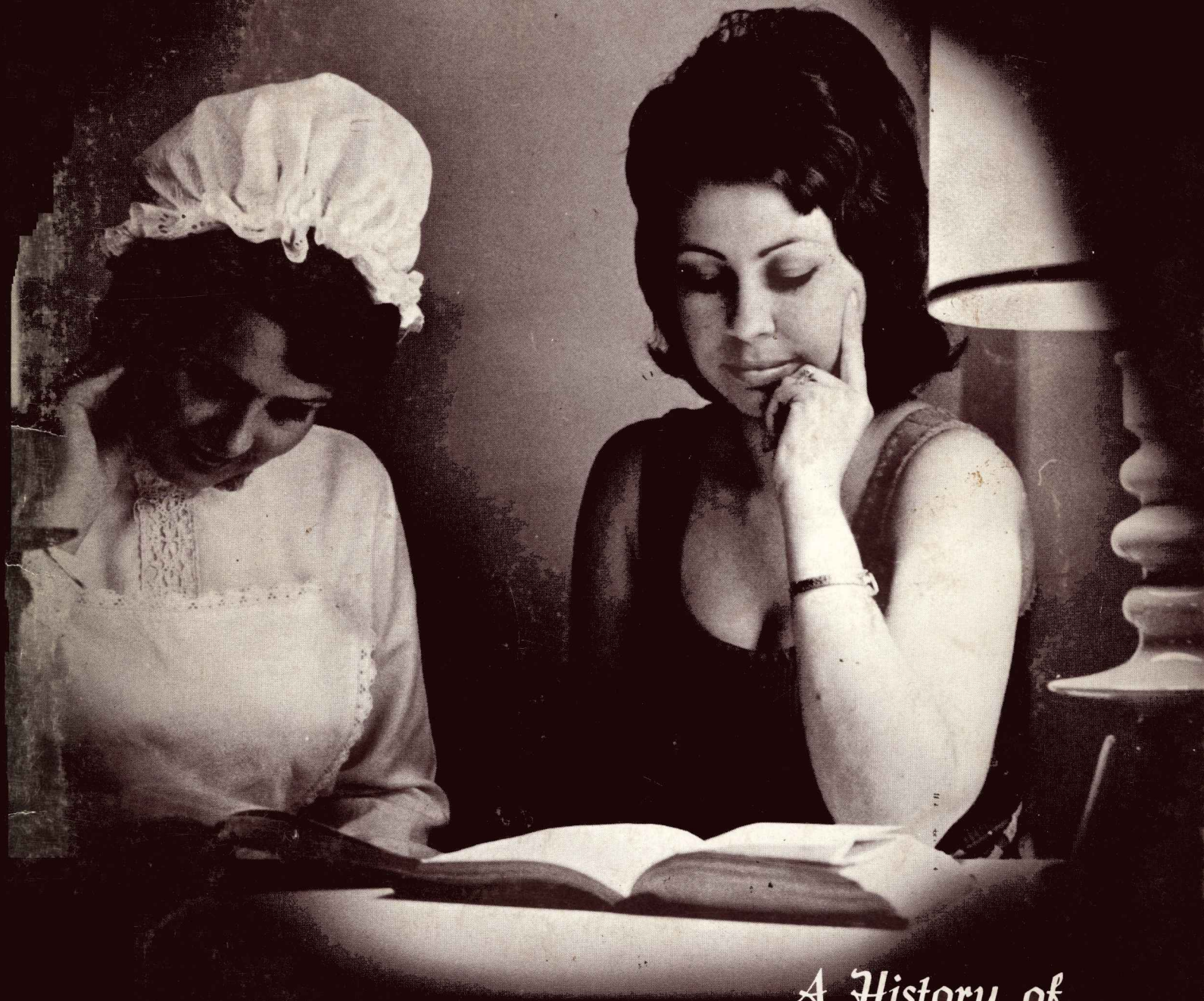
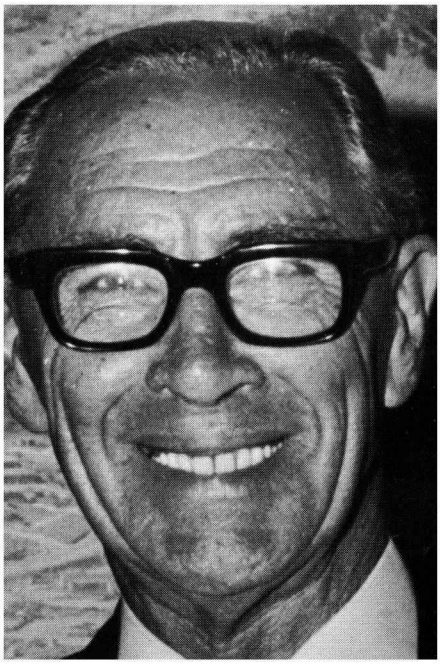
Fifty Years on . . . . .



A History of The Hawke's Bay Electric Power Board



THE CHAIRMAN SAYS —

Fifty years on! The Hawke's Bay Electric Power Board takes pride in its first half-century of existence and achievement.

From humble beginnings the Board has grown into one of this province's major industries. We number our customers in tens of thousands. They range from the humble one-room consumers to the great industrial complexes.

All are vitally dependent on the service which we give. Electricity is the lifeblood o modern society. It is the Board's responsibility to see that this power is distributed efficiently, equitably and as economically as possible. This we have always endeavoured conscientiously to do.

No message from me would be complete without reference to the people, from outside staff to senior executives, who over the years have worked hard in the interests of this board. To them I say thank you. As has been said, a Power Board is not merely technological equipment. It is people, too. Upon their efforts depend the success and ultimate efficiency of an organisation such as ours.

Never at any time in its 50 years has the Board been free of problems. They are inevitable in any fast-growing and virile enterprise. There will be major problems ahead. We celebrate our half-century in a world bedevilled by the spectre of a dire shortage of energy resources.

We salute the achievements of those who have gone before. It's hats off to the past – and coats off to the future. Hard work lies ahead. To these new tasks we apply ourselves to ensure the continuing efficiency and effectiveness of our Board.

K. R. GILLON,
Chairman.

MARKING OUR ANNIVERSARY

The Board in considering how best to mark the 50th anniversary of its establishment, decided to create the Jubilee Children's Foundation by providing $15,000 to form the nucleus of a fund to promote training, education and research into diseases of children in Hawke's Bay.

The Board hopes the fund will grow from gifts by public-spirited citizens and various organisations. Hawke's Bay has a poor infant mortality rate record. The Board anticipates that its initiative action will improve this situation.

Fifty Years on . . . . .

This book in eleven chapters was written by
RUSSELL ORR
Official Historian to the City of Hastings

Mr Orr is grateful to staff and executive members of the Hawke's Bay Electric Power Board for the use of written material for inclusion in this book. Thanks are also tendered to past and present members of the Board staff who have made photographs available.

Contents

FOREWORD

This is the story of the Hawke's Bay Electric Power Board.

This is the story of achievement, the building of a very large enterprise from humble and meagre beginnings.

A power supply authority is not just trucks, wires, poles, switching equipment and all the paraphenalia to do with the distribution of electricity. A power supply authority is people too, dedicated people, with a heavy sense of responsibility and it is about these people and their achievements that you will read in this book.

Most electric power in New Zealand is produced by hydro sources on rivers with water from lakes, and impounded by dams. The turbines spin their everlasting song to the thrust of the current. The rotors spin. Electric power is generated.

At voltages large by old time standards, the power is fed into the national grid. Substations at Redclyffe, Fernhill and Whirinaki are the points at which electricity is supplied to the feeder cables of the Hawke's Bay Electric Power Board. Electricity is generally taken at 33,000 volts but there are two reductions in voltage before supply is given to your home for lighting, power and heating.

There is only a remote chance that the room of your home will not be flooded with light the moment you press the switch. You would be perturbed if it were otherwise. It is the responsibility of the Power Board to ensure that, as far as humanly possible, you receive a continuous supply.

But there have been times, and will be times, when there is no supply, times when darkness falls on the land. These are times of flood, storm and gale, when the physical distribution resources of reticulation are utterly strained and often broken. At these times, linemen and repair staff, often soaked through and cold, cling precariously to tops of poles in howling gales to restore the power to your home. We are appreciative, grateful and thankful.

The board's head office in Heretaunga Street East, Hastings, stands in the centre of this low-level aerial photograph. The original powerhouse is the long building fronting on to Warren Street. In recent years the board has acquired adjacent properties for future development.

Acquisition of the appropriate land and development of the Howard Street depot were vital steps in the growth of the board. Situated on the eastern side of Hastings city, the large depot serves a multitude of purposes.

CHAPTER ONE

The Infant Science

The principles of electricity had long been known when men's thoughts a century ago began turning to means of applying the new science to practical use. Man had long been aware of the great power of electricity. For centuries he had known the phenomenal force of the lightning; the destructive power which in a single lethal stroke could flash from the heavens to raze buildings and kill people and animals.

The first major breakthrough in electrical science came when the British inventor Michael Faraday discovered that the simple act of moving a wire through a magnetic field induced current in that wire. Thus was born the electric dynamo, a means of converting physical force into electrical energy. Hitherto electric power for limited commercial purposes had been provided by batteries working on a chemical-reactive principle.

The Arc Light

For many years it was known that an electric spark could be sustained to produce a limited form of light. A spark between two carbon rods provided the arc light, a form of illumination which found immediate practical application. Because of its garish nature, this light was unsuitable for homes and other premises.

In 1872 the German inventor , Werner Siemens, made an important breakthrough when he discovered, accidentally, that a compound-wound electric dynamo could serve equally well as an electric motor. Thus was born the genesis of modern electrical industry. The science of electricity, however, received its greatest stimulus with the invention of the incandescent electric lamp by the American, Thomas Alva Edison, at his Menlo Park laboratory in 1881. Bamboo carbon provided the first fragile filaments for the early Edison lamps. Shortly they were to be give way to tungsten steel and other metallic compounds, still used to this day.

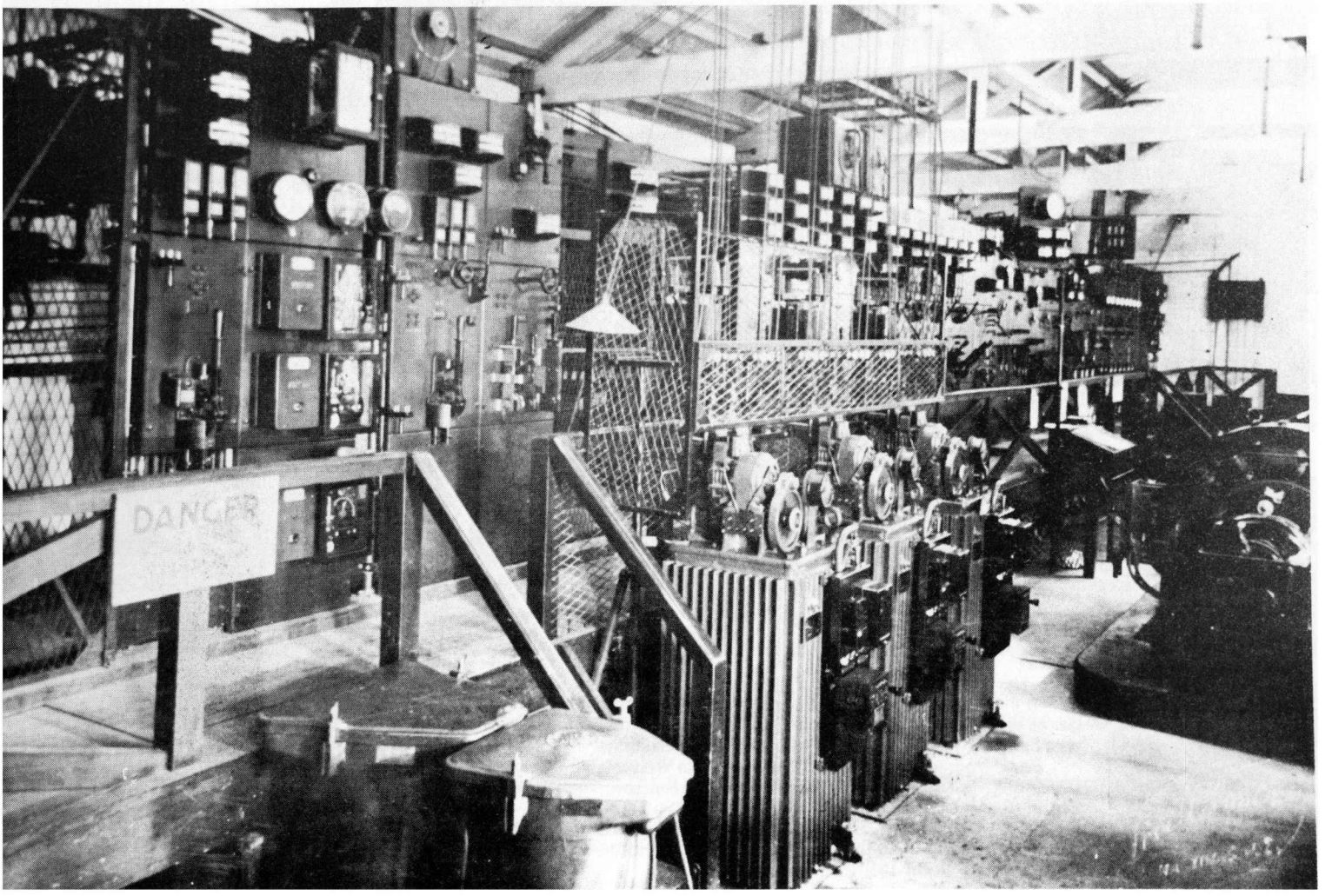
First Street Lights

Edison was quick to put to use his new discovery. Within ten years he had set up a steam generating plant in downtown New York, to supply the American metropolis with the world's first electric street lights and the first electric supply for homes and business premises.

The Edison companies within a short space of time were manufacturing hundreds of 'packaged' direct current generating plants to fill the needs of municipalities the world over. An electric power supply was a kind of civic status symbol. Everyone had to have one. The Hastings Borough Council installed a plant in Eastbourne Street in 1912, to be purchased by the Hawke's Bay Electric Power Board in 1935.

Direct current, the electricity used in the early years of the industry, had severe limitations. This form of electricity could not then be transmitted economically over long distances. It remained for a poor Serbian immigrant to America named Niklaus Tesla to adduce his theory of alternating current and the electrical transformer. By means of this system the "pressure" of the electrical current can be controlled at will. The light you now read by is supplied at 230 volts. But the same current is bought by the Hawke's Bay Board with voltages up to 33,000. The higher the voltage, the less the line loss as at higher voltages much more electricity can be transmitted over the same size of wire.

When the board took over Hastings' reticulation from the Hastings Borough Council it inherited the Eastbourne Street powerhouse and its obsolete direct-current generating plant. As the board phased out direct-current, old dynamo sets were gradually disposed of. Upper picture shows the powerhouse about 1922 with its sets of diesel-driven dynamos. Part of the complex switchboard for controlling the direct-current generation and reticulation is shown in the lower photograph.



First Electricity in Hawke's Bay

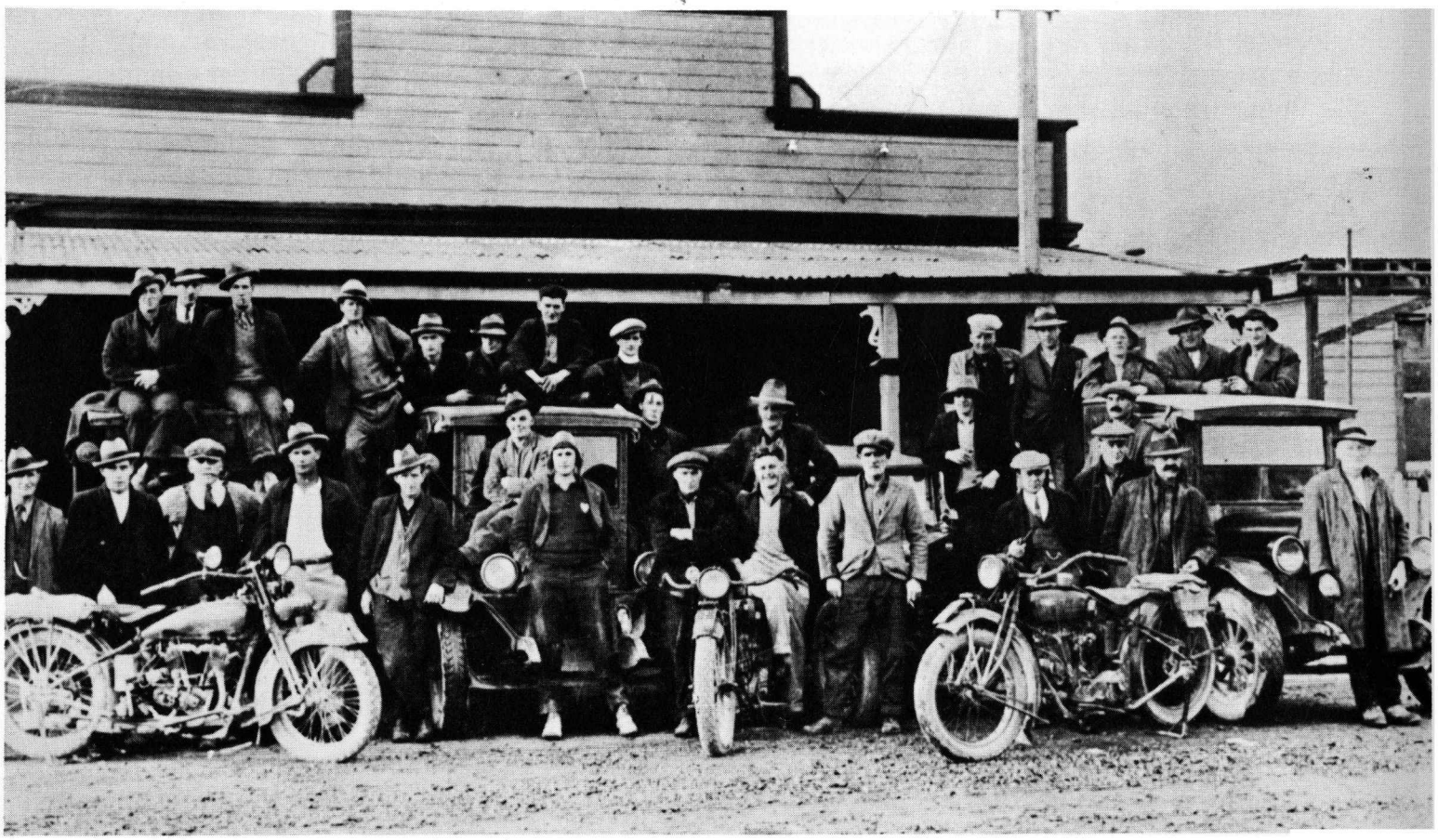
Although this is the history of the first fifty years of the Hawke's Bay Electric Power Board some mention should be made of early development of electricity in Hawke's Bay.

A number of small plants were installed in Hawke's Bay at the turn of the century and one of the first was at a small hotel situated on the top of the Taihape Road at Willowford.

The first sizeable plant was installed by the late Mr John Chambers at Mokopeka Station in Havelock North in 1892. This plant is still running and generating electricity for the homestead and is reputedly the oldest hydro-station in the world still supplying electricity. Several years ago the Board took over the maintenance of this station, and this will be carried on by the Board.

In 1910 the Hastings Borough Council was granted a licence to install a generating plant and supply electricity within the Borough. By 1912 the power house was completed and in 1913 power was supplied to 51 consumers. Of course, in this instance, power was generated and distributed by direct current. Napier Borough was also interested in supplying electricity to its residents and received a licence to generate and distribute electricity within the Borough and also to certain parts of the County including Taradale, Greenmeadows and Pakowhai. In 1913, two generators were installed and commissioned.

The Havelock North Town Board bought electricity from the Hastings Borough Council until 1923 when a hydro plant at Maraetotara was commissioned.



In the earliest days of electric power reticulation in Hawke's Bay: These men comprised two gangs employed by Mr Herbert W. Walker, first contractor to the Hawke's Bay Board. The picture was taken in 1927, possibly in Warren Street, Hastings.

Back, from left: Ted Hunter, Harry Gill, Ike Woolley, Tom Hunt, Sid Jones, Clem Beauchamp, Gordon Wright, Tim Hall, Trigger Hall, Chips Robson, Tiny Dowling, Jack Hall, Jim Smithhurst, Ernie ——, Jack King.

Front: Sep Wright, Bob McArthur, Snow Du Fresne, Chook Flay, Norm Robson, Ambury Jones, Bill Sheeran, Billy Wells, Shy Jackson, Herbert Walker, Mac Taylor, Tom Wicks, Nat Andrews, Bill Woods.

CHAPTER TWO

The Hawke's Bay Board Evolves

The Electric Power Boards Act was passed in 1918. By that time the residents of Napier and Hastings Boroughs had had a supply of electricity available for six or seven years.

Prior to the passing of that Act there was no legislative authority for rural supply other than that contained in the Municipal Corporation Act. Municipalities were not interested in rural supply. The embryo Southland Electric Power Board was the sponsor for legislation to enable supply to be made available in rural areas and so the Electric Power Boards Act 1918 was promoted and the legislation enacted.

Electricity was not then available in the Hawke's Bay County, or in other areas of the Hawke's Bay Province. In 1917 a meeting of local authorities and other organisations was held in Napier to make representation to the Government that the proposed Lake Waikaremoana hydro electric undertaking be proceeded with to enable supply to be given to the Province and to Poverty Bay. At this meeting the Minister in charge of the Hydro Electric Branch of the Public Works Department, and the Chief Electrical Engineer of that branch, were present. The strong representations made at this meeting resulted in the commencement of the Waikaremoana Scheme, and supply from the first station, Tuai, was available in 1926.

In the meantime, the Hawke's Bay County Council wanted supply available in its district and the necessary petition was submitted, signed by ratepayers in the County and in the Borough of Napier and the Town District of Taradale. A Proclamation was published in the New Zealand Gazette on 19th June, 1924, and the Hawke's Bay Electric Power Board was formed with the constituent districts of the County of Hawke's Bay and the Borough of Napier and the Town District of Taradale.

The Proclamation stated the first meeting of the Board was to be held in the Hawke's Bay County Chambers, Napier, at 2 p.m. on September 27, 1924. Present at that meeting were Messrs J. B. Andrew, Wm. Harvey, Henry Hill and R. W. Waterhouse representing Napier Borough, Thomas E. Crosse, R. D. Kettle and Father C. H. Seymour representing Hawke's Bay County. John Ellis representing the Taradale Town District was granted leave of absence. The Clerk of the Hawke's Bay County Council, A. H. Ferguson, was appointed Acting Clerk and took the minutes of the meeting. T. E. Crosse was appointed the first Chairman of the Board, defeating the other candidate, J. B. Andrew, by one vote. At this meeting which lasted 80 minutes, the Board agreed to a request by the Hawke's Bay County Council to proceed immediately with the electrical reticulation of the Greenmeadows area.

No local body can operate without money, and at the Board meeting held on October 3, 1924, the Bank of New Zealand advised that, in anticipation of Ministerial approval, an overdraft of $2,000 was granted.

Initially the Board dealt with matters absurdly trivial by modern standards but important at that time. It was common for the Board to deal with individual complaints from consumers. The purchase of reticulation equipment, transformers, poles and wire, could be the subject of lengthy discussion.

At its second meeting, the Board received the offer from Esmos Timber and Machinery Co. of a spindle horizontal borer "very suitable for boring crossarms". The letter was merely received.

At the same time the Board was already coming to grips with matters portentous and serious. The Napier Borough Council wrote saying "it has no intention of selling its plant to the Board."

Looking Ahead

But the Board was already lifting its sights to the wide scope of its future activities. It was resolved that the Board reticulate the Hawke's Bay County and supply current in bulk to Napier at its boundary, and at a later date supply Hastings and Havelock North, if these two districts so desired.

At its meeting of November 7, 1924, the Board resolved to strike a rate of .2083 cents in the dollar, covering the constituent districts of the Napier Borough, the Hawke's Bay County and Taradale Town District.

On December 5, the month's accounts totalling $584.95 were passed for payment.

The Board's first loan was a modest one. On February 6, 1925, the Board decided to raise a loan of $8,000 at 5¾%. At the same meeting the Board approved paying the Hawke's Bay County Council $150 a year for the use of office staff, offices and stationery.

On March 20, 1925, the Board declined an offer by the Hastings Borough Council to take supply from the Board. The Board was very much in its infancy then and it was thought that it was too soon to make any definite commitment in this direction.

On May 1, 1925, Father Seymour resigned from the Board and his place at the next meeting was taken by M. S. Chambers.

Early in 1925 the Acting Secretary of the Board, A. H. Ferguson intimated that he did not wish to continue, so the Board decided to call applications for the position of Secretary and Chief Executive Officer. From a large number of applications, H. H. Wylie was appointed to the position as from August 1, 1925, at the princely sum of $1,000 a year and initially he was required to provide his own office accommodation and staff. Mr Wylie continued with the Board as Chief Executive Officer until his retirement in 1965. His title was changed to Secretary-Manager in 1936, and in 1942 to General Manager. He started when the Board did not have any staff and saw it grow from very small beginnings to the large organisation it is today, and there is no doubt that to a great extent the success of the Board is due to his ability and guidance as Chief Executive Officer over 40 years.

Electricity is a commodity which, comparatively, has become infinitely cheaper during the history of the Board. On September 4, 1925, the Board fixed charges at 4 cents to 9 cents a unit, with a cent a unit penalty if the account was not paid within 20 days of the meter being read. Today's average price per unit is only 1¼ cents.

The board's retail showrooms at head office are spacious and well planned.

First Leap Forward

In late 1925 the time arrived for the Board to take its first leap forward into the mammoth task of reticulating a large area of the Hawke's Bay province. The decision was taken to raise a loan of $600,000 to carry out work proposed by Vickerman and Lancaster, who after very full investigation by the Board were appointed as consulting engineers.

They had brought down a comprehensive report on the reticulation of what might be termed the inner Hawke's Bay County area excluding both Napier and Hastings Boroughs and Havelock North Town District.

The consulting engineers were authorised by the Board to go ahead. They appointed Mr H. L. Benjamin as their resident engineer in Napier to take charge of all the construction work for the area. Prior to Mr Benjamin's appointment, the loan poll was carried which authorised the work.

The reticulation of the area was started and the work was done partly by the Board's staff and partly by a contractor, H. B. Walker. The areas reticulated were Taradale, Pakowhai and Mangateretere.

The wiring of houses to receive electricity was a big undertaking and a system was worked out whereby contracts were let on what was then termed the "block system". Tenders for a certain number of houses were let out to leading electrical contractors who then carried out the work. Thus electricity was first supplied to consumers in the County area in February and March, 1927.

It is of interest to note that the Board accepted the engineers' recommendation to use galvanised steel Bates poles. Tenders for steel poles from Samuel Brown & Co. Ltd. and the Canadian Bridge Co. were accepted. The engineers were authorised to purchase towers and poles "up to a maximum of $5,000" which proved to be a good investment. Forty-eight years later the same poles and towers are still in excellent order and giving adequate service.

The first motor vehicle purchase was made on May 7, 1926, when it was decided to purchase a Ford half-ton truck for $318 "for the use of the foreman".

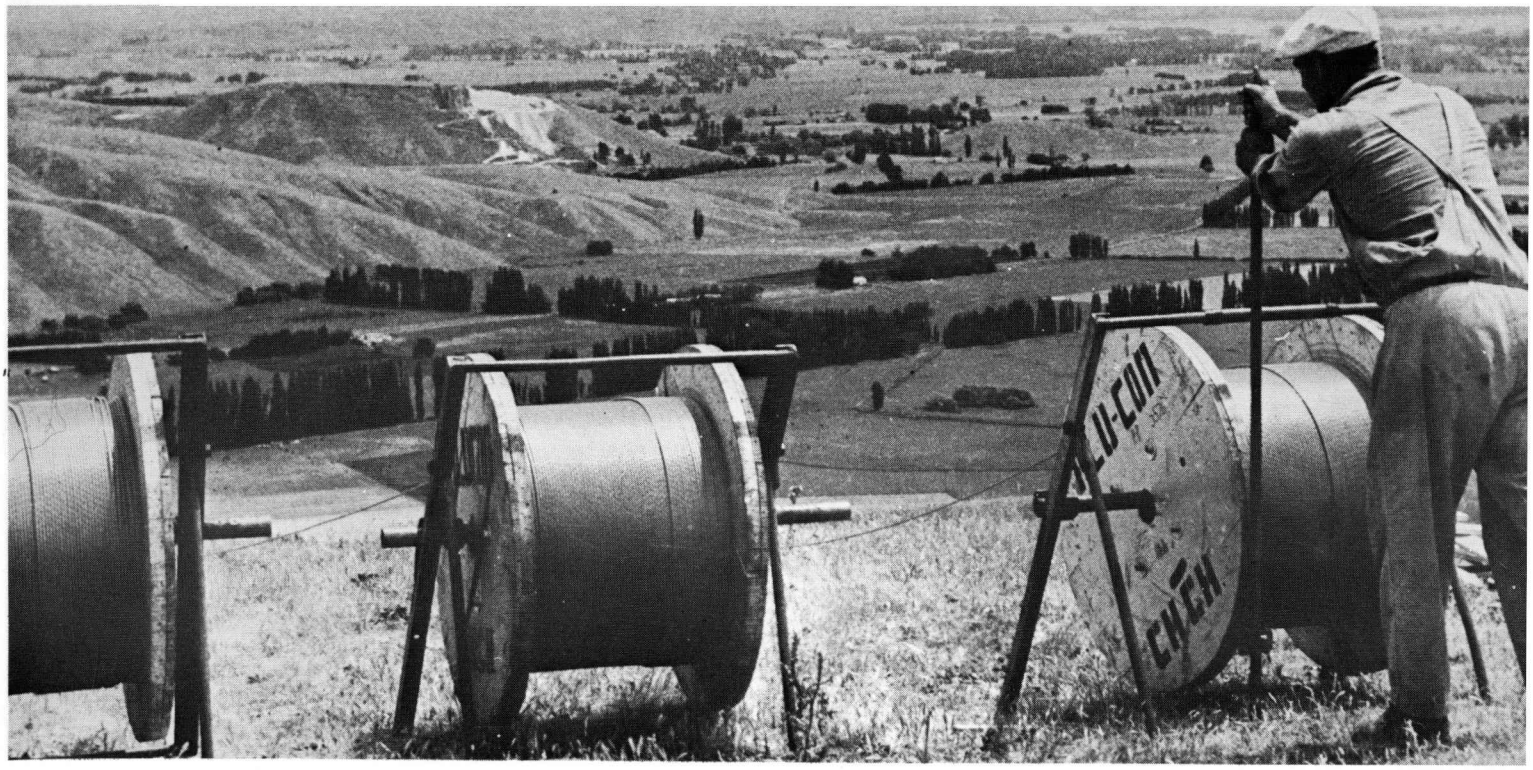
Early salaries were modest by present-day standards. Linemen were paid 19 cents an hour.

Strictly utilitarian in purpose, powerlines and poles are by no means beautiful. In recent years the Hawke's Bay Board has embarked on a policy of underground reticulation. These comparative pictures of Eastbourne Street, Hastings, illustrate graphically the improvement to the landscape achieved by underground reticulation.

The early activities of the Board and its future intentions were already well publicised by the press. With electricity made available to the rural areas near Napier and Hastings, farmers further afield were looking forward to their turn to receive supply. The Board was seen as a vigorous organisation intent on providing everybody with electricity as quickly as availability of finance, materials, and manpower, and the limitations of necessary equipment permitted.

A major event occurred in April, 1927, when electricity became available from the Public Works Department through Redclyffe substation. Bulk supply was then given through the reticulation of the Board to the Napier and Hastings Borough Councils, and also direct to retail consumers of the Board. The licensed area of the Board was a half-moon bounded on the east by the sea, on the south, beyond Waimarama, on the north by the Waikare River and extending west to the Mohaka River and to the foothills beyond Puketitiri. The reticulation was gradually extended, but it was not until 1960 that the original licensed area was fully reticulated.

Supply from Redclyffe had been available for only one year when the first of several power shortages reared its ugly head. In the summer of 1928 the Board was asked to reduce its load by 20 per cent. In addition to calling on consumers to co-operate, temporary arrangements were made to feed back into the Government system 1200 k.w. from steam and diesel plants in the district. Now in 1974 there is another power shortage which could be with us for one or two years.



The introduction of television to Hawke's Bay entailed the supply of electric power to the Mount Erin translator. Here lineman Mr D. Reid is steadying a cable drum as lines are run down the steep hillside — M. Leete.

Depression and Earthquake

In common with other power supply authorities throughout New Zealand, the Hawke's Bay Board in 1930 was feeling the effects of the economic depression.

But a bigger headache was in store. On February 3, 1931, the Hawke's Bay district reeled under the impact of an earthquake. The business area of Napier was destroyed by the earthquake and the subsequent fire. Hastings buildings suffered slightly less damage, and were spared the fire. When the earthquake struck, supply was immediately interrupted which meant that danger from electric shock and electrical fires ceased. The 110,000-volt to 11,000-volt transformers at Redclyffe, which were on rails on platforms, but not anchored, ran to the end of their traverse and tipped over. What an electrical mess! Electricity to Napier, the worst area affected, was available to some street lights on the evening of February 4, by supply from the Onga Onga substation near Waipukurau. During the next few days the New Zealand Electricity Department erected a temporary transformer at Korokipo on the road outside the home of Hector Smith at Ormlie. Supply from this transformer was given for some months until the Redclyffe plant was repaired.

Immediately after the earthquake the Hastings Borough Council's plant was recommissioned by the Council and supplied the area for some weeks until normal supply was available through Stortford Lodge.

The freezing works of Thomas Borthwick & Sons at Paki Paki was practically demolished. Industry generally came to a standstill. Relief gangs with spare equipment were sent by the Hutt Valley Electric Power Board and by the Palmerston North City Council and their assistance was invaluable.

The Board's staff worked long hours repairing lines and equipment. It must be remembered that each member of the staff had his own personal earthquake problems. Special powers were given to the General Manager of the Board, H. H. Wylie, and supply was gradually restored. Few poles came down and the main damage was broken distribution and service lines. The chief difficulty was the loss of all spares including special tools when the store was burnt. However, Power Board construction staff managed to improvise and make supply available. It was particularly fortunate that our main bulk supply lines with steel towers and poles sustained little damage, so the backbone of the system was intact.

The experience of a major catastrophe further indicated that an electrical supply undertaking must be self-reliant and an individual complex. It cannot participate in a transport or working pool, but must have its own specialised equipment available and do its job repairing lines and restoring supply in order of greatest need. At the same time the electrical supply authority must work in with the needs of other controlling authorities. This was done during the earthquake.

The Power Board was hard hit by the earthquake. Plant and stores worth tens of thousands of dollars were burnt, and the year's revenue was very greatly reduced. Repairs cost many thousands of dollars, and until electricity again was available, the Board's revenue virtually ceased.

January, 1962: Staff with 25 years' service and over —

Back, from left: Messrs H. Hawthorne, M. F. Leete, J. Stephen, V. G. Badley, K. C. Frater, W. G. McKee, S. J. Whitton, F. D. Struthers, B. F. Unverricht, G. H. Polglase.

Front: Messrs J. Simonsen, U. A. Lankovsky, F. Horton, A. A. Powell, H. H. Wylie, P. Walmsley, A. Robins, N. E. Davidson.

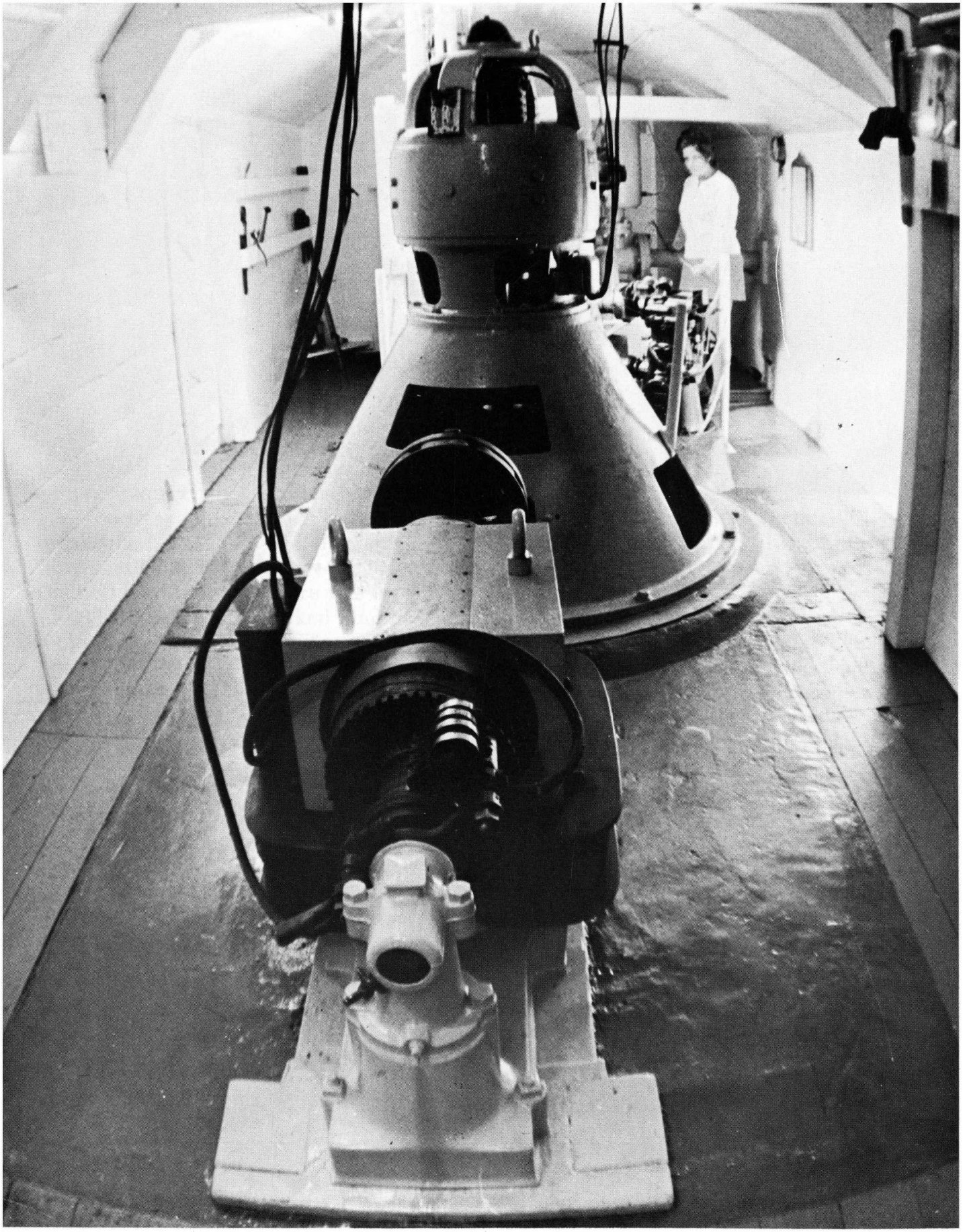
Some faces from 1962 recur in this 1974 photograph of board staff with more than 20 years' service.

Back, from left; A. G. Ericksen, C. J. Nissen, A. B. Howison, W. D. Bartlett, J. W. Monks, A. G. Bell, D. Martin, A. M. Ferguson, R. C. Whiting, M. P. Bell.

Middle: J. A. Trotter, R. A. King, A. H. Groome, N. J. Oliver, I. R. Whitton, E. G. Parkinson, O. G. Brittin, D. F. Reeks, J. Danielson, D. H. Wishart, W. F. Hearn.

Front: J. M. Sutherland, D. J. Hyland, F. D. Struthers, N. E. Davidson, T. M. Graham, D. H. Davidson, B. F. Unverricht, W. G. McKee, Mrs P. B. Bryson, Miss H. R. Burnard.

(Absent — W. H. McLean).



This old generating plant at Mokopeka Station was adopted by the board as a vintage project. The original generator (foreground) and turbine were installed by Mr John Chambers in 1892. It is believed to be the oldest generating plant of its kind still running continuously anywhere in the world.

Further Growth

After October 1, 1934, when the Board took over Hastings reticulation, the axis of the Board's operations swung to Hastings. For 11 years the Power Board's headquarters were in Napier but by 1936, 5,500 of the Board's 7,000 consumers were living in the Hastings district. In 1936, the present site in Heretaunga Street East was purchased and the Board's new headquarters were erected. Members of Hawke's Bay local bodies gathered for the official opening.

With the worst of the depression over, the Board's loading began to rapidly increase. A report in 1938 revealed some interesting figures. A total of 6,000 kVA was being handled by five bulk supply feeders each rated at 1,000 kVA. With an estimated demand in five years of 10,500 kVA it was obvious that immediate steps had to be taken to increase the system's capacity. The report proposed that the feeders' individual capacity be increased to 2,000 kVA. The overloaded feeders supplying Hastings were to be relieved by the addition of an underground cable feeder rated at 2,000 kVA. By increasing conductor sizes on existing feeder lines, further capacity would be obtained.

A special meeting of the Board in September, 1938, decided to proceed with the recommendations of a report from the Board's Engineer, H. L. Benjamin with Vickerman and Lancaster as consulting engineers, but there was scarcely a chance of getting the expensive programme under way before the Second World War broke out with its consequent severe restrictions on all the Board's activities. After two years of war, materials normally obtained overseas were virtually unprocurable. The Board had to make do with a make-and-mend programme. Capital works were confined to reconstruction of existing lines, new 11 kV extensions had ceased, and it was not until 1945 that the Board was able to extend its rural reticulation.

The Board did lose one small source of supply. Since the purchase of the electrical undertaking of the Havelock North Town Board the small 150 k.w. hydro plant at Maraetotara had been running continuously, to feed back into the Board's system. Average weekly kilowatt-hours averaged about 9,000. In November, 1941, the castings of the turbine and alternator suffered severe damage which was considered uneconomic to repair. The plant was dismantled and disposed of. The transmission line of No. 4 solid copper, was put to work in other areas and is still giving good service.

Although the Board was severely limited in facilities that it could offer consumers, there was no slackening in the requirement for its services. The demand for power continued to escalate, and of necessity severe curbs had to be maintained. Nor was the post-war period a happier time for the Board. The uncertainty of material supplies coupled with continuing power shortages placed the Board in an invidious position. Although between 1946 and 1950 there was an increase in maximum demand of 64 per cent, units purchased rose by only 19 per cent.

By 1950 it was time for the Board to again take stock of its position, and to plan for the future. That year saw the death of J. A. Ferguson who had been Chief Engineer for nine years and the appointment of T. E. Kelly, who filled the position until his retirement in 1973.

The 1938 report became quite out of date. It was necessary to plan anew, to anticipate the demands of the next two decades, and to re-design the system of major reticulation.

A second point of supply of 20,000 kVA was built by the Government at Fernhill, four miles from Hastings. Hitherto the whole area had been reticulated from the single point of supply at Redclyffe. The new substation allowed for the northern sector of the Board's area to be supplied from Redclyffe and the southern from Fernhill. The whole of the Hastings area was supplied from the Fernhill substation.

In 1950 a third source of supply became available from an unexpected quarter. At the East Coast Farmers' Fertiliser Works at Awatoto the production of sulphuric acid produced high pressure steam as a by-product. This was utilized to drive turbo-alternators which produce up to 800 kVA feed back into the Board's system.

The bulk supply lines to Napier were upgraded from 11 kV to 33 kV in March, 1957. This involved the installation of transformers of larger voltage and capacity, and the complete change of insulators.

In 1958 the Board and the State Hydro Electric Department agreed that supply be given at 33 kV and the Board had already commenced design and planning for this. Demand had increased to 30,600 kilowatts and the electricity revenue for the year ended 31st March, 1958, was $1,277,238. Power restrictions in 1958 and 1959 kept the maximum demand for the 1959 year to 30,828 kilowatts and revenue to $1,526,334.

The advent of television and a full year without restrictions meant, for the year ended March 1960, a maximum demand of 36,307 kilowatts and revenue of $1,760,436.

Country Reticulation Completed

In that year, the livening of the Puketitiri area saw the completion of the major country reticulation and this was marked by a ceremony at Puketitiri attended by local settlers, members of the Board and staff. It was then estimated that only 10 houses in the entire area of the Board did not have the advantage of an electrical supply.

In March, 1962, 33 kV substations at Whakatu, Mahora, and another at Havelock North, were under construction.

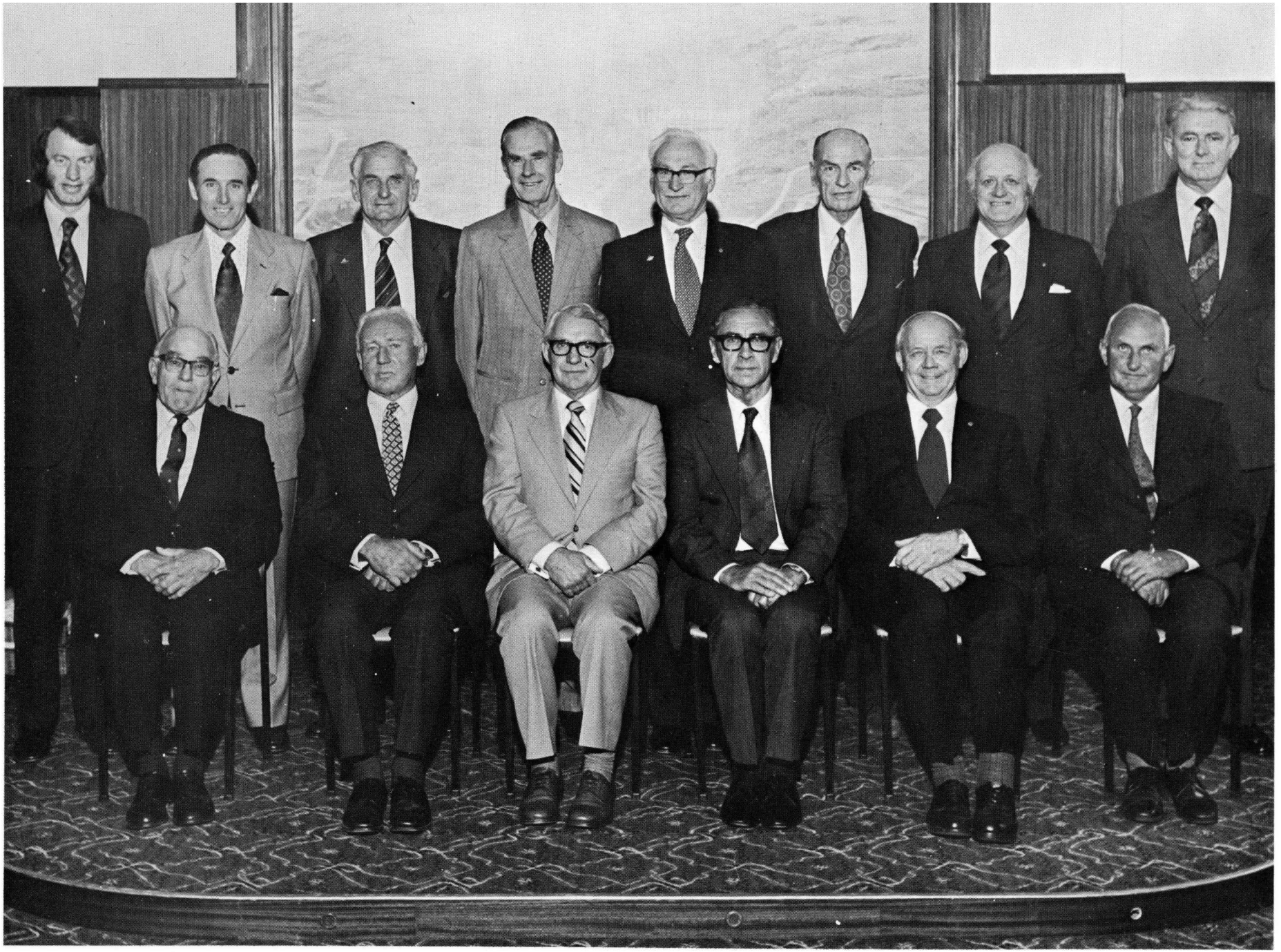
The first housing subdivision with high tension overhead and low tension underground was completed. In 1963 a 33 kV substation which was partly underground, was erected at the rear of the Head Office and 33 kV substations at Irongate and Havelock North were commissioned.

Installation of a supervisory control system to enable a more sophisitcated control of load pattern was completed in 1966.

In 1967, consulting engineers were instructed to prepare a report on the feasibility of a hydro generating station on the Ngaruroro River. After very full consideration the Board decided not to proceed with the scheme. The main difficulty was the ability to raise the necessary finance and although Government was approached for assistance, they were not prepared to offer any help.

By March, 1969, the Board was able to report a revenue of $4,800,000. This was a period of reconstruction with no demand for new extensions. In the following year there was continuation of reconstruction in county areas and an increased demand for underground installations in residential areas.

A major work for the Board, the building of a line to the summit of Mount Taraponui (4,300 ft) was completed by March, 1972. This marked the first occasion in which a helicopter was used by the Board for line construction. Severe snow and up to 10 inches of ice on the lines produced major headaches for the Board. Later, portion of this line was placed underground to minimise damage from snow and ice.



Members of the board and executive officers in the jubilee year.

Back, from left: F. B. Sanders (Secretary), E. J. Saker, C. W. J. Tucker, D. A. Wallace, D. D. Twigg, J. K. Agnew, J. G. Seton, D. H. Davidson (Chief Engineer).

Front: H. M. Lochhead, M. R. Renton, T. M. Graham (General Manager), K. R. Gillon (Chairman), D. R. Robertson, W. L. Atherfold.

Advent of Whirinaki

During 1972 and 1973 protracted negotiations were taking place between Carter Oji Kokusaku Pan Pacific Ltd., the Government and the Board, to arrive at a mutually acceptable tariff for the supply of electricity to the proposed pulp mill at Whirinaki, 10 kilometres north of Napier. Negotiations were to last right through the construction stages of the mill but agreement was reached and the N.Z.E.D. established a substation at Whirinaki to supply the mill.

A special Board meeting was held on March 29, 1973, at which representatives of the Board and Carter Oji Kokusaku Pan Pacific Ltd. signed a tariff agreement thus heralding the beginning of a large step forward in the Board's history. The eventual maximum demand will be approximately 46 m.w. with a consumption of 350 million units per year.

In 1973 the Board changed its electricity billing to a computer system which had been developed in association with a firm of computer consultants. A considerable amount of work was involved in the planning of the change and the final scheme proved very beneficial. The scope of the programmes was extended in 1974 to give information in respect of load patterns to aid the engineering staff in planning for the future. To date this suite of programmes has since been adopted by 11 other supply authorities.

Erecting poles and cabling in rough country can be back-breaking, tedious and expensive work. In 1972 at Taraponui on the East Coast the board used this helicopter to transport poles and lower them directly into pre-dug holes on the hilltops.

CHAPTER THREE

Amalgamations

The first amalgamation was in 1925 when the Board purchased the electrical undertaking of the Taradale Town Board. The Town Board had a restricted licence only which required that it sell its electrical undertaking to the Power Board when the latter so required. The Town Board was receiving supply from the generating plant of Napier Borough Council by way of a wooden pole line along the Taradale Road which then was a narrow road with tidal swamp on each side.

In 1934 the Board purchased the electrical undertaking of the Hastings Borough Council and the major portion of the purchase price was payable by instalments extending over 26 years.

In 1936 the Board purchased the electrical plant and reticulation of the Havelock North Town Board and the outstanding loan liability of the Town Board was assumed by the Power Board.

Prior to these amalgamations the Hastings Borough Council and the Havelock North Town Board were taking supply in bulk from the Power Board. The Power Board incurred considerable expense in upgrading lines and integrating supply in Taradale, Hastings and Havelock North.

Hastings Gas Company

For many decades the Napier Gas Co. Ltd. operated a coal gas undertaking in both Napier and Hastings. The Company had a good financial record over the years but the 1931 earthquake meant a collosal loss to the Company. In Napier most of the underground pipe reticulation was destroyed and substantial repairs were necessary to the generating plant. The damage at Hastings, although costly, was not so serious. In 1953 the Napier Gas Company opened negotiations with the Power Board to sell the Hastings Gas undertaking to the Board. No arrangement was made and the Napier Gas Co. Ltd. publicly stated that the Hastings Gas Works were to be closed. However, that was not to be, and mainly by the initiative and ability of John Mason of Napier the Hastings Gas Company was formed and the Company is still operating the undertaking. Mr Mason, a retired Barrister and Solicitor is now a nonagenarian living in Napier.

At present there are two supply authorities in the district, the Hawke's Bay Electric Power Board with an area of 4,988 sq. kilometres and the Napier City Council which gives supply to a small portion of the area of the City of Napier of six sq. kilometres.

The Government is now proposing a restructuring of Local Authorities and the future of Electric Power Boards is uncertain as larger territorial Regional Authorities are suggested. This could involve regional authorities assuming functions at present carried out by separate local ad hoc authorities.

CHAPTER FOUR

Buildings

The first office of the Board was in a small room rented from the Hawke's Bay County Council in 1925, with a separate entrance from Herschel Street, Napier. When Mr Wylie was first appointed as Secretary he was required to provide his own office accommodation. However, after the success of the loan poll in November 1925, in repsect of a loan of $600,000 the activities of the Board rapidly increased and more staff and larger office accommodation were required.

The next office was in the Atheneum building on the corner of Herschel Street and Browning Street, Napier, the present site of the Hawke's Bay Art Gallery. The Board then assumed responsibility for staff and accommodation. At this time the Coronation Hall at Port Ahuriri was rented from the Napier Borough Council as a store.

A section was purchased in Dickens Street, Napier, and a head office, store and garage were built and occupied at the end of 1936. The earthquake on February 3, 1931, left these buildings a shambles. The two-storied store was completely burnt out and very valuable replacement and spare material destroyed.

This store was replaced with a building of one storey. The two-storied office block was very badly damaged, which was not surprising as it was not constructed to withstand an earthquake of such magnitude. However, in 10 days architects were preparing plans to repair the building, which was the first restoration in Napier.

In the intervening period the Board used a wooden two-storied house opposite its own building in Dickens Street. A meeting of the Board was held in these premises on Friday, February 13, 10 days after the earthquake. Just prior to the meeting, the second largest earthquake occurred; the meeting was brief.

In 1938 the buildings in Dickens Street, Napier, were sold to the State Hydro Electric Department as the New Zealand Electricity Department was then known.

Hastings Activities

When the Board purchased the electrical undertaking from the Hastings Borough Council in 1935 it rented a shop in the Hastings Municipal Chambers as a branch office.

In 1936 the Board purchased a section in Heretaunga Street, Hastings, where the Protestant Hall had stood for 50 years. This hall was shifted to the corner of Warren Street and Lyndon Road and was used by the Hastings Old Folk's Association until about 1971 when the hall was demolished. The Board immediately prepared plans for a head office building. It was a most suitable site, as the existing power house bounded the section at the rear. The first Board meeting in the new head office was held in February, 1938. In 1961 a contract was let for major extensions to the head office building. Land around this building has been purchased over the years and the Board now owns a sizeable block of land for present and future needs.

In 1938 a branch office was established in Dalton Street, Napier, and in 1957 a two-storied building was erected on the corner of Kennedy Road and Douglas McLean Avenue to service the development in that direction of the Napier City. The line depot, garage and staff facilities were built in Dunlop Street, Onekawa.

Between seven and eight acres of land were purchased in the Parkvale area bounded by Howard and Louie Streets just outside the eastern boundary of the Hastings City on which was a new house that had never been occupied. The house was converted into two flats, and a store and ancilliary buildings were erected. By March, 1961, the Parkvale Line Depot was in full operation. This is the Board's main depot with lines store, amenities block, wire stores, garages, vehicle repair depot, concrete pole factory, electrical fitters' workshop and a carpenters' shop.

Transport and Plant

The Board's first vehicles were a Ford 15 cwt truck, a Dennis lorry and a Rugby car. Considering the roads in 1926, these vehicles gave excellent service. A baby Austin was purchased for the sole meter reader, "Steve", who being rather a large man did not appreciate the jokes fired at him by other staff members.

Further vehicles were purchased as the reticulated area was extended, but it was not until well after World War II that the operations of the Board could be considered adequately mechanised. The Board was one of the first supply authorities to buy a pole-hole borer, which was powered by its own unit mounted on a truck. The Board is now adequately mechanised with over 100 units including cars, trucks, bulldozers, trench diggers and pole-hole borers.

The trucks of line gangs are all fitted with mechanical hoists. Trailers are used extensively, particularly for transporting poles, and some are fully equipped with underground cable equipment and can go into operation immediately when breakdowns occur. A Power Board can be likened to a fire brigade. It is required to attend to breakdowns at a moment's notice.

The Board has modern workshops for both electrical and mechanical repairs and a motor vehicle repair shop with modern repair and testing equipment.

The transformer repair depot tests, services and repairs transformers up to a rating of 33 k.v. and has two cranes, one with a capacity of 35 tons.

CHAPTER FIVE

The Heart of it All

Sophisticated control systems are an integral part of the Hawke's Bay Board's organisation. Major work in the development of these systems was carried out under the direction of T. E. Kelly during his 23 years as Chief Engineer to the Board.

The hub of the Hawke's Bay Power Board electrical system is the Control Room in Hastings. Through telephone lines, the Board's own lines and Post Office lines, through radio controlled vehicles and from information relayed from the district main substations which is instantaneously shown on panels in the control room, the Shift Engineer is able to assess the prevailing situation at any stage.

When trouble occurs on the main high voltage lines of the system, white lights and bells give an alarm. Flashing green lights pin-point the fault. Trouble on secondary low voltage lines and local services is indicated direct by consumers who are without power. From the Control Room the search and repair organisation which operates 24 hours a day is alerted and restoration arrangements are put in hand.

In Times of Trouble

Few people realise the drama of electricity distribution in times of power failures. Practically every day something occurs which interrupts supply to some of the 33,000 consumers spread over nearly 5,000 square kilometres of Hawke's Bay. It may be that a local service to a house is faulty, wind has tangled overhead lines along the roads, or a tree has crashed through the wires, or a car has run into a pole, or some mechanical digger has cut through an underground cable.

Overhead electric lines are particularly vulnerable to the weather. Underground cables sustain their greatest damage from man-inflicted sources. Corrosion is a source of trouble in both systems but can be largely controlled. However, a good and reliable supply is given even to the most remote points some 100 miles by road from the control centre. When troubles do occur restoration of power is quite prompt, thanks to modern communication and transport.

Many years ago the public telephone system was the Board's only means of communication. Both the report of the fault and staff instructions were confined to this medium. When it was known that some person or area was without electricity, the procedure was to send out a trouble officer to locate the trouble and operate switches and isolate the faulty area. From the time the man left his home or headquarters the only contact the control centre had with him was by telephone. But often the telephone lines were also damaged. Searching for faults was prolonged and it was a very anxious time for those waiting for information. Naturally there was the worry about possible accidents, particularly when storms made driving difficult and brought trees down over roads.

First Use of Radio

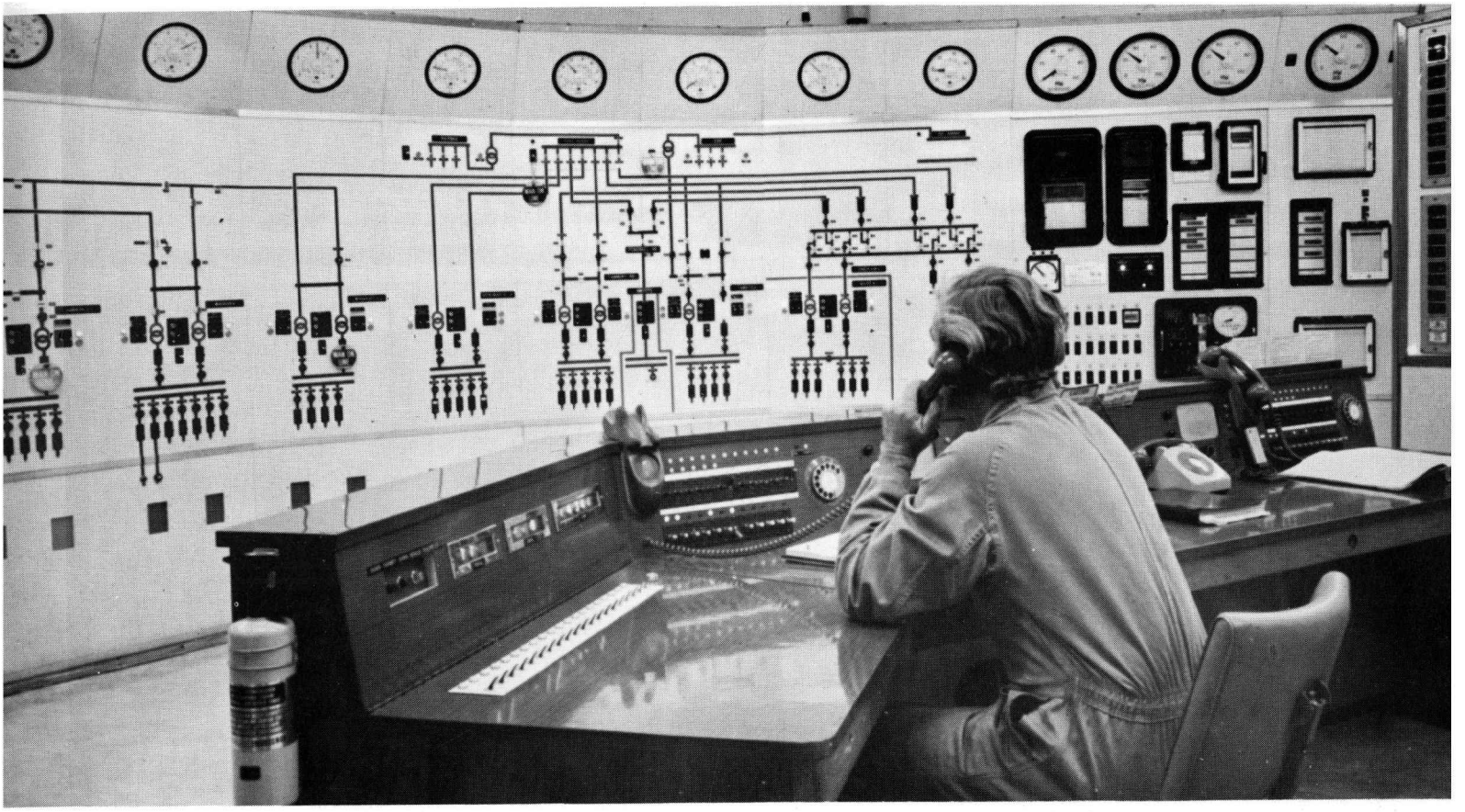
Ex-Army ZC1 radio telephones were first installed in the trouble trucks in 1952. In spite of their short range and the high noise level at headquarters, they provided great assistance in communications. Today the trouble staff and indeed most vehicles are equipped with radio. The trouble officers and line staff have high powered medium-frequency sets which operate through relay stations. In addition, they use very high frequency sets, the combination of which gives the best possible system.

Many incidents occur during system breakdowns. All are part of the tension of the moment. Strict procedures must be followed to avoid possible accidents. Time saving short cuts must be avoided. Normally major wind storms cause full-scale operations when as many staff as possible become involved. A devastating gale could be expected once every few years. Queen's Birthday weekend in 1952 was a typical case. Line repair gangs were out most of the day. The last returned to headquarters about 11 p.m. and there were still many homes without power.

Another bad day was Wahine Day in April, 1968. This was unusual in the Board receiving warning of possible trouble some hours before the storm really hit Hawke's Bay.

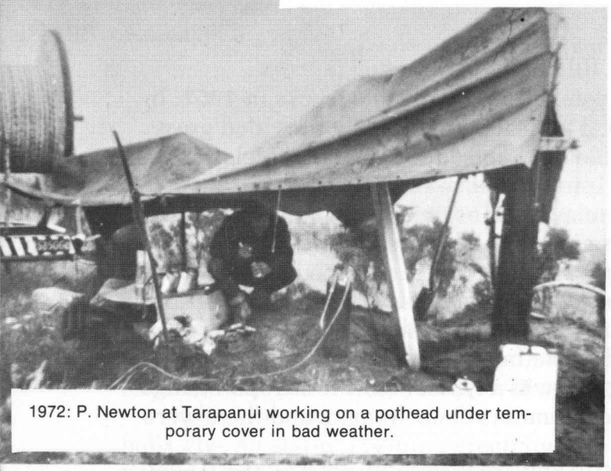
In such emergencies many people are involved — engineers organising at the control centre; extra people taking telephone messages, recording them and checking back when power is restored; major line gangs at the larger repair works; smaller gangs doing minor repairs; storemen preparing materials; even people arranging meals to be taken to the workers.

In the midst of such confusion it is not unusual for a person to ring complaining that a street light is not working. A little light relief helps everyone in the tense atmosphere. Even one of our staff caused some misunderstanding when he radioed that the poles in Pakowhai Road were falling over in a heavy wind. Frankly, he was not believed.

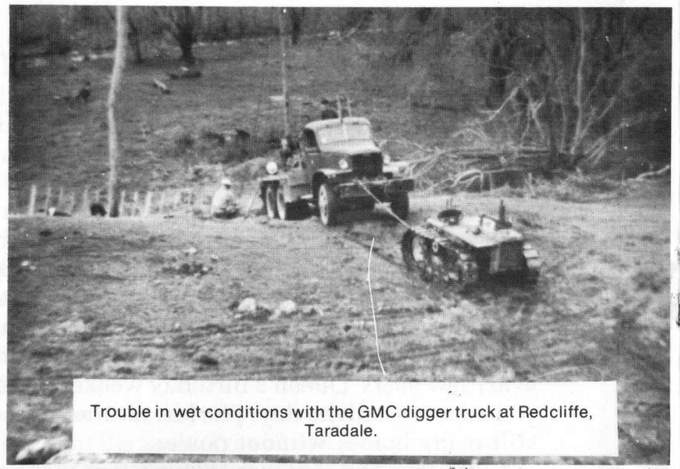


The control room is the heart of the board's great system of power reticulation.

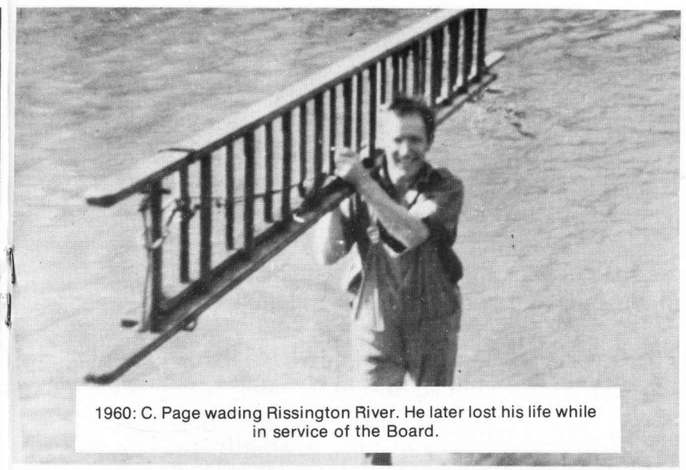
MEN at work — Flash-backs — to the past



1972: P. Newton at Tarapanui working on a pothead under temporary cover in bad weather.

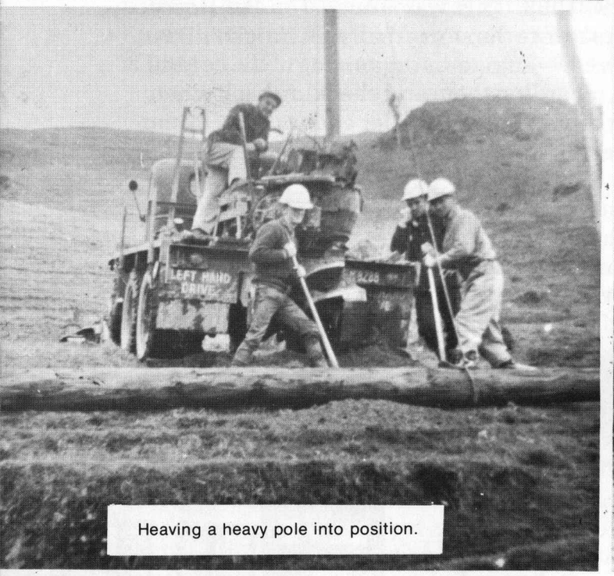


Trouble in wet conditions with the GMC digger truck at Redcliffe, Taradale.

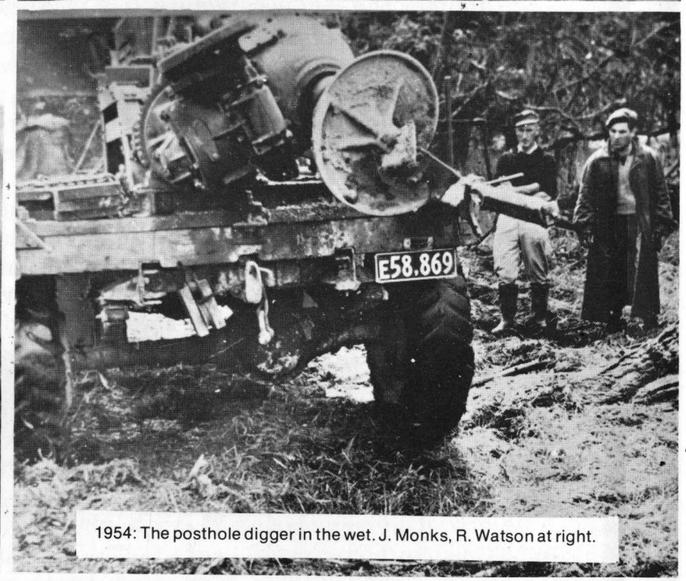


1960: C. Page wading Rissington River. He later lost his life while in service of the Board.

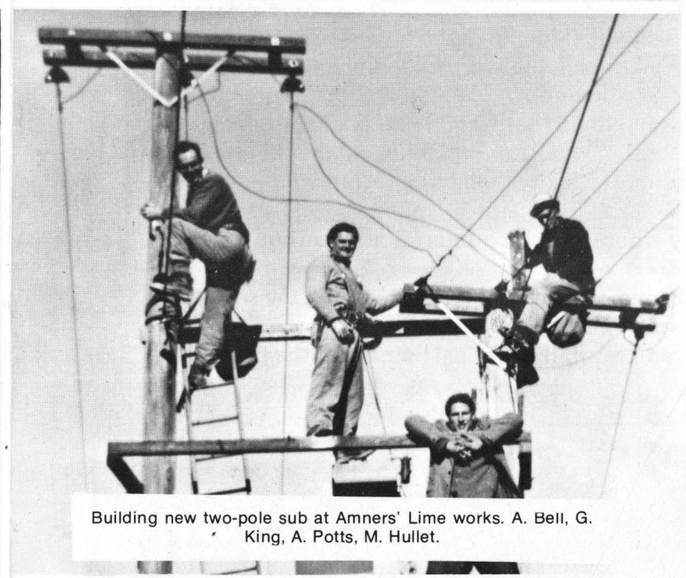
Lunch-time interlude: A. Groome, A. Potts, G. King and J. Fowler enjoy a dip in the Tukituki River.



Heaving a heavy pole into position.

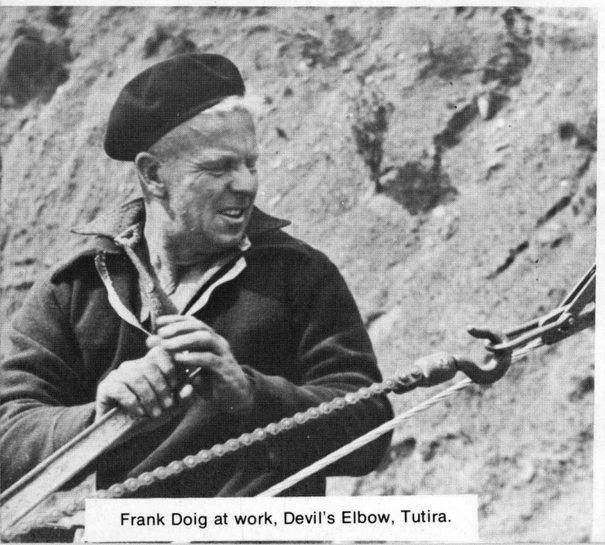


1954: The posthole digger in the wet. J. Monks, R. Watson at right.



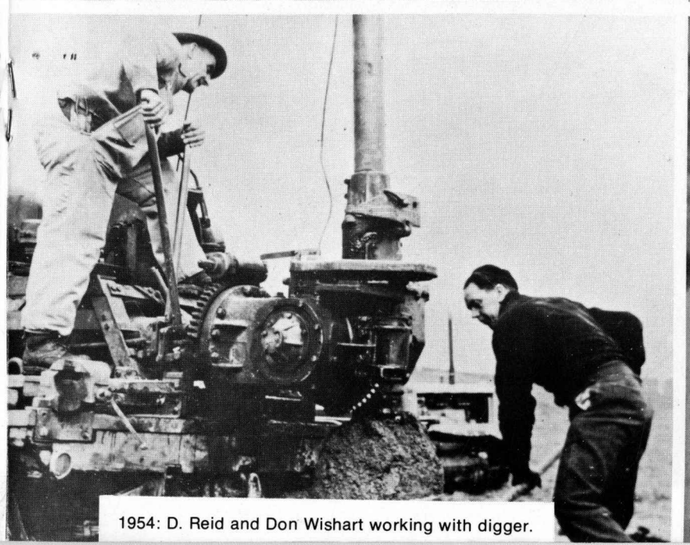
Building new two-pole sub at Amners' Lime works. A. Bell, G. King, A. Potts, M. Hullet.

C. O'Connor, D. Williams, B. Salt in lunch break make friends with an "inmate", deer farm, Fernhill.



Frank Doig at work, Devil's Elbow, Tutira.

1964: Floods at Marewa. M. Brittain and A. Potts.



1954: D. Reid and Don Wishart working with digger.

Ian Heaps with bogged digger in Tutira district.

CHAPTER SIX

Worst In Board's History

Long-serving staff members of the Board could not remember a worse storm than that which lashed Hawke's Bay Province on June 19, 1974.

A steadily falling barometer and rising winds presaged the worst storm in the Board's history. Early on the Saturday night storm and flood warnings for the East Coast were being broadcast. Under the impetus of torrential rain, creeks were becoming rivers, and rivers torrents.

Parts of Havelock North were first hit by floodwaters which coursed down St. Hill's Lane and adjacent streets. Parts of the Heretaunga Plains were soon under water. Haumoana and Te Awanga were hard hit.

As the downpour quickened in tempo, back-country areas began suffering badly. In parts of Maraetotara district 16 inches were recorded in 48 hours. Bridges were washed out and roads closed by hundreds of slips and subsidences large and small.

Thousands of trees heavy in the rain fell victims to the storm. Falling trees brought down power lines, isolating some country areas for up to three days.

As the storm grew in intensity, all available Board staff had been brought on duty. The Board's control room was inundated with calls. From the Board's point of view, worst feature of the emergency was not repairing damaged services, but gaining access to the sites of the trouble. Many affected areas were made inaccessible by washouts, slips and deep water. Little could be done immediately where underground reticulation equipment was under water.

At times working under atrocious conditions, line gangs pressed through the sodden countryside to replace poles, re-run wires and restore the services.

Considering the magnitude of the storm and rainfall, physical damage to the Board's services was surprisingly light.

Torrent pouring across the main highway at Te Awanga was a typical Hawke's Bay scene in the severe winter flooding of 1974.

A road washout in the 1974 floods also played havoc with power reticulation.

CHAPTER SEVEN

The Board: Many Hands, Many Skills

Early in its history the Board decided to engage in the retail sale of electric ranges and allied appliances. The Board felt that the use of electrical energy should be encouraged. In encouraging consumers to cook by electricity the board established a sound base domestic load.

Application of this concept over the years resulted in the Board developing as a large trading concern dealing in most types of domestic electrical equipment. Not only has the Board concentrated on selling equipment to its consumers. The public has always appreciated the sound after-sales service provided by the Board.

Allied to the Board retail section has been the Consumer Service Department which, directed by an advisory officer, gives worthwhile advice and guidance over a large field. This service is mostly concerned with builders, architects and home-owners who wish to make maximum and efficient use of electricity.

Nearly 50 years ago the Board arranged its first cooking demonstration. This set a pattern which has been an important aspect of the Board's activities.

It can be seen that the Board s operations in all its varied fields require competent personnel with complex skills.

Administrators, engineers, accountants, salesmen, electricians, surveyors, draughtsmen, typists, linemen, storemen, clerks, carpenters, mechanical engineers, painters and many others comprise the team whose sole object is serving the community and supplying constantly, sufficient electricity to meet all their needs.

Those Who Do The Job

No organisation can work efficiently without good staff. The Board has been most fortunate over the years in the calibre and ability of its staff. This is evidenced by the fact that the Board has had a large number of long-term employees, some retired and some still working for the Board.

The Board has had only three Chief Executive Officers. The first was H. H. Wylie who was appointed in 1925. The second was A. A. Powell, the then secretary of the Board who was appointed General Manager in 1965 on Mr Wylie's retirement. T. M. Graham, the present General Manager, was promoted to the position following the retirement of Mr Powell in April, 1974.

The Board has had four Chief Engineers. H. L. Benjamin started as resident engineer with the consulting engineers, Vickerman and Lancaster, and was later appointed Chief Engineer to the Board. He retired in 1941 and his successor was J. A. Ferguson who died in 1950. T. E. Kelly was then appointed as Chief Engineer and held this position until his retirement in 1973 when D. H. Davidson was appointed to the position.

When things go wrong: The gale of 1957 provided the board with a major headache. These steel poles bordering Pakowhai Road were among the victims. Possibly the drain had been widened since the poles were erected. — M. Leete.

When a motor vehicle travelling at speed encounters a solid powerpole results can be spectacular and troublesome. This car crashing into a pole carrying two sets of lines and a transformer in Omahu Road, spelled trouble for all concerned. The crash dropped 11,000-volt lines on to 230-volt circuits. Many people had a cold tea in the district that night.

CHAPTER EIGHT

Memories, Memories . . .

With the large number of past and present employees it would be almost impossible to give detailed reminiscences of what has happened over the past fifty years, but several long serving employees recall some happenings over this period.

One who was associated with electric power supply for 48 years retired in 1963. Now living in retirement in Collinge Road, Hastings, ARTHUR ROBINS recalls his early associations with electric supply in Hastings.

"I came to Hastings from Stratford to assist in setting up and running the Hastings Borough Council's undertaking," he says. "At first we had two 150 h.p. engines developing a total of something over 200 kilowatts. The electricity staff numbered about 10."

Mr Robins well remembers the first night the power was turned on in Hastings. The Mayor, Mr Garnett, some councillors, engineers and others were in attendance in the Eastbourne Street power house. The diesels were started and settled down to a steady thumping rhythm. Excitation was applied to the armatures of the big direct-current generators, amperage meters began to climb, big knife switches were closed, lights glowed into life, and a new page of history was turned for Hastings. The Electric Age had arrived.

"Although the current was D.C., you could get a nasty burn from it," Arthur Robins recalls. "In fact, when I was married in 1915 I had my left hand bandaged — a souvenir from a flashback on a knife switch."

Only a handful of subscribers availed themselves of the new service when electricity first came to Hastings. Reticulation was restricted to the central area of the town. Later, when Havelock North bought power from Hastings, service to The Village was restricted to certain hours each day.

Arthur Robins is the sole survivor of the men first associated with the establishment of electric power generation in Hastings. "We had a couple of fires in the power house from oil fuel. Then there was the 1931 earthquake. There were some pretty ominous cracks in the building, but we kept on generating."

A "Pretty Small Outfit"

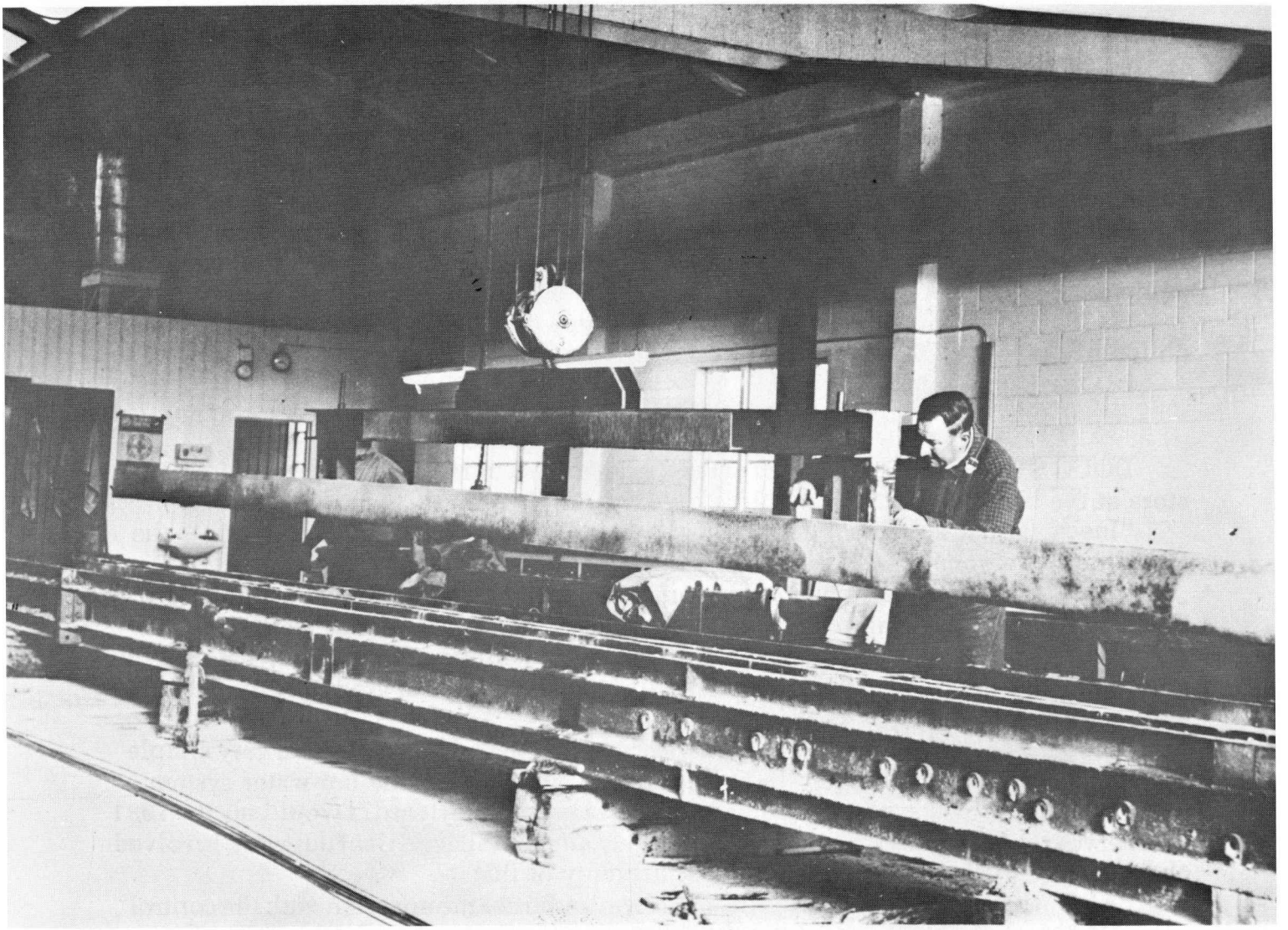
Another long serving member of the staff, HARRY HAWTHORN, recently retired, said that the Board was a "pretty small outfit" when he joined in 1936. All his 36 working years with the Board were with line gangs.

"We certainly did it the hard way," he recalls. "Erecting poles in accessible areas was no problem. It was in the hill country we ran into trouble. In the old days all the pole holes were dug by hand. The drilling of crossarms was also done manually, and many times we hoisted the poles up by hand. On flat areas we could use the truck, but not so in rough country. There were many places we couldn't get the truck to, so we used a farmer's tractor or horses. If these weren't available there was nothing else for it but to heave the poles in by hand. It was tough work.

"Even the cabling had to be hauled by hand. We strung hundreds of miles of wire over the district in this fashion." He had a couple of narrow shaves. Most linemen did in those days.

"I always remember the time staff of the State Hydro Electric Department were erecting the duplicate line from Bunnythorpe to Redclyffe. Wherever their line crossed our circuits, we had to deaden our lines. We had about eight men at the tops of poles over a considerable distance. The State Hydro men were straining wire when the eyebolt pulled out, and a live wire carrying 110,000 volts contacted our dead wires. Our lines were earthed of course, which disconnected the 11,000 volt lines but our men yelled blue murder and other blue terms. No one was hurt, but everyone had a fair shake-up."

Harry Hawthorn also had a close call in Willowpark Road, Hastings, when working up a pole reaving a new cable into place. The insulator collapsed and the whip of the pole shook him off the crossarm. "As I fell I grabbed some existing wires below. These were alive but I did not get a shock. There I was hanging on to the wires about 25 feet from the ground. My workmates saw my plight and got me down. I wouldn't want to do that too often! Those were full and busy years. It was more than a job. It was a way of life."



The pole-casting factory at the board's Howard Street depot performs an important function. Concrete poles are initially expensive, but have many advantages over their timber counterparts. — M. Leete.

Back-Country Surveys

Line survey work is an interesting part of the Board's activities and staff so employed gain an encyclopaedic knowledge of the back country of Hawke's Bay. This work had entailed tramping over hundreds of miles of some very rugged country. There are virtually no back country settlers in the Board's district without power supply.

However tenuous the line, all wishing supply are connected to the service. Most of this survey work has been done by DES HYLAND who joined the staff in 1938. He considers the most rugged country he had to contend with was west of Lake Tutira where one consumer is 4,000 feet above sea level where a helicopter was used to erect poles. He says his job is much easier now, with better access roads and better equipment.

One of the "old hands" is GEORGE McKEE, now on the Napier staff. He joined in 1936 when the Napier "outside" staff was very small and consisted of two line gangs, two troublemen, two wiring inspectors and two servicemen. He says that "when things went wrong, as they often did then, all had to turn to and work hard. Normal working time was 8½ hours per day with four hours on Saturday mornings. Storms and gales used to cause great trouble. I can remember going three days and three nights with practically no sleep. I would get home and I would be called out again."

Fell From A Pole

George McKee had his share of bad luck when he fell from the top of a pole and did not remember anything for a few days. He spent 17 weeks in hospital recovering from multiple injuries.

"Things have changed a lot from the early years when the equipment was fairly rudimentary. All pole holes were dug with shovel and spade and poles were erected manually. I can remember starting to dig a pole hole in hard pan country in Havelock North at 8.30 a.m. and still being at the same hole at 3.30 p.m. Now with sophisticated equipment the job is much easier."

He looks back on the activities of venturesome opossums, birds, athletic cats and children's kites which sent him to the tops of a multitude of poles.

"Everyone Knew Everyone"

DOUG STRUTHERS' memories of the Board go back to 1927, when he worked in the store at the back of the Dickens Street premises in Napier.

"Ineed, we had a very small staff in those days," he says. "Naturally, everyone in the Board new everyone else. How it's all changed over the years!

"The district, too, has changed beyond recognition. The land now occupied by Tamatea was largely swamp or completely under water. Marewa was similar.

"When I began with the Board reticulation was pushing out from Pakowhai near the golf links. Domestic electricity was essentially 'new-fangled', but gradually more houses were wired and new areas serviced.

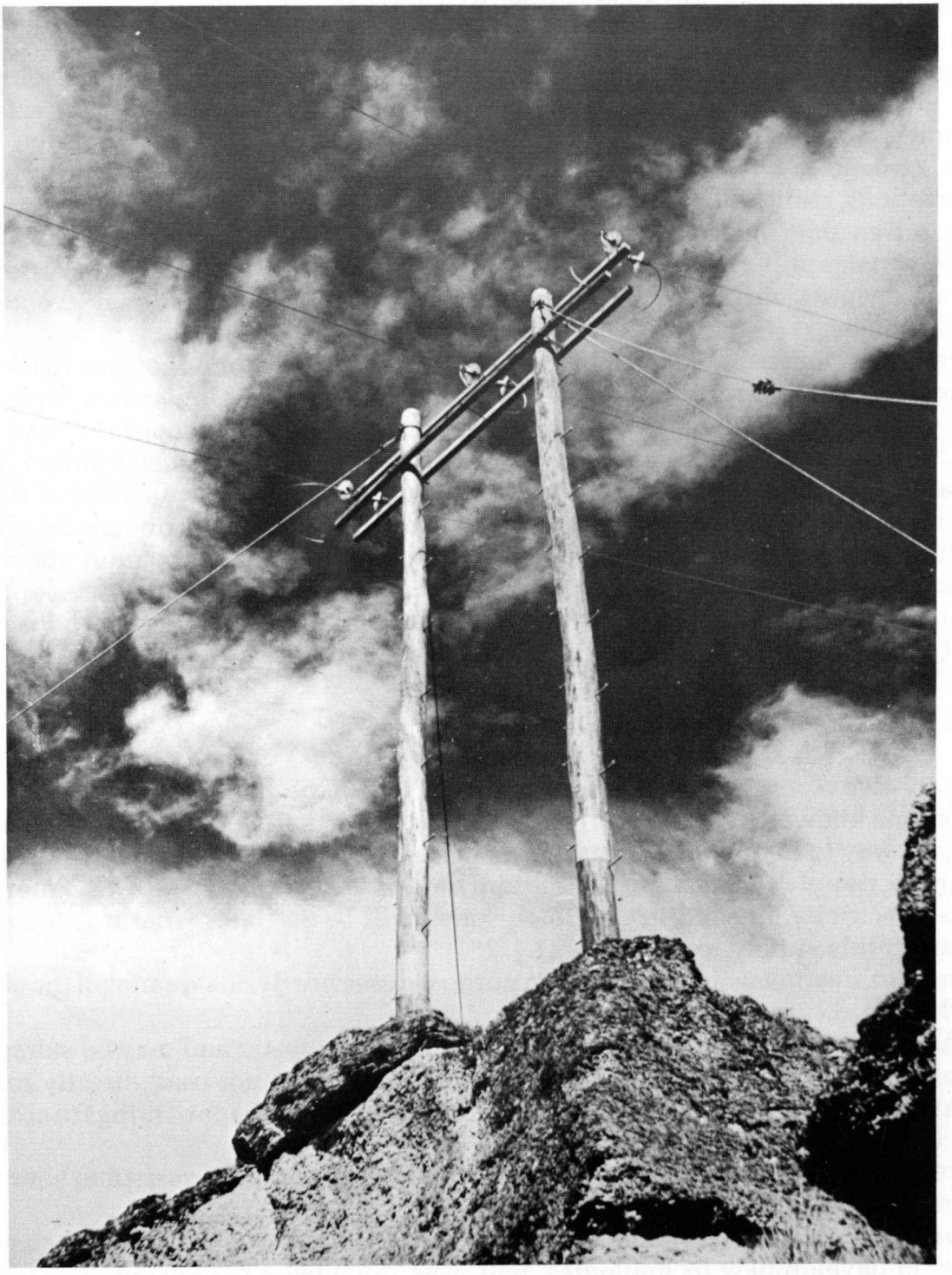
"Modern hot-water controls were unheard of. In the early days it was a very simple system: Turning on the kitchen light switch also switched off the hot-water system.

"What is my most enduring memory of my years with the Board? I would say the 1931 'quake. We lived in tents at Taradale immediately after the shake. All of our work involved checking for 'quake damage, and there was plenty of that.

"All this was long before the days of two-way radio communication with the control room. You isolated the area you were working on by the breaker switches, held your breath . . . and tested the cables with the earthstick. It wasn't quite by guess and by God, but sometimes near to it. By modern standards the equipment we used on the job was pretty archaic. Holes were dug by hand, and poles heaved up the hard way. Running cabling was a tedious, often back-breaking business."

Doug Struthers' memory goes back to the commissioning and running-in of the small hydro plant installed by the Havelock North Town Board on the Maraetotora Stream. When the board took over this plant, he serviced it.

"In the autumn keeping the intake screen free of leaves and other debris was a real problem. I had many trips up there. Gradually the debris would pile up, the water inflow would slow down, and the output from the generator would drop drastically. Sometimes, keeping that plant running was almost a fulltime job."



This pair of poles found a solid footing in the shellrock at the top of Devil's Elbow. — M. Leete.

CHAPTER NINE

What of the Next Fifty Years?

This book has been devoted to surveying the first half-century of the Hawke's Bay Electric Power Board. What does the future hold for electric power supply in New Zealand?

We look into a future clouded with problems of a drastic shortfall in the world's energy resources and New Zealand is by no means isolated and insulated from these problems.

Our country has virtually fully developed its hydro power generating resources. Soon we must seek alternatives to meet the needs of the future. Depending on the extent of our natural gas fields, this could be an immediate part solution to our need.

New Zealand is fortunate in having an abundant supply of coal. Countries of the world have long realised the advantages of siting generating plants at the coal fields rather than transporting the coal to generating plants established near the area of electricity consumption. The Russians have gone a stage further. Some generation stations are deep within the earth, virtually at coal faces. New Zealand may eventually adopt this pattern.

It seems inevitable that we will be generating power from atomic sources in the late 1980s, despite some opposition at present. Whatever the generating source, hydro, thermal, or atomic, there will be opposition from someone. Throughout the world the demand for electric power doubles every ten years. This demand must be fulfilled if we are to maintain our economic progress and continue to increase our standard of living.

The story of electricity is a fantastic success story. Fifty years ago no-one dreamed of the multiple uses by which this unseen energy would enhance the comfort and convenience of people everywhere, or would make possible the enormous development and diversification of industry. During the initial year of the Board the average house had one light in each room and one heating point in the kitchen.

What a Contrast Today!

Twenty-five years ago in 1949, the average demand of the domestic consumers of the Board was one kilowatt. Now the average is slightly more than three kilowatts. As older houses gave way to high density flats the increase in demand for power was immense. Fifty years on, population increase will require tremendous industrial growth. This could mean that electricity demand in the Board's area will be 32 times what it is today.

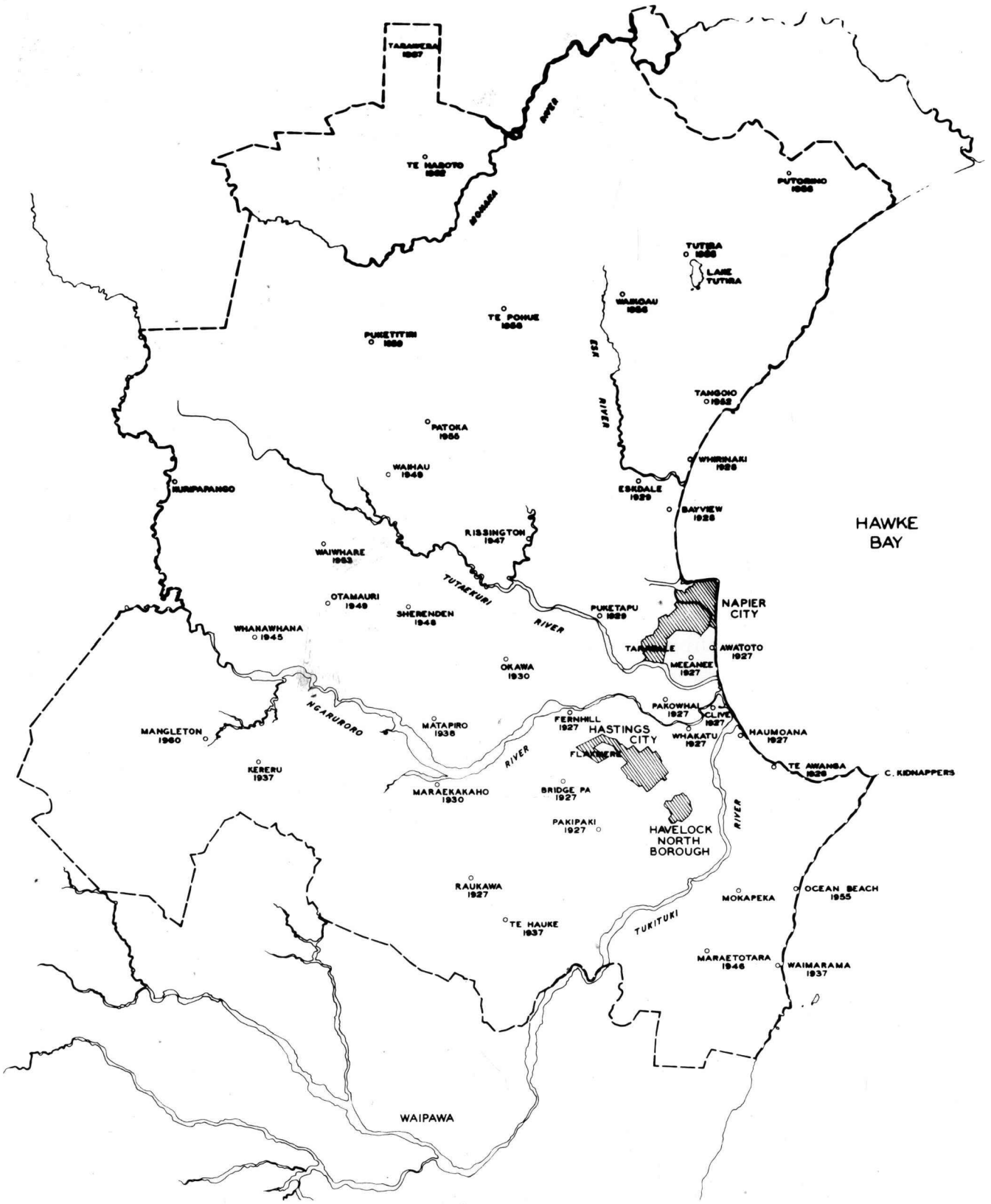
Where is this supply to come from?

At present, heating water for domestic purposes uses nearly one-quarter of the entire load of the Board.

In the future, solar heating may warm buildings, heat water and may be stored for industrial uses. At present this immense power of the sun is not used directly for industrial or domestic purposes. Solar power could well be the shape of things to come in the next half century.

Power from tidal flows is not greatly used. This regular and irresistible source of energy could be mastered by man.

However, it is not unreasonable to expect that by that time man's power of invention, his ability to develop new technologies, will have provided a completely new form of energy to fulfil his requirements.



HAWKES BAY ELECTRIC POWER BOARD AREA

YEAR OF RETICULATION SHOWN ADJACENT TO DISTRICT NAME

AREA BOUNDARY 1974 SHOWN THUS ———

CHAPTER TEN

They Headed The Board

During its first 50 years, the Board has had nine chairmen, the first of whom was T. E. Crosse representing the Hawke's Bay County Council.

MR J. B. ANDREW
Elected 17/9/24 Chairman 1/5/25 to 16/5/29
Retired 16/5/29

Born at Ross in Westland in 1876, Mr Andrew spent his early years in Wanganui before moving to Napier in 1903. He was a Napier Brough Councillor from 1918 to 1921, and Mayor from 1921 until 1927. He was elected to the Hawke's Bay Hospital Board in 1920, became chairman two years later, and relinquished the post in 1928 because of ill-health. It was while attending a Power Boards Conference in Wellington in 1928 that he suffered an accident from which he never fully recovered. Mr Andrew died in 1933 at the age of 56.

MR S. ASHCROFT
Elected 16/5/29 Chairman 30/5/44 to 18/11/47
Retired 18/11/47

Born in Lancashire, England, Septimus Ashcroft was educated in Napier and was a competent scholar and a first-class sportsman. After engaging in business ventures in Southern Hawke's Bay and serving as Deputy Mayor of Dannevirke in 1923, he and the Edwards brothers bought a coolstore business in Hastings. He served on the Hastings Borough Council for 14 years, and was Deputy Mayor. He was chairman of the Te Mata Trust Board and closely associated with St. Andrew's Church in Hastings. He was treasurer-director of the Regent Theatre, an active Rotarian and a member of the Kia Ora Bowling Club. He died in 1952.

MR R. F. CAMPBELL
Elected 10/11/53 Chairman 17/12/57 to 12/12/61
Retired 6/10/65

Mr Campbell matriculated from Hastings Boys' High School and spent much of his younger life in Blenheim. In 1919 he became manager of H. H. Campbell and Sons at Hastings, and was managing-director when he died in September, 1971.

Mr Campbell held many offices in his lifetime. He was Chairman of Directors of the Heretaunga Building Society and held a similar post with the Regent Theatre Company before it was sold to Kerridge-Odeon.

An elder and manager of St. Andrew's Presbyterian Church, Mr Campbell was a trustee and council member of both Iona and Lindisfarne Colleges. He was a past president of the Hastings Rotary Club. He died in 1971.

MR M. S. CHAMBERS
Elected 5/6/25 Chairman 27/5/41 to 30/5/44; 19/12/50 to 17/12/53
Retired 9/10/71

Educated at Heretaunga School, Wanganui Collegiate School and Lincoln College, Mr Chambers followed the family interest of farming. As a young man he supervised sheep stations in several North Island districts, served with the Wellington and East Coast Mounted Rifles in the Middle East during World War One, and participated in the formation and development of many Hawke's Bay companies. His interest in electricity was a practical one. An uncle, Mr John Chambers, installed an early hydro-electric plant to supply Mokopeka Station near Havelock North, which is still running. Mr Chambers had a remarkable record of 42 years unbroken service to the Hawke's Bay Electric Power Board.

MR C. D. COX
Elected 21/5/35 Chairman 16/12/47 to 21/11/50; 17/12/53 to 19/11/57

Born at Carterton, Mr Cox was educated at Pahiatua and Woodville. He initially worked as a telegraphist for the Post and Telegraph Department in Wellington and later, for the Railways Department. In 1920 he established his real estate and valuation business in Napier. He served for 23 years on the Napier City Council and was Deputy Mayor for several terms. As Chairman of the Napier Reconstruction Committee in 1931, Mr Cox played a prominent part in the rehabilitation of Napier after the earthquake. He was a Justice of the Peace, a recipient of the Coronation Medal, and a man who participated in many of Napier's community interests. He died in 1960.

MR T. E. CROSSE
Elected 17/9/24 Chairman 17/9/24 to 1/5/25; 17/5/32 to 24/5/38
Retired 22/4/41

Mr Crosse, as the first Chairman, piloted the Board through its first formative years. He was subsequently re-elected to head the Board through the difficult years of the '30s. Apart from farming, his interests were varied. As a member of the Hawke's Bay Rabbit Board, he was largely responsible for the construction of the rabbit-proof fence north of Wairarapa, through Kumeroa. He served on the Hawke's Bay County Council and on the Hawke's Bay A. & P. Society. Mr Crosse was largely responsible for the founding of Woodford House, and served a term as Chairman of the Board of Governors. Mr Crosse died in 1952.

MR K. R. GILLON (Current Chairman)
Elected 14/9/54 Chairman 12/12/61 to 16/11/65; 18/11/69 to present time.

Mr Gillon was born in Wellington and for over 45 years was engaged in the soap industry.

Mr Gillon has an impressive record of community service. For three terms he was President of the Hawke's Bay Manufacturers' Association, was a member of the New Zealand Manufacturers' Council in 1965, was President of the Napier Rotary Club in 1956, and President of the Napier Chambers of Commerce in 1955.

Mr Gillon is an executive member of the Napier Development Association, a member of the Napier Licensing Committee for 11 years, and was leader of the Hawke's Bay Manufacturers' Trade Mission to the South Pacific in 1963 and 1967. He is a life member of the Wellington Manufacurers' Association, and is Chairman of the Central Region Chairmen's Association of the Electrical Supply Authorities Association.

MR Wm. HARVEY
Elected 17/9/24 Chairman 16/5/29 to 17/5/32; 24/5/38 to 25/5/41
Retired 3/7/45

Mr Harvey was the founder of the business of Harvey, Fulton and Hill, Accountants and Land Agents. He served on the Napier Borough Council and after the earthquake was a member of the Napier Reconstruction Committee throughout its existence. He was also for many years a committee member of the Napier 30,000 Club. He died in 1945.

MR H. M. LOCHHEAD
Appointed 15/11/60 Chairman 16/11/65 to 18/11/69

Born and educated at Feilding, Mr Lochhead moved to Taranaki to take up farming with his family in 1915, and subsequently moved to Hawke's Bay. For 30 years Mr Lochhead was on the staff of Tomoana Freezing Works — for the last 20 years as assistant foreman. Mr Lochhead interested himself in many community actitivies, serving frequently in an administrative capacity. His local body interest began when he was elected to the Hastings City Council in 1950. Mr Lochhead served under three Mayors, until 1965 when he retired through pressure of work. In 1960 Mr Lochhead was appointed by the Hastings City Council to fill a vacancy on the Power Board.

BOARD MEMBERS TO 1974

HAWKE'S BAY COUNTY

	From	To
Batson, E. A.	9/10/65	8/10/68
Bullock, A.	15/ 7/52	6/10/65
Campbell, D. M.	13/ 5/41	15/ 6/54
Chambers, M. S.	5/ 6/25	9/10/71
Clark, H. R.	13/ 5/41	21/11/50
Crosse, T. E.	17/ 9/24	22/ 4/41
Dysart, W. J.	20/ 7/54	6/10/65
Harding, R.	17/ 5/32	22/ 5/56
Herrick, E. J.	17/ 5/32	16/ 4/35
Kettle, R. D.	17/ 9/24	19/ 4/32
Renton, M. R.	17/ 7/56	Present
Robertson, D. R.	9/10/65	Present
Saker, E. J.	9/10/71	Present
Seymour, C. H.	17/ 9/24	5/ 6/25
Smith, C. C.	17/ 5/32	13/ 1/41
Smith, L. H.	12/10/68	9/10/71
Smith, W. C.	9/10/50	6/ 7/52
Tucker, C. W .J.	9/10/71	Present
Wilkie, F. K.	18/ 2/41	22/ 4/41

TARADALE

Ellis, J.	17/ 9/24	22/ 4/41
Howard, E. V.	13/ 5/41	1/ 4/68

HAVELOCK NORTH

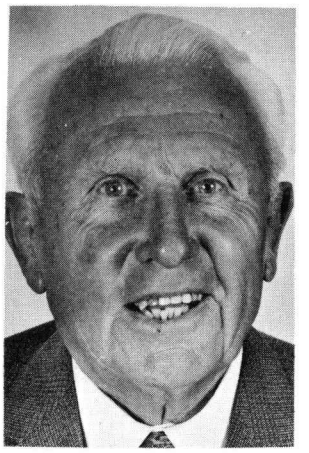
Nimon, J. J.	24/ 5/38	28/ 2/73
Wallace, D. A.	22/ 5/73	Present

NAPIER CITY COUNCIL	From	To
Andrew, J. B.	17/ 9/24	16/ 5/29
Atherfold, W. L.	9/10/71	Present
Bryant, J. C.	16/ 5/29	14/10/31
Callaghan, J. W.	5/11/26	14/ 3/29
Cox, C. D.	21/ 5/35	2/ 9/60
Creagh, B. B.	16/ 5/33	16/ 4/35
Gillon, K. R.	14/ 9/54	Present
Harvey, W.	17/ 9/24	3/ 7/45
Hill, H.	17/ 9/24	20/ 6/33
Hobson, A.	16/ 5/29	11/ 4/33
	15/ 8/33	16/ 4/35
Howard, E. V.	1/ 4/68	9/10/71
Lawry, A. E.	16/12/47	15/ 8/54
Shearer, W. H.	14/ 8/45	18/11/47
Twigg, D. D.	15/11/60	Present
Waterhouse, R. W.	17/ 9/24	11/ 4/29
Wilkie, C. H.	11/ 4/29	16/ 9/30

HASTINGS CITY		
Agnew, J. K.	12/10/68	Present
Apperley, H. W.	16/ 5/61	8/10/68
Ashcroft, S.	16/ 5/29	18/11/47
Baker, R.	16/ 5/29	14/10/31
Begley, D.	20/11/56	4/10/60
Campbell, R. F.	10/11/53	6/10/65
Harvey, L. J.	16/ 5/29	20/10/53
Jones, J. F.	16/12/47	20/10/53
Lochhead, H. McD.	15/11/60	Present
Maddison, G. A.	12/ 5/27	11/ 4/29
Phillips, J.	12/ 5/27	11/ 4/29
Priest, P. J.	10/11/53	21/ 3/61
Scott, J. H.	12/ 5/27	11/ 4/29
Seton, J. G.	9/10/65	Present

CHAPTER ELEVEN

And the Chief Executives . . .



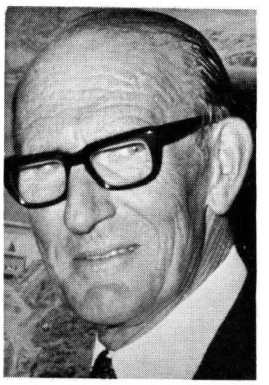
H. H. WYLIE

Mr Wylie was born in 1899 and educated at the Petone High School. He joined the Audit Department in April, 1915, and left to join the Hawke's Bay Electric Power Board to which he was appointed Secretary and Chief Executive Officer of the Board in August, 1925. He was appointed General Manager in 1942 and retired on January 31, 1965.

Mr Wylie served for a period of 39½ years. As the Board's Chief Executive Officer throughout, he was largely responsible for the manner in which the Board was able to cope with the growth of the district in such an effective and efficient manner.

Mr Wylie first attended the Electrical Supply Authorities Association Conference in August, 1926. He was a member of the Secretaries Association and an Executive member of that Association from 1929, and President from 1946 to 1948.

Mr Wylie represented Wellington at Rugby Football from 1921 to 1922, Taranaki in 1923, Wanganui in 1923 and Hawke's Bay from 1924 to 1926, and played senior cricket in Wellington and Napier. He was also a member of the Managment committee of the Hawke's Bay Cricket Association for some years, and Chairman for one term. Mr Wylie is an active playing member of the Napier Golf Club and has been a member since 1927.



A. A. POWELL, General Manager 1965 to 1974

Born in Wanganui, Mr Powell with his family moved to Napier in 1917 and was educated at Napier West School and Napier Boys' High School. He began as office boy with the Hawke's Bay Board on January 17, 1927. H. H. Wylie was the Board's Secretary, and the office staff in addition to Arthur Powell was an Accountant, Mr Rhodes, and a typist. A short time before the Board had occupied new premises in Dickens Street, Napier. The building was damaged in the 1931 earthquake and the store at the rear destroyed by fire. The Board occupied temporary premises until the office was restored.

When the Board purchased the Hastings Borough Council's electricity undertaking, Hastings premises were opened in a shop in the Municipal Buildings. Mr Powell, who had replaced Mr Rhodes as accountant, moved to Hastings. The "shop" premises were used until the present office block in Heretaunga Street was completed in 1936. Mr Powell was appointed assistant-secretary, and then secretary. In January, 1965, on the retirment of Mr Wylie, he became General Manager. Mr Powell was secretary of the Electric Power Boards of New Zealand from 1957 to 1964 and was an associate member of the executive until his retirement. He was also a member of the executive of the Secretaries' Association of the New Zealand Electrical Supply Authorities Association. Mr Powell has always had diversified activities within the community. He served as Treasurer and then Chairman of the Raureka School Committee. He has been a Rotarian for a number of years. In recent years he has been a keen bowling enthusiast.

MR T. M. GRAHAM

Mr T. M. Graham came to New Zealand with his family from Scotland in 1926 at the age of seven. He was educated at Wellington College and is a Chartered Accountant.

He began work with the Union Bank (A. & N.Z.) at Wellington and Waipukurau, and in 1941-1945 served with the Infantry in the 2nd N.Z.E.F. He was commissioned in the field and mentioned in dispatches.

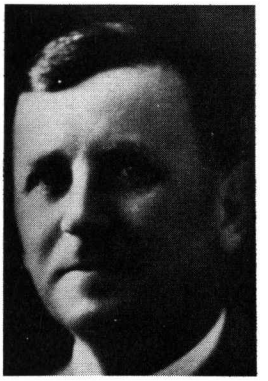
Returning to New Zealand, he served three years as a farm cadet under the Rehabilitation Scheme.

In November, 1949, he joined the Hawke's Bay Electric Power Board and completed his professional accountancy examinations by correspondence and night classes.

Mr Graham was secretary to the Electric Power Boards of New Zealand Inc. for three years and at present is a member of the Executive Committee. He was appointed Secretary of the Hawke's Bay Electric Power Board in January, 1965, and succeeded A. A. Powell as General Manager in 1974.

He has served on the Havelock North School Committee and the Hastings Golf Club Committee.

He takes an interest in all sports generally, and describes himself as "a mediocre golfer".



H. L. BENJAMIN

First Chief Engineer of the Hawke's Bay Electric Power Board, Mr Benjamin was educated at Auckland Grammar and Canterbury University where he graduated Bachelor of Engineering. After working in Pittsburg and New York, Mr Benjamin went to Paris. He was there when World War I broke out. He enlisted in France, served two years with the forces, and was invalided home to New Zealand.

Mr Benjamin worked in Australia for five years before taking up a position with Vickerman and Lancaster, Consulting Engineers, at Lake Coleridge. He was with this firm at the Southland Power Board before moving to Wairoa and Central Hawke's Bay. He was appointed Chief Engineer of the Hawke's Bay Electric Power Board in 1927.

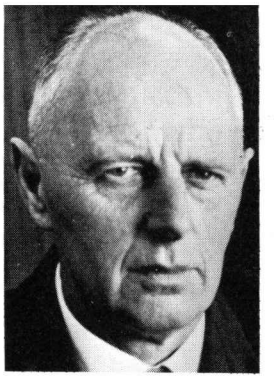
J. A. FERGUSON 1927-1950

Mr Ferguson commenced duties with the young Hawke's Bay Board on April 4, 1927. When the Board purchased the undertaking of the Hastings Borough Council in 1925, Mr Ferguson transferred to Hastings to supervise operations in that area.

Born in Clinton, Otago, in February, 1900, of Scottish parents, Mr Ferguson's formal schooling ended at Standard 6, when he began an apprenticeship as an electrician. For two years he worked for the Auckland Electric Power Board, and was married at Devonport in June, 1920. In 1922 he became a faultman with the Thames Valley Electric Power Board, and in 1924 managed an electrical business in Levin.

On April 4, 1927, Mr Fergsuson was appointed to the position of faultman with the Hawke's Bay Board at Napier. He became assistant engineer on April 12, 1938, and engineer on April 22, 1941. Mr Ferguson was still in office at the time of his death in 1950.

T. E. KELLY



Mr Kelly was born in Wellington in 1910 and was educated at Wellington College and Victoria University graduating as B.Sc. in 1932. He became a qualified member of the Institute of Electrical Engineers, London, in 1939 and also a member of the New Zealand Institution of Engineers and Registered Engineers of New Zealand. He joined the State Hydro Electric Department in 1928 and for 22 years was employed by them notably as Engineer in Charge of the Waikaremoana Power Scheme Station. He also was attached to the Department at Auckland, Hamilton and Napier, working on substations and main transmission lines before accepting the post of Chief Engineer of the Hawke's Bay Electric Power Board in 1950.

Mr Kelly served in this position until his retirement in 1973. During this period the Board's activities expanded at a remarkable rate. He was responsible for much of the development of the Board over these years.

Mr Kelly also played a leading part in the engineering societies of the district and also at national level. He was President of the Engineers Institute for a term, and was on the executive of the Engineers Institute of the Electrical Supply Authorities Association for about 20 years. He served on the Government Power Planning Committee, and several Tariff Committees and was also a member of the Committee which revised the Electrical Supply Regulations.

D. H. DAVIDSON

Born in Dargaville in 1916, Mr Davidson was educated at the Whangarei High School. He was studying electrical engineering at the Auckland University until the war interrupted his studies.

He served as a draughtsman with the R.N.Z.A.F. in New Zealand. In 1945 he joined the Hawke's Bay Board as an assistant engineer and completed his professional engineering examinations by a correspondence course. He was appointed Deputy Chief Engineer in 1958 and became Chief Engineer in 1975.

He was the Chairman of the Hawke's Bay Branch of the N.Z. Institution of Engineers during 1969-70.

During his earlier years he was a keen footballer representing both the North Island Universities and also Manawatu. He still has the occasional game of tennis.

Caterpillar tractor makes light work of hauling heavy concrete pole up steep grades.

Catching early-morning sunshine, cabling being strung in Hawke's Bay back-country takes on gossamer-like quality.

Mr M. Bell in hard hat pulls high voltage fuses. — M. Leete.

Safety Education

The Board has always been conscious of the need for safety education. In recent years the Board has periodically sponsored a visiting medical practitioner under the auspices of the Hawke's Bay Post Graduate Medical Society to give lectures to the medical and nursing fraternity.

Lecturers sponsored by the Board have been experts in the field of heart disease. Addresses have been given to members of the Board's staff and representatives of outside organisations on electrical shock and suffocation, and appropriate treatment.

Hawke's Bay Electric Power Board

(Constituted 19th June 1924)

FIRST MEETING 17th SEPTEMBER, 1924

FIRST CHAIRMAN T. E. CROSSE

STATISTICAL DATA

Year Ending	Electricity Revenue $	Units Sold	Av. Price per Unit Sold c	Av. Cost per Unit Purchased c	Total Capital Expenditure $	Total Loan Liability $	Total Reserves $	Capital Expenditure from Revenue $	Surplus $	Max Load on System K.W.	Load Factor	Consumers	Ranges	Waterheaters	Controlled Heating Installations	Year Ending
1926	602	8,278	7.27	2.29	11,504	17,600	—		390	272		68	2	—		1926
1927	920	14,786	6.16	2.22	148,136	267,200	—		1,772	360		90	10	5		1927
1928	36,902	3,942,866	.93	.41	330,022	406,800	700		6,354	2,072		1,603	154	145		1928
1929	75,626	9,579,899	.79	.35	376,312	426,000	7,028		1,274	2,640		1,990	260	232		1929
1930	89,834	14,372,647	.62	.32	404,564	465,600	10,648		792	3,084		2,181	332	343		1930
1931	94,902	13,749,334	.69	.32	441,480	464,642	16,694		*3,972	3,576		2,317	377	470		1931
1932	113,588	19,175,070	.59	.31	430,432	463,654	7,916		2,738	3,984		2,466	440	482		1932
1933	123,348	21,537,424	.57	.29	432,628	462,632	14,756		8,574	4,272		2,501	457	511		1933
1934	123,400	21,297,604	.58	.29	439,552	459,176	18,608		8,794	4,320		2,746	467	534		1934
1935	139,548	21,699,246	.64	.29	697,978	703,606	35,174	5,040	2,652	4,518		6,479	648	645		1935
1936	167,600	23,228,225	.72	.28	712,424	696,954	64,346	7,446	9,338	4,698	62.55	6,787	789	826		1936
1937	174,410	26,072,846	.67	.27	752,904	690,032	89,400	19,610	*3,882	5,022	64.99	7,188	1,000	1,105		1937
1938	197,590	30,234,555	.65	.27	878,842	701,618	142,578	43,346	*20,686	5,604	68.37	7,846	1,483	1,502		1938
1939	223,884	36,194,708	.62	.26	955,926	844,954	172,398	11,620	8,614	6,672	70.00	8,646	2,012	2,046		1939
1940	249,054	42,271,254	.59	.26	1,014,164	949,836	189,032	—	17,814	7,944	64.45	8,757	2,501	2,572		1940
1941	269,628	45,504,208	.59	.26	1,073,912	987,572	205,176	3,218	2,708	8,702	64.05	9,134	2,926	3,047		1941
1942	270,928	46,778,619	.58	.26	1,070,212	971,468	202,062	3,800	11,254	9,020	63.80	9,427	3,326	3,369		1942
1943	283,556	47,743,701	.59	.24	1,090,418	954,606	216,520	644	26,482	8,898	67.70	9,482	3,474	3,474		1943
1944	289,392	48,545,915	.59	.24	1,100,572	938,964	228,802	664	26,112	9,178	65.67	9,549	3,663	3,680		1944
1945	305,528	51,747,407	.58	.24	1,105,966	922,720	253,700	2,560	34,976	9,611	67.50	9,611	3,911	3,870		1945
1946	315,282	55,511,198	.57	.24	1,160,998	941,852	318,334	24,350	11,156	9,686	71.30	9,922	4,149	4,219		1946
1947	328,972	58,614,395	.56	.25	1,242,984	1,016,590	398,778	28,892	*6,322	10,731	66.80	10,266	4,564	4,501		1947
1948	350,982	60,734,755	.58	.26	1,340,518	986,038	454,062	18,352	6,714	12,052	63.00	10,846	5,105	5,087		1948
1949	397,876	69,386,186	.58	.25	1,504,804	937,958	636,488	27,110	14,920	13,348	57.20	11,426	5,836	5,755		1949
1950	435,880	72,233,050	.60	.28	1,620,716	903,570	858,268	24,332	31,978	15,989	56.10	12,069	6,520	6,357		1950
1951	419,198	68,363,358	.61	.29	1,744,830	983,546	961,826	26,018	*32,960	14,700	58.40	13,101	7,305	7,088		1951
1952	480,802	79,947,315	.60	.28	1,914,256	1,048,098	1,023,454	33,524	*44,360	17,932	56.20	13,722	7,914	7,504		1952
1953	537,892	83,988,380	.63	.27	2,136,738	1,119,056	1,130,672	36,484	*8,696	17,573	60.50	14,215	8,803	8,628		1953
1954	788,826	100,095,890	.78	.41	2,351,802	1,220,252	1,300,376	24,578	40,646	20,833	59.50	15,078	9,623	8,977		1954
1955	903,832	113,655,079	.79	.42	2,644,714	1,350,204	1,499,776	48,010	41,178	24,610	56.60	15,896	10,729	10,431		1955
1956	970,086	121,464,752	.79	.42	2,924,118	1,439,630	1,654,988	34,780	37,918	26,239	58.50	16,959	11,719	10,854		1956
1957	1,066,240	129,413,357	.82	.42	3,280,542	1,570,420	1,852,024	59,982	26,648	28,135	57.80	17,846	12,668	12,246		1957
1958	1,277,238	141,621,376	.90	.41	3,568,774	1,707,880	2,215,310	159,444	37,230	30,633	57.30	18,798	13,510	13,709		1958
1959	1,526,334	141,013,260	1.08	.58	3,917,232	1,797,486	2,503,018	89,826	40,420	30,828	60.58	19,808	14,359	13,923		1959
1960	1,690,768	164,504,801	1.02	.58	4,217,734	1,814,444	2,799,064	83,216	35,010	36,307	56.18	20,834	15,208	14,524		1960
1961	1,760,436	178,493,951	.98	.57	4,578,722	1,887,076	3,073,858	76,386	20,872	38,651	56.90	21,596	16,199	15,846	59	1961
1962	1,921,244	192,550,693	1.00	.59	5,067,566	1,946,744	3,348,204	60,104	12,758	43,942	54.80	22,642	17,104	16,806	186	1962
1963	2,076,816	202,155,659	1.02	.62	5,558,942	2,152,478	3,570,974	27,580	25,102	47,474	52.50	23,764	18,030	17,844	408	1963
1964	2,298,464	222,716,921	1.03	.61	5,850,722	2,320,612	3,885,628	22,748	123,410	49,291	56.20	24,665	18,776	18,671	707	1964
1965	2,473,378	238,090,524	1.04	.62	6,145,016	2,359,678	4,276,356	50,730	124,196	54,427	54.04	25,684	19,509	19,449	1,050	1965
1966	2,730,842	261,368,096	1.04	.66	6,579,414	2,474,072	4,575,496	48,902	*2,730	65,399	49.37	26,814	20,340	20,541	1,602	1966
1967	3,031,948	292,402,691	1.03	.64	6,954,556	2,517,386	4,987,232	74,556	79,464	68,927	51.70	27,685	21,113	21,610	2,444	1967
1968	3,578,682	301,263,950	1.19	.71	7,333,588	2,565,672	5,572,603	162,153	129,656	71,087	51.48	27,820	21,933	22,721	2,763	1968
1969	4,018,948	316,914,415	1.27	.76	7,720,465	2,494,955	6,288,162	170,058	198,283	71,586	54.07	28,662	22,847	22,452	3,415	1969
1970	4,295,765	345,140,724	1.24	.75	8,247,120	2,483,819	7,074,155	230,471	207,844	77,126	54.68	29,571	23,809	23,592	4,313	1970
1971	4,544,877	369,776,394	1.23	.75	8,944,361	2,419,586	7,727,611	224,252	105,850	82,676	54.54	30,497	24,766	24,662	5,406	1971
1972	4,763,305	390,369,070	1.22	.75	9,736,085	2,563,084	8,230,461	232,844	*75,391	86,417	54.73	31,249	25,558	25,582	6,633	1972
1973	5,205,362	427,710,160	1.22	.76	10,483,991	2,917,716	8,856,829	210,968	36,531	97,642	52.74	32,291	26,602	26,747	8,034	1973
1974	6,508,673	567,905,738	1.146	.72	11,330,785	2,824,891	9,353,551	281,951	248,020	115,129	58.79	33,592	27,258	28,803	9,486	1974

*Deficit

Falling trees play havoc with Board's reticulation services. This mess kept a line gang busy for a day.

The 1931 earthquake dealt a severe blow to the Hawke's Bay Board. Roachs' Corner at Hastings, like so many other localities, was a scene of devastation.

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