# STUDY OF METHODS OF DISTRIBUTING REVENUES FROM THE TAXATION OF LARGE ELECTRICAL POWER PLANTS

*Bulletin No. 87-25*

**LEGISLATIVE COMMISSION**

**OF THE**

**LEGISLATIVE COUNSEL BUREAU**

**STATE OF NEVADA**

August 1986

# STUDY OF THE METHODS OF DISTRIBUTING REVENUES FROM TAXATION OF LARGE ELECTRICAL POWER PLANTS (A.C.R. 31)

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STATE OF NEVADA

AUGUST 1986

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Assembly Concurrent Resolution No. 31—Committee on Legislative Functions

FILE NUMBER 98

ASSEMBLY CONCURRENT RESOLUTION—Directing the legislative commission to study methods of distributing the revenues from the taxation of large electrical power plants.

WHEREAS, The White Pine Power Project and, to a lesser extent, the Valmy Power Project are bringing to areas of this state construction and electrical generating capacity of a magnitude not before experienced in those areas or in the state as a whole; and

WHEREAS, Questions have been raised concerning appropriate policies for the distribution of the revenues from the taxation of these projects in light of their nature; and

WHEREAS, It is essential that the legislature be thoroughly familiar with the effects of various options for the distribution of such revenues; now, therefore, be it

RESOLVED BY THE ASSEMBLY OF THE STATE OF NEVADA, THE SENATE CONCURRING, That the legislative commission is hereby directed to study methods of distributing the revenues from the taxation of large electrical power plants; and be it further

RESOLVED, That the results of the study and recommendations for legislation be reported to the 64th session of the legislature.

REPORT OF THE LEGISLATIVE COMMISSION
TO THE MEMBERS OF THE 64TH SESSION OF THE NEVADA LEGISLATURE:

This report is submitted in compliance with Assembly Concurrent Resolution No. 31 of the 63rd session of the Nevada legislature which directed the legislative commission to study the methods of distributing revenues from taxation of large electrical power plants (File No. 98, Statutes of Nevada, 1985).

In order to conduct the study the legislative commission, under the auspices of the joint committee on taxation, appointed a subcommittee to recommend appropriate action to the 1987 session of the legislature. Legislative members of the subcommittee were:

Assemblyman Charles W. Joerg, Chairman
Senator Raymond C. Shaffer, Vice Chairman
Senator Robert E. Robinson
Assemblyman Louis W. Bergevin

The legislative commission accepts the subcommittee's report with the suggested legislation and transmits the report to the members of the 1987 legislature for their consideration and appropriate action.

Repectfully submitted,

Legislative Commission
Legislative Counsel Bureau
State of Nevada

Carson City, Nevada
August 1986

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LEGISLATIVE COMMISSION

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Senator James H. Bilbray
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LEGISLATIVE COMMISSION'S SUBCOMMITTEE TO STUDY THE METHODS OF DISTRIBUTING REVENUES FROM TAXATION OF LARGE ELECTRICAL POWER PLANTS (A.C.R. 31)

## SUMMARY OF RECOMMENDATIONS

1. THAT THE 64TH SESSION OF THE NEVADA LEGISLATURE ADOPT LEGISLATION TO ESTABLISH AN OVERSIGHT COMMITTEE TO CONDUCT A COMPREHENSIVE FINANCIAL DATABASE STUDY. (BDR S-40)

2. THAT THE 64TH SESSION OF THE NEVADA LEGISLATURE ADOPT LEGISLATION TO EMPOWER THE OVERSIGHT COMMITTEE TO DETERMINE THE SCOPE OF SUCH A STUDY, THE TIME FRAME OF SUCH A STUDY AND TO HIRE CONSULTANTS TO CONDUCT THE STUDY. (BDR S-40)

3. THAT THE 64TH SESSION OF THE NEVADA LEGISLATURE APPROPRIATE $50,000 TO FUND THE STUDY. (BDR S-40)

ACR31A/b

# REPORT TO THE 64TH SESSION OF THE NEVADA LEGISLATURE BY THE LEGISLATIVE COMMISSION'S SUBCOMMITTEE ON THE METHODS OF DISTRIBUTING REVENUES FROM TAXATION OF LARGE ELECTRICAL POWER PLANTS

## A. INTRODUCTION

The 1985 session of the Nevada legislature adopted Assembly Concurrent Resolution No. 31, directing the legislative commission to study the methods of distributing revenues from the taxation of large electrical power plants. The directive was adopted to address the problem of establishing appropriate policy regarding the distribution of revenues from the large electrical generating plants. The subcommittee further decided to again address the problem of the taxation of large generating plants.

## B. SUBCOMMITTEE METHODOLOGY

The legislative commission appointed Assemblyman Charles W. Joerg, chairman; Senator Raymond C. Shaffer, vice chairman; Senator Robert E. Robinson; and Assemblyman Louis W. Bergevin to a subcommittee to study the methods of distributing revenues from taxation of large electrical power plants. The legislative commission allocated a budget of $2,718 to provide for the costs of meetings and the printing of the final report.

The subcommittee recognized that in addition to problems with the distribution of revenues from large electrical generating plants, there were also problems involved in the taxation of same. Therefore, the subcommittee decided to address both the taxation and distribution of revenues from large electrical generating plants. The subcommittee scheduled three meetings during the interim and all meetings were attended by representatives of Sierra Pacific Power, Nevada Power, White Pine Power Project, several smaller utilities and other interested parties.

The first meeting of the subcommittee was held November 14, 1985, in the Legislative Building, Carson City, Nevada. During the meeting, the subcommittee reviewed previous studies done by the legislature regarding the taxation of large generating facilities (appendix A), reviewed the long range plans of Sierra Pacific Power, Nevada Power and the White Pine Power Project (appendices B, C, D), reviewed the development of geothermal energy in Nevada (appendix E) and discussed alternative methods of taxing large power generating facilities. The industry representatives and legislative counsel bureau staff were then directed to assess the economic effects of the alternative tax strategies discussed and to report back to the subcommittee at the next meeting.

The second meeting was held on January 31, 1986, in the Legislative Building, Carson City, Nevada. Alternative tax strategies regarding large electrical generating plants were again discussed (appendix F). During the discussion of the economic effects of the alternative tax strategies, industry representatives explained that the more popular alternatives for the taxation of large electrical generating plants were radically different than the state's historical tax policies (appendix H). Therefore, in order to complete an accurate economic assessment, a comprehensive database is required. Such a database was published in 1960 and titled Financing State and Local Government in Nevada, also known as the "Zubrow Report." However, the data is now outdated and nothing has been done since to upgrade or replace it. Therefore, the industry representatives suggested that the first step the subcommittee must accomplish was to have a new comprehensive database prepared. The subcommittee agreed that such a database is necessary and also that the scope is far beyond the scope of what could be accomplished by an interim study subcommittee. Industry representatives and staff were then directed by the subcommittee to outline the scope of work that is necessary to prepare an adequate database and present it to the subcommittee at its next meeting.

The third meeting was held April 4, 1986, in the Legislative Building, Carson City, Nevada. Industry proposals for a comprehensive database study were discussed, refined and adopted (appendices I and J). The subcommittee then moved to have a bill prepared for consideration by the 64th session of the Nevada legislature to provide for a comprehensive database study; to create an oversight committee to define the scope of the study, establish a timetable for the study and have the authority to contract with a consulting firm to complete the study; and to authorize an appropriation of up to $500,000 to fund the study (appendix K). The subcommittee then directed staff to obtain estimates on a study of the scope as approved by the subcommittee and adjust the appropriation accordingly. The estimates were received and the appropriation was then adjusted to $50,000.

## C. SUBCOMMITTEE FINDINGS AND RECOMMENDATIONS

### 1. TAXATION OF ELECTRICAL POWER PLANTS

The subcommittee recognized that that it could not address the methods of the distribution of revenues from the taxation of large electrical power plants before they addressed the problems relating to the generation of that revenue. Article 10, Section 3 of the Nevada Constitution prohibits classification of real property for taxation purposes. Therefore, under NRS 354.59805 to 354.5988 which establishes a maximum combined allowable revenue, the construction of a large electrical power plant, particularly in the rural counties, will drive the property tax rates below acceptable levels.

2. DATABASE

The subcommittee further found that any economic analysis of alternative tax strategies regarding power plants requires a comprehensive financial database. The last comprehensive financial database compiled in the State of Nevada was completed in 1960 by the Nevada Legislative Tax Study Group and published in a book entitled Financing State and Local Government in Nevada. That database is now outdated and a new database must be compiled.

3. SUBCOMMITTEE RECOMMENDATIONS

a. THAT THE 64TH SESSION OF THE NEVADA LEGISLATURE ADOPT LEGISLATION TO ESTABLISH AN OVERSIGHT COMMITTEE TO CONDUCT A COMPREHENSIVE FINANCIAL DATABASE STUDY. (BDR S-40)

b. THAT THE 64TH SESSION OF THE NEVADA LEGISLATURE ADOPT LEGISLATION TO EMPOWER THE OVERSIGHT COMMITTEE TO DETERMINE THE SCOPE OF SUCH A STUDY, THE TIME FRAME OF SUCH A STUDY AND TO HIRE CONSULTANTS TO CONDUCT THE STUDY. (BDR S-40)

c. THAT THE 64TH SESSION OF THE NEVADA LEGISLATURE APPROPRIATE $50,000 TO FUND THE STUDY. (BDR S-40)

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# APPENDIX A

## Review of the study of methods of distributing revenues from taxation of large electrical power plants - background information

# REVIEW OF THE STUDY OF METHODS OF DISTRIBUTING REVENUES FROM TAXATION OF LARGE ELECTRICAL POWER PLANTS (A.C.R. 31)

## BACKGROUND

S.B. 253 of the 1979 Session provided that counties could finance and construct large electrical generating plants and created an in lieu tax to provide state and local revenues. During the subsequent interim, many questions arose regarding the distribution of the anticipated revenues which were discussed during the 1981 Session. As a result, S.B. 687 and S.C.R. 64 passed during that session. S.B. 687 changed the distribution of revenues from line mile basis to to population basis and established a formula for the distribution. S.C.R. 64 directed that the matter be studied during the interim study on centrally assessed properties.

The S.C.R. 64 study committee sent several recommendations to the 1983 Session resulting in S.B. 27 which amended the distribution formulas in S.B. 687 and S.J.R. 2 which proposed a constitutional amendment to allow large electrical power plants to be taxed separately. S.C.R. 42 also passed that session requiring the Legislative Commission to again study the methods of taxing electrical power plants and distributing the resulting revenue.

The S.C.R. 42 Committee made recommendations to the 1985 Session resulting in the adoption of A.B. 49 which allowed the Nevada Tax Commission to make adjustments in the property tax rates which were adversely affected by the revenues generated from the construction and operation of power plants. Also, that session, A.C.R. 31 was adopted which instructed the Legislative Commission to again study the methods of distributing revenues from taxation large electrical power plants and created the A.C.R. 31 study committee.

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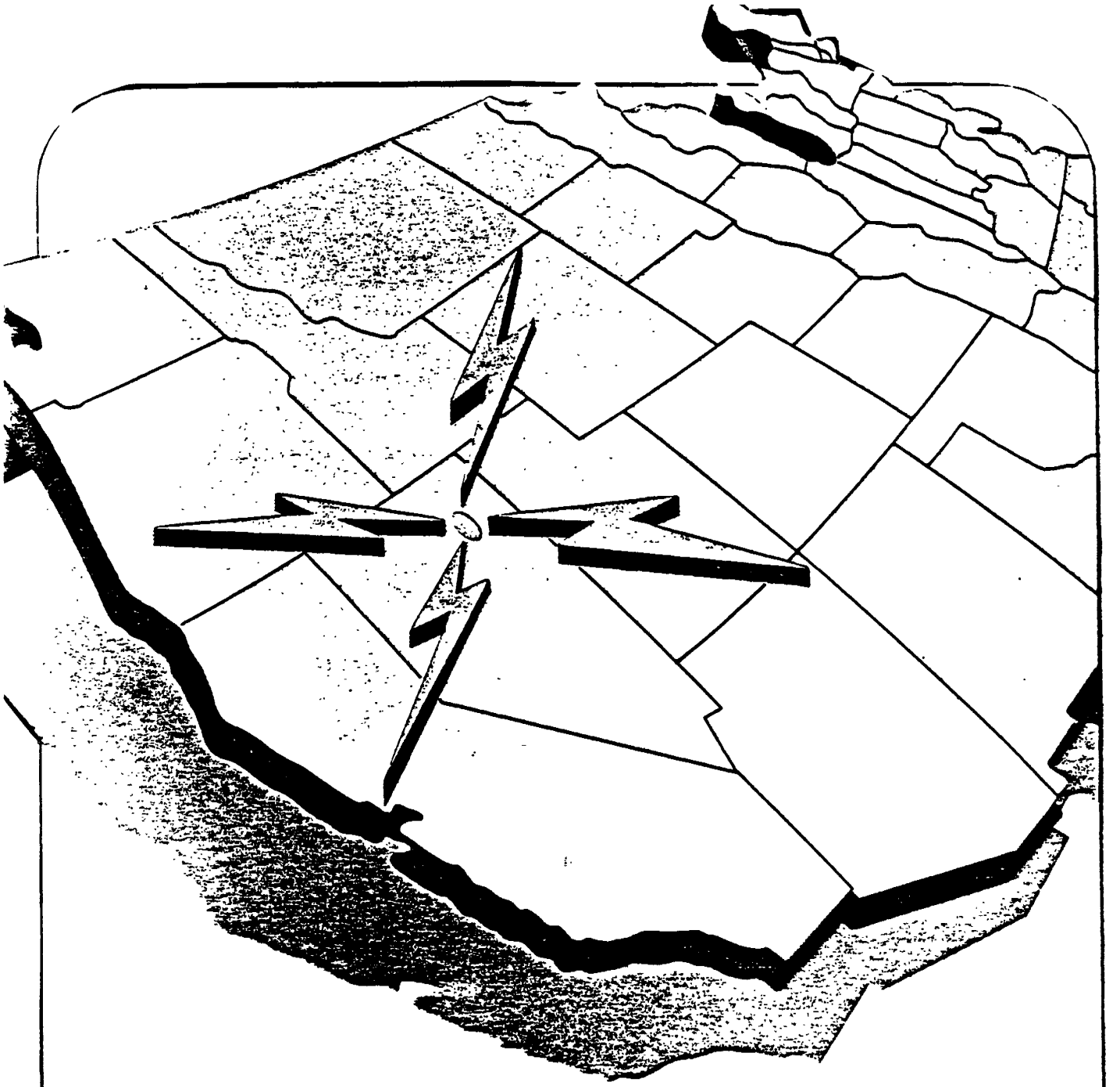
# APPENDIX B

## Station description of the Thousand Springs Generation Project, Sierra Pacific Resources, Stone and Webster



THOUSAND SPRINGS

GENERATION and TRANSMISSION PROJECT

# REGIONAL GROWTH AND ELECTRICITY NEEDS

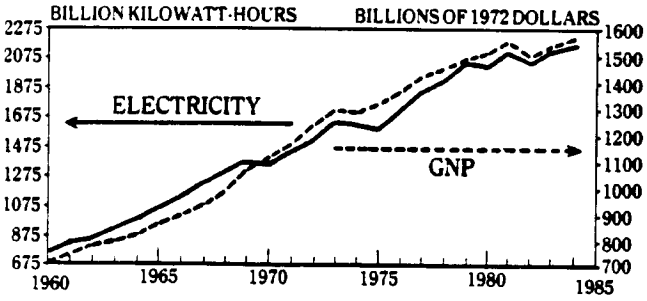
The western states lead the country in projected population gains through the 1990's. The U.S. Department of Commerce Census Bureau reports that *7-out-of-10 of the nation's fastest growing states are located in the West*, near the proposed Thousand Springs Generation & Transmission Project.

## TOP 10 STATES IN PROJECTED POPULATION GROWTH

| STATE | POPULATION INCREASE PROJECTED THROUGH 1980s and 1990s |
|---|---|
| 1. **NEVADA** | 55% |
| 2. **WYOMING** | 47 |
| 3. **ARIZONA** | 43 |
| 4. **UTAH** | 37 |
| 5. Florida | 34 |
| 6. **COLORADO** | 27 |
| 7. **IDAHO** | 26 |
| 8. Alaska | 25 |
| 9. **OREGON** | 24 |
| 10. New Hampshire | 22 |

As these western states increase in population, their residential and commercial-industrial electricity demands will climb, and new capacity will be needed to meet increased consumption. Even California, which is not one of the fastest-growing western states, already has such a large population base that modest percentage increases in population translate into major consumption increases.

The U.S. Department of Energy reports that growth in electricity consumption is up over 25 percent since 1973 — compared to a 22 percent rise in the gross national product. The growing importance of electricity — which is replacing direct burning of other fuels in U.S. industry — raises concerns about whether there *will* be enough electricity available to meet future demands.




*U.S. economic growth and electricity use have been, and continue to be, closely linked. The U.S. gross national product (GNP) was up over 8% in the first half of 1984, and electricity demand rose by an almost equal amount. Source: Federal Power Commission; Energy Information Administration, U.S. Dept. of Energy.*

If demand for electricity rises at the rate of 3.5 percent a year for the rest of the century, the U.S. Congress' Office of Technology Assessment estimates a need for as much as *77 percent more electricity by the year 2000 than used in 1983.*

Yet, many electric utility companies are *not* constructing new generating facilities due to regulatory, financial, and environmental restrictions.

This is why the Thousand Springs Generation & Transmission Project can provide an attractive alternative for meeting western electricity demand.

# A CENTRAL LOCATION NEAR WESTERN MARKETS

The northeastern Nevada site for the Thousand Springs coal-fired generating station is located in the center of growing western markets in California, the Southwest, Utah and Idaho, and the Pacific Northwest.

- A central location near all growing western markets.
- Access to transmission capabilities and corridors.
- An environmentally suitable site for generating station.
- Adequate water supplies.
- Near a comprehensive network of railroads and interstate highways.
- Close to plentiful coal sources.
- Local community support for a major project.

The project is near large labor pools in Nevada, Utah, and Idaho. Both Sierra Pacific and Stone & Webster are experienced in constructing and operating coal-fired generating units, similar to Thousand Springs, in remote areas such as this site.

# Thousand Springs

## Generation and Transmission Project

## SIERRA PACIFIC RESOURCES

Sierra Pacific Resources, which became a holding company on May 31, 1984, is the parent firm for both utility (regulated) and non-utility (non-regulated) subsidiaries, including Sierra Pacific Power Company, Sierra Energy Company and Lands of Sierra, Inc.

**SIERRA PACIFIC POWER COMPANY**

Serves more than 200,000 electric, 56,000 natural gas, and 47,000 water customers over a 50,000 square mile service area in northern Nevada and northeastern California. Headquartered in Reno, Nevada, the utility's service territory is one of the nation's fastest growth areas.

**SIERRA ENERGY COMPANY**

Participates in the exploration for and development of oil and natural gas resources in the western and midwestern United States.

**LANDS OF SIERRA, INC.**

A licensed real estate broker in Nevada, owns and manages more than 300,000 acres of diversified properties in northern Nevada and northeastern California including the Thousand Springs project site.

## STONE & WEBSTER

Since its founding in 1889, Stone & Webster has been prominent in the public utility industry. Through operating subsidiaries, Stone & Webster provides engineering, design, construction, and management consulting services to energy industries.

**STONE & WEBSTER ENGINEERING CORPORATION**

Is headquartered in Boston with full service offices throughout the U.S., representing a corporate experience in the development of more than 80,000 MW of generating facilities. The Denver Operations Center is currently responsible for the design and construction of the North Valmy Station in Central Nevada, which is exceeding industry standards for economy, productivity, and efficiency in coal-fired generation.

**STONE & WEBSTER MANAGEMENT CONSULTANTS**

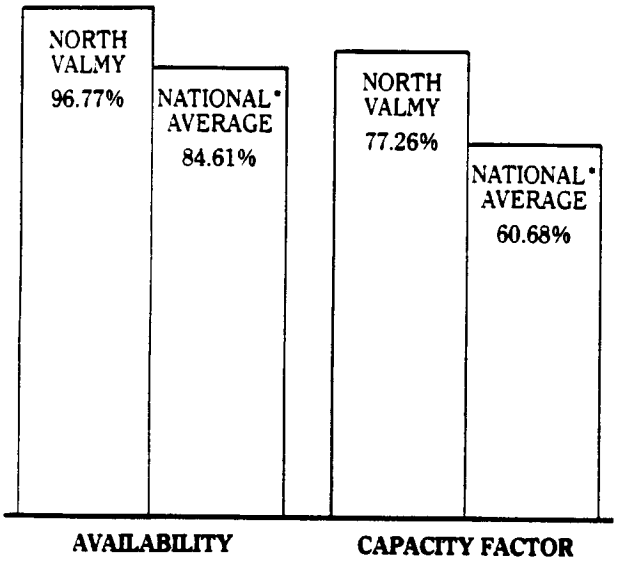
Provides general management consulting services to industry, government and utilities in the fields of finance, mergers, operations, load forecasting, regulatory services, facilities planning, site selection, area development, marketing strategies, and economic feasibility.

# THE VALMY EXPERIENCE

At the North Valmy Station in Central Nevada, Sierra Pacific and Stone & Webster have established a team with a proven ten-year record in the development of a major coal-fired generation facility. This station, which consists of two 250 MW coal-fired units, is being built for the Sierra Pacific Power Company and Idaho Power Company by Stone & Webster, who are responsible for providing all engineering, design, and construction management services. These joint efforts are producing power generation plants on schedule and within budget while exceeding industry standards for timely completion and competitive economics.

Valmy Unit 2, which is scheduled to begin commercial operations in mid-1985, will cost less than $1,250 per kw (1985) which is well below the industry average for similar plants. And, as shown graphically below, Valmy Unit 1, which began commerical operations in late 1981, is setting industry records for both plant availability and capacity.

## NORTH VALMY PERFORMANCE UNIT 1 — 1984

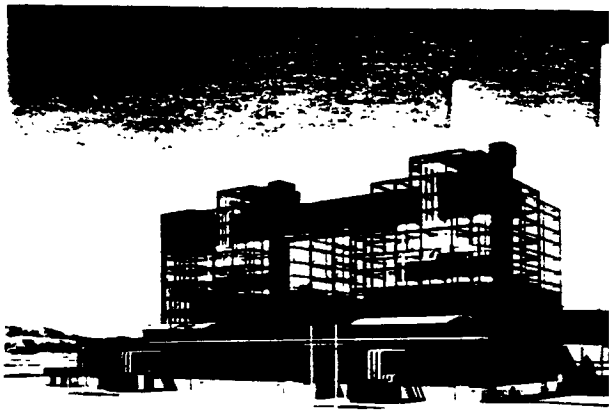



**National Average NERC 1982 data for 106 coal-fired units in the 200-290 MW range*

The North Valmy Station provides documentable evidence of the Sierra Pacific — Stone & Webster team capability to develop and produce cost effective and efficient coal-fired generation facilities. This experienced and innovative project management team anticipates similar records for the Thousand Springs Project.

# 2,000 MEGAWATT STATION

Preliminary engineering and environmental studies indicate the Thousand Springs site will support 2,000 megawatts of steam electric power generation. Current power demand projections support construction initially of four 250 MW units at two year intervals. As presently planned, these units would be similar to Stone & Webster's design of those at the North Valmy Station.



*North Valmy Units 1 & 2*

This phased development of individual units at Thousand Springs will provide an exceptional flexibility in meeting future power demand requirements, while taking advantage of the inherent cost savings and schedule efficiency in the development of similar units with repetitive design and construction requirements.

# TRANSMISSION ACCESS TO REGIONAL MARKETS

The ultimate transmission system for delivery of Thousand Springs output will be influenced by the location of the markets. Transmission line corridors are available to transmit Thousand Springs output to the Pacific Northwest, Idaho, Utah, northern and southern Nevada — along with central, northern, and southern California.

The project's associated transmission system will be designed to economically deliver energy to load centers with emphasis on reliability and coordination with area electric utilities and industry regional planning organizations. The delivery system will blend new construction and existing and planned transmission to minimize costs and enhance transmission capabilities in the region.

# PROJECT SITE

Lands of Sierra, Inc. (a Sierra Pacific Resources subsidiary) purchased the land and water rights for the Thousand Springs project in December 1980, and has spent over $1.5 million on studies for site evaluation, environmental investigations, preliminary engineering, and transmission planning and licensing.

The site consists of a checker-board pattern of alternating sections of public and private lands within the Thousand Springs Basin. Lands of Sierra owns the major share of the private land, with holdings of approximately 250,000 acres, while the Bureau of Land Management is the federal agency responsible for the public land. The remainder of the basin is in the hands of the Southern Pacific Railroad and other private parties.

- There are no identified major environmental impacts or constraints
- Annual water rights exceed 25,000 acre feet
- There is a comprehensive network of highways and railroads.

# STATION DESCRIPTION

Main station facilities will be located south of Thousand Springs Creek, within 2,000 acres required to accommodate the power block, coal handling and storage areas, cooling towers, water reservoirs, waste disposal areas, pollution abatement systems, switchyards, administrative facilities, and ancillary equipment. Additional land is available for water impoundments and delivery systems, and for transmission facilities.

Each 250 MW generating unit will supply approximately 2 million pounds of steam per hour at 1,000°F using subbituminous pulverized coal as fuel. The turbine will drive a 3,600 rpm electric power generator rated at approximately 270,000 kW at maximum load.

- Plant waste waters can be reused in other systems and processes, with no effluents returned to natural surface or ground water systems
- Coal will be transported to the site by rail, then crushed for daily use and emergency storage
- Particulate, sulfur dioxide and nitrogen oxide emissions, as well as stack opacity, will be controlled to meet all regulatory requirements.

COPY NO. 363

*FOR ADDITIONAL INFORMATION, PLEASE CONTACT:*

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**Stone & Webster**
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# STATION DESCRIPTION

*Thousand Springs*

*250 megawatt coal-fired units*

**STATION FACILITIES**

Preliminary engineering and environmental studies indicate the Thousand Springs site will support 2,000 megawatts (MW) of steam electric power generation. Current power demand projections support construction initially of four 250 MW units at two year intervals. As presently planned, these units would be similar to Stone & Webster's design of those at the North Valmy Station.

Main station facilities will be located south of Thousand Springs Creek at a base elevation of 5,700 feet above sea level. Approximately 2,000 acres will be required to accommodate the station which includes the power block, coal handling and storage areas, cooling towers, water reservoirs, liquid and solid waste disposal areas, air pollution abatement systems, road and rail access, switchyards, administrative facilities and ancillary equipment. Additional land is available for water impoundments and delivery systems, and for transmission lines and facilities.

**POWER GENERATION**

Each 250 MW (net capacity) generating unit will consist of a drum type, balanced draft furnace with a boiler that can supply approximately 2.0 million pounds of steam per hour at 1000°F using subbituminous pulverized coal as fuel. The turbine will be a tandem-compound, single-reheat, double-flow unit which will drive a 3,600 rpm hydrogen-cooled, electric power generator rated at approximately 270,000 kW at maximum load.

**FUEL SUPPLY**

Coal requirements cannot be accurately assessed until plant capacity factors are developed. However, at maximum load capacity over a 24-hour period, coal consumption is expected to approximate 3,000 tons per unit. Actual burn rate will depend on heat content of the coal, unit capacity factor, and plant equipment design efficiencies. Coal will be transported to the site by rail, then fed by conveyor to a crusher for both daily use and emergency storage.

**THREE MAJOR APPROVALS**

There are three (3) major approval processes which must be undertaken prior to licensing of the project. They are:

- Federal environmental review for compliance with the National Environmental Policy Act (NEPA) (Environmental and Social Impact).
- Nevada Public Service Commission (NPSC) certification based upon an environmental analysis statement.
- The Environmental Protection Agency's review to secure a Prevention of Significant Deterioration (PSD) permit on atmospheric emissions.

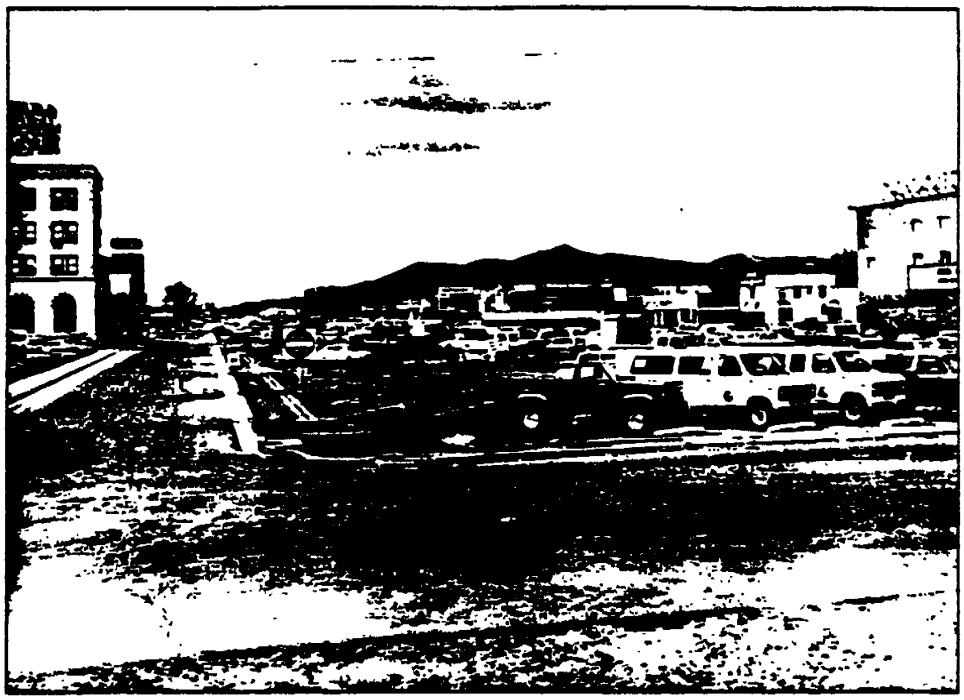
**DATA ALREADY GATHERED**

In 1981, Woodward-Clyde Consultants were engaged to begin collecting the environmental data to undertake this report and to work with the Bureau of Land Management (BLM) regarding the environmental and social impact statement a securing rights-of-way for project development. Meteorolo and air quality data have been gathered. Initial meetings w local community groups have been held.

**COMPLETION OF LICENSING**

Generally the study necessary to secure the NPSC certification can be met with minor modifications of the NE study.

With the above having been accomplished, it is now p to proceed with dispatch in preparing the NEPA, PSD, and NPSC reports, and achieving BLM permission on rights-of- which should lead to expeditious licensing and issuance of construction permits for this plant. The full scale environm licensing effort for the plant should be completed in 2 to 3



*City of Elko, Nevada (over 10,000 population)*

**PHYSICAL ENVIRONMENT**

Native grasses and sagebrush cover much of the basin, particularly on the lower range. In the mountain foothills and into the high elevations, the foliage merges into open woodland of pinon pine and juniper. Potential federal area or wild and scenic rivers are not located in the basin. Rare and endangered species are not native to the area, and no archaeological sites have been recorded.

**SOCIOECONOMICS**

Elko County is the second largest county in Nevada. Land use patterns are based largely on proximity to the City of Elko and other population centers. Away from these centers, the economy is primarily livestock ranching, mining, and recreation. Services, government and wholesale and retail trade are the County's leading employers, generating wages of approximately $135 million (1983) which are the fifth highest in Nevada.

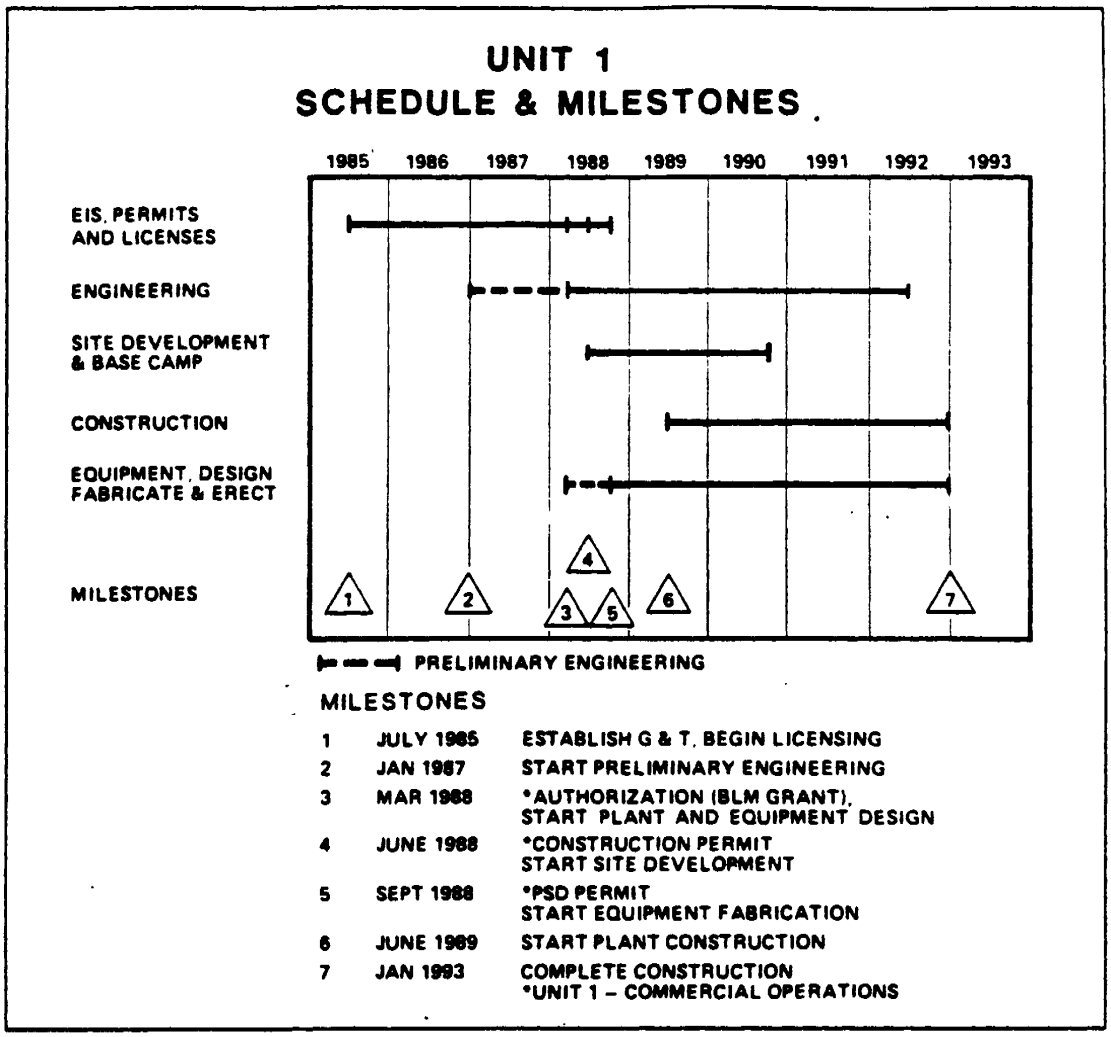
Elko, with a population of over 10,000, is the largest city near the Thousand Springs site (photo shown above). Other nearby communities include Wells, Deeth, Contact, and Wendover. Montello and Wilkins are located with the boundaries of the ranches. Initial studies indicate that Elko has an infrastructure which can be expanded to provide Thousand Springs project services.

**AIR & WATER**

Lands of Sierra properties have annual surface water rights in excess of 25,000 acre feet per year, with decreed priority dates as early as 1873. Certified groundwater appropriations for seasonal irrigational use supplement these surface rights. In addition, Lands of Sierra has rights to store in excess of 16,000 acre feet of surface water.

The generating facilities will be designed for the lowest water consumption economically achievable with mechanical draft cooling towers used to reject heat from the main condenser circulating water system. Plant waste waters will be reused in other systems and in processes that will accept lower quality water. Unusuable water and solid waste will be disposed of in accordance with applicable state and federal regulations and no effluents will be returned to natural surface or ground water systems.

Meteorologic data for the site has been accumulated for the past several years, and preliminary investigations indicate that particulate, sulfur dioxide, and nitrogen oxide emissions, as well as stack opacity, can be controlled to meet all applicable state and federal regulations.




**PROJECT SCHEDULE**

Experience at North Valmy Station indicates that each 250 MW Thousand Springs Unit can be constructed in approximately 42 months. However, the first unit will require 48 months of licensing, design and site development activities prior to start of plant construction. Therefore, Unit 1 will require a minimum of 7.5 years from the start of licensing activities to construction completion.

Subsequent Thousand Springs units are not expected to require extensive licensing or site development, and construction of these units will be scheduled to meet power market needs and to take maximum advantage of savings inherent in a levelized design and construction work force. Present planning indicates that these criteria can best be met if subsequent units are scheduled for completion at two-year intervals.

**CAPITAL COSTS**

Current (1985) estimates indicate that Unit 1 can be bui $370 million, exclusive of transmission. Present day (1985) t cost for all 2,000 MW, exclusive of transmission and AFUDC would be $2.6 billion, or an average of $1,300 per kW.

| STATION CAPITAL COST SUMMARY *(1985 $ millions)* | UNIT 1 | FOLLOW-O UNITS |
|---|---|---|
| Licensing | 6 | — |
| Site Development | 35 | — |
| Engineering | 32 | 24 |
| Construction Management | 12 | 11 |
| Construction: | | |
| General | 170 | 170 |
| Major Equipment | 115 | 115 |
| UNIT TOTALS | $370 | $320 |

*Editor's Note: Following is a summary, with excerpts of a speech made by Pacific Gas and Electric's Chairman, Frederick Mielke Jr. in early February 1985, at a Business Symposium at St. Mary's College, Moraga, CA. It is significant in that he estimates the amount of power needed in the next 20 years that will have to come from alternative sources.*

*PG&E CHAIRMAN ADVOCATES ALTERNATE ENERGY DEVELOPMENT* With the recent addition of a hydroelectric plant and the soon-to-be operational Diablo Canyon nuclear power plant, Pacific Gas and Electric Co. customers will have adequate, reasonably-priced energy supplies until at least 1990, according to PG&E Chairman Mielke. However, there is a need to further develop all avenues of energy production to assure a supply beyond the 1990 horizon. According to Mielke, the two additions will allow PG&E to hault purchases of expensive, non-contracted power from other utilities during peak usage times. But he also forecasted a need for an additional 3,000 MW within the next 20 years, a need he believes alternative sources like geothermal, cogeneration, wind and solar will not be able to satisfy. Those sources can supply 2,500 MW, Mielke said, and the difference may have to come from major coal-fired or nuclear-powered plants.

Planning of nuclear power plants in California has stopped, according to a PG&E spokesman, which may make the controversial, 2,200 MW Diablo Canyon plant the last of its kind within the state. The California legislature has banned the construction of nuclear plants until certain safeguards and environmental conditions are met and that hasn't happened yet. But even the Diablo Canyon plant that was started before the legislative prohibition has not escaped criticism, even though its site was selected in cooperation with the Sierra Club. Opponents of the Diablo Canyon plant believe that its location in an area susceptible to earthquakes is unwise, but PG&E and the Nuclear Regulatory Commission said the chances of an earthquake during peak operation are remote.

Legislation is not the only deterrent to building newer power plants at this time. Other possible roadblocks include lack of financing and delays caused by a lengthy licensing process.

"No utilities in California contemplate any such (coal and nuclear) plants because of the difficulty of financing them in the present political and regulatory climate," Mielke said, adding there is "...an unending gauntlet of time-consuming and money-consuming litigation. Until these circumstances change, no prudent investor will risk the capital needed to build coal or nuclear-fueled plants in California."

Oil and gas-fueled power plants also face pre-construction problems, chiefly a ban imposed by the National Energy Act of 1979, which prohibits the use of oil or natural gas as a fuel in running new utility plants with capacities greater than 10 MW, unless exempted by the Department of Energy. Also, utilities cannot collect the cost of new plants during construction, thus further hampering financing efforts. Despite those obstacles, the PG&E Chairman said the problems of energy supply must be confronted.

"We cannot afford to ignore the energy challenges that lie ahead—pretending they don't exist, or if we just wait long enough they will go away," Mielke said. "They won't go away, and neither will the economic and environmental consequences of the choices we make as a society.

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# Gold Rush Is Over For California Cogenerators

BY BILL RANKIN

**The gold rush is almost over for California cogenerators. On July 10, the state's Public Utilities Commission likely will order state utilities to stop signing long-term avoided-cost contracts for cogeneration plants and windmills, a PUC staffer said yesterday.**

Until the commission can settle on a new avoided-cost formula—expected to be less attractive to developers than current rates, cogenerators can only sign short-term supply contracts with Califor-

*(Continued on page 4)*

# *One Small Step For Shoreham*

The Nuclear Regulatory Commission on Monday rejected appeals by the state of New York and Suffolk County to stop low-power operations at Long Island Lighting Co.'s Shoreham nuclear power plant. The state and county were already before the U.S. Court of Appeals for the District of Columbia for an emergency stay and the NRC's order permitting low-power operation will not go into effect until 5 p.m. Thursday ("solely in order to facilitate the orderly processing of stay requests in the U.S. Court of Appeals," according to the NRC order).

The commission's refusal to stay a licensing appeal board decision that backup diesel generators at Shoreham are safe enough for low-power operation is another small step toward bringing the troubled plant on line. But whether the plant will ever run, even at low power, is far from assured. Many long-time observers of nuclear power disputes expect the appeals court to grant some sort of stay of NRC's low-power order, so that it can hear further argument over the issues involved.

The NRC vote was 4-1, with commissioner James Asselstine dissenting. Because of a long-running dispute between Lilco and the state and county over emergency planning, Asselstine said he is not confident that the plant will ever run.

# POWER PLANT CONSORTIUM FORMING

Sierra Pacific Resources has an innovative idea for selling power. It wants to enlist up to 10 non-utility firms that will buy stock in a newly formed joint venture partnership to build a large power plant in northeastern Nevada. Each partner will provide services to the venture, such as resources, equipment or engineering, to build two adjacent 250-megawatt coal-fired plants. The facility would serve Nevada as well as California, Idaho, Oregon and Utah. If the market develops as expected, Sierra Pacific would like to build six more coal-fired units at the site, according to company chairman Joe Gremban.

Construction could start in 1988 with each unit coming on line every two years, he said. Cost of the first two units: $500 million.

The Nevada legislature liked the idea so much it recently passed—almost unanimously—a bill exempting the plant from Nevada Public Service Commission (PSC) regulation, provided that no Nevada utility holds more than a one-third investment in the project.

Interstate energy sales from the venture will fall under the Federal Energy Regulatory Commission's jurisdiction, while the state's PSC and environmental agency will retain control over all environmental permitting. "The plant basically would be a wholesaler," says Dick Hughs, vice president for corporate affairs at Sierra Pacific. "Its advantage is that the plant does not have to go through the process of having its rates approved by all those other state commissions."

"We don't think we'll have any trouble getting investors," he added. The Reno-based company this week will start sitting down with potential partners. For example, Sierra Pacific already has been contacted by Westinghouse and General Electric, interested in supplying turbines. "We've also received unsolicited interest from companies that want to join just as investors,' he said.

Sierra Pacific plans to form th partnership within two months.

The project will be almost iden tical to Sierra Pacific's Valmy 1 an 2 plants. Pulverized coal will fir drum-type, balanced-draft boiler that will supply two million pound an hour of steam at 1,000 degrees F

Initial capital investments fron the partners will be for environmen tal permitting, licensing anc preliminary engineering. This two to three-year effort will cost abou $20 million, Hughs said.

Once finished, the company wil move to sign supply contracts with retail utilities, many of which have already expressed an interest in the venture. With these in hand, securing debt for construction should be no problem, he said. The plant will be located in Elko County on Sierra Pacific property and near a railroad line that will provide easy access for coal shipments.

# $750 Million Added To DOE's Coal Budget

Rep. Sidney Yates (D-Ill.) had a $750-million gift for the Department of Energy last week. The House Appropriations Committee's interior subcommittee, which Yates chairs, last Thursday appropriated the money Congress took away from the Synthetic Fuels Corp. last year for clean coal demonstration projects, but never actually appropriated.

In marking up the fiscal 1986 DOE appropriation, the subcommittee allocated $100 million of the clean coal reserve for 1986, with $300 million for 1987 and $350 million for 1988. Projects would have to offer 50 percent private sector funding, with limits on what counts as private money to control "in-kind" contributions. The bill requires DOE to issue a request for proposals to spend the money within 90 days of enactment.

Predictably, Yates' subcommittee put back into the DOE money bill the projects the Reagan Administration proposed taking out: the magnetohydrodynamics program, phosphoric acid fuel cells, the Waltz Mill coal gasification project, and two coal liquefaction pilot plants. Overall, the DOE fossil energy budget outside of clean coal technologies will be at about the same $250 million level as in fiscal 1985.

Yates' panel also told the department to keep buying oil for the strategic petroleum reserve. The appropriations bill mandates a 100,000-barrel-per-day fill rate until the reserve hits 500,000 million barrels and 50,000 barrels per day thereafter. The money bill also provides $199 million for continued construction, including the Big Hill site.

As in the past, the subcommittee tied the hands of the Interior Department in outer continental shelf leasing. The bill contains leasing moratoria for two California tracts and the Georges Bank off the East Coast. The subcommittee defeated by a 7-3 vote—with Yates, full committee chairman Jamie Whitten (D-Miss.) and Norm Dicks (D-Wash.) voting in the minority—a moratorium for Alaska's Bristol Bay area.

# Gold Rush Over For California Cogenerators

*(Continued from page one)*

nia utilities. The short-term contracts, however, are better than another proposal before the PUC, which would drastically cut prices by as much as 50 percent for cogenerators over the next year.

"There's no question about it. A new formula will have a negative impact on our industry, especially if it's for two to three cents less," said Tom Grey of the American Wind Energy Acsociation of Alexandria, Va. Current avoided costs are for a little more than seven cents per kilowatt-hour, he said. Avoided cost contracts generally run for up to 20 years, and "they are essential for us in getting credit," he said.

The favorite among cogenerators is the commission's standard offer number four, enacted in 1983 to encourage alternative energy development. Over the last two years, cogenerators flooded state utilities with proposals for ventures, using such fuel sources as geothermal, wind and refuse. Today, state utilities have contracted for more than 15,000 megawatts of cogenerated power. And the PUC thinks that's enough.

"We never expected that much," said PUC spokeswoman Charlotte Ford. "It's been too successful in their eyes," according to John Angius of Pacific Gas & Electric Co.

With reserve margins quite high, cogenerated energy is less valuable, so the PUC wants to reduce avoided cost prices. "We're trying to simulate a market," says Ford. "Ratepayers should be paying for what the power is worth." PG&E's Angius adds: If the current rate practice is not changed, "it's possible that we will have to curtail our cheap hydroelectric production to cogenerated power, giving up our cheapest power for our most expensive."

Last Friday, the PUC was expected either to approve a moratorium until it can decide on a new formula for standard offer number four, or to impose new avoided-cost rates over next year. But the commission deferred its decision until July 10, although there seems to be little doubt what will happen. The PUC will approve a one-year moratorium, says Alvin Pak, an aide to commissioner Victor Calvo. "We have three votes" of the five on the commission to approve the moratorium, he told *The Energy Daily* yesterday in a telephone interview.

"No one will be allowed to sign a long-term contract with a utility on a standard-offer basis" for the next year, Pak said. Cogenerators "won't have the bargaining power they used to." Cogenerators were using the standard offer "as if they were holding a shotgun to the head" of the utilities as they negotiated their contracts, he added.

The commission did not decide on the issue last Friday because of requests by the California Department of General Services and the County Sanitation District of Los Angeles for exceptions to the pending decision. The general services agency wants the PUC to continue providing standard offer number four to suppliers of facilities on state property. And Los Angeles wants exemptions for six waste-to-energy projects (totaling 157 megawatts) it has been pursuing. But these requests likely will be denied on July 10, Pak said.

The commission, however, did vote last Friday to allow 93 projects totalling 1,151 megawatts to sign avoided cost contracts with PG&E and Southern California Edison. With rumors running rampant, many firms submitted contracts to the two utilities just before April 17, when the PUC first announced it was suspending the current rates. But PG&E and Socal Ed did not have enough time to sign the contracts before the order. "We had no choice in the matter," says Pak, adding that the proposals were submitted in time.

Not all these projects will be built, he speculated. They still must meet PUC guidelines in order to be eligible for the sweet rates. Most important, the companies must have secured their sites. "We wanted to make sure they were real projects and not just thrown together at the last minute," Pak said.

# The Impending Energy Crisis

**MY TURN/ALLEN E. MURRAY**

Whenever I warn people that another energy crisis is on the way, I draw raised eyebrows and skeptical sneers.

"We thought we were through with those things," my friends hoot. "Don't we have oil and gas running out of our ears? And plenty of electricity?"

My answer is, "Yes, for the moment," but I also add this warning: energy plenty is not going to last.

I'm saying this loud and clear to anyone who will listen because I never again want to go through another day like Jan. 23, 1974. That was when I sat embarrassed and angry in a Washington hearing room while the late Sen. Henry Jackson waved a finger at me and other petroleum executives. He demanded to know whether the energy crisis that had begun the previous year was real or some kind of oil-industry concoction to raise prices.

It *was* real, but many times since, I wished I'd had the presence of mind to add: "But Senator, it need never have happened. In the three years before the 1973-74 energy crisis, we began warning of impending shortages, urging more reliance on mass transit, more domestic petroleum development and the creation of a national-energy policy. But no one wanted to hear it."

The trouble is, Congress—like all of us—tends to be complacent until crisis fires the adrenaline. Unfortunately, government's worst decisions in energy, like its ill-fated fuel-allocation program and the billions wasted on crash alternative-energy schemes, have been those responding to crisis. Sound energy decisions that avert crisis usually come in quiet times like these.

So let me say it once again, louder:

We're headed for another round of energy shortages. Certainly by the end of this century. Possibly well before that.

**Planning:** If a crisis even that close seems nonthreatening, remember what most people often forget: lead times in energy require very long-range planning and investment. Even when we're successful in finding a new oil or gas field, putting it into production can take five to eight years. Bringing a nuclear power plant from drawing board to start-up can often take more than a decade.

So once more, still louder:

We're seeing patterns like those that led to the 1973-74 and 1979-80 energy crises:

- In 9 of the past 10 years, the United States used more natural gas than was found in this country.
- After dropping for four years, U.S. crude oil and product imports rose 8 percent last year, reflecting revived domestic consumption that exceeded domestic production. Approximately one-third of our oil supplies now comes from abroad, the same level as before the 1973-74 energy crisis.
- U.S. energy demand is conservatively estimated to be 20 to 25 percent higher by the year 2000 than it is today. In the petroleum industry that will require finding considerably more oil and gas than we use up each year, which will be possible only with a very high level of investment.

> We are headed for another round of shortages. Certainly by the century's end. Possibly before.

Granted, the situation is not critical now, and there are emerging plus factors that will reduce the severity of future shortages: oil-refining capacity that's more than adequate; approximately 460 million barrels of oil in the Strategic Petroleum Reserve; increased availability of oil and gas from non-OPEC areas like Canada, Mexico and the North Sea, and enough electricity-generating capacity in place or being built to meet immediately foreseeable needs. But that is my very point: today's relative quiet gives us a magnificent opportunity to plan energ opment in a noncrisis atmosphere

Now is the time for governmen try and the concerned public to without panic those policies that solve future energy needs fairly an cally, responsive both to the public and to sound business judgment. the effort to revamp the tax structu conceptual ground may need to be

How, for example, can we best h least slow, the decline in U.S. res oil and natural gas—down some cent in the past decade and a half.

Are there significant additional conserve more fuel, or has this aven pretty well exhausted?

Could there be a more orderly, e mentally protected, less costly me finding and using the oil and gas lic lands?

Might the time be ripe for a co government effort to restore the c ity of nuclear power plants and red construction time, now that we hav inspections, improved training of tors and other new safety measures ing from the Three Mile investigation?

**Taxes:** Last and most important, we not look at taxes on energy? gy producers shouldn't be discrin against; the arguments for tax inc to find and produce energy are as st those for incentives to do research. the difficult times in which the oil ir currently finds itself, can we still taxes on so-called windfall profits t ply only to this industry? Is it fair special levy on crude oil should fina clean-up of pollution created by companies? The effect of taxation ture energy security should concern

With enough thoughtful atten energy now, the crisis I'm predictin never happen—at least not as s as before.

*Murray is president of the Corp.*

# The Ward Howell Roundtable

Second Quarter, 1985

Partners of the executive search firm of Ward Howell meet regularly to hear distinguished executives present personal insights on key business issues. These excerpts are published so that they can be shared with other responsible and concerned leaders.

*"There's a view in this country in many quarters.. that the supply of electricity is going to remain ample for the foreseeable future. Nothing, I can assure you, is further from the truth."*

William McCollam, Jr., President
Edison Electric Institute.

With all of today's talk of revolutionary new energy sources — everything from the sun and the wind to ocean waves — there is a tendency to forget that this country's economic vitality still depends largely upon an old and trusted standby: electricity. No one is more aware of this than our most recent guest at the Ward Howell Roundtable, William McCollam, Jr., president of the Edison Electric Institute, which represents practically all of the major investor-owned producers in the business. In his talks with businessmen, security analysts and other groups and in lobbying efforts in Washington, McCollam consistently sounds this warning: today's electrical generating capacity is not over-abundant; and, indeed, this country faces a power crisis of potentially alarming proportions unless that capacity increases dramatically between now and the mid-1990's — a commitment that will not only require billions of investment dollars but also significant changes in the way legislators and regulators approach electric energy concerns.

## *"We have increased our need for electricity much more than most people realize."*

"At this point," Bill McCollam told us, "the overriding concern of the electric utility industry is to provide an adequate and reliable supply of electricity to a growing economy. And in tackling this job, we are battling a lot of people who are saying that we already have an over-capacity of electric generation in this country. They say we don't have to spend the money we've been spending to build new plants; everything will be hunky-dory if we just conserve, use energy more efficiently and go to these more exotic forms — solar and wind power, fuel cells, that sort of thing. Well, nothing I can assure you, is further from the truth than that."

To illustrate his point, McCollam cited the increase in total output recorded by electrical suppliers last year: a substantial 4½ per cent, thanks in large part to the recovering economy and record heat during August. "But the most interesting and perhaps disturbing thing about all of this is that in late January of this year, the output record set during one week of that August heat wave was surpassed by nearly one billion kilowatt hours — the first time since 1968 when the output during a winter week surpassed the preceding summer record. Now that is a red flag warning us about what is happening to electric consumption in this country — and we'd better be taking account of it."

## *The Growth in Electrical Consumption and the GNP: A Match*

This year, McCollam said, most experts expect electric output and consumption to grow by 3-3½ per cent —

roughly equal to the anticipated growth in the gross national product. "I mention that linkage because there is a common fallacy to the effect that we have decreased our use of energy in this country and there is no longer a coupling of the use of energy and the growth of the real GNP. That is true with respect to overall energy consumption — but it is not true with respect to electricity. Electricity is the underpinning of our economy and the most recent statistics show that over a long period of time, the growth in electric output and consumption will roughly parallel the economic growth that's taking place in this country. That means only one thing; we're going to need a lot of new power plants in the years ahead."

To better understand his industry's current dilemma, McCollam noted that "electricity cannot be stored or inventoried like automobiles, steel or most other commodities; it must be instantaneously generated and instantaneously used. As a result, to provide electricity reliably and economically, utilities must have some reserve capacity to serve the load. In 1983, the last year for which complete figures are available, our capacity margin — the amount by which the total generating capacity exceeds the peak demand — was about 25 per cent. Now obviously, that wasn't a whole lot when you consider that 15 per cent of demonstrated capacity at any given time is out of service for repair or scheduled maintenance. That leaves only 10 per cent of capacity for such unexpected events as equipment failure or sudden increases in demand because of extreme weather. That operating margin also has to provide some leeway for future economic growth and for one good reason: it's rare that we can announce a decision to build a plant today and get it on line in much less than 12 years."

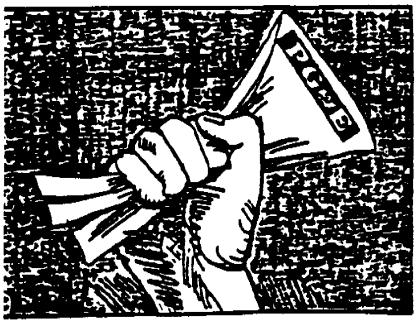
## *Needed: New Generating Capacity*

The upshot is, McCollam noted, that his industry must have a significant increase in generating capacity over the next decade. "We're going to need new capacity, first of all, to support economic growth," he said. "We also have to provide for the aging and retirement of plants; we have some very old electric generating plants in this country that are going to have to be retired and replaced. And the third thing we have to do is replace plant that is generating electricity with oil and natural gas. True, we do have what appears to be a temporary glut of oil and natural gas in this country. But Federal law now prohibits the industry from building new plants that burn gas. And I don't think anybody in his right mind would be building a plant that uses oil for generation when you look at the way we have been held as hostages in the past by OPEC."

So how much added capacity will be needed? "Based on our best current projections of future demand," Bill McCollam said, "the annual increase is probably going to be in the 2-3 per cent range. As a result, we're going to have to have 167 gigawatts of new capacity by 1993 — all of it from coal-fired and nuclear plants. Gigawatts is a term that you may not have heard before but let me explain way: 167 gigawatts is equal to 167,000 megawatts - a megawatt is a thousand kilowatts. Unfortunately, th capacity we have in the pipeline right now falls sl that goal by about 36 gigawatts. So, even if we hav the 2-3 per cent growth we're anticipating for the 1 we're going to fall short. And if we have economic g exceeding 3 per cent a year, we're going to be i trouble."

SAN FRANCISCO EXAMINER, 3/22/85, p.1

# A hard look/ State's cogeneration industry has serious growing pains




☐ Cogeneration worked well for greenhouse growers Page B14

By Richard F. Harris
Examiner science writer

With a $7.5-million-a-year electricity bill, Stanford University is one of PG&E's bigger customers. Stanford plans to reverse that next year by producing steam heat and selling the utility electricity, and ultimately hopes to put $80 million in the bank.

The Crown Zellerbach plant in Antioch used to be a good customer, too. But nowadays it generates enough electricity to supply 50,000 homes and sells whatever it doesn't need to PG&E.

The Marindale Dairy in Novato composts its manure and uses the gas to drive a small steam turbine. Although it produces only a modest amount of electricity, the owners like billing PG&E rather than being billed.

With stories like these — and the promise of abundant energy beyond planners' dreams — it's startling to find that serious growing pains have hit the state's cogeneration industry.

The technology, which generates electricity as it produces steam for heating and industrial processes, is a boon to the people who own the plants, and it has also become an unexpected, if unpredictable, factor in meeting electricity needs for the entire state.

Business has been booming: Already, more than 100 cogenerators statewide p duce enough electricity for a million ho holds, according to Jan Hamrin, an indus association representative.

And potential for growth abounds. generators have signed contracts that wo provide the state with 5,700 megawatts more than 2½ nuclear power plants the of Diablo Canyon — enough power for million households. New proposals contu to pour into utilities, which are required law to buy the electricity they are offere

Laws encouraging cogeneration "stmol out responses far greater than I think a one expected, including the regulators,"

— See back page, co

# State cogenerators face dim future

—From Page A1

Geoffrey Sikemore, coordinator of corporate planning for PG&E. "We're signing them up at an incredible rate."

Utilities would like to believe these plants will be built, because they would satisfy the state's projected growth needs into the 21st century, analysts agree. That means PG&E wouldn't need more dams or giant power plants.

But, true to the adage, it appears it is possible to have too much of a good thing.

"Except for a few very big projects, cogeneration is basically suspended," Tony Krumewald of GWF Power Systems told the state Senate's Energy and Public Utilities Committee at a recent hearing.

The causes include conflict over air pollution laws and the ever-shifting economy.

There is also a concern, shared by utilities and the state Public Utilities Commission, that the industry is growing too fast for the good of consumers.

"We've been too successful in encouraging this development," said Julian Ajello, who heads the alternative energy section at the PUC. "We need to slow things down."

The PUC determines how much utilities must pay cogenerators, based on what it would have cost the utilities to generate more power. Theoretically, alternative energy supplies cost consumers no more or no less than conventional technologies. But if cogeneration plants are built as quickly as their developers would like, Californians could end up paying inflated electricity prices.

Federal law encouraging alternative energy requires utilities to buy cogeneration electricity whenever it's offered. Sometimes, that could mean utilities would have to buy comparatively expensive cogeneration electricity while letting cheaper sources go to waste.

After a wet winter, for instance, PG&E throttles down its gas-fired power plants and uses the much cheaper hydroelectric power from the state's own dams and from the Pacific Northwest, as well as electricity from Diablo Canyon, Skidmore said.

"If you have to take the electricity from cogeneration, where's it going to go?" he asked. "We'd like to say to the cogenerators, 'Come back and see us in July.'" It is then that relatively cheap hydro power runs dry and air conditioners run hot.

Eventually, the state will need more electricity year-round. Skidmore said PG&E will be happy to buy it from cogenerators, who take all the economic risks of building a plant and don't get paid unless they deliver electricity.

That could be good for consumers, who soon will be reminded of the economic risk of building new power sources as they begin paying up to 10 times more than anticipated for PG&E's $5.4 billion Diablo Canyon plant.

Economic risk, however, is one reason the spread of cogeneration seems to have ground to a halt.

The profit margin "is very narrow," said Wally McOpist, an industry financial analyst. "If you change very many assumptions at all, you end up without a project."

Companies can spend as much as half a million dollars on a proposal, including design costs and the state permit process, before they even break ground, he testified. A change in 1 percentage point in revenues can make the difference between success and failure, he said.

And under some financing schemes, developers of cogeneration are counting on an increase in the price of natural gas to make their profits, Ajello said. Since experts have had a miserable track record in predicting natural gas prices in the last few years, that is a precarious situation.

Some of the biggest projects are proposed by oil companies, which use steam to help get the oil out of the ground. Those projects have been slowed because oil prices aren't rising, either, and because it costs too much to convey the electricity from the oil fields to the distant power lines.

Despite these economic problems, McOpist maintains "the primary problem is uncertainty" about how regulation will affect the industry.

The Legislature is trying to grapple with an air pollution conflict between cogenerators and the state and federal government that is choking the industry. This problem is acute in Southern California areas still struggling to meet minimum federal requirements for clean air, so local air-quality boards are reluctant to accept the new sources.

Cogeneration plants, most of which burn natural gas, are required to have the latest pollution-control devices. Natural gas is a relatively clean fuel, but burning it still produces nitrogen oxides, which are converted by sunlight into smog.

But when fitted with the so-called selective catalytic reduction technology for oxides of nitrogen, cogeneration plants are two to three times cleaner than existing power plants, said Michael Hertel of Southern California Edison.

As a result, proponents argue that when a cogeneration plant comes on line, it will clean up the air by reducing the need to run the older, dirtier plants. Only when the industry has grown so large that the older plants are no longer used will cogenerators begin adding to air pollution.

The U.S. Environmental Protection Agency, however, is not convinced that the dirtier plants will be turned off when the cogenerators start up.

"That may or may not be true," said Wayne Blackard, chief of the new source review program for the EPA's Western region. "We just don't know."

Blackard said the cogenerators have so far failed to prove that power plants in the area will indeed be scaled back with the addition of cogenerators. Furthermore, he said, "if in fact all the assumptions do not pan out, then somebody has to be held liable for the increased emissions."

So far, cogenerators have been reluctant to accept that, because they could be faced with scaling back their projects — and potentially wiping out their profits.

While cogenerators and utilities attempt to resolve that with the EPA, the Legislature has stepped in to smooth a similar conflict with the state's air-quality boards. A bill by Sen. Herschel Rosenthal, D-Los Angeles, would require the air-quality districts, rather than the cogenerators, to offset any new air pollution with cutbacks elsewhere.

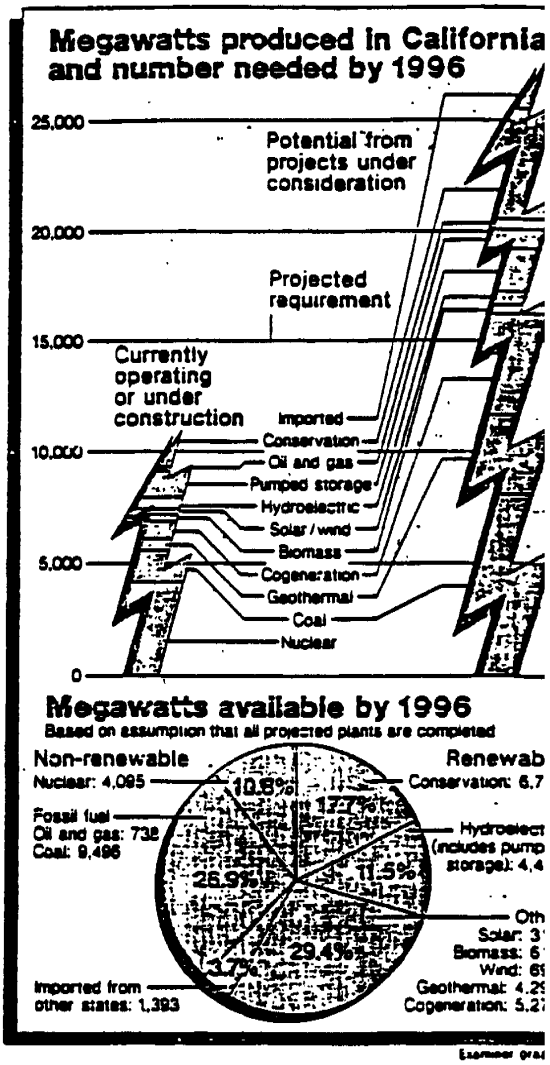
The legal wranglings have left so many uncertainties that even state agencies are complaining about it.

Michael Garland, who directs the purchase of $300 million in electricity a year for state buildings, testified that cogeneration facilities at state hospitals, universities and other facilities could save taxpayers $100 million in the next 20 years.

But "at least half the projects planned may not develop," he warned. "For the state to move ahead, we are going to need more predictability in the regulatory environment."

The uncertainties worry utilities, as well. If cogeneration is not going to take off in California, PG&E may have to build more large central po plants, Skidmore said. The u could need new power sources by mid-1990s, which means it shoul making final decisions today.

"There's really no need for uti or ratepayers to buy a centra plant," said cogeneration industry resentative Hamrin. "The questi whether we are going to allow generation to proceed."



# APPENDIX C

Statement by Charles A. Lenzie, President
Nevada Power Company

Charles A. Lenzie, President

NEVADA POWER COMPANY

Statement Before the Legislative Commission's
Committee to Study the Methods of Distributing
Revenues from Taxation of Large Electrical Power Plants (A.C.R. 31)

November 14, 1985

This statement will discuss Nevada Power Company's plans for future power generating facility construction. Assemblyman Joerg invited these comments in a letter dated October 25, 1985, to Mr. Conrad Ryan, Chairman of the Board of Nevada Power.

Senate Bill 161, the Resource Planning Act, was enacted into law during the 1983 legislative session. This Act requires that Nevada Power Company file with the Public Service Commission of Nevada every other July beginning with 1984, its estimate of the demand for electrical energy by its customers over the next 20 years and how the Company plans to meet this demand. In effect, the construction of any new generating facility has to be included in the Company's filing with the PSC and approved by the PSC.

Attached to this statement are three tables from the Company's July, 1984, filing with the PSC under SB 161. These tables summarize the Company's estimate of demands for electricity under three scenarios and the generating facilities that would be added under each.

Table A shows the estimates under low growth in peak demand at 1.5% per year.

Table B shows the Company's best estimate of growth in peak

demand at 2.7% growth per year.

Table C shows the estimates under high growth in peak demand at 4.5% per year.

Nevada Power's next filing under SB 161 will be made in July, 1986. This filing will have to reflect several major events that have occurred during the last two years.

1) Actual net peak load growth during 1984 and 1985 has exceeded Nevada Power's estimates even under the high case shown in Table C. Nevada Power's peak demand by customers for electricity in the summer of 1985 occurred on July 5 and was 1647 megawatts. As can be seen from Table C, this level of demand was not anticipated to occur until 1987 under the high growth scenario.
2) Utah Power and Light Company has cancelled Hunter Unit No. 4. This was a mine-mouth coal-fired 400 megawatt generating facility that was to have been built by Utah Power and Light Company in Central Utah. Nevada Power would have owned 100 megawatts of this unit.
3) The State of Nevada Colorado River Commission has allocated 125 megawatts of additional power to Nevada Power from the upgrade at Hoover Dam instead of the 178 megawatts estimated for the 1984 Resource Plan filing.
4) Subject to regulatory approval, Nevada Power has agreed in principle, to purchase the fast growing Laughlin/ Searchlight service territory in Southern Nevada from

CP National Corporation. The 1984 filing under SB 161 included no additional power demand requirements for the Searchlight/Laughlin area. It should also be noted that the Colorado River Commission has allocated 10 megawatts from the upgrade at Hoover Dam to the utility serving the Laughlin area.

5) Following an action filed by the Attorney General's Office of Consumer Advocate, a Carson City District Court judge ruled that the Company's last general rate increase which went into effect in January, 1984, was not properly noticed and therefore, void. The judge's ruling would require the case to be remanded to the PSC for refunds to be considered and a reduction in rates to those in effect prior to January, 1984. This decision was appealed to the Nevada Supreme Court. Legal arguments before the Supreme Court were held on October 18, 1985. To date, the Supreme Court has not rendered a decision.

6. There is uncertainty concerning the White Pine Project. This coal-fired generating station is scheduled to be located near Ely, Nevada. The status of the White Pine Project is to be reviewed by Mike Bourn at this meeting of the committee.

To replace the Hunter Unit No. 4 power, the Company has entered into an agreement, subject to regulatory approval, with Utah Power and Light to purchase a 100 megawatt interest in Hunter Unit No. 3,

which is an operating coal-fired generating facility located at the same site as proposed for Hunter Unit No. 4. This 100 megawatts would be purchased for a minimum of $135 million and would be consumated on January 1, 1988, assuming that a transmission line necessary to interconnect Nevada Power and Utah Power and Light is completed by that date. Nevada Power's cost of the necessary transmission line from Las Vegas to the Nevada/Arizona border would be about $40 million. The Company has changed the participati date in the Hunter generating facility from 1991 to 1988 because of the faster growth rate in peak electricity demand than originally estimated.

Nevada Power's participation in the White Pine County and Allen generating facilities is anticipated.

The Allen Plant is scheduled to be located about 25 miles northeast of Las Vegas near Interstate 15. Nevada Power has environ permits to build generating facilities at the Allen site capable of producing up to 2000 megawatts of power. The size of the individ generating units will depend on the Company finding partners, if any, in the ownership and construction of the units.

All of these plans for participation in new generating faciliti are very much subject to the outcome of the Supreme Court case mentioned above. Obviously, the risks of providing an adequate and dependable supply of electricity will be increased significantly if the Supreme Court case decision is unfavorable to Nevada Power Company. The Company would have to delay the new facilities discuss previously and would be forced to depend upon temporary resources,

if available, such as non-firm purchases of electricity from other utilities, for a significantly longer period of time than presently anticipated.

TABLE 4.2.1

NEVADA POWER COMPANY
LOADS AND RESOURCES - MEGAWATTS
1984 THROUGH 2000

LOW GROWTH
PLAN LC-1
20% RESERVE MARGIN

| | RESOURCE | TYPE | 1984 | 1985 | 1986 | 1987 | 1988 | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. | Hoover | Hydro (I) | 100 | 100 | 100 | 210[1] | 222 | 234 | 246 | 258 | 270 | 273 | 278 | 278 | 278 | 278 | 278 | 278 | 278 |
| 2. | Westside | Oil (P) | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 |
| 3. | Clark 1 | G&O (I) | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 |
| 4. | Clark 2 | G&O (I) | 66 | 66 | 66 | 66 | 66 | 66 | 66 | 66 | 66 | 66 | 66 | 66 | 66 | 66 | 66 | 66 | 66 |
| 5. | Clark 3 | G&O (I) | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 61 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 67 |
| 6. | Clark 4 | G&O (P) | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 |
| 7. | Sunrise 1 | G&O (I) | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 |
| 8. | Sunrise 2 | G&O (P) | 69 | 69 | 69 | 69 | 69 | 69 | 69 | 69 | 69 | 69 | 69 | 69 | 69 | 69 | 69 | 69 | 69 |
| 9. | Gardner 1 | Coal (B) | 110 | 110 | 110 | 110 | 110 | 110 | 110 | 110 | 110 | 110 | 110 | 110 | 110 | 110 | 110 | 110 | 110 |
| 10. | Gardner 2 | Coal (B) | 110 | 110 | 110 | 110 | 110 | 110 | 110 | 110 | 110 | 110 | 110 | 110 | 110 | 110 | 110 | 110 | 110 |
| 11. | Mohave 1 | Coal (B) | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 |
| 12. | Mohave 2 | Coal (B) | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 |
| 13. | Navajo 1 | Coal (B) | 85 | 85 | 85 | 85 | 85 | 85 | 85 | 85 | 85 | 85 | 85 | 85 | 85 | 85 | 85 | 85 | 85 |
| 14. | Navajo 2 | Coal (B) | 85 | 85 | 85 | 85 | 85 | 85 | 85 | 85 | 85 | 85 | 85 | 85 | 85 | 85 | 85 | 85 | 85 |
| 15. | Navajo 3 | Coal (B) | 85 | 85 | 85 | 85 | 85 | 85 | 85 | 85 | 85 | 85 | 85 | 85 | 85 | 85 | 85 | 85 | 85 |
| 16. | Gardner 3 | Coal (B) | 110 | 110 | 110 | 110 | 110 | 110 | 110 | 110 | 110 | 110 | 110 | 110 | 110 | 110 | 110 | 110 | 110 |
| 17. | Clark 5 | G&O (P) | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 |
| 18. | Clark 6 | G&O (P) | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 |
| 19. | Clark 7 | G&O (P) | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 |
| 20. | Clark 8 | G&O (P) | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 |
| 21. | Gardner 4 | Coal (B) | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 38 | 51 | 65 |
| 22. | Gardner 4 | Coal (P) | 226 | 226 | 226 | 226 | 226 | 226 | 226 | 226 | 226 | 226 | 226 | 226 | 226 | 226 | 212 | 199 | 185 |
| 23. | Allen 1 | Coal (B) | | | | | | | | | | | | 125 | 125 | 125 | 125 | 125 | 125 |
| 24. | Allen 2 | Coal (B) | | | | | | | | | | | | | | | | 125 | 125 |
| 25. | Indefinite Purchases | | | | | | | | | | | | | | | | | | |
| 26. | Total Resources | | 1841 | 1841 | 1841 | 1951 | 1963 | 1975 | 1987 | 1999 | 2011 | 2014 | 2019 | 2144 | 2144 | 2144 | 2144 | 2269 | 2269 |
| 27. | Peak Load | | 1412 | 1437 | 1462 | 1491 | 1520 | 1553 | 1590 | 1610 | 1630 | 1651 | 1671 | 1693 | 1716 | 1741 | 1765 | 1792 | 1815 |
| 28. | Required Reserves[2] | | 282 | 287 | 292 | 298 | 304 | 311 | 318 | 322 | 326 | 330 | 334 | 339 | 343 | 348 | 353 | 358 | 363 |
| 29. | Required Resources | | 1694 | 1724 | 1754 | 1789 | 1824 | 1864 | 1908 | 1932 | 1956 | 1981 | 2005 | 2032 | 2059 | 2089 | 2118 | 2150 | 2178 |
| 30. | Base Coal Capacity | | 831 | 831 | 831 | 831 | 831 | 831 | 831 | 831 | 831 | 831 | 831 | 956 | 956 | 956 | 970 | 1108 | 1122 |

1/ Present Hoover contracts expire in 1987. Assumed renewal of present capacity plus indicated additional Hoover capacity for 1987 & beyond.

2/ Required Reserves = 20% of peak load.

TABLE 4.2.2

LOADS AND RESOURCES - MEGAWATTS
1984 THROUGH 2000

PLANNING

| | RESOURCE | TYPE | 1984 | 1985 | 1986 | 1987 | 1988 | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 20 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. | Hoover | Hydro (I) | 100 | 100 | 100 | 210[1] | 222 | 234 | 246 | 258 | 270 | 273 | 278 | 278 | 278 | 278 | 278 | 278 | 278 | 2 |
| 2. | Westside | Oil (P) | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | |
| 3. | Clark 1 | G&O (I) | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | |
| 4. | Clark 2 | G&O (I) | 66 | 66 | 66 | 66 | 66 | 66 | 66 | 66 | 66 | 66 | 66 | 66 | 66 | 66 | 66 | 66 | 66 | |
| 5. | Clark 3 | G&O (I) | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | |
| 6. | Clark 4 | G&O (P) | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | |
| 7. | Sunrise 1 | G&O (I) | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | |
| 8. | Sunrise 2 | G&O (P) | 69 | 69 | 69 | 69 | 69 | 69 | 69 | 69 | 69 | 69 | 69 | 69 | 69 | 69 | 69 | 69 | 69 | |
| 9. | Gardner 1 | Coal (B) | 110 | 110 | 110 | 110 | 110 | 110 | 110 | 110 | 110 | 110 | 110 | 110 | 110 | 110 | 110 | 110 | 110 | 1 |
| 10. | Gardner 2 | Coal (B) | 110 | 110 | 110 | 110 | 110 | 110 | 110 | 110 | 110 | 110 | 110 | 110 | 110 | 110 | 110 | 110 | 110 | 1 |
| 11. | Mohave 1 | Coal (B) | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 1 |
| 12. | Mohave 2 | Coal (B) | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 1 |
| 13. | Navajo 1 | Coal (B) | 85 | 85 | 85 | 85 | 85 | 85 | 85 | 85 | 85 | 85 | 85 | 85 | 85 | 85 | 85 | 85 | 85 | |
| 14. | Navajo 2 | Coal (B) | 85 | 85 | 85 | 85 | 85 | 85 | 85 | 85 | 85 | 85 | 85 | 85 | 85 | 85 | 85 | 85 | 85 | |
| 15. | Navajo 3 | Coal (B) | 85 | 85 | 85 | 85 | 85 | 85 | 85 | 85 | 85 | 85 | 85 | 85 | 85 | 85 | 85 | 85 | 85 | |
| 16. | Gardner 3 | Coal (B) | 110 | 110 | 110 | 110 | 110 | 110 | 110 | 110 | 110 | 110 | 110 | 110 | 110 | 110 | 110 | 110 | 110 | 1 |
| 17. | Clark 5 | G&O (P) | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | |
| 18. | Clark 6 | G&O (P) | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | |
| 19. | Clark 7 | G&O (P) | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | |
| 20. | Clark 8 | G&O (P) | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | |
| 21. | Gardner 4 | Coal (B) | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 38 | 51 | 65 | 39. |
| 22. | Gardner 4 | Coal (P) | 226 | 226 | 226 | 226 | 226 | 226 | 226 | 226 | 226 | 226 | 226 | 226 | 226 | 226 | 212 | 199 | 185 | |
| 23. | Hunter 4 | Coal (B) | | | | | | | | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | |
| 24. | WPP 1 | Coal (B) | | | | | | | | | | 112 | 112 | 112 | 112 | 112 | 112 | 112 | 112 | |
| 25. | WPP 2 | Coal (B) | | | | | | | | | | | 112 | 112 | 112 | 112 | 112 | 112 | 112 | |
| 26. | Allen 1 | Coal (B) | | | | | | | | | | | | | 125 | 125 | 125 | 125 | 125 | |
| 27. | Allen 2 | Coal (B) | | | | | | | | | | | | | | | 125 | 125 | 125 | |
| 28. | Allen 3 | Coal (B) | | | | | | | | | | | | | | | | | 125 | |
| 29. | Allen 4 | Coal (B) | | | | | | | | | | | | | | | | | | |
| 30. | Geothermal | (B) | | | | | | | | | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | |
| 30. | Indefinite Purchases | | | | 12 | | 31 | 99 | 175 | 120 | 152 | 92 | 33 | 91 | 26 | 91 | 32 | 103 | 59 | |
| 31. | Total Resources | | 1841 | 1841 | 1853 | 1951 | 1994 | 2074 | 2162 | 2219 | 2273 | 2328 | 2386 | 2444 | 2504 | 2569 | 2635 | 2706 | 2787 | 2 |
| 32. | Peak Load | | 1444 | 1493 | 1544 | 1602 | 1662 | 1728 | 1802 | 1849 | 1894 | 1940 | 1988 | 2037 | 2087 | 2141 | 2196 | 2255 | 2320 | 2 |
| 33. | Required Reserves[2] | | 289 | 299 | 309 | 320 | 332 | 346 | 360 | 370 | 379 | 388 | 398 | 407 | 417 | 428 | 439 | 451 | 464 | |
| 34. | Required Resources | | 1733 | 1792 | 1853 | 1922 | 1994 | 2074 | 2162 | 2219 | 2273 | 2328 | 2386 | 2444 | 2504 | 2569 | 2635 | 2706 | 2787 | 2 |
| 35. | Base Coal Capacity | | 831 | 831 | 831 | 831 | 831 | 831 | 831 | 931 | 931 | 1043 | 1155 | 1155 | 1280 | 1280 | 1419 | 1432 | 1571 | 1 |

1/ Present Hoover contracts expire in 1987. Assumed renewal of present capacity plus indicated additional Hoover capacity for 1987 and beyond.

2/ Required Reserves = 20% of peak load.

TABLE 4.2.3

LOADS AND RESOURCES - MEGAWATTS
1984 THROUGH 2001

HIGH GROWTH
PLANNING

| | RESOURCE | TYPE | 1984 | 1985 | 1986 | 1987 | 1988 | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. | Hoover | Hydro (I) | 100 | 100 | 100 | 210[1] | 222 | 234 | 246 | 258 | 270 | 273 | 278 | 278 | 278 | 278 | 278 | 278 | 278 | 278 |
| 2. | Westside | Oil (P) | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 |
| 3. | Clark 1 | G&O (I) | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 |
| 4. | Clark 2 | G&O (I) | 66 | 66 | 66 | 66 | 66 | 66 | 66 | 66 | 66 | 66 | 66 | 66 | 66 | 66 | 66 | 66 | 66 | 66 |
| 5. | Clark 3 | G&O (I) | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 67 |
| 6. | Clark 4 | G&O (P) | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 |
| 7. | Sunrise 1 | G&O (I) | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 |
| 8. | Sunrise 2 | G&O (P) | 69 | 69 | 69 | 69 | 69 | 69 | 69 | 69 | 69 | 69 | 69 | 69 | 69 | 69 | 69 | 69 | 69 | 69 |
| 9. | Gardner 1 | Coal (B) | 110 | 110 | 110 | 110 | 110 | 110 | 110 | 110 | 110 | 110 | 110 | 110 | 110 | 110 | 110 | 110 | 110 | 110 |
| 10. | Gardner 2 | Coal (B) | 110 | 110 | 110 | 110 | 110 | 110 | 110 | 110 | 110 | 110 | 110 | 110 | 110 | 110 | 110 | 110 | 110 | 110 |
| 11. | Mohave 1 | Coal (B) | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 |
| 12. | Mohave 2 | Coal (B) | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 |
| 13. | Navajo 1 | Coal (B) | 85 | 85 | 85 | 85 | 85 | 85 | 85 | 85 | 85 | 85 | 85 | 85 | 85 | 85 | 85 | 85 | 85 | 85 |
| 14. | Navajo 2 | Coal (B) | 85 | 85 | 85 | 85 | 85 | 85 | 85 | 85 | 85 | 85 | 85 | 85 | 85 | 85 | 85 | 85 | 85 | 85 |
| 15. | Navajo 3 | Coal (B) | 85 | 85 | 85 | 85 | 85 | 85 | 85 | 85 | 85 | 85 | 85 | 85 | 85 | 85 | 85 | 85 | 85 | 85 |
| 16. | Gardner 3 | Coal (B) | 110 | 110 | 110 | 110 | 110 | 110 | 110 | 110 | 110 | 110 | 110 | 110 | 110 | 110 | 110 | 110 | 110 | 110 |
| 17. | Clark 5 | G&O (P) | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 |
| 18. | Clark 6 | G&O (P) | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 |
| 19. | Clark 7 | G&O (P) | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 |
| 20. | Clark 8 | G&O (P) | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 |
| 21. | Gardner 4 | Coal (B) | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 38 | 51 | 65 | 78 |
| 22. | Gardner 4 | Coal (P) | 226 | 226 | 226 | 226 | 226 | 226 | 226 | 226 | 226 | 226 | 226 | 226 | 226 | 226 | 212 | 199 | 185 | 172 |
| 23. | Hunter 4 | Coal (B) | | | | | | | | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |
| 24. | WPP 1 | Coal (B) | | | | | | | | | | 187 | 187 | 187 | 187 | 187 | 187 | 187 | 187 | 187 |
| 25. | WPP 2 | Coal (B) | | | | | | | | | | | 187 | 187 | 187 | 187 | 187 | 187 | 187 | 187 |
| 26. | Allen 1 | Coal (B) | | | | | | | | | | | | 250 | 250 | 250 | 250 | 250 | 250 | 250 |
| 27. | Allen 2 | Coal (B) | | | | | | | | | | | | | 250 | 250 | 250 | 250 | 250 | 250 |
| 28. | Allen 3 | Coal (B) | | | | | | | | | | | | | | | 250 | 250 | 250 | 250 |
| 29. | Allen 4 | Coal (B) | | | | | | | | | | | | | | | | | 250 | 250 |
| 30. | Unknown 1 | Coal (B) | | | | | | | | | | | | | | | | | | 250 |
| 31. | Unknown 2 | Coal (B) | | | | | | | | | | | | | | | | | | |
| 32. | Indefinite Purchases | | | | 68 | 48 | 133 | 226 | 331 | 317 | 408 | 326 | 247 | 117 | | 128 | 19 | 170 | 84 | |
| 33. | Total Resources | | 1841 | 1841 | 1909 | 1999 | 2096 | 2201 | 2318 | 2416 | 2519 | 2627 | 2740 | 2860 | 2993 | 3121 | 3262 | 3413 | 3577 | 374 |
| 34. | Peak Load | | 1462 | 1525 | 1591 | 1666 | 1747 | 1834 | 1932 | 2013 | 2099 | 2189 | 2283 | 2383 | 2489 | 2601 | 2718 | 2844 | 2981 | 310 |
| 35. | Required Reserves[2] | | 292 | 305 | 318 | 333 | 349 | 367 | 386 | 403 | 420 | 438 | 457 | 477 | 498 | 520 | 544 | 569 | 596 | 62 |
| 36. | Required Resources | | 1754 | 1830 | 1909 | 1999 | 2096 | 2201 | 2318 | 2416 | 2519 | 2627 | 2740 | 2860 | 2987 | 3121 | 3262 | 3413 | 3577 | 372 |
| 37. | Base Coal Capacity | | 831 | 831 | 831 | 831 | 831 | 831 | 831 | 931 | 931 | 1118 | 1305 | 1555 | 1805 | 1805 | 2069 | 2082 | 2346 | 260 |

1/ Present Hoover contracts expire in 1987. Assumed renewal of present capacity plus indicated additional Hoover capacity for 1987 and beyond.

2/ Required Reserves = 20% of peak load.

# APPENDIX D

## Status of the White Pine Power Project

A Nevada—California energy generation development in White Pine County
**P.O. Box 135 □ 457 5th Street □ Ely, Nevada 89301 □ (702) 289-3065**

# STATUS OF THE WHITE PINE POWER PROJECT

November 14, 1985

The White Pine Power Project is prepared to begin construction as soon as its participants are ready to commit to construction spending for a new coal-fueled generating resource. All necessary federal licenses and approvals necessary to commencing construction are in hand.

The Bureau of Land Management issued its favorable record of decision on the WPPP Final Environmental Impact Statement in March 1985. This action grants approval of the project's preferred generating station site in Steptoe Valley, corridors for power transmission lines and rail line, corridors for water supply pipelines, and locations for microwave communication stations. Since nearly all of the project's facilities will be located on federal land managed by the BLM, this guarantees the ability of the WPPP to move forward and construct the project in the most preferable and expiditious manner.

The State of Nevada Division of Environmental Protection, acting for both the State and the U. S.



White Pine County □ Boulder City □ Lincoln County Power District No. 1 □ Mt. Wheeler Power Inc. □ Nevada Power Company
Overton Power District No. 5 □ Sierra Pacific Power Company □ Valley Electric Association □ Wells Rural Electric Company
(and the California cities) □ Anaheim □ Burbank □ Glendale □ Los Angeles □ Pasadena □ Riverside

Environmental Protection Agency, granted air quality construction permits to the WPPP for the generating station in August 1985. These permits ensure protection of the environment while permitting the project to produce electricity economically. The permits require 84% removal of sulfur dioxide based on a design coal with six-tenths of one percent sulfur content. Other conditions in the permits provide for control of particulates, nitrogen oxides and other substances. Air permits are traditionally the most difficult permits to obtain for power generating stations. Receipt of them under favorable conditions, as in this case, virtually assures construction of a generating project.

The Nevada Division of Water Resources issued permits for the diversion of groundwater in the amount of 25,000 acre-feet annually to White Pine County for the WPPP in August 1983. These permits were renewed in September 1985 by the State Engineer. They provide all of the water the WPPP will need when operating at full capacity year-round, although, generally, a generating plant operates at 70% to 80% of its capacity on an annual basis.

The only major permit yet to be obtained is the construction permit from the Nevada Public Service Commission. The application for that permit will not be filed until a short time prior to the commencement of construction. By its nature, the state construction permit requires that everything, including final participation in

the project, be resolved before application is made.

I think the question on everyone's mind, particularly now that the project is over the major regulatory hurdles, is when are we going to proceed to construction. Before the drop in oil prices, I could have told you that construction would commence immediately. Now, I do not expect construction to begin until 1987 or 1988.

What oil prices have to do with the construction of the WPPP may be puzzling to many people since the project is coal-fueled.

Oil prices have had everything to do with the utility business since OPEC first dramatically increased crude oil prices in 1973. By 1978, there were no plans among utilities to build any new baseload generating capacity fueled with oil or natural gas. Utilities in the south, many of whom had traditionally generated all or nearly all of their power with natural gas, were instructed by the feds to eliminate entirely natural gas as a generating fuel as soon as practicable. So, the push was for new generation fueled with coal or nuclear.

We all are quite aware of what has happened to the growth of nuclear power. That leaves us with coal as the only viable fuel for new generating facilities for the immediately foreseeable future.

It might be interesting to note here that the history of the electrical generation business is one of ever declining costs as each new generation of power generating

facilities came on line due to technology advances and economies of scale. We often forget that in light of the increasing costs associated with the past fifteen years. But that was exactly the case until we entered the added cost era of pollution control in the early 70's and the high inflation era in the late 70's.

The great majority of the successful new generating facilities that began construction in the last ten years have been coal-fueled. During that time, these new plants had two things going for them: (1) They would reduce our dependence on foreign fuel supplies, most of which come from politically unstable parts of the world; and (2) they would produce electricity at a lower cost <u>immediately upon beginning operation</u> than existing oil-fueled generating plants. The first advantage still exists, the second now is questionable -- at least while oil prices remain at their current low levels.

While both of these advantages were operative, the decision to construct new coal-fueled generation was an easy one. New generation would displace existing, more expensive oil plants in addition to providing new capacity to meet growing demand. Now, however, electricity from new coal-fueled generation <u>in the early years</u> may cost more than electricity from some existing, older oil-fueled generating plants. Therefore, the incentive to replace still-operating oil generation with coal is not as great as it was just two or three years ago when oil prices were

higher. The problem is further complicated by the lack of consensus on just how long this wonderful situation of cheap oil will last. (Who would have thought 15 years ago that $28 crude oil would be referred to as cheap oil! In 1970, a barrel of light arabian crude cost approximately $4.00; today, the official price is around $28.00, down from a high of $42.00 in 1981.) The only point on which all might agree is that the situation can't last forever nor is it likely to last long enough to justify constructing new oil generation. (In terms of energy equivalency, $28.00 per barrel oil is equivalent to $93.00 per ton coal -- so, oil isn't much of a deal when looking at fuel for new plants even at these current "low" prices.)

The situation is further complicated by the fact that there is excess power generating capacity right now in the west. This will run out by the early to mid 90's and perhaps sooner if we have some dry years in the Columbia and Colorado River basins. Construction on new facilities will have to begin soon to meet the demand in the mid 90's because power generating facilities are not licensed and constructed in a short time. The construction cycle alone for a new two-unit plant is a minimum of five years with detailed design and engineering and licensing preceding that for up to another five years and sometimes longer.

Regulators and public utility boards are understandably frightened of making decisions that will leave them with the blame for over-capacity and higher than

necessary rates for electricity. The current oil-price situation and prognostications for further declines in the future leave them without the immediately "cheaper power from new facilities" justification for new power plants. They want to defer decisions on new facilities as long as possible. However, these sorts of decisions can only be deferred for another couple of years if the needs of the mid 90's are to be met. For some utilities, the decision can't be deferred at all. They and we are caught in this atmosphere of uncertainty and indecision.

For all intents and purposes, the White Pine Power Project is licensed and ready to proceed. We believe we shall be able to do exactly that within the next two years. We are maintaining the status of the project and the licenses and our preparedness to proceed to construction. Just recently, the management committee of the project, consisting of the participants in the project voting their respective shares of participation, acted to extend the current development period for an additional two years. This action was accompanied by a commitment to spend an additional three million dollars, mostly for debt carrying costs. The participants' alternative was to terminate the project. They elected not to do that by a very substantial majority -- over eighty percent. This indicates significant interest in constructing the WPPP and strong belief in its place in the energy supply future at a competitive cost for energy.

## WHITE PINE POWER PROJECT

The White Pine Power Project (WPPP) is a 1500-megawatt coal-fueled, steam-electric generating facility to be located 48 miles north of Ely on a 2250-acre site in White Pine County, Nevada. The project will consist of two 750-megawatt units, with unit 1 scheduled for commercial operation in 1993 and unit 2 completed a year later.

### Participants

As currently proposed, WPPP will be jointly owned by White Pine County (81.33%), Nevada Power Company (13.34%) and Sierra Pacific Power Company (5.33%). If either Nevada Power or Sierra Pacific should reduce their level of participation, the County's share of ownership would increase commensurately to take maximum advantage of tax-exempt financing. The proposed WPPP participants and their share of the project output are:

| | % | MW |
|---|---|---|
| Nevada Entities | | |
| Boulder City | 2.500 | 37.50 |
| Lincoln County Power District No. 1 | 2.530 | 37.95 |
| Mt. Wheeler Power | 3.000 | 45.00 |
| Nevada Power Co. | 25.000 | 375.00 |
| Overton Power District No. 5 | 2.530 | 37.95 |
| Sierra Pacific Power Co. | 10.000 | 150.00 |
| Valley Electric Association | 2.440 | 36.60 |
| Wells Rural Electric Co. | 1.000 | 15.00 |
| California Municipalities | | |
| Anaheim | 3.621 | 54.32 |
| Burbank | 1.938 | 29.07 |
| Glendale | 1.836 | 27.54 |
| Los Angeles | 39.117 | 586.76 |
| Pasadena | 1.836 | 27.54 |
| Riverside | 2.652 | 39.78 |

### Project Financing

White Pine County will finance its share of the costs of WPPP by the issuance of tax-exempt notes and bonds pursuant to the Nevada County Economic Development Revenue Bond Law. The County will sell its ownership share of the electrical output to the participants through power sales contracts that will unconditionally obligate the participants for the payment of all costs of the project. All participants will benefit from the attractive interest rates afforded tax-exempt bonds and the high bond rating resulting from the participation of the California participants, particularly the Los Angeles Department of Water and Power, the largest U.S. municipal utility and highly respected in financial markets as well as in utility and engineering circles.

### Development Work Agreement

Following successful preliminary feasibility studies in 1978-79, a Development Work Agreement between White Pine County, the other project owners and the Los Angeles Department of Water and Power (LADWP) was approved in November 1980. Under this agreement, LADWP is the Development Manager responsible for carrying out all planning studies, surveys, estimates and other activities necessary to secure regulatory approvals and meet environmental licensing requirements for WPPP. LADWP also has been selected by the participants to manage the construction phase of the project. Nevada Power Company will manage the WPPP operation once construction is completed and the units are producing power.

Generating Station Site Selection

In March 1985, the Steptoe Valley site was approved by the Bureau of Land Management in its record of decision approving the WPPP Environmental Impact Statement. This site, 48 miles north of Ely, was selected by the project participants as the preferred site for the generating station in July 1983. The participants' selection of Steptoe Valley followed over a year of detailed engineering and environmental evaluation of three candidate sites selected in October 1981 from among 25 potential sites throughout White Pine County.

Transmission Facilities

WPPP generation will be delivered to participating utilities over two new 500 KV transmission lines into the Las Vegas area and a new 230 KV line in northern Nevada.

Coal and Water Supplies

Coal will be transported to the WPPP generating station in unit trainloads from the north utilizing the existing Nevada Northern Railway right of way which interconnects with both the Southern Pacific RR and Western Pacific RR (now owned by Union Pacific RR) main lines in northern Nevada near Wells. The Coal will come from mines in Utah, Wyoming and Colorado. The 1500 MW generating station is expected to consume over four million tons of coal annually based on the design coal for the project.

WPPP will require a maximum of 25,000 acre-feet of water annually primarily for steam generation and power plant cooling. Permits to appropriate that amount of groundwater in Steptoe Valley were granted by the Nevada State Engineer in August 1983.

Air Quality

In August 1985, WPPP received air quality permits from the Nevada Department of Environmental Protection which also acts on behalf of the U.S. Environmental Protection Agency. The permits require 84 percent sulfer dioxide removal, baghouses for essentially complete removal of particulates and sophisticated boiler design to control nitrogen oxides emissions. The project will be extremely "clean" with these requirements and a composite coal containing only six-tenths of one percent sulfer, 8.8 percent ash and 1.09 percent nitrogen.

Construction

Construction of WPPP is expected to commence in mid 1987 or 1988.

Project Milestones

| | | |
|---|---|---|
| WPPP financing legislation enacted | May | 1979 |
| Development Work Agreement signed | November | 1980 |
| Site selection work begun | January | 1981 |
| Three sites selected for study | October | 1981 |
| Meteorological data collection begun | January | 1982 |
| Preferred site selected | July | 1983 |
| Water permits issued | August | 1983 |
| Draft Environmental Impact Statement issued | September | 1983 |
| Project Feasibility Report completed | November | 1983 |
| Final Environmental Impact Statement approved | March | 1985 |
| Preferred site approved | March | 1985 |
| Air quality permits issued | August | 1985 |
| Commercial operation unit 1 | | 1993 |

# APPENDIX E

## Geothermal Activity in Nevada

# GEOTHERMAL ACTIVITY IN NEVADA

## INTRODUCTION

Geothermal development in Nevada has not progressed as rapidly as was projected 10 years ago. To date, there is only one producing well which is selling power. Three operators are trying to come on line by the end of 1985 to qualify for the 15 percen federal tax credit. But, a more probable estimate for any new production would be early 1986 or later. The biggest drawback holding off production for this fledgling industry is financing. Initial investment in a geothermal plant is very costly, and projected revenues to retire the capital investment may take many years.

## WABUSKA

TAD'S ENTERPRISES has been operating a geothermal well at their Wabuska location since July 1984. Their present capacity is 600 kilowatts. Future expansion is planned for 1.2 megawatts. The total investment to date is about $800,000. TAD'S has a contract with Sierra Pacific Power Company.

## BEOWAWE

Chevron Geothermal, a subsidiary of Chevron U. S. A., and Crescent Valley Energy Corporation, a wholly owned subsidiary of Southern California Edison, have entered into a 50 - 50 partnership. There are two production wells with a capacity to produce 15.1 megawatts. The combined investment will be $18 - 19 million. They hope tc be in production by the end of 1985 and will be selling power to Southern California Edison. Any excess that can't be carried over the lines will be sold to Sierra Pacific.

## STEAMBOAT

Geothermal Development Associates has drilled several wells and is starting construction. Capacity of the pilot plant will be 5,500 kilowatts with an investment of about $10 million. Estimated completion date is May - June 1986. They have a 10 year contract with Sierra Pacific Power Company.

## DESERT PEAK

Phillips Geothermal Group, a division of Phillips Petroleum, is developing a 10 megawatt plant with an investment of $15 million. They plan to come on line in early 1986, and will be selling power to Sierra Pacific.

## BRADY HOT SPRINGS

Steve Munson of Munson Geothermal, Inc. is the operator. A plant with the capacity of 12 megawatts is planned. No estimate of the investment is available at this time. However, he plans to be in operation in early 1986 and will be selling power to Sierra Pacific Power Company.

## FISH LAKE VALLEY

Steam Reserve Corporation, a subsidiary of Amax Exploration, has two production wells and plans to operate a five megawatt plant with a future expansion to 15 megawatts. Their initial investment will be $6.5 - 7 million. Production is planned by the end of 1986. Power will be sent to Southern California Edison.

BIG SMOKY VALLEY

The operation was formerly a consortium of Nevada Geothermal Associates, Sequoia Thermal, and Mr. Palmer Hinsdale. Oxbow Geothermal will be the operator and wil drilling a deep gradient well in the latter part of October.

The planned capacity will be 10 megawatts with an investment of $20 million. Th planned operational date is July 1987 and will be generating power for Sierra Pa Power Company.

DIXIE VALLEY

Oxbow Geothermal is the operator. There are 12 wells with a planned 50 megawatt facility to be constructed. The projected investment will be $100 million. The plant should be operational by the end of 1987. They are constructing power lin Bishop and will be selling power to Southern California Edison.

SUMMARY

GEOTHERMAL PLANTS IN OPERATION

| | |
|---|---|
| TAD'S Enterprises | Wabuska |

POSSIBLY IN OPERATION BY END OF 1985

| | |
|---|---|
| Crescent Valley Energy Corporation/Chevron | Beowawe |

IN OPERATION IN EARLY 1986

| | |
|---|---|
| Geothermal Energy Associates | Steamboat |
| Phillips Geothermal Group | Desert Peak |
| Munson Geothermal | Brady's Hot Springs |

PRODUCTION BY END OF 1986

| | |
|---|---|
| Steam Reserve Corporation | Fish Lake Valley |

ON LINE IN 1987

| | |
|---|---|
| Nevada Geothermal Associates | Big Smoky Valley |
| Oxbow Geothermal | Dixie Valley |

| OPERATOR | LOCATION | ESTIMATED OPERATING DATE | CAPACITY | INVESTMENT |
|---|---|---|---|---|
| TAD'S Enterprises | Wabuska | July 1984 | 600 Kilowatts<br>Sierra Pacific Power Company | $800,000 |
| Crescent Valley Energy Corporation and Chevron Geothermal | Beowawe | December 1985 | 15.1 Megawatts<br>Southern California Edison | $18 - 19 million |
| Geothermal Development Associates | Steamboat | Early 1986 | 5,500 Kilowatts<br>Sierra Pacific Power Company | $10 million |
| Phillips Geothermal Group | Desert Peak | Early 1986 | 10 Megawatts<br>Sierra Pacific Power Company | $15 million |
| Munson Geothermal | Brady Hot Springs | Early 1986 | 12 Megawatts<br>Sierra Pacific Power Company | |
| Steam Reserve Corporation | Fish Lake Valley | December 1986 | 5 Megawatts<br>Southern California Edison | $6.5 - 7 million |
| Oxbow Geothermal | Big Smoky Valley | July 1987 | 10 Megawatts<br>Sierra Pacific Power Company | $20 million |
| Oxbow Geothermal | Dixie Valley | December 1987 | 50 Megawatts<br>Southern California Edison | $100 million |

121 megawatts is enough electricity to supply a city the size of Reno.

1,600 megawatts can supply sufficient electricity for San Francisco.

A kilowatt is 1,000 watts.

A megawatt is 1,000,000 watts, or 1,000 kilowatts.

# APPENDIX F

## White Pine Power Project views on issues
## by Michael Bourne, Project Coordinator

White Pine Power Project
A Nevada—California energy generation development in White Pine County
P.O. Box 135 457 5th Street Ely, Nevada 89301 (702) 289-3065

RECEIVED
JAN 14 1986
LEGISLATIVE COUNSEL BUREAU
FISCAL ANALYSIS DIVISION

December 20, 1985

Assemblyman Charles W. Joerg
Chairman
Legislative Commission's Committee
To Study The Methods of
Distributing Revenues From
Taxation of Large Electrical Power Plants (A.C.R. 31)
Legislative Building
Carson City, Nevada 89710

Dear Mr. Joerg:

I am writing to you to offer the views of White Pine County and the White Pine Power Project on the issues of how electric utilities, particularly electric generating plants, should be taxed and how the revenues derived from those taxes should be distributed. Your invitation to submit these comments at the first meeting of the interim committee established by A.C.R. 31 is very much appreciated. I hope the comments in this letter will be helpful to you and the committee in your deliberations regarding these difficult and complex issues.

## The County's Primary Concerns

White Pine County has some very definite preferences when it comes to the taxation of electric generating plants and the distribution of tax revenues and tax base derived therefrom. The primary concerns of the County are

(1) that the tax revenues derived from the WPPP during the project's construction and received by White Pine County are sufficient to mitigate the negative impacts created by the construction of such a massive project; and

(2) that the tax revenues derived from the WPPP during the project's operation and received by the County
   - (a) cover the cost for new services required by the expanded population in White Pine County,
   - (b) provide for the expansion and improvement of the County's facilities and services to benefit all the citizens of the County, and
   - (c) represent an equitable apportionment to the host county of the total tax revenues generated by the project.

While the terms "County" and "White Pine County" are used in the statement of these primary concerns, they are intended to encompass all the government entities in White Pine County.



White Pine County Boulder City Lincoln County Power District No. 1 Mt. Wheeler Power Inc. Nevada Power Company
Overton Power District No. 5 Sierra Pacific Power Company Valley Electric Association Wells Rural Electric Company

## Construction Period Considerations - Unequal Treatment of Schools

The provisions in the current law appear to provide adequately for the mitigation of construction period impacts insofar as county, city and town governments are concerned. The law, however, does not provide for school districts during the construction of new electric generating facilities in quite the same way as it does for counties, cities and towns. County, city and town governments in the county where new electric generating facilities are under construction receive all of the assessed value and CCRT derived from the generating facilities' construction. School districts receive all of the assessed value but only 10% of the LSST revenues generated by the project's construction.

School districts have as much need to mitigate impacts caused by massive construction projects, if not more, as any government entity; they should be treated in the same manner as other local government entities with regard to tax distribution from construction of new electric generating facilities.

## Operating Period - Inequity to Situs County

When it comes to the distribution of tax base and tax revenues during the operation of new electric generating facilities, the current concept, scheduled to go into effect in 1987, is not an inequitable basis for distribution except as it treats the situs county. If the situs county is a large county, such as Clark or Washoe, the impact of the "10% plus population share" leaves that county with a substantial share of the new tax base and CCRT revenues created within that county by the new generating facilities. On the other hand, if the situs county is a rural county, such as White Pine or Elko, the impact of the new distribution scheme is grossly inequitable to that county. A new electric generating plant constructed in the four counties mentioned will produce the following assessed value and CCRT allocation to those counties once the generating plant is in operation:

| County | State Pop. Share | Gen. Plant Ass. Val. & CCRT Share |
|---|---|---|
| Clark | 57.8% | 62.0% |
| Washoe | 21.6% | 31.6% |
| Elko | 2.1% | 11.8% |
| White Pine | 1.0% | 10.9% |

* These figures were derived using 1980 Census counts.

Under the proposed scheme the host county to the project does not receive a substantial long-term reward for the location of the generating plant in that county. The old "unit-mile" method of allocating assessed value of electrical facilities would benefit any rural host county more and probably also would benefit both Clark and Washoe counties more as well. This new formula, then, is not an improvement from anyone's point of view.

The new formula, however, has some merit. It permits all of the citizens in the state to benefit from the construction of large electrical generating facilities. The old method, "unit-mile", is arbitrary -- it causes the assessed value to be distributed according to where the power transmission and distribution lines run. The factors involved in routing power transmission lines may bear little relationship to where impacts or primary service will occur.

The only real flaw in the new formula is the base level of allocation to the situs county. <u>That should be a minimum of 25% rather than the present 10%.</u>

If there is no appetite for increasing the amount of assessed value and CCRT distributed to the situs county once a new electrical generating plant is in operation then it would be better for the situs counties if the "unit-mile" distribution scheme were retained and if no special provisions were made for CCRT distribution during operation.

## If a Generation Tax is Imposed

From White Pine County's point of view, let me also address the new idea of a generation tax. As I indicated at the first meeting of your committee, we can see no problem with such an approach as long as the concerns raised at the beginning of this letter are satisfied.

One final and very important point from White Pine County's perspective: Whatever scheme for allocating assessed value and tax revenues from electric generating facilities ultimately is enacted, it must provide for government entities in situs counties to place new assessed value from these facilities on their books and to assess taxes against that value both for operating purposes and debt retirement.

## The Development Manager's Point of View

Finally, let me address the issues from the viewpoint of the utility participants in the WPPP. Speaking for the Development Manager of the project, the Department of Water and Power of the City of Los Angeles, the primary concern is that the WPPP and its participating utilities be treated no differently than other utilities in Nevada.

Further, it seems that it is important also that utilities in Nevada not be treated substantially different from those in other states in the west, particularly with respect to the total tax burden placed upon them. A substantial portion of this project will serve out-of-state customers and, therefore, there is bound to be some concern on the part of the non-Nevada utilities that the tax portion of the cost of Nevada-generated electricity not be greater than it might be in another state.

On the issue of the distribution of the tax revenues, the Development Manager has no particular preference except a concern that White Pine County's receipts provide adequately for the impacts created in the County by the construction and operation of the WPPP. The taxes to be paid by the project are substantial and begin as soon as construction begins. It seems logical that those would go toward the mitigation of impacts rather than being distributed elsewhere and leaving the project participants with an additional burden to alleviate impacts when the tax payments should have provided for that.

The opportunity to present these views is very much appreciated. I would be happy to respond to any questions to which these remarks may give rise from any member of the committee or any interested party.

Sincerely,

Michael R. Bourn

Michael R. Bourn
Project Coordinator

cc: White Pine County Commissioners
Eldon Cotton, LADWP
Bob Spellberg, Ely City Clerk
Jack Havertape, Superintendent, WPCo School District
John Fowler, Vargas & Bartlett
Chuck Lenzie, NPC
Jim Salo, SPPCo
Ray Knisley

# APPENDIX G

Testimony of Roy Nickson, Executive Vice President of the Nevada Taxpayers Association to the subcommittee on January 31, 1986

TESTIMONY
INTERIM LEGISLATIVE COMMITTEE
ON STUDY OF METHODS OF DISTRIBUTING REVENUES
FROM TAXATION OF LARGE ELECTRICAL POWER PLANTS
JANUARY 31, 1986 - CARSON CITY

CHAIRMAN JOERG, SENATORS SHAFFER AND ROBINSON AND ASSEMBLYMAN BERGEVIN. I AM ROY NICKSON REPRESENTING THE NEVADA TAXPAYERS ASSOCIATION.

THE LINE MILE DISTRIBUTION OF VALUES FOR MANY COMPANIES OF AN INTERSTATE OR INTERCOUNTY NATURE HAS LONG BEEN THE SUBJECT OF DEBATE. THE VERY GEOGRAPHY OF CERTAIN NEVADA COUNTIES WAS DETERMINED BY THE LOCATION OF RAILROAD RIGHT-OF-WAYS. THE NORTHERN ELONGATION OF LANDER AND EUREKA COUNTIES AND STOREY COUNTY MAY BE DIRECTLY ATTRIBUTED TO A DESIRE TO ALLOW THOSE COUNTIES TO PARTICIPATE IN THE DISTRIBUTION OF VALUE OF WHAT ARE NOW UNION PACIFIC AND SOUTHERN PACIFIC RAILROADS FOR PROPERTY TAX PURPOSES. WHILE NRS 361.320 HAS BEEN AMENDED TWELVE TIMES SINCE 1917, WITH THE EXCEPTION OF ELECTRICAL COMPANIES, THE MILE UNIT FORMULA FOR ALLOCATION OF TAXABLE VALUE HAS REMAINED CONSTANT.

IT WAS VALMY 1 THAT BROUGHT TO THE SURFACE THE IMPACT THAT CONSTRUCTION OF A MAJOR PLANT HAD ON LOCAL SERVICES. THUS, THE STATUTES WERE AMENDED TO PROVIDE THAT THE CONSTRUCTION VALUE WOULD BE ISOLATED AND ASSESSED SOLELY IN THE SITUS COUNTY. AN INNER-COUNTY AGREEMENT BETWEEN HUMBOLDT AND LANDER RECOGNIZED THAT MANY OF THE WORKERS RESIDED IN BATTLE MOUNTAIN.

THE ASSOCIATION SUPPORTS THE NEW FORMULA EFFECTIVE IN JULY 1987 THAT ALSO RECOGNIZES THE ONGOING IMPACT ON LOCAL SERVICES THAT

A MAJOR PLANT CAUSES AFTER IT IS IN OPERATION. THAT CHANGE ALSO ALLOCATES NINETY PERCENT OF THE VALUE OF THE PLANT STATE-WIDE AMONG ALL SEVENTEEN COUNTIES RATHER THAN ON A MILE/UNIT BASIS. THIS CONCEPT IS ALSO SUPPORTED. WHILE AN ARGUMENT COULD BE MADE THAT THIS IS NOT EQUITABLE TO THOSE COUNTIES WHERE THE TRANSMISSION AND DISTRIBUTION LINES ARE PHYSICALLY LOCATED, THE STATUTORY PROVISIONS FOR DISTRIBUTION OF THE VALUE OF AIRLINES TO THOSE COUNTIES WHOSE ONLY CLAIM TO NEXUS IS AN OVERFLIGHT IS, IN SOME EYES, EQUALLY INEQUITABLE.

WHILE FUTURE PLANT CONSTRUCTION THAT WOULD IMPACT MORE THAN THE SITUS COUNTY IS NOT ANTICIPATED, IT MIGHT BE APPROPRIATE TO RECOGNIZE SITUATIONS SUCH AS THE TRACY AND VALMY PLANTS WHERE A SERVICE IMPACT WOULD BE MADE ON NEARBY COUNTIES DUE TO GEOGRAPHICAL BOUNDARIES. THAT COULD BE ACCOMPLISHED BY AN ALLOCATION BASED ON THE PRINCIPAL RESIDENCE OF THE WORKERS ACTUALLY EMPLOYED DURING BOTH CONSTRUCTION AND OPERATION PHASES.

THE ASSOCIATION ALSO SUPPORTS THE RECOMMENDATION OF SIERRA PACIFIC POWER COMPANY THAT A MAJOR STUDY BE UNDERTAKEN ON THE VALUATION OF ALL CENTRALLY ASSESSED PROPERTY. SINCE THE ADVENT OF "TAXABLE" VALUE FOR APPRAISAL AND ASSESSMENT PURPOSES, THERE ARE DISCRIMINATIONS BETWEEN THE APPRAISAL OF OTHER REAL PROPERTY AND THE ESTABLISHMENT OF VALUE FOR CENTRALLY ASSESSED PROPERTY. HISTORIC OR BOOK COSTS IN SOME INSTANCES AND REPLACEMENT COST IN OTHERS ARE WEIGHTED WITH THE INCOME AND STOCK-IN-DEBT APPROACHES TO VALUE TO DETERMINE "TAXABLE" -- REALLY MARKET -- VALUE OF CENTRALLY ASSESSED PROPERTIES. THIS IS IN DIRECT CONFLICT WITH

NRS 361.227 WHICH RECOGNIZES THE USE TO WHICH IMPROVED LAND IS PUT AND SUBTRACTS DEPRECIATION AND OBSOLESCENCE FROM THE COST OF REPLACEMENT OF IMPROVEMENTS.

THE SITUATION HAS BEEN EXACERBATED WITH THE ADVENT OF THE SUPER GENERATING PLANTS OF VALMY 1 AND 2 WHICH HAD A SIGNIFICANT IMPACT ON HUMBOLDT AND LANDER COUNTIES TAX-SUPPORTED SERVICES. THE MILE UNIT VALUE FORMULA PROVIDED LITTLE RELIEF TO THESE COUNTIES DUE TO THE GEOGRAPHIC LOCATION OF THE DISTRIBUTION LINES AND NRS 361.320 WAS AMENDED TO PROVIDE RELIEF TO HUMBOLDT COUNTY DURING THE CONSTRUCTION PERIOD. FURTHER, AN INTERCOUNTY AGREEMENT PROVIDED SOME RELIEF TO LANDER COUNTY.

THE FURTHER REVISION TO NRS 361.320 WHICH WILL BECOME EFFECTIVE IN 1987 RECOGNIZES THE ONGOING IMPACT OF A MAJOR GENERATING PLANT AFTER IT COMES ON LINE TO THE SERVICES REQUIRED FROM THE COUNTY OF PHYSICAL LOCATION OF THE PLANT BY ALLOWING A FLAT TEN PERCENT OF THE VALUE TO THAT COUNTY. IT IS A MAJOR DEVIATION FROM THE OLD LINE MILE FORMULA BY REQUIRING DISTRIBUTION OF THE REMAINING NINETY PERCENT VALUE AMONG ALL SEVENTEEN COUNTIES BASED ON THEIR PROPORTIONATE POPULATION. WHILE AN ARGUMENT CAN BE MADE THAT SUCH A DISTRIBUTION IS NOT EQUITABLE TO THOSE COUNTIES WHERE THE TRANSMISSION AND DISTRIBUTION LINES ARE PHYSICALLY LOCATED, THE STATORY PROVISIONS FOR DISTRIBUTION OF THE VALUE OF AIRLINES TO THOSE COUNTIES WHOSE ONLY CLAIM TO NEXUS IS AN OVERFLIGHT IS IN SOME EYES EQUALLY INEQUITABLE.

I WOULD RECOMMEND A REVISION TO THE FORMULA SET FORTH IN NRS 361.320 TO RECOGNIZE THAT SITUS IS NOT ALWAYS THE DETERMINATIVE FACTOR FOR THE IMPACT OF BOTH CONSTRUCTION AND OPERATION OF AN ELECTRICAL GENERATING, TRANSMISSION AND DISTRIBUTION PLANT. RECOG-

NITION SHOULD BE GIVEN TO THE DEGREE OF IMPACT ON THE SITUS COUNTY AS COMPARED TO THAT IN COMMUNITIES IN COTERMINOUS COUNTIES. AS EXAMPLES -- TRACY POWER PLANT IN STOREY COUNTY WHERE THE LARGE MAJORITY OF THE EMPLOYEES RESIDE IN EITHER WASHOE OR LYON COUNTIES AND THUS HAVE LITTLE IMPACT ON STOREY COUNTY IN PROVIDING SUCH ESSENTIAL SERVICES AS SCHOOLS, POLICE AND FIRE PROTECTION. TO A SIGNIFICANT DEGREE THE SAME SITUATION APPLIES TO VALMY 1 AND 2 WHERE MANY WORKERS RESIDE IN BATTLE MOUNTAIN IN LANDER COUNTY. AN INTERCOUNTY AGREEMENT HELPED RESOLVE THAT SITUATION DURING THE CONSTRUCTION OF VALMY 1. HOWEVER, THE STATUTES, I BELIEVE, SHOULD RECOGNIZE SUCH SITUATIONS AND ALLOW FOR A MORE EQUITABLE DISTRIBUTION OF THE TAXABLE VALUE OF THE PLANTS. PERHAPS A PROVISION THAT WOULD SPECIFY THAT THE VALUE OF ALL PROJECTS FOR THE GENERATION OF ELECTRICITY DURING OPERATION MUST BE ALLOCATED AT NOT TO EXCEED TEN PERCENT OF THE VALUATION OF EACH PROJECT TO THE COUNTY IN WHICH IT IS LOCATED WOULD BE APPROPRIATE. THE DETERMINATION OF THE EXACT PERCENTAGE TO BE MADE SHOULD BE BASED ON THE LOCATION OF RESIDENCE OF EMPLOYEES AT THE PROJECT IN ACCORDANCE WITH THE TABLE SUCH AS, FOR EXAMPLE:

A. SIXTY-FIVE PERCENT OR MORE OF THE WORKERS WITHIN THE SITUS COUNTY - TEN PERCENT;

B. MORE THAN FIFTY PERCENT BUT LESS THAN SIXTY-FIVE PERCENT WITHIN THE SITUS COUNTY - EIGHT PERCENT;

C. MORE THAN THIRTY-FIVE PERCENT BUT LESS THAN FIFTY PERCENT WITHIN THE SITUS COUNTY - SIX PERCENT;

IN SUMMARY, WHILE I BELIEVE A STRONG CASE COULD BE MADE FOR APPLYING THE FORMULA SET FORTH IN NRS 361.320.5 TO ALL ELECTRIC GENERATING PLANTS REGARDLESS OF DATE OF COMMENCEMENT OF CONSTRUCTIC SUCH A REVISION COULD ADVERSELY IMPACT SOME OF THE RURAL COUNTIES WHICH NOW RELY ON THE MILE-UNIT FORMULA FOR HISTORIC DISTRIBUTION OF VALUE. THUS, WITH THE SLIGHT MODIFICATION I HAVE RECOMMENDED, I SUPPORT THE NEW CONCEPT OF VALUE DISTRIBUTION RECOGNIZING BOTH SITU AND POPULATION.

IF I CAN PROVIDE ANY INFORMATION OR ANSWER ANY QUESTIONS, I'LL DO MY BEST.

-oOo-

# APPENDIX H

Testimony of James Salo, Senior Attorney,
Sierra Pacific Power Company to the
subcommittee on January 31, 1986

STATEMENT TO THE LEGISLATIVE COMMISSION'S COMMITTEE
TO STUDY TAXATION OF LARGE ELECTRIC GENERATION STATIONS
(A.C.R. 31)

These comments are offered to the ACR 31 Committee in an effort to assist in its investigation, deliberations and preparation of recommendations to the 1987 Session of the Nevada Legislature.

Statement of the Question

A number of fundamental questions are inherently raised by the legislative charge to this Committee in ACR 31. The following is not necessarily an exhaustive list of such questions, but is believed to be representative of the nature and scope of such concerns.

**Is the historically recognized "central assessment" of inter-county/inter-state (public utility) property desirable? Necessary? Efficient? Fair?

**Are the traditional "original cost/stock and debt/ capitalized income" approaches to valuing utility property necessary? Desirable? Fair and Equitable? Justifiable to the public? Workable?

**Is the use of "original cost less depreciation" for utilities only proper?

**Are the weightings applied to the various indicators of value reasonable, proper and defendable?

**Does the relative frequency of utility reappraisal (annual) mitigate any perceived inequity?

**Do any perceived "defects" in the present system rise to the level of constitutional deficiency?

**Should the state adopt a methodology of taxing large generating stations and distributing the revenues therefrom which would minimize possible "low tax rate windfall gains" which could accrue to non-Nevada plant owners were the facility to be taxed predominantly on a situs basis? (i.e., White Pine Power Project; Thousand Springs Station). How can it be done?

**Given the fact that property taxes generated from utility property form a significant portion of the fiscal base for many, if not most counties, can possible reforms be prudently considered without fully analyzing the direct and indirect fiscal impacts of such reforms on all affected counties? To prudently review such potential impacts, must an analysis of all other taxation and similar governmental revenue impacts of such utility properties be reviewed as well (i.e., sales/use taxes, franchise taxes)?

ANALYSIS

The underlying practical considerations underpinning ACR 31 and its predecessor committees and legislative efforts are three: (1) the view that major new industrial facilities like electric power stations should not be allowed to be built in Nevada only to be taxed at an artificially low property tax rate due solely to the form and nature of the ownership of the plant; (2) the view that our tax laws should not be designed to allow non-Nevada owners of real property within Nevada to benefit from artificially low property tax rates not available to local or domestic property owners, and (3) a realization that new large electric generating stations represent major, multi-hundred

million dollar investments and are therefore significant potential sources of new taxation revenue, the economic burden of which would fall predominantly on citizens of neighboring states through utility rates.

While various approaches have been pursued over the past few sessions of the Legislature, each has tended to focus on a relatively narrow perspective without fully considering the consequences in the broader context of the overall state revenue system. Part of the reason for such a narrow approach to these issues was the then-perceived sense of urgency to act in light of the planned construction of the White Pine Power Project on the horizon, and the desire to have the revised taxation system apply to that plant. Since the construction schedule of that project has been delayed and does not appear to be imminent, the Legislature has the luxury of time for more thoughtful and careful consideration of all related issues.

The more one examines the issues related to taxation of generating stations, the more one realizes that all forms of taxation need to be reviewed in order to develop, much less evaluate any proposed changes in the law. Utility taxes represent a major source of revenue for the rural counties, a source of revenue which cannot realistically be diverted without substitute taxes being made available. Utilities generate large amounts of property tax, sales and use tax, franchise tax and other forms of tax which form an integral part of local government's overall taxation and revenue base. Each of the components is so inextricably intertwined with the others as to form a very complex

taxation system which cannot be easily analyzed on a component by component basis.

No adequate data base exists which could form the basis for a professional analysis and development of alternative taxation methodologies. This Committee simply is not in a position to know what the full direct and indirect impacts of any particular change in the tax law might be. Without an adequate base of data which is reliable and reasonably uncontroverted, it is not possible to analyze the impacts of any proposed changes in applicable law. At this time, impacts of proposed changes in taxation policy can only be estimated in the most superficial manner using overly simplifying assumptions; which raises serious doubt about the results.

A number of the "policy considerations" inherent in the charge contained in ACR 31 transcend the broad spectrum of taxation in Nevada and must be addressed if inconsistency is to be avoided and fairness furthered. Property taxation by the "situs" local governments is the rule, not the exception; normally, property is taxed by the political entities within which the property is located and the revenues so raised are spent by such entities. The unique central assessment and allocation of value on a mile-unit basis for utility property resulted both from a recognition of practical difficulties in fairly taxing a commonly owned utility system spread physically over several neighboring governmental entities, and, from a desire to find a method to spread some of the (taxation) wealth associated with utility properties as widely within the state as possible. While

arguments have been asserted that such redistribution of taxable valuation may reflect the demands placed on government for services, little empirical data exists which would allow an objective analysis of such claimed justification. Does the Legislature desire to continue or expand efforts to spread the taxation wealth? Should utility property be assessed and taxed at the State level with revenue allocations to local entities to be made as the Legislature may deem appropriate? Since all taxes paid by public utilities find their way ultimately into the rates charged to customers for utility services and are therefore an indirect tax on Nevada's citizens, should efforts be pursued to minimize the level of taxes imposed on utilities, both relatively and absolutely?

## CONCLUSION AND RECOMMENDATION

We recognize that this paper has raised many questions and offered few answers -- we intend to respectfully suggest to this Committee that efforts to propose solutions to the questions raised are premature and lack any sound factual basis. There has been a tendency to try to focus on potential solutions before there was any true analysis of or consensus concerning the nature and scope of the problems. Any effort to propose and implement reforms in the taxation area would be imprudent absent an adequate data base and evaluation of the present status of taxation in Nevada.

We therefore urge that this Committee, in its final report to the Legislative Commission and ultimately the 1987 Session of the Legislature seek funding for an independent,

professional study and analysis of taxation in Nevada, including its impact on utilities, to result in a comprehensive publication similar to the 1960 "Zubrow" report. This effort would, of necessity, require the gathering, creation and organization of an adequate data base upon which informed judgments concerning impacts of any proposed taxation reform proposals could be made. Without such a data base professionally developed, taxation policy in Nevada will be doomed to be developed by "trial and erro" with no reliable basis for analyzing its impacts.

January 31, 1986

James D. Salo

Senior Attorney

Sierra Pacific Power Company

# APPENDIX I

## Electric Utility Tax Study Outline

ELECTRIC UTILITY TAX STUDY
OUTLINE

I. Objectives of the study
   A. Provide the Legislature with:
      1. a clear and concise explanation of all of the taxes paid by electric utilities operating in Nevada and how new generating plants would be treated under the existing law as well as the proposed new law;
      2. a comparison of the taxes paid by electric utilities in Nevada vs. other states;
      3. a comparison of the taxes paid by electric utilities vs. other utilities and other types of industrial concerns;
      4. a comparison of the disposition of electric utility tax revenues in Nevada vs. other states,
      5. a comparison of the methods of taxing electric utilities in Nevada vs. other states; and
      6. a comparison of the methods of taxing electric utilities vs. other utilities and other types of industrial concerns with a special emphasis on identifying approaches that seem to discourage the location of businesses and multi-state service area generating plants.
   B. Evaluate the effects of applying selected methods of taxing electric utilities in Nevada.
   C. Suggest a means of taxing utilities, transmission lines and generating plants in Nevada that can be applied both to existing facilities and new facilities and that will treat the utilities, utility customers, people of the state and people of the counties where such facilities are located in a fair and equitable manner.

II. Scope and nature of the study
   A. Limited -- to electric utilities and entities who may not be utilities in the ordinary sense but are in the business of generating and/or transmitting electricity.
   B. Georgraphic Comparison -- covering practices in other states with sparse populations where the population distribution is very uneven as it is in Nevada except in the instance of unique approaches discovered in states not fitting the preceding description.
      1. In depth review of all states west of the Mississippi except Texas, Oklahoma, Kansas, Nebraska and California (all populous states).
      2. Cursory review of all other states.
      3. Reviews to cover taxes and disposition of proceeds.
   C. Industry Comparison -- comparing practices of other industries to those in the utility industry -- general in nature.
   D. Interactive -- frequent interface with committee appointed to monitor and direct the contractor conducting the study.

WPCo/WPPP Suggestions

E. Selective -- contractor will be directed by the monitoring committee at various points in the study to select certain topics for more detailed examination and to abandon other evaluations and tasks in order to avoid resources being spent on unproductive areas of inquiry.

F. Analytical -- contractor will be required to apply selected methods from other states, perhaps in a modified form, to Nevada and determine the effects on utilities and governments.

G. Formulative -- the final result of the study should be a recommendation to the Legislature to modify certain existing practices and/or adopt new practices or leave things as they are.

III. Selected areas of detailed inquiry

A. Ad Valorem taxation

1. Survey of all states

a. Where applied and where not

b. Government entities applying

c. Average rate

Is this the same as for other property?

d. Valuation methodology

Is this the same as for other property?

e. Examine treatment of any generating facilities serving more than one state or more than one utility

f. When a generating plant or unit is placed on the tax roll

g. Treatment of pollution control facilities and equipment

h. Special treatment of any other types of facilities or equipment

2. Selected western states

In addition to the above information:

a. Note any special treatment for generating facilities

(1) Owned by utilities

(2) Operated as wholesale facilities

b. Review disposition of assessed value and/or tax revenues in detail

B. Sales taxes on purchases

1. Survey of all states

a. Where applied and where not

b. Government entities applying

c. Average rate

Is this the same as for other purchases?

d. Examine treatment of any generating facilities serving more than one state or more than one utility

e. Treatment of pollution control facilities and equipment

f. Special treatment of any other types of facilities or equipment

2. Selected western states
   In addition to the above information:
   a. Note any special treatment for generating facilities
      (1) Owned by utilities
      (2) Operated as wholesale facilities
   b. Review disposition of tax revenues in detail

C. Income, franchise and gross receipts taxes
   1. Survey of all states
      a. Where applied and where not
      b. Government entities applying
      c. Average rates
         Is this the same as for other businesses?
         What other businesses pay such taxes?
      d. Methodology of determining taxable basis
         Is this the same as for other property?
      e. Examine treatment of any generating facilities serving more than one state or more than one utility
      f. Treatment of pollution control facilities and equipment
      g. Special treatment of any other types of facilities or equipment
   2. Selected western states
      In addition to the above information:
      a. Note any special treatment for generating facilities
         (1) Owned by utilities
         (2) Operated as wholesale facilities
      b. Review disposition of tax revenues in detail

D. Other taxes
   1. Survey of all states
      a. Types of special taxes
      b. Tax rates
      c. Degree to which utilities are excused from other business taxes as a result of the special taxes
      d. Methodology for determining taxable basis
      e. Applicability to utilities, generating plants, transmission lines and other types of facilities or operations -- Is it the same?
      f. Special situations and treatments
      g. Other pertinent information
   2. Selected Western States
      In addition to the above information:
      a. Note any special treatment for generating facilities
         (1) Owned by utilities
         (2) Operated as wholesale facilities
      b. Review disposition of tax revenues in detail

IV. Selected areas of analysis and integration

A. Overall tax burden

1. Tax burden of utilities in Nevada vs. those in other states
2. Tax burden of utilities vs. other businesses in Nevada
3. Tax burden of utilities generally vs. other businesses

B. Distribution of tax revenues

1. Distribution of utility tax revenues in Nevada vs. in other states
2. Distribution of utility tax revenues vs. tax revenues from other businesses in Nevada
3. Distribution of utility tax revenues generally vs. tax revenues from other businesses
4. Treatment of assessed value of generating plants -- propensity for it to be taxed entirely or mostly by local governments in locales where plants are located or on some other basis

# APPENDIX J

## Revised Electric Utility Tax Study Outline

REVISED

ELECTRIC UTILITY TAX STUDY
OUTLINE

I. Objectives of the Study
   A. Provide the Legislature with:
      1. a clear and concise explanation of all of the taxes paid by electric utilities operating in Nevada and how new generating plants would be treated under the existing law as well as the proposed new law (effective 7-1-87);
      2. a general comparison of the taxes paid by electric utilities in Nevada vs. other states;
      3. a general comparison of the taxes paid by electric utilities vs. other utilities and other types of industrial concerns;
      4. a general comparison of the disposition of electric utility tax revenues in Nevada vs. other states,
      5. a general comparison of the methods of taxing electric utilities in Nevada vs. other states; and
      6. a general comparison of the methods of taxing electric utilities vs. other utilities and other types of industrial concerns with a special emphasis on identifying approaches that seem to encourage or discourage the location of businesses and multi-state service area generating plants.
   B. Evaluate the effects of applying [selected] alternate methods of taxing electric utilities in Nevada.
   C. Suggest a [means] method(s) of taxing utilities, transmission lines and generating plants in Nevada applicable [that can be applied both] to existing facilities and new facilities [and that] which will treat the utilities, generating companies, utility customers, people of the state and people of the counties where such facilities are located in a fair and equitable manner.
   D. Evaluate the Constitutionality of all suggested alternative methods of taxation and identify any needed constitutional amendments.
II. Scope and Nature of the study
   A. Scope = limited [--] to electric utilities and entities which [who] may not be utilities in the ordinary sense but are in the business of generating and/or transmitting electricity.



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B. Nature of Study - The study is to be comparative, analytical and formulative with adequate monitorin and direction from a monitoring committee.

1. Geographic Comparison - covering practices in other states with sparse populations, where t population distribution is very uneven as it in Nevada [except in the instance of unique approaches discovered in states not fitting t preceding description.

1. In depth review of all states west of the Mississippi except Texas, Oklahoma, Kansa Nebraska and California (all populous states).

2. Cursory review of all other states.

3. Reviews]; to cover taxes and disposition proceeds.

2. [C] Industry comparison -- [comparing] covering practices of other industries [to those in] than the utility industry -- general in natur

[D. Interactive -- frequent interface with commit appointed to monitor and direct the contracto conducting the study.

E. Selective -- contractor will be directed by the monitoring committee at various points in the study to select certain topics for mor detailed examination and to abandon other evaluations and tasks in order to avoid resources being spent on unproducing areas of inquiry.

F.] 3. Analytical [contractor will be r] Require[d] [to apply] application of selected methods from other states, perhaps in a modified form, to Nevada and determine the effects on utilities and governments.

[G]. 4. Formulative -- the final result of the study should be a recommendation to the Legislature to modify certain existing practices and/or adopt new practices or leave things as they are.

5. The monitoring committee will direct the course of the study and allow for reasonable deviation when conditions warrant.

III. Selected areas of detailed inquiry

A. Ad Valorem taxation

1. Survey of [all states] Nevada taxation procedures

a. Where applied and where not

b. Government entities applying

c. Average rate

Is this the same as for other property?



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d. Valuation methodology
Is this the same as for other property?
e. Examine treatment of any generating facilities serving more than one state or more than one utility
f. [When] Effect of timing of placement of a generating plant or unit [is placed] on the tax roll
g. Treatment of pollution control facilities and equipment
h. Special treatment of any other types of facilities or equipment

2. Selected [western] states for comparison. In addition to the above information:
a. Note any special treatment for generating facilities
(1) Owned by utilities
(2) Operated as wholesale facilities
b. Review disposition of assessed value and/or tax revenues [in detail]

B. Sales and Use taxes [on purchases]
1. Survey of [all states] Nevada taxation procedures
a. Where applied and where not
b. Government entities applying
c. Average rate
Is this the same as for other uses/purchases?
d. Examine treatment of any generating facilities serving more than one state or more than one utility
e. Treatment of pollution control facilities and equipment
f. Special treatment of any other types of facilities or equipment

2. Selected [western] states for comparison. In addition to the above information:
a. Note any special treatment for generating facilities
(1) Owned by utilities
(2) Operated as wholesale facilities
b. Review disposition of tax revenues [in detail]

C. [Income f] Franchise, [and gross] receipts taxes, and other taxes
1. Survey of [all states] Nevada Taxation Procedures.
a. Where applied and where not
b. Government entities applying



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B. Distribution of tax revenues

1. Distribution of utility tax revenues in Nevada vs in other states
2. Distribution of utility tax revenues vs. tax revenues from other businesses in Nevada
[3. Distribution of utility tax revenues generally vs. tax revenues from other businesses
4. Treatment of assessed value of generating plants -- propensity for it to be taxed entirely or mostly by local governments in locales where plants are located or on some other basis]

C. Constitutional Limitations

1. Constraints presently effective
2. Suggested amendments to Constitution - Scope and Effect



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# APPENDIX K

## Recommended Legislation

BDR S-40 - Directs legislative commission to contract with consultants to conduct an interim study of methods of distribution of revenues from taxation of electrical power plants.

SUMMARY---Directs legislative commission to contract with consultants to conduct interim study of methods of distribution of revenues from taxation of electrical power plants. (BDR S-40)

FISCAL NOTE: Effect on Local Government: No.
Effect on the State or on Industrial Insurance: Contains Appropriation.

AN ACT relating to taxation of electrical power plants; requiring an interim study of the methods of distributing revenues from the taxation of large electrical power plants; making an appropriation; and providing other matters properly relating thereto.

THE PEOPLE OF THE STATE OF NEVADA, REPRESENTED IN SENATE AND ASSEMBLY, DO ENACT AS FOLLOWS:

Section 1. 1. The legislative commission shall:

(a) Contract with consultants to conduct an interim study of the methods of distributing revenues from the taxation of large electrical power plants.

(b) Appoint five legislators to serve as an oversight committee for the study.

2. The legislative commission may also appoint other interested persons to serve as nonvoting members of the oversight committee. The nonvoting members are not entitled to receive any compensation or reimbursement for expenses from the state for their work on the committee.

Sec. 2. The oversight committee shall:

1. Define the scope of the study.

2. Establish a schedule for completion of the study.

3. Select the consultants and negotiate the terms of the contract.

4. Require scheduled progress reports from the consultants to ensure that:

(a) The consultants are adhering to the scope of the study as established by the oversight committee; and

(b) The study is completed as scheduled.