Establishing An Energy Commission: A Feasibility Study

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FOREWORD

This report was prepared in response to Senate Concurrent Resolution No. 62, which was adopted during the Regular Session of 1994. The Resolution requests the Legislative Reference Bureau to study the feasibility of establishing an Energy Commission. This report contains the results of that study.

The Bureau extends its appreciation to all of those whose participation and cooperation made this report possible. Special thanks are extended to: Jeanne K. Schultz, Director, John Tantlinger and James Bac, Energy Division, and Gerald Dang, Administrative Services Office of the Department of Business, Economic Development and Tourism; Clifford K. Higa, Director, Charles W. Totto, Executive Director and John A. Mapes, Division of Consumer Advocacy, and Lynette Fukunaga, Administrative Services Office of the Department of Commerce and Consumer Affairs; Eugene S. Imai, Director of Finance, and Yukio Naito, Chairman, Public Utilities Commission of the Department of Budget and Finance; Edward Hirata and Kevin Doyle of Hawaiian Electric Company, Inc.; Ira Rohter of the Green Party and the University of Hawaii; Barbara Barkovitch of Barkovitch and Associates; and the staff of the California Energy Commission, in particular, Jennifer Tachera, Governmental Affairs.

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B. Senate Concurrent Resolution No. 62, S.D. 1, The Senate, Seventeenth Legislature, 1994 Regular Session, State of Hawaii 65

Chapter 1

INTRODUCTION

Hawaii depends on imported oil for over ninety-two percent of its energy.[1] Per capita, Hawaii is one of the most oil-dependent areas in the world.[2] Moreover, as a result of their volcanic origins, the Hawaiian Islands have no indigenous fossil fuels such as oil, coal, or natural gas. The State must rely upon imported fuel for most of its energy needs.[3] Consequently, Hawaii's economy and way of life is extremely vulnerable to possible oil supply disruptions in the world oil market and rapid oil price increases.[4]

Vulnerability is but one result of Hawaii's dependence on oil. Hawaii's oil consumption also raises environmental concerns. Energy production from fossil fuels is the major source of local and global air pollutants, while petroleum shipping and handling pose risks to fragile marine habitats and coastal resort areas.[5] Both Hawaii's economy and environment are threatened by residuals of its own oil consumption.

Alternatives to oil consumption exist in indigenous energy resources and energy conservation. Although lacking in indigenous fossil fuels, Hawaii has significant, yet relatively untapped, renewable energy resources and energy-efficiency potential. Biomass, wind, solar, geothermal, hydropower, and ocean thermal and wave resources can provide clean, stable sources of energy supply.[6] Energy conservation, a demand-side strategy, stretches current supplies by increasing the efficiency of energy use.

Recognizing Hawaii's vulnerability and future energy needs, the Hawaii State Plan identifies two energy objectives: (1) to provide dependable, efficient and economical energy statewide; and (2) to increase energy self-sufficiency.[7] The plan envisions achievement of these objectives through the development and use of renewable energy sources, expansion of existing power systems to support the demands of growth, and conservation while considering environmental concerns and resource limitations.[8] Priority guidelines for energy use and development include encouraging commercialization of renewable energy sources, energy conservation programs, incentives to promote the use of energy conserving technology, and development of energy conserving and cost-efficient transportation systems.[9]

The State plan recognizes that Hawaii's environment and natural energy are two of the State's most precious assets. A comprehensive, statewide integrated resource management

system is needed to ensure the proper use of these resources. Recognizing this, an Energy and Environmental Summit ("Summit") was convened in 1993 which brought together representatives of various state and county departments and agencies involved in energy conservation and supply. Participants included legislators, representatives from public utilities, independent power producers, companies involved in energy conservation and alternative energy supply, the Public Utilities Commission, the University of Hawaii's energy research component, and citizen groups concerned about energy, resource use, and environmental impacts. Summit participants met over several months to identify issues and build broad-based support for initiatives that will move Hawaii forward in the areas of energy and the environment.

The collaborative efforts of participants of this Summit resulted in a proposal to establish a Hawaii Energy Resources Conservation and Development Commission ("Energy Commission"). The proposal was introduced for legislative consideration as Senate Bill No. 2595 (see Appendix A), Regular Session of 1994. In addition to becoming the State's principal energy planning and policy making body, the proposed Energy Commission would be responsible for ensuring a reliable and affordable energy supply by conducting energy planning, establishing priorities and overseeing nonfossil fuel research and development, energy conservation programs, and improving the efficiency of the permit process, all without compromising environmental, social, and other community standards.

However, before proceeding with that proposal, the Seventeenth Legislature, Regular Session of 1994, adopted Senate Concurrent Resolution No. 62, S.D. 1 (see Appendix B), requesting the Legislative Reference Bureau to conduct a thorough and comprehensive study to analyze the issues, make findings and recommendations, and determine the costs of establishing a Hawaii Energy Resources Conservation and Development Commission. This study has been prepared in response to the Legislature's direction.

Salient Points of Senate Concurrent Resolution No. 62, S.D. 1

Senate Concurrent Resolution No. 62, S.D. 1, incorporates by reference Senate Bill No. 2595, which provides for the establishment of an Energy Commission. The bill provides that the Energy Commission would be charged with the following duties and responsibilities:

(1) Ensure the proper use of Hawaii's environment and natural energy;

(2) Ensure a reliable and affordable energy supply by conducting energy planning, establishing priorities, overseeing nonfossil fuel research and development, energy conservation programs, and improving the efficiency of the permit process for energy facilities development, all without compromise to environmental, social, and other community standards;

(3) Become the State's principal energy planning and policy making body; and

(4) Ensure visibility of state energy policies at the highest level of state government.

The resolution requests the Legislative Reference Bureau to:

(1) Study the feasibility of establishing an Energy Commission as proposed in Senate Bill No. 2595, Regular Session of 1994;

(2) Determine the need for such an Energy Commission and the projected cost of its operation;

(3) Analyze the effect of the Energy Commission on the existing statutory provisions relating to energy, fuel conservation, and the environment;

(4) Review California's experience with the California Energy Commission; and

(5) Solicit input from state and county departments and agencies involved in energy conservation and supply, public utilities, independent power producers, companies involved in energy conservation and alternative energy supply, the Public Utilities Commission, the University of Hawaii's energy research component, and citizen groups concerned about energy, resource use, and environmental impacts.

Methodology

Data and materials were gathered from agencies and sources identified in the resolution. Interviews were conducted with the named parties or a representative thereof. Extensive data were obtained from the California Energy Commission and telephone interviews conducted with representatives from the California Energy Commission's various internal offices and staff.

Organization

The first chapter introduces Senate Concurrent Resolution No. 62, S.D. 1 and Senate Bill No. 2595, and presents a methodology and an organizational framework for the study. Chapter 2 describes Hawaii's oil dependency and oil supply dilemma, and Hawaii's present scheme for energy management.

Chapter 3 describes the proposed Hawaii Energy Resources Conservation and Development Commission and presents a feasibility study, including projected salaries of commissioners and staff, and cost of operations. Chapter 4 describes Hawaii's current energy policy and objectives. Chapter 5 analyzes the California experience with the California Energy Commission and provides insight into its present operations. Chapter 6 presents findings and recommendations.

Endnotes

1. Hawaii, Department of Business, Economic Development and Tourism, Hawaii Energy Strategy: Program Status Report (Honolulu: 1993), p. 1.

2. Nancy D. Yamaguchi and David T. Isaak, Hawaii and the World Oil Market: An Overview for Citizens and Policymakers (Honolulu: 1990), p. 82.

3. Charlotte A. Carter-Yamauchi, Utility-Financing of Energy Conservation: A Short-Term Approach to Hawaii's Oil Dependency, Legislative Reference Bureau, Report No. 3 (Honolulu: 1988), p. 6.

4. Hawaii Energy Strategy: Program Status Report, supra note 1, at p. 1.

5. Id. p. 2.

6. Id.

7. See Hawaii Rev. Stat., sec. 226-18(a) and (b).

8. See id., sec. 226-18(c).

9. See Hawaii Rev. Stat., sec. 226-103(f).

Chapter 2

HAWAII'S OIL DEPENDENCY AND SUPPLY DILEMMA

Oil plays a major role in Hawaii's economy. According to the Department of Business, Economic Development and Tourism's 1993-1994 edition of the *State of Hawaii Data Book*, total energy consumption in 1992 amounted to 322 trillion British thermal units ("Btu"), compared with 272 trillion Btu a decade earlier. In 1992, 90 percent of the energy consumed was provided by petroleum.[1] This had decreased from 98.5 percent in 1990.[2]

The Hawaiian Islands are volcanic in origin. Therefore, Hawaii has no indigenous fossil fuels such as oil, coal, or natural gas. Unlike the other fifty states, Hawaii must rely almost exclusively upon imported fuel for its energy needs. Furthermore, oil is the source of almost ninety percent of Hawaii's electricity. This is in dramatic comparison to the rest of the nation, where the majority of electricity is generated by coal, followed by nuclear power, natural gas, and hydroelectricity. Oil, on the other hand, generates only three percent of the nation's electricity.[3]

Although Hawaii's dependence on imported oil mirrors that of the United States as a whole, Hawaii is far more vulnerable than the contiguous forty-nine states and Alaska. Hawaii's island geography and distant location complicate transportation and distribution of imported oil. Historically, imported petroleum is secured in both domestic and foreign markets, both of which are subject to political, economic and other forces beyond the control of the State government.

Hawaii's oil supplies have historically come from Alaska and producers in the Asia/Pacific region. Specifically, in 1990, Hawaii's crude oil imports totaled 140 million barrels per day ("MB/D"). Of that total, the dominant supplier was Alaska (64 MB/D). The remaining 75 MB/D were imported from the following countries: Indonesia (35 MB/D), Australia (15 MB/D), Malaysia (15 MB/D), China (7 MB/D), Ecuador (1.5 MB/D), and Brunei (1.5 MB/D). If Alaskan crude is counted as an import also, Hawaii is 100 percent dependent on imports to meet its demand for oil.[4] Hawaii's situation is shared by its Asia-Pacific neighbors Japan, Korea, and Taiwan. However, even if we exclude Alaskan crude and consider imports from foreign sources only, Hawaii's import dependence still ranks above both the United States average and the world average.[5] Hawaii's oil demand per capita (approximately forty barrels per year) far exceeds the per capita demand in the United States

as a whole, as well as other imported oil dependent countries such as Japan, Korea, Taiwan, Germany, and France. Among the states, only Alaska boasts a greater demand for oil per capita, due primarily to its long cold winter.

Hawaii's heavy reliance on oil is an outgrowth of its primary economic structure. Although Hawaii's economy has grown considerably during the last decade, the structure continues to be dominated by tourism, the military, and agro-processing.[6] As one might expect, transportation is the largest energy consuming sector in Hawaii, accounting for 63 percent of petroleum use and 57 percent of total energy consumption.[7] Jet fuel dominates Hawaii's demand, accounting for approximately 35 percent of Hawaii's oil demand, versus 16 percent for United States west coast region states (Alaska, Arizona, California, Hawaii, Nevada, Oregon and Washington), and only 9 percent for the nation.[8] This is attributable to Hawaii's geographic location as a tourist destination and refueling site for military and civilian trans-Pacific flights. Of Hawaii's three lead industries--tourism, the military and agro-processing--only agro-processing contributes to the energy supply through generation of electricity by burning sugar bagasse, a by-product of sugarcane processing, and selling the excess to island electric companies.

Another major difference between Hawaii and the nation as a whole is in fuel oil consumption; at the national level, fuel oil represents only 8 percent of total demand, while in Hawaii the figure is 30 percent.[9] Most of Hawaii's fuel oil is used for electric power generation. In 1992, over 84 percent of Hawaii's total electricity production depended on oil. The nation as a whole used oil for only about three percent of its electricity production. Unlike other states, Hawaii has little by way of competitive fuels and alternative energy resources such as wind, geothermal, biomass, solar, and ocean thermal energy conversion are, for the most part, not able to compete economically with fuel oil at the present time. Other states have many other types of fuel, including natural gas, hydro electric power, coal, and nuclear for use in power generation.

Hawaii's alternative energy industries appear to be at various stages of development--some are in the experimental stages while others are technologically feasible, but do not yet appear to be sufficiently cost-effective for widespread commercialization.[10] Ultimately, the State's goal is to replace oil in satisfying its energy requirements. In 1992, indigenous energy resources satisfied over fiteen percent of the State's electricity production; the rest was generated by oil. Reliance on oil for electricity generation varies statewide,

ranging from total dependence on Lanai to a low of seventy-four percent on Kauai. In order to put Hawaii's alternative energy industries in perspective, this report will discuss briefly the alternative energy resources and their potential as a replacement for imported oil.

Geothermal Energy

Geothermal energy produced from the earth's internal heat has been considered Hawaii's brightest hope for a locally available alternative energy source. Superheated steam released from volcanically heated groundwater is piped through turbine generators, resulting in electricity.[11] Geothermal energy is considered renewable to the extent that the underground heat source is continuous and the hydrothermal resource is replenished through reinjection of water.[12] Studies have led to estimates that the Big Island alone is capable of producing between 1,000 and 3,000 megawatts of energy. The Puna area of the Big Island is estimated as capable of producing 75 to 100 megawatts of energy.[13] The average power consumption of the entire State is approximately 800 megawatts.

Private companies have plans to develop twenty-five megawatts each of geothermal capacity on the Big Island. They are currently conducting their own exploration and resource characterization tests on sites that have been identified and have received permits. After lengthy and technical delays, Puna Geothermal Venture began generation of electricity in mid-1993. Preliminary assessment indicates that the power plant may be capable of supporting the generation of additional power. Electrical energy from Big Island geothermal resources has alleviated some of the island's energy concerns and has contributed toward increased energy diversification. Further exploration to evaluate geothermal potential is being conducted in Kilauea Volcano's Rift Zone.[14]

Notwithstanding geothermal's great potential for generation of electric power, however, geothermal currently supplies less than .1 percent of the State's energy needs. Thus, although admittedly a future alternative source of energy, geothermal does not currently play a significant role as an alternative source of energy. It is also important to note that the fuel geothermal energy would supplant would be residual fuel oil--not gasoline, jet fuel, or diesel.[15] Unless demand were cut back for all oil products, Hawaii's imports of crude oil and its refinery activity would likely continue at historical levels.

Biomass Energy

Biomass, a contraction for biological mass, presents Hawaii's largest and most versatile renewable energy resource and produces both electricity and liquid and gaseous fuels. It has been an important source of energy for process steam and electricity in Hawaii's sugar mills for many years. It is also considered a potential source of fuel for ground transportation. Sugarcane residue called bagasse and other agricultural wastes have been burned to provide both on-site energy needs as well as energy sales to local utilities during periods of excess supply.[16]

In 1992, sugar plantations generated statewide 755.27 millions of kilowatt-hours.[17] More significantly, this represents 78.7 million kilowatt-hours on Kauai, followed by 142.7, 157.2, and 454.7 million kilowatt-hours on the Big Island, Maui and Oahu, respectively. It further accounted for 8.2 percent of the electricity produced statewide.[18] Particularly on the neighbor islands, biomass energy contributes significantly as an alternative source of energy for electricity. Unfortunately, some significant setbacks have occurred since 1992. Sugar processing and power generating facilities on Kauai were severely damaged in 1992 by Hurricane Iniki. As a result of various factors, the sugar industry has generated less electricity and purchased more electricity.

Technical advances in biomass gasification may soon be realized. A pre-commercial biomass gasification and gas cleanup research plant on Maui is to test the technical feasibility of producing a fuel gas from sugarcane bagasse. Future research envisions the utilization of biomass-produced gas in a gas turbine to generate electricity.

Hydroelectric Power

Hydropower, which converts the potential energy in rapid water flow into electricity, accounts for a portion of the electricity produced on the neighbor islands. However, because the flow of Hawaii's streams varies considerably according to seasonal rainfall, hydropower in Hawaii is considered an intermittent rather than firm resource. Presently, 20 hydropower projects are operating throughout the islands for a combined generation capacity of approximately 19 megawatts.[19] More hydropower plants on the neighbor islands have been

proposed but permitting requirements have not been completed. Another 67 megawatts of projects have been identified on the Big Island, Maui and Kauai. Oahu, unfortunately, the island which has the highest demand for electricity, has little hydroelectric potential because the island's topography presents few suitable sites for its development.[20]

In 1993, a hydropower plant on the Big Island's Wailuku stream was completed. This plant generates about 34 million kilowatts of electricity per year, enough to supply 11,000 homes with electricity and replace 83,000 barrels of imported oil a year. Even with these advances, however, hydropower accounts for less than one percent at the electricity produced statewide.

Ocean Thermal Energy Conversion (OTEC)

Ocean thermal energy conversion (OTEC) uses the temperature difference between warm surface ocean water and deep cold ocean water as a source to produce energy. In addition, the nutrient-rich, cold sea water from the OTEC process has other uses, including air conditioning buildings, assisting agriculture, and growing fish, kelp, and other sea plants. OTEC is considered by some to offer Hawaii the greatest potential, next to geothermal, over the long term. Extensive research is currently being conducted--Keahole Point on the Big Island and Kahe Point on Oahu have been identified as prime areas for OTEC installations. The Keahole facility is considered the world's foremost testing facility for OTEC and OTEC-related activities. However, commercial application is many years away.

Wind Energy

Wind energy conversion systems (WECS) employ the kinetic energy of the wind to turn the aerodynamically shaped turbine blades to power a water pump or rotate magnets in a generator or alternator to produce electrical energy. Hawaii's wind energy potential is considered among the best in the world, with its mountainous contours and the northeasterly trade winds which prevail over seventy percent of the time. Wind energy conversion systems are installed on most of the islands and commercial wind farms exist on both Oahu and the Big Island. Although most Hawaii wind farms are small, they contributed over 23 million kilowatts of electricity in 1992. This represents approximately .2 percent of the electricity

produced statewide. Since 1992, however, several wind farms have been sold and subsequently shut down. The cost of maintaining wind energy conversion systems makes such systems infeasible at the present time.

Wave Energy

Presently, there are nine wave gauges deployed in Hawaiian waters to gather data to evaluate Hawaii's wave energy potential. Wave energy development is still in the formative stages, with substantial barriers such as mooring costs.

Solar Energy

Harnessing solar energy is challenging because of sunlight's diffusion and variability. The most common means of utilizing solar energy is by collecting it in the form of heat and using the heat directly for heating water or for space heating or cooling. An estimated 55,000 households in Hawaii use solar water heaters and 1,000 or more solar thermal installations are in place and operating within the State.[21] However, it may be some time before the more exotic solar applications for converting sunlight into electricity, such as photovoltaic cells or solar ponds, will be in large scale commercial use. A twenty kilowatt solar thermal system near Kihei, Maui, currently furnishes power to the utility grid.[22]

However, large areas of land are necessary to produce substantial amounts of electricity. Here in Hawaii where land values are high, this becomes a major impediment to the development of larger-scale solar systems for generating grid electricity. Thus, while apparently attractive, solar energy, too, has significant barriers to large-scale development.

Endnotes

1. Hawaii, Department of Business, Economic Development and Tourism, The State of Hawaii Data Book - 1993-1994 (Honolulu: 1994), p. 373.

2. Hawaii, Department of Business, Economic Development and Tourism, State of Hawaii Data Book - 1992 (Honolulu: 1993), p. 427.

3. Charlotte A. Carter-Yamauchi, Utility-Financing of Energy Conservation: A Short-Term Approach to Hawaii's Oil Dependency, Legislative Reference Bureau, Report No. 3 (Honolulu: 1988), p. 6.

4. Nancy D. Yamaguchi and David T. Isaak, Hawaii and the World Oil Market: An Overview for Citizens and Policymakers (Honolulu: 1990), pp. 46-47.

5. Id.

6. Hawaii, Department of Business, Economic Development and Tourism, Hawaii Integrated Energy Policy (Honolulu: 1991), p. 13.

7. Id. at 14.

8. Yamaguchi and Isaak, supra note 4, at 50.

9. Id. at 50.

10. Carter-Yamauchi, supra note 3, at 10.

11. Id. at 13.

12. Hawaii Integrated Energy Policy, supra note 7, at 57.

13. Ibid.

14. Yamaguchi and Isaak, supra note 4, at 60-61.

15. Ibid.

16. Hawaii Integrated Energy Policy, supra note 7, at 57.

17. The State of Hawaii Data Book - 1993-94, supra note 1, Table 17.23, at 393.

18. Data obtained from the Department of Business, Economic Development and Tourism, Energy Data Service.

19. The State of Hawaii Data Book - 1993-94, supra note 1, at 57.

20. Carter-Yamauchi, supra note 3, at 15.

21. Hawaii, Department of Business, Economic Development and Tourism, State Energy Resources Coordinator's Annual Report 1993 (Honolulu: 1993), p. 14, see also The State of Hawaii Data Book - 1993-94, supra note 1, at 58.

22. Carter-Yamauchi, supra note 3, at 16.

Chapter 3

HAWAII ENERGY RESOURCES CONSERVATION AND DEVELOPMENT COMMISSION

Senate Bill No. 2595, introduced during the regular session of 1994, proposed the creation of a Hawaii Energy Resources Conservation and Development Commission ("Energy Commission") to effectuate the conservation of fuel and to formulate plans for the development and use of alternative energy sources. The Energy Commission would become the State's principal energy planning and policy making body. Its responsibilities would include:

(1) Ensuring a reliable and affordable energy supply by conducting energy planning;

(2) Establishing priorities and overseeing nonfossil fuel research and development, energy conservation programs, and improving the efficiency of the permit process; and

(3) Maintaining high environmental, social and other community standards.

Such duties and responsibilities correspond to conclusions drawn in the *Hawaii Integrated Energy Policy Statement*[1] and issues identified during the 1993 Energy and Environmental Summit convened on October 8, 1993.

Energy Commission

Senate Bill No. 2595 envisions a seven member commission established within the Department of Land and Natural Resources for administrative purposes only. The seven member commission would consist of five voting members appointed by the Governor and two ex officio nonvoting members. The five voting members must fit the following profiles:

(1) Engineering or physical science background (with knowledge of energy supply or conversion systems);

(2) Attorney with administrative law background;

(3) Environmental protection or ecosystems background;

(4) Economist with natural resource management background; and

(5) Public at large member with concern for long-term economic, environmental and social impacts of energy policies.

These five commission members would be paid, full-time employees of the State of Hawaii, and would serve a five-year term of office.

The two ex officio, nonvoting and nonpaid members of the Energy Commission would be the Chairperson of the Board of Land and Natural Resources and the Chairperson of the Public Utilities Commission.

Energy Commission Staff

An Executive Director appointed by the Energy Commission would serve the commission administratively. It is intended that the Executive Director oversee the administrative operations of the Energy Commission.

The Energy Commission would also appoint a legal counsel to advise the commission and represent it in connection with legal matters and litigation before any board or agency of the state or federal government. In addition, the commission may appoint other staff members as necessary.

Finally, upon the Energy Commission's nomination, the Governor would appoint a public adviser to serve a term of three years. The public adviser must be an attorney licensed to practice law in the State and would become the liaison between the Energy Commission and interest groups.

Funding

As described above, Senate Bill No. 2595 provides for the following paid positions: five commissioners; one executive director; one legal counsel; one public adviser; and other staff as necessary. Funding for the Energy Commission would be provided from the general fund through the Department of Land and Natural Resources, with additional funding provided from the alternative fuels development fund through the Department of Land and Natural Resources.

Projected Cost of Operation

It is difficult to project with any accuracy the cost of operation of the proposed Energy Commission. Beyond the eight paid positions identified by Senate Bill No. 2595, one may only guess as to the number and complexion of additional staff members necessary to carry out the Energy Commission's program of work. However, one approach is to look at comparable positions and operating costs of state agencies conducting similar activities. The agencies which come to mind are the Public Utilities Commission, which is attached to the Department of Budget and Finance for administrative purposes; the Division of Consumer Advocacy of the Department of Commerce and Consumer Affairs; and the Energy Division of the Department of Business, Economic Development and Tourism.

One might expect that commissioners appointed to the Energy Commission would be compensated at a rate comparable with commissioners on the Public Utilities Commission. Salaries of commissioners on the Public Utilities Commission are set by statute. Pursuant to section 269-2, *Hawaii Revised Statutes ("HRS")*, as of January 1, 1990, the Chairperson of the Public Utilities Commission may be paid within a range of $72,886.00 and $77,966 per year.[2] Each of the other commissioners shall be paid ninety-five percent of the chairperson's salary. Using the Public Utilities Commission as a gauge, one may project that the Chairperson of the Energy Commission would be compensated at the same rate--$72,886.00 to 77,966 per year--and the remaining four commissioners at a rate ninety-five percent of the chairperson. Thus, the State may expect to pay the five commissioners an estimated salary of between $349,850 and $374,238 per year.

The Executive Director's position would likely be paid a salary comparable to other executive administrators in similar agencies. Again, the Public Utilities Commission provides one comparable. The Public Utilities Commission is administered by an Executive Director, who is currently paid approximately ninety-five percent of the chairperson's salary, or between $69,241 - $74,068 per year.[3] By comparison, the director of the Division of Consumer Advocacy of the Department of Commerce and Consumer Affairs, commands not more than $74,655.00 in salary per year.[4] The Energy Program Administrator of the Energy Division of the Department of Business, Economic Development and Tourism, commands at least $64,752 and not more than $88,620 in salary per year.[5] Accordingly, the State may expect to pay the Energy Commission's Executive Director between $64,752 and $88,620 in salary per year.

The Energy Commission's proposed legal counsel and public adviser are attorney positions requiring a license to practice law in the State of Hawaii. Similar staff attorney positions at the Public Utilities Commission range in salary from $52,728 to $69,264 per year. The Division of Consumer Advocacy and the Energy Division do not have staff attorney positions.

In the aggregate, then, it may be estimated that the State will pay between $511,694 and $589,938 for the eight positions provided for in Senate Bill No. 2595--five commissioners, executive director, legal counsel and public adviser. And, as indicated above, the individual salaries are based on comparables from agencies conducting similar activities.

The duties and tasks of the proposed Energy Commission are presently being conducted by the Director of Business, Economic Development and Tourism, who serves as the Energy Resources Coordinator. The Energy Division is the support staff for the Energy Resources Coordinator. If enacted, Senate Bill No. 2595 would substitute the Energy Commission for the Energy Resources Coordinator. Accordingly, although the Director's position will continue to exist, it will be altered somewhat by the shift of energy policy making responsibility from the Energy Resources Coordinator to the Energy Commission. The Energy Commission's commissioner positions will be new additional positions.

By displacing the Energy Resources Coordinator, the Energy Commission would become the principal energy planning and policy making body for the State and would be responsible for conducting conservation and alternative energy source research and

development. Currently, the Energy Division carries out these functions for the Energy Resources Coordinator. Arguably, then, the Energy Division's present staff represents the appropriate personnel for the Energy Commission staff.

The Energy Division is administered by an Energy Program Administrator who oversees essentially four separate sections within the Division: (1) energy data services; (2) office services; (3) alternate energy branch; and (4) energy conservation branch. The Division consists of the following employees:

Civil Service Positions

Energy Program Administrator (ES-3)
Secretary IV (SR-18)
Research Statistician (SR-22)
Alternate Energy Program Manager (SR-28)
Clerk-Stenographer III (SR-11)
Alternate Energy Specialist (SR-24)
Energy Conservation Program Manager (SR-28)
Clerk-Stenographer III (SR-11)
Energy Conservation Specialist (SR-22)
Secretary I (temporary to 06-30-95) (SR-12)

Exempt Positions

Energy Clerk Typist (SR-08)
Energy Engineer III (SR-22)
Energy Conservation Analyst V (SR-28)
Energy Clerk Steno (SR-09)
Energy Clerk Typist (SR-08)
Energy Analyst III (SR-24)
Energy Analyst II (SR-22)
Energy Conservation Specialist III (SR-24)
Energy Clerk-Steno (SR-09)
Energy Clerk Typist (SR-08)
Energy Conservation Program Specialist III (SR-24)

Energy Information Specialist I (SR-20)
Energy Conservation Analyst III (SR-24)
Energy Conservation Program Specialist III (SR-24)
Institutional Energy Analyst (SR-26)
Energy Conservation Analyst III (SR-24)
Energy Audit Specialist (--)
Energy Research Statistician (SR-22)
Energy Information Specialist III (SR-24)
Geothermal Project Manager (SR-30)

The Energy Division's thirty employees, excluding the Energy Program Administrator, command a salary in the aggregate of at least $887,512 to as much as $1,235,028 per year.

The Energy Division is presently being reorganized. The proposal is pending before the Department of Budget and Finance. The proposed reorganization of Energy Division would establish an Energy Planning, Policy and Resources Branch, and a Geothermal Project Office.[6] The functions of the Energy Data Services Section and some of those of the Energy Conservation Branch would be transferred to the Energy Planning, Policy and Resources Branch. Additionally, an Energy Planning and Policy Section within the Energy Planning, Policy and Resources Branch would be created. The branch's responsibilities would include: (1) energy planning and energy policy analysis/development; (2) energy emergency preparedness; (3) data services; and (4) emergency contingency planning and response functions, including functions dealing with fuel allocation programs and strategic petroleum reserves.[7]

The proposal seeks to establish one permanent position to become the Energy Planning, Policy and Resources Branch Program Manager, three permanent Energy Analyst positions, two permanent clerical positions redescribed from existing temporary positions, and the transfer of one permanent Research Statistician V position currently in the Energy Data Services Section. To staff the Geothermal Project Office, the proposal establishes one permanent Geothermal Project Manager position, one permanent Alternate Energy Analyst position to be redescribed from existing temporary exempt positions, and the redescription and establishment of one permanent Secretary I position from an existing temporary civil service position.[8]

Finally, assuming that the Energy Commission's operating budget may mirror that of the Energy Division, one may project an annual operating budget in excess of $4,000,000.[9]

Clearly, establishing an Energy Commission would be a costly venture. Based on projected salaries and operating budget, an Energy Commission would require a far greater budget than the present or reorganized Energy Division of the Department of Business, Economic Development and Tourism to carry out the identical energy function in government. The five paid commissioner positions, staff attorney and public adviser positions--seven highly compensated professional positions--have no equivalent in the Energy Division.

Additionally, if an Energy Commission were established and in fact displaced the Energy Resources Coordinator, the Energy Division's energy functions would necessarily transfer to the Energy Commission. Unless redescribed, the Energy Division's duties and responsibilities would be entirely duplicative of the Energy Commission. Funding would necessarily shift from the Department of Business, Economic Development and Tourism to the Department of Land and Natural Resources. This would appear to be counterproductive, especially given the time and effort already expended by the Department of Business, Economic Development and Tourism toward the reorganization of the Energy Division.

Endnotes

1. Hawaii, Department of Business, Economic Development and Tourism, Hawaii Integrated Energy Policy Statement (Honolulu: 1991).

2. Haw. Rev. Stat., sec. 269-2.

3. Letter from Eugene S. Imai, Director of Finance, Department of Budget and Finance, to Samuel B.K. Chang, Director, Legislative Reference Bureau, November 18, 1994.

4. Letter from Clifford Higa, Director, Department of Commerce and Consumer Affairs, to Samuel B.K. Chang, Director, Legislative Reference Bureau, November 2, 1994.

5. Letter from Jeanne K. Schulz, Director, Department of Business, Economic Development and Tourism, to Samuel B.K. Chang, Director, Legislative Reference Bureau, November 3, 1994.

6. Memorandum from Mufi Hannemann, Director, Department of Business, Economic Development and Tourism, through Yukio Takemoto, Director of Finance, Department of Budget and Finance, to the Honorable John Waihee, Governor, September 1, 1993.

7. Proposed Reorganization of the Energy Division, Department of Business, Economic Development and Tourism, submitted to the Honorable John Waihee, Governor, State of Hawaii, through the Honorable Yukio Takemoto, Director of Finance, Department of Budget and Finance, September 1, 1993, pp. 1-3.

8. Ibid.

9. Total operating cost for FY 1991-92 was $4,565,193; FY 1992-93 was $4,202,786, and FY 1993-94 was $4,083,596. Hawaii, Executive Chambers, The Multi-Year Program and Financial Plan and Executive Budget for the Period 1993-1999 (Budget Period: 1993-95), Vol. I (Honolulu: 1992).

Chapter 4

HAWAII'S CURRENT ENERGY POLICY AND OBJECTIVES

In 1974, the Legislature passed Act 237, now codified as chapter 196, *Hawaii Revised Statutes*, entitled "Energy Resources".[1] The act was a direct result of the energy crisis generated by the 1973 Organized Petroleum Exporting Countries (OPEC) oil embargo. In the act, the Legislature made several findings and a declaration of necessity.

First, Hawaii's total dependence for energy on imported fossil fuel has resulted in economic hardship throughout the State during times of widespread petroleum shortages and threatens the public health, safety and welfare.[2] Second, the Legislature recognizes a need for comprehensive planning towards achieving full utilization of Hawaii's energy resource programs and the most effective allocation of energy resources throughout the State.[3] Third, federal, state and county governments in Hawaii, as well as many private agencies, have engaged in or expressed an interest in exploration, research, distribution, conservation, and production of all forms of energy resources in Hawaii.[4] And, finally, the Legislature recognizes a need to coordinate the efforts of these agencies, establish programs to effectuate the conservation and equitable distribution of fuel, and to formulate plans for the development and use of alternative energy sources.[5]

Chapter 196 further requires the Director of Business, Economic Development and Tourism to serve as the State's Energy Resources Coordinator ("Coordinator").[6] By statute, the Coordinator is charged with the following powers and duties:

(1) Formulate plans for the optimum development of Hawaii's energy resources;

(2) Conduct analyses of existing and proposed energy resource programs;

(3) Formulate and recommend proposals for conservation of energy and fuel;

(4) Assist public and private agencies in implementing energy conservation measures;

(5) Coordinate state energy conservation and allocation programs with the federal government;

(6) Develop programs to encourage exploration and research of alternative energy resources;

(7) Conduct public education programs to inform the public of energy situations and government actions;

(8) Serve as a consultant to public agencies and private industry on matters related to acquisition, utilization and conservation of energy resources;

(9) Contract for services to implement chapter 196;

(10) Review proposed state actions and their impact on energy conservation programs;

(11) Prepare and submit an annual report and other reports as requested; and

(12) Adopt rules to implement the energy resources law.[7]

The findings, declaration of necessity and duties and powers of the Coordinator are consistent with the Hawaii State Plan. The energy objectives of the plan are twofold: (1) to provide dependable, efficient and economical energy statewide; and (2) to increase energy self sufficiency.[8] The plan envisions achieving these goals through the development and commercialization of alternative energy sources and the conservation of energy.[9]

The work of the Coordinator has been carried out by the Energy Division of the Department of Business, Economic Development and Tourism. Beginning in mid-1990, the Energy Division, with the help of independent consultants, embarked on the Hawaii Integrated Energy Policy ("HEP") Development program. The program was designed to solicit and incorporate the thoughtful input, comments and recommendations of persons and organizations from throughout the State. Representatives from energy companies, environmental groups, state and county governments, research institutions and numerous concerned citizens contributed to the development of the final HEP report.[10] Ultimately, the HEP process included 57 individuals representing 34 participating agencies and organizations that served on the various HEP task forces. The HEP program participants volunteered over 3,000 hours of their time to this effort in 1990-1991.[11]

From the outset, HEP participants realized that the traditional ad-hoc approach to making energy policies was insufficient. The HEP process called for policy making to be viewed as a process, rather than a discrete decision. The final HEP report was not intended to be an energy plan for the State. Rather, it was intended to produce a comprehensive and integrated energy policy designed to facilitate the accomplishment of Hawaii's energy objectives, while establishing a process by which energy policy and planning could be periodically revised and updated.[12] The report presented issues and problems identified during the HEP process and made recommendations for solutions to the problems.[13] It also represented the first attempt by Hawaii to address the complex interrelationships of energy production and use in Hawaii and to develop a comprehensive state energy policy based on full public participation in the process. It was clear to participants that little progress had been made since 1974 toward accomplishing the State's objectives.

The report is a comprehensive document and provides an overview of energy production and use, a discussion of energy and the environment, economic development and security, findings and recommendations, and suggestions for implementation and institutionalization of the the HEP program. The following discussion summarizes the issues, findings and recommendations made in the report.

Hawaii Integrated Energy Policy (HEP)

The Hawaii Integrated Energy Policy program was completed in December 1991. In order to prepare an integrated policy for the State, the Department of Business, Economic Development and Tourism, Energy Division structured the HEP program to give comprehensive coverage to the entire energy field by providing for the broadest possible representation of Hawaii's "energy community" in the process. Individual components of the program covered the following functional areas:

(1) Electric and gas utility resource planning;

(2) Renewable energy and energy efficiency development;

(3) Transportation energy use;

(4) Energy emergency preparedness; and

(5) Institutional needs and capabilities.[14]

Broad objectives were established covering the various aspects of energy supply and demand. The program objectives were to:

(1) Facilitate the adoption of integrated resource planning procedures by Hawaii's energy utilities;

(2) Identify and address the State's institutional issues as they relate to energy management;

(3) Recommend actions to enhance renewable energy development and energy efficiency;

(4) Integrate and coordinate energy emergency preparedness plans and procedures;

(5) Broaden participation in energy policy development by the widest possible range of "energy stakeholders"; and

(6) Assess energy efficiency and diversification opportunities in the transportation sector.[15]

A common thread through the objectives is a recognized need to systemize an approach to the problem and to coordinate and incorporate the interests of federal, state and county government agencies, as well as private organizations.

HEP Major Findings

The major findings revealed that no single energy policy can address Hawaii's complex energy situation. The findings also identified several areas in which the State had been deficient in meeting state energy objectives.

First, the HEP identified a need to address institutional responsibilities and requirements in state energy management and development. Although there is limited energy planning capability within state or county governments, state and county governments are responsible for the issuance of innumerable permits and approvals for the development and siting of energy facilities such as power plants, wind farms and hydro-electric plants. For example, no fewer than twenty-one state and county agencies are involved in reviewing and permitting an energy facility in the City and County of Honolulu: (State) Department of Business, Economic Development and Tourism, Public Utilities Commission, Department of Transportation, Department of Commerce and Consumer Affairs, Department of Health, Department of Land and Natural Resources, Land Use Commission, Office of State Planning, Office of Environmental Quality Control, Hawaii Community Development Authority, Department of Labor and Industrial Relations, (City and County of Honolulu) Mayor's Office, City Council, Building Department, Department of General Planning, County Planning Commission, Department of Land Utilization, Department of Public Works, County Coordinating Agency, Fire Department, and Board of Water Supply.[16] In addition to the twenty-one listed agencies, federal agencies may be involved, too. Moreover, the permit process may require up to seven years for a single project. Clearly, the State must provide greater leadership, better coordination of energy activities, and clearer policy direction.

Second, Hawaii's extensive renewable energy research and development activities are not being conducted within a coordinated and comprehensive framework. There is limited coordination between public and private institutions. Often, funding, responsibility and activities are duplicated. Moreover, even with these activities, many alternative energy technologies remain in the demonstration stage. Better coordination of funds and activities is needed.

Third, energy conservation and improved energy efficiency deserve greater emphasis in development of Hawaii's indigenous resources. Reducing unnecessary energy use may

represent the most cost-effective and socially and environmentally acceptable resource option in all sectors.

Fourth, Hawaii's vulnerability to oil supply disruptions will increase over the decade. Current sources of imported oil are expected to decline over the next ten years. Hawaii remains extremely vulnerable to supply disruptions.

Fifth, the State must expand its energy policies to include the transportation sector. Past efforts to diversify energy supply away from oil have focused almost exclusively on the production of electricity. At the same time, the transportation sector accounts for nearly two-thirds of all petroleum use.

Finally, Hawaii is as dependent on imported oil now as it was in 1974 when its policy of energy self-sufficiency was established.

HEP Principal Recommendations

The HEP program resulted in the development of numerous proposed policy initiatives and specific project activities. In general, the report was favorably received. The public was skeptical, however, of the State's willingness to implement or act on the recommendations, based on the State's historical inability to positively affect its energy situation. The recommendations are summarized below:

(1) Create a new energy agency, with the intent of increasing the stature of, and administrative emphasis on, energy activities;

(2) Prepare and publish a biennial Hawaii Energy Plan to replace the Energy Functional Plan;

(3) Amend the Hawaii State Plan, section 226-18, *Hawaii Revised Statutes*, to include an additional objective to "ensure energy security" and an additional policy to "promote alternate fuels and energy efficiency by encouraging diversification of transportation options and infrastructure";

(4) Prepare and publish a comprehensive renewable energy and energy efficiency research and development strategy with specific resource assessment, basic and applied research, and commercialization and implementation activities; and

(5) Analyze the effectiveness of transportation policy options, including public transit, energy pricing and other fiscal policies, and infrastructure changes, that will reduce demand for petroleum based fuels.[17]

All of the issues, findings and recommendations made in the HEP final report need not be summarized here. For the purposes of the present study, it will suffice to highlight the major points and indicate the direction the State intends to move to implement the recommendations of the HEP program.

Hawaii Energy Strategy (HES) Program

Shortly after the completion of the HEP program in December 1991, the Hawaii Energy Strategy (HES) program began on March 2, 1992, under a cooperative agreement between the State's Department of Business, Economic Development and Tourism, and the United States Department of Energy. In many ways the HES program evolved out of and is implementing many of the recommendations developed by the 1989-1991 HEP program. The program was also designed to transfer important skills from the supporting consultant to the Energy Division staff in order to strengthen the State's in-house energy management expertise. The HES program is scheduled for completion by December 31, 1994.[18]

As outlined in the Statement of Joint Objectives:

> The purpose of the study is to develop an integrated State of Hawaii energy strategy, including an assessment of the State's fossil fuel reserve requirements and the most effective way to meet those needs, the availability and practicality of increasing the use of native energy resources, potential alternative fossil energy technologies such as coal gasification and potential energy efficiency measures which could lead to demand reduction. This work contributes to the [United States Department of Energy's] mission, will reduce the State's vulnerability to energy supply disruptions and contributes to the public good.[19]

The seven projects of the HES program are designed to increase understanding of Hawaii's energy situation and to produce recommendations to achieve the State's energy objectives of dependable, efficient, and economical statewide energy systems capable of supporting the needs of the people, and increased energy self-sufficiency.[20]

The seven projects in the HES program are:

Project 1 - Develop an Analytical Energy Forecasting Model (scheduled completion - first quarter of 1994);

Project 2 - Fossil Energy Review and Analysis (completed - December 1993);

Project 3 - Renewable Energy Resource Assessment Development Program (scheduled completion - late 1994);

Project 4 - Demand-Side Management Assessment (scheduled completion - late 1994);

Project 5 - Transportation Energy Strategy (completed February 1994);

Project 6 - Energy Vulnerability Assessment Report and Contingency Planning (awaiting grant approval); and

Project 7 - Energy Strategy Integration and Evaluation System (scheduled completion - late 1994).

Consultants are under contract for the completion of each of the projects in the HES program. Project 6 is being handled outside the HES program to take advantage of available Federal Emergency Management Agency funding. As of December 1993, grant approval by Federal Emergency Management Agency had not yet been obtained.

In addition to the specific projects listed above, the HES program incorporates other program activities, including Technical Advisory Groups under the auspices of the Energy Policy Advisory Committee, Energy Policy Advisory Committee and Integration Group,

workshops, public information program, and participation in the state Legislature-sponsored *Energy and Environmental Summit on October 8, 1993.*

Conclusion

When the Hawaii State Plan was enacted in 1974, Hawaii was ninety percent dependent on imported oil. In 1994, Hawaii remains ninety-two percent dependent on imported oil and vulnerable to supply disruptions and oil price fluctuations. The permitting process remains burdensome and fragmented. Indigenous energy resources have not been successfully commercialized on a large scale, and energy sources have not been diversified. Energy suppliers have few incentives and are thus reluctant to actively promote energy efficiency and renewable energy development. Energy conservation has not been treated as a source of supply. Even with the Hawaii State Plan in place for twenty years, little if any *measurable progress has been made toward the State's objectives of providing dependable,* efficient and economical energy statewide, and increasing self-sufficiency.

The Hawaii Integrated Energy Policy represented a positive step toward identifying the many deficiencies with the State's current energy system and recommending change. The Department of Business, Economic Development and Tourism's, Energy Division implemented many of the proposed recommendations through the Hawaii Energy Strategy program.

Many of the HES program projects are now complete. All projects are scheduled for completion by December 1994, excluding Project 6, which as noted above, is awaiting grant approval by the Federal Emergency Management Agency. Each of the specific projects has clearly identified objectives and goals. If the project goal are achieved, they will provide the Energy Division with the direction and vision necessary to create a more effective and efficient energy strategy and plan.

The Department of Business, Economic Development and Tourism has also submitted a proposed reorganization of the Energy Division.[21] The proposal seeks to establish within the Energy Division an Energy Planning, Policy and Resources Branch and a Geothermal Project Office, each with appropriate staff to carry out their functions. The Energy Planning, Policy and Resources Branch responsibilities would include staff functions relevant to

integrated energy planning and energy policy analysis and development, energy emergency preparedness, compilation and dissemination of data and information. The Geothermal Project Office would be assigned the integral tasks and responsibilities of formulating plans and programs for the optimum utilization of Hawaii's geothermal energy resources, and to develop strategies and implementation actions to achieve a significant level of energy self-sufficiency while meeting Hawaii's energy requirements.

The Department of Business, Economic Development and Tourism is awaiting approval on its proposed reorganization. Once approved, the reorganized Energy Division will be in a position to move forward. It remains to be seen whether the reorganized Energy Division will follow through with proposed projects.

Endnotes

1. Haw. Rev. Stat., chap. 196.
2. Id., sec. 196-1(1).
3. Id., sec. 196-1(2).
4. Id., sec. 196-1(3).
5. Id., sec. 196-1(4).
6. Id., sec. 196-3.
7. Id., sec. 196-4(1) - (12).
8. Id., sec. 226-18(a) and (b).
9. See id., sec. 226-103(f).
10. Hawaii, Department of Business, Economic Development and Tourism, Hawaii Integrated Energy Policy (Honolulu: 1991), p. i.
11. Id., note 1, p. 2.
12. Id., p. 1.
13. Id., p. i.
14. Id., p. 2.
15. Id.

16. Id., Exhibit 15, pp. 36-39.

17. Id., pp. 6-7.

18. Hawaii, Department of Business, Economic Development and Tourism, "Fact Sheet - Hawaii Energy Strategy Program" (Honolulu: 1994), p. 2.

19. Hawaii, Department of Business, Economic Development and Tourism, Hawaii Energy Strategy Program - Annual Report 1993 (Honolulu, 1993), p. 1.

20. Ibid.

21. The reorganization proposal affecting the Energy Division, Department of Business, Economic Development and Tourism, was submitted to the Department of Budget and Finance in September 1993.

Chapter 5

THE CALIFORNIA STATE ENERGY RESOURCES CONSERVATION AND DEVELOPMENT COMMISSION

Energy institutions vary from state to state. Of the fifty states, only two--California and Alaska--have established an energy commission as their primary energy policy making body. Seven jurisdictions have energy departments; thirteen, including Hawaii, have energy divisions; nineteen, including the District of Columbia and Puerto Rico, have energy offices; the remaining states have other institutional accommodations for energy management.[1] Ten states, including Hawaii, have an integrated energy plan.[2]

In 1974, the California State Legislature established the California State Energy Resources Conservation and Development Commission ("Energy Commission") to address the energy challenges facing the state. Creation of the Energy Commission is part of California's statewide plan for energy management known as the Warren-Alquist State Energy Resources Conservation and Development Act ("Warren-Alquist Act").[3]

The Warren-Alquist Act's preamble sets forth the following findings:

(1) That principal goals of resource planning and investment shall be to minimize the cost of reliable energy services and to include a value for any costs and benefits to the environment when calculating the cost effectiveness of energy resources, including conservation and load management options;

(2) That overdependence on the production, marketing, and consumption of petroleum based fuels is a threat to the energy security of the state due to continuing market and supply uncertainties;

(3) That electrical energy is essential to the health, safety and welfare of the people and that wasteful and unnecessary uses of power will result in depletion or environmental threats;

(4) That there is a need to accelerate research and development into alternative sources of energy; and

(5) That cogeneration technology should be recognized as an important element of the state's energy supply mix.[4]

The Warren-Alquist Act further establishes the following legislative and state policies:

(1) That the Energy Commission shall gather and analyze information to ascertain future energy problems and uncertainties;

(2) That the Legislature's intent is to establish and consolidate the state's responsibility for energy sources, for encouraging,developing, and coordinating research and development into energy supply and demand problems, and for regulating electrical generating and related transmission facilities;

(3) That energy consumption be reduced; and

(4) That all feasible means of energy and water conservation and uses of alternative energy and water supply sources be promoted.[5]

The Energy Commission is California's principal energy planning and policy making organization, charged with ensuring a reliable and affordable energy supply. The Energy Commission's policies are consistent with protecting the state's environment and its public health, safety, and general welfare. By statute, the Energy Commission must submit a comprehensive report to the Governor each biennium designed to identify emerging trends related to energy supply, demand, and conservation and public health and safety factors, and to provide the basis for state policy and actions, including approval of new sites for additional facilities.

The biennial report is California's principal energy planning and policy document. Once approved by the Governor, it becomes the state's official energy policy and forms the basis for action by the Legislature, the governor, other government agencies, utilities, and the private sector to meet California's future energy needs.[6]

California's energy plan is supported by five statutorily-required California Energy Commission technical reports: the Energy Efficiency Report, the Fuels Report, the Energy

Development Report; the Electricity Report and the California Contingency Plan. These Provide the analytical basis for the policies set forth in the energy plan. Each of these reports undergoes an extensive public review process prior to approval. Based on the findings of these technical reports, the energy plan recommends legislative, administrative, and regulatory actions to resolve energy issues and ensure a reliable, affordable, environmentally-acceptable future supply of energy for California's citizens and businesses.[7]

The Energy Commission seeks to focus the state's policy on finding the most cost-effective, reliable, efficient resources, and minimizing the environmental impacts of anticipated population growth. Leadership, consensus, and commitment are the keys to California's aggressive and effective state energy policy that is based on:

(1) Using energy efficiently;

(2) Using energy diversity and competition as key elements in evaluating new energy supplies, technologies, and fuel sources; and

(3) Using market forces in balancing economic health, and environmental quality.

In its most recent energy plan, the Energy Commission provided both recommendations and action steps to implement its energy policy. Many of the recommendations and action steps address transportation issues and the state's transportion strategy of decreasing vehicle-miles-traveled and trips; increasing efficiency of fuel use; and shifting to cost-effective alternative fuels and transportation modes.

In existence for almost twenty years, the California Energy Commission has been credited with raising California's energy awareness and development of a statewide integrated energy policy and plan, providing energy education for children and the general public, and development of curriculum packages. It will soon provide California with an energy center open to the public, complete with library and other reference materials.

However, accolades have come hand in hand with criticism at all levels. Many raise issues of accountability; that is, that the Energy Commission is not held accountable for its actions. A more formalized institutional structure--a department of energy, for example--would permit more government and public scrutiny, and require that the agency or division be

accountable for its actions. Most recently, in 1994, California Governor Pete Wilson introduced a budget proposal to abolish the Energy Commission and its paid commissioner positions, and replace it with a department of energy. The justification centered around duplicative and overlapping energy functions in government.

Proponents of the Energy Commission maintain that the benefits gained by an Energy Commission vastly outweigh the administrative cost of the salaries of the appointed commissioners and their clerical support staff. The salaries of five commissioners and their clerical support staff are but a small fraction of the salaries of the overall support staff, which in California numbers upward of five hundred employees, as compared to Hawaii's Energy Division with approximately thirty employees. If the California Energy Commission were to be reorganized into a department of energy, the overall support staff would likely remain intact.

To date, the California Energy Commission continues to exist. Efforts to abolish the Energy Commission have been unsuccessful, but nevertheless focus one's attention on the instability of the Commission's position within government. Even when applauded for its accomplishments, the California Energy Commission's position remains somewhat tenuous.

Other Alternatives

In a 1991 study prepared for the Department of Business, Economic Development and Tourism, state energy institutional alternatives were described and analyzed. Institutional alternatives included establishment of a commission, department, agency, administration, office, or combinations with the public utilities commission, or other agencies. Viable options for Hawaii included the following:

(1) Enhancement of the status quo;

(2) Creation of an energy division within the Public Utilities Commission;

(3) Creation of a sub-cabinet level Hawaii Energy Agency;

(4) Creation of a cabinet level Department of Energy;

(5) Creation of a Department of Energy and Environment; and

(6) Creation of an Energy Commission attached to the Department of Land and Natural Resources.[8] The options are described very briefly below.[9]

The first option, enhancement of the status quo, entails the expansion of the *Department of Business, Economic Development and Tourism, Energy Division, to meet the* functional needs not currently being fulfilled, particularly energy planning and policy development, and the addition of staff to analyze and recommend ways to streamline the permits and approvals process. The Energy Division's proposed reorganization currently pending before the Department of Budget and Finance seeks to accommodate these needs. Although this alternative ensures that essential policy and planning functions are adequately fulfilled, it neither raises the public perception of the importance accorded to energy issues nor provides the State with the focus and sense of purpose and authority a department of energy or energy commission would create.

The second option, creation of an energy division within the Public Utilities Commission, entails moving the Energy Division from within the Department of Business, Economic Development and Tourism to the Public Utilities Commission to serve as staff and technical resources to the Public Utilities Commission in its regulation of energy utilities. Again, although essential energy policy and planning functions could be fulfilled under this option, disadvantages include the loss of capability for comprehensive energy planning, a focus only on utilities, possible conflicts between the Public Utilities Commission's utility *regulation function and achievement of state policy objectives (e.g., recommendations of* higher-priced options to increase energy self-sufficiency), among others.

Third, creation of a sub-cabinet level Hawaii energy agency, involves establishment of a free standing agency, although not an executive agency. This option has most of the benefits of a cabinet level agency--increased visibility for energy issues and clear lines of communication and authority--but would not be a viable option under Hawaii's Constitution as presently constituted. Article V, Section 6 of the State Constitution requires that all executive and administrative agencies and their powers and duties be allocated among and within the principal departments.

Fourth, creation of a cabinet level department of energy would give energy a higher priority within state government, and provide greater influence over state energy policy and the policies and operations of other state agencies. Given the limited number of departments authorized by the State Constitution, however, it may be politically difficult to create a new department. Nonetheless, the authors of the study believed that this option represents the most effective institutional model for Hawaii.

Fifth, creation of a Department of Energy and Environment combines option four with current efforts to create a Department of Environment. The rationale for the creation of such a department would be that many environmental problems are energy related and thus could be analyzed and resolved in a single department. The merger of environmental protection functions with energy planning and development functions could, however, undermine public involvement and create internal conflict. The potential harm outweighs any gains made from administrative efficiency.

Finally, creation of an energy commission attached to the Department of Land and Natural Resources would likely result in a higher profile for energy issues. Essential policy and planning needs could be fulfilled with adequate staffing. Consolidation of permits and approvals for energy projects would promote efficiency. However, an energy commission can add a new bureaucracy and new regulatory or approval requirements to government and result in duplicative effort and regulation. Traditionally, commissions serve a regulatory function. Here, however, an energy commission serves no regulatory function, which leads one to question the necessity and viability of the commission structure.

In conclusion, the *Hawaii Integrated Energy Policy* recommended that Hawaii should work toward creation of a Department of Energy. At the same time, however, the policy acknowledges the difficulties with creation of such an agency given the State Constitution's limitation of twenty state departments and the current efforts to create a Department of Environment. Successful creation of a Department of Environment leaves only one available agency slot, for which a Department of Energy would receive significant competition. Therefore, although perhaps not the first nor best choice, enhancement and expansion of Energy Division, Department of Business, Economic Development and Tourism, was considered the most viable option and is currently underway.

Endnotes

1. RCG/Hagler, Bailly, Inc., Energy Management and Permitting Analysis: Hawaii Integrated Energy Policy Development (HEP) (Briefing Document) (Washington D.C.: 1991), pp. 49-51.

2. Ibid., p. 91.

3. Rev. L. Cal., Division 15 of the Public Resources Code, Energy Conservation and Development (Warren-Alquist Act).

4. Ibid., et. seq. sections 25000.1 - 25005.

5. Ibid., et. seq. sections 25005.5 - 25008.

6. California, State Energy Resources Conservation and Development Commission, The 1992 - 1993 California Energy Plan: The Biennial Report of the California Energy Commission (Sacramento: 1993), p. 1.

7. Ibid.

8. RCG/Hagler, Bailly, Inc., see supra note 1, p. 53; see also Hawaii, Department of Business, Economic Development and Tourism, Hawaii Integrated Energy Policy (Honolulu: 1991), p. 40.

9. Readers interested in more detailed discussion of these options should consult the Hawaii Integrated Energy Policy, see supra note 8, pp. 40-45.

Chapter 6

FINDINGS AND RECOMMENDATIONS

Findings

The Bureau makes the following findings:

1. Hawaii's economy and way of life is extremely vulnerable to possible oil supply disruptions in the world oil market and rapid oil price increases. Notwithstanding efforts to decrease oil dependence, Hawaii remains dependent on imported oil for over ninety-two percent of its energy.

2. Even with recent advances in various alternative energy industries, Hawaii remains far from achieving its goal of replacing oil in satisfying its energy requirements. Indigenous energy resources currently satisfy approximately fifteen percent of the State's electricity production; the rest is generated by oil.

3. Establishment of an energy commission modeled after the California Energy Commission would be a costly venture and would likely require a far greater budget than the present or reorganized Energy Division of the Department of Business, Economic Development and Tourism to carry out the identical energy function in government.

4. Since the mid-70s when the Energy Resources Coordinator was designated by statute, progress in energy policy making and planning has been slow. Beginning in 1990, however, with the onset of the Hawaii Integrated Energy Policy Development program and the resulting Hawaii Energy Strategy program, greater progress has been realized. Most of the Hawaii Energy Strategy program projects are completed or nearing completion. In addition, the pending reorganization of Energy Division, Department of Business, Economic Development and Tourism, envisions accommodation of greater integrated energy planning and energy policy analysis and development, energy emergency preparedness, and compilation and dissemination of data and information.

5. Nationwide, only two jurisdictions have established an energy commission as their primary energy policy making body. In California, the California Energy Commission has succeeded in raising California's energy awareness. However, even after twenty years, its

position in government remains somewhat unstable and issues of accountability are raised continually. Critics of the California Energy Commission advocate a more formalized institutional structure to permit more government and public scrutiny, and require that the agency or division be accountable for its actions.

6. In a 1991 study that analyzed state energy institutional alternatives for Hawaii, the establishment of an energy commission was not considered one of the more viable options for Hawaii. The study recommended enhancement of the Energy Division of the Department of Business, Economic Development and Tourism as the most viable option, although perhaps not the first nor best choice.

Recommendations

The establishment of an Energy Commission modeled upon the California Energy Commission as envisioned by Senate Bill No. 2595 (1993) is not necessary at this time. The Bureau, therefore, recommends the Legislature not enact legislation to establish an Energy Commission for the State of Hawaii. Although an Energy Commission would likely raise the energy awareness of the people of the State, and result in a higher profile for energy issues, by virtue of its stature as an independent commission, the negative impact of establishing such a commission would greatly outweigh any potential benefits.

First, the Energy Commission would likely add yet another bureaucracy and new regulatory or approval requirements to government and result in duplicative effort and regulation. Traditionally, commissions serve a regulatory function. Here, however, an Energy Commission serves no regulatory function, which leads one to question the necessity and viability of the commission structure.

Second, the present State budget crisis imposes financial constraints. Creation of an Energy Commission would be expensive and counterproductive. Given the recent imposition of strict spending restrictions and measures of maximum austerity, efforts to establish an Energy Commission with its minimum of eight highly compensated positions (five paid commissioners and three other high level professional staff), numerous professional, technical, and other support staff, and operating expenses would be at distinct odds with the State's efforts to reduce operating expenditures. Even if budgetary constraints did not exist

or the proposed Energy Commission did not include paid commissioner positions, however, it remains uncertain whether an Energy Commission would better accomplish the energy function in government than the existing Energy Division. Moreover, efforts already expended to reorganize Energy Division would be rendered moot.

Finally, the Energy Division's completion of projects intended to provide recommendations to achieve the State's energy objectives is at hand. The foundation achieved by action on these recommendations will provide Hawaii with vision toward dependable and efficient energy systems and increased energy self-sufficiency. Although small in terms of actual energy produced, alternative energy resources have enjoyed significant development and will likely contribute greatly to electricity production on the neighbor islands. Oahu, however, will continue to present a challenge. Although progress has been slow to date, movement in recent years has been more directed and reliable. Periodic review of the Energy Resources Coordinator and the Energy Division's progress may be recommended to ensure movement toward achieving state energy objectives.

Appendix A

THE SENATE
SEVENTEENTH LEGISLATURE, 1994
STATE OF HAWAII

S.B. NO. 2595

A BILL FOR AN ACT

RELATING TO THE HAWAII ENERGY RESOURCES CONSERVATION AND DEVELOPMENT COMMISSION.

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF HAWAII:

SECTION 1. Findings and declaration. The legislature finds that although it is the State's policy to establish and coordinate programs to effectuate the conservation of fuel and to formulate plans for the development and use of alternative energy sources (section 196-1, Hawaii Revised Statutes), the legislature agrees with the Hawaii Integrated Energy Policy Statement of December, 1991, which concluded that:

(1) Hawaii's extensive renewable energy research and development activities are not being adequately conducted within a coordinated and comprehensive framework among the state and county departments and agencies;

(2) Existing systems of permits and approvals required for the development and siting of energy facilities have seriously impeded development of alternative energy in this State; and

(3) There is a need to enhance visibility and continuing emphasis on energy policies at the highest levels of state government.

The legislature declares that this State needs to establish a Hawaii energy resource and development commission, which will be the State's principal energy planning and policy making body. This commission will be responsible for ensuring a reliable and affordable energy supply by conducting energy planning, establishing priorities and overseeing non-fossil fuel research and development, energy conservation programs, and improving the efficiency of the permit process, all without compromising environmental, social, and other community standards.

The 1993 Energy and Environmental Summit was convened on October 8, 1993 to identify issues and build broad-based support for initiatives that will move Hawaii forward in the areas of energy and the environment. This bill is the result of collaborative efforts of participants of this summit.

SECTION 2. The Hawaii Revised Statutes is amended by adding a new chapter to be appropriately designated and to read as follows:

"CHAPTER

ENERGY RESOURCES CONSERVATION AND DEVELOPMENT

§ -1 Energy resources conservation and development commission established. (a) There is established within the department of land and natural resources for administrative purposes only, the Hawaii energy resources conservation and

development commission consisting of five members appointed by the governor with the advice and consent of the senate. One member of the commission shall have a significant background in the field of engineering or physical science with knowledge of energy supply or conversion systems; one member shall be an attorney admitted to the practice of law in this State with administrative law experience; one member shall have background and experience in the field of environmental protection or the study of ecosystems; one member shall be an economist with background and experience in the field of natural resource management; and one member shall be from the public at large, with a demonstrated concern for long-term economic, environmental, and social impacts of energy policies in this State.

(b) The chairperson of the board of land and natural resources and the chairperson of the public utilities commission shall be ex officio, nonvoting members of the commission.

§ -2 Chairperson; appointment, duties. Every two years, the governor shall designate a chairperson and vice chairperson of the commission from among its members. The chairperson shall direct the public adviser, the executive director, and other staff in the performance of their duties in conformance with the policies and guidelines established by the commission.

§ -3 Conflicts of interest. (a) No person shall be a member of the commission if, during the two years prior to appointment to the commission, the person received any substantial portion of the person's income directly or indirectly from any electric or gas utility, independent power producer, or the person engaged in the sale or manufacture of any major component of any facility. No member of the commission shall be employed by any electric or gas utility, independent power producer, an applicant, or, within two years after ceasing to be a member of the commission, by any person who engages in the sale or manufacture of any major component of any facility.

(b) Except for the ex officio members, the members of the commission shall devote full time to their duties as members of the commission and no member shall hold any other elected or appointed public office or position or other employment during the member's term of office.

(c) The members of the commission and all employees of the commission shall comply with all applicable provisions of chapter 84.

(d) No person who is a member or employee of the commission shall participate personally and substantially as a member or employee of the commission, through decision, approval, disapproval, recommendation, the rendering of advice,

investigation, or otherwise, in a judicial or other proceeding, hearing, application, request for a ruling, or other determination, contract, claim, controversy, study, plan, or other particular matter in which, to the person's knowledge, the person, the person's spouse, minor child, or partner, or any organization, except a governmental agency or educational or research institution qualifying as a nonprofit organization under state or federal income tax law, in which the person is serving, or has served as officer, director, trustee, partner, or employee while serving as a member or employee of the commission or within two years prior to the person's appointment as a commission member has a direct or indirect financial interest.

(e) No person who is a partner, employer, or employee of a member or employee of the commission shall act as an attorney, agent, or employee for any person other than the State in connection with any judicial or other proceeding, hearing, application, request for a ruling, or other determination, contract, claim, controversy, study, plan, or other particular matter in which the commission is a party or has a direct and substantial interest.

(f) This section shall not apply if the attorney general finds that the interest of the member or employee of the commission is not so substantial as to be deemed likely to affect

the integrity of the services which the State may expect from such member or employee.

(g) Any person who violates any provision of this section is guilty of a class C felony.

§ -4 Terms of office; vacancies. The terms of office of the members of the commission shall be for five years, except that the members first appointed to the commission shall be appointed for staggered terms so that the term of office of one member shall expire at the end of each one of the five years. Any vacancy shall be filled by the governor within thirty days of the date on which the vacancy occurs for the unexpired portion of the term in which it occurs or for any new term of office, subject to the advice and consent of the senate.

§ -5 Compensation; expenses. The members of the commission shall receive a salary of $. Members shall also be entitled to reimbursement for all necessary traveling and other expenses incurred in the performance of their duties.

§ -6 Vote; quorum. Each member of the commission shall have one vote. Except as provided in section -8, the affirmative votes of at least three members shall be required for the transaction of any business of the commission.

§ -7 Hearings and investigations; powers of the commission; confidentiality of certain information. (a) The

commission may hold any hearings and conduct any investigations in any part of the State necessary to carry out its powers and duties under this chapter, and for those purposes, the commission may:

(1) Inspect books and records;

(2) Hear complaints;

(3) Administer oaths;

(4) Certify to all official acts;

(5) Issue subpoenas for the attendance of witnesses and the production of papers, books, accounts, documents and testimony in any inquiry, investigation, hearing or proceeding pertinent or material thereto in any part of the State; and

(6) Divulge evidence of unlawful activity discovered, pursuant to this chapter, from records or testimony not otherwise privileged or confidential, to the attorney general or to any prosecuting attorney who has a responsibility for investigating the unlawful activity discovered, or to any governmental agency responsible for enforcing laws related to the unlawful activity discovered.

(b) Except in a report to the commission or when called upon to testify in any court or proceeding at law, any officer

who divulges any information from the private books, documents, or papers of any person acquired by the officer while acting or claiming to act under any authorization pursuant to this chapter in respect to the confidential or private transactions, property, or business of any person is guilty of a misdemeanor and disqualified from acting in any official capacity for the commission.

§ -8 Committees; orders. The commission may appoint a committee of not less than two members of the commission to carry on investigations, inquiries, or hearings which the commission has power to undertake or to hold. Every order made by the committee pursuant to the inquiry, investigation, or hearing, when approved or confirmed by the commission and ordered filed in its office, shall be the order of the commission.

§ -9 Meetings and hearings. The commission shall hold meetings at such times and at such places as shall be determined by it. All meetings and hearings of the commission shall be open to the public, except for presentation of proprietary information. Opportunity to be heard with respect to the subject of the hearings shall be afforded to any person. Upon request, an interested party may be granted reasonable opportunity to examine any witness testifying at the hearing. The first meeting

of the commission shall be held within thirty days after the confirmation of the third member of the commission.

§ -10 Removal of member. Any member of the commission may be removed from office by the legislature, by concurrent resolution adopted by a majority vote of all members elected to each house, for dereliction of duty, corruption, or incompetency.

§ -11 Powers and duties of commission. The commission shall have the primary responsibility for conducting energy planning and policy development, establishing priorities for and overseeing energy research and development programs, and working to improve the efficiency of and facilitating the permitting process without compromising environmental, social, and other standards. In carrying out this responsibility, the commission, in addition to other duties specified in this chapter, shall do all of the following:

(1) Create, direct, and manage a triennial state integrated energy plan that encompasses conservation, renewable energy sources, and transportation;

(2) Undertake continuing assessments of trends in the consumption of energy and analyze the social, economic, and environmental consequences of these trends;

(3) Collect from electric and gas utilities, fuel producers and wholesalers, and other sources forecasts of future

supplies and consumption of all forms of energy, including electricity, and of future energy or fuel production and transporting facilities to be constructed;

(4) Independently analyze through the use of a comprehensive energy model, forecasts in relation to statewide estimates of population, economic, and other growth factors, and in terms of the availability of energy resources, costs to consumers;

(5) Provide within the integrated planning framework, maximum opportunity for all stakeholders, public and private, to become involved in the planning, development, and approval of the state plan as it relates to this chapter;

(6) Facilitate energy consumption measures and the development of renewable indigenous energy resources to meet all energy needs, including electrical, heat, and transportation;

(7) Carry out, or cause to be carried out, under contract or other arrangements, research and development into alternative energy sources of energy, improvements in energy generation and efficiency, transmission, and siting, fuel substitution, and other topics related to

energy supply, demand, public safety, ecology, and conservation which are of particular statewide importance;

(8) Recommend to the governor and the legislature new and expanded energy conservation, energy efficiency, and renewable energy production programs;

(9) Prescribe the form and content of applications for energy conversion facilities; conduct public hearings and take other actions to secure adequate evaluation of applications; and formally act to approve or disapprove applications with respect to conformance with the State's long-range energy policy plan, including specifying conditions under which approval and continuing operation of any facility shall be permitted;

(10) Consolidate and facilitate permit requirements for renewable energy projects in accordance with the permit facilitation guidelines under part IV, chapter 201;

(11) Provide an institutional mechanism to aid the resolution of disputes among energy stakeholders, and make energy development and conservation efforts a pro-active process where stakeholders may resolve

contentious issues early in the planning process by maximum participation;

(12) Prepare an integrated plan specifying actions to be taken in the event of an impending serious shortage of energy, or a clear threat to public health, safety, or welfare;

(13) Evaluate policies governing the establishment of rates for electric power and other sources of energy as related to energy conservation, environmental protection, and other goals and policies established under this chapter, and transmit recommendations for changes in power-pricing policies and rate schedules to the governor, the legislature, the public utilities commission, and to publicly-owned electric utilities;

(14) Serve as a central repository within the state government for the collection, storage, retrieval, and dissemination of data and information on all aspects of energy, including its supply, demand, conservation, public safety, research, and related subjects. The data and information shall be derived from all sources, including but not limited to electric and gas utilities, oil and other energy producing companies, institutions of higher education, private industry,

public and private research laboratories, private individuals, and from any other source that the commission determines is necessary to carry out its objectives under this chapter;

(15) Liberally construe any provisions of this chapter to fully effectuate the objectives of this chapter;

(16) Prepare and submit an annual report on its activities to the governor and legislature at least twenty days prior to the convening of the legislature; and

(17) Adopt rules to carry out this chapter.

§ -12 **Standards for designing, siting, and operating facilities; compilation, adoption.** The commission shall compile and continuously update relevant county, state, and federal land use, public safety, environmental, and other standards to be met in designing, siting, and operating facilities in the State. The commission shall adopt standards, except for air and water quality, to be met in designing or operating facilities to safeguard public health and safety, which may be more stringent than those adopted by county or federal agencies. The commission shall monitor compliance and ensure that all facilities are operated in accordance with these standards.

§ -13 **Commission staff and legal counsel.** The commission shall appoint an executive director with administrative and

fiscal experience to oversee the administrative operations of the commission and a legal counsel who shall advise the commission and represent it in connection with legal matters and litigation before any board or agency of the state or federal government. The commission may employ other staff members as necessary. All staff appointed by the commission shall serve at its pleasure and their duties and salary shall be prescribed by the commission.

§ -14 Public adviser. The commission shall nominate and the governor shall appoint for a term of three years a public adviser to the commission who shall be an attorney admitted to the practice of law in this State. The adviser shall ensure that full and adequate participation by all interested groups and the public at large is secured in the planning, site and facility certification, energy conservation, and emergency allocation procedures provided in this chapter. The adviser shall ensure that timely and complete notice of commission meetings and public hearings is disseminated to all interested groups and to the public at large. The adviser shall also advise such groups and the public as to effective ways of participating in the commission's proceedings. The adviser shall recommend to the commission additional measures to assure open consideration and public participation in energy planning, site and facility certification, energy conservation, and emergency allocation

proceedings. The adviser may be removed from office only upon joint concurrence of four members of the commission and the governor.

§ -15 Public records; dissemination. The commission shall make available any information filed or submitted pursuant to this chapter; provided that the commission shall keep confidential any information that the commission deems is proprietary.

§ -16 Exchange of information with state agencies. The commission and other state agencies, to the fullest extent possible, shall exchange records, reports, material, and other information relating to energy resources and conservation and power facilities siting, or any areas of mutual concern, to the end that unnecessary duplication of effort may be avoided."

SECTION 3. Section 125C-23, Hawaii Revised Statutes, is amended to read as follows:

"**§125C-23 Set-aside system.** The [state energy resources coordinator] <u>energy resources conservation and development commission</u> shall adopt rules establishing a petroleum products set-aside system. The purpose of this system shall be the protection of public health, safety, and welfare; the maintenance of public services, utilities, and transportation; the maintenance of agricultural operations, including farming,

horticulture, dairy, fishing, and related services; the preservation of economically sound and competitive industry, through the equitable acquisition and distribution of petroleum products; and the promotion of efficiency, with minimum economic disruptions, during a shortage of petroleum products. The rules establishing the set-aside system shall be adopted in accordance with chapter 91."

SECTION 4. Section 196-2, Hawaii Revised Statutes, is amended as follows:

1. By adding a new definition to be appropriately inserted and to read:

""Commission" means the energy resources conservation and development commission established under section -1."

2. By repealing the definition of "coordinator".

[""Coordinator" means the energy resources coordinator."]

SECTION 5. Section 196-5, Hawaii Revised Statutes, is amended by amending subsections (b) and (c) to read as follows:

"(b) Beginning ninety days after May 30, 1978, the [energy resources coordinator or its successor entity] commission shall notify, in writing, all retail sellers of gas appliances doing business in the State of the provisions of this section.

(c) [The provisions of this] This section shall not apply to any hot water heaters with pilot lights or to any gas appliance which can be conclusively demonstrated by the equipment

manufacturer, to the satisfaction of the [energy resources coordinator or its successor entity,] commission that the gas pilot device in the appliance:

(1) Has a substantial lower life cycle cost than an electric ignition or other alternate ignition system;

(2) Is more energy efficient than available alternatives; or

(3) Is necessary to safeguard public health and safety."

SECTION 6. Section 196-6, Hawaii Revised Statutes, is amended by amending subsection (b) to read as follows:

"(b) Within ninety days after May 18, 1984, the [energy resources coordinator or its successor entity] commission shall notify, in writing, all retail sellers and distributors of storage hot water heaters doing business in this State, of the provisions of this section."

SECTION 7. Section 201-12, Hawaii Revised Statutes, is amended to read as follows:

"[[]§201-12[]] **State program for energy planning and conservation.** The [department] energy resources conservation and development commission shall develop a state program for energy planning and conservation. The program shall consist of short and long-range planning for the development and promulgation of

methods to encourage voluntary conservation of gasoline, diesel oil, natural gas, propane, heating oils, other fuels, and electrical energy, and efficient development of new or alternative sources of such fuels and energy. The information resulting from such methods is to be disseminated to the people of Hawaii through all forms of mass communication media, public and private schools, private and civic organizations, and all other appropriate means. Public information offices of other state and county agencies may be called upon for assistance in the development of such program."

SECTION 8. Sections 196-3 and 196-4, Hawaii Revised Statutes, are repealed.

["§196-3 Energy resources coordinator. The director of business, economic development, and tourism shall serve as energy resources coordinator.

§196-4 Powers and duties. Subject to the approval of the governor, the coordinator shall:

(1) Formulate plans, including objectives, criteria to measure accomplishment of objectives, programs through which the objectives are to be attained, and financial requirements for the optimum development of Hawaii's energy resources;

(2) Conduct systematic analysis of existing and proposed energy resource programs, evaluate the analysis conducted by government agencies and other organizations and recommend to the governor and to the legislature programs which represent the most effective allocation of resources for the development of energy sources;

(3) Formulate and recommend specific proposals, as necessary, for conserving energy and fuel, including the allocation and distribution thereof, to the governor and to the legislature;

(4) Assist public and private agencies in implementing energy conservation and related measures;

(5) Coordinate the State's energy conservation and allocation programs with that of the federal government, other state governments, governments of nations with interest in common energy resources, and the political subdivisions of the State;

(6) Develop programs to encourage private and public exploration and research of alternative energy resources which will benefit the State;

(7) Conduct public education programs to inform the public of the energy situation as may exist from time to time and of the government actions taken thereto;

(8) Serve as consultant to the governor, public agencies and private industry on matters related to the acquisition, utilization and conservation of energy resources;

(9) Contract for services when required for implementation of this chapter;

(10) Review proposed state actions which the coordinator finds to have significant effect on energy consumption and report to the governor their effect on the energy conservation program, and perform such other services as may be required by the governor and the legislature;

(11) Prepare and submit an annual report and such other reports as may be requested to the governor and to the legislature on the implementation of this chapter and all matters related to energy resources; and

(12) Adopt rules for the administration of this chapter pursuant to chapter 91, provided that the rules shall be submitted to the legislature for review."]

SECTION 9. There is appropriated out of the general revenues of the State of Hawaii the sum of $, or so much thereof as may be necessary for fiscal year 1994-1995, to carry out the purposes of this Act. Additional funding to the commission shall be provided by designating portions of the Alternative Fuels Development Fund or a similar fund in the sum

of $ for fiscal year 1994-1995 and beyond. The sum appropriated shall be expended by the department of land and natural resources for the purposes of this Act.

SECTION 10. All rights, powers, functions, and duties of the energy coordinator of the department of business, economic development, and tourism are transferred to the energy resources conservation and development commission created by section 1 of this Act.

All officers and employees whose functions are transferred by this Act shall be transferred with their functions and shall continue to perform their regular duties upon their transfer, subject to the state personnel laws and this Act.

No officer or employee of the State having tenure shall suffer any loss of salary, seniority, prior service credit, vacation, sick leave, or other employee benefit or privilege as a consequence of this Act, and such officer or employee may be transferred or appointed to a civil service position without the necessity of examination; provided that the officer or employee possesses the minimum qualifications for the position to which transferred or appointed; and provided that subsequent changes in status may be made pursuant to applicable civil service and compensation laws.

An officer or employee of the State who does not have tenure and who may be transferred or appointed to a civil service position as a consequence of this Act shall become a civil service employee without the loss of salary, seniority, prior service credit, vacation, sick leave, or other employee benefits or privileges and without the necessity of examination; provided that such officer or employee possesses the minimum qualifications for the position to which transferred or appointed.

In the event that an office or position held by an officer or employee having tenure is abolished, the officer or employee shall not thereby be separated from public employment, but shall remain in the employment of the State with the same pay and classification and shall be transferred to some other office or position for which the officer or employee is eligible under the personnel laws of the State as determined by the head of the department or the governor.

SECTION 11. All appropriations, records, equipment, machines, files, supplies, contracts, books, papers, documents, maps, and other personal property heretofore made, used, acquired, or held by the department of business, economic development, and tourism relating to the functions transferred to

the energy resources conservation and development commission shall be transferred with the functions to which they relate.

SECTION 12. Statutory material to be repealed is bracketed. New statutory material is underscored.

SECTION 13. This Act shall take effect on July 1, 1994.

Appendix B

THE SENATE
SEVENTEENTH LEGISLATURE, 1994
STATE OF HAWAII

S.C.R. NO. 62 S.D. 1

SENATE CONCURRENT RESOLUTION

REQUESTING A FEASIBILITY STUDY ON THE ESTABLISHMENT OF A HAWAII ENERGY RESOURCES CONSERVATION AND DEVELOPMENT COMMISSION.

WHEREAS, Hawaii's environment and natural energy are two of the State's most precious assets and a comprehensive, statewide integrated resource management system is needed to ensure the proper use of these resources; and

WHEREAS, recognizing this, the 1993 Energy and Environmental Summit proposed the establishment of a Hawaii energy resources and development commission as the State's principal energy planning and policymaking body; and

WHEREAS, the commission would be responsible for ensuring a reliable and affordable energy supply by conducting energy planning, establishing priorities, overseeing non-fossil fuel research and development, energy conservation programs, and improving the efficiency of the permit process for energy facilities development, all without compromise to environmental, social, and other community standards; and

WHEREAS, the Legislature believes that to emphasize the importance of state energy policies, there is a need for visibility at the highest level of state government and such a commission would provide that visibility; and

WHEREAS, the Environmental Summit's proposal has been introduced for legislative consideration as S.B. No. 2595, Regular Session of 1994; and

WHEREAS, before the Legislature proceeds with that proposal, a thorough and comprehensive study should be undertaken to analyze the issues, to make findings and recommendations, and to determine the costs of establishing such a commission; now, therefore

BE IT RESOLVED by the Senate of the Seventeenth Legislature of the State of Hawaii, Regular Session of 1994, the House of Representatives concurring, that the Legislative Reference Bureau is requested to conduct a study on the feasibility of establishing a Hawaii energy resources and development commission as proposed in S.B. No. 2595, Regular Session of 1994; and

BE IT FURTHER RESOLVED that the study include, but not be limited to:

(1) The need for such a commission, and if needed, the projected cost of its operation;

(2) The effect of the proposed commission on other existing statutory provisions relating to energy, fuel conservation, and the environment; and

(3) A review of California's experience with the California Energy Commission;

and

BE IT FURTHER RESOLVED that the Legislative Reference Bureau is requested to solicit input from representatives of various state and county departments and agencies involved in energy conservation and supply; public utilities; independent power producers; companies involved in energy conservation and alternative energy supply; the Public Utilities Commission; the University of Hawaii's energy research component; and citizen groups concerned about energy, resource use, and environmental impacts.

BE IT FURTHER RESOLVED that the Legislative Reference Bureau report its findings, conclusions, and recommendations to the Legislature before the convening of the Regular Session of 1995; and

BE IT FURTHER RESOLVED that a certified copy of this Concurrent Resolution be transmitted to the Director of the Legislative Reference Bureau.