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**"Power to the People?"
The Palmerston North Municipal
Electricity Department, 1910 - 1996**

A thesis presented in partial fulfilment of the requirements for the degree
of Master of Arts in History at Massey University

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Abbreviations

AJHR	Appendices to the Journals of the House of Representatives.
ECNZ	Electricity Corporation of New Zealand (or Electricorp), 1987 onwards.
EPB	Electric Power Board.
EPS	Emergency Precautions Scheme (during WWII).
MED	Municipal Electricity Department.
MESAAZ	Municipal Electricity Supply Authorities Association of New Zealand.
MOEPB	Manawatu-Oroua Electric Power Board.
MP	Member of Parliament.
NA	National Archives.
NZE	Electricity Division, Ministry of Energy, 1978 - 87.
NZED	New Zealand Electricity Department, 1958 - 78.
NZPD	New Zealand Parliamentary Debates.
PNBC	Palmerston North Borough Council (until 31 July 1930).
PNCC	Palmerston North City Council (from 1 August 1930).
PNCCA	Palmerston North City Council Archives.
PNCCR	Palmerston North City Council Records Office.
PNBCM	Palmerston North Borough Council Minutes.
PWC	Public Works Committee, Palmerston North Borough Council.
PWD	Public Works Department (electricity controlled by the Hydro-electric Branch until 1946).
RERC	Rural Electrical Reticulation Council.
SHED	State Hydro-electric Department, 1946 - 58.

Glossary of Electrical Terms

A	Ampere or amps, the unit of electrical current.
AC	Alternating current, replaced DC as the commonest power reticulated, produced by an alternator.
BHP or HP	Brake Horse Power, an imperial measurement unit now known as 'horse power' (replaced in metric scale by watts, 1HP is 754 watts).
DC	Direct current, used as standard until the early twentieth century, produced by a generator.
kV	Kilovolt, 1,000 volts.
kVA	Kilovolt-amp. It indicates the voltage-current rating of an appliance such as a transformer.
kW	Kilowatts, 1,000 watts.
kWh	Kilowatt hour, the unit of electric power use.
Load factor	The relationship between the actual average load on a generating plant or system over a given period (usually a year) and the maximum potentially available, expressed as a percentage.
Power	Capacity to do work (measured in watts or kW).
Suction gas engine	A reciprocating internal-combustion engine that draws fuel gas into its cylinder by suction.
Unit	Unit of energy, one watt-hour.
W	Watt, the unit of power. This is one volt multiplied by one ampere.
V	Volt, the unit of electrical pressure.

(Source for technical definitions:

John E. Martin (ed.), *People, Politics and Power Stations. Electric Power Generation in New Zealand 1880 - 1990* (Wellington, 1991), pp. 298 - 9.

Neil Rennie, *Power to the People. 100 Years of Public Electricity Supply in New Zealand* (Wellington, 1989), p. 4.

Preface

The impetus for this study came from my interest and contacts in the energy sector, allied to a desire to advance local history writing from a mere reporting of events. Therefore, this thesis attempts to place a local Manawatu organisation into a national context to analyse the significance of its activities. The Palmerston North MED was chosen for this study because the records were preserved in the Palmerston North City Council Archives and were thus available for use, and because of my contacts with the organisation. It was stimulating to study an enterprise up to the present day, although this has provided some difficulties with obtaining confidential material at a time when the Council was considering merging it with a power board.

In the course of this thesis many people have provided a great deal of assistance. Firstly, I would like to thank my supervisors, Dr James Watson and Professor Kerry Howe, for their support, guidance and comments. The Massey University History Department provided financial assistance, as did the Massey University Graduate Research Fund and Federation of University Women (Manawatu Branch), without which completion of my work would have been difficult. I also appreciated the general support and interest of individual members of the History Department.

Ian Matheson and Barbara Olsen of the Palmerston North City Council Archives provided access to material relating to the Palmerston North Municipal Electricity Department, assisted with locating pictures, and unfailingly answered my questions. I am grateful that the City has such a resource available for students and historians. The records staff of the Palmerston North City Council also provided access to current records, for which I am appreciative.

I would also like to thank the staff of Electro Power for allowing me to base my researches in their office temporarily, for answering technical questions and explaining photographs, and for displaying interest in my findings. Many of the photographs used come from the Electro Power collection.

Lastly, I could not have completed this thesis without the assistance of Sheryl Morgan, discussions with Jim Lundy, and the moral support of my fellow Masters students. My biggest debt, however, is to the support, technical assistance and enthusiasm of Terry Jones, and for this I thank him.

Introduction

The first New Zealand public supply of electricity was provided in Reefton in 1888, but a similar supply was not available in Palmerston North until 1924. This was the last major urban area to obtain an electricity supply. The central focus of this thesis is to investigate the forces and relationships that influenced the development of that supply through the Municipal Electricity Department.

The Palmerston North MED is not a particularly significant organisation to New Zealand, being one of the smaller supply authorities. However, it is important in the local context, as it provides an example of a council-owned enterprise endeavouring to provide a satisfactory service to customers, while subject to a variety of external influences. Its history has national significance, in that other MEDs felt similar pressures from the Government and neighbouring power boards. It was subject to the same economic influences as other suppliers, and had to operate under the same regulations and supply limitations. On the other hand, some of its experiences appear to have been unique, particularly in relation to the 1935 crisis. No similar incident is recorded in any other supply authority's history.

The time-frame of this work encompasses most of the twentieth century, from around 1910 until the present. It thus considers the effects of such major international and national events as the World Wars and Depression, and other economic crises.

There has been limited academic interest in the study of the electricity industry, with only five history theses written on the subject between 1924 and 1995. There are a similar number of economics theses, and a sprinkling from the disciplines of geography, political science and environmental science.¹

¹ Battersby, G. B., 'An Examination of Costs and Tariffs in New Zealand Electricity Supply', Economics, MCom, Canterbury/Auckland, 1946; Cain, C. T. R., 'Some Aspects of Hydro-electric Developments in New Zealand: with Particular Reference to Christchurch', Economics, MCom, Otago, 1936; Clegg, J. E. B., 'Some Aspects of the Supply of Electrical Energy in New Zealand', MCom, Economics, University of New Zealand, 1936; Decker, James Conway, 'Politics and Administration in the New Zealand Electrical Industry', Political Science, PhD, University of Colorado, 1966; Farrell, B. H., 'The Geography of Power Resources in New Zealand', Geography, PhD., Auckland, 1960; Flesher, H. de R., 'Canterbury and Hydro-electric Power', MA, History, University of New

These are of limited assistance in putting this study into the context of the industry. There are a large number of histories of local electricity distributors, particularly electric power boards, but these tend to be narratives, lacking analysis or any context of the time, area or industry. In the context of Manawatu history, this thesis forms part of a very small body of business histories. There are two volumes of *Manarua Memoirs*, the laudatory narrative histories of the Manawatu-Oroua Electric Power Board, and a centennial history of a local trading company.² Local Manawatu histories are similarly unhelpful at setting a context. Although there are a number of general histories, they are uncritical and have tended to concentrate on the early colonial period. This thesis differs from earlier works centred on the Manawatu in that it seeks to analyse rather than report local material. Of greater assistance are two recent general studies of the New Zealand electricity industry, which concentrate respectively on electricity supply and distribution.³ My study modifies Rennie's argument that only the state was large enough to provide the capital for electricity generation. In general, however, it confirms the broad conclusions drawn by Martin and Rennie regarding the influences on electrical development in New Zealand.

Primary sources are also problematical. The National Archives has limited material on electricity distribution, as the Government's main concentration was on generation. There is a small but useful collection on distribution during the war years, when the Government took control 'for the duration'. In Manawatu, the situation is more satisfactory, but the material in the

Zealand, 1924; Hasman, C., 'The Development of Hydro-electric Resources on the Waikato River, 1900 - 1964', MA, History, Auckland, 1965; Irwin, D. L., 'The Development of Electric Power in New Zealand', Economics, MCom, University of New Zealand, 1935; Greensmith, E. L., 'Hydro-electricity in New Zealand', Economics, MCom, Otago, 1929; Pickering, B. B. M., 'State Policy and Hydro-electricity', History, MA, Otago, 1949; Wood, G. E., 'Some Aspects of the Financing of the Supply of Electricity in New Zealand', History, MPhil research exercise, Massey, 1992; Woolman, D. Y. 'Waipori: an Economic Analysis for Hydro-electricity', Economics, MCom, Otago, 1955.

² J. W. Clevely, *Manarua Memoirs. A Short History of the Manawatu-Oroua Electric Power Board, 1920 - 1972* (Palmerston North, 1973); J. S. Devonport, *Manarua Memoirs. Part II. A Short History of the Manawatu-Oroua Electric Power Board, 1973 - 1986* (Palmerston North, 1987); Barraud and Abraham Ltd., *Merchant Memoirs. The Short History of a Manawatu Merchant in a Century of Service, 1882 - 1982* (Palmerston North, 1983).

³ John E. Martin, (ed.), *People, Politics and Power Stations. Electric Power Generation in New Zealand 1880 - 1990* (Wellington, 1991); Neil Rennie, *Power to the People* (Wellington, 1989).

Palmerston North City Council Archives favours minute books, correspondence and engineering details, rather than financial and customer interests.

The first chapter of this thesis considers the legislative and local background to the formation of the MED, up until the end of World War One. It also looks at the environment that led to the national system of government generation and local government distribution of electricity. Chapter Two covers the building of the local power station, and the provision of electricity to the first consumers, in light of the key influences of this period. The third chapter considers a period where the MED was subject to growing interference, leading up to the infamous episode when the neighbouring power board cut the City's electricity supply. The fourth chapter covers the time when the Council had the least direct control over its enterprise, due to supply shortages and wartime contingencies. Conflict with the neighbouring power board is a major influence in Chapter Five, as is the economic recession of the 1970s. Finally, the influence of the national push to restructure the electricity industry is considered in the sixth chapter. This reflects a complete change of model from that considered ideal by successive governments earlier in the century, and this background will be examined first.