Preface

In the last four decades of the twentieth century, many Canadians had their lives and efforts subordinated to the political and economic imperative of damming rivers to produce hydroelectricity for industry and export. These included Native peoples, environmentalists, and others who opposed Canada's dam-building rush, and also the thousands of construction workers, technical employees, and engineers whose careers were broken when the rush ended in the 1990s. The political and economic leaders responsible for Canada's hydroelectric development policies often dismissed opponents' views in favour of their own claims that provincial electrical systems needed to expand for local industrial transformations and that electricity exports are in Canada's national interest. At the time, the 25,000 employees now laid off by Ontario Hydro, Hydro-Québec, and BC Hydro were often convinced by those claims. A closer examination of the claims reveals, however, that something went wrong with the initial privatizations of hydro resources, with the kind of industrial development the addition of new hydroelectric projects was expected to bring, with the timing and size of the provinces' electrical supply expansion, and with the national and regional initiatives to link these major projects to a trans-Canada power grid.

In probing the relationship between hydro expansion, industrial diversification, and the weakening of national power grid initiatives through export of power, I have had to conduct my research at both the federal and provincial levels. This was because the Canadian Constitution assigns the authority to develop natural resources, including hydroelectric power, to the provinces, but gives jurisdiction over trade to the federal government without the authority to unilaterally enforce its policies; thus the federal government must try to achieve consensus among the provinces regarding interprovincial trade and exports to the US.

Federal Cabinet records, engineering and economic assessments, federal-provincial conferences and negotiations, and studies of provincial utilities

in provinces owning major water-power resources (e.g., waterfalls, canyons, river narrows) reveal that, in the 1960s, 1970s, and 1980s, it would have been possible to establish either a national network or several regional power grids, which would have resulted in more integrated service to the country. However, provincial resistance to federal plans, the inability and unwillingness of provinces to accept or form an extra-provincial authority to regulate the transport of electricity across provincial transmission systems, the preference of provinces to export electricity to the US, and the strategies of provinces to develop hydro for local economic purposes undermined such initiatives.

In my examination of the causes of the failure of these initiatives, I consider the views of a number of political economists. Thomas Hughes, for example, sees the cause of failure in the particular mix of private and public ownership and the often narrow profit and political interest of both utilities and governments. I also employ the insights of the new Canadian political economists, such as Janine Brodie (national policies and regional outcomes), Michel Duquette (centralized energy policies and defensive provincial continentalism), Laura Macdonald (free trade and differential continental integration), and Rianne Mahon (locations of resistance in an era of fragmenting state sovereignty), to examine Canada's national, regional, and continental power system integration in the context of specific political practices. Furthermore, I also cite research by engineering firms to show that (1) during the initial planning stage of various hydro mega-projects in the 1960s, the use of Canada's provincial electricity surplus capacities could have been coordinated to benefit both neighbouring provinces and the country as a whole by optimizing plant operations interprovincially and thereby reducing their environmental, social, and fiscal impacts; but that (2) provincial pursuit of exports and hydro-related industrial policies, as well as federal continental bias, undermined initiatives in that direction.

Other new Canadian political economists, including Mel Watkins, Wallace Clement, Glen Williams, Gordon Laxer, and Neil Bradford, have shown that Canada's peculiar industrial development processes vary regionally and split into at least three paths: the emergence of manufacturing entrepreneurs from within local, provincial, and national communities; the establishment of manufacturing in branch plants by foreign direct investment; and export-oriented commodity extraction for manufacturing elsewhere. Provincial reliance on foreign, often global, corporations for economic growth makes the planning of infrastructures, such as hydroelectric systems, for local industry difficult. An historic case-in-point, as noted by H.V. Nelles, was that of the Niagara Falls development in Ontario, where the province had to buy back the water rights and power plants from private American interests who failed to provide electricity for Ontario

communities and industries because of their export of power to manufacturers on the American side (see Chapter 3).

More recent hydro projects, such as Churchill Falls (Labrador), James Bay, Nelson River, and Peace River, are in northern regions of the country that have only since the 1950s been opened for extensive development. The policy of accelerating dam-building in these areas during the 1960s and 1970s was intended, in part, to further the cooperative interconnection of the new northern generating facilities with a national power network, to benefit Canada as a whole, and to diversify its industrial growth. But the Liberal federal government of Prime Minister Lester B. Pearson weakened this strategy by encouraging early dam construction for power exports. Subsequent electricity exports evolved according to federal and provincial building-for-export agendas. These agendas were legitimized by the National Energy Board (NEB) and by the federal Cabinet but were denied initially by provincial utility officials until the 1980s and 1990s, because it was uncertain whether official utility mandates allowed the building of hydroelectric facilities exclusively for provincial markets or also for export.

Because hydro expansion programs occurred with provincial predominance in national, continental, and (with respect to attracting industries) global contexts, the required multiprovincial inquiry into, and interpretations of, varied outcomes presents a theoretical and methodological challenge. In Chapter 1, I provide academic readers with general insights from new Canadian political economists that allow a better understanding of hydroelectric development and the related politics within Canadian national, transborder regional, and North American continental spaces. To provide a more specific understanding of provincial cases, I also introduce in Chapter 1 an analytical guide to the inquiry into the five expansions of provincial hydro systems presented in Chapters 3, 4, 5, 6, and 7. Although theoretical insights are integrated throughout this book, I have kept discussion of theoretical literature to a minimum and replaced academic jargon, where possible, with more common terms.

I reviewed documents and records in both provincial and national archives, in utility archives, in the Centre de recherche en développement industriel et technologique in Montréal, and in libraries and industrial development departments as well as in some regulatory agencies. I reviewed most manuscripts, correspondence, and contracts with industry at their locations in Québec City, Montréal, Ottawa, Toronto, Winnipeg, Vancouver, and Victoria. Historic collections consulted include papers from Sir Adam Beck (Ontario Hydro), the records of Prime Ministers John Diefenbaker's and Lester B. Pearson's federal Cabinet discussions concerning the national power network, the records of the Churchill Falls (Labrador) Corporation, transcripts of the public discourse in export hearings,

the papers of Edward Schreyer, the records of the James Bay Development Company, submissions to provincial commissions of inquiry, and the collections held by provincial utilities and in the National Archives in Ottawa. I have integrated all this historical and other material in the main chapters of the book in order to demonstrate the tensions over national and regional power-system integration and to illustrate in five provincial case studies the repetitive historical pattern in the development of hydro power, industry, and exports.

To permit a better understanding of archival records and other sources, I also conducted twenty unstructured interviews with industrial development officers, utility economists, procurement officers, utility officials, and people who have researched the relationship between hydro development and industry. Until 1984, manufacturers used to report their electricity consumption to Statistics Canada, which provided evidence for determining whether new supplies of power stimulated new manufacturing activities. Since then, Statistics Canada has ended such surveys, and so the numerical quantification of this relationship cannot be extended. Nevertheless, the decline in manufacturing in Canada in the 1980s and 1990s suggests that new supplies of electricity have not led to new manufacturing in the last decade.

In this book I do not attempt to describe the entire history of Canada's federal, provincial, or continental electricity policies or of its major utilities; rather, after discussing Canada's proposed national and regional power networks, I describe five provincial hydroelectric developments and confine my analysis to specific time frames and to key development patterns that recur in each case. In my Niagara Falls discussion, I give a brief history of the pre-1900 period and of the first three decades of the twentieth century. The more recent period of major hydroelectric system expansions (with the exception of the proposed Conawapa project on the Nelson River) started in the early 1960s and ended in 1972 in Labrador, in 1984 in British Columbia, in 1992 in Manitoba, and in 1994 (with the exception of Québec's and Newfoundland's 1998 proposal to develop the Lower Churchill project) in Québec. Within those periods, I concentrate on power projects at Churchill Falls (Labrador), in the James Bay region (Québec), on the Nelson River (Manitoba), and on the Peace River (British Columbia) (Figure 1.1). I trace the influence these projects had on expected provincial industrial transformation until the mid-1980s and examine their role in power exports and in the deintegration of Canadian public power systems in order to integrate them in the late 1990s with US power systems. In each provincial case, I briefly review the historical pattern of initially releasing public water power for private development and then reclaiming these privatized hydro-power resources, often with completed power facilities, for public ownership. Finally, I argue that now, at

the dawn of the twenty-first century, in keeping with the neo-liberal economic policies of governments in the 1990s, hydroelectric resources are in danger of being re-privatized.

I present archival material and secondary sources in order to demonstrate that political issues prevented the development of a national power grid or regional grids and that certain development patterns are repeated in one or more provincial hydro cases (e.g., privatization reversals, expected but unrealized hydro-related industrial development, reported electricity surpluses, and the implications of exporting these surpluses to the US for utility restructuring in Canada). Overall, my research findings support the claim that, instead of providing the infrastructure for a national power grid and serving as a force for indigenous secondary industry, the provincial expansions of Canada's hydro resources have merely fostered continued dependence on branch-plant industrial development and staples export and have created vast surpluses of electricity for continental, rather than national, use.