

ALASKA STATE LEGISLATURE

HOUSE SPECIAL COMMITTEE ON ENERGY

Anchorage, Alaska

September 1, 2009

2:13 p.m.

MEMBERS PRESENT

Representative Bryce Edgmon, Co-Chair

Representative Charisse Millett, Co-Chair

Representative Nancy Dahlstrom

Representative Kyle Johansen

Representative Jay Ramras

Representative Pete Petersen

Representative Chris Tuck

MEMBERS ABSENT

All members present

COMMITTEE CALENDAR

COOK INLET NATURAL GAS CONTINGENCY PLANS

- HEARD

PREVIOUS COMMITTEE ACTION

No previous action to record

WITNESS REGISTER

MARK SLAUGHTER, Manager

Gas and Supply

ENSTAR Natural Gas Company

Anchorage, Alaska

POSITION STATEMENT: Gave a slide presentation dated 9/1/2009 and answered questions regarding Cook Inlet Natural Gas Contingency Plans.

REPRESENTATIVE LES GARA

Alaska State Legislature

Juneau, Alaska

POSITION STATEMENT: Asked questions during testimony on Cook Inlet Natural Gas Contingency Plans.

SENATOR GENE THERRIAULT

Alaska State Legislature

Juneau, Alaska

POSITION STATEMENT: Asked questions during testimony on Cook Inlet Natural Gas Contingency Plans.

GEORGE VAKALIS, Municipal Manager

Municipality of Anchorage

Anchorage, Alaska

POSITION STATEMENT: Testified during the hearing on Cook Inlet Emergency Contingency Plans.

BRADLEY EVANS, CEO

Chugach Electric Association (CEA)

Anchorage, Alaska

POSITION STATEMENT: Gave a slide presentation titled "Incident Management Gas Supply Interruption" and answered questions during the hearing on Cook Inlet Gas Emergency Contingency Plans. Offered his personal opinion in response to a question.

PHIL STEYER, Director

Government Relations & Corporate Communications

Chugach Electric Association (CEA)

Anchorage, Alaska

POSITION STATEMENT: Testified during the hearing on Cook Inlet Emergency Contingency Plans.

CHRIS ROSE, Executive Director

Renewable Energy Alaska Project (REAP)

Anchorage, Alaska

POSITION STATEMENT: Gave a slide presentation titled "Diminishing Gas Deliverability & Energy Efficiency in Anchorage" and answered questions during the hearing on Cook Inlet Gas Emergency Contingency Plans.

ACTION NARRATIVE

CO-CHAIR CHARISSE MILLETT called the House Special Committee on Energy meeting to order at 2:13 p.m. Representatives Tuck, Dahlstrom, Ramras, Johansen, Petersen, Edgmon, and Millett were present at the call to order. Also in attendance was Senator Therriault (via teleconference). Representative Gara arrived as the meeting was in progress.

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Cook Inlet Natural Gas Contingency Plans

CO-CHAIR MILLETT announced that the committee would hear presentations regarding Cook Inlet Natural Gas Contingency Plans.

[2:15:12 PM](#)

MARK SLAUGHTER, Manager, Gas and Supply, ENSTAR Natural Gas Company, directed the committee's attention to slide 2, titled "Cook Inlet Gas Infrastructure." He indicated that the blue lines on the map were ENSTAR gas pipelines; the red lines were Marathon Oil Corporation (Marathon) or Unocal Corporation (Unocal) pipelines; and the yellow lines were either ConocoPhillips Company (ConocoPhillips) or Cook Inlet Gas Gathering System (CIGGS) pipelines. The map also indicated the location of power plants and natural gas storage reservoirs in Cook Inlet. Mr. Slaughter noted that ENSTAR's pipeline system includes the following: the Beluga pipeline that is a 100-mile, 20-inch diameter pipeline that moves ENSTAR and Anchorage Municipal Light & Power (ML&P) gas to Anchorage; the Kenai "A" and "B" pipelines that are 75 mile, 12-inch pipelines that travel from Soldotna to Anchorage; and a 22-mile, 8-inch pipeline that connects to the A and B pipelines. He showed the committee the location of the Kenai-Kachemak Pipeline (KKPL) that is owned by Marathon and Unocal and operated by Marathon; the location of the Kenai Nikiski Pipeline (KNPL) that is a 20-inch line from the Kenai gas fields to Nikiski; the location of the CIGGS undersea pipeline; and the location of the Marathon Beluga Pipeline. Mr. Slaughter recalled that last year ENSTAR had two contracts that were not approved by the Regulatory

Commission of Alaska (RCA). In order to replace the denied contracts, ENSTAR subsequently secured two, two-year contracts with Marathon and Conoco to meet the remainder of its gas needs through December 31, 2010. He presented slide 3, titled "Gas Supply-Winter 2009/2010 Outlook," and said beginning January 1, 2011, approximately one-third of ENSTAR's gas supply will not be under contract. Initially, ENSTAR had its gas supply under contract through 2013, but those contracts were not approved by the RCA. At this time ENSTAR is buying gas under five contracts; however, in January, the small Beluga contract will end.

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REPRESENTATIVE RAMRAS referred to slide 3 and asked for the anticipated percentage of growth for the Southcentral region from 2009 through 2018.

MR. SLAUGHTER responded that ENSTAR projects a steady growth of 1-1.5 percent. The dynamic of forecasting gas supply is uncertain partly because of the effect of third parties that market gas and ship on ENSTAR's pipeline, and partly because of the effect of the military base contracts. Currently, loads are projected at a lower increase than the historical high of 3 percent per year. In further response to Representative Ramras, he said when customers convert from gas to alternative fuels it is called "curtailment." Mr. Slaughter continued to explain that ENSTAR is seeking additional gas volumes that are needed to meet its customers' needs beyond 2010. Moreover, ENSTAR faces curtailment if the company does not have sufficient gas under contract because customers who convert to other sources of energy will be lost.

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CO-CHAIR MILLETT asked for the number of customers ENSTAR anticipates will be lost by curtailment if it does not find a gas supply.

MR. SLAUGHTER stated that ENSTAR is missing contracts for one-third of its portfolio; in fact, ENSTAR would lose its entire commercial base without additional contracts. In further response to Co-Chair Millett, he explained that because of the priority listing, large and small commercial customers are lost first and then it is determined by "ageing." For example, customers returned to ENSTAR in 2009, 2008, and 2006, with the exception of buildings such as schools and churches, would be lost next. In further response, he noted that customers need as much notice as possible before they are taken off of natural gas; a lack of notice last December led to very irate customers.

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MR. SLAUGHTER presented slide 4, titled "Cook Inlet Peak Day Comparison." The chart indicated that the last significantly cold day was 2/3/99, with an average daily temperature of -19 degrees F, and ENSTAR moved about 272 million cubic feet (mmcf) of gas in one day. On 1/3/09, the average daily temperature was -11 degrees F; however, 314 [mmcf/d] was required. He pointed out that in 1999, the Nikiski liquefied natural gas plant (LNG) and the Agrium, Inc. fertilizer plants were operational and there was plenty of gas available. However, by 2009, the fertilizer plant was closed and the LNG plant had reduced its need from 224 [mmcf/d] to 40 [mmcf/d] of gas. In addition, the source of the gas had changed to a combination of gas from storage volumes and from well supplies. The Department of Natural Resources (DNR) estimated there is 380 mmcf/d of well deliverability from the Cook Inlet this year and Mr. Slaughter concluded that in two years 120 mmcf/d of deliverability was lost.

MR. SLAUGHTER returned to the subject of ENSTAR's present situation. Slide 5, titled "ENSTAR 2009/2010 Supply Portfolio" indicated that the peak for 2009 is forecast at 270 mmcf/d and that the peak forecast for 2010 is 282 mmcf/d. ENSTAR's 2009 suppliers are: Beluga River Unit Producers, ConocoPhillips, Marathon APL-4, Marathon APL-7, and Union. In 2010, the four suppliers will be: ConocoPhillips, Marathon APL-4, Marathon APL-7, and Union. He reminded the committee that ENSTAR has

been investing in its infrastructure since 2007; in fact, these investments have been designed to increase the flow of gas from wherever it is available to the areas that need it on peak days. Mr. Slaughter then presented slide 7, titled "ENSTAR Operations." Regarding emergency interruptions, he assured the committee that ENSTAR is staffed 24 hours per day, 7 days per week, 365 days per year, and its central operations center in Anchorage responds to gas emergencies. In addition, there are regional offices in Soldotna and Wasilla, and emergency control locations in Wasilla and Sterling. ENSTAR maintains a proprietary communications network with equipment staged in various locations in the state, and thus is not dependent on other communications companies in the event of an emergency.

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REPRESENTATIVE DAHLSTROM asked whether ENSTAR's proprietary communications network is tied in with the U.S. Department of Homeland Security (USDHS).

MR. SLAUGHTER responded that ENSTAR participates in emergency preparedness with the Alaska Partnership for Infrastructure Protection (APIP); however, ENSTAR manages its own microwave communication system that is also used by AT&T. In addition, ENSTAR leases lines through GCI for other communication needs. In further response, he noted that the statewide emergency organizations have not been meeting as often this year.

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MR. SLAUGHTER presented slide 8, titled "ENSTAR Standard Operation Procedures" and said that ENSTAR is regulated by the U.S. Department of Transportation Pipeline and Hazardous Materials Safety Administration (PHMSA) which audits its standard operating procedures annually. The operations plans are designed to cover operator qualification programs, a disruption in gas supply, gas leaks, damages, natural disasters,

and fires. Slide 10 was a chart of ENSTAR's emergency response call-tree.

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REPRESENTATIVE RAMRAS asked whether residential or commercial gas heat customers can restart their heat plants on their own.

MR. SLAUGHTER informed the committee that when ENSTAR receives a call that an appliance is out, it sends a serviceman to check on the gas supply, but then advises the customer to call a contractor to relight the appliance. Relighting an appliance is simple, unless there is some sort of disruption or limit on the flow of gas.

REPRESENTATIVE RAMRAS gave the example of an involuntary curtailment of the system, affecting more than 1,000 homes, and asked if each home would have to be manually lit.

MR. SLAUGHTER replied yes, but steps would occur prior to a curtailment of service of that degree. Last week, testimony before the RCA from the electric utilities indicated that the utilities "believe that they could shed, we could stop 75 percent of their load and send that to ENSTAR." He continued to explain that ENSTAR has no back-up and it cannot build diesel-fired plants. However, during an extreme case such as Representative Ramras' example, ENSTAR can call on its mutual aid assistance agreements with the Western Energy Utility Institute (WEI) and its sister companies in Michigan and New Mexico.

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MR. SLAUGHTER clarified that the 2009 gas supply is contracted; however, there is always the possibility of equipment failures.

He then presented slide 11, titled "Cook Inlet Gas Supply Coordination" that indicated the three primary users of gas in Cook Inlet are Chugach Electric Association (CEA), ENSTAR, and Anchorage Municipal Light & Power (ML&P). To facilitate coordination of the gas supply, ENSTAR normally hosts an annual shippers/producers meeting; shippers issue forecast demands on an annual, monthly, and daily basis; and gas flows are coordinated on ENSTAR pipelines and on the Marathon pipeline system. Mr. Slaughter presented slide 12, titled "ENSTAR Contingencies" and displayed the Gas Emergency Agreement Letter that was recently executed by ENSTAR, CEA, ML&P, and Golden Valley Electric Association (GVEA). The agreement outlines the steps the utilities will take in the event of a disruption of gas supply. These steps include: curtailment of interruptible deliveries; rerouting; the use of back-up agreements; the importation of electricity; and conservation by consumers. He discussed other contingencies that are part of ENSTAR's delivery contracts.

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REPRESENTATIVE DAHLSTROM asked for information about any other agreements to help provide gas to health facilities, hospitals, treatment homes, schools, or residences with 24-hour home medical care.

MR. SLAUGHTER answered that the tariff [agreement] is clear regarding the priority of delivery during a disruption to the gas supply. For those on the ENSTAR system at the time of the disruption, industrial customers are turned off first, then commercial customers, and lastly hospitals, residences, churches, and schools. In further response to Representative Dahlstrom, he clarified that all residential homes are part of the final protected class of customer. Furthermore, ENSTAR Tariff Section 1200 directs how additional costs associated with a disruption are paid as approved by the RCA.

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MR. SLAUGHTER added that the final contingency under the transportation shipping agreement allows that a third party shipper can be penalized 2.5 times the most expensive price of gas if they do not provide an appropriate quantity of gas for their own customers. He then presented slide 13, "Gas Supply Interruption Incident Response Overview." The overview is being developed with the goal of putting in place short-, mid-, and long-term response plans for the electric utilities in the event of a disruption in the gas supply. He stressed that the long-term responses also need the participation of state and local governments. Slide 14, titled "Actions & Next Steps" listed the following deadlines: utilities update RCA on 8/26/09; gas and electric system operator tabletop scheduled for 9/10/09; ENSTAR annual shippers/producer meeting scheduled for 9/17/09; and coordination with the Municipality of Anchorage beginning 9/1/09 and continuing to 11/13/09. Mr. Slaughter concluded the following: Cook Inlet deliverability continues to decline; mutual aid planning and coordination is not a long-term solution; coordinated customer awareness and education efforts are ongoing; utilities, producers, and local and state governments must work together for long-term solutions; and regulatory and fiscal certainty are required to achieve long-term solutions.

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REPRESENTATIVE RAMRAS asked whether Senator Therriault would be able to speak about these issues to the energy committee after assuming his new position with the administration.

SENATOR THERRIAULT answered that he was not sure at this point.

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REPRESENTATIVE RAMRAS then referred to slide 3 and asked whether the "undesignated" gas was going to come from new sources in the inlet or imports.

MR. SLAUGHTER informed the committee that ENSTAR is working with DNR to reevaluate the gas supply in Southcentral; nevertheless, gas is available in the near-term if ENSTAR is able to enter contracts. If ENSTAR is unsuccessful in entering contracts, the needed investments in infrastructure will not be made. He opined that entities were opposed to the proposed ENSTAR contracts that would have guaranteed the availability of gas for the next five years at low prices. When it becomes necessary, ENSTAR will import LNG.

[2:53:03 PM](#)

REPRESENTATIVE RAMRAS asked for further details about the plan for a supply of gas in 2013-2014, and the source of the aforementioned LNG.

MR. SLAUGHTER explained that ENSTAR will contract for gas in 2011-2012; however, according to DNR the total production in Cook Inlet in 2013-2014 will not meet the estimated demand of 87 BCF/d. Therefore, ENSTAR has to make some significant investments in the near future for storage to ease "swing" in deliverability requirements. He opined it is too early to say where imported gas will come from. In further response, he said, "The inexpensive options have basically been presented and rejected. Where that gas [comes from] will all depend on, as we move down that path, and evaluate it, but there's significant investment that has to be made in order to have, ... storage facilities that can receive gas, have to contract for that gas, you have to evaluate [and] make sure the docks can receive the gas, and where it comes from [is] the free market."

[2:57:19 PM](#)

REPRESENTATIVE RAMRAS asked when ENSTAR will have to begin to commit capital, and to make plans, in order to deliver foreign LNG to Southcentral by 2014.

MR. SLAUGHTER advised that ENSTAR is now developing storage because storage is necessary whether there is additional production in Cook Inlet, or there is a bullet line, a spur line, or a big line. Frankly, significant decisions will be made this year as ENSTAR contracts for gas. Because Cook Inlet is a small market, without a spur line, a bullet line, or an industrial anchor tenant, there is basically no reason for producers to look for gas.

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REPRESENTATIVE DAHLSTROM asked where the gas will be stored.

MR. SLAUGHTER said ENSTAR is working with the owners of identified storage reservoirs in Cook Inlet.

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REPRESENTATIVE TUCK asked how soon pipeline storage can be at a comfortable capacity.

MR. SLAUGHTER advised that ENSTAR is working with ANR Pipeline Company (ANR) to have a storage system up and running for the 2011-12 system. However, there are many issues to overcome such as securing a field and obtaining regulatory approvals.

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REPRESENTATIVE TUCK then asked how the cost of storage will affect rate-payers.

MR. SLAUGHTER advised that ENSTAR does not have the costs yet. He assumed that gas would be less expensive in the summer, but warned that the cost of storing gas is not cheap, and costs will not return to the "days of 2000, when we were in \$2 gas."

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REPRESENTATIVE TUCK asked for the reasons that the 2013 contracts were not approved.

MR. SLAUGHTER explained that ENSTAR was unlucky in that when presenting the contracts, gas prices were at unprecedented high levels. In the summer of 2008, some thought ENSTAR was the market price-setter for gas and parties intervened to oppose the contracts for their own advantage in negotiations. He opined that if ENSTAR had those contracts, it would be paying \$4.36 in 2010 for ConocoPhillips Alaska, Inc. (ConocoPhillips), and \$5.02 for the Marathon Oil Corporation (Marathon) contract.

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REPRESENTATIVE PETERSEN referred back to ENSTAR's contingency plans. He observed that the plan calls for consumers to be educated on conservation measures and asked how this will be done, and whether similar plans elsewhere have been successful.

MR. SLAUGHTER explained that the education methods will be a joint effort between the utilities. In the 1980s there were joint communication actions which will be revamped for present day use. Information will be made public about voluntary curtailments-like what happened in Juneau-when rates went up and people consumed less power.

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REPRESENTATIVE RAMRAS asked whether the first calendar year of gas supply problems is anticipated to be 2013 or 2014.

MR. SLAUGHTER predicted if storage is on-line for 2011, sufficient gas supply will probably extend through 2012; however, his expectation is dependent upon how much gas the producers make available. Undoubtedly, there is more gas to be found in Cook Inlet, albeit at a [higher] free market price. In further response to Representative Ramras, Mr. Slaughter advised that ENSTAR is currently working on a contingency plan for the importation of foreign LNG because of the significant time that will be required to negotiate delivery and to educate the RCA, the state, and the community, as to what is involved.

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REPRESENTATIVE RAMRAS expressed his interest in learning the source of the imported gas.

MR. SLAUGHTER said areas of British Columbia, the Lower 48, Sakhalin [Russia], Australia, and Indonesia, have gas.

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SENATOR THERRIAULT asked whether the contracts that were denied would have locked ENSTAR into deliverability for the "out years," but at more of a market price.

MR. SLAUGHTER further explained that the contracts were based on various trading indices, but were not full deliverability on the out years. Therefore, the producers were not willing to contract for ENSTAR's entire 1:12 summer to winter peak swing ratio. If the contracts had been approved, ENSTAR would still

have to develop storage, but not under the timeline it now faces. In further response to Senator Therriault, he said the proposed contract with ConocoPhillips limited ENSTAR at the first quarter of 2011, and the Marathon contract proposed full deliverability through the first quarter of 2011. Beyond that, the proposed contracts gave ENSTAR the responsibility to "flatten our profile" by developing storage for the 2011-2012 season.

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REPRESENTATIVE DAHLSTROM asked whether Mr. Slaughter would agree that cheap gas is gone and only expensive gas is left, or if there is no more gas.

MR. SLAUGHTER agreed that easy, less expensive gas is gone; in fact, given the present cost of drilling, the easy gas has been found and the cheap options are "off the table."

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REPRESENTATIVE RAMRAS observed that ENSTAR was previously moving forward on building a bullet line independently. He asked whether ENSTAR was still prepared-in its strategic plan-to pursue a bullet line after it invests in the infrastructure necessary for gas storage.

MR. SLAUGHTER stressed that importing gas into Cook Inlet includes gas from a bullet line or a spur line from the North Slope, and/or LNG imports. ENSTAR is working with Harry Noah, the governor's advisor on the in-state gas pipeline project, who is taking the lead on the in-state gas pipeline. He expressed indifference as to where the gas comes from, as long as ENSTAR can execute a contract with a producer.

REPRESENTATIVE RAMRAS remarked:

Quite frankly, I do care where gas comes from. I have 100,000 people that I and some of my colleagues represent ... and so it's a big darn deal to me whether that gas comes from the North Slope of Alaska or whether it's foreign LNG that's imported from Australia, ... Russia, or Indonesia.... I have a community that's been tied to diesel for decades and decades since we converted from coal in the '50s. I have a community that is struggling under the [Fine Particulate Matter] Pm 2.5 mandate that's imposed by the [Environmental Protection Agency (EPA)] that is resulting in a constrained economy....

REPRESENTATIVE RAMRAS further described how the limited supply of natural gas has cost his constituents 800 new service jobs and prevented over \$50 million in property tax revenue and new economic growth in the Fairbanks area. He said, "I would like to be on record as saying ... those folks in the interior, and ... in Western Alaska, and ... along the road system do care where that gas is going to come from." He pointed out the divergent interests between the industry that is concerned with supplying gas to its customers, and the residents and policy makers of Alaska who ought to be concerned with where the gas comes from and how each community in Alaska moves forward for the next 50 years.

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REPRESENTATIVE GARA informed the committee of the need for the state to have a plan in place to reduce energy use and avoid rolling black-outs this winter. He asked whether the state has a plan for safely reducing the use of energy in state buildings, facilities, and schools, rather than "cutting people off" on cold, high demand days.

MR. SLAUGHTER deferred the question to Phil Steyer, Director of Government Relations and Corporate Communications, CEA.

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CO-CHAIR MILLETT asked Senator Therriault to inform the administration of the committee's interest in a plan to reduce energy use in state facilities during peak demand.

SENATOR THERRIAULT surmised when the RCA denied the ENSTAR contracts, it seemed that the commission went beyond regulating what the utility was charging for transportation of the resource, to regulating the commodity price for the resource that was being delivered. He asked if ENSTAR has an opinion on whether the statutes or regulations need to be modified in order to prevent this situation.

MR. SLAUGHTER advised that a review of past RCA rulings has revealed a "shifting of standards as to how they have evaluated the contracts." ENSTAR would like the RCA to return to the previous standard that was applied and "leave a reliable gas supply at a reasonable price that's available in the market." He acknowledged that the RCA had recently approved CEA's contract with ConocoPhillips and ENSTAR is hopeful that this is an indicator for future contracts. In further response to Senator Therriault, he said that the burden of proof is on ENSTAR to supply sufficient information to support its proposed contracts. Referring to the Department of Law (DOL), Division of Regulatory Affairs & Public Advocacy (RAPA), he said RAPA did not oppose the CEA/ConocoPhillips contract, although it did present testimony at the ENSTAR hearings in opposition to some of the terms and conditions.

3:26:53 PM

GEORGE VAKALIS, Municipal Manager, Municipality of Anchorage, informed the committee that the Municipality of Anchorage is

looking at solutions to a possible interruption in its supply of natural gas with a three-pronged approach: a long-range solution that includes the alternatives discussed today, and study by a mayor's task force; intermediate solutions such as gas storage, propane, and LNG; and an immediate short-term fix for occurrences this winter. During a recent meeting with all of the utilities supplying Anchorage, the utilities agreed that the most likely scenario this winter would be a disruption in the flow of natural gas due to equipment failure. He explained that emergency management by the municipality falls under either a short-term solution to a temporary equipment failure, or a long-term solution to address a major disruption that cannot be quickly repaired. Mr. Vakalis said one obvious solution for a short period of time is the use of conservation measures. In fact, the utilities have provided suggestions to reduce energy consumption by residents, businesses, and industrial users. These measures could help to mitigate the problem for awhile; therefore, the municipality will release an education plan in October informing consumers of measures they can take in this event. Also, the educational materials will include information about the effects of lower pressures should the shortage of gas continue. Mr. Vakalis stressed that the first step is conservation, and the "alert notification system" will be used in October to notify residents to begin to take the conservation measures. The success of these measures will be an indication to the utilities of the effect of conservation on the amount of energy needed. He continued to explain that in November, the municipality will hold a tabletop exercise with all of the utilities to determine how well they are able to handle such an emergency. He concluded that Anchorage is doing everything possible to encourage conservation and to develop a plan through the tabletop exercise. More importantly, the municipality is looking at a plan to address a major disruption during the winter months.

[3:34:13 PM](#)

[CO-CHAIR Millett handed the gavel to Representative Dahlstrom.]

REPRESENTATIVE TUCK asked how the educational information will be communicated to the public.

MR. VAKALIS responded that the municipality is coming up with a plan to use the media, the municipality, the school district, and the University of Alaska (UA) television channels, as well as internet and other electronic means of communication. This plan will be used to educate and to alert residents of the need to start conserving. The municipality will also monitor weather conditions and will determine the best way to communicate with the utilities regarding pressure readings. In further response to Representative Tuck, he said that the municipality will alert the entire city of Anchorage and areas in the Railbelt. Additionally, Anchorage will share with Kenai and Mat-Su emergency management organizations information about the alert program and the best methods to conserve and will also invite their participation in the tabletop exercise.

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REPRESENTATIVE RAMRAS applauded Mr. Vakalis for encouraging conservation efforts and mentioned the effectiveness of the "green star" program for businesses.

[Representative Dahlstrom returned the gavel to Co-Chair Millett.]

3:39:09 PM

CO-CHAIR MILLETT asked for the best way the state and the legislature could help the municipality with its tabletop exercise.

MR. VAKALIS observed that the municipality has a great working relationship with the Alaska Division of Homeland Security & Emergency Management (DHS&EM). However, it may be the role of the state and legislature to develop the long-term solution, whether the solution is hydroelectric, tidal, wind, or

conversion to coal. In the short-term, he encouraged the committee to support the development of gas and the most feasible alternatives. In further response to Co-Chair Millett, he said that after educating the residents on conservation measures, he plans to ask the major users of energy, such as the Ted Stevens Anchorage International Airport, hospitals, and large facilities to develop their own conservation measures.

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REPRESENTATIVE RAMRAS observed that Cook Inlet gas will not be sufficient to provide natural gas to Anchorage in the future. He asked whether the municipality will develop a policy position regarding where it intends to obtain its gas supply in the future.

MR. VAKALIS opined it is inconceivable that Alaska cannot draw from its own resources to provide energy for the state.

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REPRESENTATIVE GARA suggested that community service announcements and direct notification to industrial users will be more effective than posting flyers to encourage conservation measures. He expressed his concern that the media plan to encourage conservation measures will not include the entire Railbelt. Furthermore, there should be actual agreements with the large commercial users and the nonresidential users.

MR. VAKALIS stressed that "the plan is to get 'buy-in'." The municipality will pay for advertisements to educate the public, in addition to posting flyers and producing radio announcements. He assured Representative Gara that whatever goes over the media waves in Anchorage will be seen and heard in most of the Railbelt. Furthermore, the municipality will be providing information to the emergency management agencies of the Kenai and Mat-Su Boroughs.

3:46:31 PM

BRADLEY EVANS, CEO, Chugach Electric Association (CEA), informed the committee that CEA plans for many emergency events from weather incidents to volcano activity, and including gas supply interruption. Chugach Electric Association also maintains a trained staff that is available 24/7, and has redundancy and backup systems to call on during emergencies. System operating rules would provide flexibility during a gas supply interruption, and the coordination between utilities regarding risk management has resulted in planning for other contingencies also. He displayed slide 5, titled "Corporate Incident Management Plan Provides Incident Response Oversight" and noted that CEA's corporate incident management plan is a management document that includes notification procedures, call-trees, situation assessments, return to normal transitions, and other information. Slide 6, titled "Additional Chugach and Inter-Utility Plans" listed additional CEA and inter-utility plans ranging from business continuity to strategic alliances with petroleum providers. Inter-utility plans include an intertie operating agreement, joint planning, gas coordination, cost sharing, and participation in the Alaska Partnership for Infrastructure Protection. Mr. Evans presented slide 7, titled "Gas Supply Interruption Incident Response Overview" that identified the responses of systems operations, voluntary consumer response, and short-, mid-, and long-term consumer interruptions.

3:51:45 PM

CO-CHAIR MILLETT asked about the possibility of increasing hydroelectric power (hydro) generation in response to a gas supply interruption.

MR. EVANS explained that the hydro generation from Bradley Lake is not normally dispatched to its maximum capability. Furthermore, although wattage from Bradley Lake may not be available for every incident, additional megawatts from it and the intertie can be shifted to full capability, thereby

incrementally reducing the amount of production needed from a gas turbine.

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REPRESENTATIVE TUCK asked whether energy generated by hydro or natural gas is cheaper to provide.

MR. EVANS advised that this is a very complex economic dispatch problem. Hydro cannot be run "full out" all year because production is limited by the supply of water.

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REPRESENTATIVE GARA asked Mr. Evans to compare the energy usage of residential and nonresidential consumers during high peak periods of a cold snap.

MR. EVANS said that he would provide the electrical consumption statistics for each class of consumer at a later date. His firm plans to inventory the capabilities of commercial users and develop agreements for conservation and the use of alternative fuels. The goal is to not shift the commercial customer "either through an outage or through a commercial arrangement", but to reduce the footprint.

PHIL STEYER, Director, Government Relations & Corporate Communications, Chugach Electric Association (CEA), stated that a review of CEA's annual load profile looks like a "U": high electric loads in the winter and low in the summer. Because its market is largely residential, the daily profile on a cold winter day reveals peaks during the morning and early evening, and a low at midnight. Using 1/7/09 as an example, he estimated that if consumers avoided using electricity in the evening, there would be a 10 percent reduction in use. Mr. Steyer opined conservation by nonresidential consumers would be needed to increase the savings. In response to Co-chair Millett, he

explained that CEA customers are about 80 percent residential and 20 percent commercial, while ML&P customers are about the opposite. However, CEA kilowatt hour sales are about evenly split between residential and commercial customers. All utilities have commercial customers, but the mix of customers a utility company has may be more commercial or residential.

[3:59:42 PM](#)

MR. EVANS added that CEA planned on scheduling a "voluntary day" in order to measure the result of taking voluntary actions. He then returned to slide 7 and noted that the voluntary customer actions for mid- and long-term have been discussed in previous testimony before the committee. Mr. Evans pointed out that voluntary consumer response "can be done under both sides of natural gas and electric consumption."

[4:01:19 PM](#)

CO-CHAIR MILLETT inquired as to how many times CEA has reached yellow or red levels of disruption.

MR. EVANS said that to his knowledge CEA has not reached yellow or red levels on a large scale. He advised that CEA has joined with many consumers for its Smart Power conservation program. He acknowledged CEA has operated in the [up to 40 percent level] and interruptions have been handled with operating measures that do not impact the customer and have prevented brownouts and blackouts.

[4:03:29 PM](#)

MR. EVANS continued to explain that it is possible to reduce the consumption footprint operationally by maximizing resources, emergency purchasing, and re-dispatching units. For example, a compressor outage can be accommodated by generating more pressure in a different way.

4:04:31 PM

REPRESENTATIVE RAMRAS referred to slide 8, titled "System Operations Response to a Gas Supply Interruption" and asked from where emergency gas could be purchased.

MR. EVANS explained that CEA has been able to purchase excess capability gas from another producer. This procedure is handled "behind the pilot's chair, so to speak."

4:05:58 PM

REPRESENTATIVE JOHANSEN asked whether very cold winters create problems with low water levels at Bradley Lake.

MR. EVANS said that generally speaking the inflow from the lake begins early in the summer and is reduced from October to freeze-up. In further response, he noted that CEA has experienced minimum lake elevations late in the year, in April or May, but the operating groups monitor the lake level and curtail the flow where necessary. The lake collects water from rain, snowpack, and glacier melt.

4:08:42 PM

REPRESENTATIVE GARA recalled hearing comments about the possibility of rolling blackouts during a very cold winter. Considering Mr. Evans' previous testimony, he asked whether the danger of rolling blackouts is real.

MR. EVANS agreed that the threat is real and is not limited to a disruption in the flow of gas, but also includes problems that can be caused by an infrastructure failure. In addition, he

reminded the committee of the uncertainties in the Cook Inlet Emergency Management Plan regarding production from the wells in Cook Inlet. The utilities are a "weakly interconnected system all throughout the supply chain to make this work." He warned that a production, delivery, or conversion problem could surface and Alaska does not have a lot of backup.

[4:11:14 PM](#)

REPRESENTATIVE TUCK, referring to slide 8, asked for the cost effectiveness of the six system operations responses listed on the slide.

MR. EVANS advised that GEA normally chooses the least disruptive response which would generally be purchasing from GVEA; however, GVEA is also a liquids, diesel-based generation and GEA holds an interruptible contract. He described other scenarios using different operations responses. In further response to Representative Tuck, he explained that the contract to provide generation to MEA expires in 2014. In fact, how all of the utilities manage generation going forward is under deliberation at this time, whether "we could work something out, or we could do something through a Railbelt energy corporation."

[4:14:13 PM](#)

REPRESENTATIVE TUCK surmised the service area may be under a "yellow" status for three to four months this year. He asked whether this would affect consumers' rate cost.

MR. STEYER referred to slide 7 as "our one-page attempt to put on a single piece of paper and explain to people what this issue is all about." There are three levels of response to resolve problems: at the green level, the use of systems operations by the utilities; at the yellow level, the use of voluntary action by customers; at the red level, the use of disruptions. He pointed out that the first response to an incident is the use of systems operations, and remarked, "Heretofore, all problems have been resolved [by actions] within the green area and customers have never been asked, in my 22 1/2 years at Chugach, we've

never gotten into this middle band - voluntary actions." Only, as a last resort, would there be consumer interruptions. In response to Representative Gara, he said, "Sometimes people get this page out of order." In fact, even the problems last winter were resolved at the green level. Mr. Steyer then defined short-term as a problem measured in hours or days; mid-term as a problem measured in weeks or months; and long-term as a problem measured in years.

[4:18:38 PM](#)

CO-CHAIR MILLETT said:

You said that you've only gone to one of, one thing in the green box to this point. Is that what you said ...?

MR. STEYER clarified that last winter, during the cold snap, CEA "really only used one of these tools in the toolbox...." He added that other utilities, such as ENSTAR and the LNG facility, may have used other actions.

CO-CHAIR MILLETT remarked:

I guess what I'm trying to get at is ... but if we used all of these tools, I guess I'm trying to get to the point ... [how] close were we to getting into the yellow?

MR. STEYER opined that many actions were still available to the utilities had the utilities needed them. He pointed out that headlines and hallway conversations do not always serve customers and constituents well.

[4:20:31 PM](#)

CO-CHAIR MILLETT continued to say:

If we haven't gotten to that point ... I guess my question to you is why is the municipality planning and why are, why do we have so many people-ENSTAR in particular and the municipality-saying that this is a distinct possibility, and you're telling me that we haven't even made it through the green box and we haven't gotten to that point. So, is there a false sense of dire straits here? Is it warranted, are we jumping way ahead...?

MR. EVANS assured Co-Chair Millett that the situation is real due to the declining deliverability of Cook Inlet. Although the precise answer regarding production in Cook Inlet is unknown, the utilities want to have plans in place; this is prudent utility planning and operation. He reiterated past testimony in which he warned that the situation is going to get worse and actions must be taken to "keep the lights on and safety first." Today's testimony is focused on how the utilities are planning for a contingency, however, a perfect storm could happen.

[4:22:44 PM](#)

REPRESENTATIVE JOHANSEN expressed his interest in knowing how close this area of the state is to [voluntary consumer response] to a gas supply interruption problem.

MR. EVANS acknowledged that at one time or another CEA has used all of the [actions] available to [system operations].

[4:24:24 PM](#)

REPRESENTATIVE GARA relayed that he has heard that there is also a danger of a shortage of gas availability during peak winter usage.

MR. EVANS confirmed that sufficient gas is under contract for this winter and there would need to be a gas supply interruption to cause a failure. However, it is possible that a temperature of 30 below for 20 days might exceed the capability. There are two issues to understand, the deliverability and the volume. If either were stretched to the breaking point - then the utilities would use [system operations] tools to handle that.

REPRESENTATIVE GARA restated that the gas now under contract is enough for this winter, although the systems issues are separate.

MR. EVANS said, "There is always ... there could be a deliverability problem here, we could exceed the ability of the Cook Inlet to deliver gas."

MR. STEYER continued his discussion of slide 7. The short-term system operations response, shown in green, could reduce up to 40 percent of CEA's peak daily demand for gas. Voluntary consumer response, shown in yellow, represents another reduction of up to 15 percent. He expressed his belief that these are actions customers could and would do if necessary. Furthermore, CEA is seeking ways to help its customers choose the most valuable actions to take. To do this, CEA has organized its customer base not only by the retail or commercial level, but also by government or public control versus private control of a facility. Thus, federal, state, and municipal building management will be contacted to prearrange the planning of voluntary responses. The remainder of retail customers may have energy saving responses unique to each site. Mr. Steyer then displayed slide 10, titled "Customer Interruptions" that illustrated the information that will be provided to residential customers.

[4:31:04 PM](#)

REPRESENTATIVE RAMRAS observed that every rural community that the committee has visited since January is living with [interruptions for short durations] every day.

[4:31:33 PM](#)

MR. STEYER stressed that the document presented is a draft document and a work in progress. The goal is to develop something simple for residents to use during the course of a short-term interruption. He concluded by saying that the voluntary responses and a common plan are being developed by all six of the Railbelt utilities, ENSTAR, and the Municipality of Anchorage.

[4:33:37 PM](#)

MR. EVANS returned to slide 7, and said after reductions by system operations and voluntary consumer response, rotating consumer interruptions over a peak period can save an estimated 20 percent. The minimum requirement in the transportation system is 25 percent of the on-peak take, or 25 million cubic feet per day (mmcf/d). A minimum amount of generation is required to keep the backbone of the transportation system up. He concluded by advising the committee of the upcoming electric and gas utility tabletop exercise and the deadlines coordinated with the Municipality of Anchorage that were listed on slide 13, titled "Next Steps."

[4:35:03 PM](#)

CO-CHAIR MILLETT asked for the state's and legislature's role in CEA's contingency plans and long-term solutions.

MR. EVANS expressed his belief that coordination with the state for resources to support contingency planning, education, and

communications is critical. In the long-term, the next step is for the Cook Inlet Resource Management Plan to provide more answers and transparency in order to better communicate the "pockets of information between DOR and DNR." Furthermore, the state, as the lease-holder, needs to work with CEA and ENSTAR on potential gas storage. Mr. Evans pointed out that CEA is also participating in the development of an in-state bullet gas line and other in-state resources. However, the decisions made by CEA must be in the best interest of its consumers. He opined that the state must make hard decisions about its investments in infrastructure such as the bullet line and the Susitna Hydroelectric Project. Mr. Evans said, "I personally think that if you're going to export a BTU you should create a BTU ... Susitna goes a long ways to do that ... in some communities where they have an abundance of hydro, or a higher percentage of hydro, they have more stable rates."

[4:38:07 PM](#)

REPRESENTATIVE RAMRAS agreed that the overarching concern of a utility is to keep the lights on. He asked how to make a transition to a bullet line supply of gas in 2015-2016, "so that you're contributing to the volume of gas ... on day one."

MR. EVANS offered his personal opinion that there is a need for an anchor tenant and the likely candidate is the LNG export [plant]. Although the plant does not line up with the Alaska Gasline Inducement Act (AGIA), the legislature must sort this out. The other question is how much the state is prepared to invest in its future.

[4:41:48 PM](#)

CHRIS ROSE, Executive Director, Renewable Energy Alaska Project (REAP), informed the committee that REAP is a coalition of 65 organizations working to promote renewable energy and energy efficiency. Mr. Rose agreed that there are short-, mid-, and long-term solutions to this problem not only on the supply side, but on the demand side by using conservation, weatherization, and energy efficient construction. He advised that most of the gas in Cook Inlet supplies residential and commercial electric generation and pointed out that conservation requires conscious

decisions and behavioral changes, but energy efficiency reduces the amount of energy consumed while still delivering the same quality of services. Examples of energy efficiency are replacing a car to improve gas mileage, or replacing a refrigerator with an EnergyStar model. However, large scale implementation of either needs a comprehensive strategy; in fact, a recent study indicated that the U.S. could reduce its energy consumption by 23 percent through energy efficiency and conservation. Mr. Rose noted that buildings consume about 70 percent of all electricity generated, and also account for about 40 percent of the total energy use in the U.S. Furthermore, the U. S. Department of Energy (DOE) estimates that every \$1 spent on the Building Energy Codes Program will save \$50-\$60 over the lifetime of the investment. In Alaska, the legislature invested \$360 million in energy weatherization and energy rebate programs and Alaska Housing Finance Corporation (AHFC) is estimating that if every person in the region participated in the weatherization program each household could save 780 therms [one therm equals 100,000 BTUs] per year. This represents roughly 5 percent of the Cook Inlet gas load. Mr. Rose encouraged the committee to consider how to change the way people think about energy. Partly because of the extreme climate, "Alaskans use more energy per capita than probably any society on the planet." Therefore, Alaskans should have the most incentive to reduce their consumption of energy. He agreed with Co-Chair Millett that a large part of Alaska's energy use is industrial.

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MR. ROSE stated that one of the fundamental barriers to increasing energy efficiency is the sheer number of households and electric devices. In addition, energy efficiency is not a primary focus of our economy as it is in other states and countries. Other barriers are: cost of improvements; lack of cold climate research baseline data; ingrained behavior; competing incentives such as hotel guests who do not pay extra for the use of energy; landlords who pass energy costs on to their tenants; and lack of choice of devices provided by others, such as cable boxes.

[4:50:02 PM](#)

REPRESENTATIVE RAMRAS stated that the hospitality industry is leading the marketplace of ideas in energy conservation areas, such as providing recycling bins in rooms and saving on laundry costs. He suggested that hotels are changing guests' behavior when traveling and after returning home.

MR. ROSE agreed that the hospitality industry is doing so in select places, but the point is simply that the problem still exists.

REPRESENTATIVE RAMRAS continued to explain that hotels were among the first to install flat panel TVs to save energy, and suggested that the speaker is ignoring a movement in the private sector that is changing the behavior of consumers. In fact, the hospitality industry is "glamorizing the green movement and changing the broad behavior of large, cross-sections of consumers You make the business component sound passive and I don't think they are." Representative Ramras opined that private venues across the country are taking conservation steps because it is good business management.

MR. ROSE expressed his understanding that many good things are happening and the research proves that more can be done.

[4:53:15 PM](#)

REPRESENTATIVE JOHANSEN asked for clarification as to whether Alaskans are the number one energy consumers in the world.

MR. ROSE said, "Yes ... I said one, one of the largest per capita users in the world." In further response to Representative Johansen, he explained that per capita is all of the energy use in the state, including industrial use, divided by the population.

4:54:07 PM

MR. ROSE continued to list realistic barriers to increasing energy efficiency: cost of new technologies; poor building practices and lack of building codes; and inexperience in "green" building. Turning to ways to address these barriers, he noted that the Cold Climate Housing Research Center has issued the following program and policy recommendations: state leadership, funding energy efficiency, financial incentives, building codes and standards, baseline data, and public education and outreach. Mr. Rose then relayed that in Juneau, when an avalanche crippled power lines and cut off Juneau's hydroelectric energy supply, electric energy consumption was reduced by 30 percent. After power was restored, there remained a sustained reduction of 8 percent. It is believed the sustained reduction is the result of changes in lighting and some energy efficiency improvements to freezers and appliances. Although a catastrophe brought these changes, perhaps people can be motivated to prevent a looming catastrophe. He suggested competition may be a driving force. For example, the Sacramento Municipal Utility District utility bills compare each customer's energy usage to the consumption of 35,000 other users; this policy resulted in an average 2 percent decrease in energy usage. A holistic approach to the problem helps people understand why conservation is important and should be a "normal" policy, and addresses the structural barriers such as aligning utility companies' interest with energy efficiency; access to accurate energy saving advice; incentives for investing in new technologies; and building codes and standards.

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MR. ROSE then described the Alaska Efficiency Challenge. He explained that the program is currently specific to Southcentral Alaska and a website is being developed which will list 400 energy saving and efficiency measures effective in this region. Consumers can pledge to take certain measures and the website will immediately calculate the savings for the consumer to see. The primary goal of this program is to work with the utilities to monitor and verify what the consumers are doing voluntarily

to save energy, and then establish competitions between communities, schools, and businesses, to generate "the competitive element, the competitive spirit that people have that really resonates with people." He opined that this competitive spirit will combine with the desire to save money and to save natural gas. When completed, the website will show detailed information on each of 400 possible ways to save energy and money. Mr. Rose concluded that "this is one piece of the puzzle, not a silver bullet, none of these are silver bullets, ... but just another way that we could be a little bit more energy efficient.

[5:01:39 PM](#)

REPRESENTATIVE PETERSEN asked whether the development of Fire Island [Wind Farm] would help [CEA] and ML&P during the peak load times.

MR. ROSE estimated that a 54 megawatt project equals about 5 percent of the overall gas generation; however, there is increased wind in the winter that would coincide with the peak load. He was unsure how the wind power would balance with hydro.

CO-CHAIR MILLETT thanked the presenters.

[5:03:00 PM](#)

ADJOURNMENT

There being no further business before the committee, the House Special Committee on Energy meeting was adjourned at 5:03 p.m.