



ST. GEORGE HISTORICAL SOCIETY

SPONSORED BY ROCKDALE MUNICIPAL COUNCIL

81 Watkin Street,
BEXLEY. 2207.

9th April, 1971.

Dear Friend and Member,

The April meeting of this Society will be held as follows:-

Date: Friday Evening next, 16th April, 1971, at 8 p.m.
Place: Council Chamber, Town Hall, Princes Highway, Rockdale.

With the recent Rockdale Centenary Celebrations, this evening will take the form of an Informal Slide Evening - with MEMBERS SHOWING SLIDES TAKEN OF EVENTS DURING THESE CELEBRATIONS.

Business: General.

Would lady members please bring a plate and gentlemen kindly donate 20¢ towards the "Lydham Hall Fund Raising Committee".

D.H. Sinclair.
President.

(Miss) J. Noble.
Hon. Secretary.
Phone. 599.4884.

Supper Roster. Miss McCartney (Capt)., Mrs. Gow, Miss Wilding,
Mrs. O'Meara and Mrs. Bushell.

OBITUARY

It is with deep regret that I have to announce to the members of the St. George Historical Society that Mrs. Mary Ann Beaman (nee Beehag), passed away on December 3rd, 1970, in her 91st year.

The article, entitled "THE AFFAIRS OF ISAAC BEEHAG", published in the March issue of our Society's Bulletin, was written when this grand old lady was still hale and hearty and I had the pleasure of experiencing her delight when the manuscript was read over the telephone to her for checking purposes. The story was based on her reminiscences and I feel sure that the history of this pioneering family could not have been written without her co-operation and valued assistance. She was a most vital and remarkable woman. I am sorry indeed that the story of her family was not in print prior to her demise.

Gifford Eardley.

DATES FOR YOUR DIARY FUTURE OUTINGS & SOCIAL EVENINGS.

Please ring Mrs. Eardley, Asst. Secretary, for outing bookings. Ph. 59.8078.

We would like the support of all members and their friends on our various Outings and Social Functions.

MAY - 22nd. Saturday. Visiting "EVERGLADES" at Leura. Full Day.
Details in next month's Bulletin. Limited 42 persons.

OCTOBER 2, 3 & 4th - LONG WEEKEND OUTING TO BRAIDWOOD & GOULBURN.
Following the success of the Society's first long weekend visit to Gulgong in October of last year, it was decided to arrange a visit to Goulburn and Braidwood.

The Coach will be leaving Rockdale Town Hall at 8 a. m. on Saturday 2nd, spending overnight on 2nd and 3rd at the "Astor Hotel Motel", Goulburn.

On Sunday morning members will travel to Braidwood, with inspections of Historical Interests made in the Town, then on to Historic "Bedervale" for a Bar-B-Que Lunch. During the afternoon a visit will be made to the "Araluen Valley". During our visit to Braidwood, we will be guests of the Braidwood Historical Society.

Monday will be spent visiting Historic places around Goulburn returning to Sydney in the afternoon, approximately 6 p. m.

Bookings are now being taken, cost of trip all inclusive \$31. Morning and Afternoon Teas and Lunch at Braidwood are not included in this amount. Please contact the Secretary, Phone 599.4884, as soon as possible. Deposit required by next April Meeting \$4.

Limited 45 persons.

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"LYDHAM HALL FUND RAISING COMMITTEE"

The Ladies Fund Raising Committee hope you will keep in mind the following events, and for bookings or tickets please contact Mrs. E. Wright. Phone. 599.4884.

APRIL - 28th WEDNESDAY EVENING.

Cooking Demonstration: A Cooking Demonstration will be held at St. George County Council, Binder Auditorium, Kogarah, at 7.30 p. m. Donation 50¢. To make this evening a success, please support this function and bring your friends. We need to guarantee 70 persons to attend.

MAY - 15th. SATURDAY EVENING.

Housie Night: This function will be held at the home of Mr. & Mrs. D. Gow, 33 Gloucester Road, Hurstville. Donation \$1.00.

JUNE 1st. TUESDAY EVENING.

Cavalcade of Fashion: Tickets are now available for this Parade. This function is being held in connection with the "Rockdale Centenary Celebrations" and presented by "THE NORTH SHORE CAVALCADE GROUP". Gowns paraded are authentic articles of past fashions from the 1780's period through to the 1900's. Cost \$1.50.

JULY - 13th. TUESDAY EVENING.

ANNIVERSARY DINNER. To be held at "Ainslee" Lodge, Bexley. Cost \$4.00.

LYDHAM HALL is now open for inspection, Saturday and Sunday Afternoons.
2 p.m. till 4 p.m. Donations: Adults 20¢. Children 5¢.

Mrs. E. Wright.
President Ladies Committee.
Phone. 599.4884.

"A CENTURY OF PROGRESS".

Copies of this publication are now available, and have been prepared to celebrate the Centenary of the Rockdale Municipality. Cost \$1.00.

SOCIETY'S PUBLICATIONS.

A limited supply is still available of publications. These copies are obtainable from the Secretary.

The attention of our members is drawn to two excellent booklets entitled "Captain Cook in the South Seas" and "The Opening up of the Pacific". Priced at 50¢ each, and obtainable at the Public Library, Sydney, Room 24.

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THE POWER BEHIND THE SCENES

19th March, 1971.

Mr. Chairman, Ladies & Gentlemen:

INTRODUCTION.

For years we have been taking the benefits of electricity for granted. In a sense of course this can be taken as the greatest possible compliment that could be given to the Electricity Supply Industry. People know that when they want electricity it will be there.

Yet the power of electricity has been available for only a relatively few years. Rockdale Municipal Council this year is celebrating its Centenary. Yet it was only eight years ago - in 1963 - that the Centenary of the public use of electricity in Australia was celebrated.

And yet electricity today is truly the power behind the scenes - a quiet and versatile servant that we use in so many ways each day that it is just an accepted part of our daily lives. But without electricity our way of life would not, nor could not, exist.

The story of progress in the last century right up to putting men on the moon, is fundamentally the story of electricity and the developments it has made possible.

When asked to address you tonight I was simply requested to speak on "electricity". There were no terms of reference to guide me as to those aspects in which you might be most interested, so I decided to approach it in three parts:-

- (1) Outline of the discovery of electricity and its development.
- (2) History of the use of electricity in New South Wales.
- (3) The story of electricity in the St. George District.

At appropriate stages I propose to show two films:-

- (1) "Out of the Dark"
which traces the discovery of electricity and the early development of electric lighting.
- (2) "Power Pictorial"
which is a report on film of work of the Electricity Commission of New South Wales covering generation and major transmission developments in New South Wales.

EARLY HISTORY.

People have known something about electricity for centuries.

The ancient Chinese, for example, were able to construct a magnetic compass and learned to induce magnetism in iron and steel. Centuries later, some six hundred years before the birth of Christ, a Greek philosopher named Thales (often claimed to be the founder of mathematics) found he could produce static electricity by rubbing amber with a piece of cloth. Doing this, he discovered, gave amber the power to attract small bits of wood, feathers, leaves and other light objects.

However, no one seems to have understood the importance of this discovery and for hundreds of years this seemed to remain the extent of electrical knowledge until the 17th and 18th centuries when scientists with a greater knowledge of mathematics were able to enquire more deeply into the phenomena observed those centuries before.

However, once scientists like Alessandra Volta in Italy, Benjamin Franklin in America, James Watt in England and Andre Ampere in France began to experiment, the body of knowledge grew rapidly. By 1808 Sir Humphrey Davey, an Englishman, was demonstrating crude forms of both arc and incandescent lighting.

I mentioned that from ancient times people had known that electricity somehow produced magnetism, but it was not until 1831 that the English scientist and inventor, Michael Faraday, asked whether the reverse could be true. Could magnetism produce electricity? After many trials he discovered that by moving a magnet through a coil of wire it was possible to generate a continuous current of electric energy. This is the principle used in all electric generating equipment today, and perhaps to him more than any other should go the title of "Father of Electricity Supply".

After this, progress was rapid.

The first public use of electricity occurred in 1846 when arc lamps were used to light the Paris Opera House and the first occasion on which electricity was used for street lighting was in 1878, when 16 arc lamps were installed in The Avenue of the Opera again in Paris.

Electricity was generated for sale to the public in a limited way in San Francisco in September 1879, but the world's first commercial power station for incandescent electric lighting commenced operation at 57 Holbourn viaduct, London, on 12th January, 1882. On that day - less than 90 years ago - it might be said that the electrical age had arrived. It is difficult to realise fully just how young is the electricity supply industry today, which is so highly developed technically, so enormous in size and so far reaching in effect.

With that rather lengthy introduction we will proceed with the first film.

ELECTRICITY IN NEW SOUTH WALES.

Australia, of course, made no contribution to the early development of electricity - it was a penal colony.

However, today it is among the world leaders in use of electricity, and the Snowy Scheme and the 330,000 volt transmission lines constructed to tie in the New South Wales, Victorian and ultimately Queensland state systems are major schemes by world standards.

The first recorded use of electricity in this State was in 1863 when, on 11th June, the Sydney Observatory was lit by battery powered arc lamps in celebration of the marriage of the then Prince of Wales.

One of its earliest practical uses was in 1878, when the Government was building an Exhibition Palace in the Botanic Gardens. To shorten the construction time, Sir Henry Parkes imported generators from England so that work could be continued into the night.

Sydney Arcade (now demolished) was lit by arc lamps in 1882, the year in which the first commercial power station went into operation in London, and also in that year a Mr. Kingsbury, one of the first electrical contractors in New South Wales, imported a number of electric light plants which he sold to private individuals and Government Departments. In that same year also, the Sydney Municipal Council wrote to Mr. Swan of England, Mr. Edison of New York and other authorities, and asked for "particulars of your most recent inventions in the direction of lighting by electricity".

However, several country towns beat Sydney to the gun and to Tamworth goes the distinction of the first electrically lighted streets on 9th November, 1888. Then followed Young, Penrith, Moss Vale and Broken Hill. In Sydney the first electric street lights were not installed until 1892, when they were erected in King Street between Elizabeth and Pitt Streets.

The first public power station in Sydney was established at Ultimo by the Department of Railways, and began operating in 1899, generating power for traction purposes. However, until 1904 the supply of electricity in the City of Sydney was left to private companies, each of which supplied small groups of adjoining premises.

After a somewhat uneasy passage, the Municipal Council of Sydney Electric Lighting Act gave the Council the right to generate and sell electricity, and on 8th July, 1904, its first power station at Pyrmont was officially opened.

Other electricity undertakings were subsequently established by the Electric Light and Power Supply Corporation Limited (Balmain) in 1908, and by the Public Works Department at Port Kembla in 1915.

Power to conduct electricity trading undertakings was conferred on Municipal and Shire Councils by legislation passed in 1904 and 1906, and as the advantages of electricity became increasingly recognised, small generating stations were commenced in most towns throughout the State.

The production and distribution of electricity is very different from many other commodities and services in as much as generally it cannot be stored but must be generated as required. Quite early it was seen that substantial economies could be made by establishing large central power stations to replace isolated small plants. During the first World War the first inter-connections between the systems of the Railways and the City Council were made, and in 1935 the passing of the Gas and Electricity Act represented the first major step forward in co-ordination.

The first major connection between distant power stations was the 132,000 volt line between Port Kembla and Burrinjuck Hydro Stations, both being in the southern electricity supply system of the Public Works Department. This permitted an exchange of thermal and hydro power at different seasons of the year, and demonstrated the advantage of carrying electricity long distances from stations situated near their primary source of energy.

The second World War brought further inter-connections of the major networks as an emergency measure, and although limited in capacity, they later proved of valuable assistance at times when electricity shortages occurred during the early post-war years.

The need for co-ordination of existing resources and planning became increasingly evident, and to this end the Government established the Electricity Authority of New South Wales in 1946, with powers to promote and regulate the co-ordination and development, expansion, extension and improvement of electricity supply throughout the State.

To overcome the increasing power shortages the Electricity Commission of New South Wales was established in May 1950, to take over the generating and main transmission functions of the four former principal authorities, viz; Sydney County Council, Balmain Company, Department of Railways and the Southern Electricity Supply section of the Public Works Department, and to build up the State's power resources on an integrated basis.

During the 1950's also, many of the small Municipal undertakings were amalgamated under the County Council system to meet the growing demands for distribution of increasing blocks of power to retail customers, and to extend electricity beyond the towns into the rural areas throughout the State.

Today the public electricity supply industry in New South Wales is organised as follows:-

(a) Generation and Transmission:

The responsibility of the Electricity Commission of New South Wales with some power being obtained from the Snowy Mountains Hydro-Electric Scheme (not expected to provide more than 15-20% of State's needs).

(b) Co-ordination and Development of Electricity Distribution:

The responsibility of the Electricity Authority of New South Wales.

(c) Distribution and Reticulation:

Controlled by Local Government bodies and some private franchise holders.

County Councils	34
Municipal and Shire Councils	5
Franchise Holders	2

The extent of the electrical supply industry in New South Wales may be gauged from the following: -

Number of consumers	-	1.5 million	
Sales of electricity (units)	-	14,616.5	" (38% of Aust. consumption)
Capital invested	-	\$1,500	" (50% approx. generation)
Annual Revenue	-	\$300	"
Coal used (tons)	-	7	"
Persons employed	-	25,000	

These figures do not include the Snowy Mountains Hydro-Electric Scheme constructed by the Commonwealth Government for the joint use of the Commonwealth and State authorities. New South Wales and Victoria are joined with the Commonwealth Government in a council which determines the pattern of development and operation of the scheme to provide the optimum power and irrigation benefits for all concerned.

I do not propose to refer to this scheme in detail, not because it is not a vital development, but perhaps because it is a subject in itself and mainly because the next film, which will be shown shortly, deals with this scheme.

ST. GEORGE COUNTY COUNCIL.

In view of the publicity given to the history of the St. George County Council last year during the 50th Anniversary Celebrations, including the issue of a Golden Jubilee Supplement to the "Electricity News" which is delivered into every home in the St. George District, I trust that any duplication or repetition will be forgiven.

It is of interest to note that when the St. George County Council was constituted on 4th December, 1920, to distribute electricity within the Municipalities of Bexley (now part of Rockdale), Hurstville, Kogarah and Rockdale, it was the first County Council formed under the Local Government Act of 1919 which provided for the establishment of County Councils as we know them today. The formation of this County Council was many

years in advance of the general County Council concept for electricity distribution throughout the State, formulated as I have said in the late forties and nineteen-fifties, which I have referred to, but even in those early days it was appreciated that the four Councils acting together could provide electricity within this 27 square miles of district more efficiently than each Council acting individually.

Even then, it was set up only because, after an approach in 1918, the City Council had advised it would not be able to extend its electricity supply into this district for at least five years. In 1919, however, the Railway Department announced its intention of electrifying the Illawarra Line, thus providing the necessary supply of bulk power for distribution.

It is interesting to note, also, that the original move for electricity was initiated by the Sutherland Shire, but because the Railway electrification project was to terminate at Hurstville that Shire had to be excluded from the County Council proposal.

The first meeting of the Council was held in the Rockdale Town Hall on 4th December, 1920, and some present may recall the pioneer Aldermen who sat on that first Council:-

Alderman W.F. Brown, then Mayor of Bexley, was the first Chairman and, with Ald. W. Bateman and Ald. F.W. Dowsett, he represented Bexley on the Council.

Hurstville Council was represented by Ald. W. Coleborne, W. Jones and F.J. Wheeler, and

Rockdale Council was represented by Ald. F. Farrar, G. Fortescue and W. Taylor.

The first County Clerk was Mr. Roley Rose, previously Town Clerk of Kogarah and the first Chief Electrical Engineer was Mr. E.P. Thompson.

The Council had no money to start with and it borrowed \$1,600 from the four Municipal Councils in order to get under way.

And for the next fifteen months it lived on credit until the first loan of \$200,000 commenced to be advanced in March 1922.

The original reticulation of the district provided for supply to 2,000 consumers and as many street lights, at a cost of the \$200,000 referred to, to be expended over 5 years.

Today the County Council is supplying 460 million units of electricity to 70,000 consumers. The capital investment is over \$16 million dollars which produces an annual revenue of approximately $11\frac{1}{2}$ million dollars.

The first consignment of two trucks of poles arrived at Arncliffe Railway Station on 30th January, 1922, and the poles were distributed in adjacent streets by bullock waggon on the same day.

The waggon was drawn by twelve bullocks and it is understood that their appearance caused quite a stir at the time, particularly in the business centres.

Transport for the officers was almost as old fashioned; they used a pony (Dolly) and sulky on hire to travel throughout the district, and a horse (Jack) and dray to transport the drums of cables and pull the mains over the crossarms on the poles.

However, in 1923 a T Model Ford utility was purchased, then an Excelsior motor cycle, which was followed quickly by several Harley Davidson motor cycles with side cars and two Vulcan trucks with solid rubber tyres and other vehicles. Compare this with today's modern fleet of 150 vehicles, which includes a mobile substation, a 10 ton crane and other mobile equipment.

The first premises to be connected to the supply in the County District was the Masonic Hall in Montgomery Street, Kogarah (now demolished), and the first temporary supply of electricity, by courtesy of the Railway Department, was arranged for a special shopping carnival conducted by the Hurstville and District Chamber of Commerce at Hurstville on 10th October, 1922.

The Head Office building was officially opened on 9th March, 1923, by the then Chairman, Alderman F.E. Dowsett, who that same evening also officially "switched-on" the current the event, according to records "being hailed with a demonstration of enthusiasm by those assembled in the Hall and by the thousands of residents who had gathered in the streets."

Bulk power is now supplied by the Electricity Commission, the generating authority, at Peakhurst (refer to E.C. and district maps), which is connected to the 330,000 volt State grid at Sydney South. At Sydney South the pressure is stepped-down from 330,000 to 132,000 volts and at Peakhurst there is a further stepping down to 33,000 volts. Electricity is then distributed by Council throughout this district at 33,000 volts to the major zone substations (refer to district map). At these zone substations the voltage is again reduced to 11,000 volts for supply to 539 distribution transformers dotted throughout the district where the supply is again broken down to the normal 415/240 volt supply to operate the normal household appliances and other equipment connected to the mains.

The consumption of electricity is being doubled each 8 to 10 years and the maintenance of a satisfactory load factor and the provision of funds for the capital expansion necessary to cope with this growth are the major problems related to the financing of the Undertaking. Although 70% of the electricity load in this district is residential, the tariffs charged are comparable with those charged by the Sydney County Council and other Metropolitan Authorities which enjoy a better balance between residential and commercial and industrial loadings.

As the district has developed, electric power has been there behind the scenes to provide the means for the development and with the growth has come the provision of increasing services to its consumers.

Street lighting has been improved and augmented so that we can now claim that the St. George District is one of the best lighted districts in the metropolitan area.

Appliance showrooms at Hurstville and Kogarah and radio-equipped vehicles providing for the repair of appliances in homes, together with the general advisory services and the special home management and cooking service are all part of the services now being provided to the consumers by their own co-operative organisation.

THE FUTURE.

And what of the future ! Some of the forecasts include:-

- High-speed electric railway system will be expanded.
- Most travel within the cities will be in small electric cars and the internal combustion engine probably will be used mainly for long distance or inter-city driving.
- Industry will become increasingly automated.

The home of the future will be different too. Here are what some of the manufacturers are talking about:-

- "Picture frame" television screens as large as a living room wall which will be turned on and off with the wave of a hand.
- Electric waste disposal - beams of searing light will vaporize all the refuse in a household.
- Home computers will keep the bank account and household budget up to date.
- Floor cleaning will be all-electric, probably with the use of automatic robot-like sweepers and clothes cleaning will be electric too.
- Climate control will be complete. Humidity and temperature will be completely at the home-owner's command.
- The kitchen will almost have disappeared. Small mobile cabinets, handsome enough for the living room, will house the basic cooking and refrigerating units.

Electricity will become increasingly the power behind the scenes and the foundations for the supply of the necessary power are now being laid as will be demonstrated in this film to wind up my talk - "Power Pictorial". This film is a report of the work of the Electricity Commission of New South Wales covering major developments to provide for the increasing demands for electricity power in the future.

(Sgd). J. Lundie.

THIS ADDRESS WAS ESPECIALLY PREPARED BY MR. J. P. LUNDIE,
COUNTY CLERK OF ST. GEORGE COUNTY COUNCIL AND GIVEN AT
THE MARCH MEETING OF THIS SOCIETY.

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