

ALASKA LEGISLATURE SPECIAL COMMITTEE / SUBJECT FILES 86 / 2

91 SCOMM 9: HOUSE SPEC. COMM. ON PERMANENT FUND 1977-78

Fifteen

Southeastern Alaska has fairly narrow population and economic bases. What do you see in the future for its main economic sectors, timber, fish and tourism? Do you think the proposed fund should be involved in any of these areas?

Sixteen

With the proposed capital move in mind, how would you characterize the relationship (if any) between the fund and the proposed move?

Seventeen

In the area of " resource development " how would characterize the influence of the fund? What about questions of (economic) subsidies? To what extent should the fund be involved with investments in " high subsidy " resource projects?

Eighteen

What responsibility do you think the state has to develop an infrastructure (airports, roads, port facilities, power projects) that will assist overall statewide economic growth and development? Should the proposed fund be involved with investments in those areas; to what extent should " tolls " be charged to reduce the real costs of establishing infrastructure?

Nineteen

To what degree do you think the magnitude of the fund and the magnitude of the effects of " petro - dollars " Alaska will soon receive are understood?

Twenty

Since the proposed fund language stresses that : " the principal (of which) shall be used only for those income-producing investments specifically designated by law as eligible for permanent fund investment." , legislation that specifys " eligible investments " will be very important -- Do you think that legislation should be enacted in the up - coming legislative term OR do you think an Interim study with full statewide hearings should be conducted to determine the nature of the " eligible " investments?

Twenty One

What social benefits could the fund investments bring to Alaska?

Twenty Two

How would you characterize the future of rural Alaska?

Twenty Three

In general terms how would you characterize the business climate in Alaska?

Twenty Four

Alaska has 207,826 registered voters. 111,082 are listed as Independents. Independents outnumber Democrats and Republicans combined. What effects do you think these registration relationships will have on the future of Alaska's politics?

Twenty Five

General comments or remarks

SCOMM

#9:7

PF Consultants



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Library*

May 11, 1977

Mr. Brian Rogers
Alaska State Legislature
Legislative Affairs Agency
Pouch V
Juneau, Alaska 99811

Dear Mr. Rogers:

Gary Simon and I certainly enjoyed the opportunity to visit with you last week. We appreciate your giving us so much of your time during your obviously busy schedule.

As promised, I am enclosing some samples of our work which may be germane to your interests. I should note that we have three other major reports which are due out by the middle of June on subjects which are particularly pertinent to the discussions we had regarding implementation of programs in the state of Alaska.

Again, we appreciate the opportunity to meet with you and hope to see you in the near future.

Sincerely,

A handwritten signature in cursive script that reads "C. Richard Schuller".

C. Richard Schuller
Director
Science & Government
Study Center

CRS/stk
Enclosures



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Research Scientist

5/4/77 Gary Simon }
Richard Schuller }

COAL || Method Solvent Refined
OIL - GAS

Gas Purchasing Authority

CAPITIAL

Regulatory policies -

Land Use Control Bill
Bauxite Industry (Hydro) }
pre planning emissions * }

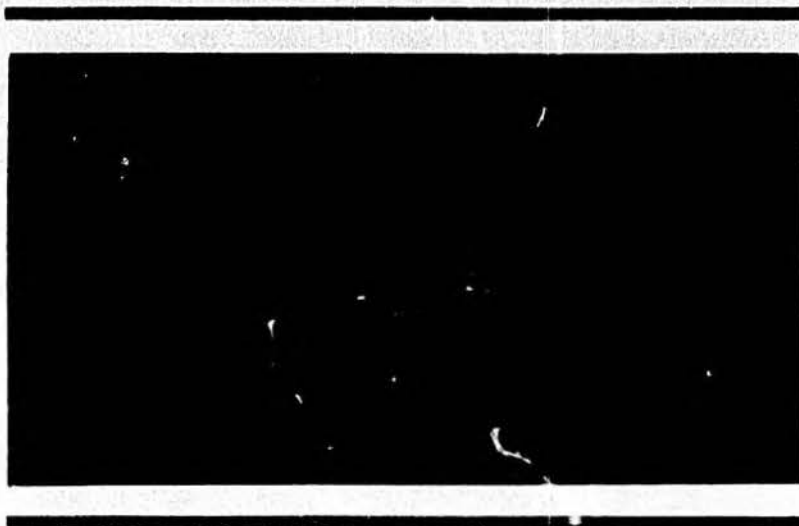
Market penetration
Tourism

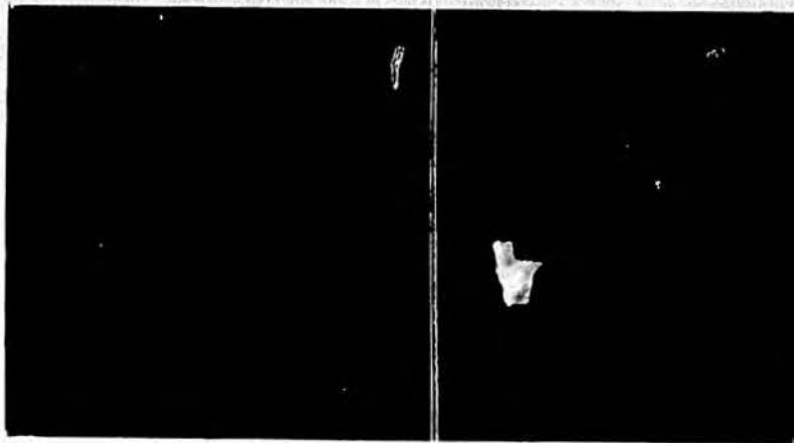
- Recent
- legal inst polit barriers to geothermal
 - Structure regs - elect generating tech
how do you commercialize solar?
 - develop integrated geothermal - remote labels

Lack of specific action -
are there major stumbling blocks?

Social Impact

A Research Report





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FINAL REPORT

STATE AND LOCAL PLANNING PROCEDURES
DEALING WITH SOCIAL AND ECONOMIC
IMPACTS FROM NUCLEAR POWER PLANTS

For
The United States
Nuclear Regulatory Commission
Office of State Programs

January 1977

STATE AND LOCAL PLANNING PROCEDURES
DEALING WITH SOCIAL AND ECONOMIC IMPACTS
FROM NUCLEAR POWER PLANTS

For

The United States
Nuclear Regulatory Commission
Office of State Programs

Final Report

January 1977

By

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Executive Summary

The Nuclear Regulatory Commission (NRC) is undertaking-- in cooperation with other federal and state agencies--a study designed to improve procedures for federal and state review and approval of sites for proposed nuclear facilities.* As a part of that study, this report focuses on one important segment of the entire process: the roles of state and local agencies in planning for and managing social and economic impacts of nuclear power plants. In order to be effective in these roles state and local agencies must work with each other as well as the NRC. Consequently, the NRC should be aware of the problems that state and local agencies face in managing social and economic impacts if it is to better cooperate with these agencies.

We used a comparative case study approach, analyzing six sites in three West Coast states. The case studies included plants in operation, plants under construction, and plants still in the planning stages. In contrast to some states, all three of these states have moderately centralized procedures for siting power plants, and all have strong environmental laws. However, the problems facing local government, particularly in less populated regions, are typical of similar communities anywhere faced with the need to plan for the rapid changes that come about from the construction of all large industrial or commercial installations.

*Efficiency in Federal/State Siting Actions, U.S. Nuclear Regulatory Commission, NUREG-0128, October 1976.

The major conclusions of this study encompass two types of issues: Substantive impacts such as schools, housing and public facilities, and process-oriented issues which affect the intensity and effect of the substantive impacts. The following is a summarized list of the conclusions and recommendations of this report:

1. We discovered that the following facilities and services were most commonly and most severely impacted by the influx of a construction force: schools; public services (sewer, water, police, fire, roads, hospitals); and housing. Overcrowding and overloading were the most common problems.

2. We identified several process issues which directly relate to the effective management of social and economic impacts resulting from power plant construction:

Coordination is poor among most government agencies, resulting in a poor information flow, and duplication or lack of services.

Early notification of the proposed project to all affected local governments is necessary to plan for impacts and to request outside funding. Early notification can provide adequate lead time (estimated as up to three years for the construction of certain public facilities) to construct and expand the needed facilities.

Planning capabilities are important to a local government's success in managing the identified social and economic impacts.

Additional funding is needed by most communities to expand their public facilities and services.

3. On the basis of the above conclusions we make the following recommendations:

- * The NRC should require, as part of the licensing process, that the utility demonstrate that it made efforts to provide the affected communities with early and complete information regarding anticipated social and economic impacts.
- * The NRC should formally examine a community's ability to manage expected social and economic impacts as part of its impact assessment process.
- * Dialogue should be initiated between state and NRC officials to assure that the NRC process does not hinder state and local efforts to obtain sufficient lead time and funding to cope with power plant impacts.
- * The NRC should establish an information office to direct communities impacted by nuclear power plants to the right sources of assistance. The possibilities of establishing such an office at the regional level should be investigated.

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Chapter I: Introduction

1.1 Overview

The Nuclear Regulatory Commission (NRC) is undertaking-- in cooperation with other federal and state agencies--a study designed to improve federal, state, and local procedures for siting nuclear power facilities and dealing with their impacts.* This final report discusses one aspect of the overall study: state and local government procedures for identifying and managing the social and economic impacts that may be associated with constructing or operating a nuclear power plant. The discussion of these state and local procedures points out how they relate to the entire process.

The building of a nuclear power plant, particularly in sparsely populated areas, has significant social and economic impacts on communities close to the construction site. The influx of a large construction force into a community causes a rapid increase in demand for public services (e.g., education, fire, police) and public facilities (e.g., roads, sewers). When the power plant has been built, and the construction force departs, the demand for such facilities and services may decline very rapidly. Sometimes a community is unprepared for the rapid growth and subsequent rapid decline in population associated

* Efficiency in Federal/State Siting Actions, U.S. Nuclear Regulatory Commission, NUREG-0128, October 1976.

with the construction of a nuclear power plant. This may lead to unplanned and even haphazard growth that can place a great strain on the community infrastructure. This strain on facilities and services can be minimized through the coordinated use of state, county, and local planning procedures. However, the community must be given sufficient "lead time"* in which to do proper planning, must have methods available to accurately assess which problems are likely to arise, and must have the resources to provide solutions.

This report contains three kinds of information.

- A. It identifies the social and economic impacts which potentially can be mitigated by state and local government action.
- B. It identifies the existing planning and budgetary processes that state and local governments might use in dealing with these impacts.
- C. It discusses the relationships among federal, state, and local processes.

The research for this report started by identifying the range of social and economic consequences of power plant construction that can impact a community. Both adverse and beneficial impacts were identified and the analysis focused on those impacts that a community can manage or mitigate. The data sources were obtained from a literature search and from analyses previously conducted by members of the research team.

* "Lead time" refers to the period of time between the decision to locate a plant in a specific community and when the impacts begin to occur.

We used case studies to identify the existing planning and budgetary cycles that some representative state and local governments might use in dealing with social and economic impacts. Six plants were selected for case study analysis. Two sites were selected from each of the following states: Washington, Oregon, and California. Sites were selected in consort with the NRC to provide data for a range of characteristics to be discussed later.

Data gathering consisted of interviews with state, county, and local officials in each of the three states to obtain information about their power plant siting process and the social and economic impacts that occurred or are expected to occur in the respective host communities. Interviews focused on how each community coped with (or planned to cope with) local social and economic impacts and what planning procedures the communities have set up to ensure orderly growth. In addition, in the interviews we discussed planning and budgetary cycles as well as revenue generating techniques.

We then examined the information we had obtained on state and local planning procedures to see how such planning activities might be better integrated with the federal licensing process. A portion of this work consists of a network analysis designed to illustrate relationships between the federal, state, and local processes.

1.2 Definition of Terms

In order to assure that the reader understands the terms used throughout this report, definitions of several planning-related terms are given below.

Local government refers to municipal, county and regional governments most closely involved in planning for the impacted area. However, when reference is made to both local and county governments, local refers to municipalities.

Community refers to the area within legal town boundaries and adjacent areas that are perceived by residents as making up a coherent entity.

The planning process is the sequence of steps that are undertaken to formulate goals and to implement them through specific ordinances regarding the use of land and the provision of services in a jurisdiction.

The budgeting process is the sequence of steps taken on an annual or biennial basis by various levels of government to determine the means for generating revenues and to allocate resources for the provision of government goods and services.

The permit process is one of the tools of planning. It includes specific steps that must be taken to obtain approval of proposed development projects within a particular locality, county, or state. This tool is used by government agencies to assure that developers are in compliance with governmental regulations and plans.

Process is a series of actions or operations taken to reach an end; a continuous operation.

Procedure refers to the method of carrying on in a particular course of action.

Mechanism refers to an action that is used as a means to achieve the desired goal; it is used here to refer to specific actions used to attain overall planning goals.

1.3 Case Studies

As noted above, we conducted two case studies in each of three West Coast states: Washington, Oregon, and California. We selected two nuclear power plant sites in each state. (See map on page 6) The sites were as follows:

Skagit-Sedro Woolley, Washington, proposed by Puget Sound Power and Light (PSP&L).

Washington Public Power Supply System (WPPSS-2)-Richland, Washington, being built by Washington Public Power Supply System.

Pebble Springs-Arlington, Oregon, proposed by Portland General Electric Co. (PGE).

Trojan-Rainier, Oregon, built by Portland General Electric Co. (PGE)

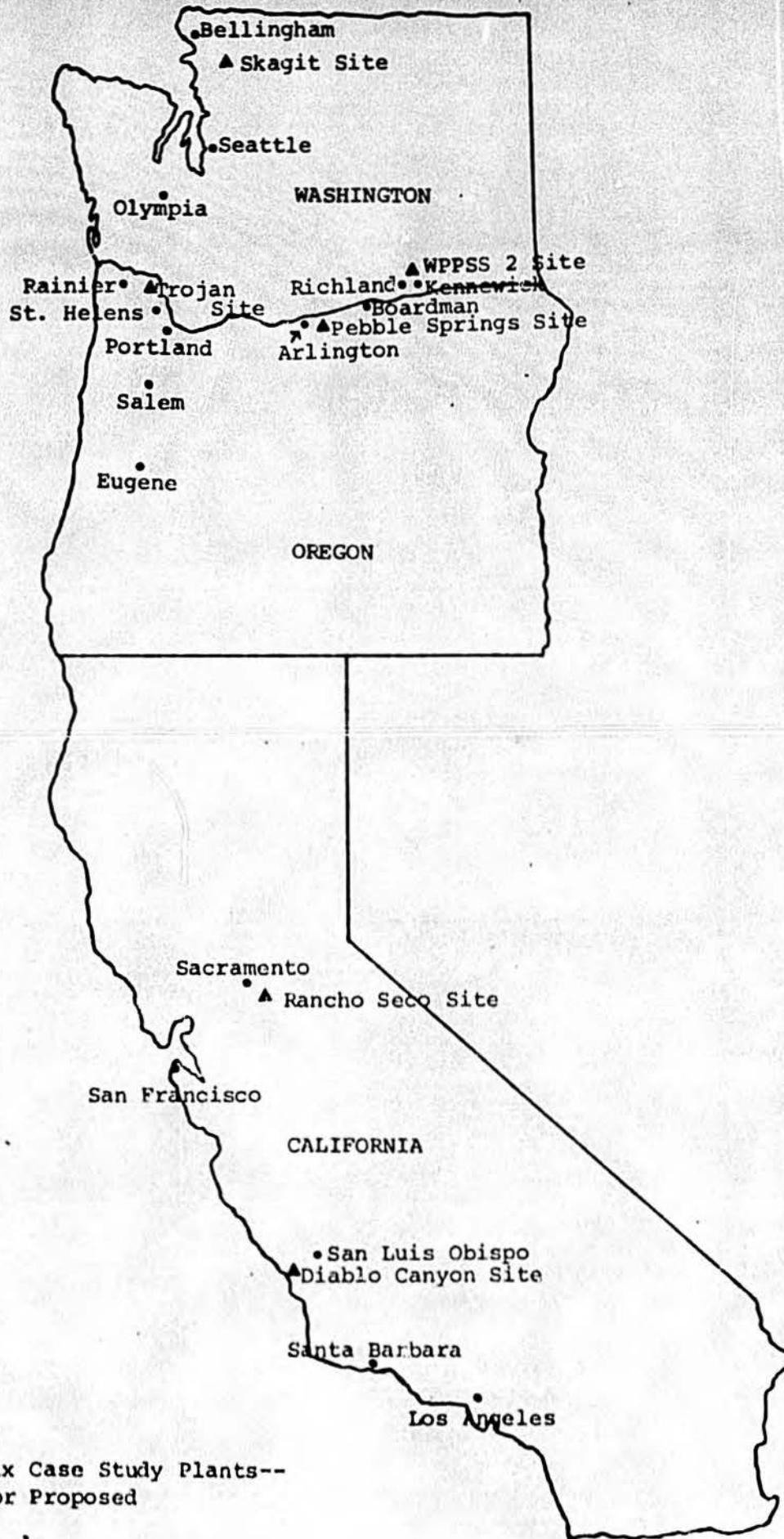
Rancho Seco-Clay Station, California, built by Sacramento Municipal Utility District (SMUD).

Diablo Canyon I-Diablo Canyon, California, built by Pacific Gas and Electric Co. (PG&E).

Each site was selected according to a number of criteria that were defined jointly by the research team and the NRC.

Major criteria were: (1) size and type of host community;

CASE STUDY SITES



▲ Sites of the Six Case Study Plants--
Constructed or Proposed

0 Miles 150

(2) differing stages in completion of the construction; and
(3) convenient geographical access to sites (in this case, three West Coast states).

1.3.1 Community Type and Size. The specific impacts likely to occur at any given site are dependent on unique characteristics of the host community. Social and economic impacts experienced by small isolated towns will be of a greater magnitude than if the same plant were built near a large city. As an illustration, the lack of available housing at the Skagit site just prior to the start of construction may create much pressure for building trailer parks. In contrast, the existence of sufficient vacant housing near the Diablo Canyon site minimized pressure on the local housing market during construction of that facility.*

1.3.2 Stage of Completion. We also tried to select sites having power plants in various stages of completion. In communities where the nuclear power plants were already operational, such as Rainier, Oregon (Trojan) and Clay Station, California (Rancho Seco) the social and economic impacts associated with construction have run full cycle, and a complete retrospective case study can be made. In Sedro Woolley, Washington (Skagit) and Arlington, Oregon (Pebble Springs) the impacts have not occurred yet and can only be anticipated, but the planning processes under way can be examined in detail.

* There is some dispute about this point. See Page C-11.

1.3.3 Disadvantages of these cases. There are also certain disadvantages to the cases used. We wanted a range of plants from the beginning to completed state. However, the impacts associated with the two completed nuclear power projects in California, Rancho Seco and Diablo Canyon, were minimal. Rancho Seco was located near a large metropolitan area and there was vacant housing near the Diablo Canyon site, although the nearby communities were small to moderate in population. Two alternative sites, San Joaquin and Sun Desert, would have provided more potential information on community impacts, but were only in the planning stages of development. In addition, California has changed its siting process by creating the California Energy Resources Conservation and Development Commission (ERCDC). Rancho Seco and Diablo Canyon were built before ERCDC had jurisdiction over siting and site certification. San Joaquin and Sun Desert will be subject to the new siting regulations.

The same situation exists in Oregon where the Trojan plant was built before the Oregon Energy Facility Siting Council took jurisdiction over plant siting. The Pebble Springs site has gone through the certification and review process at the state level. State certification was recommended by the Oregon siting council but a legal suit has prevented action by the Governor.

In addition, we must remember that it is risky to generalize from the three states and six sites we examined to situations in all other states.

1.3.4 Data Gathering. We interviewed a number of key persons who were involved with each power plant project at the state, county, and local levels. Interviewees included local government officials, school district administrators and planners; representatives from the state energy office, the state siting council, and the state planning agency; and a few utility-community liaison representatives. Each was interviewed concerning the range of impacts (using as a base those identified from the literature review), their planning and budgetary cycles, and mechanisms for identifying and managing local social and economic impacts, including taxing procedures and capital investment planning. (See Appendix E for a copy of the interview schedule.)

1.4 Analysis

Finally, we analyzed information from the interviews and other information on the state and local processes and on the selected sites. We discuss state level processes and cycles in one chapter and local level processes and cycles in another. Because of the brief time allowed to generate this report and because many different state and local agencies each have their own requirements and/or responsibilities in dealing with power plants, our major focus has been upon the siting and planning processes. Less emphasis was placed upon the budgetary process and specific permit processes. The team feels that the mechanisms and cycles available to plan for impacts is one of the key elements in effective coordination of federal, state, and local

impact management efforts. Without planning and coordination mechanisms, budget and permit processes will continue to be piecemeal. However, a later step in NRC's overall study should devote more effort to budgeting and specific permits because they are two important components of local impact management.

1.5 Local and State Governmental Agency Fragmentation

One significant limitation on this study is the fragmentation of the local, county, and state governments in the three states we examined. Agencies at each governmental level often lack common objectives and are only loosely coordinated; individual agencies may have incomplete information as to what other agencies at their governmental level are doing. We found cases where county and local officials communicate very infrequently, where local and county officials both complain of little communication with various state officials, and where state agency officials are unaware of what other state officials (with similar responsibilities) are doing. This fragmentation was compounded by situations where officials involved in the siting of a power plant, or in the identification and possible management of its impacts, had long since left the agency and their replacements could only provide guesses as answers to some of our questions.

This problem of fragmentation and lack of coordination is common to most government agencies. It is not the result of

malicious or intended exclusion by one agency of another, but rather often occurs because there is neither time nor staff to pursue more coordinated and efficient goals. Thus, tasks such as the identification of all permits which may be required at the state, county, or local levels to cope with social and economic impacts become a monumental sorting-out of government functions and agencies--it would involve contact with every division within every agency which might potentially be involved with such social and economic impacts. Given the time constraints of this project, such a task did not prove realistic. Thus we chose to focus on community development and planning, and energy agencies.

A final limitation imposed by a lack of coordination and communication is that information does not always flow easily among government agencies. Thus, although there are several well-done studies on impact management (see especially Williams, 1976) many local officials are not aware of their availability. It is more likely (although not a certainty) that state officials will be aware of the studies; however they have no formal mandate and little staff time to pass such information on to affected counties and communities.

1.6 Major Conclusions

The major conclusions of this study focus on two types of issues: substantive impacts such as schools, housing and public facilities; and process-oriented issues which affect the intensity and effect of the substantive impacts.

Substantive Issues

1. Schools are a public facility often impacted by the influx of the construction force (children of construction workers). The impact is complicated by its temporary duration and suddenness and can have detrimental effects on the quality of education and on relationships between existing residents and newcomers. Potential amelioration strategies include impact payments by the utility to the school districts.

2. Public services (sewers, water, roads, hospitals, fire protection and law enforcement) also can be significantly overloaded by the construction of a power plant. To manage these impacts most successfully communities need lead time to plan for expanding the facilities and additional funding to accomplish the expansion.

3. Housing is another community facility, usually controlled by the private sector, which is impacted by the influx of a construction force into a community. Subsidized housing, mobile homes, modular homes and zoning that allows for higher densities are techniques available to communities to cope with

with this impact. However additional funding and sufficient lead time are both necessary to a community's successful mitigation of these impacts.

Process Issues

1. There has been, and in some cases continue to be, poor coordination among state agencies, local agencies, state and local governments and utilities in the states we examined. This lack of coordination results in a poor information flow; accurate and timely information is necessary for state and local agencies to effectively plan for the above mentioned social and economic impacts.

2. Early notification of the proposed project to all affected local governments did not always take place at the sites we examined. Lack of early notification means communities do not have adequate lead time to plan for social and economic impacts and to request funding from outside sources. For large capital projects communities may require up to thirty-six months from the time they begin planning to the time the facilities will be ready for use. This issue is complicated, however, by the fact that in some cases communities are uncertain as to if the plant will be built or not. By the time it is certain that a plant will be constructed, it is too late for the community to develop plans to cope with the impacts.

3. A local government's capabilities for planning for needs related to rapid growth will determine in large part how successfully local impacts are managed in the nuclear power plant development process.

4. Most communities need outside funding to expand their public facilities and services to meet the demand imposed by an influx of construction workers. Such additional funding may come from the utility in the form of prepayment of taxes, or the federal government.

Our recommendations, based on the above findings, are as follows:

- * The NRC should require, as part of the licensing process, that the utility demonstrate that it made efforts to provide the affected communities with early and complete information regarding anticipated social and economic impacts.
- * The NRC should formally examine a community's ability to manage expected social and economic impacts as part of its impact assessment process.
- * Dialogue should be initiated between state and NRC officials to assure that the NRC process does not hinder state and local efforts to obtain sufficient lead time and funding to cope with power plant impacts.
- * The NRC should establish an information office to direct communities impacted by nuclear power plants to the right sources of assistance. The possibilities of establishing such an office at the regional level should be investigated.

Chapter II: The Identification of Social and Economic Impacts

2.1 Overview and Definitions

Social and economic impacts which affect a community due to the construction and operation of a nuclear power plant are principally related to changes in the demographic and economic characteristics of the community. Shifts in size and composition of the population will affect local economic activity, the tax base, public services and quality of community life. Usually, for a rural siting, the smaller the neighboring host communities, the greater the net impact produced by plant construction.

The increase in population and its composition is due to an influx of a construction, management, and engineering work force, and their families. Population increase does not occur at once, but rather proceeds incrementally for the first one or two years of plant construction, peaks in the third to fifth year of construction, and declines rapidly thereafter. For example, for a single-unit, 1200 megawatt station, the work force peaks at approximately 1475 workers in the fourth year of construction.*

It is not the growth in population of immigrating construction workers alone which has ramifications for a community.

* Schulte, Steven C. "Overview of Population Requirements - Analysis of Sectors Affecting Socioeconomic Impacts of Nuclear Power Plants." Richland, Washington: Battelle Pacific Northwest Laboratory, October 1976.

Some members of the work force bring their families with them to communities near the site.* Social and economic impacts occur because this new population places demands on a community's infrastructure. It requires many facilities and services, which a community may or may not be able to initially supply. In addition, these new demands on services require the addition of a secondary work force to provide those services. In turn, the secondary workers relocate their families to the host communities and are an additional source of population growth.

This population growth has consequences on a community's population composition. Many construction workers have school age children. The composition of a rural community with an aging population is therefore radically altered and may be caught unprepared to house the new children in presently available school facilities.

The problems are further complicated by the fact that this is not a permanent population growth. Rather, it is very intense for a reasonably short term, usually five to seven years. Unless other industries are prepared at the end of this cycle to provide employment opportunities for continuing high levels of population, the community will experience a rapid population decline as residents leave to work elsewhere. The community

* For estimates of typical population effects, see page D-12 of this report and Recht and Greene (1977).

may then be saddled with excess housing, retail, sewer, water, and school facilities, if these have all been provided. The planning problem which is most critical to communities facing such a "boom and bust"* future, therefore, is providing the optimum mix of temporary and permanent facilities, or use of other alternatives.

The problems discussed above - rapid, temporary population growth, strains on existing community facilities and services, changes in the community's economic structure, etc. - are generic to power plant siting or the construction of any large industrial or commercial installation. However, although these problems will occur, they will vary in magnitude, depending on the size of the communities near the site. The problems will be more severe in relatively isolated rural communities, than in communities located near a metropolitan area. In the latter case, the work force will more than likely commute, as opposed to relocate, and therefore not require as many services.

2.2 Dimensions of Social and Economic Impacts

Social and economic impacts are multi-dimensional, and thus present an array of problems to federal, state, and local

* "Boom and Bust" is a term applied to areas experiencing large and rapid population changes - first increasing, then rapidly decreasing. It is usually associated with a deterioration in the quality of life, as community services are strained during the "boom" to accommodate the new population. When the "bust" occurs and the population leaves, those facilities which were provided to accommodate the increased demand are left idle.

officials attempting to cope with them. Some principal dimensions of these impacts which affect the problems of planning for their amelioration are:

1. Magnitude or intensity, such as the size of the incoming construction force relative to the existing population.
2. Reversibility, or whether conditions are retrievable after construction is over. The acquisition of land for the plant is an example of an irreversible impact whereas the provision of portable classrooms is reversible.
3. Primary versus secondary, meaning whether the impact is direct or indirect. The influx of construction workers is direct, while the demands placed on community services are direct or secondary.
4. Beneficial or adverse. These impacts are self-explanatory. Some impacts, such as enlarging the tax base, are positive while others, such as overcrowding in the schools, are negative impacts.
5. Length of occurrence. Some impacts are short-term while others are long-term. Congestion on roads or highways will subside when the construction workers leave the community, but vacant, permanent housing remains.
6. Synergism. Some impacts, taken alone, do not appear to present serious problems to community officials. However, when the impacts are aggregated they can present difficult planning and coordination problems to the community.

If not planned for properly, such as planning the correct mix of temporary as opposed to permanent services and facilities, a "boom and bust" phenomenon can occur, leaving the community in a worse situation than originally existed. Local government is often placed in an intractable position regarding the provision

of new facilities and services because it must wait until the population is projected with a high level of certainty to reach a certain level and density before it can justify building new facilities and providing new or expanded services. Yet, if the local government's planning is to assure orderly growth, and the growth transition is to be smooth, it must have adequate lead time to construct new facilities before the population influx occurs.

2.3 Specific Impacts Potentially Occurring with the Construction of a Nuclear Power Plant

A number of specific social and economic impacts associated with the construction of nuclear power plants were identified through a review of the pertinent literature and previous research experiences of some study team members.*

* Olsen, Marvin and Donna J. Merwin. "Toward a Methodology for Conducting Social Impact Assessments Using Quality of Social Life Indicators." Richland, Washington: Battelle Pacific Northwest Laboratory for U. S. ERDA, 1976.

Curry, Martha and Marjorie Greene. "A Program Plan for Performing Social Impact Assessment: A Case Study of Coal Development in the Powder River Region." Richland, Washington: Battelle Pacific Northwest Laboratory for U. S. ERDA, 1976.

Curry, Martha, Jill Goodnight and Marjorie Greene (contributors). Identification and Management of Economic and Social Impacts of Nuclear Energy Centers: A Preliminary Analysis. Seattle, Washington: Battelle Human Affairs Research Centers, 1975.

The literature consisted of environmental impact statements, scholarly works, and handbooks describing community impacts.

(The most useful works included Battelle Human Affairs Research Centers, 1975; Olsen and Merwin, 1976; Reiff, 1976; Williams, 1976; and Brenner, 1976.)

A listing of the potential range of social and economic impacts which could occur in a community impacted by a power plant are shown in Table 1. Not all of these impacts occur in every community where a plant is being built. The items in this table show the range and variety of changes possible with construction and operation of a nuclear facility. The magnitude, and nature of each category of impact will vary substantially from one site to another.

All of the impact categories in Table 1 are attributable to a large construction labor force and secondary employment force, plus their families moving into an area of sparse population. Construction workers and their families may add a large increment to demands for public facilities and services. The new residents may also provide new sources of tax revenue for the community, but how much revenue a community will get is dependent on how local taxes are collected and distributed. (They are not necessarily collected by the agency which uses them.)

TABLE 2.1

Major Social and Economic Impacts Associated
with Nuclear Power Plants

The main headings describe the major sectors of social and community life which could potentially be impacted; the subheadings describe the types of changes which might take place in each sector.

1. Relocation Impacts

A. Displacement of residents from the site area

(These people could be confronted with a new housing market of escalating prices--prices may be higher than what residents were compensated for their property)

2. Demographic Impacts

A. Rapid population growth caused by in-migration of the construction force workers employed in service or support jobs and those seeking employment who may remain unemployed

B. Change in the ethnic composition of the population

C. Change in the sex ratio of the population

D. Change in the age structure of the population

E. Change in the educational status of the population

F. Change in the population density of the area

G. Change in the urbanization rate of the area

3. Local Economic Impacts and Taxes

A. New job opportunities in the community

B. Change in the total median family income in the area

- C. Change in the employment rate in the area
 - D. Change in the retail prices in the area
 - E. Demand increases for retail services
 - F. Change in the assessed value of property in the area
 - G. Change in prevailing real estate prices
 - H. Change in the cost of living in the area
 - I. Change in the budget and property tax levy review
 - J. Increased revenues from the sales tax
 - K. Change in the community's gross product
 - L. Change in the business and industrial composition of the community
 - M. Change in rates of business starts and failures
 - N. Change in economic base
 - O. Increased economic planning required
4. Public Works and Transportation Impacts
- A. Water
 - 1. Demand increases for major transmission and distribution system for water supply
 - 2. Need increases to develop new drinking water sources
 - 3. Need to provide more technology to protect water quality
 - 4. Need to provide storm run-off systems as urbanization increases
 - 5. Change in the demand for water

B. Sewage Impacts

1. Increased demand for sewer collection treatment facilities
2. Increased need for facilities for sludge disposal and recycling
3. Failure of subsurface sewage system

C. Solid Waste Impacts

1. Increased demand on collection and storage of solid waste
2. Increased demand on disposal and recycling facilities
3. Increased inspection of handling and disposal facilities
4. If land disposal, is there adequate land and suitable conditions?

D. Air Pollution Impacts

1. Increased need for air pollution control policies
2. Increased need to enforce existing policies
3. Increase in dust and air matter from trucks going to the site

E. Noise Pollution

1. Increased need for policies to control disruptive construction and traffic noise
2. Increased need to enforce existing noise ordinances

F. Transportation Impacts

1. Increased demand for a variety of services
 - a. highways and expressways
 - b. principal, minor arterials and collectors
 - c. public parking facilities
 - d. traffic control and safety
 - e. public transit
 - f. airport, land and harbor facilities
 - g. bikeways
 - h. rail transport
2. Increased need to maintain highways, roads, and major arterials
3. Increased demand for special transportation services, e.g. construction workers
4. Increased need for transportation planning
5. Land Use Impacts--Agricultural/Residential/Commercial/Industrial/Forest/Recreational
 - A. Change in existing land use patterns (from agricultural to more urbanized uses)
 - B. Increased demand on services provided by planning and engineering departments: zoning, subdivision regulations, comprehensive planning, building permits and inspections, and code enforcement

C. Interference with present land use activity nodes

D. More sophisticated management tools required

6. Housing Impacts

A. Changes in residency duration and mobility

B. Increased demand for housing of various types:
rental units, mobile homes, rooms in houses, single
family dwellings

C. Increase in housing values and rental costs

D. Changes in ethnic and social class segregation in
housing

E. Increased alterations from existing housing market
structure--new units, size, price range

F. Increased possibility of outmigration of existing
residents

G. Increased demand for low income housing

7. Recreation/Culture Impacts

A. Increased demand for a variety of recreational
facilities and services, public/private, indoor/
outdoor

1. Ballparks and playgrounds

2. Tennis courts

3. Swimming pools

4. Parks

5. Taverns

6. Theaters

- B. Increased demand for the community to plan, acquire or construct, maintain, or operate recreational facilities
 - C. Increased need to organize and direct recreational programs
 - D. Increased demand on cultural facilities
 - 1. museums
 - 2. libraries
 - 3. cultural centers (coliseums, auditoriums, historical sites, fairgrounds)
 - E. Increased demand for neighborhood centers and programs
8. Public Safety Impacts
- A. Increased demand/need for basic police and fire services --apprehension and detection, crime prevention, fire protection
 - B. Increased demand on police enforcement and fire protection support systems--communications, equipment maintenance, training
 - C. Increased demand/need for legal and judicial services
 - D. Extent and quality of corrections facilities and services (drug, alcohol, delinquency, criminal)
 - E. Inadequate jail facilities

9. Educational Impacts

- A. Increased demand and need for facilities and personnel in primary and secondary education
- B. Increased strains on the budget and quality of the educational system

10. Physical and Mental Health Service Impacts

- A. Increased demand for professional services and facilities
- B. Increased strains on the budgets and quality of physical and mental health care services
- C. Increased demands on laboratory services
- D. Increased demands on a variety of services
 - 1. Family planning
 - 2. Prenatal care
 - 3. Chronic diseases
 - 4. Home health care
 - 5. Emergency services, e.g. ambulances

11. Public Health Impacts

- A. Increased demands on sanitation inspections-- restaurants, school buildings, water sampling, day care, foster homes, etc.
- B. Increased demand for public health programs

- C. Rise in ethnic organizations and activities
 - D. Increased demand on local mass media--newspapers, radio, television stations
 - E. Replacement of traditional rural community values and preferences by urban values and preferences, e.g., dramatic increase in fast food and apartment-oriented services
15. Organizational
- A. Changes in family living patterns, (singles, couples, families, etc.)
 - B. Changes in informal social interaction
 - C. Changes in the number and types of churches
 - D. Changes in the socioeconomic class structure
16. Political Impacts
- A. Changes in the strengths of local political parties
 - B. Changes in citizen participation in politics--voting, communicating, acting
 - C. Changes in the strength and structure of informal community power systems
 - D. Changes in relationships between local, state, and federal governments
 - E. Increased demands on local government budget

12. Social Services Impacts

- A. Increased demand on government agencies for various types of social service payments: welfare, unemployment, food stamps
- B. Increased demand/need for various services:
 - 1. Alcohol abuse programs
 - 2. Interpersonal counseling
 - 3. Drug abuse programs
 - 4. Child welfare services
 - 5. Manpower employment-job training, work experience programs

13. Social and Psychological Wellbeing Impacts

- A. Change in the type and number of crimes in the community
- B. Change in types and numbers of social problems-- divorce, alcoholism, suicide
- C. Change in perceived quality of life
- D. Change in life styles as a result of urbanization-- accelerated way of life
- E. Possible conflicts between newcomers and oldtimers

14. Community Structure Impacts

- A. Changes in the number, types of community organizations
- B. Changes in the participation rates in community organizations

2.3 Impacts in the Case Sites

Table 2.2 illustrates the major impacts experienced or anticipated at each of the six sites we studied. For each impact category at each site, the general impact which occurred or may occur is described. It should be noted that the impacts described in the table do not entirely encompass those identified in Table 2.1. Presently, measurement techniques do not exist to monitor all the impacts listed in Table 2.1.

TABLE 2.2: IMPACTS IDENTIFIED AT THE CASE STUDY SITES

CASE STUDIES	WPPSS-2	SKAGIT	TROJAN	PEBBLE SPRINGS	DIABLO CANYON	RANCHO SECO
IMPACT CATEGORY						
Relocation	N/A *	Displacement of residents from site area	N/A	N/A	No impact	No impact
Demographic	Rapid population growth	Anticipated moderate population growth	Moderate population growth	Anticipated rapid population growth	Moderate population growth	Minimal population growth
Economic/ Taxes	New job opportunities in community. Change in employment rate. Increased demand for retail services	New job opportunities anticipated. Anticipated change in employment rate. Expected increase in retail services	N/A	Same as for Skagit	Increased sales tax receipts in affected communities. Increased prop. tax receipts in one school district, tax hardship in another	Public utility; minimal prop. tax impact. Sales tax receipts up.
Water	Eventual shortage without new facilities (in Richland)	Increased demand anticipated	Increased demand--available facilities	Increased demand anticipated. Shortage without new facilities	Increased demand facilities available	No impact
Sewer	Eventual shortage without new facilities (in Richland)	Increased demand anticipated	Increased demand--facilities available	Increased demand anticipated--shortage w/o new facilities	Increased demand--facilities available	No impact
* Not Available						

TABLE 2.2: IMPACTS IDENTIFIED AT THE CASE STUDY SITES

CASE STUDIES	WPPSS-2	SKAGIT	TROJAN	PEBBLE SPRINGS	DIABLO CANYON	RANCHO SECO
IMPACT CATEGORY						
Solid Waste	N/A	Increased demand anticipated--facilities available	No impact	Increased demand shortage anticipated	N/A	N/A
Air Pollution	N/A	No impact anticipated	N/A	N/A	N/A	N/A
Noise Pollution	N/A	No impact anticipated	N/A	No impact anticipated	N/A	N/A
Transportation	Congestion on streets and at intersections	Major congestion anticipated. Increased demand for traffic control anticipated	Moderate congestion on roads. Increased demand for traffic control	N/A	Some rush hour congestion at highway 101 turnoff	No impact
Land Use	Increased demand on planning services	Increased demand on planning services	Development of all available land in St. Helens for housing, some commercial	Increased demand on planning services	N/A	N/A

TABLE 2.2: IMPACTS IDENTIFIED AT THE CASE STUDY SITES

CASE STUDIES	WPPSS-2	SKAGIT	TROJAN	PEBBLE SPRINGS	DIABLO CANYON	RANCHO SECO
IMPACT CATEGORY						
Housing	Housing shortage	Tight housing market anticipated. Shortage of low income housing	Housing shortage in St. Helens. Impact on low income elderly	Housing shortage	Moderate impact--difficult to separate from other growth pressures	No impact
Recreation/Culture	Shortage of recreation facilities--ball fields	No impact anticipated	Shortage of recreation facilities (ball fields, parks)	Increased demand anticipated	No impact	New Park constructed
Public Safety	Increased demand with budget cutbacks required	Increased demand anticipated. Provisions for new personnel and equipment	Increased demand. New facilities and personnel	Increased demand anticipated	No impact found	No impact found
Educational	Shortage of facilities. Required portable classrooms	Increased demand anticipated--provisions for portable classrooms & school campuses	Shortage of facilities--required portable classrooms	Shortage after excess capacity filled--require portables, new construction. (no excess at Boardman)	One school district grew 7%--had financial strain	No impact
Physical/Mental Health Services	Increased demand--facilities available	No impact anticipated	Increased demand for professional services & facilities	Increased demand for facilities and professional services	No impact found	No impact found

TABLE 2.2: IMPACTS IDENTIFIED AT THE CASE STUDY SITES

CASE STUDIES	WPPSS-2	SKAGIT	TROJAN	PEBBLE SPRINGS	DIABLO CANYON	RANCHO SECO
IMPACT CATEGORY						
Public Health	N/A	N/A	Increased demand but not enough to preclude budget cuts	N/A	N/A	N/A
Social Services	N/A	N/A	Increased demand for juvenile services began during Trojan impact	N/A	N/A	N/A
Social/ Psychological Well-being	N/A	Some conflicts anticipated	Change in life styles	Retain younger population with new job opportunities	N/A	N/A
Community Structure/ Organization	N/A	N/A	N/A	N/A	N/A	N/A
Political	N/A	N/A	Some expansion of government structure; especially of emergency services division	N/A	N/A	N/A

Chapter III: The State Role

3.1 Overview

The purpose of this chapter is to describe and analyze the state planning processes and cycles that are involved in nuclear power plant siting. The chapter focuses on the use of these mechanisms to deal with social and economic impacts. First, it compares the state energy facility siting processes of Washington, Oregon and California as to their responsibility for social and economic impacts. Second, it compares the state planning and community development agencies that have responsibility for state involvement with local communities in social and economic impact assessment and management. Lastly, it presents a general discussion of the potentially most useful features in each of the state processes.

3.2 State Energy Facility Siting Review Processes

3.2.1 State Energy Authorities. An increasing number of states have adopted energy facility siting laws which require state approval of the location for proposed energy facilities. This approval may supercede any approval granted in the federal licensing process. Such siting reviews provide states with some influence on the location and development of energy facilities. Of particular concern here is how state facility siting review procedures take social and economic impacts into consideration.

Washington, Oregon and California have state energy agencies which are legally responsible for planning and coordinating energy development in the state. The California (Cal. Pub. Res. Code §§ 25200 et seq. Supp. 1976) Energy Resources Conservation Development Commission (ERCDC) has the strongest mandate of the

three to develop and implement a plan for electrical energy needs in the state; the Oregon legislation creating the Department of Energy (Ore. Rev. Stat. § 469.120; 1975) and the Washington legislation creating the State Energy Office (Wash., Ch. 108, Laws of 1975-76 (44th Leg. Session, 2nd Ex. Session), § 5) have a more limited scope in planning for future energy needs. The Oregon and Washington laws place major emphasis on centralizing information about energy supply and development and on effecting coordination among state agencies.

In all three states the energy planning process includes as a primary function the evaluation and approval of all proposed energy facility sites. In California the five commissioners of the ERCDC act as the site evaluation hearing body which is staffed by the Facility Siting Division of that agency. In Oregon a site evaluation council is attached to the Energy Office; in Washington a site evaluation council has been set up as an independent agency. Oregon's council is made up of members appointed from the public; Washington's consists of members from 15 state agencies. In Washington, representatives from county legislative bodies from counties with sites under consideration become temporary members of the council when it considers the facility and site in their county. In Oregon, it is also the county legislators from the potentially affected community who serve as an advisory committee to the Energy Council. Although these arrangements assure some local input, they do not guarantee that other local governments and citizens receive adequate representation.

3.2.2 State Certification Processes. The energy facility site certification process is similar but not identical in all three states. Oregon and Washington have gone through the site certification process,^{*} and have formally specified the steps that must be taken in the process. While California has not yet implemented the site certification process, the ERCDC has developed administrative regulations which provide specific guidelines for the procedure. Listed below is the general outline of sequential steps in the site certification process in the three states, with special note of the requirements for considering social and economic impacts.

1. Utility files notice of intent (NOI) to file an application for site certification to the appropriate Commission, or Council (hereafter called "agency"). Social and economic effects must be discussed in the NOI in California. The NOI process does not exist in Washington.
2. Agency distributes NOI to interested parties and solicits comments from state and local agencies (Washington omits this step; California requires publishing NOI summary in newspapers of local areas affected).
3. If NOI is determined acceptable by agency, utility proceeds to prepare and file an application for certification accompanied by a filing fee.
4. The application for certification provides the major basis for evaluating the proposed facility site(s) and usually follows a general EIS format (collect baseline data on existing conditions, identify effects of alternative plans on various physical, biological, environmental, land use and social and economic elements of the area and region, and identify ways to mitigate adverse

^{*} For the Skagit, Satsop and WPPSS sites in Washington, and the Pebble Springs site in Oregon.

impacts). It also includes a justification of need, a discussion of emergency systems and safety precautions, waste transport and disposal plans. This step is one point where pertinent information on social and economic impacts is required in all three states.

5. **Hearings:** Following the receipt of the application for certification, the agency distributes copies to state and local agencies, performs its own staff evaluation of the application's sufficiency (a state-required EIS in Washington and California) and conducts a series of hearings near the proposed site to obtain public responses to the proposed development. Again, social and economic considerations may be raised here. (The applicant is responsible for distribution in Washington.)
6. Agency evaluation may warrant further studies of problems which are found to be inadequately evaluated in the application for certification. Among these, of course, could be social and economic impact evaluations.
7. The agency integrates comments and criticisms obtained from public, state and local agencies and the agency uses this information to formulate its own report with recommendations for approval or disapproval of the application.
8. Agency reports to the Governor its recommendations; Governor has final voice in the approval process. In Washington the recommendation must be based on hearing records.

The three states vary significantly in the timing of this site certification process.

In Washington this process may be completed in a minimum of 12 months, which may be extended; in Oregon it may take 26 to 30 months; and in California it may take 36 months or more. California has the most complex process since it requires the applicant to analyze three alternative sites in detail in the NOI process, then to provide more detailed analyses of the

preferred site in the certification process. In contrast, the NOI has a much more limited function in the Oregon process and does not exist in the Washington process. In all cases, the actual state site evaluation process usually is preceded by considerable utility planning and sometimes by utility contact with relevant local and state agencies. This contact takes place during the utility's own planning process; the utility provides information to government agencies about its plans. Financial assistance arrangements between the utility and the impacted community can be made before the utility approaches the state or during the state site evaluation process.

Each of the states has tried to move toward a more simplified permit process in an effort to reduce the number of permitting delays facing energy facility developers and to facilitate better siting decisions. However, the consolidation of permit processes has not been entirely successful. Other state agencies (e.g., California Coastal Zone Commission) and local agencies (e.g., zoning commissions and building departments) still require separate permits over and above the site certificate. In addition to permits required for the site, permits are also required for many of the expanded and new public facilities needed to cope with the population influx. Efforts have been made to coordinate all these permits with regard to timing and sequence in the overall site certification process to reduce unnecessary delays.

At first glance, the normal cycle appears long enough to allow sufficient lead time (two to three years) for both local and state agencies and the utility to plan for the impacts ensuing from plant construction and operation. Problems that occur in timing are discussed later in this section.

3.2.3 Social and Economic Considerations in the Siting Process. The energy facility siting processes in all three states acknowledge the need to include social and economic concerns in the application for certification. However, the level of detail with which this element must be treated varies considerably.

In all three states, social and economic impacts must be identified by the utility early in the siting process--they must be contained in both the Notice of Intent and Application for Certification in California and in the Application for Certification in Oregon and Washington. In all three states, specific administrative regulations spell out in detail the elements that must be included in the application, and all include a fairly comprehensive list of social and economic factors. In addition the California and Oregon regulations include the identification of available resources to mitigate social problems (Washington regulations are not yet published). California's Energy Commission has the power to undertake further investigation of social and economic impacts and associated mitigation measures if an initial evaluation

determines that the utility's analysis is insufficient. In Oregon the utility must conduct any additional studies considered necessary by the siting council. Washington uses its \$25,000 permit fee to hire a consultant only to analyze the application. The siting agencies may also perform their own assessments, although in Washington they are not funded for this.

The environmental impact statement (EIS) has also become a major tool, particularly for state and federal levels of government, for performing these assessments. Twenty-four states (Council on Environmental Quality, 1975, p. 659) including California (California Environmental Quality Act, CEQA) and Washington (State Environmental Policy Act, SEPA) now have state environmental quality laws which require an environmental impact analysis for some private and all public projects which have any significant environmental impact. In Washington and California the energy facility siting agency is responsible for the preparation of environmental analyses that indentify social and economic impacts and procedures for mitigating these impacts. In the preparation and evaluation of these reports, state agencies can become actively involved in social and economic impact assessment as well as mitigation measures.

Including county legislators on the siting body and holding public hearings on proposed projects also helps to assure that social and economic impacts, as they are perceived locally,

will be identified. However, as mentioned earlier, county legislators may have a different perception of local needs and impacts than local community planners, officials and citizens, and may not communicate with them. The California ERCDC does not include any local representatives during deliberations on siting issues. However, it uses three specific mechanisms early in the siting process (in the NOI phase) that assure the opportunity for local involvement and input. The ERCDC (1) must publish a summary of the NOI in local newspapers, (2) must distribute an information packet to local governments once they receive word from a utility that a site is being considered in the NOI process, and (3) must reimburse local governments for their review and input to the application procedure. Additionally the Commission has a Public Advisor who assists people wishing to participate in Commission proceedings and who can suggest ways to make that participation most effective.* (ERCDC, p 1-2) Thus several aids are provided to local governments and the public to help them comment on the Environmental Impact Report (California's term for Environmental Impact Statement) and for participating in the certification process for facilities affecting them.

* However, one person interviewed in this state expressed the view that the Public Advisor has not really been that helpful to citizens.

3.2.4 Involvement of State Planning Agencies. State agencies which assist or coordinate local land use planning and community development efforts comprise a second channel for considering social and economic impacts in developing power plants. The state agencies involved and the nature of their involvement vary substantially among the three states. Rather than try to identify each state agency that might be involved in providing services to local areas, we chose to focus primarily on the state planning and community development agency or its equivalent. We chose this agency because it is the agency most likely to be involved in dealing with local governments in comprehensive community planning and it is usually the state dispenser of at least some federal funds for local planning. Planning seems to be a key factor and a prerequisite to effective impact management, particularly in communities that are impacted by large nuclear and other energy facilities.

3.2.4.1 Planning Assistance Agencies. Washington, Oregon and California each have agencies that are responsible for the state coordination or assistance role in local comprehensive planning and community development efforts. This agency is the Office of Planning and Research (OP&R) in California, and the Planning and Community Affairs Agency in Washington. These agencies administer HUD 701 funds to local governments and are responsible for assisting local communities with comprehensive planning efforts and with impact management efforts. In Oregon, two agencies are involved. The Department of Land Conservation and Development administers the State Land Use Planning Act, financially assists local governments

in completing them and coordinates certain state agency plans. The Intergovernmental Relations Division (IRD) administers HUD 701 funds and represents the Governor's office in coordinating impact management efforts. IRD has allocated field staff to specific geographic regions in the state. The field staff are assigned to work with communities in coping with problems that require intergovernmental coordination. California and Washington's agencies have a more fragmented system of assistance to local governments. State agency staff are assigned to functional programs and work with communities involved in those specific programs. While spokespeople for both the California and Washington agencies have expressed concern and interest in assisting communities impacted by power plant construction, their program-oriented organizations make comprehensive assistance less likely than in Oregon. However, all three states have established mechanisms for providing technical assistance (field staff) as advisors or facilitators to local communities.

Generally, in California and Washington these planning agencies do not provide financial assistance to local communities, although the state does select and disperse federal funds to applicants and grantees. However, they play a key role in helping communities to obtain federal or other state grants or loans for a variety of services and facilities. The state agencies do not have much money in their budgets for community impact management. In fact, Washington provides no state money for comprehensive land use planning; it disperses

federal money only. Oregon, however, is the leader in the area of financial assistance with \$4 million allocated to assisting local governments develop land use plans to achieve compliance with the State Land Use Planning Act.

3.2.4.2 Other State Agencies. Although we investigated only the state agencies most directly involved in relating to communities' comprehensive planning efforts, there are numerous other state agencies that may provide limited impact assistance in specific areas. These include agencies responsible for public health, social services, housing assistance, and transportation. Federal agencies are also relevant because although some state grants are available for community projects and programs, much of the available financial assistance flows through state agencies from federal agencies such as EPA and HUD. We did not investigate all of these various agencies because time for this project was short. Many of these agencies have differing objectives and roles which at times overlap or are not consistent with one another. This makes identification of all potential forms of state and federal assistance a time-consuming task. To the extent that state and federal agencies take responsibility for assisting or monitoring local impact management efforts, it will be important to examine thoroughly these various agencies and programs and how they relate to one another. Such knowledge will help in identifying the range of impact management tools and in identifying how the relevant levels of government can best work together to manage these impacts.

3.3 Conclusions

All three states included in this study have developed formal mechanisms within state government for coordinating energy facility siting with state planning. While the structure of these mechanisms differs in these states, they have some basic features which could be used by other states which have yet to develop a site evaluation process.

The three states all include local governments formally in the site evaluation process. Temporary membership or advisory status on the site evaluation council; early notification of the community; and reimbursement of local governments for their review of the facility site application seem to be particularly useful ways of assuring local government involvement. However, there have been some problems in identifying and including all of the impacted governments and in assuring that the local representatives actually represent their area. Also, the California ERCDC's Public Advisor to potential intervenors is a unique service which potentially helps to assure that the public has adequate access to the decision making process and the relevant information. Finally, the practice of holding hearings in the local area affected by the proposed site, which is done in the three states, helps all parties involved to see more clearly and be more aware of the local situation.

The state planning and community development agencies tend not to have well defined or comprehensive roles in assisting local governments to manage impacts from energy or other developments. Oregon is undertaking its first state

effort to provide comprehensive impact management assistance through the IRD's coordinating function in the Pebble Springs case. This is potentially an innovative state role in social and economic impact management. With the exception of this one experimental mechanism, however, the three states' planning and community development agencies are not organized so as to play a major role in coordinating federal, state, and local efforts to deal with the local social and economic impacts associated with nuclear and other energy developments.

Generally, the states have little money budgeted for assistance to local governments facing or experiencing major social and economic impacts. Although Oregon does have money budgeted to assist local governments develop local land use plans, there is a fragmented approach to state programs for other local needs. This is true also in California and Washington because they all rely upon HUD 701 money for local comprehensive planning assistance (with no state financial assistance). Oregon and Washington cannot respond quickly to financial needs due to the lag associated with a biennial budget (the lag is sometimes up to 30 months). Although each has developed some mechanism for providing emergency funds, these are limited and are probably inadequate to cover a wide range of needs in impacted communities. The developer, however, can be asked, and under Washington law, required to make impact payments to communities. (See Chapter IV for further discussion of the utility's role in impact management.)

Much of the potential financial assistance to local governments currently lies within federal programs, making the federal planning and budgeting cycles at least as important as those at the state and local levels. This tends to complicate impact management efforts by local governments since they need to plan some facets of their annual budget and programs so they coincide with both the federal and state fiscal years (which often are not consistent). Additionally, federal funding may be negotiated directly with local governments or through state agencies who then administer and monitor funds to local governments. This varies from program to program and is an inconsistency which makes it difficult for either local or state agencies to develop a comprehensive impact management scheme. This situation particularly hinders state efforts to provide a coordinating function to local impact management efforts.*

In summary the state site evaluation and planning agencies show a growing interest and concern in playing a major role in identifying and evaluating social and economic impacts and in the provision of technical and financial assistance to impacted communities. Although only Oregon has formal mechanisms in place for playing such a role, several staff in the state agencies in California and Washington are attempting to

* This view was expressed specifically by people in Oregon's IRD, which does have a mandate to coordinate state and local programs.

monitor informally communities anticipating impacts, and provide planning advice. The fragmentation of roles among the state agencies makes it difficult for the planning and community development agencies involved to provide information to local governments in locating and using state assistance and to comply with state requirements from various agencies. Another factor which limits the state's role is its inability to provide substantial financial assistance to local governments (except for Oregon's land use planning assistance). Finally, because of these two limitations, state agencies may not have developed the expertise necessary to provide comprehensive information and technical assistance that local governments need to manage effectively the social and economic impacts with which they are faced.

Chapter IV: Local Government Actions

4.1 Introduction

This chapter is composed of three sections: (1) an examination of local government's role in the siting process; (2) a discussion of the function of local comprehensive planning in the assessment and management of social and economic impacts resulting from nuclear power plants; and (3) a discussion of local government's problems and successes in providing the additional public services required by the construction and operation of a nuclear power plant.

This chapter is written to reflect the process as it now exists in Washington, Oregon, and California. Since the time frames of the six sites studied vary considerably, no statements about state processes would apply accurately to the experiences of each utility and community faced at the time their plant was approved and constructed. Consequently we decided to describe the approval, coordination, and financing processes which now exist, even though the experiences of the earlier projects (Rancho Seco, Trojan, and Diablo Canyon) were rather different.

4.1.1 Local Involvement in the Siting Process. Basically there are two ways in which local public officials may be involved in the process. The first is as temporary members of the state siting council. The second is as planners who organize efforts, perhaps with state help, to deal with anticipated local impacts. In the State of Washington local

officials also may be intervenors in the contested case process of site evaluation.

4.2 The Local Officials' Participation in Siting Decision Making

The precise nature of local governmental involvement in the siting decision varies in Washington, Oregon and California, although there are several generally consistent practices. (See Appendices B, C, and D for a detailed description of the role of local governments in each of the three state processes.) County governments in Washington and Oregon, and all local governments in California are notified at about the time the state and utility begin to have formal interaction. In Washington and Oregon representatives of county legislative authorities from the affected counties sit on or are advisors to the respective Energy Facility Siting Councils for the duration of the siting decision affecting them. County legislators may not always be the most appropriate local representatives to put on the siting councils. In some counties, the local governments and county government do not communicate regularly, thus one cannot represent the other very well.* This causes a problem particularly in cases where local governments (cities and towns) feel most of the impacts, but are not represented directly in the decision making and in the alloca-

* Washington State officials gave the example of a county commissioner on the Energy Council who never even talked with town, school district and other local officials about potential impacts.

tion of resources for planning and impact management. In California the local governments are asked for their comments on the Notice of Intent and the Application for Certification and are reimbursed for their planning, study and review efforts associated with the power plant. The reimbursement comes from either the Energy Commission or the utility. To date, approximately 30 communities have been reimbursed for their review efforts with regard to two energy facilities. The reimbursements have been billed to the utility.*

California's recognition of both the importance of having all the local governments review applications, and of the necessity to assist these governments financially in carrying out this function, is an important step toward ensuring full local participation. Many local governments, particularly those in sparsely populated towns and counties have very limited staff and funding for day-to-day planning responsibilities. The siting of a power plant in such a community will clearly be of critical interest to its residents and public officials. Yet without financial assistance to hire consultants or additional planning staff, government officials may find it impossible to adequately review and assess the implications of such a large development on their community.

* Information gained in phone conversation with R. Richard Recht, Consultant, Palo Alto, California.

Although the issue of how to get fair local representation has not been resolved completely, all three states do involve local governments in the siting process in some way. One Washington state official suggested a potential solution to this issue. All affected local, county and regional governments and citizens groups would be asked to form a coalition. That coalition would then select a representative to the siting council to represent the concerns and to report back to all the member governments and groups. A mechanism such as this merits consideration by the state siting councils.

In addition to the question of which local governments should be and are involved, is the issue of how much consideration should be given to the local government perspective in the siting decision. It appears that local governments may have some limited powers that they can use to influence this decision. For example, in the Skagit County case, changes in the zoning ordinance were required before the site could be certified. However this power is not used at all extensively. After the Skagit County commissioners received the request for an unclassified use permit from the utility, they initiated a research effort to determine what other counties with power plants had done. After extensive inquiry they were unable to elicit a single reply from a local jurisdiction that had ever attempted to regulate the siting of a nuclear power plant.*

* Memo from Fred Clagett, staff, to Richard Hemstad, then Director of the Washington State Office of Community Development, December 1, 1975.

In addition to zoning there may be other local permits which the local governments can require of a utility. However, we did not explore these permits within the time constraints for this project for two reasons. First, local permit systems are fragmented, thus it is difficult to obtain information on the range of permits required for a development. Secondly, such permits appeared not to be an issue for the six specific sites we examined.

It is also important to note that the siting agencies in all three states have some preemption powers over local zoning and land use plans, although the limits of each power are unclear. It should be noted that the first chairman of the Washington State Thermal Power Plant Site Evaluation Council (the predecessor to EFSEC) stated in testimony before Congress that Washington's siting law requires compliance with local zoning before the utility can approach the siting council (Joint Committee on Atomic Energy, 1974). This was also the situation with the Skagit plant, where the utility had to obtain a rezone. State officials point out, however, that because of an amendment to the law in 1975 and a recent Attorney General's ruling, the state evidently does have preemption powers. Nonetheless, the state officials whom we interviewed appear to be making serious efforts to take local concerns into account (although some local officials are skeptical about this judgment). Local governments can help assure this serious consideration through their input as advisors and reviewers

of the utility's application.

A final point regarding the local role in the siting process concerns the issue of coordination among the various governmental bodies. As mentioned in the Introduction, coordination and communication are critical issues for local and state governments, particularly those impacted by some type of energy development. If one local agency is informed by the utility or by the state of a potential power plant development, this does not guarantee that all the other affected local agencies will subsequently be informed. In addition, there is no guarantee that the utility will inform the local agencies of its plans directly. In fact the literature documents that historically communities have not been informed of plans to construct nuclear power plants (Campbell, 1976). Such a lack of communication results in less time for local agencies to plan and establish programs, and it can exclude them from decisions which ultimately affect the community way of life. Perhaps further documentation of the increased difficulties caused by such a lack of communication can encourage some of the local and state agencies to take a closer look at their working relationships with each other in the area of siting of energy facilities.

In conclusion, the local role in the siting process is not as clearly defined as the state role in the nuclear power plant siting process. While adequate local and citizen representation is not guaranteed in the Oregon and Washington processes, the local and state governments we examined show serious concerns

about the local social and economic issues surrounding a nuclear power plant. In our assessment, if local governments make concerted efforts to provide effective input regarding their assessment of potential social and economic impacts and their own requirements to effectively manage such impacts during the state siting process, the states, in turn, will try to address these impacts.

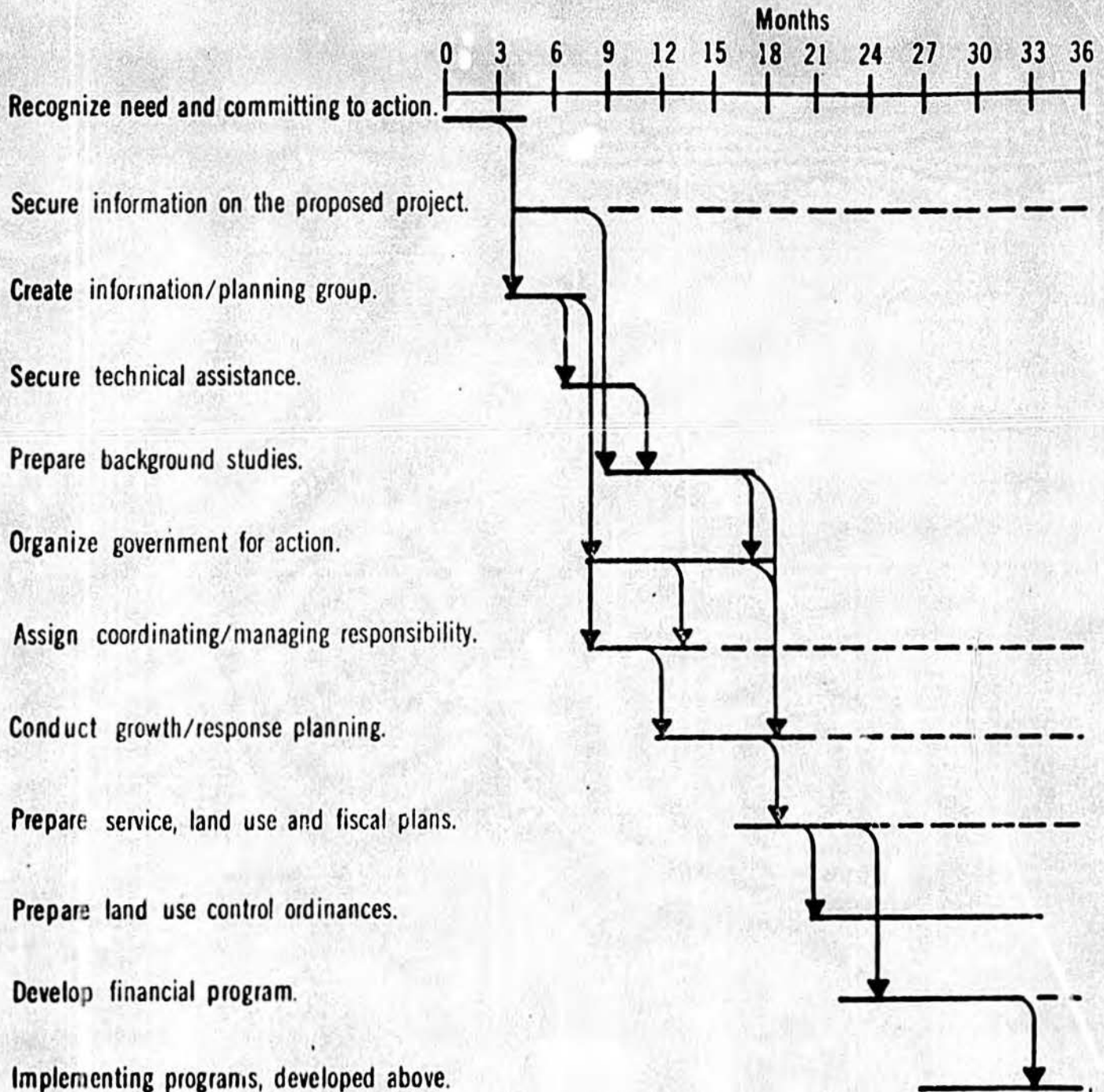
4.3 Local Planning in the Assessment and Management of Social and Economic Impacts

It is of critical importance that local governments are notified early about a contemplated development to insure effective planning for the expected impacts. The length of time needed depends on the anticipated size of the work force and the existing carrying capacity (ability to absorb new growth) of the community, such notice usually should take place two to three years before the construction force is expected to appear (Williams, 1976; Briscoe, et. al., 1974). The notice should include information on the magnitude, timing and duration of the expected labor force buildup; accurate information is essential in those areas where a large population influx could require provision of additional major public services. If local governments can get sufficient funding, early notification also allows them time for several important planning and governmental activities: (1) to prepare or update comprehensive plans, (2) to commission feasibility and impact studies on local capital improvement programs (sewers, water, roads, schools), (3) to estimate personnel requirements that will result from

increased demand on local government services, and (4) to incorporate public opinion into development decisions and impact management plans. In addition, lead time is necessary for capital improvement programs and special planning programs which require state or federal funding, particularly because applications for funding often are delayed or denied. The Pebble Springs and Skagit county sites are examples where the counties have had over two years for precisely this type of planning. (See Diagram 4.1 on page 58 for a summary of the general types and timing of planning activities required of local communities impacted by energy development). In almost all the sites we examined we learned that, in addition to early notification, a reciprocal information flow between local officials and the utility facilitated a smoother planning, construction, and in some cases, operating phase for the plant. Recognition by both the utility and community of legitimate needs on the part of the other can hasten public acceptance and minimize the disruption of local government services if large numbers of workers are brought in. In areas where the labor force is drawn from nearby populations, the need for early and continuing flow of information between the utility and the local government is less critical, although still important for smooth community relations.

DIAGRAM 4.1

TIMELINE FOR ACTION Response to Energy Projects



(From Williams, David. "Rapid Growth from Energy Projects: Ideas for State and Local Action. A Program Guide." Department of Housing and Urban Development, 1976.)

Notification to local communities of project plans two to three years prior to construction, and a reciprocal information flow between utility and community help create an environment conducive to effective planning. Pre-certification impact studies, dictated by the state and local governments, can also encourage local communities to begin early planning for the rapid growth that may follow.

An additional incentive to early planning in local communities are state and federal requirements for comprehensive planning. At the federal level, comprehensive land use planning has been encouraged by several federal programs. The Department of Housing and Urban Development's (HUD) 701 Planning Assistance program, and the Environmental Protection Agency's 208 water quality planning program, both require and provide financial assistance for comprehensive plans and area-wide water-basin plans. Most local governments engage in the planning activities required by these programs for they cannot afford to reject a major source of local governmental funding. In addition, requirements in the Coastal Zone Management Act and the Federal Clean Air Act encourage communities to practice sound land use planning and energy facility planning. State and local governments are in some cases frustrated by the federal piecemeal approach to comprehensive land use planning which requires them to incorporate different types of information into their planning process in order to tap different sources of federal aid.

At the state level, Washington, Oregon and California all have programs requiring or advising local community comprehen-

sive planning. Oregon has what appears to be the most developed state land-use planning effort: it requires localities to prepare comprehensive plans with substantial input from their citizens, based on statewide goals and guidelines. The state also provides substantial funding assistance for this development. (See Appendix B for a detailed discussion.) California and Washington have not developed comprehensive state land-use planning requirements or an attendant administrative structure to oversee the process.

Below the state level, regional councils of government have responsibility for some types of comprehensive planning and interfaces extensively with local government. Most of the counties and/or localities we visited are members of regional councils of government of varying responsibilities and effectiveness. Several councils of government (COGs), particularly those in metropolitan areas, perform the A-95 review function, reviewing all federal projects for consistency with the regional perspective.* If federal funding is received by localities for various impact management programs, these programs would be examined by the designated A-95 review body, in some cases the COG. In the more rural counties, such as those in eastern Oregon and Washington the COGs perform some of the planning functions for localities

* A-95 Review, legislated through the Office of Management and Budget. A-95 Circular, requires that federal funds to a local government must be reviewed and approved by a designated regional or state body for consistency with regional needs and plans.

too small to have their own planning staff, such as reviewing environmental analyses and preparing comprehensive plans.

Comprehensive planning was often mentioned as an integral part of the response to growth by localities facing population pressures and a changed community profile resulting from power plant construction. The current experiences of Rocky Mountain coal towns have increased the awareness by citizens, officials, and utility representatives of the tremendous problems which can be expected in small towns heavily impacted by new developments. (See Briscoe, et al., 1974; Lindauer, 1975; Williams, 1976.) Although many rural communities have traditionally been resistant to and suspicious of planning, the severity of the problems in the coal boom towns present few alternatives. In fact, community representatives from both the Pebble Springs and Sun Desert sites visited the Wyoming and Colorado boom towns, as guests of their respective utilities, and discussed planning problems with local officials.

Fiscal planning is another type of planning critical to a local government's ability to manage the social and economic impacts of a power plant. There are three primary sources of money to a local government to use for impact management. The first of these is the tax revenues generated by the plant itself. Many power plants ultimately will bring huge tax revenues to the counties in which they are located.*

* One respondent pointed out that the utility's tax payments may not result in an increase in tax revenues. In Columbia County the impact of Trojan has been to decrease the cost per \$1000

And, in fact, most power plants pay increasing property taxes as the assessed valuation of the plant steadily increases during construction. However, communities that must increase their public services capabilities for the construction force usually need additional outside sources of funding one to three years before plant construction begins. Also, the plant may not be in the jurisdiction facing most of the impacts. In the Diablo Canyon case, for example, many of the construction workers did not live in the school district in which the plant was located. The school district with a large proportion of the workers and their children was required to absorb much of the educational impact, while receiving little immediate or eventual benefit. (For more detail, see pages C-16 and C-17.) The jurisdictional problem is illustrated even more dramatically by the Sun Desert case in California. The plant is located outside the taxing jurisdictions of the two towns which will absorb the work force, as well as one or two adjacent counties. The towns that are expected to provide a range of services and facilities for the workers will not receive any of the benefit of the taxes generated by its plant.

(Continuation from footnote on previous page:)

assessed valuation to the tax payer/property owner. The reason for this is that the amount the county can levy in taxes is based on its tax base, which can be increased only 6% each fiscal year. Any increase of the tax base beyond 6% has to be approved by the voters of the County.

Oregon has a program which helps resolve this jurisdictional problem in the area of educational impacts. The state instituted Intermediate Education Districts (IED) in order to partially allocate industrial revenue among member districts. Such reallocation of revenue is only available for payment of operating budget expenses, however. In the case of the Trojan plant the two-county IED provides additional assistance in the form of central purchasing for local governments and member school districts as well as performing its equalization function.

For those communities and counties that can expect increased revenues from the power plant taxes, there is also the question of how to spend the increased wealth that will eventually be available to them. Local tax rates could remain unchanged and additional governmental services could be provided to serve new populations and new needs, or local rates could be lowered to the individual taxpayers as the new industry steps in to fill the revenue gap.

The second source of funding is from state and federal programs. Federal agencies could reinterpret eligibility requirements for grants and loans in order to acknowledge the special conditions and the sense of urgency associated with rapid and severe growth pressures, but may resist doing so. Such resistance stems from federal agencies' reluctance to fund projects where the rapid growth is not assured. Thus, state and federal funds also may come too late to help the local governments prepare for future needs due to the plant construction. This problem also has been identified in the Rocky

Mountain region where federal approval is often required for every project. As an Exxon official described,

"Delays in approval leave the cities with no control over their future. No public official can propose the building of public facilities which may not be used. When federal approvals are given it is too late to design and build public facilities. Also, the number of applications have usually been caught in a logjam which compounds the local impacts."
(Lindauer, 1975, p. 66.)

Local officials in the Arlington, Oregon (Pebble Springs) area perceive this to be a problem in their current attempt to get federal funds to expand their sewer system. (See Appendix C for more detail.)

Finally, a third source of funding for local impact management is the developer. In some cases utilities have recognized, or been forced to recognize, the severity of the problems outlined above, and have worked with communities to provide partial assistance. In Skagit County the utility and the county devised a contract rezone agreement: the utility promises prepayment of some of its taxes to help finance additional schools and law enforcement.

In Arlington, Oregon, near the Pebble Springs site, PGE has agreed to assist the city with their airport improvement plans in exchange for 25 years of landing fee waivers for themselves, their contractors and consultants. The utility has entered into an agreement with Gilliam County to assist with funds for improvement of the county road, by the county, which will be the main access road to the Pebble Springs plant.

site. In Boardman, Oregon, PGE has purchased sewer and water hookups in advance of need by it or others with the expectation of credit or reimbursement when these hookups are used by it or other developers. At Sun Desert in California, the utility, in conjunction with local unions and a community college, is training local residents for construction jobs.

This discussion illustrates that adequate planning by local government is important to successful impact management. Several conditions contribute to the satisfactory management of local impacts due to power plant construction: (1) planning should already play a role in the management of growth of the community, (2) the community should have two to three years for their planning efforts, and (3) adequate and timely funding must be secured for any additional public services required. If these conditions are not met, then undesirable disruptions of one variety or another may occur. It is important to note local problems would not be solved simply by more money. The timing of the flow of revenues and funding is equally important. See Chapter 5 for a detailed discussion of fiscal issues.

4.4 The Provision of Additional Community Services Required by the Construction and Operation of a Nuclear Power Plant

The mix of public and private services that a community provides is determined by the size of the population base (and consequently the size of the government organization), by local traditions and state laws. In general, larger communities