ALASKA STATE LEGISLATURE
HOUSE SPECIAL COMMITTEE ON OIL AND GAS
March 13, 2003
3:20 p.m.

MEMBERS PRESENT

Representative Vic Kohring, Chair
Representative Hugh Fate
Representative Jim Holm
Representative Lesil McGuire
Representative Norman Rokeberg
Representative Harry Crawford
Representative Beth Kerttula

MEMBERS ABSENT

All members present

OTHER LEGISLATORS PRESENT

Representative Jim Holm

COMMITTEE CALENDAR

HOUSE JOINT RESOLUTION NO. 12
Expressing support for federal energy initiatives affecting Alaska that would reduce the nation's continuing dependence on imported foreign oil as its principal energy source.

- HEARD AND HELD

PREVIOUS ACTION

BILL: HJR 12
SHORT TITLE:SUPPORTING FEDERAL ENERGY INITIATIVES
SPONSOR(S): REPRESENTATIVE(S)CRAWFORD

Jrn-Date	Jrn-Page		Action
03/05/03	0395	(H)	READ THE FIRST TIME - REFERRALS
03/05/03	0395	(H)	O&G, RES
03/05/03	0395	(H)	REFERRED TO OIL & GAS
03/13/03		(H)	O&G AT 3:15 PM CAPITOL 124

WITNESS REGISTER

JAY HARDENBROOK, Staff
to Representative Harry Crawford
Alaska State Legislature
Juneau, Alaska
POSITION STATEMENT: Answered questions pertaining to HJR 12.

ACTION NARRATIVE

TAPE 03-15, SIDE A
Number 0001

CHAIR VIC KOHRING called the House Special Committee on Oil and Gas meeting to order at 3:20 p.m. Representatives Kohring, Chenault, McGuire, and Crawford were present at the call to order. Representatives Rokeberg, Fate, and Kerttula arrived as the meeting was in progress. Also present was Representative Holm.

HJR 12-SUPPORTING FEDERAL ENERGY INITIATIVES

CHAIR KOHRING announced that the committee would hear HOUSE JOINT RESOLUTION NO. 12, Expressing support for federal energy initiatives affecting Alaska that would reduce the nation's continuing dependence on imported foreign oil as its principal energy source.

Number 0065

REPRESENTATIVE CRAWFORD, sponsor, characterized HJR 12 as an "energy independence resolution." He explained his belief that because 55 percent of oil in the U.S. comes from outside of North America, it has skewed a number of things including foreign policy and pricing. He said he'd like a 10-year plan - much like President John F. Kennedy's 10-year plan to put a man on the moon - to get America to the point of energy independence, and said he believes Alaska holds the key.

Number 0185

CHAIR KOHRING commended this as a good thing. Referring to Representative Crawford's point that Alaska is key as far as energy-independence potential in the U.S., he said this is with regard to not only oil and gas, but also geothermal [energy] and coal. He noted that research provided by Representative Crawford mentions 5.5 trillion tons of coal.

REPRESENTATIVE CRAWFORD clarified that the approximately 5 trillion tons is projected, but provided the figure of 170 billion tons of coal in proven reserves.

Number 0334

CHAIR KOHRING indicated the resolution is to be sent to Gale Norton, Secretary of the Interior, and to the President [in addition to several others]. He asked Representative Crawford, if it were to be promoted aggressively, what he would suggest legislatively such as incentives to encourage development of these different areas of potential [energy resources].

REPRESENTATIVE CRAWFORD answered that before the Alaska Science and Technology Foundation (ASTF) was scheduled for demise, he'd had other legislation for introduction. Indicating the desire to wait to see what happens to ASTF, he said he'd talked to its new director about public and private partnerships and how to promote this.

Number 0398

REPRESENTATIVE McGUIRE encouraged introduction of the other legislation. She suggested the bill should be part of the public policy discussion with respect to removing [ASTF's] endowment of close to a billion dollars.

REPRESENTATIVE CRAWFORD reported that the new director [of ASTF] had asked that the legislation be held back for a little time. He reiterated his belief that Alaska holds the key to changing America's energy picture.

The committee took an at-ease from 3:25 p.m. to 3:27 p.m.

Number 0529

CHAIR KOHRING lauded the concept of promoting energy [independence] and added his belief that one reason the U.S. is involved so heavily in the Middle East is because of not wanting to disrupt the flow of oil. In addition, he said, developing resources within the U.S. could help grow the economy.

REPRESENTATIVE CRAWFORD suggested it would benefit all of North America because the U.S. is part of the North American Free Trade Agreement (NAFTA) and thus is in partnership with Canada and Mexico.

CHAIR KOHRING agreed.

Number 0624

CHAIR KOHRING suggested this resolution mirrors what President Bush announced two years ago with regard to greater energy independence and looking at developing coal, oil, gas, and alternative sources. He asked whether that is correct.

REPRESENTATIVE CRAWFORD said it is, but pointed out that hydrogen is a new field. He likened it to a big battery, a way to store alternative energy and ship it worldwide. He opined that Alaska has the best potential of anywhere in the world to produce hydrogen because of all the alternative energy sources available, including wind, water, tidal power, and geothermal power; furthermore, those sources are at [tidewater] and thus shipping hydrogen in tankers all around the world can be done cheaply and safely. He pointed out that a wrecked tanker filled with hydrogen wouldn't cause a huge environmental disaster like a tanker full of oil would.

Number 0732

CHAIR KOHRING asked whether hydrogen is shipped currently or is being developed at all in the world.

REPRESENTATIVE CRAWFORD replied that it's being done to a small extent today, and is used in many products. He emphasized his belief that hydrogen is the fuel of the future, but pointed out that the problem until now has been producing it cheaply. He said producing hydrogen by using fossil fuels such as natural gas or oil - because of insufficient return in BTUs [British thermal units] - isn't that efficient, although coal could be used efficiently. Wind, water, and geothermal power, however, can be used where the energy is produced, such as at Akutan on the Aleutian Peninsula, where there are huge geothermal potentials; at Knik Arm or Turnagain Arm, where there is good tidal power; at Fire Island outside of Anchorage, where there is a desire to put 70 megawatts of wind power; or at Turnagain Arm, where there is a desire to put 10 to 20 megawatts of wind power on Bird Ridge, to his belief.

Number 0885

CHAIR KOHRING expressed interest in [having the committee] work on legislation to encourage development like that through tax

incentives or streamlined regulation and permitting, for instance.

REPRESENTATIVE CRAWFORD remarked that certainly Chugach [Electric Association, Inc.] could use help with its wind farm at Fire Island, which is in its infancy. Suggesting the legislature could help foster this, he noted that just putting in 70 megawatts of power at Fire Island wouldn't be that efficient because there would be high winds sometimes, but no wind sometimes at peak hours when it's needed. Excess energy turned into hydrogen could be stored, however, and thus would be used most efficiently.

The committee took an at-ease at 3:31 p.m. that lasted only a few seconds.

Number 0987

REPRESENTATIVE CRAWFORD addressed his handout, "North American Energy Independence: Alaska's Resources and How They Can Free America From Dependence on Foreign Oil." Turning to the first page, "Alaska's Role in Energy Independence," he said Alaska has the potential to be the backbone of an energy-independence plan for the continent. Referring to a depiction of a battery superimposed on Alaska, he explained that it shows Alaska as a big storage house for America's energy.

REPRESENTATIVE CRAWFORD referred to the next page, "National Security," and said currently the U.S. imports more than 55 percent of its oil from foreign sources, with almost 45 percent coming from the Middle East. This dependence on foreign oil has put U.S. military personnel in harm's way, and has subjected the U.S. market to large price fluctuations in oil and natural gas; essentially, the U.S. purchases hydrocarbons from the same people who threaten the lives of U.S. citizens.

REPRESENTATIVE CRAWFORD addressed the next two pages, "Oil and Gas Development" and "Coal." He said that NPR-A [National Petroleum Reserve-Alaska] and ANWR [Arctic National Wildlife Refuge] have the potential to produce over 20 billion barrels of oil collectively; that a proven 30 trillion cubic feet of natural gas is stranded on the North Slope; and that in coal bed methane alone, Alaska has an estimated 1,000 trillion cubic feet of natural gas. Noting that coal is just one of Alaska's many underutilized resources, he reported that Alaska has proven reserves of 170 billion tons of coal, with an estimated 5.5 trillion tons - half of the U.S. reserves - all in one state.

Number 1146

REPRESENTATIVE CRAWFORD turned to the next two pages, both labeled "Hydrogen." He explained that hydrogen is believed to be the fuel of the future for the automobile; in many areas of the world, that could be true for power plants as well. It can be used to power fuel cells that produce electricity, with the only byproduct being water; it also can be used to make clean diesel through the gas-to-liquids (GTL) process. Essentially, hydrogen is a means to deliver energy from one point on the earth to another without constructing power lines or pipelines. Thus hydrogen is the way that Alaska can deliver its energy throughout North America.

REPRESENTATIVE CRAWFORD addressed the next-to-last page, "The University of Alaska." He told members that using the incredible research facilities and human resources at the University of Alaska and Alaska's vast energy resources, North American energy independence could become a reality. Turning to the final page, which discussed HJR 12 specifically, he concluded by noting that it [urges Congress, the President, and members of his cabinet] to do the following: 1) open more areas in North America for oil and gas exploration and development; 2) provide reasonable incentives for an Alaska natural gas pipeline; 3) develop reasonable energy-efficiency standards for the U.S.; and 4) develop a 10-year plan for North American energy independence.

Number 1261

CHAIR KOHRING asked how hydrogen would be delivered from one point to another.

REPRESENTATIVE CRAWFORD replied that hydrogen can be safely transported by bonding the molecules with zeolite, a mineral found in abundance in Alaska. He pointed out that an acetylene canister that lacks a carbon "honeycomb" inside would be a bomb, but the carbon honeycomb causes the acetylene to bond with the carbon and makes it safe to transport. Similarly, hydrogen can be transported safely in a tanker as long as the zeolite is there. He suggested this would provide another industry for Alaska in addition to mining the zeolite.

Number 1368

CHAIR KOHRING asked about the downside with regard to safety or the environment.

REPRESENTATIVE CRAWFORD replied that he'd heard of only two negative aspects. First, hydrogen requires care - though the same is true of gasoline or natural gas. Second, it hasn't been used as a fuel thus far because the [monetary] return isn't sufficient if it requires natural gas to produce. However, geothermal power, wind, water, or other renewable resources don't have a "meter" and thus are the way to produce hydrogen cheaply.

Number 1434

REPRESENTATIVE FATE complimented Representative Crawford on HJR 12, which he said he could support if there were modifications. He agreed that hydrogen will become the fuel of the future, especially for automobiles and perhaps even trains, but suggested it will be awhile because of the cost, even though wind or other cheap power sources may help produce it.

Number 1547

REPRESENTATIVE FATE offered specific comments on HJR 12. Referring to the first "WHEREAS" clause [page 1, lines 4-6], he explained that he wouldn't want the state to send a resolution that directs the U.S. government to "interfere with their efforts" with regard to human rights. He also suggested that the second ["WHEREAS" clause, page 1, lines 7-8, implies] that foreign oil has put the armed services in harm's way. Disagreeing with that concept, he added that if it is true, it certainly isn't the only reason.

REPRESENTATIVE FATE called attention to [page 1, lines 15-16], which mentions potential for [oil and] gas development in the coastal plain of ANWR and NPR-A. He said there is a high potential for gas in NPR-A; for oil, however, it has yet to be seen through the necessary seismic work.

Number 1680

REPRESENTATIVE FATE referred to [page 2, lines 1-3]. He remarked that whereas some people say [the amount of stranded gas on the North Slope] is 30 trillion cubic feet [as cited in HJR 12], some say 33 trillion or 35 trillion; he suggested it isn't worth quibbling about, however. He also suggested

deleting "Northern Canada" [on line 3]; he questioned the merit of including Canada, since its gas competes with Alaska's.

REPRESENTATIVE FATE reiterated that although he absolutely believes in the future of hydrogen power, the [costs versus benefits] don't measure out yet. He remarked that steam can be generated by using natural gas, which the state has plenty of; however, whether it could be done efficiently - in comparison with what the gas itself could be sold for - needs to be looked at. Referring to page 2, line 18, which talks about developing [resources] on the North American continent, he indicated this goes back to his concern about including Canada.

Number 1839

REPRESENTATIVE FATE mentioned an ongoing effort in federal legislation [that hadn't yet passed] with respect to producing energy standards.

REPRESENTATIVE CRAWFORD responded, "That's why we said 'reasonable'."

REPRESENTATIVE FATE also suggested striking "10-year" where it says "10-year plan". He explained, "Let the people who come up with an energy plan determine that. And 10 years may fall way short. It takes 10 years, for example, to probably get the gas pipeline on line here. And they understand that; they've been working on this for several years." Reiterating his absolute support for HJR 12 if the foregoing changes are made, he again commended the sponsor.

CHAIR KOHRING also commended Representative Crawford. He proposed that Representatives Fate and Crawford work together to improve the bill.

Number 1968

REPRESENTATIVE CRAWFORD agreed to work with members in order to get acceptable wording. Responding to Representative Fate's suggestions, he said one main reason for HJR 12 was to try to move the federal government in this direction as quickly as possible; the 10 years is included to give the federal government a "boost." He acknowledged that if it were binding law, it would be done differently. As for putting troops in harm's way, he offered his belief that "this has made us expend a lot of our national energy on protecting the oil routes in the

Middle East that we might not be [protecting] if we weren't so dependent on foreign oil."

Number 2095

REPRESENTATIVE CRAWFORD, in response to questions from Representative Rokeberg, explained that electricity is needed to [produce hydrogen from water]. Alaska has geothermal resources for which there is no market. He noted that New Zealand obtains its electricity from geothermal power, for example. Although there is no market for [something similar] on the island of Akutan, those geothermal resources can be used to produce hydrogen from seawater; the hydrogen then can be exported around the world. Similarly, the 70 megawatts of wind power on Fire Island or tidal power in Knik Arm or Turnagain Arm, for example, could be used to produce hydrogen, which is a way to store the excess energy.

REPRESENTATIVE CRAWFORD reported that ASTF's new director said hydrogen can be produced using coal if excess electricity is produced beyond that required for other needs. Furthermore, this can be done in areas of Alaska where there are [few] people and no need today for a power plant otherwise. Representative Crawford noted that General Motors has a hydrogen-run car and that Honda has had one ready for production for about a year. He offered his belief that this is close to fruition, rather than being 20 years away.

Number 2347

REPRESENTATIVE ROKEBERG said he shared Representative Fate's concerns about the technology for hydrogen conversion and costs; he also expressed concern about creating a distribution system for the retail marketing of hydrogen. He inquired about the BTU value of hydrogen.

Number 2401

JAY HARDENBROOK, Staff to Representative Harry Crawford, Alaska State Legislature, said it depends on how it is used. When hydrogen is used for fuel cells, it basically becomes a battery and the BTU level is similar to natural gas. Essentially, he said, it is natural gas that also can be used in fuel cells.

REPRESENTATIVE ROKEBERG observed that hydroelectric power hadn't been mentioned. He then asked whether generating hydrogen goes

against the short-term interests of Alaskans to produce oil and gas [because of royalties].

REPRESENTATIVE CRAWFORD answered that if the 55 percent of oil that comes from foreign countries were cut off, there would be a shortage of energy in the United States; he suggested this would make hydrogen an essential part of the country's energy supply. He noted that there is a fuel cell operating at the airport post office [in Anchorage] that is a clean source of electricity there; he suggested this could be done all over Alaska without the need for diesel generators.

Number 2573

REPRESENTATIVE FATE emphasized the high cost of current hydrogen-run automobiles. He then remarked that the Stone Age didn't end because of lack of stone; neither will the hydrocarbon age end because of lack of hydrocarbons. However, as long as cheap, efficient hydrocarbons can be used - which is the case for gas - it will remain. He reiterated his belief that the transition from gas technology in the United States to hydrogen will occur later, rather than sooner, because there is so much gas available at such a cheap price.

Number 2727

REPRESENTATIVE CRAWFORD responded that the point of the resolution is to stop using imported hydrocarbons from the Middle East and elsewhere, and instead to use [Alaska's] resources - whatever are the most efficient at the time. Saying that gas is, by far, the best fuel available, he related his belief that [dependence on fuels from elsewhere] skews the country's foreign policy, currency, and business climate. He emphasized the desire to use North American sources of fuel as quickly as possible, thereby getting away from using foreign fuel and energy.

REPRESENTATIVE FATE said he concurred with that effort, but noted that Representative Crawford had highlighted geothermal [and other renewable sources of energy]. He reiterated that those won't [be used extensively] for a long time because of the large quantities of natural gas available.

Number 2861

MR. HARDENBROOK pointed out that a cost benefit of hydrogen is that it's already at tidewater, in contrast to natural gas on

the North Slope. All that is necessary is a power plant and an electrolysis plant; then hydrogen can be shipped using a zeolite tanker directly to the West Coast. He suggested there would be a cost savings, therefore, since it can be used as a natural gas. That is why it is highlighted in the resolution, he said, rather than to displace other [North American] hydrocarbons.

CHAIR KOHRING noted that the emphasis of the bill is to encourage energy [independence], but said Representative Fate's comments are well taken. Asking that Representatives Crawford and Fate work on it, he offered to facilitate the work as well. [HJR 12 was held over.]

ADJOURNMENT

There being no further business before the committee, the House Special Committee on Oil and Gas meeting was adjourned at 4:09 p.m.