THE INSTITUTIONAL BARRIERS TO PUBLIC PARTICIPATION IN ELECTRICAL ENERGY PLANNING IN BRITISH COLUMBIA: THE CASE STUDY OF THE CHEEKYE-DUNSMUIR 500 kV TRANSMISSION LINE

by

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ABSTRACT

The issue of energy planning and decision making in industrial nations is becoming increasingly critical to societal well-being. Such decisions impact on a wide range of factors including: human health and safety, economic stability, environmental quality, social flexibility and civil liberties. Public participation in these public policy issues is considered to be a basic democratic right.

The purpose of this thesis is to identify the institutional barriers to public participation in electrical energy planning in British Columbia. The issue was seen as important in that energy decisions are extremely crucial and directly affect the public. There appeared to be institutional barriers or constraints, in the form of laws, policies and administrative procedures which restricted public participation in energy planning. Examination of such barriers was believed to be a useful avenue to the improvement of the decision making process.

The pursuit of these objectives was undertaken in three stages. Firstly, a literature review was carried out. Its purpose was to determine whether there is in fact a valid case for increased public participation in resources management. The first portion of the thesis reviews the theory and practice of public participation in resource management issues, particularly energy issues in Canada. Principles for effective public participation are identified.

Secondly, it was necessary to review the institutional framework of decision making on electrical energy in British Columbia, in order to identify possible institutional barriers to effective participation. The British Columbia Hydro and Power Authority, the major public utility in the province, is the focus of analysis since it is the key planning and decision making body.

And thirdly, it was important to select a case study in British Columbia to focus the analysis and to examine in more detail the

institutional barriers to participation previously identified. The British Columbia Hydro and Power Authority's proposed Cheekye-Dunsmuir 500 kilovolt transmission line to link Vancouver Island with the mainland was selected for the case study. The problems and issues encountered on the Cheekye-Dunsmuir project were considered to be in some ways a microcosm of those involved in electrical energy planning throughout the province. Interviews were conducted with affected public interest groups and individuals, B.C. Hydro staff and provincial government officials. The principles for effective public participation developed from the literature review were then employed as evaluative criteria to analyze the results of the interviews.

The thesis concludes that significant institutional barriers to public participation exist in electrical energy planning in British Columbia. In order to establish a more participatory planning process, there is a need to remove existing constraints to effective public involvement. To this end, it is recommended that the mandate and responsibilities of the British Columbia Hydro and Power Authority be redefined and clarified to ensure that the broader social and political decisions concerning energy are made with greater public input. The challenge lies in developing institutions that will facilitate rather than constrain effective public participation.

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CHAPTER 1

INTRODUCTION

RATIONALE

The issue of energy planning and decision making is becoming increasingly important to societal well-being. Energy decisions impact upon a wide range of factors including: economic stability, environmental quality, social flexibility, human health and safety, and political freedom.

Since the early 1970s, the international energy supply situation has changed dramatically, necessitating a reappraisal of energy policy and decision making. Changes such as the rapid increase in the world price of oil,* growing public awareness and concern about the finiteness of resources, particularly fossil fuels, and recognition of the severity of the trade-offs involved in energy decisions which will shape the future have compounded to make energy issues a particularly significant problem.

It is becoming increasingly clear that there are limits to each of the four existing major energy resources (oil, natural gas, coal and uranium). As a result, the utilization of energy resources of the 21st century energy may be radically different from that of the present, necessitating significant changes and adjustments in social organization. What the principal energy source(s) of the future will be is a matter of controversy in most industrial countries today. The choice of a strategy of transition—how to convert a petroleum based system into a system dependent upon either renewable energy resources completely, or

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*The Organization of Petroleum Exporting Countries (OPEC) quadrupled crude oil prices during the 1973-74 embargo. In 1970 the United States bill for imported oil was three billion dollars, in 1980 it was 80 billion dollars (Weaver, 1981).

a mixture of renewable and non-renewable energy resources is becoming the major challenge of the next two decades. How these choices will be made and who will make them, are two of the most important questions facing citizens today.

In addition, the importance of energy can be seen by recognizing industrial man's dependence upon energy to fuel his technological machinery. Cook (1977) has referred to energy as "the ultimate resource" since it is the life blood of industrial society and the most important physical element of what geographers call the man-environment system. Everything we do is dependent upon one form of energy or another and we are therefore not only dependent but extremely vulnerable to the political and economic control of energy. This has important implications for social flexibility and diversity as well as individual freedom.

Until very recently, the energy problem was defined primarily from either the perspective of expanding supply to meet demand or relying upon as yet undeveloped technology to provide solutions to current problems. This neglected other important considerations such as the relationship between the energy basis of a society and its political, social and economic structures. Recently it has been argued by critics such as Lovins (1977) and Orr (1979) that energy decisions are not simply technical decisions, but fundamentally political and ethical decisions. In particular, Orr (1979:1027) has argued that much of the debate of the past several years about energy policy, concerns which risks we as a society accept, which we avoid, who decides, and by what process. These are issues which directly affect the individual, and therefore the public has a right to be involved in energy decision making.

The case for greater public participation in decision making is based on: ethically, the right of the individual in a democratic society to influence decisions that affect his/her life or life style; and pragmatically, the need for a broader and more comprehensive basis for decision making. Other factors such as the growth of humanistic values

in an educated and informed citizenry and the need to render institutions more responsive and egalitarian can be cited in defence of participation (Pateman, 1970; Kasperson and Breitbart, 1974).

There is no doubt that decisions about energy planning and decision making directly affect individuals in our society, whether in as direct a way as turning on a light switch or in as indirect a manner as choosing a certain direction or path of energy development. As Barnet (1980:97) succinctly states:

> When a society buys an energy system it is also buying a particular path of development. By choosing to burn up imported fossil fuels, to develop new coal technologies, to take the nuclear option, or to develop new alternatives—solar energy, fusion, harnessing of the ocean winds—leaders are also making decisions about how dependent society will be on scarce minerals, how much water it will use, how many jobs will be created, which cities will rise and which will fall, and who will hold political power.

The choices inherent in energy decisions are therefore much broader and more significant than mere technical decisions about the costs and benefits of any particular energy project. As such, energy policy is in the realm of broad economic and social policy, and public participation in such policy should be regarded as a basic democratic right.

CONTEXT

Although the need exists for greater public involvement and a more appropriate means for reaching acceptable decisions on energy development, the institutional structure in society is often slow to respond to change and to incorporate changing social values. The traditional legal and administrative framework may well result in using limited criteria for decision making in the face of complex environmental, economic and social issues or restricting inputs into the decision making. Therefore as a basis for analyzing the institutional structure there is a need to examine the way in which it influences and constrains the management of energy resources. More specifically, the purpose of this study is to examine the extent to which institutional barriers

constrain and affect public participation in electrical energy planning in British Columbia.

Of the major institutions responsible for electrical energy planning in British Columbia, the crown corporation, British Columbia Hydro and Power Authority (referred to hereinafter as B.C. Hydro) has occupied the central role. Since its inception in 1962 and until the August 1980 passage of the *Utilities Commission Act*, B.C. Hydro was basically a self-regulating entity. Aside from National Energy Board regulation on energy exports, the appointment of B.C. Hydro's Board of Directors by the Lieutenant Governor in Council, and the representation of the provincial Minister of Finance as fiscal agent of the authority, B.C. Hydro has largely remained unregulated. It does however submit to various provincial government environmental impact assessment procedures and statutory requirements dealing with project design.

This basic lack of regulation and government control has aroused a great deal of public outcry and opposition to B.C. Hydro's practices and policies during the last decade. Public controversy over Hydro projects began with the construction of the Peace and Columbia River dams (Wilson, 1973; Robin, 1973) and has continued with more recent projects such as the Revelstoke dam and the Cheekye-Dunsmuir 500 kV transmission line. The provincial government's Committee on Crown Corporations in its inquiry into the construction management practices of B.C. Hydro in its Columbia River Treaty projects was also critical of Hydro management practices and controls (Committee on Crown Corporations, 1979). The former British Columbia Energy Commission's electrical energy forecasts were known to differ considerably with B.C. Hydro's, adding to the unsavoury political climate surrounding the unpopular crown corporation. More recently the attacks of environmental interest groups on B.C. Hydro's policies and practices have reached the forefront of the debate about the role of B.C. Hydro in planning British Columbia's energy future (Danylchuck, 1980).

Public concern about the future is predicated upon dissatisfaction with the past. The nature, scale and balance of the whole provincial

power system have changed considerably since B.C. Hydro began its integrated approach to power development in the province. Wilson (1978: 89) summarizes this trend in the following manner:

> The whole power system has changed: from having a fairly uniform pattern of local generation supported by sub-transmission and distribution systems, B.C. is now served, outside of the metropolitan areas, by a small number of very large generation projects feeding their power into a large capacity and almost pervasive transmission grid. Furthermore that grid is now strongly linked with the system in the American Northwest for the purpose of mutual protection in time of crisis. The supply radius has jumped from 160 to 800 kilometres to the Peace and 400 kilometres to the Columbia. And whereas the bulk of the power used to be produced relatively close to the user, and therefore closely reflected the population distribution, the centre of gravity of power generation has now moved far inland, well away from the principal cities in particular.

The importance of this trend lies in the fact that the large scale centralized energy system developed by B.C. Hydro has created resource user and resource hinterland* relationships.

The hinterland aspects of energy planning have created special difficulties for public participation in that the disparity between those groups and regions which bear the social and environmental costs of development and those which benefit from it, is accentuated. Public concern over such development has geographical dimensions in that certain regions or groups have been asked to bear a disproportionate amount of the social costs of development for the overall provincial good. While most of the public demands a sufficient supply of energy at reasonable cost, opposition occurs when the disbenefits of development are inequitably placed on one area or one group. Although this is not unique to energy development, the centralized nature of large scale systems establishes a setting where resources are extracted or transported in one area and consumed in another.

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*Canadian and British Columbian history is marked by the metropolis/hinterland tradition of development. For good reviews see: Innis (1956), Lumsden (1970), and Robin (1973).

B.C. Hydro's proposed Cheekye-Dunsmuir 500 kV transmission line to bring electrical power from the mainland to Vancouver Island was selected as a case study for analysis in this thesis. The problems encountered with the Cheekye-Dunsmuir project are in many ways a microcosm of some of the issues related to energy planning throughout British Columbia. In particular, the difficulties of establishing effective public involvement in large-scale centralized energy projects are of concern in developing more participatory energy planning procedures.

METHODOLOGY AND ORGANIZATION

The purpose of this thesis was to identify the institutional barriers to public participation in electrical energy planning in British Columbia. The issue was seen as important in that energy decisions are critical to societal well-being, such decisions affect the public, and the public in a democratic society should have the right to influence decisions that directly affect them. There appeared to be institutional barriers or constraints, in the form of laws, policies and organizations that restricted public participation in electrical energy planning in British Columbia. It was felt significant to identify and examine those barriers in order to suggest ways of improving the present decision making process.

The realization of these objectives was undertaken in three stages. Firstly, confirmation was sought in the literature on public participation, that the case for increased public participation in environmental decision making, particularly energy decision making, was a valid one. This is the focus of the first three chapters which review the theory and the practice of public participation. A set of principles for effective public participation are identified. Secondly, it was necessary to review the institutional framework of decision making on electrical energy in British Columbia in order to identify institutional barriers to effective public participation. Since B.C. Hydro was identified as the central actor, the focus of the fifth chapter is a review

of the institutional barriers to public participation in B.C. Hydro's planning process. And thirdly, it was important to select a case study to focus analysis and examine in more detail the institutional barriers to public involvement identified in the previous chapter. The principles of public participation identified in earlier chapters as critical to the establishment of an effective public participation program or process, are employed as evaluative criteria in the case study.

The research undertaken for this study fell into two parts. The first phase of library and archival research was divided into two areas, one of which was a review of the body of literature pertaining to public participation. The second area was an examination of the literature pertaining to electrical energy planning in British Columbia. This was collected from journals, newspapers, statutes and transcripts of public meetings. In addition, both the British Columbia Hydro and Power Authority and the Environment and Land Use Committee Secretariat of the provincial government provided open access to all relevant files. These were extensively reviewed.

The second phase of the research involved interviews with key actors in the case study. Structured interviews were conducted with individuals and public interest groups involved in the Cheekye-Dunsmuir project and senior officials in B.C. Hydro. These interviews provided insights into the planning and decision making process which would have been difficult to identify through other research techniques. To supplement these structured interviews, informal interviews were conducted with provincial government officials and B.C. Hydro staff involved in the Cheekye-Dunsmuir project in order to gain a thorough understanding of the difficulties with present energy planning procedures and public involvement processes. Although the sample size of the study is small, it represents a thorough sample of those who would be difectly affected by the Cheekye-Dunsmuir project and the key provincial government and B.C. Hydro officials involved in the planning and decision making process on the Cheekye-Dunsmuir. Responses during the

interviews were recorded on the interviewing guides. Conversations were not recorded verbatim since it was felt that a number of respondents would have restricted their comments due to the sensitivity of the issues involved.

The final chapter summarizes the significant findings of the analysis and makes recommendations to improve the process.

CHAPTER 2

A RATIONALE FOR PUBLIC PARTICIPATION

> Any theory of participation which defines men as colonists in their own society has lost sight of social virtue. What is needed is not the surrender to inequality, inactivity, elitism and the participant as child, but rather a radical reaffirmation of the classical values of participation and a commitment to the design of structures and processes which drawing upon all the new-found knowledge of man, realize these values. This is the challenge to a humane society.
>
> Roger Kasperson and Myrna Breitbart, *Participation, Decentralization and Advocacy Planning* (1974)

INTRODUCTION

The call for greater public participation in social and environmental concerns is not new, nor are the challenges facing the realization of a more participatory society a recent phenomenon. Advocates of public participation are zealous in their belief that participation is the key to realizing individual potential and social justice (Pateman, 1970; Gibson, 1975). Although there is a great deal of literature that supports the case for greater public participation in decision making, there is a lack of any generally accepted theory of participation (Wengert, 1976).

This chapter presents a variety of arguments—philosophical, legal and administrative that form the basis of a rationale for public participation in resource management issues. Due to the complex and multi-dimensional nature of participation, it is apparent that no single theory or rationale can adequately explain the basis of participation. The arguments presented in this chapter are both intrinsic and instrumental in nature, reflecting the many, varied philosophical and

practical goals of participation. Without such an integral understanding of the value of participatory social organization, there can be no strong case for greater public participation in social and environmental concerns.

THE ETHICAL/PHILOSOPHICAL RATIONALE

Generally stated the ethical/philosophical basis for public participation is humanistic in outlook, decentralist in emphasis and egalitarian in thrust. Ideas are drawn from the classical theorists of democracy, the social critics of the 1960s, the anarchists and contemporary environmentalists. Although these perspectives differ in the context of time and social change, they unite in their opposition to the modern technocratic state and in their affirmation of free and genuine self-expression harmonious with society and nature.

Much of the writing on the philosophical basis for participation focusses on the debate between the classical ideals of political democracy and contemporary notions of representative democracy. Although central to an understanding of participation it neglects the more subtle socio-psychological elements that are essential to a deeper understanding of the nature of public participation and modern environmentalism. The following discussion of the theory of participatory democracy therefore emphasizes the intrinsic value of participation in maximizing human potential.

The Classical Ideas of Participatory Democracy

Forgotten somehow in the efficiency of the modern state and maze of bureaucracy is the notion that participation in the decisions affecting one's life is not a gratuitous privilege, but a basic right. This idea draws on the ideals of the classical theorists of democracy (Rousseau and Mill) who believed that the purpose of democracy was to ensure that decisions were made by those individuals who would be directly affected.

The case for participatory democracy also rests on the notion that individuals and their institutions cannot be considered in isolation from one another (Pateman, 1970). Rousseau emphasized the important psychological links that could be established between individuals and institutions in order to overcome possible breaches of confidence and alienation between individuals and institutions. His ideal system was designed to develop responsible, individual, social and political action through the effect of the participatory process. As a result of participating in decision making, the individual would be educated to be a public as well as a private citizen.

Effective participation is thus two-dimensionsal: the individual occupies a creative role in a given situation and his activity contributes to his development as an autonomous citizen. This educative function is an important justification for participation and is expounded upon by Kasperson and Breitbart (1974), Bregha (1978) and Fagence (1977). Pateman (1970) also describes the positive correlation between participation and political efficacy and the integrative function of participation in bringing individuals closer to their communities. As such, participation is seen as central to both the development of man's capacities as a free, responsible and moral human being and the development of a competent citizenry.

Contemporary social critics such as Ivan Illich (1973) and Erich Fromm (1968) argue that participation has an important role to play in humanizing society. Illich (1973, 1980) argues that man cannot just be a spectator, he must also be a creator and interpreter in this world. Man's estrangement and transformation into a dependent being is a major reason for feelings of alienation and powerlessness. Bookchin (1971) describes the feeling of impotency created by a technologically oriented age and the largely synthetic urban environment where modern man has become an "insensate receptacle". Participation can be a means of overcoming some of the alienating features of modern technological society, while at the same time developing the essential attributes of man.

Contemporary notions of representative and elite democracy strip man of the hopeful aspirations of the classical participatory theorists. They assign a passive role to the individual citizen in public affairs and describe the mass of citizens as relatively uninformed and uninterested. Elite representatives are held to possess high levels of information, and well-developed skills for public office. In contrast the role of the citizen is confined to accepting or rejecting elites in periodic elections (Sadler, 1978). Elite theory as expressed by Schumpeter (1954:269) maintains that "the democratic method is that institutional arrangement for arriving at political decisions in which individuals acquire the right to decide by means of a competitive struggle for the people's vote."

Some proponents of elite democracy argue that universal involvement would lead to instability and perhaps even tyranny by the emotional and uninformed. Non-participation is held to be essential for political stability and efficiency (McClosky, 1969). Advocates of elitism also argue that the very nature of modern complex society, and the complicated institutional and political structures which have developed necessitate some form of elite leadership. Classical elitists such as Schumpeter (1954), Lipset (1960) and Mills (1956) contend that such factors as organizational competence, selective leadership and control over economic resources have naturally evolved our system into one of elite representation.

The debate between classical theorists of democracy and advocates of representative or elite democracy is central to the participation issue. Our present system of government can be accurately described as elite as opposed to participatory democracy. Participation is essentially relegated to the electoral process although critics such as Ramp and Schrecker (1978) note the inadequacies of the electoral system as a mechanism for indicating public preferences on specific issues.

Although the classical theory of democracy may be a favourable ethical and philosophical position, it falls short of being

a viable political theory of modern society. It is clear that mass participation on all issues would be an organizational impossibility yet the ideals of egalitarianism and decentralization should not be so easily discarded. In order for participatory social organization to become a reality, society may have to undergo fundamental changes, including an extensive decentralization and simplification of organization and technology.

The Anarchistic Vision

There has been a tendency among those advocating increased public participation to look to the anarchists for a vision of a more humanistic society. Although the extreme concern for the sovereignty of individual choice dominates anarchistic thought it would be a mistake to identify anarchism as merely a logical extension or extreme form of democracy (Woodcock, 1962). Democracy advocates the sovereignty of the people; anarchism advocates the sovereignty of the individual. The anarchists reject parliamentary institutions because they mean that the individual abdicates his sovereignty by handing it over to a representative and therefore decisions are no longer within his control. Anarchist opposition extends to a denial of popular government and the right of the majority to inflict its will on the minority. As Woodcock (1962:34) notes: Rights lie not in numbers, but in reason; justice is found not in the counting of heads but in the freedom of men's hearts.

The ideal or vision of anarchism has had appeal to utopian writers who link self-actualization to a sense of collective responsibility, and the young who feel the need to retreat from industrial society and establish small, self-sustaining communities where nature is very much a part of existence. The Kropotkin ideal of a simple life, based on limited expectations and material benefits has similarities with the counter culture movement and the decentralist tendencies of Rousseau's classical theory of participatory democracy. These are all appeals for a new social order based upon empathy and participatory co-operation at the level of the neighbourhood, commune or village.

Kropotkin was a hundred years ahead of his time in his vision of small scale organization and technology, creative communal labour and self-sufficiency. It sounds like Schumacher's *deja vu* and Thoreau brought back to life.

Anarchism in its outright rejection of any form of government that is not grounded in individual sovereignty is a retreat from social organization: a participatory strategy is not. Although it may embrace and actualize many of the ideals of anarchism, a participatory strategy must necessarily differ in form and application. Nevertheless the "visionary commonwealth" of Roszak (1973), the Kropotkin ideal and the communal philosophy provided by Schumacher (1973) all strike a similar chord.

An extension of the anarchist theme of simplicity, a return to self-sustaining communities and communal life style, can be seen in the rise of an ecological consciousness in modern society. This recent phenomenon is a product of the 1960s and therefore differs with the long historical tradition of anarchism which can be traced back to the 18th century.

The Rise of an Ecological Consciousness

The decades of the 1960s and 1970s may well be remembered by future historians as the era when concerns about environmental protection and quality became highly politicised. Earlier periods of history in Britain and the United States had been marked by reactions against the environmental consequences of urban and technological change and witnessed the birth of groups such as the Sierra Club (1892) in the United States and the National Trust (1895) in Britain. The social activism of the 1960s, however, united many of the different concerns under the banner of environmentalism.

Various writers have reflected on the rise of modern environmentalism and distinguished between its various forms, notably O'Riordan (1976), Cotgrove (1976) and Sandbach (1980). O'Riordan distinguishes between a technocentric and ecocentric mode of environmentalism, Cotgrove between a traditional and liberal type, and Sandbach

between an ecological/scientific and anti-establishment form of environmentalism. These distinctions serve to highlight the diverse roots of environmentalism.

The growth of an ecological consciousness has arisen partly from a realization that the ecological web is extremely fragile and man's pervasiveness overbearing, but also from a basic ethical responsibility towards the environment and future generations. Books like Rachel Carson's *Silent Spring* (1962), Barry Commoner's (1972) widely quoted principles of ecology, and the publication of *The Ecologists: A Blueprint for Survival* (1972) sensitized people to the fragility of "spaceship earth's" unique environment. The notions that the earth's resources are limited and finite and that human life exists in and is dependent on the natural environment were popularized by the Club of Rome's report on *The Limits to Growth* (Meadows et al., 1972). The fact of dependence is becoming increasingly clear as the costs of exploitation threaten present and future environmental quality. No fence is tight enough to shut out air or water pollution. As Barbour (1972:146) has suggested:

> The American public is slowly becoming aware of the devastation of the earth. We are poisoning our air and water with chemicals, fumes, sewage, detergents, pesticides, radioactivity, noise and heat. We dump 28 billion bottles and 48 billion cans each year. In a few decades we have exterminated animal species that required hundreds of millions of years to come into being. These facts are finally becoming widely known.

Along with this knowledge has come the realization that environmental concerns are important aspects of public policy. This has precipitated the rise of environmental activists and interest groups concerned about environmental protection.

Some critics have argued that the exploitation of nature and the exploitation of other human beings are inseparable; reflecting a common set of cultural values and a common framework of economic and political institutions. Pollution and urban blight are linked together as products of a technological society and political economy that are determined more by private profit than a concern for human welfare and environmental preservation (Grant, 1969; Barbour, 1972, 1980).

The rise of an ecological consciousness is most apparent in the young, where feelings of alienation and the rise of a counter culture in the 1960s have been linked to the social and environmental failings of modern society (Roszak, 1969). O'Riordan (1976:1) has utilitized the term "ecocentric mode" to describe certain aspects of the ecological consciousness.

> Ecocentrism preaches the virtues of reverence, humility, responsibility, and care; it argues for low impact technology (but is not anti-technological); it decries bigness and impersonality in all forms (but especially the city); and demands a code of behaviour that seeks permanence and stability based upon ecological principles of diversity and homeostasis.

The small is beautiful school of thought (Schumacher, 1973) and the search for environmentally appropriate technology (McCallum, 1975) reflect this concern for humanly and ecologically conducive modes of behaviour.

Much of the religious zeal and moral crusade that first characterized the environmental movement has subsided in the past few years. Environmental groups have become much more sophisticated and professional in their approach towards government. Some critics have lamented the apparent institutionalization of environmental issues and interest groups, and have expressed concern that rigid frameworks run counter to the very nature of environmentalism and participation (Bregha, 1978).

To conclude, the case for increased public participation has a sound ethical base and philosophical tradition, rooted in the classical ideals of participatory democracy, the anarchistic vision of society and the rise of an ecological consciousness. This important challenge to the legitimacy and accountability of modern institutions, particularly government, it is argued, could lead to fundamental reforms which would render society more responsive, egalitarian and humane in its treatment of the individual. Without increased public participation in social and environmental concerns, individuals will continue to feel moral outrage at the workings of institutions over which they have no control.

The importance of establishing an ethical/philosophical rationale for participation, lies in understanding the intrinsic value of participatory activity. Furthermore, selective participation strategies may provide a means of resolving the lack of a participatory democracy in what has become essentially an elite democracy. What is at stake are the rights of the individual, the rights of the planet and the rights of future generations. These will not be easily compromised.

THE LEGAL RATIONALE

The legal case for increased public participation in environmental issues, rests on the power of the law to guarantee public rights, establish and enforce participatory opportunities in statutes, and monitor and enforce environmental quality standards. The considerable leverage that the law can provide the average citizen in addressing environmental concerns, makes it an attractive avenue of recourse. If all the traditional mechanisms for ensuring equitable social conduct and democratic representation fail, then the law stands as the guardian of social justice (Baldwin and Page, 1970). There may be varying interpretations as to the effectiveness of the law but the crucial point is that the role of the law is to safeguard rights and ensure that legislative mandates are being obeyed (O'Riordan, 1976).

Another aspect of the legal basis for public participation in environmental issues rests on the assertion that the public has a right to a clean, safe and healthful environment (Elder, 1975). One facet of this in the environmental field is the notion of public trust which is the device by which the government can use and preserve land for the benefit of the people (Berlin, Roisman, and Kessler, 1970). More explicitly, Sax (1970) has argued that federal and regional governments (in the American context) have legal responsibilities to ensure that certain common property resources such as air and water are held in trust for the free and unimpeded use of the general public. Although the trust doctrine is centred on the obligation of the government to

act for the benefit of the people, the difficulties in defining the public benefit or interest have hampered its use. The logical extension of the public trust doctrine however is the establishment of a charter of citizen rights to a clean and healthy environment since public trust implies that citizens have a collective interest in the quality of the environment and its protection for future generations (Hunt, 1978).

Rationale for the inclusion of public interests in environmental decision making is also based on the rules of natural justice which include: "minimum standards of fair decision-making imposed by the common law on person and bodies who are under duty to act judicially (deSmith, 1971:561). There are two rules of natural justice: nobody is to be judge in his own cause; and all parties have the right to be heard and to be given a fair hearing. The first rule has two main aspects. First, an adjudicator must not have any direct financial or proprietary interest in the outcome of the proceedings. Secondly, he must not be reasonably suspected, or show a real likelihood of bias (deSmith, 1971:558). The second rule of natural justice means that nobody shall be penalized by a decision of a court or tribunal unless he has been given prior notice of the charge or case he has to meet, and a fair opportunity to answer the case against him and to put his own case (deSmith, 1971:560). Estrin and Swaigen (1978:487) offer an interpretation of the rules of natural justice which is of utility to this discussion.

> The theory behind the concept of natural justice is that there is a system of rules and principles to guide human conduct that can be discovered by common sense, independent of the laws enacted by the legislature. In practice the rules of natural justice are rules to ensure fairness and impartiality in the courts. They are so necessary to the proper exercise of power that they have been extended to many administrative procedures. The rules provide that public officials such as judges, arbitrators, council members and others who have a substantial interest in the outcome of any decision may not participate in the making of the decision. They provide for a right to a fair hearing, although what is a "fair hearing" varies greatly.

Although it is beyond the scope of this study to review the legal requirements of natural justice exhaustively, of significance to this

disucssion is the fact that the rules of natural justice may be used in some circumstances to pry open certain aspects of the environmental hearing process to some members of the public. However the situations in which the courts will imply a duty on a board or tribunal to act "judicially" and hence observe the rules of natural justice may vary.

The requirements of natural justice depend on the circumstances of the case, the nature of the inquiry, the rules under which the tribunal was acting, the subject matter that is being dealt with, and so forth (de Smith, 1971; Emond, 1975; Harvison, 1979).

Participation and the Canadian Legal System

A selective examination of Canadian federal and provincial environmental legislation and a review of common law indicate that citizens' rights to participation in environmental management decisions are not extensive (Elder, 1974; Franson and Burns, 1974; Franson and Lucas, 1975; Lucas, 1976; Estrin and Swaigen, 1978). There are several constraints which include the following. There are very few statutes which *require* public participation of any sort (Franson and Burns, 1974; Franson and Lucas, 1976). Where participation is conferred it is usually *discretionary* on the part of the ultimate decision maker and is often left in the hands of the agency for implementation.

For example in British Columbia, the *Environment and Land Use Act* (R.S.B.C. 1979), potentially the most powerful piece of environmental legislation in the province, has never been implemented to hold a public inquiry. The *Environment and Land Use Act* establishes a cabinet committee charged with the responsibility of ensuring that adequate consideration is given to environmental factors in land and resource use decisions. The committee is empowered to hold a public inquiry whenever it appears to the committee that the proper determination of any matter within its jurisdiction necessitates an inquiry under section 4(a) of the *Environment and Land Use Act*. However since it is not legally required to do so, it leaves the individual citizen little guarantee that public participation will be part of the decision making process.

This distinction between rights and opportunities for participation is an important one in the literature. Indeed Lucas (1976) goes so far as to suggest that agencies with the discretion to permit opportunities for public participation are generally either not doing so effectively, or not doing so at all. This is especially so in the case of water pollution, as the *Utah Mines* case clearly indicated (Lucas and Moore, 1973).

There are other cases where participation is precluded in law by the doctrine of natural justice which provides safeguards to only those affected significantly in rights or property, the so-called *locus standi* prerequisite (Sax, 1970). The citizen has standing or status to use the courts or tribunals to vindicate a public interest (as opposed to a property or economic interest) only if the person suffers damage that is greater than the damage suffered by the public as a whole (Estrin and Swaigen, 1978:460).

In the case of common property resources such as water, land or air (where there is essentially no private ownership and the resources are essentially public in character) Franson and Burns (1974) argue that the common law* has been largely ineffective in providing access to the courts. Additional constraints include: the lack of public access to information, restrictive formal court room procedures, the narrow scope of review and the possibility of substantial costs incurred (Sax, 1970; Baldin and Page, 1970; Lucas, 1976). Estrin and Swaigen (1978:23) summarize the current situation well:

> In civil actions, the funds, time, expert witness, private property or financial interest needed, restrictions on class actions and delays available to the polluter defendent are enough to discourage people from enforcing their rights.

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*The common law is a body of rules and principles which derive their authority from traditional usage and from judgements of courts recognizing, affirming, and enforcing these usages and customs, as distinguished from statutory law created by legislative bodies. (Estrin and Swaigen, 1978:485)

Presently Canadians have very little access to government decision makers and few opportunities to seek judicial redress for environmental injuries. Lucas and Peterson (1978) and Elder (1974) argue that the present legal framework is geared to compensation after damage has occurred rather than the prevention of environmental disturbance or damage. Surely this is a misguided direction and focus for solving environmental problems in the long run. Estrin (1974) in fact characterizes Ontario's environmental planning process as the ad hoc licensing of private polluters with tokenistic public hearing procedures.

Although the 1970s ushered in a host of progressive pieces of environmental legislation in Canada, and to a much larger extent the United States,* there appears to be a gap between the intent and application of the law. Laws are only effective if they are enforced. Lucas and Peterson (1978) note that much remains to be done on this issue in Canada.

Much of the impetus for change in environmental law in the past decade in Canada has come from various citizen organizations and environmental law associations. Of particular importance are the Canadian Environmental Law Association and the West Coast Environmental Law Association which have been instrumental in researching and writing about the potential of the law to aid citizens in asserting their environmental rights.

There are many sound reasons why increased public participation would improve present decision making. Estrin (1974) summarizes a number of arguments in favour of the legal basis for participation including: litigation is an invaluable tool to stimulate a high public profile for otherwise routine government decisions, thereby ensuring a comprehensive evaluation of conflicting interests; litigation forces public officials to consider the full implications of major planning; and it provides a

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*The United States has been in the forefront of change in environmental law with such innovative legislation as the *National Environmental Policy Act* (1969), the *Freedom of Information Act* (1966) and the *Michigan Environmental Protection Act* (1970).

means of coping with unanticipated or neglected issues.

Although the law can offer some considerable advantages in promoting the cause for environmental protection and public participation, it is not a panacea to all environmental problems. In order to ensure that citizens have a clean, safe and health environment, much more needs to be considered, notably the administrative basis for public participation. By broadening the basis for decision making and providing a mechanism for power sharing and political accountability, the organizational basis for participation could lead towards a more efficient and equitable allocation of resources.

THE ADMINISTRATIVE RATIONALE

Dissatisfaction with the management of Canada's natural resources has led to demands for additional information and involvement by affected public interests. In reaction to such demands a number of responses are noteworthy. During the last 15 years, Ministries of Environment with specific environmental protection mandates have been created at the federal and provincial levels. Institutions have initiated a wide variety of procedures and programs including: the appointment of special commissions and inquiries into specific projects or proposals; informal policy guidelines suggesting the desirability of environmental impact assessment; and mandatory legislative requirement for impact assessment (Hunt, 1978).

The focus of the administrative rationale for participation is well summarized in the following citation from the Organization for Economic Co-operation and Development (1978:111):

> The general thrust, then, of the participatory demand would appear to be for a greater degree of public accountability; freer public access to information; more timely consultation of policy options; a more holistic approach to the assessment of impacts; all of which amounts of course, to more direct participation in the exercise of decision-making power.

Not only are institutions challenged on grounds of accountability and

accessibility to the public but also in their response to market failure in allocating natural resources and their ability to incorporate changing social values. These concerns form the organizational basis for increased public participation.

In response to demands for better resource management, the traditional reaction of the public sector is institutional or administrative change. Such change was manifested in the resources field in Canada, with the evolution of environmental impact assessment procedures in the early 1970s (Mitchell and Turkheim, 1977). These procedures grew out of an increased awareness of the need to assess all of the impacts (environmental, social, economic) of a proposed activity or development. In the past developers generally failed to account for or consider the potential environmental impact or their proposals and there was no mechanism to assign to proponents some of the social and environmental costs incurred by development. The philosophy of environmental impact assessment demanded that the public role be recognized in two ways: first, as a contributor to decision making, and second, as a scrutineer to ensure that the proper procedures were followed. It has also been suggested by Lucas and McCallum (1975) that the public has a vested interest in the management of resources, it has a right to monitor the government's administration of essentially public resources and to participate in decisions which will determine patterns of development for communities.

Additionally it has been argued by J. and T. O'Riordan (1980) that the cultural, social and amenity values that public interest groups promote can often only be incorporated into the decision making process through direct participation. The collective knowledge of citizens in local communities can be an invaluable source of information, not otherwise accessible to decision makers.

Arguments for the minimization of external costs and the necessity of institutional reform to reflect changing circumstances and non-market values present additional reasons for an increased role for public participation in resource management decisions. It would appear that

two main factors have contributed to difficulties in resource management in general: (1) market failure to internalize external costs and realize the total social benefits of non-priced public goods; and (2) shifting social values for, and demands on resources (Dorfman and Dorfman, 1972; Seneca and Tausig, 1974). If the goal of resource management is to allocate resources with efficiency and equity and the traditional mechanism for doing so, the private market, is failing, then a need exists for other organizational and institutional responses (Ducsik, 1974).

The causes of market failure are well documented in the literature on environmental economics where three main factors have been cited: externalities, common property resources and the provision of public goods (Seneca and Tausig, 1974; Bish et al., 1975). Externalities, or external costs, refer to the failure of producers to internalize all of the costs of their production (i.e., pollution) leading to external social and environmental costs which must be absorbed by those not directly involved in the action. An example of this would be the downstream impacts on residents of effluent discharged by a factory.

Common property resources refer to those resources for which no private property rights have been designated to an individual(s). Air and water are the most obvious examples of common property resources. It has been argued by Hardin (1968) that resources owned in common are more likely to be misused or overused since everybody's property is nobody's property, leading to the so-called "tragedy of the commons". Problems such as oil spill pollution (Ross, 1973) and overfishing (Gordon, 1954) are examples of the possible misuse of common property resources.

Lastly, it has been argued that the market has failed to realize the total social benefits of non-priced public goods. Ducsik (1974) notes that when there is no pricing mechanism for such amenities as clean air and water, there is a tendency to undervalue these products. An example of this would be in a cost-benefit study where the difficulties of measuring or quantifying amenities such as recreation can

lead to undervaluing these in favour of factors that are easily quantifiable (Coomber and Biswas, 1973).

These types of market failure have contributed to conflicts over resource use and misallocation and use of resources. Overcoming market failure depends upon an active government role in resource allocation and public participation in decision making. In order for resource use decisions to have legitimacy and credibility they must accurately reflect social goals and a variety of social values. Such policies require a degree of support and legitimization from a variety of interests and public participation is a means of acquiring this.

The shifting nature of social values and demands on natural resources are more difficult to account for and measure than resource conflict caused by market failure. With a growing public awareness of the finiteness of resources and the limits to exponential growth (Meadows et al., 1972) there is some evidence of shifting social values. Public participation is a means of identifying these social values.

The Science Council of Canada (1977) and the GAMMA research team (see Valaskakis et al., 1979) referred to this shift in social values as the transition from consumer society values to conserver society values. The conserver society concept is based on an ethic of conservation and carefully planned growth and is concerned with: economy in design (doing more with less); recognition of total costs (including environmental externalities); the encouragement of diversity and flexibility in our society and its systems; concern for the future (conserving resources and options for future generations); and the beliefs and values of individuals (Science Council of Canada, 1977).

The movement towards the use of environmentally appropriate technology (Schumacher, 1973; and McCallum, 1975), and the employment of renewable resources for satisfying energy needs (Lovins, 1977; Crow et al., 1978) are indications of these changing values. Conserver society proponents such as Solomon (1978) argue that governments are elected for limited terms and have short term visions and time horizons. There is a need however for long term planning horizons to reflect

concerns for environmental quality and conservation, and the options of future generations. Solomon (1978) and Valaskakis et al. (1979) argue that the present system of environmental planning and decision making is locking us into a near-sighted and short-lived future. Public participation is one means of ensuring that changing social values are incorporated into the decision-making process, thereby potentially broadening the future planning horizons of institutions.

To conclude, the administrative basis for greater public involvement in environmental issues is based on: the need to involve the public in the institutional procedures for environmental impact assessment in order to incorporate amenity values and scrutinize the management of resources; the need to identify and account for external costs and non-priced public goods; and the necessity for planning institutions to reflect changing social values, particularly when such values are based on sound ethical and ecological principles.

CONCLUSIONS

The foregoing review of the rationale for increased public participation in environmental issues indicates the coalescence of various streams of thought. On the one hand there is the broad concern for more equitable decision making based on an affirmation of the classical ideals of participatory democracy and a solid legal basis for participation. On the other hand there is the more singular concern for better environmental quality and resource use decisions, based on greater public awareness of natural resource values and the need to overcome market failure and institutional inadequacies. The streams of environmentalism and public participation have many interrelated concerns which have converged during the 1970s and gathered a momentum of their own.

From an institutional perspective, participation is necessary to inform the decision maker(s) of the values held by the public, how those values are changing and the full range of alternatives available

to society. A citizen task force working under the Man and Resources Project summarized the case for increased public participation in decision making exceptionally well:

(1) Governments exist through consent of the governed, therefore, legislation affecting a broad segment of the population (e.g. zoning, regional planning, pollution standards) requires the acceptance and support of the public to be effective and enforceable.

(2) No single individual, politican, or decision maker, has the clairvoyance to anticipate and evaluate public opinion in every issue over a four-year period without continuous and comprehensive public input, no matter how great his electoral support.

(3) Public attitudes are continually changing over time with new information, and should therefore, be continually reassessed in making and monitoring decisions.

(4) Frequently public opinion has been an important source of information providing the impetus for new legislation (e.g. pollution control) and as such, should be provided by statute.

(5) Public participation provides alternatives from which decision makers can choose. Ours is a pluralistic society and often technical reports contain the social/educational/economic biases of their writers and do not take into account the interests and needs of different socio-economic groups.

(6) No one knows better than the people themselves where they want to go in the future and what development trends they are willing to support.

(7) At present there is no way to estimate the relative worth of intangibles such as "clean" water or "pleasant" views; therefore, there is no basis on which planners or decision makers can make a "rational" choice. When trade-offs must be made between two intangibles, it is the citizens who must live with the solution who are in the best position to make the choice.

(8) When it comes to implementation of policy, decisions which have been reached with maximum public involvement are most likely to have minimum opposition, thus reducing friction, easing implementation, and perhaps avoiding expensive reversal of decisions.

(9) Public involvement increases public understanding, knowledge

> of, and acceptance of necessary technical developments (e.g. sewage treatment plants) in this way acting as an educational system to benefit all parties concerned. (B.C. Provincial Task Force on Citizen Participation, 1973)

The above points demonstrate the very real value of participation for both intrinsic and instrumental reasons.

Having established the rationale for increased public participation in environmental issues, it is important now to review what has actually occurred in the evolution of public participation in Canada. The next chapter reviews the practice of public participation in environmental issues by focusing on the key actors, techniques of participation and methods of evaluation.

CHAPTER 3

THE PRACTICE OF PUBLIC PARTICIPATION IN ENVIRONMENTAL ISSUES IN CANADA

> There has been criticism of participatory decision-making on the ground that it delays reaching decisions, that its costs outweigh its benefits and that it introduces irrelevant or unreliable information to the discussion. We, however, say with confidence that the advantages of participation far outweigh these criticisms.
>
> K. Lysyk, E. Bohmer and W. Phelps,
> *Alaska Highway Pipeline Inquiry*
> (1977)

INTRODUCTION

Although the rationale for increased public participation in environmental management concerns may be clear, the appropriate procedure for incorporating public input into the decision making process is far from clear. A great deal of uncertainty exists as to who should be involved, at what stage of the planning process, on what issues, through what variety of techniques and for what purpose. It is often difficult to ascertain what degree of participation is practical and possible in any program, and how public input can be best utilized by decision makers.

Past experiences have also demonstrated a wide variation in the definition and perception of public participation on the part of both decision makers and the public. At one extreme, public participation has come to mean any activity undertaken by groups of citizens which is not part of the formal government structure of our society (Wengert, 1976). At the other extreme, participation is defined more narrowly as a concept of citizen power which permits non-elected citizens to have access and some control over decision making (Arnstein, 1969; Fagence,

1977). Demands for greater public participation may be motivated by a desire to alter the existing decision making structure and thus weaken vested interests, or they may simply seek better information inputs amd more responsive public service (Wengert, 1976). The classic ladder of participation developed by Arnstein (1969) and the evaluated framework of Farrell et al. (1976) indicate a wide range of public involvement varying from manipulation and persuasion exercises through to citizen control and self-determination. This lack of a consensus on the objectives and definition of public participation has led to difficulties in developing, implementing and evaluating public participation processes and programs (Hampton, 1977).

The following review of the practice of public participation in environmental issues in Canada is divided into three main sections: an overview of the formation and role of environmental interest groups, a discussion of the various techniques of participation and a review of the evaluation of public participation. A list of principles of public participation are then formulated from this review which are fundamental to the planning and evaluation of participation programs and processes.

ENVIRONMENTAL INTEREST GROUPS

The increased social activism of the 1960s led to the formation of groups of individuals concerned with such issues as minority rights, racial discrimination, poverty and environmentalism. The environmental interest group in particular has arisen due to a perceived deterioration in the quality of the environment and the apparently increased alienation of the public in decision making (Draper, 1972; Wilkinson, 1974).

There has been no comprehensive analysis to date of the role, activities, or successes of interest groups in environmental issues in Canada (Wilkinson, 1974). Most of the literature on interest groups is either theoretical explanations from the disciplines of political science or sociology, or case study accounts of interest group activity. The lack of a comprehensive analysis of such activity has therefore

necessitated a descriptive overview of environmental interest groups.

Interest groups are organizations whose members act together to influence public policy in order to promote their common interest. The following definition by Almond (1963:98) expresses one view of the basic function and utility of interest groups:

> Interest groups articulate political demands in the society, seek support for these demands among other groups by advocacy and bargaining and attempt to transform these demands into authoritative public policy by influencing the choice of political personnel and the various processes of public policy making and enforcement.

Interest groups also serve to aggregate inputs into the policy making process and to represent public opinion and views (Eckstein, 1971). They have important output and educational functions which can be utilized by government agencies to increase public support for policies. Their advice and support can contribute to the creation of acceptable public policy by giving it a sense of legitimacy in the community. Usually unobtrusive, and not always respectable, they serve as pervasive and necessary links in the processes of communication that bind government and people (Gable, 1958; Olson, 1969; Pross, 1975).

Interest groups vary considerably in their organization, objectives and membership but the literature is replete with case studies which reveal that the politically active are normally from the middle to upper socio-economic classes (Almond and Verba, 1963; Smith, 1970; Burch, 1976). Many individuals involved in interest groups sacrifice large amounts of personal time and effort for seemingly marginal results, as interest groups have been a varying force of strength in influencing public policy in Canada. In some instances, interest groups can serve society usefully by providing a type of self-expression, formulating policies and seeking their fulfilment, providing public officials with information and helping to define the public interest (Pross, 1975). Concurrently, interest groups must be watched so that they do not subvert the public interest in favour of their own self-sustaining or philanthropic goals (Van Loon and Whittington, 1971).

A basic problem in linking interest group activity with public participation in general, is the difficulty of defining what the public interest really is. Innumerable writers on public participation have addressed this problem, but the basic dilemma remains. Traditionally group theory and the concept of pluralism assumed that as long as there were enough different kinds of groups participating then all segments of society would somehow be represented (Dahl, 1961). Critics of this approach, notably Garson (1978), argue that such an approach does not recognize the varying political and economic resources of different groups, their particular vested interest, nor the role of private sector lobbies. Ramp and Schrecker (1978) make the point that the term public interest group is probably a misnomer since most groups referred to in that way would not claim to represent a unified public interest and would certainly not represent the views of a majority of the general public. Rather the function of such groups is to articulate viewpoints which are opposed to those of organizations with a high level of political resources and accessibility to decision makers.

Environmental interest groups in particular have come under a great deal of criticism for representing select and often elite interests (Neuhaus, 1971; Sills, 1975). Neuhaus (1971) for example claims that an educated, middle class, white, suburban elite has enjoyed the luxury of escape to nature and turned its back on the poor in cities. Sociological studies also lend some credibility to the charge of elitism. In one study of members of several environmental organizations, 80 percent of the sample had some college education and 23 percent had a graduate degree (Zinger et al., 1973). In a survey of Sierra Club members, only 7 percent were clerical or blue collar workers (Coombs, 1972).

Although there is some validity to the elitist tinge of environmental interest groups, a succession of surveys have shown that environmental measures continue to have broad public support and cut across lines of race, education and income (Mitchell, 1978). Of significance is not simply the socio-economic class of the participants

but the quality of participation and the universality of the issues involved. The issue of the definition of the public interest or common good however is not likely to be easily resolved.

There are literally hundreds of different environmental interest groups in every province across Canada (Wilkinson, 1974). They are concerned with a myriad of issues ranging from recycling to wildlife protection to energy conservation to sewage disposal. Groups may be ideologically motivated and transcend single issues, or they may be concerned with specific goals and issues (Pross, 1975; O'Riordan, 1976).

Wilkinson (1974:232) outlines a list of the variety and scope of issues that environmental interest groups in Canada have been involved in:

> . . . the Ontario government's cancellation of the partly completed Spadina Expressway in Toronto after vocal citizen opposition; the "People or Planes" Committee's protests over the proposed Pickering (Ontario) airport; a suit in the Quebec Supreme Court for an injunction against Quebec's James Bay Development project filed by the province's native peoples; the federal government's rejection of plans from private concerns to build a massive skiing and tourist complex in Banff National Park after vocal protests from all parts of the country; and the cancellation of plans by Canadian Pacific Rail to ship municipal solid waste from Toronto to the small town of Harrison (about seventy miles to the northwest of Toronto) after vigorous opposition from that area's "Derail Dump Today" (DDT) Committee.

This gives some indication of the types of concerns that have been the focus of environmental interest group activity.

An interest group's effectiveness is difficult to account for although O'Riordan (1976) cites the following factors: advance intelligence and access to information, good liaison with administrators, rational argument and expertise, good contacts with legislators, effective use of the media and readiness to invoke sanctions. Obviously, success will vary from one case to another, but most critics would agree that organization, resources (time and money), leadership, tactics and information are key to a group's success (Draper, 1972; Pross, 1975; Canadian Environmental Advisory Council, 1978).

Reflecting on the evolution of Canada's most flamboyant environmental interest group, Greenpeace's director in Canada, Dr. Patrick Moore admits Greenpeace has passed the test of time (Shepherd, 1980). Ten years after a small group of long haired eco-freaks set sail in a halibut trawler to stop underground nuclear testing in Amchitka, Alaska, Greenpeace has evolved into a sophisticated international organization with 250,000 members in nine countries, a secretariat in Washington, D.C. and an annual budget of $4 million (Shepherd, 1980). Greenpeace with its daring and flamboyant tactics has an enviable track record and Moore cites the following as triumphs for which Greenpeace has been directly or indirectly responsible: the U.S. decision to stop underground nuclear testing in the Aleutian Islands, an unstable earthquake zone; forcing the French government to switch to underground nuclear tests from atmospheric tests in the South Pacific; removing the Russian and Japanese factory whaling ships from the North Pacific; the moratorium on the live capture of killer whales on the west coast of North America; the halt to the killing of seals on the Orkney Islands off Scotland, and the cancellation of a gypsy moth spray program in Vancouver's Kitsilano district.

Certainly much of the religious zeal that first characterized the environmental movement has given way to more professional and sophisticated environmental interest groups. Concern has been expressed that some groups may in fact have become too institutionalized (Hunter, 1980). The future of environmental interest groups will no doubt depend upon the recognition of appropriate goals and effective strategies by the groups themselves and the political milieu. As society and bureaucracy become increasingly complex it is likely that collective action will be necessary to broaden the basis of decision making. In this sense interest groups may become an increasingly important and common feature of the decision making process by filling gaps between the public in general and government. Presently they fulfil important and necessary roles as influencers and educators for society as a whole. Their success in the future will no doubt be partially determined by the

amount of information and funding that government or other sources will provide them with and the existence of viable forums and avenues for participation.

TECHNIQUES OF PUBLIC PARTICIPATION

A wide variety of techniques exist for public participation with the most common being: public meetings, public hearings, task forces, advisory committees, open houses, workshops, information programs and citizen review boards.* Aside from voting and public opinion polls and surveys, the most conventional method of obtaining public input is through the public hearing. At the National Conference on Public Participation in Canada, held in Banff, Alberta, April 1979, past approaches to participation were typified as being conservative rather than designed to fit the nature of the issue (Sadler, 1980). There appears to have been an over-reliance in the past on the use of the public meeting and to a lesser extent the public hearing. Meanwhile, there has been greater success where more comprehensive programs using a wide variety of techniques have been initiated (Sadler, 1980).

Public participation techniques vary considerably in the extent to which they are controlled by decision makers and in the level of commitment required by participants (Sewell et al., 1979). The effectiveness of the various techniques is difficult to measure, although Conner (1980) suggests that success depends on their function in the planning process (level of decision making), the nature of the issue and the social profile of the community. The literature suggests that no standardized approach to participation exists and some observers feel in fact that it should not exist (Thompson, 1980). Success is more a function of the commitment to participation, the perceptions and attitudes of the public and agency and the nature of the issue.

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*For an in-depth review of techniques for participation see the U.S. Department of Transportation, *Effective Citizen Participation in Transportation Planning*, Volume 2, Washington, D.C., 1976.

Although no standardized approach can be recommended, the literature does suggest that early, ongoing and continuous involvement is the ideal and offers the best results (Vindasius, 1974; Priscoli, 1975; Sinclair, 1977). Therefore the success of techniques is often a function of their role in the planning process.

With respect to utilization of public input J. and T. O'Riordan (1980) suggest that more emphasis should be placed in the future on consultative techniques rather than mass meetings. In the past, large scale unfocussed public meetings have failed to provide decision makers with useful information. Thus decisions were not influenced by the public who became disillusioned with this costly and tokenistic procedure. The O'Riordans suggest a two-tier process of both mass meetings and advisory or consultation bodies as a more effective means of separating regulatory and planning functions and acquiring useful levels of public input.

To conclude, it is evident that practice and experience are essential to developing successful techniques of participation. In the past public hearings had legitimacy as a traditional mechanism of participation but recently the limitations of public hearings due to their formality, one-shot approach, and lack of two-way communication (Sinclair, 1977) suggest that practitioners must experiment a great deal more with various combinations of techniques. The Mackenzie Valley Pipeline Inquiry's use of informal community workshops and meetings as well as formal public hearings is an example of an innovative experiment that worked successfully. The challenge in the future lies in seeking more of these effective combinations.

EVALUATION

Several recent reviews of the literature on public participation reveal that there is little or no formal evaluation of public participation programs or processes (Burton and Wildgoose, 1977; Sewell et al., 1979; Smith, 1979). Although large amounts of money are spent by

agencies on their public participation programs, there appears to be little concern about how well the money was spent, for what purpose, or for whose benefit.

There are many difficulties associated with evaluation. The major problems with evaluating public participation programs are summarized below:

(1) there is no generally accepted set of evaluative criteria;
(2) there is disagreement and uncertainty as to the value and purpose of evaluation;
(3) evaluation methodologies vary with specific issues and objectives;
(4) there are difficulties in skilfully measuring "soft" data such as environmental intangibles;
(5) evaluation implies a certain degree of subjectivity; and
(6) there is concern that the political implications of public participation programs cannot be recognized in evaluation procedures.*

Although there have been significant problems with evaluation, there have also been valuable contributions to the field. These include: Arnstein (1969); Farrell et al. (1976); Hampton (1977); Hendee, Clark and Stankey (1974); Homenuck et al. (1978); Sewell and Phillips (1979); and Vindasius (1975). Arnstein (1969) and Farrell et al. (1976) make a useful attempt in this regard by outlining the wide ranging dimensions of participation along continuums. The latter framework of evaluation is particularly valuable in identifying levels and techniques of participation as well as evaluative indicators. Hampton (1977), Hendee, Clark and Stankey (1974) and Homenuck et al. (1978) also have attempted to develop systematic approaches to evaluation. For example Hendee, Clark and Stankey (1974) propose by theoretical description and discussion a basic structure for making use of public inputs into resource decision making. The basic model they propose consists of six elements: issue definition, collection process, analysis process, evaluation

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*Refer to Homenuck et al. (1978); Morgenstern, Durlak and Homenuck (1980); Sewell and Phillips (1979); and Vindasius (1975).

process, decision implementation and review. Each element is defined and it is shown how, when and where public input should be incorporated. Homenuck et al. (1978) offer a general framework upon which an agency evaluation might be based, and Hampton (1977) proposes a schema for evaluating public participation based on three main objectives: to disperse information, gather information and to attain interaction between planners and the public. Within each objective, techniques for citizen involvement are assessed according to the type of information generated and the public involved. Vindasius (1975) proposes a formal model of evaluation based on three specific objectives for participation: informing the public, receipt of public input and incorporation of public input into the planning process. Each of these goals is assessed in terms of optimizing efficacy and efficiency with given time and budget constraints.

In the review by Sewell and Phillips (1979) four of these models were selected for analysis—Farrell et al. (1976), Hampton (1977), Homenuck et al. (1978), and Vindasius (1975). These were viewed as being representative of the range of sophistication in public involvement techniques in the urban and resources field. Several major themes emerged from the Sewell and Phillips analysis. Firstly, present frameworks do not adequately identify perceived goals of participation. Secondly, specific criteria for the assessment of participation are seldom identified. Thirdly, the representativeness of the public is not adequately considered. Fourthly, restrictive time and data requirements often limit the effectiveness of the process. Fifthly, there is no measure of cost effectiveness to ensure an element of efficiency in the process. Sixthly, evaluation is generally a hindsight activity rather than an ongoing process. And lastly, there is an agency bias evident in all of the frameworks considered. Such trends indicate a need to considerably improve evaluative procedures in the future.

Public participation can also be evaluated in terms of the amount of decision making power shared between the public and the agency. As noted earlier, past experiences have demonstrated a wide variation in

the perception of public participation ranging from mere tokenism to citizen control. The highest and ideal levels of participation might be viewed as those where citizens are actually involved in influencing and making decisions.

What emerges is a general conclusion that no blueprint approach to evaluation exists to date. Each situation requires unique responses and public participation processes and programs must be flexible enough to accommodate these. As agencies continue to spend vast sums of money on public participation programs (the Berger Inquiry alone cost over five million dollars),* there is a clear need to improve evaluation procedures. Not only is there concern over costs, but also potential delays in decision making. Therefore although there exists a growing demand for public participation in planning and decision making, there is concurrently a growing dissatisfaction with the experience to date. The development of improved evaluative concepts, criteria and frameworks could aid in identifying and ameliorating some of the major problems facing participation today.

PRINCIPLES OF PUBLIC PARTICIPATION

The literature on the theory and practice of public participation indicates the evolution of participation as an important component of planning and decision making. There are however ambiguities and differences in translating the rationale for participation into participative practices. In order to bridge the general gap between the theory and practice of participation a set of general principles of effective public participation has been developed. These principles are derived from the extensive literature review undertaken for the first three chapters and are displayed in Table 3.1.

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*It is important to note however that the Berger Inquiry was much more than a public participation exercise. It also involved environmental impact assessment, and not all major public participation exercises in the resources field do.

TABLE 3.1: PRINCIPLES FOR EFFECTIVE PUBLIC PARTICIPATION

1. *Definition of Objectives and Issues*
   - — The public and the agency(s) involved should agree on the objectives of the public participation process before it is initiated.
   - — The public and the agency(s) should establish mutually acceptable terms of reference and issues to be included in the process.

2. *Representativeness of Participants*
   - — The public participation process should include as many relevant and directly affected individuals and/or groups as possible.
   - — Every affected individual or group should have the means to participate.

3. *Timing of Participation*
   - — Participation should occur at an early stage of the planning process and be ongoing and continuous. It must occur before major decisions are made.
   - — Participation should be fully integrated and in sequence with the planning process. It must not be a token effort.

4. *Information Availability*
   - — Pertinent information should be readily accessible to the public.
   - — The information should be readily understandable to those whom it affects.
   - — Two-way information flow mechanisms should be established between the public and the agency.
   - — Information is only as credible as its source. In order to ensure the release of unbiased information, it should be reviewed by an independent agency or source.

5. *Employment of Suitable Participation Techniques*
   - — The public participation techniques should suit the nature of the issue, the participants and the stage of the planning process.
   - — Direct contact with the public is maximized through the use of both formal and informal techniques, depending on the objectives of the process.
   - — The public participation techniques employed should facilitate communication between the public and the agency(s), and the program should be flexible enough to accommodate a variety of different techniques to suit each situation.

—table continues—

—table continues—

6. Commitment to Utilization of Public Input

- — Credibility and effectiveness require that public participation be utilized in the planning and decision making processes to reach acceptable decisions.
- — The amount of shared decision making power should be consistent with the objectives of the process as established in principle #1.
- — Direct feedback mechanisms should be established to demonstrate to the public, how, when, where and why public input was or was not utilized.

The six principles are structured around the following evaluative criteria: (1) the definition of objectives and issues; (2) the representativeness of the participants; (3) the timing of participation; (4) information availability; (5) the employment of suitable participation techniques; and (6) the commitment to utilization of public input.

Definition of Objectives and Issues

- — The public and the agency(s) involved should agree on the objectives of the public participation process before it is initiated.
- — The public and the agency(s) should establish mutually acceptable terms of reference and issues to be included in the process.

It is recognized that there will be variety of objectives expressed by both the public and the agency(s) involved as to the nature and definition of participation. These varying objectives will reflect the different competing and often conflicting interests in society. For example the agency may be conducting public participation for the following reasons: education, information feedback, consultation, or even shared decision making with the public. The public on the other hand may be involved in the process in order to: obtain more information on a particular issue, object to proposed developments, inform the agency

of particular concerns or share in the decision making. What is important is that the public and the agency agree upon the objectives or goals of the public participation program. Without such agreement, the process will likely be ineffective.

Often in the past the objectives for participation have been narrowly defined and focussed, based largely on the perceived goals of the agency funding the program. Little attention was paid to the values sought by the participants themselves. The literature on public participation suggests that the most ideal arrangement is a partnership between the public and the agency. It implies that the public has equal input into the planning and decision making process. Additionally if there is mutual agreement on the terms of reference of the program and the issues to be included, the public participation program will be effective. Without such agreement, no matter how well structured the process is, it will fail to satisfy the goals and expectations of the participants.

Representativeness of Participants

- The public participation process should include as many relevant and directly affected individuals and/or groups as possible.
- Every affected individual or group should have the means to participate.

The ideal according to the classical theorists of democracy is that all those directly affected by a decision should have the right to influence that decision. Also principles of natural justice dictate that members of society who are likely to be affected by a decision should have the right to be heard and a fair hearing. Practical problems such as geographic location, size and scale of issue, and timing of public participation program often impede the involvement of all of those directly affected. Additionally, not all members of the public directly affected may wish to become involved. In other circumstances, it may be difficult to define the relevant publics. However, efforts

should be made to involve as many individuals or groups as possible and to reflect as many interests as possible. In order to do this it is important that every individual directly affected has the means to participate.

Financial resources, research skills and expertise are not likely to be evenly distributed among various groups in society. As a result, financial assistance and access to resource people and information may be a prerequisite to effective representation. It is often forgotten that the quality of the public participation process is dependent upon the quality of the participants, and efforts should be made to facilitate this.

One of the tasks of government agencies should be to provide open and impartial forums in which conflicting and competing interests can be heard. No individual or group of individuals should be allowed therefore to dominate the process. On the other hand effectiveness cannot simply be measured by how many people attended a meeting. The quality of information and debate are equally important.

Timing of Participation

- Participation should occur at an early stage of the planning process and be ongoing and continuous. It must occur before major decisions are made.
- Participation should be fully integrated and in sequence with the planning process. It must not be a token effort.

In order for a public participation process to be effective it must be fully integrated and in sequence with the overall planning process. Public participation should occur at an early stage of the planning process and continue until it is completed. Public input must be received before major decisions are made or the credibility and legitimacy of the program will be questioned. In some instances this may require that participation be included at different levels of the decision making process, for example at policy formulation levels and then project management concerns. Asking for public input on a *fait*

accompli is inviting an adversary mode of public participation.

Information Availability

- Pertinent information should be readily accessible to the public.
- The information should be readily understandable by those whom it affects.
- Two-way information flow mechanisms should be established between the public and the agency.
- Information is only as credible as its source. In order to ensure the release of unbiased information, it should be reviewed by an independent agency or source.

Information availability and accessibility are crucial to the effectiveness of a public participation program. Without adequate access to pertinent information, it is impossible to participate with any degree of effectiveness. Indeed information is now seen as an essential means for individual advancement and a prerequisite for citizen participation in the democratic process.

Additionally the quality of information is important. It is essential that information is comprehensive yet easily understood by those whom it affects. Technical jargon should be avoided and complex issues and terminology should be readily understandable.

It must be recognized however that information is only as credible as its source. One of the persistent difficulties encountered by government institutions involved in the conduct of public information programs has been that, because their own institutional credibility is often questioned,so too is the information they provide. This points to the importance of establishing an independent forum to ensure unbiased review of information. In addition the more sources of information available, the greater the likelihood of a greater representation of different types of information.

Another important aspect of information availability is recognition by the agency that the public has a wealth of local information to

provide to the decision making process. It is essential therefore that two-way information flow mechanisms are established between the public and the agency.

Employment of Suitable Participation Techniques

- The public participation techniques should suit the nature of the issue, the participants and the stage of the planning process.
- Direct contact with the public is maximized through the use of both formal and informal techniques, depending on the objectives of the process.
- The public participation techniques employed should facilitate communication between the public and the agency(s), and the program should be flexible enough to accommodate a variety of different techniques to suit each situation.

The choice of public participation techniques is critical to the effectiveness of a program. A typical response of agencies has been to establish public hearings as a means of involving the public. The public hearing has legitimacy as a traditional mechanism of public involvement but used by itself is inadequate. The use of a variety of techniques to suit the nature of the issue, the participants and the stage of the planning process is crucial. Certain techniques are better suited for specific goals and it is therefore critical that the techniques suit the objectives of the program.

The public participation techniques should facilitate communication between the public and the agency(s) and to this end the use of both formal and informal techniques is of importance. Informal techniques such as workshops, open houses and small meetings are better suited to interactive and informational objectives whereas public hearings, inquiries and task forces may be better suited for more formal ritualistic objectives. There should be flexibility in the program to ensure that techniques are chosen to suit each situation.

Commitment to Utilization of Public Input

- Credibility and effectiveness require that public participation be utilized in the planning and decision making processes to reach acceptable decisions.
- The amount of shared decision making power should be consistent with the objectives of the process as established in principle #1.
- Direct feedback mechanisms should be established to demonstrate how, when, where and why public input was or was not utilized.

Although a public participation program or process has been undertaken by an agency, there may be no guarantee that the planning or decision making process will be influenced by public input. Credibility and effectiveness require that public input be utilized in the decision making processes in order to reach acceptable decisions. This necessitates some form of prior commitment by the agency involved to the public as to the level of utilization of input. The amount of shared decision making power should be consistent with the objectives of the process as established in principle #1.

The literature on public involvement points to some of the advantages of using public input in planning and decision making including: the need to incorporate changing social values into decision making, public input has been an important source of information to decision makers; public acceptance of decisions is likely to be greater if they were involved in the decision making process and decisions will have greater credibility and legitimacy with public input.

Additionally there is a need on the part of the agency to inform the public of how, when, where and why public input was or was not utilized in decision making. Without such feedback the public may not accept the final outcome of the process.

These six principles of public participation could be usefully involved in the development and analysis of public participation programs or processes in resource management in Canada. They are germane to an understanding of public participation and in order to

utilize them as evaluative criteria they must be turned into a series of specific questions. The answers would determine how well the principles were in fact satisfied by a particular program or process.

CONCLUSIONS

The practice of public participation in environmental issues raises some important questions as to who should be involved in public participation in order to best represent the public, which technique or variety of techniques facilitate effective participation and communication, and how it is possible to evaluate participation. The above review indicates that there is still a great deal of uncertainty as to the practical dynamics of participation.

It is apparent that the growing sophistication and professionalism of environmental interest groups is an evolving feature of the practice of participation as is the range of available techniques. Similarly evaluation methods have grown in sophistication and scope. To date however there still appears to be a considerable gap between the theory and practice of participation. To aid in this direction, a set of principles of public participation were developed. They are derived from an in-depth evaluation of experience as well as a review of the theory and philosophy of public involvement. It seems appropriate now to use them as evaluative criteria in the subsequent case study.

This review of public participation in resource management issues would however be incomplete without a more specific examination of public participation in energy planning in Canada. The next chapter therefore addresses this subject in terms of the major trends, major avenues and particularly public participation practices by electrical utilities. This provides the necessary context for the subsequent review of the institutional framework of electrical energy planning in British Columbia and the case study.

CHAPTER 4

PUBLIC PARTICIPATION IN ENERGY PLANNING IN CANADA

> Energy choices involve the most basic decisions about values: What is efficiency and what do we sacrifice for it? Is interdependence good or bad? Is it avoidable? Is simplicity better than complexity? Is it important to protect individuals? Is democracy worth preserving at the cost of rearranging the economy? Is the economy made for people or are people the servants of the economy? Which people?
>
> Richard J. Barnet, *The Lean Years: Politics in the Age of Scarcity* (1980)

INTRODUCTION

The roots of public participation in energy planning date to the environmental activism of the 1960s. Concern over the use and allocation of natural resources spurred an interest in energy planning and decision making since energy decisions impact on a wide range of environmental, social, economic and political factors. In British Columbia alone, there are currently approximately 20 major energy projects under provincial government review.*

It is difficult to imagine the cumulative impact of such projects on the environment and economy, although critics have speculated on a variety of doomsday scenarios. There is concern over the large scale

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*These projects include: four liquified natural gas proposals, three petrochemical proposals, Foothills Pipeline, Vancouver Island Gas Pipeline, Northeast Coal proposals and Southeast Coal expansion, coal liquifaction, Cheekye-Dunsmuir, Site C, Hat Creek, Kootenay Diversion, Northern Transmission from Stikine-Iskut and Liard, Murphy Creek, Nicola-Kelly Lake 500 kV and Cranbrook-Alberta Border 500 kV transmission.

potential for environmental degradation including: the adverse impact of acid rain particularly in eastern Canada (Rosencranz and Whetstone, 1980); low and high level radiation from nuclear power plant operations (Torrie, 1980); oil spills from tankers in sensitive marine environments (Thompson, 1978); the loss of or flooding of productive agricultural land due to hydroelectric generation (Wilson, 1973) and the adverse health and safety impacts of high voltage transmission lines (Young, 1978). It is clear that there are no clean forms of energy but people are beginning to question just how much energy is needed, by whom, for what purpose, at what cost and for whose benefit?

MAJOR TRENDS AND CONCERNS

Public debate on energy planning in Canada began in the late 1960s on a project by project basis, but has evolved into a much broader examination of the social, environmental and economic aspects of energy policy. This has been conditioned by the emergence of a variety of ad hoc forums for interest group articulation such as: the Berger Inquiry into the Mackenzie Valley Pipeline; the Thompson Inquiry into West Coast Oil Ports; the Lysyk Inquiry into the Alaska Highway Pipeline; the Porter Commission on Electric Power Planning in Ontario; the Hartt Commission on the Northern Environment in Ontario; and the Bayda and Bates Commissions into Uranium Mining in Saskatchewan and British Columbia, respectively.

Today, the major national interest groups concerned about energy planning include: Energy Probe, the Canadian Coalition for Nuclear Responsibility, the Canadian Arctic Resources Committee, Friends of the Earth (Canada), Greenpeace and the Canadian Environmental Law Association. In British Columbia, interest groups such as SPEC (Canadian Society of Scientific Pollution and Environmental Control), the West Coast Environmental Law Association, Sierra Club, The B.C. Wildlife Federation and the British Columbia Energy Coalition are active. Issue-oriented groups are still formed in response to specific energy projects,

but the emergence of national and provincial interest groups has been an evolving feature of public participation in energy planning.

Concern about the possible adverse environmental and social impacts of energy projects is a key issue with interest groups. It would be fair to say that in the past, these impacts were largely underestimated in the decision-making process and that energy planning was based primarily on financial and technical criteria (Hooker and van Hulst, 1977). Many environmental interest groups disagreed with this approach and argued for a much broader decision-making basis. As Ramp and Schrecker (1978:1) have suggested:

> Factors demanding a radical change included: the environmental impacts of new energy technologies; the social impacts of the degree of financial and technological centralization of power which must accompany continued adherence to our present energy paths; and the sky-rocketing economic costs of continuing to meet energy demand which is largely a result of the demand-orientation of policy institutions.

Past energy planning and development have demonstrated the magnitude of some of the environmental and social impacts. For example in British Columbia during the construction of the Bennett dam on the Peace River in the mid-1960s there was little consideration given to the downstream impacts of hydroelectric generation. Subsequent study revealed significant environmental and social impacts in the Peace-Athabaska delta, including the destruction of wildlife and waterfowl habitat and disruption to the hunting and fishing practices of native Indians (Peace Athabaska Delta Project Group, 1972).

More specifically with respect to electric power, Hooker (1978: 200) has identified some of the side effects of the use of electric power today:

(1) the potential hazards of the production technology, e.g. in nuclear generators;

(2) pollution caused by the production process;

(3) the allocation of land for, and the environmental impact of transmission lines;

(4) the enormous investment required to expand the electrical system; and

(5) the inhibiting effect of technology and social planning on local innovation and choice, and public participation.

The increasing importance of these side effects of energy production indicate the severity of the trade-offs involved in the making of energy policy.

Although the environmental and social impacts of hydroelectric generation and transmission projects are generally thought of as marginal compared to other energy resources, there are some significant impacts nonetheless. Wilson (1978:90) for example lists some of these impacts with respect to the Peace and Columbia River dams in the interior of British Columbia.

> Much land has been taken, both in the major reservoirs and within new rights-of-way. In both cases other productive uses of the land such as agriculture, grazing, forestry and recreation, often have been eliminated. In the case of storage reservoirs the qualities attached to the water have been changed. A natural setting based on free-flowing water is replaced by an ugly "bath tub" condition, justified only by the storage function itself. A lake and a reservoir are not the same thing. In the case of the Columbia a large number of people (about 2000) were forced out of a comfortable environment. Rights-of-way leave the natural landscape disrupted and scarred, especially in forested areas, and impede agricultural operations. The presence of large project construction forces has produced stresses in small communities, not all of which (e.g. land and housing costs)were remediable, although B.C. Hydro has in recent years paid "social bills" very fully. Also the boom-and-bust aspect of the situation has been neither pleasant nor healthy.

In addition, the damming of rivers may require the relocation of native Indian settlements or other communities, and may destroy native hunting or fishing areas (Hooker, 1978). The construction and operation of a hydroelectric dam may greatly affect the level and flow of a river inducing upstream and downstream changes including adverse impacts on migratory fish and wildlife and waterfowl habitats.

Recently there has been a great deal of controversy over the health/safety impacts of high voltage transmission lines. To date there

appears to be conflicting evidence relating to the health effects of exposure to extra high voltage transmission lines (500 kV).* There is concern by Young (1978) and Miller and Kaufman (1978) that electrical fields may interfere with the normal functioning of the central nervous system and may evoke neurophysiological or behavioural effects. However current research in Canada, Britain, the United States and the Soviet Union on the long term health effects of high voltage fields on electric utility workers remains inconclusive.

Closely related to the health implications of high voltage transmission is the safety aspect. There is concern about farmers working in the vicinity of transmission lines who have experienced electric shocks, people carrying metal pins or plates in their bodies and people wearing pacemakers who may be particularly susceptible to dangerous shock currents around high voltage lines (Young, 1978). Additionally, lightning strikes pose a hazard to a person standing near a tower during an electric storm under transmission lines, irrigation systems must be used with special care to avoid water touching a conductor, and children must be supervised to avoid accidents, particularly with the flying of kites.

Another area of concern relates to the maintenance of rights-of-way and the use of herbicides for vegetation maintenance. For example the use of the herbicide 2,4,5-T for vegetation control, contains a contaminant, dioxin, which is extremely toxic and has been shown to cause birth defects in laboratory animals. Although the utilities only use herbicides registered under legislation and the certified applicators are required to adhere strictly to government-approved concentrations

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*Refer to: L. Young, "Danger: High Voltage," *Environment*, Volume 20, No. 1, May 1978, 16-24; M.W. Miller and G.E. Kaufman, "High Voltage Overhead," *Environment*, Volume 20, No. 1, January/February 1978, 6-15; C. Comer, "Controversy over High Voltage Effects," *Electric Power Research Institute Journal*, No. 5, June/July 1977; Royal Commission on Electric Power Planning, Issue Paper #4, *Transmission and Distribution*, March 1977.

there is concern by the public that government standards and regulations are inadequate.

The other adverse environmental impacts of transmission lines include: the aesthetic impacts of transmission lines on the natural beauty of the countryside due to their high visibility; and the environmental damage due to clearing of vegetation for rights-of-way and construction and maintenance activities. In particular the ecological disturbance to wildlife and fish streams has been of concern to environmental interest groups. The width of the rights-of-way has also been an area of controversy due to the visual impacts of the clearing and the total amount of land use. In contrast, however, it appears that the advantages of using 500 kV or 765 kV as compared with lower voltages are very marked from the standpoints of minimization of right-of-way width and reduced loss of energy via transmission costs per mile (Scott, 1972; Solandt, 1978).

Generally speaking, there has been an increased awareness among the public about the scope and impact of decision making about energy projects. This is no doubt partially due to the controversy surrounding nuclear power, the most visible and symbolic of the highly centralized energy systems. It is becoming increasingly clear that decisions about energy development influence a wide variety of other social, political and economic choices. Not only are there choices about different resource uses and technologies and their social and environmental consequences, but also choices about individual freedom, local innovation and public choice (Hooker, 1978).

A number of other factors have contributed to the greater demand for involvement in energy planning. It is generally accepted in political science literature that the electoral process alone is a poor mechanism for either stimulating intelligent public debate or indicating public preferences on specific issues (Remp and Schrecker, 1978). Politicians are generally elected on broad platforms that do not indicate their views on highly specific issues or developments. This situation has led to a lack of political accountability on particular

decisions where the public has no recourse but to wait till the next election to voice their preferences. As a result, a number of alternative mechanisms for articulating public views on certain issues have evolved including: committees, task forces, public inquiries and royal commissions. The pattern that has emerged, however, is one of ad hoc, fragmented liaison with the public, dealing with specific issues, rather than one of continuous involvement on broad concerns in the environmental field as a whole (Lucas and Peterson, 1978).

Another contributing factor to the growth in public participation in energy planning has been the tendency for the social and environmental costs of energy projects to fall on local and rural populations, who are often politically weak, while the benefits of such projects accrue to urban and metropolitan populations who are politically and economically stronger. This has stimulated the rise of local interest groups which have no other recourse but to protest and/or oppose such developments. As Ramp and Schrecker (1978:13) suggest:

> Issue-oriented public interest groups may represent, in this context, the only avenue short of outright revolt for the articulation of minority or victim interests. Native people and uranium miners carry relatively little weight in the councils of the energy consumptive corridor. The more centralized our technology becomes, and the higher its costs, the more important the dynamics of this situation are bound to become. In this context, "blind opposition" becomes the only course of action available to, for instance, a local constituency confronted with a major energy development project as a *fait accompli*.

This situation is exacerbated in highly technological and centralized large-scale energy systems where resource user and resource hinterland relationships are created. Certain groups or regions are asked to bear a disproportionate amount of the social costs of development for the overall common good (Orr, 1979).

Another aspect of this problem of regional disbenefit is the confrontation between rural and urban values. The aesthetic and environmental impacts of energy projects are symbolically more obtrusive in rural as opposed to urban settings, sensitizing rural people to the

clash in values. As the managing editor, G. LeMasurier of the *Comox District Free Press* on Vancouver Island stated (July, 1979:7):

> We can't help thinking that many problems generated by the actions of government and major public corporations boil down to a case of urban versus rural attitudes. Take the case of B.C. Hydro's proposed Cheekye-Dunsmuir transmission line planned to cross Georgia Strait from the Sechelt Peninsula to Vancouver Island. The urban executive has decided the rural areas need the power, it is the rural people who must live and work near the towers and cables that will cut across rural land and they are rural people who will manage and maintain the line. But it is the city executives who are making all the decisions, issuing all the press releases.

When political and economic power is concentrated in the urban areas there is a tendency for those on the periphery to feel alienated and outside of the decision-making process.

The concerns of local people, particularly native Indian populations with the development of northern hinterland areas to feed the energy needs of southern metropolitan areas is an extension of the more general urban versus rural confrontation. There has been a tendency for the major energy projects in Canada in the last decade to be located in the northern hinterland portions of the province. The proposed Mackenzie Valley Pipeline in the Northwest Territories, the James Bay Hydro Development project in Northern Quebec, and the Nelson-Churchill Power project in northern Manitoba are but a few examples of such projects. Although these three projects differ significantly in scale and in the areas impacted they do represent the kind of energy development path that Canada seems to be moving towards.

This type of energy development has been characterized as the "hard path" and the battle lines have been drawn between two opposing philosophical thrusts—that of the "hard path" and the "soft path". The "hard path" uses high technology, non-renewable resources, and large scale centralized energy systems. The "soft path" implies use of renewable energy resources, environmentally appropriate technology and small scale decentralized energy systems (Lovins, 1977). Much of the recent public debate on energy planning has focused on the merits of

the "soft path" as opposed to the "hard path" and has pitted utility executives against environmental groups. It is a debate that remains unresolved even though both sides rely on highly qualified experts and technical information.

This has led to some thoughtful commentators such as Barnet (1980) and Orr (1979) to conclude that energy choices are not just technical options but selections involving the most basic decisions about values. In the domain of values there are no experts, thus necessitating broad public debate and involvement in energy choices and decisions. As a consequence public participation in energy planning is critical for the articulation of a broad range of social goals and values. The absence of participation may lead to a variety of civil disobedience acts, the consequences of which may extend well beyond the issues of energy planning and the legitimacy of existing institutional practices.

MAJOR AVENUES

The major avenues or vehicles for public participation in energy planning which have emerged in the past decade have been largely disconnected, involving a wide variety of jurisdictions and terms of reference at both the federal and provincial level. Clearly the emergence of national and public inquiries and commissions into particular energy developments has been a key feature of the last decade. However, the lack of a central forum or focus for participation at either the provincial or national level has been one of the most distinguishing features of this ad hoc pattern of liaison with the public. This was well articulated in the Select Committee of the Legislature investigating Ontario Hydro which Hooker and van Hulst (1977:10) quote:

> The Committee found, however, that while the public—directly and through its Government—was involved in many aspects of Hydro, there was no focus to the involvement. There was no single forum or combination of forums that looked at the overall direction of Hydro's expansion programs and its need for revenue from a public policy perspective.

These remarks indicate the extent to which there is a lack of focus for involvement and the current institutional fragmentation which characterizes energy planning institutions.

Lucas and Peterson (1978) in their extensive review of public participation in northern resource issues conclude that ad hoc procedures have largely replaced firm policy or legislative commitments by either provincial or federal governments. As a result, an interesting pattern of procedural arrangements in the form of environmental impact assessment processes has evolved to fill the gap between policy and regulatory procedures.

At the federal level the Federal Environmental Assessment and Review Process (EARP) established in 1973 is applicable only to projects of federal departments and specified crown corporations.* As Lucas and Peterson (1978:74) note EARP was initiated by a Cabinet directive to ensure that:

(1) environmental effects are taken into account early in the planning of new federal projects, programs and activities;

(2) an environmental assessment is carried out for all projects which may have an adverse effect on the environment before commitments or irrevocable decisions are made; projects with potential significant environmental effects are submitted to the Department of the Environment for review;

(3) the results of these assessments are used in project planning, decision making and implementation.

If a project is screened and anticipated to have adverse environmental effects which are considered significant an EARP panel is established consisting of four to six persons with relevant expertise largely from the federal public service. The panel reviews the proponent's environmental impact statement and can hold hearings on the project before

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*Federal projects are those which involve federal funds or federal property. Regulatory agencies and proprietary crown corporations are not specifically bound by the process but have been "invited to participate".

writing a report to the Minister of the Environment.

Although importance is attached to public consultation and participation in the published guide to the EARP process, there are no enforceable requirements as to the nature and extent of participation. The lack of a statutory base for the entire process and clear legally binding guidelines within which the procedure must operate has led to considerable criticism of the viability of EARP. Since the basis for the process is merely a Cabinet document there is no means of enforcing compliance and fear of considerable discretion by departmental officials (Lucas and Peterson, 1978).

Apart from EARP at the federal level the National Energy Board can assess environmental effects in considering pipeline facilities under the *National Energy Board Act* and has jurisdiction to regulate interprovincial and international energy movements. Under Sections 22, 26, 27 of the *National Energy Board Act*, the NEB is responsible for issuing certificates of public convenience and necessity for the construction of energy projects and advising the federal Cabinet on the use of Canada's energy resources. Under Section 10, the NEB establishes its own public hearing practices. Hearings are held in Ottawa as well as in regions in close proximity to the project under question. A unanimous NEB decision is submitted to Cabinet after its hearing.

With respect to public participation Page (1975) notes that the NEB operates upon the principles of adversary hearings. Both the applicant and the critics appear before the Board and are cross-examined on their testimony. This quasi-judicial type of forum assumes some equality between the two sides in expertise, support staff and research studies. In fact, however, there are considerable financial and organizational burdens on the public interest group intervenors. Often a few thousand dollars of work and experience are matched against millions of dollars from the multi-nationals. Additional criticisms of the NEB Inquiry Process include the following: there are no specifications on the social and environmental issues that the NEB must consider and there is no guarantee that it will consider these broader issues (Lucas and

Bell, 1976).

An interesting development with respect to pipelines was the creation of the Northern Pipeline Agency in 1978 under the *Northern Pipeline Act* to develop terms and conditions for the construction of the Alaska Highway gas pipeline. Under the Act, the agency is required to take into account the local and regional interests of the residents, particularly native people, in developing the terms and conditions. A series of public hearings was held respecting the British Columbia section of the proposed Alaska Highway gas pipeline during November-December 1979 and from the concerns and views expressed during the hearings a report was submitted to the Commissioner of the Northern Pipeline Agency in Ottawa. These hearings provided the opportunity for local people who would be directly affected by the project to express their thoughts and be heard. The creation of the Northern Pipeline Agency represents a novel institutional response to large scale energy projects. The agency was created to oversee the planning and construction of a massive energy project and to streamline the approval process by acting as a "single window" to undertake all federal responsibilities relating to the pipeline in Canada (Mair, 1980). The National Energy Board is represented within the agency by the designated officer. Under the terms of the Act, the objectives of the agency are twofold: to facilitate completion of the project; and to ensure maximum economic and industrial benefits to Canadians while trying to minimize adverse social, economic and environmental impacts of the pipeline project (Mair, 1980). This type of institutional response provides a mechanism for incorporating public input (particularly at the local level) into energy project decision making.

At the provincial level, those industries and institutions which develop and supply energy solely within one province are regulated by that province. All provincial governments in Canada have initiated some form of environmental impact assessment procedures for energy projects. These procedures are based on either policy decisions and/or legislation, and vary considerably from province to province (Mitchell

and Turkheim, 1977; Canadian Council of Resource and Environment Ministers, 1977). Opportunities for public participation exist under these procedures but they are largely discretionary on the part of decision makers (Mitchell and Turkheim, 1977). A detailed analysis of British Columbia's environmental impact assessment process on electrical energy projects is outlined in Chapter 5.

The above review indicates that although avenues do exist for public participation on energy issues they tend to involve ad hoc formulations of problems dealing with a specific range of issues or a specific project and provide few opportunities for continued participation. As Ramp and Schrecker (1978) point out, once committee hearings or deliberations of a royal commission are over, there is no second chance. The public has little opportunity to follow up at a later stage of the planning process.

Such a style of participation dictated by government institutions and policies has in turn had effects on interest group activities. The multiplicity of avenues for public participation demand a high level of resources if a group is to participate effectively. Public interest groups are by and large voluntary associations with few financial or organizational resources which cannot afford to spread their efforts too thinly over a wide range of procedures. Provision of funding for interest group activity could go a long way towards facilitating interest group participation and enhancing the general quality of participation. The pioneering efforts of the Berger, Bayda, Thompson, Lysyk, Hartt, Porter and Bates Commissions in providing funding and organizational support for interest groups have been important and valuable. Ramp and Schrecker (1978) go one step further in recommending the funding of permanent advocacy groups for their research and participatory efforts.

Although the avenues for citizen participation in energy planning and development have evolved significantly in the past ten years it is important to realize the limitations to present structures. As Lucas (1978:51) points out:

> This may suggest that a tradition of public participation is developing in Canada, at least on natural resources and energy issues. But it must be remembered that the Berger Commission and its descendents have all been ad hoc bodies. Their very existence depends on favourable exercise of political and administrative discretion.

Much remains to be done on both creating and facilitating effective avenues for citizen participation in energy planning. The following review of the practice of North American electrical utilities with respect to public participation completes this overview of public involvement in energy planning in Canada.

PUBLIC PARTICIPATION AND ELECTRICAL UTILITIES

Public participation in electrical generation and transmission planning in North America is a relatively recent research interest. Very little independent research beyond that relating to the utilities' own experiences with public participation has been undertaken. Three reviews of interest and significance are: MacLaren's (1979) examination of the state of the art of public participation in transmission line planning in Canada; L.J. D'Amore and Associates Ltd. (1978) review of United States utility experience in public participation, and Ontario Hydro's (1980(b)) review of public participation in route and site planning in North American electrical utilities.

Whereas ten years ago evidence would suggest that utilities in North America did not involve the public in any substantial way in planning and decision making, there have been some general changes in direction and policy. They have been described by one utility employee interviewed by L.J. D'Amore and Associates Ltd. (1978:13) below:

> I believe one clear fact to be emerging—that is the day of unilateral decision making about environmental quality is at least going and perhaps already gone—gone for government, gone for corporations. What is up for grabs in a fundamental sense is the way in which society is going to make decisions on social policy in a time to come. And the rules for acceptable corporate

> behavior have been turned upside down. No longer can corporations safely rely upon historical value systems or what they did in the past to judge the appropriateness of environmental decisions.

Changes in government regulatory procedures, siting approvals and environmental impact assessment processes have altered the ground rules for decision making on energy projects.

Nevertheless, according to MacLaren (1979) there is still a general reluctance to involve the public in energy planning due to the following factors.

(1) A lack of general understanding as to the values and intentions of participation;

(2) The many and variety of techniques available to the industry may not be fully appreciated;

(3) In the absence of a legislative or regulatory mandate, there may exist a reluctance to alter the traditional centralized decision-making process.

These factors will require not only changes in laws and regulations but also changes in attitudes before there is a better acceptance of the value of participation.

Utilities across North America have responded in a variety of ways to increasing pressures for public involvement. This response has usually taken the form of public meetings on specific energy projects to exchange information with the public. Ontario Hydro's (1980(b)) survey of over 40 North American utilities* indicates that almost all utilities employ a wide range of participation techniques in their

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*Questionnaires were distributed in April 1970 to 61 electric utilities throughout North America. Responses were received from 42, some of which indicated that they were not involved in locating power plants or transmission corridors. This reduced the survey group to 33. Of these 33 respondents, 12 replied that public participation was not a component of their planning. This left 21 utilities (64 percent) of those involved in route/site planning which do practice some form of participation. (Ontario Hydro, 1980(b))

programs—with the most popular being public meetings, consultation with interest groups and audio-visual presentations. The most developed role of the public in this survey was to provide input to the study by reviewing the alternatives, although a wide range of roles was identified. Over half of the utilities believed that the public's role in planning would increase in the future. Two utilities actively encourage public participation on matters of corporate policy. Tennessee Valley Authority (TVA) has established a Citizen Action Office and its Board of Directors meetings are open to the public and rotated among affected communities. The Pennsylvania Power and Light Company has formed a permanent citizens advisory committee to represent the community and almost half of the utilities surveyed had a department or unit with public participation as the prime responsibility (or one of its prime responsibilities). These latter two initiatives indicate a much more progressive attitude towards public participation.

For the most part it would be fair to say that utilities invite selected forms of participation. Generally participation is sought on site-specific and project design concerns but seldom on the broader based utility concerns such as long range plans or pricing policies. Some utilities are not willing to recognize the interrelated nature of siting issues vis-a-vis other utility concerns and this has led to credibility problems with their public participation process. On the other hand Pennsylvania Power and Light Company claims in the report by L.J. D'Amore and Associates Ltd. (1978:18) that:

> . . . PP & L and the Public Advisory Committee are discovering that siting issues are often inseparable from other energy-related issues. Consideration of siting issues leads one very quickly to the questions of how much power is needed, when it is needed, and what types of facilities are appropriate to supply it.

At whatever point in development, most utilities appear to be moving towards incorporating public participation officially and formally as part of their planning process. The most far-reaching development in participation has been open public examination of and input to utility

planning in advance of decision making. Compared to past approaches based on public or consumer relations these are encouraging new developments in the field.

One of the central issues within the American utility network is the relationship between utilities and government, and the extent to which there is increasing intervention of government, through its regulatory agencies, in energy planning. Utilities in the United States now find requirements and controls in nuclear legislation, conservation acts, energy management bills and environmental impact controls (L.J. D'Amore and Associates, 1978). Although existing regulatory measures of environmental protection and energy conservation have enjoyed a great deal of public support there are areas of controversy as well. These include the debate over funding of public participation in regulatory proceedings and the significant time delays incurred by industry due to extensive regulatory procedures.

Ramp and Schrecker (1978) note the financial disparity between citizen and public interest group intervenors and government and industrial intervenors. Therefore although the regulatory process may call for "non-expert" involvement in hearings, the mechanisms and support necessary to facilitate and enhance the quality of participation appear to be lacking. As L.J. D'Amore and Associates Ltd. (1978:47) point out:

> Lay persons have floundered trying to conduct cross-examination in an arena of skilled utility lawyers. Others, lacking funds to hire expert witnesses in support of their positions, have embarked on interminable, rambling cross-examinations, consuming hours of valuable time and proving or disproving nothing at all. These kinds of consequences produce a caricature image of public participation—hostile, obstructive or simply inept—which ironically serves as the best argument against it.

There appears to be a need therefore not only to establish opportunities for participation, but to ensure that adequate resources and organizational support are provided to enhance the quality of participation.

Other barriers to full and adequate participation in the American experience include: the lack of simplified training materials and

experience in providing training to public groups; the lack of and/or availability of background material prior to public discussion; the inaccessibility of public meetings because of timing or geographical distance; and the lack of financial resources in citizens' groups (L.J. D'Amore and Associates, 1978). Ontario Hydro (1980(b)) cites the following factors as the most common problems experienced by utilities in implementing public participation programs: polarization between public and utility groups concerned only with their own interests; public apathy; and lack of credibility of utility public involvement processes in the eyes of the public. Other problems identified by respondents included reluctance by a utility to involve the public; financial inability of some citizens to participate; determination of what role the public should play in a study; and the perception that the proponent already knows what they want before a study begins (Ontario Hydro, 1980(b)).

Future directions for public participation in utility planning and decision making point to an expanding role for the public. As government becomes increasingly involved in environmental and energy decision making, and therefore utility decision making, there are strong indications that public participation will become an integral aspect of the decision-making process. In order to establish a working partnership between the utilities, public and government, there is a need to reconcile conflicting viewpoints. Utilities can help to achieve that balance by bringing to government decisions already formulated with public participation; and government, through continued development and refinement of its participation structures can complement utilities in that regard as regulatory requirements are met.

CONCLUSIONS

The above review of public participation in energy planning in Canada indicates the major trends and concerns, the major avenues for participation and the utilities experience with involvement. Although

it is apparent that the public has had an important role in articulating the social and environmental impacts of energy development, much remains to be done in both establishing opportunities and avenues for participation as well as facilitating the quality of participation.

The lack of a statutory basis for participation or clear legally binding guidelines within which some participation procedures should operate, has restricted the evolution of participation in energy planning and decision making. Similarly, expensive, quasi-judicial and formal hearing procedures have tended to dominate past approaches to participation, thereby discouraging local, "non-expert" involvement. This largely supports the conclusions of the previous literature review on the theory and practice of participation which demonstrated the need for greater public involvement and revealed some of the practical problems of realizing this objective.

In order to place these more general comments into a specific context, the latter chapters of the thesis examine the institutional barriers to public participation in electrical energy planning in British Columbia. Many of the trends and concerns identified in this chapter are important to an understanding of the British Columbia case study.

CHAPTER 5

THE INSTITUTIONAL FRAMEWORK OF DECISION MAKING ON ELECTRICAL ENERGY IN BRITISH COLUMBIA

> Our institutions haven't changed as fast as society so most cannot now help us achieve the more vernacular lifestyle that's needed. They most need to be flexible, yet they're huge, heavy, unwieldy. They must loosen up fast or die.
>
> Walter Pitman, *Institutions in Crisis* (1980)

INTRODUCTION

Concern about energy resource use and management necessitates a detailed analysis of the institutional framework of energy planning and decision making. Institutions have a major bearing on how decisions are made and by whom. The purpose of this chapter is to examine the institutional framework of decision making on electrical energy planning in British Columbia, in order to identify opportunities and barriers to effective public participation.

The term "institution" refers to various established laws, policies and organizations in society.* It may mean: a specific rule or practice; a general pattern of action; or a specific organization with some charter or scope of authority (Lang, 1978). Specifically in this case it refers to laws, policies, administrative structures and procedures.

In the field of energy planning critics such as Lovins (1977) and Hooker and van Hulst (1977) question the traditional assumptions behind

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*Whichever meaning one gives the word institution, it is something infused with value for the participants associated with it. Psychologists are divided concerning the role of values and institutions as determinants of behaviour. Evidence suggests however that not only do values influence institutions, but also that institutions influence values; they cannot be neatly separated (Barbour, 1980).

energy planning institutions and the ability of these institutions to respond to the wider societal and environmental implications of energy planning. There is concern that existing institutions have inherent biases that seriously constrain the range of alternatives and social values that are incorporated into decision making (Hooker and van Hulst, 1977; Barbour, 1980). If institutional barriers or restrictions to effective public participation in electrical energy planning and decision making exist in British Columbia, it is important to identify them and recommend ways of developing a more participatory process.

THE EXISTING INSTITUTIONAL FRAMEWORK

Federal Level

In Canada, the *British North America Act* (1867) establishes federal and provincial legislative jurisdiction over natural resources, including energy resources. The federal government exercises jurisdiction over interprovincial and international trade, as well as a broad range of issues falling under the "Peace, Order and Good Government" clause, while the provincial governments have control over natural resources, including energy and minerals produced within their own borders (Burton, 1972).

In practice however this division of federal and provincial responsibilities is unclear due to overlapping and conflicting areas of jurisdiction in some areas of resource management and the development of new and emerging concerns unaddressed in the *British North America Act* (MacNeill, 1971). In the energy field this is best illustrated by the current negotiations between Alberta and Ottawa over oil pricing and revenue sharing (Scott, A., 1977; McDougall, 1979).

Although the *British North America Act* (1867) establishes the legislative jurisdiction over resources, it provides little insight into the subsequent administrative and policy mechanisms and arrangements that have evolved. In the energy field at the federal level, major responsibility for energy policy rests with the Department of Energy, Mines and

Resources. The National Energy Board functions as a regulatory and advisory body to the Ministry of Energy, Mines and Resources. The Department of Indian Affairs and Northern Development is responsible for the administration and regulation of exploration and oil field development north of the 60th parallel (where it acts as provincial landlord) and Environment Canada is responsible in some instances for assessing the environmental impacts of energy development and enforcing environmental quality standards. A variety of other forums such as the Mackenzie Valley Pipeline Inquiry and institutions such as the Northern Pipeline Agency and Petro Canada have evolved at the federal level to fill the gap in existing institutional arrangements. With respect to electrical energy projects in particular the federal government is involved in: the areas north of the 60th parallel where it acts as provincial landlord; on energy exports where the National Energy Board is the regulatory agency; and on transboundary issues such as the electrical developments on an international river like the Columbia.

At the provincial level, each provincial government has developed its own set of institutional arrangements for energy policy and planning within its jurisdiction. Co-ordination of energy policy between the federal and provincial levels occurs at the political and administrative levels through a variety of formal and informal mechanisms including the First Ministers' Conference and the Energy Ministers' Conference (Burton, 1972; Smiley, 1980).

Provincial Level: British Columbia

Background:

Traditionally in British Columbia, the focus of provincial government energy policy has been on securing additional energy supplies to meet growing demands and encourage economic growth. At the present time total energy demands in the province are satisfied by petroleum products (44 percent), natural gas (21 percent), wood wastes (17 percent), coal (1 percent), and electricity (17 percent)(Ministry of Energy, Mines and Petroleum Resources, 1980 (a)). In its 1978 *Energy Forecast,* the British Columbia Energy Commission stated that British Columbia's energy use

pattern differed from the rest of Canada in a number of important ways:

(1) With the exception of Alberta, British Columbia is the only province where primary production of energy (estimated at 930 quadrillion joules or 880 trillion Btu's) exceeds gross consumption in all end use sectors plus the energy supply industries. This does not mean however that British Columbia is self-sufficient in all types of energy as nearly 75 percent of the province's petroleum requirements are met from Alberta.

(2) Energy consumption per capita in end use sectors is estimated at 300 megajoules or 284 million Btu's. This is high in comparison to other provinces and is primarly a reflection of the large volumes of energy consumed in industry, particularly the forest and mining industries. The industrial sector alone accounts for over 47 percent of the energy consumed in the province. Presently 40 percent of industrial needs are met by forest industry wastes, 22 percent from refined petroleum products, 21 percent from electricity, 15 percent from natural gas, and only 2 percent from coal.

(3) In contrast to the rest of Canada, the industrial sector in British Columbia is approximately 50 percent self-sufficient in energy from either self-generated hydroelectricity or from hog fuel/waste liquor for the raising of steam.

Such a pattern of energy use has important implications for electrical energy planning. Although electricity accounts for only 17 percent of the province's present consumption, there are indications that it will play an increasingly important role in the future as fossil fuels continue to deplete (Energy, Mines and Resources Canada, 1980).

ELECTRICAL ENERGY PLANNING AND DECISION MAKING INSTITUTIONS

Introduction. Major planning and decision making institutions in the electrical energy field in British Columbia to date include: the British Columbia Hydro and Power Authority; the British Columbia Energy

Commission; the Environment and Land Use Committee of cabinet (and its former Secretariat); and the Ministry of Energy, Mines and Petroleum Resources. In addition various provincial government ministries have been involved in the recent interagency review of environmental impact assessments on major energy projects.

By way of brief introduction to all of these actors it is worth making the following observations. The planning for electrical energy in British Columbia has been largely undertaken in the past two decades by the provincial public utility, B.C. Hydro. Established as a crown corporation in 1962, this agency is the most visible of all the electrical energy planning institutions and was placed in a monopoly position by virtue of its enabling statute, the *British Columbia Hydro and Power Authority Act*. The Act gives the corporation wide authority in relation to the generation, transmission and distribution of power in the province. The establishment of the British Columbia Energy Commission in 1973 with the passing of the *Energy Act* and its predecessor the British Columbia Energy Board did not in any way significantly regulate the electrical planning functions of B.C. Hydro. Although the B.C. Energy Commission had important advisory and regulatory powers and was established in response to a growing need for more detailed information on the province's future energy supplies, B.C. Hydro was exempted from the commission's regulation of energy entities (*B.C. Energy Commission, Annual Report*, 1978). B.C. Hydro was therefore basically a self-regulating entity although on the federal side its exports were regulated by the National Energy Board and provincially accountability was said to be established by the presence of a minister(s) on the Board of Directors.

The provincial government became more heavily involved in energy planning procedures in the mid-1970s with the introduction of environmental impact assessment procedures. With the passing of the *Environment and Land Use Act* in 1971 and the subsequent establishment of the Environment and Land Use Committee of cabinet and its Secretariat, a number of important changes were initiated. *The Guidelines for Coal*

Development were introduced in 1976 and were soon followed by the *Guidelines for Linear Development* in 1977. These Guidelines established environmental impact assessment procedures for major energy projects which would be reviewed by a variety of provincial government agencies under the co-ordination of the Environment and Land Use Committee Secretariat.

However in the past six months there have been some major changes in the provincial energy planning and review process. The *Utilities Commission Act* was passed in August 1980 and the Environment and Land Use Committee Secretariat was dismantled in September 1980. Currently a new energy review process is being structured. The new administrative review procedures have not been finalized nor implemented to date.

The research for this thesis was undertaken before the advent of these changes and therefore focusses on the existing planning procedures for transmission line planning under the *Guidelines for Linear Development*. The findings of the thesis should however be of importance to the restructuring of electrical energy review procedures in British Columbia.

British Columbia Hydro and Power Authority. B.C. Hydro was established in 1962 by a merging of the former B.C. Electric Company Ltd. and the B.C. Power Commission. Through an unexpected political move the former Premier W.A.C. Bennett opened up the way for an integrated approach to power development in the province, specifically the development of the Peace and Columbia Rivers (Robin, 1973). Since its timely birth, B.C. Hydro has had a stormy and controversial history. Of all the planning and decision making institutions involved in electrical energy in the province, it has the highest profile and has come under considerable public criticism.

B.C. Hydro is a crown corporation* employing about 12,000 people and is responsible for the overall planning, generation, supply and

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*A crown corporation may be defined as a corporation ultimately accountable to the public, that is, to Parliament or the legislature through a minister(s) who sits on the Board of Directors of the corporation (Kristjanson, 1968).

distribution of electrical energy in the province. Placed in a monopoly position by its enabling statute, *The British Columbia Hydro and Power Authority Act* (R.S.B.C. 1979), B.C. Hydro has received wide authority in relation to its activities. Section 52(1) of the *British Columbia Hydro and Power Authority Act* leaves little doubt as to the omnipotence of this organization.

> Notwithstanding any specific provision in any Act to the contrary, except as otherwise provided by or under this Act, the authority is not bound by a statute or statutory provision of the Province.

The application of this particular section of the statute is however complicated by the fact that the British Columbia *Environment and Land Use Act* (R.S.B.C. 1979), section 6 contains a similar "notwithstanding" clause. In practice B.C. Hydro has voluntarily submitted itself to the provisions of a wide range of provincial statutes. The ultimate legality and interpretation of the primacy of the *British Columbia Hydro and Power Authority Act* has not been specifically determined.

With respect to B.C. Hydro's electrical energy planning functions, the utility's future generation options are confined to those energy sources which have four basic attributes: (1) the energy source must be available in British Columbia; (2) it must have a well-developed technology; (3) the cost per installed kilowatt must be competitive with other available energy sources; and (4) it must be acceptable to the provincial government and the consensus of public opinion (B.C. Hydro, 1979). Within these parameters Hydro's current future generating options are primarily hydroelectric development and conventional coal-fired thermal development. The bulk of B.C. Hydro's generation is connected to an integrated transmission system which as of March 1978 consisted of 14,259 kilometers of in-service transmission lines (B.C. Hydro, 1979). In addition more than 3,700 kilometers of transmission lines are either committed or under construction; construction is currently underway at B.C. Hydro's Peace Canyon, Seven Mile and Revelstoke generating stations and at least five other generation projects are in the planning stages. Figure 5.1 provides an indication of the location of existing and potential major generation projects while

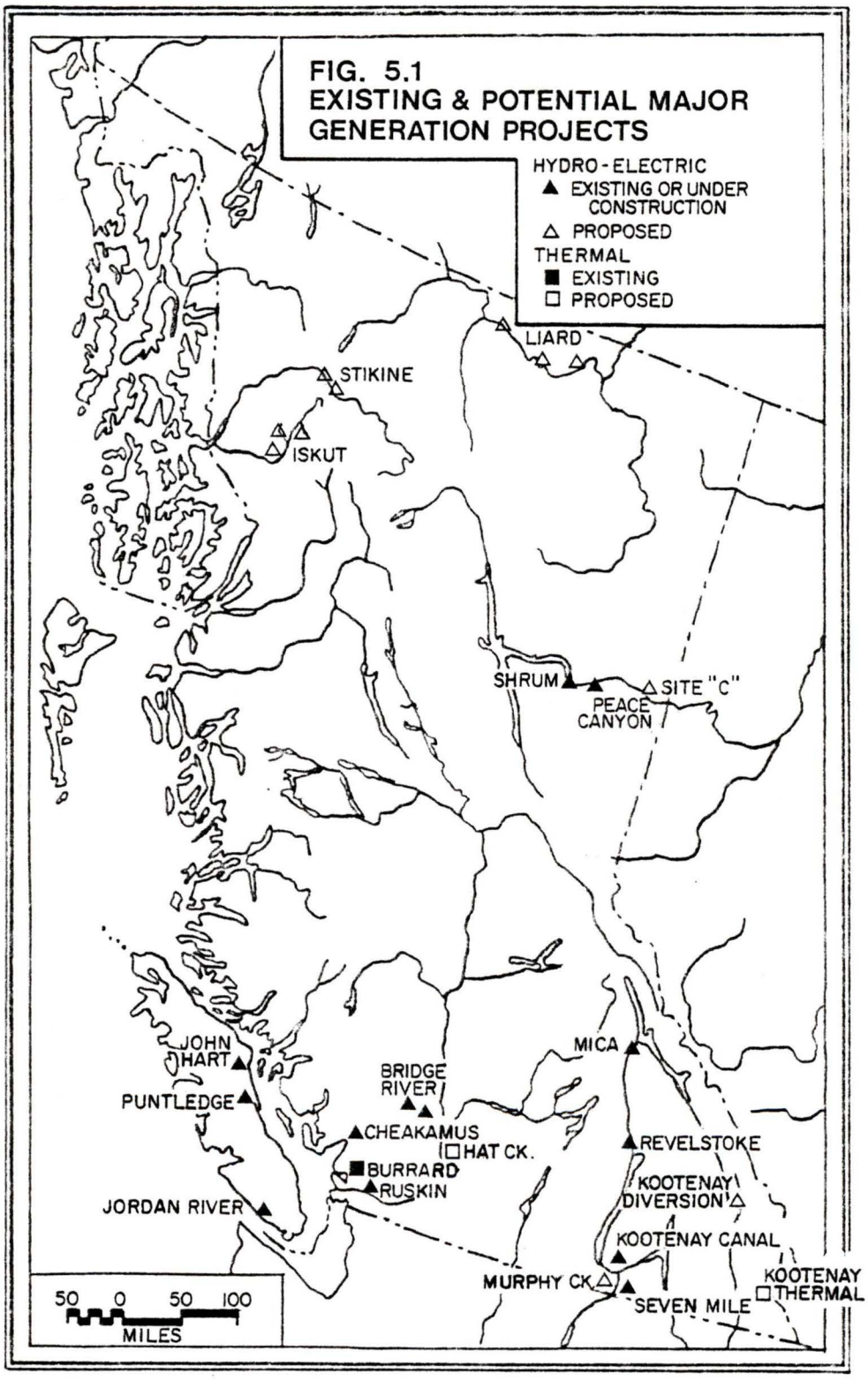
FIG. 5.1
EXISTING & POTENTIAL MAJOR
GENERATION PROJECTS
HYDRO-ELECTRIC
EXISTING OR UNDER CONSTRUCTION
PROPOSED
THERMAL
EXISTING
PROPOSED
LIARD
STIKINE
ISKUT
SHRUM
SITE "C"
PEACE CANYON
JOHN HART
PUNTLEDGE
BRIDGE RIVER
CHEAKAMUS
HAT CK.
BURRARD
RUSKIN
JORDAN RIVER
MICA
REVELSTOKE
KOOTENAY DIVERSION
KOOTENAY CANAL
MURPHY CK
SEVEN MILE
KOOTENAY THERMAL
50 0 50 100
MILES

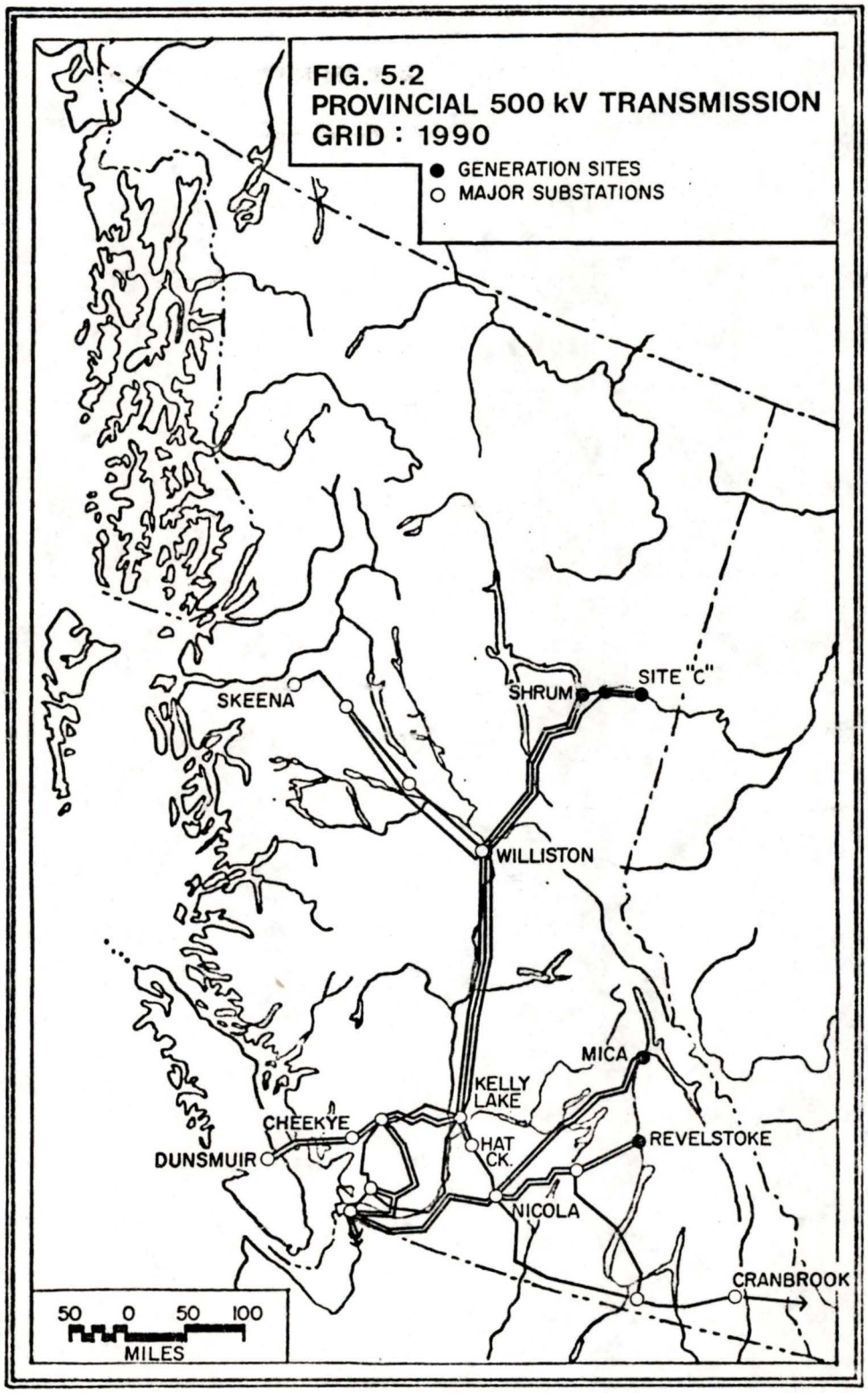
FIG. 5.2
PROVINCIAL 500 kV TRANSMISSION
GRID : 1990
● GENERATION SITES
○ MAJOR SUBSTATIONS
SKEENA
SHRUM
SITE "C"
WILLISTON
MICA
KELLY
LAKE
CHEEKYE
DUNSMUIR
HAT
CK.
REVELSTOKE
NICOLA
CRANBROOK
50 0 50 100
MILES

Figure 5.2 furnishes a map of the provincial 500 kV transmission grid as envisioned by B.C. Hydro for 1990.

Public concern over B.C. Hydro's activities began over a decade ago with the construction of the Columbia River Treaty dams and the subsequent flooding of the Arrow Lakes (Wilson, 1973). With the later flooding of the valleys of the Peace, Parsnip and Finlay Rivers to form the Williston Reservoir and Hydro's more recent proposals and projects including the Revelstoke dam, Site C dam on the Peace River and the Cheekye-Dunsmuir 500 kV transmission line public concern and opposition has mounted. Future projects include a coal thermal generating plant at Hat Creek, a diversion project on the Kootenay River and further hydro-electric generation at Murphy Creek and on the Stikine-Iskut and Liard Rivers.

Public debate has centred on the following concerns: the differences in load forecasting between the B.C. Energy Commission and B.C. Hydro; B.C. Hydro's rate structure; B.C. Hydro's large provincial debt; B.C. Hydro's lack of accountability and credibility; the adverse environmental and social impacts of large scale centralized energy systems and the lack of public participation in energy policy planning and decision making. These concerns call into question the adequacy of existing planning and decision making processes.

B.C. Hydro's planning process for transmission lines.

Background: B.C. Hydro's planning process for transmission lines has evolved in the past decade from a strictly internal planning and review process to what is now termed "open planning."* Open planning implies a broadened mandate and an open attitude toward government and the public. It was first adopted in 1974 and remains today as the broad policy concept.

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*Open planning as defined by Hydro involves other levels of government such as the provincial resource and social service departments, regional districts, municipalities and public interest groups and citizens.

Also in 1974 B.C. Hydro began to develop a more orderly planning process for transmission lines to deal with both the technical constraints imposed by the engineering requirements for transmission line location and the more general environmental and social concerns. This resulted in a formalized Phase I and Phase II planning process complete with terms of reference for environmental consultants (Batho et al., 1979).

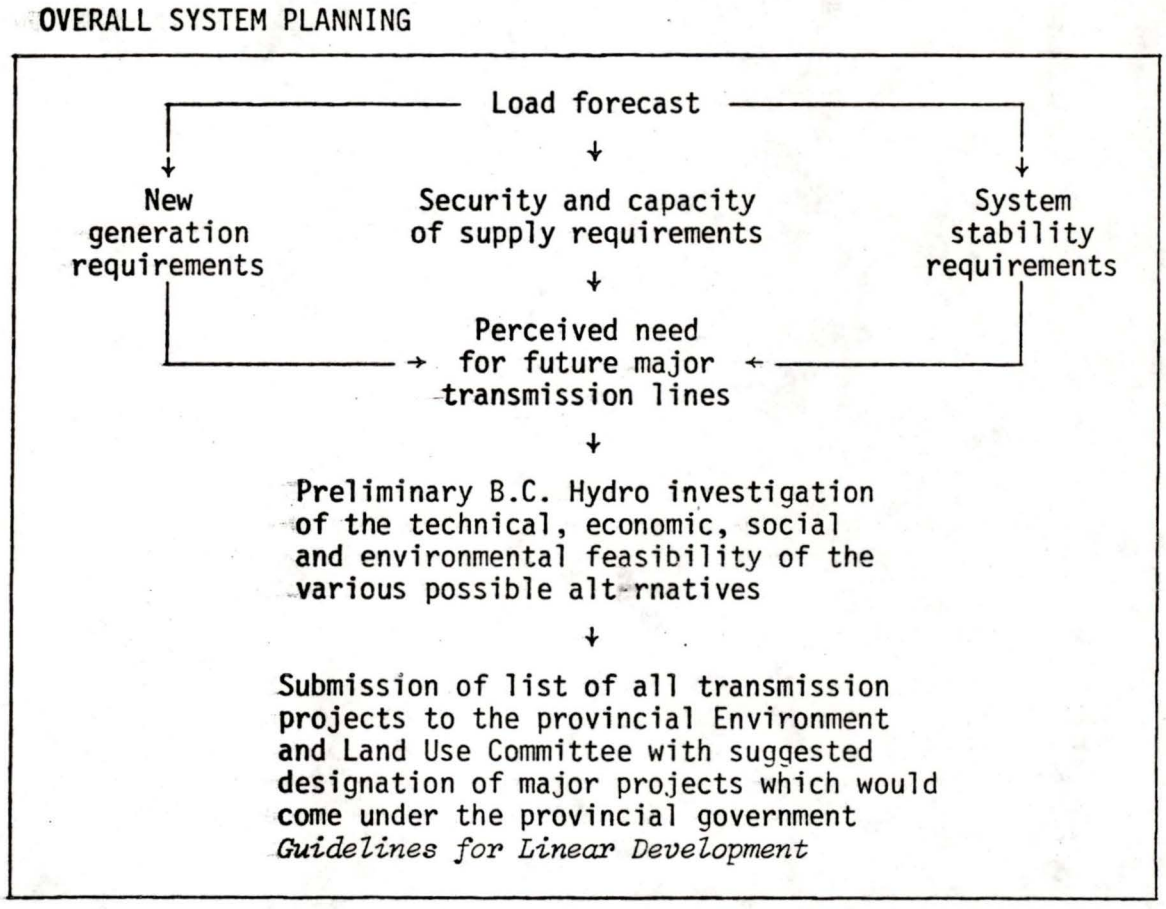
In March 1977 the Environment and Land Use Committee of the provincial cabinet issued the *Guidelines for Linear Development*. These Guidelines outline a comprehensive planning process designed to encourage the careful management of land use and the assessment of environmental and social impacts associated with certain types of linear developments such as major railways, pipelines, transmission lines, highways and industrial roads. Certain B.C. Hydro projects such as major transmission lines and pipelines may be subject to the Guidelines and once a project has been designated by ELUC for assessment under this process the administration of the Guidelines is through the Environment and Land Use Committee Secretariat in Victoria.

In summary then, the following three adopted policies set the context for B.C. Hydro's planning process on transmission lines: the broad policy concept of open planning; B.C. Hydro's Phase I and Phase II planning process; and the provincial cabinet's *Guidelines for Linear Development*.

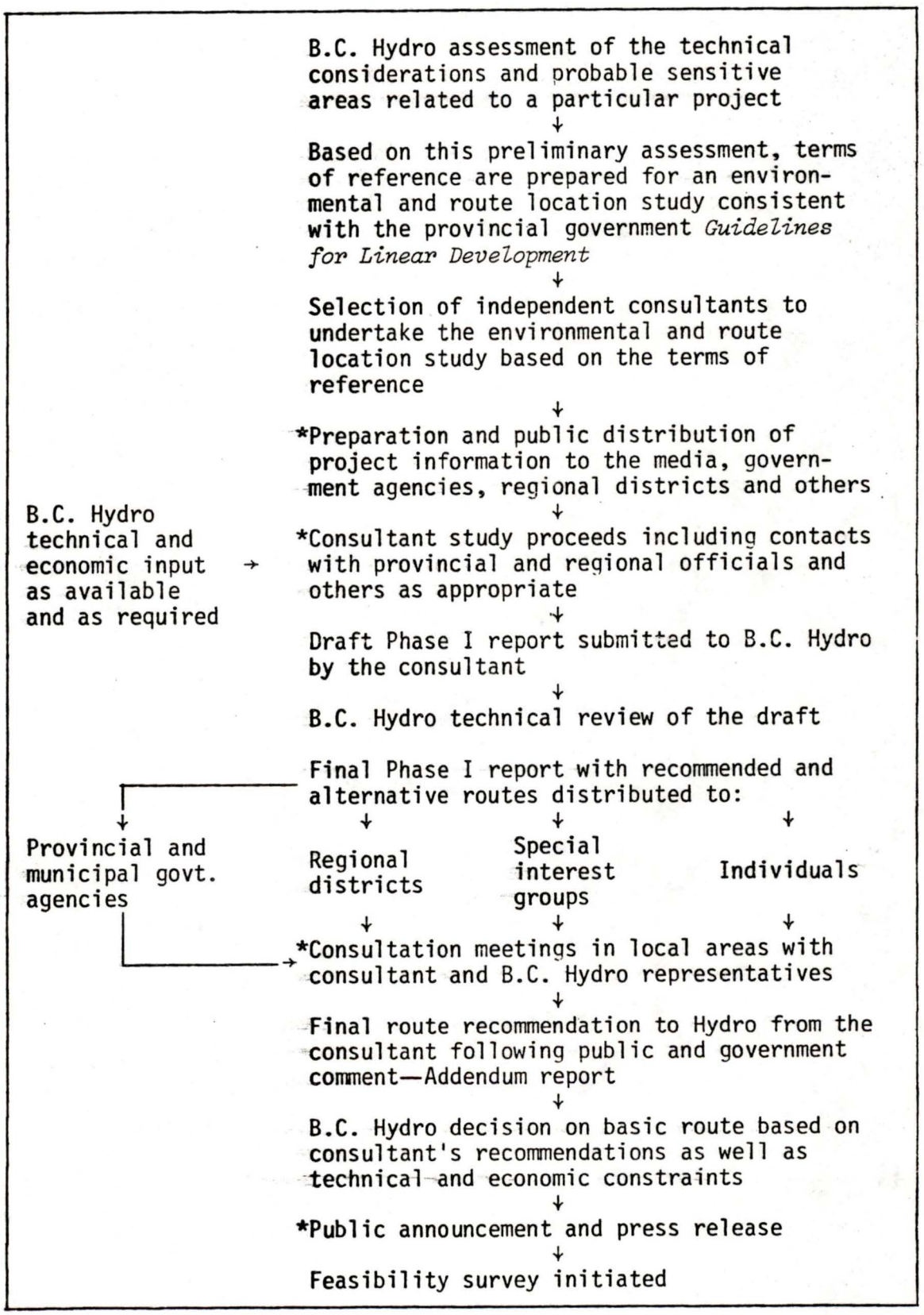
The Planning Process: More specifically, B.C. Hydro's planning process on transmission lines is in two stages—Phase I and Phase II. This process is outlined schematically in Figure 5.3 which presents B.C. Hydro's transmission line planning process for major projects.

As is the case with most electrical utility projects, the planning process for transmission lines begins with a load forecast which leads to a perceived need for new transmission. This is done internally within Hydro. Once a perceived need for future transmission lines is identified, Hydro undertakes a preliminary investigation of the technical, economic, social and environmental feasibility of the various

FIGURE 5.3. B.C. HYDRO'S TRANSMISSION LINE PLANNING PROCESS: MAJOR PROJECTS



PHASE I


B.C. Hydro assessment of the technical considerations and probable sensitive areas related to a particular project
Based on this preliminary assessment, terms of reference are prepared for an environmental and route location study consistent with the provincial government Guidelines for Linear Development
Selection of independent consultants to undertake the environmental and route location study based on the terms of reference
*Preparation and public distribution of project information to the media, government agencies, regional districts and others
B.C. Hydro technical and economic input as available and as required
*Consultant study proceeds including contacts with provincial and regional officials and others as appropriate
Draft Phase I report submitted to B.C. Hydro by the consultant
B.C. Hydro technical review of the draft
Final Phase I report with recommended and alternative routes distributed to:
Provincial and municipal govt. agencies
Regional districts
Special interest groups
Individuals
*Consultation meetings in local areas with consultant and B.C. Hydro representatives
Final route recommendation to Hydro from the consultant following public and government comment—Addendum report
B.C. Hydro decision on basic route based on consultant's recommendations as well as technical and economic constraints
*Public announcement and press release
Feasibility survey initiated

PHASE II

Phase II study proceeds with detailed evaluation of the selected route to provide site-specific guidelines for design, construction and maintenance of the transmission line

↓

*Phase II report published and distributed to the public and the government

↓

Final survey

↓

Clearing

↓

Construction

↓

Operation

*Denotes opportunities for public consultation or information release.

alternatives. Subsequently a list of all transmission line projects is submitted to the Environment and Land Use Committee along with a suggested list of those major projects which should be designated for assessment under the Guidelines.* Once a project is designated the four staged planning process of the Guidelines is initiated (see Figure 5.4) as is Hydro's Phase I and Phase II planning process. In broad terms, Hydro's Phase I and Phase II processes are in sequence with Stages I and II of the Guidelines.

Phase I. Phase I of Hydro's route planning process is a regional overview of all possible route options and their implications both from a technical and environmental perspective. These are then narrowed down to a preferred "corridor" with as many potential variations as possible. The resulting Phase I report (prepared by the environmental consultants and reviewed by Hydro) outlines the rationale for the route preference. It also provides a basic public information document for discussion of the route options with local groups, citizens and government resource agencies before a final route preference is selected by Hydro.

Following discussion of the consultant's report with local and government groups the consultant prepares final recommendations. Hydro's eventual route preference and the public input collected are then published in the form of an Addendum to the Phase I report. Release of this Addendum completes Phase I.

Phase II. Once a basic corridor is decided upon Phase II can begin. Phase II work includes more detailed studies of problems related directly to the routing of the transmission line within the selected corridor. This includes field surveys to determine a specific right-of-way along the chosen corridor as well as a detailed environmental assessment of the selected route. The Phase II report provides environmental guidelines for the eventual design, construction and maintenance of the project.

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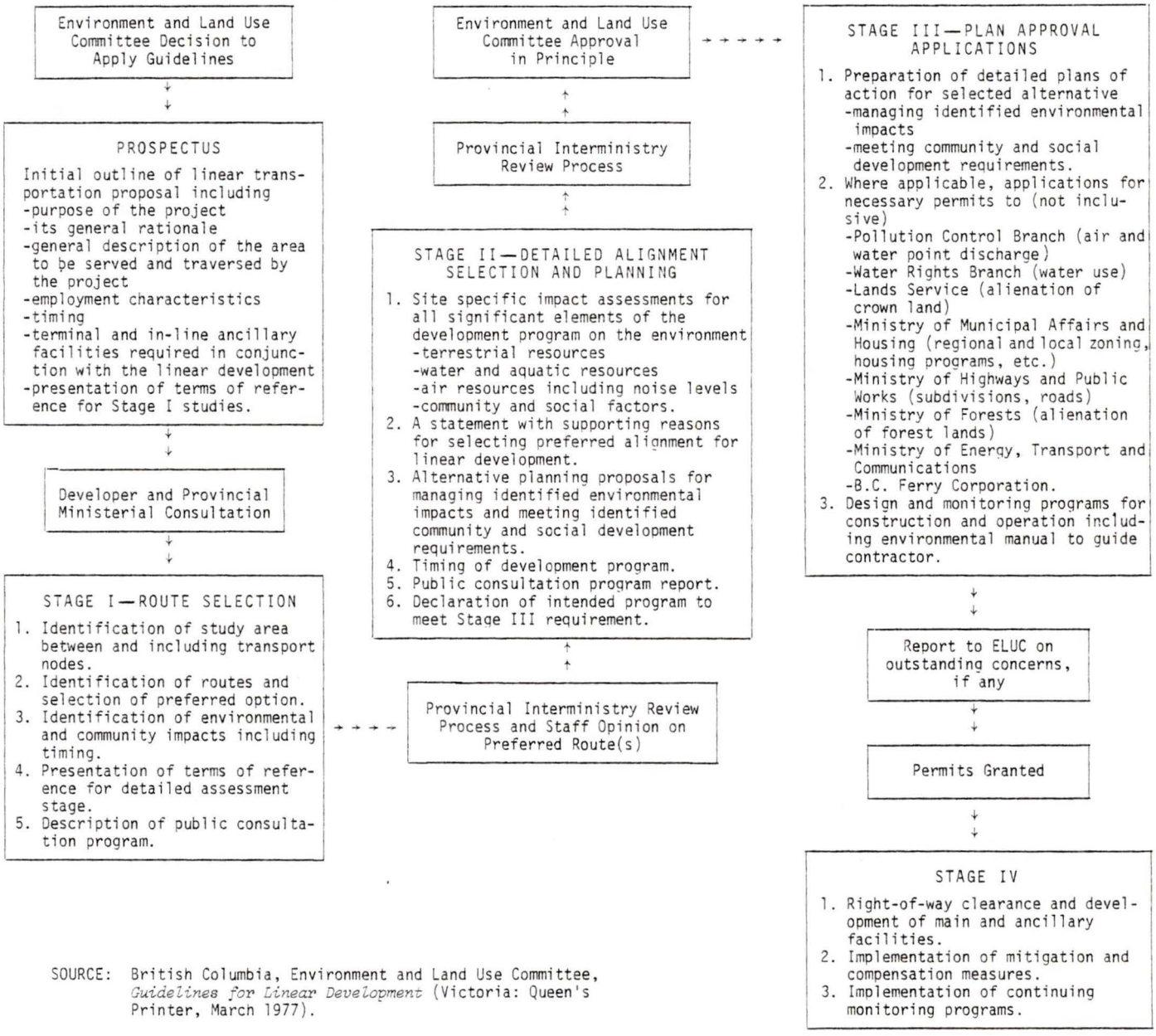
*The Guidelines are applied to large scale projects, generally defined as those which traverse more than one resource management region of B.C., or which cross or affect areas of particular environmental sensitivity or hazard.

FIGURE 5.4: LINEAR DEVELOPMENT ASSESSMENT AND PLANNING REVIEW PROCEDURE



SOURCE: British Columbia, Environment and Land Use Committee, *Guidelines for Linear Development* (Victoria: Queen's Printer, March 1977).

This planning process is consistent with the requirements of the *Guidelines for Linear Development* outlined in Figure 5.4. The integration of B.C. Hydro's planning process and the *Guidelines for Linear Development* is outlined in Figure 5.5 which illustrates the overall transmission line planning process.

Public participation in the planning process. With respect to public participation, the general access points for the public in the planning process are outlined in Figure 5.3 which highlights the Phase I and Phase II planning process, and in Figure 5.5 which indicates the overall transmission line planning process.

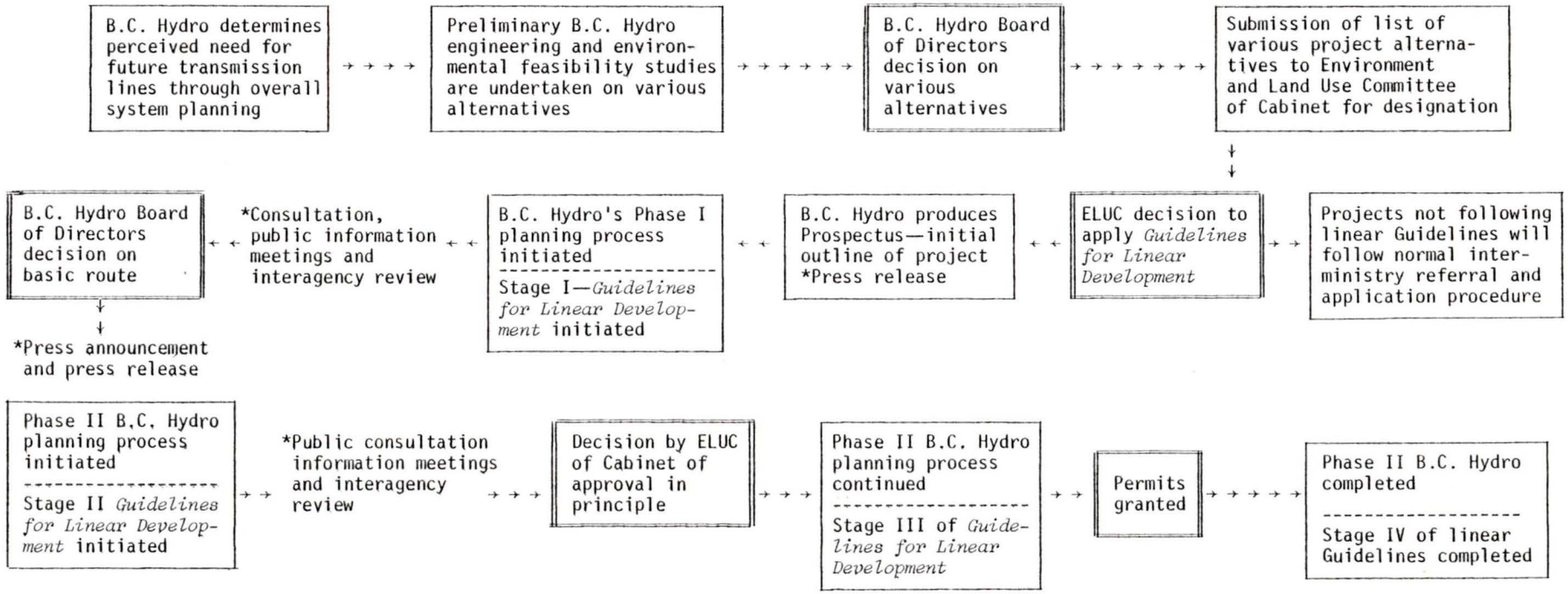
Public participation in Phase I begins with release of introductory information about the project to the media, government agencies, regional districts and interest groups. This normally takes the form of a press release followed by an information bulletin—"Prospectus." Several informal meetings with government and concerned citizens' and interest groups may take place at this point. After the Phase I report is completed and released, discussions with a wide section of the public including local governments, interest groups and in some cases the general public are arranged. These generally take the form of public meetings, open houses or workshops. As a result of these discussions Hydro's final recommendation for a route is published in an Addendum to Phase I incorporating public input.

During Phase II which involves detailed studies along the recommended route to ascertain particular environmental problems, mitigation measures and potential areas of compensation, discussions are held with specific groups and government experts. The Phase II report is then published and distributed to government and the public. Open discussions follow in response to the demand for participation.

It is of interest to note that no discussions are held with the public or government with respect to justification or need for the line. As B.C. Hydro states:

> The question of whether or not a project of this nature is required—and its timing—must be B.C. Hydro's responsibility as the agency accountable for meeting the electrical energy needs of

FIGURE 5.5: OVERALL TRANSMISSION LINE PLANNING PROCESS



NOTE: ___double lines denote decision point and * indicates public consultation or information release.

> the province. However, the question of how a project will be done should involve discussion with those who would be affected by it*

Therefore public input is restricted to project management and design questions and to route location and alignment impacts.

Generally speaking, within B.C. Hydro the Community Relations Division is responsible for the public participation process. Their responsibilities include: public information presentation and release; initiating and responding to public contact; organizing and attending public meetings, open houses, workshops, etc.; information service; and the implementation of the public consultation process.

To summarize, it is evident that B.C. Hydro follows a formalized Phase I and Phase II planning process on transmission lines which is in concert with the provincial government's *Guidelines for Linear Development.* This planning process assesses route location not only from a technical and economic perspective but also from an environmental, regional planning and social perspective. Terms of reference for environmental consultants are established and the consultant's Phase I and Phase II reports are formally reviewed by the provincial government's resource agencies. Opportunities for public participation are restricted at the policy level and there is limited direction for public participation under the Guidelines process. The lack of provision for public participation in such issues as the development of energy policy and specific project justification are particularly evident in the present planning process.

Furthermore there are no formal opportunities for public participation under the *British Columbia Hydro and Power Authority Act* revealing one important institutional barrier to public participation. The restrictive scope of the public participation process developed by B.C. Hydro also ensures that B.C. Hydro does not have to address the broader issues of project justification or energy forecasting pricing

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*Charles Nash, Vice President of Corporate Affairs, B.C. Hydro (Jan. 1978), letter to *The Peninsula Times*, Sechelt, B.C. (reference is to Cheekye-Dunsmuir).

at the public meetings. This indicates a need to either widen the scope of the public meetings or establish alternative forums for the discussion of such concerns. It also represents a possible institutional barrier to effective participation and discussion on the broader aspects of energy planning and decision making.

It is not unreasonable to conclude from this examination that currently it is exceedingly difficult for the public to participate in decisions about energy policy and decision making leading to increased antagonism between B.C. Hydro and the public. With respect to B.C. Hydro's electrical generation projects many of the same institutional barriers exist. Even though public hearings are held under the *Water Act* (1960) these are not an effective forum for the discussion of the broader aspects of energy planning and decision making.*

Environment and Land Use Committee and its Secretariat. The Environment and Land Use Committee of cabinet was established in 1971 under the *Environment and Land Use Act*. The committee is established under section 2 of the Act and consists of provincial cabinet ministers from the various resource ministries (Environment; Energy, Mines and Petroleum Resources; Agriculture and Food; Lands, Parks and Housing; Industry and Small Business; Health; Transportation and Highways; and Municipal Affairs). Under the *Environment and Land Use Act* (R.S.B.C. 1979) the duties and powers of the committee are considerable (refer to sections 3 and 4) and the committee essentially has ultimate control over all provincial resource use. The committee is responsible for broad environmental and land use policy, and the Act establishing the committee can override other development and environmental management

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*For each hydroelectric generation project public hearings are held under the *Water Act*. The provincial Comptroller of Water Rights has the authority to hold public hearings on proposed hydroelectric generation projects and can impose a number of terms and conditions on the issuing of a water license, or can even withhold the license. In practice these hearings have however become a formal provincial forum for the articulation of public concerns on hydroelectric projects. There are no comparable provisions for public participation on transmission line proposals.

legislation. Section 6 of the Act states that:

> The Lieutenant-Governor in Council on the recommendation of the committee, may make such orders respecting the environment or land use as he may consider necessary or advisable, and he may make such orders under this Act, notwithstanding any other Act or regulation, and no Minister, department of Government, or agent of the Crown specified in the order shall exercise any power granted under any other Act or regulation except in accordance with the other.

Although potentially the most powerful of all provincial statutes in British Columbia respecting the environment, much of its power appears to rest with the potential for application rather than precedent setting applications in the past.

With respect to public participation section 4(a) of the Act states that the committee may hold a public inquiry or hearing into any matter within its jurisdiction. Although the opportunity for public involvement exists in legislation it is however discretionary on behalf of the committee.

In 1973 the Environment and Land Use Committee Secretariat was established to aid the committee in its role of co-ordinating major regional development decisions on an inter-ministerial basis and to assist and advise on major land use, regional development and resource management decisions. The secretariat was viewed as the independent agency with technical expertise on resource issues, to assist the conflict resolution process through both formal and informal channels of communication.

In the energy field the contributions of the secretariat included drawing up the *Guidelines for Coal Development* (1976), the *Guidelines for Linear Development* (1977), and the *Guidelines for Benefit-Cost Analysis* (1977). The Guidelines for coal and linear development effectively initiated environmental impact assessment procedures on energy developments in the province and provided a means of co-ordinating government review on such projects.

The linear development assessment and planning review procedure is outlined in Figure 5.4 which describes the four-stage planning process leading to the granting of applicable permits and project

authorization.

With respect to public participation the Guidelines offer little direction for the design, initiation, implementation or monitoring of the public involvement process for the developer. Stage I—Route Selection calls for a description of the public consultation process and Stage II—Detailed Alignment Selection and Planning calls for the public consultation report. In more general terms there is a section on public disclosure in the introduction to the Guidelines which states that:

> Developers of proposed projects subject to these guidelines will be expected to disclose their plans to the public and seek out public response to their projects at initial and ongoing stages in the assessment/planning process and report public concerns to the Environment and Land Use Committee. Furthermore, under section 4(a) of the *Environment and Land Use Act*, the committee may at its discretion hold public hearings for the project at which developers will be expected to present and defend their plans. Hearings of this type would be held prior to the granting of approvals under various provincial statutes where such approvals are required. (*Guidelines for Linear Development*, 1977)

Additionally the spirit of the Guidelines as conveyed in the text states that developers should be prepared to initiate their public consultation process with local government authorities as well as with local interest groups. However with no further directives, the nature of the public participation program or process is left entirely to the developer. The secretariat is not involved in the design, conduct or evaluation of the public consultation process although secretariat staff have attended particularly controversial public meetings.

Therefore a situation has arisen where opportunities for public participation on major transmission line projects are basically confined to B.C. Hydro's project planning meetings. No independent forum exists where the public can debate the broader aspects of energy policy or project justification in particular for major projects. Public input is restricted to project management and design issues, route location and alignment impacts. Even though the opportunity exists for holding a public inquiry or meeting under the *Environment and Land Use Act*, this has not been utilized in energy planning in the past.

In September 1980 the Environment and Land Use Committee Secretariat was dismantled. Its abolition was strongly attacked by environmental and farm groups as well as the New Democratic Party.* Concern was expressed about the destruction of a philosophy of integrated resource management and the concept of an independent advisory team of professionals providing cabinet with technical information on sensitive environmental issues. The duties and staff of the secretariat have been absorbed by five separate provincial government ministries. With respect to energy planning the Ministry of Energy, Mines and Petroleum Resources will assume the majority of the work relating to the review of major energy projects although the Ministry of the Environment has responsibility for the linear Guidelines process.

Ministry of Energy, Mines and Petroleum Resources. The provincial Ministry of Energy, Mines and Petroleum Resources was created in 1978 as a by-product of a new rationalization of ministerial responsibilities under one roof. Previously there had been a Ministry of Energy, Transportation and Communications and a Ministry of Mines and Petroleum Resources. The present ministry is the principal agency responsible for the provincial government's energy program and the focal point for energy policy initiatives (Ministry of Energy, Mines and Petroleum Resources, 1980(b)).

It is fair to say that in the past decisions on electrical energy were made predominantly by B.C. Hydro, the provincial cabinet and the premier (Robin, 1973). However with the announcement of an *Energy Policy Statement for British Columbia* in February 1980, the passage of the *Utilities Commission Act* in August 1980 and the abolition of the ELUC Secretariat in September 1980, the institutional framework for energy planning and decision making has changed substantially. Indications are that the Ministry of Energy, Mines and Petroleum Resources will occupy a key role in both designing and implementing the

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*Refer to "ELUCS Death Raises Uproar," *Times-Colonist*, September 19, 1980, p. 1.

new energy review procedures. As of July 1979 the responsibility for preparing energy forecasts was formally transferred to the ministry, as have been the other non-regulatory functions of the British Columbia Energy Commission.

With respect to opportunities for public involvement, although public hearings may be conducted on major energy projects under the *Utilities Commission Act* (1980, Part 1 (7)), the public has not been involved in the development of the new energy policy or the review procedures. It is also uncertain at this point how extensive the scope of the new public hearings will be.

The British Columbia Energy Commission. The British Columbia Energy Commission was established in 1973 with the passage of the *Energy Act* and replaced the former British Columbia Energy Board. Its purpose was to provide British Columbia with a full time energy board to determine the province's future energy needs and the extent of existing resources. In practice however the British Columbia Energy Commission was mainly involved in the regulation of the petroleum industry and had very little involvement in the electrical energy sector.

The responsibilities of the B.C. Energy Commission as outlined in the *Energy Act* (R.S.B.C. 1979) included: advising the provincial government on energy resource management issues, regulating energy utilities (under section 53 of the *British Columbia Hydro and Power Authority Act* B.C. Hydro is specifically exempted from regulation under the *Energy Act*) and regulating the oil and gas industries. In all of these functions the commission was able to hold public hearings, although it did not exercise this opportunity to any great extent.

With respect to electrical energy planning and decision making the only key function of the commission was its provision of load forecasts. Significantly, these forecasts turned out to be much lower than those of B.C. Hydro and caused considerable debate about future electrical energy requirements.* Shortly after the decision on the

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*Refer to M. Shaffer, *A Review of the Economic Justification for the Cheekye-Dunsmuir 500 kV Transmission Line,* ELUC Secretariat, Ministry of the Environment, Victoria, B.C., 1979.

Revelstoke dam, it was announced that the commission would hold a series of public hearings on energy and there was even talk of a royal commission (Kenyon, 1977). Although the commission could have been an effective forum for the discussion of the broader aspects of energy policy, it was clearly not empowered or envisioned by the government to have such a role. The hearings or royal commission never were established.

The British Columbia Energy Commission was gradually phased out of existence with the recent restructuring of the energy review procedures. It was formally replaced by the Public Utilities Commission in 1980.

CONCLUSIONS

The above review of the institutional framework of decision making on electrical energy in British Columbia describes a fragmented and changing process. In the past the key decision makers on electrical energy were B.C. Hydro and the provincial cabinet, with some review by government agencies, notably the Environment and Land Use Committee Secretariat. The recent abolition of the secretariat and the B.C. Energy Commission and the establishment of a Utilities Commission and a new energy review process under the *Utilities Commission Act* (1980) have changed the ground rules for decision making on energy planning in British Columbia.

The major institutional barriers to effective public participation in the transmission line planning process to date are:

(1) No formal opportunities exist for public participation under the *British Columbia Hydro and Power Authority Act* (1964); informal opportunities for participation under B.C. Hydro's project planning process are limited to project-specific concerns and do not include the broader aspects of energy policy and project justification.

(2) Opportunities for public participation under the *Environment and Land Use Act* (1971)are discretionary on the part of Environment

TABLE 5.1: THE INSTITUTIONAL BARRIERS/OPPORTUNITIES FOR PUBLIC PARTICIPATION IN ELECTRICAL ENERGY PLANNING IN BRITISH COLUMBIA

Organizations	Laws*	Policies	Administrative Procedures
British Columbia Hydro and Power Authority	*British Columbia Hydro and Power Authority Act* (1962, 1964) No formal opportunities for participation exist under this statute.	Open planning was the broad policy concept initiated in 1974. In practice, it is restrictive in its definition of public participation.	B.C. Hydro's public participation process occurs during Phases I and II of the planning process. The public participation process is restrictive in scope, there is no public input on project justification, and minimal public influence on project management decisions.
Environment and Land Use Committee	*Environment and Land Use Act* (1971) Provisions for public hearings under this Act are discretionary.	Public hearings are discretionary. In practice, they have not been exercised on major energy projects to date.	The Environment and Land Use Committee of cabinet's decision making is open to public review through the electoral process.
Environment and Land Use Committee Secretariat	*Environment and Land Use Act* (1971) Public hearings or inquiry are discretionary.	Public participation is left to the developer or proponent of the project.	*Guidelines for Linear Development* (1977) Inter-ministerial review of major projects is generally not open to the public. Public participation is addressed in the Guidelines but no standards or procedures are established—left to the developer.
Ministry of the Environment	*Water Act* (1960) Public hearings are required for water license applications on major hydroelectric projects.	A number of restrictions can be placed on the granting of a water license or a Comptroller can withhold it. The scope of hearings has recently widened, but is still restrictive.	Public hearings are held under the *Water Act* for each hydroelectric generation project to obtain a water license. Hearings are narrow in scope but have broadened recently.
British Columbia Energy Commission	*Energy Act* (1973) Public hearings are discretionary.	May hold public hearings under the *Energy Act* but these opportunities have not been exercised with respect to electrical energy.	Commission is responsible for regulation of energy industry, however B.C. Hydro was exempt under section 53 of *B.C. Hydro Act*.
Ministry of Energy, Mines and Petroleum Resources	*Ministry of Energy, Mines and Petroluem Resources Act* (1973, 1977) No provisions for public hearings are established.	B.C. Energy Policy Statement of 1980 established a new era of public review. In the past, electrical energy planning was the sole responsibility of B.C. Hydro.	The new energy review process is not yet implemented. Public hearing provisions exist under the new *Utilities Commission Act* (1980). The scope of hearings is as yet undetermined.

*The statutes of British Columbia were revised in 1979 and are noted in the bibliography as Revised Statutes of British Columbia (R.S.B.C. 1979).

and Land Use Committee cabinet members and have not been exercised during the planning of past energy projects.

(3) The *Guidelines for Linear Development* (1977) established by the provincial government's Environment and Land Use Committee do not establish or guarantee standards or procedures by which public participation should be conducted.

(4) Public participation in transmission line planning is essentially left to the proponent of specific projects to initiate, design, conduct and evaluate; there are no provincial guidelines for public participation on major energy projects. This has led to an ad hoc, restrictive and fragmented response to participation on specific projects by developers.

(5) There are no independent forums or avenues for the review of electrical energy planning procedures in British Columbia. This has restricted public participation to B.C. Hydro's planning process which is clearly not the appropriate forum for determining social choice.

Table 5.1 summarizes the major opportunities and barriers to public participation in electrical energy planning in British Columbia.

Although a review of the decision making framework can identify potential institutional barriers to public participation, it is important to examine an actual case study to reveal how the planning and decision making processes actually work. The following chapter reviews the case study of the public participation process on B.C. Hydro's Cheekye-Dunsmuir 500 kV transmission line to link Vancouver Island with the mainland of British Columbia. The results of the interviews conducted with select members of the public and B.C. Hydro staff contribute important information to understanding institutional barriers to public participation in energy planning.

CHAPTER 6

THE CASE STUDY OF THE CHEEKYE-DUNSMUIR 500 kV TRANSMISSION LINE

> Our gut feeling of revulsion at the prospect of our home being devastated is only the tip of the iceberg. The economic and environmental impact of this project affects everyone in the province. We are seeking to mobilize members of all communities along the proposed route and inform the general public about the consequences of more power/more consumption/more flooded valleys/more industry/more pollution/lower quality of life. Let's make B.C. Hydro responsible to the people who live with it.
>
> Lasqueti Island Steering Committee (1978)

INTRODUCTION

During the early 1970s, the British Columbia Hydro and Power Authority began planning for the projected increased electrical energy requirements of Vancouver Island. A number of alternatives were considered but the selected proposal was to construct a twin 500 kilovolt transmission line linking Cheekye substation near Squamish on the mainland with Dunsmuir substation near Qualicum on Vancouver Island. The scheduled in-service date for the project is 1983 and the latest cost estimate is 800 million dollars.

The Cheekye-Dunsmuir project has aroused a considerable amount of public interest and controversy. Opposition has been strongest in those areas thought to be directly affected by the line, particularly Texada and Lasqueti islands and the Sechelt Peninsula. Public debate has centred on the following key issues: the justification for the construction of the Cheekye-Dunsmuir project; the adverse environmental and social impacts of large scale energy projects; the use of herbicides for

vegetation management; and the role of the public in energy planning and decision making.

This power line controversy was selected as a case study since the problems encountered with the Cheekye-Dunsmuir project are in many ways a microcosm of some of the issues related to energy planning throughout British Columbia. In particular, the difficulties of establishing effective public participation on large scale centralized energy projects are of concern in developing more participatory energy planning procedures. Additionally the quality of debate generated by public interest groups concerned with the Cheekye-Dunsmuir line indicates that public concerns run deeper than the problem of routing just one power line. They encompass such issues as institutional accountability and credibility, a more equitable distribution of economic and social costs and benefits and environmental quality.

To date the stormy history of the Cheekye-Dunsmuir project includes numerous written and oral requests for a public inquiry into the justification for the project and B.C. Hydro policies in general, the call for a one year moratorium on all activities related to the project, and civil disobedience actions on Texada Island that have led to a court case between B.C. Hydro and the various Texada Islanders involved. The requests for a public inquiry and moratorium on the project have been rejected at the political level. The court case was recently settled and the power line protesters were fined and given suspended jail sentences.* The planning of the project is at the end of Stage II of the *Guidelines for Linear Development*, and construction activities have begun on the final right-of-way alignment, attached as Figure 6.1. The final right-of-way chosen was the result of the assessment of various route options considered in the planning process.

This chapter traces the evolution of the case study of the controversy surrounding the Cheekye-Dunsmuir project by focussing on the

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*Refer to Y. Vickers, "Powerline Protester Fined $500: Chief Justice Suspends Terms in Contempt Case," *Vancouver Sun*, March 19, 1981, p. A13.

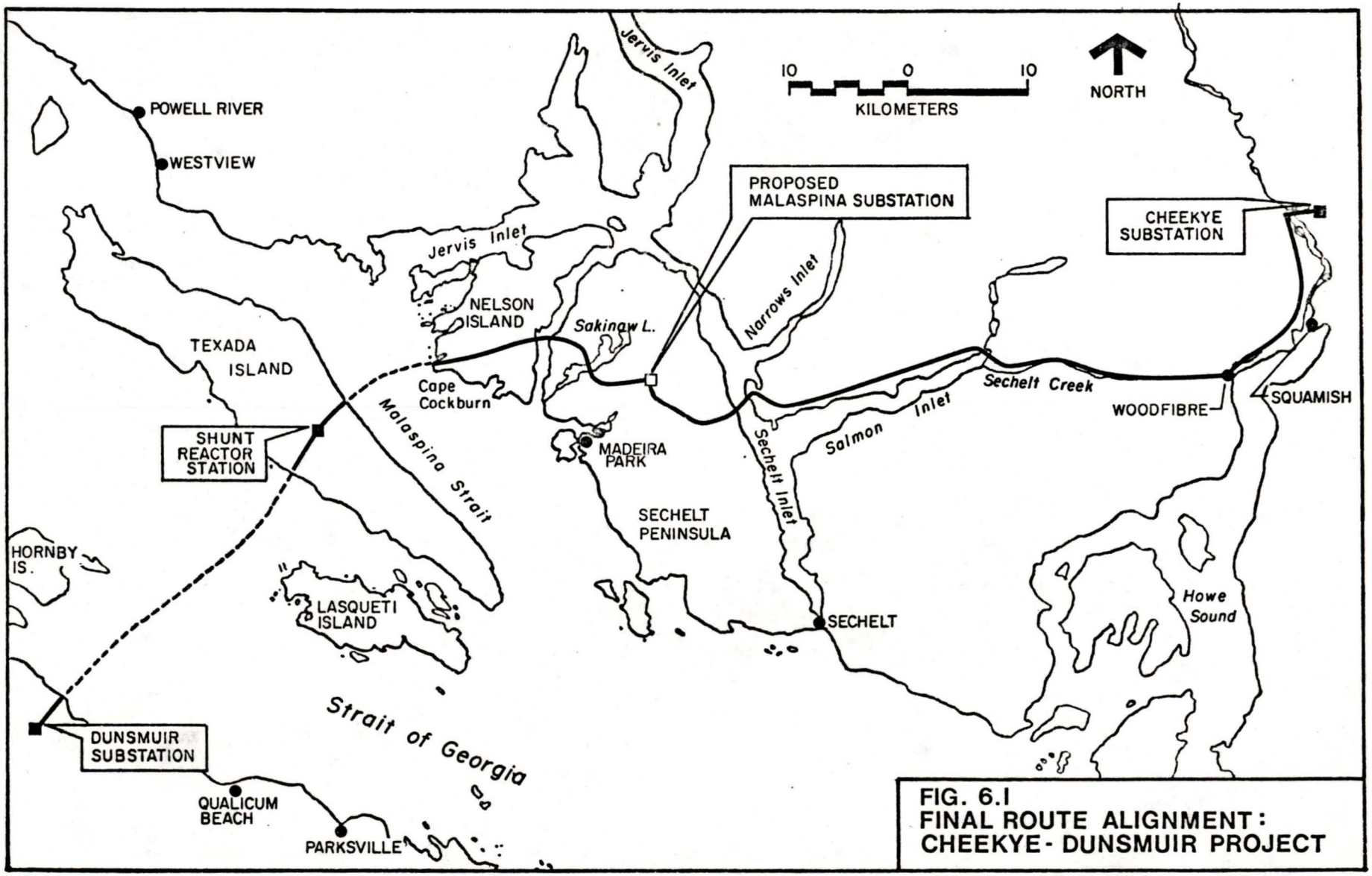

FIG. 6.1
FINAL ROUTE ALIGNMENT:
CHEEKYE - DUNSMUIR PROJECT

following factors: the existing power supply on Vancouver Island, the alternative sources of power for Vancouver Island, and the viewpoints of a number of members of the public and B.C. Hydro who were interviewed on the public participation process on the Cheekye-Dunsmuir project.

THE EXISTING POWER SUPPLY ON VANCOUVER ISLAND

Electrical power loads on Vancouver Island have grown twofold in the past ten years and almost sixfold in the last twenty years (B.C. Hydro, 1978). To meet the mounting demands a number of major generating stations have been constructed on the island and a high voltage transmission interconnection with the mainland was installed which now delivers about 70 percent of the island's electrical requirements.

Electrical energy production began on Vancouver Island at the beginning of this century with the construction of a number of small hydroelectric and steam-electric generators. The first major hydro development was undertaken on the Jordan River, west of Victoria in 1910. Other early hydroelectric projects included: the Puntledge River generating station near Courtenay; the development of the hydroelectric potential of the Campbell River (including the John Hart, Ladore Falls and Strathcona projects); and the construction of a power plant on the Ash River near Port Alberni.

By the mid-1950s it was evident that Vancouver Island's hydroelectric generation resources would be inadequate to meet future energy demands and in 1956 a high voltage transmission link with the mainland was installed. This link connected Arnott substation near Ladner with Vancouver Island terminal, north of Duncan. It presently supplies about 70 percent of the island's energy demands and has a peak capacity of 1076 Mw as of 1979. There are also two gas turbine generating plants on Vancouver Island to supply power during periods of peak demand or emergency situations. The Georgia plant is located near Chemainus and the Keogh station close to Port Hardy. There are in addition small diesel-electric generators to supply the towns of Tofino, Bamfield and

Alert Bay (B.C. Hydro, 1978; Sewell, 1979).*

Vancouver Island's basic transmission and generation systems are displayed in Figure 6.2. The transmission system consists of three 138 kV circuits which extend from Victoria in the south to Campbell River in the north, except for a section between Nanaimo and Qualicum Bay which has only two 138 kV circuits. The existing system was supplemented in 1979 by two parallel 500 kV lines running from the Victoria area to the Qualicum area, with 230 kV links to Vancouver Island terminal near Duncan. The Vancouver Island terminal is the focal point for the transmission system, receiving power from the cables from the mainland and feeding electricity both north and south into the transmission system.

Faced with the problem of growing energy demands on Vancouver Island, the high costs of fuel and few remaining opportunities for hydroelectric generation on the island, the future power supply alternatives for Vancouver island are however more difficult to determine.

ALTERNATIVE SOURCES OF FUTURE ELECTRIC POWER SUPPLY FOR VANCOUVER ISLAND

Early in the 1970s, B.C. Hydro determined through its electrical forecasting system that to supply the growing electrical requirements of Vancouver Island, additional sources of power would be required by 1983 (B.C. Hydro, 1978). Load growth on the island is now forecast to be about 5.6 percent annually and the existing power supply to the island will be committed by 1982-83.

Three basic approaches were considered by B.C. Hydro to increase the supply of electrical energy to Vancouver Island. The first was to install local generation and defer construction of a high capacity

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*In addition to the undertakings of B.C. Hydro (and its predecessors), the forest, fishing and mining industries have developed some of their own electric power. The generating capacity of the latter however is extremely small compared to that of the other B.C. Hydro projects.

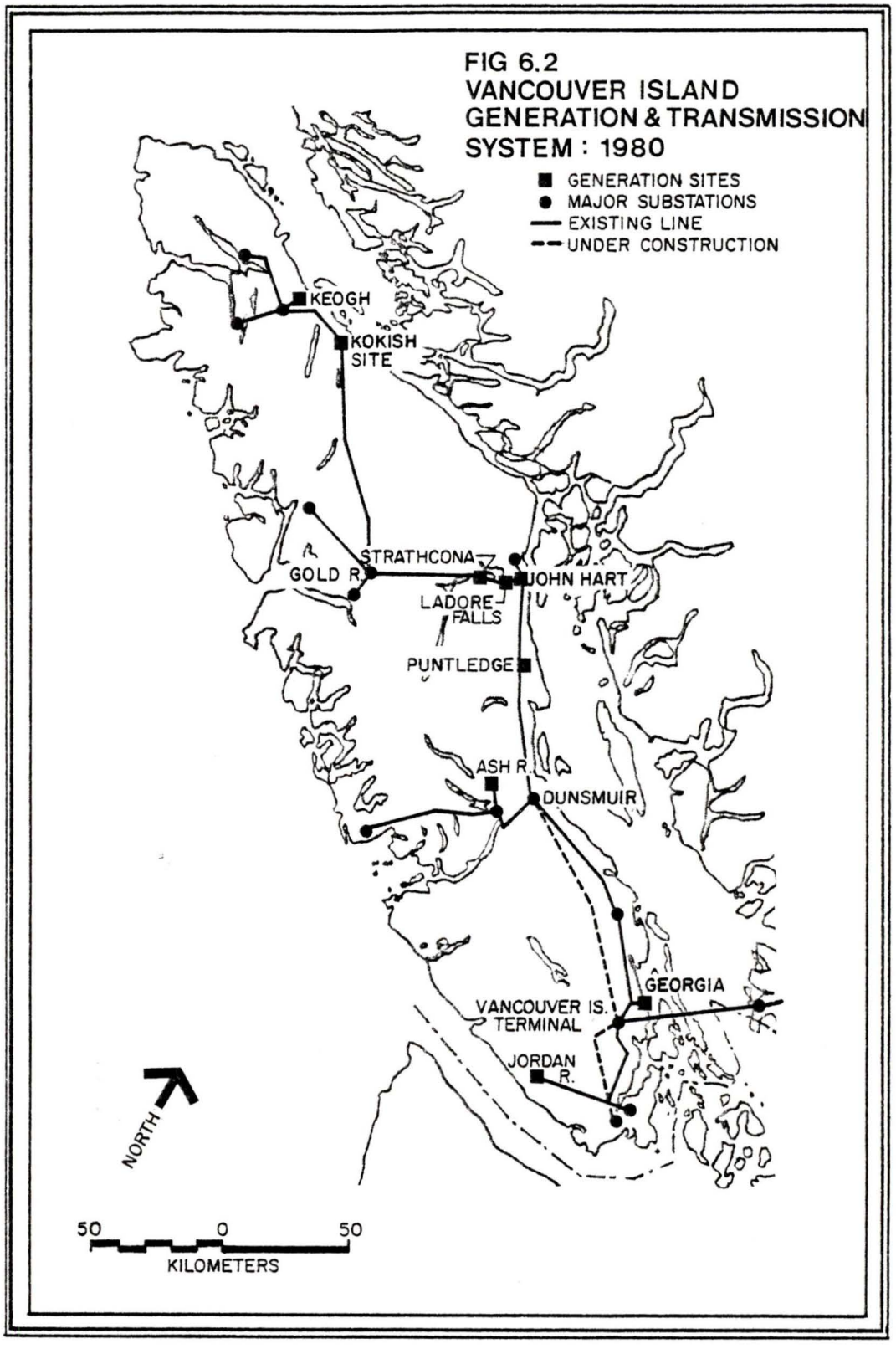
FIG 6.2
VANCOUVER ISLAND
GENERATION & TRANSMISSION
SYSTEM : 1980
GENERATION SITES
MAJOR SUBSTATIONS
EXISTING LINE
UNDER CONSTRUCTION
KEOGH
KOKISH
SITE
STRATHCONA
GOLD R.
JOHN HART
LADORE
FALLS
PUNTLEDGE
ASH R.
DUNSMUIR
GEORGIA
VANCOUVER IS.
TERMINAL
JORDAN
R.
NORTH
50
0
50
KILOMETERS

mainland-island generation transmission system until the mid-1990s or even later. The second approach was to build suitable transmission from the mainland and defer local generation until the 1990s. The third was to reduce total power demand through various load reduction alternatives.

Under the first option, a number of alternatives were considered including: increasing hydroelectric generation on the island, nuclear power development and the construction of conventional thermal power stations. All of these options were rejected for a variety of reasons including: anticipated adverse environmental impacts, long lead time required, social acceptability and economic feasibility. The remaining undeveloped hydro potential on the island was considered by B.C. Hydro to be limited to a few small projects which would add little energy to the system and have significant environmental impacts. The oil-fired gas turbines were considered too expensive and the coal-fired thermal plant could only be completed by 1985 and would only serve load growth until 1991. A nuclear project could not be built before 1991 due to the long lead time and was rejected on grounds of social unacceptability.

Under the second option, several alternative transmission systems were examined. These included: a route from Kelly Lake via the Homathko Canyon to Bute Inlet, routes paralleling existing cables from Arnott substation to Vancouver Island, and the various route options for the Cheekye-Dunsmuir project. The Bute Inlet route was rejected because of terrain unsuitability and expense, and the paralleling of existing routes was dropped due to cable security and concentration concerns in a narrow corridor. The Cheekye-Dunsmuir 500 kV transmission line option was chosen as the most economic feasible source of future power supply.

Under the third option of reducing total electrical power demand through load reduction measures such as increased conservation, an expansion of self-generation by industry and the supply of natural gas to Vancouver Island, it was concluded that these measures would have little impact on reducing electrical power loads (B.C. Hydro, 1978).*

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*For a more detailed evaluation of all three options see: B.C. Hydro, *Vancouver Island Power Supply: 1982-1966*, June 1978.

Not everyone agreed with B.C. Hydro's decision that the Cheekye-Dunsmuir 500 kV transmission line route option was the most economic or the best source of future power supply. Neither the public nor the provincial government had been directly involved in the decision and concern was expressed about the credibility of B.C. Hydro's forecasts and planning system. The credibility gap widened when an independent consultant (see *Shaffer Report*, 1979) retained by the provincial government was critical of B.C. Hydro's justification for the Cheekye-Dunsmuir project. Additional criticisms were levied against B.C. Hydro's rate structure, its large provincial debt, and its growth forecasts (Kennedy, 1978, 1980). This eventually led to public demands for a public inquiry into the project and B.C. Hydro's energy planning and decision making process in general.

PUBLIC PARTICIPATION IN THE CHEEKYE-DUNSMUIR PROJECT

Background

Public concern over the planning of the Cheekye-Dunsmuir project began in 1976 when B.C. Hydro first announced its plans through a press release. It was not however until the following year that the public* became sufficiently organized and informed to actively question B.C. Hydro's plans on the Cheekye-Dunsmuir project.

A number of interest groups were formed and expressed concern about the Cheekye-Dunsmuir project, notably the Lasqueti Island Steering Committee, the Texada Island Environmental Association, the Sakinaw Lake Property Owners and Lease Holders Association, the Pender Harbour District Ratepayers Association, the Sunshine Coast Regional District, the Powell River Regional Board, the British Columbia Energy Coalition

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*The term "public" is subject to many different interpretations. In this case it refers to those individuals or groups who participated in or expressed concern about the Cheekye-Dunsmuir project. It is not meant to represent the general public.

and the Mid-Island Coalition for Energy. Of these groups the Lasqueti Island Steering Committee showed remarkable organizational skills and expertise in dealing with B.C. Hydro.

Originally, it seemed likely that Lasqueti Island would be used as a stepping stone for the transmission line, but there was vehement opposition from the island residents. This opposition can be partially explained by the uniqueness of Lasqueti, the last of the Gulf Islands to elude significant development of any kind. There is no hydro service or car ferry to the island. Of the approximately 300 permanent residents, most have chosen Lasqueti for its unique alternative life style possibilities. The presence of a 500 kV transmission line would be symbolic of the hard, large scale aspects of modern technological society that the islanders are philosophically opposed to. A reading of the transcripts of the public meeting held on Lasqueti Island in January 1978 indicates the degree of success the islanders had in confronting B.C. Hydro on some of the inadequacies of the present institutional framework of decision making on electrical energy.

Subsequently it was determined by B.C. Hydro that Lasqueti could be bypassed due to the technical possibility of splicing an underwater 500 kV cable. The Cape Cockburn-Texada Island-Dunsmuir alignment was eventually selected as the final portion of the right-of-way. It is however still unclear whether the decision not to use Lasqueti Island as a stepping stone for the line was a result of the islanders meetings with B.C. Hydro or a technical decision based on either the unsuitability of Lasqueti as a take-off and landing point or the subsequent information that a splice in the submarine cable was technically feasible.

Public participation in the planning of the Cheekye-Dunsmuir project generally took the form of public meetings organized by B.C. Hydro. These meetings were designed by the Community Relations division of Hydro and were initiated during Phase I of the planning process. The most developed role accorded to the public during these meetings was to provide input on the specific route selection and alignment concerns of the project, although there were considerable demands from the public

for participation on the broader aspects of energy policy and planning. The latter policy concerns however were generally not addressed by B.C. Hydro.

The chronology in Table 6.1 highlights the major events that occurred with respect to the public participation process on the Cheekye-Dunsmuir project. It includes announcements of information releases, dates of public meetings, a recording of the major meetings between the provincial government resource agencies and B.C. Hydro, and other events of particular significance. The chronology covers the period from the initial press release on the project in July 1976 until the end of Phase I of the planning process in February 1980.

TABLE 6.1: CHRONOLOGY OF MAJOR PUBLIC PARTICIPATION EVENTS: CHEEKYE-DUNSMUIR PROJECT

29 July 1976	B.C. Hydro news release announces plans to supply the increased power requirements of Vancouver Island through a new submarine cable connection from the mainland which would give the island its first 500 kV (500,000 volt) transmission.
29 July 1976	B.C. Hydro retains Beak Consultants to conduct the Phase I environmental studies.
4 Oct. 1977	Phase I, Volume I, Beak Report sent to the Environment and Land Use Committee Secretariat (ELUCS) for review.
3 Nov. 1977	B.C. Hydro meets with ELUCS and provincial government resource agencies to discuss Beak Report, Phase I, Volume I.
24 Nov. 1977	B.C. Hydro meets with Sunshine Coast Regional District Board.
12 Jan. 1978	Open house public meeting organized by B.C. Hydro in Squamish.
27-28 Jan. 1978	Public meeting on Lasqueti Island organized by the Lasqueti Island Steering Committee, B.C. Hydro officials and provincial government officials attend. Strong opposition expressed towards project.

—table continues—

—table continues—

8 Feb. 1978	B.C. Hydro meets with West Lake Property Owners Association.
15 Feb. 1978	B.C. Hydro meets with Green Bay Property Owners.
23 Feb. 1978	B.C. Hydro meets with the Sunshine Coast Regional District in Sechelt. SCRD indicates a desire for public hearing to justify the project and expresses official opposition to the Cheekye-Dunsmuir proposal.
3 Mar. 1978	B.C. Hydro meets with Sakinaw Lake Property Owners and Lease Holders Association.
16 Mar. 1978	Public meeting with Sakinaw Lake Steering Committee in John Oliver High School in Vancouver.
21 Mar. 1978	B.C. Hydro meets with Nanaimo Regional District.
5 Apr. 1978	Public meeting with Madeira Park Property Owners and Tyee Air in Sechelt.
10 Apr. 1978	B.C. Hydro meets with planning staff of Nanaimo Regional District.
13 Apr. 1978	B.C. Hydro advises Sunshine Coast Regional District that surveys will commence between Cheekye and Salmon Inlet.
18 Apr. 1978	Public meeting in Parksville chaired by the Nanaimo Regional District.
25 Apr. 1978	Letter from Captain G.H.P. Shaw, base commander, Esquimalt advising that cable crossing of Department of National Defence test range in Georgia Strait is unacceptable.
24 May 1978	B.C. Hydro meets with Area Planning Committee, Pender Harbour, and Area A Ratepayers Association.
9 June 1978	B.C. Hydro meets with representatives of local interest groups in Sunshine Coast Regional District offices.
17 June 1978	Open house public meeting organized by B.C. Hydro in Madeira Park.
4 Aug. 1978	Phase I, Volume II of Beak Report is released to ELUCS and provincial government resource agencies.

—table continues—

—table continues—

31 Aug. 1978	B.C. Hydro meets with ELUCS and resource agencies to review Phase I, Volume II Report.
14 Sept. 1978	Evan Wolfe, Minister of Finance replies to form letter from Sechelt Peninsula area stating that "the provincial government supports the need for the project."
20 Oct. 1978	Phase I Addendum (includes summary of public comments) and Vancouver Island Power Supply Report are sent to ELUCS.
26 Oct. 1978	Phase I, Volume II Report and Addendum to Phase I Report, and Vancouver Island Power Supply Report are released to the public.
9 Dec. 1978	Public meeting on Texada Island.
7 Feb. 1979	B.C. Hydro meets with ELUCS and government resource agencies in Victoria. Approval to commence prelogging between Cheekye and Salmon Inlet is granted.
8 Feb. 1979	B.C. Hydro meets with Sunshine Coast Regional District and ELUCS in Sechelt.
27 Feb. 1979	B.C. Hydro meets with Sunshine Coast Regional District and ELUCS in Sechelt. Agreement reached to hold another open house to be chaired by the Sunshine Coast Regional District.
9 Mar. 1979	Special Report by B.C. Hydro on the Sechelt Peninsula in released to ELUCS, government resource agencies and the public.
21 Mar. 1979	B.C. Hydro meets with West Quarry Retreats Ltd. in Vancouver.
31 Mar. 1979	Open house in Madeira Park to assess route options to cross Sechelt Peninsula. ELUCS advises that Dr. Shaffer is retained as staff economist to review the economics of project justification.
5 Apr. 1979	B.C. Hydro meets with Area A Property Owners.
26 Apr. 1979	Minister of Energy, Mines and Resources, J.J. Hewitt writes to Denman Island Ratepayers Association, "the government does not feel a public inquiry is required into specific issues of Cheekye-Dunsmuir."

—table continues—

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10 May 1979	J.J. Hewitt replies to "mail-in" campaign requesting moratorium on construction of project by explaining that the other alternatives are less favourable than the Cheekye-Dunsmuir project.
14 May 1979	B.C. Hydro meets with North Qualicum Ratepayers Association.
21 June 1979	K.R. Mair, Minister of the Environment advises that government has approved the project and that there will be no public hearing—the final choice of route will be up to B.C. Hydro.
25 June 1979	B.C. Hydro writes to Sunshine Coast Regional District and ELUCS advising of their final route decision over Sechelt Peninsula—route AB'C—south of Sakinaw Lake crossing Agamemnon Channel near Fearney Point.
17 July 1979	Don Lockstead, MLA for Sechelt area writes to Minister of National Defence seeking review of former federal government position on crossing of DND test range in Georgia Strait.
19 July 1979	Approximately 80 people participate in demonstration against Cheekye-Dunsmuir line at the Parliament Buildings in Victoria.
23 July 1979	B.C. Hydro and provincial government meet with Sakinaw Lake residents; Minister of Environment is present.
2 Aug. 1979	Contract awarded for supply of submarine cables to Italian firm.
7 Aug. 1979	ELUCS releases Shaffer Report after considerable public pressure.
- Aug. 1979	Texada Island residents pull out surveyor's stakes. Subsequent actions, including lying down in front of a bulldozer clearing right-of-way on Texada, lead to charges of civil disobedience against 4 islanders.
31 Aug. 1979	Letter from Minister of Defence to Sakinaw Lake Steering Committee in reply to their letter states that installation of 500 kV cables would render the Georgia Strait test range "essentially useless."
- Dec. 1979	B.C. Hydro releases Special Report on route alternatives between Malaspina substantion and Cape Cockburn.

—table continues—

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10 Jan. 1980	Public meeting in Madeira Park chaired by provincial Minister of the Environment, S. Rogers to hear views of the public with respect to alternative routes for crossing the Sechelt Peninsula.
13 Feb. 1980	The Environment and Land Use Committee gives final approval to the route across Sakinaw Lake for the Sechelt portion of the line.

RESEARCH DESIGN

In order to facilitate an understanding of the public participation process that occurred on the Cheekye-Dunsmuir project and identify institutional barriers to public participation, structured interviews were held with members of the public and B.C. Hydro staff. It was felt that this type of qualitative approach would permit a broad understanding of the public participation process and avoid the limitations of narrow quantitative indices. The analysis of public participation is not well suited to the application of sophisticated quantitative techniques or methodologies. A systematic interviewing approach based on selected evaluated criteria was considered to be more appropriate to the research objectives. The evaluative criteria are based on the broad principles of public participation developed in Chapter 3.

Structured interviews were conducted with individuals and/or groups who had expressed concern about the Cheekye-Dunsmuir project to either the provincial government, B.C. Hydro or the media. Approximately 25 individuals and/or groups were interviewed and a list of those interviewed and the interviewing guide are attached as Appendix A. Similarly structured interviews were conducted with B.C. Hydro senior management staff and a list of those interviewed and the interviewing guide are attached as Appendix B. In order to supplement these interviews, informal interviews were conducted with relevant B.C. Hydro and provincial government staff who were involved in the Cheekye-Dunsmuir project. A list of those contacted is attached as Appendix C. Although the

sample size of the study is small, it represents a thorough sampling of those who would be directly affected by the Cheekye-Dunsmuir project and the key provincial government and B.C. Hydro officials involved in the planning and decision making on the Cheekye-Dunsmuir.

Interviews were conducted in the three broad geographic areas where people had expressed concern about the line. These were identified as Vancouver Island and the Gulf Islands, the Sechelt Peninsula and metropolitan Vancouver. Interviews were informal and generally on a one-to-one basis. They varied in length from one to one and a half hours. The responses were recorded on the interviewing guides and conversations were not recorded verbatim since it was felt that a number of respondents would have restricted their comments due to the sensitivity of the issues involved.

RESULTS OF THE INTERVIEWS

A summary of the results of the interviews are presented in Table 6.2 which summarizes the major viewpoints of those members of the public and B.C. Hydro staff interviewed on the Cheekye-Dunsmuir project. The table outlines the public's viewpoints, B.C. Hydro's viewpoints, areas of agreement between the public and B.C. Hydro and outstanding differences. The responses are grouped according to evaluative criteria derived from the principles of public participation developed in Chapter 3. They include: (1) definition of objectives and issues; (2) representativeness of participants; (3) timing of participation; (4) information availability; (5) employment of suitable participation techniques; and (6) commitment to utilization of public input.

Definition of Objectives and Issues

- The public and the agency(s) involved should agree on the objectives of the public participation process before it is initiated.
- The public and the agency(s) should establish mutually

TABLE 6.2: SUMMARY OF INTERVIEW RESULTS

Evaluative Criteria	Public Viewpoints	B.C. Hydro Viewpoints	Areas of Agreement	Outstanding Differences
Definition of Objectives and Issues	-Discuss impacts of proposed project and route location and alternatives. -Discuss project need and broader energy policy issues. -Participation is based on consultation and joint planning objectives.	-Discuss project-specific impacts and choose most acceptable route. -Gain an awareness of public concerns. -Persuade, educate and inform public of best option.	-Discuss impacts and identify most acceptable route. -Negotiate on site-specific concerns (e.g., use of herbicides).	-Questions of project need. -No consensus on mutually acceptable objectives of participation and terms of reference. -The public and B.C. Hydro are at opposite ends of the public participation continuum.
Representativeness of Participants	-Those directly affected by a project should participate. -Those expressing a legitimate concern should participate. -Interest groups are important and can represent broader concerns.	-All those with a legitimate concern should participate. -Participation should be open to everyone. -More involvement of elected representatives. -Interest groups do not represent the public interest.	-Participation should be non-restrictive. -Those demanding power should be present at meetings (i.e., bulk industrial consumers). -Adequate means of participation would improve quality of participation	-The role of interest groups. -Questions of the broad public interest.
Timing of Participation	-Ongoing and continuous participation is preferred. -Early involvement before major decisions are made. -Participation in broad energy policy issues and project justification.	-Participation later in process, after Hydro identifies best option. -Focus on project-specific concerns, not policy. -Participation as outlined in *Guidelines for Linear Development*.	-None	-The timing and level of public participation.
Information Availability	-Information was readily but selectively available. -Timing of release of information was poor, out of sequence with planning process. -Information was biased in favour of Hydro and its consultants. -Consultants' report provided data base but often inaccurate and incomplete.	-Sufficient information provided to meet requirements of linear Guidelines. -Special efforts were made to present information in summary form. -Information was readily available and not withheld.	-Information was accessible and available.	-The timing of information release. -Quality of information.
Employment of Suitable Public Participation Techniques	-Meetings are of value in enabling Hydro and the public to present positions and concerns. -Meetings do not address the broader energy policy issues. -Meetings are a public relations move by Hydro to soothe the public. -There is a need for a neutral third party.	-Meetings are of limited value; too much grandstanding. -Smaller group meetings more effective. -There is a need for a neutral chairperson. -Meetings are costly and time-consuming; few productive results.	-Meetings are of limited value. -There is a need for a neutral chairperson. -There is a need for a variety of techniques of participation.	-The types of issues to be addressed at the meetings. -Cost/benefits of meetings. -Whether or not meetings are a public relations exercise.
Commitment to Utilization of Public Input	-There was little or no influence on Hydro decision making. -A great deal more influence is being demanded. -Public should have influence in policy and justification issues.	-Public is only one consideration among other factors. -Decisions are often judgement calls and trade-offs. -Hydro listens and weighs concerns to choose best route.	-Public input should be part of planning and decision making.	-The types and degree of influence of the public in planning and decision making. -The public and Hydro are at opposite ends of the public participation continuum with respect to definition of public participation.

acceptable terms of reference and issues to be included in the process.

Those members of the public and B.C. Hydro staff interviewed on the Cheekye-Dunsmuir project had very different impressions about the nature and definition of participation. The only areas of agreement between the two sides were that the objectives of the public participation process should include the discussion of route location and selection, possible route alternatives and proposed project impacts.

Those members of the public interviewed also expressed concern that the objectives of the participation process be widened to include a discussion of the broader aspects of energy planning and decision making such as: the use of hard and soft technologies; the role of energy conservation, the choice of an industrial strategy, the role of renewable energy resources in British Columbia's future, energy forecasting and pricing methods and the role of the public and government in reviewing major energy projects. Specifically on the Cheekye-Dunsmuir project concern was expressed about: the economics of large scale centralized energy projects (the costs of the Cheekye-Dunsmuir project escalated from an estimated 300 million dollars in 1978 to 800 million dollars in 1980); the human health and safety impacts (particularly the use of herbicides for vegetation management) and the environmental impacts of the project (on the recreational value of the scenic Sechelt Peninsula and Gulf Islands).

B.C. Hydro's objectives for participation were considerably narrower than those of the public. From the interviews conducted with B.C. Hydro staff, it was evident that the purpose or objectives of the public participation process were to discuss route selection and location problems and the proposed project impacts. The process was not designed to debate the broader aspects of energy planning and these issues were viewed as being beyond the scope of the B.C. Hydro's view of participation. With reference to the project justification issue on the Cheekye-Dunsmuir line, B.C. Hydro's Vice-President of Corporate Affairs clearly stated:

> The question of "whether or not" a project of this nature is required—and its timing—must be B.C. Hydro's responsibility as the agency accountable for meeting the electrical energy needs of the province.*

This indicates a lack of consensus on the objectives of participation between those members of the public and B.C. Hydro staff interviewed.

Evidence from the interviews also suggests that B.C. Hydro and the public did not agree on mutually acceptable terms of reference and issues to be included in the process before it was initiated. B.C. Hydro's Community Relations division organizes and structures the public participation process according to corporate objectives for participation with little regard for the broader objectives of the public. Those members of the public likely to be directly impacted by a project are not consulted or involved in the structuring of the meetings in order to reach acceptable terms of reference.

Generally speaking it appears that those members of the public and B.C. Hydro staff interviewed were at opposite ends of the continuum of participation developed by Farrell et al. (1976). Whereas B.C. Hydro's corporate objectives for participation are at the persuasion, education and information feedback end of the continuum, the public's objectives are at the consultation, joint planning and delegated authority end of the spectrum. It is anticipated that this lack of agreement on objectives and terms of reference will inevitably lead to frustration, protracted debate and conflict.

The literature on public participation suggests that the current state-of-the-art is moving towards the consultation/joint planning end of the continuum and the widening decision making objectives of the public. There is a definite need to incorporate these trends into B.C. Hydro's public participation process. Otherwise conflicting and polarized viewpoints will continue to dominate the process and jeopardize the credibility of the corporation. Attempts should be made by B.C. Hydro to identify the various objectives of the participants before a final

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*Charles Nash, letter sent to the *Peninsula Times*, January 13, 1978.

program is initiated in order to determine mutually acceptable terms of reference and agreement on the issues to be discussed.

It is suggested that the problem of conflicting objectives between B.C. Hydro and the public might be greatly alleviated if the provincial government would create a separate forum for public review and debate on energy policy. The absence of such a forum has channelled all such debate to B.C. Hydro's project planning meetings which are currently not structured to deal with these broader concerns. Moreover it is questionable whether the public utility should be responsible for making these wider social choices or whether these fundamental social and political choices should be channelled to the political level with full public participation.

Representativeness of Participants

- The public participation process should include as many relevant and directly affected individuals and/or groups as possible.
- Every affected individual or group should have the means to participate.

It was agreed upon by those members of the public interviewed and B.C. Hydro staff that public participation should be non-restrictive and include as many relevant and directly affected individuals and/or groups as possible. Agreement also existed between the public and B.C. Hydro staff interviewed that bulk customers demanding additional amounts of power (particularly industrial representatives) should be involved in the public participation process in order to justify their demands for additional electrical energy.*

Disagreement was evident however between the views of the public and B.C. Hydro on questions of the broad public interest and specifically

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*In the case of the Cheekye-Dunsmuir line the major consumer of additional power is the pulp and paper industry which accounts for about 40 percent of the total electrical load on Vancouver Island (Farrow, 1979).

the role of public interest groups in the public participation process. Concern was expressed by B.C. Hydro officials that the interest groups involved in the Cheekye-Dunsmuir project represented select and special interests rather than the broad public interest. It was advocated that more emphasis should be placed in the future on the views of the democratically elected representatives who theoretically represent the broad public interest.

Those members of the public interviewed felt that because they were going to be directly impacted by a Hydro proposal they had the right to influence decisions. The formation of the British Columbia Energy Coalition (a decentralized network of interest groups concerned about energy issues in the province) was cited as evidence of a move towards the articulation of broader provincial concerns related to energy planning.

With respect to adequate means for participation (time, financial resources and information) there was general agreement by all those interviewed that the quality of participation would have been improved if more time and resources had been available. Neither B.C. Hydro nor the provincial government gave financial support to those public interest groups involved, and aside from the Shaffer Report (1979) no independent research was funded on either the justification for the project or possible alternatives.

A central issue in the literature on participation is who should represent the public in order that all viewpoints are adequately reflected. A related problem is how to ensure that the perspective is comprehensive and that local as well as provincial concerns are represented.

It would appear that the problem of representation and equitable participation is exacerbated by the hinterland aspects of energy planning, where the costs and benefits of development are not distirbuted equitably throughout a region or province. Public participation is a means of ensuring that these inequities are articulated in the decision

making process.*

In the case of the Cheekye-Dunsmuir project those groups who protested most loudly were composed of individuals who would have to bear the social and environmental costs of the line, notably residents of the Sechelt Peninsula and Gulf Islands. Although opposition to the line was also expressed on Vancouver Island which will reap the benefits of the line, it was generally confined to those areas directly impacted by the construction of the project. It is recognized that as long as large scale centralized energy projects are developed, the problem of regional disbenefit will be a core issue in the participation process.

Perhaps the separation of participation on broad provincial policy concerns and specific project management issues would be a means of partially alleviating this problem. Liaison committees could be formed to represent a cross-section of provincial interests on topics related to project planning in general and provincial energy policy, and citizens' committees (or local advisory planning committees) could represent a cross-section of local interests on major route and site planning issues. Ontario Hydro has been using citizens' committees on all major route and site planning studies in the past five years and has found them to be a very efficient means of implementing joint planning (Ontario Hydro, 1980(a)).

Ultimately it must be recognized that it is extremely difficult to define the public interest and common good and that as a minimum those directly affected by a project should be able to participate in the decision making.

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*Some critics such as Orr (1979) have argued that public participation is the only mechanism available for articulating dissatisfaction with an energy system that leads to an inequitable distribution of social costs and benefits. Under ideal circumstances those receiving the benefits of a policy should pay its full costs or render mutually agreed compensation to those who do have to pay for the costs. The lack of participation has concealed a system of winners and losers. The argument also applies to the divergence of costs and benefits between generations.

Timing of Participation

— Participation should occur at an early stage of the planning process and be ongoing and continuous. It must occur before major decisions are made.

— Participation should be fully integrated and in sequence with the planning process. It must not be a token effort.

There is no agreement between those members of the public and B.C. Hydro staff interviewed as to the proper timing of participation. The public is seeking early, ongoing and continuous involvement, before major project and policy decisions are taken. With respect to the Cheekye-Dunsmuir project the majority of those interviewed felt that they had been involved too late in the planning process to participate effectively. There is some feeling that by the time B.C. Hydro initially announces its project plans considerable time and resources have been invested in the project feasibility studies and the project is too far along to either make significant changes or stop the project entirely. The public is also demanding involvement on project justification concerns before major decisions on the go-ahead for the project are made.

B.C. Hydro on the other hand prefers later and selective involvement after considerable study and project design have been undertaken. Only after such planning, they argue, can legitimate public discussion commence.

The literature on participation suggests that early, ongoing and continuous involvement is the ideal. If the public is not involved in major decisions such as project approval, there will be a continual questioning of the credibility of the process. Participation will then be regarded as token effort and not an integral part of the planning process. This is precisely what occurred during the planning of the Cheekye-Dunsmuir project. The lack of public involvement early in the process, particularly on the project justification issue, led to a credibility crisis in the planning process.

Although it is recognized that public participation without some technical information on the project is difficult, it is also apparent

that later involvement after considerable technical information on the project has been gathered tends to have less influence since many decisions have already been taken. It is important that B.C. Hydro enhances public trust in the utility by seeking public feedback and local information during the initial stages of the planning process. Although B.C. Hydro claims to already do so, it was apparent on the Cheekye-Dunsmuir project that public meetings on the project did not commence until the release of the Phase I, Volume I Beak Report, one year after the original press release on the project.

It is anticipated that many of the problems with the timing of participation could be overcome if public participation on the broader energy policy issues (including project justification) was considered an integral part of the overall planning process. The public should be involved in the earlier and more general decisions on energy policy as well as later project-specific concerns on route alignment and mitigative measures.

Information Availability

- Pertinent information should be readily accessible to the public.
- The information should be readily understandable by those whom it affects.
- Two-way information flow mechanisms should be established between the public and the agency.
- Information is only as credible as its source. In order to ensure the release of unbiased information, it should be reviewed by an independent agency or source.

There was basic agreement between those members of the public interviewed and B.C. Hydro staff that information on the project was eventually accessible. Disagreement existed however over the timing of information release and the quality of information provided.

With respect to quality of information, the majority of those members of the public interviewed were of the opinion that the informa-

tion provided by B.C. Hydro and its consultant was biased in favour of Hydro preferences. Particular criticisms were levied against B.C. Hydro's report *Vancouver Island Power Supply: 1982-1996* with respect to load forecasting techniques, planning assumptions and the review of the energy alternatives available for Vancouver Island. In addition, the Beak Consultants' reports were criticized as being incomplete and inaccurate in places. For example during the public meetings on the Sechelt Peninsula it became evident that the data sources related to the Phase I level of study did not adequately reflect the current status of rapidly developing residential and recreational areas. Local residents also suggested alternate corridors across the Sechelt Peninsula that were not originally considered by Beak Consultants or B.C. Hydro. The most glaring problems with information quality were revealed at the public meeting on Lasqueti Island and a reading of the transcripts of the meeting reveals the general flavour of the arguments forwarded.*

Additionally the timing of information release was criticized as being out of sequence with the general planning process particularly with respect to the release of B.C. Hydro's *Vancouver Island Power Supply: 1982-1996* and the Shaffer report. The *Vancouver Island Power Supply* report was released in August 1978, two years after the initial press release on the project and the Shaffer report was released by the Environment and Land Use Committee Secretariat three months after it was completed. These two delays led to considerable public distrust of both B.C. Hydro and the provincial government as it was felt that information was withheld from public review.

B.C. Hydro on the other hand stated that sufficient information had been provided to meet the requirements of the provincial government's *Guidelines for Linear Development* and that special efforts had been made to provide the public with clear and concise information, notably the summary extracts from Volume I of the Beak report for the Sunshine Coast

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**Lasqueti Island Transcripts*, Volumes I, II and III, Neudorf Reporting Service, Vancouver, B.C., 1978.

area and the Squamish area.

The major problems with information availability centre around the credibility of information and the timing of release of information. Information quality was questioned because the credibility of B.C. Hydro as an institution was questioned as well. This was exacerbated by the sentiment that the environmental consultants hired by B.C. Hydro were not independent of Hydro preferences. This situation could be partially remedied if the retainment and terms of reference for consultants were set by a neutral third party rather than the developer. It is anticipated as well that decisions would be generally more acceptable if they were not based solely on B.C. Hydro's or their consultants' information as is the present case. There appears to be a need therefore for an independent source and review of information, particularly information related to project justification issue and electrical forecasts for the province.

The problems with project justification on the Cheekye-Dunsmuir were exacerbated by the late publication and release of the project justification document and the difficulties in releasing the independent review of the economic justification for the project. Suggested improvements to information quality include: independent research and information on project justification; earlier release of project justification studies; more direct interaction and input between the general public and interest groups and the consultants concerning local community concerns; and funding for independent research by interest groups on energy issues. It is also recognized that information can have an important educative function in helping people to identify and understand energy issues and planning processes. Emphasis should be placed on the idea that energy use, development and conservation are everyone's problem, not just B.C. Hydro's.

Ultimately it must be recognized that even if all the mechanisms for establishing information flows are in place problems will arise if not all the key issues are addressed. B.C. Hydro should be prepared to discuss and consult with the public on all issues related to its

policies and practices, not just specific project impacts. Evidence suggests that B.C. Hydro did a commendable job in actually distributing information to all those interested. The large distribution list for publications and the attempts to provide clear and concise information to the public on technical issues are positive indicators. It is unfortunate that B.C. Hydro's general credibility problems have jeopardized some of the positive efforts that have been made by the corporation to date.

Employment of Suitable Participation Techniques

- The public participation techniques should suit the nature of the issue, the participants and the stage of the planning process.
- Direct contact with the public is maximized through the use of both formal and informal techniques, depending on the objectives of the process.
- The public participation techniques employed should facilitate communication between the public and the agency(s), and the program should be flexible enough to accommodate a variety of different techniques to suit each situation.

It was evident from the interviews held with the public and B.C. Hydro staff that public meetings were the most common participation technique employed by Hydro. Both the public and Hydro agreed that public meetings can be of limited value in facilitating communication. They do not always suit the nature of the issue, the participants and the stage of the planning process. Both the public and B.C. Hydro agreed that the presence of a neutral chairperson at future meetings would however go a long way towards improving the credibility of meetings.

Disagreement existed between B.C. Hydro and the public over the types of issues to be addressed at meetings. The public felt that meetings were of limited value since some of the broader energy policy questions were not properly addressed. Respondents generally felt that

Hydro's meetings were nothing more than a public relations exercise where Hydro presented and attempted to justify its present projects and policies and where the public aired its concerns.

B.C. Hydro staff generally agreed that the meetings held on the Cheekye-Dunsmuir project were of limited value. It was felt that there was little productive information exchange and too much public grand-standing. Hydro staff were frustrated that the broader energy policy issues were not dealt with at the political level and thereby constantly obstructed their project-specific meetings.

It is recognized that many of the actual problems with techniques of participation relate to conflicting expectations between the public and the agency as to the nature and objectives of the participation process. Without basic agreement or consensus on the objectives of participation, the best combination and variety of techniques may prove ineffective.

With respect to the Cheekye-Dunsmuir project, the number of public meetings held by B.C. Hydro during the planning stages indicates a willingness to meet with the public. With reference to the chronology of events previously outlined, over twenty public meetings were held on the Cheekye-Dunsmuir project between 1976 and 1980. Additionally B.C. Hydro conducted a limited number of open houses and workshops and met with provincial government agencies to review the consultants' reports under the Guidelines process. The public meetings were held in all three geographic areas identified as regions where people had expressed concern about the Cheekye-Dunsmuir project. These included Vancouver Island and the Gulf Islands, the Sechelt Peninsula and metropolitan Vancouver. Efforts were made to hold meetings in regional centres in order to encourage local participation.

In the future, B.C. Hydro should take greater care in its choice of public participation techniques. Currently Hydro uses the public meeting more than any other type of participatory technique. As noted in an earlier section on the techniques of participation, the public meeting tends to formalize the consultative process and can be

unproductive and conflict-oriented. The use of more informal techniques such as workshops and open houses is therefore recommended to supplement the current process. Ontario Hydro for example uses a wide variety of public participation techniques including: citizens' committees, provincial study committees' workshops, information centres, speaking engagements, tours of Ontario Hydro field activities, field contacts, public meetings and media programs.* It is suggested that B.C. Hydro review the participation programs of other utilities across North America in order to ensure that future participation techniques suit the nature of the issue, participants and stage of the planning process.

Commitment to Utilization of Public Input

- Credibility and effectiveness require that public participation be utilized in the planning and decision making processes to reach acceptable decisions.
- The amount of shared decision making power should be consistent with the objectives of the process as established in principle #1.
- Direct feedback mechanisms should be established to demonstrate how, when, where and why public input was or was not utilized.

There was basic agreement between those members of the public interviewed and B.C. Hydro staff that public participation should be part of the planning process. Very definite areas of disagreement existed however over the type and degree of influence that the public should be accorded.

Those members of the public interviewed on the Cheekye-Dunsmuir project felt that they should have been accorded a great deal more influence than they were. The question of project justification—one of the key concerns of those interviewed—was a case in point. The

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*Ontario Hydro (1980(a)), Route and Site Selection Division, *Public Participation in Route and Site Planning*, Report No. 80384, October 1980.

decisions on project justification were made without any public input or review. This eventually led to the call for a moratorium on the construction of the Cheekye-Dunsmuir line, and for a full public inquiry under the *Environment and Land Use Act* into project justification and alternative sources of energy for Vancouver Island. Both of these requests were rejected at the political level.

B.C. Hydro's viewpoints on the utilization of public input into the planning and decision making process were quite different from those of the public. First of all there is no policy statement or commitment to public participation other than the broad concept of "open planning." Open planning simply means some form of consultation between Hydro and the public (as well as government) but does not define the amount of influence or shared decision making power the public is accorded. B.C. Hydro senior management staff stated that public input is only one of many factors that must be considered in decision making and that decisions are often judgement calls and trade-off situations where it is difficult to determine how public input is weighed in relation to other concerns. They stated that decisions on project justification were B.C. Hydro's responsibility as the agency accountable for meeting the electrical demands of the province, while decisions on how a project should be built and where it should be located were open to public discussion and consultation.

It is evident that the viewpoints of the public and B.C. Hydro regarding utilization of public input are based on each group's definition of the objectives of participation and the issues to be included. These objectives were examined under the first evaluative criteria and were found to be quite different. B.C. Hydro's definition of public participation was found to be behind the state-of-the-art vision of participation and should be moving towards the consultation and joint planning end of the spectrum.

In the final analysis, B.C. Hydro did not use public input to any significant degree on the Cheekye-Dunsmuir project. Although many meetings were held with the public, these did not substantially alter

B.C. Hydro's decisions. The final decision on project justification was made without public input or review and the final route alignment of the transmission line was only marginally influenced by public input. The changes to the Phase I recommended corridor in response to public input and other information are identified in the Addendum to the Phase I report.*

In all fairness to B.C. Hydro there were attempts made by the utility to evaluate some of the alternative routes proposed by the public, particularly across the Sechelt Peninsula and in the area between the Malaspina substation and Cape Cockburn (see Figure 6.1). These did not lead to any substantial revisions in the final route alignment.

The lack of B.C. Hydro's commitment to and utilization of public input has had broad implications for the credibility and accountability of the crown corporation. B.C. Hydro's credibility crisis appears to run much deeper than the routing of just one power line. It extends to the broad questions of institutional accountability, environmental and social responsibility and the rights of the individual in determining energy choices.

CONCLUSIONS

B.C. Hydro's public participation process as applied to the Cheekye-Dunsmuir transmission line proved to be relatively ineffective according to the principles for effective public participation outlined in this thesis. Although Hydro has attempted to evolve a more open planning process in concert with the *Guidelines for Linear Development*, the process has failed to satisfy those who are potentially most affected by a transmission line proposal.

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*Some minor changes were made to avoid sensitive watershed areas and shorelines. Also B.C. Hydro agreed to negotiate with regional districts on the use of herbicides and hand clearing of brush in sensitive areas.

Those members of the public interviewed on the Cheekye-Dunsmuir demanded influence in planning and decision making that went beyond project-specific impacts. There was a definite demand for public participation in broader energy planning questions such as project justification and alternative sources of energy for Vancouver Island. The major institutional barriers to public participation identified in the previous chapter were largely confirmed by the interviews with the public and B.C. Hydro staff on the Cheekye-Dunsmuir project.

The fact that no formal opportunities existed for public participation under the *British Columbia Hydro and Power Authority Act* restricted public participation to the project planning meetings of B.C. Hydro. These meetings are restrictive in scope and do not permit effective public input into planning or decision making. The public did not have input into the key question of project justification and public influence on the route location issues was minimal.

Although opportunities for public participation exist under the *Environment and Land Use Act*, they are largely discretionary on the part of senior provincial cabinet decision makers. In the case of the Cheekye-Dunsmuir line there were numerous petitions and requests for a public inquiry into the justification of the project under the *Environment and Land Use Act*. These were all rejected at the political level. Similarly the call for a moratorium on the construction of the project until the controversial justification issue was settled was rejected by senior decision makers. The failure to use the opportunities for public participation outlined in the *Environment and Land Use Act* and the lack of formal opportunities for participation under the *British Columbia Hydro and Power Authority Act* indicate the lack of an effective statutory or legal basis to public participation in transmission line planning in British Columbia. This is considered to be a firm institutional barrier to effective public involvement.

Although the *Guidelines for Linear Development* address public consultation, they do not establish or guarantee effective standards or procedures of public involvement. This has led to a situation where

the developer or proponent of a project is responsible for the public participation process. The review of B.C. Hydro's public involvement process on the Cheekye-Dunsmuir project clearly illustrates the inadequacies of this situation. The lack of standards or review of public participation under the Guidelines procedure has contributed to the inadequacies of B.C. Hydro's present participation process. Specific problems with B.C. Hydro's public participation process were identified during the interviews conducted on the Cheekye-Dunsmuir project. They included: conflicting objectives and expectations between the public and B.C. Hydro as to the nature and definition of public participation; serious credibility problems with the present timing of participation, information quality and release, and utilization of public input in decision making; and structural limitations to the process with respect to representativeness of participants and ineffective public participation techniques. The above problems with B.C. Hydro's public participation process and the limitations of the *Guidelines for Linear Development* with respect to participation indicate definite institutional barriers to participation.

And finally the lack of independent forums or avenues for the discussion of energy policy issues in British Columbia and the lack of opportunities for public input into project justification concerns under past planning procedures were clearly identified during the interviews with the public and B.C. Hydro representatives on the Cheekye-Dunsmuir project. The present system of reviewing energy projects on a project-specific basis without full public review of project justification issues and in the absence of a comprehensive energy policy and industrial strategy for the province as a whole was totally unacceptable to those members of the public interviewed. The lack of provincial government direction and responsibility in the past on energy policy, particularly in defining and clarifying B.C. Hydro's mandate, was pointed out by both Hydro and public representatives. The fact that B.C. Hydro is operating in a partial political vacuum makes it increasingly difficult for the public to participate in energy decisions. This coupled with the lack

of opportunities and forums for the discussion of energy policy represent additional institutional barriers to public involvement in energy planning.

The final chapter of the thesis addresses ways to remedy or alleviate some of the above mentioned institutional barriers to effective participation in electrical energy planning. Without such remedial actions the realization of a more participatory planning process will never be fulfilled.

CHAPTER 7

CONCLUSIONS

GENERAL CONCLUSIONS

From the preceding chapters, several general conclusions can be drawn about public participation in resource management issues, particularly energy planning. The call for greater public participation in environmental issues is well founded on ethical/philosophical, legal and administrative principles. Ethically, there is the right of the individual in a democratic society to influence decisions that directly affect his/her life. Legally, principles of natural justice are a major rationale for the inclusion of public interests in environmental decision making. Administratively, there is a need for organizations to reflect a broad range of social values and public participation is a means of achieving this. On the one hand there is the broad concern for more equitable decision making based on an affirmation of the classical ideals of participatory democracy and a solid legal basis for participation. On the other hand there is the more singular concern for better environmental quality and resource use decisions, based on greater public awareness of natural resource values and the need to overcome market failure and institutional inadequacies.

The practice of public participation, particularly in the energy field in Canada, has revealed some of the major problems associated with implementing participation processes or programs. There is a great deal of uncertainty about who should be involved in order to best represent the public, which technique or variety of techniques facilitate effective participation and how to best undertake the evaluation of participation. In the energy field in particular, the costs and benefits of energy development have not been equally distributed among individuals and groups in the province, leading to a situation where

some regions have had to bear a disproportionate amount of the costs of energy development. Due to the hinterland aspects of energy development in Canada these social and environmental costs or externalities of energy production and distribution have tended to largely impact rural and regional populations. These populations are generally politically and economically weaker than the large metropolitan centres which have received most of the benefits of development. Public participation is a means of articulating minority and affected interests into the decision making process.

It was hypothesized that the institutional structure of decision making on electrical energy in British Columbia restricted or constrained public participation in decision making. The results of the thesis largely confirm the hypothesis. Major institutional barriers to decision making in British Columbia were identified through an analysis of the decision making framework and interviews with those directly affected by a proposed large scale energy development.

Presently in British Columbia decisions about electrical energy are largely determined by the crown corporation B.C. Hydro and the provincial cabinet. The thesis argues that energy issues have changed rapidly in the past few years, necessitating a reappraisal of conventional energy policy and decision making. Changes such as the rapid increase in the cost of fossil fuels, growing recognition of the finiteness of resources and concern about the social, environmental, economic and political impacts of further large scale centralized energy development require institutional responses and adjustments. In British Columbia the social and environmental costs of ever increasing electric power production are being questioned, and those directly affected by project proposals are opposing further development.

A review of the case study of B.C. Hydro's proposed Cheekye-Dunsmuir 500 kV transmission line to link Vancouver Island with the mainland reveals many of the major problems with electrical energy planning in British Columbia. B.C. Hydro has a very broad mandate to supply, generate and distribute electrical power to the citizens of the province. In a

time of increasing recognition of the finiteness of resources, particularly energy resources, and awareness about the costs of electrical power production, it is argued that B.C. Hydro's mandate and objectives need clarification and redefinition. The interviews with the public and B.C. Hydro staff on the Cheekye-Dunsmuir project revealed some of the major problems with the present public participation process on transmission line planning and energy planning in general.

These problems centre around conflicting expectations and objectives between the public and B.C. Hydro as to the nature and definition of public participation: credibility problems with timing of participation, information quality and release, and utilization of public input; and structural limitations with the process relating to representativeness of participants and ineffectiveness of public participation techniques. It was discovered that the lack of public input or review on project justification issues and energy policy in general led to a fundamental questioning of the policies and practices of B.C. Hydro. This resulted in numerous requests for a public inquiry and moratorium on the project, all of which were rejected at the political level.

The review of the Cheekye-Dunsmuir case study also revealed the lack of a comprehensive energy policy and industrial strategy for British Columbia. The lack of direction and responsibility of the provincial government with respect to energy issues is clearly one of the key problems with present planning processes. As a result of this political vacuum, B.C. Hydro has had to bear major responsibility for decisions which should be more appropriately made at the political level with full public participation. These points were well articulated during the public meetings on the Cheekye-Dunsmuir project. It can be argued that public pressure for a comprehensive review of energy projects in British Columbia has stimulated the changes in energy planning processes that are now taking place the province. The heated public controversy over both the Revelstoke dam and the Cheekye-Dunsmuir transmission line has indeed forced energy planning procedures to fall under a political spotlight. As a result extensive changes in the

energy review process are taking place under the *Utilities Commission Act* (1980).

To date it is unclear whether the new energy review procedures will remedy or ameliorate the major institutional barriers to public participation identified in this thesis. Clearly the establishment of the Utilities Commission and a public hearing process for major energy projects (including 500 kV transmission lines or greater) is a step in the right direction. Uncertainties about the composition of the commission, the scope of the terms of reference for public hearings, the nature of the public hearings (quasi-judicial versus informal), the funding and resources (information) available to participants and the practical dynamics of the process impede further comments. Additionally it is unclear whether the planning and regulatory functions of government will be sufficiently separated under the new process to facilitate effective public participation.

SPECIFIC CONCLUSIONS

The major institutional barriers to public participation in electrical energy planning in British Columbia were identified by analyzing the decision making framework and conducting interviews with select members of the public and B.C. Hydro staff. The results of the interviews were analyzed according to the principles of public participation identified after an extensive review of the theory and practice of participation.

The principles for effective public participation developed in this thesis centre around the following evaluative criteria: (1) definition of objectives and issues; (2) representativeness of participants; (3) timing of participation; (4) information availability; (5) employment of suitable participation techniques; and (6) commitment to utilization of public input. It is argued that the principles of participation derived from these criteria are crucial to the development and evaluation of effective participation programs and processes. The principles

also aid in bridging the gap between the theory and practice of participation that is evident in the literature by including both intrinsic and instrumental aspects of participation.

The results of the interviews confirmed the existence of the potential institutional barriers to participation identified during the analysis of the decision making process. These institutional barriers to participation include laws, policies and administrative procedures. They can be summarized as follows:

(1) No formal opportunities for public participation exist under the *British Columbia Hydro and Power Authority Act.*

(2) Opportunities for public participation under the *Environment and Land Use Act* are discretionary on the part of senior decision makers and have not been established during the planning of past energy projects.

(3) The provincial government's *Guidelines for Linear Development* do not establish or guarantee standards or procedures for public participation and do not address project justification concerns.

(4) Public participation in transmission line planning has been largely left to the developer or proponent. Specific problems with B.C. Hydro's public participation program include: conflicting objectives between B.C. Hydro and the public as to the nature and definition of participation; difficulties in representing the public in order to ensure that all points of view are fairly reflected; conflicting viewpoints between B.C. Hydro and the public on the proper timing of participation; disagreement between B.C. Hydro and the public on the timing of information release and quality of information provided; difficulties in establishing effective public participation techniques; and disagreement between B.C. Hydro and the public as to the type and degree of influence the public should have in energy planning.

(5) The lack of independent forums or avenues for the review of energy policy issues in British Columbia and the lack of opportunities for public input into project justification issues.

The existence of these institutional barriers to public participation in energy planning in British Columbia has seriously constrained the nature, level and extent of public input into electrical energy decision making in the province. The thesis has argued for an increased role for the public in energy decisions and the following recommendations are designed to improve B.C. Hydro's public participation process for transmission line planning and remedy some of the institutional barriers to public participation. Table 7.1 presents these recommendations in terms of organizations responsible, methods of implementation and general implications.

The general recommendations are:

(1) Clarify and redefine B.C. Hydro's role and responsibility in electrical energy planning and decision making.
(2) Develop provincial public participation principles or guidelines with respect to electrical energy planning.
(3) Establish an independent forum for project justification open to public review.

B.C. Hydro's role and mandate with respect to electrical energy planning should be redefined or clarified to ensure that the broad social and political decisions concerning energy planning are made at the appropriate political level with full public participation. This could be accomplished through a variety of means including: the establishment of a royal commission on electrical power planning; the development of a comprehensive energy policy for British Columbia; the necessary statutory revisions to the *British Columbia Hydro and Power Authroity Act;* and the acceptance by the provincial government of greater responsibilities on electrical energy planning.

The development of provincial public participation guidelines or principles with respect to electrical energy planning would establish some standards for the development, review and evaluation of public participation processes and programs. The major areas of concern could be identified through a series of public meetings or the public inquiry procedure recommended above. This could lead to the development of

TABLE 7.1: SUMMARY OF RECOMMENDATIONS

Recommendation	Responsibility	Implementation	Implications
1. Clarify B.C. Hydro's role and responsibility in energy policy and planning issues in the province.	Provincial government	-Establish provincial inquiry or royal commission on electric power planning. -Develop comprehensive energy policy for B.C. -Clarify B.C. Hydro's mandate to reflect changing social values. -Shift identified policy responsibilities to the provincial government.	-Clarify B.C. Hydro's role in planning and policy making. -Develop an energy policy per se which could establish the context for further planning. -Involve the public and government in energy policy. -Develop more acceptable policies.
2. Develop public participation policy or guidelines.	Provincial government, B.C. Hydro, and public	-Identify concerns and issues through inquiry recommended above, or a series of public meetings or hearings. -Develop agreed upon principles of public participation. -Translate principles into policies or guidelines (strengthen ELUC Guidelines with respect to public participation). *or* -Include in appropriate statutes (*B.C. Hydro Act, ELU Act, Utilities Commission Act*).	-Agreed upon principles will set ground rules. -Ensure commitment to public participation. -Allow legal access to planning and decision making. -Ensure a more co-operative process and reduce conflict.
3. Establish independent forum for project justification issues.	Provincial government and B.C. Hydro	-Identify and involve key actors (government, Hydro and public). -Establish independent review board, or broaden powers of the Energy Commission (now Utilities Commission). -Include project justification in the ELUC Guidelines, or appropriate procedures.	-Ensure more credible load forecasting. -Diffuse public opposition to Hydro projects. -Broaden decision making basis. -Include all affected interest groups and individuals in major public policy area.

agreed upon principles of public participation which could be strengthened through either policies, guidelines or statutory regulations. The principles of public participation developed in this thesis are a good starting point for such an undertaking and indicate the major areas of concern.

The establishment of an independent forum for the review of project justification would ensure that major decisions on electrical energy were subject to a thorough examination of all interested and affected persons. This forum could have been part of the procedures of the former Energy Commission and should be definitely included in the energy review procedures of the new Public Utilities Commission.

The recommendations outlined are directed towards an amelioration of present energy planning procedures. It would appear that many of the problems regarding incompatible objectives of participation, credibility of process and process design could be overcome if adequate avenues and forums were developed for the public to address energy policies and projects. The present system of reviewing projects on a project-specific basis in the absence of a comprehensive provincial energy policy and industrial development strategy is totally unacceptable.

As energy issues continue to maintain a high profile, the potential for conflict increases. The broad social, political, economic and environmental implications of energy planning necessitate a broader and more comprehensive basis for decision making. Public participation is a means of broadening the decision making basis and articulating values into decision making. There are no "right" answers to complex resource use conflicts, particularly energy development, and choices must be made between competing values. It is important that there is an accessible forum and mechanism for articulating different value preferences to decision makers.

Ultimately it should be recognized that the inability to develop a satisfactory public participation process on energy planning will lead to unnecessary and unwelcome disruptions of the planning process. The civil disobedience actions on the Cheekye-Dunsmuir project may be an

indication of future responses to unacceptable public participation processes.

IMPLICATIONS

The conclusions of this thesis have important implications with respect to public participation and social organization. It is apparent that large scale centralized energy developement is not conducive to the practice of public participation. Remoteness to the source of energy, rural versus urban values and the unequal distribution of the costs and benefits of energy production and transmission do not facilitate co-operative participation. On the other hand the small scale decentralized renewable energy alternatives proposed by soft energy advocates are conducive to effective participation at the community or local level.

It may well be determined that in order for effective participation to take place there will have to be an extensive decentralization and reorganization of society. With respect to energy issues, the soft path advocates have long been arguing that small decentralized systems promote participation whereas hard path energy systems impede effective involvement. Energy experts agree that our long term energy choices are basically nuclear (hard) or solar (soft). It is important to recognize the implications of these alternatives with respect to public participation, social organization and individual freedom. The nuclear option is particularly disturbing with regard to human health and safety factors, environmental degradation and centralization of political power.

The implications of this thesis therefore extend beyond the study of participation and into the wider realm of institutional reform and reorganization. Ensuring that the institutional barriers to participation are removed is only the first step in working towards a fundamental reorganization of society. There are many other structural reforms that will be necessary in the realization of a more participatory and humane society.

POSTSCRIPT

With the passage of the *Utilities Commission Act* in August 1980, energy planning procedures in the province of British Columbia changed significantly. The *Utilities Commission Act* creates the British Columbia Utilities Commission, lays the framework for the major energy project review process, brings B.C. Hydro and Power Authority under public regulatory control for the first time and enables the government to issue energy removal certificates for energy resources leaving the province.

To date it is unclear how the new review procedures will work in practice, and currently the administrative structure for implementation is being established by the Ministry of Energy, Mines and Petroleum Resources. What is clear is that the energy and environmental review processes will be integrated and that provisions for public hearings under the Utilities Commission exist for major energy projects.

Under the *Utilities Commission Act*, 1980 a new utilities commission was established to replace the former British Columbia Energy Commission which had been established in 1973 under the New Democratic Party government. The *Utilities Commission Act* Section 2(a)(b) states that the commission shall consist of not more than seven commissioners appointed by the Lieutenant Governor in Council for a period not exceeding five years and other temporary commissioners drawn from industry, the public and government. The duties of the commission include: the regulation of public utilities; the review and certification of projects which generate, use, store, transport, tranship or transmit energy; and the review and certification of the removal of energy resources from British Columbia. The commission has taken over the regulatory functions of the B.C. Energy Commission with some important changes. B.C. Hydro is brought under public regulatory control in the following manner: Hydro rate increases on electricity are subject to public hearing before

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the commission; Hydro gas and electrical utility service standards and additions to facilities will be regulated; and most importantly energy project and operation certificates are required for large scale energy projects. The regulated projects are defined according to the amount of energy involved (Part 2, Section 16) and include: transmission lines of 500 kV or higher, pipelines capable of transporting 16 PJ energy per year; transhipment or storage facilities of 3 PJ per year, electricity generation of 20 Mw or higher; and any energy project capable of using 3 PJ per year.

Section 18 of the *Act* states that an application for an energy project certificate must be made to the Minister of Energy, Mines and Petroleum Resources. The application must contain the information specified in B.C. Regulation 388/80 which includes: description of the applicant; description of the project, anticipated timetable; description of any new or expanded infrastructure made necessary by the project; identification and preliminary assessment of impacts on the physical, biological and social environments, proposals for impact management; project justification including technical feasibility studies and a benefit cost analysis; list of approvals under federal, provincial and municipal jurisdictions, whether or not the *Water Act* or *Pollution Control Act* requirements form part of the application; description of the applicant's public information and consultation program; and other information as required by the minister, including supplementary information to clarify application (Ministry of Energy, Mines and Petroleum Resources, 1980 (c)).

Once an application has been made there are three review procedures specified by the *Act* (Part 2, Section 19). These are: (1) review by the Utilities Commission/Decision by cabinet (Section 19(1)(a); (2) referral to B.C. Utilities Commission (Section 19 (1)(b)) for normal regulatory procedures as established by Part 3 of the Act; (3) exemption from some or all of the provisions of the *Act* (Section 19(1)(c)).

For the purposes of this thesis it is anticipated that major transmission lines (500 kV or higher) will be subject to the first review procedure for an energy project certificate under Section 19(1)(a) of the *Utilities Commission Act*. This would include a public hearing review by the Utilities Commission, Utilities Commission recommendation to cabinet and a cabinet decision on the granting of an energy project certificate and *Water Act/Pollution Control Act* requirements. The project would then be subject to more detailed project management review, detailed permitting as required, monitoring and surveillance during construction. This would eventually lead to the granting of an energy operation certificate.

With respect to the proposed administrative review procedures, an energy project co-ordinating committee (EPCC) has been established to co-ordinate the broad review of projects and provide advice to the Ministers at the various stages in the procedures (Ministry of Energy, Mines and Petroleum Resources, 1980(c)). The EPCC will consist of three members: the Director of the Project Analysis Branch, Ministry of Energy, Mines and Petroleum Resources; the Director of the Assessment Branch, Ministry of the Environment; and a B.C. Utilities Commission staff member.

It is proposed that the EPCC will co-ordinate input from agencies whose responsibilities may be affected by application through working committees in the following broad areas: Environment/Resource/Land Use; Social/Community Planning and Development; Economics and Finance; and Energy. The function of the working committees will vary depending on the type of application, its stage in the review procedures and the form which the review takes.

With respect to opportunities for public participation in the new energy review procedures, the most significant change is the requirement for public hearing review of major energy projects by the Utilities Commission. This requirement establishes an unprecedented opportunity for the public to participate or intervene on issues such as project justification. At the present time however there is uncertainty as to:

the nature of the hearing process, whether participation will be restricted to intervenors with standing or open to the general public, the style and scope of the hearings, the format of presentation required and the time and financial costs of participation. The determination of the above factors could significantly affect the opportunities for, and the nature and quality of participation.

Additionally it remains unclear as to whether the broader aspects and concerns of energy policy will be reviewed during the public hearings process. Presently it appears as if the two issues of project justification and project management will be dealt with simultaneously, rather than reviewed separately. If these two areas are not reviewed separately, then it is likely that the public hearings will become protracted debates with few opportunities for effective participation on the broader energy policy concerns.

The introduction of these changes to energy planning and decision-making processes in British Columbia will have significant impacts on energy management in the province. The new energy review procedures appear to be much more participatory than past approaches. As a result it is anticipated that some of the institutional barriers to public participation identified in this thesis will be either removed or partially alleviated. However the findings of this thesis should be kept in mind in the design of the new procedures.

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APPENDIX A

INTERVIEWING GUIDE: PUBLIC REPRESENTATIVES

Name:

Address: Phone:

Member of Interest Group:

Private Citizen:

1. When did you first become aware of the proposed Cheekye-Dunsmuir 500 kV transmission line?

   How?

2. Have you ever contacted B.C. Hydro on this transmission line issue or any other Hydro project?

   Yes _____ No _____

   If yes:

   For what purpose?

   How?

   When?

Who did you contact?

3. What is your assessment of the process employed by B.C. Hydro to communicate with local citizens and interest groups?

4. Are you aware of B.C. Hydro's general planning process on transmission lines?

Yes _____ No _____

If yes:

How did you become aware of it?

Hydro _____ Regional District _____

Prov. Gov't. _____ Public Meeting _____

Other _____

5. Are you aware of any guidelines for environmental impact assessment prepared by the provincial government?

Yes _____ No _____

If yes:

Can you name them?

When did you become aware of them?

How did you become aware of them?

Hydro _____ Regional District _____

Prov. Gov't. _____ Public Meeting _____

Other _____

6. Will the Cheekye-Dunsmuir have any adverse effects on you personally?

Yes _____ No _____

If yes:

What effects?

7. Will the Cheekye-Dunsmuir have any beneficial effects on you personally?

Yes _____ No _____

If yes:

What effects?

8. Did you ever receive any written information on the Cheekye-Dunsmuir?

Yes _____ No _____

If yes: What kind of information?

Where and how did you obtain it?

9. Was it useful information?

Yes _____ No _____

If yes:

Why?

If no:

Why not?

10. Was this information readily available?

Yes _____ No _____

What recommendations do you have that could improve the distribution of information?

11. Did you receive information early enough before meetings were held?

Yes _____ No _____

Detail:

12. Did you ever attend a public meeting, workshop, open-house, etc., on the Cheekye-Dunsmuir?

Yes _____ No _____

If yes:

When:

Where:

Sponsored by:

Which technique was the most successful?

13. How did you become aware of the meeting?

14. Did you present a written brief at the meeting?

Yes _____ No _____

If no:

Why not?

15. Did you speak out at the meeting?

Yes _____ No _____

If no:

Why not?

16. What were your major personal concerns and why did you participate?

17. Did you feel the meeting was successful in addressing the Cheekye-Dunsmuir project?

Yes _____ No _____

If no:

Why not?

18. Were Hydro's and the public's concerns adequately addressed at the meeting?

Yes _____ No _____

If no:

Why not?

19. What came out of the meeting and who was involved?

20. Do you think that meetings are of value in facilitating communication?

Yes _____ No _____

If no:

Why not:

21. What was your general impression of the meeting? How many people were there?

22. Did you feel that you were made aware of the project early enough so that you could participate effectively?

Yes _____ No _____

If no:

Why not?

23. Were you ever approached by Beak Consultants Ltd., the environmental consultants for B.C. Hydro on the Cheekye-Dunsmuir project?

Yes _____ No _____

If yes:

How many times?

What type of information sought?

What type of information given?

24. Are you aware of the addendum to Beak Consultants Volume 2 report on the Cheekye-Dunsmuir line?

Yes _____ No _____

If yes:

How well do you think public concerns were addressed in the addendum? How well do you think your concerns were addressed?

25. Did you feel that you had any influence on B.C. Hydro's planning and decision-making processes?

Yes _____ No _____

Detail:

26. (i) What are your general feelings on public involvement?

— the people involved

— the problems in participating (access to information and resources)

— the quality of participation

(ii) With respect to large public or private organizations?

— does it improve accountability

(iii) Does government have a role in public involvement?

— what about independent public forums

LIST OF PUBLIC INTERVIEWEES

The following citizens and interest groups have been listed according to affected geographic area;

A. Vancouver Island and Gulf Islands
B. Sechelt Peninsula
C. Metropolitan Vancouver

PRIVATE CITIZENS AND INTEREST GROUPS

A. 1. Lasqueti Island Steering Committee
— Michael Humphries — Guy Immega
2. Coombs-Hilliers-Errington Residents Association
— Toni Bacon
3. French Creek Resident's Association
— Bud Bourgeault
4. Bowser and Area Environmental Concern Committee
— Judith Reid
5. Kwah-li-kum Ratepayers Association
— Sharman Edgett
6. Denman Island Residents
— David Fraser — Des Kennedy
— Glen Snook — Harlene Holme
7. Texada Island Residents
— Alex Seredin — Don & Paulette Magwood
— Arnold Walker

B. 8. Sakinaw Lake Property Owners and Lease Holder's Association
— Ivo Cargnelli — Bruce Barkley
9. Pender Harbour Ratepayers Association
— Howard White
10. Area A Property Owners—Madeira Park
— Lloyd Davis
11. West Lake Property Owners Association
— Don Garnett
12. Regional Board Director, Area A, Sunshine Coast
— Joe Harrison
13. Regional Board Chairman, Sunshine Coast
— Ed Nicholson

C. 14. B.C. Aviation Council
— Mr. McCollum
15. West Coast Air
— Jack Ross
16. SPEC
— Cliff Stainsby
17. B.C. Energy Coalition
— Michael Humphries
18. Wesquarry Retreats Ltd.
— Bill Canning
19. Green Bay Holdings Ltd.
—

APPENDIX B

INTERVIEWING GUIDE: B.C. HYDRO

1. What factors have led towards the development of B.C. Hydro's public participation process on transmission line planning?

2. How involved was the public in earlier projects? Is it fair to say that the process has gradually become more open over the years? How open?

3. What would you describe as the main purpose or objectives of B.C. Hydro's public participation process?

4. How much influence do you think the public should have in the planning and decision making on transmission lines?

5. Who should be involved in the public participation process?

6. How dependent do you think participation is on access to information and resources (financial and time)?

7. When should public involvement be initiated and terminated in the planning process?

8. Which techniques are the most successful in facilitating communication?

9. How would you describe the information that B.C. Hydro releases to the public? Do you think it is easily accessible?

10. Other comments?

    — major problems with public involvement?

    — role of government?

LIST OF B.C. HYDRO INTERVIEWEES

1. Robert Bonner
   Chairman of the Board of Directors

2. Norman Olsen
   President of B.C. Hydro

3. Charles Nash
   Vice-President of Corporate Affairs

4. Eric Martin
   Vice-President of Engineering

5. Thomas Sheean
   Vice-President of Finance

NOTE: For a list of informal interviews with B.C. Hydro staff, see Appendix C.

APPENDIX C

LIST OF INFORMAL INTERVIEWEES

GOVERNMENT AGENCIES

1. Lorna Barr, Islands Trust
2. Robyn Addisson, Ministry of Municipal Affairs
3. Al Ferguson, Environment and Land Use Committee Secretariat
4. Bryan Gates, Environment and Land Use Committee Secretariat
5. Jamie Alley, Ministry of Lands, Parks and Housing
6. Lance Chambers, Ministry of Transport
7. Peter Hoemburg, Nanaimo Regional District
8. John Magor, Nanaimo Regional District
9. William Lindsay, Sunshine Coast Regional District
10. John Vance, Greater Vancouver Regional District
11. William Bedford, Fish and Wildlife Branch

B.C. HYDRO CONTACTS

1. John Dawson, Community Relations
2. Ronald Kujala, Community Relations
3. Thom Thompson, Community Relations
4. Jill Davidson, Community Relations
5. Joe Batho, Systems Engineering
6. Steven Hayden, Systems Engineering
7. Billy Ellis, Systems Engineering
8. Ernest Collins, Property Management
9. Ronald Blakely, Gas Division
10. Jim MacCarthy, Public Relations
11. Transmission Line Working Group Members

ENVIRONMENTAL CONSULTANTS

1. John Richardson, Beak Consultants Ltd.
2. John Thomas, Beak Consultants Ltd.

VITA

Surname: FRAGGALOSCH Given Names: AUDREY CHRISTINA

Place of Birth: MONTREAL, QUEBEC Date of Birth: NOVEMBER 20, 1954

Educational Institutions Attended
with Date of Entering and Leaving:

QUEEN'S UNIVERSITY, KINGSTON, ONTARIO	1974 to 1975
TRENT UNIVERSITY, PETERBOROUGH, ONTARIO	1975 to 1977
UNIVERSITY OF VICTORIA, VICTORIA, B.C.	1978 to 1981

Degrees, Diplomas, Etc. Awarded
with Dates and Names of Institutions:

Bachelor of Arts	1977	Trent University, Peterborough, Ont.

Honours and Awards:

Ontario Scholarship, 1974, Ministry of Education

A Reginald R. Faryon Scholarship, 1976, Trent University

A Rufus Gibbs Scholarship, 1977, Trent University

University of Victoria Graduate Fellowship, 1979/80 and 1980/81

Martlett Chapter, IODE Graduate Scholarship for Women, 1980/81

Publications:

W.R.D. Sewell, et al. *Where is Public Participation Going? An Annotated Bibliography Focussing on Canadian Experience.* Edmonton: Environment Council of Alberta, 1979.

A. Fraggalosch. *Our Energy Future: Study Pack.* University Extension, University of Victoria, Victoria, B.C., 1980.

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Author [redacted]

Signature

AUDREY CHRISTINA FRAGGALOSCH

Name

April 16, 1981

Date