

AN EVALUATION OF THE REGULATORY REGIME
FOR ELECTRICAL ENERGY IN BRITISH COLUMBIA

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An Evaluation of the Regulatory Regime for

Electrical Energy in British Columbia

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ABSTRACT

In 1980 the British Columbia government significantly changed the procedures for regulating electric utilities and energy projects: 1) it created the British Columbia Utilities Commission to regulate all public utilities in the province, including B.C. Hydro; and 2) it established an energy project review process with provisions for public hearings, to be conducted by the new commission. The purpose of this research project was to evaluate this new regulatory framework by examining its application in the recent hearing and review of British Columbia Hydro's proposal to construct a dam at Site C on the Peace River. The research method included: 1) a review of electric utility and regulation literature, government policy documents, and the transcripts of the Site C public hearings; 2) a questionnaire sent to registered intervenors; and 3) structured interviews with representatives of British Columbia Hydro, public interest groups, and the provincial government. A set of evaluative criteria were established which emphasized, first, the condition that there be a clear need for regulatory activity and, second, the normative view that the public interest is better served by government regulatory activity of a more decentralized nature. On completion of the analysis, the public hearing component of the review process was found to be satisfactory, but the rest of the review process lacked adequate provisions for public involvement and allocated excessive discretionary and confidential powers to cabinet, which tended

to undermine the open process of the public hearing. The review procedures could be substantially improved, without threatening cabinet authority, by increasing public involvement in both the pre- and post-hearing phases. Project research and project monitoring would be more closely attuned to public and scientific concerns and, as a consequence, the public hearing would be streamlined and less costly.

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CHAPTER 1

INTRODUCTION

The development of British Columbia's hydroelectric resources has played a key role in the province's economic growth of recent decades. Since 1962, the primary responsibility for this task has rested with B.C. Hydro, a publicly owned utility corporation with a mandate to produce sufficient electricity to meet the demands of the residents of British Columbia. Although the legislation which established B.C. Hydro exempted it from most other jurisdictions and agencies of government, its activities in the period 1962 - 1980 were nonetheless constrained by certain government regulatory mechanisms: direct cabinet control, licence requirements for the use of provincial water resources, federal export licence requirements, and explicit provisions of the statute which established the crown corporation. In 1980, the provincial government decided to dramatically alter this regulatory framework by introducing a number of institutional and statutory changes. The provincial ministry responsible for energy was re-organized and a new agency, the B.C. Utilities Commission (BCUC), was established with the responsibility to extend existing utility regulation to B.C. Hydro and to play a central role in the evaluation of major energy-related projects in the province.

The purpose of this research is to evaluate this new regulatory framework by examining its first significant application: the recent hearing and review, conducted by the BCUC, of B.C. Hydro's proposal to construct a 900 MW hydro-electric dam at Site C on the Peace River. The primary objectives of the study are to:

1. review the theory of electricity regulation;
2. review the history of electricity regulation in British Columbia;
3. establish a set of criteria for evaluating current regulatory activity;
4. apply these criteria to electricity regulation activity in B.C. since 1980; and
5. recommend improvements to the existing regulatory regime.

One approach to evaluating regulatory activity is: (1) to develop, with the assistance of the relevant literature, a set of normative assumptions about the desired purpose of regulatory activity; and (2) to assess the ability of regulatory processes to fulfill the explicit goals of government. This study begins, therefore, with a theoretical overview of regulation: its rationale, methods, and application to the electric utility industry (Chapter 2). Emphasis is placed on the establishment of a normative definition of the public interest in order to eventually design a set of evaluative criteria consistent with that definition. The British Columbia context is then

introduced with a brief review of the evolution of regulatory mechanisms pertaining to energy projects and electrical utilities in the province up to 1980 (Chapter 3). This provides the rationale for a second set of evaluative criteria: the government's stated goals for its recent modification of the regulatory process. In Chapter 4, the normative criteria and criteria based on policy goals are integrated. The recent institutional and statutory changes and their application to the review of the Site C dam are then outlined (Chapter 5) in order to apply the evaluative criteria (Chapter 6). Suggested improvements are discussed in the conclusion.

Electrical energy was chosen as the focus of this study because it is related to a number of novel regulatory developments in the province: 1) the creation and application of a new public utilities commission; 2) the introduction of regulatory supervision over a publicly owned electric utility; and 3) the establishment of a 'comprehensive' energy project review of secondary sources pertaining to electric utilities and regulation, policy documents of the British Columbia government, and the B.C. Utilities Commission transcripts of the Site C Hearing. A questionnaire was mailed to registered public and six in-depth interviews were conducted with representatives of B.C. Hydro, public interest groups, and the provincial government. Of 57 questionnaires mailed 23 were returned for a response rate of 40 per cent (for a sample of the questionnaire and a summary of the responses see Appendices A and B).

Some of the problems that were encountered with the methodology indicated that as a subject for a research project this topic may have been too immediate and, as a consequence, certain information was difficult to obtain. This was particularly a problem in three cases. First, the objectives of the questionnaire were to obtain from the intervenors: 1) cost of participation data; 2) general suggestions for improvement of the process; and 3) a detailed subjective assessment of the regulatory process. While the first two objectives were largely satisfied by the questionnaire responses, the latter proved unattainable, primarily because most respondents were unwilling to subjectively assess a process that they did not consider completed. The reason for this constraint was that both the submission by the BCUC of its report for this constraint was that both the submission by the BCUC of its recommendations to cabinet and the cabinet's decision were beset by extraordinary delays. Indeed, at this time (August, 1983) the cabinet has yet to publicly state its decision on Site C. These delays in the post-hearing phase resulted in a second constraint for the in-depth interviews. While the BCUC's recommendations are before cabinet, and thus confidential, representatives of the BCUC who were directly involved in the Site C review are unwilling to be interviewed (Cerunau, 1983). Finally, a third constraint was the collection of cost data for the regulatory process. B.C. Hydro has gathered data on the costs it incurred from the Site C Hearing, but since these are intended for

presentation in a subsequent submission to the BCUC, the management of the crown corporation is unwilling to release them at this time (Ellis, 1983). B.C. Hydro did provide, however, a detailed list of all of the payments to intervenors which it made in compliance with BCUC directives.

In spite of these constraints, the author considers that the research undertaken for this paper, and other parallel studies, is both worthwhile and necessary. Recent events appear to support this contention. In November of 1982 the Minister of Energy, Mines and Petroleum Resources (EMPR), announced the intention of the ministry to 'streamline' the energy project review process as administered by the BCUC (Financial Post, Nov. 27, 1982, 10). Then in the provincial budget of June 1983 the provincial government re-iterated this position:

. . . the Minister of Energy, Mines and Petroleum Resources will also be taking steps to streamline the regulatory processes of the British Columbia Utilities Commission (B.C. Minister of Finance, 1983, 15).

These developments are significant because, while it is usually desirable to review a regulatory process once it has undergone its first real test, there are a number of divergent criteria which one could choose when evaluating an institutional and statutory mechanism such as the energy project review process. Hopefully, the interviews and questionnaire responses by participants, which comprised much of the input for this evaluation, will assist this review.

CHAPTER 2

THE REGULATORY FRAMEWORK

While it has been argued that all functions of government can be considered to be regulation (Hartle, 1979, 1), Priest, Stanbury and Thompson have developed a narrower interpretation. They define regulation as:

. . . the imposition of rules by government, backed by the use of penalties, that are intended specifically to modify the behaviour of individuals and firms in the private sector (Priest et al., 1980, 5).

Thus, they distinguish regulation from alternative instruments of public policy, such as exhortation, direct expenditure, taxation, tax expenditure, and public ownership (Economic Council of Canada, 1979, 43). For the purpose of this paper the definition of Priest et al. will be extended to include those government-imposed rules which are also intended to modify the behaviour of firms in the 'public sector'. The reason is that while public ownership is usually regarded as an alternative to regulation, there are instances where public enterprises are included within the jurisdiction of regulatory agencies. The relationship between B.C. Hydro and the B.C. Utilities Commission is such an instance. While at one time it may have been true that B.C. Hydro's status as a crown corporation was sufficient reason to exempt it from regulatory jurisdictions, that is no longer the case. One of the goals of this and the

following chapter is to explain why this change occurred.

THE PUBLIC INTEREST RATIONALE

Regulatory activity by government is conventionally attributed to a concern for the public interest, but this notion is difficult to define. Stanbury has compiled a list of 25 definitions of the public interest (see Hartle, 1979, 213) which he grouped into four categories:

1. the aggregation of a number of special interests to form a majority interest;
2. any interest which is common or universal to society;
3. an ideal or absolute standard; and
4. decision making processes which ensure that all relevant interests are properly considered.

1. The first category defines the public interest as the sum of all interests in society. This interpretation tends to view the public interest as best represented through the 'majority rule' of the democratic electoral process. Decision making authority is vested with electorally successful political parties and is exercised through the powers of the executive of government (cabinet).

2. The universal interest theory describes the public interest as any interests that are common to all. Generally, this interpretation is of little use to evaluations of government regulatory activity because conditions of universal

interest are "so rare as to be irrelevant to a serious discussion of public policy" (Hartle, 1979, 4).

3. The idealist theory defines the public interest in terms of some absolute standard of values, which may be different from the perceived interest of the majority. This interpretation suggests a greater need for technocratic input into society's decision making processes, i.e., that which the experts say may be as important as the expressed desires of the majority.

4. The process theory defines the public interest as a careful balance of competing interests which is best attained through decision making processes that involve input from all legitimate interests. Inherent in this interpretation is the notion of 'administrative due process', i.e., formalized open decision making processes which ensure that all interests are fairly considered.

While the universal interest theory, as Hartle noted, is too narrow to serve as a guide to the evaluation of government activity, but each of the other three deserve consideration. As will become apparent from later discussion, the majority rule theory is dominant in the Canadian political system. We tend to assign extensive decision making authority to our elected representatives. However, both the idealist and the process theory have much to offer. First, a growing awareness in recent decades of certain ecological limits to human activity has led

to an awareness of the need to design mechanisms for the inclusion of idealist public interest interpretations in the decision making process (Payne, 1981, 5). Second, the growing complexity of issues before government and the consequent requirement for voters to base their electoral choices in terms of ever larger 'bundles of decisions' tends to favour mechanisms that delegate some authority to decision making processes that provide opportunities for input by various interests on the individual decisions which concern them (Hartle, 1979, 127).

It is claimed in this paper that the above two arguments are valid and that, therefore, certain Canadian decision making processes, such as regulatory activity, should shift from the majority rule interpretation of the public interest toward the idealist and the process theories, particularly the latter. The reason is that decisions have become too complex to be resolved in any meaningful way in one decision at the voters booth. The public interest is best served if decision making processes incorporate mechanisms that ensure the consideration of all relevant individual interests in addition to broader, more idealist, social interests. This applies equally to government regulatory activity, as will become apparent in the following discussion.

TYPES OF REGULATION

The traditional rationale for government regulation is the existence of market failures which cause certain undesirable outcomes, such as an inefficient allocation of society's resources or an unfair distribution of wealth (a fair distribution being one that would occur under normal market conditions). Government, therefore, imposes regulations which are deemed to be in the public interest because they correct market failures.

Government regulatory activity has been categorized as one of two types: 'economic regulation' and 'social regulation' (Economic Council of Canada, 1979, 44). Economic regulation, also called industry-specific regulation, refers to government regulation of the prices charged by a firm, the revenue received, the output produced, and the firm's ability to enter or exit particular markets. Social regulation is also economic in nature, but rather than focusing on specific fiscal indices of an individual firm's behaviour, it is more concerned with the social impacts of economic activity, concerns such as health, safety, fairness, environmental protection, as well as protection of indigenous culture and the national economy.

Economic Regulation

The classic reasons for the imposition of economic regulation are the market failures caused by (1) natural monopoly, and (2) destructive competition. Since only natural monopoly is relevant to the focus of this paper, the analysis will be restricted to that case. According to economic theory, a natural monopoly exists when a firm's internal economies of scale are such that the total costs of production are lowest if there is only one producer. This situation usually occurs in capital intensive industries where high initial costs (which act as a barrier to entry) result in declining marginal and average costs over the relevant range of output. Electric utilities are traditionally characterized as natural monopolies because the substantial capital outlay required initially for generating plants and transmission networks represents a high fixed cost which diminishes per unit of output as production increases (Dales, 1957).

If it is assumed that the manager of a natural monopoly attempts to maximize his profits (the assumption of neoclassical economic theory), the resulting output and price will be socially undesirable because the monopolist will choose a lower level of output and a higher price than would occur under competitive conditions. A return to the output and price levels of competitive conditions would increase total social welfare

because the gains to the consumer would be greater than the losses of the producer.

As a consequence governments, or their regulatory agencies, impose rules intended to force natural monopolies to choose more socially optimal levels of output and price. Unfortunately, appropriate rules of regulation, indeed even appropriate methods, are difficult to determine. In particular, the ideal output and price from a social perspective often implies losses for the natural monopoly (Stanbury, 1973(a), 7). The conventional practice, therefore, has been to allow a rate of return based on the natural monopoly's capital investment, i.e., 'rate base regulation'. The intent is that the firm's average costs, including a normal return to capital, equal its average revenue. Some of the literature on this type of regulation has indicated, however, that its application may create inefficiencies by encouraging regulated utilities to employ excess amounts of capital (Averch and Johnson, 1962; Bailey, 1973).

Social Regulation

The second type of regulation, social regulation, is concerned with broader social objectives, particularly health and safety standards, consumer and environmental protection, and cultural and political goals. Social regulation has become the principle focus of government regulatory activity in the last

decade (Doern, 1978; Priest and Wohl, 1980). As in the case of economic regulation, social regulation is traditionally assumed to be a response to market failure. In this case, the market failures commonly cited as rationales for social regulation are: (1) the problems of externality and open access associated with the use of common property resources; and (2) inadequate provision of information. The latter case relates primarily to consumer protection regulation and as such has little relevance to this study, but the former is central to the issues of electric utility regulation in B.C.

An intrinsic characteristic of common property resources is 'externality'. An externality exists when third parties receive an economic benefit or cost from some economic activity involving two other unrelated parties. This occurs when the by-product of the economic activity affects a common property resource which the third party is also using. A classic example of an external cost is the water pollution experienced by those who neither produce nor consume the product whose production process is the source of the pollution. Since many external costs and benefits are not taken into account in determining market values, the intention of some forms of social regulation is to ensure that external effects will, nonetheless, be considered by those who produce them (Economic Council of Canada, 1979).

Because common property resources are not privately owned, there is open access to their use and, as a consequence, they

tend to be over-utilized (Hardin, 1968). A common example is fish stocks, which, when they are not privately owned, are continuously threatened by over-exploitation. The standard solution to the problem of common property resources is the regulation of access. Social regulation is a common method of implementing such a policy. However, social regulation of common property resources is fraught with complexities since it is equally difficult for government, with its limited information, time and resources, to determine the socially efficient rate of utilization (Dales, 1975).

As we shall see in Chapter 3, the environmental awareness of the 1970's was accompanied by a growing demand for increased social regulation of common property resources in order to deal with the problems of externality and open access. Governments commonly apply social regulation by setting restrictive standards. This method has been criticized, however, as being socially inefficient since government has a tendency to set standards which impose private costs that exceed the total social benefits produced. Indeed, it is argued, government should replace its use of standards with a combination of taxation and subsidies in order to achieve the socially optimal result (Dales, 1968; Schultze, 1977).

Another motivation for social regulation is to affect the distribution of income. An example of this is the 'economic justice' concept of Owen and Braeutigan (1978). It implies that regulators may be asked to delay technological and economic

change in order to protect those individuals and interest groups with a stake in the status quo, even when the change would improve overall economic efficiency.

Another example of using social regulation to affect the distribution of income is government imposed price discrimination which results in a subsidy from one group of consumers to another. One such instance is the setting of uniform residential electricity rates even though some residential customers have higher service costs. Posner (1971) questioned the validity of this practice of 'taxation by regulation', arguing that all of society should provide the subsidy, not just the other customers.

OTHER EXPLANATIONS FOR THE IMPOSITION OF REGULATION

A suspicion that regulation by government results in greater social cost than benefit has led some theorists to advance alternative explanations for the existence of regulation. Bernstein (1955) argued that regulatory agencies follow a life-cycle. In his life-cycle model, a regulatory agency is initially established in response to broad public demands for the correction of some market failure. Thus, the agency at first functions as a 'crusading spirit in the public interest'. However, over time a dynamic occurs in which the visibility of the public interest declines, the agency becomes bureaucratized, and it increasingly comes to depend on the

regulated industry for its information. Eventually, the regulatory agency is 'captured' by the very group it regulates, i.e., the regulatory agency has acquired the perspective of the regulated group and acts in its interests instead of the public's interest.

A more recent explanation, associated with economists at the University of Chicago, is termed the 'private interest' or 'economic' theory of regulation. Advocates of this theory explain its development by extending the supply and demand logic of economics into the realm of government regulation. They claim that because regulation can be used for private benefit (for example, to increase profits or protect inefficiency), the type and amount of regulation supplied by government is simply a function of the demand for regulation from various interest groups. Furthermore, since the potential costs or benefits of regulation to the specific group being regulated are more concentrated than the costs or benefits to individual members of society as a whole, regulated groups have greater incentive to ensure that regulation is to their benefit. Therefore, regulation is not, and can not be, in the public interest (Stigler, 1971; Posner, 1974; Peltzman, 1976). As one might expect, the development of this rather pessimistic interpretation of government regulatory activity has convinced many of the private interest theorists to advocate wide-scale deregulation, even in the case of natural monopoly (Posner, 1975).

Although the deregulation arguments of the Chicago School theorists have been persuasive, they have failed to attain a social consensus on their call for deregulation. Trebing (1976) explains this by emphasizing the general suspicion of the public and experts that while deregulation may remove some costly and unfavourable activities, it would likely produce others. As an example, Reschenthaler (1978) argues that although the deregulation proponents devote considerable effort to proving that natural monopoly may not be as economically inefficient as originally assumed, they totally underestimate the public's concern for the unfair income distribution aspects of natural monopoly. Furthermore, the arguments for deregulation tend to be aimed at economic regulation, and fail to recognize the growing importance of the numerous reasons for social regulation.

More recent studies on regulation go beyond the public interest, capture and private interest theories to analyze the complexity of obstacles facing regulatory agencies and the consequent confusion of objectives and actions for those same agencies. Cairns (1980) classifies these latest interpretations as 'new dynamic rationales' for regulation. By this he means that these more recent interpretations avoid the tendency of previous theories to attempt to provide a single comprehensive explanation of all regulatory behaviour. Therefore, although much regulation is found to be economically inefficient, one does not automatically call for deregulation, first, because the

goals of regulation often extend beyond singular problems of market failure, and second, because each industry or market requiring regulation has significantly different institutional structures with their own unique demands on the regulatory process.

The Canadian Context

Our initial discussion of definitions of the public interest has important implications for the character of regulatory activity. In particular, the Canadian preference for the 'majority rule' interpretation of the public interest has tended to result in regulatory agencies which are directly linked to the electoral process via provisions for cabinet override. In contrast, the U.S. definition of the public interest has been closer to the 'process' model and, as a consequence, the decisions of regulatory agencies tend to be independent with the exception of provisions for judicial override of procedural matters. One consequence of these differences is that some of the theories about regulation which are based on evidence from the U.S., are not totally applicable to Canada. Specifically, the fact that the decisions of most Canadian regulatory agencies are subject to review by the executive renders it less likely, and presumably less important, that the regulatory agency may eventually come to mirror private interests (Reschenthaler, 1978).

As a result, more emphasis is placed on the relationship between politicians and private interests than between the regulatory agency and private interests. Breton (1974), for example, argued that regulation is primarily an extension of the political trading process, i.e., an exchange of regulatory favours to the private sector for electoral support. Trebilcock, Waverman and Pritchard (1978) provide another political interpretation when they claim that governments may deliberately provide only vague mandates for statutory regulatory agencies so that:

1. Government will 'appear' to be responding to a particular public demand, rather than doing nothing;
2. The agency can make difficult decisions that government does not want to take responsibility for;
3. In instances where public opinion is difficult to assess, the agency can serve as a weather vane with minimal direct risk to government;
4. Demands that the government take a policy stance will be lost in the multitude of incremental decisions made by the agency; and
5. The agency and its procedures will deflect and exhaust the efforts of troublesome public interest groups.

Thus, the key for these political interpretations of government action is public perception:

. . . the capacity of an instrument to exaggerate benefits while depreciating costs in the perception of voters is an important determinant of instrument choice in a vote maximizing perspective (Trebilcock et al.,

1982, 107).

Another difference between Canada and the U.S. is that Canadian governments have a greater propensity to use regulation to achieve objectives other than economic efficiency. These include manipulation of individual and regional income distribution, promotion of regional and national economic development, and protection of the country's political integrity (Baggaley, 1981).

In addition to these broader applications of regulation in Canada, there has also been a greater tendency to use 'public enterprise' to achieve some of the above objectives (Tupper and Doern, 1981). This characteristic is particularly relevant to the topic of this paper since, as B.C.'s hydroelectric power resources came to be seen as a potential impetus to economic development, the practices and corporate strategy of private electric utilities became less an issue for economic regulation and more a concern to the province's development plans (Vining, 1981, 22).

THE REGULATORY AGENCY

Trebilcock et al. (1982, 88) differentiate between 'direct' and 'delegated' forms of regulation. Direct regulation refers to regulatory regimes administered entirely by the executive of government, whereas delegated regulation refers to regulatory regimes that are administered, at least in part, by agencies which are outside the conventional government

bureaucracy. The latter is of particular concern to the theme of this paper.

'Statutory regulatory agency' is the common term for those agencies charged with the responsibility to administer delegated regulation. In Canada, responsibility for statutory regulation is normally assigned to a specific ministry or branch of government and its members are chosen by cabinet.

As mentioned previously, the appropriate relationship between the executive of government and a statutory regulatory agency depends upon one's definition of the public interest. The majority rule interpretation emphasizes the desirability of wide-ranging cabinet discretionary power. In contrast, the process interpretation holds that executive discretion should be limited to specific instances. Hartle (1979), for example, argues that there should be two distinct types of statutory regulatory agencies: (1) advisory agencies, and (2) decision making agencies. The former would hold inquiries into public policy issues, which the government wishes to explore, and then make recommendations to government. The latter would be guided by explicit policy directives and would make implementation decisions that could only be overridden by the executive of government after parliamentary debate.

Public Hearings

Public hearings have always been an integral component of regulation by statutory regulatory agencies, but their character has changed significantly in recent years. This transformation is largely due to the shift of regulatory activity from economic to social regulation. In economic regulation procedures for public involvement tend to be legalistic and adversarial. This is because (1) participation is normally limited to clearly defined private interests (represented by lawyers and economists), and (2) the power of the courts to overturn regulatory decisions for reasons of procedural impropriety has compelled economic regulation hearings to adhere to quasi-judicial procedures (Henderson, 1983). Another characteristic of economic regulation is that the regulatory agency often has a considerable degree of decision making autonomy. Since the process often involves the adjudication of relatively private interests, governments are less prone to become involved.

In contrast, social regulation involves issues of broad public concern and the growth of that form of regulation in the 1970's led to a number of innovative developments in the public hearing process. For a review of broad policy issues, governments occasionally establish ad hoc public inquiries modelled on the traditional Royal Commission. Examples of these

are the federal Berger Inquiry into the Mackenzie Valley Pipeline proposal and the provincial Bates Inquiry into uranium mining in B.C. For more project specific concerns, federal and provincial governments have tended to establish statutory regulatory agencies with formalized procedures to assess environmental and socio-economic impacts, for example, the federal Environmental Assessment and Review Process. In most of these jurisdictions the decision to initiate review procedures, or to override the findings of the regulatory agency, has remained at the discretion of the executive of government (Hartle, 1979, 124).

The wide range of social concerns dealt with in these review procedures has dramatically changed the public hearing process because of the numerous groups and individuals with potentially legitimate interests in the outcome. In this regard the Mackenzie Valley Pipeline Inquiry is particularly noteworthy in Canada because it initiated a number of hearing procedures and practices which are now considered commonplace, or at least acceptable. Some of these include: (1) funding for public interest groups; (2) a mix of formal/technical hearings and informal/community hearings; (3) various measures to ensure both access to information and the dissemination of information; (4) a broad interpretation of the terms of reference resulting in a fairly comprehensive investigation; (5) a willingness to delay the entire process if that seemed in the interests of fairness and accuracy; and (6) an interpretation of the role of the

Commission staff as independent of the government (Barz, 1983

While some of these practices have become more acceptable than others, Barz notes some definite evolutionary trends of public hearings as their role in social regulation (for example, energy project regulation) becomes more established:

. . . energy project hearings are becoming more comprehensive in scope, public involvement is increasing, funding of interest groups is becoming more common, there is an increasing use of informal hearings within the framework of formal hearings, there is a greater availability of information (perhaps too much information), rules of standing are becoming less strict, and monitoring is becoming more common (Barz, 1983, 49).

The above discussion has summarized the trends in regulatory activity, particularly as they pertain to electric utilities and electrical energy projects. What is still needed, however, is an explanation of the particular trends in the field of electrical energy which have resulted only recently in the assumption that increased regulation by government is desirable, or at least necessary. In the following section some of these trends are reviewed.

REGULATION, ELECTRIC UTILITIES AND ENERGY PROJECTS

Dales (1957) pointed out that, since its development around the turn of the century, the electric utility industry has had the characteristics of natural monopoly. Two important reasons for this are (1) the dominance of fixed costs, and (2) the rather inflexible interconnectivity of producers and consumers.

While the former characteristic tends to act as a barrier to entry to other producers, the latter acts as a barrier to exit for the consumer. In particular, it is difficult to switch suppliers when you are physically connected to one supplier by transmission cables.

Because of its natural monopoly characteristics, the electric utility industry has been subject to various forms of economic regulation since early in the century. In North America, a common practice was for governments to establish 'public utility commissions' to regulate the prices of private electric utilities. However, in some Canadian provinces this was carried out in conjunction with the creation of publicly-owned electric utility enterprises to function alongside the private firms in each provincial industry. Thus, in Ontario, Manitoba and Saskatchewan publicly owned electric utilities were established early in the century and in the ensuing years grew to monopoly positions. In B.C. and Quebec, however, the industry remained private, albeit regulated, until the 1960's when crown corporation monopolies were finally established (Vining, 1981).

The reasons for the emergence of a 'crown corporation approach' in the Canadian electric utility industry are numerous. Vining argues that the demands of other business interests were frequently the driving force behind the establishment of crown utility corporations throughout Canada:

. . . the crown corporations have arisen . . . from a fear that the particular controlling monopolist would be

detrimental to other capitalist and sectarian groups, especially middle class industrial and manufacturing interests (Vining, 1981, 37).

Payne points out, however, that electric utilities were also perceived as legitimate instruments of provincial economic policy, in particular, expansionary development policies.

At varying times, in certain provinces, there emerged a consensus among influential economic interests that electric power at the lowest possible cost was essential for future economic development. . . . While utility regulation was effective in controlling the excessive profits associated with monopoly, it was less able to control the other underlying costs of production, or to force firms to expand in pursuit of economies of scale (Payne, 1982, 6).

As will be shown in Chapter 3, this question of economies of scale was critical in the eventual creation of B.C. Hydro.

With the creation of B.C. Hydro in 1961 and Hydro Quebec in 1964, publicly owned electric utilities had become the norm in Canada and, in the 1960's and early 1970's, crown corporations carried out rapid development of the country's hydroelectric resources. As a consequence, economies of scale were realized resulting in cheap electricity which, in turn, played a part in the economic development of that era. Furthermore, the creation of crown monopolies made the traditional reasons for economic regulation obsolete: most of the crown corporations, such as B.C. Hydro, were directed by government to provide electricity at the lowest possible cost, so there was no threat of monopolistic pricing.

By the 1970's, however, a number of new concerns emerged which substantially altered the issues confronting crown electric utilities. Perhaps most important was the rise of the

costs of new generating facilities above their historic average costs. According to Helliwell, pricing and accounting techniques were partly responsible. Developed during the period when expansion was desirable in order to realize economies of scale, these techniques were, by the 1970's, ensuring that utility rates were inadequate to cover the costs of building new capacity.

. . . rising inflation, rate base accounting, declining block structures, and rising real costs have together assured that the remaining unallocated historic costs of existing plant are much less than the current-dollar costs of new plant (Helliwell, 1978, 119).

In addition to the cost differentials caused by inflation and accounting techniques, a number of factors had driven the 'real' marginal cost of supply above average cost. First, the exploitation of the lowest cost electricity sources in earlier years necessitated a shift, by the 1970's, to higher cost sources. In B.C., this meant a shift from high quality hydro electric sites to sites of lower technical quality, or higher transmission costs, hence higher costs per unit output of electricity. Second, growing public awareness of the value of alternative uses of valley bottoms required that the resource costs of hydroelectricity be more accurately accounted for than previously; earlier project studies had given minimal consideration to associated resource costs (Wilson, 1973). Third, the dramatic increase in the costs of alternative ways of producing electricity (hydrocarbons and nuclear) meant that, where alternative markets were available, there was pressure for

hydro-electricity prices to reflect the opportunity cost of consuming electricity domestically instead of exporting it for a substantial return (Bernard, Bridges and Scott, 1982).

As these new concerns emerged in the 1970's it became apparent that crown electric utility monopolies were not responding and, indeed, seemed entrenched in their traditional pattern of setting unjustifiably low electricity prices and making overly optimistic demand forecasts in order to continue on their growth oriented paths. Vining (1981) sought an explanation for this behaviour by examining the motivations of the salaried managers of publicly owned firms. Drawing from Baldwin (1975) and others he concluded that:

1. Public managers are likely to recognize growth rather than profit maximization as the best method to maximize their pecuniary and non-pecuniary benefits;
2. Public managers will attempt to minimize profits in order to maximize political support and encourage future demand growth (assuming that consumers and electorate are one and the same and can be placated by low rates);
and
3. Public managers are likely to cross-subsidize large scale consumers (industrial classes usually) since these have the greatest potential, faced with higher prices, of investing in their own electricity producing facilities. This is particularly relevant in B.C., where the forest industry has considerable potential, in

addition to that already in use, to meet its own electricity needs by cogenerating process steam and electricity from wood waste. (Helliwell and Margolick, 1981).

The tendency of electric utilities to pursue growth strategies, even in the face of high marginal costs for new facilities, threatened to result in overexpansion by the late 1970's. This is because the costs of new facilities require massive borrowing and rate increases which may have a depressive effect on the anticipated growth in demand. In the extreme, these circumstances can lead to a sort of 'utility death spiral', in which rate increases to finance capacity expansions result in decreasing demand and eventual excess capacity. The lack of demand to pay for the new facilities can in turn create fears concerning the financial stability of not only the utilities, but also the jurisdictions of government which have guaranteed their debt. Moreover, the rate increases necessitated by these substantial expansions of capacity tend to bring forth renewed public pressure for stricter rate controls. A recent example of this problem is the experience in the northwest U.S. with the expansion plans of the Washington Public Power Supply System (Fox, 1983).

Thus, by the late 1970's the regulatory issues pertaining to electric utilities had changed significantly. Governments began to recognize, if only from public pressure, that a new institutional approach was needed to subject electric utilities

to more extensive social regulation and to re-introduce economic forms of regulation, even when the utilities in question were publicly owned.

Summary

The goal of this chapter was to survey the theoretical context of regulation as it relates to energy project and energy utility regulation in B.C. The following points have been made:

1. Governments claim to undertake regulation to correct market failures or fulfill other social goals in the public interest. However, notions of the public interest differ and, correspondingly, so do notions of appropriate regulatory activity. Recent studies in the disciplines of economics and political science have provided strong evidence that there are other private interest motivations for at least some forms of government regulatory activity.
2. In Canada, the decisions of statutory regulatory agencies are commonly subject to cabinet review. This characteristic is intrinsic to a majority rule interpretation of how the public interest is best represented.
3. Regulatory activity can be categorized as one of two types: economic and social. Although regulation of the electric utility industry has traditionally been of the

former type, growing environmental awareness in the 1970's has brought forth demands for social regulation of large energy projects, including those proposed by electric utilities. Furthermore, economic regulation has re-emerged in importance, but for qualitatively different reasons. These are primarily related to the threat of overexpansion by electric utilities, whether privately or publicly owned.

4. Regulation is only one of many instruments available to government. Public ownership, rather than regulation has been a common practice in Canada for dealing with electric utilities, primarily because of a tendency to perceive utilities as instruments of economic development policy. The reliance on public ownership has also resulted in complex situations where one layer of government control (public enterprise) is overlaid by another layer (a statutory regulatory agency).
5. Public hearings have been an integral component of economic regulation by statutory regulatory agencies, but their recent use in social regulation has required an evolution toward more flexible procedures and wide-ranging rights of intervention.

With this general understanding of the relationship between regulation, electric utilities and electrical projects, we now turn to the history of electrical energy regulation in British Columbia. Our objective in this next chapter is to determine

(1) the specific character of the regulation problem in B.C., and (2) the goals of the provincial government in transforming the regulatory regime in 1980. The latter will then be combined in Chapter 4 with certain normative goals in order to develop a set of criteria for evaluating recent regulatory activity.

CHAPTER 3

ELECTRICITY REGULATION IN BRITISH COLUMBIA

UNREGULATED PRIVATE UTILITIES: 1900-1940

In British Columbia the natural monopoly characteristics of the electric utility industry provided the financial incentive early in this century for utility consolidation, particularly in centres of concentrated demand. Thus, in Victoria and in the Lower Mainland, the B.C. Electric Railway Company (BCE) emerged to dominate electric and urban transport services, while in the southeast of the province electric services were provided to mineral smelting operations and residential areas by the West Kootenay Power and Light Company (WKPL). In the rest of the province, where scattered small settlements hindered the development of large scale services, the electric utility industry remained disaggregated among numerous privately or municipally owned utilities. Many of these, however, were eventually purchased by the BCE (Taylor, 1965).

Early demands by consumers, organized labour, and municipal governments for utility regulation were primarily directed at the electric urban transit railway of the BCE and tended to overlook its electrical operations, which incidently were quite profitable. The BCE was able to successfully resist the

pressures for regulation up to the end of the First World War. At that time, growing competition from motorized transport convinced the company's directors that their economic fortunes might be better if urban transport were regulated. Therefore, they reversed their strategy and joined the push for transit regulation and in 1919 the provincial government established B.C.'s first Public Utilities Commission (PUC). Ironically, the government had no sooner created the PUC when it became aware that an amendment to the federal Railway Act exempted BCE's urban rail system from the PUC's jurisdiction. In response to this revelation, and also because of a subsequent public controversy over the selection of the PUC's Commissioner, the government changed course, abolishing the PUC within a year of its inception (Roy, 1971, 3).

For the next two decades, utilities in B.C. remained unregulated, a contrast with the rest of the country where most provinces had either replaced their electric utilities with crown corporations or had established public commissions to regulate them (Vining, 1981). Consumers, labour, and municipal governments continued their demands for regulation, but their focus had shifted by the 1920's and 1930's from the BCE's transit services to its electric services. Their principal concerns were with the 'economic issues' of regulation - price, rate of return, output, quality of service, and availability of service.

REGULATION AND PUBLIC ENTREPRENEURSHIP: 1940-1960

It was not until 1938 that a newly elected provincial government responded to these pressures and re-established a Public Utilities Commission with regulatory jurisdiction over electricity, gas, communications, and transportation (B.C., 1938). The new commission subsequently undertook inquiries and public hearings in the early 1940's in which it investigated the finances and operations of the province's utilities, eventually establishing an information base and criteria from which to administer 'economic' regulation.

Shortly after the province's utilities were brought under regulatory control the provincial government also ventured into public participation in the utility industry. The rationale for such a policy emerged when a public inquiry in 1944 and 1945 on the inadequacy of electric services to the province's outlying areas concluded that the electric utility industry should be re-organized. The inquiry determined that either government subsidization or public ownership was necessary to initiate system integration and larger hydro-electric projects which, in turn, would eventually lower electricity costs and induce increasing demand (B.C. Rural Electrification Committee, 1945, 42). It became apparent to the provincial government that the most effective way of achieving this goal was through public entrepreneurship (Taylor, 1965, 93).

Thus, in 1945 the provincial government established the B.C. Power Commission, a crown corporation created from the integration of a number of private utilities (B.C., 1945). Consistent with its goal of promoting growth, one mandate of the Commission was to set electricity prices which would "permit and encourage the maximum use of power" (s.44). This was ensured by another requirement (s.24) that the Commission sell electricity at cost.

Since the Power Commission was a crown corporation directly responsive to government direction, and prevented from retaining profits, it seemed redundant to also have it regulated by the PUC, especially since economic regulation was the principle focus of regulatory activity at that time. Therefore, the Power Commission was exempted from the jurisdiction of the PUC and permitted to determine its rates in any manner that it considered consistent with its mandate (s.110).

With the creation of the PUC and the Power Commission in the 1940's the era of unregulated private utilities was brought to a close. The BCE and WKPL were now under the regulatory supervision of the PUC, while much of the rest of the province was serviced by the crown corporation, the B.C. Power Commission. However, the degree of government control of the electric utility industry was not as all-encompassing as these new institutional arrangements made it appear. First, the only regulatory constraint on the Power Commission was its statutory link to the provincial executive, i.e., 'direct regulation'

(Chapter 2). Generally, the executive provided little guidance to the Commission. Second, the provincial government did not provide the PUC with sufficient staff to exercise effective regulation and, as a consequence, the PUC tended to adopt an advisory role without any significant input into the decision making of the BCE and WKPL. Approvals for major projects were granted quickly, usually without public hearings, and the rate structure designed by the company tended to receive acceptance without serious questioning (Payne, 1982). As Stanbury observed,

How can such a small staff in any sense regulate between one and two hundred public utilities? . . . However, the PUC does give the appearance of regulation (Stanbury, 1973(b), 50).

This two-pronged policy toward the province's electric utility industry was a consequence of the distinctly different issues facing the metropolitan and hinterland areas of the province. In the areas served by the BCE and WKPL the issue was strictly one of economic regulation, but in the outlying areas of the province, the government was more concerned with the development and provision of services than with the regulation of those services that already existed. Public entrepreneurship was perceived as a necessity where private entrepreneurship was unwilling or unable to generate sufficient investment and take the necessary risks. In this sense, the motivation in British Columbia for the introduction of public entrepreneurship into the electric utility industry differed from the common motive in other parts of Canada. According to Vining (1981, 35) crown

electric utilities were usually introduced in other provinces in order to protect indigeneous industrialists and farmers from the monopolistic pricing practices of private utilities, in effect, a Canadian alternative to the economic regulation that was relied upon in similar circumstances in the U.S.

During the next decade the B.C. Power Commission pursued a strategy of promotional pricing and hydroelectric expansion which met with considerable success. In fact, the demand for electricity increased so rapidly that by the late 1950's it had overtaken supply and, as a consequence, planned projects had to be accelerated. The consequent cost overruns, in addition to the first stirrings of public concern for the environmental impacts of unmitigated dam construction, led once again to public concern for the actions of an unregulated utility, although in this case the unregulated utility was publicly owned (Payne, 1982, 12).

Similar problems were arising in the regulated private sector. The BCE promoted a pricing structure which, like that of the Power Commission, charged decreasing per unit costs for electricity with each additional unit purchased. The company rapidly expanded its generation capacity throughout the 1950's, but by the end of the decade it too faced a situation where growing electricity demand threatened to outdistance supply. As a consequence, the BCE applied for and was granted a major rate hike of 22 per cent in 1958 which, like the increases instituted by the Power Commission, met with considerable public

resistance. In this case, however, much of the public's displeasure was directed at the Public Utilities Commission, which was increasingly seen as ineffectual (Stanbury, 1973(b)).

Concerns for the environmental and social impacts of these expansionary development policies were still of an isolated nature in the late 1950's. Nonetheless, specific projects, such as the Power Commission's Campbell River development, provoked considerable local opposition because of their alienation of potential parkland or interference with fishery resources. At that time the only forum for the discussion of these complaints was provided by the provincial Water Act (B.C., 1960). Under that act the Water Comptroller has the authority to grant or refuse a licence to use the crown's water resources, and to hold public hearings on any matter pertaining to that jurisdiction:

When the comptroller determines that the proper determination of a matter within his jurisdiction necessitates a public or other inquiry, he may hold that inquiry (B.C., 1960, s. 29).

Although in most cases private and public applications for a water licence were granted almost immediately, the Act was used in a few controversial cases to review the acceptability of projects and to require action by the project proponent to mitigate some of the negative impacts of hydro-electric development (Payne, 1982, 13).

UNREGULATED PUBLIC MONOPOLY: 1960-1980

B.C. Hydro

In 1961 the premier, W.A.C. Bennett, dramatically transformed the province's electric utility industry by nationalizing the BCE and amalgamating it with the B.C. Power Commission into a single provincially owned utility, B.C. Hydro. This action resulted in a substantial alteration of the province's energy regulatory framework, but that was of little concern to the premier. Instead, his decision to nationalize the BCE was based on the same kinds of issues which had, in 1945, resulted in the creation of the Power Commission. Specifically, Bennett was convinced that the economic development of the province would be stimulated if the hydro electric potential of two river systems, the Columbia and the Peace, were exploited simultaneously. He was supported in this conviction by the findings of a study by the B.C. Energy Board - an advisory body comprising, among others, the Chairman of the PUC and the Water Comptroller, and chaired by Dr. Gordon Shrum. The Energy Board concluded that:

. . . economic and employment conditions in B.C. would be greatly improved by the development of both the Peace and Columbia projects more or less simultaneously (B.C. Energy Board, 1961, 6).

Although this conclusion was qualified by the necessity of firm export markets in the initial years after completion, the Energy

Board also pointed out that public rather than private development of the projects would make them more feasible because the province could obtain capital at lower interest rates and would be able to avoid burdensome federal taxes. This latter point had been a concern of the premier's for a number of years, one he had argued with successive federal governments. Bennett believed that B.C.'s private utilities should be exempt from federal taxation as were the crown utilities of other provinces (Vining, 1981, 22).

However, Bennett only decided to nationalize the BCE after realizing that he could not convince the private company to adopt his development strategy. The BCE had continually resisted Bennett's plans for two reasons. First, development of both rivers would create supply far in excess of foreseeable demand, an enormous capital risk for a private company. Second, the BCE owned the Hat Creek coal deposit and had plans to develop it to meet future electricity needs. Public entrepreneurship, therefore, seemed to be Bennett's only alternative:

Nationalization was simply used as an expedient to achieve a set of objectives which had very little to do with public ownership per se and absolutely nothing to do with any form of socialism. The electric power industry in private hands simply became an impediment to the brand of provincial entrepreneurship which was central to the political philosophy of W.A.C. Bennett and his Social Credit party. . . . The dominant private power utility was both unwilling and unable to adapt itself to this entrepreneurial role, since its own corporate objectives had to take into account both the unfavourable economics of hydro at that time and the risks inherent in rapid economic expansion. Nationalization, in effect, socialized these risks, and

thus made an aggressively expansionist power policy possible (Payne, 1982, 13).

Following the precedent set by the Power Commission, B.C. Hydro was exempted from the jurisdiction of other government departments and regulatory bodies (B.C., 1962, s.12). Once again it was assumed that direct regulation by cabinet eliminated the need for regulatory review. The only significant change from the Power Commission was that one or more cabinet ministers were appointed to B.C. Hydro's board of directors, thus ensuring cabinet responsibility for the corporation's decisions.

From its inception, B.C. Hydro's approach to electricity management was to foster the production and consumption of electricity in the province. This was achieved through measures which ensured the lowest possible electricity prices for consumers, particularly industrial consumers. Thus, the provincial government provided low interest pension funds to B.C. Hydro, exempted it from taxes (s. 12), and guaranteed its debt (s. 19). Furthermore, the corporation maintained a 'declining block' price structure, which encouraged energy intensive industry and increased electricity consumption by commercial and residential consumers. This pricing structure was also weighted in favour of industrial class users over the other classes of consumers, leading Osler to note that:

the larger users (both within each class and within the system) face substantially higher marginal rates from those now in effect (Osler, 1977, 87).

The electrical energy policy of the provincial government provided electricity at or below cost to industrial consumers and thus contributed to the dramatic economic expansion of the 1960's by allowing industry to concentrate investment in production processes. During the decade industrial expansion was particularly dramatic in the mining and pulp and paper sectors, industries that require considerable energy. In a span of only eight years (1965 - 1973) B.C. Hydro increased its electrical capacity by 230 per cent and its electrical sales by 260 per cent (B.C. Hydro, 1965 - 1973). By the early 1970's, this rapid expansion was seen as absorbing the excess capacity created by the two rivers policy and by the middle of the decade and B.C. Hydro was once again planning major expansion of its hydro electric network.

Regulation of electrical energy development during this period was minimal. The Public Utilities Commission had been rendered irrelevant in the field of electricity since much of B.C. was serviced by B.C. Hydro, which was exempt from regulatory review. Moreover, there seemed little reason for any economic regulation, since for the first five years of its existence B.C. Hydro was able to reduce its rates on an annual basis. Finally, the potential for the Water Act to provide some form of social regulation in order to protect other users of the province's water resources, was little more than symbolic since the government had already committed itself to the projects that were being undertaken. While the economic boom of the 1960's

saw increasing per person consumption of electricity and continued support for the Social Credit government and its policies there was, nonetheless, also a growing environmental awareness that led many people to question the effects of economic growth on the environment, in particular, the inundation of British Columbian valleys behind B.C. Hydro dams. In the latter part of the decade this coincided with rising costs which finally forced B.C. Hydro to institute rate hikes in 1967 and 1970.

The growing public concern for B.C. Hydro's policies prompted the provincial government in 1970 to resurrect the B.C. Energy Board and direct it to undertake a comprehensive review of B.C.'s power options and B.C. Hydro policy. The Board's findings generally vindicated the expansionist policies, which was hardly surprising considering that its chairman was also the chairman of B.C. Hydro, Dr. G. Shrum. The Board concluded that there was no conflict between higher electricity consumption and environmental conservation:

The Board is confident that no significant reduction in the use of electricity in this Province will result from the present concern for the environment (B.C. Energy Board, 1972, 27).

In 1972, 20 years of Social Credit government ended with the election of the New Democratic Party (NDP). During its short three years in power the NDP did little to reduce the autonomy of B.C. Hydro, preferring instead to exercise control through its appointment of the corporation's chairman and by placing two cabinet ministers on the board of directors, the

same practice of direct regulation employed previously by the Social Credit government. However, while the NDP did not directly change the institutional framework encompassing B.C. Hydro, nor successfully alter the corporation's expansionary policies, it did initiate administrative and institutional changes which were to eventually challenge B.C. Hydro's autonomous position.

First, in an effort to develop a policy framework for resource planning, the government directed the Technical Secretariat to the Environment and Land Use Committee of cabinet (ELUC) to formulate administrative guidelines for the preparation of environmental impact statements, compensation-mitigation procedures, cost-benefit analyses, and linear developments. Although no statutes or regulations required B.C. Hydro to follow these guidelines, they, nonetheless, became influential in the preparation of subsequent project proposals.

The second important action of the NDP government was its abolition of both the Public Utilities Commission and the B.C. Energy Board and their replacement by the B.C. Energy Commission, a statutory regulatory agency charged with the responsibility for regulating the privately owned petroleum and natural gas industry and advising the government on energy policy issues (B.C., 1973). Although B.C. Hydro's exemption from regulation was allowed to continue, the Energy Commission's analysis provided a credible challenge to the crown

corporation's expertise. This was particularly noteworthy in the field of energy demand forecasting, where it predicted growth rates less than half those predicted by B.C. Hydro (Margolick and Charles, 1980). In terms of the procedures of energy regulation, one interesting component of the Energy Commission's mandate was its independent authority to initiate public hearings:

A public hearing shall be held whenever, in the opinion of the Commission, the Lieutenant Governor in Council or the Legislative Assembly, a public hearing is in the public interest (B.C., 1973, Energy Act, s.99).

Moreover, in such public hearings the Commission also had the authority to allow class (interest group) representation and to supply costs for that representation (s.139).

The Revelstoke Dam Hearings

In late 1975 the Social Credit party was returned to government but opposition to B.C. Hydro's policies continued and, in fact, intensified the next year when the corporation applied for the necessary permits to construct its latest mega-project, the Revelstoke dam. By 1976 there were still no regulatory mechanisms in B.C. requiring a comprehensive review of major energy development projects. Although there were the ELUC Secretariat guidelines, mentioned above, there existed no 'administrative due process' to ensure compliance with the guidelines. Indeed, the only significant statutory constraint

to B.C. Hydro's plans was the surviving requirement for the corporation to obtain a water licence from the Water Comptroller at the Ministry of Environment. The Water Act provides no specific legislative authority for the Water Comptroller to deal with the complex issues involved in the review of an energy project: such as project justification, supply and demand forecasts, environmental and socio-economic impacts, mitigation and compensation, and project monitoring. However, the Comptroller's broad mandate to (1) hold a public inquiry if considered necessary, and (2) to demand from an applicant any information which may be relevant, provided the only framework to deal with the many issues raised by those wishing to intervene in B.C. Hydro's licence application (Bankes and Thompson, 1980, 46). Therefore, it was largely by default, as had been the case with some of the projects in the 1950's, that the application for a water licence became the focus for public involvement in the Revelstoke dam project, simply because this was the only regulatory forum in which intervenors could hope to raise the fundamental issues which concerned them (Bankes, 1982, 102).

The Revelstoke public hearings in September 1976 marked the first application of the ELUC Secretariat's project guidelines to a major energy development project. Thus, accompanying its application for a water licence B.C. Hydro submitted a benefit-cost analysis and an environmental impact statement to the Water Comptroller. Criticisms of B.C. Hydro's position at

the hearing ranged over several issues: the evaluation of environmental costs; the methodology of the cost-benefit analysis; the mitigation and compensation proposals; and the credibility of demand forecasts indicating a need for the dam (Bankes and Thompson, 1980, 24).

From the perspective of this paper, there were additional criticisms pertaining specifically to the regulatory process. Bankes and Thompson (1980) identified a number of these:

1. Section 9 of the Water Act restricts the right of intervention during a water licence application to other water licencees, riparian owners, and certain government ministries. Although the Water Comptroller took a broad interpretation of this stipulation and allowed public interest group intervention, this was, nonetheless, a discretionary decision which by no means guaranteed the status of these participants.
2. The Water Comptroller and his staff lacked the expertise or specific mandate to assess questions of electricity supply and demand. As a consequence, only two of the 27 days of the hearing were devoted to this subject, even though the 'need for the project' was a principle concern of many of the public interest intervenors.
3. The Water Comptroller had not established rules of information disclosure and this became a recurrent problem as public interest group representatives, local

governments, and even the provincial Fish and Wildlife Branch castigated B.C. Hydro for its tendency to withhold information or to present it at the last moment.

4. The legal counsel for the Water Comptroller did not take an active role in terms of cross-examining witnesses or presenting evidence. An approach such as this might have compensated to some extent for the lack of preparation time and resources of the intervenors.
5. There were no informal community hearings even though some local residents were anxious to have the opportunity to express their opinions without having to submit formal interventions.
6. There was no funding for public interest intervenors. This meant that everyone had to rely on B.C. Hydro and its consultants for most of the research.
7. The mandate of the Water Comptroller left uncertainty about his jurisdictional authority, especially after he granted a licence to B.C. Hydro to construct the dam subject to conditions which required additional research and deferred decisions. In an attempt to compensate for the absence of enforceable regulatory procedures, the Comptroller imposed wide ranging conditions of licence which required regulatory and monitoring powers that he clearly did not have.
8. Finally, the monitoring committees established by the

Water Comptroller lacked the resources or opportunities for effective public involvement:

Public input could have been co-ordinated through a representative impact committee funded either publicly or by Hydro. . . . A less desirable alternative would have been for the official co-ordinating committees provided for by the water licence to include public interest representatives, as a minimum, they should have been organized so as to receive submissions and complaints from the public (Bankes and Thompson, 1980, 40).

Opposition to B.C. Hydro's policies carried over into its hearings for export licences from the National Energy Board in 1979, the only other regulatory agency with authority over the company. Again debate centred on B.C. Hydro's tendency to produce overly optimistic demand forecasts, which was interpreted by some as a means of inconspicuously producing surplus electricity for export and thereby side-stepping a policy restriction on producing for export (Margolick and Charles, 1980).

Changing the Regulatory Regime

By the late 1970's, the Social Credit government had become convinced that its past practice of direct regulation of B.C. Hydro (by legislation and cabinet participation on the Board of Directors) was insufficient to satisfy growing public opposition to the policies of the crown corporation. Moreover, the problems with B.C. Hydro were not isolated. A number of

energy-related projects were being planned which, in conjunction with each other, would have profound social, economic and environmental ramifications for the province. These included:

1. liquid natural gas production;
2. petro-chemical industries;
3. off-shore oil and gas exploration;
4. a gas pipeline to Vancouver Island;
5. coal export projects;
6. B.C. Hydro's plans for dams on the Peace, Liard and Stikine Rivers and the thermal generation of electricity using Hat Creek coal.

The degree of expertise and jurisdictional authority required to regulate and co-ordinate these diverse proposals strongly suggested the need for a statutory regulatory agency, one that would consider both public and expert input in order to provide advice to cabinet on how to dispense with these various proposals. As noted previously, Trebilcock et al. (1982) would point out that the situation also warranted the creation of a statutory regulatory agency from a political perspective, simply to relieve the government of the imminent controversies associated with these projects. Regardless of the government's motives, in February 1980 it took the first step in this direction by issuing the policy paper, An Energy Secure British Columbia (B.C. MEMPR, 1980). While the main thrust of this document was to outline policies for provincial energy security, it also discussed new regulatory procedures for utilities and

major energy related projects in the province, including those of B.C. Hydro.

In the following chapter the explicit goals of the government, as outlined in its policy paper, are integrated with criteria from the definition of the public interest in Chapter 2 to produce a set of evaluative criteria.

CHAPTER 4

EVALUATIVE CRITERIA FOR REGULATION

In the previous chapters it was argued that, although there are a number of plausible explanations for government regulatory activity, governments universally justify such activity in terms of a single ambiguous concept, the public interest. Therefore, since governments claim to act in the public interest, their actions can be evaluated in terms of their success in meeting this goal. However, there are a number of interpretations of the public interest and, as a consequence, such an evaluation requires certain normative assumptions.

The argument in this paper is that for the purposes of regulating electrical energy the pre-eminence of the majority rule definition of the public interest in Canadian government institutions should be decreased in favour of the process and idealist interpretations. This is primarily because many of the regulatory problems associated with electric utilities have shifted from the rather narrow technical concerns of economic regulation to broader policy level concerns. Specifically, in a world of diverse interests, biophysical limitations and increasingly complex issues, a decentralization of decision making power is desirable in order to allow greater input from interest groups and technical groups. This is particularly important at the project or single issue level, where cabinets

can and should provide guidance, but where statutory regulatory agencies have the necessary time and expertise to thoroughly examine issues.

The criteria developed in this chapter reflect this position. First, government regulation must be in the public interest, i.e., there must be a 'legitimate' need for regulation and the government must be 'effective' in meeting its regulatory goals. Second, the government must improve the opportunities for all concerned groups to participate in the regulatory process. The process must be 'efficient', 'open', and 'fair'. Thus, the evaluative criteria are:

1. legitimacy;
2. effectiveness;
3. efficiency;
4. openness; and
5. fair process.

LEGITIMACY

There must be a valid public interest need for government regulatory activity, be it social or economic. It must be demonstrated, therefore, that the existing economic system and regulatory mechanisms are inadequate to deal with the specific market failures or other social concerns that have prompted the regulatory activity in question. Without this initial condition, private interest theories of regulation, and

consequent arguments for de-regulation, deserve consideration.

EFFECTIVENESS

The regulatory regime should fulfill the explicit objectives of government for establishing it. As outlined in the provincial policy document of 1980 these are:

1. to establish utility regulation over B.C. Hydro:

The new Commission will be responsible for full regulation of both the electricity and gas sections of British Columbia Hydro (B.C. MEMPR, 1980, 9).

2. to establish a 'streamlined' and 'comprehensive' energy project review process which would:

. . . ensure that socially and economically desirable projects will be evaluated with a minimum delay, while also ensuring that all appropriate government safeguards would be taken (B.C. MEMPR, 1980, 13).

3. to develop the review process in two phases:

The first phase will examine the broad justification for the project, including energy demand projections, alternative energy sources (including conservation), and general environmental and social factors. Projects found justifiable in the first phase would go into a second phase of detailed study to examine specific environmental concerns, mitigation measures and other detailed factors. This second phase would be undertaken within the guidelines defined by the provincial Environment and Land Use Act (B.C. MEMPR, 1980, 13).

4. to ensure that "full opportunity will be provided for public input" (B.C. MEMPR, 1980, 13).

EFFICIENCY

The efficiency criterion is traditionally applied in the literature, particularly U.S regulatory literature, to refer to the effect of regulatory activity on the economic efficiency of the economy, or a specific industry. In this paper the emphasis is on process and, therefore, the efficiency criterion refers to the procedures of the regulatory agency and its co-ordination with other facets of government activity. These procedures should be:

1. clearly explained and complementary to other government agencies and administrative procedures (Thompson, Bankes and Souto-Maior, 1981);
2. as streamlined as possible and the collection of information should not exceed the scope and quantity necessary to reach decisions (Munn, 1979); and
3. the regulatory agency, or certain of its functions, should not exist if equally effective and less costly means of achieving the same ends are available (Dales, 1975).

OPENNESS

The regulatory agency should function in a manner that is both open and responsive to those who will be affected by its decisions. Since the issues of regulation vary in scope so

should the regulatory mechanisms. Specifically, where the issues are narrowly defined technical ones, the agency should be relatively independent of cabinet. As issues become more policy-oriented this autonomy should decrease, but the regulatory process should nevertheless remain open so that participating groups know the relationship between their input, the decisions of the regulatory agency, and the final decision. An example would be Hartle's (1979) two tier regulatory agencies: (1) those with the authority to make decisions; and (2) those which make recommendations on policy issues to cabinet. However, in the interests of openness, both the decisions and recommendations of these agencies should be immediately available for public scrutiny. Finally, this goal of openness must be consistent with the other criteria, in particular efficiency. Thus, methods must be developed which ensure that the open processes do not become unjustifiably costly and time consuming.

FAIR PROCESS

Legitimate interests should have 'fair' access to the regulatory process. The following conditions are therefore desirable:

1. All legitimate interests must have the opportunity to participate or be represented, as early as possible in the process. The problem with this last criterion is

that it can be difficult to determine legitimate interests. However, criteria for determining 'legitimate' interests have been developed in previous hearings and are becoming common place (Barz, 1983, 113).

2. All legitimate interests must have the means to participate. Where an individual or group with relevant concerns lacks the financial resources to effectively participate, mechanisms should exist to provide support for them (Thompson, Bankes and Souto-Maior, 1981).
3. The public must have access to all pertinent information in a form which is readily understandable (Thompson, Bankes and Souto-Maior, 1981).
4. Public participation techniques should suit the nature of the issue and the public groups that are involved. For example, the degree of formality of public hearings would probably be different for rate hearings than for project evaluation hearings, or, for technical evidence than for community input (Barz, 1983).
5. the public hearing component of a regulatory process should exhibit a flexibility of procedure which corresponds to the hierarchy of decision making levels that it may be asked to address. For example, there may be one type of public hearing to deal with questions of general policy, and another to deal with specific projects, and yet another to deal with rate relief

applications (Barz, 1983).

Since 1980, the provincial government has implemented many of the regulatory objectives of its policy paper. In Chapter 5 these changes and their first major application will be examined in terms of the above criteria. This historical review will be followed in Chapter 6 by a more specific evaluation, again in terms of the above criteria.

CHAPTER 5

THE NEW REGULATORY REGIME AND SITE C

THE UTILITIES COMMISSION ACT

Later in 1980, the provincial government began to implement the objectives of its policy paper by passing the Utilities Commission Act (B.C., 1980, Utilities Commission Act). As a result, the Energy Commission was abolished and its functions divided. Policy formulation and forecasting were transferred to a re-organized Ministry of Energy, Mines and Petroleum Resources. Regulatory powers over public utilities, including B.C. Hydro, were transferred to a new B.C. Utilities Commission, currently comprised of four full time commissioners and a professional staff of 38. The Commission was also vested with major responsibilities in the new energy project review process.

One important aspect of the Act was the transfer of the regulatory responsibilities formerly held by the B.C. Energy Commission to the newly established B.C. Utilities Commission. These include the power to regulate public utilities (Part 3), the petroleum industry (Part 4), and common carriers, purchasers and processors (Part 5). The degree of regulatory power stipulated in the Act extends from 'standards of service' and

'rate determination' to all aspects of financial matters and, with a more recent ammendment, 'utility ownership' (B.C., 1982(b)). Furthermore, the BCUC has also been given the responsibility to issue Certificates of Public Convenience and Necessity for the operation of utility plants and systems (Sections 51-54) and has general provisions to inquire and hold hearings on any matter which it deems relevent to the operation of utilities (Part 7). In terms of the discussion in Chapter 2, these segments of the Act establish the authority of the BCUC to administer what can roughly be termed 'economic regulation' over the utility industry in B.C., including B.C. Hydro.

In addition to addressing the above issues of utility regulation the new Act is particularly important for the provisions it establishes for dealing with, in a single review process, the issues associated with major energy projects, issues more commonly assigned to the category of 'social regulation'. In Part 2 (Sections 16-21), the Act provides the BCUC with the power, but not independent authority, to review and certify proposals to produce consume or transport significant amounts of energy in the province. Section 16 defines, in terms of their magnitude, those projects eligible to be 'regulated'. Thus, for example, a hydro or thermal electricity generating plant, or an addition to a plant, of at least 20 MW is considered a 'regulated project', as is a transmission line of at least 500 KV and facilities consuming an annual energy equivalent of 3 PJ.

The third important function vested with the BCUC by the Act is the power to authorize all energy exports from the province (Part 2, Sections 22-25). Since energy exports from Canada are already reviewed by the federal National Energy Board, federal-provincial co-ordination will be required in order to minimize regulatory redundancy.

The Energy Project Review Process

The regulation of major energy projects is not solely the responsibility of the BCUC. The regulatory process also involves participation by committees comprised of representatives from various provincial ministries in addition to discretionary powers residing with the Cabinet as a whole and, in particular, with the Minister of Energy, Mines and Petroleum Resources (EMPR) and the Minister of the Environment. This entire review procedure, which was developed in concert with the new Act, is called the Energy Project Review Process (EPRP).

The proponent of a 'regulated' energy project is expected to initiate a project application by opening consultations with the relevant government agencies. This initial period of proponent-government liaison is orchestrated by the Energy Project Co-ordinating Committee (EPCC), an inter-agency group responsible for directing interaction between the proponent and those government agencies which have a direct concern in the

project. The EPCC consists of representatives of the Project Analysis Division of the Ministry of EMPR, the Assessment Branch of the Ministry of the Environment, and the BCUC. It has three working sub-committees:

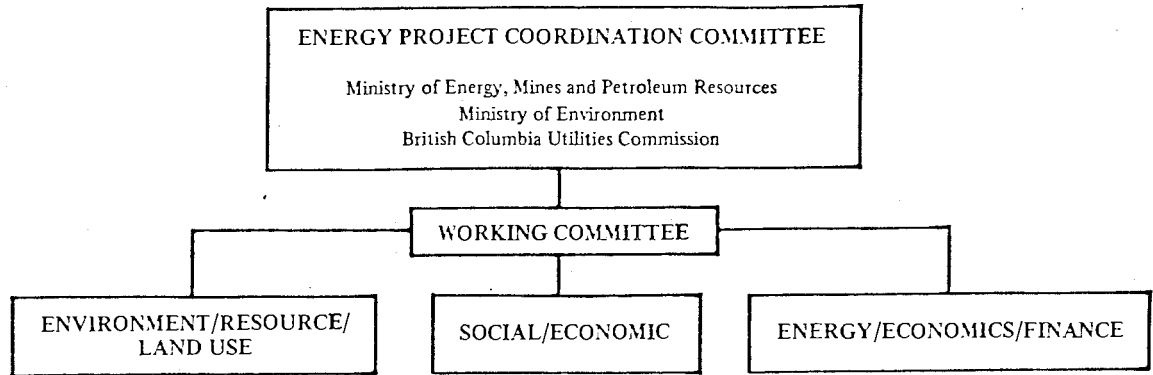
1. Environment / Resource / Land Use;
2. Social / Economic; and
3. Energy / Economics / Finance (Figure 1).

The sub-committees of the EPCC screen proposals twice prior to the submission of a formal application. In the first stage the proponent submits a general 'prospectus', describing the project and various proposed studies. The prospectus is reviewed by the EPCC and then, after receiving feedback, the proponent proceeds to the next stage, preparation of a 'preliminary planning report'. This second report contains an identification of alternatives to the project, economic or other justifications, potential environmental and social impacts, public consultation programs, and a preliminary list of the required approvals, licences and permits. This report is also reviewed by the EPCC which then decides if the proponent may submit a formal application to the Minister of Energy, Mines and Petroleum Resources (Figure 2).

The formal application requirements for an Energy Project Certificate are outlined in Section 18 of the Act and in B.C. Regulation 388/80 (Appendix C). Generally, an application must include:

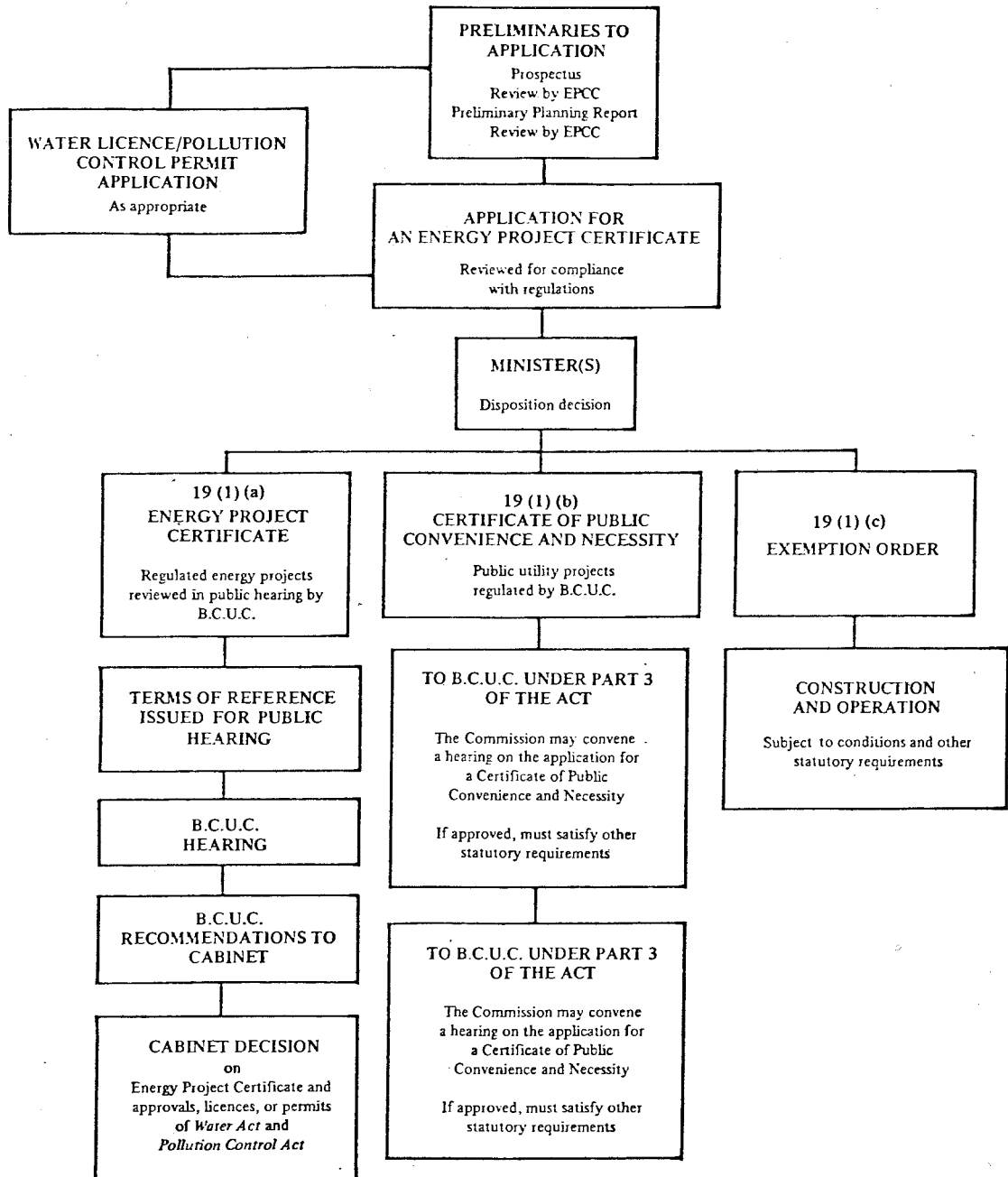
1. a project description;

Figure 1: Energy Project Coordination Committee



(Source: B.C. MEMPHR, 1982, 7 (a))

Figure 2: Energy Project Review Process



(Source: B.C. MEMPHR, 1982, 7 (a))

2. project justification,
3. an assessment of environmental and socio-economic impacts;
4. ancillary applications as required by other statutes; and
5. a description of an ongoing public information and consultation program.

In the consultations leading up to formal application the EPCC and its working committees will assist the proponent in tailoring the application to the applicable administrative guidelines (the guidelines which were developed under the ELUC secretariat in the 1970's).

Upon receiving a formal application, the Minister of EMPR distributes it to the various government departments for review. These reviews are subsequently collated and evaluated by the EPCC which, in turn, makes recommendations to the Minister for disposition of the application.

Under Section 19 of the Act the Minister, with the concurrence of the Minister of Environment, has three options for disposition of the application. First, under Section 19 (1)(a) he can refer the application to the Commission for a review under 'terms of reference' specified by both Ministers. This review by the Commission must include public hearings. The Commission is also authorized, under Section 132, to provide funding for intervenors or their representatives. In the case of Site C the terms of reference stipulated that the BCUC review

B.C. Hydro's application in public hearings using the ELUC guidelines as reference and that the Commission also consider and recommend whether ancillary licences or approvals should be granted. After conducting hearings, the Commission then submits a report and its recommendations to cabinet. Cabinet is free to issue or refuse an Energy Project Certificate subject to any conditions it deems appropriate, regardless of the intent of the Commission's recommendations (Section 21(1)). Upon completion of project construction and after compliance with the terms of the Energy Project Certificate, cabinet may then issue an Energy Operation Certificate, again subject to any terms and conditions it deems appropriate (Section 21(3)).

The second option for the two ministers, Section 19(1)(b), is to refer the application to the BCUC for a review under its own rules as established in Part 3, Sections 51-53. Under these procedures, which apply only to public utilities, the Commission makes the final approval decision rather than cabinet. If it approves a project it issues a Certificate of Public Convenience and Necessity. In this process the decision to include public hearings in the review is at the discretion of the Commission.

The third option, Section 19(1)(c), authorizes the Minister, again with the concurrence of the Minister of Environment, to order that the construction and operation of a regulated project be exempt from some or all provisions of the Act. In this third option, which allows the Ministers to totally circumvent the involvement of the BCUC or the public in

the regulatory process, the Ministers may still attach their own terms and conditions to the Energy Project Certificate and the Energy Operation Certificate.

To ensure compliance with the terms and conditions of the Certificate of Public Convenience and Necessity (review by the BCUC under its rules and procedures), Section 51 (7-8) delegates supervisory authority to the BCUC. Although there is no comparable provision in the Act for projects that have received Energy Project Certificates, a recent technical discussion paper by the Ministry of Energy, Mines and Petroleum Resources envisions no problem with this ambiguity. It states that Section 25 of the Act provides express powers for the BCUC to delegate surveillance and monitoring responsibilities to government agencies or other bodies (B.C. MEMPR, 1982(b)). It further suggests that two impact monitoring committees be established: (1) environmental impact management; and (2) social impact management. Finally, it suggests that public involvement could be fostered by various methods including 'local advisory committees'.

THE SITE C PROJECT REVIEW

The introduction of the Utilities Commission Act met with considerable criticism, mostly directed at the broad discretionary powers given to cabinet and, in particular, the Minister of EMPR and the Minister of the Environment. Debate

tended to follow the traditional lines described in Chapter 2. Opposition political parties and public interest representatives argued that executive interference should be restricted to statute, explicit policy guidelines, and the authority to hear appeals only if they are openly debated in parliament. For its part, the government emphasized the public forum dimension of the Commission's role, at least for energy project review, and defended its prerogative to retain control over what are essentially political decisions.

The early experiences of the Commission seemed to vindicate the claims of its critics. In February of 1981, cabinet awarded B.C. Hydro the contract to build a natural gas pipeline to Vancouver Island without allowing competitive bids or a public review by the Utilities Commission. Then in March, cabinet granted B.C. Hydro a rate increase, again without review by the BCUC. By this time even the government-appointed commissioners were lamenting the wording of the legislation. Commissioner Kilpatrick publicly stated:

There are lots of clauses in the new act that can lead to the suggestion that we're a rubber stamp just because of the wording. . . . It would be nice if the Act were cleaned up, but we can live with it (Vancouver Province, 1981, Oct. 23).

In defence of the government, a fully operational regulatory agency is not created overnight and, at the time, certain decisions seemed rather urgent. However, by late 1981 a number of important responsibilities had been delegated to the BCUC. In September the cabinet reversed its stand on the

pipeline, rescinded the contract with B.C. Hydro, and submitted the question to review by the BCUC. In addition, the Commission initiated public hearings to review B.C. Hydro's rates and was also asked by the government to conduct a full scale public hearing on B.C. Hydro's application for an Energy Project Certificate for the Site C dam.

The Site C dam would be a continuation of the development of the Peace River system. Located 7 km from Ft. St. John and 120 km downstream from the Bennett Dam, it would take advantage of the enormous storage capacity of the Williston Reservoir. Although B.C. Hydro originally intended to follow the Revelstoke Dam with the Hat Creek Coal thermal electricity project, it reversed its plans in 1979. B.C. Hydro management also maintained that its electricity demand forecast, engineering studies and economic research indicated that only Site C or Hat Creek had sufficient capacity and could be completed quickly enough to prevent electricity deficits in the mid-1980's.

B.C. Hydro had begun engineering and environmental studies for the Site C project in the mid-1970's and, therefore, the introduction of the BCUC and the Energy Project Review Process in 1980 came too late for the project to follow the new procedures from beginning to end. Specifically, it was too late for the 'prospectus' or the 'preliminary planning report', since both of these phases should precede the detailed engineering and environmental studies. Thus, one month after the creation of

the BCUC, in September of 1980, B.C. Hydro initiated the third phase of energy project review by submitting a formal application to the government for an Energy Project Certificate for Site C. In response, the government issued terms of reference in April of 1981 for the BCUC to conduct a full public hearing on the project (Figure 3).

Because the planning and review of the Site C project occurred during a period of regulatory transition in B.C., it experienced unique difficulties which complicated and extended the subsequent review by the BCUC. For one thing, the government-proponent liaison envisioned in the new regulatory procedures did not occur, largely because of inconsistent behaviour by the government. Specifically, while the government was developing the new review process it was also well aware of the B.C. Hydro's proposal, and yet it refused to provide any significant guidance or feedback to the crown corporation (Waite, 1983). Indeed, all ministry evaluations of B.C. Hydro's work were kept confidential until blue papers were released just prior to the hearing. As a consequence, B.C. Hydro had no opportunity in the pre-hearing stage, to respond to the discrepancies between their work and the work of government ministries. While some of these discrepancies could have been resolved in the pre-hearing stage, they were instead debated at length during the hearing. The compensation-mitigation measures were one example of this problem as was the estimate of the amount of agricultural land to be affected by the reservoir.

Figure 3: Chronology of Site C

- mid-1970's - Design and impact research
- 1980 Aug. - Creation of BCUC and EPRP
- Sept. - B.C. Hydro applies for EPC
- 1981 April - MEMPR decides that Site C will be reviewed in public hearings by the BCUC and issues terms of reference (Site C avoids the prospectus and preliminary planning phase of the EPRP)
- July 28 - Pre-hearing meeting in Fort St. John to explain general procedures
- Oct. 7 - Pre-hearing conference in Fort St. John
- Nov. 24 - Hearing begins, Fort St. John, demand phase
- 1982 Jan. 5-13- Special session held in Vancouver
- Feb. 11 - Supply phase begins
- Feb. 25 - Engineering and design phase
- March 24 - Environmental phase
- Sept. 21 - Financial phase
- Oct. 5 - Demand phase II
- Nov. 2 - End of hearing
- 1983 March - Submission of BCUC recommendations on disposition of Site C to cabinet

The terms of reference issued by the Minister of EMPR and Minister of Environment for the public hearing review by the BCUC included the following components:

1. project justification;
2. project design;
3. environmental, land use, social and economic impacts;
and
4. ancillary licence permits and any other matter considered by the Commission to be relevant.

After the public hearing the BCUC was to submit recommendations to cabinet on the following issues:

1. the refusal or issuance of an Energy Project Certificate;
2. any conditions which should be attached to the certificate; and
3. the issuance of ancillary licences and permits under the Water Act and the Waste Management Act (B.C. MEMPR, 1981).

The details of the terms of reference provided a preliminary indication of the government's commitment to its regulatory goals of 1980. On the one hand, the incorporation of the various licence and permit requirements into one hearing and review process fulfilled the objectives of 'streamlining' and 'comprehensiveness'. On the other hand, there was no mention of a two-phase hearing process. While the government appeared to have rejected this 1980 policy objective, there may have been

reasons unique to the Site C project. One argument is that the purpose of two stages is to avoid costly environmental and social research in those cases where a project is found to be unjustifiable on economic or political grounds. In the case of Site C, however, the environmental and social research had already been completed, eliminating the rationale for the two stage method.

In spite of the unique circumstances of the Site C review, recent statements by the government suggests that it now envisages a much narrower scope for the public hearing component of the EPRP. The recent technical discussion paper describes the function of the public hearings as:

Review of design plans; Elaboration of impact assessment; Refinement of mitigation/compensation and implementation proposals; Further evaluation and clarification of data and deficiencies (B.C. MEMPR, 1982(b), 5).

A further example is the recently issued terms of reference for the BCUC's review of the natural gas pipeline to Vancouver Island. In this case, the government has limited the scope of the hearing to an evaluation of the relative merits of competing proposals, with the need for the project as given (B.C. MEMPR, 1983). A continuation of this trend would see the BCUC fulfilling a role analagous to that of the federal Environmental Assessment Review Process: simply reviewing environmental and socio-economic impact studies without having the option of approving or rejecting the projects.

With the release of the terms of reference for Site C, the cabinet also appointed a review panel consisting of one permanent and four temporary commissioners. The Chairman was Keith Henry, an engineer and former commissioner with the International Joint Commission. The permanent commissioner was Don Kilpatrick, a retired Vancouver business executive, and the other temporary commissioners were Lorne Ryan, an engineer and former manager of the City of Vancouver, Earl Little, an engineer and land surveyor from Fort St. John, and Robert Petrick, a Dawson Creek motel owner and alderman (Barz, 1983, 161).

In the ensuing months the panel reviewed all of the documents submitted by B.C. Hydro in support of its application, requested additional information, and requisitioned a number of private consulting studies in order to provide alternative analyses of certain potentially contentious subjects. After a pre-hearing meeting in late July to explain general procedures, the Commission held a pre-hearing conference October 7th to deal with preliminary motions with respect to jurisdictions, procedures, and other matters. This was the first opportunity for public involvement in the Site C review process. The major outcomes of the conference were:

1. rights of intervention would be open to virtually any one;
2. the Commission would award costs to intervenors based upon the contribution of their submissions to the review

process;

3. these costs would be awarded at the end of each phase;
4. B.C. Hydro was required to provide confidential information concerning power inquiries from the industrial sector;
5. most of the hearing would be held in Fort St. John; and
6. the hearing would be divided into six phases: 1. Demand; 2. Supply; 3. Project Cost and Design; 4. Environmental and Socio-Economic Impacts; 5. Financial Impacts; and 6. Final Argument.

THE PUBLIC HEARING

Demand

The formal Site C hearing began on November 24th, 1981 with the demand phase, which continued until February of 1982. The major issues of this phase were:

1. the validity of B.C. Hydro's contention that forecasting error resulting in excess capacity is more financially sound than errors resulting in capacity shortage;
2. the effect of electricity price on electricity demand (demand elasticity);
3. the reasons for the significant divergence in the methods and results of energy demand forecasting between

the Ministry of EMPR and B.C. Hydro;

4. the potential for electricity exports;

5. B.C. Hydro's method of estimating demand from current and prospective industrial customers; and

6. whether demand should be simply estimated and planned for or whether attempts should be made to manage it.

This phase was also noted for the appearance before the hearing of the Minister of EMPR, Bob McClelland, to explain government policy in pricing and electricity exports. McClelland reiterated the policy of not producing electricity for export, and acknowledged the goal, albeit long-term, of replacement cost pricing, but he was generally non committal on other policy questions. Although McClelland's appearance provided no evidence of increased public input in government decision making, the chairman, Henry, interpreted the event as a breakthrough in public participation:

The Commission's proceedings are setting precedents for Canada, and probably for North America, in public participation in decision making on resource utilization (BCUC, 1982, 4111).

Also during this phase the Commission dealt with a motion by the two principal intervening organizations, the Society for the Promotion of Environmental Conservation (SPEC) and the Peace Valley Environmental Association (PVEA), for an adjournment of the hearings until the completion of concurrent hearings by another BCUC panel on B.C. Hydro's application for a rate increase. They argued that since electricity prices have a critical effect on electricity demand, and since B.C. Hydro was

applying for a substantial rate increase, that the hearings into site C should await the rate determination. In essence, their argument was that it seemed futile to examine a project in great detail while the fundamental question of need had yet to be resolved. The response of the Commission was to proceed with the hearing, pointing out that the kind of detailed financial knowledge required from the first application of 'economic' regulation to B.C. Hydro could extend the rate hearings for two years (BCUC, 1982, 1950).

By the close of the demand phase, B.C. Hydro had agreed to reconsider its demand forecasting methodology and, consequently, the panel decided that a second demand phase would be held at the end of the hearing.

Supply

In contrast with the length of the demand phase, the supply phase lasted only eight hearing days. In this phase the principle issue was B.C. Hydro's method of determining its lowest cost supply option. B.C. Hydro argued, and the Commission agreed, that it need only present detailed cost data for Site C and one alternative project, Hat Creek. Furthermore, since B.C. Hydro had decided that these were the two lowest cost alternatives, the benefit of Site C could be calculated in terms of its cost advantage over Hat Creek. In response, intervenors argued that since there was negligible evidence

indicating that these were indeed the lowest cost alternatives, B.C. Hydro's 'cost-benefit' analysis was actually a 'cost-effective' analysis between two arbitrarily chosen options. Feeling frustrated with the apparent absence of a holistic approach to the supply issue, one intervenor, Hadland, introduced a motion that the BCUC conduct a review of the province's energy options. The panel pointed out, however, that although such an undertaking may have been justified, the decision to do so was beyond the mandate of the Commission.

Project Design

The project design phase lasted only eight hearing days. The BCUC had commissioned an engineering review of the project design which generally substantiated the work of B.C. Hydro's engineers. Lacking expertise in this area, the intervenors were also unable to seriously challenge B.C. Hydro's design.

Environmental and Socio-Economic Impact

The fourth phase began March 24th and lasted 62 hearing days until September 21st. By far the longest phase, it included four B.C. Hydro panels, in addition to panels representing various provincial government ministries, local governments, native people, interest groups, and individuals.

One of the main issues of this phase was the loss of agricultural land to the reservoir. At one point there was confusion between the provincial Ministry of Environment and B.C. Hydro as to the total amount of land that would be lost, an issue that clearly should have been resolved prior to the hearing. Another debate centred on B.C. Hydro's decision to calculate the value of the land from the current market value, even though (1) the potential threat of reservoir flooding tends to depress market values, and (2) agricultural land in Canada may have a much higher relative value in the future.

Another issue of continuous debate was the inconsistency between the provincial government's guidelines for valuing environmental and social resources and the actual methods that were applied by B.C. Hydro. The crown corporation favoured equity over economic efficiency as a compensation principle. Thus, the costs of the dam were considered compensated if individuals received offsetting payments. Similarly, B.C. Hydro's method of measuring benefits by the advantage over Hat Creek was compared to the willingness-to-pay criterion of the Ministry of Industry and Small Business Development. Stainsby of SPEC quoted the ministry's submission:

There is no direct evidence in B.C. Hydro's submissions to the B.C. Utilities Commission, however, that the willingness-to-pay for the additional power would be at least equal to the cost of the Hat Creek project. Therefore, the 'alternative cost' procedure may or may not provide an accurate measurement of the social benefits of the project (BCUC, 1982, 11058).

Stainsby then proceeded to pose this argument to B.C. Hydro's

economist, Peterson:

Stainsby: So strictly speaking, there is nothing before this Commission that allows it to conclude that there is a benefit to Site C?

Peterson: I agree with you (BCUC, 1982, 11060).

Other issues tended to focus on the standard elements of environmental and socio-economic impact review. These included: fish and wildlife, native people, local communities, outdoor recreation, climate, transportation, forestry, and heritage sites.

There were also a number of developments in this phase which are of particular interest from a procedural perspective.

1. The general support of the Commission for intervenor attempts to obtain B.C. Hydro information was evident on numerous occasions. For example, the Chairman ruled, in spite of B.C. Hydro's protests, that it should release various background environmental and socio-economic studies.
2. The Chairman was extremely lenient in terms of allowing seemingly endless discussion:

The intention is to make sure that everybody is thoroughly heard and that we have as good a record as we can get of this whole operation (BCUC, 1982, 10744).
3. The precedent that intervenors receive cost re-imburements only at the end of each phase was broken because of the length of this phase.
4. The Chairman castigated various groups for not negotiating in advance of the hearing when possible.

For example, commenting on negotiations between B.C. Hydro and the town of Hudson's Hope he stated:

we would hope in future hearings of this sort, that the process may have gone a good long step further in negotiation of agreement before the whole issue is made the subject of an application before a board of this Commission (BCUC, 1982, 13626).

5. In July the hearings were transferred to Vancouver in an effort to abate the rapidly accumulating costs of flying most of the hearing participants to and from Fort St. John each week.
6. Although the Commission had been lenient toward late submissions, the spectre of an endless hearing finally prompted a tightening of this policy. A three month late submission by the Sierra Club was disallowed (BCUC, 1982, 16481).

Financial Aspects

In this phase additional difficulties were introduced to the hearing because of the rapidly changing economic and political environment. First, additional government increases in water license fees resulted in increasing the estimated cost of Site C power, suggesting that in the regulatory hearing B.C. Hydro would need a higher rate increase with the consequent dampening effect on electricity demand. Second, in September the provincial government passed a bill prohibiting annual rate

increases above 6 per cent (B.C., 1982(a)). As a result, B.C. Hydro would have insufficient revenue to cover expenses. Given these complications, the Commission devoted only three days to this phase, assuming that these questions would be addressed in the concurrent rate hearing.

Demand Phase II and Final Argument

The demand phase was re-opened with B.C. Hydro submitting its latest forecast in which: (1) price effects were incorporated; (2) bulk demand was examined in greater detail; (3) export potential was reconsidered; and (4) a lower estimated growth rate showed that Site C would not be needed until 1990. This phase was followed by the final argument in which B.C. Hydro maintained the basic need for the dam, although somewhat later than originally estimated. In contrast, intervenors tended to argue that changing economic conditions had defacto scuttled an already dubious proposal.

Other Components of the Hearing

In addition to the six formal hearing phases, there were also special hearings. One of these occurred in Vancouver for two weeks in January because of the large number of intervenor submissions from individuals who could not travel to Fort St.

John. Individual presentations during this phase were allowed to address issues from any of the formal phases, although B.C. Hydro was not available for cross-examination. In the area of the dam, community hearings were held at the local communities and at the Indian reserves. The format of these hearings was to allow individuals to voice their concerns without a formal submission or exposure to cross-examination.

When the hearings officially concluded in Vancouver on the 2nd of November, 1982, over 17,000 pages of testimony had been recorded during 116 hearing days extending over a duration of just under one year. Barz (1983, 173) has compiled hearing time allocation data based upon the number of transcript pages devoted to various phases and activities. His data indicate that 55 percent of the hearing was devoted to the environment and socio-economic phase and 20 percent to the demand phase with no other phase consuming more than 7 percent of the total. His data also show that 75 percent of the hearing was devoted to cross-examination, 12 percent to presentation, 8 percent to procedure, and 4 percent to argument. Clearly, adversarial type hearings devote considerable time to cross-examination.

Barz (1983, 164) also compiled data on the time involvement in cross-examination. As one would assume, B.C. Hydro was the object of over 50 per cent of the cross-examination, but of particular interest is that the B.C.U.C.'s counsel was the principle cross-examiner. Thus, 33 percent of the total cross-examination of B.C. Hydro was conducted by the B.C.U.C. counsel, while the

second most dominant group was SPEC and PVEA, who, in combination, accounted for another 25 percent. As these data and a reading of the transcripts indicates, the BCUC counsel defined a very active role for itself.

As noted previously, the funding method adopted by the BCUC panel was to award partial re-imbusement costs to those intervenor submissions that had contributed to the Commission's better understanding of the issues. By order of the BCUC, these costs were payed by B.C. Hydro. The total amount paid to intervenors by B.C. Hydro for Site C was \$360,000, 49 percent of which was paid to SPEC and PVEA (Ellis, 1983).

Finally, the simultaneous introduction in the rate hearings of economic regulation over B.C. Hydro, had a significant influence on debate at the Site C hearing. B.C. Hydro tended to argue, with the usual agreement of the BCUC panel, that since the outcome of the rate hearing was uncertain, it should not be a factor in the Site C hearing and subsequent panel recommendations. However, others argued that since price has a critical influence on demand, the two hearings were intimately connected. For example, Helliwell and Margolick (1982, 11) inserted the provincial government water licence fee increases and B.C. Hydro's proposed rate increases into an electricity demand model and concluded that Site C could be deferred another four years.

The establishment of economic regulation of B.C. Hydro will be a lengthy process. Similar to the introduction of the

Public Utilities Commission in B.C. in the early 1940's, initial hearings will be devoted to the compilation of basic financial data. In December of 1982 the BCUC completed introductory hearings into B.C. Hydro's rates and by March had issued an interim report. Some of the more noteworthy provisions called for: (1) a review of management salaries; (2) possible re-organization of the corporation; (3) more flexible system planning; and (4) a revision of project accounting techniques.

In addition to the economic regulation by the BCUC, the cabinet also exercised its regulatory authority. Thus, in May, 1981, it issued "Special Direction, B.C. Hydro No. 1" which directed B.C. Hydro to alter its interest coverage in order to eventually attain a debt/equity ratio of 80:20. Then in September of 1982 the government passed the previously discussed, Rate Increase Restraint Act (B.C., 1982(a)), which superceded the Commission's rate setting powers by setting a rate increase ceiling of six per cent.

In concert, all of the above measures represent a dramatic increase, over a span of just two years, in the various forms of social, economic, direct, and indirect regulation of B.C. Hydro. These experiences provide an initial indication of the new regulatory regime for electrical energy in British Columbia, although without knowledge of the recommendations of the Site C panel to the cabinet, nor of the cabinet's reaction, it is difficult to apply all of the regulatory criteria established in Chapter 4. Nonetheless, the mandate assigned to the Commission,

and the manner in which it interpreted and implemented its mandate in the Site C hearing, provide considerable evidence for the evaluation which follows.

CHAPTER 6

EVALUATION OF THE NEW REGULATORY REGIME

In the previous chapter the recent experiences of electrical energy regulation in B.C. were examined and compared, where warranted, to the criteria developed in Chapter 4. In this chapter the new regulatory regime is evaluated in greater detail, using these criteria: legitimacy, effectiveness, efficiency, openness, and fair process.

LEGITIMACY

The legitimacy criterion refers to the existence of a valid public interest need for regulation by government. The historical review of Chapter 3 indicated that by the late 1970's, there existed a need for some form of co-ordinated and comprehensive social regulation of major electricity projects. Furthermore, there was evidence (especially at the Revelstoke Hearing) of a demand for greater opportunity for input into the decision making process from local residents, public interest groups, and the scientific and technical community.

There was also evidence of a need for economic regulation, although for qualitatively different reasons than the traditional market failure rationale. This is because, while there is little threat of monopolistic pricing by crown electric

monopolies, there is a threat of overexpansion which has a substantial social dimension to its impacts. Because of these differences, the introduction of traditional economic regulation may be inappropriate. This will be examined further in the conclusion.

EFFECTIVENESS

Effectiveness is evaluated in terms of the government's ability to meet its own objectives. Four regulatory objectives were outlined in the energy policy statement of 1980.

1. The goal of establishing indirect economic regulation over B.C. Hydro was achieved by including it within the utility regulation responsibilities of the BCUC. Direct regulation was also increased with new directives from cabinet. However, an additional regulatory mechanism was eliminated recently (1983) with the dissolution of the legislative committee on crown corporations. This committee also served to provide information to the public, a role which the BCUC will presumably fill.

2. The dual objectives of establishing a 'streamlined' and 'comprehensive' energy project review process were countervailing to some extent. In particular, the inclusion of all other licence and permit requirements into one process (the Energy Project Certificate) had a streamlining effect, but the emphasis on comprehensiveness resulted in a lengthy public hearing. Suggestions for additional streamlining of the process

will be discussed in the efficiency and equity sections.

3. The two-phased hearing concept was not applied in the Site C review and no longer appears to be an objective of the government. However, time allocation data of the Site C Hearing indicate that the concept should not be abandoned. What would normally be the second phase of the review process (the environmental and socio-economic impact assessment) was responsible for more than half of the hearing and, if the government had then decided not to proceed with Site C, much of the associated costs of the research and the hearing might have been avoided. One can only speculate on what the BCUC recommended to cabinet and, in turn, what cabinet will decide to do, but there have been indications that the project has fallen out of favour with B.C. Hydro (Newton, 1983). This issue will be examined further in the conclusion.

4. The government's other regulatory objective was to provide full opportunity for public involvement. Clearly, the Site C Hearing was a substantial improvement over its predecessor, the Revelstoke Hearing. Open intervention rights, funding for intervenor groups, liberal access to information, and formal and informal hearings were some of the more noteworthy improvements to the public hearing process. However, all of these provisions were discretionary decisions of the Site C panel and, therefore, were exclusive to the hearing. Without the opportunity to participate in pre-hearing activities (such as establishing the terms of reference) or post-hearing

activities (such as monitoring) the function of the public is to express its opinion rather than to actually participate in decision making.

EFFICIENCY

Application of the efficiency criterion is restricted here to the process itself. There are three conditions of this criterion:

1. co-ordination with other facets of government activity;
2. streamlining and scoping of the collection of information; and
3. the appropriateness of the regulatory instrument.

1. In terms of its co-ordination with other facets of government activity, the new regulatory regime represents a significant improvement over the previous system of licences and permits. The structure of the EPRP should ensure that the functions of the regulatory agency are closely co-ordinated with, and complementary to, other government agencies and administrative procedures. Although this goal was not completely realized in the case of Site C, there was an obvious reason for it. Most research for that project had been completed before the introduction of the process. Another co-ordinating factor was the stipulation in the terms of reference for the use of the guidelines established by the ELUC secretariat. These provided a standard for the Commission's

examination of evidence from B.C. Hydro, government ministries, and others. The ELUC guidelines also provided a greater opportunity for input from technical experts on a wide range of social, economic and biophysical issues.

2. In terms of streamlining and scoping the collection of information, the new procedures were less successful. The Commission panel tended to hear everything in detail, regardless of its importance. However, this was more a function of the process than a fault of the panel because there was no opportunity in advance of the hearing to determine issues of paramount public concern. Ideally, for a public hearing to be able to focus on key issues of public concern it should operate as an integral part of other planning and regulatory mechanisms. Thus, in the pre-hearing stage of the Site C review there should have been provisions for: (1) a public review of initial plans for the dam; (2) a process of determining the critical public and technical concerns which should serve to focus the terms of reference for subsequent research; and (3) a mechanism for resolving a number of public concerns and jurisdictional and technical issues well in advance of the actual public hearing. Furthermore, in the post hearing stage there should be a greater role for the public in project monitoring and impact management. In his presentation to the panel, Andrew Thompson pointed out that this can reduce the pressure on the public hearing to resolve every issue and therefore shorten that phase of the review:

. . . if there can be effective means developed for monitoring and managing the impacts of a project, and if the public comes to accept the fact that those procedures work and will be used, then a lot of heat is taken off the initial approval stage. At the initial approval stage you can concentrate on the really important issues, and you can leave these other issues to be postponed and dealt with in the future and that would be very efficient (BCUC, 1982, 13158).

3. The final aspect of the efficiency criterion is the appropriateness of choosing regulation as the governing instrument. The existence of a need for a review process for major energy projects, is also true for major projects that are not necessarily energy-related. Thus, the government might instead have created some regulatory procedure analagous to the EPRP but relevent to all categories of major projects. The application of economic regulation to B.C. Hydro is difficult to assess at such an early stage. The appropriateness of that choice, however, is questionable considering the qualitative differences between traditional reasons for economic regulation and the current situation. Specifically, the current threat of overexpansion by electric utilities tends to involve issues with implications for social rather than economic regulation. Furthermore, because the regulatory mechanism is split into two processes, it is difficult to deal with issues which overlap. Electricity rates were a critical question in both the Site C Hearing and the rate hearing, but there was no mechanism for dealing with the consequent interrelationship of these two hearings. Finally, if it is true that the management personnel of crown corporations have a propensity to pursue growth strategies regardless of the public interest (see Chapter 3),

then perhaps the most appropriate task for the new Commission would be for it to conduct an inquiry into the comparative costs and benefits of decentralizing a number of the functions of B.C. Hydro.

OPENNESS

The openness criterion refers to the idealist and process interpretations of the public interest: that the regulatory process should be open and responsive both to those who can contribute expertise to a given issue and to those who have legitimate concerns. Traditionally, economic regulation of private natural monopolies by public utilities commissions included decision making independence for these commissions from the executive and departmental bureaucracy of government. However, the current issues of electric utility regulation involve wide ranging policy-oriented questions, such as the security of provincially guaranteed debt and the nature of economic development in the province. As a consequence, regulatory processes should be open to the public, but should also allow cabinet to retain ultimate responsibility. One option is for cabinet to continue to use its direct regulatory powers via special directives and cabinet participation on the board of directors. In terms of openness, the special directives are preferred since at least the public is aware of the decision, which is not the case with decisions taken in

meetings of the board of directors.

In the social regulation component, cabinet's discretionary power and secrecy provisions are consistent with the majority rule interpretation of the public interest. The difficulty with such a system for encouraging constructive public involvement was demonstrated by the experience with Site C. The panel's recommendations to cabinet were confidential and may remain confidential indefinitely. Thus, those who participated in the process still have no indication of how the panel considered their input or whether the concentration of their effort in the regulatory process had any effect.

If cabinet wishes to influence reviews by the Commission panel, it has a number of options. For example, it could issue a policy statement. The energy policy statement of 1980 (B.C. MEMPR, 1980) was of some assistance to the panel, although it was rather vague with regard to some critical questions, such as electricity pricing. Policy papers, however, tend to be out of date shortly after they are issued. More immediate input would be preferable. The blue papers issued by the various government ministries are one possibility, although in the Site C review they should have been released sooner than just before the hearing. Another possibility would be to establish government policy in the terms of reference. Finally, another option would be for government ministers to testify at public hearings to clarify policy questions. The appearance of the Minister of EMPR, Bob McClelland, before the Site C panel was a potentially

significant precedent in terms of policy guidance, although not in terms of improving public participation in decision making, as the chairman of the panel had claimed.

The extensive powers of cabinet in the existing regulatory system also lessen the importance of the BCUC panel. The panel only issues recommendations and even these may remain confidential. If, however, the panel was given greater autonomy, then the method of selecting its members would become more significant. Consistent with the process approach to the public interest, some mechanism could be developed for involving the public in their selection. For example, government could select prospective panel members from a list prepared with input from B.C. Hydro and interest group representatives.

FAIR PROCESS

The fair process criterion is comprised of five conditions:

1. the opportunity for all legitimate interests to participate;
2. the means for all legitimate interests to participate;
3. extensive public access to information;
4. suitable public participation techniques; and
5. flexible public hearing procedures.

1. All legitimate interests were given the opportunity to participate in the review process, although this was restricted to the public hearing. The decision to allow standing to any

individual who wished to intervene was generally successful. There were instances of individuals exploiting the opportunity to expound upon unrelated concerns, but the Chairman had the option, and used it when necessary, to rule speakers out of order or require that they limit their remarks. It has been noted that the EPRP calls for the proponent to initiate public consultation programs in the pre-hearing phases, but that public involvement at this stage was minimal in the Site C Hearing because of the advanced state of the proposal and research when the new procedures were established. However, given the emphasis in this paper on the process interpretation of the public interest, proponent-organized public participation programs are suspect because of the tendency for the public to distrust such measures: quite simply, it is against the proponent's interest to accurately depict the extent of public concerns about a particular project.

An alternative, would be to have public involvement co-ordinated by local governments, the regulatory agency or perhaps a government ministry. For example, a proponent submits a prospectus to the Ministry of EMPR. It, or another of the above agencies, ensures that the public has the opportunity to study the prospectus and then organizes a public hearing in which the public and the scientific and technical community are given the early opportunity to voice their concerns.

This early public involvement would serve two useful purposes. First, it would provide government with an early

indication of the public attitude to a particular proposal. Where a particularly negative public reaction convinced the government that a project was politically unacceptable, the proponent would be spared the extensive research and development expenditures normally required in the early phases of a project. Second, by determining at an early stage many of the principal public concerns, this early hearing could help to establish terms of reference for the subsequent environmental and socio-economic impact studies. By scoping the research process at such an early stage this would save considerable expense and perhaps time. Of course, this initial process would not be complete; new issues would emerge during the course of project review, but that is a normal development. At least by involving the public and the technical and scientific community at an early stage, substantial research effort should be saved.

2. In terms of ensuring that all legitimate interests had the means to participate or be represented, the practice of intervenor funding in the Site C Hearing represented a significant improvement over the Revelstoke Hearing. This kind of support is particularly crucial in a hearing as lengthy as the Site C Hearing because financially weak interest groups would find it difficult to sustain full time participation.

While the principle of funding is now generally accepted, the method is not. The method in the Site C Hearing was for the Commission to award costs (paid by B.C. Hydro) if the submission of an intervenor was deemed by the Commission to have

contributed to its appreciation of the issues. The intention, which is sound, was to force interest groups to form coalitions of common interest in order to prevent redundancy in their presentations and arguments. In this way, most viewpoints were heard, but the costs were kept to a minimum.

However, there were some problems:

1. The absence of start up funding limited the ability of intervening groups to initiate research and, as a consequence, their role tended to be reactive;
2. After the fact funding can create a 'reward syndrome', where presentations have to be acceptable to the panel if they are to receive funding (Barz, 1983, 171); and
3. It can be difficult for intervening groups to attract 'experts' to testify when payment of their expenses are not guaranteed (Stainsby, 1983).

On the other hand, an initial lump sum payment also has problems since it is difficult to determine in advance what the contribution and commitment of various groups will be, especially in the case of a long hearing. One solution would be to, first, develop criteria for eligibility for intervenor funding and, then, award an initial payment for pre-hearing research (this must occur well before the hearing, sometime after the public review of the prospectus). Finally, as the hearing progresses costs would be awarded on a basis similar to the one developed in the Site C Hearing.

3. The third condition of equity is public access to pertinent information. Again the Site C Hearing was a substantial improvement over Revelstoke. The Commission dutifully mailed out information to intervenors, was responsive to requests for additional information, tended to support requests for additional information from B.C. Hydro, and was willing to delay the hearings to allow for the study of last minute submissions.

However, while access to information for those participating in the hearing was satisfactory, such access was lacking for the public of the province as a whole. This is particularly important with a project such as Site C, which would have considerable local impacts, but which was also shown to have important ramifications for the entire province in terms of electricity prices and the provincially guaranteed debt of B.C. Hydro. One improvement would have been for the Commissioners to issue a weekly newsletter on the hearing. Another, more substantive alternative, would have been to hold the bulk of the hearing in Vancouver with just local hearings in Fort St. John. This idea tends to be supported by various groups, but for different reasons. Some point out that regulatory costs would be reduced (Newton, 1983; Waite, 1983; Henderson, 1983) while others feel that the hearings did not receive adequate publicity in the rest of the province when they were held in Ft. St. John (Roberts, 1983; Stainsby, 1983). Difficulties for local residents could be overcome by holding

special local hearings and by paying the expenses of the few local residents intent on continuous participation. This approach would vary, however, depending on the nature of the project under review.

Finally, another critical element of access to information is access to expertise. While intervenor funding provides some public interest groups with the means to challenge the proponent's research in subjects of critical concern, it is perplexing that proponents are still allowed to retain control over the bulk of project impact research. This obvious and unnecessary conflict of interest could be easily resolved in ways that could reduce research costs to the proponent. In the conclusion one such possibility for impact research will be described.

4. Again the Site C Hearing was a significant improvement over the Revelstoke Hearing in terms of selecting public participation techniques that suited the nature of the hearing subject matter. The panel demonstrated considerable flexibility in its willingness to: (1) hold less formal community hearings; (2) conduct special hearings in Vancouver; (3) repeat the demand phase to incorporate new forecasting techniques; and (4) move the hearings to Vancouver as the costs mounted.

5. The last condition of equity is that the public hearing component should be flexible enough to deal with a range of decision making and policy development issues. Generally, the new regulatory regime in British Columbia has the potential to

meet this condition. For issues of economic regulation, which tend to be of a predictable and confined nature, the hearing format is set out in statute. For issues of energy project regulation, which can vary considerably, the terms of reference for each hearing are determined by the Minister of EMPR. Moreover, the Utilities Commission Act also includes provisions for the minister to direct the BCUC to hold public inquiries on any issue. This provision could be used to examine more general policy-oriented subjects such as 'appropriate electricity pricing' or 'energy and economic development'. There is no current evidence that the government intends to pursue this latter option, but at least it exists.

CHAPTER 7

CONCLUSIONS

The regulatory framework for the electric utility industry in British Columbia underwent two distinct changes in 1980: (1) the publicly owned electric utility monopoly, B.C. Hydro, was subjected to supervision by a statutory regulatory agency for the first time; and (2) comprehensive social regulation over major energy projects was established which included provisions for public hearings administered by the same regulatory agency, whose decisions were subordinate in this case to the provincial cabinet. This paper focuses on the latter development, but the former involves issues which are closely interrelated and thus also deserve consideration.

Economic regulation over B.C. Hydro was implemented by the verbatim transfer to the B.C. Utilities Commission of statutory powers formerly assigned to the B.C. Energy Commission for regulating the privately owned energy industry. The original intent of these provisions was to facilitate regulatory supervision over a different industry with a different ownership structure and different problems than the publicly owned electric monopoly, B.C. Hydro. However, the decision to regulate B.C. Hydro was more closely related to: (1) the difficulties of reconciling the management strategies of crown corporations with the public interest; and (2) a recently

emerging threat of surplus capacity. In the past this practice may have been in the public interest since excess electricity was easily exported. However, because the total social costs were never accounted for, it is impossible to determine if, in fact, this practice was in the public interest. Furthermore, it is less likely that this policy is still in the public interest, since rising costs and an economic recession have curtailed the availability of export markets, depressed the growth of demand and led to the threat of surplus capacity.

Cabinet has also increased its direct regulation of B.C. Hydro. First, cabinet has issued a directive restricting the growth of the corporation's debt relative to its equity. Second, it has restrained B.C. Hydro's annual rate increase to not greater than six per cent. Third, it has dramatically increased water licence fees so that the price of using water resources more closely reflects their social cost. In response to these constraints on its revenue and its borrowing, in the last two years B.C. Hydro has reduced its staff from 9000 to 7500. In addition, the corporation is looking more seriously at smaller, less expensive hydro electric projects (Best, 1983).

It is difficult, however, to determine the significance of increased cabinet regulation of B.C. Hydro since this has coincided with an economic recession which has slowed the growth of demand, thus delaying the need for new projects. Furthermore, studies of crown corporations suggest that it is difficult to control the policies of crown corporations because

of certain inherent tendencies in the outlook of their management, regardless of the regulatory mechanism (see Chapter 2). If this is the case, then perhaps an increase in regulation is not the appropriate policy. Perhaps, the solution lies in a fundamental structural change of the crown corporation. One possibility is to separate system planning functions from construction and operations. Having a separate agency responsible for electricity management may be particularly appropriate for the current situation, when alternative energy strategies need serious consideration yet so many B.C. Hydro employees are dependent upon hydro-electric dam construction for their employment.

The second regulatory change was the imposition of social regulation on major energy projects, including those of B.C. Hydro. The issues of social regulation are wide ranging and have a definite impact on the broad public interest. As a consequence, regulatory procedures must include provisions for direct political accountability. The new energy project review process does this, but its provisions for executive control are excessive. Executive control over the process includes: (1) the initial decision to initiate public involvement in any particular issue; (2) control over the terms of reference for each review; (3) control over the availability to the public of the recommendations of the agency; and (4) authority to decide whatever it wishes, regardless of the intent of the agency's recommendations. Such a degree of executive power is contrary

to public interest notions which prescribe a greater role for the public in project or issue level decision making. Under the current situation the efforts of public interest groups and independent members of the scientific and technical community are totally divorced from the decision making process. Furthermore, the absence of provisions to ensure that recommendations of the Commission become public information has tended to alienate this group from the entire review process.

Nonetheless, the new project review process is a significant improvement over the previous regulatory regime in terms of public participation and access to information. However, a number of improvements are necessary if it is to provide the degree of public involvement that will convince various groups that they have the opportunity to affect decisions that legitimately concern them. Following is a general description of an alternative review format which would increase public control and streamline the review process, yet also ensure ultimate executive responsibility.

1. A project proponent submits a prospectus to the Minister of EMPR.
2. After review by the Energy Project Co-ordinating Committee the proponent is informed whether a preliminary planning report should be prepared. At this point, the decision to include major public involvement would depend on the magnitude of the project. The guiding principle would be that projects which affect a

broad spectrum of the public should include provisions for public hearings.

3. The preliminary planning report is made available for public scrutiny and then a public meeting is held by the Ministry of EMPR or the BCUC to determine issues of critical public and technical concern. These form the basis for terms of reference for project research.
4. The proponent, a government representative (from the Ministry of EMPR or the BCUC), and a public interest representative (chosen by the various interest groups) select independent research consultants to study the issues outlined in the terms of reference. The responsibilities of these consultants would differ only slightly from the current situation except that their research would be less under the control of the proponent. An important requirement of these processes involving public interest representatives is a mechanism for determining who constitutes a valid public interest group. Such a task is beyond the scope of this paper, but it has been attempted in other hearings (see Chapter 4). Nonetheless, it tends to be a somewhat subjective practice. In any event, if this proves unsuccessful, a local level government representative may suffice in terms of ensuring alternative perspectives in the selection process.
5. The research is funded by the proponent, but the results

are publicly available. As the time for the public hearing approaches, the proponent, the BCUC and public interest groups still have the option to commission additional research on results over which they disagree. Nonetheless, the total costs of research should still be reduced since the research would be scoped at the initial stage.

6. If the government decides that a project is politically acceptable, it then enters the public hearing phase. Everything that can be negotiated or resolved in writing prior to the hearing should be. Any such decisions, however, are subject to review and perhaps rejection in the public hearing.
7. Commissioners who are selected specifically for the public hearing should be chosen in a manner similar to that used for selecting consultants. Furthermore, the Commissioners should have considerable latitude for determining the structure and procedures of the public hearing.
8. The structure of the public hearings may vary considerably depending on the differences in the types of projects. Where practical a two stage review process should be considered. Justification hearings should not require too much preparation time and, if a project is rejected outright, they could save considerable expense. In other cases, however, it may be necessary to include

justification, design and impact studies all in the same hearing.

9. The procedures of the hearings should be flexible, as in the case of the Site C Hearing, but should include closer supervision by the chairman of repetitious cross-examination.
10. After the hearing the Commission must publicly submit its decision. Preferably this decision will be made within a specified time period, such as two or three months following the end of the hearing.
11. In its report the Commission will defer those decisions which are more appropriately delegated to project monitoring committees. Such committees will include representatives from the proponent, the provincial government, the BCUC, and local government. They should meet in the area affected by the project and should have the authority to hear, and act upon, public complaints.
12. The decisions of the Commission can be overturned by cabinet, but such action must be in the form of legislation so that the reasons are openly debated.
13. In the case of more policy oriented issues the government could also direct the Commission to hold public hearings. In this case the Commission would submit recommendations to cabinet which would be available to the public but which would not be binding on the cabinet.

These provisions should have a number of favourable consequences: (1) scoping of the issues would save time and expense in both the initial research and the public hearing; (2) consulting companies would be under pressure to strive for objectivity; (3) the reduced suspicion toward their consulting work would probably lessen the propensity of the BCUC and intervenor groups to commission redundant research; (4) the public would have full access to information rather than being dependent upon the decisions of B.C. Hydro and the BCUC; (5) process and idealist interpretations of the public interest would receive greater emphasis which should, in turn, increase public involvement and awareness of the trade-offs in decision making; and (6) the majority rule interpretation of the public interest would continue, but in an atmosphere of diminished executive secrecy.

APPENDIX A, SITE C HEARINGS: QUESTIONNAIRE

Simon Fraser University

Master of Natural Resources Management Program

Respondent

Position

Address

Telephone

Date

Please return to:

Mark Jaccard

Natural Resources Management Program

Simon Fraser University,

Burnaby, B.C. V5A 1S6

The purpose of this questionnaire is to obtain from the participants an evaluation of the Site C Hearings conducted by the B.C. Utilities Commission (BCUC). The responses will comprise part of the research for a masters thesis.

Hearing Experience

1. Have you been involved in other public hearings?

1. the Revelstoke Dam Hearings?

2. other hearings involving energy issues?
3. any other public hearings? (please specify)
2. Who did you represent at the Site C Hearings?
3. What was your position?
4. What was your time involvement in the Site C Hearings?
 1. How many days were you in attendance at the Site C Hearings?
 2. How many additional days were you engaged in related activity? (i.e. research, preparation of briefs, etc.)
5. What was the cost of you activity in the Site C Hearings?
 1. total costs?
 2. portion of total costs which were specifically for legal services?
 3. portion of total costs for which you were re-imbursed (for example, if you were an intervenor: for what amount of your total cost did the BCUC award payment?

The Regulatory Agency: the BCUC

6. Commissioners of the BCUC are loaded by the provincial Cabinet. Are you satisfied with this method of selection?

Yes	No	No opinion
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Do you have any comments or alternative suggestions?

7. What qualifications, if any, should Commissioners have?
8. Do you agree with the procedures which were followed by the Commission in the Site Hearings?

1. opening the hearings to individual interventions.

Yes No No opinion

2. dividing the hearings into six phases.

Yes No No opinion

3. holding hearings in both Ft.St. John and Vancouver.

Yes No No opinion

4. undertaking the Site C Hearings concurrently with the B.C. Hydro rate hearings?

Yes No No opinion

Comments on these or any other procedures followed at the Site C Hearings?

9. In the Site C Hearings the Commission followed a middle path between a strictly adjudicative role and a strictly investigative role; it requisitioned some research but usually left that responsibility to the applicant and intervenors. What should be the Commission's role?

strictly adjudicative

primarily adjudicative

both adjudicative and investigative

primarily investigative

strictly investigative

Please explain your answer.

10. In general, were you satisfied with the role of the BCUC as manifested in the Site C Hearings?

very satisfied

satisfied

neutral

dissatisfied

very dissatisfied

11. Could the role of the BCUC be improved?

The Regulated Agency: B.C. Hydro

12. Do you think it is necessary to submit a crown corporation (B.C. Hydro) to regulation by another government agency. (i.e. the BCUC)?

Yes

No

No opinion

Please explain your answer.

13. Are you satisfied, given the experience to date, that the Utilities Commission Act provides an effective means of

regulating B.C. Hydro in terms of:

1. ensuring that demand forecasting is more accurately reviewed?

Yes No No opinion

2. ensuring that all supply and conservation options are considered?

Yes No No opinion

3. ensuring public input into the energy options evaluation processes ?

Yes No No opinion

4. ensuring that environmental issues are fairly considered?

Yes No No opinion

5. ensuring public input into the determination of rates?

Yes No No opinion

6. ensuring fiscal responsibility from both the corporate and provincial spectives?

Comments on these or any other areas of concern?

14. Do you feel that the regulation of B.C. Hydro could be improved by structurally re-organizing the utility?

Yes No No opinion

If yes, what changes are desirable?

1. separating the gas division from the electricity division (as suggested by the BCUC)?

Yes No No opinion

2. foster the development of local utilities, responsible for operations, with B.C. Hydro retaining all co-ordinating functions, such as system planning?

Yes No No opinion

3. creating a separate agency responsible for system planning, such as the new Northwest Planning Council in northwest United States.

Yes No No opinion

Comments or other suggestions?

15. Do you agree with the present system in which the bulk of the research on the environmental and socio-economic impacts of a project are undertaken by the proponent?

Yes No No opinion

If yes, why? If no, do you have alternative suggestions?

The Provincial Government

16. What should be the role of the Energy Resources Division of the government in the energy regulation process?

1. clarifying policy issues?

Yes No No opinion

2. acting as a neutral facilitator (for example, co-ordinating the procedures)?

Yes No No opinion
3. conducting specific research on projects and related issues?

Yes No No opinion
4. providing expertise to critique research conducted by the proponent intervenors?

Yes No No opinion
Comments or other suggestions?

17. In concert with its creation of the BCUC the provincial government developed an administrative process to guide energy project proponents through the early phases of an application: the Energy Project Review Process. Are you satisfied with this procedure? (If you are unfamiliar with this procedure, proceed to Question 18.)

Yes No No opinion

Please explain your answer.

Public Participation

18. In Principal, do you agree that public interest intervenors at public hearings, such as Site C, should be funded?

Yes No No opinion

19. At the Site C Hearings public interest groups and individual

intervenor were funded if the Commission deemed their submissions to be of value to the hearing process. Their costs were then charged to B.C. Hydro which had the right to present argument to the Commission on the validity of each claim. Do you agree with this method of intervenor funding?

Yes

No

No opinion

Do you suggest any changes?

20. How could public interest representation in the regulatory process be improved?

Regulatory Costs

21. Do you feel the length of the Site C Hearings was justified?

Yes

No

No opinion

22. Do you have any suggestions for streamlining the hearings or for reducing their cost?

APPENDIX B, SUMMARY OF THE QUESTIONNAIRE RESPONSES

While the principal goal of the questionnaire was to solicit opinions and suggested improvements from the hearing participants (the intervenors), it was also anticipated that it might provide a quantitative evaluation of the regulatory process. However, this latter objective was not attained for several reasons.

1. It was impossible to get a complete list of all of the participants in the Site C Hearing. The BCUC refused to provide this and as a consequence the only publicly available list was the initial list of 63 intervenors sent out with the early information mailings of the BCUC.
2. The intervenors in the Site C Hearing by no means represented a cross-section of British Columbian Society, since those who intervene tend to be those who have some reason to state their objection to a particular project. However, an evaluation from such a group may be of use in a comparative sense, i.e., how they found the new regulatory regime relative to the previous one. Unfortunately, in this aspect the results were also somewhat disappointing since few of the Site C participants (at least on the initial list) had experience with the previous regulatory regime (for example, the Revelstoke Hearing).
3. When this research project was selected (1981) it was

assumed that the questionnaire would be distributed subsequent to the public release of the findings and recommendations of the Site C Panel. Since this was not the case many of the respondents were unwilling to evaluate the process until they studied the final report.

In spite of these constraints the questionnaire responses did provide valuable analyses and ideas. Following is a brief description of the responses. Questions 1-4

The purpose of the first four questions was to obtain a general idea of the experience and perspective of each respondent. While most of the respondents had some previous experience in public hearings, few had experienced other energy hearings and only two had participated in the Revelstoke Hearing. The extent of time involvement of the respondents in the Site C Hearing varied widely from those who participated for one or two days to those who followed almost the entire hearing.

Question 5

This question was intended to contribute to an estimation of the total costs of the Site C Hearing. However, more complete information on intervenor costs were obtained by B.C. Hydro from its record of payments to intervenors. Unfortunately, B.C. Hydro was unwilling to provide data on its total costs and thus the larger objective was not realized. The data did provide an indication of the relationship between intervenors' estimates of their costs and the amount of re-imbusement they received. Almost half (10) of the

respondents did not apply for re-imbusement. Of the rest the re-imbusement ranged widely from 10 to 85 per cent of estimated total costs.

Question 6

Of the respondents 11 disagreed with the existing method of selecting commissioners and 6 agreed. Alternative suggestions covered a wide range of possibilities.

Question 7

Suggestions on the desirable qualifications of commissioners also varied considerably. However, one common proposal was that future commission panels be characterized by more diverse background experience than that of the Site C Panel.

Question 8

Generally respondents agreed with the procedures of the Site C Hearing although in part (d) of the question there was a split between those who were satisfied with the format and those who felt that the rate hearings should have been completed first. The argument of the latter group tended to be that rate determination, or at least a firm policy on rates, was an essential pre-condition of the Site C Hearing.

Question 9

Almost all respondents (17) agreed that the BCUC should continue to fulfill both an adjudicative and an investigative role.

Question 10

This was one of the subjective evaluations of the questionnaire that received few responses because of the reluctance to assess a process of which the final report was still confidential. Of those who responded (10) there was an even split between satisfaction and dissatisfaction with the overall role of the BCUC.

Question 11

The purpose of this question was to solicit ideas for improvement of the role of the BCUC in energy regulation. The responses covered a wide range which is impossible to summarize.

Question 12

Respondents to this question (21) unanimously agreed that B.C. Hydro should be regulated.

Question 13

There was only a 50 per cent response rate to this question again because respondents expressed a reluctance to evaluate a process which had not completed its first 'real' test. Of those who responded there was an even split between satisfaction and dissatisfaction with the various aspects of the BCUC's regulation of B.C. Hydro.

Question 14

Of the 18 responses to this question there was unanimity that B.C. Hydro should be re-organized and near unanimous support for the three suggestions for re-organization.

Question 15

The current method of proponent-directed environmental and socio-economic research was supported by 7 of the respondents and opposed by 15. Of the latter group there was a strong desire to see more rigorous guarantees of unbiased research.

Question 16

The response rate to this question was low (8) and responses tended to indicate that the question was inadequately formulated.

Question 17

This question also had a very low response rate (7) in this case because most respondents did not feel that they had an adequate understanding of the Energy Project Review Process. Those who did comment criticized either the restriction of public involvement to the hearing phase or the project specific focus of the process.

Question 18

The general principle of intervenor funding was supported by 17 respondents and opposed by 5.

Question 19

While most respondents (13) agreed with the funding method that was used in the Site C Hearing others felt that it could have been improved by partial advance funding so that intervenors would find it easier to attract quality expertise.

Question 20

The purpose of this question was to solicity suggested improvements to public interest representation and as such it was extremely valuable. It is impossible to summarize the wide range of responses.

Question 21

Of the respondents 10 felt that the length of the hearing was not justified while 11 felt that it was. Of the latter group the principal justification for such a long hearing was that as the first test of a new process unforeseen delays and extensions were inevitable.

Question 22

The last question was very useful in terms of the suggestions it generated for streamlining the hearing and reducing its cost. Several of these were developed in the paper.

APPENDIX C, B.C. REG. 388/80

SCHEDULE

An application under section 18 shall contain the following information.

Application for an Energy Project Certificate

1. Applicant

1. the name, address and nature of business of the applicant and all other persons having a direct interest in the ownership or management of the project;
2. evidence of the financial and technical capacity of the applicant and other persons involved, if any, to undertake the project;
3. the name, title, and address of the person with whom communication should be made respecting the application;
4. the name and address of legal counsel for the applicant, if any;

2. Project Description

1. a description of the project, its purpose and cost, including all ancillary or related facilities that are proposed to be constructed, owned or operated by the applicant;
2. an outline of the anticipated timetable for construction, operation, abandonment and reclamation, as

applicable, together with dates by which critical events must take place to ensure continued economic viability;

3. a description of any new or expanded public works, undertakings or infrastructure that will be entailed by the project, together with an estimate of the costs and necessary completion dates;
4. identification and preliminary assessment of any impacts by the project on the physical, biological, and social environments; and proposals for reducing negative impacts and obtaining the maximum benefits from positive impacts;

3. Project Justification

1. studies of the technical, economic, and financial feasibility of the project, identifying assumptions and sources of data;
2. a study estimating the value of all the project's costs and benefits and their distribution or, where not quantifiable, identifying the cost or benefit and stating that it cannot be quantified;

4. Ancillary Applications

1. a list of approvals, permits or licences required under the Pollution Control Act and Water Act, and whether they are being sought as part of the present application;
2. a list of other approvals, permits or licences required under federal, provincial, and municipal law;

5. General

1. a description of the applicant's public information and consultation program;
2. other information as required by the minister, including supplementary information to clarify information contained in the application;

Application for Modification to an Energy Project Certificate or Energy Operation Certificate

1. the name, address and nature of business of any person who has a direct interest in the ownership or management of the project and who did not have an interest at the time of the previous application;
2. a description of the proposed modification and explanation of its purpose;
3. an assessment of the effects of the proposed modification in relation to the information and analyses contained in the original application;
4. other information with, or to supplement, the application as required by the minister, including supplementary information to clarify information contained in the application;
5. a copy of the existing Energy Project Certificate or Energy Operation Certificate.

Source: B.C. MEMPR, 1982(a), 22.

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