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## Planning for Power: The New Brunswick Electric Power Commission in the 1950s

In the 1950s electric power development became symbolic of economic progress in New Brunswick.<sup>1</sup> Newspaper headlines announced that “Power is Keynote of N.B. Prosperity”, and proclaimed New Brunswick the “Could-Have Province”, while the slogan “Power, Progress and Prosperity” proved its appeal in electoral politics. In this atmosphere, the public agency responsible for electrical generation and distribution in the province changed significantly. The New Brunswick Electric Power Commission (NBEP) became largely free from political control. Although the government continued to appoint the utility’s commissioners or board of directors, and although their chairman was a responsible cabinet minister, accountable to the legislature and the public, the organization grew more autonomous. NB Power — as it came to style itself — also became an organization driven in important ways by corporate self-interest.

Traditionally, politicians supervised the NBEP very closely, gearing its activities to partisan needs and directing its spending through localized channels of patronage. But in the quest for economic growth, the public utility was seen as an essential tool, and the organization was newly oriented towards the efficient provision of electricity for industry. In the process it became more cohesive, conscious of its interests, able to choose its own goals, and prepared to shape its environment to attain them.<sup>2</sup> When corporate drives towards security and ex-

- 1 The Canada Council supported this research, and I also thank many colleagues for helpful suggestions about earlier drafts of this article. I am especially grateful to N.B. Power for access to its archives.
- 2 Presenting a complex organization in such anthropomorphic terms is not fallacious, but merely a shorthand for describing complex internal processes. See R. Mayntz, “The Study of Organizations”, *Current Sociology*, 13 (1964), pp. 93-156, especially pp. 113-4. Indeed, management’s primary functions are to integrate and maintain the organization and to advance its interests. For a formal derivation of the goals of agencies from individual motives, see W.A. Niskanen, *Bureaucracy and Representative Government* (New York, 1971), and for a classic statement of management’s need to infuse individuals with a common ethos and purpose, see Chester I. Bernard, *The Functions of the Executive* (Cambridge, Mass., 1938). Recent works taking a “corporate-interest” view of large organizations in the business of energy supply include L. Lindberg, “Energy Policy and the Politics of Economic Development”, *Comparative Political Studies*, 10 (1977), pp. 355-82, and Larry Pratt, “Petro-Canada: Tool for Energy Security or Instrument of Economic Development”, in G.B. Doern, ed., *How Ottawa Spends Your Tax Dollars: 1982* (Toronto, 1982), pp. 87-113.

pansion diverged from explicit objectives and from the general public interest — which is difficult to show, not least because the definitions and theories of economic development with which the commission justified its activities were so pervasive — the NBEPCC tended to pursue its own goals.

This change occurred as the organization contemplated a major hydroelectric power development on the St. John River at Beechwood, a project which held centre stage in New Brunswick politics for several years. A young, highly professional staff of engineers began to present to the commission and the government proposals which implied a fundamentally different role for the utility. The engineers and their allies succeeded in transforming the NBEPCC from a politically useful instrument of public expenditure at the local, consumer level into an efficient and dynamic part of the province's industrial infrastructure. This was not due to technological change, for no significant innovations dictated new organizational forms or functions. Neither was the impetus political, though Premier Hugh John Flemming had a supportive faith in engineering and electrical development. Nor did the NBEPCC change to accommodate the wishes of a powerful business class, though it did serve the large, mainly extra-provincial corporations which increasingly dominated the economy. Rather, the NBEPCC evolved as the organization began to plan. Within a favourable context formed by technical, economic and political influences, the organization was allowed to develop a corporate awareness, and thereafter it aimed for autonomy and growth, deploying its expanding resources to realize its plans.<sup>3</sup>

The New Brunswick Electric Power Commission was created prior to the 1920 provincial election, in response to a broadening populist movement. It was designed on the Ontario model, to distribute power to municipal commissions. Despite the commission's early reverses, the administration led by Premier Peter Veniot supported its ambitious plans to establish a province-wide system based on hydro power from Grand Falls.<sup>4</sup> But the Conservatives won the 1925 election, and the Grand Falls site was sold to a subsidiary of International Paper, which quickly developed its power potential.<sup>5</sup> The public utility was

- 3 That planning, particularly in high-technology and capital-intensive sectors, leads in large organizations to the shift of effective decision-making power from superiors to technical experts was strongly argued in J.K. Galbraith, *The New Industrial State*, 2nd edition (Harmondsworth, 1974), pp. 75-86. Only the technical staff, arranged in interlocking committees, can prepare and evaluate complex plans, and a consensus at this level is difficult for their directors to over-rule. In crown corporations, this phenomenon makes the classic problem of accountability more acute.
- 4 *Acts of the Legislative Assembly of New Brunswick [Acts]*, 1920, Ch. 53; New Brunswick Electric Power Commission, *Annual Report [AR]*, 1923, pp. 8, 13-17; A.T. Doyle, *Front Benches and Back Rooms* (Toronto, 1976), pp. 227-31, 243.
- 5 *Acts*, 1926, Ch. 45. A useful history is found in the NBEPCC Central Files [CF]: see C.J.A. Hughes, "Memorandum to the N.B.E.P.C. Respecting Legislation affecting Power Development on the Saint John River", 13 November 1952, Microfilm Reel [MR] 597, St. J-11 [file number], "Legal 1950-55" [folder title]. All subsequent MR references are to microfilm reels in the NBEPCC Central Files; other CF references are to hard-copy NBEPCC files.

placed under a member of the legislative assembly who had campaigned against public power. It was tightly restrained. Hydro development was rejected, so by 1930 the private New Brunswick Power Company was supplying 30 per cent of the commission's electricity, line extensions were refused unless customers were signed in advance, and the commissioners supervised operations closely, consulting personally with municipalities seeking power and with individuals whose property was expropriated for transmission lines.<sup>6</sup>

The NBEPCC owed its continued existence less to the lingering appeal of public power than to its usefulness as an instrument of patronage and of electorally beneficial capital spending. Shortly before the 1930 election, the commission decided to build a coal-fired thermal plant at Grand Lake. This helped the local coal industry by providing a new market, and also inaugurated a pattern of incremental growth corresponding to political cycles, one maintained by governments of both political stripes. An addition to Grand Lake was announced in 1935, and Premier L.P.D. Tilley decided then that rates should be reduced,<sup>7</sup> and another unit was ordered in 1939. By then, the NBEPCC had 2,000 miles of lines and 17,000 direct customers. But the distribution system was fragmented, and the utility did not serve most industrial users, as large plants generated their own power; nor did it control the lucrative urban markets, as it wholesaled to private companies or municipal commissions. Under close political control, the organization was devoid of internal dynamism.

At the end of the Second World War, in New Brunswick as elsewhere, the public strongly demanded rural electrification. Moreover, cheaper electricity was essential to the economic strategy of forward linkage into secondary processing, to which the administration of J.B. McNair was committed, until its reforming impulse was dulled by federal transfer payments and the requirements of patronage politics.<sup>8</sup> The Resources Development Board, led by Dr. H.J. Rowley, was established to implement this strategy, and its members were appalled to find in 1944 that the commission had no post-war plans for expansion, though power shortages had occurred. The complacent assumption that further units would be added at Grand Lake, where the generators were already "lined up like little toys", was intolerable to the development board members.<sup>9</sup> They advocated a hydro development on the Tobique River, a tributary joining the upper St. John in Victoria County, but the commissioners favoured burning native coal in thermal plants. By the time a favourable consultants' report on the

6 NBEPCC, *AR*, 1929, p. 6; NBEPCC Minutes, 2 November 1925, 29 April 1926, Record Group 30, Record Series 179, Provincial Archives of New Brunswick [PANB].

7 NBEPCC Minutes, 5 April 1935; Order-in-Council, 8 April 1935.

8 R.A. Young, "Development, Planning and Participation in New Brunswick: 1945-1975", D. Phil. thesis, Oxford University, 1979, pp. 81-123.

9 Memorandum on meeting of Dr. Rowley and Col. Harrison with the NBEPCC chief engineer, 4 August 1944, MBU/IV (G.P. Burchill Papers), 21/59/8, PANB; Dr. J.S. Bates, interview, 19 October 1977.

Tobique Narrows site arrived, the commission had decided to build a coal-fired plant at Chatham.

The McNair government did strive to meet the demand for rural electrification. Extensions were politically satisfying, as line-building was a highly visible benefit. Also it could be allocated regionally with great precision, as the residents of Carleton County, who persistently returned Conservatives, discovered: there were exactly three miles of NBEP line in the county in 1947, but when a Liberal was elected in 1948, he was made a commissioner, and work was soon begun on a major line from Grand Lake; 138 miles of line were built in the county in 1950 alone.<sup>10</sup> Moreover, spending on labour and supplies was, like spending on roads, extremely divisible, so affording rich opportunities to reward loyal supporters in the selective way that the traditional party system required. Lines built in 1949 alone required the purchase of 39,000 wooden poles and the employment of hundreds of men. Between 1945 and 1948, more than 1,100 miles of line were built, and the number of direct NBEP customers almost doubled.

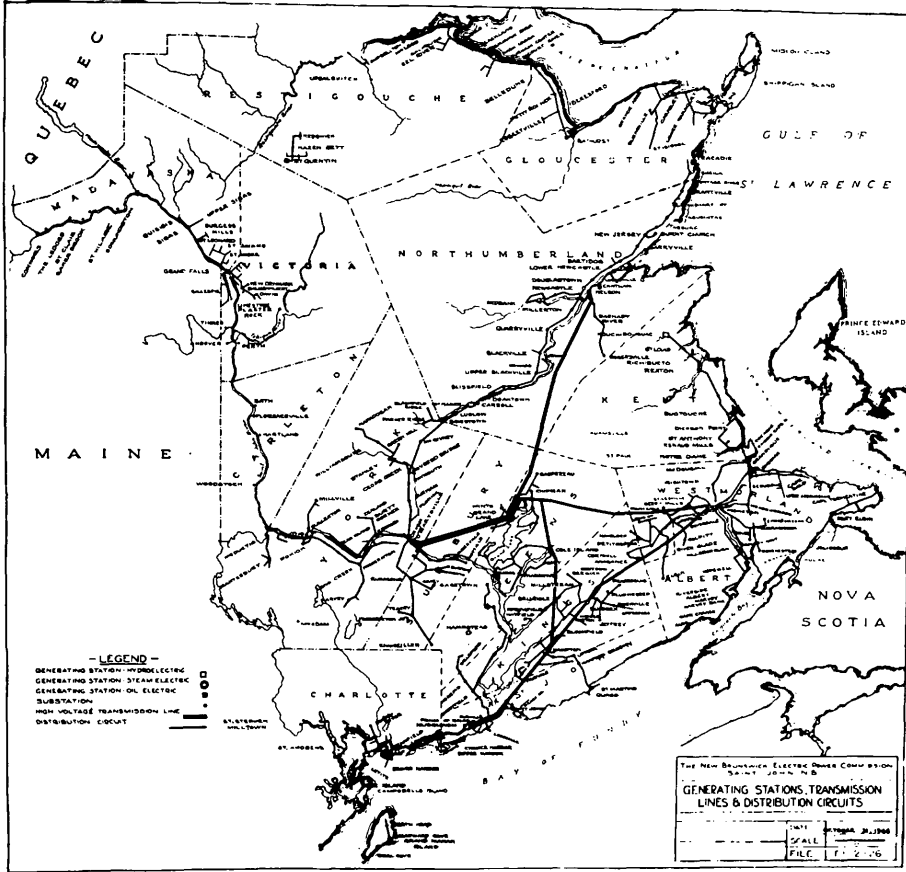
But rapid expansion strained the system. In 1946-47, power had to be rationed, and in 1948 the government expropriated the Saint John plant of the uncooperative N.B. Power Company. As well, the government had to operate a large strip-mine to keep the NBEP in operation during the coal miners' strike of 1947, an experience which demonstrated the vulnerability of thermal generation to both disruption and escalating costs. Power was the keynote of the 1948 Legislative Assembly session. Hugh John Flemming, a junior Progressive Conservative MLA, seized the initiative. Bowing to his party's established policy of expansion at Grand Lake, he also proposed a major hydro development at Beechwood, a site on the St. John river in his own power-starved constituency of Carleton County. Flemming was well-briefed; he kept up the pressure; and if his oratory lacked the fabled quality of that of his father, Premier "Kidd" Flemming, it still captured something of the old populist faith in clean technology and "Power for the People": "It is obvious that we need something big, something revolutionary, something that will give our people new hope, revive their ambition, and render available worthwhile opportunity. We have such a situation on the St. John River . . . Engineers can harness all this useless energy; they can conserve it; they can release it at a determinable rate. They can, in short, employ it in the full service of man and all his works". Hugh MacKay, the Tory leader, was himself led to declare that such a project would underpin "the next Conservative advance", and Premier McNair, in an election year, warned that Grand Falls was not immune to expropriation.<sup>11</sup>

After his 1948 victory, McNair moved to reform the public utility. First, Dr.

10 New Brunswick, *Synoptic Report of the Proceedings of the Legislative Assembly of New Brunswick [Assembly Report]*, 1949, p. 107 reports J. Fraser's announcement of the lines; figures from NBEP, *AR*, various years.

11 *Assembly Report*, 1948, pp. 243-5, 279, 291-4.

FIGURE 1



New Brunswick Electric Power Commission operations in 1946. The map is about one-tenth actual size. Clearly the emphasis is on local distribution and service to individual communities. (Source: NBEPC, *Annual Report*, 1947).

Rowley of the Resources Development Board was appointed a commissioner. Then, after a meeting at which the power commission's chairman admitted his staff "had not spent much time in projecting plans five or ten years ahead", it was decided to approach Ottawa for a reference to the International Joint Commission concerning potential developments on the St. John River.<sup>12</sup> Although

12 "Electrical Power in New Brunswick", minutes of meeting of 24 November 1948, MR 488, St.J-22, "Minutes of Minutes [sic] 1948-1951". In attendance were the cabinet, the commission, and the development board.

Grand Lake was to be expanded yet again, the Tobique Narrows hydro project was also begun in 1950. As well, a consultant was engaged to examine the organization. His recommendation that a general manager be hired to run this "\$32,000,000 corporation" was rejected; obviously this would impede the exercise of political control.<sup>13</sup> However, another suggestion which was implemented tended to have the same result. This was to separate Operations from Engineering, thus making a formal distinction between routine activities and forward planning, and institutionalizing the latter function for the first time. The Engineering posts were filled by the young, professional staff recruited since the war, men not subject to the organization's long inertia.<sup>14</sup> Before long, the utility's annual reports reflected the change: in 1950 it was foreseen that Tobique output would be "absorbed in normal channels within three years"; by 1951, there was "a plan to provide more electricity for more users"; and, most telling, annual increases were expressed as percentages and described as "gains".

These stirrings of change in the NBEPCC received strong reinforcement through its participation in the extensive planning exercise conducted by the St. John River Engineering Board Work Group, which was established under the auspices of the IJC. As is usual in such large-scale investigations, the Work Group drew together all the major interests affected by possible St. John River hydro developments — Canadian and U.S. federal and provincial/state agencies, public and private utilities, pulp and paper companies, and consultants. The NBEPCC representatives were the new chief engineer, J.L. Feeney, and the leader of the post-war complement, Reg Tweeddale.<sup>15</sup> They insisted from the outset on studying sites downstream from the area actually covered by the reference, and concentrated on those entirely within the province, which would not necessarily require international co-operation.<sup>16</sup> Since Work Group forecasts included industrial supply and demand in projections for electrical development in

13 R.M. Harvey, "Report on the Present Organization and Recommendations for Re-organizing the Functions and Responsibilities of the New Brunswick Electric Power Commission", 26 September 1949, MR 508, 1-600, "Organization R.M. Harvey 1949". An inter-departmental committee structure was established, but it remained under the vice-chairman's close supervision and discussed little of import: "Administrative and Planning Committee Meetings 1951", MR 508, 1-620.

14 For information about the new staff members, see *Assembly Report*, 1948, Appendix, pp. 24-6.

15 Feeney replaced the long-serving W.D. MacDonald in 1951. Tweeddale, who then became "power development engineer", was a New Brunswick native who had long been interested in the Tobique River's potential. He had supervised part of the post-war rural extension program and rejoined the NBEPCC in 1949 after working for two years with Dr. Rowley and the Resources Development Board. See Robert Nielsen, "Tweeddale, Builder of Mactaquac", *The Tobiqueur*, 4 (1979), pp. 47-53.

16 Minutes of meeting of 13 February 1951, and "Progress Report — NBEPCC", 31 August 1951, MR 597, St.J-22, "Saint John River — Minutes of Meetings (Work Group)". In 1952, following NBEPCC requests, the IJC reference was extended to cover the St. John River as far south as Fredericton.

the whole basin, Feeney and Tweeddale accepted implicitly a new responsibility to supply power to industry.<sup>17</sup> They made respected friends, and learned much from such visionaries as worked in the U.S. Army Corps of Engineers. And they formed firm views on the fundamental role of electric power in industrial society — and in New Brunswick. As Tweeddale wrote in 1951:

Industrial development is absolutely dependent on the availability of electrical energy. We have raw materials, we have transportation with the other provinces of Canada and the United States, we have water communication with all parts of the world at all times of the year and we have some of the best labor in Canada. All that is needed is reasonably cheap power, the initiative to do something and a local patriotism or provincial pride which will demand that surplus funds be invested in industrial and other developments within the province instead of outside . . . The economic salvation of the Province depends in large measure on greater production, total and per man, and this will only come from the more extensive use of electric power as applied to our industrial life and the development of our resources.<sup>18</sup>

As an initial step in the phased development of the St. John, the power commission's engineers came to favour the Beechwood site. After exhaustive studies, the benefit/cost ratio for the project was certified to be satisfactory. Finally, in early 1953, the Engineering Board placed its cachet on the recommendation that Beechwood be built, as the best first stage in any larger scheme of St. John development.<sup>19</sup>

The NBEPCC gained momentum. Certainly, Flemming's victory in the 1952 election could not have displeased the engineers. Power had not been a major campaign issue: the Liberal defeat was caused by the new sales tax, which

17 "Interim Report of the Sub-Committee on the Distribution and Use of Electricity", 22 January 1952, MR 488, St.J-12, "Saint John River Load Studies 1951". It should be noted that in 1950 the NBEPCC and municipally owned utilities generated 234 million kwh; private stations produced 463 million kwh for sale alone: Canada, Dominion Bureau of Statistics, *Central Electric Stations 1950* (Ottawa, 1952), Table 12. Figures on production of power by private industrial firms for their own use are not available.

18 R. Tweeddale to J.L. Feeney, 30 July 1951, MR 488, St.J-12, "St. John River Load Studies 1951".

19 NBEPCC, "Benefits from Various Development Programs", document submitted to the Sub-committee on Distribution and Use, meeting of 1-3 December 1952, MR 488, St.J-12, "St. John River Load Studies 1952"; H.M. Nelson, "Selection of Power and Storage Sites for Early Development", document presented to the meeting of the Work Group, 3-4 February 1952, esp. Table II - pt. II, MR 597, St.J-22, "Minutes of Meetings (Work Group) 1952"; International Saint John River Engineering Board, *Water Resources of the Saint John Basin: Quebec-Maine-New Brunswick*, interim report to the International Joint Commission (under the reference of July 7, 1952), 6 April 1953, p. 79 and section IX.



Flemming had successfully linked to the free-spending McNair machine of “ward-healers, gravel salesmen and all the other rag-tag and bob-tail of camp-following Liberalism”.<sup>20</sup> But the new premier’s enthusiasm for power development was well-known, and his recognition of the electrical workers’ union relieved labour disputes simmering in the NBEPC.<sup>21</sup> For the first time, a commissioner — Dr. Rowley — was reappointed after a change in regime. And the commission’s new chairman, Edgar Fournier, protected his employees against partisan pressures.<sup>22</sup> On the other hand, the new vice-chairman was neither technically expert nor lacking in partisan zeal: C.H. Forbes, a Fredericton druggist, was president of the York County Conservative Association, and within a year he assumed responsibility for routine administration of the organization.<sup>23</sup>

A further strong impetus towards large-scale energy development was the discovery in 1951-52 of non-ferrous metallic ores in the Bathurst region.<sup>24</sup> Huge quantities of power would be needed were smelting to be done in the province, and this reinforced the case for Beechwood which Feeney and Tweeddale quickly placed before the incoming government. They predicted power shortages in 1957, produced a benefit/cost ratio of 2.07 for the project, and recommended that construction begin in 1953: “It is understood that in the past the Province has lost potential industries because immediate power requirements were not available, this situation should never be allowed to happen again”.<sup>25</sup> Fleming, however, ordered further study, by the consulting firm Power Corporation. Their chief engineer had been active in the Work Group, and, using the same data and methodology, their findings endorsed Beechwood.<sup>26</sup> The government

20 *Assembly Report*, 1952, p. 392.

21 Order-in-Council 53-608 made the NBEPC an employer under the Labour Relations Act; Order-in-Council 53-609 confirmed a no-strike, no lock-out, closed-shop contract with the International Brotherhood of Electrical Workers.

22 Fournier to all employees, 7 November 1952, MR 508, 1-600, “Organization General Data 1924-55”. A vocational school instructor, Fournier had an affinity for machinery and engineering which later proved supportive of his professional staff. As a newly elected member, however, his early conduct reflected the wishes of cabinet and the premier.

23 Fournier to Feeney, 27 November 1953, *ibid.*

24 This was sparked by Dr. Rowley, who borrowed an airplane and a magnetometer, and located anomalies which stimulated feverish prospecting and a torrent of claims. See G.S. Mackenzie, “Mineral Discovery and Exploration in New Brunswick”, in *New Brunswick’s Rising Industrial Potential*, [proceedings of a symposium on the industrial chemical development of New Brunswick, Maritime Section of the Chemical Institute of Canada, Fredericton, 8-10 September 1955] (n.p., C.I.C. and N.B. Department of Industry and Development), pp. 10-14.

25 R. Tweeddale and J.L. Feeney, “Report on Power Requirements of the New Brunswick Electric Power Commission”, 13 November 1952, p. 2, MR 488, St.J.-12, “St John River Load Studies 1952”. H.M. Nelson’s benefit/cost ratio for Beechwood (see note 19 above), without upstream storage, was 1.14.

26 Power Corporation of Canada Ltd., “Report on the Power Situation in New Brunswick: The

appeared to be persuaded. The 1953 Throne Speech announced that plans were being developed, the NBEPC annual report included Beechwood as “proposed additional capacity”, a legislative committee heard Tweeddale outline the entire scheme of St. John development and pronounce Beechwood economical, the Engineering Board supported the project, and Flemming rhetorically asked the House, “What are we going to do this time — wait for something to turn up?” His government, he replied, “has the will and the purpose and the determination to push the development of the St. John River as quickly as possible. A beginning will be made at Beechwood in the near future. I have high hopes that before the end of this Administration’s first term of office is completed, power may be flowing out from Beechwood to a large section of New Brunswick. It will be one of the great moments of my life to see the first turbine turning over on this project”.<sup>27</sup>

But the Beechwood project was not let to tender until 1955. One reason for this delay was uncertainty about upstream storage dams, which would greatly increase the efficiency of the installation. In Maine, no firm plans were made by either the utilities or the federal agencies, and the commission’s proposals to raise the level of Lake Temiscouata, which had been dammed in the 1920s for the Grand Falls plant, were lost in the byzantine politics of Duplessis’ Quebec, remaining under the consideration of the Bishop of Rimouski. Despite his regard for the Quebec premier, Flemming was unable to resolve the problem.<sup>28</sup>

Financing was another obstacle. Complete development of the St. John basin would cost the Canadians alone \$100 million, and the Beechwood project and associated transmission facilities would cost \$28 million. The basic financial policy of the Flemming administration was to restore the province’s severely strained credit by stabilizing net debt. Further provincial borrowing, even for productive investment, was impossible. The NBEPC itself could not finance the project: until rate increases in 1950-51 it ran a small deficit, and reserve funds established then were as yet small. At this time, the utility borrowed through provincial bonds issued on its behalf; hence its credit was indistinguishable from that of the province, and were this not so it would have been even lower.<sup>29</sup> Another possibility, private financing, could not be entertained seriously by any New Brunswick government, for the Liberals were committed to public ownership, while the Conservatives could have alienated another St. John River hydro site only at great political risk.

New Brunswick naturally turned to Ottawa. Within three weeks of the Engineering Board’s report, a brief presenting the province’s case for aid was

Beechwood Project”, 2 January 1953, CF.

27 *Assembly Report*, 1953, pp. 200-1.

28 Minutes of a meeting of Feeney with Quebec officials and Canadian IJC members, 5 October 1953, MR 597, St.J-22, “Saint John River Conference”; *Assembly Report*, 1954, pp. 96-7.

29 Hon. Hugh John Flemming, interview, 23 September 1977.

ready. This document traced in detail the federal government's historic neglect of New Brunswick, the sad path beaten so regularly by provincial politicians during the 1920s and 1930s. But there were two new departures from the pre-war submissions. Now, funds were requested not to supplement existing spending patterns but to initiate a development strategy: it was argued that electric power could underpin sustained growth in the province. Second, the brief contained a projection of provincial capital requirements for a seven-year period, and such comprehensive forward planning was quite new. Since the province's net debt was to remain stable at \$119 million while that contracted for the NBEPC was to increase from \$44 million to \$100 million by 1960, the development program was to be based entirely on electric power. New Brunswick could not finance this alone, and so it requested a \$30 million loan for Beechwood, to be repaid at 1½ per cent per annum; then power rates could be reduced and industrial growth accelerated.<sup>30</sup>

Ottawa's response to this proposal was not encouraging. The sum was considerable, and power development was a provincial matter. Although Flemming took the matter up with Prime Minister Louis St. Laurent, and stressed that new opportunities should not be blocked by "legalistic and constitutional obstacles", he made no progress.<sup>31</sup> To some it appeared that this was due to party differences, as the complexions of the provincial and federal governments failed to match for the first time since 1930, but it is evident that powerful federal civil servants were unenthusiastic about low-interest loans.<sup>32</sup> Despite a final presentation by the provincial government and New Brunswick MPs and senators, Ottawa's decision not to fund "the development of provincial natural resources" was communicated in early 1954.<sup>33</sup>

A third cause of hesitation and delay in commencing the Beechwood project was opposition from the New Brunswick coal industry. In northern Queens and Sunbury counties, coal lies in thin seams, which were mined by operators ranging from pulp company subsidiaries to single families. The first NBEPC plant at Grand Lake had stimulated the operators to combine and demand a price increase,<sup>34</sup> and as the public utility grew to absorb an increasing proportion of production — 32 per cent by 1947 — it subsidized the industry. Coal was typically screened: chunks were sold to ordinary customers while the power commis-

30 New Brunswick, "A Brief Presented by the Province of New Brunswick to the Government of Canada on the Need for Financial Assistance to Develop the Hydro Electric Power Resources of the St. John River", 27 April 1953, New Brunswick Legislative Library [NBLL].

31 Hon. Milton Gregg, interview, 11 October 1977; Flemming to St. Laurent, 11 September 1953, p. 4, and reply, 16 September 1953, MR 488, St.J-20, "St. John River Financing 1953-1954".

32 "Report on a Meeting with a Committee of Federal Civil Servants", 10 November 1953, MR 597, St.J-22, "St. John River Conference".

33 K.W. Taylor to R.S. Fitzrandolph, 3 February 1954, MR 488, St.J-20, "St. John River Financing, 1953-1954".

34 "Coal General Data, 1931-46", MR 592, 3-331.

sion bought the slack, which not only was sulphurous, but also contained high proportions of moisture and “ash”; that is, dirt. For the larger operators, business was lucrative, since prices reflected the costs of the less efficient ones, who were kept in operation by the NBEPC.<sup>35</sup> The Beechwood project threatened this arrangement by challenging the traditional policy of state support for an established, if inefficient, industry with the potential economic benefits of new industry based on cheap power.

When the vast St. John plans were made public in 1953, the coal operators attacked the Work Group’s comparative cost estimates, which showed Beechwood a better investment than thermal power. They argued that the estimates should have assumed one large, efficient steam plant rather than several small ones, and that the method of capital-costing was incorrect. Moreover, they complained, Beechwood would replace the coal mined by 276 men: “We feel that there would be many congratulatory notices in the press if a new industry of this size were to be started up in the province. Why not protect the industry we have and develop it?”<sup>36</sup> Aroused by a timely mine closure, the coal miners also pressed for thermal generation rather than hydro. So did some Tory backbenchers, and even within the cabinet there was questioning of capital-intensive hydro projects.<sup>37</sup>

The government ordered yet another comparative study. But it also received the blistering retort of the NBEPC engineering staff, who proclaimed it their duty to “produce energy in the most economical method possible”. They observed that the profit margin at Minto was the highest in the Canadian coal industry, that the current price of \$8.10 per ton of dirty, sulphurous slack compared unfavourably with the \$4.85 charged in the U.S. for high-grade Pennsylvania anthracite, and that at 5 per cent moisture levels, the commission was paying \$81,000 each year for water to ruin its boilers. The operators’ figures were wrong and — worse — were “not based on engineering principles”.<sup>38</sup> Soon the consultants’ report, (which relied upon data supplied by the NBEPC and which compared Beechwood with six small plants totalling 113 megawatts

35 The strip-mine run by the government during the 1947 strike made a gross profit on sales of 39 per cent: E. Caldwell, “Stripping Operation of the Avon Coal Company Ltd. 5/4 to 6/6/47”, Office of the Comptroller-General, MR 592, 3-331, “Fuels Coal General Data 1947-1948” [my calculations]. It was not unusual for MLAs to ask the NBEPC to buy a carload or two from a needy operator, and in several instances the power commission signed multi-year contracts to enable operators to secure a line of credit.

36 “The New Brunswick Coal Operators’ Association Brief in Support of Thermal Generation of Electrical Energy as Opposed to Development of Hydro Generation at Beechwood”, 31 August 1953, p. 19, MR 597, 3-331, “Coal Meeting and Correspondence, N.B. Coal Producers Association 1952-1955”.

37 *Daily Gleaner* (Fredericton), 11, 22 September 1953; Feeney to D.D. Patterson, 15 August 1953, MR 488, St.J-20, “St. John River Financing, 1953-1954”.

38 NBEPC, “Reply to the Coal Operators’ Brief of August 31, 1953”, 19 October 1953, MR 592, 3-331, “Coal Operators Ass’n Brief of 31/8/53”.

[mw]), reassured the government that the hydro project was “more economical than any other equivalent source of power available”.<sup>39</sup> Then the commissioners supported their engineers’ plan, now more diplomatically labelled a “mixed hydro-thermal system”.<sup>40</sup> Through its new public relations department, the utility continued to impress upon the public the imperative of cheap power, as did Premier Flemming and a young University of New Brunswick economist, W.Y. Smith, who was appointed in 1954 as the province’s first Economic Advisor.<sup>41</sup>

The coal operators continued to skirmish, with some success. The commission imposed penalties for sub-standard coal, but then, under pressure, relaxed them. In turn, the engineers resisted, continually seeking price reductions and strict quality guarantees. They also took the unprecedented step of soliciting quotations from Nova Scotia mines, and the chief engineer wrote to the chairman stating flatly that either coal should be subventioned or the NBEPCC should save \$100,000 annually by using oil in new plants: “We propose being in a position to burn oil at Chatham after the new unit comes in”.<sup>42</sup> Meanwhile the operators relied upon the pressure of organized miners, the influence of local MLAs, and their own ability to cease shipments.<sup>43</sup> In response to these competing influences, commission policy on coal oscillated throughout 1954 and 1955. But the doctrine that cheap power could induce industrial expansion had become so general that primitive operations at Minto were no longer able to command widespread support.<sup>44</sup> The NBEPCC engineers had won concessions from the coal operators, and had helped mobilize a public consensus in favour of efficient power generation. Beechwood was to be built, and although delays had forced a 20 mw expansion of the Chatham thermal plant, it was to burn oil not coal.<sup>45</sup> When the latter decision was finally taken in late 1955, there was before the

39 H.G. Acres & Company, “Proposed Beechwood Development: Economic Analysis”, 12 November 1953, p. 3, CF.

40 C.H. Forbes to A.M. Tooke, 30 November 1953, covering NBEPCC “Reply”, MR 592, 3-331, “Coal Operators Ass’n Brief of 31/8/53”.

41 *Gleaner*, 26 January 1954, and W.Y. Smith, *The Door to New Brunswick’s Opportunity*, [speech to the executive of the Board of Trade in Saint John, 7 January 1954] (reprinted as a NBEPCC pamphlet).

42 R.L. Miller, “Brief Supporting the New Brunswick Electric Power Commission’s Coal Purchase Conditions of July 2, 1954”; H.V. Denyer to Forbes, 8 June 1954, and Denyer to various Nova Scotia coal companies, 15 June 1954; and Feeney to Fournier, 18 June 1954, MR 592, 3-331, “Coal General Data 1954”.

43 *Gleaner*, 31 March, 22 July 1954; Minutes of Meeting of 22 July 1954, Minto Local, United Mine Workers of America, District 26, Microfilm Reel 237, PANB; extract of minutes of NBEPCC meeting (with coal operators) of 14 July 1954, MR 592, 3-331, “Coal General Data 1954”.

44 “The Coal Price Dilemma”, *Gleaner*, 24 July 1954 [editorial].

45 Extract from minutes of NBEPCC meeting of 16 November 1955, MR 592, 3-331, “Coal: General Data 1955”.

commission a proposal to build several 50 mw thermal plants, and with expansion of this magnitude on the horizon, the local coal industry paled into insignificance.

The construction of Beechwood began officially in June 1955, and thousands of people streamed to the site to hear speechmaking by Flemming, Fournier, and C.D. Howe, the federal minister responsible for industry, who was pointedly invited. In the old-time, political-picnic atmosphere, the premier expounded upon the theme of industrial development, which the press took up enthusiastically.<sup>46</sup> Yet the project was undertaken very hesitantly. In 1953, funds were allocated for design work, but when Forbes leaked the commission's approval of Beechwood in early 1954, he was forced to retract. Not until April 1954 did Fournier commit himself publicly, and tenders were not called until early 1955.<sup>47</sup>

While the storage question, financial incapacity, and opposition from the coal industry were the main causes of delay, it was also due to acute uncertainty about power requirements. The northern ore finds seemed capable of supporting entirely new mining, smelting, and chemical industries; the government's policy was to welcome extra-provincial corporations prepared to create these developments; and, within limits, the government was disposed to depart from past practice and supply substantial blocks of energy to heavy industry: the NBEPIC definitely planned to do so. But the companies' plans were vague, or were secret, or were bargaining feints, or were dependent upon the intentions of other actors, and so future demand for electricity became radically uncertain. The utility found that its planning parameters constantly changed as plans interacted with those of other large organizations. That is, planning took place in what has been called a "turbulent field".<sup>48</sup> In this environment, the orderly development of the St. John River, based on Beechwood, was cast in doubt as the NBEPIC sought flexible power sources to meet shifting and uncontrollable demands. As well, the decision load increased rapidly, and the need for fast and expert evaluation shifted effective decision-making power further from the government and the commission to the technical staff of the organization.

In 1954 the provincial government assembled a small, mobile group of experts, the Power Committee, to assess the possible electrical requirements of the mining industry. As the importance of the northern ore bodies became apparent, potential demand had risen enormously. While the NBEPIC's generating capacity in 1954 was 112 mw and estimated peak demand in 1961 was

46 *Gleaner*, 13 June 1955; *Telegraph-Journal* (Saint John), 13 June 1955; "Of Men and a River", *Gleaner*, 11 June 1955 [editorial].

47 *Gleaner*, 19, 20 January, 6 April 1954. Order-in-Council 55-315 gives tender history; see also R. Tweeddale, "The Background of the Beechwood Hydro Electric Power Development", unpublished manuscript, 25 March 1955, NBLL.

48 F.E. Emery and E.L. Trist, "The Causal Texture of Organizational Environments", *Human Relations*, 18 (1965), pp. 21-32.

147mw, (which Beechwood and the Chatham expansion could meet comfortably), one mining firm alone expressed interest in 100 mw in 1959 and a further 150 mw by 1964.<sup>49</sup> The Power Committee was to investigate the tangibility and implications of such inquiries.<sup>50</sup> Since the requirements of the mining and related heavy industries were both huge and subject to substantive negotiation, the Power Committee soon became a predominant force in both power and industrial planning.

It was quickly evident that the corporations' intentions were uncertain. One concern was possible changes in U.S. import duties, and another was the new mining tax legislation which had been passed in New Brunswick to discourage the export of raw ore. The St. Joseph Lead Company, which controlled a major lode near Bathurst, might simply hold its resources underdeveloped; for smelting to be done in the province, however, it was made clear that power had to be available at around 5 mills per kilowatthour [kwh].<sup>51</sup> As there was no firm demand from St. Joseph or other companies, the Power Committee advised the government in 1954 that Beechwood could suffice until 1960, after which it favoured a progressive development of the St. John.<sup>52</sup> In 1955, the Power Committee received inquiries from firms interested in mines, smelters, chemical plants, and a pulp mill. The plans of each called for phased blocks of power building up over a number of years after start-up dates. Start-ups were subject to alteration, and the many possible permutations of power requirements made total demand in any future year very uncertain. If the NBEPC were to generate power for industry, it appeared that its only recourse was to make flexible plans which could be quickly implemented as the companies' intentions clarified.<sup>53</sup> Flexibility, in the power business, implies thermal plants, which are more quickly built than hydro installations and have lower capital costs. Hence the Power Committee investigated oil prices and Nova Scotia coal supplies. Studies showed that very large thermal plants could produce power at about 7 mills per kwh, but the mining companies demanded cheaper rates; otherwise

49 Tweeddale to H.M. Nelson, 2 September 1954, MR 603, 3-351, "Planning General 1954"; see also *Assembly Report*, 1954, pp. 335-6.

50 Officially, this was the Committee to Study the Electric Power Requirements of New Brunswick's Mining Industry. The members were Tweeddale, Rowley, W.Y. Smith, J.S. Bates, C. Clements (Director, Mines branch, Lands and Mines), and J. Paterson (Deputy Minister, Industry and Development). The first four were the key participants. See minutes of first meeting, 4 October 1954, MR 595, 3-333, "Power C'ttee General Data Oct. 1955".

51 *Acts*, 1954, Ch. 10 changed the basis of tax from royalties to income, and provided for discretionary triple taxation of profits from raw ore exports. See minutes of meeting with St. Joseph Lead, 9-10 November 1954, MR 595, 3-333, "Power Committee Meetings 1954-1955".

52 Power Committee, "Interim Report to the Premier", 20 December 1954, MR 595, 3-333, "Power Committee 1954".

53 Minutes of meeting of NBEPC engineers with representatives of Shawinigan Engineering Company, 19-20 July 1955, MR 603, 3-351, "Planning General 1955".

ores would be smelted elsewhere. Consequently, the Power Committee considered subsidizing heavy users, a very significant expansion of state support for industry.<sup>54</sup>

At the same time, the pressure on Ottawa for aid was increased. The New Brunswick submission to the Royal Commission on Canada's Economic Prospects outlined a development strategy based on the full processing of provincial natural resources, with the state providing the essential electrical infrastructure. Hydro dams were proposed for the St. John and for most other large rivers in the province, and power development was projected to account for 20 per cent of all investment in industrial and social capital (including housing) through to 1985: it would consume two-thirds of all provincial government capital expenditure.<sup>55</sup> At the Fredericton hearing Flemming made a forceful plea for federal assistance: "But unless we can supply adequate amounts of low-cost electrical energy this great wealth will only be dug up to be carted away and processed elsewhere. New Brunswick will be destined for years to come to remain the hewer of wood and the drawer of water that it has been for years past. But, gentlemen, this province is no longer content to remain one of the weakest links in the Confederation. If need be we will fight for our place in the economic sun".<sup>56</sup> The Royal Commission was not especially sympathetic. But Flemming did fight, in the 1957 and 1958 federal elections: his strong provincial party organization worked hard for the federal Progressive Conservatives, who were pledged to, and ultimately did, satisfy the province's demands for help in financing hydro developments.<sup>57</sup>

By late 1955, however, the Power Committee had little interest in hydro. It had designed two possible strategies for the 1956-1966 period. The first would meet normal load growth, with storage on the Tobique allowing a third 34 mw unit to be installed at Beechwood, followed by 50 mw of thermal power. The

54 Minutes of special meeting with St. Joseph Lead Co., 13 June 1955, MR 595, 3-333, "Power C'ttee Meetings 1954-1955; C.E. Baltzer, "Confidential Memorandum on Power For N.B. Mining Companies" (evaluating studies by H.G. Acres and W. Dryer), 20 October 1955", MR 595, 3-333, "Power C'ttee General Data Oct. 1955", and, in the same file, see calculations of the subsidy — \$2.3 million per year — required to provide 5-mill power at Woodstock (for a potential manganese smelter) and at Bathurst.

55 New Brunswick, *The New Brunswick Economy: Past, Present and Future Prospects* (Fredericton, 1955), especially Chapter VIII, Tables XV and XVI. This brief bears the stamp of W.Y. Smith. Of some interest is the suggestion, made here for the first time, that electricity might be sold to the U.S. to finance power projects, were federal funds not forthcoming (p. 85).

56 "Address of the Hon. Hugh John Flemming", *ibid.*, p. 9.

57 Flemming had an unwritten commitment from Diefenbaker for aid. On the "Moncton Resolutions" passed by Progressive Conservative candidates in the region, see Dalton Camp, *Gentlemen, Players and Politicians* (Toronto, 1970), pp. 324-30, 337. In 1957, the federal Tories gained two seats in New Brunswick. In 1958, after the Diefenbaker government extended a special loan for Beechwood and passed the Atlantic Provinces Power Development Act, two more seats were gained.



second plan would meet all industrial demand as well, by supplementing the basic program with seven thermal plants totalling 400 mw as well as another hydro project. It was the guiding principle of the Power Committee that industrial demand should be met, and in a formal report, the committee reviewed potential industrial installations, and forecast extraordinary load growth of 215 mw over the next five years alone.<sup>58</sup> Impressed, the commissioners deferred decisions on particular plants, but approved burning oil at Chatham, and accepted the policies of allowing large users special rates and of providing individual plants for very heavy consumers (who might be expected to loan the NBEPCC part of the capital costs).<sup>59</sup> The government too seemed persuaded. It sent to Ottawa another brief laying out possible industrial developments and the string of thermal plants required to supply them, and proposing either loans for the St. John installations or a federal subsidy for thermal plants using Maritimes coal.<sup>60</sup> This document was hastily prepared and weakly argued, and may have been designed for electoral purposes. The massive shift to thermal power shocked the Liberal opposition members, and Flemming used their abstention on a cleverly-worded motion which supported both Beechwood and future power developments as his central issue in the 1956 election.<sup>61</sup> Nevertheless, Flemming appears to have been genuinely committed to the new thermal strategy, defending it as one which “leaves most factors under our control and under the benefit of our own decisions, here in New Brunswick. We can settle details in the board room of the Commission or in the Executive Council chamber and will not need to be perpetually waiting outside of office doors in other capitals”.<sup>62</sup>

58 H.E. Marshall and L.J. Bruneol, “New Brunswick Electric Power Commission: Long Range Construction Program and Capital Requirements for Fiscal Years 1956-57 to 1965-66 Inclusive”, 8 November 1955, and “Interim Report of the New Brunswick Power Committee to the Government of New Brunswick and the New Brunswick Electric Power Commission”, 9 November 1955, MR 603, 3-351, “Planning General 1955”.

59 Extract from minutes of NBEPCC meeting of 16 November 1955, MR 595, 3-333 “Power C’ttee Meetings 1954-55”.

60 New Brunswick, “The Need for Federal Assistance to New Brunswick for the Development of Electric Power”, January 1956, NBLL. Federal aid would ensure “that the province would not be forced to request the Federal Government to grant it permission to export power to the United States, in order to obtain the necessary funds for hydro power development” (p. 16).

61 *Assembly Report*, 1956, pp. 249-50, 502-3, 528; C.A. Woodward, *The History of New Brunswick Provincial Election Campaigns and Platforms 1866-1974* (Toronto, 1976), pp. 71-3.

62 *Assembly Report*, 1956, p. 633. Another possible explanation for the conversion to the thermal strategy is the influence of K.C. Irving, the industrialist, who was planning an oil refinery for Saint John. It is true that the first major thermal plant, of 50 mw at Courtenay Bay, did burn residual oil from this refinery (NBEPCC, *AR*, 1962, p. 7). And Irving was in contact with the NBEPCC at an early date (Secretary to Tweeddale, 23 July 1957, MR 824, 1-636, “Agenda 1951-1960”, concerning Irving’s letter of 12 July inquiring about NBEPCC oil purchases). However, the shift was made before Irving’s plans solidified, and the NBEPCC emphasis still was on coal, as many meetings in 1956 and 1957 with Dosco and the New Brunswick operators show. Moreover, the engineers were waging a running battle with Irving over his log drives through

While the new strategy may have reduced reliance on other governments, its adoption also contributed to a loss of independence in policy formation. First, the NBEP's commitment to supply electricity to industrial consumers tended to subject its own plans to their requirements. Second, initiative passed from elected politicians to the commission's permanent staff, whose assumptions about economic development and sense of organizational self-interest both influenced power planning. That the staff's proposals could be overruled only at the cost of thorough internal discontent was evident during the dispute with the coal operators, but the positive influence of expertise was clearest in the Power Committee, which took over planning when uncertainty and the decision-load both increased.<sup>63</sup> It could affect the plans of corporations and take decisions about which plants might have priority should power be scarce.<sup>64</sup> More important, it consistently assumed that the NBEP should meet all industrial demand for electricity, and this view underlay all its deliberations. Recommendations were singular, rather than in the form of alternatives: for instance, of the two strategies prepared for the 1956-1966 period, only the one which called for fully supplying industry went forward to the commission.<sup>65</sup> As there was no independent source of advice, the Power Committee's proposals were quickly translated into government policy.

The rise of staff control culminated in the debate which took place when Feeney, the chief engineer, was to retire. C.H. Forbes was still acting as administrative head, although he shared authority with both Feeney and the chairman, Edgar Fournier. The Power Committee, arguing that this arrangement created conflict and indecision, favoured a single chief executive officer: the organization should be "prepared to cope with the many problems which are involved in its future growth and development".<sup>66</sup> A short amendment to the Electric Power Act allowed the commission to appoint a general manager, and the struggle, when it came, was brief. In July 1957, the commission agreed that Feeney should stay on to oversee the completion of Beechwood while Tweeddale

Beechwood and his proposal to install a holding boom in its headpond (MR 907, 3-422b, "BW#1 Log Chute General July 1955-1956", and "BW#1 Log Driving Minutes of Meetings"). Neither was the government especially inclined to favour Irving's interests at this time, as it was encouraging a competitive pulp and paper company to build a mill in Saint John: R. Hunt and R. Campbell, *K.C. Irving: The Art of the Industrialist* (Toronto, 1973), pp. 122-3, 127. This mill actually used cheap steam provided by the NBEP, and this reflects the organization's willingness to encourage industrial use and to increase revenues regardless of the source. It was this dynamic that led to the mutually beneficial deal with Irving and also, in a larger sense, to the shift to flexible, accommodating thermal plants.

63 J.S. Bates saw the appointment of the Power Committee as a mere transitional step in the transfer of control to the staff of the NBEP: interview, 19 October 1977.

64 Minutes of meeting of 1 March 1956, MR 871, 3-333, "Power Committee General Data Jan-May 1956".

65 Compare the documents cited in note 58 above.

66 Minutes of meeting of 3 April 1956, MR 871, 3-333, "Power Committee Meetings 1956-1958".

would replace him as chief engineer and also would assume responsibility for all operating functions of the NBEP. Forbes vehemently opposed the change, resigned, and left the boardroom.<sup>67</sup> Tweeddale became general manager in all but title. He quickly re-organized the managerial structure and instituted a strong executive committee made up of all department heads. It was, he said, to act “as a clearing house for items for presentation to the Commission”.<sup>68</sup> The executive committee itself dealt with crucial matters like rate structures, expropriations, and industrial development strategy. With this change accomplished, real decision-making power was lodged firmly in the organization’s professional staff, thus capping the evolution which the NBEP had undergone through the preceding decade.

One fundamental corporate imperative is organizational maintenance and consolidation, and certainly the NBEP grew more internally cohesive during the course of the 1950s. Good labour relations were enjoyed following the recognition of the union, and the utility led most New Brunswick firms in careful personnel policies. In 1953 an apprenticeship training program was set up, and trade advisory committees established the following year accorded senior tradesmen a consultative role. A company newsletter was begun. And after the organizational changes of 1957, when Tweeddale issued new policy directives to redefine internal structures and to standardize operating procedures, the attitude of senior management towards the external boundary of the organization was best illustrated by a discussion of the “induction” of new employees: there was a conscious effort to hire New Brunswickers and to train them carefully in the ways of the public utility.<sup>69</sup> Surely the loyalty to the new regime of the executive and professional staff was not weakened by the substantial salary increases awarded them soon after the reorganization.<sup>70</sup>

If the NBEP grew more cohesive, it also became less forthcoming about its activities. In an environment where other major actors may be in competition if not outright opposition, information is an asset. Secrecy enhances flexibility and, in the short run at least, inhibits public criticism while obviously weakening accountability. Amendments to the Electric Power Act in 1955 reduced the amount of information required to be made public, and annual reports did become less detailed.<sup>71</sup> In 1957 the executive committee decided to cease reporting its sales to large industrial clients, for this was “poor business ethics”. The

67 *Acts*, 1957, Ch. 38; extract from minutes of NBEP meeting of 19 July 1957, MR 823, 1-600, “General Data 1956-1960”. See also Order-in-Council 57-617A formalizing the change.

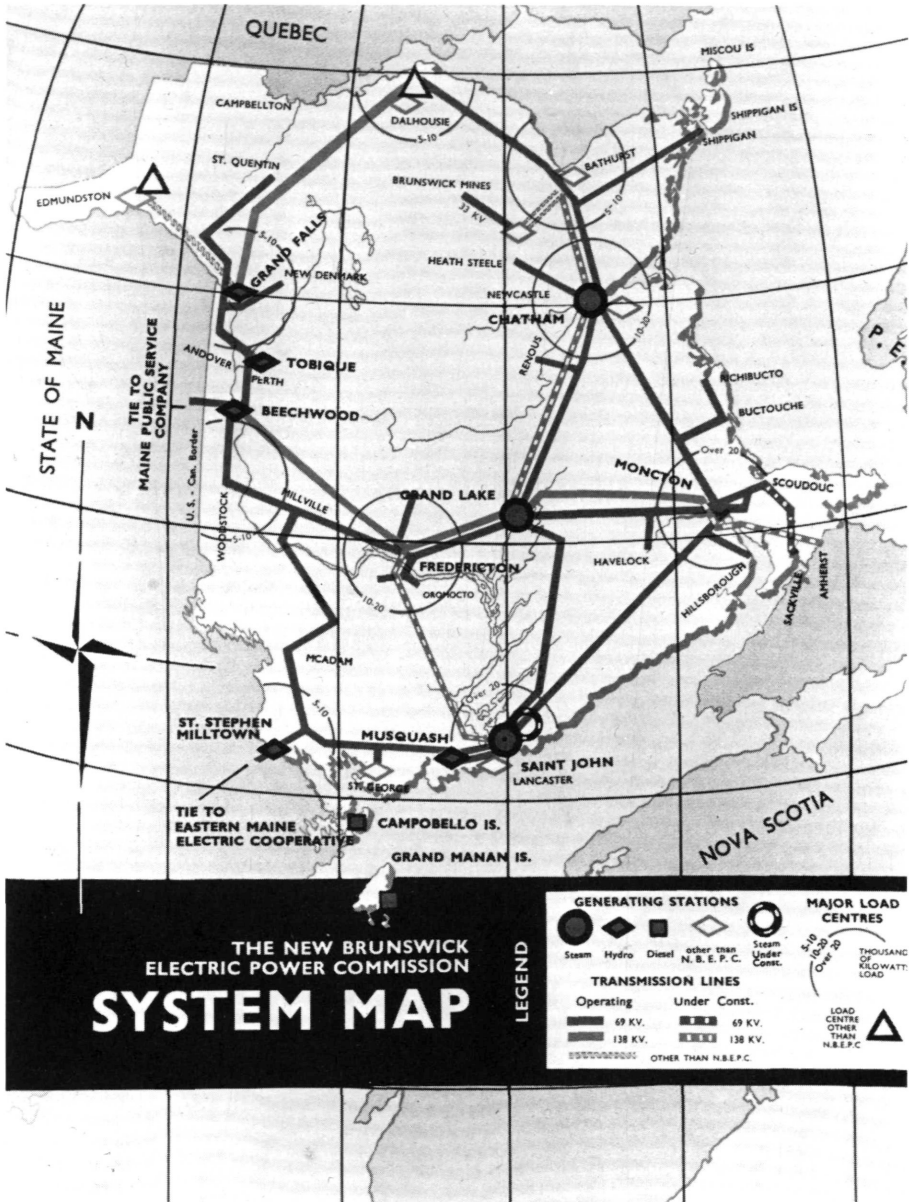
68 Minutes of meeting of 16 August 1957, MR 824, 1-636, “Executive Committee Meetings 1957-58”. See also Tweeddale to Fournier, 26 July 1957, MR 823, 1-600, “General Data 1956-1960”. Tweeddale was officially appointed General Manager in 1958.

69 Minutes of meeting of 14 July 1958, MR 824, 1-636, “Executive Committee Meetings 1957-58”.

70 Order-in-Council 57-868.

71 Compare New Brunswick, *Revised Statutes 1952*, Ch. 71, Sn. 18 (a. to f.) with *Acts*, 1955, Ch. 44, Sn. 25.

FIGURE 2



New Brunswick Electric Power Commission operations in 1960. The stylish design presents an image of coherence, and emphasizes expansion and production rather than local service. (Source: NBEP, *Annual Report*, 1960, p. 17).

committee also favoured excising the supplement to the annual report which listed NBEP employees and salaries: there was "no advantage in having such material open for public information". Similarly, when the federal coal subventions made available by the Diefenbaker government were to be distributed, management chose a billing system which would disclose very little information to the customers affected, as this would preserve "flexibility".<sup>72</sup>

The counterpart to secrecy is public relations. One hardly could exaggerate the barrage of power publicity that was laid down in New Brunswick during the 1950s. While the media were willing to disseminate almost any story or press release about power development, there was also a determined effort on the part of the commission staff to impress upon New Brunswickers the need for more electricity.<sup>73</sup> The public relations department began to operate in 1954, and the doctrine it spread was that industry was essential for the province and power was essential for industry. A series of half-hour radio programs aired in the fall of 1955, for instance, was informative and very sophisticated, but the basic premise that more power was required for more large-scale industrial development was never cast in doubt.<sup>74</sup> This view was reflected in political debate. Elected representatives from both sides of the House were made privy to NBEP plans, and they echoed the emerging orthodoxy. According to the Leader of the Opposition, members of both parties were "apparently of one mind", and until 1956 the most acrimonious debate over the Beechwood development concerned whether the credit for it should lie with McNair's administration or with Flemming's.<sup>75</sup>

During the 1950s, the NBEP also consolidated its financial position. Rate increases in 1951 had produced a modest surplus, which came to be retained in a variety of stabilization and insurance reserves. Applying revenues to reserves needed government approval until 1955, when the commission gained the authority to set up freely "such reserve, depreciation and surplus accounts as are maintained by a properly managed public utility".<sup>76</sup> By 1958, reserves were kept

72 Minutes of meetings of 8 November, 31 December 1957, MR 824, 1-636, "Executive Committee Meetings 1957-58".

73 "Power Development NB Clippings 1950-1955", MR 595, 3-333; *Gleaner*, 31 March 1953, pp. 12-17, [special supplement on electricity], especially R. Tweeddale, "Assuring N.B.'s Future Power". See also the opposition's comments on the publicity campaign: *Assembly Report*, 1954, pp. 60, 68.

74 Scripts of a series of seven radio talks given weekly over station CFNB, beginning 21 September 1955, MR 595, 3-333, "1955 Power Committee Reports".

75 *Assembly Report*, 1955, pp. 32, 364-75. Only once in the Assembly was the power of cheap electricity to attract industry questioned: see *Assembly Report*, 1954, pp. 69-70. A 1955 motion supporting Beechwood passed without debate. In 1956 this unanimity broke, with opposition charges of patronage at Beechwood (involving the premier's company), and with its surprise over the replacement of hydro development on the St. John by the thermal strategy.

76 *Acts*, 1955, Ch. 44, Sn. 24. Compare *Revised Statutes 1952*, Ch. 71, Sn. 16.

for depreciation, insurance, water storage equalization, storm damage, heavy maintenance, revision of the rate structure, and contingencies. As the commission chairman later explained, "And when we paid that deficit and we were beginning to make money, we had to hide the profit because the people knowing that we were making money would want reductions in rates".<sup>77</sup>

Retained earnings helped ensure the autonomy of the organization by facilitating the borrowing necessary for expansion. Traditionally, NBEPIC capital expenditures were financed by provincial bonds, but under the 1955 Electric Power Act amendments, the ceiling on provincial borrowing for the utility was removed, loans made by the province could be exchanged for the NBEPIC's own bonds, and, with government approval, the commission could borrow for its own purposes by issuing its own debentures, which could be guaranteed by the province. These powers were not exercised fully for some time, although the bank loan used to finance Beechwood, until the Diefenbaker government extended its special loan in 1958, was contracted by the NBEPIC itself. The borrowing powers did confer an important freedom on management: permission to borrow would be obtained easily when the province's credit was not thereby impaired, and the new arrangement would not constrain other departments to limit their capital spending in favour of the utility. Further, since the corporation was self-supporting, residual partisan pressures to spend through particular channels or at politically opportune times could be resisted more readily. Through subsequent years of very rapid expansion, the NBEPIC continued to borrow on its own account, with government guarantees. By the late 1970s, when the utility's debt was approaching that of the province as a whole, there were those in the organization who believed that its profitable operations were helping maintain the credit rating of its nominally senior partner, the government of New Brunswick.

In addition to security and autonomy, the NBEPIC sought expansion. Besides helping fulfill its acknowledged mission to supply more and cheaper power, growth expressed the drive, present in any organization, towards increasing resources, operations, personnel, and influence. The commission's engineers believed in industrial growth, and they firmly believed that this required electric power. Lack of electricity and high rates had been a bottleneck in the past. But the engineers also maintained that cheap power could attract industry to the province, an argument they advanced persistently to press the case for expanding generating capacity. Moreover, the engineers supported the commission's entry into the "heavy industry field", and favoured primary industry, which consumes most power. Not only was it intrinsically desirable and capable, they

77 W.Y. Smith, *et al.*, "An interview with Senator Edgar E. Fournier", November 1975, p. 51, University of New Brunswick Business Administration Interviews, PANB. Exhaustive compilations of NBEPIC accounts are found in H. Gagnon, "La Commission d'Electricité de Nouveau-Brunswick", MSc thesis, Université de Moncton, 1969.

argued, of stimulating secondary manufacturing, but it would also enable larger generating plants to be built. As Tweeddale stated in 1955, "Today, we believe that the Commission must be in a position to supply the requirements of heavy industry as well, and this could be the turning point in the supply and cost picture of electrical energy in New Brunswick, because it will make it possible to develop some of the larger hydro potential of the Province and the use of larger, more efficient thermal units".<sup>78</sup> Note how the logic runs: one decides to supply heavy industry because it allows larger generating units to be installed. It would be absurd to regard the entire effort of the NBEPIC to increase its generating capacity as a manifestation of the implicit corporate goal of expansion. But the strategy of encouraging heavy industry was so strongly advocated, in part, because it was most congruent with organizational growth.<sup>79</sup>

Whatever the mix of motives, corporate management did favour heavy consumers. Rate-setting provides an example. Of course, in North America electricity rates have been lowest, generally, for heavy, steady users providing dependable demand (although the economic rationale for this practice has been questioned strongly, precisely on the grounds that it encourages over-investment and organizational growth<sup>80</sup>). New Brunswick has not been exceptional in this regard. But the NBEPIC's sympathies were made clear in 1958 when it had to allocate among customers the federal coal subvention payments which were, by law, to be used "to reduce the price of power where it will make the greatest possible contribution to economic growth".<sup>81</sup> This was taken up by the executive

78 R. Tweeddale, "New Power for New Brunswick Development", in *New Brunswick's Rising Industrial Potential*, pp. 7-10, p. 8. Tweeddale expressed the professional or corporate view: at this time the commissioners had taken no decision to supply heavy industry.

79 It is obvious that larger plants achieve economies of scale which could allow rates to be reduced. But when generating stations would supply individual mines or smelters, as the NBEPIC planned, then the overall savings due to lower reserve requirements and bulk purchasing would be marginal — particularly were heavy users subsidized — and there is no evidence that the Power Committee ever calculated them. Nor, if expansion continues, do rates necessarily decrease, since further, larger units must be financed. Organization theorists refer to "goal displacement" when the original goal is obscured by preoccupation with the means initially designed to attain it. Here, it seems that the goal of heavy industrial development was favoured by the NBEPIC, to some extent, because it allowed the deployment of certain means — more and larger installations — which were organizationally fulfilling. This process has been called "reverse adaptation": "The goals, purposes, needs, and decisions that are supposed to determine what technologies [the NBEPIC in this case] do are in important instances no longer the true source of their direction. Technical systems become severed from the ends originally set for them and, in effect, reprogram themselves and their environments to suit the special conditions of their own operation"; L. Winner, *Autonomous Technology* (Cambridge, Mass., 1977), p. 227.

80 Aidan R. Vining, "Provincial Hydro Utilities", in Allan Tupper and G. Bruce Doern, eds., *Public Corporations and Public Policy in Canada* (Montreal, 1981), pp. 149-88, especially pp. 176-82.

81 Order-in-Council 58-86 (federal-provincial agreement under the Atlantic Provinces Power Development Act), Sn. 2 (c).

committee — not the commission — and most members agreed that the subvention could “supply something practical for large users such as Udd, Irving, and Brunswick Mining”. A suggestion to aid smaller enterprises instead was rejected, for it was incompatible with the theory of economic development upon which the NBEPC of the 1950s was founded: “The basic industries would have to be developed and once this has been done, the secondary industries should grow”. Rebates totalling \$250,000 per year were granted the Minto strip-mine operators and 19 other heavy users; as a major, in-plant, consumer itself, the NBEPC retained a significant share of the subvention.<sup>82</sup>

Reflecting the growth ethic, the utility stimulated other consumption as well. In 1958 management decided to co-operate with the Department of Industry and Development in its efforts to encourage smaller regional centres to attract new investment: some units would be idle anyway, “awaiting load growth and industrial expansion”.<sup>83</sup> Nor were households neglected. Returns from domestic consumption were higher, and evening demand employed unused capacity. In 1953 monthly billing was introduced in the expectation that lower bills, albeit more frequent ones, would encourage greater use. In 1956 a special rate was made available to consumers who owned major domestic appliances, and teams toured the province giving demonstrations under the slogan “Live Better Electrically”. This activity was financed by the 25¢ per customer per year allocated to efforts to increase consumption.<sup>84</sup> Promotion was also carried out less overtly through the Electric Service League, of which the utility’s distribution manager was a founding member.<sup>85</sup> By 1959 households took less than one-third of NBEPC output, but this market’s significance to the corporation was far greater than sales or load figures could reveal, for domestic use impressed upon the public the indispensability of NB Power.

Another avenue of growth was exports. As Beechwood neared completion, links were established with two Maine utilities. For some years, sales remained relatively small but eventually the organization’s growth came to be based largely on power exports, mainly to the United States. Some of this electricity was made surplus by imports from Quebec; however, the NBEPC identified itself as a “manufacturer” of electricity, building plants for export purposes. The argument was made that larger plants would keep rates low in the future and would eventually serve expanded New Brunswick industry, but the strategy also seemed attractive because it allowed the deployment of certain means and also

82 Minutes of meetings of 24 October, 8 November, 31 December 1957, MR 824, 1-636, “Executive Committee Meetings 1957-58”; NBEPC, *AR*, 1959, p. 12.

83 Minutes of meeting of 7 July 1958, MR 824, 1-636, “Executive Committee Meetings 1957-58”. See also minutes of meetings of 28 July, 13 September 1958, *ibid.*, and Order-in-Council 58-634.

84 “History of Rates: New Brunswick Electric Power Commission”, n.d., CF; NBEPC, *AR*, 1958, p. 14; *Assembly Report*, 1955, pp. 157-58.

85 Incorporation Papers, 1957, p. 395, Department of Consumer and Corporate Affairs, Fredericton, N.B.



entailed quicker growth: "If this export load were to be higher, in the range of 800 mw to 1000 mw, this would permit consideration of a larger installation and thus nuclear power plants could be added to the NB Power system as early as the late 1970s".<sup>86</sup>

A final pattern in NBEPCC activity consisted of its efforts to bring under management factors impinging upon corporate plans. This implied, notably, control over generation, the function upon which its position as a utility was based, and during the 1950s its drive towards a monopoly of power supply within the province quickened. In 1957, the distribution systems of Bathurst and Dalhousie were acquired, and in 1959 that of the Moncton Electricity & Gas Company. In 1959 too, the NBEPCC took over the symbolic Grand Falls plant of Gatineau Power. The trend continued: in 1956, private utilities and industrial plants generated 60 per cent of New Brunswick's electricity; in 1979, 9 per cent.<sup>87</sup>

Of course there are good technical and economic reasons for integrating power systems. But the NBEPCC's reaction to a potential private station indicates that its actions were not influenced by such factors alone. In 1954 the Power Committee received a proposal to build an innovative 44 mw thermal plant in Albert County, fuelled by the local oil shale deposits and producing chemical by-products. The principals, Nashwaak Corporation, created much publicity, and Flemming ordered a feasibility study which did not condemn the scheme. But the commission's engineers received the proposal coolly, for a private plant would impede the potential monopoly they regarded as most efficient.<sup>88</sup> Despite continued Nashwaak pressure, another study was commissioned, and it recommended not proceeding, as did the Power Committee.<sup>89</sup> Later, after the proponents had built a pilot plant in New York, the Power Committee took another look at the project — the price now offered was 6 mills per kwh for 66 mw, when the NBEPCC's projected oil-fired thermal plants were

86 NBEPCC, "An Export Power Programme for New Brunswick with Nuclear Power", [brief prepared for the Department of Regional Economic Expansion, 1971], p. 13. See also NBEPCC, *AR*, 1963, p. 10: "It is believed that the recently announced policy change of the Federal Government with respect to the export of surplus power from Canada to the United States may make possible an accelerated development of many of our hydro potentials which at present may not have sufficient local markets to warrant immediate development".

87 Canada, Dominion Bureau of Statistics, *Electric Power Statistics 1956* (Ottawa, 1957), Table 3, and Statistics Canada, *Electric Power Statistics 1979*, Volume II, (Ottawa, 1982), Table 2.

88 Ebasco Services Incorporated, "Review of Proposed Oil Shale Burning Power Development", November 1954, NBLL; Feeney to Forbes, 5 May 1954, MR 595, 3-333, "Albert Oil Shale General Data 1954-1955".

89 Nashwaak Corporation lawyers to N. Buchanan, 20 May 1954, complaining of NBEPCC "rigidity", and W.P. Dryer to Feeney, 7 January 1955, *ibid.*; Tweeddale to Rowley, 13 January 1955, and Power Committee to Flemming, 9 February 1955, MR 595, 3-333, "Power C'ttee General Data 1954-1955".

to produce at 7 mills.<sup>90</sup> Yet the oil-shale plant was never strenuously pursued by NBEPCC engineers, who adopted a passive stance rather than a co-operative one, and who concentrated on their own plans.

Rational arguments for monopoly in electricity supply stand on the grounds of technical and economic efficiency: administrative costs are reduced, duplication is eliminated, and more efficient plants can be used most often. Such considerations should apply beyond the boundaries of a small province, and so if maximally efficient generation and minimally priced supplies were the principal goals animating the NBEPCC, one would expect extra-provincial interconnections to have been pursued eagerly. This was not the case, for in this area the goals of cheaper electricity and organizational advancement did not coincide. Interconnection with Nova Scotia utilities was arranged, but slowly, despite strong federal encouragement, pressure from regional businessmen (through the Atlantic Provinces Economic Council), and the known advantages of integrating New Brunswick hydro with Nova Scotia coal-fired plants. When it was achieved, the systems were not closely integrated: total spinning (active) reserves were co-ordinated, but not rates or capital spending, nor was there any obligation to curtail ordinary service or even casual sales in order to give emergency aid to the other participants.<sup>91</sup>

Another indication of the desire to control power generation was the NBEPCC failure to respond positively to offers of cheap power from the British-Newfoundland Corporation (BRINCO) development of Hamilton (later Churchill) Falls in Labrador. In 1956, after initial surveys of this giant project, BRINCO was seeking secure, long-term customers.<sup>92</sup> The head of BRINCO sales, E.N. Webb, wrote to suggest that 200 mw might be available to New Brunswick, and that a line from Sept-Isles to the province could be constructed for \$20 million. He was told that the Power Committee would consider the matter, but that absorbing 200 mw might be difficult.<sup>93</sup> The issue was presented

90 Minutes of meetings of 6 June, 8 August, 27 November 1956, MR 871, 3-333, "Power Committee Meetings 1956-1958".

91 Order-in-Council 59-919 [agreement of NBEPCC with Nova Scotia Power Commission and Nova Scotia Light and Power Company, 13 November 1959]. The Atlantic Provinces Power Development Act provided for funding of interconnections, an Atlantic Provinces Economic Council committee had been established in 1955 to promote co-operation, and studies had been completed much earlier: A.G. Christie, "Report to the Dominion Coal Board on Thermal Power from Canadian Coal: the Maritime Situation", 20 September 1954, especially pp. 8-10, MR 592, 3-331, "Coal Dominion Coal Board Reports 1954". A brief account of Maritime interconnection is found in G.L. Titus, "Maritime Electrical Energy Needs and Interprovincial Planning", *Canadian Water Resources Journal*, 4 (Fall 1979), pp. 64-70. This rather hopeful account antedated the collapse of the Maritime Energy Corporation in 1980.

92 P. Mathias, *Forced Growth* (Toronto, 1971), pp. 43-80, especially p. 54; Philip Smith, *Brinco: The Story of Churchill Falls* (Toronto, 1975), pp. 61-71.

93 Webb to Tweeddale, 29 May 1956, Tweeddale to Webb, 5 June 1956, MR 871, 3-333, "Power Committee General June 1956-Dec. 1956".

to the commissioners, who expressed interest and requested details. Webb soon quoted 4 mills as the Sept-Isles price, and again asked for a meeting.<sup>94</sup> This price was considerably lower than that which had been assumed by the Power Committee in an earlier discussion, and was much below the NBEPC's projected generating costs, and while concern was expressed about the absorption of 200 mw, current internal plans called for four 50-mw thermal plants to come on line between 1962 and 1965.<sup>95</sup> Yet the Power Committee spent more time on other matters, including the highly speculative Quoddy tidal project, and concluded that BRINCO's offer was relevant only to an integrated Maritimes system. After a visit by the persistent Webb, C.H. Forbes wrote that the NBEPC would be "extremely interested" in 150-200 mw at 5-5½ mills in 1961. BRINCO offered to supply that quantity at that price, and to build a transmission line to any point in the province; once more, the proposal was cast by the Power Committee onto the sterile ground of Maritime integration.<sup>96</sup> Tweeddale's year-end report to the premier again recommended large-scale thermal plants, and, since the price of oil had risen dramatically, he also advocated a complete assessment of the province's fuel resources. BRINCO was not mentioned.<sup>97</sup>

Describing these negotiations, Dr. J.S. Bates of the Power Committee later wrote with characteristic directness that the staff was "blindly seeking to confine generation to New Brunswick sources".<sup>98</sup> But a more cautious evaluation is necessary. The Hamilton Falls development was, at the time, still largely on the drawing boards. A transmission line across the St. Lawrence had recently failed. The political obstacles to sending power across Quebec were not yet fully apparent (and might have been solved through a united Atlantic front at this time), but the NBEPC engineers had encountered difficulties with that province which reflected a reluctance to supply competitors.<sup>99</sup> It is evident nonetheless that the NBEPC, and especially the engineers, did not welcome enthusiastically

94 Minutes of meeting of Power Committee of 6 June 1956, extract from minutes of NBEPC meeting of (probably) 13 June 1956, Webb to Tweeddale, 8 June 1956, *ibid.* The power line to the province would add one to two mills to the Sept-Isles price.

95 Minutes of meeting of 3 April 1956, MR 871, 3-333, "Power Committee General Data Jan.-May 1956".

96 Minutes of meetings of 8 August, 27 November 1956, Forbes to Webb, 4 September 1956, MR 871, 3-333, "Power Committee General June 1956-Dec. 1956".

97 Tweeddale to Flemming, 31 December 1956, *ibid.*

98 J.S. Bates, "Recollections of Maritimes Developments", unpublished manuscript, November 1977, p. 5. [copy in possession of R.A. Young]. See also his "Recollections of Atlantic Developments", *APEC Newsletter*, 22 (1978), pp. 1-4. There is some evidence that Bates favoured a single private power corporation in the Maritimes: Bates to Tweeddale, 5 February 1957, MR 871, 3-333, "Power C'ttee General Data 1957-1960".

99 "Proceedings of a Meeting for the Discussion of Requests by the Province of New Brunswick to the Province of Quebec for the Purchase of Power and for Water Storage on the Saint John Watershed", 1 March 1955, especially p. 13, MR 549, 3-317, "Quebec Hydro 1953-1955".

the prospect of cheap electricity for New Brunswick from outside sources.

During the 1950s, several forces converged to create conditions favourable to the rise of an internal dynamism in the New Brunswick Electric Power Commission. Post-war expansion brought new staff, while power shortages and system overload required new generating facilities. The organization, through an institutionalized planning process, gained initiative and a sense of mission, and was gradually freed from close political supervision. In part this flowed from a congruence of the engineers' ambition to undertake large-scale, efficient generation of power for industry with Premier Flemming's personal faith in technology and his government's policy of encouraging industry to locate in the province and develop its resource wealth. Native entrepreneurs, like Flemming himself, could not supply the capital required to exploit the northern ores or build chemical plants, but they could hope to advance on the strength of activity created by extra-provincial firms. The NBEPCC therefore was allowed to orient itself towards efficiency — even at the expense of those it had previously subsidized, and with the consequence that politically useful direction of petty expenditure was sacrificed — in order to provide attractive infrastructure for new industry. Indeed, freeing the organization from political control unleashed a powerful growth mechanism, for the NBEPCC could best achieve its own expansion by stimulating industrial development in the province.<sup>100</sup>

But goals may be realized through a variety of means. Efficiency can be increased by careful cost control or by building much larger plants, and growth can be achieved by aiding domestic industry, encouraging new entrants, or satisfying export markets. Furthermore, organizations have latent goals. As it evolved through the 1950s the NBEPCC became increasingly concerned with its own security and expansion, and as it achieved greater autonomy and resources the utility became prepared to confront actively its environment, including the commission and the government and the public, in order to achieve its ends. Both the strategic choices and the operational behaviour of the utility were shaped in part by corporate impulses. These choices were not politically neutral, and so the shedding of political appointees' direct influence did not "depoliticize" the NBEPCC except in the most formal and limited sense. On the contrary, the policies pursued by the power commission, and particularly its efforts to promote economic development, have had a tremendous impact upon the economic and social fabric of New Brunswick. To the extent that corporate drives towards security and growth influenced those policies, and deflected the NBEPCC from its explicit goals of cheap and efficient power supply, one can argue that its actions have coincided less than completely with the larger interests of New Brunswickers.

100 J.H. Dales, *Hydroelectricity and Industrial Development in Quebec 1898-1940* (Cambridge, Mass., 1957), especially pp. 23-4.