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Red marker
lights 1951

EDITORIAL:

Members who read our first issue in July, 1964, will remember I expressed the hope that our magazine would soon progress from its simple beginning. It is thus with some pride that the Board of Directors and I are able to present this, our January issue, with many improvements including historic photographs. The coming months will see even greater steps forward in the field of presentation of never-before published photos and information.

INTRODUCING

..... A New Department. "R.J." extends its "track"!)

This is the seventh issue of "R.J.", and we are very pleased to commence a new section in the Society's publication. To date, we have published Society news and events, "editorial type" articles, historical notes and progress reports on activities from other Museums. We now venture into the field of authoritative historical articles which will become a regular feature of future issues. The first such article appears below, and commemorates the 10th anniversary of the closure of the tramway system at Geelong.

A SHORT HISTORY OF THE TRAMWAYS OF GEELONG

By K. S. Kings.

Geelong today, is the second largest urban area in the State of Victoria, with a population of 91,666 at the 1961 census. It is situated 45 rail miles south west of Melbourne, on the shores of Corio Bay (an arm of Port Phillip Bay). Geelong is Victoria's second port, and has a wide variety of industries. The greater Geelong area now comprises the City of Geelong, City of Geelong West, City of Newtown and Chilwell, and portions of the Shires of Bellarine, South Barwon, and Corio.

Although tramways were considered quite seriously in September, 1888, and an Order-in-Council was made in 1899 to enable routes to be constructed, the residents of Geelong had to wait until 14th March, 1912, to be able to ride a tramcar in their city. The population turned out in force on this memorable day to join in ceremonies and celebrations typical of the period, as electric tramcar No. 4 - suitably decorated - had the distinction of being the official "first tram" to run in Geelong. The Melbourne Electric Supply Company Limited, which already provided the local domestic supply of electricity in Geelong, had obtained the franchise to construct electric tramways in the city and suburban area. Two routes - to Newtown and West Geelong - opened the service, with two short branches to the railway station and wharf (which served a steamer service to Melbourne across Port Phillip Bay), and a short

Saloon 16

Platform 5x4 = 20

36

7'8" + 2'9"

5 10'5"

it +

Adel 10' 9 1/2"
Melb 10' 8"

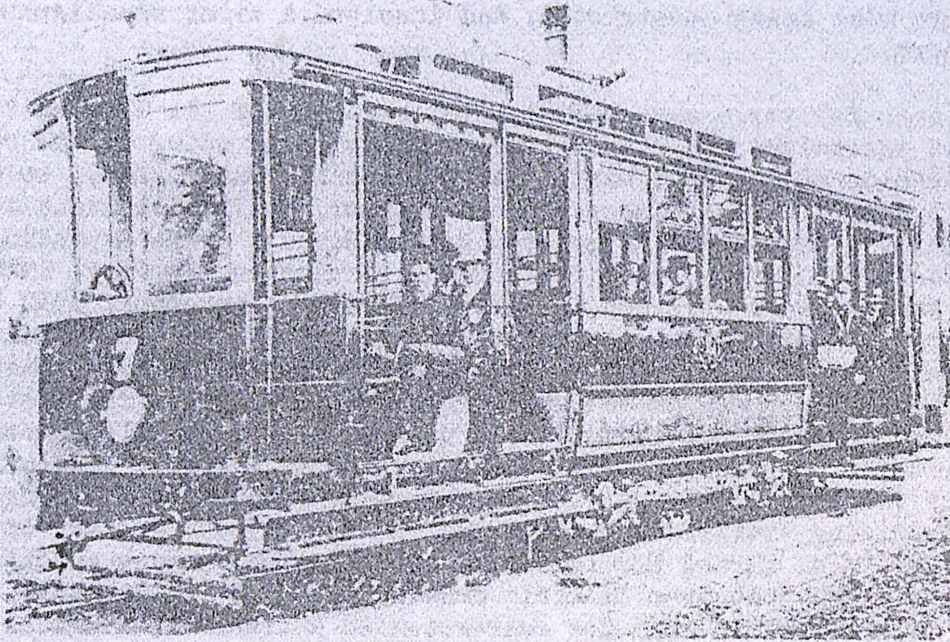
Adel
Dcar 11'7"

Platform Saloon

7'0" 7'7"

single track straight side open combination car

spur line off the latter to a four-track Depot adjacent to the power station and offices. Double track was laid in the central city area with single track and passing loops elsewhere, and provision at termini for shunting trailers. The Adelaide firm of Duncan and Fraser built (at the Depot) seven open combination type single truck tramcars (of distinctive body style) and four single truck open cross-bench type trailer cars for the service; these cars were numbered 1 to 7 and 1 to 4 respectively.



State Electricity Commission of Victoria Photo
"Geelong tramcar No. 7, as built, in 1912.

The (motored) tramcars were originally fitted with small destination boxes at the front of their roofs, magnetic track brakes, tip-over seats in the saloons and link and pin couplers, had a simple style lining-out with double shadows and were embellished with a complex monogram. Originally, there were $3\frac{3}{4}$ miles of track.

The first extension was opened in November, 1913, to South Geelong, at the Barwon River. During 1913-14, trailers Nos. 1 and 4 were motorised and renumbered Nos. 11 and 12, while Duncan and Fraser delivered three new cars from their Adelaide works, to the same design as Nos. 1 to 7. They arrived in 1915, and were numbered 8 to 10. The Company placed three Milnes-Daimler buses (Nos. 1 to 3) in service late in 1912 between the city and East Geelong. The bodies of these vehicles were of the same style as the saloon sections of tramcars Nos. 1 to 10. Their solid rubber tyres apparently had an injurious effect on the roads traversed, as it is reported that they had to be re-routed on occasions to better thoroughfares! However, their bodies in turn

suffered heavily during the course of their operations, and were provided with suitable strong bracing. When the East Geelong tramway was opened on 12th October, 1922, they were withdrawn to be sold. However, when the bracing was removed to enable the bodies to be separated from the chassis and lifting ropes attached for the purpose, the bodies collapsed! Thus ended ten years of tramway bus operation in Geelong. It was decided to import two "Birney" type safety cars from U.S.A., and they were duly assembled at the Depot during the middle of 1924. They were numbered 14 and 15, and were fitted with twin trolley poles and trolley retrievers. The number 13 was not used, possibly because of superstitious reasons. The fifth (northern) road was added in the Depot whilst the Birneys were being constructed, and involved a minor re-alignment to the special-work.

*replaced
trailers*

The next few years saw considerable expansion of the Geelong tramways, with four route extensions and a number of tramcars being added to the roster. The first extension of trackage was opened on 13th September, 1927, to Chilwell, followed by the line to Belmont on 16th October, 1927 (subsequent to the completion of a new bridge across the Barwon River). The expanding industrial area of North Geelong received its tramway service on 6th July, 1928, while the rails to Eastern Park were put into service on 1st September, 1930 (to serve the large park and recreational area, including the football ground, as well as a residential area). Eight new, large, tramcars were built by the Adelaide firm of Pengelley and Company on "Radiax" trucks. They were of distinctive appearance and massive construction, being fitted with twin trolley poles, because of their 35 feet length. They were the last tramcars to be built in Australia with clerestory roofs, entering service during 1925-26, and being numbered 16 to 23. The two remaining trailers were scrapped in 1925-26, and the two open cross-bench motors (Nos. 11 and 12) followed in 1928. The Company purchased the body of a former North Melbourne Electric Tramway and Lighting Company Ltd. trailer from the M. & M.T.B. in 1925 for conversion to a track cleaning car, and fitted it to the truck from the scrapped No. 11 in 1928. The year 1928 also saw the purchase of seven second-hand single truck open combination tramcars from the M. & M.T.B. These were the latter's class J, having been built in 1915 by the Meadowbank Manufacturing Company, Sydney, for the Prahran and Malvern Tramways Trust. They became Nos. 24 to 30 in the Geelong fleet. The Geelong tramways thus entered the 1930's with 27 single truck tramcars operating over 11 $\frac{1}{4}$ miles of track (the maximum reached).

The State Electricity Commission of Victoria was created by Act of Parliament to be the main electricity supply authority for Victoria, and was vested with power to generate same or to purchase existing electricity supply companies. Negotiations were carried out with the Melbourne Electric Supply Company Limited during the late 1920's, and it was agreed that the S.E.C. should purchase the Company from 31st August, 1930.

The S.E.C. quickly surveyed the state of the Geelong tramway system, and found that it was in very good condition (unlike the Ballarat and Bendigo tramways, which were inherited at the same time). Most of Geelong's track was less than ten years old, and all its rolling stock less than twenty years old. However, the depression of the 1930's caused a decline in passengers, and it was decided to introduce one-man operation of tramcars, in 1932. The two "Birney" cars (Nos. 14 and 15) were an obvious choice, and Nos. 3 to 10 and 24 to 30 were

converted by alterations to their open end compartments. Although this move was not popular with the crews, it operated successfully, and Nos. 1 and 2 were converted in 1935, and Nos. 16 to 19 in 1939. In 1936, the S.E.C. purchased four "Birney" type cars from the Municipal Tramways Trust, Adelaide, when they became surplus upon the closure of the isolated Port Adelaide tramway system. They were placed in service at Geelong, where the other two "Birneys" had proved very popular, and were numbered 27 to 30. To equalise the rolling stock, the original Nos. 27 to 30 were transferred to Ballarat, as part of the rehabilitation of that system. Nos. 14 and 15 had their trolley retrievers removed in 1937, and were converted to single trolley pole cars at the same time. The four "new" cars differed from Nos. 14 and 15 in that the latter were fitted with longitudinal seats and bulkheads behind the motorman's seats, whereas the ex-Adelaide "Birneys" had transverse tip-over seats and no bulkheads. The final route alteration took place on 9th October, 1940, when the short length of track leading to the Wharf was relocated from the Depot to what became known as Beach terminus. Over the years, some duplication of track had taken place, the middle passing loop had been added on the West route, the through connection from West to Newtown/Chilwell routes removed, the loop on Chilwell had been removed, and the loop on North had been relocated on the East route. Modifications to the track layout had taken place at the main city intersection (the corner of Moorabool and Rylie Streets) as necessary to suit the extension of the routes. An interesting relocation of track took place at the Newtown and Chilwell Town Hall. The date has not yet been ascertained, but it probably took place in conjunction with the opening of the Chilwell route.

The Depot has undergone a number of changes over the years. The 1924 alteration has been mentioned. Subsequently, the rear of the Shed was modified by the extension of the two southern roads. These tracks left the rear of the shed by large doors, crossed the narrow street and entered a two-track building on the other side. This was the Workshop and had a separate one-track Paint Shop situated beyond it. Entrance to the latter was gained by a small traverser, originally built only for single truck tramcars trucks. When bogie cars arrived after World War II, they were moved into the Paint Shop one truck at a time. Clearances at the doorway pillars was critical, so some bricks were removed to ease the position. It is interesting to note that our Canberra member - Jack Richardson - suggested this method as the solution to the problem of how to get the very long overall wheel base bogie cars across the short traverser.

About the end of World War II, the S.E.C. decided to purchase a number of surplus maximum traction bogie cars from the M. & M.T.B. The first four arrived in 1947, becoming Nos. 31 to 35, and were followed by two more in 1948 (Nos. 35 and 36), and four more in 1951 (Nos. 37 to 40). The first six cars were replacements for the six "Birney" cars which were transferred to Bendigo during 1947 to 1949, while the last four were additional units. The Geelong rolling stock thus reached its maximum of 31 passenger tramcars. It is of interest that Geelong was the last tramway system in Australia to operate with an all-single truck car fleet, until the first bogie cars arrived in 1947. The entry of the bogie cars into Geelong spelt the end of an interesting feature of the local tramways - coloured route indicator lights. Although not introduced when the system opened in 1912, they were in use by May, 1915. Four colours were

used: red, white, blue and green. At first, there was some concern that the bogie cars might not operate successfully with the public without route lights, but it was soon found that there was no cause for alarm. Consequently, the coloured lights were removed from all the single truck cars except Nos. 23 to 26. In 1951, No. 25 was renumbered 28, whilst No. 39 was altered for one-man operation during 1953. However, the Employees Union refused to run the car as a one-man unit, and it continued to operate with a two-man crew. The problem of head-on accidents with motorists on single track sections of the routes caused the S.E.C. to fit red marker lights in the lower outside corners of the dashes during 1951, and to decide to paint the dashes in yellow and black stripes, illuminated by a canopy light, in 1955. The only cars to be done were Nos. 31 to 35, 37 and 4, while No. 5 only had its dashes painted. The project was then cancelled.

Through-routing of cars has been practiced for many years. Before and after World War II, cars ran as follows:- Newtown to City; West to City; Chilwell to East; Eastern Park to City; Belmont to North. Newtown and West cars ran to Beach and the Railway as required. About the end of 1952, amendments were made as follows:- Chilwell to Beach or Station; East to West; Newtown to Eastern Park; North to Belmont. Short workings were timetabled as follows: East - to Humble Street (the far end of the loop); North - Victoria Street, and Mackay Street (one stop short of the terminus); Belmont - the railway overbridge, and South Geelong. Most single track sections were protected by colour light signals operated by the trolley wheel passing through a contactor on the overhead trolley wire. Details of the coloured route indicator lights are:- Newtown - green; West - red; East - blue; Chilwell - green and blue; Belmont - white; North - red and white; Eastern Park - blue and white.

Subsequent to an enquiry, the State Government announced plans to replace the Geelong trams with privately operated bus services in November, 1955. The closure was to be undertaken in four steps: firstly, on January 8th, 1956, the last cars ran on the routes to East, West and Chilwell, together with the latter's regular workings to Beach and Railway. Cars were provided on the two latter as required. The second abandonment was on 24th January, when Newtown and Eastern Park routes ceased. The third closure was the route to North on 4th March, while Belmont went out in a real blaze of glory on 25th March, 1956. No. 4 - which had opened the system - was suitably decorated as the official last tram, and preceded bogies Nos. 38, 31 and 33 to Belmont terminus, so that it would be the last tram to return. A huge crowd was present, and a number of ceremonies took place during the final return trip. Pengelley cars Nos. 17 and 18 ran the Sunday afternoon and early evening service, but were changed over for Nos. 38 and 31 before the "last run". No. 33 was run out when the size of the crowd became known. It had been planned to use Nos. 31 and 38 because these two bogie cars were to be scrapped, while the other eight were due to be (or had already been) sent to Ballarat and Bendigo. All the single truck cars and the track cleaner were scrapped and sold. Although ten years have rolled by since the Geelong Tramways were closed, quite a deal of track remains in the roadways, despite quite a lot having been lifted during 1965. In some thoroughfares it can be seen beneath a bituminous coating, while elsewhere no attempt has been made to either cover or remove it. The eight bogie cars (and four of the six "Birneys") still carry passengers in Ballarat and Bendigo, whilst bodies of some of the single truck cars are still in existence in various parts of Geelong and the

Geelong Tram No.2

This style of tram is described as a single truck straight-sill open combination car. The body was manufactured by Duncan & Fraser of Adelaide in 1911 as one of the Melbourne Electric Supply Company's order of seven cars and four trailers to open Geelong's tramways the following March. The car bodies¹ were assembled at the new depot in Geelong and the electrical and mechanical gear imported from London.

The car body is made from mainly from Australian timbers. The structural timbers along the full length of the car are silky oak and the vertical structural timbers of a particularly hard native timber, Crow's Ash. Interior panelling, doors and trim are of blackwood, silky oak and Queensland maple. The cross-seats on the platforms are fixed in position and consisted originally of alternate kauri pine and blackwood slats and the window frames of silky oak. The roof timber is oregon, imported from the US. The wooden saloon sides are covered with sheeted galvanised iron and have a striker rail at the height to rebuff passing carts and buggies. The 8 seats in the saloon were the American Hale and Kilburn tip-over variety with cushions covered with herringbone weave rattan. The trams could carry 36 seated passengers. The 8ft wheelbase truck was supplied by the Brush Electrical Engineering Company and controllers and motors by the British Westinghouse Electrical and Manufacturing Company². The two motors were WH225N, rated at 45hp, and controllers Westinghouse T1Fs.

The trams were seen as particularly modern: two braking systems for 'assured safety' (hand and magnetic track), windshields, and front and side destinations that could be changed from *inside* the car. By mid-1914 coloured route indicator lights were included on new front destination boxes for the three routes: red, West Geelong, green, Newtown and white, South Geelong. Cars from these went to either of the city destinations, Station and Wharf, which did not have colour signals. The fourth light (blue) was covered over until the East-City route was eventually opened in 1923.

In 1935 the car was converted for one-man operation by closing in the open platform ends such that entry points were reduced to two in the direction of travel and those on the opposite side closed with folding metal gates. The transverse seating in the saloon was replaced with longitudinal slatted seats of blackwood. In the late '40s windscreen wipers were added and in 1950 the car's gates were replaced with hinged wooden doors and the front bumpers lowered. The destination lights were removed and two mirrors fitted.

When the system closed in March 1956 the car was scrapped and the body sold to Phil Shoppee at Murradoc on the Bellarine Peninsula who used it initially for feeding livestock (through open saloon windows). It came to Canberra in 1991 in restorable condition, mainly because Phil had built a roof over it sometime in the 1960s. As the TMSV, which had earlier purchased his other tram (Geelong No 9), indicated that their intention was to restore it in its final configuration, I made the decision to change No.2 back to its Company, pre-1930, days. All there was to work off were old photographs. No written records have been located and any drawings from the SEC era that Bendigo may have had were not acknowledged. The bodywork was almost finished in 2019 when the car arrived at Bendigo Tramways to have the mechanical and electrical work done.

Car 2 is presented as it would have looked in the mid-1920s. The body colour is Olive Drab³ (similar to Middle Bronze Green) and Lemon Chrome (guessed, the original was Yellow Chrome) with Indian Red feature trimming and lineouts in black, Larch Green and yellow. The roof canvas was white. During the '20s several significant changes were made to the first Geelong cars. Their magnetic track brakes were replaced by air brakes operated from Westinghouse PV3 manual lap valves with a DH10 compressor. The use of trailers was discontinued and tow bars removed. These changes were adopted in the restoration but others were not, e.g. replacement of the drop windows in the motorman's bulkhead by a half glass wooden panel and the fitting of motorman's seats. Two 1950 changes that have deliberately been retained are the lowering of the bumpers from on top of to below the king planks and, at one end, the final white on black destination roll.

There are two non-authentic items that are obvious but essential in order that the tram could operate: the truck and controllers. The former is a Brill 21E with ACEC (Ateliers de Constructions Electriques de Charleroi) MTV343 56 h.p. motors and roller bearings, ex-Brussels. To run them Westinghouse T1F controllers could not be used, but the readily available General Electric K35JJ s adapted from 4 motor to 2 motor cars could.

¹ The cars were about 18" taller than the drop-end American Brill design that Duncan & Fraser had used to build the first 100 cars for Adelaide and first 20 cars for the Prahran and Malvern Tramways Trust only a year or two earlier. The saloons are narrower even though the widths across the platforms are similar. Perhaps this design was cheaper than the drop-end version but it meant there had to be two 15" steps to enter the car and a narrow aisle between the seats in the saloon.

² Metropolitan Vickers from 1919.

³ The consensus of opinion until at least the 1990s was that the MESCo trams were red, as portrayed in the History of Transport mural at Southern Cross station. Several lines of evidence suggest otherwise.

Geelong Tram No. 2

The tram is one of seven that opened Geelong's tramway system in 1912. The monogram you will see on the sides of the tram is that of the Melbourne Electric Supply Company Limited which held the franchise for providing electricity to Geelong. The design chosen was a straight-sill 'California' or combination car: closed saloon in the centre with comfortable seats, mainly for ladies, and open ends with wooden seats for smokers, almost exclusively men.

Duncan & Fraser of Adelaide built the tram bodies, as they had for Ballarat in 1905 when they converted 18 ex-Sydney saloon tramcars and cable trailers into straight sill California cars, and later for Adelaide's Municipal Tramways Trust and the Prahran & Malvern Tramways Trust, both of which chose the drop end style (with considerably lower steps). The Geelong cars' design differed in another way: they were about 50cm higher and had straighter sides. They were painted in a deep olive green and lemon chrome colour, revealed under many layers of varnish and red and green paint. Detailed features were in Indian red and lineouts in black, Larch Green and yellow. Sketches of the numbers were generously provided by a signwriter who had worked at the Geelong depot.

The car body is made from timbers rarely used in other Australian trams of the era. The structural timbers along the full length of the car are silky oak and the vertical structural timbers of a particularly hard native timber, Crow's Ash. Interior panelling, doors and trim are of blackwood, silky oak and Queensland maple. The cross-seats on the platforms are (unusually) fixed in position and consisted originally of alternate kauri pine and blackwood slats. The window frames of silky oak needed renewing at one end only as they had later been painted. The roof timber is oregon, imported from the US. The seats in the saloon were the American Hale & Kilburn tip-over variety with cushions covered with herringbone weave rattan. Amazingly, two of the original seats survive, the other 6 seats are the common Brill 'Winner' design, first imported by the North Melbourne Electric Tramways & Lighting Company in 1906 and recycled in the M&MTB's 4-wheel trams thereafter.

In 1914 four coloured route indicator lights were added to front destination boxes for the three routes extant then: to Newtown (green), West Geelong (red) and South Geelong (white), and with provision for a fourth, to East Geelong (blue, opened in 1923). In the late '20s tow bars for the trailers were removed, the drop windows behind the motorman replaced by panels with a window in the upper half and the side destination boxes moved to more obvious positions. Seats, albeit uncomfortable, for the motormen were finally added,

In 1930 the State Electricity Commission took over the franchise that included running the Geelong tramways. No.2 was converted for one-man operation in 1935 by closing in the open platform ends such that entry points were reduced to two in the direction of travel and those on the opposite side closed with folding metal gates. The transverse seats in the saloon were replaced with longitudinal wooden ones. In the late 40s bumpers were lowered to match those on recently arrived bogie cars and No.2's has been left that way here. The tram travelled just over a million miles (1.7M Km) until its last run in January 1956. Soon after, all the Geelong 4-wheeled cars were stripped of their mechanical and electrical gear and the bodies sold. Nos. 2 and 9 were purchased by Phil Shoppee for his farm on the Bellarine Peninsula. No.9 now lives in retirement at Bylands.

No.2 was acquired by Warrington Cameron in 1991 who slowly restored the tram's body in Canberra. Maple veneers were made in Sydney, seat brass in Adelaide, Muranese green glass tracked down in leadlight shops and conductor's bells and some enamel signs from eBay. The herringbone pattern rattan for the saloon seating was sourced in China by an importer in the US. Replicating the unusual Brush Electrical Engineering Company's 'truck' (undercarriage) seemed near impossible but a chance sighting at a Brussels tram depot in 2003 of four discarded Brill trucks changed that. Their importation negotiated by a member of the Sydney Tramway Museum meant that No.2 could run with one of these and GE controllers dating from the 1920s. The electrical and pneumatic work essential for completing the tram was carried out by Bendigo Tramways in 2020.

LAUNCH OF RESTORED GEELONG TRAM 2

BALLARAT TRAMWAY MUSEUM

SUNDAY FEBRUARY 6TH 2022

Light Lunch at Midday at the Museum

Launch at 12.30pm Wendouree Parade

PROGRAM

SPEECHES

Paul Mong	President - Ballarat Tramway Museum
Cr Daniel Moloney	Mayor - City of Ballarat
Cr Trent Sullivan	Mayor - City of Greater Geelong
Rod Atkins	Council of Tramway Museums of Australasia
Warrington Cameron	Restorer of Geelong 2

Cr Moloney, Cr Sullivan and Warrington Cameron	Jointly cut a ribbon across the tramway in the reserved track at Depot Junction
Official Guests and Media Board Geelong 2	
Cr Trent Sullivan	Drives Geelong 2 towards Carlton Street for about 100 metres
Cr Daniel Moloney	Drives Geelong 2 towards Carlton Street for about 100 metres
Motorman	Proceeds to Carlton Street and returns to North side of Windmill Drive South
Warrington Cameron	Drives Geelong 2 from Windmill Drive South towards Depot Junction
Media Interviews and Pictures	Depot Junction
Guests	Trips as required between Depot Junction – Carlton Street – Depot Junction then returns to the Depot by 1.45pm
	From 2pm Geelong 2 continues in service as part of the days running



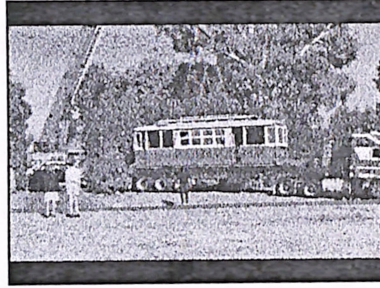
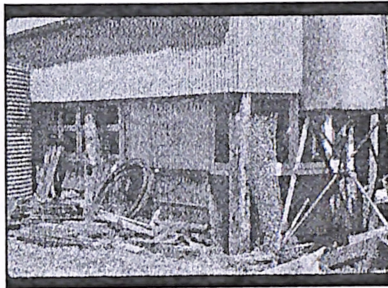
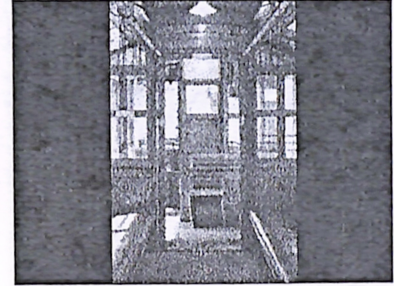
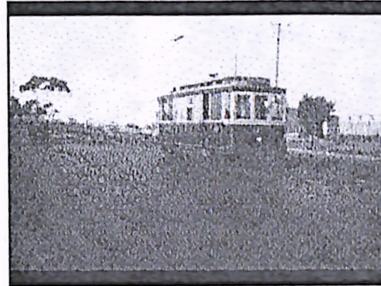
Identical Tram to Newtown in Ryrie Street – 1927
Source – Museums Victoria



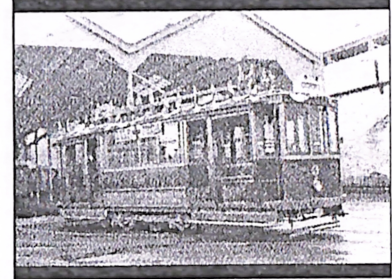
Restored Geelong 2 Ballarat – 2021
Source – BTM

PowerPoint present?
Geelong?
Launch day.

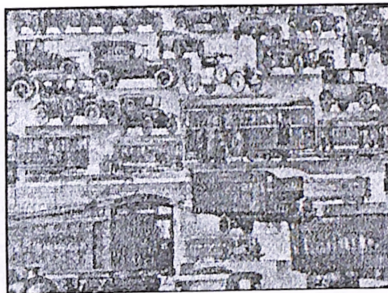
24/3/23



1991

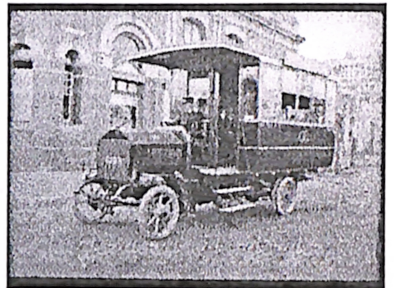
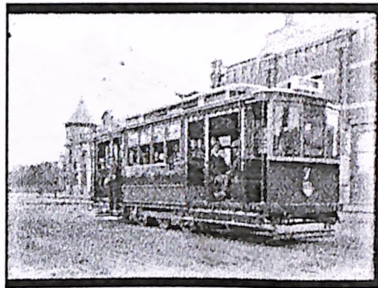
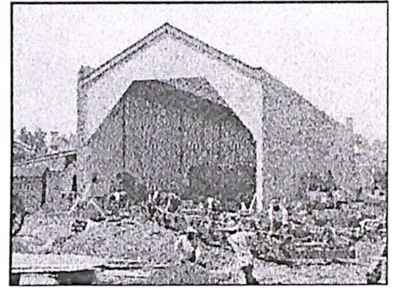
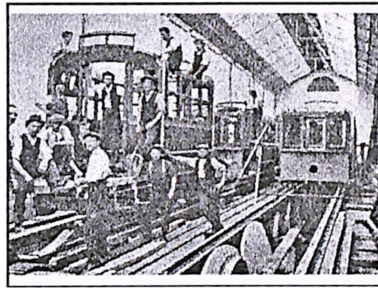
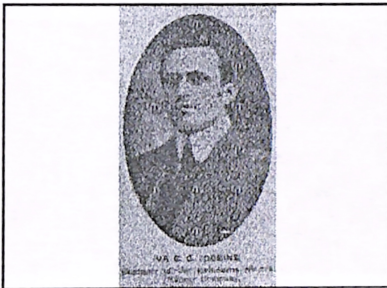
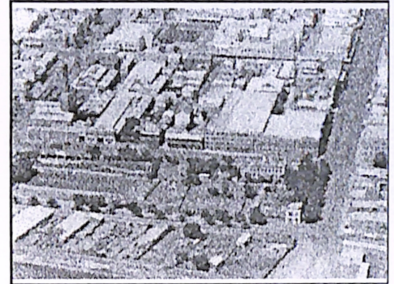
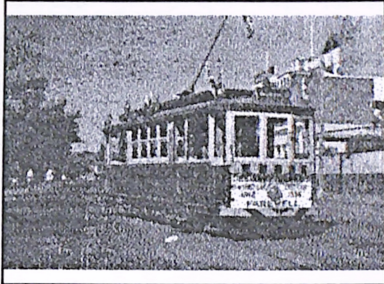


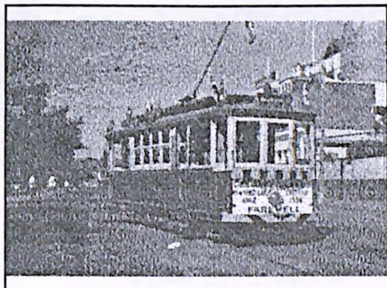
1915?



Colour to Paint

Mural Commissioned '73
Unveiled '78





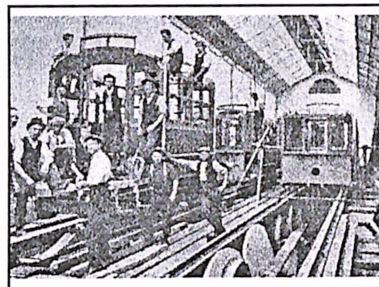
25/3/56
2/3 Century.



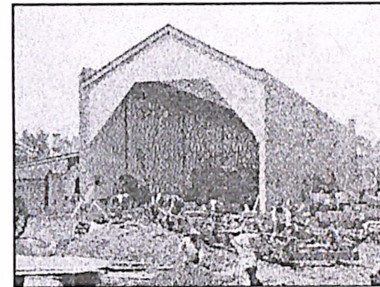
1900 power in Glap Coal fired
Electric Lighting and Traction Co
of Aust
Brush Electrical Engineering Co
major shareholder
Changed name to MESC in 1907



1904 resident Engineer
age 26
Power station output
was 200 kW DC



1911
Railed from Adelaide,
Duncan & Fraser 7 cars



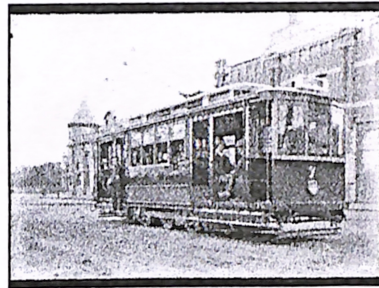
Wheels, ~~at~~ from Bous' 30
Motors British Westinghouse ~~4~~ hp
→ Metro Vickers in 1919

1912



Tracks + overhead finished
in 1911. Holdup was
depot tonight.

pop 30,000 of B'ral
~50k



High cars + o/head
windshields
3 braking systems
hand
magnetic track
rheostatic
25 km/h



Not enough people in E Glap
+ too dispersed

The Geelong tramways: the Ballarat connection.**By Alan Bradley****Preamble**

This article has been inspired by the sight of Geelong tram No. 2 operating for members on AGM day 2020, 64 years after it last operated in Geelong. There are plenty of links between Ballarat and Geelong, dating back to the early days of European settlement. Those links remained strong during the era of tramway operation.

What is the connection between the Ballarat and Geelong tramways? Read on. (*Refer to List of Abbreviations at end of article.*)

Growth of Geelong

The Wathaurong indigenous people of the Geelong area called the bay "Jillong" and the surrounding land "Corayo". Somehow the land is now named Geelong and the bay Corio. Anglicized versions of Wathaurong words were used for streets where trams later ran including Moorabool, Gheringhap and Malop Streets, and Corio Terrace.

Geelong was first settled in 1837, only two years after the settling of Melbourne. In 1838 the Yuille cousins left Geelong looking for land and settled around the future site of Ballarat. Within a few years the Raglan Road, the stock route from Geelong to Adelaide, followed the course of what is now Sturt Street, well before there was a township at Ballarat.

Geelong's population increased from 450 in 1841 to 8,000 in 1851 and was now the fifth largest town in Australia. But a long sandbar across the entrance to Corio Bay prevented the entrance of large ships, and this impacted Geelong's development for many years.

During mid 1851 Geelong was used as a base for the earliest Victorian gold discoveries at Buninyong, Clunes and Ballarat. For gold seekers from around the world the walk from Geelong to the Ballarat goldfield was shorter and less hilly than the walk from Melbourne. Some Melbourne merchants became so concerned that they produced a map of Victoria for potential gold seekers that showed Melbourne closer to those goldfields than Geelong.

The Barwon River at Geelong is said to have changed its colour during the Ballarat gold rush, due to the washing of gold-bearing clay in the Yarrowee Creek. The yellow water eventually flowed into the Leigh River, and then the Barwon.

The population of Geelong trebled in the three years since the discovery of gold to 20,000 in 1854, a third of Melbourne's population, and there was optimism that Geelong might be able to eclipse Melbourne. The first coaches began running in 1854 between Geelong and Ballarat, the trip taking nine hours. Ballarat's first railway was the line from Geelong, opened in 1862 – the main line from Melbourne was not opened until 1889.

Ballarat's population, fluctuating with the fortunes of gold mining, had risen to 46,000 by 1891. But Geelong stalled after the 1850s, and grew slowly to 24,000 in 1891. It preferred the nickname "Pivot City" in reference to its being the central hub for shipping and rail to Melbourne, Ballarat and the Western District. But another, more contemptuous nickname "Sleepy Hollow" took decades to throw off.

The City of Ballarat opened its horse tramway system in 1887. Over the next few years Geelong considered proposals to install trams powered either by batteries or overhead wires. But these proposals came to naught, and Geelong had to wait well into the new century for its tramways.

But the tide soon turned for Geelong. In 1893 the Hopetoun Channel was at long last opened through the bar into Corio Bay. Geelong began to develop as a significant shipping port as vessels could now access its sheltered, deep anchorage. While Ballarat's population declined from 49,000 in 1901 to 42,000 in 1911 (due mainly to the decline of the gold industry), Geelong's increased from 25,000 to 29,000. There were further signs of its growing importance: the opening in 1907 of the first sewerage scheme outside Melbourne;

15/6/07
10/11/09
22/7/10
10/1/11

Photo News of the wheel
mopane 11/7/07
MESC
Photos of proposed trans. Details of /way scheme

3 local municipalities and the MESC

Scheme - in Gazette. P 4921
Agreement signed to construct the tramways (on 12/2/10) - Gazette 20/2/10 p 3309
Period allotted to MESC to commence the tramway expires 12/1/11. Begin the overhead the day before.
The car bodies may be made in England or Adelaide by D+F
Quotations are now being obtained. Rail 45 lengths Stringer construction: 
Longer wheelbase cars for steadier running. 2 35hp motors.
Car shed for 15 cars
Contract let to D+F. Undercarriage + other gear from the US?

22/4/11

24/7/11

10/5/11

2 curves in Pleasant St v close to kerbs
Glass windshields provided for - in response to demands by Ballarat men.

16/11/11

Company £1000, Council £500. Agreed pgr to Railway Act.

* 14/3/12
15/3/12

Ticket prices
opening desc.

21/10/12

Additional tram cars have been ordered (The Age)

10/9/12

Two of the trailers are being fitted with motors so they can be used as summer cars.
For the S route 2 ordinary cars have been ordered.

30/6/13

2 new cars will be ordered shortly. Proposed to convert 2 trailers after the football season.

12/8/13

Conversion of 2 tram trailers into summer cars next month.

25/8/13

2 more cars ordered as soon as D+F can take the contract. Car shed will be duplicated.

8/13

Summer cars will lighten the load to be imposed on the new S Geelong line

12/9/13

Not enough people in E Geelong to justify trams + too dispersed.

1/11/13

Trailers will be used for the S route.

13/6/14

Newtown route via Aqueduct opened 16/6.

5/8/14

Subsidine of ST² line to Johnston Park. Putting in under concrete supports.

24/7/14

Duplic² of track Moorabool St → ST² + Wharf. finished

2/15

New D+F cars commissioned. Photo line-up is 4/15.

25/8/15

Municipalities sanctioned the w/d² of motor buses to E Geelong. 3/15 first proposal to electify the E Geelong motor bus service.

20/1/17

Station terminal loops brought 2 rail lengths (30m) nearer the city.

4/6/17

1st section (special) bet Ryrie St and Wharf/Rly. - was 3rd.

30/4/18

Since opening of June ST² → Newtown trailers attached for the convenience of business people going home for lunch. The trailer goes as far as Pleasant St only.

21/8/18

21/8/19

Steel rails v expensive ∴ no extensions in the near future.

10/8/21

MESC HQ transferred to Melbourne.

8/4/22

Tram rails - argued as more suitable as grooved rail but finally checked with street litter

- 26/4/22 Ext'd to rails at N end of Pak St. When the trailers will be able to be turned without 10/15 of time
12/4/22 Extending the rails to Church St will reduce time lost in changing trailer direction.
- 28/6/22 Lows galloping across the tracks.
29/8/22 Excavations at Car of Moor/Ryne St. 33,000 people.
7/11/22 12 miles of track in 2 years - 6 new cars ordered - The 10 is relying on its faith
1d. sections to be introduced when Ryne + Abard Sts duplicated 1- the progress + development of G'ap.
- 22 Paper noted that grooved rail wasn't to be used. Jobbies:
12/10/22 E-W Cross-over at Moor/Ryne St installed, ~~WSS~~ J removed.
Eli's to Goden St open. Longitudinal seats + people in the front + rear will be sheltered from wind and rain by special devices.
- 25/1/23 1st train to Humble St
16/5, 22/9, 11/10/23 Reconst of Abernethy St line from Talbot St → terminus. Same manner as Ryne St to Dr Monaghan's Car?
1/2/24 1st sleepers (25/8/23) * Safety Cars
1/3/24 SEC could take over operations with 5-10 yrs. - Big new for East + Newtown routes
26/3/24 New tramcars for Geelong. - Trailer on Gpm run St → Newtown replaced by 2 trans.
- 5/6/24 Bimney cars. In a few weeks time 8 new combination cars will arrive from America!!
31/7/24 1d. sections introduced. New seats? map. In a measure to increase patronage.
- from 3/9/24 (claimed as 1st in Aust)
Concept of Tramway Centre. A car in Moorabool St every 2 minutes.
- 24/8/24 Bimney first run. £3500.
19/11/24 8 new "stately" cars coming over the next few months. 2nd body arrived yesterday to be mounted on trucks already in G'ap. 16/12/24: 6 of 8 have arrived
24 track cleaner arrives (car 60)
29/10/24 Bill before State Leg. Council for assets of MESC to be taken over by the SEC. The Commission would not withhold consent on tramway extensions. (In fact work was underway on 3 possible dates 1/9/30 between 1/9/34 on 3)
16/12/24 6 of 8 new combination cars have arrived.
- 13/1/25 Tested (St Pangelly) Commis. 6/2/25. His airbrakes. Aust timber exclusively.
5/2/25 Design: greater protection against the unpleasant weather.
28/5/26 Trailers still in use what → St.
21/21/5/25 Track cleaner in service for 1st time.
1/10/25 Salto SEC negotiated.
Geelong Tramways. Financial loss increasing. Never made a profit. Total Pass/yrs ~ 3m.
Pass/car mile 7.5.
- 28/5/26 Track cleaner used for in service for 1st time
29/2/28 The first of 7 new tramcars is expected to arrive at the railway St. today.
9/5/28 1st MESC car put into operation - East-Chilwell looped 9/27.
13/6/28 3 of the 7 new tramcars now in service. Air brakes + sanding equipment.
20/7/28 All cars to be fitted with air brakes (ie the BTFs)
7/9/28 Open cars + trailers ~~to be~~ dismantled. 5 of Meadowbank cars now in service.
8/28 Still replg sleepers on W. track.
7/12/28 Method of construction now sleepers.
- 31/1/29 Aberdeen St reconst. + duplication of track finished
2/10/37 First fare increase to 3d then + 1 1/2 child
15/9/49 Second - Adult to 4d 2d child
1/7/51 3rd more expensive on Sundays, sections changed to 1 mile each.
1/12/52 Through routes changed.

Gilbert Jobbins. Trove The Age 23/11/37

Left school "the normal
schoolboy urge to drive
an engine"

Appointed Chairman of SEC 21/12/37

26-37 Engineers and Managers

1926 Engineer + manager of the WE & Co
President of the Gordon 1st T

leader in thought and a
man of outstanding
personality (1926)

1930 Engineer + manager, Electric Supply
& Tramways.

18⁸ 1900 Electric Lighting + Traction Co of Perth
1900 Power & Geelong.

Jobbins → Geelong.

1900

resident engineer
at Geelong

age 26

Bf + war franchises expire 30/6/34.

last date of sale is 1/7/31 operations under the Company
under the control + supervision of SEC.

GRS 2009/00346
710 Index

trades 194 - 2019/01 936/125.

1912 capacity of the plant
1300 hp.

1900 200 kW DC

1920 200 kW
10,000 kW
AC generator capacity 10,000 kW.

1937
5.9
1878

Brush +
Mkro Vickers
alternators

until 1954

4/54 - lamp n mention of cars 24-26-28.
brake shoe castings
uncertainty about the future of the Gellap Trams

under
brake
setups
1952 | Brush + Brill Single-trucks
- max traction trucks
Brill Radco trucks

4/53 - track maintenance problems in Glap. were far greater
than D+B because the tracks there were not reconditioned
at the time of takeover (p 38)

last tram painted = 3 + 8
still had to operate 39. as 1-man.

5/52 brake shoes 24, 26, 28 mentioned

p. 47 Recent acquisition of 4 MT cars allowed for the retention of the 3 "Meadowbank" cars. However, in view
of the possibility of extending 1-man operation, this action has ^{been} temporarily postponed.

Under the provisions of Section 11 of the State Electricity Commission Act No. 2996, the duty
devolves on the Commission of inquiring into and reporting to the Minister "as to the steps which

MELBOURNE ELECTRIC SUPPLY COMPANY.

Weather blinds 1" diam 30"
33"
48" rollers.

SEC 5th Apr
Peak
30/6/24

MELBOURNE ELECTRIC SUPPLY COMPANY.

Under the provisions of Section 11 of the State Electricity Commission Act No. 2996, the duty devolves on the Commission of inquiring into and reporting to the Minister "as to the steps which, in its opinion, should be taken to secure the ultimate co-ordination or unification of all State or other electrical undertakings in Victoria . . . and to secure the amalgamation or concentration of such undertakings."

Due to the fact that the franchises under the Electric Light and Power Act held by the Melbourne Electric Supply Co. would expire in November, 1925, so far as the Metropolis of Melbourne is concerned, the Commission, practically since its inception, has had to exhaustively consider the position which would arise at that date.

Because of the necessity for directing attention to more urgent problems in connexion with the bringing into operation of the Morwell Scheme, the Commission was not able to open the matter with the Company from any point of view until October, 1921.

As the Commission viewed the problem, there were two alternatives open to the Government to consider, viz. :—

- (a) The compulsory acquisition in November, 1925, of the Melbourne portion of the Company's undertakings, leaving the Geelong portion to be dealt with later when the franchises governing the latter undertaking expire.
- (b) The extension or renewal of the franchises for a limited term on conditions which would satisfactorily safeguard the interests of the State and of the consumers of electric energy.

Not the least important aspect which the Commission had to keep before it in the negotiations with the Company was the extremely urgent work of converting the Company's system of supply from single-phase to three-phase supply, particularly in the industrial areas which it serves. The single-phase system proves to be quite inefficient and uneconomic when applied to electric motors for driving machinery, and has now been superseded in this State by the adoption of the universal standard of the three-phase system of supply.

It was therefore highly desirable that with the least possible delay the conversion of the system of the Company in the industrial areas, and in other areas in which industry is developing, should be undertaken, otherwise the whole of the territory in which the Company is supplying industrial consumers will remain without the more efficient and economical energy. Moreover, failing this conversion, the Company would be unable, except to a limited extent, to avail itself of the supply from the State-owned power stations, and since its own generating plant is already severely overtaxed, it would be unable to keep pace with the growing public demand.

It should be noted also that there was no compulsion whatever upon the Company to expend capital on these works of conversion, nor was the Government in a position to deal in some alternative way with this urgent situation unless and until the main question of the future of the Company was definitely settled.

With the knowledge of the circumstances surrounding this difficult question, the Government instructed the Commission to enter into negotiations with the Company for the granting of an extension of franchise conditionally upon the acceptance by the Company of certain stipulations which it was considered would adequately protect the public interest, and would not prove unduly burdensome to the Company.

After negotiations extending for a period of over two years, the Company, early in 1924, accepted, in principle, the fundamental conditions which the Government sought to impose.

Following this acceptance, the Government entered into an agreement with the Company upon terms which can be summarized as follows :—

1. Extension of franchise to be granted for the authorized maximum period of ten years, but with an option to the Government of acquiring the assets at the end of respectively five or seven and a half years, the Company to have the right, in certain circumstances, of demanding that the Government exercise its option at the end of five years.
2. Acquisition, when effected, to be based upon the "residual" value of assets, i.e., upon original actual cost, less a definite percentage depreciation for each year that each item of the plant still remaining in service has been in service.
This depreciation, it has been estimated, will average 3 per cent. per annum.
3. The Company's distributable profits to be limited to 7 per cent. per annum upon its ordinary share capital and to 8 per cent. on its preference share capital.

4. The Company to carry out, when called upon, all works of "conversion" and "extension" approved by and under the supervision of the Government, and to purchase all its requirements of energy from the State scheme, as and when the same becomes available.

This involves the closing down of the Company's present "single-phase" generating plant at Richmond at a much earlier date than would otherwise be possible.

5. The Company not to issue any further shares nor to raise further capital on debentures, except with the approval of the Government, which may, however, provide any further capital required for extensions and conversions for which capital the Company is to pay interest.
6. The control arrangements and other conditions applicable to the Melbourne undertaking to apply to the Geelong undertaking, and any unexpired period of the franchises governing the Geelong undertaking at the date of the acquisition of the Company's Melbourne and Geelong undertakings, to be surrendered by the Company.

The net effect of the arrangements concluded with the Company is that, for all practical purposes, the Company will undertake the management of the undertaking on behalf of and under the control of the Government, receiving as its remuneration for such management, and for the use of its share capital, only certain prescribed interest returns.

More important still, a fair basis of ultimate acquisition has been achieved, enabling the purchase price to be determined at the date of acquisition by simple accountancy methods, instead of by arbitration; and further, it permits the urgent work of conversion in the industrial areas to be undertaken forthwith.

The Government proposed to submit to Parliament legislation to ratify this agreement with the Company.

EXTENSION OF THE STATE SCHEME TO SERVE THE CITIES OF BALLARAT AND BENDIGO.

The Electric Supply Company of Victoria, operating under Orders in Council issued under the Electric Light and Power Act has, since 1901, given electric service in the cities of Ballarat and Bendigo, having installed in each city direct-current generating plant of a total capacity of about 1,000 kilowatts. Owing to the limited economic range of transmission by direct-current, the development of the electric services of these communities has been confined, in greater part, to districts lying within a radius of $\frac{3}{4}$ mile from the respective power-houses. This consideration, together with the limited power-house capacity, has, in recent years, brought about a situation which has been unsatisfactory to the municipal councils, in respect of the development both of industries desiring to establish themselves in the outer environs, and of increased service to meet the ever-growing demand for light and power. It is to be particularly noted that the mere increase in the installed amount of direct-current generating plant would, perhaps, have met, to some extent, increased requirements in the inner areas, but would have in no way economically catered for industrial requirements in the outer areas.

This being the position, the State Electricity Commission propounded, early in 1921, schemes for the construction of high-tension transmission lines from Yarraville to Ballarat and beyond, and from Yarraville to Castlemaine, Bendigo, Eaglehawk, and beyond. Such transmission could supply alternating current in practically unlimited amounts, and would be capable of extension in all directions from the power centres of Ballarat and Bendigo.

Two antecedent and indispensable conditions to the building of the two main transmission lines referred to were, however, firstly, that there should be an assured market for the electric energy to be so transmitted, to the extent of a definite minimum demand, in order that a due return of interest upon the heavy capital expenditure involved would be assured; and, secondly, that the Electric Supply Company of Victoria should be prepared to purchase alternating-current energy from the Commission, and should, in order to distribute such energy to consumers economically, change over its reticulation system from direct-current to alternating-current distribution.

A conference in January, 1922, between delegates from the municipalities of Ballarat and Bendigo, with representatives of the Company, made it quite clear that the only solution of the difficulty was the acquisition by a public authority of the whole of both undertakings, particularly as the Company definitely refused to take any ameliorating action, except upon terms unacceptable to the municipalities.

6th Ann rep
30/6/25

A copy of the Commission's letter on this subject is appended for record purposes :---

The Hon. the Attorney-General,
Melbourne.

29th July, 1925.

DEAR SIR,

For some time past this Commission has been subjected to much criticism in the Press and in Parliament upon the State Electricity Scheme and the Coal Winning and Briquetting operations. Allegations have been made from time to time that capital expenditure has been extravagant and unjustified, that works constructed or under construction do not or will not operate satisfactorily, that the brown coal deposits are unsatisfactory and not commercially useful, that the expenditure will not be reproductive, that burdens will therefore fall upon the taxpayer, that tariffs and charges are excessive and burdensome upon customers, that further expenditure recommended upon extensions of the generation and transmission of electricity is not necessary or not justified, and the like.

While it is realized that criticism of this nature is not unusual in the experience of those responsible for the conduct of public undertakings, and the personnel of the Commission is not unduly disturbed thereby, the Commission is nevertheless very much concerned in so far as such criticism is undoubtedly calculated to destroy public confidence in the Scheme and in its administration, and seriously to hamper its further successful development and operation. You are well aware that it is hopeless for the Commission to meet such criticism merely by means of contradictions or by explanatory statements prepared and issued by the Commission itself. It is felt, therefore, having regard to the magnitude and importance of the undertakings entrusted to the Commission, and to their potential bearing upon the progress and welfare of the State, that a searching inquiry into those undertakings and a review of the whole of the schemes, if conducted by some competent outside authority, would do much to satisfy the public mind, and thereby free the Commission from the inevitable embarrassment of a continuation of such criticism, which, it feels confident, such an inquiry would prove to be unjustified, and which would tend to the elimination hereafter of conditions inimical to the smooth and successful development of the undertakings.

The Commission would therefore greatly welcome action by the Government in this direction. The Commission desires and recommends that the Government should appoint some person or persons having unquestioned standing, authority, and experience in the realm of Modern Power Development on a large scale, and competent also to review both the power resources and the future power requirements of the State, with instructions to make an exhaustive and critical examination into the affairs of this Commission and into the whole of its past, present, and prospective works and operations. It is suggested that such an inquiry should be directed mainly to the important and paramount questions whether the schemes undertaken and to be undertaken by the Commission are capable of paying their way without becoming any burden upon the general revenues of the State and capable of rendering necessary electric and other services to the public at prices which are fair and reasonable.

In making this request, the Commission assumes that it would be afforded the opportunity of laying its views upon every issue before the authority conducting such inquiry.

Yours obediently,

JOHN MONASH, Chairman.

(Sgd.)

ROBERT GIBSON, {
D. ORME MASSON, { Commissioners.

MELBOURNE ELECTRIC SUPPLY COMPANY.

Reference was made in the Fifth Annual Report to the terms of the agreement entered into with the Melbourne Electric Supply Co., whose franchise under the Electric Light and Power Act for its Melbourne undertakings expires in November, 1925.

In December, 1924, Parliament passed the requisite legislation approving the agreement subject to later ratification by the company's debenture and share holders. Formal resolutions embodying this ratification were passed about March, 1925, thus making the agreement effective.

The net effect of the arrangements concluded with the company is that, for all practical purposes, it will undertake the management of the undertaking on behalf of and under the control of the Government, receiving as its remuneration for such management, and for the use of its share capital, only certain prescribed interest returns.

More important still, a fair basis of ultimate acquisition has been achieved, enabling the purchase price to be determined at the date of acquisition by simple accountancy methods, instead of by arbitration: and, further, it permits the urgent work of conversion to three phase in the industrial areas to be undertaken forthwith.

The *Melbourne Electric Supply Company Act 1924*, in ratifying the agreement, provides that the Commission will act as the representative of the Government in its supervision and control of the management of the undertaking during the period that the extension of franchise remains in operation.

The agreement applies to both the Melbourne and Geelong undertakings of the company.

Conversion of System of Supply.—The Commission, in close collaboration with the company, commenced the planning of the works of conversion from single to three phase supply. This work is particularly vital and urgent on account of the large industrial territories served by the company's system. It was determined that the works of conversion must comply with the electrical standards adopted for the State of Victoria.