### Sydney Electricity

**Sydney Architecture Images:** [Central Business District](#)

#### Sydney Electricity

<table>
<thead>
<tr>
<th>Architect</th>
<th>location</th>
<th>date</th>
<th>style</th>
<th>construction</th>
<th>type</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>corner of Bathurst and George Streets</td>
<td>1962</td>
<td>Late 20th-Century International</td>
<td>reinforced concrete, curtain glazing 99 m 325 ft</td>
<td>Office Building</td>
</tr>
</tbody>
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*The SCC grew, moving in 1963 to its present building on the corner of Bathurst and George Streets. (from its previous headquarters in the QVB). The authority installed its first computer, bought from IBM for 223,500 pounds. It had 1 Megabyte of RAM, and a new building was bought next door in Pitt Street to house its systems and network.*
Thursday, July 8, marked the 100th anniversary of public electricity in Sydney, when the electric streetlights of the inner city were turned on for the first time.
Let me recreate that scene, because it illustrates what a difference electricity was to make to our lives.

All over Sydney that morning of July 8, 1904, people were waking up, lighting bedroom oil lamps, and stirring last night's coal grate to spark up some hopefully latent warmth.

In those households which didn't have the new-fangled gas water-heaters in their bathrooms, water would be put on to heat in kettles over gas cookers or fuel stoves, partly for the morning wash, partly for the breakfast tea and porridge.

Then the working adults would set off to the local stop or station to catch the steam train or the new electric tram into work in the city or nearby suburbs.

The housewives would begin their arduous day, packing children off to school, lighting gas or chip-burning "coppers" to start boiling up the washing, cleaning grates, and getting in the day's coal or wood; then thinking about what provisions were needed from the corner store for the evening's meal.

By mid-afternoon that day a full-scale gale was blowing.

Due to the inclement conditions, few turned up at a ceremony at the new building in Pyrmont, under the tall brick chimney from which smoke had been wisping for most of the dingy afternoon. The party consisted of the Lord Mayor and his group, aldermen of the City Council, the Town Clerk, some senior officials and some engineers.

At 5pm sharp, the Lord Mayor, the Right Worshipful Samuel E. Lees, pulled the lever that released the steam from the station's boilers and set the generators in motion. Then the Lady Mayoress, Mrs Lees, turned a golden key that switched on the electric current.

And so, much to everyone's surprise, the lights first came on all over what is now the CBD. People scurrying through the rain at first thought it was a particularly bright flash of lightning. But it stayed on.

Sydney would never be the same again.

Although July 8 was the 100th anniversary of electric street lighting in Sydney, in fact man-made electricity first came to our shores 134 years before, in 1770, aboard Captain Cook's Endeavour.

After Joseph Banks and Solander had bidden farewell to the maidens of Tahiti, they entertained themselves by experimenting with electricity as the Endeavour crossed the Tasman. Using Leyden jars, which were primitive batteries, they created a weak electric current. The canvas floor-covering of their cabin happened to be an ideal conductor of electricity, as it was sliced down and cleaned daily with salt water.

Picture the two men, standing opposite each other on the canvas mat, testing their experiments by giving each other electric shocks.

"Ready, Mr Banks?"

"Yes Mr Solander...OUCH!"

In the ensuing years a few sporadic attempts were made to harness what was then a new and exciting phenomenon.

In 1863 Sydney celebrated the marriage of the Prince of Wales by erecting an arc lamp on Observatory Hill. The Observatory Hill lamp was so bright people claimed that they could read a newspaper by it one mile away…probably a slight exaggeration.

Fifteen years later Sydney and Melbourne were locked in a battle over which city would hold the first International Expo. Sydney trumped Melbourne by importing several electric generators from England so that building work on its Expo site, the Garden Palace in the Domain, could continue 24 hours a day.

Soon private companies began setting up generators, mainly to light street arcades - the Strand Lighting Company, for example. One of the Garden Palace generators was used to light Parliament House in Macquarie Street. The GPO also had its own generator.

A few wealthy people installed generators in their homes. It was quite a party trick for the electric lights to be switched on suddenly halfway through a dinner party. The ladies present were taken aback because their complexities showed so much more than in candlelight and they had to learn new make-up techniques. Fashions changed too because of the brighter light. Shot taffeta became all the rage because it reflected brighter light. Shot taffeta became all the rage because it reflected brighter light.

In 1887 a big moment for Sydney occurred when the Lord Mayor asked the Postmaster General to extend his electric power at the GPO to a lamp above a horse trough outside the GPO in George Street. Small step though this may have been for horses passing down George Street, it was a giant stride for electricity. It was Sydney's first permanent electric streetlight.

In 1888 Tamworth became the first city in the southern hemisphere to install public street lighting. Sydney was starting to lag behind.

By 1890 the NSW Railways opened its own power station and began electrifying the tram service. Trains weren't electrified until 1926.

By 1891 the towns of Young, Penrith, Moss Vale and Broken Hill had all set up their own electricity supply systems. More embarrassingly, Redfern, so close to the Municipality of Sydney, had built its own powerhouse - and it still stands today. Balmain also had its own powerhouse.

In 1896 a Sydney Electrical Lighting Bill became law, giving the City Council the right to light up the CBD with electricity. Yet Sydney was to remain gas-lit for a further eight years.

Finally in 1900 a Major Cardew was brought in from England to begin planning public electric street lighting in Sydney.

Various sites were examined for the erection of the first power station. One of them was in the Rocks. You can still see its chimney today as you cross the Bridge, towering above what used to be the Mining Museum, which later housed the Julian Ashton Art School. But the city fathers scrapped the Rocks site when it was half-built, and in 1903 plumped for Pyrmont, which was much handier to unloading colliers.

And so, in early 1904, the council's Electricity Undertaking came into being.

By the end of 1904, although the street lighting was being extended to areas such as Kings Cross, the general population had no conception of the future uses of electricity. They still cooked on fuel stoves or with gas, they still lit gas lamps or candles in their homes, they still stoked their coppers with wood and coal, and manufacturers still used steam to drive their machinery.

The task of converting Sydney to electricity wasn't made any easier by the fierce competition from the Australian Gas Light Company (the AGL), which, in an effort to preserve its monopoly, began a smear campaign, hinting that electricity was dangerous and leaked through the ground, despite the fact that it was quite the opposite - gas was the one that leaked.
The First World War caused major supply problems due to non-delivery of equipment that had been purchased in Germany. But the Undertaking, by then headed by an able, dour Scot called Forbes Mackay - the true father of Sydney electricity - muddled through until new generators arrived in the early 1920s, and the power lines began to snake out into the suburbs.

In 1934 the SCC famous cookery demonstrations had begun, compered by "radio uncles" - the equivalent of John Laws and Alan Jones today. Ladies in hats and gloves were invited to these cookery demonstrations in church halls and other venues around Sydney where they watched scenes being baked in electric ovens and partook of what the promoters described as a "cheery afternoon tea party."

Fleets of repair vans plied the suburbs, and door-knocking salesmen exhorted Mrs Sydney to show them her kitchen. Once in the kitchen, the salesman would pull out a plan of an ultra-modern "all-electric kitchen" and try to sign up the housewife.

In 1936 the Electricity Undertaking was abolished, and a new entity, called the Sydney County Council, elected by Sydney's councils, took over, moving into its new Headquarters in the Queen Victoria Building.

(It is of interest in passing that the fact that the SCC's headquarters was in the QVB later saved it from demolition, when the city council, abetted by Harry Seidler, wanted to replace it with an underground carpark).

The Second World War saw the SCC do its "bit". But after the war, when demand rose but capacity did not there was a severe crisis and blackouts began to disrupt Sydney.

I can recall as a young child that the blackouts would hit our house in Roseville usually around dinnertime. "That dratted Mr Conde!" my mother would curse, as she rummaged through the cupboard under the sink for the candles. Mr Conde my mother was cursing was Harold Conde, who had been appointed the Emergency Electricity Commissioner. He was a much-maligned man, for in reality it was he who did more than anyone to solve the problem of the blackouts that plagued post-war Sydney.

1952 saw the SCC stripped of its generating role with the establishment of the NSW Electricity Commission. (Bunnerong had not been a success as it was bedevilled with labour problems as were the coalfields, until the new Menzies government and right-wing labour began to turn back the tide of militancy in the union movement). From then on, however, the SCC was purely a distributor or retailer of electricity.

The next few decades were the heyday of the SCC. Electricity usage boomed, kitchens were converted, showrooms bulged with new electric appliances, and the AGL went on to the back foot.

By the 1960s new high-rise buildings were going up in the city. New highways and bridges were being built. NASA asked Sydney to switch on its lights for passing astronauts. Suburban shopping centres like Roselands and Bankstown Square were opened, and new suburbs, serviced by electricity, sprawled across the Cumberland Plain.

The SCC grew too, moving in 1963 to its present building on the corner of Bathurst and George Streets. (The QVB had by then been saved). The authority installed its first computer, bought from IBM for 223,500 pounds. It had 1 Megabyte of RAM, and a new building was bought next door in Pitt Street to house its systems and network.

The Opera House opened. The New Cahill and Warringah Expressways were lit in the streets.

In the 1970s, Sydney lit up for another Royal visit, a Papal tour, and the Bicentenial celebrations of Cook's landing, which as we know now from Banks' journal in the Mitchell Library, was also the 200th anniversary of electricity coming to Sydney.

Charles and Diana got married in July 1981, causing a power surge in Sydney at 9pm equivalent to 600,000 electric jugs being turned on.

By 1979 the SCC was taking 41 per cent of the State Electricity Commission's output. But the 1980s were a decade of uncertainty for the SCC, with talk of privatisation, and a threat from the gas fields in New South Wales. The AGL, in a stroke of marketing brilliance, invented the term "natural gas" and began to make a comeback in power supply and distribution.

In 1989 the State Government began steps to take over the SCC, which had become a very profitable organisation. An initial levy on the SCC of $500 million went into State Govt coffers, and from then on an annual levy was imposed.

After a cursory inquiry, the Curran Report recommended corporatisation. The aldermen who ran the SCC resisted this, at least initially. By 1991 a new statutory authority, Sydney Electricity, was created and, though aldermen still had a role, the government now had the whip hand. The days of aldermanic – i.e. public - control were numbered.

Yet in fact Sydney Electricity was a short-lived entity. The authority was now on the path to full privatisation. From that time on it reported directly to the Minister, and its business was (and is) conducted behind closed doors.

In 1996 the recently elected Carr Government merged Sydney Electricity with Orion Energy, based in the Newcastle-Hunter region to create ENERGY AUSTRALIA. Sydney Electricity's board was sacked. A new team mainly from Orion, took charge.

And today Energy Australia is just one of many sellers of energy in NSW, which, ironically, now includes the AGL.

This is an edited extract of a talk delivered to the Union Club, Sydney, on July 13, 2004.

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Sandra Jobson studied history at the University of Sydney. After graduating she became a journalist and was a reporter, feature writer and columnist for the Sydney Morning Herald and later, the Australian. She went to England and wrote the first biography of Lady Ottoline Morrell (Chatto & Windus). She is the author of six other published books and one unpublished book, Power for the People: a History of Electricity in Sydney. She now helps run an internet company.


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**DATING OLD PHOTOGRAPHS FROM LIGHT POLES**

by A. H. D. Freeman


Like other artefacts, the poles and wires which are seen on so many photographs of outdoor scenes can provide clues to the date on which the photograph was taken. Their value is greatest for the period from 1880 to about 1920, since before 1880 wires were rare and after 1920 the changing models of cars in streetscapes are usually a better dating guide. This article shows how pole routes can be used in this way, with particular reference to the city of Sydney, New South Wales, and inner suburbs.
The first step in dating a pole route is to identify the type of service it provides. Wires were erected at different times for telegraphs, telephones, electrical distribution, high-voltage transmission and traction, and each application uses different types of construction. In the case of telephone routes, the styles changed significantly with time and this can also help with dating.

Pole routes with a single wire carried by an insulator at the top of the pole, and possibly a few more in a staggered formation on the sides, as shown in figure 1, are usually telegraph routes, but the same construction was sometimes used for telephone routes if only a few wires were needed.

Pole routes with crossarms and numerous wires are always for telephone services. Because telephones and telegraphs in Australia were operated by the same authority, it is not always easy to differentiate between them on style alone. Some other criteria are discussed below.

Electrical distribution to provide street or home lighting can be differentiated from telephone construction by its more robust appearance with heavier and more widely spaced wires. On telephone routes the separation between wires on crossarms was usually 15 cm to 20 cm and crossarms were 35 cm apart. Power lines had no more than four wires on each crossarm, spaced more than 30 cm apart and seldom more than eight wires on a pole. The poles nearly always carry lighting fixtures since street lighting was usually the motive for the provision of electrical distribution. Since telephone poles never carried streetlights, this is a reliable indicator of the purpose.

Electrical transmission is the use of high-voltage lines to carry bulk power from the generating point to sub-stations or pole transformers. These lines used much higher poles, very widely spaced wires and usually three or four wires. More recent transmission lines have used distinctive steel towers. The only other use of wires is for electric trams and trains and it is unmistakable.

The earliest wires erected were for telegraphs which started in New South Wales in 1858 (ref 1) with lines from a telegraph office in the Royal Exchange to South Head and Melbourne. A line to Brisbane followed soon after and services were progressively extended to country towns and suburban centres. As a single wire could serve a dozen offices on an “omnibus” or “party” line, most routes had only one to three wires. The construction shown in figure 1 was nearly always used. A separate telegraph network was built by the Railways Department for signalling and operational needs and the two services often shared a common route.

The backbone of the public telegraph network was a route in George Street from the telegraph office to Redfern Station and a shared route along the railway line to Parramatta. By 1880 there were about 10 wires along George Street. This pole route appears from the General Post Office c.1890 on Arthur Streeton’s 1893 painting of Redfern Station. From Redfern to Parramatta there were about 20 wires, and crossarms were used. At Granville the lines to the south diverged, still following the railway, and at Parramatta the lines to the north branched off to follow the road. Few other telegraph routes had more than three wires. Telegraph wires sometimes appear on photographs of country towns and the date of erection was sometimes known to the Telecom Historical Officer. It was the telephone which was responsible for the rash of wires which spread over the larger Australian cities, beginning in the 1880’s. (ref 2) Each telephone service needed one or two exclusive wires back to the exchange and in the two years 1882 and 1883 the number of wires entering the Sydney General Post Office (G.P.O.) increased from about 20 to over 200. By 1890 this had increased to well over 1000. In contrast to the telegraph service which needed wires only along main roads, these telephone wires extended to business premises all over the city.

The needs were met initially by building large pole routes capable of carrying up to 200 wires. When the limits of this technique were reached, cables containing a number of separate insulated wires were introduced. It took some time before the best combination of the two techniques was established. The pattern which finally emerged was one with cables radiating from the G.P.O. to a number of distribution points from which the lines continued to the subscriber on pole routes. As the cable network expanded the need for very large pole routes diminished and by 1905 nearly all telephone wires had disappeared from the streets of the city. A similar sequence was followed in the suburbs and country towns when the telephone spread to these areas.

The consequence of all this activity was that from 1883 to 1900 nearly every street in the commercial area of Sydney had a pole route, the appearance of which changed frequently as wires were added and in due course were replaced by cables. Potentially, therefore, these poles form a valuable dating guide for the period by allowing a series of photographs of the same street to be placed in chronological order. In the case of George Street the writer has made some investigations which suggest that a dating guide can be produced, accurate to within two or three years, from the period from 1870 to 1900.

For other streets the changes were slower and there is less documentation. The earliest and latest possible dates can sometimes be established or inferred from records and a knowledge of the ages of growth. The following outline of developments in the inner city may be useful.

Growth from 1882 to 1884 was met by pole routes along George Street running north and south of the G.P.O. and along Barrack Street. Smaller routes branched off this backbone. Towards the end of this period aerial cables were carried on the lower cross arms, at least close to the G.P.O.

In 1885 a cable support disguised as an ornamental verandah front was erected along the western side of George Street from the G.P.O. to what is now Railway Square. (ref 345) This is a distinctive feature which can be seen on many photographs. It became the backbone of the network with pole routes branching off at every cross street. The pole route in this section of George Street was replaced by a smaller one carrying only
telegraph wires. The cable support was superseded before 1900 but was not all demolished. Shopkeepers had been allowed to use it to support awnings, and where they had done so it was left in place.

Telephone services north of Martin Place continued to be served by pole routes for several more years and at one time there were pole routes on both sides of George Street and one in Barrack Street feeding the Wynyard area. Aerial cables on the lower crossarms were added at an early stage.

Starting in the 1890's a network of underground cable tunnels was built and this allowed almost complete elimination of pole routes in the central city area by 1905. Some wires could not be placed underground for technical reasons and there were still two major pole routes from the G.P.O. One was the previously mentioned telegraph route in George Street and the other followed Elizabeth Street and carried long-distance junction and trunk lines. The George Street route lasted until at least 1920. Not much is known about the Elizabeth Street route.

In suburban Sydney and large country towns, similar developments occurred but with delays of ten to twenty years. Documentary evidence is usually confined to the opening date of an exchange and it may be necessary to try to date a pole route from its structural details.

Pole routes using the construction shown in figure 1 were used for new work from 1858 almost to the present day (1984) but after about 1880 this style was only used if the expected growth was very small. A pole route of this type, therefore, is difficult to date. If it is along a main road, it was probably erected for telegraphs and if the telegraph office it served can be established, the date of erection can be found. Any pole route of this type not in a major street, or carrying more than three wires, was probably used for telephones.

After about 1881 crossarms were nearly always used for routes with more than five wires. Three distinct styles can be recognised. The earliest had crossarms of varying length designed to give a tapered outline as shown in figure 2 and was normal up to about 1900. It was superseded in about 1900 by a style with crossarms of equal length as shown in figure 3. A further change took place about 1908 when the former practice of putting crossarms on both sides of the pole was discontinued. This change is shown in figure 4.

Telephone numbers are also useful in dating photographs, books, and other printed matter on which they appear. These numbers are subject to change as the network is extended and new telephone exchanges are established. In the city of Sydney from 1882 to 1900 the numbers were listed without an exchange name. From 1900 to 1908 the use of the prefix "CENTRAL" gradually became common. From 1908 to 1915 there were two exchanges, called "CENTRAL" and "CITY". From 1915 to 1920 there was only the one exchange, "CITY". From 1920 automatic numbers prefixed "B" and "BW" appeared in the city north of Market Street while the rest of the city remained manual. After 1926 the southern part of the city was converted to automatic with numbers prefixed "M" and "MA". It must be recognised that an advertising sign may remain long after the business it advertises has closed down. For example, there is a sign still existing in the Sydney suburb of Crows Nest (1984) showing a telephone number which was changed in 1938. However, if treated with due caution, changes in telephone numbers can be useful dating aids.

Electrical distribution began in the Sydney city area about 1900, soon after the telephone wires faded away. The main reason for providing electricity was for street lighting and the poles almost invariably carry lighting fixtures. The switching on of streetlights was always a major civic event and the date is often recorded in local histories. If not, details may be found in council minute books or local newspapers. Unfortunately, once erected these pole routes changed very little over the years, so only an earliest possible date can be established.

High-voltage power lines are mentioned for completeness, but they seldom appear on photographs and generally belong to more recent years. The Sydney Municipal Council sold electricity in some suburbs before 1920 and erected high-tension lines for the purpose, while in the 1920's the Railways Department supplied the Southern Tablelands.
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Overhead wires for electric trams are only one aspect of transport history. This is a subject which has attracted much interest and an enthusiast can often point out several features in a photograph which help to determine the date. Much helpful information is contained in books on tramway and railway history. (ref 6)

This article concentrates on the principles involved in using pole routes as an aid to dating photographs. A companion document providing specific details useful in dating telephone line plant in New South Wales has been prepared and a copy is held in the library of the Society of Australian Genealogists.

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All the above are held in the State Library of New South Wales (Australia).

Thanks to http://www.telephonecollecting.org/articles.html contact www.sydneyarchitecture.com

links