

ALASKA LEGISLATURE COMMITTEE FILES 1983 - 1984 86/2

2588 HLC HB 654 - HB 684 2588

Preferences or criticisms of the spruce timber were at least more vigorous, if not more serious. One importer notes that only 40 percent or so of the Sitka spruce is really suitable for sounding boards in pianos, its intended use. They complain about knots, unacceptably wide grain, wavy grain, pitch pockets or lines, excessive hardness and instability in drying. As a result of these defects, one processor has accumulated about 500 MBF of material that they cannot use--presumably it could be used for legs but the requirement for legs is not large enough to use defective material. In contrast, the other Sitka spruce importer did not have major complaints about quality.

### C. The General Situation for Timber in Korea

Given the status of Alaskan timber imports in Korea, we now provide an overview of the aggregate timber market. Topics covered include demand and supply which will lead to a final section on opportunities for Alaskan timber in Korea.

#### 1. Demand

The total demand for timber in Korea was 11.6 million cubic meters (log equivalent) in 1978, declining to 7.3 million in 1981. The Office of Forestry forecasted, about a year ago, that 1982's demand would be up to 8.3 million cubic meters. 1982 data were not available at the time of the visit, but it is apparent that there has been an appreciable increase over 1981. Table V-2 shows the demand from 1965 to date by category of domestic use, and by domestic vs. re-export requirements.

According to the Korean Office of Forestry, Korea's domestic needs were much less than those of the Korean re-export industry through the late 1960's and up to 1977. During those years the re-export sector took almost 60 percent of the total demand, reaching 66 percent in 1976. Still, its importance has declined recently, and is likely to decline even more in the future.

Table V-2. Korea's wood products demand

	1965	1970	1975	1978	1979	1981	1982
-----1000 m <sup>3</sup> log equivalents-----							
<u>Domestic use</u>							
Pit props	304	450	549	617	626	628	637
Pulpwood	41	206	188	313	233	497	737
Plywood	-	-	-	541	1,792	1,345	1,132
Other	403	1,057	2,159	4,875	3,965	2,115	2,911
Total	<u>748</u>	<u>1,713</u>	<u>2,839</u>	<u>6,346</u>	<u>6,616</u>	<u>4,585</u>	<u>5,417</u>
<u>Export use</u>							
Plywood	511	2,279	3,226	4,528	3,031	2,497	2,413
Other	1	17	350	737	1,293	183	460
Total	<u>511</u>	<u>2,287</u>	<u>3,576</u>	<u>5,265</u>	<u>4,324</u>	<u>2,680</u>	<u>2,873</u>
Total Demand	1,259	4,000	6,465	11,611	10,940	7,265	8,290

Note: 1982 figures are a forecast prepared at the end of 1981, apparently reasonably accurate.

Source: Assembled from data obtained from the Korean Office of Forestry.

a. Domestic requirements

The categories of domestic use into which the Office of Forestry groups its figures, and which are shown in Table V-2, are pitprops, pulpwood, plywood and general use (presumably lumber in its various applications and particle board). The plywood and general use categories cover housing and other construction, furniture and musical instruments, and boxes and crating material.

Since Korea is heavily export-oriented, an unknown but certainly quite large part of domestic use should perhaps be assigned to the re-export sector - e.g., furniture, musical instruments and the packing materials needed for all kinds of export items. These requirements would exist in most countries, but in Japan and the United States, for example, they are small compared to other domestic needs. In Korea, they probably inflate domestic demand to a significant degree.

Domestic use peaked in 1979, at 5.6 million cubic meters, declined to 4.5 million in 1981. Government stimulation of the housing industry was to increase domestic use to 5.4 million in 1982.

The current rate of housing starts is between 200,000 and 250,000 annually, and is expected to increase slightly. Data were not available on the number of multi-unit vs. single-family dwellings. However, in terms of wood use it is probably not as significant as in Japan because there are very few wood-frame buildings. Wood is used primarily in door and window frames, floors, ceilings and roofs to some extent, doors and some cabinetry, and in concrete forming.

The volume of wood used per housing unit is estimated to be 7.1 m<sup>3</sup>. Housing, therefore, would be using 1.4 to 1.8 million cubic meters per year, plus whatever is used temporarily for concrete forming, perhaps another 0.2 or 0.3 million. Plywood and general use took 3.5 million cubic meters in 1981, so roughly another 0.5 million were required for other construction, furniture, crating, etc.

b. Re-export

Starting in the early 1960's, Korea became the world's most important in-transit processor/producer of hardwood plywood, using Southeast Asian logs. This activity peaked in 1977, with 4.9 million cubic meters of logs--half of Korea's total log requirements in that year. It has since dropped sharply, to 2.5 million in 1981.

Reduced plywood markets in North America, Europe, Japan, etc. are not the only factor in the decrease in Korea's plywood re-export trade. The declining availability of suitable logs is more significant and promises more future problems for the industry. Indonesia and the Philippines have severely restricted log exports, leaving only Papua New Guinea and the Malaysian states of Sabah and Sarawak as places from which logs may be exported on a reasonably open market basis. As a result, Korea must compete with Taiwan, Singapore and Japan for these remaining log sources.

The Korean plywood industry has two options for dealing with this problem. They are:

- shift their operations to the resource country which many companies either have done or are planning to do. This, of course, removes their log requirements from Korea's total demand.
- Substitute other woods for Southeast Asian hardwoods, in core and cross-band veneer. The possibilities include Korean plantation poplar, cottonwood from North America, tight-knotted softwood logs from North America, or imported veneer of softwoods, aspen, etc.

Korea also exports lumber, moldings and other remanufactured wood products, although this is much less important than plywood export. The raw material for this includes North American softwoods, re-exported to Japan and to

Korean construction companies working in the Middle East. This sector took 1,293,000 cubic meters of logs in 1979, dropping to 183,000 in 1981 and supposedly increasing to 460,000 in 1982.

Export statistics cast doubt on the above figures, however. In 1981, Korea apparently exported 262,000 cubic meters of lumber, moldings, and other processed lumber of which 219,000 cubic meters were softwoods for Japan and the Middle East. Probably about 400,000 cubic meters of logs would have been needed to produce this volume, suggesting that lumber re-export is much more important than the 183,000 cubic meters shown in Table Y-2.

c. Future demand

The Office of Forestry has prepared a forecast of timber demand and supply up to the year 2030. This was done in 1978 and their estimate for 1980, not surprisingly, missed significantly as the world-wide economic climate suddenly worsened. Their long-term forecasts are presumably more reliable, if their analysis of underlying domestic trends is soundly based. These forecasts are:

	<u>Domestic</u> <u>use</u>	<u>Export</u> <u>use</u>	<u>Total</u>
	-----million cubic meters-----		
1990	14.5	4.8	19.3
2000	19.5	3.0	22.5
2010	22.7	2.5	25.2
2020	24.6	2.0	26.6
2030	25.6	1.5	27.1

It would not be surprising if the export sector's demand declined faster than these figures suggest, particularly with respect to plywood. As domestic demand increases and as the plywood industry struggles with its raw materials problems, a larger decline in exports is possible.

## 2. Supply of Timber

### a. Domestic supplies

In 1965 domestic timber accounted for 48 percent of the total supply. Imports became more and more important as the plywood and lumber re-export industry grew, and domestic sources supplied only 8 percent in 1978. Their proportional importance has increased sharply since 1978, however, up to 16% in 1981. This is largely because of reduced imports for the plywood re-export industry as discussed earlier. The actual volumes have been 800,000 to 900,000 cubic meters since the mid 1960's, topping 1 million in 1981.

Data were not obtainable on the species composition of domestic production, but from our knowledge of Korea it is estimated that well over half would be pine, about one-tenth plantation poplar, and the balance other conifers, oak, chestnut and miscellaneous other hardwoods (e.g., walnut, persimmon, Paulownia).

Domestic logs are mostly small and of rather low grade and poor form. Their end uses are:

- Conifers: construction, generally utilizing small cross-section and short lengths.
- Poplar: packing material, choesticks, blockboard.
- Hardwoods: furniture, sliced veneer (particularly in narrow widths and short lengths for items such as plywood parquet), and specialty purposes such as golf club heads (persimmon), and Japanese-style solid or veneered furniture (Paulownia).

Table V-3 shows the sources of Korea's timber supply from 1965 to date.

Table V-3. Sources of Korea's timber supply

Source and species	1965	1970	1975	1978	1979	1981
	-----1000 m <sup>3</sup> log equivalents-----					
Domestic supplies	503	845	896	996	952	1,130
Imports						
Tropical hardwood	718	2,863	5,116	8,197	7,886	4,792
Softwood						
North American	18	236	443	1,719	1,252	929
Chile & New Zealand	20	56	-	622	832	414
Total	<u>38</u>	<u>292</u>	<u>448</u>	<u>2,401</u>	<u>2,084</u>	<u>1,343</u>
Other	-	-	5	17	18	-
Total	<u>756</u>	<u>3,155</u>	<u>5,569</u>	<u>10,615</u>	<u>9,988</u>	<u>6,135</u>
Total supplies	1,259	4,000	6,465	11,611	10,940	7,265

Source: Assembled from data obtained from the Korean Office of Forestry.

## b. Imports

Imports reached a peak of 10.6 million cubic meters in 1978, declining to 6.1 million in 1981. Industry sources consider an increase to 6.3 million, likely in 1982. Southeast Asia and the South Pacific are the principal sources, and from 1965 to 1977 this area supplied 85-95 percent of imports. Softwood imports increased sharply in 1978, and as of 1981 they reduced tropical hardwoods' share of the market to 72 percent.

Tropical hardwoods are used mostly for plywood, but also for other purposes such as lumber and remanufactured product exports, furniture, domestic moldings, window frames, and construction. Table V-4 compares the Office of Forestry data on domestic and export plywood raw material requirements, and on tropical hardwood imports, in order to get some idea of the hardwood volume that goes into these uses.

Softwood imports have so far come mainly from the United States. New Zealand and Chile are suppliers of Monterey pine, accounting for about 27 percent in 1981. Korea has also started to buy Siberian logs, either transshipped or redocumented in Japan. There has been some imports from Canada in the past few years, the volume is not available. We suspect that it is quite small.

With a few exceptions, Korean importers have but one criterion for softwoods--price. Color, grain characteristics, knot placement, ring count and log size mean little. Knot size is of some significance, however, since Korea, like other Asian countries, uses lumber in some very small cross-section, it does not seem to be a serious problem. Also, logs with smaller knots are selected for this type of end product. One product that can accept large knots, provided they are tight, is crating material for machinery exports, etc. Monterey pine, from New Zealand and Chile, is used for this, as it is in Japan.

Table V-4. Korean plywood requirements and tropical hardwood imports

Item	1978	1979	1981
	-----1000 m <sup>3</sup> log equivalents-----		
Plywood requirements			
Domestic	541	1,792	1,345
Export	4,528	3,031	2,497
Total	5,069	4,823	3,842
Tropical hardwood imports	8,197	7,886	4,792
Tropical hardwood used for lumber, moldings, etc. (domestic and export)	3,128	3,063	950

Source: Assembled from data obtained from the Korean Office of Forestry and the Korean Traders Association.

West Coast exporters prepare a class of logs for the Korean market, appropriately called "K Sort." Ideally this consists of small second-growth logs, in long lengths, so that the Korean mills can benefit from the very high Scribner MBF/cubic meter conversion factor. While the Japanese market accepts small logs (down to 6"), Koreans also accept a considerable degree of roughness, i.e. more knots, sweep, crook bark seams, center rot and, catfaces. The Korean market will also accept larger logs with considerable center defect (say, up to 35-40 percent of the gross volume), provided it is scaled out and the poorer stowage on board ship is accounted for in the price.

U.S. lumber grading rules are not applicable to Korean usage, because with a wide variety of small sizes the Korean sawmillers can recover clear lumber where U.S. sawmillers could not. However it may be useful to describe Korea's lumber use in terms of these rules to provide an idea of what is needed from their softwood supplies. Some characteristics are:

- A moderate amount of improvement in recovery--upgrading from purchase basis by remanufacturing into small sizes. This end result, achievable directly in the sawmill, will not be very large because most of the logs imported are small second-growth, with tight knots.
- A moderate amount of utility grade lumber, used domestically, probably most of it as boxes or packing material.
- A moderate amount of Standard grade, used domestically or exported to Japan or the Middle East.
- Some Construction grade--probably most of which is exported to Japan.
- A little No. 1, Select Structural, Shop Grades, or Clears, probably used locally for miscellaneous special uses or exported to Japan.

Two exceptions to these remarks are:

- Sitka spruce for the musical instrument manufacturers, whose requirements are even more stringent than those of their Japanese counterparts. Korea does not have the same outlets as Japan for spruce which, while not meeting musical instrument specifications, is still of rather high grade, and
- Red cedar, which has come into fashion in Korea for wall panelling. In this case the Koreans are forced into taking lower grade sawlogs in order to get the larger logs that yield clear lumber for panelling; the lower grade logs then go into general uses, probably including crating.

#### D. Trends and Opportunities in the Korean Market

##### 1. Future Timber and Lumber Supplies

The production forecasts developed by the Office of Forestry indicates an aggressive production level for domestic timber. Supplies are projected to increase to 13 million m<sup>3</sup> by 2030 or 42 percent of the projected demand in that year. By 1990, however, domestic supplies are expected to be at only the 3 million m<sup>3</sup> level, or 15 percent of demand. These forecasts rely heavily on poplar, which of course grows much faster than any native species. Poplar volume is expected to reach a plateau of 5 million cubic meters per year by 2010.

Imports are forecast to grow, with domestic demand, to 16.4 million cubic meters in 1990, but to decline to 14.1 million in 2030, as domestic supplies increase. The importance of North America as a supply source is likely to increase, as Korea's overall demand comes to consist more of domestic construction needs and less of (mostly plywood) re-export raw material.

Table V-5 shows the Office of Forestry's estimates of where supplies will come from between now and 2030, plus our own estimate of how much North America might provide. Our estimate is based on these assumptions:

- Korea's re-export industry will continue to have difficulties competing for South Seas hardwoods to supply the necessary component for the plywood component.
- The domestic plywood requirement will account for about one-third of total domestic demand. A part of the domestic demand will be filled by softwood plywood imports; some softwoods will be used for veneer in domestic plywood production.
- As a result of increasing difficulty in obtaining tropical hardwood logs, the volume of tropical hardwoods used for purposes other than plywood will decline. The combined domestic and export plywood demand will approximate the extent of tropical hardwood imports.

Up to now Korea has imported almost all its lumber requirements as logs, with relatively little material in cants, squares, lumber, particle board, etc. From our analysis of the market, we believe Korea will gradually import more and more finished or semi-finished wood products. It is difficult to quantify this, but the areas in which such imports are likely to show the most growth are:

- Korean specification construction lumber sawn in North American mills from K Sort logs--similar to those mills that now produce to Japanese specifications,
- hardwood lumber as by-products of Korean plywood operations in Indonesia, etc.,
- softwood veneer and plywood, and

Table V-5. Future sources of Korea's timber supply

	1988	1990	2000	2010	2020	2030
-----million m <sup>3</sup> log equivalents-----						
Domestic supplies						
Native species	1.4	1.5	2.0	4.0	6.0	8.0
Poplar	0.9	1.5	4.4	5.0	5.0	5.0
Total	<u>2.3</u>	<u>3.0</u>	<u>6.4</u>	<u>9.0</u>	<u>11.0</u>	<u>13.0</u>
Imports						
North American	4.8	5.1	4.7	4.4	3.9	3.0
Other areas	10.9	11.3	11.4	11.8	11.7	11.1
Total	<u>15.7</u>	<u>16.4</u>	<u>16.1</u>	<u>16.2</u>	<u>15.6</u>	<u>14.1</u>
Total	18.0	19.4	22.5	25.2	26.6	27.1

Source: Assembled from data obtained from the Korean Office of Forestry.

• North American particle board.

## 2. Opportunities for Alaskan Timber Species

Within the general setting, it is also possible to gain some insight about opportunities for Sitka spruce, western hemlock and some other Alaskan products.

### a. Sitka spruce

As mentioned, the Korean musical instrument industry uses about 5 million BF or (13,000 cu. m.) of spruce per year. This figure is likely to increase somewhat, according to the largest piano manufacturer. They report increasing demand for Korean-made pianos, and to satisfy this they are increasing their capacity. Within a couple of years the total demand will probably be about 7 million BF or (18,000 m<sup>3</sup>).

Also as mentioned, the demand could theoretically be halved, or at least reduced, if spruce are supplied only in sounding board quality and basswood and other species are used for keys, legs, etc. In practice, basswood might not be as convenient to import as spruce, and so it seems rather likely that spruce will maintain its position.

Since even the highest grade log is bound to contain considerable non-music grade material, we think it is reasonable to say that cants, containing as much as possible of music grade cuttings, would be preferred if the end-users could get them. Some of the smaller companies are now making efforts in this direction.

### b. Hemlock and lower grade spruce

Only a very small percentage of Southeast Alaska hemlock and spruce is really suitable for the Korean market - top grade spruce for musical instruments, and small, knotty and preferably sound logs of either species.

What lies in between is too good, in the sense that it possesses characteristics (tight grain and generous yield of clear lumber) that command a premium in Japan but are in most cases of no importance in Korea.

Korea's current log imports from Alaska are covering not only the small low quality, knotty logs but also the next layer of quality upwards - as previously described, logs that will yield a considerable amount of clear lumber but which have a lot of defect. This is probably due to two factors:

- the current low prices for all logs which brings more logs within the range that Korean importers are willing to pay, and
- the overall lower level of logging activity in the Pacific Northwest, which reduces the volume of K Sort logs available there.

When the Japanese market improves, or as the yen strengthens against the dollar, it is almost certain that some of the logs now being bought by Korea will be priced out of the Korean's reach, and either imported by Japan in the round or custom sawn into cants. When this happens exports to Japan from the Pacific Northwest will pick up, producing more K Sort logs as a kind of by-product; some of the Koreans' buying will presumably then shift back to that area.

One might suppose that the small percentage of "true K Sort" logs produced from National Forest land in Southeast Alaska could be sawn into cants that would then be suitable and reasonably priced for the Korean market. We do not think so, for these reasons:

- such logs are, at most, 16" in diameter, and the lower productivity with small logs makes the canting process inordinately expensive, and

- with larger logs, the cost of producing cants may be partly offset by a real freight saving, as defective material is sawn out. With small, knotty but reasonably sound logs this saving is not available.

In short, these logs should, perhaps, be available for export to Korea in the round.

c. Red cedar

Unless red cedar panelling is a passing fad, the projected growth of Korean domestic demand, based on housing and other building construction, will mean more demand for red cedar, and more opportunities to supply it to small scale importers or end users in the form of cants.

d. Other Alaskan possibilities

Moving north and west along the Gulf of Alaska coast, the percentage of logs that are suitable for Korea rises sharply. In places such as Seldovia, Port Chatham and Afognak and Kodiak Islands about half of the volume could be considered K Sort.

Possibilities for Korea's plywood industry exist in cottonwood, white spruce, and perhaps birch, as log or maybe even veneer imports.

In general, the Korean market prospects are good for high grade spruce logs or cants and for red cedar. The market size is small compared to Japan, however. The Korean market does not look particularly good for hemlock or low grade spruce, as Koreans will not compete price-wise with the Japanese for this timber. As described above, some other Alaskan timbers also have some market potential and deserve some attention.

HB

680

*Quote # 1*  
AOGA PROPOSED TESTIMONY ON HOUSE BILL NO. 680

HOUSE LABOR AND COMMERCE COMMITTEE

*just what's needed*  
MARCH 7, 1984

Good morning. I'm ~~Dave Yesland~~ <sup>He is</sup> Senior Staff Environmental Engineer with Shell Western E & P. I'm representing the Alaska Oil and Gas Association ~~this morning~~ and I will comment on the proposed Committee Substitute for HB680.

~~Our Association supports the intent of CSUB680,~~ which is to provide the legislation necessary to enable the State to be the sole administrator of a permitting program for underground injection wells related to oil and gas production activities, or Class II wells, as they are identified in the Federal program. <sup>He gives his</sup> I will ~~discuss the~~ reasons for <sup>their</sup> our support.

Without State preemption of the Federal program there will be redundant State and Federal programs with nothing but duplicated record-keeping and administrative delay as a result.

We have had a concern that existing statutes might prevent the State from preempting the Federal program because confidentiality provisions and penalty imposition limits may not meet the Federal requirements. We believe this bill will eliminate that concern.

Our Association prefers that the permitting process for injection wells, related to oil and gas operations, be controlled by the

state. The regulation of oil and gas operations by the Alaska Oil and Gas Conservation Commission is an example of regulatory control based on well-established knowledge of the regulated activity.

Therefore, we believe the Alaska Oil and Gas Conservation Commission is the appropriate administrator of regulations that bear on the technical elements of oil and gas operations and it should be the sole administrator of Class II wells in the state.

Finally we have seen that the Federal program, as proposed, would reduce the production rate of secondary recovery projects (water floods) by requiring that current injection pressure be reduced. The EPA's basis for lower pressures is no more than a "rule-of-thumb" which they acknowledge may be changed on a case-by-case review. But, until that review is completed, pressure would have to be reduced to comply with the regulations. This reduction would not only reduce current production rates, but even if only temporary, would reduce the ultimate total production of the formation causing revenue losses to both the State and producer. It is therefore a matter of mutual urgency.

If the proposed Federal rules are promulgated in the absence of State intent and ability to assume the program there will be a loss with no measure of compensation.

We urge the State to assume primacy in the regulation of Class II injection wells and we believe this bill contains specific statutory language which will serve this purpose.

Thank you.

BILL SHEFFIELD  
GOVERNOR



HB 680

STATE OF ALASKA  
OFFICE OF THE GOVERNOR  
JUNEAU

February 13, 1984

The Honorable Joe Hayes  
Alaska House of Representatives  
Pouch V  
Juneau, AK 99811

Dear Representative Hayes:

Under the authority of art. III, sec. 18, of the Alaska Constitution, I am transmitting a bill relating to the Alaska Oil and Gas Conservation Commission. This bill would give the state the authority to assume control and regulation of injection wells associated with oil and gas production, such as salt water disposal or enhanced recovery of natural gas or oil. The U.S. Environmental Protection Agency currently has that authority. A 1980 amendment to the Safe Drinking Water Act (42 U.S.C. sec. 300f -- j) added a new sec. 300h-4 that would allow a state to obtain primary enforcement responsibility from the federal government for those portions of its Underground Injection Control program related to the recovery and production of oil and gas. Instead of imposing the existing federal regulatory requirement, sec. 300h-4 would give a state that authority if the state could demonstrate that it had an effective program to prevent underground injection which endangers drinking water sources. This bill would give the state that authority.

Sincerely,

A handwritten signature in cursive script that reads "Bill Sheffield".

Bill Sheffield  
Governor

QUESTIONS

HB#680--3/7/84

MEMO:

FROM: MERRILL

TO: JOHN

1.) HAVE THE FEDS BEEN DOING THIS ELSEWHERE? AND EVEN IF WE PASS THIS BILL GIVING THE STATE THE AUTHORITY SO THAT IT MAY APPLY FOR TRANSFER, DOES IT GUARANTEE THAT WE'LL GET IT?

2.) IF THE FEDS ARE MAKING THIS TRANSFER POSSIBLE, ARE THEY PROVIDING ANY PROGRAMS TO HELP THE STATE FUND IT?

A.) FOLLOW UP: IF THERE ARE GOING TO BE FEDERAL FUNDS AVAILABLE, ISN'T THE FISCAL NOTE RATHER HIGH?

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ALASKA OIL & GAS  
CONSERVATION COMMISSION



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HB# 680

Rules by request of the Governor  
Relating to oil & gas recovery

ANALYSIS FOR LABOR & COMMERCE COMMITTEE

7 March, 1984

This bill will basically give the state authority, enabling it to apply to the EPA for transfer of authority to control and regulate injection wells associated with oil & natural gas production. The Governor in his message transmitting this bill to the House, stated:

"THIS BILL WOULD GIVE THE STATE THE AUTHORITY TO ASSUME CONTROL AND REGULATION OF INJECTION WELLS ASSOCIATED WITH OIL AND GAS PRODUCTION, SUCH AS SALT WATER DISPOSAL OR ENHANCED RECOVERY OF NATURAL GAS OR OIL. THE U.S. ENVIRONMENTAL PROTECTION AGENCY CURRENTLY HAS THAT AUTHORITY. A 1980 AMENDMENT TO THE SAFE DRINKING WATER ACT, ADDED A NEW SECTION 300h-4 THAT WOULD ALLOW A STATE TO OBTAIN PRIMARY ENFORCEMENT RESPONSIBILITY FROM THE FEDERAL GOVERNMENT FOR THOSE PORTIONS OF ITS UNDERGROUND INJECTION CONTROL PROGRAM RELATED TO THE RECOVERY AND PRODUCTION OF OIL AND GAS. INSTEAD OF IMPOSING THE EXISTING FEDERAL REGULATORY REQUIREMENT, SEC. 300h-4 WOULD GIVE A STATE THAT AUTHORITY IF THE STATE COULD DEMONSTRATE THAT IT HAD AN EFFECTIVE PROGRAM TO PREVENT UNDERGROUND INJECTION WHICH ENDANGERS DRINKING WATER SOURCES. THIS BILL WOULD GIVE THE STATE THAT AUTHORITY."

AOGA PROPOSED TESTIMONY ON HOUSE BILL NO. 680

HOUSE LABOR AND COMMERCE COMMITTEE

MARCH 7, 1984

Good morning. I'm Dave Yesland, Senior Staff Environmental Engineer with Shell Western E & P. I'm representing the Alaska Oil and Gas Association this morning and I will comment on the proposed Committee Substitute for HB680.

Our Association supports the intent of CSHB680, which is to provide the legislation necessary to enable the State to be the sole administrator of a permitting program for underground injection wells related to oil and gas production activities, or Class II wells, as they are identified in the Federal program. I will discuss the reasons for our support.

Without State preemption of the Federal program there will be redundant State and Federal programs with nothing but duplicated record-keeping and administrative delay as a result.

We have had a concern that existing statutes might prevent the State from preempting the Federal program because confidentiality provisions and penalty imposition limits may not meet the Federal requirements. We believe this bill will eliminate that concern.

Our Association prefers that the permitting process for injection wells, related to oil and gas operations, be controlled by the

state. The regulation of oil and gas operations by the Alaska Oil and Gas Conservation Commission is an example of regulatory control based on well-established knowledge of the regulated activity.

Therefore, we believe the Alaska Oil and Gas Conservation Commission is the appropriate administrator of regulations that bear on the technical elements of oil and gas operations and it should be the sole administrator of Class II wells in the state.

Finally we have seen that the Federal program, as proposed, would reduce the production rate of secondary recovery projects (water floods) by requiring that current injection pressure be reduced. The EPA's basis for lower pressures is no more than a "rule-of-thumb" which they acknowledge may be changed on a case-by-case review. But, until that review is completed, pressure would have to be reduced to comply with the regulations. This reduction would not only reduce current production rates, but even if only temporary, would reduce the ultimate total production of the formation causing revenue losses to both the State and producer. It is therefore a matter of mutual urgency.

If the proposed Federal rules are promulgated in the absence of State intent and ability to assume the program there will be a loss with no measure of compensation.

We urge the State to assume primacy in the regulation of Class II injection wells and we believe this bill contains specific statutory language which will serve this purpose.

Thank you.

PROPOSED AMENDMENT NO. 1  
FOR  
CS House Bill No. 680 L & C

Add to the Bill a new Section 4 as follows and renumber subsequent Sections accordingly:

\* Sec. 4 AS 31.05.170 is amended by adding a new subsection to read:

- (14) regular production means continuing production of oil or gas from a well into production facilities and means for transportation to market, but does not include short term testing, evaluation, or experimental pilot production activities which have been approved by permit or order of the commission.

ARCO Alaska, Inc.

Legal Division  
Post Office Box 360  
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Stephen M. Williams  
Senior Attorney



RECEIVED  
Department of Law

FEB 28 1984  
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Anchorage, Alaska

February 28, 1984

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Deputy Attorney General  
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Resolution Tower  
Anchorage, AK 99510

RE: Petition for Rehearing, ARCO Alaska, Inc. to the  
Alaska Oil and Gas Conservation Commission

Dear Barbara,

Attached for your review is the Stipulation and Settlement in the above-entitled matter. This document includes the comments we reviewed on Monday, February 27, 1984. I have executed 2 original copies of the settlement on behalf of ARCO. After you and the members of the Commission have executed the settlement, please transmit a copy to me.

If you have any questions, please advise me. Thank you for your assistance in resolving this matter.

Very truly yours,

S. M. Williams

SMW/ksm

Attachment



WHEREAS there is a dispute between ARCO and the AOGCC on whether the test production must be reported on Form 10-405; and

WHEREAS the AOGCC, by Order dated January 25, 1984, ordered ARCO to file the December 1983 production data on Form 10-405; and

WHEREAS ARCO, on February 10, 1984, petitioned the AOGCC for rehearing and reconsideration in accordance with the provisions of AS 31.05.080; and

WHEREAS it is the desire of both the AOGCC and ARCO to settle these matters;

NOW THEREFORE, ARCO and the AOGCC agree to stipulate and settle these issues as follows:

1. Until the date the pilot production facility to be located at the West Sak Sands Pilot Project Area commences normal operations and processes, and treats production from West Sak Sands Pilot production wells, or July 1, 1984, whichever date is earlier, ARCO shall file a monthly report on or before the 20th day of the month, commencing with a report on March 20, 1984 showing the test production levels, injection levels, and other test production data and information gathered by ARCO for the previous month. Such report shall be in the form and provide the specific information included in the reports filed by ARCO for December 1983, and January 1984. These reports will be kept and maintained confidential by the AOGCC in accordance with AS 31.05.035(d). Such reports shall be in addition to the quarterly report

required by Conservation Order No. 191, Rule 11.

2. Upon commencement of normal operations of the West Sak pilot production facility or July 1, 1984, whichever is earlier, ARCO must file all previously filed production reports on Form 10-405, or appeal to the Superior Court within 20 days of July 1, 1984 pursuant to the provisions of AS 31.05.080(b).

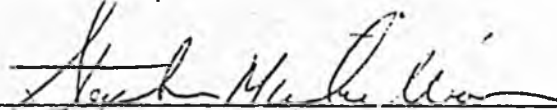
3. The AOGCC agrees to not claim, contend, or bring any action against ARCO under AS 31.05.150 of the Alaska Oil and Gas Conservation Commission statutes, or contend that ARCO violated AOGCC regulations for failure to file Form 10-405 showing West Sak Pilot test production information so long as ARCO is in compliance with the provisions of this Stipulation and Settlement, Conservation Order No. 191, and the AOGCC Regulations.

4. Because a dispute exists between ARCO and the AOGCC, this settlement shall not be construed as setting precedent or prejudicing any claims, arguments, or contentions of either ARCO or the AOGCC with respect to any of the issues set forth in this stipulation. Both the AOGCC and ARCO agree not to use this settlement as evidence in any proceeding before any court of law or administrative body, except as necessary to enforce the provisions set forth in this stipulation and settlement.

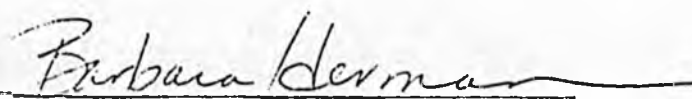
5. The AOGCC order issued January 25, 1984 is hereby amended to conform to this Stipulation and Settlement.

Agreed to and approved this 29<sup>th</sup> day of February,  
1984.

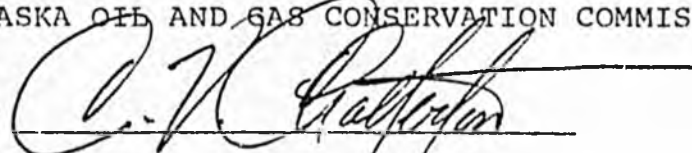
ARCO ALASKA, INC.

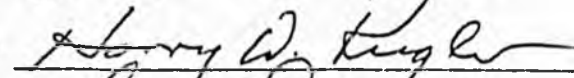
By   
Stephen M. Williams, Attorney

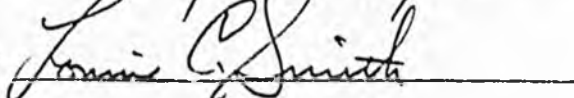
ALASKA DEPARTMENT OF LAW

By   
Barbara Herman

ALASKA OIL AND GAS CONSERVATION COMMISSION

By 

By 

By 

PROPOSED AMENDMENT No. 2  
FOR  
CS House Bill No. 680 L & C

Add to the Bill a new Section 2 as follows and renumber subsequent sections accordingly:

\* Sec. 2 AS 31.05.030 is amended by adding a new subsection to read:

(i) The commission shall have the authority to act as the jurisdictional agency over applications involving natural gas price determinations for all wells in Alaska not under federal jurisdiction, pursuant to the "Natural Gas Policy Act" of 1978, Public Law 95-621 and applicable regulations.

**Subpart E—Identification of State and Federal  
Jurisdictional Agencies**

[¶ 24,451]

**Sec. 274.501 Jurisdictional agency.**

(a) *Definition.* Except as provided in paragraph (b), "jurisdictional agency" means:

(1) with respect to a well the surface location of which is on the OCS, the Federal or State agency having regulatory jurisdiction with respect to the production of natural gas. The following agencies have notified the Commission of their authority in this regard.

(i) for OCS wells located in the Gulf Coast Region:

Area Oil & Gas Supervisor  
Suite 336  
3301 N. Causeway Blvd.  
Metairie, LA 70010

(ii) for OCS wells located in the Atlantic Region:

Area Oil and Gas Supervisor  
Atlantic OCS Operations  
Suite 204  
1725 K Street, N.W.  
Washington, DC 20244

(iii) for OCS wells located offshore Alaska:

Area Oil & Gas Supervisor  
P.O. Box 259  
Suite 109  
800 A Street  
Anchorage, AK 99510

(iv) for OCS wells located offshore California:

Area Oil & Gas Supervisor  
160 Federal Building  
1340 W. 6th Street  
Los Angeles, CA 90017

(2) with respect to a well the surface location of which is on lands within the boundaries of a State (including Federal lands and offshore State lands), the Federal or State agency having regulatory jurisdiction with respect to the production of natural gas. The following agencies have notified the Commission of their authority in this regard:

## Jurisdictional agency for wells on

State in which well is located	Federal lands	Other lands
Alabama	Area Oil & Gas Supervisor, Suite 204, 1725 K St., N.W., Washington, D.C. 20006.	Oil & Gas Supervisor, State Oil & Gas Board, Drawer O, University, AL 35486.
Alaska	Area Oil & Gas Supervisor, P.O. Box 259, Suite 109, 800 A Street, Anchorage, AK 99510.	Oil & Gas Conservation Commission, 3001 Porcupine Drive, Anchorage, AK 99501.
Arizona	Area Oil & Gas Supervisor, P.O. Box 26124, 505 Marquette Ave., N.W., Albuquerque, NM 87125.	Oil & Gas Conservation Commission, Suite 420, 1645 W. Jefferson, Phoenix, AZ 85007.
Arkansas	Area Oil & Gas Supervisor, 6136 E. 32nd Place, Tulsa, OK 74135.	Oil & Gas Commission, A Division of the Arkansas Dept. of Commerce, 314 East Oak, El Dorado, AR 71730.
California	Area Oil & Gas Supervisor, 160 Federal Building, 1340 West 6th Street, Los Angeles, CA 90017.	Department of Conservation, Division of Oil & Gas, 1416 Ninth St., Rm. 1316, Sacramento, CA 95814.
Colorado (except for the west ranges of the New Mexico Principal Meridian)	Area Oil & Gas Supervisor, P.O. Box 2859, 2002 Federal Building & Post Office, Casper, WY 82602.	Oil & Gas Conservation Commission, 1313 Sherman Street, Rm. 721, Denver, CO 80203.
(cr)		
Colorado (only the west ranges of the New Mexico Principal Meridian)	Area Oil & Gas Supervisor, P.O. Box 26124, 505 Marquette Ave., N.W., Albuquerque, NM 87125.	
Florida	Area Oil & Gas Supervisor, Suite 204, 1725 K Street, N.W., Washington, D.C. 20006.	Administrator of Oil & Gas, Bureau of Geology, Department of Natural Resources, 903 W. Tennessee Street, Tallahassee, FL 32304.
Georgia	Area Oil & Gas Supervisor, Suite 204, 1725 K St., N.W., Washington, D.C. 20006.	Department of Natural Resources, Geologic & Water Resources Division, 19 Martin Luther King Drive, S.W., Atlanta, GA 30334.
Idaho	Area Oil & Gas Supervisor, 160 Federal Building, 1340 West 6th Street, Los Angeles, CA 90017.	Idaho Public Utilities Commission, Statehouse Mail, Boise ID 83720.
Illinois	Area Oil & Gas Supervisor, Suite 204, 1725 K Street, N.W., Washington, D.C. 20006.	Department of Mines and Minerals, Oil & Gas Division, 704 Stratton Office Building, 400 S. Spring Street, Springfield, IL 62706.
Indiana	Area Oil & Gas Supervisor, Suite 204, 1725 K Street, N.W., Washington, D.C. 20006.	Department of Natural Resources, Oil & Gas Division, 606 State Office Bldg., 100 N. Senate Avenue, Indianapolis, IN 46204.
Kansas	Area Oil & Gas Supervisor, 6136 East 32nd Place, Tulsa, OK 74135.	Corporation Commission, State Office Building, Topeka, KS 66612.
Kentucky	Area Oil & Gas Supervisor, Suite 204, 1725 K Street, N.W., Washington, D.C. 20006.	Department of Mines and Minerals, Oil & Gas Division, Box 680, Lexington, KY 40501.
Louisiana	Area Oil & Gas Supervisor, 6136 East 32nd Place, Tulsa, OK 74135.	Office of Conservation, Box 44275, Baton Rouge, LA 70804.
Maryland	Area Oil & Gas Supervisor, Suite 204, 1725 K Street, N.W., Washington, D.C. 20006.	Energy and Coastal Zone Administration, Department of Natural Resources, Taxes State Office Bldg., Annapolis, MD 21404.
Michigan	Area Oil & Gas Supervisor, Suite 204, 1725 K Street, N.W., Washington, D.C. 20006.	Department of Natural Resources, Box 30028, Lansing, MI 48909.
Mississippi	Area Oil & Gas Supervisor, Suite 204, 1725 K Street, N.W., Washington, D.C. 20006.	State Oil & Gas Board, Box 1332, Jackson, MS 39205.
Montana	Area Oil & Gas Supervisor, P.O. Box 2859, 2002 Federal Bldg. & Post Office, Casper, WY 82602.	Oil & Gas Conservation Division, Department of Natural Resources and Conservation, 2535 St. Johns Ave., Billings, MT 59102, or P.O. Box 217, Helena, MT 59601.

¶ 24,451 § 274.501

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## Jurisdictional agency for wells on

State in which well is located	Federal lands	Other lands
Nebraska	Area Oil & Gas Supervisor, P.O. Box 2859, 2002 Federal Bldg & Post Office, Casper, WY 82602.	Oil & Gas Conservation Commission, Box 399, Sidney, NE 68162.
Nevada	Area Oil & Gas Supervisor, 160 Federal Building, 1340 West 6th Street, Los Angeles, CA 90017.	Department of Conservation and Natural Resources, Division of Mineral Resources, Capitol Complex, 201 S. Fall Street, Carson City, NV 89710.
New Mexico	Area Oil & Gas Supervisor, P.O. Box 26124, Marquette Ave., N.W., Albuquerque, NM 87125.	Department of Energy and Minerals, Oil Conservation Division, Box 2088, Santa Fe, NM 87501.
New York	Area Oil & Gas Supervisor, Suite 204, 1725 K Street, N.W., Washington, D.C. 20006.	Department of Environmental Conservation, Bureau of Mineral Resources, 50 Wolf Road, Albany, NY 12233.
North Carolina	Area Oil & Gas Supervisor, Suite 204, 1725 K Street, N.W., Washington, D.C. 20006.	Department of Natural Resources and Community Development, 512 N. Salisbury Street, Raleigh, NC 27611.
North Dakota	Area Oil & Gas Supervisor, P.O. Box 2859, 2002 Federal Bldg & Post Office, Casper, WY 82602.	Geological Survey, University Station, Grand Forks, ND 58202.
Ohio	Area Oil & Gas Supervisor, Suite 204, 1725 K Street, N.W., Washington, D.C. 20006.	Ohio Department of Natural Resources, 1932 Belcher Drive, Fountain Square, Columbus, OH 43224.
Oklahoma (except the Osage Reservation)	Area Oil & Gas Supervisor, 6136 East 32nd Place, Tulsa, OK 74135.	Corporation Commission, Jim Thorpe Building, Oklahoma City, OK, 73105.
(or)		
Oklahoma (Only the Osage Reservation)	Superintendent, Osage Indian Agency, Bureau of Indian Affairs, U.S. Department of the Interior, Pawhuska, OK 74056.	
Oregon	Area Oil & Gas Supervisor, 160 Federal Building, 1340 West 6th Street, Los Angeles, CA 90017.	Department of Geology & Mineral Industries, 1069 State Office Bldg., Portland, OR 97201.
Pennsylvania	Area Oil & Gas Supervisor, Suite 204, 1725 K Street, N.W., Washington, D.C. 20006.	Department of Environmental Resources, Division of Oil & Gas Regulation, 1205 Kessman Bldg., 100 Forbes Avenue, Pittsburgh, PA 15222.
South Carolina	Area Oil & Gas Supervisor, Suite 204, 1725 K Street, N.W., Washington, D.C. 20006.	South Carolina Public Service Commission, P.O. Drawer 11649, Columbia, SC 29211.
South Dakota	Area Oil & Gas Supervisor, P.O. Box 2859, 2002 Federal Bldg & Post Office, Casper, WY 82602.	Geological Survey, Science Center University of Vermillion, SD 57069.
Tennessee	Area Oil & Gas Supervisor, Suite 204, 1725 K Street, N.W., Washington, D.C. 20006.	State Oil & Gas Board, G-5 State Office Bldg., Nashville, TN 37219.
Texas (East of the 100th Meridian)	Area Oil & Gas Supervisor, 6136 East 32nd Place, Tulsa, OK 74135.	Railroad Commission, Drawer 12367, Austin, TX 78711.
(or)		
Texas (West of the 100th Meridian)	Area Oil & Gas Supervisor, P.O. Box 26124, 505 Marquette Ave., N.W., Albuquerque, NM 87125.	
Utah (except San Juan County)	Area Oil & Gas Supervisor, P.O. Box 2859, 2002 Federal Bldg & Post Office, Casper, WY 82602.	Division of Oil, Gas and Mining, Utah Department of Natural Resources, 1589 West North Temple, Salt Lake City, UT 84116.
(or)		
Utah (only San Juan County)	Area Oil & Gas Supervisor, P.O. Box 26124, 505 Marquette Ave., N.W., Albuquerque, NM 87125.	
Virginia	Area Oil & Gas Supervisor, Suite 204, 1725 K Street, N.W., Washington, D.C. 20006.	Division of Mines and Quarries, P.O. Drawer V, Big Stone Gap, VA 24219.
Washington	Area Oil & Gas Supervisor, 160 Federal Building, 1340 West 6th Street, Los Angeles, CA 90017.	Oil & Gas Supervisor, Department of Natural Resources, Olympia WA 98504.
West Virginia	Area Oil & Gas Supervisor, Suite 204, 1725 K Street, N.W., Washington, D.C. 20006.	Oil & Gas Division, Department of Mines, State Capitol, Charleston, WV 25305.
Wyoming	Area Oil & Gas Supervisor, P.O. Box 2859, 2002 Federal Bldg & Post Office, Casper,	Oil & Gas Conservation Commission, Box 2640, Casper, WY 82602.

(b) *Waiver.* In the case of any determination to which a waiver under Subpart C of Part 274 is applicable, "jurisdictional agency" means the Commission.

(c) *Federal lands.* For purposes of this section, "Federal lands" means

(1) all lands leased under:

(i) the Mineral Lands Leasing Act, as amended, 30 U.S.C. §§ 181 *et seq.*; and

(ii) the Mineral Leasing Act for Acquired Lands, as amended, 30 U.S.C. §§ 351 *et seq.*; and

(2) all Indian lands which are under the supervision of the United States Geological Survey (30 CFR Part 221); and

(3) all Indian lands which are under the supervision of the Osage Indian Agency, Bureau of Indian Affairs, U.S. Department of the Interior.

(d) *Divided-interest leases.* Unless an agreement under paragraph (f) of this section provides otherwise, where a well is located on a divided-interest lease involving Federal (or Indian) and private (or State) ownership:

(1) the Federal jurisdictional agency shall make the determination where the majority lease interest is Federal (or Indian);

(2) the State jurisdictional agency shall make the determination where the majority lease interest is private (or State); and

(3) the State jurisdictional agency shall make the determination where the lease is divided equally

(e) *Drilling units.* Unless an agreement under paragraph (f) of this section provides otherwise, where a drilling unit is drained by two or more wells, the Federal jurisdictional agency shall make the determination if the completion location of the well in question is located on a Federal (or Indian) lease, and the State jurisdictional agency shall make the determination if the completion location of the well in question is located on a private (or State) lease.

(f) *Agreements.* If the United States Geological Survey and any State jurisdictional agency enter into an agreement authorizing such State agency to make determinations under Subpart A of this part with respect to wells located on Federal lands, or authorizing the U.S. Geological Survey to make such determinations with respect to wells located on State lands, such agreement shall be filed with the Commission. Upon the filing of such an agreement the agency so authorized in the agreement shall be considered the jurisdictional agency with respect to wells on the designated lands to the extent provided in the agreement.

44 F.R. 48664 (August 20, 1979).  
 Historical record.—Section 274.501  
 originated in 43 F.R. 56448 (12/1/78),  
 effective 12/1/78.

Subsection (a), appearing in 43 F.R.  
 56448 (12/1/79), effective 12/1/78, read as

follows until its amendment in 44 F.R.  
 48664 (8/20/79), effective 8/1/79:

(a) *Definition.* Except as provided in  
 paragraph (b), "jurisdictional agency" means:

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(1) With respect to a well on the OCS, one of the following offices of the United States Geological Survey:

(i) for OCS wells located in the Gulf Coast Region:

Area Oil & Gas Supervisor  
Suite 336  
3301 N Causeway Blvd  
Metairie, LA 70010

(ii) for OCS wells located in the Atlantic Region:

Area Oil & Gas Supervisor  
Atlantic OCS Operations  
Suite 204  
1725 K Street, N.W.  
Washington, DC 20244

(iii) for OCS wells located offshore Alaska:

Area Oil & Gas Supervisor  
P.O. Box 259  
Suite 109  
800 A Street  
Anchorage, AK 99510

(iv) for OCS wells located offshore California:

Area Oil & Gas Supervisor  
160 Federal Building  
1340 West 6th Street  
Los Angeles, CA 90017

(2) With respect to a well the surface location of which is on lands within the boundaries of a State (including Federal lands and offshore State lands), the agency specified in the following table:

[Note: the list of jurisdictional agencies, appearing in 43 F.R. 56448 (12/1/78), effective 12/1/78, is not reproduced.]

Subsection (c), appearing in 43 F.R. 56448 (12/1/78), effective 12/1/78, read as follows until its amendment in 44 F.R. 48664 (8/20/79), effective 8/1/79:

(c) *Federal lands.* For purposes of this section, "Federal lands" means

(1) all lands leased under:

(i) the Mineral Lands Leasing Act, as amended, 30 U.S.C. §§ 181 *et seq.*, and

(ii) the Mineral Leasing Act for Acquired Lands, as amended, 30 U.S.C. §§ 351 *et seq.*, and

(2) all Indian lands which are under the supervision of the United States Geological Survey (30 CFR Part 221).

Subsections (d) and (e) newly originated in 44 F.R. 48664 (8/20/79), effective 8/1/79.

Subsection (f) (formerly designated as subsection (d)), appearing in 43 F.R. 56448 (12/1/78), effective 12/1/78, read as follows until its amendment in 44 F.R. 48664 (8/20/79), effective 8/1/79:

(f) *Agreements.* If the United States Geological Survey and any state jurisdictional agency enter into an agreement authorizing such state agency to make determinations under Subpart A with respect to wells located on Federal lands, such agreement shall be filed with the Commission. If such an agreement is filed, then such state agency shall be considered the jurisdictional agency with respect to wells on Federal lands in such state to the extent provided in the agreement.

[Part 275 begins on page 14,541.]

(b) *Waiver.* In the case of any determination to which a waiver under Subpart C of Part 274 is applicable, "jurisdictional agency" means the Commission.

(c) *Federal lands.* For purposes of this section, "Federal lands" means

(1) all lands leased under:

(i) the Mineral Lands Leasing Act, as amended, 30 U.S.C. §§ 181 *et seq.*; and

(ii) the Mineral Leasing Act for Acquired Lands, as amended, 30 U.S.C. §§ 351 *et seq.*; and

(2) all Indian lands which are under the supervision of the United States Geological Survey (30 CFR Part 221).

(d) *Agreements.* If the United States Geological Survey and any state jurisdictional agency enter into an agreement authorizing such state agency to make determinations under Subpart A with respect to wells located on Federal lands, such agreement shall be filed with the Commission. If such an agreement is filed, then such state agency shall be considered the jurisdictional agency with respect to wells on Federal lands in such state to the extent provided in the agreement.

[Part 275 begins on page 14,541.]

APPLICATION FOR DETERMINATION OF THE MAXIMUM LAWFUL  
PRICE UNDER THE NATURAL GAS POLICY ACT (NGPA)  
(Sections 102, 103, 107 and 108)

GENERAL INSTRUCTIONS

Complete this form if you are applying for price classification under sections 102, 103, 107 or 108 of the NGPA.

Complete each appropriate item on the reverse side of this page. The code numbers used in items 4 and 6 can be obtained from the Buyer/Seller Code Book. If there is more than one purchaser or contract, identify the additional information in the space below. Also enter any additional remarks in the space below. The data reported on this form are not considered to be confidential and will not be treated as such.

Submit the completed application to the appropriate Jurisdictional Agency as listed in title 18 of the CFR, part 274.501. If there are any questions, call (202) 357-8585.

SPECIFIC INSTRUCTIONS

Use the codes in the table below for type of determination in item 2.

Section of NGPA (a)	Category Code (b)	Description (c)
102	1	New OCS lease
102	2	New onshore well (2.5 mile test)
102	3	New onshore well (1000 feet deeper test)
102	4	New onshore reservoir
102	5	New reservoir on old OCS lease
103	-	New onshore production well
107	0	Deep (more than 15,000 feet) high cost gas
107	1	Gas produced from geopressured brine
107	2	Gas produced from coal seams
107	3	Gas produced from Devonian shale
107	5	Production enhancement gas
107	6	New tight formation gas
107	7	Recompletion tight formation gas
108	0	Stripper well
108	1	Stripper well - seasonally affected
108	2	Stripper well - enhanced recovery
108	3	Stripper well - temporary pressure buildup
108	4	Stripper well - protest procedure

Enter the appropriate information regarding other Purchasers/Contracts:

Line No.	Contract Date (Mo, Da, Yr) (a)	Purchaser (b)	Buyer Code (c)
1			
2			
3			
4			
5			
6			

Remarks:

1/ A gas sales contract has not as yet been agreed upon and/or executed. It is anticipated, however, that it will contain pricing provisions that will permit ARCO to collect the maximum lawful price.

**APPLICATION FOR DETERMINATION OF THE MAXIMUM LAWFUL  
PRICE UNDER THE NATURAL GAS POLICY ACT (NGPA)**

1.0 API well number: (If not assigned, leave blank. 14 digits.)	50- 029 - 20585 -				
2.0 Type of determination being sought: (Use the codes found on the front of this form.)	102 Section of NGPA	4 Category Code			
3.0 Depth of the deepest completion location: (Only needed if sections 103 or 107 in 2.0 above.)	_____ feet				
4.0 Name, address and code number of applicant. (35 letters per line maximum. If code number not available, leave blank.)	ARCO Alaska, Inc., a corporation duly organized under the laws of the State of Delaware Name P. O. Box 2819 (22-108 DAB) Street Dallas, Texas 75221 City State Zip Code			000969 Seller Code	
5.0 Location of this well: (Complete (a) or (b).) (a) For onshore wells (35 letters maximum for field name.)	Kuparuk River Oil Pool Field Name North Slope Borough Alaska County State				
(b) For OCS wells:	Area Name _____ Block Number _____  Date of Lease: _____ Mo. Day Yr. OCS Lease Number _____				
(c) Name and identification number of this well: (35 letters and digits maximum.)	Kuparuk River Unit #1C-8				
(d) If code 4 or 5 in 2.0 above, name of the reservoir: (35 letters maximum.)	_____				
6.0 (a) Name and code number of the purchaser: (35 letters and digits maximum. If code number not available, leave blank.)	None Contract Pending Name Buyer Code				
(b) Date of the contract:	N/A Mo. Day Yr.				
(c) Estimated total annual production from the well:	302.8 Million Cubic Feet				
		(a) Base Price as of 2-1-84	(b) Tax Estimated	(c) All Other Prices [Indicate (+) or (-)]	(d) Total of (a), (b) and (c)
7.0 Contract price: (As of filing date. Complete to 3 decimal places.)	\$/MMBTU	_0_._0_0_0	_0_._0_0_0	_0_._0_0_0	_0_._0_0_0 <sup>1/</sup>
8.0 Maximum lawful rate: (As of filing date. Complete to 3 decimal places.)	\$/MMBTU	_3_._6_0_9	_0_._3_6_1	_0_._0_0_0	_3_._9_7_0
9.0 Person responsible for this application:	Dottie J. Martinson Director, Name Gas Regulations Signature <i>Dottie J. Martinson</i> Title February 16, 1984 (214) 880-3650 Date Application is Completed Phone Number				
Agency Use Only					
Date Received by Juris. Agency					
Date Received by FERC					

PROPOSED AMENDMENT NO. 3  
FOR  
CS House Bill No. 680 L & C

Add to the Bill a new Section 3 as follows and renumber subsequent sections accordingly:

\* Sec. 3 AS 31.05.030 is amended by adding a new subsection to read:

(j) The commission in accordance with I.R.C. Section 4993(d)(5)(A)(i) shall have the authority to act as the state jurisdictional agency over applications involving tertiary recovery projects on lands in Alaska not under federal jurisdiction, pursuant to requirements of I.R.C. of Section 4993(c)(2)(A), (B), and (C) of the "Crude Oil Windfall Profits Tax Act" of 1980 and applicable regulations.



STATE OF ALASKA  
OFFICE OF THE GOVERNOR  
JUNEAU

September 23, 1980

The Honorable W. Michael Blumenthal  
Secretary of the Treasury  
15th Street and Pennsylvania Avenue  
Washington, D.C. 20220

Dear Mr. Secretary:

Pursuant to the requirements of Section 4993 (d) (5) (A) of the recently enacted Crude Oil Windfall Profits Tax Act of 1980, I have appointed the Alaska Oil and Gas Conservation Commission (AOGCC) as the jurisdictional agency over applications involving tertiary recovery projects on lands in Alaska not under federal jurisdiction. The AOGCC will review and take suitable action on any application for a tertiary recovery project within the stipulations of the Crude Oil Windfall Profits Tax Act of 1980, and applicable regulations.

This notification fulfills the responsibilities of the Governor of Alaska to provide a written submittal of agency designation in accordance with Section 4993 (d) (5) (A) of the Act.

Acknowledgement of receipt of this letter is requested.

Sincerely,

Jay S. Hammond  
Governor

cc: Hoyle H. Hamilton, Chairman/Commissioner  
Alaska Oil and Gas Conservation Commission

The Honorable William P. Clements, Governor of Texas  
Interstate Oil Compact Commission

William W. Hopkins  
Alaska Oil and Gas Association

The Honorable Robert E. LeResche, Commissioner  
Department of Natural Resources

Amendments:	Sec. as amended effective:
P.L. 96-223, § 101(a)(1) .....	.....
P.L. 96-223, § 101(a)(1):	
Added Code Sec. 4992 to read as above. For the effective date and transitional rules, see P.L. 96-223, § 101(i), following Code Sec. 4986.	

[Sec. 4993]

**SEC. 4993. INCREMENTAL TERTIARY OIL.**

[Sec. 4993(a)]

(a) **IN GENERAL.**—For purposes of this chapter, the term "incremental tertiary oil" means the excess of—

- (1) the amount of crude oil which is removed from a property during any month and which is produced on or after the project beginning date and during the period for which a qualified tertiary recovery project is in effect on the property, over
- (2) the base level for such property for such month.

Source: New.

[Sec. 4993(b)]

(b) **DETERMINATION OF AMOUNT.**—For purposes of this section—

(1) **BASE LEVEL.**—The base level for any property for any month is the average monthly amount (determined under rules similar to rules used in determining the base production control level under the June 1979 energy regulations) of crude oil removed from such property during the 6-month period ending March 31, 1979, reduced (but not below zero) by the sum of—

(A) 1 percent of such amount for each month which begins after 1978 and before the first month beginning after the project beginning date, and

(B) 2½ percent of such amount for each month which begins after the project beginning date (or after 1978 if the project beginning date is before 1979) and before the month for which the base level is being determined.

(2) **MINIMUM AMOUNT IN CASE OF PROJECTS CERTIFIED BY DOE.**—In the case of a project described in subsection (c)(1)(A), for the period during which the project is in effect, the amount of the incremental tertiary oil shall not be less than the incremental production determined under the June 1979 energy regulations.

(3) **ALLOCATION RULES.**—The determination of which barrels of crude oil removed during any month are incremental tertiary oil shall be made—

(A) first by allocating the amount of incremental tertiary oil between—

- (i) oil which (but for this subsection) would be tier 1 oil, and
- (ii) oil which (but for this subsection) would be tier 2 oil,

in proportion to the respective amounts of each such oil removed from the property during such month, and

(B) then by taking into account barrels of crude oil so removed in the order of their respective removal prices, beginning with the highest of such prices.

Source: New.

[Sec. 4993(c)]

(c) **QUALIFIED TERTIARY RECOVERY PROJECT.**—For purposes of this section—

(1) **IN GENERAL.**—The term "qualified tertiary recovery project" means—

(A) a qualified tertiary enhanced recovery project with respect to which a certification as such has been approved and is in effect under the June 1979 energy regulations, or

(B) any project for enhancing recovery of crude oil which meets the requirements of paragraph (2).

(2) REQUIREMENTS.—A project meets the requirements of this paragraph if—

(A) the project involves the application (in accordance with sound engineering principles) of 1 or more tertiary recovery methods which can reasonably be expected to result in more than an insignificant increase in the amount of crude oil which will ultimately be recovered,

(B) the project beginning date is after May 1979,

(C) the portion of the property to be affected by the project is adequately delineated,

(D) the operator submits (at such time and in such manner as the Secretary may by regulations prescribe) to the Secretary—

(i) a certification from a petroleum engineer that the project meets the requirements of subparagraphs (A), (B), and (C), or

(ii) a certification that a jurisdictional agency (within the meaning of subsection (d)(5)) has approved the project as meeting the requirements of subparagraphs (A), (B), and (C), and that such approval is still in effect, and

(E) the operator submits (at such time and such manner as the Secretary may by regulations prescribe) to the Secretary a certification from a petroleum engineer that the project continues to meet the requirements of subparagraphs (A), (B), and (C).

Source: New.

[Sec. 4993(d)]

(d) DEFINITIONS AND SPECIAL RULES.—For purposes of this section—

(1) TERTIARY RECOVERY METHOD.—The term "tertiary recovery method" means—

(A) any method which is described in subparagraphs (1) through (9) of section 212.78(c) of the June 1979 energy regulations, or

(B) any other method to provide tertiary enhanced recovery which is approved by the Secretary for purposes of this chapter.

(2) PROJECT BEGINNING DATE.—The term "project beginning date" means the later of—

(A) the date on which the injection of liquids, gases, or other matter begins, or

(B) the date on which—

(i) in the case of a project described in subsection (c)(1)(A), the project is certified as a qualified tertiary enhanced recovery project under the June 1979 energy regulations, or

(ii) in the case of a project described in subsection (c)(1)(B), a petroleum engineer certifies, or a jurisdictional agency approves, the project as meeting the requirements of subparagraphs (A), (B), and (C) of subsection (c)(2).

(3) PROJECT ONLY AFFECTS PORTION OF PROPERTY.—If a qualified tertiary recovery project can reasonably be expected to increase the ultimate recovery of crude oil from only a portion of a property, such portion shall be treated as a separate property.

(4) SIGNIFICANT EXPANSION TREATED AS SEPARATE PROJECT.—A significant expansion of any project shall be treated as a separate project.

(5) JURISDICTIONAL AGENCY.—The term "jurisdictional agency" means—

(A) in the case of an application involving a tertiary recovery project on lands not under Federal jurisdiction—

(i) the appropriate State agency in the State in which such lands are located which is designated by the Governor of such State in a written notification submitted to the Secretary as the agency which will approve projects under this subsection, or

(ii) if the Governor of such State does not submit such written notification within 180 days after the date of the enactment of the Crude Oil Windfall Profit Tax Act of 1980, the United States Geological Survey (until such time as the Governor submits such notification), or

(B) in the case of an application involving a tertiary recovery project on lands under Federal jurisdiction, the United States Geological Survey.

(6) BASIS OF REVIEW OF CERTAIN QUALIFIED TERTIARY RECOVERY PROJECTS.—In the case of any project which is approved under subsection (c)(2)(D)(ii) and for which a certification is submitted to the Secretary, the project shall be considered as meeting the requirements of subparagraphs (A), (B), and (C) of subsection (c)(2) unless the Secretary determines that—

Sec. 4993(d)

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001-26

(A) the approval of the jurisdictional agency was not supported by substantial evidence on the record upon which such approval was based, or

(B) additional evidence not contained in the record upon which such approval was based demonstrates that such project does not meet the requirements of subparagraph (A), (B), or (C) of subsection (c)(2).

If the Secretary makes a determination described in subparagraph (A) or (B) of the preceding sentence, the determination of whether the project meets the requirements of subparagraphs (A), (B), and (C) of subsection (c)(2) shall be made without regard to the preceding sentence.

(7) **RULINGS RELATING TO CERTAIN QUALIFIED TERTIARY RECOVERY PROJECTS.**—In the case of any tertiary recovery project for which a certification is submitted to the Secretary under subsection (c)(2)(D)(ii), a taxpayer may request a ruling from the Secretary with respect to whether such project is a qualified tertiary recovery project. The Secretary shall issue such ruling within 180 days of the date after he receives the request and such information as may be necessary to make a determination.

Source: New.

Amendments:	Sec. as amended effective:
P.L. 96-223 § 101(a)(1) .....	.....
P.L. 96-223, § 101(a)(1):	
Added Code Sec. 4993 to read as above. For the effective date and transitional rules, see P.L. 96-223, § 101(i) following Code Sec. 4986.	

[Sec. 4994]

#### SEC. 4994. DEFINITIONS AND SPECIAL RULES RELATING TO EXEMPTIONS.

(a) **QUALIFIED GOVERNMENTAL INTEREST.**—For purposes of section 4991(b)—

(1) **IN GENERAL.**—The term “qualified governmental interest” means an economic interest in crude oil if—

(A) such interest is held by a State or political subdivision thereof or by an agency or instrumentality of a State or political subdivision thereof, and

(B) under the applicable State or local law, all of the net income received pursuant to such interest is dedicated to a public purpose.

(2) **NET INCOME.**—For purposes of this paragraph, the term “net income” means gross income reduced by production costs, and severance taxes of general application, allocable to the interest.

(3) **AMOUNTS PLACED IN CERTAIN PERMANENT FUNDS TREATED AS DEDICATED TO PUBLIC PURPOSE.**—The requirements of paragraph (1)(B) shall be treated as met with respect to any net income which, under the applicable State or local law, is placed in a permanent fund the earnings on which are dedicated to a public purpose.

Source: New.

[Caution: Code Sec. 4994(b), below, as amended by P.L. 97-34, is applicable to taxable periods beginning after December 31, 1980.—CCH.]

[Sec. 4994(b)]

(b) **QUALIFIED CHARITABLE INTEREST.**—For purposes of section 4991(b)—

(1) **IN GENERAL.**—The term “qualified charitable interest” means an economic interest in crude oil if—

(A) such interest is—

(i) held by an organization described in clause (ii), (iii), or (iv) of section 170(b)(1)(A) which is also described in section 170(c)(2),

(ii) held by an organization described in section 170(c)(2) which is organized and operated primarily for the residential placement, care, or treatment of delinquent, dependent, orphaned, neglected, or handicapped children, or

(iii) held—

(i) by an organization described in clause (i) of section 170(b)(1)(A) which is also described in section 170(c)(2), and

(ii) There has been a material change of circumstances since the time that the project or expansion was initiated; and

(iii) The project is certified under the criteria and pursuant to the procedures provided in paragraph (d). For purposes of determining eligibility for certification, an existing project shall be examined prospectively, on the basis of the circumstances existing at the time such certification is sought.

(c) *Definitions.* For purposes of this section—

A "qualified tertiary enhanced recovery project" is a project for the enhanced recovery of crude oil, to the extent that such project involves the application of one or more of the following techniques and is certified pursuant to paragraph (d) of this section as being uneconomic at the otherwise applicable ceiling prices:

(1) Miscible fluid displacement, *i. e.*, an oil displacement process in which gas or alcohol is injected into an oil reservoir, at pressure levels such that the injected gas or alcohol and reservoir oil are miscible. The process may include the concurrent, alternating, or subsequent injection of water. The injected gas may be natural gas, enriched natural gas, a liquefied petroleum gas slug driven by natural gas, carbon dioxide, nitrogen, or flue gas. Gas cycling, *i. e.*, gas injection into gas condensate reservoirs, is not a miscible fluid displacement technique nor a tertiary enhanced recovery technique within the meaning of this section.

(2) Steam drive injection, *i. e.*, the continuous injection of steam into one set of wells (injection wells) or other injection source to effect oil displacement toward and production from a second set of wells (production wells).

(3) Microemulsion, or micellar/emulsion, flooding, *i. e.*, an augmented waterflooding technique in which a surfactant system is injected in order to enhance oil displacement toward producing wells. A surfactant system normally includes a surfactant, hydrocarbon, cosurfactant, an electrolyte and water, and polymers for mobility control.

(4) In situ combustion, *i. e.*, combustion of oil in the reservoir, sustained by continuous air injection, to displace unburned oil toward producing wells.

(5) Polymer augmented waterflooding, *i. e.*, augmented waterflooding in which organic polymers are injected with the water to improve areal and vertical sweep efficiency.

(6) Cyclic steam injection, *i. e.*, the alternating injection of steam and production of oil with condensed steam from the same well or wells.

(7) Alkaline (or "caustic") flooding *i. e.*, an augmented waterflooding technique in which the water is made chemically basic as a result of the addition of alkali metals.

(8) Carbon dioxide augmented waterflooding, *i. e.*, injection of carbonated water, or water and carbon dioxide, to increase waterflood efficiency.

(9) Immiscible carbon dioxide displacement, *i. e.*, injection of carbon dioxide into an oil reservoir to effect oil displacement under conditions in which miscibility with reservoir oil is not obtained.

(10) Specific variations of any of the above-listed general techniques, as determined in any particular case by the certifying authority.

"Certifying authority" means the Administrator, Economic Regulatory Administration, Department of Energy, or any officer of the Department of Energy to whom the Administrator has delegated such functions.

"Incremental crude oil" (resulting from the implementation of a qualified tertiary enhanced recovery project) means, in the case of a new project, the amount of crude oil which is or will be produced as a result of such a project and which is in excess of the amount of crude oil ("nonincremental crude oil") which could have been produced from the property or project area through continued maximum feasible production from methods of production employed on the property prior to the receipt of the certifications provided for in paragraph (d) of this section. As applied to expansion of existing tertiary enhanced recovery projects, the term means the amount of crude oil which is or will be produced as a result of the expanded project and which is in excess of the amount of crude oil ("nonincremental crude oil") which could have been produced from the property or project area through continued maximum feasible production from the methods of production employed on the property prior to the receipt of the certification provided for in paragraph (d) of this section. As applied to an existing project within the meaning of paragraph (b)(2) of this section, the term means the amount of crude oil which is or will be produced as a result of the continuation of the project or of the particular highest phase of the project and which is in excess of the amount of crude oil ("nonincremental crude oil") which could have been produced from the property or project area through continued maximum feasible production from methods of production (other than the tertiary method, or that phase of such method, that would be discontinued in the

STATE OF ALASKA 1984 LEGISLATIVE SESSION  
FISCAL NOTE

Revision Date: \_\_\_\_\_

**REQUEST**

Bill/Resolution No.: \_\_\_\_\_  
 Title: Relating to the Alaska Oil and Gas Conservation Commission  
 Sponsor: Governor  
 Requestor: \_\_\_\_\_  
 Date of Request: \_\_\_\_\_

**FISCAL DETAIL**

Agency Affected: Commerce and Economic Development  
 Program Category Affected: \_\_\_\_\_  
Protection  
 BRU, Program or Subprogram(s) Affected: \_\_\_\_\_  
Oil and Gas Conservation Commission

**EXPENDITURES/REVENUES: (Thousands of Dollars)**

OPERATING	FY 84	FY 85	FY 86	FY 87	FY 88	FY 89
100 PERSONAL SERVICES	0	25.0	26.1	27.6	29.0	30.7
200 TRAVEL	0	88.0	90.4	90.4	90.5	90.3
300 CONTRACTUAL	60.0	9.5	9.5	9.5	9.5	0
400 SUPPLIES	0	0.5	0.5	0.5	0.5	0.5
500 EQUIPMENT						
600 LAND & STRUCTURES						
700 GRANTS, CLAIMS						
800 MISCELLANEOUS						
<b>TOTAL OPERATING</b>	<b>60.0</b>	<b>125.0</b>	<b>126.5</b>	<b>128.0</b>	<b>129.5</b>	<b>121.5</b>
<b>CAPITAL</b>						
<b>REVENUE</b>						

**FUNDING: (Thousands of Dollars)**

GENERAL FUND	60.0	125.0	126.5	128.0	129.5	121.5
FEDERAL FUNDS						
OTHER						
<b>TOTAL</b>	<b>60.0</b>	<b>125.0</b>	<b>126.5</b>	<b>128.0</b>	<b>129.5</b>	<b>121.5</b>

**POSITIONS:**

FULL-TIME	1	1	1	1	1
PART-TIME					
TEMPORARY					

**SOURCE OF FUNDS TO OFFSET FISCAL IMPACT OF BILL:**

**ANALYSIS:** Attach a separate page for analysis

Prepared By: Chat Chatterton Phone: 279-1433  
 Division: Alaska Oil and Gas Conservation Comm. Date: 2/3/84

Approved by Commissioner: Richard A. Lyon Date: 2/11/84  
 Agency: Commerce and Economic Development

Distribution (by Agency preparing fiscal note):

- Legislative Finance
- Legislative Sponsor
- Requestor
- Office of Management and Budget
- Impacted Agency(ies)

12/1/83

ALASKA OIL AND GAS CONSERVATION COMMISSION

ANALYSIS

- INTRODUCTION: The fiscal impact results solely from subsection (h) Section 1 of the Bill.
- Code 100 Are advised by Environmental Protection Agency (EPA) and by other states who have been delegated enforcement primacy by EPA that there is a substantial increase in the technical clerical workload. Accordingly request personal services funding for a Clerk Typist III.
- Code 200 Field inspection requirements will nearly double the current level of trips to the field. Accordingly additional travel funding is required.
- Code 300 a) Contractual cost to prepare an application package to EPA for obtaining primacy is estimated to cost \$60,000 which will be expended in FY'84.
- b) A word processing machine will be obtained for the additional Clerk Typist III on a four year rental/purchase agreement.
- Code 400 Additional clerical supplies will be required for the new Clerk Typist III.
- Code 500 A one-time expenditure for office equipment (desk, chair, etc.) will be necessary in FY'85.



AOGA PROPOSED TESTIMONY ON HOUSE BILL NO. 680

HOUSE LABOR AND COMMERCE COMMITTEE

MARCH 7, 1984

Good morning. I'm Dave Yesland, Senior Staff Environmental Engineer with Shell Western E & P. I'm representing the Alaska Oil and Gas Association this morning and I will comment on the proposed Committee Substitute for HB680.

Our Association supports the intent of CSHB680, which is to provide the legislation necessary to enable the State to be the sole administrator of a permitting program for underground injection wells related to oil and gas production activities, or Class II wells, as they are identified in the Federal program. I will discuss the reasons for our support.

Without State preemption of the Federal program there will be redundant State and Federal programs with nothing but duplicated record-keeping and administrative delay as a result.

We have had a concern that existing statutes might prevent the State from preempting the Federal program because confidentiality provisions and penalty imposition limits may not meet the Federal requirements. We believe this bill will eliminate that concern.

Our Association prefers that the permitting process for injection wells, related to oil and gas operations, be controlled by the

state. The regulation of oil and gas operations by the Alaska Oil and Gas Conservation Commission is an example of regulatory control based on well-established knowledge of the regulated activity.

Therefore, we believe the Alaska Oil and Gas Conservation Commission is the appropriate administrator of regulations that bear on the technical elements of oil and gas operations and it should be the sole administrator of Class II wells in the state.

Finally we have seen that the Federal program, as proposed, would reduce the production rate of secondary recovery projects (water floods) by requiring that current injection pressure be reduced. The EPA's basis for lower pressures is no more than a "rule-of-thumb" which they acknowledge may be changed on a case-by-case review. But, until that review is completed, pressure would have to be reduced to comply with the regulations. This reduction would not only reduce current production rates, but even if only temporary, would reduce the ultimate total production of the formation causing revenue losses to both the State and producer. It is therefore a matter of mutual urgency.

If the proposed Federal rules are promulgated in the absence of State intent and ability to assume the program there will be a loss with no measure of compensation.

We urge the State to assume primacy in the regulation of Class II injection wells and we believe this bill contains specific statutory language which will serve this purpose.

Thank you.

STATE OF ALASKA 1984 LEGISLATIVE SESSION  
FISCAL NOTE

Revision Date: \_\_\_\_\_

REQUEST

Bill/Resolution No.: \_\_\_\_\_  
Title: Relating to the Alaska Oil and Gas Conservation Commission  
Sponsor: Governor  
Requestor: \_\_\_\_\_  
Date of Request: \_\_\_\_\_

FISCAL DETAIL

Agency Affected: Commerce and Economic Development  
Program Category Affected: \_\_\_\_\_  
Protection  
BRU, Program or Subprogram(s) Affected: \_\_\_\_\_  
Oil and Gas Conservation Commission

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500 EQUIPMENT						
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OTHER						
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POSITIONS:

FULL-TIME		1	1	1	1	1
PART-TIME						
TEMPORARY						

SOURCE OF FUNDS TO OFFSET FISCAL IMPACT OF BILL:

ANALYSIS: Attach a separate page for analysis

Prepared By: Chat Chatterton Phone: 279-1433  
Division: Alaska Oil and Gas Conservation Comm. Date: 2/3/84  
Approved by Commissioner: Richard A. Lyon Date: 2/11/84  
Agency: Commerce and Economic Development

Distribution (by Agency preparing fiscal note):

Legislative Finance  
Legislative Sponsor  
Requestor  
Office of Management and Budget  
Impacted Agency(ies)

12/1/83

HB

683

# Alaska State Legislature

Representative Milo Fritz  
District 5  
P.O. Box 158  
Anchor Point, Alaska 99556  
(907) 235-8366



While in Juneau  
Pouch V  
Juneau, Alaska 99811  
(907) 465-4833

## House of Representatives

MILO FRITZ

### MEMORANDUM

TO: Representative John Cowdry  
Labor & Commerce Chairman

FROM: Representative Milo Fritz  
Finance Committee Member

DATE: March 13, 1984

SUBJ: HB 683

I would greatly appreciate your springing HB 683 out of your Committee. As I look at it, there is no threat to the Susitna Dam and with the population of the Kenai Peninsula growing in the neighborhood of between nine and ten percent every year, we will need the power from Bradley Lake within the next two years. Your consideration in getting HB 683 out of your Committee and on to the next Committee of referral will be very greatly appreciated. If there is anything about this matter that you would care to discuss with me I am at your service.

cc: D. Kent Wicke  
Mr. Leo Rhode



**Homer Electric Association, Inc.**

CENTRAL OFFICE: P.O. BOX 429 ☉ HOMER, ALASKA 99603-0429 ☉ (907) 235-8167

March 7, 1984

The Hon. John J. Cowdery, Chairman  
House Labor & Commerce Committee  
Alaska State Legislature  
Pouch V (MS 3100)  
Juneau, Alaska 99811

Dear Mr. Cowdery:

House Bill #683, presently in the Labor and Commerce Committee, would authorize Bradley Lake as a State project. It requests no funding. Bradley Lake must be authorized in order for the Alaska Power Authority to file for a FERC license. Filing for an FERC license should be done concurrently with development of a financing plan and power sales agreements.

Approval of HB #683 does not conflict with the four-dam pool, and Bradley Lake is not competition to Susitna. Power from Bradley Lake is needed for the winter of 1988/89. Without Bradley Lake natural gas generation facilities must be added. I believe all studies thus far show no negative impact of Bradley Lake on Susitna feasibility or financing.

We need your support! HB #683 should be passed out of its assigned Committees for full House consideration as soon as possible to keep the project on schedule. Funding will be requested only after a financing plan is developed. Funding is not requested in HB #683.

Thank you in advance for your consideration. Please let us know if we can answer any of your questions.

Sincerely yours,

HOMER ELECTRIC ASSOCIATION, INC.

R. Kent Wick  
General Manager

BKW:em

# Alaska State Legislature



## Speaker of the House of Representatives

Official Business

Pouch V  
State Capital  
Juneau, Alaska 99811  
(907) 465-3720

March 29, 1984

To: Representative Bob Bettisworth  
Vice Chairman, House Finance

From: Representative Joe Hayes *JH*  
House Speaker

Per our recent telephone conversation, I am sending a copy of Governor Sheffield's letter dated March 29, 1984, proposing a formula to the solution of the 4-Dam Pool problem.

Would you please check out the disposition of various pieces of legislation relating to "the package". I believe most or all of them may be in House Finance. I would appreciate your suggestions for a resolution to the Governor's requirements.

Please feel free to discuss this with the Governor and his staff.



STATE OF ALASKA  
OFFICE OF THE GOVERNOR  
JUNEAU

March 29, 1984

The Honorable Joe Hayes  
The Capitol  
Juneau

Dear Joe,

From our discussion at lunch today, it is my understanding that you would consider an agreement to ensure that a solution to the 4-dam pool problem is brought to the House floor for a vote.

I propose the following formula as the solution, and due to the time constraints imposed on us by the four capital budgets now on my desk, the vote on all but one portion of the formula needs to be taken during your floor session this evening.

The package includes:

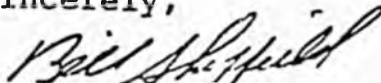
- Repeal of the Susitna Clause
  - Approval of \$49 million for the Rate Stabilization Fund
  - Repeal of the prohibition against industrial rates
  - Inclusion of Watana and Bradley Lake into a new, 6-dam pool
  - \$200 million appropriated to the Power Development Fund.
- I understand the time problem involved on this item, and I would agree that it could be handled later.

It would be my intention to publicly support this formula, and I also would reiterate my longstanding support for the Susitna Hydroelectric Project. The only qualifications to my support for Susitna is the same as always: that we first arrive at a positive finding of feasibility, a workable financing plan and pre-signed power sales agreements with the Railbelt utilities.

As we also discussed, the issue of the Major Projects Fund also should be subjected to a floor vote today. I strongly believe that only a "clean" constitutional amendment represents good public policy. I reiterate that if a vote is taken today, it should be on House Joint Resolution 57 as I introduced it.

I understand your personal opposition to some of these points. I appreciate your agreement to refrain from lobbying others in opposition, and your willingness to allow the members of your caucus to vote their own consciences. I also can assure you that positive action on these issues will greatly influence my budget decisions over the next few days.

Sincerely,

  
Bill Sheffield  
Governor

FEBRUARY 29, 1984

TO: JOHN  
FROM: KEN  
RE: HB 683 "APPROVING THE BRADLEY LAKE HYDROELECTRIC  
PROJECT"

HB 683 IS A BILL WHICH ASKS THE LEGISLATURE TO APPROVE THE BRADLEY LAKE HYDROELECTRIC PROJECT AS A PROJECT OF THE ENERGY PROGRAM FOR ALASKA. THIS LEGISLATION ALSO ASKS FOR APPROVAL OF THE COST OF BRADLEY LAKE, ESTIMATED TO BE 354 MILLION DOLLARS. THE BILL, HOWEVER, IS NOT AN APPROPRIATIONS BILL. FUNDING FOR BRADLEY LAKE PROJECT WOULD NOT BE ASSURED BY PASSAGE OF HB 683.

QUESTIONS:

1. HOW LONG WILL IT BE BEFORE THE A.P.A. COMPLETES ITS FINDINGS AND RECOMMENDATION REPORT AND SENDS IT ON TO O.M.B. ?
2. HOW LONG DO YOU EXPECT IT TO TAKE O.M.B. TO PRODUCE ITS REPORT ONCE THE A.P.A. HAS PASSED ON ITS FINDINGS ?
3. ISN'T THIS LEGISLATION A BIT UNTIMELY SINCE THE LEGISLATURE HAS NO ASSURANCE AT THIS POINT THAT THE A.P.A.'S AND O.M.B.'S FINAL REPORTS WILL SUPPORT THE FEASIBILITY STUDY ?
4. WHERE WILL THE INITIAL FUNDING FOR THE CONSTRUCTION OF BRADLEY LAKE COME FROM AND HOW WILL THE ENTIRE PROJECT BE FUNDED ?

5. IF THE STATE APPROPRIATES FUNDS FOR BRADLEY LAKE, ISN'T THAT USING FUNDS THAT COULD GO TOWARD CONSTRUCTION OF THE WATANA PHASE OF THE SUSITNA PROJECT ?
6. WILL THERE BE A NEED FOR THE STATE TO PROVIDE SUBSIDY TO STABILIZE POWER RATES DURING THE FIRST FEW YEARS BRADLEY LAKE IS IN OPERATION ?
7. WILL BRADLEY LAKE POWER BE AN ADDITIONAL SOURCE OF POWER TO CUSTOMERS ON THE KENAI PENINSULA OR WILL IT REPLACE THE CURRENT SOURCE OF POWER ?
8. WHAT PERCENTAGE OF THE POWER PRODUCED AT BRADLEY LAKE CAN BE SOLD WHEN THE PROJECT COMES ON LINE ?
9. IS THE A.P.A. CERTAIN THAT POWER PRODUCED AT BRADLEY LAKE COULD BE SOLD ?
10. ARE THERE NOW OR HAS THERE BEEN ANY POWER SALES NEGOTIATIONS WITH UTILITY COMPANIES FOR BRADLEY LAKE POWER ?
11. WITH WHAT UTILITY COMPANIES HAVE THOSE NEGOTIATIONS OR TALKS TAKEN PLACE ?
12. WHAT IS THE STATUS OF THE F.E.R.C. LICENSING PROCESS FOR BRADLEY LAKE ?
13. HOW LONG BEFORE CONSTRUCTION COULD ACTUALLY START ?
14. ARE THE COMMUNITIES TO BE SERVED BY BRADLEY LAKE SET UP TO HANDLE THE TRANSMISSION OF THAT POWER ?
15. THEN, ARE THERE CAPITAL PROJECTS ASSOCIATED WITH BRADLEY LAKE THAT ARE NOT INCLUDED IN THE 354 MILLION DOLLAR COST FIGURE ?

## STATUS REPORT

Bradley Lake Hydroelectric Project

February 27, 1984

The Bradley Lake Hydroelectric Power Project was authorized by the U.S. Congress as a Federal project in the Flood Control Act of 1962.

After lengthy study the project was found to be economically feasible by the U.S. Army, Corps of Engineers in 1978.

The Corps of Engineers started work in 1978 and published a General Design Memorandum in February 1982 and a final Environmental Impact Statement in August 1982.

The 1981 Alaska State Legislature, by joint resolution, requested that the United States Congress provide a system to permit the Corps to design and construct the project as a project of the Alaska Power Authority, provided that the financing for the project be solely the responsibility of the State of Alaska and the Power Authority. The Legislature also appropriated \$15 million from the General Fund to the Power Development Fund for the Bradley Lake project.

The 1982 Alaska State Legislature in HB 9 stated that subject to the review of the feasibility study and plan of finance by the Division of Budget and Management in the Office of the Governor the Bradley Lake Hydroelectric Project is approved as a project of the Power Authority. The Letter of Intent accompanying HB 9 stated that it was the intent of the Legislature that the Power Authority proceed with the Bradley Lake Hydroelectric Project by expending the funds received and by securing, if necessary, additional financing. The Legislature also appropriated \$3 million for the Bradley Lake project.

The Power Authority attempted to negotiate an agreement with the Corps concerning the Bradley Lake project. Due to lack of Federal legislation to allow the Corps to accept State funds, impact of Federal ownership on ability of the Power Authority to obtain bonding for the project, and lack of State control of cost overruns and power rates, the Power Authority Board of Directors in October 1982 voted to pursue design and construction of the project by the Power Authority and supported Federal deauthorization of the project.

The Bradley Lake project was deauthorized by the U.S. Congress in December 1982.

In March 1983, the Board of Directors approved the selection of the firm of Stone and Webster Engineering Company as design engineer for the project, and authorized an award of a contract for preliminary design and feasibility study to focus on the determination of the feasibility and optimum plan for development of Bradley Lake. The project's conceptual design has been modified from that planned by the Corps to lessen the environmental impact and the cost of the project.

Results of the Feasibility Study were presented to the Power Authority Board of Directors in September 1983. The project is attractive economically, both with or without Susitna. A sensitivity analysis at zero percent load growth indicates that Bradley Lake's economic feasibility remains positive. Consequently, the Board authorized preparation of a Federal Energy Regulatory License Application. Preliminary cost of power determinations were made under various funding scenarios which indicate that the Bradley Lake power costs are competitive with the thermal alternatives. The project was sized at 90 megawatts, constructed so that it could be expanded to 135 Megawatts in the future if necessary. In 1983 dollars the project cost is \$283 million. The 1985 bid price is \$354 million, not including financing costs.

Meetings have been held with the various utilities who are potential power purchasers and Letters of Interest to purchase power have been received from a sufficient number of utilities to indicate that Bradley power is marketable.

Environmental aspects of the project have been discussed with the various Resource Agencies. The 60 day agency consultation period required by the Federal Energy Regulatory Commission (FERC) has been initiated and the draft license application has been forwarded to interested agencies. Minimum Bradley River instream flow requirements, which was a major concern of the Resource Agencies expressed in their review of the Corps' Final EIS, have been established and concurred with following Power Authority field study and analysis in 1983. A moose migration study is also underway to establish mitigation requirements for possible impacts on the moose population.

#### Current Status and Future Actions

1. The Finance Plan is in final preparation. The Plan considers information gained from the 4 Dam Pool negotiations and is based on Bradley Lake being in the Energy Program for Alaska. It should be finalized by March 18, 1984.
2. The Power Authority is currently working with the Office of Management and Budget on their review of the Feasibility Study and the Plan of Finance.
3. The submittal of the FERC license application will be considered by the Power Authority Board of Directors meeting during the week of mid March 1984.
4. Although funds have been appropriated for Bradley Lake, the project has not been specifically authorized by the Legislature at a specified construction cost nor has it been included in the Energy Program for Alaska. Design cannot be initiated until the project is authorized at a specified construction cost. HB 683 provides the required authorization and includes the project in the Energy Program for Alaska.

5. If the Legislature authorizes the project, design can commence if approved by the Power Authority Board of Directors. No design funds will be expended until power sales agreements with specified power rates have been signed by the participating utilities.
6. Sufficient funds have been appropriated to fund FERC license support and design activities in FY 85. Additional funds, dependent on the requirements of the Finance Plan, will be required in FY 86 and later years.
7. If design can be initiated by July 1, 1984, construction could commence in August 1985 with first power on line in late 1988. The construction start is dependent on receipt of the FERC license. FERC has indicated in writing that due to extensive Federal environmental work on the project, it may be possible to receive the license as early as 11 months after submittal.



ALASKA STATE LEGISLATURE  
HOUSE OF REPRESENTATIVES  
RESEARCH AGENCY

Pouch Y. State Capitol  
Juneau, Alaska 99811  
(907) 465-3991

April 26, 1982

MEMORANDUM

TO: Representative Hugh Malone  
Attn: Spike Dale

FROM: Jack Kreinhed *JK* and David Teal *DT*  
Research Staff

RE: Bradley Lake Financing Analysis  
Research Request 82-122

You requested that we convert the power cost figures in the Bradley Lake financing analysis prepared by Sterling Gallagher into 1982 dollars, so that the costs can be more accurately compared to current power costs. Tables 1 and 2, below, show annual project and energy costs, based on 100 percent bond financing, and on 50 percent State financing, respectively. These tables correspond to Tables III and VIII of Mr. Gallagher's analysis.

TABLE 1  
BRADLEY LAKE COST ANALYSIS (1982 DOLLARS)  
Financing: 100 Percent Tax Exempt 14% Bonds  
(7% inflation, 3% real discount rate)

Year	Debt Service <sup>1</sup> (\$000)	Operating Costs <sup>2</sup> (\$000)	Total Annual Cost (\$000)	Energy Sales (MWH)	Power Cost (Cents/KWH)
1989	\$69,658	\$1,063	\$70,721	340,000	20.80
1994	42,845	917	43,762	340,000	12.87
1999	26,350	791	27,141	340,000	7.98
2004	16,206	683	16,889	340,000	4.97
2009	9,967	589	10,556	340,000	3.10
2014	6,130	508	6,638	340,000	1.95

<sup>1</sup> Debt service in nominal dollars would be \$137.6 million per year.  
<sup>2</sup> Operating costs are constant in real terms and are discounted at a real rate of 3 percent per year.

TABLE 2

BRADLEY LAKE COST ANALYSIS (1982 DOLLARS)  
Financing: 50 Percent State Grant,  
50 Percent Tax Exempt 14% Bonds  
(7% inflation, 3% real discount rate)

Year	Debt Service (\$000)	Operating Costs (\$000)	Total Annual Cost (\$000)	Energy Sales (MWH)	Power Cost (Cents/KWH)
1989	\$31,799	\$1,063	\$32,862	340,000	9.67
1994	19,557	917	20,474	340,000	6.02
1999	12,028	791	12,819	340,000	3.77
2004	7,398	683	8,081	340,000	2.38
2009	4,550	589	5,139	340,000	1.51
2014	2,798	508	3,306	340,000	0.97

These cost figures are based on the Gallagher analysis, discounted at an inflation rate of 7 percent and a real discount rate of 3 percent. The resulting power costs are much lower than those cited in the Gallagher analysis, particularly in the more distant years. For example, Gallagher's figures for the cost of power under the 100 percent bond financing case range, in nominal dollars, from 41 cents/KWH in 1989 to 44 cents in 2014.

In 1982 dollars, these costs are equivalent to 21 cents/KWH in 1989 and 2 cents/KWH in 2014. Although the actual power cost in 2014, under Mr. Gallagher's assumptions, would be about 44 cents/KWH, this amount is comparable to only about 2 cents/KWH in terms of today's dollars.

We are presently working on the second part of your request, which was to apply the analysis used by Mr. Gallagher for Bradley Lake to the Susitna project, and to re-view the Bradley Lake analysis for accuracy and completeness. This work should be completed by tomorrow, April 27. If you have any questions in the meantime, please let us know.



ALASKA STATE LEGISLATURE  
HOUSE OF REPRESENTATIVES  
RESEARCH AGENCY

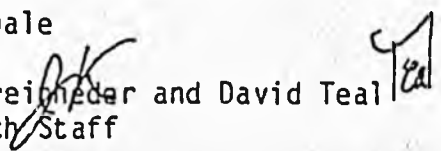
Pouch Y, State Capitol  
Juneau, Alaska 99811  
(907) 465-3991

April 29, 1982

MEMORANDUM

TO: Representative Hugh Malone

ATTN: Spike Dale

FROM: Jack Kreighner and David Teal   
Research Staff

RE: Bradley Lake Financing Analysis--Supplemental Information  
Research Request Number 82-122

This memorandum is in response to your request for a comparison of the Bradley Lake and Susitna hydroelectric projects, based on Sterling Gallagher's recent Bradley Lake financing analysis. The memorandum contains 1) several tables which present energy costs of the two projects and 2) a review of Mr. Gallagher's Bradley Lake analysis for accuracy and completeness. The major finding is that application of Gallagher's analysis to both projects shows that the Bradley Lake project is capable of producing energy at lower cost than the combined Watana and Devil Canyon portions of the Susitna project.

The source of data on the Susitna project is the Susitna Hydroelectric Project Draft Feasibility Report prepared by ACRES for the Alaska Power Authority. That report gives annual operating costs of the Watana portion of the Susitna project as \$10 million and lists project construction costs as \$3,647 million. Construction and annual operating costs of the Devil Canyon project are \$1,480 million and \$5.2 million, respectively. All of these figures are in 1982 dollars.

Table 1 presents projected costs of the Watana and Devil Canyon projects in nominal dollars. A seven per cent annual interest rate was used to convert 1982 dollars to projected bonding requirements and operating costs in the year of project completion, and a 14 percent interest rate was used to compute interest costs during the construction periods. Both computations used the construction cost schedules presented in the draft feasibility report.

Table 1  
 PROJECTED COSTS OF THE WATANA AND DEVIL CANYON  
 HYDROELECTRIC PROJECTS  
 (in millions of nominal dollars)

	<u>Watana</u> (Completed 1993)	<u>Devil Canyon</u> (Completed 2002)
Total Construction Cost	\$ 6,006	\$ 4,503
Interest to Completion of Construction--Capitalized	4,555	2,800
Total Investment Cost	10,561	7,302
Financing Expense	327	226
Reserve Fund	<u>1,804</u>	<u>1,247</u>
TOTAL CAPITAL REQUIREMENT	\$12,692	\$ 8,775
<hr/>		
Annual Debt Service	\$ 1,804	\$ 1,247
Coverage (20% of Debt Service)	361	249
Interest on Reserve (at 13%)	<u>(234)</u>	<u>(162)</u>
NET ANNUAL DEBT SERVICE	\$ 1,930	\$ 1,334
<hr/>		
Operating Costs in First Year	\$ 21	\$ 20
TOTAL ANNUAL COST--FIRST YEAR	\$ 1,951	\$ 1,354

Source: House Research Agency 4/82

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The remainder of the tables in this memorandum are based on the information above and on average annual energy sales of 3,450,000 MWH and 3,340,000 MWH from the Watana and Devil Canyon projects, respectively.<sup>1</sup>

<sup>1</sup>ACRES anticipates that sale of power from the Devil Canyon project will be less than plant capacity during an initial operating period of about ten years. The resulting higher per unit power costs during that period are reflected in the tables in this memorandum.

Each of the tables is described below. In all cases, debt service is based on assumptions used in Gallagher's analysis of the Bradley Lake project. That is, the projects are supported by a tax exempt bond issue at 14 percent interest, a reserve fund equal to one year of debt service requirements, and coverage of 20 percent of annual debt service requirements. These figures are not identical to the financing details used by ACRES to determine the debt service requirements of the Susitna project. We have used Mr. Gallagher's approach on both the Bradley Lake and Susitna projects in order to minimize differences in the computation of total cost of the projects.

Although financing has been made equivalent, energy cost comparisons may not be accurate if some components of total cost have been omitted from one or more of the projects or if the methodology for estimating costs is not comparable. We have reviewed the construction cost estimates of the Bradley Lake project and find Mr. Gallagher's figures acceptable for comparison with the Susitna project.

Table 2 shows project and energy costs of the Watana project in nominal dollars and is comparable to Gallagher's Table III. Debt service is constant--payments are fixed at the time bonds are sold--and operating costs increase at seven percent per year, which is the assumed rate of inflation. As in Gallagher's analysis, energy costs increase throughout the evaluation period. Table 2 shows energy costs of 56.55 cents per kwh in 1994 and 58.46 cents per kwh in 2014.

Table 2  
WATANA HYDROELECTRIC PROJECT COST ANALYSIS  
(in millions of nominal dollars)

Year	Debt Service	Operating Costs	Total Annual Cost	Energy Sales (GWH)	Power Cost (cents/kwh)
1994	\$1,929.85	\$22.52	\$1,952.37	3,450	56.59
1999	1,929.85	31.59	1,961.44	3,450	56.85
2004	1,929.85	44.30	1,974.15	3,450	57.22
2009	1,929.85	62.13	1,991.98	3,450	57.74
2014	1,929.85	87.15	2,017.00	3,450	58.46

Source: House Research Agency 4/82

Table 3 shows project and energy costs of the Watana project in 1982 dollars. The table corresponds to Table 1 in memorandum number 82-122 delivered to you on April 26.<sup>2</sup> Debt service is deflated at seven percent per year to reflect the declining real value of a fixed payment. Operating costs are constant because it is assumed that the increase in operating costs is exactly equal to the rate of inflation. Energy costs decline from 25.13 cents per kwh in 1994 to 6.71 cents per kwh in 2014.

Table 3  
WATANA HYDROELECTRIC PROJECT COST ANALYSIS  
(in millions of 1982 dollars)

Year	Debt Service	Operating Costs	Total Annual Cost	Energy Sales (GWH)	Power Cost (cents/kwh)
1994	\$856.88	\$10.00	\$866.88	3,450	25.13
1999	610.94	10.00	620.94	3,450	18.00
2004	435.59	10.00	445.59	3,450	12.92
2009	310.57	10.00	320.57	3,450	9.29
2014	221.43	10.00	231.43	3,450	6.71

Source: House Research Agency 4/82

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Table 4 compares energy costs of the Bradley Lake, Watana, and Devil Canyon projects. Estimated costs are in nominal dollars. Table 5 makes the same comparison in 1982 dollars. In both tables, the "percentage difference" columns refer to change from the projected energy costs of the Bradley Lake project. In both tables, the energy costs listed for the Susitna project are weighted averages of the Watana and Devil Canyon projects. In 2004 and 2009, the figures for Devil

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<sup>2</sup>In Table 1 of our memorandum of April 26, the discount rate included a three percent rate for the time value of money. That factor has been omitted from the computations in this memorandum. This "real interest rate" does not affect the percentage changes shown in tables 4 and 5 of this memorandum.

Canyon are adjusted for operation at less than plant capacity. Note that power produced at Devil Canyon is expected to be about six percent cheaper than power from Bradley Lake once Devil Canyon is at full capacity but that the combined cost of energy from the Susitna project remains higher than energy produced at the Bradley Lake project.

Table 4  
 PROJECTED ENERGY COSTS OF THREE HYDROELECTRIC PROJECTS  
 (NOMINAL CENTS PER KWH)

<u>Year</u>	<u>Bradley Lake</u>	<u>Watana</u>	<u>Percentage Difference</u>	<u>Devil Canyon</u>	<u>Percentage Difference</u>	<u>Combined Susitna</u>	<u>Percentage Difference</u>
1994	41.32	56.59	37%	--	--	56.59	37%
1999	41.68	56.85	36	--	--	56.85	36
2004	42.16	57.22	36	61.20	45 %	58.78	39
2009	42.85	57.74	35	43.30	1	50.84	19
2014	43.81	58.46	34	41.31	(6)	50.02	14

Source: House Research Agency 4/82

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Table 5  
 PROJECTED ENERGY COSTS OF THREE HYDROELECTRIC PROJECTS  
 (1982 CENTS PER KWH)

<u>Year</u>	<u>Bradley Lake</u>	<u>Watana</u>	<u>Percentage Difference</u>	<u>Devil Canyon</u>	<u>Percentage Difference</u>	<u>Combined Susitna</u>	<u>Percentage Difference</u>
1994	18.35	25.13	37%	--	--	25.13	37%
1999	13.19	18.00	36	--	--	18.00	36
2004	9.52	12.92	36	13.81	45%	13.27	39
2009	6.90	9.29	35	6.97	1	8.18	19
2014	5.03	6.71	33	4.74	(6)	5.74	14

Source: House Research Agency 4/82

Representative Malone  
April 29, 1982  
Page 6

We were also asked to review the Bradley Lake analysis for accuracy and completeness. In Mr. Gallagher's Table III, the cost components are inaccurately summed. However, the energy cost computation is correct so there is no major flaw in the analysis. The construction cost estimates of both projects appear to include similar items, and the assumptions on financing appear reasonable.<sup>3</sup> Mr. Gallagher apparently used a project cost of \$360 million and transmission costs of \$70 million, compared to costs of \$367 million and \$47 million, respectively, cited in the Corps of Engineers' design memorandum. However, these cost differences do not have a major effect on projected energy costs. In short, we believe Mr. Gallagher's analysis was both complete and reasonably accurate.

\* \* \*

We hope the information presented in this memorandum is helpful. If you would like additional information or would like to discuss the information presented here, please call.

<sup>3</sup>The "financing expense" included in Mr. Gallagher's analysis was not verified. We simply used the ratio of financing expense to total construction costs to determine a similar expense for the Susitna project.

STATE OF ALASKA 1984 LEGISLATIVE SESSION  
FISCAL NOTE

Revision Date: \_\_\_\_\_

REQUEST

Bill/Resolution No.: HB 683  
Title: Approving Bradley Lake hydro-electric project; and effec. date  
Sponsor: Governor  
Requestor: \_\_\_\_\_  
Date of Request: \_\_\_\_\_

FISCAL DETAIL

Agency Affected: Commerce and Economic Development  
Program Category Affected: Development  
BRU, Program or Subprogram(s) Affected: \_\_\_\_\_  
Alaska Power Authority

EXPENDITURES/REVENUES: (Thousands of Dollars)

	FY 84	FY 85	FY 86	FY 87	FY 88	FY 89
OPERATING						
100 PERSONAL SERVICES						
200 TRAVEL						
300 CONTRACTUAL						
400 SUPPLIES						
500 EQUIPMENT						
600 LAND & STRUCTURES						
700 GRANTS, CLAIMS						
800 MISCELLANEOUS						
TOTAL OPERATING	0	0	0	0	0	0
CAPITAL	0	0	0	0	0	0
REVENUE						

FUNDING: (Thousands of Dollars)

GENERAL FUND						
FEDERAL FUNDS						
OTHER						
TOTAL						

POSITIONS:

FULL-TIME						
PART-TIME						
TEMPORARY						

SOURCE OF FUNDS TO OFFSET FISCAL IMPACT OF BILL:

ANALYSIS: Attach a separate page for analysis

Prepared By: George Matz Phone: 465-2079  
Division: Dept. of Commerce and Economic Development Date: 2/11/84

Approved by Commissioner: Richard A. Lyon Date: 2/11/84  
Agency: Commerce and Economic Development

Distribution (by Agency preparing fiscal note):

Legislative Finance  
Legislative Sponsor  
Requestor  
Office of Management and Budget  
Impacted Agency(ies)

12/1/83

# Legislative Digest

## A Forecast and Review

**Bargaining In Billions:** OFFICE COPY

February 25, 1984  
No. 7/84

### BLACKMAIL FOR "SUSITNA FUND"

Repeal of the so-called Susitna "blackmail clause" may be linked to the Governor's Major Projects Fund, and a new proposal to channel a portion of those revenues to Susitna and Bradley Lake. The inclusion of Bradley Lake in the potential compromise may also be significant as a future alternative and compromise should Susitna falter. The problem with the Susitna "equity/blackmail" clause--attached to the authorization of the four-dam pool now in controversy--is that it presents a "catch-22" situation, especially for Susitna backers and Southcentral region lawmakers. The clause effects \$280 million in state grants (a gift) already invested in the four dams, and would convert that equity to interest bearing debt/equity if \$5 billion is not invested in Susitna by 1991.

The short term debt used to construct the four dams is now coming due, beginning in May. This means the state must either: (1) appropriate and pay cash for the remaining \$200 million in short-term debt, (2) finance the remaining \$200 million with longer term revenue bonds, or (3) go into default.

The state and the Alaska Power Authority have proposed financing the remaining debt with longer term revenue bonds, (option 2). However, this requires (for bond buyers) evidence of feasibility and ability to repay, which means power-use contracts with the communities to be served. However, the communities to be served would not sign those agreements unless guaranteed that their wholesale power rates would be at, or below, their present alternative diesel capacity. Hence, the Alaska Power Authority has proposed a rate stabilization package, requiring \$35 million initially (as a bond reserve) and a total of \$65 million. On this basis bond buyers appear to have assurances they need to buy the bonds. (continued page 5)

### Projects Bills Moving Quickly

The six capital projects bills are now moving swiftly in the House and Senate. The swift pace of the bills means project lobbyists had best be alert concerning their projects. By the end of this week each House will probably have sent their three bills to the "other House." The bills will quickly find their way to the Finance Committees where they will "pause" for a time to get finishing touches. The bills are: HB-635, Development, HB-636, Transportation, HB-637, University of Alaska, SB-364, Erosion Control, SB-403, Education, and SB-420, Water and Sewer. (continued page 4)

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# Bargaining Over The "Blackmail Clause"

(Continued from page 1)

However, the Susitna "equity/blackmail" clause presents further problems if buyers are to be attracted. What the clause means to bond buyers is that they do not know whether their risk should be assessed against \$200 million (present remaining debt), or \$480 million, should the blackmail clause come into effect and grants be converted to debt. It is as if the bond buyer is being asked to take a second mortgage behind Susitna, which is an unlikely position for either buyers to take or bond houses to recommend. What is remarkable about the four-dam package is that the combined project is already salted with \$280 million in grant dollars and apparently still fails feasibility tests without further subsidy.

How did we get to this position. Well, of course things were different back when the dams were authorized and original appropriations made. The state was wallowing in enough money that these latter costs might easily have simply been appropriated if need be. If things were to be done over again, with benefit of hindsight, certainly with a \$280 million gift to the projects, the users (communities) would have been required to sign off on power use contracts before construction began and assume a share of the risk based on energy cost projections. They might have won big had the energy crisis continued, or lost. But that's the way most energy projects are financed.

Now the four-dam financing package is all tangled up with Susitna. The problem for Susitna backers and Southcentral lawmakers is that they may have to "give up" something they thought they had, something no politician likes to do. The Railbelt lawmakers would like to maintain what they feel are political guarantees on Susitna. If they give up the "blackmail clause" they will want some similar provision such as guarantees for Susitna in the Major Projects Fund. If they can't get pound for pound collateral for trading the "blackmail

(continued from previous column) clause", then some kind of reduced collateral will have to do. Lastly, any politician wants to "save face".

The legislature could up and pay the \$200 million due and maintain the "blackmail clause", but it would be politically difficult to squeeze \$200 million out of the current capital pie. Next, they could do what the APA and Sheffield Administration propose, and devise whatever they can as a collateral payment for repealing the clause. Lastly, the state could "default", a move that would leave a terrible fiscal mess and likely a negative impact on state and local bond ratings of all kinds. Default would most certainly kill any chances of financing Susitna, or similar large scale state related revenue bond projects, unless the state were to use its own cash dollars.

The situation is not a happy one for anyone. Even the four-dam pool communities find that the dams produce no "rate benefits" presently, or are likely to in the near future. Perhaps the only lament is that everything would have been wonderful if energy rates had soared as projected.

## Eklutna Where Are You ???

With the major legislative capital bills now being kicked into their respective "other houses", the biggest missing piece from those bills is the Anchorage Eklutna water project. The giant \$220 million project, designed to meet Anchorage water demands in the late 1980's, received \$13.7 million in 1982 and \$22.5 million last year. In November 1983, Anchorage voters also committed to the project with approval of \$55 million in local bonds. Plans called for 25% of funds to be local and 75% to be state (\$55 million vs. \$165 million).

A push and pull over Eklutna could develop in the latter stages of capital bill funding within the legislature, or or negotiations between the executive and the legislature.

HB

684



STATE OF ALASKA  
OFFICE OF THE GOVERNOR  
JUNEAU

February 13, 1984

The Honorable Joe Hayes  
Alaska House of Representatives  
Pouch V  
Juneau, AK 99811

Dear Representative Hayes:

Under the authority of art. III, sec. 18, of the Alaska Constitution, I am transmitting a bill making a special appropriation to the Alaska Power Authority. This special appropriation is for rate stabilization for the utilities that will be purchasing power from the Lake Tyee, Swan Lake, Terror Lake, and Solomon Gulch hydroelectric facilities. The money will be used to reduce the wholesale power rate for these utilities during the early years of the operation of the hydroelectric facilities when hydroelectric costs will be significantly higher than their projected costs for diesel generation.

At the current stage of negotiations on the power sales agreements the rate stabilization fund is treated as a grant, and the special appropriation bill reflects this approach. However, the authority is still looking at the possibility of funding rate stabilization with a loan rather than a grant. If the loan approach is used, an amendment to this bill will be proposed to reflect the change.

Sincerely,

A handwritten signature in cursive script that reads "Bill Sheffield".

Bill Sheffield  
Governor

LEGISLATIVE BRIEFING  
LABOR AND COMMERCE COMMITTEES  
PROPOSED RATE STABILIZATION FUND

A major issue involved with the establishment of the Energy Program for Alaska's Four Project Pool is the cost of power in the early years of operation. As is often the case with hydropower projects, the high fixed cost of bringing the projects on-line combined with relatively low utilization in the early years and lower than expected costs of operating diesel units has meant that the cost of power will exceed that of existing diesel generation. The Alaska Power Authority has, therefore, suggested a Rate Stabilization Plan that would provide an entry rate competitive with existing generation, protect the communities from rate shock, and allow the communities access to hydropower until the project's capacity is utilized enough to make it more desirable than diesel generation.

The power sales agreements proposed to the communities involved in the Four Project Pool recognize that the full power cost of the Power Authority's hydroelectric project will initially exceed that of the purchasing utilities' existing generation. This situation is likely to continue for several years until the increased usage of hydroelectric power brings its unit cost down and the unit cost of diesel generation, including the cost of additional generating capacity increases. The attached graph illustrates this relationship. It shows, in concept, the average unit revenue requirements with and without the hydroelectric projects. The average unit revenue requirement represents the total costs projected to be paid by the utility from sales revenue in each year divided by the forecasted sales of electricity. In the long run this approximates the average rate per unit of electricity sold to each type of customer including commercial, industrial, and residential.

The intent of the Rate Stabilization Fund is to offset the higher costs of the hydroelectric projects in these early years in amounts equivalent to the costs avoided by not operating diesel generation. The amount of the Fund is represented by the shaded area on the graph. The amount initially deposited in the Fund and the annual amounts withdrawn from the Fund to offset each utility's power costs from the Power Authority are established in advance and the power sales agreement will be conditional upon the establishment of the Fund. The calculations to determine the size of the Fund and the schedule of payments are detailed and complex. They rely on large amounts of data and numerous assumptions and involve analytical models that have been developed over the last several months with the purchasing utilities.

In general, the methodology involves projecting each utilities' costs with and without the hydroelectric projects and determining the difference. The costs without the projects include diesel fuel, operation and maintenance costs, major repairs and overhauls, and additions or replacements of generating capacity. By purchasing power from the Power Authority, the utilities can avoid some or all of the costs associated with these items. If the amount paid for power from the Power Authority is equal to the avoided cost of diesel, then the resulting costs to the ratepayers is no greater than it would otherwise have been. Once the avoided cost of diesel exceeds the fully allocated costs of Power Authority power, there is no further need for rate stabilization payments. The point at which this occurs is generally referred to as the "cross-over point." At the cross-over

point power costs tend to stabilize as the slight increases in the operating costs of the hydroelectric projects are off-set by increasing power sales.

The amount in the Rate Stabilization Fund needs to be carefully considered as well as the variables that will effect it. The amount is approximately \$61.5 million consisting of \$35 million in a State grant, \$12 million from the bond proceeds, and about \$14.5 million in interest earned on the \$47 million invested during the approximately eight years that the Fund would be needed. These funds would be held by the Bond Trustee, not the communities, and each utility would take annual credits that would be necessary to stabilize their rates. Each utility would have a specific, maximum amount which could be drawn from the fund. While this amount could not be exceeded, the utility could elect not to take the entire annual amount and the remainder would be held in the Rate Stabilization account and reinvested. In this way, the utility could use the excess money to provide for future rate shock insurance.

Due to provision in House Bill 9 (HB 9), an amendment to the Energy Program for Alaska which established the pooled debt concept, there is the possibility of return on the State's investment to these four projects. Because of the "system increment" mechanism imposed by HB 9, when a new project is introduced to the Energy Program, the debt service on that project is pooled with the projects already in the system. The projects then continue to pay on the pooled debt at their established proportionate share. System increments, however pose problems for rate stability if a heavily debt financed project enters the system. As part of the proposed power sales agreements, the Power Authority is proposing a "cap" on the amount that rates can be raised due to a system increment. (See attached graph.) This will provide protection for the Four Project Pool utilities from future rate shock due new projects being brought into the system while at the same time it will return a portion of the State's investment in these four facilities.

Alaska Power Authority  
Commissioner: D Lyon  
Executive Director: Lary Crawford

Board meeting, 22 February 1984

Power Sales agreements;

1. Copper Valley: close to an agreement. Jim Billingham, manager of utilities states that he shows some concern of confronting his public with a cost not seen before. Presently Glennallen diesel generation is .06 PKW and proposed APA power will be .07 PKW. This constitutes a 40% increase to some. Valdez is an emphatic NO! Average monthly consumption in Glennallen is 340 KWH and translates to \$90 per month, while Valdez is running an average monthly bill of 550 KWH or \$151. per month. A 40% increase can be devastating.
2. Wrangell: Matt Cole (position unknown) will be taking power sales agreement to city council Thursday night (Feb 23rd) for consideration. He says discussion (informal) with council members appears good and contract may be forthcoming.
3. Kodiak: David Neese, Mgr of Muni-power. Municipality has agreed to purchase power from APA. Two suggestions: possible loans to consumers and the establishment of an advisory board.
4. Ketchikan: Rick -?-- mgr of utilities says it looks very good, contract in the making with questions as to wording of legal documents.
5. Petersburg: NO!

Management study (status report) presented by Roger McMannus of Mead consultants for FY 84, FY 85, FY 86.

Presently APA employes 69 persons

Executive Dept	-----4
Planning	----- 9
Projects	-----18
Operations	----- 7
Finance-Administration	---31

*People* *People*

APA is asking for an immediate increase of 16, 17 more FY 85, and an additional 9 for FY 86 to total 111 persons.

1984 Susitna contingency fund: 3.18 Million dollars  
Drilling request (wantana dam) 1.9 million. if approved this will leave in the contingency fund 1.28 million.

Competitive bidding on Watana Dam drilling will be let 27 Feb 84 with awarding of contract sometime in mid April 84.



ALASKA STATE LEGISLATURE  
HOUSE OF REPRESENTATIVES  
RESEARCH AGENCY

Pouch Y, State Capitol  
Juneau, Alaska 99811  
(907) 465-3991

May 26, 1983

MEMORANDUM

TO: Representative Ron Wendte

FROM: Jack Kreinheder  
Research Staff *JK*

RE: Power Rates for Alaska Power Authority Projects  
Research Request 83-182

Suzanne Mullen of your staff requested that we review and summarize the power rate analysis provided to you by the Alaska Power Authority. This analysis compared power rates for the four projects now completed or under construction -- Solomon Gulch, Swan Lake, Terror Lake, and Tyee Lake -- under the following cases or scenarios:

- a base case, with all four projects under the current rate structure established by HB 9, and minimum expected power sales.
- power sales for Swan Lake assumed to increase to 90 percent of project capacity, with remaining assumptions identical to the base case.
- a "stand alone" case, in which all four projects are separated and responsible for the payment of their own debt service. Under the current system, debt service is pooled for the four projects.
- a stand alone case identical to the one just described, except that all projects are assumed to be fully utilized (all power sold). Swan Lake was assumed to be 90 percent utilized.

General Comments

In general, the rate calculations provided by the Power Authority appear to be accurate for the cases specified. Some of the power sales figures in the base case do differ slightly from earlier estimates provided by the Power Authority, but the differences are not major. However, the rate tables which were provided to you do not match all of the cases described in the cover letter. For example, the cover letter states that the analysis includes a case for Terror Lake, Swan Lake and Solomon Gulch under the current HB 9 rate system (Tyee excluded), and a case

Representative Wendte  
May 26, 1983  
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for Terror Lake and Solomon Gulch (Tye and Swan Lake excluded). However, neither of these two cases were included in the tables I reviewed. The only similar case was one for Terror Lake, Solomon Gulch, and Tye Lake, with Swan Lake excluded from the system.

If you specifically requested these two cases from the Power Authority, you may wish to inform the Authority staff that the correct rate analysis was not provided for these cases.

#### Comparison of Rate Scenarios

The attached graph and table provide a summary comparison of wholesale power rates in FY 1986 for the four scenarios described on the first page of this memo. Under the "current system" or base case scenario, the Tye project would have the highest power rate, at 16.6 cents per kilowatt hour (KWH), with progressively lower rates for Swan Lake, Terror Lake, and Solomon Gulch.

Under the second scenario, increasing utilization of Swan Lake from 40 percent to 90 percent reduces the power rates for all projects except Solomon Gulch. The explanation for the higher Solomon Gulch rate is rather complex, but basically, Solomon Gulch would have to carry a larger portion of debt service because of the lower system average rate which would result from increased utilization of Swan Lake. Swan Lake rates would decrease the most, but Terror Lake and Tye would also benefit because of the debt-sharing formula included in the HB 9 rate structure.

The third scenario is the stand alone case. The power rates for this scenario should be compared to the current system case, rather than the 90 percent Swan Lake usage case. Separation of the four power projects would have a large impact on rates, with large rate decreases for the Solomon Gulch and Swan Lake projects, and substantial rate increases for the Terror Lake and Tye Lake projects. The primary reason for the differences in rates is the debt/equity ratio of the four projects. Solomon Gulch has no debt, while Swan Lake was 26 percent debt financed. On the other hand, Terror Lake and Tye were 58 percent and 36 percent debt financed, respectively. The higher level of debt for these two projects means that their power rates would increase if they were separated from the current APA system, unless some other action were taken to limit their rates, such as the Petersburg proposal for the Tye project.

Finally, the fourth scenario shows the power rates for the four projects on a stand alone basis, with full utilization of the projects' capacities, except for Swan Lake, which is 90 percent utilized. The largest decrease in rates under this scenario is for the Tye project,