly indicate the increasing demand for this class of fuel, viz. :—

	1925.	1926.	1927.
June	7,528 ..	12,998 ..	15,817
July	6,586 ..	11,251 ..	15,185
August	8,280 ..	8,835 ..	14,939
Total	22,394 ..	33,084 ..	45,941

The industrial demand showed a substantial increase and absorbed 35 per cent. of the year's output.

It cannot be too strongly emphasized that while there has been substantial improvement in the finances of this undertaking, accompanied by a satisfactory increase in sales, the production and sale of briquettes can only be placed on a proper commercial basis by a considerably enlarged output. In view of this fact, the necessity of extensions to the factory at the earliest possible date, as already recommended by the Commission, is again stressed.

DISTRICT UNDERTAKINGS.

General.—The Profit and Loss Accounts and Balance Sheet, and financial and statistical data appearing as Appendices to this report illustrate the growth of demand, number of consumers, and other details bearing on the operations of the main district undertakings. The following summary of the year's results is useful in considering these undertakings individually and as a whole :—

(*a*) The total number of consumers increased during the year from 23,714 to 30,305, an increase of 6,591, or 27·79 per cent.

(*b*) Fifteen new country and extra metropolitan centres of demand were served during the year, bringing the number of centres in which local distribution is undertaken to 88. Of these centres, 56 had no service until supplied from the State Scheme.

(*c*) The number of motors connected increased from 1,394 to 1,946, with a resultant increase in horse power from 8,534 to 18,378.

Two-part Tariff.—At the end of the year 12,702 domestic consumers were supplied under the two-part tariff, or 51·5 per cent of the total residential consumers. Compared with the previous twelve months this represents an increase of 4,971, or 64·4 per cent. The action of the Commission in making a uniform service charge per room irrespective of the size of the house has further popularised the Domestic Two–Part Tariff and, with the development of the demand for electrical labor-saving devices in the home, which is bound to follow the All-Electrical Exposition, it is certain that this form of charging will be availed of by the great body of consumers.

Essendon–Flemington District.—After providing £3,517 for depreciation, there was a profit of £18,908 on the operations of this district. This profit will be transferred to a reserve account, providing for redemption of the purchase price, in accordance with the Government's instruction when authorizing the acquisition of the undertaking from the North Melbourne Electric Tramways and Lighting Company. The progress of this undertaking is very satisfactory, substantial development being disclosed in the statistics for the year.

Eastern Metropolitan District.—Operations showed a net profit of £7,452 after providing £3,084 for full depreciation. During the year supplies were made available to the towns of Boronia, Somerville, and Hastings, as well as a bulk supply to the Naval Base, Crib Point. The necessary construction work to give supply to Tremont, Ferny Creek, Kallista, Sherbrooke, Sassafras, and Olinda was in progress at the close of the year. An important extension of service is to be made on the Mornington Peninsula, arrangements having been completed to take over the Portsea and Sorrento undertakings from the Flinders Shire Council. In addition to the towns mentioned, supply will also be given to Dromana, Rosebud, and Rye, and the reticulation is expected to be complete early in December, 1927. All the important bayside resorts on the Peninsula will thus be served, and their popularity and opportunities for development will be greatly enhanced thereby.

Metropolitan South-West District.—The main centres served are Werribee and the Royal Australian Air Force at Point Cook.

Operations resulted in a net profit of £570, after providing £645 for full depreciation.

The energy sold this year showed a 60 per cent increase. over the quantity sold during the previous twelve months.

Altona District.—Altona and its immediate neighborhood are served. It is still in its developmental stage.

During the year the number of consumers increased from 113 to 136, the amount of energy sold from 20,737 kilowatt hours to 34,180 kilowatt hours and the connected load from 81 kilowatts to 110 kilowatts, i.e., an increase of 35·8 per cent.

After providing £81 for depreciation, there was a net loss on the year's operations of £245, which shows an improvement on last year of £209.

Sunbury District.—This undertaking passed from the Shire of Bulla to the control of the Commission in May 1926.

The district is showing satisfactory development. The number of consumers is 166, to whom 93,330 kilowatt hours of energy were sold during the year. The connected load is 352 kilowatts.

After providing £130 for full depreciation, a net profit of £734 was shown on the year's operations.

Sunshine District.—This branch began operations in March, 1927. It includes the area formerly supplied by H. V. McKay Pty. Ltd., and also several large consumers who last year received direct bulk supply from the Commission.

The number of consumers is 1,075, who purchased 983,983 kilowatt hours of energy.

The connected load amounts to 3,346 kilowatts.

The net profit for the period was £915.

South-Western District.—The loss on the year's operations was £8,949 after providing £8,042 for depreciation. This is £2,661 better than last year.

This year the interest charged against operations was £17,850, of which £16,943 was earned, or approximately 95 per cent of the total. The district affords such opportunities for development that at the close of the year 1927–28 it should be in a position to make a substantial contribution towards depreciation.

Gippsland District.—This district continues to show satisfactory development. Operations resulted in a profit of £951, after providing £4,895 for full depreciation, the improvement over last year being £1,371. Sales of energy exceeded those of last year by 20·8 per cent.

New towns connected during the year were Bairnsdale, Stratford, and Newry. In the first-mentioned town, a private undertaking was acquired by the Commission. The other two towns did not previously enjoy a service.

North-Eastern District.—Considerable progress has been made in this district during the year, and supplies of energy from the Commission's mains have been given to Mooroopna, Kyabram, Tatura, Rutherglen, Chiltern, Wangaratta and Alexandra. In all these places, municipal undertakings were taken over by the Commission with the exception of Kyabram, where a private undertaking was acquired.

In addition, supply was also given to Springhurst, Tongala, and Merrigum, where no service previously existed.

After providing £1,870 for depreciation, operations showed a net loss of £1,939, which should soon be overtaken, as the great amount of developmental work carried out during the year will shortly begin to earn a proportionate revenue,

Next year, supply will be given to the district from the Sugarloaf-Rubicon Hydro-Electric Scheme.

COMMISSION'S ELECTRIC SUPPLY UNDERTAKINGS FOR LOCAL DISTRIBUTION.

ESSENDON AND FLEMINGTON DISTRICT.

	1923–24.	1924–25.	1925–26.	1926–27.
Population of Supply Area	53,000	55,000	58,000	60,500
Number of Consumers	8,461	9,897	11,212	12,332
Percentage of Consumers to Population	16 per cent.	18 per cent.	19·3 per cent.	20·4 per cent
Sales of Energy—				
Lighting (Excluding adjustments for unread meters and service charges paid in advance at end of year)	1,408,397 kw. hrs.	1,797,678 kw. hrs.	2,294,687 kw. hrs.	2,812,802 kw. hrs.
Power (Excluding adjustments for unread meters and service charges paid in advance at end of year)	2,527,705 ,,	5,097,832 ,,	7,268,866 ,,	7,757,206 ,,
Public Lighting (Excluding adjustments for unread meters and service charges paid in advance at end of year)	235,424 ,,	543,625 ,,	588,874 ,,	585,426 ,,
(Excluding adjustments for unread meters and service charges paid in advance at end of year)	4,171,526 ,,	7,439,135 ,,	10,152,427 ,,	11,155,434 ,,
Revenue	£65,075	£77,347	£93,116	£101,408
Average Revenue per Kilowatt Hour sold	3·859d.	2·495d.	2·201d.	2·181d.
Maximum Demand of District in Kilowatts	1,726	2,462	2,635	3,339
Total Connexions in Kilowatts	9,380	11,824	13,911	19,087
Number of Motors	386	482	552	574
Total h.p. of Motors	2,045	3,413	3,871	7,887

EASTERN METROPOLITAN DISTRICT.*

	1923–24.	1924–25.	1925–26.	1926–27.
Population of Supply Area	8,200	10,000	15,200	16,918
Number of Consumers	826	2,246	2,898	3,519
Percentage of Consumers to Population	10 per cent.	22·4 per cent.	19·07 per cent.	20·8 per cent
Sales of Energy—				
Lighting (Excluding adjustments for unread meters and service charges paid in advance at end of year)	88,725 kw. hrs.	244,405 kw. hrs.	380,701 kw. hrs.	707,958 kw. hrs.
Power (Excluding adjustments for unread meters and service charges paid in advance at end of year)	24,933 ,,	140,887 ,,	314,765 ,,	426,406 ,,
Public Lighting (Excluding adjustments for unread meters and service charges paid in advance at end of year)	14,122 ,,	43,837 ,,	62,070 ,,	84,747 ,,
Bulk Supplies (Excluding adjustments for unread meters and service charges paid in advance at end of year)	..	260,879 ,,	437,669 ,,	1,062,304 ,,
(Excluding adjustments for unread meters and service charges paid in advance at end of year)	127,780	690,008 ,,	1,195,145 ,,	2,281,415 ,,
Revenue	£4,119	£15,482	£23,893	£39,869
Average Revenue per kw. hr. sold (Excluding Bulk Supplies)	7·73d.	5·38d.	5·65d.	5·4d.
Maximum Demand of District in kws. (Excluding Bulk Supplies)	113	300	520 (estimated)	634
Total Connexions in kws. (Excluding Bulk Supplies)	(not available)	2,410	3,293	4,755
Number of Motors (Excluding Bulk Supplies)	30	78	93	131
Total h.p. of Motors (Excluding Bulk Supplies)	322	683	936	1,566

* Including Metropolitan South District for Years 1924–25, 1925–26 and 1926–27.

METROPOLITAN SOUTH-WEST DISTRICT.

	1924–25.	1925–26.	1926–27.
Population of Supply Area	..	1,700	2,550
Number of Consumers	318	365	410
Percentage of Consumers of Population	..	21·4 per cent.	16·08 per cent.
Sales of Energy—			
Lighting (Excluding adjustments of unread meters and service charges paid in advance at end of year)	55,191 kw. hrs	76,228 kw. hrs.	108,055 kw. hrs.
Power (Excluding adjustments of unread meters and service charges paid in advance at end of year)	160,813 ,,	181,422 ,,	315,352 ,,
Public Lighting (Excluding adjustments of unread meters and service charges paid in advance at end of year)	21,619 ,,	22,491 ,,	24,933 ,,
(Excluding adjustments of unread meters and service charges paid in advance at end of year)	237,623 ,,	280,141 ,,	448,340 ,,
Revenue	£4,442	£5,228	£6,739
Average Revenue per kw. hr. sold	4·487d.	4·478d.	3·608d.
Maximum Demand of District in kws.	131	235	255
Total Connexions in kws.	575	753	1,031
Number of Motors	25	30	32
Total h.p. of Motors	306	385	675

SOUTH-WESTERN DISTRICT.

	1923–24.	1924–25.	1925–26.	1926–27.
Population of Supply Area	..	26,391	27,100	26,970
Number of Consumers	2,582	3,629	3,974	4,321
Percentage of Consumers to Population	..	13·7 per cent.	14·7 per cent.	16·02 per cent.
Sales of Energy—Units sold—				
Lighting (Excluding adjustments for unread meters and service charges paid in advance at end of year)	192,852 kw. hrs.	528,500 kw. hrs.	753,270 kw. hrs.	995,567 kw. hrs.
Power (Excluding adjustments for unread meters and service charges paid in advance at end of year)	136,351 ,,	646,510 ,,	960,336 ,,	1,314,241 ,,
Public Lighting (Excluding adjustments for unread meters and service charges paid in advance at end of year)	41,278 ,,	108,973 ,,	118,861 ,,	124,222 ,,
(Excluding adjustments for unread meters and service charges paid in advance at end of year)	370,481 ,,	1,283,983 ,,	1,832,467 ,,	2,434,030 ,,
Revenue	£11,306	£33,910	£43,074	£49,747
Average Revenue per kw. hr. sold	7·32d.	6·34d.	5·64d.	4·90d.
Maximum Demand of District in kws.	529	(*a*) 732	(*a*) 867	(*a*) 882
		(*b*) 88·5	(*b*) 111	(*b*) 124·5
Total Connexions in kws.	1,922	3,815	4,573	5,900
Number of Motors	146	276	348	443
Total h.p. of Motors	605	1,311	1,491	1,888

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

GIPPSLAND DISTRICT.

	1923–24.	1924–25.	1925–26.	1926–27.
Population of Supply Area	..	16,467	18,760	23,825
Number of Consumers	661	2,881	3,307	4,209
Percentage of Consumers to Population	..	17·5 per cent.	17·7 per cent.	17·67 per cent.
Sales of Energy—Units sold—				
Lighting (Excluding adjustments for unread meters and service charges paid in advance at end of year)	44,324 kw. hrs.	486,931 kw. hrs.	594,692 kw. hrs.	772,311 kw. hrs.
Power (Excluding adjustments for unread meters and service charges paid in advance at end of year)	37,095 ,,	440,866 ,,	1,023,543 ,,	1,191,348 ,,
Public Lighting (Excluding adjustments for unread meters and service charges paid in advance at end of year)	10,762 ,,	68,938 ,,	87,659 ,,	97,303 ,,
Total (Excluding adjustments for unread meters and service charges paid in advance at end of year)	92,181 ,,	996,735 ,,	1,705,894 ,,	2,060,962 ,,
Revenue (Excluding adjustments for unread meters and service charges paid in advance at end of year)	£2,742	£21,358	£33,489	£39,545
Average Revenue per kw. hr. sold	6·11d.	5·14d.	4·71d.	4·605d.
Maximum Demand of District in kws.	135	532	640	970
Total Connexions in kws.	421	2,980	3,896	5,708
Number of Motors	19	204	284	406
Total h.p. of Motors	146	1,227	1,551	1,910

NORTH-EASTERN DISTRICT.

	1924–25.	1925–26.	1926–27.
Population of Supply Area	8,000	13,025	27,760
Number of Consumers	1,026	1,850	4,137
Percentage of Population	12·8 per cent.	14·2 per cent.	14·9 per cent.
Sales of Energy—Units sold—			
Lighting (Excluding adjustments for unread meters and service charges paid in advance at end of year)	90,305 kw. hrs.	219,223 kw. hrs.	534,638 kw. hrs.
Power (Excluding adjustments for unread meters and service charges paid in advance at end of year)	27,740 ,,	91,480 ,,	581,049 ,,
Public Lighting (Excluding adjustments for unread meters and service charges paid in advance at end of year)	16,971 ,,	43,183 ,,	91,030 ,,
Bulk Supplies (Excluding adjustments for unread meters and service charges paid in advance at end of year)	..	371,767 ,,	2,939,350
Total (Excluding adjustments for unread meters and service charges paid in advance at end of year)	135,016 ,,	725,653 ,,	4,146,067 ,,
Revenue (Excluding adjustments for unread meters and service charges paid in advance at end of year)	£5,050	£16,930	£51,660
Average Revenue per kw. hr. sold	8·97d.	5·597d.	2·99d.
Maximum Demand of District in kws.	156	1,000 kw. (estimated)	1,736 (approx.)
Total Connexions in kws. (Excluding Bulk Supplies)	725	(Not available)	4,937
Number of Motors (Excluding Bulk Supplies)	56	87	337
Total h.p. of Motors (Excluding Bulk Supplies)	237	300	1,430

SALE OF ELECTRICAL APPARATUS.

The very appreciable benefits to be derived by householders from an extended use of electricity under the Commission's Two-Part Domestic Tariff have led to a general awakening of interest in all kinds of electrical conveniences and labour-saving devices for the home. This is evidenced by the success which has attended the establishment by the Commission of a well-equipped showroom for electrical appliances at Sale, Gippsland. Here demonstrations in the uses of such appliances are regularly given, and residents of the district have been quick to recognize the all-round advantages of electric installations when current is provided at a low rate. Photographs of the showroom appear in Appendix No. 7.

A showroom was also opened by the Commission at Dandenong, but it was not until late in the year that it was put on the same footing as that at Sale in regard to staff, equipment, and demonstrations. Since that time it, too, gave good results, and the Commission was prompted to extend the system to Essendon, where a showroom is to be opened at Puckle street. At these showrooms, apparatus is handled by the Commission on a consignment basis and is made available on hire-purchase terms.

The extent to which the Commission should extend its efforts to provide facilities for its consumers to purchase apparatus on easy terms is a matter which is receiving earnest consideration and is being given special attention by the Secretary during his visit abroad. Unquestionably there is room for vigorous development in this direction, and, before taking any definite steps in the matter, the Commission desires to be supplied with the fullest information as to the practice in those countries where the use of electricity for domestic purposes has reached its highest point of development.

The following table shows the number of appliances in use in the various districts which are under the control of the Commission. It is certain, however, that many small heating and cooking devices have been purchased and connected without the knowledge of the Commission's officers.

	Total Connected at 30th June, 1927.	Increase for Twelve Months ended 30th June, 1927.	Percentage Increase.
			%
Electric Stoves	293	135	86
Fans	769	519	208
Grillers	495	219	79
Irons	11,004	4,123	60
Kettles	956	430	82
Radiators	4,666	1,521	48
Toasters	160	97	154
Vacuum Cleaners	292	235	412

Electrical Exposition.—At the instance of the Electrical Federation of Victoria, steps were taken late in 1926 to organise an All-Electric Exposition in the City of Melbourne. The Melbourne City Council, the Melbourne Electric Supply Company Limited, and the State Electricity Commission all agreed to co-operate with the Electrical Federation in the matter, and arrangements were accordingly made to hold the Exhibition in the Melbourne Exhibition Building, commencing on the 10th September 1927, and concluding on the 1st October, 1927. A very comprehensive display was decided upon, the main purpose being to demonstrate the utility and economy of all kinds of electrical applicances, particularly on the farm and in the home.

The Exposition proved an event of outstanding importance, and fully achieved its objects. The intense public interest manifested in it was sustained without diminution to its close, and it was visited by approximately a quarter of a million people, who were greatly impressed by the displays.

Notable amongst the demonstrations of the uses of electricity were those afforded by the Railways Department, the Postal Department, the Melbourne and Metropolitan Tramways Board, and the Metropolitan Fire Brigades Board. These demonstrations laid bare the electrically-operated mechanism of trains, trams, and the automatic telephone exchange, whilst emphasizing the important part played by electricity in the fire-fighting organisation of a great city. The educational nature of these demonstrations was greatly enhanced by the explanations of the experts in charge.

Two modern homes, fully equipped with electrical conveniences, comforts, and labour-saving devices, were objects of great interest, and convinced all who saw them of the utility, cleanliness, drudgery-eliminating, and labour-lessening qualities of electrical appliances.

A model electrified farm, complete in every detail, including a homestead, attracted much interest. The representation showed the diversified operations of a mixed farm, and how electricity can be applied economically and efficiently to each of them, so that output may be increased, labour lessened, and the amenities of farm life added to.

A most artistic feature of the Exhibition was an electric fountain.

The homes, farm, and fountain were jointly provided by the Melbourne Electric Supply Company Limited, the Melbourne City Council, and the Commission.

A further feature of the Exposition was an electrical restaurant, where visitors were able to study in a practical manner the advantages of electrical cooking.

The final success of the Exposition was ensured by the comprehensive displays made by the various electrical firms, all the available space being occupied. At the numerous stalls, the universal services rendered by electricity to mankind, and the simplicity and serviceableness of a multiplicity of electrical appliances, were fully demonstrated.

Judging by the interest shown, the literature readily availed of, and the numerous inquiries made, the Exposition should mark the beginning of a definite electrical era in the State of Victoria.

PART III.—DESIGN, CONSTRUCTION, AND OPERATION.

YALLOURN OPEN CUT.

Overburden Removal.—The erection of the electrically-driven dragline, mentioned in the Seventh Annual Report, was completed early in the year, and has been used since for both overburden removal and construction work. The 175 B shovel operated on a two-shift basis until November last, when it was converted from steam to electric drive. Sufficient drivers were trained to enable this shovel to be operated for three shifts, a system which has been followed since April, 1927.

The overburden disposal plant was removed to a new site and utilized for dumping the material. It has operated satisfactorily and economically.

The overburden removed during the year was 364,650 cubic yards. The total quantity of overburden removed since operations commenced in this cut is 1,947,240 cubic yards.

Coal Winning.—Operations were continued on a two-shift basis throughout the year.

The output of coal from the Yallourn Open Cut during the year was 860,474 tons, and the total quantity of coal excavated from the commencement of operations till the end of this period is 1,992,301 tons.

The output of coal for the year represented an increase of 170,226 tons, as compared with the previous period, and, in order to deal with the larger tonnages, 24 additional trucks for the various ropeways were obtained.

The reclaiming belts under the storage bins were completed early in the year, thus enabling the bins to be fully utilized, and increasing operating efficiency.

Arrangements are in hand for the transfer of Yallourn Open Cut coal for the Power House through a hopper from the No. 1 ropeway to 20-ton trucks hauled by electric locomotives, by which it will be transported to a concrete bunker which has been constructed at the eastern end of the Power Station; thence it will be taken by belt conveyors to the Power Station bunkers or storage dump, as required. The supplies of coal for the Briquette Factory will be similarly transferred through a hopper direct from No. 1 ropeway to No. 4 ropeway, and the screening house will be eliminated from the circuit.

Additional pumps were installed in the bottom of the open cut to deal with the increased volume of water due to the extension of the workings and the catchment area. A pump was also installed on the surface south of the open cut to deal with surface water.

OLD BROWN COAL OPEN CUT.

The total output for the year was 307,601 tons, of which 257,177 tons were used in the Power Station. The total quantity of coal excavated from this cut since operations were commenced there is 688,458 tons. The amount of overburden removed during the year was 537,509 cubic yards, making a total of 1,110,457 cubic yards since the cut was taken over in April, 1924.

During the year, action was taken to put into effect the Klitzing Intermediate Scheme of cheapening the cost of coal from this cut as delivered to the Power Station, and the following works were accordingly carried out, viz.:—

(*a*) Transfer of 150 B shovel of 2½ cubic yards capacity from the Yallourn Open Cut to the Old Cut, to supersede methods of hand-removal of overburden.

(*b*) Provision of a sludge dump at the Old Cut for the disposal of the overburden excavated by the power shovel, and the transfer from the Yallourn Open Cut to the old cut of two steam locomotives and twenty-five three cubic yard trucks for the conveyance of the overburden to the dump.

(*c*) Construction of a permanent 1,500-ton bunker at the Power Station, together with belt conveyor, to the boiler bunkers. (Photographs of the bunker and the trestleway leading thereto appear in Appendix No. 7.)

(*d*) Construction of an electric railway, and the provision of electric locomotives and 20-ton gable-bottom self-opening and self-closing trucks to haul the coal from the old cut to the Power Station Bunker. (A photograph of the electric locomotive and the 20-ton trucks in use appears in Appendix No. 7.)

The 150 B shovel was converted from fuel-burning to oil-burning in order to minimize danger from sparks. The shovel has operated to increase the rate and decrease the cost of overburden removal.

To permit of the transport of the shovel to the old cut, a timber bridge had to be constructed across the Latrobe River.

During the year, the method of coal-winning at the cut was altered to eliminate shovelling, and the bulk of the coal is now won by dropping it through "chinamen" chutes in the back of headings driven in the coal.

A belt conveyor was installed to take the coal from the crushers and load it into railway trucks. It has operated satisfactorily, increasing the tonnage and improving the efficiency.

During the year, a drill was kept continuously at work exploring the deposit at the old cut, and the results indicate the existence of large bodies of payable coal.

ELECTRICITY SUPPLY.

Yallourn Power Station.

Maximum Load during year ended 30th June, 1927 ..	**59,500**	**kw.**
Total Units generated during year ended 30th June, 1927 ..	**233,247,022**	**kw. hrs.**
Total Units purchased from Briquetting Factory ..	**5,510,280**	**,,**
Total	**238,757,302**	**,,**

Turbo-Generators.—Early in the financial year the last two of the five sets of turbo-generators at the Yallourn Power Station were taken over fron the contractors as complete. The maximum load that this plant is designed to carry is 50,000 kw., which was reached in about February, 1927. However, four months later the load had steadily grown to 59,500 kw., which is regarded as beyond the utmost limit of capacity which can be relied upon with perfect confidence under present conditions, hence the necessity of making full provision for an additional 12,500 kw. turbo-generator, as mentioned elsewhere in this report. This will complete the 75,000 kw. of installed plant which the present power house is designed to accommodate.

Boiler House.—The fact that the boiler plant was able to cope with the year's heavy and unexpected winter loading is evidence of the success which has attended the researches of the Commission's staff into the problems associated with the efficient combustion of low-grade brown coal, and confirms the statements contained in the reference to the matter which was made in the Seventh Annual Report of the Commission. These researches have been continued without intermission, and since the first supplementary step grates were installed on No. 2 boiler, as indicated in the Seventh Annual Report, a progressive programme of improvements has proceeded in the boiler room, although the work has been somewhat retarded by the overloading of the system, consequent upon the unexpected growth in the demand for energy. For this reason, the installation of a Howden-Ljungstrom air preheater, which is to be tried on No. 10 boiler, had not been completed at the close of the year, but it will be shortly in operation and be subjected to exhaustive tests.

Primarily with the object of still further increasing the capacity of the plant in the burning of high-moisture coal and incidentally of exploring alternative methods of dealing with this class of fuel, No. 6 boiler (which will be the last of the set of twelve to go into service) is being equipped with a Seyboth mechanical step grate to operate in conjunction with a pre-drying shaft and an air preheater designed by the Commission's staff. This boiler is expected to be ready for service early in 1928.

It has been found that with the higher moisture coal, and the peculiar conditions arising from the demands of supply, greater flexibility and control of performance is obtained on those boilers fitted with induced draft fans. Seven boilers are so equipped, while No. 10 boiler has a fan forming an essential part of the air preheater. Recently, four additional fans to complete the equipment were ordered.

Coal Supply and Storage.—In December, 1926, a contract was placed with Messrs. Gibson Battle Pty. Ltd., for the complete installation of a line of five coal conveyors and appurtenances. This work proceeded most expeditiously, and at the end of the financial year was within two months of completion. The conveyors will co-ordinate with the changes to be made in the system of delivery of coal to the power station, under the scheme of development initiated in connexion with the coal winning operations.

NEWPORT "B" POWER STATION.

Maximum Demand during year ending 30th June, 1927 ..	**19,800**	**kw.**
Total Units generated during year ended 30th June, 1927 ..	**45,438,629**	**kw. hrs.**

Upon the approach of the winter, a complete overhaul of the boiler plant was carried out, so that by June the station was in first class condition to meet the heavy winter loading.

SUGARLOAF–RUBICON SCHEME.

During the year, good progress was maintained on the site works of the Rubicon–Royston section of the Hydro–Electric Scheme by the contractors (The Civil Engineering Construction Company Pty. Ltd.)

Satisfactory progress was also made with the electrical equipment of the various stations, some of which will be available for operation early in 1928. It is unlikely, however, that the scheme will be completed before the end of the next financial year 1927–28, but it is expected that all works will be completed well to schedule time.

The contracts for the supply of the generators for the mountain stream stations proceeded satisfactorily.

Photographs of sections of the Scheme appear in Appendix No. 7. The lay-out of the scheme is shown in Appendix No. 10.

Details of the progress of the various works are given hereunder :—

Rubicon "A" Sub-station.—A considerable quantity of outdoor switchgear was erected. The structures have been in use for more than a year to carry the conductors supplying Benalla and the North-Eastern Area.

Lower Rubicon Power Station.—The off-take works at the junction of the Rubicon and Royston Rivers were practically completed ; the Lower Rubicon Race was excavated and concreted, the forebay at the head of the pressure pipe is complete, and excavation for the pipe line was in progress. An electrically-operated haulage was installed along the route of the pipe line to facilitate the handling of pipes, &c., during construction. Excavation was proceeding on the site of the power station and adjacent switch yard.

Rubicon Power Station.—The concrete-lined race serving this station was completed, excepting for a few minor items.

The forebay at the head of the pressure pipe was also completed, and the concrete piers and anchorages made ready for the erection of the pipes.

The Power House substructure and machine foundations were well advanced, and the steel frame of the building was in course of erection.

Royston Power Station.—The off-take dam on the Royston River was about 70 per cent. complete when it became necessary to suspend operations during the winter. The concrete-lined race and forebay were completed, and the pipe line structure made ready for the erection of pipes.

Pipe Lines.—The steel pressure pipes for the various power stations will be manufactured by Morts Dock and Engineering Co. Ltd., of Sydney, and Thompson's Engineering and Pipe Company of Williamstown, while a section of wood stave pipe will be supplied by the Australian Wood Pipe Company.

Sugarloaf Power Station.—The construction of the Power Station substructure by the State Rivers and Water Supply Commission, on behalf of the State Electricity Commission, was proceeding, a coffer dam having been built around the site.

The 13 ft. 6 in. diameter pressure pipe fabricated by Thompson's Engineering and Pipe Company was in course of erection.

YALLOURN–YARRAVILLE 132,000-VOLT TRANSMISSION LINE.

The main transmission line from Yallourn to Yarraville, 132,000 volts pressure, operated throughout the year without the slightest interruption.

Towards the end of the year 1926, an additional insulator (making eight in all), was added to each suspension string of the line, with the object of slightly increasing the flashover voltage and affording some increase of safety, especially in case of fog. Special care was also given to the observation of the line during the dry summer period. Cleaning of insulators was resorted to wherever a patrol reported abnormal discharge across the string at night. This contributed to the very satisfactory result achieved during the year.

The performance of insulators on the line was particularly good, as only six were found to be defective and in need of renewal during the twelve months.

The value of the aislometer method of live line insulator testing was demonstrated to the fullest extent on this line, as well as on the other high pressure lines and sub-stations throughout the system.

NEWPORT TO YARRAVILLE CABLES.

A fault occurred during the year on one of the four 22,000-volt underground cables between the Yarraville Terminal Station and Newport " B " Station.

To augment the existing transmission facilities between these stations, a heavy overhead circuit was provided. This proved a valuable standby, and is of particular service when both generators are available at Newport " B," as the machines may be operated with open bus section switch, the overhead lines being connected to one section, and both cables to the other, thus permitting appropriate division of load between the circuits.

TERMINAL STATIONS.

Yarraville.—The station operated satisfactorily throughout the year, and the sustained loading up to the normal designed rating of the apparatus installed was carried efficiently. A total system interruption of 28 minutes which occurred on the 6th May, 1927, was due to an operator's fault, and precautions were taken to prevent a recurrence.

In addition to various improvements to the plant, designed to reduce and prevent interruptions, it was decided during the year to bring the major supply system under the constant observation and attention of shifts of " system supervisors," whose duties are to guard against interruptions of supply, and, if interruptions do occur, to direct immediate efforts towards restoration of service. As the generating plant connected to the supply system increases and becomes more diversified in location, the duties of these officers will grow in scope and importance.

Thomastown.—This station is used at present solely as a despatching station for energy fed from the Metropolitan System to the North-Eastern District, via Sugarloaf and Benalla.

Plans were completed for the installation of a second transformer bank (13,000 K.V.A. 66,000/22,000/6,600 volt) together with synchronous condensers and switchgear. This will be in readiness for the energy which will be received from the hydro-electric stations early in 1928. A certain amount of this energy will be available to augment supply in the metropolitan area.

The station suffered a sixteen minutes' interruption on the 30th November, 1926, owing to a magpie fouling the 22,000-volt bus work.

METROPOLITAN DISTRIBUTION SYSTEM.

In the Seventh Annual Report details were given of the major constructional works in the metropolitan area to provide for the requirements of the system of the Melbourne Electric Supply Co. Ltd.

During the year, the whole of these works were completed and put into commission, with the result that it was possible to take over the whole of the bulk loading of the Melbourne Electric Supply Co.'s area, with the exception of 4,000 or 5,000 kilowatts. At the date of this report the whole of this remaining load had been taken over and the Richmond Power Station closed, preparatory to the installation there, by the Commission, of an 18,500-kw. three-phase turbo-generator. With the completion of these works the backbone of the distribution system in the metropolitan area was built, and, for a number of years at least, no very considerable augmentation of the system will be required.

The main substations which have been constructed in the area of the Melbourne Electric Supply Co. are :—

Substation " B "—Collingwood	..	..	Capacity	18,000 K.V.A.
" " G "—South Melbourne		..	"	" "
" " R "—Richmond	..	..	"	" "
" " K "—Camberwell	..	..	"	" "
" " H "—St. Kilda	..	..	"	" "
" " O "—Oakleigh	..	..	"	3,000 "
" " M " Mentone	..	..	"	" "

All of these stations have now been in service for some months and have operated without trouble.

Photographs of Sub-stations " O " and " M " appear in Appendix No. 7.

The 22,000-volt lines between Yarraville Terminal Station and Sub-station "G" were completed, and the duplication of cable ends from the overhead lines at both ends of the run ensure that the maximum advantage can be taken of the overload capacity of the overhead conductors.

From Sub-station "G" to Sub-station "R," three 0·15 square inch 22,000-volt underground cables were laid and put into service. A similar cable forms a link between Sub-station "K" and Sub-station "B." Between Sub-station "R" and Sub-station "H" two 0·15 square inch 22,000-volt underground cables were laid. A combination of overhead circuits with underground cable ends in duplicate between Sub-station "R" and Sub-station "K" serves to supply the bulk of the requirements of the Caulfield and Camberwell areas.

The extreme eastern and south-eastern areas of the Melbourne Electric Supply Co.'s territory were served in bulk through the Sub-stations "O" and "M," which are also connected with the "K" Sub-station by overhead circuits, operating at 22,000 volts.

At the "M" Sub-station a 22,000-volt step-by-step buck and boost regulator was installed. This sub-station is interlinked with the Commission's Mornington system.

During the twelve months' period there were no interruptions to the metropolitan system attributable to faulty apparatus or defective maintenance. Of two interruptions which did occur, one was due to an operator coming into fatal contact with the 22,000-volt conductors at the Spencer-street Sub-station "J." The other was caused by incorrect operation of isolating switches at the Yarraville Terminal Station.

The number of faults on underground cables experienced during the year were appreciably fewer than in the previous period. The bulk of the new 22,000-volt cable laid during the year was jointed by the "vacuum" and "pressure-filling" process, a filling compound very similar in nature to that with which the cable is impregnated being used. It is believed that this system will greatly reduce faults due to jointing defects.

Relay performances showed a high percentage of correct operations. For portions of the system, apparatus to provide for the installation of the Westinghouse Company's impedance type relay was received. These relays were under test and in process of installation at the close of the year.

In preparation for the winter loading of 1928, plans were prepared for augmentation of distribution lines at 22,000-volt pressure between Thomastown Terminal Station and the Collingwood Sub-station "B." This will enable the main bulk of the Sugarloaf–Rubicon energy to be delivered to the centre of the heaviest industrial loading in the metropolitan area. At the same time, an additional underground cable between Sub-station "G" and Sub-station "R" is to be provided, in order to avoid overloading of the existing cable, which will carry the whole of the bulk load centred in Richmond.

The Preston Sub-station reached normal load during the winter of 1927, and an additional 3,000 k.v.a. bank will be installed there in preparation for the winter of 1928.

MAIN DISTRIBUTION AND SUB-STATIONS, RURAL DISTRICTS.

South-Western District.—A number of small extensions was installed during the year, and plans were prepared for the conversion of the transmission to operate at full designed pressure of 44,000 volts, for which purpose it will only be necessary to make reconnexions on the transformer banks at the main sub-stations.

During the year, one half-mile of the main transmission line between Geelong and Warrnambool was broken down owing to a severe tornado close to Geelong. Apart from this cessation the accidental interruptions to the line during the year totalled four hours and ten minutes. All interruptions were due to simple causes, such as the actions of boys in throwing wire across the conductors.

There was no case of insulator failure.

Gippsland.—The 22,000-volt transmission line was extended from Maffra to Bairnsdale during the year, and the line between Yallourn and Drouin converted to its full designed pressure of 22,000 volts.

There was no case of transmission failure affecting the 22,000-volt lines and, with apparatus of all voltages throughout the district, there were only three interruptions which could be ascribed to lightning disturbances.

North-Eastern District.—During the year, this district was brought into practically complete operation, the works outstanding at the close of the period covering supply to one or two of the smaller towns.

Trouble occurred on three occasions through the 22,000-volt transmission line between Thomastown and Maindample coming into contact, under very abnormal conditions of wind pressure and temperature, with the adjacent telephone lines. As the result of the remedial measures taken, there was no further interference from this cause.

On the 22,000-volt lines, opossums have caused interruptions at infrequent intervals, the animals finding their way from the crossarms to the conductor. Provision of opossum guards on the poles in places likely to be affected was considerably extended to overcome this interference.

A comprehensive system of patrol and maintenance of major transmission lines was introduced, and this operating attention was effective in thoroughly establishing the reliability of transmitted supply throughout the district.

MAIN AND BRANCH DISTRIBUTION SYSTEMS—DISTRICT UNDERTAKINGS.

Metropolitan and Extra-Metropolitan.

Essendon–Flemington District.—Five additional sub-stations were constructed during the year to deal with the steadily increasing load. One of these, of the Kiosk type, is a design new to the Commission's service. In addition to possessing advantages of a technical character, it is ornamental and occupies little space. A photograph of this sub-station appears in Appendix 7. A photograph of the type of two-pole outdoor sub-station also appears in Appendix No. 7.

About 10 miles of high and low tension overhead mains were erected during the year, and the installed transforming capacity of the main sub-station "D" was increased by 1,185 k.v.a. during the period. The manual method of switching street lights was superseded by clock switches, a considerable saving of labor being effected thereby.

Eastern Metropolitan District.—There was considerable extension in this district during the year, relating to work in the Eltham, Montmorency, Mulgrave, Bayswater, Boronia, Ferntree Gully, Hastings, Somerville and Flinders areas. An extension to the Naval Base, Flinders, with a load of 180 kw., enabled supply to be also given to a number of smaller towns on the Mornington Peninsula.

Metropolitan South District.—This is at present a very small district, comprising supply to the Commonwealth Oil Refineries, Werribee, Point Cook, Laverton and a number of small consumers.

Altona District.—It became necessary to increase the installed transformer capacity by 15 k.v.a.

Country Districts.

South–Western District.—Although no branch lines were erected during the year, important individual extensions in four of the centres were made, totalling 247 k.v.a.

Gippsland District.—During the year, Bairnsdale, Stratford, Newry and Rosedale were fed direct from the 22,000-volt system at 400 volts for reticulation purposes. This plan of direct step-down from 22,000 volts to the reticulation pressure is being gradually extended to the country areas, it being almost universal in the North-eastern district. Provided suitable means of protection are used on all sub-stations fed direct from the 22,000-volt system, there appears to be no appreciable risk of the smaller sub-stations interfering with service to the larger centres, and the method leads to considerable economies, especially in connexion with distribution over a wide area containing scattered load.

In regard to the type of outdoor sub-station used, a simplification of the isolating arrangement on the high voltage side was evolved during the year, by making use of the choke coil mounted on one side of an air-brake isolator. This proved quite satisfactory for the low current involved.

North–Eastern District.—By far the greatest constructional activity in country supplies again took place in this district. Four towns, which previously did not enjoy a service, were supplied.

The towns of Shepparton, Kyabram, Tatura, Mooroopna, Alexandra, Rutherglen and Chiltern were changed over during the year from direct current system of supply to alternating current supply from the transmission mains, and the towns of Echuca and Wangaratta, which were formerly supplied by local plants, now receive electricity from the transmission line, although no change in system was necessary in their cases.

WATER POWER INVESTIGATIONS.

Systematic investigation of the water power resources of the State was maintained throughout the year with promising results.

Surveys on the upper portions of the Mitta-Mitta River, which were commenced during the latter part of the previous year, were continued. Surveys have now been carried from Hinnomunjie, near Omeo, downstream to Mitta-Mitta, and various dam sites and storage areas have been investigated. This is a mountainous district, practically untouched by surveys of any kind, and the investigations required are therefore of an extensive nature, but although these are still far from complete, this scheme shows promise of being capable of the economic development of a large power output.

Further work was carried out at the Kiewa River automatic gauges on the Bogong High Plains, which will greatly increase the accuracy of the records at these gauges under the snow conditions which extend throughout the winter seasons. Further work on this scheme for the next few years will be confined to obtaining the stream flow records which are necessary before designs can proceed any further.

At the request of local residents the possibility of power development on the Yarra at Warrandyte was investigated, but the project proved too costly.

Stream gauging work continues to receive special attention. Several new gauging stations were established during the year, and at one of these (on the Mitta-Mitta River at the junction of Gibbo Creek) a new type of automatic recording gauge was installed. This gauge was manufactured in the Commission's own workshops to its own designs (which were developed to meet the demand for a reliable recording gauge suitable for certain conditions), at a cost less than that of the imported gauges.

At 30th June, the Commission was maintaining 25 regular gauging stations in various parts of the State, seven of them being equipped with automatic recording gauges.

BRIQUETTING AND RESEARCH.

Briquetting.—Excepting during shut-downs, due to industrial troubles, in December and March, the Yallourn factory operated continuously and successfully, producing 109,535 tons of briquettes. This is an increase of about 23,000 tons above the output of the previous year. The factory was designed to give a daily output of 360 tons or 108,000 tons a year, less losses of production due to overhaul of boilers or stoppages of the factory from industrial or other causes. In the actual circumstances that obtained, the output for the period is, therefore, very satisfactory.

The first steps were taken in the direction of placing the present "half" factory on a commercial basis. With the approval of the Government, contracts were let for the supply and erection of a fifth boiler of 5,000 square feet heating surface, and for the supply of two additional steam presses and spare parts. It is expected that this additional plant will be under steam in the latter half of 1928, and that an appreciable increase in the yearly output will result therefrom. At present all five presses are in continuous operation to produce a normal daily output of over 400 tons. The original intention was to have always one press in reserve, but the fifth press is being regularly operated to take advantage of the fact that the driers have been found capable of giving an output considerably in excess of the maker's guarantee. The installation of the additional presses will permit of a normal daily output of 450 or 460 tons with one press completely in reserve.

As a result of special inquiries made abroad, particularly in America, it was decided that the new high pressure boiler plant for factory extension, including No. 5 boiler, shall operate at 600-lb. gauge.

Electrical dust precipitation plant to replace the present fan system in the drier house has been ordered, and should be operating by about the end of 1927. The actual saving in dust is expected to repay the cost of the installation within three years at the most.

The performances of the various portions of the plant, as well as the quality of the briquettes, are up to the highest standards of the best German factories. Close watch is being kept on developments in the briquetting industry in Central Europe, so that advantage may be taken of any improvements in plant and operation that appear from time to time.

Pulverized Fuel.—In the Seventh Annual Report a summary was given of the principal results achieved at the Newport experimental drying and pulverizing plant, as well as of those obtained in raising steam from the combustion of pulverzied brown coal; the latter experiments were carried out by the Railways Department and the Commission in conjunction. The Commission has since issued in bulletin form (Bulletin No. 1) an account of this work in considerably detailed form.

Fuel Research.—At the pilot carbonizing plant at Yallourn, the low temperature experiments were continued up to June, 1926, and, after necessary alterations to plant, high temperature experiments were started in September, 1926, and continued until February of this year, when the plant was shut down and reports prepared on the whole series of investigations.

The main object of the Commission in initiating these carbonizing experiments was to further, if possible, the policy of making the State as independent as possible of imported fuel supplies. Consequently, the aim kept most prominently in view was to provide a substitute for black coal to satisfy the two most important consumers in the State of imported black coal, viz., the Railway Department for its locomotives, and the various gas works for town's gas supply.

The technical results of the investigations are fairly complete, and furnish justification for the hope that there will eventually be obtainable on a commercial scale, from Yallourn brown coal, a solid fuel suitable not only for locomotive purposes, but also for other uses for which a high grade solid fuel is required; and further, that it may be practicable to obtain a gas suitable for the use of towns and cities.

The full results of the carbonizing investigations are being issued in Bulletin No. 2.

CONCLUSION.

Staff.

The Commission places on record its appreciation of the services rendered during the year by its officers and employees.

The earnest and efficient manner in which the staff applied itself to its duties in dealing with the growing volume of work following upon the expansion of the Commission's activities is worthy of the highest commendation.

JOHN MONASH, Chairman.

THOS. R. LYLE, Commissioner.

ROBERT GIBSON, Commissioner.

F. W. CLEMENTS, Commissioner.

W. J. PRICE,
Acting Secretary.

26th October, 1927.

APPENDICES.

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 opinion the Balance-sheet fairly exhibits a true and correct view of the undertaking at the 30th June, 1927. The values of the stores have been accepted on the certificates of the storekeepers.

J. A. NORRIS,
Auditor-General,
12th September, 1927.

STATE ELECTRICITY COMMISSION OF VICTORIA.

GENERAL BALANCE-SHEET AS AT 30TH JUNE, 1927.

LIABILITIES.

	£	£	s.	d.	£	s.	d.
CAPITAL AUTHORIZED BY PARLIAMENT UNDER—							
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						
	12,142,834						
EXPENDITURE UNDER ABOVE ACTS		7,944,439	1	9			
ADD EXPENDITURE UNDER TREASURY ACT No. 3274/3200		2,500,000	0	0			
ADD EXPENDITURE UNDER TREASURY ACT No. 3345/3300		1,100,000	0	0			
LIABILITY ON ACCOUNT OF LOAN FUNDS					11,544,439	1	9
ADVANCED BY TREASURY FROM PUBLIC ACCOUNT (SECTIONS 5 AND 6, ACT No. 3239)					228,208	0	4
DEBENTURES GUARANTEED BY COMMISSION					77,050	10	6
RESERVE ACCOUNTS—							
Depreciation		262,533	3	0			
Bad and Doubtful Debts		409	4	10			
Redemption		10,589	9	1			
					273,531	16	11
SUNDRY CREDITORS AND ACCRUED CHARGES		132,176	6	5			
INTEREST ACCRUED		207,671	2	10			
					339,847	9	3
TRUST MONEYS—							
Security Deposits		6,306	1	3			
Unclaimed Wages		931	9	7			
Consumers' Deposits		5,238	7	8			
Consumer's Advances for Construction		1,882	3	1			
Sundries		542	10	0			
					14,900	11	7
MELBOURNE ELECTRIC SUPPLY COMPANY RESERVE ACCOUNT		558,351	5	2			
ADD INTEREST ACCRUED ON INVESTMENTS TO 30TH JUNE, 1927		7,634	18	10			
					565,986	4	0

ASSETS.

	£	s.	d.	£	s.	d.	£	s.	d.
YALLOURN WORKS—									
Power Station, Plant, and Equipment	2,222,165	5	4						
Coal Supply Plant and Equipment	1,165,402	15	4						
Briquetting Plant and Equipment	525,346	14	5						
Township Yallourn	425,546	0	0						
Township Brown Coal Mine	9,105	5	2						
Township Lighting Undertakings, Yallourn and Brown Coal Mine	11,123	18	10						
General Plant, Buildings and Equipment—									
Permanent	388,526	4	8						
Temporary	51,533	19	4						
				4,798,750	3	1			
NEWPORT "B" WORKS—									
Power Station Plant and Equipment				766,476	13	6			
MAIN TRANSMISSION SYSTEMS				642,291	7	4			
TERMINAL STATIONS				570,912	14	4			
MAIN DISTRIBUTION SYSTEM (METROPOLITAN AREA)				747,723	1	10			
SUGARLOAF WORKS—									
Power Station Plant and Equipment				273,224	0	7			
NORTH-EASTERN DISTRICT—									
Transmission and Transformation System	285,214	0	11						
Power Stations and Distribution Systems	164,728	7	3						
				449,942	8	2			
SOUTH-WESTERN DISTRICT—									
Transmission and Transformation System	140,848	9	0						
Distribution Systems	191,286	3	5						
				332,134	12	5			
GIPPSLAND DISTRICT—									
Transmission and Transformation System	121,225	10	5						
Distribution Systems	132,303	10	6						
				253,529	0	11			
METROPOLITAN SOUTH-WEST DISTRICT—									
Transmission and Transformation System	9,426	12	5						
Distribution Systems	15,827	6	10						
				25,253	19	3			
EASTERN METROPOLITAN DISTRICT—									
Transmission and Transformation System	33,306	12	1						
Distribution Systems	133,635	1	2						
				166,941	13	3			
ESSENDON AND FLEMINGTON DISTRICT—									
Distribution System				185,679	15	11			
ALTONA DISTRICT—									
Distribution System				3,573	5	0			
SUNBURY DISTRICT—									
Transmission and Transformation System	9,700	8	8						
Distribution System	10,132	4	7						
				19,832	13	3			
SUNSHINE DISTRICT—									
Distribution System				41,615	3	2			
MELBOURNE DISTRICT—									
Distribution System	75,773	19	5						
Metropolitan Supplies Suspense	23,585	12	9						
				99,359	12	2			
SERVICE BUILDINGS AND EQUIPMENT—									
Head Office Building, Furniture and Fittings	121,741	8	10						
Footscray Store Buildings and Workshop	39,770	7	2						
Dandenong Store Buildings and Workshop	8,954	8	11						
South Melbourne Garage and Equipment	4,683	17	10						
Briquette Depot Equipment	12,158	19	7						
				187,309	2	4			
							9,564,549	6	6
MOTOR AND OTHER VEHICLES							21,180	10	10
ELECTRIC SUPPLY POWER SURVEYS							451	18	2

STORES ON HAND—			
Footscray	185,853 7 4		
Dandenong	36,587 1 5		
Thomastown Transmission Line	1,203 3 1		
Sugarloaf	24,084 13 4		
Stationery Store	1,961 3 6		
Garage	2,690 17 11		
Yallourn	145,934 14 2		
Gippsland	7,367 10 7		
North-Eastern District	10,173 1 10		
Altona District	107 2 2		
Metropolitan South-West District	138 4 9		
Essendon and Flemington District	4,775 13 5		
Western District	6,754 18 3		
Eastern Metropolitan District	4,932 11 2		
Sunbury District	131 15 4		
Sunshine District	584 7 10		
		433,280	6 1
COAL STOCKS ON HAND		5,346	3 7
BRIQUETTE STOCKS ON HAND		45,730	10 0
SUNDRY DEBTORS—			
Head Office—General	32,743 15 8		
Brown Coal	2,024 2 10		
Briquettes	24,941 14 5		
Melbourne	82,139 4 8		
Yallourn	2,448 7 2		
Gippsland	7,056 16 0		
North-Eastern	9,228 8 10		
Altona	25 3 2		
Metropolitan South-West	460 14 1		
Essendon and Flemington	11,447 18 3		
Western District	5,591 15 0		
Eastern Metropolitan	5,859 18 3		
Sunbury	343 16 10		
Sunshine	3,053 13 9		
		187,365	8 11
PAYMENTS IN ADVANCE		2,398	7 1
		10,260,302	11 2
LOAN FLOTATION EXPENSE		168,891	15 1
ADVANCES TO AND CAPITAL EXPENDITURE ON BEHALF OF MELBOURNE ELECTRIC SUPPLY COMPANY		602,974	6 5
MELBOURNE ELECTRIC SUPPLY COMPANY INVESTMENT ACCOUNT	558,351 5 2		
Add Interest accrued to 30th June, 1927	7,634 18 10		
		565,986	4 0
INTEREST DURING CONSTRUCTION		553,400	3 2
EXPENSES IN CONNEXION WITH INQUIRY BY AMERICAN EXPERTS	7,334 3 2		
Less Written off	3,667 1 7		
		3,667	1 7
AMOUNT CHARGED TO COMMISSION BY TREASURY IN ACCORDANCE WITH DECISION OF CABINET, 22ND JULY, 1922		62,023	6 8
VICTORIAN GOVERNMENT STOCK		5,781	11 0
CASH—			
At Bank and in Hand	14,391 16 4		
In Transit from Branches	786 3 3		
Advances to Officers	5,802 0 0		
		20,979	19 7
PROFIT AND LOSS ACCOUNT		799,956	15 8
		£13,043,963	14 4

£13,043,963 14 4

There is a contingent asset and liability in respect of securities lodged as bona fides under Contracts to the extent of £36,369 17s., and held by the Bank on the Commission's behalf.

Certified correct,

W. J. PRICE, Acting Secretary.

STATE ELECTRICITY COMMISSION OF VICTORIA.

GENERAL PROFIT AND LOSS ACCOUNT FOR YEAR ENDED 30TH JUNE, 1927.

Dr.

	£ s. d.	£ s. d.	£ s. d.
To Balance at 30th June, 1926		597,938 4 0	
Add Interest short-charged Financial Year 1925–26 Melbourne District	4,957 1 4		
Briquette Manufacture ..	407 14 5		
		5,364 15 9	
			603 302 19 9
Loss—			
North-eastern District		.. ..	1,939 9 5
Western District		.. ..	8,949 6 10
Altona District		.. ..	244 16 0
Melbourne District Loss		169,392 10 0	
Add Cost of Strike		12,342 7 6	
			181,734 17 6
Briquette Manufacture Loss		22,746 17 5	
Add Cost of Strike		10,601 17 11	
			33,348 15 4
			£829,520 4 10

Cr.

	£ s. d.
By *Profit*—	
Essendon and Flemington District	18,907 15 3
Gippsland District	950 10 0
Eastern Metropolitan District	7,451 19 0
Metropolitan South-West District	569 14 2
Sunshine District	914 18 5
Sunbury District	733 18 5
Yallourn District	34 13 11
Balance carried to Balance sheet	799,956 15 8
	£829,520 4 10

STATE ELECTRICITY COMMISSION OF VICTORIA.

METROPOLITAN SUPPLY SYSTEM.

Profit and Loss Account for Year ended 30th June, 1927.

Dr.	£	*s.*	*d.*	*Cr.*	£	*s.*	*d.*
To Purchase of Energy	6,917	10	11	By Bulk Sales—Commission's Undertakings	844,110	17	2
Power Generation	431,213	6	5	Strike Account transferred to Melbourne Branch	12,342	7	6
Transmission, Transformation, and Distribution	48,513	18	8				
Interest	263,246	8	8				
Depreciation	106,562	0	0				
	856,453	4	8		856,453	4	8

BRIQUETTE MANUFACTURE.

Profit and Loss Account for Year ended 30th June, 1927.

Dr.	£	*s.*	*d.*	*Cr.*	£	*s.*	*d.*
To Briquettes on hand 30th June, 1926	10,322	10	0	By Sales	145,619	8	5
Operating and Maintenance Expenses	118,219	11	6	Fire Insurance Recovery	4,160	0	0
Freight	23,749	14	2	Briquettes on Hand	45,730	10	0
Selling Expenses	14,508	9	4	Loss	33,348	15	4
Advertising Expenses	706	0	10				
Bad and Doubtful Debts	287	9	4				
Interest	36,505	0	2				
Depreciation	13,575	0	0				
Strike	10,601	17	11				
Proportion of Cost of American Experts' Inquiry	383	0	6				
	228,858	13	9		228,858	13	9

BROWN COAL MINE—OLD OPEN CUT.

Profit and Loss Account for Year ended 30th June, 1927.

Dr.	£	*s.*	*d.*	*Cr.*	£	*s.*	*d.*
To Operating and Maintenance Expenses	85,459	5	7	By Sales	88,912	16	7
Selling Expenses	780	6	7				
Freight	103	15	3				
Bad and Doubtful Debts	56	14	6				
Interest	1,437	4	8				
Depreciation	1,075	10	0				
	88,912	16	7		88,912	16	7

EXPENDITURE OUT OF CONSOLIDATED REVENUE 1ST JULY, 1926, TO 30TH JUNE, 1927.

	£	*s.*	*d.*		£	*s.*	*d.*
To Expenditure—				By Treasury Account—			
Salaries	1,560	0	0	Division 71/1	5,360	13	2
Power Investigations	5,857	3	9	Division 71/2	6,107	16	6
Licensing of Wiremen	1,128	4	10	Division 71/3	3,193	17	11
Electric Inspection	2,923	1	1				
Research Work	3,193	17	11				
	14,662	7	7		14,662	7	7

STATE ELECTRICITY COMMISSION OF VICTORIA.

BRANCHES.

PROFIT AND LOSS ACCOUNT FOR YEAR ENDED 30TH JUNE, 1927.

	North-Eastern District.	South-Western District.	Gippsland District.	Metropolitan South-West District.	Eastern Metropolitan District.	Essendon and Flemington.	Altona District.	Sunbury District.	Sunshine District.	Melbourne.	Total.
EXPENDITURE.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
To Generation, Purchase of Energy and Distribution	35,174 10 2	32,342 8 9	23,579 11 3	4,150 4 3	21,860 7 7	69,365 2 7	917 13 11	1,492 3 2	4,694 8 0	812,599 6 1	1,006,175 15 9
Interest	18,986 5 3	17,849 13 0	10,893 11 3	1,203 8 11	7,267 15 7	8,371 1 10	217 9 8	823 12 11	631 5 7	24,210 19 8	90,455 3 8
Depreciation	1,870 0 0	8,042 0 0	4,895 0 0	645 0 0	3,084 0 0	3,517 0 0	81 8 0	130 0 0	7 16 3	1,988 0 0	24,260 4 3
Bad and Doubtful Debts	64 11 6	61 13 8	49 18 0	8 5 3	63 17 11	268 17 9	1 4 4	18 14 3	..	..	537 2 8
Strike	..	..	..	..	..	..	..	..	..	12,342 7 6	12,342 7 6
Proportion of Cost of American Experts' Inquiry	..	..	..	..	..	..	..	..	..	3,284 1 1	3,284 1 1
Total	56,095 6 11	58,295 15 5	39,418 0 6	6,006 18 5	32,276 1 1	81,522 2 2	1,217 15 11	2,464 10 4	5,333 9 10	854,424 14 4	1,137,054 14 11
INCOME.											
By Sales	54,155 17 6	49,346 8 7	40,368 10 6	6,576 12 7	39,728 0 1	100,429 17 5	972 19 11	3,198 8 9	6,248 8 3	672,689 16 10	973,715 0 5
Total	54,155 17 6	49,346 8 7	40,368 10 6	6,576 12 7	39,728 0 1	100,429 17 5	972 19 11	3,198 8 9	6,248 8 3	672,689 16 10	973,715 0 5
Profit	..	..	950 10 0	569 14 2	7,451 19 0	18,907 15 3	..	733 18 5	914 18 5	..	29,528 15 3
Loss	1,939 9 5	8,949 6 10	..	..	..	..	244 16 0	..	..	181,734 17 6	192,868 9 9

Balance-sheet as at 30th June, 1927.

—	North-Eastern District.	South-Western District.	Gippsland District.	Metropolitan South-West District.	Eastern Metropolitan District.	Essendon and Flemington.	Altona District.	Sunbury District.	Sunshine District.	Melbourne.	Total.
Assets.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Transmission and Transformation System	285,214 0 11	140,848 9 6	121,225 10 5	9,426 12 5	33,306 12 1	..	..	9,706 8 8	..	..	599,721 13 6
Distribution Systems	164,728 7 3	191,286 3 5	132,303 16 6	15,827 6 10	133,635 1 2	185,679 15 11	3,573 5 0	10,132 4 7	41,615 3 2	75,773 19 5	954,554 17 3
Interest during Construction	6,413 2 11	4,528 9 11	2,225 18 8	47 0 6	714 11 3	..	78 1 2	105 16 9	76 14 0	1,081 5 6	15,271 0 8
Loan Flotation Expense	5,285 10 5	5,873 2 2	3,288 9 6	..	1,582 15 8	2,549 15 8	..	..	..	139,043 9 3	157,623 2 8
Metropolitan Supplies Suspense ..	..	..	..	..	..	..	..	..	..	23,585 12 9	23,585 12 9
Stores on Hand	10,173 1 10	6,754 18 3	7,367 10 7	138 4 9	4,932 11 2	4,775 13 5	107 2 2	131 15 4	584 7 10	..	34,965 5 4
Sundry Debtors	9,228 8 10	5,591 15 0	7,056 16 0	460 14 1	5,859 18 3	11,447 18 3	25 3 2	343 16 10	3,053 13 9	82,139 4 8	125,207 8 10
Payments in Advance	68 8 9	9 1 1	24 0 9	4 14 2	45 9 5	5 0 4	..	6 16 0	12 2 0	..	175 12 6
Victorian Government Stock	1,767 4 7	..	2,724 18 0	..	215 19 2	..	..	1,073 9 3	..	..	5,781 11 0
Cash at Bank and in Hand	195 9 1	218 18 1	47 12 1	8 16 1	248 6 8	320 16 7	..	79 2 6	129 2 7	..	1,248 3 8
Balance Profit and Loss Accounts ..	..	20,752 6 3	..	..	..	..	863 8 11	..	..	718,086 6 11	739,702 2 1
	483,073 14 7	375,863 3 2	276,264 6 6	25,913 8 10	180,541 4 10	204,779 0 2	4,647 0 5	21,573 9 11	45,471 3 4	1,039,709 18 6	2,657,836 10 3
Liabilities.											
Sundry Creditors and Accrued Charges ..	39,223 7 6	6,458 12 8	12,614 17 5	3,630 7 5	18,467 14 7	808 8 3	1 2 0	2,013 4 1	238 19 4	..	83,456 13 3
Interest Accrued	6,223 0 10	6,768 18 2	4,068 18 10	387 15 6	2,079 6 3	2,918 16 6	91 6 10	224 3 7	184 14 5	13,057 15 2	36,004 16 1
Trust Moneys	513 11 10	1,288 10 8	652 11 1	52 11 6	1,224 18 6	3,333 1 8	50 7 6	6 4 0	4 4 0	..	7,126 0 9
Reserves—											
Depreciation	1,019 0 0	7,361 0 0	4,203 12 2	548 0 0	3,297 11 0	18,265 1 4	81 8 0	100 0 0	..	2,604 11 8	37,480 4 2
Bad and Doubtful Debts	45 17 7	77 0 4	43 13 4	3 18 5	..	..	0 0 8	..	5 18 0	..	176 8 4
Redemption Account	..	..	..	..	..	10,589 9 1	..	..	..	..	10,589 9 1
Balance Profit and Loss Account ..	1,387 10 8	..	6,864 13 11	2,119 2 6	18,342 5 9	18,907 15 3	..	972 18 2	914 18 5	..	49,509 4 8
Balance carried to General Balance-sheet	434,661 6 2	353,909 1 4	247,815 19 9	19,171 13 6	137,129 8 9	149,956 8 1	4,422 15 5	18,257 0 1	44,122 9 2	1,024,047 11 8	2,433,493 13 11
	483,073 14 7	375,863 3 2	276,264 6 6	25,913 8 10	180,541 4 10	204,779 0 2	4,647 0 5	21,573 9 11	45,471 3 4	1,039,709 18 6	2,657,836 10 3

STATE ELECTRICITY COMMISSION OF VICTORIA.

CAPITAL EXPENDITURE STATEMENT.

—	Expended to 30th June, 1926.	Total at 30th June, 1926.	Additional for Year 1926-27.	Total for Year 1926-27.	Expended to 30th June, 1927.	Total at 30th June, 1927.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
YALLOURN WORKS—						
Power Station Plant and Equipment	2,119,178 12 5		102,986 12 11		2,222,165 5 4	
Coal Supply Plant and Equipment	932,336 11 8		233,066 3 8		1,165,402 15 4	
Briquetting Plant and Equipment	508,688 6 8		16,658 7 9		525,346 14 5	
Township, Yallourn	360,019 10 9		65,526 9 3		425,546 0 0	
Township, Brown Coal Mine	..		9,105 5 2		9,105 5 2	
Township Lighting Undertakings, Yallourn and Brown Coal Mine	10,511 5 9		612 13 1		11,123 18 10	
General Plant, Buildings and Equipment—Permanent	323,406 15 9		65,119 8 11		388,526 4 8	
General Plant, Buildings and Equipment—Temporary	107,563 8 4		*56,029 9 0*		51,533 19 4	
		4,361,704 11 4		437,045 11 9		4,798,750 3 1
MAIN SUPPLY SYSTEM—						
Power Station Plant and Equipment—Newport "B"	766,892 18 6		*416 5 0*		766,476 13 6	
Main Transmission Systems	631,524 7 10		10,766 19 6		642,291 7 4	
Terminal Stations	554,838 7 9		16,074 6 7		570,912 14 4	
Main Distribution System	511,101 15 7		236,621 6 3		747,723 1 10	
		2,464,357 9 8		263,046 7 4		2,727,403 17 0
SUGARLOAF WORKS—						
Power Station Plant and Equipment	78,044 11 9		195,179 8 10		273,224 0 7	
		78,044 11 9		195,179 8 10		273,224 0 7
NORTH-EASTERN DISTRICT—						
Transmission and Transformation System	249,082 17 10		36,131 3 1		285,214 0 11	
Power Stations and Distribution Systems	70,585 13 7		94,142 13 8		164,728 7 3	
		319,668 11 5		130,273 16 9		449,942 8 2
SOUTH-WESTERN DISTRICT—						
Transmission and Transformation System	138,568 0 7		2,280 8 5		140,848 9 0	
Distribution System	186,579 4 0		4,706 19 5		191,286 3 5	
		325,147 4 7		6,987 7 10		332,134 12 5
GIPPSLAND DISTRICT—						
Transmission and Transformation System	98,641 15 7		22,583 14 10		121,225 10 5	
Distribution Systems	98,400 6 1		33,903 4 5		132,303 10 6	
		197,042 1 8		56,486 19 3		253,529 0 11
METROPOLITAN SOUTH-WEST DISTRICT—						
Transmission and Transformation System	9,445 4 1		*18 11 8*		9,426 12 5	
Distribution Systems	15,913 15 6		*86 8 8*		15,827 6 10	
		25,358 19 7		*105 0 4*		25,253 19 3
EASTERN METROPOLITAN DISTRICT—						
Transmission and Transformation System	26,474 13 6		6,831 18 7		33,306 12 1	
Distribution System	103,704 3 3		29,930 17 11		133,635 1 2	
		130,178 16 9		36,762 16 6		166,941 13 3
ESSENDON AND FLEMINGTON DISTRICT—						
Distribution System	161,739 15 9		23,940 0 2		185,679 15 11	
		161,739 15 9		23,940 0 2		185,679 15 11
ALTONA DISTRICT—						
Distribution System	3,313 17 0		259 8 0		3,573 5 0	
		3,313 17 0		259 8 0		3,573 5 0
SUNBURY DISTRICT—						
Transmission and Transformation System	6,011 10 1		3,688 18 7		9,700 8 8	
Distribution System	5,087 11 0		5,044 13 7		10,132 4 7	
		11,099 1 1		8,733 12 2		19,832 13 3
SUNSHINE DISTRICT—						
Distribution System	..	..	41,615 3 2		41,615 3 2	
				41,615 3 2		41,615 3 2

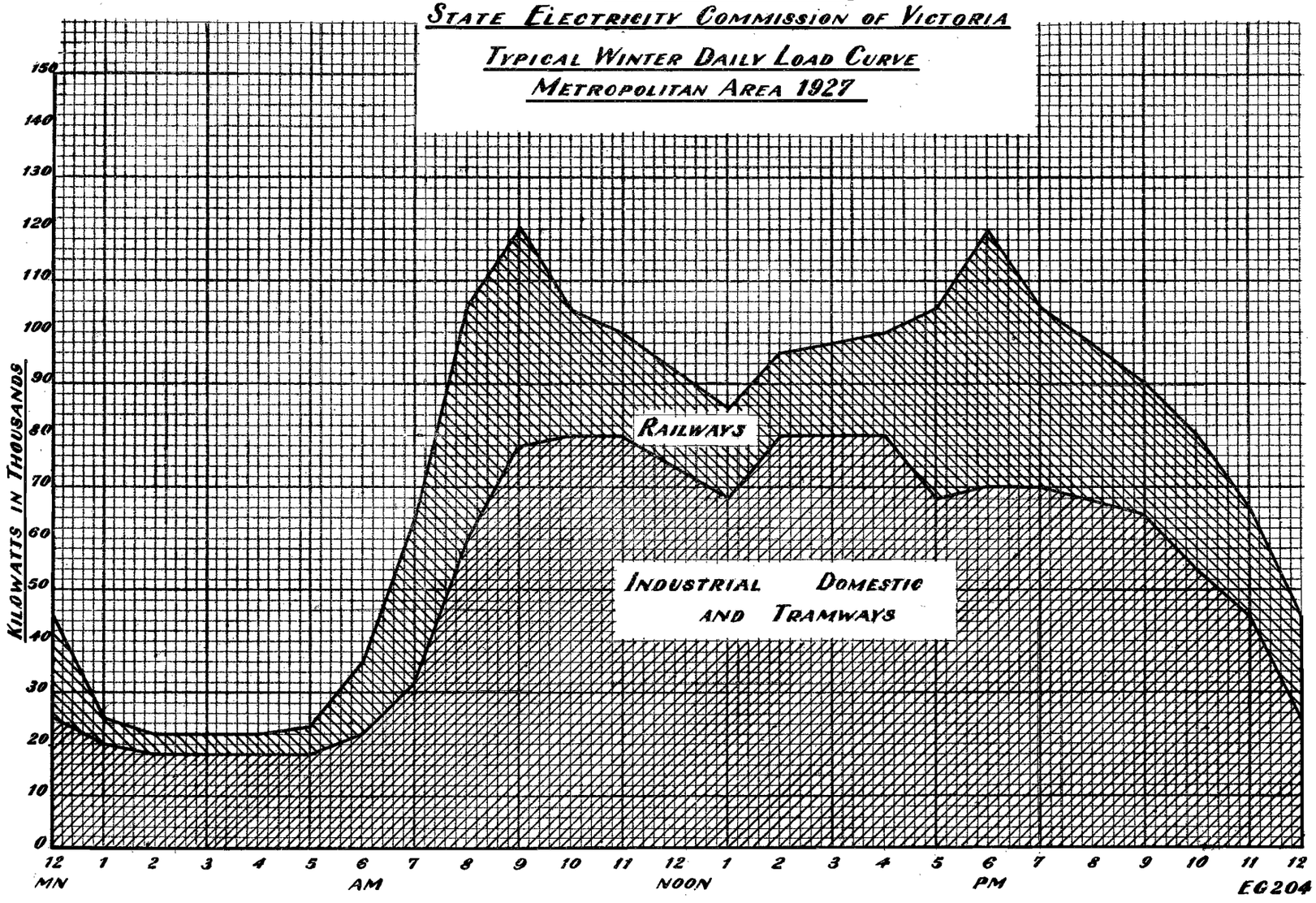
MELBOURNE DISTRICT—						
Distribution System	81,944 0 11		*6,170 1 6*		75,773 19 5	
Metropolitan Supplies Suspense	6,690 19 8		16,894 13 1		23,585 12 9	
		88,635 0 7		10,724 11 7		99,359 12 2
SERVICE BUILDINGS AND EQUIPMENT—						
Head Office Building, Furniture and Fittings	119,561 1 0		2,180 7 10		121,741 8 10	
Footscray Store Buildings and Workshop	23,821 9 2		15,948 18 0		39,770 7 2	
Dandenong Store Buildings and Workshop	8,847 17 2		106 11 9		8,954 8 11	
South Melbourne Garage and Equipment	1,891 6 10		2,792 11 0		4,683 17 10	
Briquette Depot Equipment	2,147 14 11		10,011 4 8		12,158 19 7	
		156,269 9 1		31,039 13 3		187,309 2 4
MOTOR AND OTHER VEHICLES	23,526 10 10		*2,346 0 0*		21,180 10 10	
		23,526 10 10		*2,346 0 0*		21,180 10 10
ELECTRIC SUPPLY POWER SURVEYS	1,732 1 11		*1,280 3 9*		451 18 2	
		1,732 1 11		*1,280 3 9*		451 18 2
LOAN FLOATION EXPENSES	171,700 6 10		*2,808 11 9*		168,891 15 1	
		171,700 6 10		*2,808 11 9*		168,891 15 1
INTEREST DURING CONSTRUCTION	541,326 16 4		12,073 6 10		553,400 3 2	
		541,326 16 4		12,073 6 10		553,400 3 2
AMOUNT CHARGED TO COMMISSION BY TREASURY IN ACCORDANCE WITH DECISION OF CABINET 22ND JULY, 1922	62,023 6 8		..		62,023 6 8	
		62,023 6 8		..		62,023 6 8
EXPENSES IN CONNEXION WITH INQUIRY BY AMERICAN EXPERTS	7,334 3 2		*3,667 1 7*		3,667 1 7	
		7,334 3 2		*3,667 1 7*		3,667 1 7
	9,130,202 16 0	9,130,202 16 0	1,243,961 6 0	1,243,961 6 0	10,374,164 2 0	10,374,164 2 0

Amounts shown in *italics* represent deductions occasioned by transfers to other accounts.

APPENDIX No. 2 (A)

STATE ELECTRICITY COMMISSION OF VICTORIA

TYPICAL WINTER DAILY LOAD CURVE METROPOLITAN AREA 1927



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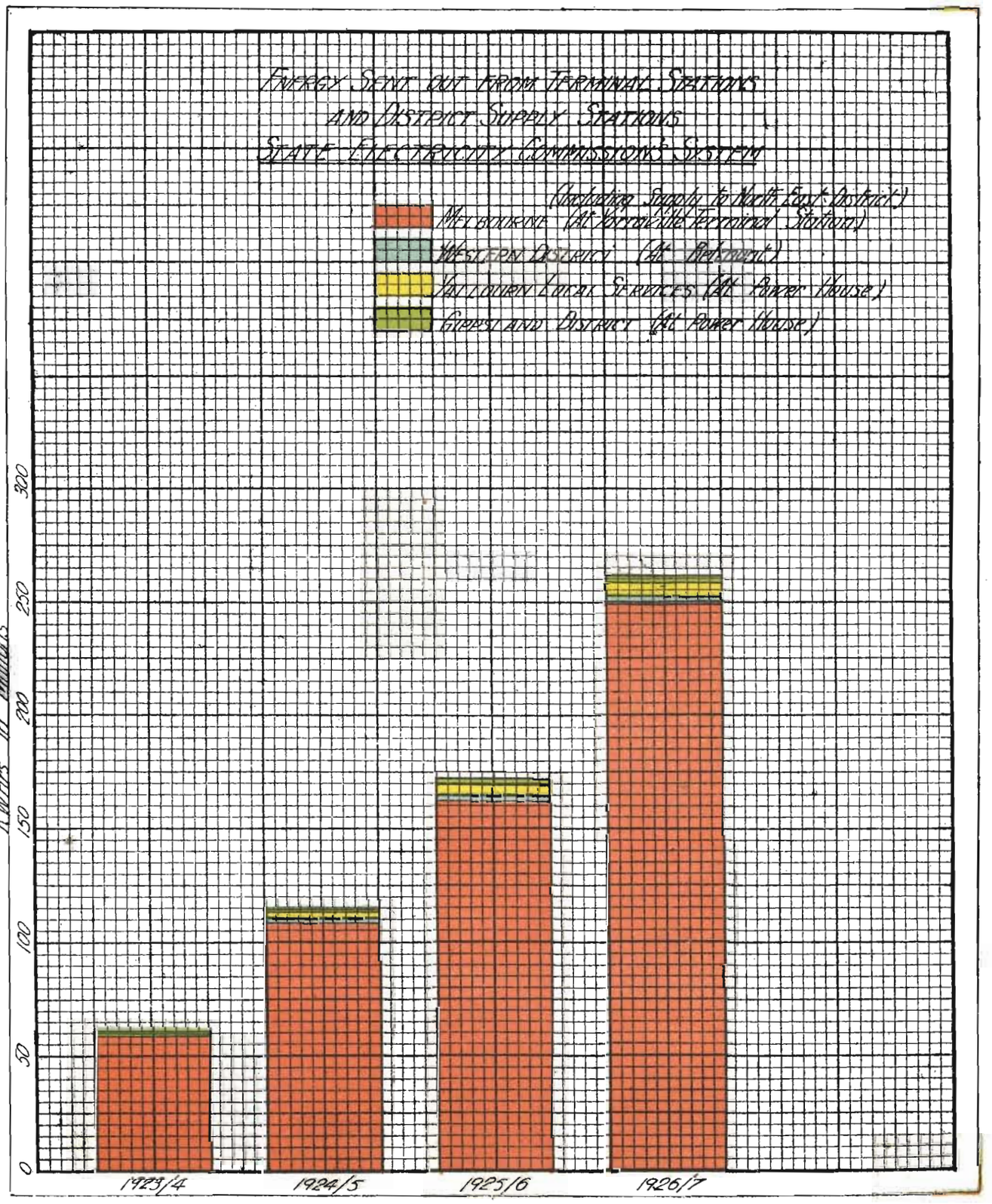
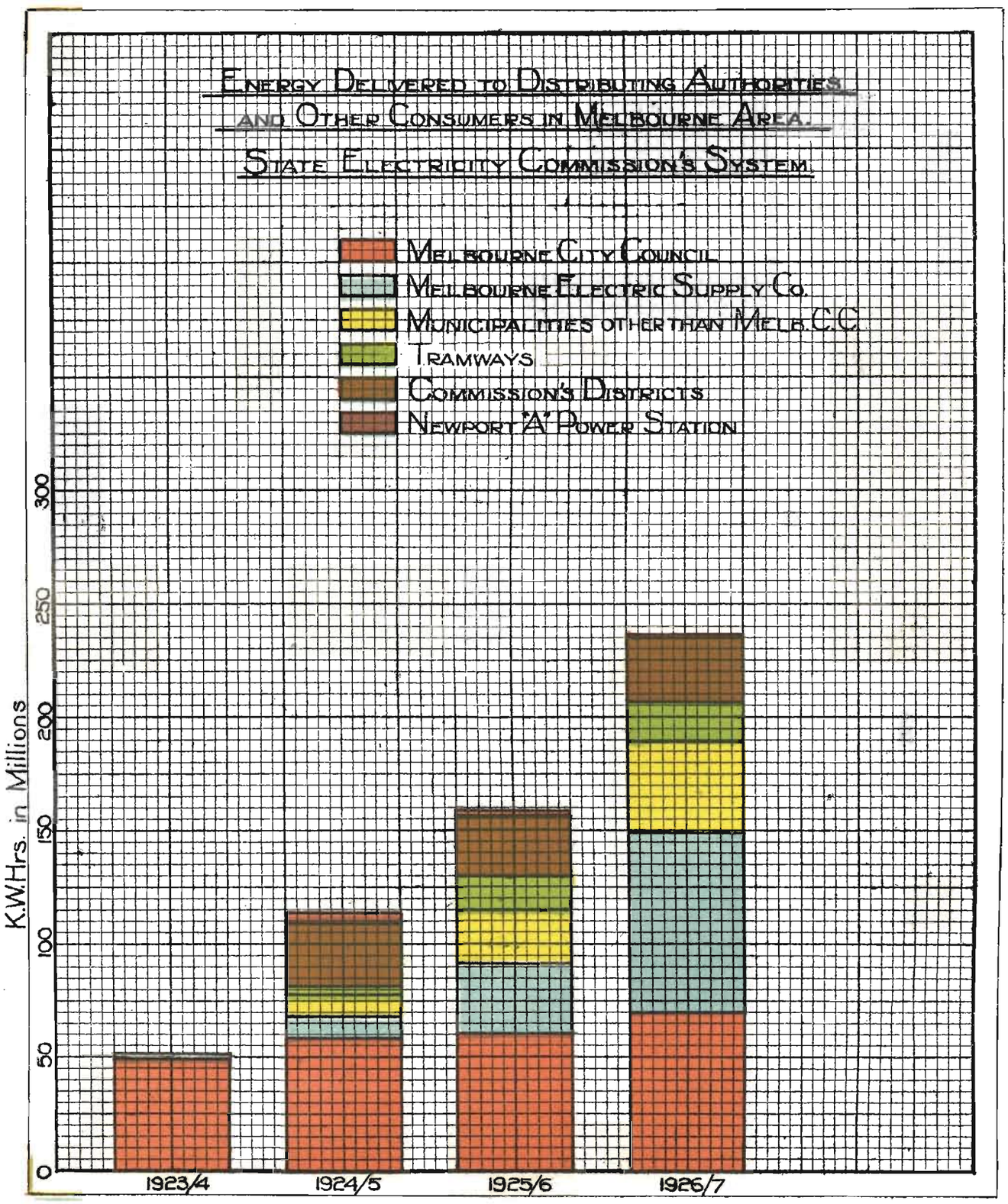
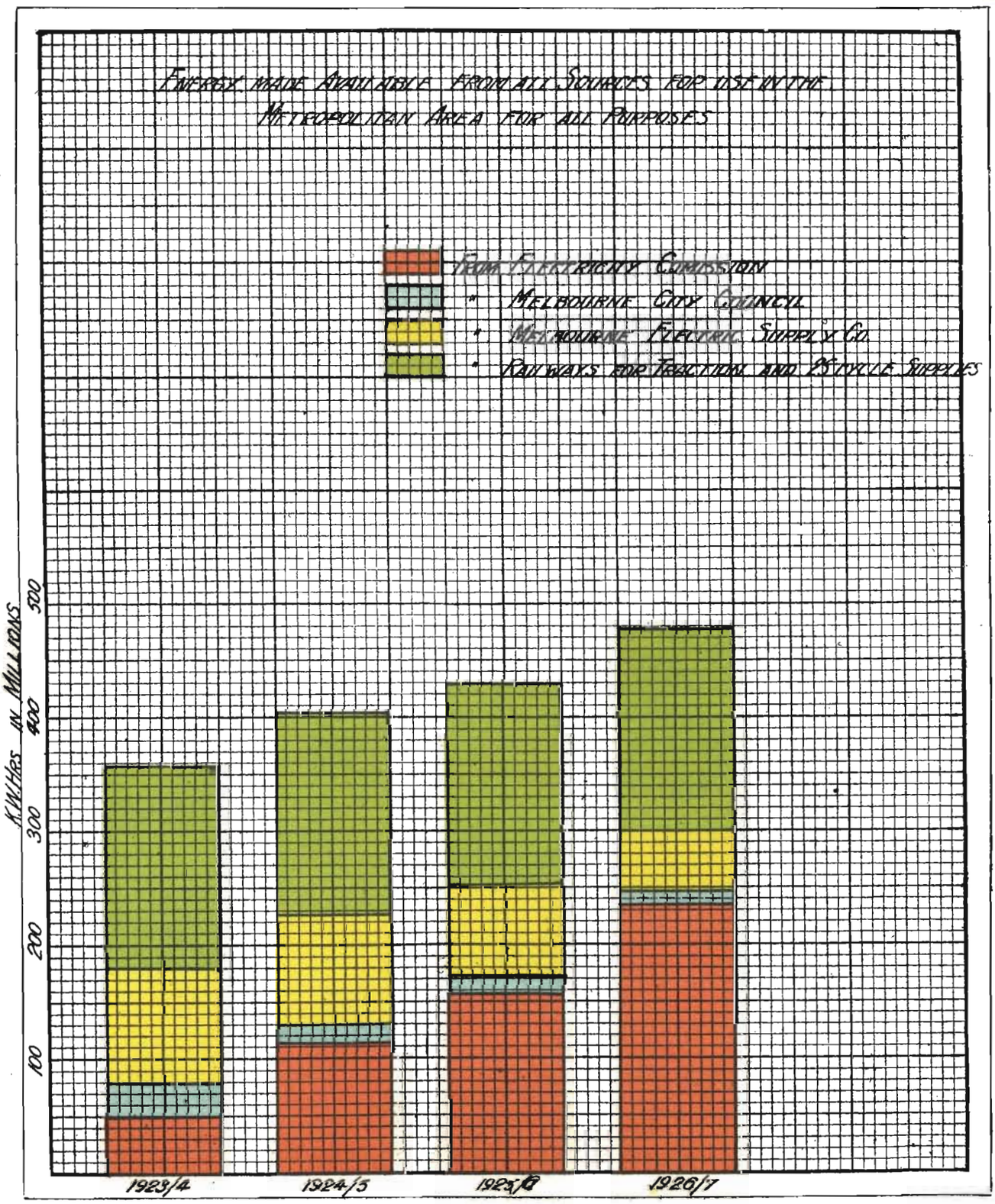
APPENDIX No. 2 (B).



APPENDIX No. 2 (c).



APPENDIX No. 2 (D).



APPENDIX No. 3.

UNITS GENERATED AND DISTRIBUTED IN METROPOLITAN AREA 1918–1927.

Year.	Newport A, Generated.	Melbourne City Council, Generated.	Melbourne Electric Supply Company, Generated.	Newport B, Generated.	Yallourn to Yarraville Terminal Station.	Newport A to Melbourne Electric Supply Company (25 Cycle).	Newport A to Melbourne City Council (25 Cycle).	Newport A to Yarraville Terminal Station (25 Cycle).	Yarraville Terminal Station to Newport A (25 Cycle).	Yarraville Terminal Station to Melbourne City Council.	Yarraville Terminal Station to Melbourne Electric Supply Company	Other Supplies from Yarraville Terminal Station and Losses.
	Kw. hrs.	Kw. hrs.	Kw. hrs.	Kw. hrs.	Kw. hrs.	Kw. hrs.	Kw. hrs.	Kw. hrs.	Kw. hrs.	Kw. hrs	Kw. hrs.	Kw. hrs.
1918	293,400	38,002,182	45,209,890	..	..	..	..	..	..	..	..	..
1919	19,091,723	39,974,648	50,811,070	..	..	..	..	..	..	..	..	..
1920	47,868,179	50,673,371	53,869,324	..	..	..	..	..	..	..	..	..
1921	80,397,774	55,517,920	55,289,970	..	..	9,025,350	..	..	..	..	..	..
1922	188,910,649	36,898,790	47,543,348	..	..	35,749,700	30,577,273	..	..	..	..	..
1923	266,532,672	37,348,870	41,542,034	16,448,300	..	65,714,900	19,741,295	10,524,055	392,700	20,500,000	..	6,079,655
1924	265,472,939	19,993,000	32,310,586	61,329,200	20,912,300	80,719,800	88,943	7,898,800	4,036,600	58,683,857	4,954,600	26,501,843
1925	251,318,843	17,679,440	28,574,875	38,228,900	107,548,364	72,232,600	..	182,700	2,705,900	59,522,500	23,210,050	60,521,514
1926	223,421,572	14,638,690	39,412,944	44,656,600	164,461,110	42,344,965	..	4,682,500	58,800	65,374,300	49,805,677	98,561,433
1927 (1st January to 30th June)	89,633,818	6,156,550	17,281,586	20,207,000	125,637,935	..	..	914,200	19,600	35,417,800	47,973,076	63,348,659

SUMMARY.

Year.	Total Units Generated or Supplied to Metropolitan Area.	Utilized for Railway Traction and Minor 25-cycle Supplies.	Utilized for General and Tramway Purposes.	Total Output from Newport A (Generated), plus Supply from Yarraville Terminal Station.	Total Output from Yarraville Terminal Station (Losses included).	Total Output from Melbourne Electric Supply Company (excluding Supply from Yarraville Terminal Station) Richmond Power Station.	Total Output from Melbourne City Council.	Total Output from Melbourne Electric Supply Company.
	Kw. hrs.	Kw. hrs.	Kw. hrs.	Kw. hrs.	Kw. hrs.	Kw. hrs	Kw. hrs.	Kw. hrs.
1918	83,505,472	293,400	83,212,072	293,400	..	45,209,890	38,002,182	45,209,890
1919	109,877,441	19,091,723	90,785,718	19,091,723	..	50,811,070	39,974,648	50,811,070
1920	152,410,874	47,868,179	104,542,695	47,868,179	..	53,869,324	50,673,371	53,869,324
1921	191,205,664	71,372,424	119,833,240	80,397,774	..	64,315,320	55,517,920	64,315,320
1922	273,352,787	122,583,676	150,769,111	188,910,649	..	83,293,048	67,476,063	83,293,048
1923	361,871,876	170,945,122	190,926,754	266,925,372	26,972,355	107,256,934	77,590,165	107,256,934
1924	400,018,025	180,801,996	219,216,029	269,509,539	90,140,300	113,030,386	78,765,800	117,984,986
1925	443,350,422	181,609,443	261,740,979	254,024,743	145,959,964	100,807,475	77,201,940	124,017,525
1926	486,590,916	176,452,907	310,138,009	223,480,372	213,800,210	81,757,909	80,012,990	131,563,586
1927 (1st January to 30th June)	258,916,889	88,739,218	170,177,671	89,753,418	146,759,135	17,281,586	41,574,350	65,254,662

APPENDIX No. 4.

TRANSMISSION LINES—OVERHEAD.

District.	Erected prior to 30th June, 1927.		Erected during Year ending 30th June, 1927.		Total Erected.	
	Route Miles.	Miles of Cable.	Route Miles.	Miles of Cable.	Route. Miles.	Miles of Cable.
132,000 Volt Line	110	660	..	..	110	660
NORTH-EASTERN.						
66,000 Volt Line	171·7	540·1	..	..	171·7	540·1
22,000 Volt Line	98·8	427·5	2·0	6·0	100·8	433·5
6,600 Volt Line	3·0	9·0	1·3	3·8	4·3	12·8
SOUTH-WESTERN.						
44,000 Volt Line	116	348	..	..	116	348
6,600 Volt Line	129·9	342·5	2·2	7·0	132·1	349·5
GIPPSLAND.						
22,000 Volt Lines	105·4	316·1	76·2	228·7	181·65	544·9
6,600 Volt Lines	46·5	132·0	—33·0	—98·2	13·71	33·6
METROPOLITAN.						
22,000 Volt Lines	106·1	318.5	23·2	69·7	129·3	388·2
6,600 Volt Lines	15·1	45·5	3·7	11·2	18·8	56·7
EASTERN METROPOLITAN.						
22,000 Volt Lines	32·2	96·6	15·0	45·0	47·2	141·6
6,600 Volt Lines	41·5	122·7	8·0	19·1	49·5	141·8
WESTERN METROPOLITAN (including Essendon–Flemington).						
22,000 Volt Lines	16·5	49·5	10	30	26·5	79·5
6,600 Volt Lines	22·5	67·5	5·0	14·5	27·3	82·0

SUMMARY OF OVERHEAD LINE CONSTRUCTION.

Voltage.	Erected during Year.		Total Erected.	
	Route Miles.	Miles of Cable.	Route Miles.	Miles of Cable.
132,000	..	..	110·00	660·00
66,000	..	..	171·7	540·1
44,000	..	..	116·0	348·0
22,000	126·50	379·50	485·55	1,577·75
6,600	—12·64	—42·49	245·88	676·54
Total	114	337	1,129	3,802

UNDERGROUND CABLE LAID.

Class of Cable.	Route Miles Cable Laid prior to 30th June, 1926.	Route Miles Cable Laid during Year 30th June, 1926, to 30th June, 1927.	Total Route Miles Laid to 30th June, 1927.
22,000 Volt	65·5	16·4	81·9
6,600 Volt	22·0	3·1	25·1
Pilot and Telephone	41·5	3·5	45·0
Low Tension	2·2	0·4	2·6
Miscellaneous	1·4	0·6	2·0
Total	132·6	24·0	156·6

Appendix No. 5.

TABLE SHOWING NUMBER AND CAPACITY OF SUB-STATIONS TO DATE AND INCREASE FOR YEAR ENDED 30TH JUNE, 1927.

District and Stations.	Total Installed at end of Year—				Increase for Year 1926-27.	
	1925-26.		1926-27.			
	No.	Kva.	No.	Kva.	No.	Kva.
Metropolitan Terminal Stations	2	73,500	2	76,000	..	2,500
Main Distribution Sub-stations	5	63,000	10	126,000	5	63,000
Distribution Sub-stations at Line Voltage	15	15,050	16	18,050	1	3,000
Transformer Distribution Sub-stations	24	6,400	30	7,435	6	1,035
Extra Metropolitan.						
Main Distribution Sub-stations	5	5,600	5	6,350	5	750
Transformer Distribution Sub-stations	46	5,405	64	6,425	18	1,020
Western District.						
Main Distribution Sub-stations	5	2,850	5	2,850	..	..
Transformer Distribution Sub-stations	53	2,024	60	2,429	7	405
Gippsland District.						
Main Distribution Sub-stations	3	800	3	800	..	..
Transformer Distribution Sub-stations	35	1,545	40	2,082	5	537
North-Eastern District.						
Main Distribution Sub-stations	5	5,750	5	5,750	..	..
Transformer Distribution Sub-stations	7	500	22	1,800	15	1,300
Sugarloaf-Rubicon Area.						
Transformer Distribution Sub-stations	..	..	7	450	7	450
Yallourn Township, etc.						
Transformer Distribution Sub-stations	12	1,650	14	1,900	2	250
Total Installed	217	184,074	283	258,321	66	74,247

APPENDIX No. 6.

DISTRICTS SERVED BY STATE ELECTRICITY COMMISSION.

District.	Population.	System of Supply.	No. of Consumers.	Domestic Light and Power.		Commercial Light and Power. (c)		(a) Commercial Power Two-part Tariff. (b) Commercial Power, Restricted Hour Tariff (See Notes.)				
				Service Charge per Room per Month.	Energy Charge per Unit.	Service Charge per Room per Month.	Energy Charge per Unit.	Service Charge per H.P. per Month.				Energy 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.*
Alexandra ..	850	A.C., 3 ph., 230–400 v. ..	182	1 6	1¾	2 0	1¾	7 0	6 6	6 0	5 6	1¼
Allansford ..	296	A.C., 1 ph., 230–460 v. ..	29	1 6	1¾	2 0	1¾	7 0	6 6	6 0	5 6	1¼
Altona ..	1,800	,, ,, ..	136	1 4	1½	1 10	1½	5 6	5 0	4 6	4 0	1
Alvie ..	..	,, ,, ..	Included in Coroorooke	1 6	1¾	2 0	1¾	7 0	6 6	6 0	5 6	1¼
Bayswater ..	450	,, ,, ..	42	1 6	1½	2 0	1½	6 0	5 6	5 0	4 6	1
Beeac ..	300	,, ,, ..	93	1 6	1¾	2 0	1¾	7 0	6 6	6 0	5 6	1¼
Belgrave ..	800	A.C., 3 ph., 230–400 v. ..	261	1 6	1½	2 0	1½	6 0	5 6	5 0	4 6	1
Benalla ..	4,000	,, ,, ..	485	1 3	1¾	1 9	1¾	6 0	5 6	5 0	4 9	1¼
Birregurra ..	400	A.C., 1 ph., 230–460 v. ..	85	1 6	1¾	2 0	1¾	7 0	6 6	6 0	5 6	1¼
Boolarra ..	685	,, ,, ..	49	1 6	1½	2 0	1½	6 0	5 6	5 6	4 6	1
Camperdown ..	3,500	A.C., 3 ph., 230–400 v. ..	556	1 3	1¾	1 9	1¾	6 0	5 6	5 0	4 9	1¼
Chiltern ..	1,500	,, ,, ..	111	1 6	1¾	2 0	1¾	7 0	6 6	6 0	5 6	1¼
Clayton ..	250	A.C., 1 ph., 230–460 v. ..	78	1 6	1½	2 0	1½	6 0	5 6	5 0	4 6	1
Cobden ..	650	A.C., 3 ph., 230–400 v. ..	105	1 6	1¾	2 0	1¾	7 0	6 6	6 0	5 6	1¼
Coroorooke (Warrion and Alvie)	150	,, ,, ..	58	1 6	1¾	2 0	1¾	7 0	6 6	6 0	5 6	1¼
Cowwar ..	200	,, ,, ..	49	1 6	1½	2 0	1½	6 0	5 6	5 0	4 6	1
Croydon ..	1,000	A.C., 1 ph., 230–460 v. ..	438	1 0	1¼	1 6	1½	5 0	4 6	4 0	3 6	1
Dandenong ..	4,000	A.C., 3 ph., 230–400 v. ..	953	1 3	1½	1 9	1½	5 0	4 6	4 0	3 6	1
Drouin ..	850	,, ,, ..	132	1 6	1½	2 0	1½	6 0	5 6	5 0	4 6	1
Drysdale ..	800	A.C., 1 ph., 230–460 v. ..	66	1 6	1½	2 0	1½	6 6	6 0	5 6	5 0	1¼
Echuca ..	4,000	A.C., 3 ph., 230–400 v. ..	654	1 3	1¾	1 9	1¾	6 0	5 6	5 0	4 9	1¼
Eltham ..	700	,, ,, ..	Included under Greensborough	1 6	1½	2 0	1½	6 0	5 6	5 0	4 6	1
Essendon ..	42,000	,, ,, ..	12,332	1 0	1¼	1 6	1¼	4 3	3 6	3 0	2 6	¾
Ferntree Gully ..	700	,, ,, ..	114	1 6	1½	2 0	1½	6 0	5 6	5 0	4 6	1
Greensborough (Eltham and Montmorency)	931	,, ,, ..	242	1 6	1½	2 0	1½	6 0	5 6	5 0	4 6	1
Heyfield ..	700	,, ,, ..	122	1 6	1½	2 0	1½	6 0	5 6	5 0	4 6	1
Korumburra ..	2,500	,, ,, ..	486	1 4	1½	1 10	1½	5 6	5 0	4 6	4 0	1
Kyabram ..	1,700	,, ,, ..	375	1 4	1¾	1 10	1¾	6 6	6 0	5 6	5 0	1¼
Leongatha ..	1,700	,, ,, ..	378	1 4	1½	1 10	1½	5 6	5 0	4 6	4 0	1
Lilydale ..	1,800	,, ,, ..	230	1 4	1½	1 10	1½	5 6	5 0	4 6	4 0	1
Maffra ..	2,000	,, ,, ..	440	1 4	1½	1 10	1½	5 6	5 0	4 6	4 0	1
Merrigum ..	..	,, ,, ..	38	1 6	1¾	2 0	1¾	7 0	6 6	6 0	5 6	1¼
Mirboo North ..	600	,, ,, ..	106	1 6	1¼	2 0	1½	6 0	5 6	5 0	4 6	1
Moe ..	400	,, ,, ..	124	1 6	1½	2 0	1½	6 0	5 6	5 0	4 6	1
Montmorency ..	300	A.C., 1 ph., 230 460 v. ..	Included under Greensborough	1 6	1½	2 0	1½	6 0	5 6	5 0	4 6	1
Montrose ..	..	,, ,, ..	Included under Croydon	1 0	1¼	1 6	1¼	5 0	4 6	4 0	3 6	1
Mooroopna ..	1,500	A.C., 230–400 v. ..	200	1 4	1¾	1 10	1¾	6 6	6 0	5 6	5 0	1¼
Mortlake ..	800	,, ..	182	1 6	1¾	2 0	1¾	7 0	6 6	6 0	5 6	1¼
Morwell ..	1,365	,, ..	249	1 4	1½	1 10	1½	5 6	5 0	4 6	4 0	1
Noble Park ..	..	A.C., 1 ph., 230–460 v. ..	72	1 6	1½	2 0	1½	6 0	5 6	5 0	4 6	1
Noorat ..	120	,, ,, ..	49	1 6	1¾	2 0	1¾	7 0	6 6	6 0	5 6	1¼
Ocean Grove ..	..	,, ,, ..	25	1 6	1½	2 0	1½	6 6	6 0	5 6	5 0	1¼
Queenscliff ..	2,780	A.C., 3 ph., 230–400 v. ..	309	1 4	1½	1 10	1½	6 0	5 6	5 0	4 9	1¼
Ringwood ..	3,000	,, ,, ..	591	1 0	1¼	1 6	1½	5 0	4 6	4 0	3 6	1
Rutherglen ..	1,160	,, ,, ..	250	1 4	1½	1 10	1½	6 0	5 6	5 0	4 6	1
Sale ..	3,955	,, ,, ..	635	1 3	1½	1 9	1½	5 0	4 6	4 0	3 6	1
Sassafras ..	..	,, ,, ..	No returns yet	1 6	1½	2 0	1½	6 0	5 6	5 0	4 6	1
Shepparton ..	5,200	,, ,, ..	819	1 3	1½	1 9	1½	6 0	5 6	5 0	4 9	1¼
Springhurst ..	100	,, ,, ..	17	1 6	1¾	2 0	1¾	7 0	6 6	6 0	5 6	1¼
Springvale ..	..	,, ,, ..	254	1 6	1½	2 0	1½	6 0	5 6	5 0	4 6	1¼
Sunshine ..	..	,, ,, ..	1,075	1 0	1¼	1 6	1¼	4 3	3 6	3 0	2 6	¾
Sunbury ..	1,500	,, ,, ..	166	1 4	1¾	1 10	1¾	6 6	6 0	5 6	5 0	1¼
Tatura ..	1,300	,, ,, ..	253	1 6	1½	2 0	1½	6 0	5 6	5 0	4 6	1
Terang ..	2,255	,, ,, ..	393	1 4	1¾	1 10	1¾	6 6	6 0	5 6	5 0	1¼
Tongala ..	200	,, ,, ..	45	1 6	1¾	2 0	1¾	6 0	5 6	5 0	4 6	1
Trafalgar ..	700	,, ,, ..	190	1 6	1½	2 0	1½	6 0	5 6	5 0	4 6	1
Traralgon ..	2,300	,, ,, ..	420	1 4	1½	1 10	1½	5 6	5 0	4 6	4 0	1
Upwey ..	..	,, ,, ..	136	1 6	1½	2 0	1½	6 0	5 6	5 0	4 6	1
Wahgunyah ..	500	,, ,, ..	71	1 6	1¾	2 0	1¾	7 0	6 6	6 0	5 6	1¼
Wangaratta ..	3,900	,, ,, ..	598	1 3	1¾	1 9	1¾	6 0	5 6	5 0	4 9	1¼

APPENDIX No. 6—*continued.*

DISTRICTS SERVED BY STATE ELECTRICITY COMMISSION—*continued.*

District.	Population.	System of Supply.	No. of Consumers.	Domestic Light and Power.		Commercial Light and Power. (*c*)		(*a*) Commercial Power Two-part Tariff. (*b*) Commercial Power, Restricted Hour Tariff. (See Notes.)				
				Service Charge per Room per Month.	Energy Charge per Unit.	Service Charge per Room per Month.	Energy Charge per Unit.	Service Charge per H.P. per Month.				Energy 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.*
Warrion ..	100	A.C., 1 ph., 230–460 v. ..	Included in Coroorooke	1 6	1¾	2 0	1¾	7 0	6 6	6 0	5 6	1¼
Warrnambool ..	7,739	A.C., 3 ph., 230–400 v. ..	908	1 3	1¾	1 9	1¾	6 0	5 6	5 0	4 9	1¼
Werribee ..	1,700	,, ,, ..	410	1 4	1½	1 10	1½	5 6	5 0	4 6	4 0	1
Winchelsea ..	705	A.C., 1 ph., 230–460 v. ..	89	1 6	1¾	2 0	1¾	7 0	6 6	6 0	5 6	1¼
Yarragon ..	400	A.C., 1 ph., 230–400 v. ..	61	1 6	1½	2 0	1½	6 0	5 6	5 0	4 6	1
Yarrawonga ..	1,650	,, ,, ..	308	1 4	1¾	1 10	1¾	7s. 6d. for each H.P. of motors installed.				1¾

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 hotels and boarding houses with accommodation for at least twelve persons.
Energy charge subject to special discount of 20 per cent.

Appendix No 6—*continued.*

ELECTRIC SUPPLY UNDERTAKINGS OPERATED BY VARIOUS AUTHORITIES IN METROPOLITAN AREA.

District.	Population.	Supply Authority.	System of Supply.	Consumers. Lighting.	Consumers. Other Purposes.	Tariffs.
Brighton ..	500,000	*Melbourne Electric Supply Co. Ltd.	A.C., 1 ph., 200–400 v. ..	105,273	3,416	The Tariffs in operation in the metropolitan area are now under revision for the purpose of having them standardized. (See page 8 of this Report.)
Collingwood ..			A.C., 3 ph., 230–400 v. ..			
Camberwell ..			A.C., 1 ph., 200–400 v. ..			
Caulfield ..			,, ,, ..			
Cheltenham ..			,, ,, ..			
Fitzroy ..			A.C., 3 ph., 230–400 v. ..			
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. ..			
City of Melbourne	105,200	Melbourne City Council ..	D.C., 230–460 v. / A.C., 3 ph., 230–400 v.	22,411	(total)	
Aspendale, Chelsea, and Carrum	7,000	Carrum E.S. Co. ..	A.C., 3 ph., 230–400 v. ..	1,600	..	
Brunswick ..	47,000	Brunswick City Council ..	,, ,, ..	10,032	424	
Box Hill ..	15,800	Box Hill City Council ..	,, ,, ..	4,076	..	
Coburg ..	33,000	Coburg City Council ..	,, ,, ..	6,407	93	
Doncaster ..	2,000	Doncaster Shire Council ..	A.C., 1 ph., 200–400 v. ..	350	..	
Footscray ..	48,000	Footscray City Council ..	A.C., 3 ph., 230–400 v. ..	9,500	(total)	
Heidelberg ..	15,700	Heidelberg Shire Council	,, ,, ..	4,729	1,443	
Northcote ..	39,376	Northcote City Council ..	A.C., 3 ph., 230–400 v. ..	9,515	(total)	
Preston ..	22,000	Preston City Council ..	,, ,, ..	4,000	..	
Port Melbourne	12,000	Port Melbourne City Council	,, ,, ..	1,800	250	
Williamstown ..	20,000	Williamstown City Council	,, ,, ..	4,700	79	

* The Melbourne Electric Supply Company Ltd. has decided to introduce the Commission's standard two-part domestic tariff into its area as from the 1st September, 1927.

ELECTRIC SUPPLY UNDERTAKINGS OPERATED BY VARIOUS MUNICIPAL AND PRIVATE UNDERTAKERS—RURAL DISTRICTS.

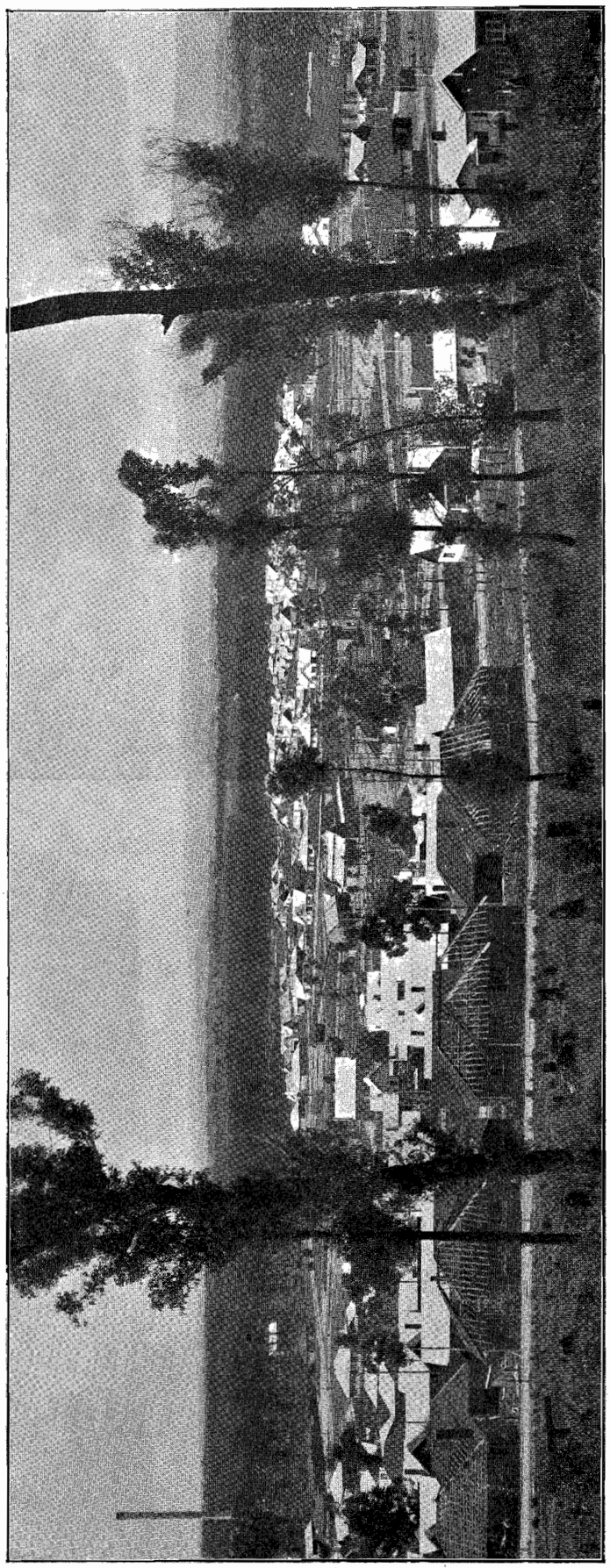
Locality.	Population.	Supply Authority.	System of Supply.	No. of Consumers. Light.	No. of Consumers. Power.	Price per Unit. Lighting.	Price per Unit. Power.
Ararat ..	4,700	Ararat Borough Council	A.C., 230–400 v. ..	630	120	1s.	6d.
Avoca ..	800	Avoca E.S. Co.	,, ..	117	33	1s.	6d.
Bacchus Marsh	1,400	Bacchus Marsh Shire Council ..	,, ..	305	..	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.	,, ..	150	..	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.	,, ..	4,000	(total)	9d., and 9d. to 5d.	4d. and 1½d., with fuel clause
Beulah ..	550	Karkaroo Shire Council	D.C., 230 v. ..	103	15	1s. 6d. ..	9d.
Birchip ..	945	Birchip E.S. Co. Ltd.	,, ..	220	..	11d. ..	6d.
Boort ..	650	Boort Co-op. Butter and Ice Co. ..	,, ..	132	30	1s. 3d. to 9d. ..	6d. to 4½d.
Broadford ..	800	Broadford Shire Council	,, ..	200	..	9d.	
Casterton ..	1,500	Casterton E.S. Co.	,, ..	250	15	1s.	7½d.
Castlemaine ..	5,300	Castlemaine E.S. Co.	D.C., 230–460 v. ..	630	..	1s.	5d.
Charlton ..	1,031	Charlton E.L. Co.	D.C., 230 v. ..	348	73	1s. to 9d. ..	4½d.
Cobram ..	850	Tungamah Shire Council	,, ..	150	10	1s. 6d. ..	8d.
Cohuna ..	..	Federal Milk Pty. Ltd.	,, ..	210	12	1s.	9d.
Coleraine .	840	Coleraine and W.D.B.F. Co. Ltd. ..	,, ..	155	10	1s. 2d.	

APPENDIX No. 6—*continued.*

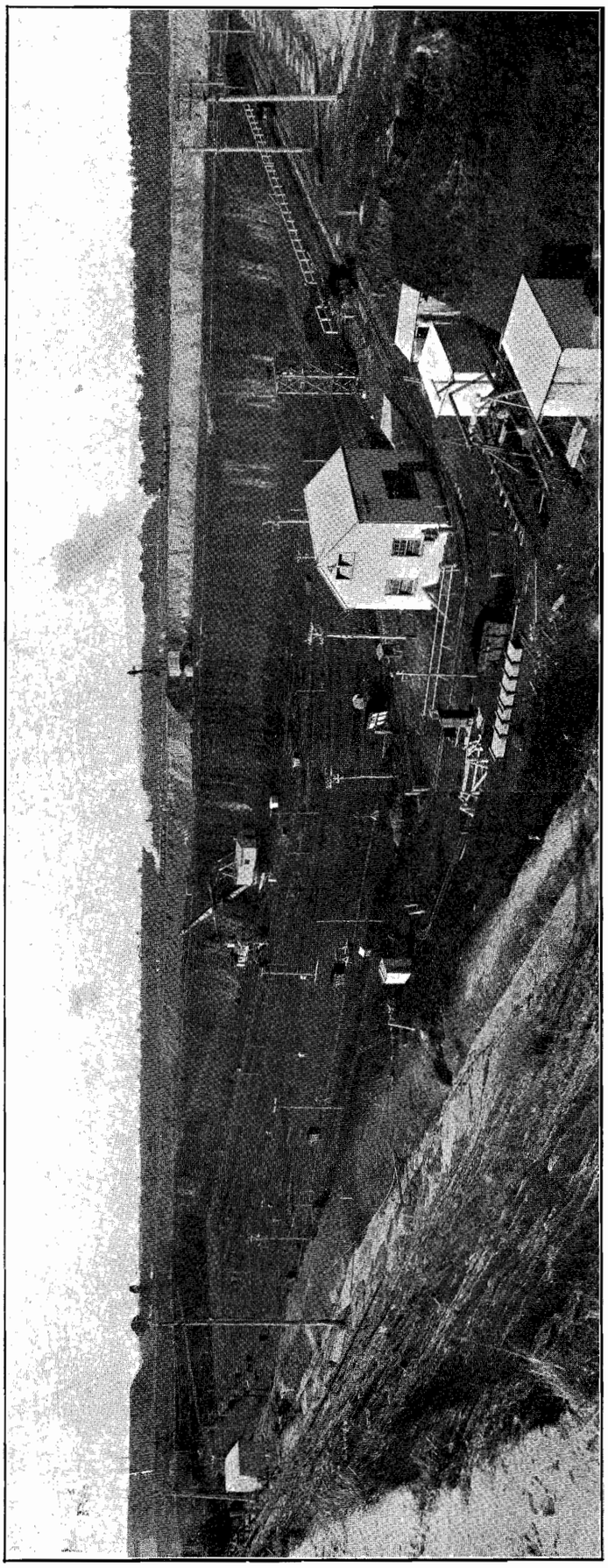
ELECTRIC SUPPLY UNDERTAKINGS OPERATED BY VARIOUS MUNICIPAL AND PRIVATE UNDERTAKERS—RURAL DISTRICTS—*continued.*

Locality.	Population.	Supply Authority.	System of Supply.	No. of Consumers.		Price per Unit.	
				Light.	Power.	Lighting.	Power.
Daylesford	3,400	India Rubber G.P. and T.W. Co.	D.C., 230–460 v.	495	..	10d.	5d.
Dimboola	1,500	Dimboola Shire Council	,,	281	94	1s. 2d.	7d.
Donald	1,700	Donald Shire Council	D.C., 230 v.	400	..	1s.	6d.
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.	
Euroa	2,000	Euroa Shire Council	,,	375	..	9d.	6d.
Foster	450	Toora–Foster Elec. Co.	A.C., 230–400 v.	See Toora		10d.	4d. to 1d.
Frankston	1,000	Frankston and Hastings Shire Council	,,	1,350	..	10d.	3d.
Garfield	..	M. O'Donohue	D.C., 230 v.	50	..	1s.	6d.
Geelong	32,000	Melbourne Elec. Supply Co. Ltd.	A.C., 230–400 v.	7,845	(total)	8½d. to 4d.	4½d. to 2d.
Gisborne	600	Gisborne Shire Council	D.C., 230 v.	130	..	1s. 3d.	9d.
Hamilton	5,098	Hamilton E.S. Co.	,,	893	..	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.	190	..	1s.	6d.
Hepburn	200	Hepburn Springs E.S. Co.	A.C., 230–400 v.	100	..	1s. 3d.	10d.
Hopetoun	550	Karkarooc Shire Council	D.C., 230 v.	94	41	1s. 6d.	9d.
Horsham	4,500	Horsham E.S. Co.	D.C. 230–460 v.	865	65	10d.	5d.
Inglewood	1,100	Inglewood Borough Council	D.C., 230 v.	168	..	1s.	
Jeparit	800	H. J. W. Block	,,	191	17	1s.	6d.
Kangaroo Flat	..	Marong Shire Council	A.C., 230–400 v.	60	..	1s.	6d.
Kaniva	500	Lawloit Shire Council	,,	108	3	1s. 3d.	6d.
Kerang	2,600	Kerang Shire Council	D.C., 230 v.	455	45	10d.	5d. to 4d.
Kilmore	1,785	Kilmore Shire Council	,,	192	22	1s. to 6d.	7d.
Koondrook	300	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.	60	..	Domestic light, 2s. per room per month, and 2d. per unit	
Koroit	2,221	Koroit Borough Council	D.C., 230 v.	167	48	1s. 1d.	6d. to 3d.
Korong Vale	500	Korong Shire Council	A.C., 230–400 v.	150	..	1s.	6d.
Kyneton	3,120	Kyneton Borough Council	,,	490	..	1s.	6d. to 4d.
Lorne	250	Winchelsea Shire Council	D.C., 230 v.	100	..	1s. 6d. to 1s.	
Mansfield	650	Mansfield Shire Council	,,	195	6	1s. 1d.	
Maryborough	4,252	Maryborough Borough Council	A.C., 230–400 v.	341	136	1s.	5d.
Mildura	5,500	Mildura Town Council	D.C., 230–460 v.	1,100	(total)	11d.	2½d., and 6d. to 1.49d.
Minyip	700	Dunmunkle Shire Council	D.C., 230 v.	165	(total)	1s. 2d.	8d.
Mornington	2,100	Mornington Shire Council	A.C., 230–400 v.	283	208	1s.	4d.
Murrayville	350	Siemering's Pty. Ltd.	D.C., 32 v.	2	..	1s. per 25-watt lamp per month	
Murtoa	1,148	Dunmunkle Shire Council	D.C., 230 v.	117	136	1s.	7d. to 5d.
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.
Nathalia	860	Nathalia Shire Council	D.C., 230–460 v.	200	..	1s. 4d.	8d.
Natimuk	559	H. C. Woolmer	A.C., 230–400 v.	70	..	1s. 6d	9d.
Nhill	1,500	Lowan Shire Council	D.C., 230–460 v.	250	..	1s. 3d.	9d. to 5d.
Numurkah	1,350	Numurkah Shire Council	D.C., 230 v.	300	..	9d.	5d. to 3½d.
Nyah	..	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.	250	80	10d.	6d.
Ouyen	700	Walpeup Shire Council	,,	140	..	1s.	
Portsea	150	Flinders Shire Council	D.C., 230–460 v.	Included in Sorrento		25s. per annum per 32c.p. lamp	
Pyramid	420	Gordon Shire Council	A.C., 230–400 v.	40	..	1s. 6d.	9d.
Quambatook	450	Kerang Shire Council	D.C., 230 v.	86	8	1s. 3d.	9d.
Rainbow	900	Rainbow E.L. Co.	,,	145	..	1s.	1s to 8d.
Rochester	1,487	Commonwealth E.S. Co.	,,	360	12	1s. to 6d.	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	550	Wycheproof Shire Council	,,	175	(total)	1s. 4d.	6d. to 4½d.
Seymour	2,000	Seymour Shire Council	A.C. 230–400 v.	401	147	10d. to 6d.	5d. to 2d.
Sorrento	500	Flinders Shire Council	D.C., 230–460 v.	245	4	25s. per annum per 32 c.p. lamp	
Stawell	5,000	Stawell Borough Council	A.C., 230–400 v.	510	85	10d.	5d.
St. Arnaud	3,500	St. Arnaud Borough Council	,,	321	..	1s. and 11d.	6d. and 5d.
Swan Hill	2,531	Swan Hill Shire Council	,,	450	100	1s. to 3d.	5d. to 1d., and 3½d.
Toora	350	Toora Foster Elec. Co. Ltd.	,,	90	50	10d.	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., 230 v.	91	23	1s. 3d.	6d
Warburton	1,000	Yuthong Electric Coy.	..	140	..	1s. per month per 25 c.p. lamp	9d.
Warracknabeal	2,800	Warracknabeal E.L. Co.	A.C., 230–400 v.	70	..	1s.	6d.
Warragul	1,800	River Latrobe H.E. Co.	,,	222	200	1s. 3d. to 9d.	4d. to ½d.
Wedderburn	1,100	Korong Shire Council	,,	150	..	1s.	6d.
Wodonga	2,270	Wodonga E.S. Co.	D.C., 230 v.	216	..	9d.	7d. to 6d
Woodend	1,000	Newham and Woodend Shire Council	D.C., 230 v., and A.C., 110 v.	225	8	1s. 3d.	6d.
Wycheproof	760	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	..	Yea Shire Council	,,	70	..	1s. (maximum)	

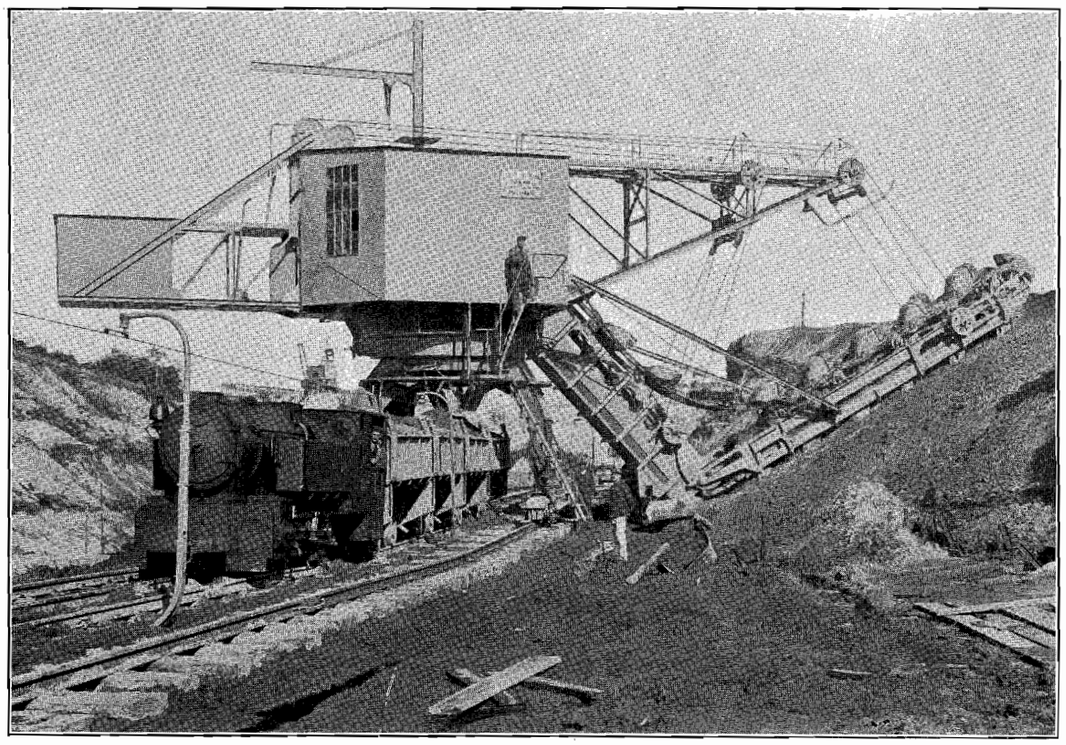
APPENDIX 7.

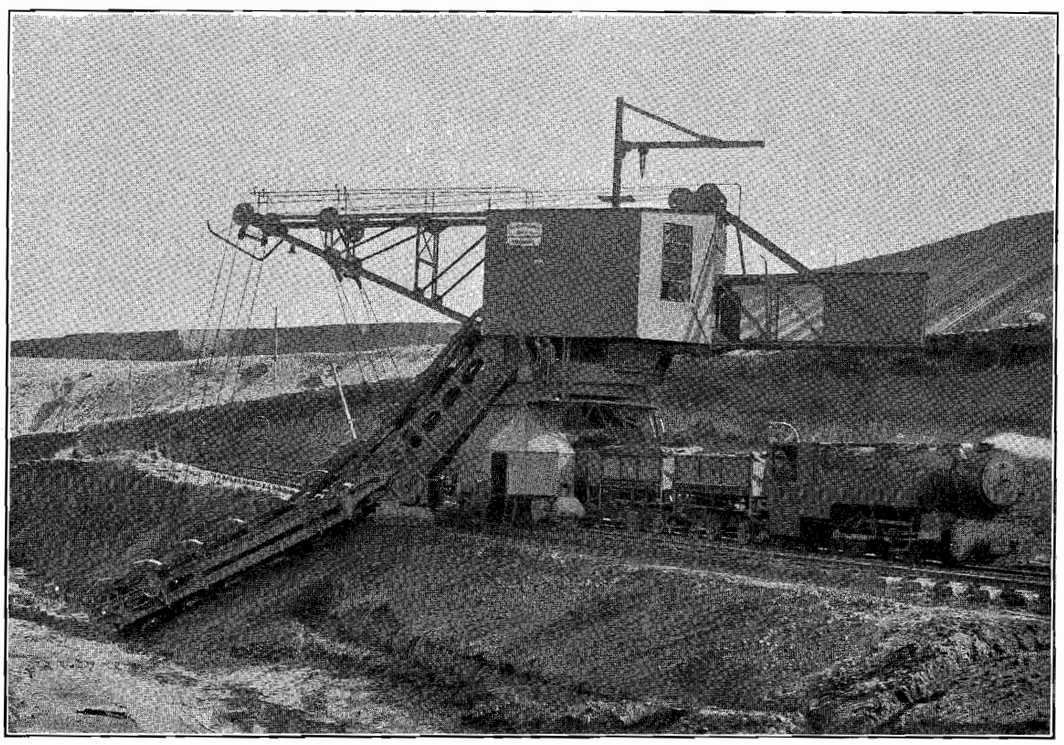


A View of Yallourn.



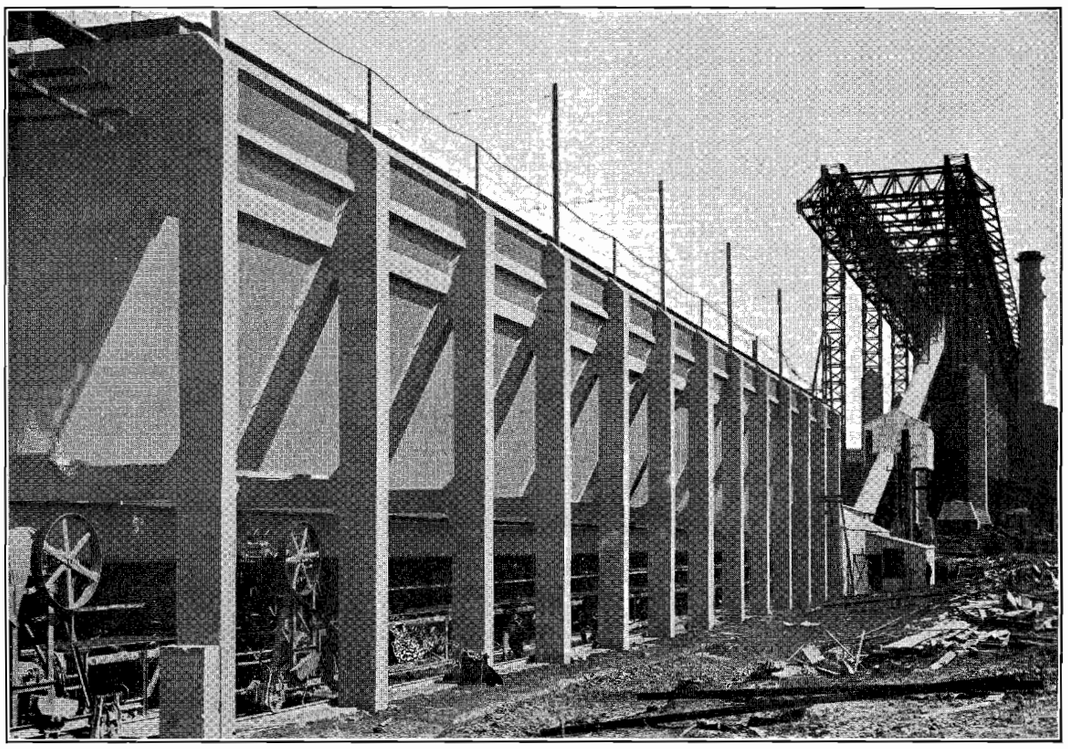
New Open Cut, Yallourn.

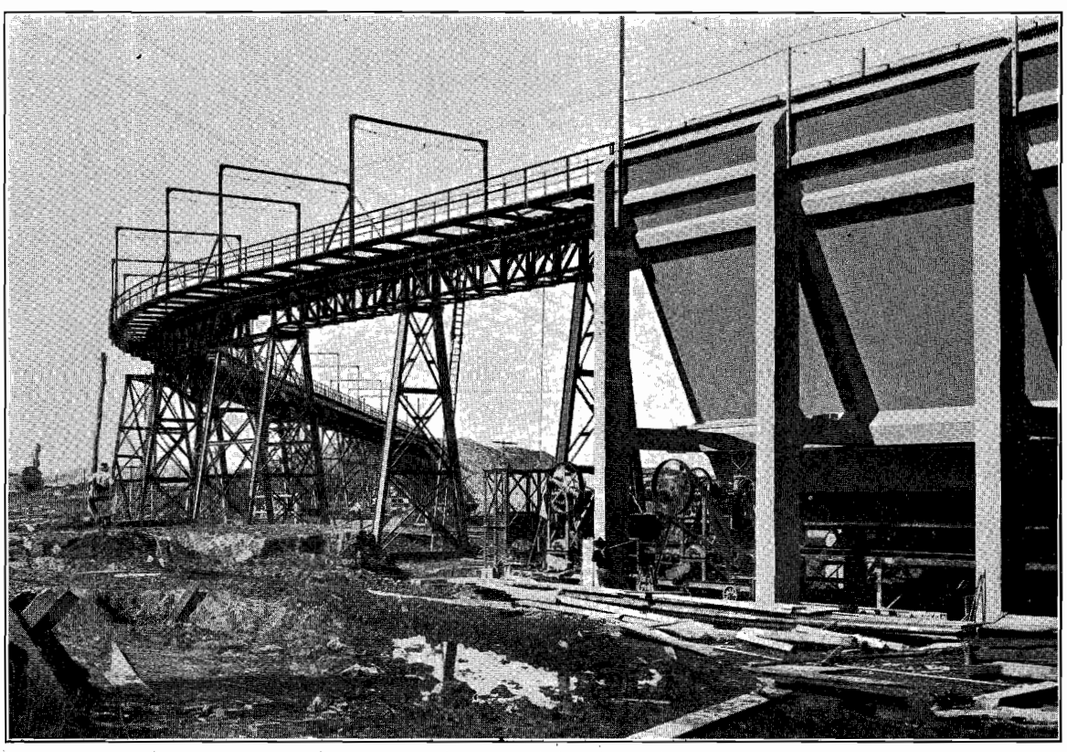




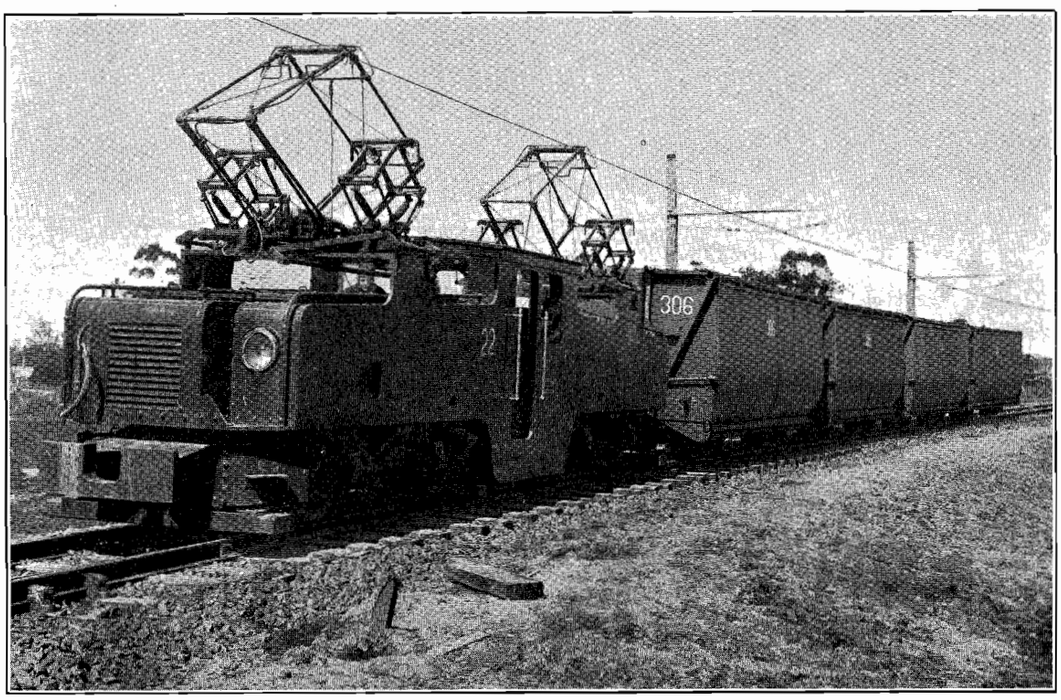
Type of Revolving Overburden Dredger for Yallourn, to be used in conjunction with Electric Locomotives and 20 cubic yards Trucks.

1. Excavating above rails. **2. Excavating below rails.**





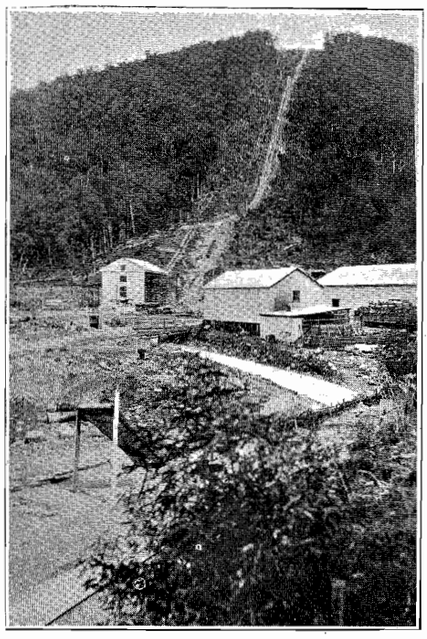
Coal Bunker, Yallourn (section of Klitznig Intermediate Scheme).



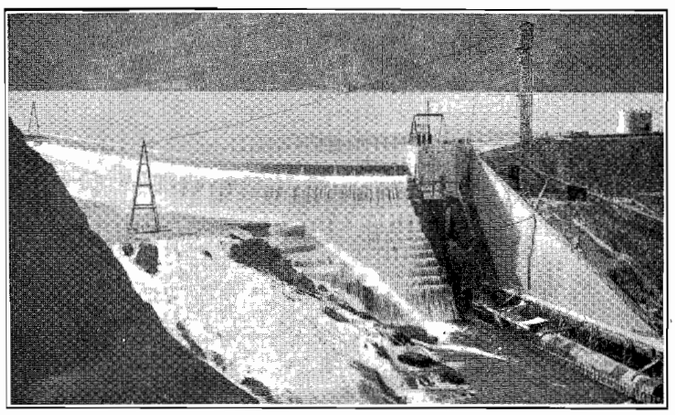
Electric Locomotive and Trucks for Coal Supply, Yallourn.

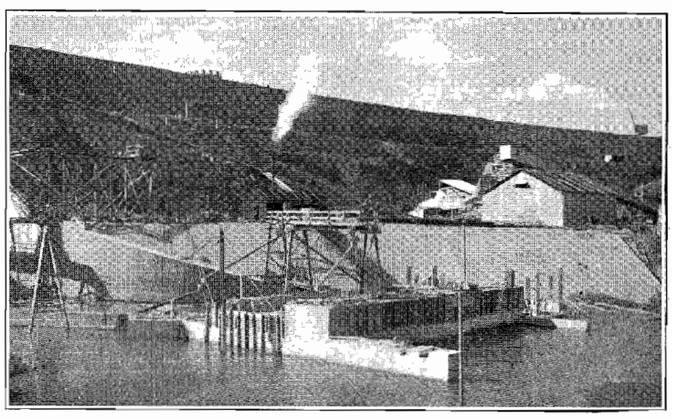
Commission's General Store, Yallourn.

SUGARLOAF—RUBICON HYDRO-ELECTRIC SCHEME.

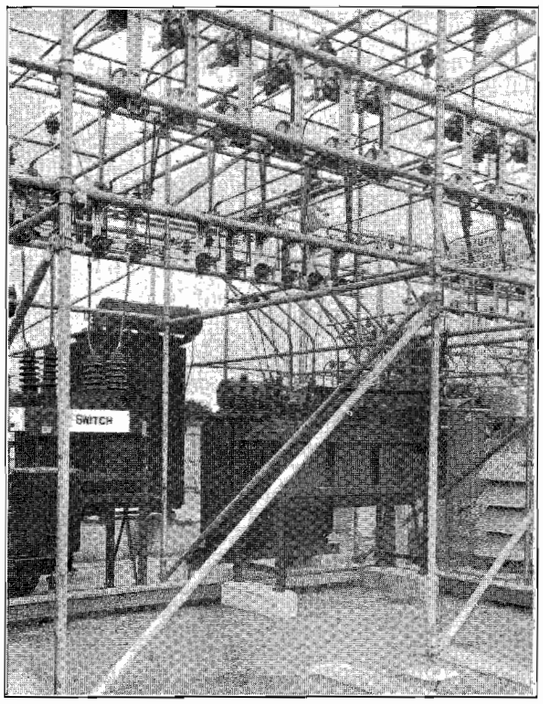


Site of Rubicon Power Station.

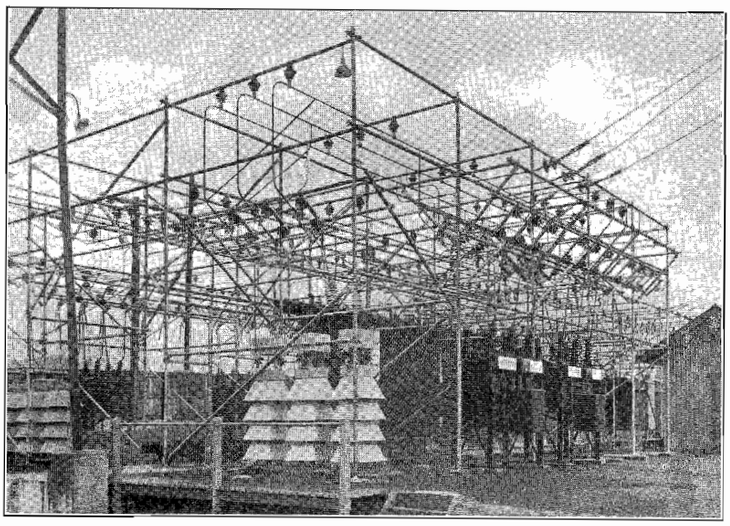




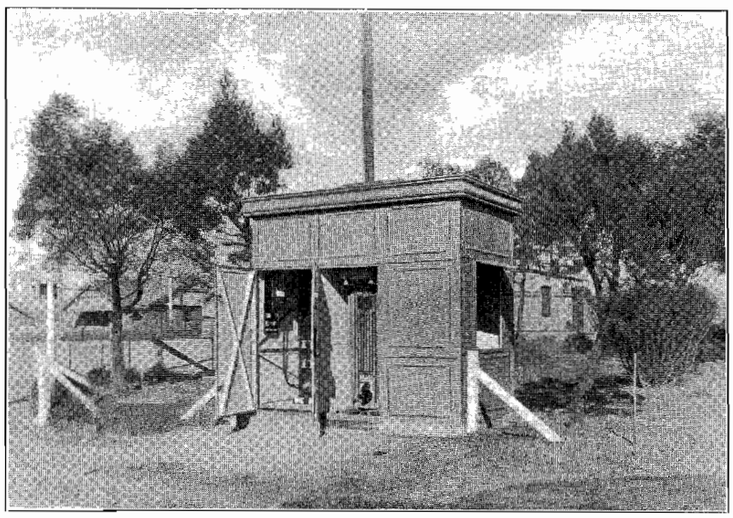
Works at the Sugarloaf Power Station.



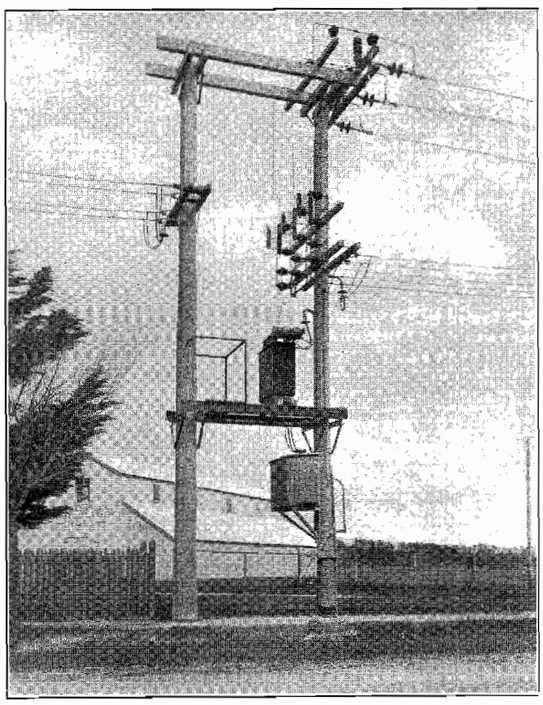
Mentone Substation, showing 22,000 volt. Step by Step Voltage Regulator.



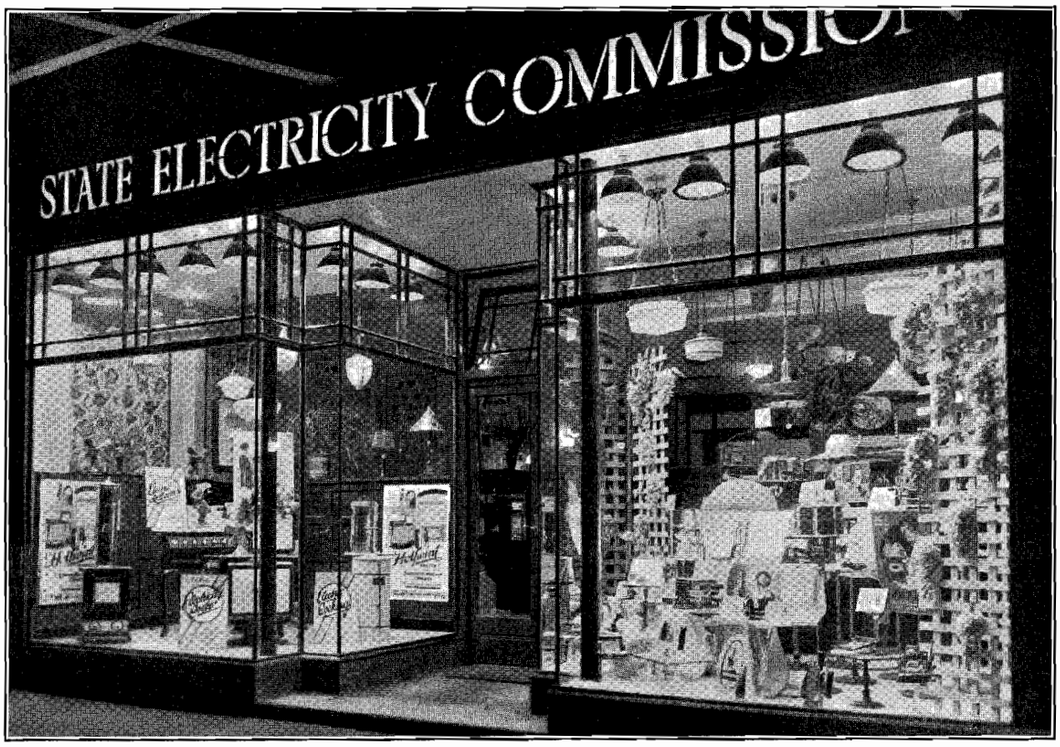
Oakleigh Substation.



Type of 6,600-volt. Kiosk Substation.



Type of 22 kv. Two-pole Substation.

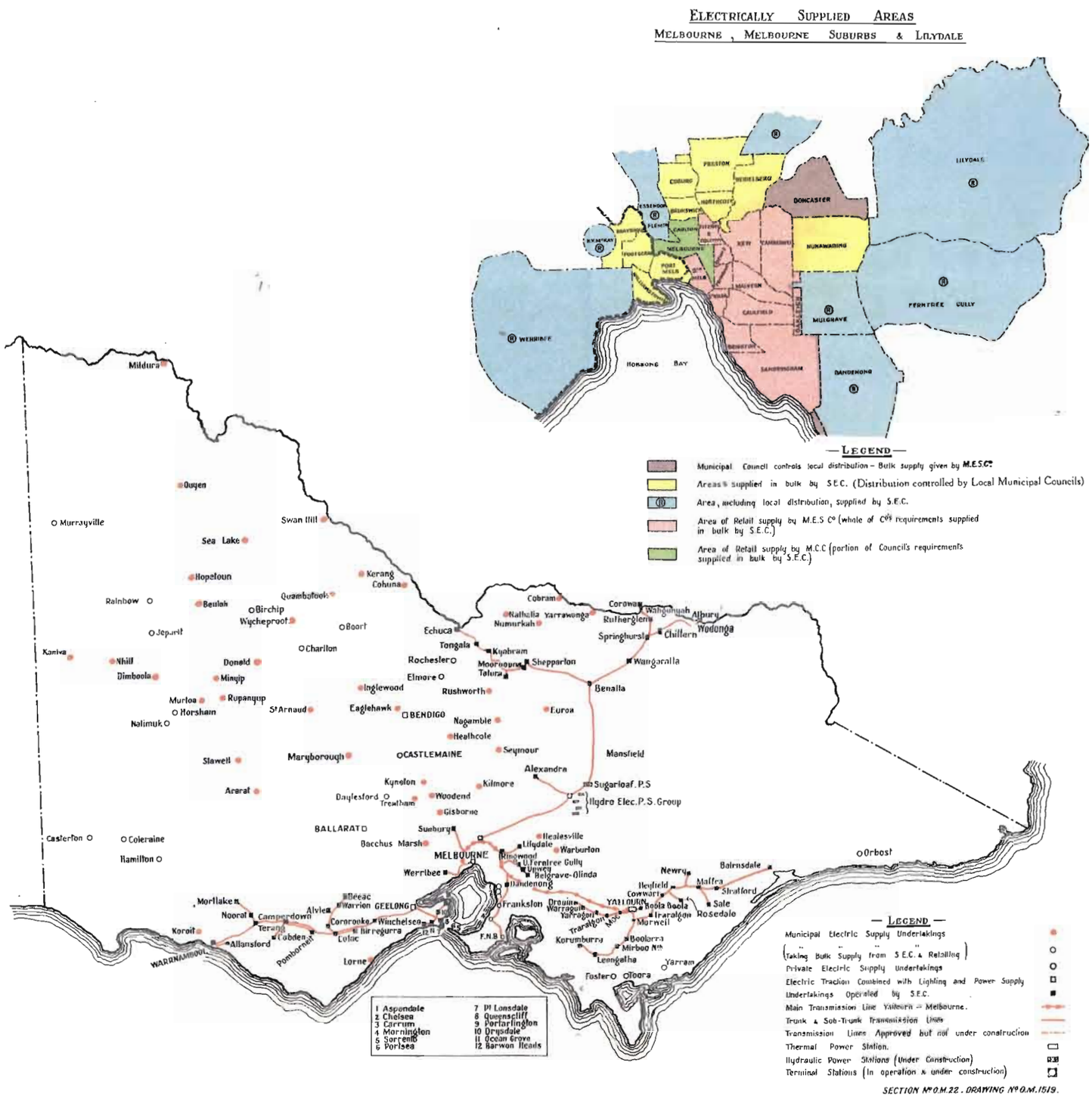


Commission's Showroom, Raymond-street, Sale.

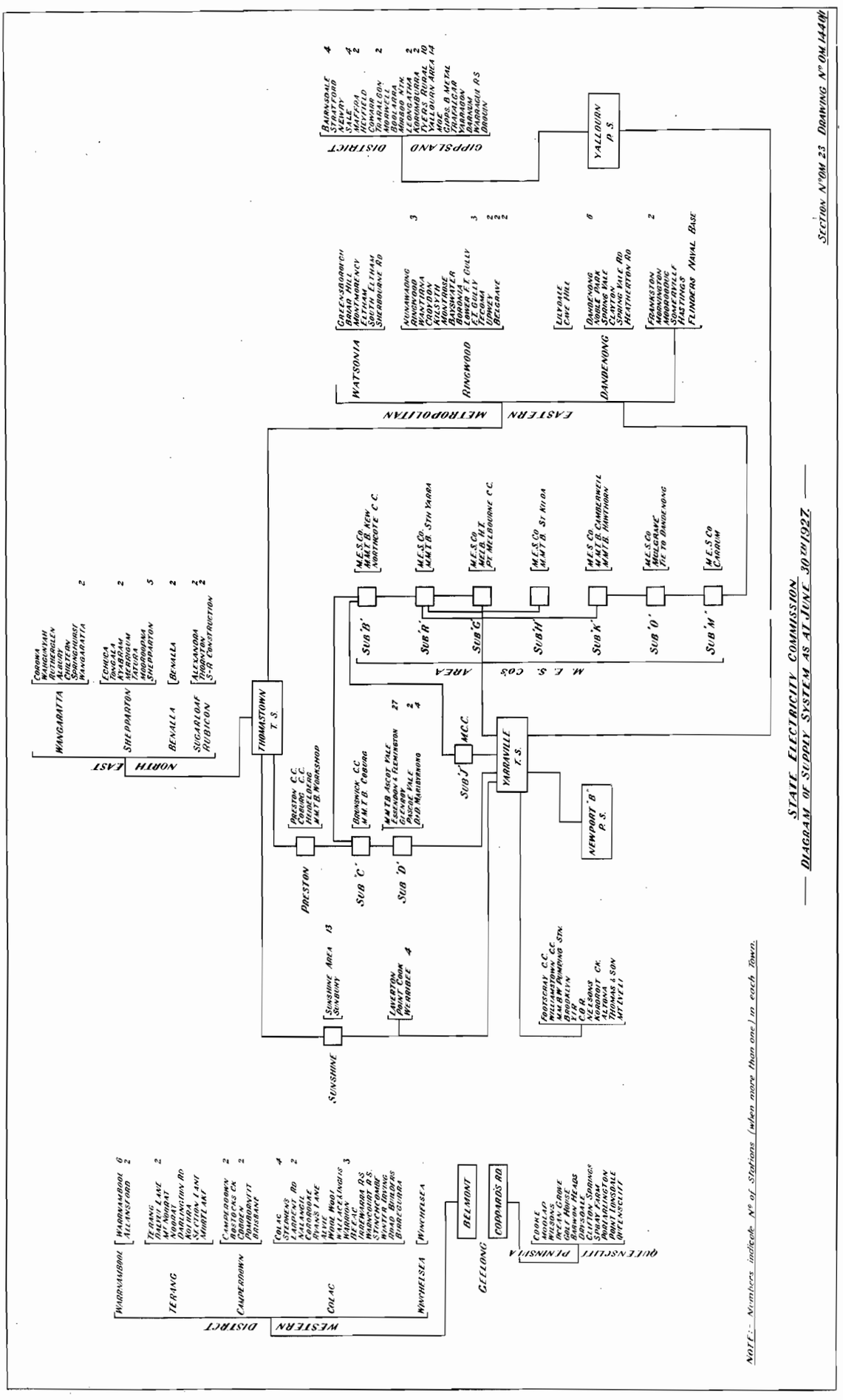
Demonstration Kitchen, Commission's Showroom, Sale.

APPENDIX No. 8.

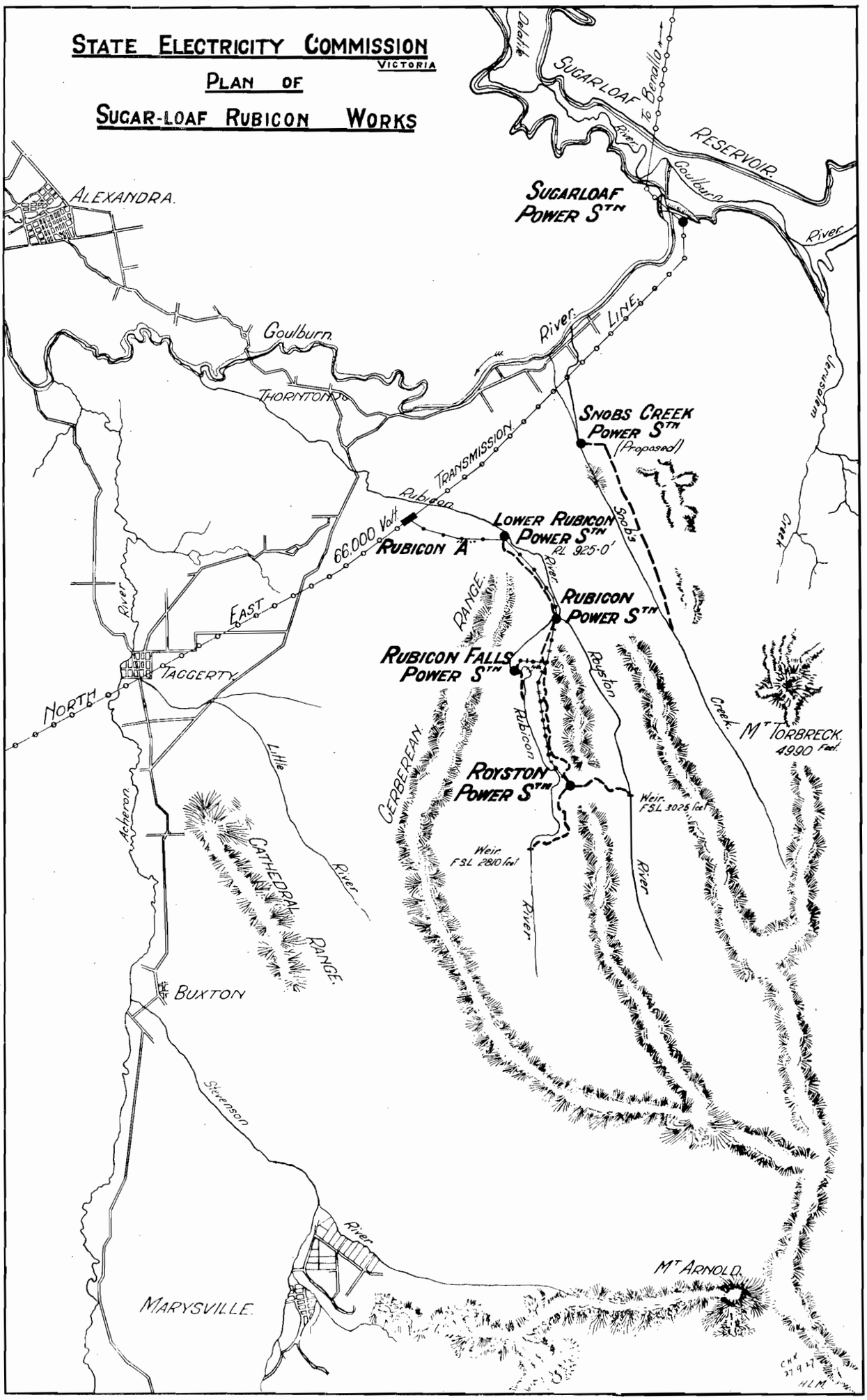
— ELECTRICALLY SUPPLIED AREAS IN VICTORIA —



APPENDIX No. 9.



APPENDIX No. 10.



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