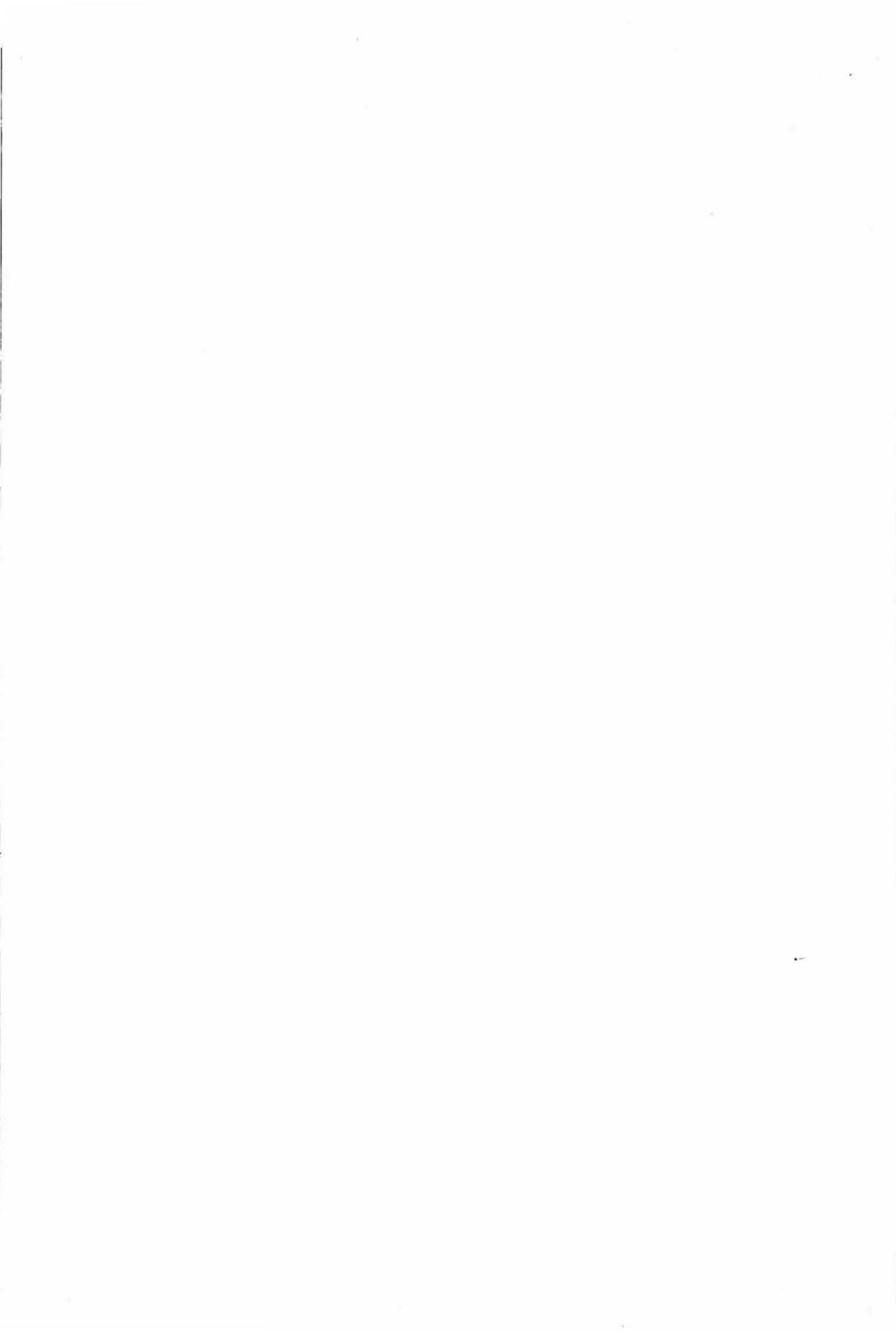


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'DAMMED BY DIVERSION'
THE TONGARIRO POWER DEVELOPMENT
PROJECT AND THE CLASH BETWEEN
CONSERVATION AND DEVELOPMENT
1955-1983

A thesis presented in partial fulfilment of the requirements
for the degree of Master of Arts in History at
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SHANE E. CASKE
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Abstract

This thesis examines the clash of values between Conservation and Development. To examine this the Tongariro Power Development Project is used as an example of the ongoing struggle between the two perspectives.

The first chapter explores the development of Hydro-electricity as the premier energy source in New Zealand. The rise of hydro-electricity was not plain sailing, attitudes waxed and waned over time.

The second chapter discusses the growth of concern for conservation and how it ultimately came to a head to head clash with hydro-electric development. Chapter three describes the Tongariro Development, explaining exactly what was constructed and the reasons for this.

Chapter four discusses the debate over the Tongariro Development. The government anticipated some criticism, but the chapter argues they were off the mark with their planning. They did not expect the widespread negative reaction which is explored in chapter four.

Chapter five links these early protests with challenges to the Tongariro Development in the planning tribunals. A conclusion suggests that the Tongariro Development remains a live and contested issue.

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GLOSSARY and ABBREVIATIONS

AJHR: Appendices to the Journals of the House of Representatives

Concrete Arch Dam: a thin-walled curved dam dependent on the strength of the arch and solid abutments to secure it against the force of the water

Cumecs: One cubic metre of water per second (metric measure of flow)

Cusecs: One cubic foot of water per second (imperial measure of flow)

ECNZ: Electricity Corporation of New Zealand Limited

Head: the length of water above the turbines, used as a measure of hydraulic pressure.

Headrace: a channel leading water to the penstock intakes of the power house

Intake: the structure leading water into the penstocks

KWh: Kilowatt = Kilowatt - Hour = 1,000 units

Load: the demand for power made on a generating unit, plant or system at any one time

MW: Megawatt = one million watts or 1,000KWh

MWRC: Manawatu-Wanganui Regional Council

NA: National Archives, Wellington

NCC: Nature Conservation Council

NZPD: New Zealand Parliamentary Debates

Peak load: the maximum load on a generating plant or system at a given time

Penstock: a downward slopping pipe, tunnel or shaft leading water from the intake to the turbines.

RWCB: Rangitikei- Wanganui Catchment Board

Spillway: a structure for releasing surplus water from a dam

Surge chamber: an open water reservoir designed to absorb a sudden rise in pressure in a pipeline or penstock

Tailrace: the channel for water leaving the power house

TPD: Tongariro Power Development

Watt: unit of power = one volt x one ampere

WVA: Waikato Valley Authority

Chronology

- 1861 First use of Electricity in New Zealand (Dunedin)
- 1887 Tongariro National Park established
- 1903 Water Power Act passed
First investigation into hydro-electric potential of waterways
- 1914 First State constructed Hydro power station at Lake Coleridge
- 1924 First published thoughts of Tongariro Regions potential
- 1932 National Commission on Expenditure opposes hydro developments
- 1946 State Hydro-electric Department established
- 1955 First official discussions of Tongariro Power Development
Gibb's commissioned complete feasibility study of region
Waimarino voice concern at proposed scheme
Discussions held with Ngati Tuwharetoa regarding Tongariro Scheme
- 1958 Order in Council passed allowing Government to construct the scheme
Aratiatia Debate begins
- 1959 National Conference on Scenic Preservation in New Zealand starts
- 1962 Gibb's report received by Ministry of Works
- 1963 First meeting of Nature Conservation Council
Planning Committee recommends Project for approval
- 1964 Peter McIntyre's article published in *Evening Post*
Nature Conservation Council approves Tongariro Development
Cabinet Approval of scheme
- 1971 Western Diversion starts diverting water into Lake Rotoaira
- 1977 New Zealand Canoeing Association letter sent
- 1983 Planning Tribunal meets to discuss a minimum flow for the Whanganui River

Introduction

Relatively little has been written on the Tongariro Power Development Project. The impact of the first stage the Western Diversion, upon the Whanganui River has been particularly neglected.¹ What has been written deals primarily with the latter period of debate, in relation to Planning Tribunal minimum flows hearings in the 1980s.² This study deals primarily with the formative years of the Tongariro Development between 1955 and 1983, in particular debates about the impact of the Western Diversion.

In 1955 when the Tongariro Power Development was first mooted, electricity was considered to be the 'fuel of progress,' it had become the most sought after power source in the country.³ A combination of increased demand during war and a power shortage prior to the war saw New Zealand emerge from World War Two in dire need of new electricity production. The Tongariro Development was part of a post war 'catch up' plan. The Tongariro scheme followed the construction of seven power stations on the Waikato River and served not only to further enhance the power production of these stations by increasing water flow down the river, but also generated electricity in the Tongariro region with two new power stations.

Clearly the Tongariro Power Project was an important event in the history of post war energy development. It was also important as one of several examples of a clash between energy development

¹ The spelling of 'Whanganui' is in accordance with the pronunciation of the river; the town will be spelt the traditional way, Wanganui.

² See ECNZ, Whanganui River Maori Trust Board, Rangitikei-Wanganui Catchment Board and Regional Water Board, and the Wanganui River Flows Coalition. *Whanganui River Flow Submissions: Electricity Corporation of New Zealand (3 vol)*, Marton: Rangitikei-Wanganui Catchment Board, 1990.

³ David Young, 'River of Great Waiting,' in *New Zealand Geographic*, 3: July-Sept, 1989, p.108.

and a growing desire to preserve New Zealand's natural environment. Plans for power developments at Aratiatia and Manapouri promoted widespread debate and facilitated the emergence of the modern conservation movement.⁴ The Tongariro Development needs to be seen in this context. It too was a case of a values clash between energy development and conservation values. The public debate about the Tongariro Development and the opposition to it is the principal subject of this thesis. Unlike the debate over Manapouri, the opposition to the Tongariro Development has not been extensively explored. This thesis seeks to make a contribution to understanding the emergence of the modern conservation movement and its interaction with those seeking to meet the ever growing demand for energy. The thesis has five chapters.

Chapter One examines the development of demand for hydro-electricity in New Zealand from its initial slow, hesitant start in the late nineteenth century to a period of rapid activity after World War Two.

Chapter Two examines the gradual growth of concern for conservation in New Zealand. From the establishment of the Tongariro National Park in 1887, the Tongariro region has been a conservation site of great note. The first two chapters establish the historical context in which the clash of values associated with the Tongariro Development took place.

Chapter Three examines the Tongariro Power Development and explains why it was that the Tongariro scheme was chosen over

⁴ See J.T. Salmon, *Heritage Destroyed - The Crisis in Scenery Preservation in New Zealand*, Wellington: A.H. & A.W. Reed, 1960.

other options. Geography, geology and adding extra value to the Waikato Development were among the reasons the Tongariro Development went ahead.

Chapter Four discusses the debate over the Tongariro Development. The first part of the chapter discusses the views of the Electricity Department and Ministry of Works as to the likely reaction to the project. As it turned out, their ideas were far off the mark. The main part of the chapter examines the negative public reaction to the scheme and the attempts by the Government to allay concerns about the impact of the project.

Chapter Five links the first stage of protest against the Tongariro Development with the commissioning of the Western Diversion, and notes the beginning of a new wave of protest prompted by the operation of the diversion. New avenues of protest were employed, in particular protest became focussed on the Planning Tribunal as a result of changes in resource management introduced by the 1967 Water and Soil Conservation Act.

The thesis concludes by arguing that the Tongariro Project is still a live issue today. Since 1983 both the Waitangi and Planning Tribunals have both considered issues relating to the Tongariro Development.

The clash of values between conservation and energy developments remain one of the central issues in modern resource management. The debate on the Tongariro Development in the 1960s was a beginning of an ongoing contest of values.