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PROJECTED CALIFORNIA ENERGY BALANCE
FIRST QUARTER 1974

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Summary

California has become dependent on out-of-state sources for well over half of its total energy supply. In addition to declining production of oil and gas within the State, outside supplies have been interrupted, curtailed, or otherwise restricted as follows: Arab nations oil embargo, 250,000 barrels per day (B/D); natural gas imports from the East by contract, 336,000 MCF/D (58,000 B/D oil equivalent) curtailment*; and anticipated additional natural gas deliveries from Canada not realized (export permit denied), 200,000 MCF/D (35,000 B/DOE).

Further complicating the State's energy situation is the 60,000 B/D abnormal overseas military demand for petroleum products from California because of the Arab nations embargo; the State's share is about twice the per capita share of the United States as a whole. This, however, is balanced by increased foreign imports of petroleum products from other sources. Standards for sulfur content of fuels prevent burning of oil containing more than one-half percent sulfur in many parts of the State. California has no significant supplies of commercial coal readily available as an alternative fuel for gas or oil.

Oil supply restrictions have materially reduced refinery output while gas supply restrictions and normal growth have increased petroleum product demand. The net effect is a projected petroleum product supply-demand deficit for the first quarter 1974 of 535,000 B/D or 25 percent of demand, exclusive of net inventory changes.

The most critical shortage is in residual fuel oil supplies. Present inventories held by utilities, with vigorous statewide electrical conservation measures and equalizing exchanges between utilities could prevent blackouts well into Spring. Actual delivery of all oil committed under "firm" contract and of oil for which negotiations are in an advance stage, together with vigorous statewide conservation and equalizing exchanges, could carry the State's electrical utilities through the year without intentional blackouts. Any major short-fall in actual oil deliveries could result in drastic electrical curtailments, including blackouts, before the end of the year. However, the recent relaxation of the Arab embargo to most other nations will tend to make oil from other foreign sources much more readily available.

Distillates, including diesel fuels, will be in short supply in the first quarter, aggravated by demands for low sulfur fuel alternatives for natural gas and by overseas military needs. Inventories of distillates appear to be about normal for this time of year and inventory depletion will make up a considerable part of the production-demand deficit.

Gasoline demands in January will probably be brought into balance with supply by a combination of increased conservation measures, allocation programs, and higher prices. Significantly greater supply-demand imbalances in February and March may require additional measures. Gasoline inventories are generally well below normal. The Federal Energy Office is preparing a "stand by" rationing program for possible imposition in March; ration coupon plates are presently being engraved by the Federal Government.

Jet fuels will also be in short supply in January and February with some easing forecast for March. Allocations to civil air carriers and between civilian and military uses are controlled by the Federal Energy Office. Inventories may be able to alleviate any severe hardships in January and February.

Supply-demand forecasts have not been prepared individually for other petroleum products. However, as a group, demand will exceed supplies at least until adequate availability of crude oil enables refineries to return to near-capacity production.

*Note: Anticipated actual delivery curtailment: January, 433,000 MCF/D (75,000 B/DOE); February, 493,000 MCF/D (83,000 B/DOE); and March, 308,000 MCF/D (53,000 B/DOE).

Introduction

Preparation of the following report was authorized by the State Energy Planning Council on December 12, 1973. It was prepared by an inter-agency group, serving as staff to the Council, consisting of personnel from the Department of Conservation (including the Division of Oil and Gas), Transportation, Agriculture, and Water Resources, with major assistance from the Public Utilities Commission, the Office of Planning and Research, and the Office of Emergency Services. Assistance and information was also provided by a number of other State agencies.

The findings and conclusions presented herein represent the group's best objective evaluation as of this date of the energy situation in California for the first quarter of 1974. It should be regarded as preliminary. The total energy picture is very complex and the present situation for both supply and demand is extremely fluid. New data becomes available daily and new developments are commonplace. Many of the sources of supply are highly variable both as to area of origination and as to quantities available. Federal regulations, programs, and directives change with regularity. The market areas for energy vary from product to product and from time to time. California's boundaries rarely coincide with source areas, marketing and demand areas, or with reporting or statistical units for either category or for various subdivisions thereof.

Information was gathered from every source available within the time limits required to prepare the report. These sources, in addition to State agencies, included: U.S. Bureau of Mines, U.S. Customs Offices (Los Angeles and San Francisco), Federal Energy Offices (Washington and San Francisco), Federal Office of Oil and Gas, U.S. Department of Defense (various offices), the Nevada Tax Commission, the California Oil Conservation Committee, the American Petroleum Institute, Southern Pacific Railroad, and various oil companies and utilities located in California.

The report drew heavily on energy reports prepared by the California Resources Agency, the Rand Corporation, Stanford Research Institute, the California Department of Agriculture (with U.C. Davis), and the publications of various federal agencies.

Assistance provided by the Western Oil and Gas Association, and by Sherman H. Clark Associates through the courtesy of Southern California Edison, was especially helpful.

The individual factors that combine to make up the present energy deficit in California are largely a matter of public record as to natural gas curtailments and export permit denials, amount of petroleum imports, and decline in State oil and gas production. Historic demand growth projections are well known and the amount of overseas military demand, while not officially released, is more or less common knowledge within the petroleum industry.



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January 3, 1974

PROJECTED CALIFORNIA ENERGY BALANCE
FIRST QUARTER 1974

General

In January 1973, oil and gas provided 91.5% of California's total energy supply of 3,352,000 equivalent barrels per day of crude oil (B/DOE). California oil production peaked in 1968 and has since declined annually; its natural gas production peaked in 1966. Progressive curtailment of natural gas imports began in November 1972. In January 1973, the State was dependent on out-of-state sources for 59.9% of its energy supply, including 31.8% from foreign sources. Imports, particularly of crude and residual fuel oils, increased further until November 1973.

The petroleum refining capacity of the State has not increased significantly since 1969. Major California refineries were operating at near capacity for much of 1973 but production only barely kept pace with demand for most products. A number of independent refineries in the San Joaquin Valley were operating at well below capacity because of a shortage of crude oil. A voluntary allocation program for gasoline went into effect in May, and a mandatory allocation program for propane was imposed by the federal government on October 3. The announced sharp increase in curtailment, to 336,000 MCF/day (58,000 B/DOE), of natural gas from the 4 Corners area, effective January 1, 1974, plus a moratorium on a contract for an anticipated 200,000 MCF/day additional natural gas (34,500 B/DOE) from Canada created a greatly increased demand for low sulfur residual and crude oils and, to a lesser extent, for distillates as auxilliary fuels for large gas users during periods of interrupted gas delivery.

The Arab nations oil embargo caused a decrease of about 250,000 B/D in oil imports by late November, although about 60,000 B/D of this decrease was offset by increased imports from other foreign sources during December. A side effect of the embargo is the curtailment of oil supplies to U.S. military forces from overseas sources which requires that those forces be supplied from the United States. About 60,000 barrels per day is supplied from California over and above that normally required before the embargo.

The forecast for California petroleum products supply in the first quarter of 1974 assumes continuation of both the Arab nations embargo and the 60,000 B/D increased imports from non-embargo foreign sources through February 1974 as well as continued overseas military demands.

Immediate resumption of Arab nation imports at the pre-embargo level plus continuation of present higher level imports from other foreign sources could cut the anticipated overall petroleum product balance deficit by about 43% in February and by about 72% in March, reducing the total deficit forecasts to 18% and 6% of demand, respectively.

California's projected overall energy supply shortage from all sources for the first quarter 1974 is about 15.7% of total demand. This shortage is reflected in a 25% supply-demand deficit in petroleum products. The petroleum shortage forecast for the State is nearly twice the 13.6% shortage predicted for the Nation as a whole for the first quarter (Petroleum Situation Report, Week Ending December 14, 1973, Federal Energy Office). California has been exceptionally impacted relative to the rest of the U.S. by diversion of natural gas, a double (per capita) share of overseas military demands, earlier decline of in-State oil and gas production, and lack of available coal as an alternative fuel.

An informed Washington source indicates that the military on at least one occasion has declined to take oil from other foreign sources for overseas supply, preferring instead to requisition from the U.S. because of lower prices. Most U.S. oil is subject to price control.

Residual Fuel Oil

The most immediate and critical fuel shortage is in low sulfur crude and residual fuel oil for direct burning in power plants and industrial plants, especially as replacement for interrupted natural gas deliveries. Assuming unconstrained electrical demand, normal electrical deliveries from out-of-state, and continuation of the Arab nations embargo, these deficits would be 317,000 B/D (48.7%), 454,000 B/D (57.1%), and 336,000 B/D (50%) in January, February, and March, respectively. Present recoverable oil inventories of the various utilities alone, estimated at 26.9 million barrels, would cover these deficits through mid-March if the inventories were distributed pro-rata among the utilities. A net 15% Statewide conservation in electrical use would stretch these inventories, alone, into mid-April if distributed pro-rata.

In addition to current inventories, utilities have an additional 94.2 million barrels of fuel oil under "firm" contract for the remainder of 1974 and another 18.8 million barrels in advanced stages of contract negotiation. If all this fuel is actually delivered in a timely manner and distributed pro-rata, with a net 15% effective Statewide conservation program the State's residual fuel oil needs could be met for the entire year without invoking blackouts or brownouts. However, based on recent events and rapid price increases, there appears to be no such thing as an absolutely firm contract with some overseas suppliers. If only half of the "firm" contract and "advance negotiation" oil is actually delivered and distributed pro-rata, with an effective 15% Statewide conservation saving, the State's needs could still be met without significant interruption through July 1974. Current higher than anticipated electrical deliveries from the Pacific Northwest would extend this grace period. The end of the Arab nations oil embargo would probably assure delivery of at least the amount of oil under firm contract. The recent relaxation of the Arab nations oil embargo to most other nations will tend to make oil supplies from other foreign sources much more readily available.

Depletable refinery inventories of residual fuel oil appear to be practically non-existent.

Distillates

Distillates, which include diesel fuel and home heating oils, will be in short supply in the first quarter of 1974. The demand forecast is based on historic uses. However, an unusually large volume of these oils is now also in demand as a low sulfur fuel alternative for natural gas. Since there is no real history for this kind of demand, there is no reasonable way to estimate its magnitude. In addition, military overseas demands occasioned by the Arab nations embargo are particularly heavy in the distillate range. These two unquantified but significant factors will probably increase demands at least 10% and possibly as much as 30% beyond those indicated in the forecast tables.

Fortunately, inventories of distillates appear to be about normal for this time of year. Depletion of these inventories plus slightly increased percentage yields by refinery shifts from gasoline production should alleviate much of the anticipated deficit. However, at best, distillate supplies will be tight in the first quarter.

Gasoline

Demand figures used in the gasoline forecast estimate are based on about a 7% reduction below projected unconstrained demand. The combination of the voluntary allocation program (until January 15) and federal mandatory allocation program (after January 15) for gasoline and the lowered speed limit, plus a concerted public information and education effort, should offset the remaining 8.4% estimated supply-demand deficit for January without undue dislocation. The larger February and March estimated deficits (21.7% and 21.0%) will present much greater difficulties; whether they can be managed by the allocation program without serious economic dislocation remains to be seen. There will undoubtedly be heavy pressure for upward adjustment of refinery yields in favor of gasoline production at the expense of other products. In view of the generally more critical need by the economy for other petroleum products, such as distillate (including diesel fuel) and residual fuel oil, these pressures should be resisted until an adequate supply of these other products is assured.

Gasoline inventories are well below normal for this time of year. Supply-demand deficits probably cannot be significantly reduced by inventory depletion, at least not in the first quarter.

Jet Fuels

Jet fuels are projected to be in short supply during January and February but adequate supplies are indicated for March. The demand forecast, however, does not include overseas military demands for jet fuels occasioned by the Arab nations embargo. An unquantified but considerable volume of jet fuel is included in the approximate 60,000 B/D of petroleum products diverted from California to meet this demand. Inventories may be able to alleviate any otherwise severe hardships in January and February.

Allocation of jet fuels to civil air carriers and between military and civilian users is under the control of the Federal Energy Office. This seems appropriate since both the supply and demand for these fuels is primarily national and international in scope.

Other Petroleum Products

Other products include: ethane, liquid refinery gases (LRG), liquid petroleum gases (LPG), kerosene, petrochemical feedstocks, special naphthas, lube oil, wax, coke, road oil, still gas, and other miscellaneous.

Supply and demand figures have not as yet been developed for individual products. Overall, this category appears to be in short supply for the first quarter. This primarily reflects reduction of refinery runs due to curtailed crude oil supplies. Shortages of petrochemical feedstocks and lube oils had already developed in 1973. The Federal Energy Office may elect to correct inequitable regional distribution of petrochemical feedstock if the situation warrants.

Deficits of many of these products will probably continue until sufficient crude oil becomes available to enable refineries to return to near capacity operation.

Employment Trends

On December 1, 1973, the Department of Human Resources Development began to classify initial claims for determination of unemployment benefits as to energy-related job losses. Through December 28, 9628 such claimants had been identified. Nearly half were due to decline in the manufacture of recreational vehicles. A large number were also formerly employed in seat-belt manufacture. Other fields in which lay-offs were noteworthy include service stations; hotels, motels, and restaurants; manufacturers using petrochemicals; automobile assembly; and a Portland cement plant.

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CALIFORNIA BASIC ENERGY SUPPLY SUMMARY
 Equivalent Thousands of Barrels/Day of Crude Oil

First Quarter 1974

| | <u>January</u> | <u>February</u> | <u>March</u> |
|--|--------------------|--------------------|--------------------|
| <u>CRUDE OIL</u> | | | |
| California ^{1/} | 910 | 915 | 920 |
| Other States | 95 | 95 | 95 |
| Foreign ^{2/} | 375 | 375 | 375 |
| Refinery Processing Gain | <u>42</u> | <u>42</u> | <u>43</u> |
| TOTAL Crude Oil | 1,422 | 1,427 | 1,433 |
| <u>IMPORTED PETROLEUM PRODUCTS</u> | | | |
| Residual | 45 | 45 | 45 |
| Finished Products, Diesel, Fuel Oil, Gasoline, Jet Fuel, and Unfinished Products | 5 | 5 | 5 |
| Other Hydrocarbons and Unfinished Oil | <u>100</u> | <u>100</u> | <u>100</u> |
| TOTAL Petroleum Products | 150 | 150 | 150 |
| <u>LIQUID PETROLEUM GAS</u> | | | |
| California | | | |
| Propanes/Butanes | 22 | 22 | 22 |
| Ethane | <u>7</u> | <u>7</u> | <u>7</u> |
| TOTAL Liquid Petroleum Gas | 29 | 29 | 29 |
| <u>NATURAL GAS (1000 mcf/day)</u> | | | |
| California ^{3/} | 207 (1,200) | 207 (1,200) | 207 (1,200) |
| Other States | <u>750 (4,350)</u> | <u>733 (4,250)</u> | <u>767 (4,450)</u> |
| TOTAL Natural Gas | 957 (5,550) | 940 (5,450) | 974 (5,650) |
| <u>ELECTRICITY^{4/} (million kwh/mo)</u> | | | |
| Hydroelectricity | 99 (1,790) | 104 (1,709) | 115 (2,083) |
| Nuclear Electricity | 18 (335) | 19 (305) | 19 (338) |
| Geothermal Electricity | 15 (267) | 15 (241) | 15 (267) |
| Imported Electricity | <u>148 (2,681)</u> | <u>150 (2,456)</u> | <u>138 (2,512)</u> |
| TOTAL Electricity | 280 (5,073) | 288 (4,711) | 287 (5,200) |
| <u>COAL (Imported) (Tons/day)</u> | <u>17 (4,350)</u> | <u>17 (4,350)</u> | <u>17 (4,350)</u> |
| <u>GROSS ENERGY SUPPLY</u> | 2,855 | 2,851 | 2,896 |
| <u>EXPORTS</u> | | | |
| Foreign (coke & high sulfur fuel oil) | 100 | 100 | 100 |
| Interstate (petroleum products; Ariz., Nev., Oregon) | 186 | 186 | 186 |
| Military Overseas (petroleum products) | <u>60</u> | <u>60</u> | <u>60</u> |
| TOTAL Exports | <u>346</u> | <u>346</u> | <u>346</u> |
| <u>NET ENERGY SUPPLY (Gross Less Exports)</u> | 2,509 | 2,505 | 2,544 |

1/ Includes 48,000 barrels per day Federal offshore California.

2/ Includes minor amounts from Alaska.

3/ Includes 23,000 MCF/D Federal offshore California.

4/ Does not include fossil fuel electricity generation within California.

CALIFORNIA BASIC ENERGY SUPPLY SOURCES*

In-State vs. Out-of-State**
(Equivalent Thousands of Barrels per Day of Crude Oil)

| | January 1973 | | | | | January 1974 (est.) | | | | |
|---------------------------|-------------------|-------------------|-------|----------|----------------|---------------------|--------------|-------|----------|----------------|
| | Calif. | Out-of-State | Total | % Calif. | % Out-of-State | Calif. | Out-of-State | Total | % Calif. | % Out-of-State |
| Crude Oil ^{1/} | 929 | 1026 | 1955 | 47.5 | 52.5 | 904 | 668 | 1572 | 57.4 | 42.6 |
| LPG and Ethane | 15 | 0 | 15 | 100 | --- | 29 | 0 | 29 | 100.0 | --- |
| Natural Gas | 302 | 790 ^{2/} | 1092 | 27.6 | 72.4 | 203 | 754 | 957 | 21.3 | 78.7 |
| Electricity ^{3/} | 102 ^{3/} | 171 | 273 | --- | 3/ | 114 ^{3/} | 166 | 280 | --- | 3/ |
| Coal | --- | 17 | 17 | --- | 100.0 | --- | 17 | 17 | --- | 100.0 |
| Totals | 1348 | 2004 | 3352 | 40.1 | 59.9 | 1250 | 1605 | 2855 | 43.6 | 56.3 |

California and Other States vs. Foreign
(Equivalent Thousands of Barrels per Day of Crude Oil)

| | Domestic | Foreign | Total | % Dom. | % For. | Domestic | Foreign | Total | % Dom. | % For. |
|---------------------------|-------------------|---------|-------|--------|--------|----------|---------|-------|--------|--------|
| | | | | | | | | | | |
| Crude Oil ^{1/} | 1078 | 877 | 1955 | 55 | 45 | 1047 | 525 | 1572 | 66.6 | 33.4 |
| LPG and Ethane | 15 | 0 | 15 | 100 | --- | 29 | 0 | 29 | 100.0 | --- |
| Natural Gas | 904 ^{2/} | 188 | 1092 | 82.8 | 17.2 | 769 | 188 | 957 | 80.3 | 19.7 |
| Electricity ^{3/} | 273 | --- | 273 | 100 | --- | 280 | 0 | 280 | 100.0 | --- |
| Coal | 17 | --- | 17 | 100 | --- | 17 | 0 | 17 | 100.0 | --- |
| Totals | 2287 | 1065 | 3352 | 68.2 | 31.8 | 2142 | 713 | 2855 | 75 | 25 |

* Does not include burning of wood, wood-chips, sawdust, lignite, and other minor sources.

** Includes foreign.

^{1/} Includes imported refined products, unfinished oils, and refinery processing gain.

^{2/} Reflects a curtailment of about 200,000 MCF/D below contract volumes from 1972.

^{3/} California figures do not include electricity generated by fossil fuel plants within the State. To include same would result in counting some of the same basic energy sources twice.

CALIFORNIA PETROLEUM PRODUCTS SUPPLY FORECAST *
(Thousands of Barrels per day)

Refined Products:

| | January | | | February | | | March | | |
|-------------------------|------------------------------|---------|-----------|------------------------------|---------|-----------|------------------------------|---------|-----------|
| | Calif. Refinery Output | Imports | Subtotals | Calif. Refinery Output | Imports | Subtotals | Calif. Refinery Output | Imports | Subtotals |
| Motor Gasoline | 652 | | 652 | 590 | | 590 | 609 | | 609 |
| Aviation Gasoline | 9 | | 9 | 6 | | 6 | 6 | | 6 |
| Jet Fuel (Nap) | 44 | | 44 | 60 | | 60 | 55 | | 55 |
| Jet Fuel (Kero) | 100 | | 100 | 121 | | 121 | 144 | | 144 |
| Distillate | 200 | | 200 | 226 | | 226 | 182 | | 182 |
| Residual Fuel Oil | 290 | 45 | 335 | 296 | 45 | 341 | 290 | 45 | 335 |
| Other ** | 227 | 5 | 232 | 228 | 5 | 233 | 247 | 5 | 252 |
| Total Refinery Products | 1522 | 50 | 1572 | 1527 | 50 | 1577 | 1533 | 50 | 1583 |

From California Oil Field Gas Plants:

| | | | | | | | | | |
|-------------------------------------|------|----|------|------|----|------|------|----|------|
| Liquid Pet. Gas | 22 | | 22 | 22 | | 22 | 22 | | 22 |
| Ethane | 7 | | 7 | 7 | | 7 | 7 | | 7 |
| Total from Gas Plants | 29 | | 29 | 29 | | 29 | 29 | | 29 |
| Total California Petroleum Products | 1551 | 50 | 1601 | 1556 | 50 | 1606 | 1562 | 50 | 1612 |

- * 1. Based on 1972 yield patterns except where necessary to restrict otherwise expectable motor gasoline output to 95% of corresponding month of 1972, as per Federal Energy Office regulations.
 2. Assumes Arab nations embargo continues in effect at least through February.
 3. Assumes continuance of slightly higher rate of crude oil imports from non-embargo nations.
 4. Assumes normal pattern of inventory management by major suppliers. Inventory volumes of users, other than utilities, are unknown.

** Includes: ethane, liquid refinery gases, kerosene, petrochemical feedstocks, special naphthas, lube oil,

CALIFORNIA PETROLEUM PRODUCT DEMAND FORECAST *
(Thousands of Barrels per day)

Demand from within California:

| Product (use) | January | | February | | March | |
|--------------------------------|---------|-------------------|----------|-------------------|--------|-------------------|
| | Detail | Subtotals | Detail | Subtotals | Detail | Subtotals |
| Gasoline ¹⁾ | | 607 | | 646 | | 663 |
| Jet Fuels | | 170 | | 197 ²⁾ | | 160 ²⁾ |
| Distillate | | 172 ²⁾ | | 160 | | 142 ²⁾ |
| Residual | | 487 | | 671 | | 474 |
| (Power Plants) | 352 | | 364 | | 284 | |
| (Industry, Marine) | 135 | | 307 | | 190 | |
| Other | | 281 | | 302 | | 255 |
| Total demand within California | | 1717 | | 1976 | | 1694 |

Outside demand for California petroleum products:

| From/product | | | | | | |
|--------------------------------------|--|------------------|--|------------------|--|------------------|
| Arizona: | | | | | | |
| Gasoline ¹⁾ | | 80 | | 80 | | 80 |
| Distillate | | 13 | | 13 | | 13 |
| Residual | | 18 | | 18 | | 18 |
| Nevada: | | | | | | |
| Gasoline ¹⁾ | | 26 | | 26 | | 26 |
| Distillate | | 10 | | 10 | | 10 |
| Residual | | 4 | | 4 | | 4 |
| Oregon: | | | | | | |
| Gasoline ¹⁾ | | 9 | | 9 | | 9 |
| Distillate | | 26 | | 26 | | 26 |
| Foreign: | | | | | | |
| Hi sulfur fuel oil | | 30 | | 30 | | 30 |
| Hi sulfur coke (equiv. bbls) | | 70 | | 70 | | 70 |
| U.S. military overseas: | | | | | | |
| Undifferentiated | | 60 ³⁾ | | 60 ³⁾ | | 60 ³⁾ |
| Total outside demand | | 346 | | 346 | | 346 |
| Total demand for California products | | 2063 | | 2322 | | 2040 |

* Based on historic demand and growth rates as adjusted to reflect: (1) preliminary indications of fuel conservation measures in late 1973 in use of gasoline and jet fuel; and (2) significantly increased demand for residual fuel oil to replace sharp curtailment of natural gas imports, modified by 10% Statewide electrical conservation and current high rate of electrical imports from the Pacific Northwest.

1) Includes aviation gasoline.

2) The amount of increased demand for distillates resulting from curtailment of natural gas supplies has not been determined and is therefore not fully reflected in these figures.

3) Conservative approximation. Figures not available on products or total. The end of the Arab nations embargo will be reflected more quickly by a decrease in this demand figure than by an increase in California refinery output figures because of transportation time differentials.

CALIFORNIA PETROLEUM PRODUCT BALANCE FORECAST SUMMARY
(Thousands of Barrels per day)

| Product | January 1974 | | | | February 1974 | | | | March 1974 | | | |
|------------------------|----------------|-----------------|---------|-------------|----------------|-----------------|---------|-------------|----------------|-----------------|---------|-------------|
| | Supply | Demand | Balance | % of Demand | Supply | Demand | Balance | % of Demand | Supply | Demand | Balance | % of Demand |
| Gasoline ^{1/} | 661 | 722 | (61) | (8.4) | 596 | 761 | (165) | (21.7) | 615 | 778 | (163) | (21.0) |
| Jet Fuels | 144 | 170 | (26) | (15.3) | 181 | 197 | (16) | (8.1) | 199 | 160 | 39 | 24.4 |
| Distillate | 200 | 221 | (21) | (9.5) | 226 | 209 | 17 | 8.1 | 182 | 191 | (9) | (4.7) |
| Residual ^{2/} | 335 | 539 | (204) | (37.9) | 341 | 723 | (382) | (52.9) | 335 | 526 | (191) | (36.4) |
| Others ^{3/} | 256 | 351 | (55) | (17.7) | 257 | 372 | (115) | (30.9) | 276 | 325 | (49) | (15.1) |
| Undifferentiated | ^{54/} | ^{605/} | (55) | ----- | ^{54/} | ^{605/} | (55) | ----- | ^{54/} | ^{605/} | (55) | ----- |
| TOTALS | 1601 | 2063 | (462) | (22.8) | 1606 | 2322 | (716) | (30.8) | 1612 | 2040 | (428) | (21.0) |

^{1/} Includes aviation gasoline.

^{2/} Includes crude oil for direct burning; demand figures reflect 10% Statewide electrical conservation and current high rate of electrical imports from the Pacific Northwest.

^{3/} Includes: refinery ethane, liquid refinery gases, ethane and LPG from oil field gas plants, kerosene, petrochemical feedstocks, special naphthas, lube oil, wax, coke, road oil, still gas, and other miscellaneous.

^{4/} Miscellaneous imported refined products, not differentiated.

^{5/} Conservative approximation of U.S. military overseas demand since beginning of Arab nations embargo; not differentiated by product.

UNCONSTRAINED TRANSPORTATION DEMAND - 10⁶ GALLONS/MO.
(Parenthesized figures are 1000 bbl/day equivalent oil)

| | <u>Jan</u> | <u>Feb</u> | <u>March</u> | <u>1974</u> |
|-------------------------------|---------------|---------------|---------------|----------------|
| <u>GASOLINE (Highway)</u> | | | | |
| Civilian | 862.1 | 843.7 | 868.9 | 10,500 |
| Military | 1.1 | 1.1 | 1.1 | 13 |
| U.S. Government | 1.7 | 1.4 | 1.6 | 17.7 |
| Export | 9.8 | 9.5 | 10.7 | 147 |
| Sub-Total | 874.7 (607) | 855.7 (654) | 882.3 (612) | 10,677.7 (623) |
| <u>GASOLINE (Non-Highway)</u> | | | | |
| Agriculture | 12.9 | 15.3 | 21.1 | 184.7 |
| Contractors | .6 | .7 | .8 | 7.6 |
| Producer-Distributors | .2 | .2 | .3 | 2.8 |
| Lumbering-Quarrying | .3 | .3 | .2 | 2.8 |
| Marine | 2.2 | 2.9 | 5.5 | 60.8 |
| Miscellaneous | 3.5 | 3.5 | 4.5 | 42.8 |
| Sub-Total | 19.7 (14) | 22.9 (17) | 32.4 (23) | 301.5 (18) |
| TOTAL | 894.3 (621) | 878.6 (671) | 914.7 (635) | 10,979.2 (641) |
| <u>L.P.G. (Highway)</u> | | | | |
| Trucks, etc. | .2 (.11) | .3 (.16) | .3 (.16) | 3.0 (.13) |
| <u>L.P.G. (Non-Highway)</u> | | | | |
| Misc. Shop & Yard Equipment | --- | --- | --- | --- |
| <u>DIESEL (Highway)</u> | | | | |
| Trucks & some buses | 64 | 62 | 66 | 772 |
| Municipal Transit | 3.2 | 3.1 | 3.3 | 39 |
| Sub-Total | 67.2 (53.0) | 65.1 (56.3) | 69.3 (54.5) | 811 (53.8) |
| <u>DIESEL (Non-Highway)</u> | | | | |
| Agriculture | .5 | .7 | .8 | |
| Contractor | 10.3 | 9.3 | 10.3 | 121 |
| Marine | 9 | 8 | 9 | 108 |
| Military | 9.5 | 8.6 | 9.5 | 112 |
| Producer-Distributor | 3.8 | 3.4 | 3.8 | 45 |
| Rail | 27 | 25 | 27 | 324 |
| Sub-Total | 60.1 (47.4) | 55.0 (47.6) | 60.4 (47.5) | 710 (47.1) |
| TOTAL | 127.3 (100.4) | 120.1 (103.9) | 129.7 (102.0) | 1,521 (100.9) |

| | <u>Jan</u> | <u>Feb</u> | <u>March</u> | <u>1974</u> |
|---|----------------|---------------|----------------|----------------|
| <u>RESIDUAL FUELS</u> | | | | |
| Marine | 80 | 80 | 80 | 966 |
| Military | 46 | 42 | 46 | 546 |
| Rail | <u>.025</u> | <u>.023</u> | <u>.025</u> | <u>.3</u> |
| TOTAL | 126.025 (99.3) | 122.023 (106) | 126.025 (99.3) | 1,512.3 (100.) |
| <u>AVIATION GASOLINE</u> | | | | |
| General | 4.0 | 4.0 | 3.5 | 49 |
| Agriculture | .1 | .4 | 1.5 | |
| Military | 8.5 | 7.0 | 7.0 | 90 |
| Exports | <u>.4</u> | <u>.5</u> | <u>.6</u> | <u>7.5</u> |
| TOTAL | 13.0 (9.0) | 11.9 (9.1) | 12.6 (8.7) | 146.5 (8.6) |
| <u>JET FUEL</u> | | | | |
| General | 1.1 | 1.3 | 1.4 | 21 |
| Commercial | 145 | 150 | 155 | 1,850 |
| Military | <u>48</u> | <u>82</u> | <u>36</u> | <u>966</u> |
| TOTAL | 194.1 (150) | 233.3 (198) | 192.4 (149) | 2,837 (185) |
| <u>ELECTRICITY (10⁶ kwh)</u> | | | | |
| BART | 9.5 | 9.6 | 9.7 | 125 |
| SF Muni | 5.3 | 4.8 | 5.3 | 62 |
| Misc (Golf carts, forklifts, etc.) | <u>---</u> | <u>---</u> | <u>---</u> | <u>---</u> |
| TOTAL | 14.8 (.8) | 14.4 (.8) | 15.0 (.8) | 187 (.8) |
| <u>GRAND TOTALS (1000 B/DOE)</u> | (980.6) | (1,089.0) | (995.2) | (1,037.1) |

State of California

Memorandum

To : Mr. Wesley G. Bruer

Date: December 24, 1973

From : **ENERGY PLANNING COUNCIL**

Room 704, 11th and L Bldg., Sacramento 95814

Subject: CALIFORNIA AGRICULTURE ENERGY UTILIZATION,
CONSERVATION, AND ENERGY ALLOCATION IMPACTS

UTILIZATION

Agriculture in California, and in the Nation, utilizes a variety of energy sources. Agriculture is unique in significant utilization of solar energy. It is this biological conversion process that enables California agriculture to be a minimum user of the common energy forms.

An in-progress study of 1972 energy utilization by California agriculture examines the use of six energy forms: natural gas; electricity; diesel and fuel oil; LP gas, propane, and butane; and aviation fuel. The preliminary report shows that all forms combined account for only 38.985 million barrels of crude oil equivalent.

The report identifies various utilization categories and the corresponding energy form consumption amounts through first level processing.¹⁾ In millions of barrels of crude oil equivalents, 1972 all categories utilization was as follows:

| <u>ENERGY FORM</u> | <u>CRUDE OIL EQUIVALENT UTILIZATION (MILLIONS OF BARRELS)</u> |
|-------------------------|---|
| Natural Gas | 21.410 |
| Electricity | 6.119 |
| Diesel and Fuel Oil | 6.590 |
| Gasoline | 3.818 |
| LP Gas, Propane, Butane | .856 |
| Aviation Fuel | .192 |
| | <u>38.985</u> |

Table I shows California energy flow in 1971. Agricultural use of each of the energy forms shown is a relatively low percentage of the California total.

1) First level processing includes transportation to and processing by major processors (canners, packers, freezers, etc.).

Table 1 - CALIFORNIA ENERGY USE

| In Millions of Units | | | | |
|----------------------|--------|----------------------------|--------------------|------|
| Energy Source | Unit | Total (1971) ^{1/} | Agriculture (1972) | % |
| Natural Gas | Therms | 22,166 | 1,241 | 5.6 |
| Electricity | KWH | 131,400 | 10,400 | 7.9 |
| Diesel | Gal | 2,374 | 273 | 11.5 |
| Gasoline | Gal | 9,976 | 179 | 1.8 |
| LP Gas | Gal | 448 | 53 | 11.8 |

^{1/} California Energy Flow in 1971. By Mark Henwood, Interdisciplinary Systems Group, Mechanical Engineering Department, University of California, Davis, July 1973.

CONSERVATION

Conservation efforts will have minimal--probably not measurable--effects on total energy utilization by California agriculture. First, that percentage of the total energy annually consumed in California by all users is extremely small (between 4 and 5%). Second, competitive marketing and narrow profit margins historically have mandated efficient energy utilization on the farm. Third, there appear to be no major management procedural or cultural modifications which could be applied uniformly. Fourth, decreased utilization at one production level may require an excessive increase in utilization in a later level.

Nevertheless, individual voluntary efforts can be made. Education in the need for energy conservation and energy conservation techniques such as preventative maintenance (including engine tune-ups), proper tire inflation, better use of integrated pest management, more precise fertilizer use, broader use of drip irrigation, use of soil moisture measuring techniques to determine irrigation needs, increased use of the minimum tillage concept, combination of cultural operations, matching horsepower to job requirements, and fuel storage in a manner that minimizes volatilization losses; will help to develop a positive conservation attitude.

Certain drastic measures are possible. They are based upon:

1. Distinguishing between essential and nonessential agricultural endeavors.
2. State and national priorities.

California agriculture is extremely diverse; so, it is well to distinguish between producers, processors, and distributors of food and fiber and those segments which are devoted to forestry (including silviculture) and nursery and floriculture. However, it would be a drastic measure to curtail or cease energy allocation to the latter because the economic impact would be very great. The 1971 wholesale value of nursery and floricultural products alone was over \$250 million. Annually that value has been increasing greatly and the total dollar impact probably is four or five times the wholesale value.

Further distinction could be made between the food and fiber sections. Food production, processing, and distribution seems clearly to be of the highest priority. Fiber and forestry production, processing, and distribution could be second. Nursery and floriculture could be third in this ranking.

Farm vehicles may provide little opportunity for energy conservation; but, more careful planning of farm trips and better use of telephone and car radio communications would be helpful.

ALLOCATION IMPACTS

Current Federal LPG, gasoline, middle distillate, and aviation fuels allocation programs, whether voluntary or mandatory, generally give or will give producers and processors of food priority status. Agricultural aviation should have priority status when regulations are introduced to handle aviation separate of the middle distillate fuels allocation program.

The proposed middle distillate fuels allocation program permits delivery based on a 110% of 1972 corresponding usages. Allocation on that basis could present problems because use in a given month is not only seasonal but is highly subject to weather conditions. In fact, 1972-73 weather conditions were exceptionally inclement such that fuel consumption was only 68.2% of the 1971-72 figure.²⁾

Limiting allocation to 1972 also would tend to limit production to the 1972 level; result in crop production shifts from high-investment, high-energy crops to lower-investment, lower-energy crops; or result in crop losses due to farm planting as though no shortage existed. In the latter case, the lack of anticipated supplies could lead to a situation in which the farmer is unable to adequately care for any of his plantings with corresponding crop losses the result.

Limiting production to 1972 levels seemingly is in conflict with Secretary of Agriculture Butz's plan for reducing food prices and increasing production and allowing agriculture to contribute its fair share to the balance of payments. This plan seems to place national priority on increasing food production. If this be so, allocation to production, processing, and distribution of food should be 100% of whatever is "needed." Who can, will, and should make "need" determinations is another question.

- 2) The Winding Down of the West--What The Energy Crisis Means to California; Assembly Office of Research, California Legislature; December 1973.

Diesel fuel cuts would affect ground preparation and harvest operations first. Second affected would be frost protection. In order of usage, the industries affected would be vegetable crops, livestock, and fruit and nuts. Many greenhouse operations are also dependent on diesel fuel for heating and cutbacks could cause bankruptcy.

Natural gas cuts would affect the fertilizer manufacturing, sugar refining, canning and processing, nursery and floriculture, and container manufacturing industries. The fertilizer manufacturing and greenhouse industries would be seriously affected.

Gasoline would affect small truck and pick-up uses mostly. To a lesser extent it would affect tractor operations. Most newer tractors are diesel-powered.

Electricity cuts would affect irrigation operations most. In 1972, almost 7 billion kilowatt hours (KWH) out of a total of 10 billion KWH used by California agriculture was used for water pumping. The livestock industry also consumes a significant amount of electricity in running automated feeding systems and animal feed preparations. The poultry industry uses electricity for heating brood houses. Interruption of electrical power to the dairy industry would be serious--it would be disastrous to cold storage operations.

LP gas is used for most stationary and mobile engines and for winter heating of poultry houses.

Aviation fuel is essential to planting and crop protection operations.

One thing that should be emphasized is that most agricultural producers depend on more than one form of energy. A common combination of usage is diesel, electricity, and gasoline. Thus it appears that if state and national priorities will emphasize maximum food production, processing and distribution; the respective energy needs must be met. This need not be in a blank check fashion, but as fairly and equitably determined by a state level organization with local input. Logically, this could be determined by the State Energy Planning Council with Department of Food and Agriculture, University of California, State Board of Agriculture, and farm organizations input or by the Department with input from the University, State Board, and farm organizations.

Priorities can be established among the various industry segments if energy supply becomes critical. Food production, processing, and distribution should be first priority. Fiber and forestry production, processing, and distribution could be of secondary priority with nursery and floriculture third.

Consumption efficiency can be improved by better planning, greater attention to details such as minimum and alternate fertilizer uses, preventative equipment maintenance, and increased use of integrated pest management, drip irrigation, and minimum tillage.

Agricultural projected energy needs for 1974 are shown in Table II. Table III shows a 1974 first quarter needs estimate.

Table II

ENERGY CONSUMPTION IN AGRICULTURE - CALIFORNIA
(1974)(10⁶ Units)

| Category | Factor | Natural Gas Therm | Electricity KWH | Diesel Gal | Gasoline Gal | LP Gas Propane Gal | Aviation Fuel Gal |
|------------------|--------|----------------------|--------------------|---------------|-----------------|--------------------------|-------------------------|
| Field Crops | 1.036 | 398.904 | 335.044 | 78.333 | 18.237 | 1.003 | --- |
| Vegetables | 1.043 | 188.432 | 423.695 | 44.855 | 12.724 | 5.123 | --- |
| Fruits/Nuts | 1.014 | 155.195 | 155.194 | 31.078 | 12.744 | 2.276 | --- |
| Livestock | x/ | 95.613 | 1,446.199 | 31.456 | 5.804 | 15.553 | --- |
| Irrigation | 1.033 | 41,958 | 7,414.296 | 6.746 | .503 | 4.670 | --- |
| Fertilizers | 1.033 | 298.108 | 560.232 | 7.166 | 3.722 | 1.151 | --- |
| Ag. Aircraft | 1.033 | --- | --- | 1.107 | 1.660 | --- | 9.291 |
| Frost Protection | 1.015 | --- | 31.426 | 69.754 | 7.602 | --- | --- |
| Greenhouses | 1.169 | 120.056 | 97.526 | --- | --- | --- | --- |
| Vehicles | 1.033 | --- | --- | 10.792 | 121.685 | --- | --- |
| Other | 1.033 | --- | --- | --- | --- | 24.984 | --- |
| TOTAL (1974) | | 1,298.265 | 10,728.026 | 281.287 | 184.681 | 54.760 | 9.291 |
| TOTAL (1972) | | 1,241.730 | 10,400.006 | 273.028 | 178.679 | 52.629 | 8.994 |

x/ TH KWH Diesel Gas (G) Gasoline (G) LP Gas (G)
 1.048 1.033 1.0179 1.0231 1.0547

Table III

FIRST QUARTER AGRICULTURE NEED ESTIMATES ¹⁾
(1974)

(10⁶ Units)

| Category | ENERGY FORM | | | | | | | | | | | | | | | | | |
|------------------|-------------------|------|-------|-----------------|-------|-------|-------------------------|------|------|--------------|------|------|--------------------------------|-----|-----|------------------|-----|-----|
| | Natural Gas Therm | | | Electricity KWH | | | Diesel and Fuel Oil Gal | | | Gasoline Gal | | | LP Gas, Propane and Butane Gal | | | Aviation Gas Gal | | |
| | Jan | Feb | Mar | Jan | Feb | Mar | Jan | Feb | Mar | Jan | Feb | Mar | Jan | Feb | Mar | Jan | Feb | Mar |
| Field Crops | 2.0 | 2.0 | 48.0 | 1.5 | 1.5 | 40.0 | 2.0 | 4.0 | 12.0 | 1.0 | 1.0 | 3.0 | 0.1 | 0.1 | 0.1 | --- | --- | --- |
| Vegetables | 6.0 | 6.0 | 7.0 | 30.0 | 30.0 | 40.0 | 3.0 | 3.0 | 5.0 | 0.7 | 0.8 | 1.5 | 0.6 | 0.5 | 0.2 | --- | --- | --- |
| Fruits/Nuts | 6.0 | 3.0 | 3.0 | 6.0 | 3.0 | 3.0 | 2.5 | 2.5 | 3.0 | 1.5 | 0.8 | 0.7 | 0.3 | 0.1 | 0.1 | --- | --- | --- |
| Livestock | 15.0 | 15.0 | 10.0 | 150.0 | 150.0 | 100.0 | 3.0 | 2.5 | 2.5 | 0.4 | 0.3 | 0.3 | 4.0 | 4.0 | 2.0 | --- | --- | --- |
| Irrigation | --- | --- | --- | 100.0 | 150.0 | 250.0 | --- | --- | --- | --- | --- | --- | 0.1 | 0.1 | 0.3 | --- | --- | --- |
| Fertilizers | 30.0 | 35.0 | 35.0 | 55.0 | 65.0 | 65.0 | 0.5 | 0.5 | 1.0 | 0.2 | 0.3 | 0.5 | 0.1 | 0.1 | 0.1 | --- | --- | --- |
| Ag. Aircraft | --- | --- | --- | --- | --- | --- | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | --- | --- | --- | 0.5 | 0.5 | 1.0 |
| Frost Protection | --- | --- | --- | 10.0 | 10.0 | 8.0 | 20.0 | 20.0 | 20.0 | 2.0 | 2.0 | 2.0 | --- | --- | --- | --- | --- | --- |
| Greenhouses | 30.0 | 30.0 | 20.0 | 10.0 | 10.0 | 5.0 | 0.4 | 0.4 | 0.3 | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Vehicles | --- | --- | --- | --- | --- | --- | 0.5 | 0.7 | 0.8 | 7.0 | 10.0 | 13.0 | --- | --- | --- | --- | --- | --- |
| Other | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 2.0 | 2.0 | 2.0 | --- | --- | --- |
| Monthly Totals | 89.0 | 91.0 | 123.0 | 362.5 | 419.5 | 511.0 | 32.0 | 33.7 | 44.7 | 12.9 | 15.3 | 21.1 | 7.2 | 6.9 | 4.8 | 0.1 | 0.4 | 1.5 |
| Quarter Totals | 303.0 | | | 1293.0 | | | 110.4 | | | 49.3 | | | 18.9 | | | 2.0 | | |

1) Through first level processing.

CALIFORNIA FOSSIL AND GEOTHERMAL ENERGY SUPPLIES
January 7, 1974

CALIFORNIA CRUDE OIL PRODUCTION

State crude oil production¹⁾ in the first nine months of 1973 declined about 2.3 percent from a high of 930,209 barrels a day in February to a low of 908,614 barrels a day in September. This decline was due to a natural decline in rate, economic factors, moratorium on offshore development, and environmental controls. Projecting this rate of decline into the first quarter of 1974, an average production rate of 895,000 barrels of oil would be anticipated. However, a price rise in oil, production from the newly discovered Tule Elk field, and remedial work scheduled on offshore wells will increase daily production to 910,000, 915,000, and 920,000 barrels of oil for January, February, and March, respectively, in 1974.

Tule Elk field will have 12 more wells completed during the first quarter of 1974. Increased production for this period will average 18,000 barrels per day of oil and 9,000 Mcf. of gas. The latter figure is assuming 500 cu. ft. of gas produced per barrel of oil.

Remedial work scheduled on offshore wells in State waters could increase production by as much as 2,700 barrels per day. Although the moratorium on offshore development was recently lifted, any new well completions would have a negligible impact on the 1974 first quarter forecast. John F. Matthews, Jr., State Oil and Gas Supervisor, estimates that new development drilling from existing platforms will increase production 10,000 barrels per day within six months.

1) State production figures include federal offshore production.

If Congress opens the 46,000 acre Elk Hills field, it would be a partial remedy to the nationwide energy shortage. The Navy believes the field is capable of a production level of 160,000 barrels a day of oil within two months. Within 18 months, the Navy says, the field could produce up to 230,000 barrels a day and attain a daily rate of 350,000 barrels in three years. Although pipeline capacity is available, a daily production rate above 60,000 barrels would require additional pipeline pumping facilities.

Tables I and II give a breakdown of California production by gravity and sulfur content, respectively.

TABLE I

CALIFORNIA CRUDE PRODUCTION
COMPARISON OF JANUARY 1972 WITH JANUARY 1973
BY GRAVITY GROUPS

| <u>API GRAVITY</u> | <u>January 1972</u> <u>B/D</u> | <u>January 1973</u> <u>B/D</u> | <u>Change</u> <u>+ or -</u> <u>B/D</u> | <u>%</u> <u>Change</u> |
|--------------------|-----------------------------------|-----------------------------------|--|---------------------------|
| 11.9 and Under | 42,458 | 45,777 | + 3,319 | + 7.8 |
| 12 - 19.9 | 451,108 | 449,499 | - 1,609 | - .4 |
| Heavy: | 493,566 | 495,276 | + 1,710 | + .3 |
| 20 - 24.9 | 139,928 | 144,369 | + 4,441 | + 3.2 |
| 25 - 31.9 | 237,166 | 216,929 | - 20,237 | - 8.5 |
| 32 and Over | 76,646 | 67,559 | - 9,087 | - 11.8 |
| Light: | 453,740 | 428,857 | - 24,883 | - 5.5 |
| Total: | 947,306 | 924,133 | - 23,173 | |

TABLE II
DAILY STATE PRODUCTION
AS TO
SULFUR CONTENT

| Field | % Sulfur Content | Daily Production | Accumulative Total |
|--------------------------|------------------|------------------|--------------------|
| <u>.5 and Under</u> | | | |
| Paloma | .2 | 400 | |
| Elwood | .5 | 175 | |
| East Los Angeles | .5 | 240 | |
| | | Subtotal | 815 |
| <u>1.0 - .6</u> | | | |
| Antelope Hills | .56 | 639 | |
| Belridge North | .6 | 948 | |
| Buena Vista | 1.0 | 13,001 | |
| Coalinga Nose | .6 | 10,977 | |
| Coles Levee, North | .8 | 2,416 | |
| Coles Levee, South | .7 | 1,671 | |
| Edison | .8 | 3,673 | |
| Elk Hills | .9 | 2,127 | |
| Fruitvale | .9 | 2,875 | |
| Greeley | .8 | 2,126 | |
| Kern Front | .9 | 8,626 | |
| Kettleman, North Dome | .75 | 2,313 | |
| Cymric | 1.0 | 9,433 | |
| Temblor Ranch | 1.0 | 25 | |
| Midway-Sunset | 1.0 | 9,474 | |
| Mount Poso | .8 | 5,014 | |
| Mountain View | .9 | 1,956 | |
| Poso Creek | .8 | 4,580 | |
| Rio Bravo | .6 | 1,058 | |
| Round Mountain | .8 | 1,949 | |
| Strand, East | .8 | 134 | |
| Ten Section | .7 | 2,080 | |
| Wheeler Ridge | .8 | 3,949 | |
| Devils Den | .7 | 140 | |
| Capitan | .8 | 114 | |
| Oak Canyon | 1.0 | 531 | |
| Santa Clara Valley Group | .7 | | |
| Fillmore | | 256 | |
| West Montalvo | | 2,194 | |
| Oakridge | | 891 | |
| Piru | | 7 | |
| Saticoy | | 771 | |
| Aliso Canyon | 1.0 | 2,307 | |
| Newhall-Potrero | .9 | 1,606 | |
| Simi | .7 | 119 | |
| Montebello | .8 | 1,874 | |
| Santa Fe Springs | .9 | 2,417 | |
| | | Subtotal | 104,271 |
| | | | 105,086 |

| Field | % Sulfur Content | Daily Production | Accumulative Total |
|--------------------|------------------|------------------|--------------------|
| | <u>1.5 - 1.1</u> | | |
| Canfield Ranch | 1.1 | 1,834 | |
| San Miguelito | 1.5 | 3,157 | |
| Del Valle | 1.5 | 356 | |
| Shiells Canyon | 1.5 | 1,278 | |
| Brea-Olinda | 1.05 | 10,863 | |
| Dominquez | 1.15 | 4,083 | |
| Long Beach | 1.45 | 7,620 | |
| Seal Beach | 1.5 | 3,939 | |
| Whittier | 1.2 | 2,491 | |
| | Subtotal | 35,621 | 140,707 |
| | <u>2.0 - 1.6</u> | | |
| Belridge, South | 1.6 | 23,792 | |
| Rincon | 1.7 | 12,776 | |
| Ventura Avenue | 1.6 | 27,659 | |
| Bardsdale | 2.0 | 381 | |
| Coyote, East | 1.8 | 2,064 | |
| Coyote, West | 1.6 | 6,164 | |
| Huntington Beach | 1.6 | 59,289 | |
| Inglewood | 1.9 | 10,716 | |
| Richfield | 1.8 | 4,645 | |
| Wilmington | 2.0 | 192,147 | |
| | Subtotal | 339,633 | 480,340 |
| | <u>2.5 - 2.1</u> | | |
| Torrance | 2.5 | 5,644 | |
| | Subtotal | 5,644 | 485,984 |
| | <u>Over 3.0</u> | | |
| Kern River | 10.5 | 74,396 | |
| Casmalia | 3.5 | 1,939 | |
| Cat Canyon | 6.0 | 19,656 | |
| Lompoc | 4.1 | 1,301 | |
| Orcutt | 3.0 | 5,644 | |
| Santa Maria Valley | 5.2 | 4,641 | |
| Oxnard | 7.5 | 1,149 | |
| South Mountain | 3.1 | 5,182 | |
| El Segundo | 3.5 | 105 | |
| Playa del Rey | 3.5 | 400 | |
| | Subtotal | 114,413 | 600,397 * |

* This figure represents about two-thirds of California's daily production.

CALIFORNIA CRUDE OIL IMPORTS

Foreign crude oil imports to California during October and November 1973 were about 536,000 barrels per day. The December daily average of 375,000 barrels reflects the Arab nations oil embargo and an increase of imports from other foreign sources and Alaska. Table III tabulates imports to California by tankers for the months September through December 1973.

If the Arab nations oil embargo continues through the first quarter of 1974, California crude oil imports from foreign sources and Alaska are anticipated to be 375,000 barrels per day. An immediate lifting of the embargo would not have an impact on increasing crude oil supply before March.

Domestic imports of crude oil from out-of-state sources are expected to be about 95,000 barrels per day.

TABLE III

PETROLEUM CRUDE OIL AND PRODUCTS IMPORTED TO CALIFORNIA
BY TANKERS

| Month/Year | Bunker Fuel | Crude Oil | Crude Residual | Diesel Fuel | Finished Product | Fuel Oil | Gasoline | Jet Fuel | Unfinished Product | Total Barrels/Day Imports |
|------------|-------------|------------|----------------|-------------|------------------|-----------|----------|----------|--------------------|---------------------------|
| Sept./1973 | 117,796 | 11,975,100 | | | 171,200 | 583,275 | | | 122,275 | 432,000 |
| Oct./1973 | | 16,362,253 | | 45,787 | 182,252 | 1,973,958 | 37,325 | 118,315 | 278,057 | 612,500 |
| Nov./1973 | 100,556 | 16,392,461 | 209,081 | 9,995 | | 1,822,425 | 194,478 | 92,668 | 60,604 | 629,000 |
| Dec./1973 | | 10,143,515 | | 10,000 | | 1,123,594 | 42,110 | | 119,500 | 420,000* |

* From December 1 through 20 the total imports averaged 375,000 barrels per day.

Note: Above figures are in barrels corrected to 60 degrees F.

CALIFORNIA NATURAL GAS SOURCES

California natural gas production, like oil, continued to decline during the first eight months of 1973. Combined oil field and dry gas field production averaged 1,379,000 Mcf/D. Anticipated supply from California fields for the first quarter of 1974 is 1,175,000 Mcf/D or 207,000 equivalent barrels a day of crude oil.

California rate of consumption in 1973 was about 5.8 million Mcf. per day or 1.12 million equivalent barrels of oil. In 1973, California obtained about 58 percent of its gas requirements from the southwestern states and 18 percent from Canada. Forecasted delivery rates from out-of-state sources for the first quarter of 1974 are 4.35 million Mcf. per day or .750 million equivalent barrels of oil. This reduction in delivery of natural gas will require greater use of fuel oil by public utilities.

CALIFORNIA GEOTHERMAL ENERGY

The power generation at the Geysers in 1973 was slightly above 9.6 million kwh per day, or about 15 thousand equivalent barrels of oil. No increase is scheduled until October 1974.

CALIFORNIA IMPORTED COAL

Coking coal is imported to California from the Rocky Mountain states. The amount equals about 17 thousand barrels per day of equivalent oil.

HYDRO, NUCLEAR AND GEOTHERMAL
ELECTRICAL GENERATION

About 25% of California's first quarter energy will be consumed as electricity. More than half will be generated by domestic oil-fired plants, and the rest will be split between imported electricity and domestic hydro and geothermal generation. Importation is mainly hydro from the Pacific Northwest, but includes coal-generated electricity from Four Corners in New Mexico and Mohave in Nevada, partly owned by California utilities, hydro from dams on the Lower Colorado River, also shared by California utilities, and the fuel for nuclear power generated in-state. A small amount of electricity is also generated at domestic geothermal fields. Nuclear and geothermal together constitute 1% of California's energy supply.

Hydro, both domestic and imported, depends on adequate reservoir levels in California, the Pacific Northwest and the Colorado River Basin. Recent weather patterns have favorably modified an originally bleak outlook, especially in the Pacific Northwest. At present, though specific figures are not available, intertie lines are loaded to capacity, taking some pressure off fuel requirements for oil and gas fired generation in California. Latest indications are that demand for oil fired generation will be reduced from 465 to 352 thousand barrels/day in January, the slack being taken up by a combination of effective conservation of about 10% of demand along with increased domestic and out-of-state hydro generation. At best, though, only 25% of California's electric generating resources are hydro, and no major new hydro plants are under construction at this time.

The picture is slightly different for nuclear and geothermal generation. While both are presently minor sources of electricity, and are unable to significantly alter the energy picture in the short run, new units of both types are under construction, and will be available in late 1974. Nuclear-fired generation, listed in the attached tables, comes from one nuclear unit in the P.G. & E. plant at Humboldt Bay, recently refueled, and the unit at San Onofre, presently down for repairs but expected to be back on line in late January. Construction of second and third units at San Onofre has been stalled by refusal of the California Coastal Zone Conservation Commission to issue a permit.

SMUD's Rancho Seco Plant, expected on line at 913 megawatts in October 1974, will triple the State's nuclear generating capacity and will save about 30,000 barrels of oil per day.

CONTACT:

Earl C. Parker
Press Secretary
Sacramento, Calif.
(916) 445-0680



MS - 29
December 27, 1973

TO: NEWS MEDIA

SUBJECT: STATE OF CALIFORNIA ENERGY RELATED ACTIONS

In the past few weeks increasing numbers of media representatives have requested background information regarding the energy crisis.

This report, from Lieutenant Governor Ed Reinecke, details the state actions in relation to the energy crisis, dating back to 1972 when the Office of Science and Technology began working on the impending energy situation.

The final section of the report, actions of the Energy Planning Council, will be updated monthly to assist media in keeping track of the Council's activities.

#

PROGRESS REPORT ON ACTIONS
TAKEN BY THE STATE OF CALIFORNIA IN RELATION
TO THE ENERGY CRISIS

PREPARED BY:

Lt. Governor Ed Reinecke
Chairman
Energy Planning Council

December 20, 1973

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INTRODUCTION
BY
LT. GOVERNOR ED REINECKE
CHAIRMAN
ENERGY PLANNING COUNCIL

This report details the actions taken by the State of California in relation to the energy crisis.

The activities of the State of California have been directed to three areas:

1. Federal government. Communications, state recommendations and implementation of federal actions.
2. State government. Actions to alleviate energy waste in state government, and liaison between the legislative branch and various state agencies with energy-related activities, such as the Public Utilities Commission.
3. Local government, private industry and the technical community. Recommendations to various segments of the state, meetings with industry regarding economic impact, and activities with researchers and developers in relation to the future need for energy supplies.

It is important that state government continue its work to alleviate the immediate short term economic impact, and also that it create long range action programs that will boost the state's economy in the next decade and create an environment which will supply the state's energy needs.

One major thrust of the Energy Planning Council has been to continually call for voluntary effort on the part of every Californian. Electrical usage has already been reported reduced in home and business use, and so has heating. There are also reports from the highway patrol that the public is, indeed, driving not only slower, but reducing unnecessary driving. Car pools and public transit are also being utilized by more individuals as a means to conserve precious fuel.

Every voluntary effort, which government must encourage, makes it less likely that government will have to mandate actions that will create hardships on segments of the community, or on individuals.

With the Energy Planning Council as the focal point for energy related matters, and with a legislative activity that speaks to the people in the same voice, the State of California government can work united toward a goal that will serve the needs of the people.

LT. GOVERNOR ED REINECKE

ORGANIZATIONAL HIGHLIGHTS OF STATE
GOVERNMENT TO HANDLE THE
ENERGY CRISIS

- June, 1973 -- The Office of Science of Technology determined that the major problem in California for scientific and technological effort was energy, and the Cabinet directed the Resources Agency to complete an energy study.
- September, 1972 -- "California's Electricity Quandary," Rand Corporation study completed for the Resources Agency.
- January, 1973 -- "Energy in California, It's Supply, Demand, Problems" report was released.
- May, 1973 -- An Energy Workshop was held in Sacramento. In attendance were state officials, conservationists, researchers, private industry representatives and local government officials.
- June, 1973 -- "The Energy Dilemma," a report from the Resources Agency.
- October, 1973 -- The Energy Planning Council was established by executive order by Governor Reagan. This council was recommended at the Energy Workshop held in May, 1973.

I. HIGHLIGHTS OF FEDERAL GOVERNMENT ENERGY RELATED ACTIVITIES

Many of the energy crisis activities are in federal jurisdiction.

The State of California has, through its office of Science and Technology, and the Lt. Governor, Governor Reagan's science advisor, established liaison with various federal agencies. This activity began in 1972 with meetings and continual communications with various federal agencies, including the federal Office of Science and Technology and the National Science Foundation.

Currently, many state government agencies are working closely with federal agencies, and the Energy Planning Council has maintained close communication with the federal government. Among the various Energy Planning Council activities in association with the federal government are:

- Energy Planning Council (EPC) executive secretary has met with fuel allocation officials in Washington, and he and his staff work closely with federal regional officers.
- Congress was urged to provide for an immediate increase in oil production from Elk Hills for at least military needs, and for the drilling of additional wells to help alleviate the fuel supply deficit.

- Requested that the federal environmental impact statements for off-shore oil and gas be prepared on a field basis, rather than on individual wells, as a means to reduce time consuming report activities.
- Requested the federal government to accelerate off-shore drilling and production in federal waters off the California coastline.
- Urged the federal government to finance research and development projects for geothermal, solar and nuclear energy.

In addition, the State of California conducted a survey of the 50 states in 1972 on energy related matters. This study was conducted through Lt. Gov. Ed Reinecke's office, and he, as chairman of the National Conference of Lieutenant Governors, has submitted the report to the states, the National Conference of Governors and various federal agencies.

II. HIGHLIGHTS OF STATE GOVERNMENT ENERGY RELATED ACTIVITIES

Following are actions taken that relate to state government energy conservation:

- By executive order, a 50 mile per hour speed limit was established for state vehicles, which will remain in effect until the statewide 55 mile per hour speed limit is effective (Jan. 1, 1973).
- By executive order, all state vehicles, except emergency vehicles, will reduce their gasoline consumption by 10 per cent, compared to last year's usage, in addition to the savings realized by reduced speeds.

NOTE: THIS WILL RESULT IN A TOTAL 20 PER CENT GASOLINE REDUCTION FOR STATE VEHICLES.

- Building managers were directed to achieve optimum efficiency of gas, electricity and other energy sources to meet the heating and cooling needs of the facility. Most facilities have thermostats set at 68 degrees for the winter. In Sacramento, state buildings during October have achieved significant savings in natural gas and electricity. Preliminary reports show a 45 per cent savings in natural gas, and a 22-32 per cent savings in electricity.

- Reduced the review and comment time from 45 days to 30 days for state environmental impact statements and environmental impact report review and comment time for energy related projects. This will assist in getting approval for necessary projects on as short a time basis as possible, and still protect the environmental needs.
- Designated a State Fuel Allocation Officer and established an office which has been operational since November 1, 1973.
- Established a Fuel Allocation Appeals Board.
- Requested Local Air Pollution Control Districts to give full consideration to fuel shortages when considering sulfur variance applications.
- Requested the Air Resources Board to consider deferring implementation of statewide NO_x retrofit program on 1966-1970 vehicles. On December 19, 1973, after a two-day hearing, the Air Resources Board voted unanimously to postpone for one year the retrofit program.
- Directed a decrease in the state vehicle fleet, and the purchase of fuel-economy cars for state use.

- Directed the establishment of energy performance specifications as a condition for the granting of building permits; such as minimum insulation in the walls and around the doors and windows.
- Directed General Services to consider energy efficiency of buildings leased.
- Supported utility-sponsored energy conservation programs with the California Public Utilities Commission monitoring them. The Commission in turn has ordered a voluntary energy reduction of 10 per cent in California's Public Utility usage.
- Urged the PUC to study changing rate schedules for both electricity and gas pricing to help reduce demand and to monitor peak seasonal pricing.
- The Energy Planning Council recommended, and Gov. Reagan directed the Department of Transportation to handle state car pooling programs to reduce state employee vehicle travel to and from work.
- The EPC recommended the lifting of the moratorium on off-shore oil drilling. The State Lands Commission, after several hearings, voted on Dec. 12 to lift the moratorium.
- Encouraged state agencies and departments to use conference telephone calls and visual aids such as audio and video tapes as a means to further reduce employee and vehicle travel.

- The Office of Science and Technology was directed by EPC to develop a priority list of research and development projects to help alleviate the energy crunch.
- Directed EPC staff to update the state's energy inventory, and to quantify the energy available and the supplies needed for the first quarter of 1974. EPC will also identify flexibilities within the fuel allocation program to alleviate "pocket problem areas."
- Directed the Department of Commerce to complete a study on the economic impact of the energy crisis on an individual industry level, and to include information regarding employment rates, so that the state will have an early warning system for unemployment problems in the energy intensive industries.
- Recommended professional staff comprised of competent individuals in appropriate energy fields to support the Energy Planning Council.

III. HIGHLIGHTS OF LOCAL GOVERNMENT, PRIVATE INDUSTRY AND TECHNICAL COMMUNITY ENERGY RELATED ACTIVITIES

- Letters sent to all city and county governments, requesting that they implement energy conservation measures including those put in effect at the state level, such as: vehicle speed reduction, reduced lighting and heating.
- Questionnaires were sent to all city and county governments to determine what they were doing to conserve energy, with the goal being to share workable projects with other governmental agencies.
- A research study group was created with representatives from Livermore Research Laboratory of the University of California and Jet Propulsion Laboratories to work with the Office of Science and Technology in the priority listing of research and development energy projects to which California should address itself.
- Encouraged manufacturers of electric generating equipment to improve generation efficiency with support from the newly formed electric Power Research Institute.
- Communications with the public to voluntarily reduce lighting, heating and driving as a means to conserve energy and eliminate waste.
- Meetings with various industry representatives, such as tourism, manufacturing, chamber of commerce, oil industry and agriculture, to assess the needs and concerns.

RECOMMENDATIONS
RESULTING FROM THE ENERGY WORKSHOP
HELD MAY, 1973
CHAired BY LT. GOVERNOR ED REINECKE

NOTE: These recommendations formed the basis for actions which have been taken, or are being considered, by the Energy Planning Council.

Prohibit air conditioning on new cars.

Use advanced communication techniques to reduce need for travel.

Revise State policy to set new standards for energy efficiency for leased buildings.

Reduce packaging to conserve energy.

Set energy performance specifications as a condition to granting building permits.

Initiate public educational program to encourage lower thermostat settings in the winter and higher settings in the summer.

Prohibit the use of electricity for resistive space and hot water heating in new installations.

Establish minimum performance standards for new air conditioning units.

50 MPH maximum speed on highways.

Encourage car pooling.

Expand bus system.

Establish bicycle lanes and paths.

Use gasoline tax funds for rapid transit.

Institute measures to ration individual travel.

Develop offshore petroleum reserves.

Construct deepwater ports.

Develop onshore primary, secondary and tertiary oil recovery techniques.

Develop geothermal resources.

Press for California Air Resources Board automotive emission standards rather than federal standard.

Encourage industry to conserve energy.

Include consideration of social and environmental costs in price of energy in selection of energy source.

Develop recycling incentives and solid waste conversion.

Study use of solid waste as a boiler fuel.

Institute utility - sponsored conservation programs.

Study restructuring of rate schedules for electricity and gas pricing as a incentive to energy conservation.

Study methods to improve transmission efficiency.

Study methods to improve generation efficiency.

Consider prohibiting the use of natural gas for generating electricity.

Expand the category of interruptable customers for gas and for electricity.

Develop nuclear power plants.

Create an Energy Policy Council for the state.

Establish regulations for the siting of energy facilities.

ACTIONS TAKEN TO DATE (DEC. 20, 1973) BY THE
ENERGY PLANNING COUNCIL

The Energy Planning Council recommended by the Energy Workshop was established by Governor Ronald Reagan by Executive Order, on October 2, 1973. Lt. Governor Ed Reinecke was named chairman. The following actions have been implemented as a result of recommendations and follow-up by the Council:

Established an Energy Planning Coordinator as Executive Secretary to the Council.

Designated a State Fuel Allocation Officer and established and staffed State Office; operational since November 1.

Established a Fuel Allocation Appeals Board.

Request State reserve for propane.

Request production from Elk Hills and N.P.R. #4, North Slope, Alaska, be expanded to satisfy military requirements.

Certification of public mass transit facilities to quality for fuel preferences.

Issued Executive Orders: Eliminate 70 mph speed limit; establish interim 50 mph speed limit for State-owned vehicles; decrease State vehicle use to produce at least 10% fuel savings in addition to savings realized by reduced speed.

Use advanced communications to reduce travel - such as conference telephone connections and audio video tapes.

Requested Federal Environmental Impact Statements for off-shore oil and gas be prepared on field basis, rather than on individual wells.

Reduced State Environmental Impact Statement and Environmental Impact Report review and comment time on energy related projects to 30 days.

Requested local APCDs (Air Pollution Control Districts) give full consideration to fuel shortage when considering sulfur variance applications.

Urged the Environmental Protection Agency to shorten hearing notification on Statewide NO_x retrofit program on 1966-70 vehicles.

Directed an investigation of the possible use of refinery flare gas for productive purposes.

Urged the President and Congress to enact federal daylight savings time.

Established a series of conservation measures in State controlled facilities (heating, lighting). Building managers have been directed to adopt appropriate energy conservation measures.

Requested local governments to develop and implement energy conservation plans.

Directed a decrease in the State vehicle fleet, and purchase of fuel-economy cars for state use.

Directed the establishment of energy performance specifications as a condition for the granting of building permits.

Directed establishment of minimum performance standards for new air conditioning units.

Encouraged selective expansion of bus systems.

Initiated action to obtain federal approval for deepwater ports for California.

Supported utility-sponsored conservation programs, with the California Public Utilities Commission monitoring these programs.

Urged PUC to study changing rate schedules for both electricity and gas pricing to help reduce demand and to monitor peak seasonal pricing.

Urged PUC to encourage utilities to improve transmission efficiency.

Encouraged manufacturers of electric generating equipment to improve generation efficiency with support from the newly formed electric Power Research Institute.

Urged PUC to expand the category of interruptable customers for electricity.

Directed a revision of state policy to set new standards for leasing buildings.

Seek Legislation to ban the use of hot water wall heating units powered by electricity.

Directed the Department of Transportation to continue with their bicycle lanes and path program.

Supported the development of California offshore petroleum reserves under strict conditions.

Recommended implementation of a car pooling program for state employees.

Directed the Office of Science and Technology to develop a priority listing of research and development projects to help alleviate the energy crunch.

Recommended immediate establishment of a professional staff comprised of competent individuals in appropriate energy fields to support the Energy Planning Council.

Recommended that the 50 mile per hour speed limit for state vehicles be rescinded by the Governor, to be effective when the Statewide 55 mph speed limit takes effect.

Directed the Energy Planning Coordinator and his staff to proceed with a three month energy supply and demand inventory of the State - resulting in an inventory "model" to keep the state's energy supply and demand needs on an immediate retrieval basis.

Meetings with various industry representatives, such as tourism, manufacturing, chamber of commerce, oil industry and agriculture.

CONTACT:

Earl C. Parker
Press Secretary
Sacramento, Calif.
(916) 445-0680

11-13-73

news

FROM THE OFFICE OF
LT. GOVERNOR
ED REINECKE

ENERGY ACTIONS TO BE TAKEN BY
LT. GOVERNOR ED REINECKE

1. TO URGE DR. HENRY KISSINGER - NOW THAT HE HAS ACCOMPLISHED A MUTUALLY SATISFACTORY CEASE-FIRE - TO BEGIN NEGOTIATIONS ON RESUMING THE SHIPMENT OF OIL FROM THE ARAB-BLOC NATIONS.
2. ASK THE PRESIDENT TO REVIEW THE OIL EXPORT POLICIES DURING THIS CRISIS PERIOD
3. URGE THAT THE ARB STANDARDS FOR AIR POLLUTION EQUIPMENT OF THE 1966-1970 MODELS CAR BE POSTPONED.
4. URGE THAT THE EPA REGULATIONS FOR NO LEAD GAS EFFECTIVE NEXT JULY BE POSTPONED UNTIL FURTHER NOTICE.
5. TURN OFF THE CAPITOL DOME LIGHTS.

CONTACT:

Earl C. Parker
Press Secretary
Sacramento, Calif.
(916) 445-0680

11-13-73

news

FROM THE OFFICE OF
**LT. GOVERNOR
ED REINECKE**

STATEMENT TO THE MEDIA

**ENERGY PLANNING COUNCIL RECOMMENDATIONS
TO EASE THE FUEL CRISIS.**

1. URGE LEGISLATURE TO REDUCE STATE
LEGAL SPEED LIMIT TO 50 MPH SPEED
WHEN IT RECONVENES.
2. URGE THE PUBLIC TO ELIMINATE ALL
UNNECESSARY DRIVING TO CONSERVE FUEL.
3. FURTHER REDUCE THERMOSTAT SETTINGS IN
STATE BUILDINGS FROM 72 DEGREES TO 68
DEGREES FOR HEATING, AND INCREASE
THERMOSTAT SETTINGS TO 78 DEGREES FOR
COOLING. THE STATE WILL URGE LOCAL
GOVERNMENTAL AGENCIES TO TAKE SIMILAR
ACTION, AND IT WILL ASK PRIVATE INDUSTRY
AND THE PUBLIC TO KEEP THEIR THERMOSTATS
AT THE SAME LEVELS ON A VOLUNTARY BASIS.
4. URGE THE CONGRESS TO PROVIDE FOR AN
IMMEDIATE INCREASE OF PRODUCTION FROM
ELK HILLS FOR THE CONSUMER MARKET AND
FOR THE DRILLING OF ADDITIONAL WELLS TO
HELP ALLEVIATE THE FUEL SUPPLY DEFICIT.

5. URGE THE STATE LANDS COMMISSION TO PERMIT THE RESUMPTION OF OFFSHORE OIL DRILLING ON STATE OWNED LANDS, AND RECOMMEND TO THE FEDERAL GOVERNMENT THAT IT PERMIT INCREASED OFFSHORE OIL DRILLING BEYOND THE 3 MILE LIMIT.
6. RELAX SULFUR STANDARDS FOR AREAS OUTSIDE THE CRITICAL AIR POLLUTION BASINS AND WITHIN THESE CRITICAL BASINS RELAX THE STANDARDS ON A CASE-BY-CASE BASIS FOR THE WIDE UTILIZATION OF ALL FUELS.
7. URGE THE FEDERAL AND STATE GOVERNMENTS TO REDUCE STRINGENT REQUIREMENTS ON VEHICLE AIR POLLUTION DEVICES AS A MEANS TO SAVE FUEL ON A SHORT TERM BASIS.
8. URGE LOCAL GOVERNMENT, PRIVATE INDUSTRY AND THE PUBLIC TO REDUCE LIGHTING IN NON-WORK AREAS. TURN OFF LIGHTING AFTER WORKING HOURS EXCEPT WHERE NECESSARY FOR SECURITY, AND CUT OUT ARCHITECTURAL AND LANDSCAPE LIGHTING, CONFORMING TO ACTIONS ALREADY IMPLEMENTED FOR STATE BUILDINGS.

9. ENCOURAGE PRIVATE INDUSTRY TO CONDUCT ENERGY EFFICIENCY STUDIES OF FACTORIES AND BUILDINGS AS A WAY TO FIND MEANS TO REDUCE WASTE IN HEATING AND COOLING SYSTEMS.
10. ENCOURAGE LOCAL CHAMBERS OF COMMERCE AND OTHER BUSINESS-RELATED ORGANIZATIONS TO WORK WITH COMMERCIAL BUSINESSES TO SEE IF BUSINESS HOURS CAN BE REDUCED.
11. SUPPORT THE FEDERAL GOVERNMENT'S RECOMMENDATION FOR THE ESTABLISHMENT OF YEAR-ROUND DAYLIGHT SAVINGS TIME, AND URGE THE STATE LEGISLATURE TO TAKE THE STEPS NECESSARY TO IMPLEMENT YEAR-ROUND DAYLIGHT SAVINGS TIME IN CALIFORNIA.

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CONTACT:

Earl C. Parker
Press Secretary
Sacramento, Calif.
(916) 445-0680

news

FROM THE OFFICE OF
**LT. GOVERNOR
ED REINECKE**

October 11, 1973

MS - 5

MEMO TO THE PRESS

Attached is a copy of the Energy Policy for the State of California which was approved by Governor Ronald Reagan.

The Energy Planning Council, chaired by Lt. Governor Ed Reinecke, will coordinate and monitor the implementation of this policy, recommending policy changes and additional actions.

The first meeting of the Energy Planning Council will be held within two weeks.

October 1, 1973

STATE OF CALIFORNIA ENERGY POLICY

It is essential that energy be available to the people of the State California to protect the health and safety, promote the general welfare, and further the State's economy.

Unnecessary, uneconomical and inefficient uses of power have resulted in an increased demand for energy. The continuation of this trend will result in the depletion of energy resources. The wise use of energy resources is vital to our current way of life and to that of future generations.

It is the policy of the State of California to achieve maximum efficient utilization and conservation of the limited sources of energy available to the State and for State Government to involve itself more directly in this field.

In furtherance of this policy, there is established by Executive order an Energy Planning Council, advisory to the Governor which will coordinate all state activities regarding energy resources, monitor energy-related problems and their solutions and recommend policy alternatives and actions for implementation.

THE STATE IS TAKING THE FOLLOWING ACTIONS REGARDING THE ENERGY POLICY.

- . To conserve energy and reduce travel, the State will increase its use of advanced communication techniques by expanding the use of standard and conference telephone connections and audio-video tapes.
- . The State will revise the State policy by establishing new building lease standards to include minimum energy efficiency standards which are to be met before a building is to be leased by the State.
- . The State will support incentive measures to encourage industry to conserve energy, to increase efficiency, to consider an energy price increase as well as tax incentives, and to develop guidelines for more efficient packaging of its products.
- . The State will encourage private companies to initiate a public educational program to encourage lower thermostat settings in the winter and higher settings in the summer.
- . The State will support amendments changing the building codes so that the use of electricity for resistive space and hot water heating on new installations is prohibited in those locations where more efficient fuel consumption methods are available.
- . The State will support the establishment of minimum performance standards for new air conditioning units for residential, commercial, and industrial installations.
- . The State will establish a voluntary incentive program of car pooling, as outlined below:
 1. Encourage car pool matching services by all major public and private employees. The Department of Transportation will act as coordinator between employers, institute a public information campaign, and contact key employers.
 2. Encourage urban fringe parking facilities located at key rendezvous points near existing freeway interchanges which could be utilized by both car pools and public transit.

3. Encourage preferential parking for car pools. Car pool vehicles should be given preferential treatment in terms of parking space allocation, proximity and fees.
 4. Meter ramps and establish preferential freeway lanes in urban areas.
- . The State will support studies for improvement of bus transit and promote those proposals which show a favorable benefit-cost potential, considering both economic and social terms.
 - . The State will continue the Department of Transportation policies for providing bicycle paths.
 - . The State will develop further information concerning a tax program based upon the energy efficiency of the automobile. The efficiency standards would be based upon, among other things, the weight of an automobile.
 - . The State will continue to institute gas and electric utility-sponsored conservation programs through Public Utilities Commission formal proceedings involving electric and gas utilities rates and services.
 - . The State, through the Public Utilities Commission, will continue to study restructuring rate schedules for electricity and gas pricing in connection with formal proceedings involving electric and gas rates.
 - . The State, through the Public Utilities Commission will supervise utility-sponsored programs to improve transmission and generation efficiency.
 - . The State will continue to deal with expanding the category of interruptible customers for electricity through formal Public Utilities Commission proceedings involving electric rates.
 - . The State will support legislation calling for the reduction of the speed limit to 65 miles per hour.
 - . The State supports the right of the people to choose whether gasoline tax funds should be used for rapid transit.
 - . The State will prepare a priority list for research and development of energy resources.
 - . The State will support action to develop offshore petroleum reserves.
 - . The State will support the construction of a deep water port on the West Coast, and will coordinate such activity with the U. S. Army Corps of Engineers.

- . The State will advocate development of onshore primary, secondary and tertiary oil recovery techniques to include consideration for incentives such as investment credit to secondary and tertiary oil production facilities, maintaining present depletion allowances and establishing realistic environmental standards.
- . The State will support development of geothermal resources to include encouraging the opening of federal lands for this type development, together with necessary environmental impact report, encouraging the federal government to conduct research and development programs, streamlining permit granting procedures, and consideration for faster depreciation of power plants.
- . The State will continue to support efforts to regulate pollutants and require aesthetic and environmental mitigation to ensure necessary costs are reflected in costs charged for energy production and utilization.

Memorandum

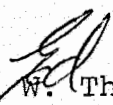
To : Work Session Members

Date : August 15, 1973

Subject: Energy Policy Issues

From : Governor's Office

Attached is the final summary of actions taken on the remainder of the recommendations of the Energy Workshop last Monday, August 13.


Edwin W. Thomas
Administrative Officer
to the Cabinet

cc: Vern Sturgeon

Public Utilities Commission

Issues

Action taken by Cabinet

PUC-1 Institute utility-sponsored conservation programs.

1. Public Utilities Commission is to further evaluate the policy issue and report to the Cabinet what other companies are doing in this field and what actions can be taken by the State.

PUC-2 Item (1) institute utility-sponsored conservation programs.

1. Public Utilities Commission is to further evaluate the policy issue and report to the Cabinet what other companies are doing in this field and what actions can be taken by the State.

PUC-3 Study restructuring rate schedules for electricity pricing.

1. Public Utilities Commission is to evaluate the Con-Edison report on changing rate schedules for pricing energy.

PUC-4 Item (2) study restructuring rate schedules for gas pricing.

1. Public Utilities Commission is to evaluate the Con-Edison report on changing rate schedules for pricing energy.

PUC-5 Study peak seasonal pricing.

1. Cabinet concurred with Public Utilities Commission's recommendation.

PUC-6 Item (3) study peak seasonal pricing.

1. Cabinet concurred with Public Utilities Commission's recommendation.

PUC-7 Study methods to improve transmission efficiency.

1. Cabinet concurred with Public Utilities Commission's recommendation.

PUC-8 Study methods to improve generation efficiency.

1. Cabinet concurred with Public Utilities Commission's recommendation.

PUC-9 Study prohibiting the use of natural gas for generating electricity.

1. Cabinet concurred with Public Utilities Commission's recommendation.

PUC-10 Expand the category of interruptible customers for electricity.

1. Cabinet concurred with Public Utilities Commission's recommendation.

PUC-11 Item (7) expand the category of interruptible customers for gas.

1. Cabinet concurred with Public Utilities Commission's recommendation.

Issues

- | | |
|--|---|
| r-4 A very large geothermal potential exists in California, which can only be partially developed unless certain problems can be solved. | 1. Add to the recommendation that an environmental impact statement is required for all geothermal development projects. |
| | 2. Resources Agency is to prepare a Cabinet issue supporting the recommendations. |
| r-5 Press for California Air Resources Board automotive emission standards rather than federal standards. | 1. No action required. |
| r-6 What can government do to encourage industry to conserve energy? | 1. Public Utilities Commission working with the Resources Agency, is to re-evaluate the recommendation. |
| r-7 Can all social and environmental costs be included in the price of energy? | 1. Public Utilities Commission working with the Resources Agency is to re-evaluate the recommendation and return to Cabinet with a report on their findings. |
| r-8 Develop re-cycling incentives and solid waste conversion. | 1. Resources Agency is to contact the Solid Waste Management Board and return to Cabinet in thirty days with a summary on the Solid Waste Management Board's work plan. |
| r-9 Study the use of solid waste as boiler fuel. | 1. Resources Agency is to contact the Solid Waste Management Board and return to Cabinet in thirty days with a summary on the Solid Waste Management Board's work plan. |

Sub-Cabinet

Issue

SC-1 Study all energy-oriented Agencies in the State with a view to consolidate and give a new and broader definition to key regulatory and administrative bodies concerned in energy.

Action taken by Cabinet

1. No action required. Implemented with the adoption of LG 73-3.

Office of Science and Technology

Issues

Action taken by Cabinet

OST-1 Create a California Energy Office in the Office of the Governor to recommend energy policies to the Governor and deal with such problems that may emerge from an energy shortage.

1. No action required. Implemented with the adoption of LG 73-3.

OST-2 The development of nuclear power plants.

1. Cabinet concurred with the Office of Science and Technology's recommendation.

OST-3 Utilize energy consultants' advice on potential savings.

1. No action required. Implemented with the adoption of LG 73-3.

OST-4 Request legislation creating an Energy Policy Council and establishing regulations for the siting of energy facilities.

1. Referred to Energy Policy Council for evaluation.

OST-5 The allocation of funds for research and development in the energy field.
(Combined #1, 4, 5, 9 and 10)

1. Referred to Energy Policy Council for evaluation.

Office of Emergency Services

Issue

OES-1 Develop a contingency plan for gasoline rationing.

Action taken by Cabinet

1. Referred to Energy Policy Council. No further action required.

*Energy
Crisis*

ENERGY POLICY

A Report of the Energy Workshop to the Lieutenant Governor*

May 15-16, 1973

I. Introduction

The following is a summary report of the Energy Workshop recommendations and proposals that was presented to Lieutenant Governor Ed Reinecke. The workshop, which was held on May 15 and 16, 1973, at the Sacramento Host Hotel, was called by the Lieutenant Governor and sponsored by the National Science Foundation in association with the California Science and Technology Program.

As a result of two days of intensive discussions, the participants, who represented energy supply and demand, conservation and environmental groups, reached a general consensus that California, along with the entire nation, is facing an energy crisis and that in order to overcome these energy problems, an all-out concerted effort by all branches of government and all citizens will be necessary.

Although the recommendations have been summarized separately, with respect to supply, demand and policy actions, each proposal is closely interrelated and center upon answering the major issue at hand:

What energy and environmental policies are necessary to balance the supply and demand of energy, consistent with acceptable economic, social and environmental goals to achieve the most effective development, use and conservation of California's energy resources?

II. Supply

A. Research and Development Programs

Recognizing that the federal government and industry are conducting increasing amounts of energy research and development, a number of specific areas appear

* The Chairman of the Workshop and the Committee Chairmen jointly drafted this statement to reflect the general views of the conference. No conferee expressly endorsed the entire report. Some of the participants represented federal agencies for whom they did not and could not speak. This report, therefore, does not necessarily reflect the views of those participants.

to be of interest, both immediate and long-term, to California. These should be supported -- either jointly, directly or through the exertion of political stimuli to encourage their immediate development. They include:

- (1) The development of advanced systems to increase the efficiency and safety of electric power generation.
- (2) The development of efficient fuel resources not currently used; e.g., low BTU gas from California crude (both in the ground and above), coal and solid waste.
- (3) The development of advanced power transmission and storage systems.
- (4) The use of nuclear heat for fuel production such as coal gasification and hydrogen production from water.
- (5) The development of systems to reduce the emission of oxides of nitrogen from fossil fuel combustion.
- (6) The development of advanced solar energy systems both for electricity generation and production.
- (7) Development of solar/thermal conversion systems for water heating, space heating and air conditioning.

B. Offshore Oil Production

California has very large potential reserves of crude oil in offshore State lands.

In the past, over 1,400 wells have been drilled without incident in the offshore area under the regulations of the California Public Resources Code and under the supervision of the California State Division of Oil and Gas as well as other concerned state and local agencies.

The Santa Barbara incident was on federal lands and occurred in a well drilled under less restrictive federal regulations.

Procedures have been developed and equipment is available to handle emergency situations in offshore waters.

Work should proceed to develop the State's reserves in the offshore area to meet future energy needs. The State should move aggressively to encourage the development of these resources working within the authority of the Regional Coastal Commission and the State Lands Commission giving full concern for the quality of the environment.

C. Deep Water Ports

All energy projections show the need for imported crude to meet California's future energy deficit. This crude must come by tanker. California must take advantage of the most economical sources of crude as well as transportation means.

Large tankers reduce costs of transportation significantly.

In view of the lead time to construct port facilities to receive large tankers, California should begin immediately to facilitate the siting of deep water ports and storage facilities.

D. Secondary and Tertiary Oil Recovery

California oil reserves can be increased within a short time period by the application of secondary and tertiary recovery techniques. These reserves are one of the major available potential resources for the State of California. Dependent on the encouragement and on the success of the program, this might yield as much as an additional 10 billion barrels.

Production of oil by secondary and tertiary recovery methods is considerably more costly than production by primary means. Accordingly, numerous potential projects are not now being developed. As a matter of fact, in urban areas where land values have increased, potential secondary recovery wells now are being abandoned. In effect, this potential future secondary oil will be lost because the cost to redevelop the property involved will be too great to ultimately justify a secondary recovery project.

E. Onshore Oil and Gas Development

The State of California is presently facing decreasing domestic production of oil and gas and greatly increasing demands for petroleum products. The potential onshore reserves of the State are estimated to be about 16 billion barrels.* Further development

* Oil is presumed to exist because of certain favorable geological conditions. In order to "prove" the existence of oil in these fields, further exploration and development will be necessary.

and exploration of this energy supply must be encouraged.

F. Nuclear Power

Nuclear power is the basic source for the generation of electricity for the future of the American States. It can be expanded without apparent resource limit for many decades. This can be done within the internal resources of the United States but will require unusual capital investments which may limit its growth. A requirement for its continued development is the satisfactory resolution of current safety concerns.

G. Geothermal Power Development

Geothermal electric power production for California by 1985 is estimated to range from 5,000 to 10,000 Mwe. This production is based on estimating the producing potential of known geothermal resource areas within the State. Additional geothermal capacity calls for extensive exploration and will be available for the periods of 1985 to 2000. It is estimated to be as much as 20,000 Mwe. This estimate is based upon the development of new and improved exploration techniques, improved conversion technology and the opening of federal lands for geothermal development.

III. Demand

Present rate of growth for energy in California does not appear capable of being sustained. In order to reduce growth rate to the minimum required for full employment, various methods of demand reduction are recommended. These recommendations are:

A. Transportation

- (1) Reduce speed limit on highway to 50 miles per hour.
- (2) Encourage car pooling.
- (3) Expand the bus systems.
- (4) Establish protective bicycle lanes and paths.
- (5) Institute gasoline rationing.
- (6) Develop taxes and other incentives designed to reduce the weight of the automobile.
- (7) Prohibit automotive air conditioning units on new cars.

- (8) Press for California Air Resources Board automotive emission standards rather than federal standards.
- (9) Use gas tax funds for rapid transit.
- (10) Study the establishment of a ceiling on per capita transportation, (e.g., limiting the number of air travel miles per person).
- (11) Utilize advanced communication techniques to reduce travel, where feasible.

B. Industry

- (1) Develop recycling incentives.
- (2) Urge industry to conserve energy.
- (3) Utilize energy consultants' advice on potential savings.
- (4) Study energy conservation technological improvements.
- (5) Reduce packaging to conserve energy.
- (6) Reduce energy consumption per unit of industrial output.

C. Residential and Commercial Buildings

- (1) Initiate a massive public educational program to encourage lower thermostat settings in the winter and higher thermostat settings in the summer.
- (2) Prohibit the use of electricity for resistive space and hot water heating on new installations.
- (3) Revision of the State policy for leasing buildings to include the establishment of minimum energy efficiency standards that must be met before a building can be leased by the State.
- (4) Establish minimum performance standards for new air conditioning units.
- (5) Prohibit pilot lights on new gas appliances and substitute electrical starting devices.
- (6) Study technological improvements such as use of solar, reflective glazing, increased insulation and heat recovery systems.

D. Utilities

- (1) Institute utility-sponsored conservation programs.

- (2) Study restructuring rate schedules for both electricity and gas pricing.
- (3) Study the use of solid wastes as boiler fuel.
- (4) Study peak seasonal pricing.
- (5) Study methods to improve transmission efficiency.
- (6) Study methods to improve generation efficiency.
- (7) Include all social and environmental costs in the price of energy.

IV. Policy Implementation

Study all of the energy oriented agencies in the State with a view to consolidate and give a new and broader definition to the key regulatory and administrative bodies concerned in energy. This includes, for example an analysis of the Public Utilities Commission, the Air Resources Board, the State Water Resources Control Board, the State Lands Commission, the Department of Transportation, Coastal Conservation Commission and its regional commissions, and other entities within the Resources Agency. The powers of these bodies must be reexamined with a view to updating, streamlining, and conferring necessary powers on the regulatory and administrative bodies best able to carry out the energy policy of the State. The following recommendations were made:*

- A. Create a California Energy Office in the Office of the Governor to recommend energy policies to the Governor and deal with such problems that may emerge from an energy shortage. The California Energy Office will consider all aspects of the energy problems of the State including social, economic, environmental and cost factors, and will make appropriate recommendations to the Governor. The California Energy Office will also recommend to the Governor a system of priorities for the allocation of fuels and energy in the event of shortages. The California Energy Office will be dissolved when an Energy Policy Council is authorized by the Legislature.

* One of the issues considered was nuclear power plant siting safety. Some participants felt that uncertainties concerning reactor safety require a "go-slow" approach to nuclear power plant development in California. Other spokesmen expressed the view that the current state of knowledge on these matters is fully adequate to justify the fastest possible implementation of nuclear power. No consensus was reached.

- B. Request the Legislature to create an Energy Policy Council to determine a statewide energy policy and prepare long-range plans for the development and use of fuel and energy in the State. This Council, when created, will take the place of the California Energy Office and will consider economic, social, environmental costs and all other pertinent factors in establishing such policy. The Council will coordinate all of the multiple energy activities of the State to the extent possible. Where the Council does not have jurisdiction over the activities of existing agencies, it will nonetheless recommend to those agencies policies that are in conformity with the overall State energy policy and long-range planning. The Council should be structured so as to represent all segments of the public.
- C. Adopt legislation to facilitate the siting of all energy facilities within the State. This may involve the creation of a new authority with power to consolidate and, in some cases, supersede the authority of existing bodies. In the alternative, it may require the consolidation of existing authorities with additional powers to integrate their activities and expedite their siting processes. The siting authority will include not only electrical facilities, but oil refineries, deep water ports, unloading facilities and special facilities designed for the development of advanced sources of power such as geothermal, solar, or advanced nuclear.
- D. Urge the diversion and use of highway gas tax funds for rapid transit systems.
- E. Recommend that the Legislature appropriate money for research and development in the energy field. This money is not designed to take the place of or even augment federal research programs, but rather is designed to enable the State to attract federal funds by demonstrating a willingness to put up some matching money. Examples of research in which the State has a particular interest are solar energy, geothermal energy, hydrogen generation from water using nuclear energy and the further development of high temperature, gas-cooled nuclear reactors.
- F. Urge utilities, both public and private, to increase their participation in research and development projects dealing with current and proposed technology in the field of electrical generation, transmission and distribution, and encourage the State regulatory bodies to recognize such contributions as fully deductible expenses.
- G. Expand the category of interruptable customers for both electricity and gas.

- H. Set minimum energy performance specifications on all buildings in the State as a condition for granting building permits.
- I. Analyze all of the regulatory and administrative bodies of the State dealing with energy problems with the objective of reorganizing those agencies to achieve a more effective, coordinated and all-inclusive response to the energy policy as enunciated by the Energy Policy Council.

Summary Of The
Energy Workshop Recommendations

I. Supply

A. Research and Development

The State research and development program, proposed by the policy implementation committee, should give priority consideration to the seven research and development program areas listed in the supply section of the Energy Policy Report.

B. Offshore Oil Production

The State should proceed to develop offshore oil and gas reserves in State lands, giving full concern for the quality of the environment.

C. Deep Water Ports

The State should facilitate the siting of deep water ports and storage facilities.

D. Secondary and Tertiary Oil Recovery

The State should encourage secondary and tertiary oil recovery.

E. Onshore Oil and Gas Development

The State should encourage onshore oil and gas development.

F. Nuclear Power

The State should do what it can to expedite the implementation of nuclear power, consistent with the satisfactory resolution of environmental and safety concerns. This includes encouraging the federal government to resolve these issues as rapidly as possible.

G. Geothermal Power

The State should encourage the development of geothermal power.

II. DEMAND

A. Transportation

- (1) Reduce speed limit on highways to 50 miles per hour.
- (2) Encourage car pooling.

- (3) Expand the bus systems.
- (4) Establish protective bicycle lanes and paths.
- (5) Institute gasoline rationing.
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- (7) Prohibit automotive air conditioning units on new automobiles.
- (8) Press for California Air Resources Board automotive emission standards rather than federal standards.
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- (5) Study methods to improve transmission efficiency.
- (6) Study methods to improve generation efficiency.
- (7) Include all social and environmental costs in the price of energy.

III. POLICY

- A. Research the powers of the Governor under the Constitution and the laws of the State to establish an energy policy to meet the fuel and energy shortages.
- B. Create a California Energy Office in the Governor's Office to establish an energy policy and to handle shortages of fuel, energy and similar emergencies.
- C. Suggest legislation creating an Energy Policy Council with the power to establish a State-wide energy policy, develop long-range plans for meeting the energy requirements of the State, and establish an orderly machinery of government to deal with the allocation of fuel and energy in the event of shortages and to cope with emergency situations.
- D. Suggest legislation to facilitate the siting of all types of energy facilities within the State.
- E. Urge the diversion and use of highway gas tax funds for rapid transit systems.
- F. Recommend that the Legislature appropriate money for research and development in the energy field.

- G. Urge utilities, both public and private, to increase their participation in research and development projects dealing with energy technology.
- H. Expand the category of interruptable customers for both electricity and gas.
- I. Set minimum energy performance specifications on all buildings in the State as a condition for granting building permits.
- J. Study the interrelation and reorganization of all regulatory and administrative authorities responsible for the energy matters in the State.
- K. Encourage the Public Utilities Commission to respond to the need to conserve energy.
- L. Congress is urged to deal at once with the statutory problem underlining the Alaskan pipeline.



Management Bulletin

From the Office of Governor Ronald Reagan

Ed Hay

MF 73-17

Energy

ENERGY PLANNING COORDINATION

Lieutenant Governor Ed Reinecke, Chairman of the Energy Planning Council, has appointed Wes Bruer as Energy Planning Coordinator for the Council. Mr. Bruer was formerly State Geologist and Chief of the Division of Mines and Geology in the Department of Conservation.

The Energy Planning Coordinator will perform the following functions:

- (1) Provide staff services to the Energy Planning Council.
- (2) Coordinate the implementation of decisions made by the Energy Planning Council.
- (3) Coordinate energy-related activities of the various elements of state government.
- (4) Maintain liaison with the Federal Energy Administrator in the Executive Office of the President, and such federal agencies and other organizations as may be directed by the Energy Planning Council.
- (5) Provide a single point of contact for information and inquiries concerning energy policy matters.
- (6) Such other specific functions as may be assigned by the Energy Planning Council.

In the performance of his activities, the Energy Planning Coordinator will report to the Chairman of the Energy Planning Council. Necessary administrative support will be provided by the Office of Planning and Research.

It is the policy of the Energy Planning Council that existing resources of state government be utilized to the maximum extent possible in solving problems related to energy. Ongoing energy-related functions will continue as they have in the past (i.e. Public Utilities Commission concerning utilities; Resources Agency and Department of Conservation concerning natural resources; Office of Science and Technology concerning liaison with scientific community and research and development activities; Office of Emergency Services concerning emergency planning, etc.) The Energy Planning Coordinator will work with the various agencies involved in these energy-related activities and will provide a focal point for coordination of effort.

To facilitate this coordination, it is requested that all elements of state government provide the Energy Planning Coordinator with information, copies of correspondence, and advice of federal and other contracts related to energy policy.

FOR THE GOVERNOR:

A handwritten signature in cursive script that reads "Edwin Meeze III". The signature is written in dark ink and is positioned above the printed name and title.

EDWIN MEESE III
Executive Assistant
to the Governor