ALASKA STATE LEGISLATURE
HOUSE SPECIAL COMMITTEE ON ENERGY
March 31, 2011
3:04 p.m.

MEMBERS PRESENT

Representative Neal Foster, Co-Chair
Representative Lance Pruitt, Co-Chair
Representative Bob Lynn
Representative Kurt Olson
Representative Dan Saddler
Representative Pete Petersen
Representative Chris Tuck

MEMBERS ABSENT

All members present

COMMITTEE CALENDAR

OVERVIEW: Alaska Propane Project by the Alaska Natural Gas Development Authority (ANGDA)

- HEARD

PREVIOUS COMMITTEE ACTION

No previous action to record

WITNESS REGISTER

HAROLD HEINZE, Chief Executive Officer (CEO)
Alaska Natural Gas Development Authority (ANGDA)
Anchorage, Alaska
POSITION STATEMENT: Introduced the Alaska Propane Project to the committee.

MARY ANN PEASE, Consultant
Alaska Natural Gas Development Authority (ANGDA)
Anchorage, Alaska
POSITION STATEMENT: Testified during the Overview of the Alaska Propane Project.

PAUL FUHS, Consultant
Alaska Natural Gas Development Authority (ANGDA)
Anchorage, Alaska

POSITION STATEMENT: Testified during the Overview of the Alaska Propane Project.

ACTION NARRATIVE

3:04:03 PM

CO-CHAIR LANCE PRUITT called the House Special Committee on Energy meeting to order at 3:04 p.m. Representatives Pruitt, Lynn, Petersen, and Olson were present at the call to order. Representatives Saddler, Tuck, and Foster arrived as the meeting was in progress.

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Alaska Propane Project by the Alaska Natural Gas Development Authority (ANGDA**Overview: ALASKA PROPANE PROJECT BY THE ALASKA NATURAL GAS DEVELOPMENT AUTHORITY (ANGDA**

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CO-CHAIR PRUITT announced that the only order of business would be updates on the Alaska Propane Project by the Alaska Natural Gas Development Authority (ANGDA).

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CO-CHAIR PRUITT spoke of his interest in the subject and noted the Alaska North Slope Propane Conference is underway in Anchorage.

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HAROLD HEINZE, Chief Executive Officer (CEO), Alaska Natural Gas Development Authority (ANGDA), stressed the importance of ANGDA weighing in on the subject of the Alaska Propane Project. He explained that ANGDA is a public corporation formed through the initiative process in the 2002 election. It has worked on a wide variety of projects consistent with its mission of bring North Slope gas to market in a method that benefits Alaskans. He highlighted that "benefits Alaskans" is the key piece of delivering gas statewide. He related that ANGDA has worked on

numerous aspects of the issue and given its limited resources has most recently focused on areas that represent the prime importance in Alaska. First, ANGDA has participated on behalf of the electric utilities of Alaska in the open season process of both of the big pipeline projects: the Denali Pipeline and the Alaska Pipeline Project. He emphasized that working in this process has put ANGDA in the position for many electrical customers to enjoy the benefits of reduced transmission costs for North Slope gas when the pipeline is built. The pipeline may affect up to 75 percent of Alaskans. Secondly, ANGDA has focused its efforts on North Slope propane since a substantial amount of propane, which is a heavier gas molecule, also exists in the vast North Slope reserves. Bringing this propane to market could assist Alaskans who will not directly benefit from the big pipeline. He attested by working simultaneously on these issues, ANGDA can assist Alaskan consumers.

MR. FUHS offered his belief that a wholesale propane facility on the North Slope and actively participating in the big pipeline process fit in the total picture of providing power for the state. He acknowledged the uncertainty of when and how the North Slope gas can be tapped but stressed that both ideas will be pursued. The North Slope natural gas reserves, in terms of natural gas and natural gas liquids such as propane, are far more extensive that Alaska can ever use. He predicted the reserves are 10 to 20 times greater than Alaska's needs so Alaska must look for markets outside the state. He said the market has changed and ANGDA sees opportunities for in-state use and export to support the economies of scale. Initially ANGDA considered a small scale facility on the North Slope but the market did not warrant the investment risk. He related that currently ANGDA is working with the Prudhoe Bay Unit owners and ANGDA is poised to better accomplish this project, particularly given the export opportunities that should provide the economies of scale. He cautioned that all costs must be considered since it is not only the cost of purchasing propane and separating the molecules, but the cost of delivering them that determines whether this energy source is a bargain or has a high value to the consumer.

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MARY ANN PEASE, Consultant, Alaska Natural Gas Development Authority (ANGDA), stated she is pleased to be attending the Alaska North Slope Propane Conference with stakeholders attending from all over the U.S. All facets of propane distribution are under discussion, including infrastructure, transportation opportunities, distribution, and financing. ROUSCH CleanTech has been active with auto racing has partnered with Ford Motor Company to develop a protein fuel injection system for fleet services throughout the world.

MS. PEASE began her presentation "Connecting Alaskans to their Natural Gas." She referred to a map depicting proposed pipeline routes [slide 1]. She related that the map depicts all of the proposed pipeline projects but the proposed pipeline routes do not reach many parts of the state. ANGDA would fill in the areas in the state that will never be reached by any pipeline. The propane project would off-take North Slope propane at strategic compressor stations once a pipeline is built. The ANGDA's intent is to develop a market for propane from the North Slope that would provide an attractive alternative to costly diesel. The current price of home heating oil in the Northwest Arctic Borough was reported at the Alaska North Slope Propane Conference today at $9.85. Resources for in state use and expanding to Asian markets could provide jobs, industry development, and opportunities.

MS. PEASE listed propane's benefits and opportunities [slide 2]. The picture for propane changed several years ago with oil at $144 per barrel. She related her understanding that it was always envisioned that propane would be transported on the main pipeline and off-takes would provide propane to other parts of the state. When oil increased to $144 per barrel North Slope propane rose as an alternative source for non-discretionary home heating and lighting. She predicted that the plan to provide propane to the state could be developed and operational in a two-year period well ahead of any pipeline completion. The benefit of using North Slope propane is that it provides an attractive clean fuel for rural Alaska. Many of the discussion points at the conference have highlighted the reality that the transition to ultra-low sulfur diesel is costly and unattainable

to many rural Alaska's communities [slide 3]. It is not possible to build sufficient storage or get the supply to meet rural Alaska's requirements. Propane has been used for decades and the price advantage of North Slope propane saves on transportation. It is being priced with the North Slope as the market point rather than transporting it from Prince Rupert via barge to Whittier and transporting it via rail to Fairbanks and beyond. To do so, cuts off a huge portion of the logistical "train." Propane would transcend the natural gas pipeline route. Even with a natural gas pipeline, there is the opportunity to provide propane to critical markets in Alaska beyond Southcentral. She emphasized the volumes of C3 propane are world class. This opportunity could expand beyond Alaska to national markets. Today there is no market for North Slope propane. Currently Prudhoe Bay unit operators have an operational target for the maximum amount of propane to facilitate injection to keep oil flowing through the Trans-Alaska Pipeline System (TAPS).

MS. PEASE offered her belief that in examining the petrochemical market, the 20,000 billion cubic feet (bcf/d) per day of propane could be supplied by direct marine export [slide 4]. She recalled Lt. Governor Mead Treadwell's comments this morning about arctic transportation corridors beginning to emerge. He said the reduced extent and thickness of polar ice routes creates potential transportation opportunities through the Arctic that will add to the market. She pointed out that ANGDA is willing to facilitate and bring the stakeholders together. The project will be a private sector project that will be driven by markets and business sense. ANGDA is part of an Alaska Propane Consortium Group that has been meeting in Anchorage. She stressed the discussions with producers to highlight the opportunities beyond Alaska. A vibrant business case exists to open up potential. She discussed the logistics to Asia and U.S. West Coast [slide 5]. She anticipated the proposed natural gas pipeline would provide 4.5 bcf/d of gas unless a smaller diameter pipeline was built. She stressed that 110,250 barrels per day represents a worldwide opportunity. Alaska's demand has been estimated at 3,000 to 3,500 barrels per day, which provides an in state perspective on the magnitude of natural gas.

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MS. PEASE stated the volume in the pipeline will create a worldwide opportunity. She highlighted the "Feedstock Based Cracker Production Capacities" and noted that the composition of liquids available has not changed significantly since 2004 when these figures were developed for the right-of-way application [slide 6]. She reported that the "Alaska Gas & NGL Potential Uses" slide garnered attention at the conference [slide 7]. The rich stream of gas holds many types of gas opportunity for imports and exports, which is dependent upon the private sector development and marketing. She commented that many people attending the conference also participate in the worldwide Propane Gas Association. Participants at the conference noted that Hawaii and Asia have insatiable appetites for propane [slide 8]. Hawaii consumes a million gallons of imported propane per day on one island alone. They are keenly interested in obtaining propane from the U.S. rather than Asia. Bringing together the stakeholders and having industry represented has been one of the things ANGDA has been working hard to accomplish. There is a channel to market issue for exports [slide 9]. She emphasized the opportunity that partnering with a U.S. company could have to facilitate market development activities in a sustainable manner. ANGDA is asking the Prudhoe Bay owners to perform technical evaluation of liquids and to consider development of a logistical facility [slide 10]. Initially, ANGDA worked solely on the in state market. The in state market is important to Alaska and its rural communities. However, it does not rise to a compelling commercial transaction for the North Slope operators. ANGDA also considers the worldwide needs, including Asia and the U.S. West Coast. Additionally, technical work needs to be done on the cost estimates for modifications and requirements for the central gas facility. She offered her belief that a minimum investment of $300,000 will be necessary on technical and feasibility studies. This would provide a marketing plan from the State of Alaska that would identify the market opportunity in a clear and defined manner and a non-unit logistical facility to receive individual propane sales. That means ANGDA is asking to put in place a very rich extraction stream of the North Slope propane at a wholesale facility which makes it available to an

aggregator and other users within the state. She highlighted the positive nature of doing so. It is possible to develop the site separate from the Prudhoe Bay unit. She remarked that this would be a very small volume, about 2,500 barrels in an extremely high-cost plant estimated to cost $20 million for the initial development cost. She related her understanding that these changes could happen for a small investment to the central gas facility right before the propane extraction plant that currently exists. She said to do so could result in 20 million barrels per day which presents a compelling business argument.

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MS. PEASE referred to a study done by Northern Economics, Inc. on the Alaska Pipeline Project In-state Gas Study [slide 11]. This study encompassed the Denali pipeline project as well as the Alaska Pipeline Project. This study examined the opportunity for propane once the proposed natural gas pipeline is built. She pointed out that in zero to five years the demand will still be about the same, about 3,000 barrels per day. However, the demand grows to 30,000 barrels per day in years 10-15. She remarked on the potential for in-state demand for propane as an alternative energy source at a reasonable price. She pointed out the need for propane for fleet services. Currently, hundreds of barrels of ultra low-sulfur diesel are trucked to the North Slope to provide for fleet services operation and the cost is extremely high. She anticipated that a fueling station could provide Alaska's propane on the North Slope if the fleet were to be converted to propane, which would avoid spill issues. She highlighted that this idea and opportunity is beginning to gain traction. Additionally, propane could be used for exploration and drilling, industrial applications such as electrical generation, and transitional development from in-state and North Slope- use to longer-term export. The best opportunity is for rural community and village home heating. She pointed out that providing alternatives to the $9.85 per gallon in Kotzebue and beyond is one thing ANGDA is focused on and can do today. The "Propane Barging/Tankering Direct from North Slope" could happen direct from the North Slope [slide 13]. Ms. Pease concluded that if Alaska had a propane wholesale facility on the North Slope the propane could

be trucked, barged, or exported directly to mining opportunities, gas operations in Cook Inlet, to Hawaii, and for use by petrochemical manufacturer's in-state, as well as to the Lower 48 and West Coast for seasonal demand. She emphasized that this opportunity could so easily be accomplished and embraces the private sector and development of Alaska's resources in a sustainable and opportunistic manner going forward.

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REPRESENTATIVE SADDLER asked whether the propane is compressible.

MS. PEASE answered that it is a liquid, but air can be added to it so it can be injected. She offered to provide technical applications.

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REPRESENTATIVE SADDLER referred to the cost of the propane separation facility on the North Slope and asked for clarification on whether it would be incorporated just above the gas treatment facility.

MS. PEASE answered yes, that would be the unoptimized plant that would produce about 2,500 barrels per day. She explained that if the North Slope owners changed the central gas system, the result would reduce the cost and increase the volume to approximately 20,000 barrels of propane per day. She related that the goal is to reduce the overall cost and bring it back to the Prudhoe Bay unit to see if the producers and owners would be willing to consider this as a business market opportunity. If not, there is a backup plan that this project is viable over a period of time.

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REPRESENTATIVE SADDLER related his understanding $200 million would provide a stand-alone facility that would produce 2,500 barrels per day.

MS. PEASE agreed noting that it is so expensive since it would take a full-gas stream with the CO2 still needing to be removed and the plant would not be located in the optimal place on the North Slope. She explained the goal is to work with the North Slope owners and producers to work to develop a propane wholesale facility that would utilize the more optimized richer stream of propane ahead of the propane extraction facility that exists today prior to injection. In further response to Representative Saddler, she agreed that it would take approximately $300,000 for a study. She remarked that she is encouraged by the preliminary discussions and work. The preliminary findings indicate the opportunity is so incredible the producers and owners should embrace it since it would likely pan out.

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REPRESENTATIVE PETERSEN recalled the British Thermal Units (BTU) values of propane are two-thirds of diesel. He asked what the cost would be in Kotzebue to outline the potential savings.

MS. PEASE answered that the BTU for propane equals 91,600 per gallon and on fuel oil is 145,000 per gallon. She offered to provide a slide she developed for the conference which puts it on a one million BTU (MMBtu) equivalent basis. Thus, basically a customer paying $2.90 for fuel oil would pay $1.83 for propane under the MMBtu basis. She explained the premise is that communities currently use propane so if it could be sourced from the North Slope instead of transporting it from Prince Rupert, Alaska can ensure the product would be cheaper from North Slope and would use existing equipment.

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CO-CHAIR PRUITT recalled the propane distribution map at the ANGDA office. He also recalled the Lt. Governor's comments at the conference. He inquired as to the feasibility and potential to transport propane directly from North Slope. He further inquired as to whether as to the infrastructure needed and if

any special equipment would be needed to transport propane via rivers and the Arctic Ocean.

MS. PEASE offered one presentation at the conference was on "steel intermodal containers" known as ISO containers that can be stacked and placed on barges and transported via rivers to rural Alaska's communities. She recalled that ISO containers are stacked eight or nine high on vessels for transport to Hawaii, and other places. She related that the ice opening up on the North Slope presents an opportunity to expand the length of time annually to reach communities. She stated that barges have a lower draft. More importantly, the technology is changing including a truck with a crane built into it that could be loaded on a barge and used in towns and villages to off-take the ISO containers as well as transport the containers to other locations. She recalled one consideration mentioned would be to load the ISO on a sled facility to transport during the winter. She noted that many of the villages are more isolated in the winter and access is by snow machine or sled.

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MR. HEINZE elaborated on the Arctic ice conditions. He stated that ANGDA is looking at a direct shipment from Prudhoe Bay through the Beaufort Sea and ice for a number of decades. The "game changer" that has occurred the past few years has been that the Arctic ice cap has withdrawn hundreds of miles from the coastline. Thus, when the ice freezes each year it is referred to as "one-year ice" which is thinner and can be broken in the winter by tankers and other ships not considered "icebreakers." Smaller ocean-going tankers can be strengthened and could obtain access 8-9 months of the year. He described possible port facilities for Arctic conditions including necessary water depth of 30-40 feet. He stated some ice related technologies that may allow a protected atoll, loading facilities below the ice surface. Major concerns surrounding tankers have related to oil. Propane tankers are pressure tanks, double hulled, and spilled propane evaporates so it does not represent traditional types of contamination. He related that ANGDA has been working to identify interested partners who are willing to help

investigate issues to gain access to a world class supply of natural gas. He offered his belief that some partners exist.

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REPRESENTATIVE SADDLER inquired as to the capital transition cost from fuel oil to propane. He further inquired as to whether the burners work the same and if it is possible to convert from one fuel source to another.

MS. PEASE answered that the conversion cost would be low, well under $2,000. Conversion of appliances would be paid for by savings in one year. Also, there are rebates available for clean-burning fuel. She offered her belief that rural Alaska would embrace propane and the issue is just obtaining the lower cost propane source instead of importing the propane.

MR. HEINZE added that in terms of home heating that homeowners would likely add propane heaters in addition to their existing diesel fuel source. Thus, he did not envision that homeowners would remove existing equipment, but would add to their systems to provide alternatives for homeowners. He stated that in many conditions in rural Alaska it is important to have redundancies and alternatives. The cost of adding another heater is small in comparison to the annual heating bill. Additionally, ANGDA did not anticipate an instant conversion of everyone in Alaska. He thought it could take a full generation for that to happen. Some residents, such as in the Northwest Arctic Borough have difficult logistics so the motive isn't so much as price, but the logistics.

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PAUL FUHS, Consultant, Alaska Natural Gas Development Authority (ANGDA), stated that he contracted with ANGDA to perform a logistics study. It began with water-related logistics but extended to rail, trucking, pipeline production and other facets. He suggested that a high degree of uncertainty exists with respect to the natural gas pipeline, the Susitna Dam, or for any major project. He offered his belief that with any scenario propane could play a role. He said the propane project

would fit in with any natural gas pipeline project. Currently, propane could be developed in the short term on the North Slope or for the long term, off-takes could be placed at points along a natural gas pipeline. He offered to discuss the logistics. Thus, propane is a good project to invest in since it has long-term impacts in terms of energy policy. He stated differences in propane versus natural gas. Generally, propane represents about two percent of the gas steam in the North Slope. It is not efficient since it requires processing 98 percent to obtain two percent propane. He answered an earlier question noting that the North Slope propane works out to about $2 per gallon. However, if one could get to the point in the central gas processing plant with the highest concentration of propane it would reach 35 percent of propane within the stream. That would vastly reduce the processing costs so he calculated that that would reduce costs to about $.50 per gallon. The original ANGDA contract with one of the suppliers used the two percent gas stream. Currently, the central gas processing plant requires all three Prudhoe Bay operating unit operators to agree which is a more complicated process that he characterized as "three moving parts." He did not think that this aspect mattered much overall to the oil companies but it would make a different to Alaska. He suggested this could be a talking point during discussions with the operators since it could be important to Alaska. He said if any pipeline was built that a straddle plant could be added to any location on a pipeline. He related that the Yukon River was reviewed as a potential plant location since the Yukon River is the best place for river access to Western Alaska. Additionally, the Yukon River has the deepest water so the larger barges cost efficient barges can be used. He stated that natural gas would be processed at Fairbanks into methane so the propane would also be pulled off. Whether a bullet line or other pipeline is built it would make sense to have a plant located in Fairbanks and make deliveries to Tok or other places by truck. A bullet line or other pipeline that presents access to tidewater also makes it feasible to deliver to areas that do not freeze up. This would provide the advantage of periodic deliveries to communities and could significantly reduce or eliminate storage facilities that are necessary in Western Alaska. He reviewed pricing issues, pointed out that propane has 2/3 the BTU value of diesel. He related a scenario in which

the value of diesel was $4. This would require $6 worth of propane to be equivalent. He pointed out that propane would need to be sold at $6.50 per gallon to be equivalent to $9.85. Thus, any cost under $6.50 per gallon would represent a savings to consumers. He pointed out that propane is 2.5 times the BTU value of methane. He stated that it is concentrated but consumers are familiar with its use. He compared it to liquefied natural gas which is cryogenic and transported at minus 270 degrees and must be transported in specialized containers or the metal will crystallize and break at the lower temperatures. Currently, the competition between distributors keeps the cost competitive. In areas without competition, the utilities have banded together to make aggregated purchases to reduce competition costs. When the utilities distribute fuel the Regulatory Commission of Alaska (RCA) requires them to pass on distribution savings to consumers. He noted that sometimes the distribution charges create the highest cost. He suggested an electric coop might bring in fuel at a reasonable price and turn it over to the village corporation or local government who must then store it and pay storage costs. Additionally, the fuel is marked up by communities short of funds since it provides the only source of income. He characterized it as a tough situation since the parties charge a high price to locals in order to survive financially.

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MR. FUHS referred to potential uses. He said that even if the electric issues are solved the home energy cost problem is not solved despite the work that has been done with wind power and other alternative power. He related that Southcentral Alaska pays about the same for home heating as electricity. In Fairbanks home heating costs twice as much whereas rural Alaskans pay four times as much for home heating. He pointed out that this is where propane can assist homeowners. He recalled that the cost of a tank and unit, including fuel for a month cost $3,000 to convert a home to propane. He referred to a chart titled, AEA Regional Energy Cost, August 2008, page 5 of his report, titled "Propane Production, Transportation and Utilization in Rural and Urban Alaska." He compared the costs between Southeast Alaska, Anchorage, Fairbanks, and Rural

Alaska. The lowest costs were in Southeast Alaska at $5,000 per year, Anchorage at $8,000, Fairbanks at $9,000 and Rural Alaska at $12,000. He stated that 20.2 percent of total household income is spent on energy in rural Alaska. He highlighted the need to have a comprehensive program if the overall goal is to lower household energy costs to make it affordable. Some areas of the urban part of the state are not served because of low density housing. He stated that even if the natural gas pipeline were to be built to Fairbanks approximately 60,000 people would not be served by a natural gas pipeline. Propane can fill the gap. Propane would be an ideal fuel for electrical generation because the motors do not wear out as fast as diesel. He reported that diesel engines can be retrofitted by installing an input orifice on the intake manifold to inject propane in a mixture of up to 25 percent without further modifications to the unit which will burn cleaner. Additionally, propane generators operate on a much lower maintenance schedule than diesel generators, he said. He stated in areas in which wind generators are used the diesel generator will still run unless the wind generators are continuously operating which makes them less efficient. However, using propane generators allows scalability so the generator works in conjunction with the wind generator according to the wind. He characterized it as a better fit with wind energy in addition to better air quality. He stated that the Donlin Creek mine is installing generators that can burn diesel, methane or propane. He touched on conditions that can trigger necessity to add scrubbers which illustrated that propane may work well for mining operations.

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MR. FUHS discussed marine transportation costs. In the Lower 48, the medium and smaller sized trucks run on propane. He related that the cost is $.50 per gallon to truck a single bulk tank of 10,000 gallons or two 20 foot ISOs. These limits are consistent with weight restrictions on the Dalton Highway. He compared barge costs for shipping 100 pounds from Nenana to Tanana at $.65 per gallon, Nenana to Galena at $.80 per gallon, and Nenana to St. Marys at $1.57 per gallon. He projected costs for North Slope propane at $2, plus transportation costs of $2, would total $4, which would be equivalent to $6 for diesel

costs. He referred to the ISO containers previously mentioned noting the many attributes such as stacking on barges, portability, and that they can also serve as storage in a village. Additionally, wheels can be added, he said.

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REPRESENTATIVE SADDLER inquired as to whether there are special hazardous restrictions on transporting propane tanks.

MR. FUHS answered no. He pointed out that restrictions do not apply even on bulk barge. He commented that the propane requires more storage than diesel, but a propane tank farm does not require any berm or liners since the fuel is a "green" fuel. He recalled the Denali Commission still has about $200 million in outstanding tank replacements in villages. He related that if cost savings can be shown that the Denali Commission would substitute propane tanks instead of diesel fuel tanks.

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REPRESENTATIVE SADDLER inquired as to the amount of propane that could be carried in one tank truck.

MR. FUHS answered that approximately 2,500 barrels could be transported per tank truck. He projected that a bullet line would produce 12,000 barrels of propane per day. He related that shipment to tidewater in Southcentral Alaska is the easiest to serve and the hardest is in Western Alaska. He stated that he considered direct shipments from the North Slope which would pose some additional issues. The ocean depths on the North Slope are shallow so a berthing facility would be required. While an existing dock exists the facility is extensively used. The most likely customers would be the Red Dog Mine and regional fuel hubs like Nome or Bethel. He discussed some technical issues including 50 percent more storage. Since propane does not vaporize below minus 45 degrees modifications would need to be made for extreme cold. One solution is to create an Arctic grade of propane by adding additional ethane. Another solution may be to bury the tank. The University of Alaska Cold Regional Research Facility in Fairbanks studied this and the temperatures

did not exceed minus 19 degrees. He pointed out that an alternative supply is necessary in case of any disruption of supply, which could be handled by shipping on rail. Finally, training is required to ensure safe operations.

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CO-CHAIR FOSTER commented that this is an exciting prospect for rural Alaska. He offered his belief that the Bush will be interested.

CO-CHAIR PRUITT agreed propane represents great potential for rural areas.

REPRESENTATIVE SADDLER also commented by referring to a quote on whether there is anything that cannot be done.

REPRESENTATIVE PETERSEN has used propane for many years. He pointed out that propane creates a value-added product for the state.

CO-CHAIR PRUITT agreed that propane may serve as a bridge until new technology is developed.

CO-CHAIR FOSTER related that some propane is being used in Nome so making the transition seemed feasible.

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ADJOURNMENT

There being no further business before the committee, the House Special Committee on Energy meeting was adjourned at 4:19 p.m.