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page Chugach files Fire Island wind tariff, estimates costs, savings

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Rumor confirmed: BP's Dudley met with Gov. Walker; separately, Dudley cautious on ANWR

In the previous issue of Petroleum News (Jan. 14 edition) Oil Patch Insider reported rumors that BP chief Bob Dudley met with Alaska Gov. Bill Walker on Jan. 5 in Juneau.



BOB DUDLEY

A PN source close to the governor said BP's chief wanted to discuss the state's oil and gas

policies, in particular Walker's actions toward BP that largely stemmed from his conviction that BP should be producing the natural gas it held in its Prudhoe Bay leases. Dudley's agenda appeared to be smoothing over the relationship with the Walker administration. And yes, he was prepared to discuss the subject clos-

est to the governor's heart: A massive liquefied natural gas export project.

A Jan. 8 call from PN to the governor's deputy press secretary yielded no comment. PN's media contact in the Alaska

see INSIDER page 10

December sea ice extent 2nd lowest

The Arctic sea ice extent for December averaged 4.54 million square miles, the second lowest in the satellite record, which began in 1979, the National Snow and Ice Data Center said Jan. 3.

The December Arctic sea ice extent was 420,900 square miles below the average for 1981 to 2010 and 108,100 square miles above the December 2016 record low extent, with both the Bering and Chukchi seas below average.

NSIDC said Arctic sea ice growth in December averaged 23,100 square miles per day, fairly close to the average rate of 24,800 square miles, with ice growth in the Chukchi close to average, although very late for the Chukchi compared to previous years.

Air temperature at the 925 hPa level, some 2,500 feet above sea level, was 2 to 6 degrees Celsius, 4 to 11 degrees

see **SEA ICE** page 8

Bill in House to increase oil taxes

Three co-chairs of major House committees have introduced legislation to increase the state's minimum oil and gas tax from 4 percent to 7 percent.

The bill targets the North Slope, applying to oil and gas produced from land north of 68 degrees North latitude and would apply to production on and after Jan. 1, 2019, and before Jan. 1, 2022. It applies when the average price for North Slope crude oil on the West Coast is more than \$25 per barrel, and decreases by increments to zero percent if the West Coast price drops below \$15 per barrel.

Reps. Geran Tarr, D-Anchorage, and Andy Josephson, D-Anchorage, co-chairs of the House Resources Committee, and Paul Seaton, R-Homer, co-chair of House Finance, are the sponsors of House Bill 288. The three are members of the Alaska House Majority Coalition. The bill was referred to Resources and Finance. As this issue of Petroleum News went

see OIL TAXES page 11

• NATURAL GAS

IEP moving ahead

Work starts on Fairbanks LNG storage; info for residents needed on conversion

By ALAN BAILEY

Petroleum News

During its Jan. 11 meeting the board of the Alaska Industrial Development and Export Authority reviewed the status of the Interior Energy Project, an AIDEA project to bring affordable, clean energy to Fairbanks and its surrounds. The plan is to greatly expand the existing LNG supply to Fairbanks and thus enable more businesses and residents to convert to the use of natural gas for heating their buildings

Following decisions in December by the boards of

Conversion of Fairbanks buildings to the use of gas for heating will drive the future gas demand, a key underpinning for the economics of the IEP.

AIDEA and Fairbanks based Interior Gas Utility to approve the terms of the sale of Pentex Natural Gas Co. to IGU, work is progressing on a new LNG storage facility for Fairbanks while AIDEA and IGU take the necessary steps to complete the Pentex sale by the

see FAIRBANKS LNG page 10

FINANCE & ECONOMY

What causes what?

As the dollar goes down the oil price goes up in international markets

By ALAN BAILEY

Petroleum News

It has been recognized for a number of years that there appears to be an inverse relationship between the global price of oil and the value of the U.S. dollar in international currency exchange markets. In other words, as the price of oil goes up, the value of the dollar falls, and vice versa. And an inspection of graphs of the oil price and the dollar value shows one graph to be a near mirror image of the other.

So, does this mean that the current climb in the price of oil will reverse if, for some reason, the current slide in the dollar exchange rate ends?

An explanation?

There is a simple and enticing explanation for the oil price/dollar correlation, given that oil is generally traded in U.S. dollars. If the economic value of oil were to remain constant, a drop in the value of the dollar would result in more dollars being needed to buy a barrel of oil. And so, the dollar price of the oil would increase. Using the same line of reasoning, an increase in the value of the dollar would reduce the dollar cost per barrel of oil.

The problem with this line of argument is that the economic value of oil is not constant, but

see PRICE CORRELATION page 11

EXPLORATION & PRODUCTION

Mustang flow tests out

N Tarn well produced 24 API oil at 1,292 bpd; reserves estimated at 33 million

By ALAN BAILEY

Petroleum News

Brooks Range Petroleum Corp. has announced that a test in November of its North Tarn No. 1A well in the Southern Miluveach unit on the North Slope demonstrated an average peak flow rate of 1,292 barrels of 24 API oil per day, with only trace amounts of water.

The oil came from the Kuparuk C formation, one of the reservoir rocks in the adjacent Kuparuk River field. Independent engineering firm DeGolyer and MacNaughton has estimated that the unit has 2P reserves of 33 million barrels of oil, the company said. This class of reserves consists

In evaluating the tests and agreeing to the certification, Alaska's Division of Oil and Gas commented that, while having a relatively high gas-to-oil ratio, the well exhibited a high flow capacity.

of both proven and probable oil that can be viably produced.

Brooks Range has been developing the unit and has already built the Mustang production pad and associated pipeline supports. The company has also had some production modules fabricated.

see FLOW TESTS page 9

NATURAL GAS

Mat-Su disputes site selection process

Applies to FERC to intervene prior to issuance of draft Alaska LNG EIS; argues Port MacKenzie unfairly excluded from site selection

By KRISTEN NELSON

Petroleum News

ikiski was chosen as the lead site for the gas lique-faction plant for the Alaska LNG project back in October of 2013, when project proponents included ExxonMobil, BP, ConocoPhillips and TransCanada. The companies said that in addition to site selection factors, having the LNG facility at Nikiski "results in a pipeline route that provides an access opportunity to North Slope natural gas by the major population centers in Fairbanks, Mat-Su Valley, Anchorage and the Kenai Peninsula."

Valdez, the terminus for the trans-Alaska oil pipeline, has continued to argue that the LNG facility should be in Valdez, which would require routing the gas pipeline down the Richardson Highway into Valdez.

Now the Matanuska-Susitna Borough has lodged a formal complaint with the Federal Energy Regulatory Commission, asking to intervene and arguing that the The Matanuska-Susitna Borough location was not considered, Carlstrom said, because of the conflict between a public dock at the port and a large LNG facility.

borough's site at Port MacKenzie, across Cook Inlet from Anchorage, has been unfairly cut from site consideration for the liquefaction facility.

In response to a question from Petroleum News, Jesse Carlstrom, communications manager for the Alaska LNG project's current lead, the Alaska Gasline Development Corp., said when AGDC took over as lead on the project at the end of 2016 it inherited work already done on the FERC reports. The Matanuska-Susitna Borough location was not considered, Carlstrom said, because of the conflict between a public dock at the port and a large LNG facility.

Issues from the FERC report

In its Dec. 29 appeal to FERC the Matanuska-Susitna Borough focused on a list of reasons included in Resource Report No. 10 for site exclusion.

The Matanuska-Susitna site is called "Point Mackenzie" on the list; the site the borough has been promoting is Port MacKenzie. The borough said it has been "in dialogue with AGDC and other project proponents regarding the ability to site the liquefaction facility at Port MacKenzie within the Borough's jurisdiction" for several years. "AGDC assured the Borough on numerous occasions that Port MacKenzie would be considered as an alternative site for the liquefaction facility in its application for the Project," the borough said.

The borough said it pointed out to AGDC and other project proponents that the draft environmental analyses were not correct regarding Port MacKenzie, and "AGDC ensured

see SITE SELECTION page 5

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EXPLORATION & PRODUCTION

ND oil cut back to meet gas capture rules

By JAMES MACPHERSON

Associated Press

Pearing sanctions by the state, some North Dakota oil drillers have begun cutting output to control the amount of natural gas that's being burned off at well sites and wasted as a byproduct of crude production, industry and state officials say.

Rebounding oil prices and technology advances in western North Dakota's oil patch have goosed crude production, spurring unanticipated record levels of natural gas that comes with it, said Justin Kringstad, director of the North Dakota Pipeline Authority.

The state's gas-gathering and processing capability is 2.1 billion cubic feet (0.06 billion cubic meters) daily. In November, the latest figures available, the industry was right at that ceiling — with a record 2.09 billion cubic feet (0.06 billion cubic meters) of natural gas produced daily.

Pipeline capacity is adequate to move the natural gas to market, but it's the lack of gasgathering and processing facilities in between that's the problem. That forces some drillers to restrict oil output at some wells to meet gas flaring rules, said Ron Ness, president of the North Dakota Petroleum Council.

"We don't want to be restricted by the state," said Ness, whose group represents hundreds of companies working in North Dakota's oil-producing region.

Ness said an industry group task force is being formed this month to pinpoint where gas-gathering and processing infrastructure is needed most.

The rules that went into effect in 2014 allow regulators to set production limits on oil companies if the targets are not met. Companies that fail to meet the goals could have production at a well limited to as little as 100 barrels a day, depending on the

amount of gas flared.

The rules that were adopted by the state and endorsed by the industry require oil companies to capture 85 percent of the gas by 2016, and 90 percent by 2020. They came after as much of a third of the gas went up in smoke, drawing criticism from environmentalists and many residents who said the state was losing revenue from the wasted gas, and that it contributed to unnecessary carbon dioxide emissions.

Less than 1 percent of natural gas is flared from oil fields nationwide, and less than 3 percent worldwide, the U.S. Energy Department said. North Dakota drillers in November burned off, or flared, about 14 percent of the gas, said Alison Ritter, a spokeswoman for the Department of Mineral Resources, which regulates the state's oil and gas industry.

Oil production in North Dakota, the second-biggest oil producer behind Texas, rose slightly in November to 1.19 barrels daily and remained above 1 million barrels per day for the 10th consecutive month. A record 1.2 million barrels was produced in December 2014, but had been declining amid weakened oil prices.

The price for North Dakota sweet crude topped \$60 a barrel in late December and for the first time since 2015. Fifty-six oil rigs were drilling Jan. 16, up 20 from a year ago.

But full exploitation of the state's oil patch likely will be hamstrung unless infrastructure is built quickly, regulators say.

"Without additional investment in terms of gathering and processing, the industry is running up against it," Ritter said. "It's all kind of a race."

Kringstad, the pipeline authority director, said three gas processing plants are proposed in the next two years, though even if they are built, they would just "keep up" with expected production.

EXPLORATION & PRODUCTION

Western area opens for tundra travel

The North Slope western coastal area opened for tundra travel Jan. 16. The Department of Natural Resources, Division of Mining, Land and Water, said it has documented that soil temperatures and snow cover in that area have met criteria for opening — 6 inches of snow and colder than minus 5 C soil temperature at a depth of 30 centimeters.

The division said the opening applies only to operators with valid off-road vehicle travel permits to operate on state-owned lands on the North Slope.

This is the second area to open — the eastern coastal area opened for tundra travel Jan. 9. Both the lower and upper foothills areas remain closed.

The division said in its western opening notice that while overall snow cover is good it may be thin in some areas and said those areas should be avoided or special construction methods used to protect the tundra surface. The division also said that its stipulations regarding winter off-road vehicle travel require adequate frost and snow cover and approval of individual routes of travel, with periodic site inspections by state personnel to ensure compliance.

Questions should be directed to the division's Northern Region Land Section in Fairbanks at 907-451-2740.

—PETROLEUM NEWS

Icewine 3-D permit gets state approval

Geokinetics Inc. has received permit approval from the Alaska Department of Natural Resources' Division of Oil and Gas for the Icewine 3-D seismic survey, the division said Jan. 11. This is a land-based seismic survey on state land some 12 miles west of the Dalton Highway, and is effective Jan. 11 through May 31.

The seismic is on acreage held by Accumulate Energy Alaska, Australia-based 88 Energy's local operating company, and its partner Burgundy Xploration of Houston.

88 Energy has said the seismic will allow it to firm up drilling candidates for the first half of 2019 and begin a farm-out process.

The survey area, some 40 miles southwest of Deadhorse, covers some 200 square miles, with Geokinetics mobilizing crews and equipment from its Deadhorse facility, the state said. Existing roads, highways, trails and tundra travel will be used, a temporary ice pad may be constructed, and the Franklin Bluffs pad is near the project area and may be used.

Ten tracked vibrators and ancillary support vehicles will be used in the seismic operations, with wireless nodes spaced 50 meters apart and vibrators operating in a north/south pattern along line 37.5 to 150 meters apart.

Crew members will work 12 to 14 hour shifts and seismic operations will continue nonstop.

This is in the lower foothills and DNR's Division of Mining, Land and Water had not yet opened that area for off-road tundra travel when this issue of Petroleum News went to print. The application says DML&W is communicating with Geokinetics on their planned ice pad and off-road travel and part of that conversation includes the technique of pre-packing the snow to help release heat from the ground, which the division said may help Geokinetics get started on ice pad construction prior to the areawide opening for the lower foothills.

—KRISTEN NELSON

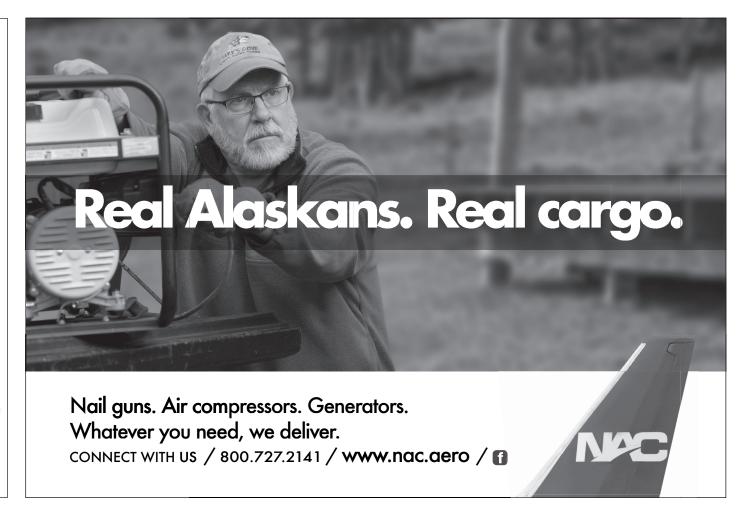
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GOVERNMENT

AEA proposes rural program changes

Funding for community power supply projects moving from grants to loans while scope to include more diverse, smaller initiatives

By ALAN BAILEY

Petroleum News

Alaska Energy Authority staff is proposing some changes to the manner in which it conducts AEA's Rural Power System Upgrade program, Neil McMahon, AEA energy planning project manager, told the AEA board on Jan. 11.

A significant change will be a move from the funding of projects through grants to the increased use of loan financing. In addition, the scope of projects considered within the program will broaden to include, not just the construction of new power houses and power distribution networks, but also smaller projects, including the refurbishment of existing infrastructure and the implementation of cost-effective

Selecting projects for support under AEA's rural power upgrade program involves assessing community needs and deficiencies.

renewable energy systems, McMahon explained.

The program provides rural communities in Alaska with populations between 20 and 2,000 with financial and technical assistance in upgrading electricity supply systems, systems vital to safe and healthy living conditions in the communities. Since 2000 the program has funded more than 80 projects, with a total cost of more than \$120 million. Most of the funding has come from the Denali Commission, with the rest of the

funding coming from the state, McMahon said. Most of the work has involved the replacement of aging powerhouses and the upgrading of distribution systems.

Process changes

The proposed rejigging of the program reflects a desire for more transparency and objectivity in the selection process for projects, and a desire to benefit as many communities as possible in an era when state and federal financial resources have diminished. Project funding also needs to be arranged in a manner that is realistic for community economics: In some cases, were a community to pay the full cost of an upgrade program, the resulting impact on electricity rates would be impractical, thus undermining the mission of the AEA program, McMahon said.

At the same time communities see a high priority need to reduce the consumption of diesel fuel for power generation, he

Past projects involving the construction of new powerhouses and distribution systems have typically cost somewhere in the range of \$2 million to \$4 million, mainly paid through government grants. In future the broadening of the scope of projects considered will involve improvements to existing infrastructure, ensuring that new infrastructure is not installed in situations where the existing infrastructure can be rehabilitated, and making sure that projects are cost effective. A broader selection of project types could include renewable energy systems. The result will likely be more projects with costs down to around \$150,000, rather than the \$2 million lower end of the current program, McMahon said.

Higher local contributions

AEA is proposing significantly higher local contributions to the funding, with the local funding matches potentially coming in a variety of forms. Whatever funding mechanism is used, the impact on commu-

nity electricity rates must be lower than some manageable threshold. Possible funding mechanisms include payments in lieu of taxes, loans paid back via the state's Power Cost Equalization program, or paying off a loan through the savings from the lowered cost of electricity supplies, McMahon suggested. The PCE program lowers the cost of electricity in communities with high electricity rates.

Needs assessment

Selecting projects for support under AEA's rural power upgrade program involves assessing community needs and deficiencies. AEA prioritizes potential upgrades on the basis of fixing safety problems; reducing natural or other risks to the infrastructure; ensuring reliable operation of the power supplies; and improving the affordability of power for consumers.

Needs assessment involves figuring out which of the needs AEA can effectively address. The assessment can involve sending an engineer to a village, to figure out what needs to be done, and how any power supply issues might be addressed. It is also important to determine how the community can contribute to solving any identified problems.

And needs must be prioritized both within individual communities and across communities, so that AEA can prepare a list of target projects for the state as a whole.

The final step in the planning process then involves determining options for funding each selected project, McMahon said.

During the Jan. 11 board meeting there was also discussion about the importance of ensuring that the power infrastructure is appropriately maintained, and about the importance of keeping data about the condition and age of the infrastructure, as a means of gaining insights into future upgrade requirements.

Contact Alan Bailey at abailey@petroleumnews.com

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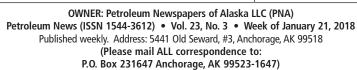


CORRECTION

Bills extend AIDEA's bonding authority

An item in the Jan. 14 issue of Petroleum News incorrectly described prefiled bills extending authority to issue bonds. Those bills, House Bill 261 and Senate Bill 125, would extend the authority of the Alaska Industrial Development and Export Authority to issue bonds for a liquefied natural gas production system and natural gas distribution system through June 30, 2023.

Petroleum News apologizes for the error.



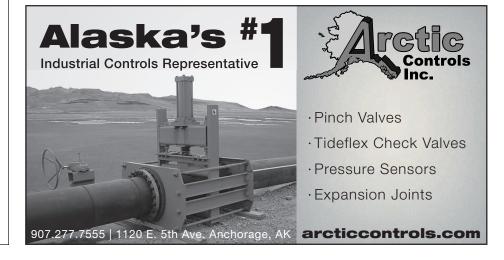
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SITE SELECTION

the Borough that these mistakes would be rectified before the application was filed."

When Resource Report No. 10 was filed, however, Port MacKenzie was excluded and after review the borough determined "that AGDC did not actually consider Port MacKenzie at all in its alternatives analysis," but instead considered Point MacKenzie, "a completely separate location with different attributes" than those at Port MacKenzie.

Point MacKenzie

The borough told FERC that over the course of several years AGDC and the ExxonMobil project manager repeatedly said that Port MacKenzie was the same as Point MacKenzie, and from 2014 through December 2017, the borough said it frequently told project representatives they were not the same. The borough said that when it raised the issue it was told that the FERC reports would be updated. But, the borough said, "Point Mackenzie" shown on a map in the resource report is a plot of land north of and adjacent to Knik Village, some 3 miles north of Port MacKenzie.

In excluding Point MacKenzie from further analysis the resource report lists first that "the site is located on Native Village (Knik) lands." The borough said it owns 14 square miles of land, 8,940 acres, at Port MacKenzie.

The dock issue

The borough said the existing dock at Port MacKenzie, and the ability to add docks, were factors in favor of further consideration of Port MacKenzie for the LNG facility.

The dock was not listed among the major reasons for exclusion of MacKenzie from further analysis, but AGDC's Carlstrom addressed it in an email to Petroleum News.

"The Alaska LNG project team did not consider the Port site because of incompatible land use between a public dock and a large (20 Mtpa) LNG plant and terminal," he said.

"However, the Point Mackenzie site was included in the screening process but did not



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www.alaska-frac.com + 1 (907) 885 5388 info@alaskafracconsulting.com advance as a viable site for a large LNG plant due to geographic, marine, environmental, and other considerations."

On the issue of information in the resource reports, Carlstrom said:

"AGDC took the lead of Alaska LNG in December 2016. In the transition, AGDC inherited approximately \$600 million dollars in pre-FEED study. This included the information presented in Resource Report 10 regarding Alternative selections and where the Nikiski location was identified as the preferred site for the liquefaction facility."

The borough as moved to intervene outof-time and told FERC that while any interested party can intervene once the commission has issued a draft environmental impact statement, the borough seeks to intervene now to ensure FERC's draft EIS "is not based on the errors contained in the current Resource Report No. 10."

> Contact Kristen Nelson at knelson@petroleumnews.com

GOVERNMENT

BSEE announces penalty increase

The Bureau of Safety and Environmental Enforcement has announced an increase in the maximum civil penalty for violations of the Outer Continental Shelf Lands Act. The maximum penalty is rising from \$42,704 to \$43,576 per day for each violation, BSEE said in a Jan. 17 press release. OCSLA is the statute under which the U.S. Department of the Interior manages oil and gas leasing on the outer continental shelf. BSEE imposes civil penalties under OCSLA when an offshore oil and gas operator fails to correct a recorded violation or commits a violation that poses a serious threat to life, property, a mineral deposit, or to the marine, coastal, or human environment.

"Assessing civil penalties is one of BSEE's tools used to promote safe and environmentally sustainable operations," explained BSEE Director Scott Angelle. "America's energy future depends on robust production on the outer continental shelf, and oil and gas operators must produce in a safe and environmentally sustainable manner."

BSEE said that it reviews penalty rates annually, to ensure that the rates keep pace with inflation. By law the maximum penalty must be adjusted to reflect changes in the consumer price index, the agency said.

—ALAN BAILEY



ALTERNATIVE ENERGY

Chugach files Fire Island wind tariff

Documents its estimated costs and cost savings associated with CIRI Wind's proposed expansion of wind farm offshore Anchorage

By ALAN BAILEY

Petroleum News

In response to a request from CIRI Wind, Chugach Electric Association has filed a tariff with the Regulatory Commission of Alaska for a proposed expansion to Cook Inlet Region Inc.'s wind farm on Fire Island, offshore Anchorage. The tariff sets out Chugach Electric's estimates of its costs and cost savings, if it were to use power from the wind farm expansion.

In November CIRI Wind asked Chugach Electric for tariffs for two potential wind farm expansions: an 11 turbine system with a 20.35 megawatt nameplate capacity, or a five turbine system with a 9.25 megawatt capacity. The electric utility has responded with a set of tariffs for the 20.35 megawatt option. The existing wind farm, with 11 wind turbines and an output capacity of 17.6 megawatts, went online in September 2012, supplying power to Chugach Electric.

As anyone who uses Anchorage's nearby Kincaid Park can attest, the Fire Island site enjoys an excellent wind resource. But the variability of the wind strength poses a challenge for a utility using the wind power, because some appropriate form of variable power generation must



Cook Inlet Region Inc.'s wind farm on Fire Island, offshore Anchorage.

counterbalance the varying wind power. This integration of the wind power represents a cost to the utility. On the other hand, a wind farm can provide stably priced, clean energy that displaces the cost of power generated by some other means.

Estimated cost impacts

In its RCA filing, Chugach Electric has documented its estimated cost of connecting the wind farm expansion to its system, a tariff setting out annual estimates of costs avoided as a consequence of wind power displacing other power sources,

and a tariff with estimated annual integration costs. The overall viability of the wind farm expansion, and the impact on electricity prices, would presumably depend on some combination of connection costs, integration costs, avoided costs and the price that Chugach Electric would pay for the wind power.

CIRI Wind has requested tariffs for the proposed additional wind power as what is referred to as a "qualifying facility," under the terms of state regulations driven by the federal Public Utilities Regulatory Policies Act, or PURPA. Under PURPA, a statute designed to encourage use of renewable energy sources, electricity utilities are required to purchase power under reasonable terms from qualifying, independent renewable power facilities.

In its tariff filing Chugach Electric told the RCA that, because the commission's version of regulations for qualifying facilities appears to be unique, collaboration between the utility, CIRI Wind and the commission will be needed to achieve a proper implementation of the tariff filing requirements.

Avoided costs

Given that Chugach Electric has no planned additions to its generation capacity, the utility's avoided costs from use of the wind farm expansion would entirely consist of power generation fuel savings and savings in the purchase of power from other entities, the utility told the commission. And, although CIRI has asked for a

tariff for a wind farm life of 25 years, it is only possible to project avoided costs for 15 years, since Chugach Electric has no basis on which to forecast its costs beyond that 15-year period, Chugach Electric said. The estimated avoided costs range from \$67.87 per megawatt hour in 2018, to \$71.21 per megawatt hour in 2033.

Integration costs

When it comes to integration costs, Chugach Electric told the commission that it sees no benefit from integration of the wind farm expansion that could offset the cost of accommodating the varying wind power. The cost estimates for integration derive from reduced generation efficiency resulting from Chugach having to back down its more efficient power generation; the increased cost of having to use less efficient generation, in particular Chugach Electric's old Beluga plant on the west side of Cook Inlet; and increased curtailment of power from the existing Fire Island wind farm.

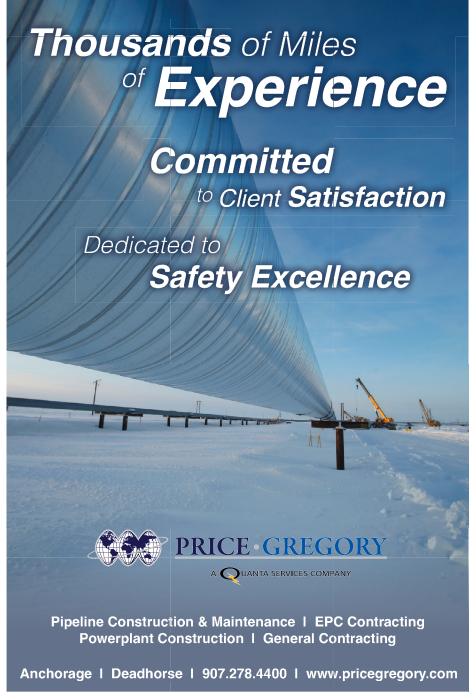
Integration charges could range from \$31.58 per megawatt hour in 2018 to \$35.88 per megawatt hour in 2032, Chugach Electric has estimated.

However, Chugach Electric cautioned that these integration cost estimates assume operational flexibility that is currently constrained by factors such as the scheduling of gas supplies and the dispatch of hydroelectric power. In fact, these operational constraints may render it impossible to integrate all of the wind farm power, as required under Alaska's regulations for a qualifying renewable energy facility, Chugach Electric said.

Impact on power pooling

The electric utility also cautioned about complications relating to the current efforts by Chugach Electric, Municipal Light & Power and Matanuska Electric Association to pool their power generation, to make maximum use of the least cost power sources. Under currently contemplated pooling arrangements, Chugach might have to reserve sufficient generating capacity to enable the wind

see WIND TARIFF page 7





PETROLEUM NEWS • WEEK OF JANUARY 21, 2018

LAND & LEASING

NY asks exclusion from OCS drilling plan

New York's governor urged the federal government Jan. 15 to exempt the state from a plan by President Donald Trump's administration to expand offshore oil and gas drilling, calling it "an unacceptable threat" to the state's heavily populated coastline.

Gov. Andrew Cuomo is the latest in a number of coastal governors to try to get their states withdrawn from the plan, which was announced earlier in January. So far, only Florida has been exempted.

New York's relationship to the sea is no less economically and environmentally important than Florida's, Cuomo said a letter Jan. 15 to Interior Secretary Ryan Zinke.

"With this plan, the federal government is trampling on the interests of New Yorkers and threatening the future wellbeing of our state," the Democratic governor wrote. He cited the risk of oil spills and argued that offshore drilling runs counter to New York's own plans to increase offshore wind energy facilities.

The Interior Department had no immediate response.

Plan would expand offshore drilling

The Republican administration's plan would greatly expand offshore oil drilling from the Atlantic to the Arctic and Pacific oceans, including more than a dozen states where drilling is now blocked. Zinke has said the plan would boost jobs and economic security while providing billions of dollars to fund conservation along U.S. coastlines.

Industry groups have praised the proposal, while environmental organizations have denounced it.

At least 22 coastal states are affected. Their governors are split in their views. After announcing it, Zinke decided to exempt Florida. Gov. Rick Scott, a Republican, had argued that Florida was unique and noted its coastal tourism industry.

The Interior Department said Jan. 12 that Zinke had spoken with the governors of Rhode Island, Oregon, California, Washington, Delaware and North Carolina to get their input. All are Democrats who oppose drilling off their state's coasts.

Zinke also spoke earlier in January with South Carolina Gov. Henry McMaster, a Republican who objects to the plan for his state.

—ASSOCIATED PRESS

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WIND TARIFF

power integration. Moreover, there is a proposal for Chugach Electric to buy ML&P. Because the impact of this purchase, if it goes ahead, on the power pooling is not currently known, the purchase may require a re-evaluation of the avoided costs and integration costs associated with the wind farm.

Submarine cables

Another complication relates to the submarine power cables that connect Fire Island to Chugach Electric's onshore transmission and distribution system. Chugach Electric told the commission that, to accommodate the 20.35 megawatt

capacity of the proposed wind farm expansion, a third cable would need to be added to the two cables that connect to the current farm. A feasibility study commissioned by Chugach Electric has estimated a cost of around \$34 million for the laying of that third cable.

In addition, the current cables were laid with a design life of 25 years, six years of would have already passed before the wind farm expansion could go into operation. That raises questions over whether Chugach Electric would be able to purchase power from the expanded wind farm over the full 25-year timeframe that CIRI Wind anticipates, Chugach Electric suggested. ●

Contact Alan Bailey at abailey@petroleumnews.com

EXPLORATION & PRODUCTION

Putu 2 exploration plan approved

In a Jan. 12 decision the Department of Natural Resources, Division of Oil and Gas, approved ConocoPhillips Alaska's Putu 2 exploration project unit plan of operations.

The plan includes an ice drilling pad some 2.8 miles east of Nuiqsut for the Putu 2 exploration well and sidetrack and vertical seismic profile of the well and sidetrack.

The surface is owned by Kuukpik Corp. The state said ConocoPhillips has an agreement with Kuukpik allowing it to use corporation surface lands for activities associated with the Putu 2 exploration project.

The proposed schedule called for drilling to start Jan. 15 and end March 15, using Kuukpik 5. The state said the well and sidetrack "will provide additional reservoir information for the area and reduce uncertainty around reservoir description parameters including oil-water contact, sand quality and thickness and oil viscosity."

An ice road some 0.4 miles in length will originate at the previously permitted Alpine Resupply Road, the state said, and proceed south to the Putu 2 well location. The state said ConocoPhillips intends to begin building ice roads and pads as soon as necessary permits and approvals are received, and when tundra travel conditions are

Tundra travel for this option of the North Slope opened Jan. 16.

Prior exploration activities include, most recently, Armstrong Energy's Horseshoe 1 exploration well and sidetrack drilled in 2017 some 14 miles southwest of the Putu 2 site. The state said the closest known exploration was the Tofkat 1 exploration well drilled in 2008 by Brooks Range Petroleum Corp. some 2 miles from the proposed Putu 2 site.

The Putu 2 well is in an expansion area of the Colville River unit and drilling one well this year and one by 2020 is a condition set by DNR in its approval of the expansion last August.

—KRISTEN NELSON

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ENVIRONMENT & SAFETY

Western Arctic caribou herd has increased

Alaska's largest caribou herd, the western Arctic herd, is showing signs of growth after years of decline. The Department of Fish and Game's Division of

Wildlife Conservation said Jan. 10 that last summer's photo census of the herd produced a count of 239,055 animals, resulting in an estimate of 259,000 for the total herd, up from 201,000 caribou a year ago.

The western herd is one of four in Alaska and roams an area of some 157,000 square miles, the division said. A division map illustrating herd ranges shows the range of the western herd from the west coast well into the Interior, south and west of the range of the Teshekpuk herd. The division said caribou availability and abundance impact heritage and traditions of Native Alaskans in some 40 subsistence-based communities in the western portion of the state.

The division said the herds have frequent cyclic highs and lows in population influenced by factors including condition of the range, weather, disease and predation. The western Arctic herd most recently peaked in 2003 at some 490,000 animals, followed by years of steady decline, the division said.

Four herds calve on the North Slope, including the western Arctic herd, the Teshekpuk herd, the central Arctic herd and the Porcupine herd.

The division said biologists who track the western herd are encouraged by the uptick in numbers, but not surprised.

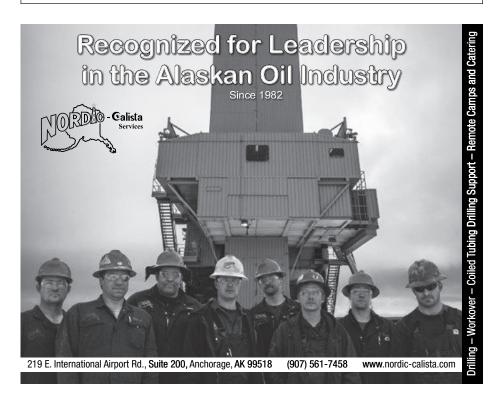
"We've seen positive indicators for the past few years and have been anticipating the rebound," said Kotzebue-based wildlife biologist Alex Hansen.

"During the declining years, adult cow mortality was high and calf recruitment was low, but since 2015 we've observed a positive shift in survival and recruitment rates. With fewer productive cows existing the population and an increased number of calves joining the herd things were bound to improve."

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Accuracy of the 2017 photo census was improved through implementation of a newly acquired digital photography system, the division said, supporting higher flight altitudes and larger photo footprints, with improved quality allowing for more precise counting.

—KRISTEN NELSON





ENVIRONMENT & SAFETY

Oil spill is expanding in East China Sea

Several oil slicks have been found in waters around a sunken Iranian tanker ship in the East China Sea in a spill that is growing and whose potentially major impact on the marine environment is still being assessed.

The Chinese State Oceanic Administration said late Jan. 15 oil slicks around the site of the sunken ship were much larger than the previous day. The Sanchi sunk on Jan. 14 after burning for more than a week following a collision with a Hong Kongregistered tanker. All 32 members of its crew — 30 Iranians and two Bangladeshis — are believed dead.

The State Oceanic Administration said a 9-mile-long oil slick was found southwest of the site of the sinking and another slick stretched 11 miles to the east. The site is about 330 miles from Shanghai and 193 miles from Naha, Japan.

The administration said two ships and an aircraft were on the scene monitoring developments, but described no further action being taken at present.

The ship was carrying natural gas condensate, which continued to burn on the ocean surface. Condensate is highly toxic but readily evaporates or burns off in a fire. If trapped underwater, however, it could seriously harm the marine environment.

The cause of the Jan. 6 collision between the Sanchi and the Chinese freighter CF Crystal, which was carrying grain, remains unclear. The ship's voice data recorder was reportedly recovered Jan. 13, possibly helping reveal how the collision and resulting fire occurred.

Authorities need to first assess the amount of condensate leaked and the size of the area contaminated, said Paul Johnston, of Greenpeace International's Science Unit at Britain's University of Exeter.

Because most of the condensate would have burned off or evaporated, the disaster will not result in the sort of thick, black oil slick typical of crude oil spills, Greenpeace said.

However, it will be much more difficult to separate from water because the condensate is so light, colorless and partially soluble. "A major concern is that, now that the tanker has sunk, any condensate which did not yet burn off could continue to leak underwater, disperse and break down quite quickly, significantly complicating clean-up operations," Greenpeace said.

Authorities and environmentalists have said it's too early to know the impact on fisheries, although Greenpeace said the area is spawning ground for bluefin leatherjacket and swordtip squid and the winter habitat of blue crab, chub mackerel and yellow croaker.

—ASSOCIATED PRESS

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SEA ICE

Fahrenheit, above average in December, NSIDC said, with one prominent warm spot over central Alaska. The pattern was similar to November, "driven in part by the arrangement of high and low air pressure regions surrounding the Arctic," the center said.

The linear rate of decline for sea ice in December was 18,300 square miles per year, 3.7 percent per decade, NSIDC said, with record low winter sea ice extent and higher than average temperatures in the 2016-17 winter.

Assessments of both sea ice thickness and sea ice age "indicate that Arctic sea ice remains very low in overall volume," the center said, with ice extent especially low in the Chukchi and Bering seas at year end 2017. An unusually early seasonal ice retreat in the Chukchi Sea in the summer of 2017 "likely relates to a strong inflow of oceanic heat into the region via the Bering Strait," NSIDC said.

Chukchi, Beaufort ice-over dates

The center said the National Oceanic and Atmospheric Administration's National Weather Service assembled a time series of ice-over dates for the Chukchi and Beaufort seas, with ice-over defined as the first day that the ice concentration exceeds 95 percent in the region.

"The trends toward later freeze up in both areas is striking," NSIDC said. "This has an impact on sea ice thickness as the growth season is shortened, which may The linear rate of decline for sea ice in December was 18,300 square miles per year, 3.7 percent per decade, NSIDC said, with record low winter sea ice extent and higher than average temperatures in the 2016-17 winter.

lead to thinner ice by the end of winter."

Another result of later freeze up is that there is less time for snow accumulation on the sea ice. "Since sea ice grows faster for a thinner snowpack, this may partially offset the impacts of late ice formation."

NOAA has also used maps, ship reports and other records to create monthly estimates of Arctic sea ice extent from 1850 to 2013, NSIDC said. There is limited data for the earlier part of the record, but "the carefully constructed time series helps to put the more recent satellite record in a longer-term context," and reveals an earlier period of unusually low summer sea ice extent, compared to the 1850-2013 average, from 1937 to 1943. That unusually low summer ice extent, however, "did not extend to the winter season, and was followed by a few years of significantly higher-than-average summer ice extents."

"Early in the record (1850 to 1900), winter sea ice extent was not particularly elevated relative to the 1850 to 2013 average, but summer sea ice extent was quite a bit higher than the average."

—KRISTEN NELSON

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FLOW TESTS

However, technical complications with the development drilling followed by financial issues, triggered by the low oil price, have hindered progress and caused delays in completing the work.

Company CEO Bert Armfield expressed optimism in the light of the new test results.

"This recent success is very encouraging and highlights the dedicated and persistent support invested by the working interest owners, state agencies and the contracting community," Armfield said. "These results confirm we are on the right track with our development

Drilled in 2011

The North Tarn No. 1 well, drilled in April 2011 to a depth of 6,197 feet, is located on the Mustang pad. As previously reported in Petroleum News, Brooks Range

The North Tarn No. 1 well, drilled in April 2011 to a depth of 6,197 feet, is located on the Mustang pad.

conducted its testing of the well using fracture stimulation and an associated flow test. The idea was to obtain certification of the well as capable of production in paying quantities, thus enabling preservation of the unit beyond the end of 2017, when the leases in the unit reached the ends of their primary terms.

In evaluating the tests and agreeing to the certification, Alaska's Division of Oil and Gas commented that, while having a relatively high gas-to-oil ratio, the well exhibited a high flow capacity. The division has also approved a fifth plan of development for the unit.

Brooks Range commented that the flow test results confirmed assumptions about the reservoir characteristics and supported parameters used for the production facility design. The company said that, as a result, devel-

opment of the oil field should accelerate, with the next phase of the development involving the installation of the processing facilities and the drilling of up to 18 horizontal production and development wells.

9

Development plan

The Mustang pad is located close to the Alpine oil pipeline: The development plan for the field involves connecting an export pipeline from the field to the Alpine line. The newly approved plan of development involves the completion of on-pad piles in the first quarter of this year; installing Canada-built modules by the end of September; and installing Alaska-built modules and connecting pipelines into the Alpine system by the end of 2018. Brooks Range's plan also envisages development drilling restarting at the beginning of August. The plan would lead to first oil from the field in the first guarter of 2019. ●

> Contact Alan Bailey at abailey@petroleumnews.com

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Foss Announces new chief financial officer

Bryceon Sumner has joined Foss Maritime as chief financial officer. In his new role at Foss, Sumner will oversee all aspects of the organization's financial function and performance with an eye toward the company's long-range strategic goals.

Sumner brings to the role years of experience as a leader in creating smart, straightforward financial strategies for a number of organizations ranging from education technology and real estate, to architecture and financial services.

"Bryceon is a strategic leader with a track record of successfully leading companies' financial functions through periods of growth and change," said John Parrott, president and CEO of Foss Maritime. "His financial leader-



BRYCEON SUMNER

ship experience will be a key component of Foss' success as we continue forward and grow our service lines."

Oil Patch Bits

Prior to joining Foss, Sumner served as COO and CFO for public and private companies, family offices and as a senior financial officer of a \$60 billion government banking insurance fund. Most recently, he was chief financial officer of Academic Partnerships, a Dallasbased educational technology provider focused on developing online classroom tools for nonprofit colleges and universities.

"I'm thrilled to join Foss in this CFO role and I think my experience in a number of different industries will bring a unique perspective to Foss," said Sumner. "The maritime industry is fascinating to me and I'm looking forward to learning and growing with the knowledgeable leaders at Foss, to help strengthen our finances and support the important work we are doing."

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INSIDER

office for BP was unaware of Dudley's Juneau meeting.

That Insider brief was written Jan. 11 and released online in Petroleum News the morning of Jan. 12.

In the same time period Dudley was giving an exclusive interview to Axios reporter Amy Harder that confirmed Alaska and BP's top executives had indeed met.

Axios is an American news and information website, founded in 2017. Its initial launch funding came from, among others, BP. (Other backers included NBC News, Emerson Collective, Greycroft Partners, and David and Katherine Bradley, owners of Atlantic Media. Axios' initial launch partners were JP Morgan & Chase Co., PhRma, Boeing, BP, Bank of America, Koch Industries, S&P Global, United Health Group, Walmart, PepsiCo and Cooley LLP.)

Axios reported on Jan. 12, "BP's consideration gives potential credence to the \$43 billion proposed

(Alaska) project, which coincided with President Trump visiting China in November and touting his administration's backing of it. Many analysts doubt the proposal will actually come through, though, given a lack of details and firm commitments at the time of the announcement."

Dudley was quoted as saying. "It's a large resource, and the world is going to need natural gas, particularly Asia. ... We're exploring with the state ways to make that resource find a market."

Furthermore, he told Axios, "I had not met the governor before. I was impressed."

In a separate interview, Charif Souki, "considered a pioneer in the natural gas exporting industry and founder of two companies in this space, expressed skepticism about the project."

"With a slight eye roll, Souki said, "it's a very, very ambitious project."

Here's what else Souki, who decades earlier founded Cheniere Energy, told Axios about the Alaska project:

"It depends on a lot of moving parts. You have to source the gas, build the pipeline infrastructure and

build the liquefaction facility. That's three pieces controlled by three different groups of people."

But by the end of Souki's comments on Walker's project, he reportedly sounded more optimistic: "It's an attractive project," he told Axios.

Dudley reportedly cautious about ANWR

Other highlights from Axios' exclusive interview with Dudley included BP's interest in drilling in the Arctic National Wildlife Refuge.

"The honest answer is we don't know ... so we and I think most companies have got to have a good hard look in the geology over there."

BP was a part of the consortium that drilled the only oil well in ANWR.

"The results of that well are highly confidential, legally protected. ... Even I haven't even seen that," he said.

—KAY CASHMAN, PUBLISHER

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FAIRBANKS LNG

end of May.

Consolidated utility

The concept is to consolidate the two existing Fairbanks gas utilities, Fairbanks Natural Gas and IGU, into a single utility, thus achieving gas distribution efficiencies and economies of scale. FNG is a subsidiary of Pentex. The new LNG storage facility, with an anticipated capacity of 5.25 million

gallons, will be needed to support the expanded LNG supply.

Pentex also owns the Titan LNG plant near Point Mackenzie on Cook Inlet and a trucking operation to transport LNG to Fairbanks.

During the Jan. 11 meeting, questions from AIDEA board members particularly focused on the construction of the new LNG storage facility, and on the need to ensure that information is available to Fairbanks residents about future options for the use of natural gas. Conversion of Fairbanks buildings to the use of gas for heating will drive

The concept is to consolidate the two existing Fairbanks gas utilities, Fairbanks Natural Gas and IGU, into a single utility, thus achieving gas distribution efficiencies and economies of scale.

the future gas demand, a key underpinning for the economics of the IEP.

Storage facility

Meanwhile, the construction of the new LNG storage facility in Fairbanks is being started as early as possible: The facility needs to be in use by Jan. 1, 2020, to obtain a \$15 million state tax credit to cover part of the facility's cost. The economics of the IEP assume that the tax credit will be forthcoming.

Gene Therriault, IEP team leader, told the AIDEA board that the contract for construction of the LNG storage tank had been signed on Dec. 22 and that there were continuing negotiations for construction of other components of the storage facility. The project is also waiting for a land use permit from the Fairbanks North Slope Borough, he said.

However, the brush clearing and trenching at the storage site have been completed, Therriault said.

David Prusak from IGU told the AIDEA board that excavation for the foundation of the facility is likely to begin around Jan. 17. He said that Preload Cryogenics has been awarded the contract for tank construction, with various subcontractors, including some Alaska contractors, engaged in the project.

Double-wall tank

Prusak said that, although the original concept had been the construction of a single walled tank, the selected proposal for tank construction involves an attractively priced two-wall design. The construction cost of this design is higher than that of the single-wall concept, but the leakage containment capabilities of the two-wall arrangement enable a reduction in the total footprint of the facility, Prusak said.

Therriault assured the board that, overall, the double wall design is competitive on price, and that the storage construction project is progressing to schedule, within the authorized total funding of up to \$45.5 million. He also mentioned that a Fairbanks landowner had offered to sell a land tract adjacent the LNG storage site to the IEP

project, an option that could have appeal in accommodating future expansion and improvement of the facility.

Therriault also commented that a bill has been filed for the upcoming legislative session, to extend the deadline for authorizing AIDEA bonding for the IEP by a further five years, to June 30, 2023.

Information for consumers

AIDEA board members asked about the extent to which IGU has picked up the baton of promoting the future availability of gas for Fairbanks consumers. Although the gas distribution pipeline system in Fairbanks has previously been built out, in anticipation of an expanded gas supply, the utilities cannot offer gas to new customers until the supply is increased.

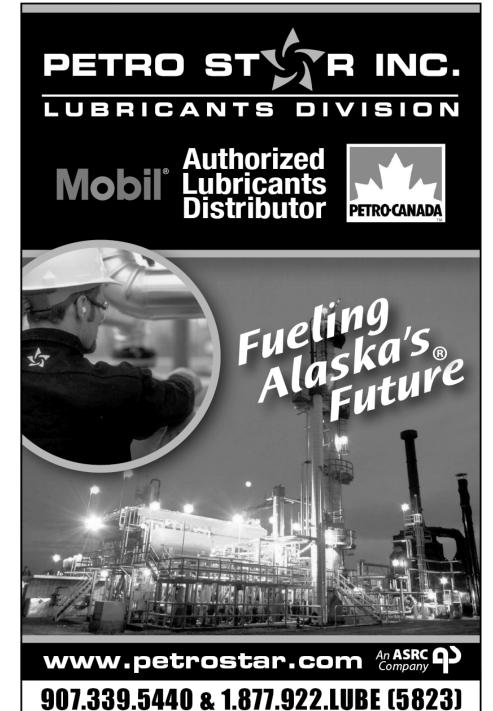
Jomo Stewart, CEO of IGU, told the board that IGU's recent focus has been on sealing the deal for the Pentex purchase. Board members urged the need to be able to respond to questions from people in Fairbanks regarding the status of the IEP and future options relating to natural gas availability.

The IEP has been investigating options for assistance with the cost of converting heating systems to the use of gas, including Property Assessed Clean Energy, or PACE, legislation that was passed last year, and Environmental Protection Agency grants targeting air quality improvement — a key objective of the IEP is the reduction of winter air pollution, resulting in particular from the widespread use of wood stoves.

Gravel pad

In conjunction with the purchase of Pentex, IGU is buying a gravel pad that was constructed as a site for a potential North Slope LNG facility in an earlier phase of the Interior Energy Project. AIDEA is requesting approval from the Department of Natural Resources for the transfer of the pad to IGU. Issues involved include the approval of commercial activities on the pad, and the subleasing of pad usage, Therriault said.

As previously reported in Petroleum News, IGU and AIDEA have applied to the Regulatory Commission of Alaska for the transfer of Fairbanks Natural Gas's certificate of public convenience and necessity to IGU.



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PRICE CORRELATION

varies in response to the economic forces of oil supply and demand. And most analysts agree that swings in the oil price reflect the fundamentals of the oil market. The oil price crash in 2014, for example, resulted primarily from an oversupply, as increasing amounts of U.S. shale oil came on line, while the recent upsurge in the price appears to have resulted from buoyant demand coupled with oil production quotas enacted by the Organization of the Petroleum Exporting Countries and Russia.

Similarly, the value of the dollar in international exchange markets is impacted by dollar demand levels resulting from factors such as the scale of the U.S. trade deficit, interest rate levels for dollar denominated bonds, and demand for dollars as a de-facto international reserve currency.

In fact, the conundrum of the linkage between oil and dollar pricing presents a classic example of the problem of interpreting a statistical correlation as a result of cause and effect. A correlation does not prove a cause. And, while the oil/dollar correlation does seem to indicate some underlying relationship, that relationship could result from some factor that impacts both.

A number of perspectives

A number of perspectives on the conundrum have been published over the years.

A paper published by Yi Zhang from Suffolk University, Boston, in 2013 in the International Journal of Energy Economics and Policy presented a statistical analysis that questioned whether the pricing correlation actually exists. That paper also presented an overview of previously published work, finding that a preponderance of authors had concluded that the oil price has been the driving force behind what many see as a valid correlation. Some have argued that an increase in the price of oil has increased the dollar income of oil producing countries, thus enabling these countries to use

Brent crude \$ per barrel

Drata sources: U.S. Energy Information Administration, Federal Reserve Bank of St. Louis

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Over the years the trade weighted U.S. dollar index has tended to increase as the oil price has dropped, and vice versa.

U.S. dollars to buy goods outside the United States, and hence cause the dollar to depreciate. Conversely, if the dollar-denominated price of oil drops, oil consuming countries will be motivated to buy more oil and hence push the price of oil up.

A couple of theories

An article published in Oil Sands Magazine in October suggested a couple of theories behind the oil price-dollar value connection. The first theory reflects the concept that variation in the dollar exchange rate inversely impacts the demand for oil outside the U.S., and hence inversely impacts the oil price. The second theory posits that, because the United States is such a massive consumer of oil, the price of oil impacts the country's trade balance, and hence the dollar exchange rate. Interestingly, this article also points out that oil prices are particularly sensitive to the U.S. dollar exchange rate when the

dollar is weak.

An article published on the oilprice.com website last March questioned whether the inverse correlation between the oil price and the dollar will continue, as U.S. oil production and oil exports increase — as a country's economy becomes more linked to oil production, the value of the country's currency

tends to move more in step with the oil price.

The debate on this topic will no doubt continue. Meanwhile, people in Alaska may want to watch out if they see the value of the U.S. greenback start to climb again. •

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OIL TAXES

to press no hearing dates had been set. In a Jan. 16 press release the representatives referred to the legislation as the "Fairness in Oil Taxes Bill," and said that since Alaska's fiscal gap can't be reduced through budget cuts alone, the bill would increase revenue.

"The Senate's unwillingness to consider new revenues has left Alaskans with limited choices for a sustainable budget future," Tarr said in a statement. "This bill represents a modest, fair increase in oil taxes that benefit all of Alaska."

The sponsors said the increase in the minimum tax is estimated to raise some \$225 million.

"Stability in oil taxes ensures that present and future Alaskans can share in the benefits of Alaska's natural resource wealth," Josephson said. "If we aren't increasing the Permanent Fund, then we won't have new revenues to share through the permanent fund dividend In a Jan. 16 press release the representatives referred to the legislation as the "Fairness in Oil Taxes Bill," and said that since Alaska's fiscal gap can't be reduced through budget cuts alone, the bill would increase revenue.

program. Even with all the increased oil exploration happening in existing and new locations, we can't balance the budget with the existing revenue stream."

"The Alaska House Majority Coalition is committed to a vibrant and diversified future for Alaska where our kids can get a great education, our seniors and elders are cared for, and our economy works for all Alaskans," Seaton said. "If the Senate refuses to address small steps to diversify revenue sources, then we must continue to rely on the oil and gas sector to fill the gap."

—KRISTEN NELSON

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