

**ALASKA STATE LEGISLATURE  
HOUSE COMMUNITY AND REGIONAL AFFAIRS  
STANDING COMMITTEE**

March 4, 2003  
8:05 a.m.

**MEMBERS PRESENT**

Representative Carl Morgan, Chair  
Representative Kelly Wolf, Vice Chair  
Representative Tom Anderson  
Representative Mike Chenault  
Representative Ralph Samuels  
Representative Sharon Cissna

**MEMBERS ABSENT**

Representative Albert Kookesh

**COMMITTEE CALENDAR**

OVERVIEW: LOW SULFUR DIESEL FUEL

**TAPES**

03-6, SIDE(S) A & B

**CHAIR CARL MORGAN** convened the meeting of the House Community and Regional Affairs Standing Committee at 8:05 a.m. Representatives Morgan, Samuels, Chenault, and Cissna were present at the call to order. Representatives Wolf and Anderson arrived as the meeting was in progress.

**SUMMARY OF INFORMATION**

CHAIR MORGAN reminded committee members that last year the House Community and Regional Affairs Standing Committee introduced a resolution requesting that Alaska be given the most flexibility in the implementation of the new diesel fuel regulations. Unfortunately, the resolution died in the Senate Finance Standing Committee.

RON KING, Program Manager, Air Non-Point & Mobile Sources, Division of Air & Water Quality, Department of Environmental Conservation (DEC), began the presentation which can be found in the committee packet in the document labeled "House Community and Regional Affairs Standing Committee, New Diesel Fuel

Regulations, February 6, 2003." He explained that approximately a year ago DEC submitted recommendations to the Environmental Protection Agency (EPA) regarding the implementation of the ultra-low sulfur diesel plan for urban Alaska. Urban Alaska was defined as the contiguous road system and those major ports on the Alaska Marine Highway. The recommendation was to follow the national plan, which the EPA accepted. Therefore, the EPA is preparing its final rule pending the department's recommendation for rural Alaska. Mr. King explained that the EPA established a rule to reduce air pollution in order to address health concerns. The EPA rule proposed lowering the sulfur particulates from 500 parts per million (ppm) to 15 ppm as well as placing control equipment on 2007 model cars, trucks, and buses. The new fuel and control systems will achieve 90 percent emissions reductions. He noted that the new vehicles will have to use the new fuel or there is a good likelihood of catastrophic engine failure. Mr. King reviewed the impacts of air pollution and pointed out that the estimated health benefits of this requirement amount to \$70 billion nationally.

MR. KING noted the difficulty in estimating the cost impacts of this rule for Alaska. He estimated that the cost would be \$.10 per gallon or more, depending on the cost of fuel and production. In rural Alaska, the fuel costs are anticipated to be higher due to the distribution challenges. Furthermore, the use of ultra-low sulfur diesel fuel as home heating or power generation may increase the cost to the community because of the basic increase in the cost of the fuel. Mr. King highlighted that the distribution impacts for Alaska are quite different than those for the Lower 48. For instance, Alaska requires Arctic spec fuel, which is fuel that must be able to be poured at a temperature of -60 degrees. Although use of ultra-low sulfur diesel fuel isn't expected to cause any problems in the engines of vehicles built prior to 2006, there were some issues during the change from uncontrolled sulfur to the 500 ppm sulfur.

MR. KING reviewed the options he saw for rural Alaska; options that keep in mind the goal of minimal impact. Since the department requested and received additional time to provide its recommendations, the recommendations aren't due until June 13th. Mr. King related that the department wants to balance energy costs with health costs. Although there is a [lack of] concentration of diesel vehicles in rural Alaska, there are other sources of diesel emissions such as the power generators in rural Alaska that use the same engines in eighteen-wheel

trucks. Therefore, the department is seeking funds to identify potential health benefits and economic impacts.

TOM CHAPPLE, Director, Division of Air & Water Quality, Department of Environmental Conservation, echoed Mr. King's comments regarding the goal of balancing the cost and health benefits of this rule. Although rural Alaska is unique because it doesn't have a large number of vehicles, the new vehicles in Alaska will require separate tankage for the [low sulfur] fuel the newer vehicles require. Therefore, communities will face infrastructure costs. However, if all fuel use in rural Alaska went to ultra-low sulfur diesel fuel in rural Alaska, the cost of power generation would be significantly higher. Mr. Chapple clarified that the aforementioned benefit of \$70 billion over the cost [of health care] doesn't apply to rural Alaska due to the lack of vehicles in rural Alaska. He pointed out that there is no [knowledge of the] health consequences in rural Alaska. Mr. Chapple stressed the need to obtain more time for rural Alaska in order to determine the health consequences in an effort to determine the best way to manage the costs to rural Alaska.

MR. CHAPPLE, in response to questions, said that the national data can be reviewed in the context of this rule as part of the base of scientific information. However, real information about exposures in rural Alaska must be available to convert the national science for use at the local level in assessing the health risks. The department is attempting to obtain federal funds to perform the aforementioned.

MR. KING, in response to questions, confirmed that there is an international movement to reduce the sulfur from fuel. There are indications that Europe is moving toward implementation of this in the maritime industry. With regard to the energy efficiency of ultra-low sulfur diesel, Mr. King related his understanding that currently the energy loss when using this fuel is less than one-half of one percent. That ultra-low sulfur fuel is being produced for \$.7 a gallon more plus the transportation costs. Furthermore, the only refinery producing the Arctic grade fuel is in Edmonton, Canada. He discussed the possibility of converting power generators and engines to use this ultra-low sulfur diesel and remarked that the problem is one of distribution of cost rather than whether the fuel will work in the engine.

STEVE CLEARY, Executive Director, Alaska Public Interest Research Group (AkPIRG), noted that cleaner fuel is already

being used in rural Alaska. Mr. Cleary mentioned that [the department and others] are seeking a grant of over \$1 million to study the health effects [of sulfur] in rural Alaska. Mr. Cleary highlighted the fact that there is no minimum exposure threshold; that is certain individuals exposed to any amount of diesel exhaust can develop cancer, breathing ailments, and asthma. Since Canada has already moved to lower sulfur diesel, AkPIRG reviewed Canada's situation. Canada has switched everything over to [ultra-low sulfur diesel] in order to avoid the infrastructure costs of dual tankage. Mr. Cleary related that switching everything in order to avoid infrastructure costs.

FRANK DILLON, Executive Vice President, Alaska Trucking Association, expressed the need to be careful when speaking of the cost-saving health benefits in Alaska as a result of using lower sulfur fuel. Mr. Dillon related his belief that with the use of [ultra-low sulfur diesel] there won't be much noticeable difference in terms of the rates of asthma in either rural or urban Alaska. Mr. Dillon opined that this [switch to ultra-low sulfur diesel] is attempting to solve a problem that doesn't exist in terms of the health issue. The EPA report in the committee packet doesn't supply any proof that diesel exhaust emissions cause asthma or cancer, although links and evidence were found. Reducing the sulfur in fuel isn't bad, but it will be an expensive and complicated proposition for Alaskans, he said. No matter what is done, Alaska faces a logistical problem in that Edmonton, Canada is the only place that produces the [Arctic grade] fuel. In response to questions, Mr. Dillon informed the committee that the percentage of diesel used nationwide in production is about a 50:50 split between diesel fuel and all other fuels. In Alaska, 90 percent of the fuel in Alaska goes to jet fuel while 10 percent goes to diesel, gasoline, and all other products from [Alaska's] refineries. Therefore, Alaska is significantly different from the Lower 48 and Canada. Mr. Dillon said that although going to [ultra-low sulfur diesel] for everything makes sense, it will cost money.

MARIE BECKER, Alaska Village Electrical Coop (AVEC), expressed concern with the increase in cost to consumers. "It's great if we have a little healthier people, but if they're sitting in the dark it's not going to do a lot of good," she said. She also noted concern with regard to the availability of this product. Therefore, she suggested the need for pilot studies to determine the impacts and costs to those [AVEC] represents.

TC WILSON, Director, Safety & Engineering Service, Alaska Rural Electric Cooperative Association (ARECA), pointed out that over 70 percent of the electric utilities in Alaska are cooperatives. Although ARECA realizes that eventually all the fuel in the world will be ultra-low sulfur fuel, ARECA requests that the implementation be postponed as long as possible. Mr. Wilson acknowledged that most of the utility plants he has visited have diesel engines that are basically the same engineering as a truck engine but are much larger and more sophisticated and run diesel engines at optimum efficiency daily. With regard to the cost of converting one of the aforementioned engines, Mr. Wilson estimated that the gaskets alone would amount to \$2,500 which doesn't account for maintenance down time and operation efforts to replace the gaskets. Therefore, if the mandatory aspects of the change could occur over a long period of time, the regular maintenance cycles of the engines could be utilized to change the gaskets. Mr. Wilson said that he does not have the understanding that the new fuel won't damage old engines. Furthermore, cooperatives operate on the edge financially and [problems] with this conversion could be catastrophic to the electric generation in rural Alaska.

SHAEN TARTER, Vice President, Yukon Fuel, pointed out that the road system in Alaska will accommodate demand without storage whereas rural Alaska will require storage of six to seven months worth of product due to transportation barriers. He also pointed out that Jet A fuel is generally moved in Western Alaska and then downgraded to heating fuel number 1 or diesel number 1. Although he agreed that it would be easier to change everything to [ultra-low sulfur] diesel at once, it wouldn't take into account the storage of Jet A in Western Alaska that is downgraded later. In such a situation, an separate tanks and pipelines will be required and thus there will be financial impacts and transportation challenges. Mr. Tarter informed the committee that Yukon Fuel supports having more time to implement this rule and review the impact to rural Alaska.

BILL BOYCOTT, Chemical Engineer, Williams Alaska Petroleum, acknowledged the worldwide trend toward the removal of sulfur from fuel. In regard to manufacturing, Mr. Boycott related that at this point the production of [ultra-low sulfur] fuel isn't economic and thus import scenarios are being reviewed. Another milestone is [the removal of sulfur] from gasoline. After this rule is implemented, Mr. Boycott saw two options for supply to the state. One option would be the transport of fuel from some West Coast facility. However, those fuels aren't made to Alaska's specifications and thus would lead to batch operations.

The problem is that the size of the batches and units are typically large while [Alaska's] demand is quite small and thus difficulties are anticipated. Therefore, the Edmonton, Canada, refinery is probably the easiest option logistically, although perhaps the highest in cost.

MR. BOYCOTT predicted that in Alaska this rule change will result in short-term supply issues with a high price early on. Therefore, it would be difficult to have the Bush transition at the same time the road system does and thus he suggested transitioning the road system first in order to help establish the supply chains. Furthermore, there are other considerations because Alaska consumes about 31,000 barrels a day of diesel of which less than 5,000 barrels a day is transported via the road. Therefore, the Bush, the railroad, the marine system, and heating oil are all part of the consumption. Alaska has a lot of small demands that, in aggregate, make a reasonable demand, although individually the demands don't justify the construction of new equipment.

AL EWING, Chief of Staff, Denali Commission, noted he was available to answer questions. In response to questions, he said that there has been no research with regard to the cost of cleaning out tank farms to accept this ultra-low sulfur diesel.

CHRIS MELLO, Program Manager, Alaska Energy Authority (AEA), informed the committee that AEA is still waiting for the costs to flesh out. However, AEA believes this is doable and won't be the largest problem that Bush Alaska faces, although there will be an associated cost.

#### **ANNOUNCEMENTS**

There were no announcements.

#### **COMMITTEE ACTION**

The committee took no action.

#### **ADJOURNMENT**

There being no further business before the committee, the House Community and Regional Affairs Standing Committee meeting was adjourned at 9:15 a.m.

NOTE: The meeting was recorded and handwritten log notes were taken. A copy of the tape(s) and log notes may be obtained by contacting the House Records Office at State Capitol, Room 3, Juneau, Alaska 99801 (mailing address), (907) 465-2214, and after adjournment of the second session of the Twenty-Third Alaska State Legislature this information may be obtained by contacting the Legislative Reference Library at (907) 465-3808.