

Alaska State Legislature



Senator Hollis French

SB 203 – Cook Inlet Gas Storage Facilities

Sponsor Statement

Senate Bill 203 creates economic incentives for companies in Cook Inlet to develop storage facilities for natural gas.

While natural gas supply in Cook Inlet is sufficient to supply southcentral Alaska with the energy it needs for the near future, the need to produce gas at a constant rate results in more gas than the system needs in the summer months and near-shortages when demand is far higher in the winter.

Recently, the Regulatory Commission of Alaska (RCA), the Municipality of Anchorage and local utility companies have all discussed the possibility of natural gas shortages for homes and businesses during peak winter use. Both Enstar and Chugach Electric Association indicated in a recent RCA hearing that gas shortages could occur as early as winter 2011-2012.

While incentives exist to encourage producers to explore for new supplies, there are no similar incentives for storage. According to studies and industry sources, development of an adequate storage system could cost companies \$100 -- \$200 million dollars.

Under SB 203 development costs for the creation of gas storage facilities or reservoirs will be eligible for a tax credit like those offered for development of new wells. Cushion gas, which would remain in storage wells to maintain pressure for efficient removal, would not be subject to taxation. The legislation would also exempt storage facilities and equipment from state property taxes.



Senator Hollis French

SB 203 SECTIONAL ANALYSIS

Section 1

Section 1 provides for a 20% tax credit on qualified gas storage facilities. Qualifying expenditures include; a payment for a lease, machinery, supplies, equipment, or the cost of cushion gas which pressurizes the well for efficient extraction. The gas must be designated for sale and delivery in Alaska. A qualifying purchase must be made between December 31, 2009 and January 1, 2013, and cannot exceed 50% of the total tax liability.

The section also outlines the process for applying for the tax credit, and defines "Cook Inlet gas storage facility," and "cushion gas."

Section 2

Section 2 exempts Cook Inlet gas storage facilities from state property taxes.



Senator Hollis French

CSSB 203\P Explanation of Changes

P. 2, line 13: Adds gas storage facilities to the definition of a “public utility” under the Alaska Public Utilities Regulatory Act.

P. 2, line 21: Inserted “direct cost” to definition of “a qualified capital investment.” This narrows the costs to which a company would be allowed to apply the credit.

P. 3, line 9-10: Deleted “but shall be calculated before the application of any other credits allowed under this chapter.” This was in conflict with other language in statute.

P. 3, line 20-21: Inserted “A credit may not be claimed before the gas storage facility is ready to receive gas for storage.”

26-LS1114\P
Bullock
2/4/10

CS FOR SENATE BILL NO. 203()

IN THE LEGISLATURE OF THE STATE OF ALASKA
TWENTY-SIXTH LEGISLATURE - SECOND SESSION

BY

Offered:
Referred:

Sponsor(s): SENATORS FRENCH AND WIELECHOWSKI, Ellis

A BILL

FOR AN ACT ENTITLED

1 "An Act relating to the regulation of a gas storage facility by the Regulatory
2 Commission of Alaska; relating to a tax credit for a facility to store Cook Inlet gas for
3 sale and delivery in the state; relating to an exemption from the oil and gas exploration,
4 production, and pipeline transportation property tax for a facility that stores Cook Inlet
5 gas for sale and delivery in the state; and providing for an effective date."

6 **BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF ALASKA:**

7 * **Section 1.** AS 42.05.990(4) is amended to read:

8 (4) "public utility" or "utility" includes every corporation whether
9 public, cooperative, or otherwise, company, individual, or association of individuals,
10 their lessees, trustees, or receivers appointed by a court, that owns, operates, manages,
11 or controls any plant, pipeline, or system for

12 (A) furnishing, by generation, transmission, or distribution,
13 electrical service to the public for compensation;

(B) furnishing telecommunications service to the public for compensation;

(C) furnishing water, steam, or sewer service to the public for compensation;

(D) furnishing by transmission or distribution of natural or manufactured gas to the public for compensation;

(E) furnishing for distribution or by distribution petroleum or petroleum products to the public for compensation when the consumer has no alternative in the choice of supplier of a comparable product and service at an equal or lesser price;

(F) furnishing collection and disposal service of garbage, refuse, trash, or other waste material to the public for compensation;

(G) furnishing a tank, depleted reservoir, injection well for gas storage permitted under AS 31.05, or other structure in the state for the storage of gas that is designated to be sold and delivered in the state by a public utility providing the service described in (D) of this paragraph;

* Sec. 2. AS 43.20 is amended by adding a new section to article 1 to read:

Sec. 43.20.046. Cook Inlet gas storage facility tax credit. (a) A taxpayer that is an owner of a Cook Inlet gas storage facility may apply as a credit against the state tax liability that may be imposed on the taxpayer under this chapter, for a tax year beginning after December 31, 2009, 20 percent of the taxpayer's qualified capital investment in a Cook Inlet gas storage facility. The credit is subject to the terms and conditions of this section and is in addition to any other credit authorized to the taxpayer by this chapter.

(b) A qualified capital investment for the investment credit under (a) of this section is

(1) a cash expenditure or a payment due under a binding payment agreement entered into after December 31, 2009, and before January 1, 2013, made for the direct cost of purchasing, constructing, or otherwise acquiring an ownership interest in the real property or tangible personal property used in this state for a Cook Inlet gas storage facility; in this paragraph, "property" includes

1 (A) property that is placed in use under a capitalized lease or an
2 operating lease; and

3 (B) machinery, appliances, supplies, and equipment directly
4 related to the storage of gas produced from the Cook Inlet sedimentary basin
5 and designated for sale and delivery in the state; and

6 (2) the cost of cushion gas acquired after December 31, 2009, and
7 before January 1, 2013, that is required for a Cook Inlet gas storage facility to
8 function.

9 (c) The credit for each tax year allowed under (a) of this section may not
10 exceed 50 percent of the taxpayer's total tax liability under this chapter. An unused
11 portion of the credit for the tax year

12 (1) may be carried forward into one or more of the following tax years,
13 except that the unused credit from one tax year may not be carried forward for more
14 than five following tax years;

15 (2) shall be applied to the taxpayer's tax liability under this chapter
16 during the following tax year before allowance of a credit allowed under (a) of this
17 section for that following tax year.

18 (d) To obtain the credit allowed by this section, the taxpayer has the burden of
19 demonstrating compliance with the requirements of this section to entitle the taxpayer
20 to the claim of and the amount of the credit. A credit may not be claimed before the
21 gas storage facility is ready to receive gas for storage. To claim the credit, a person
22 shall submit, on a form prescribed by the department, information that demonstrates
23 that the taxpayer is eligible for the credit and evidence of the expenses that are the
24 basis of the claim of the credit. A person

25 (1) required to file a return under this chapter shall submit the form
26 claiming the credit with the taxpayer's return;

27 (2) not required to file a return under this chapter shall submit the form
28 claiming the credit before May 1 of the year following the year in which the
29 expenditure qualifying for the credit under this section is made.

30 (e) A taxpayer entitled to a credit under this section

31 (1) with prior written approval by the department, may convey, assign,

or transfer the credit to another taxpayer or business entity;

(2) forfeits the credit to which the taxpayer is entitled during the tax year and any carryover of it under (c) of this section, but does not forfeit the portion of the credit that accrued in a previous taxable year that may be carried over under (c) of this section, if the taxpayer

(A) disposes of the qualified capital investment;

(B) takes the qualified investment out of service; or

(C) fails to use the Cook Inlet gas storage facility primarily for the storage of gas for sale and delivery in the state.

(f) In this section,

(1) "Cook Inlet gas storage facility" means a tank, depleted reservoir, injection well for gas storage permitted under AS 31.05, or other structure in the state for the storage of gas that is produced from the Cook Inlet sedimentary basin and designated for sale and delivery in the state, and includes machinery, supplies, and equipment directly related to and necessary for filling and withdrawing gas from the structures holding the gas for storage in the facility;

(2) "Cook Inlet sedimentary basin" has the meaning given in AS 43.55.900;

(3) "cushion gas" means gas that is needed to pressurize the storage facility and that allows the storage facility to function.

* **Sec. 3.** AS 43.56.210(5) is amended to read:

(5) "taxable property"

(A) means real and tangible personal property used or committed by contract or other agreement for use within this state primarily in the exploration for, production of, or pipeline transportation of gas or unrefined oil (except for property used solely for the retail distribution or liquefaction of natural gas), or in the operation or maintenance of facilities used in the exploration for, production of, or pipeline transportation of gas or unrefined oil; "taxable property" includes

(i) machinery, appliances, supplies, and equipment;

(ii) drilling rigs, wells (whether producing or not),

gathering lines and transmission lines, pumping stations, compressor stations, power plants, topping plants, and processing units;

(iii) roads, tank farms, tanker terminals, docks and other port facilities, and air strips;

(iv) aircraft and motor vehicles owned by a person whose principal business in the state is the exploration for, production of, or pipeline transportation of gas or unrefined oil and whose operation of the aircraft or motor vehicle directly relates to the conduct of that business;

(v) maintenance equipment and facilities, and maintenance camps and other related facilities; and

(vi) communications facilities owned by a person whose principal business in the state is the exploration for, production of, or pipeline transportation of gas or unrefined oil and whose operation of the communications facilities directly relates to the conduct of that business;

(B) does not include

(i) permanent residences;

(ii) office buildings requiring substantial local government services;

(iii) oil and gas pipeline systems owned and operated by a public utility that is certificated under AS 42.05.221 and is regulated by the Regulatory Commission of Alaska;

(iv) aircraft and motor vehicles, except aircraft and motor vehicles taxable under (A)(iv) of this paragraph; [AND]

(v) communications facilities, except communications facilities taxable under (A)(vi) of this paragraph; **and**

(vi) notwithstanding (A) of this paragraph, a Cook Inlet gas storage facility, as that term is defined in AS 43.20.046;

* Sec. 4. This Act takes effect immediately under AS 01.10.070(c).

SENATE BILL NO. 203

IN THE LEGISLATURE OF THE STATE OF ALASKA

TWENTY-SIXTH LEGISLATURE - SECOND SESSION

BY SENATORS FRENCH AND WIELECHOWSKI, Ellis

Introduced: 1/19/10

Referred: Resources, Finance

A BILL

FOR AN ACT ENTITLED

1 **"An Act relating to a tax credit for a facility to store Cook Inlet gas for sale and delivery**
2 **in the state; relating to an exemption from the oil and gas exploration, production, and**
3 **pipeline transportation property tax for a facility that stores Cook Inlet gas for sale and**
4 **delivery in the state; and providing for an effective date."**

5 **BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF ALASKA:**

6 * **Section 1.** AS 43.20 is amended by adding a new section to article 1 to read:

7 **Sec. 43.20.046. Cook Inlet gas storage facility tax credit.** (a) A taxpayer that
8 is an owner of a Cook Inlet gas storage facility may apply as a credit against the state
9 tax liability that may be imposed on the taxpayer under this chapter, for a tax year
10 beginning after December 31, 2009, 20 percent of the taxpayer's qualified capital
11 investment in a Cook Inlet gas storage facility. The credit is subject to the terms and
12 conditions of this section and is in addition to any other credit authorized to the
13 taxpayer by this chapter.

14 (b) A qualified capital investment for the investment credit under (a) of this

1 section is

2 (1) a cash expenditure or a payment due under a binding payment
3 agreement entered into after December 31, 2009, and before January 1, 2013, made for
4 the purchase, construction, or other acquisition of an ownership interest in the real
5 property or tangible personal property used in this state for a Cook Inlet gas storage
6 facility; in this paragraph, "property" includes

7 (A) property that is placed in use under a capitalized lease or an
8 operating lease; and

9 (B) machinery, appliances, supplies, and equipment directly
10 related to the storage of gas produced from the Cook Inlet sedimentary basin
11 and designated for sale and delivery in the state; and

12 (2) the cost of cushion gas acquired after December 31, 2009, and
13 before January 1, 2013, that is required for a Cook Inlet gas storage facility to
14 function.

15 (c) The credit for each tax year allowed under (a) of this section may not
16 exceed 50 percent of the taxpayer's total tax liability under this chapter, but shall be
17 calculated before the application of any other credits allowed under this chapter. An
18 unused portion of the credit for the tax year

19 (1) may be carried forward into one or more of the following tax years,
20 except that the unused credit from one tax year may not be carried forward for more
21 than five following tax years;

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24 section for that following tax year.

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26 demonstrating compliance with the requirements of this section to entitle the taxpayer
27 to the claim of and the amount of the credit. To claim the credit, a person shall submit,
28 on a form prescribed by the department, information that demonstrates that the
29 taxpayer is eligible for the credit and evidence of the expenses that are the basis of the
30 claim of the credit. A person

31 (1) required to file a return under this chapter shall submit the form

1 claiming the credit with the taxpayer's return;

2 (2) not required to file a return under this chapter shall submit the form
3 claiming the credit before May 1 of the year following the year in which the
4 expenditure qualifying for the credit under this section is made.

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6 (1) with prior written approval by the department, may convey, assign,
7 or transfer the credit to another taxpayer or business entity;

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9 year and any carryover of it under (c) of this section, but does not forfeit the portion of
10 the credit that accrued in a previous taxable year that may be carried over under (c) of
11 this section, if the taxpayer

12 (A) disposes of the qualified capital investment;

13 (B) takes the qualified investment out of service; or

14 (C) fails to use the Cook Inlet gas storage facility primarily for
15 the storage of gas for sale and delivery in the state.

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17 (1) "Cook Inlet gas storage facility" means a tank, depleted reservoir,
18 injection well for gas storage permitted under AS 31.05, or other structure in the state
19 for the storage of gas that is produced from the Cook Inlet sedimentary basin and
20 designated for sale and delivery in the state, and includes machinery, supplies, and
21 equipment directly related to and necessary for filling and withdrawing gas from the
22 structures holding the gas for storage in the facility;

23 (2) "Cook Inlet sedimentary basin" has the meaning given in
24 AS 43.55.900;

25 (3) "cushion gas" means gas that is needed to pressurize the storage
26 facility and that allows the storage facility to function.

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31 the exploration for, production of, or pipeline transportation of gas or unrefined

oil (except for property used solely for the retail distribution or liquefaction of natural gas), or in the operation or maintenance of facilities used in the exploration for, production of, or pipeline transportation of gas or unrefined oil; "taxable property" includes

(i) machinery, appliances, supplies, and equipment;

(ii) drilling rigs, wells (whether producing or not), gathering lines and transmission lines, pumping stations, compressor stations, power plants, topping plants, and processing units;

(iii) roads, tank farms, tanker terminals, docks and other port facilities, and air strips;

(iv) aircraft and motor vehicles owned by a person whose principal business in the state is the exploration for, production of, or pipeline transportation of gas or unrefined oil and whose operation of the aircraft or motor vehicle directly relates to the conduct of that business;

(v) maintenance equipment and facilities, and maintenance camps and other related facilities; and

(vi) communications facilities owned by a person whose principal business in the state is the exploration for, production of, or pipeline transportation of gas or unrefined oil and whose operation of the communications facilities directly relates to the conduct of that business;

(B) does not include

(i) permanent residences;

(ii) office buildings requiring substantial local government services;

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1 (v) communications facilities, except communications
2 facilities taxable under (A)(vi) of this paragraph; **and**
3 **(vi) notwithstanding (A) of this paragraph, a Cook**
4 **Inlet gas storage facility, as that term is defined in AS 43.20.046;**
5 * Sec. 3. This Act takes effect immediately under AS 01.10.070(c).

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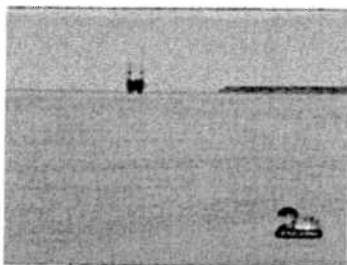
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Enstar: Cook Inlet natural gas is rapidly diminishing



Enstar's gas supply manager
Mark Slaughter (Mike
Nederbrock/KTUU-DT)



According to Enstar, no one is
sure exactly what is causing the
depletion of reserves. (Mike
Nederbrock/KTUU-DT)

by Lori Tipton
Wednesday, September 16, 2009

ANCHORAGE, Alaska -- The utility that uses Cook Inlet gas to help heat Southcentral Alaska says there is a steady depletion of gas reserves.

That was the topic of discussion Wednesday at the fifth annual Oil and Gas Congress meeting in Anchorage.

Enstar's gas supply manager, Mark Slaughter, says despite five new wells being drilled in the last year, research shows a considerable drop in the amount of gas in Cook Inlet.

In 2006, producers reported a rate of close to 150 million barrels per day, but as of last year they only reported about 50 million barrels per day.

According to Enstar, no one is sure exactly what is causing the depletion of reserves.

"There's a potential problem that's coming and we need to prepare for it, there's investments that need to be made, decisions that need to be made, and that date is coming," Slaughter said.

The U.S. Department of Energy has predicted local demand will outpace supply as early as 2014 -- producers are predicting it could happen by 2013.

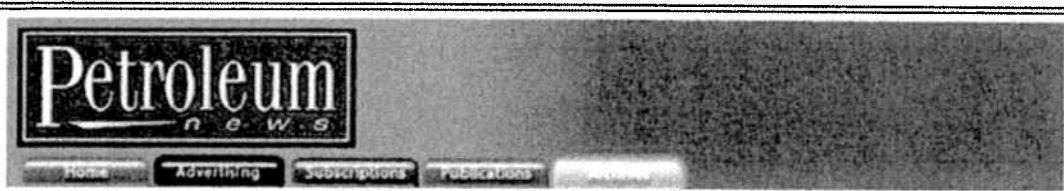
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gas industry
September 2009**

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Week of September 20, 2009

What price CI gas?

RCA gleans views on breaking utility supply contract approval logjam

Alan Bailey

Petroleum News

While concerns rise about whether natural gas supplies from Alaska's Cook Inlet basin will be able to keep up with local utility demand, especially during the depths of the winter, a debate continues regarding whether Cook Inlet gas prices are too low to entice sufficient new gas exploration and development, or whether the Cook Inlet gas producers are crying wolf over the gas supply situation, to increase their profits by pushing gas prices up.

Since 2004 the Regulatory Commission of Alaska, in its role of regulating the utilities and protecting energy consumers from unnecessarily high energy prices, has rejected as too expensive every gas supply contract that Enstar Natural Gas Co., the main Southcentral Alaska gas utility, has negotiated with Cook Inlet gas producers. A recent supply agreement between power utility Chugach Electric Association and gas producer ConocoPhillips is the only utility gas supply contract that the commission has approved in that time.

But what is a reasonable price for Cook Inlet natural gas?

On Sept. 16 RCA convened a technical conference to seek views on how to provide regulatory oversight of gas pricing, to help change the regulatory process for gas supply contract approval from what has all too often become an expensive and time consuming minefield, possibly delaying new gas development, into more of a well-marked pathway.

Producer view

The major Cook Inlet gas producers declined to participate in the conference, citing anti-trust issues that might be raised by their involvement in discussions about how gas prices might be set. But a written statement by Marathon, one of those producers, reiterated an often expressed oil company view that supply contracts, including gas pricing arrangements, should be “freely and fairly” negotiated between the producers and the utilities, rather than be specified in some way by regulators.

“The regulators should regulate the regulated, not the gas market,” Marathon said. And negotiations between the producers and the utilities need to recognize that producers are driven by the balance between risk and reward, in a situation where gas projects in Alaska compete for finite funding with other projects on a global basis, the company said.

But the isolated nature of the tiny Cook Inlet utility gas market and the lack of a spot market for Cook Inlet gas have made it impossible to determine a market-driven local gas price and have led gas contract negotiations into some creative ways of establishing contract prices.

A few decades ago, prior to the formation of dynamic national and global natural gas markets, negotiations between Southcentral utilities and the Cook Inlet gas producers led to long-term contract gas prices indexed to the price of oil. And, with a large glut of Cook Inlet gas, those prices were low relative to other part of the United States.

Changing market

Then in the early 2000s, as tightening Cook Inlet gas supplies started to draw people’s attention to the need for more Cook Inlet gas exploration, and as a burgeoning North American and global trade in natural gas drove the establishment of many gas trading hubs, Cook

Inlet gas contract negotiations moved toward the indexing of Cook Inlet gas prices to gas markets elsewhere, in particular to the Henry Hub market in the Lower 48.

Indexing Cook Inlet gas prices to Lower 48 prices would enable Cook Inlet gas exploration to compete for capital with gas exploration projects elsewhere, the gas producers argued.

In 2001 RCA approved a Unocal gas supply contract with Enstar that used a Henry Hub index, and in 2004 the commission approved a similar contract between Enstar and the NorthStar Energy Group. However, the commission subsequently dropped its support for Henry Hub indexing, and for other proposed indices involving North American trading points at the demand or downstream end of gas transmission networks, saying that these markets did not model the market situation in the Cook Inlet and resulted in over-priced Cook Inlet gas.

The commission proposed instead a price index based on a basket of producer basin markets, an approach that the producers rejected for contracts with Enstar but which forms the basis of the pricing in the recently approved Chugach contract.

Market index?

Is the use of this form of market index appropriate as a benchmark for gas prices in Cook Inlet, the commissioners asked at the Sept. 16 conference? And should the commission specify a “safe harbor” range of prices that would be acceptable to the commission and guarantee contract approval?

Some conference participants cautioned about the difficulty of restraining prices within a narrow range, an approach that seems akin to price controls. And Dan Dieckgraeff, Enstar’s manager of rates and regulatory affairs, argued the case for price mechanism flexibility, given the inevitable differences between different contract situations and the evolving nature of gas markets.

Trying to pick a pricing mechanism that works perfectly today is not useful for determining gas prices in the future, given that gas markets around the world are changing continuously, he said.

And Commissioner Janis Wilson commented that experience of linking Cook Inlet gas prices to Lower 48 market indices has in practice demonstrated how little connection there is between the market dynamics in the Lower 48 and the gas supply and demand situation in the Cook Inlet.

“Here we are with a (gas) surplus in the Lower 48, prices going way down, and we’re facing gas shortages (in the Inlet),” Wilson said.

Another possible Cook Inlet gas price model discussed at the conference is a price cap indexed to the estimated price of imported LNG, imports that would form an obvious alternative to the Cook Inlet basin as a gas source.

And Aurora Gas, the one producer to participate in the conference, would like to see some percentage of the total gas demand set aside for bidding in an open spot market that would give small producers like Aurora market access, while also establishing a market gas price. However, utilities have expressed concern about this concept, because of utility needs for assured supplies from medium- to long-term contracts.

No cost data

One problem that the commission faces when it comes to assessing a reasonable gas-price level is the absence of information regarding the cost of Cook Inlet gas production, information that the gas producers are unwilling to divulge, said Commissioner Anthony Price.

“One emphasis in prior gas contracts is that there’s more cost in the Cook Inlet, and yet there’s no evidence put on the record of the cost in the Cook Inlet,” Price said. “... There’s nothing we can land on.”

Dieckgraeff said that, although costs factor into gas producer decision making, in his experience it is gas prices that determine gas producer investment commitments. On the other hand, the cost of servicing the extreme swings in Alaska utility gas demand between summer and winter must be taken into account when comparing Alaska gas prices with those in the Lower 48, he said.

In fact, the commission is seeking views on whether it should allow seasonal price variation, or possibly gas producer cost add-ons for the

storage of gas for winter use, in approved gas supply contracts. The conference participants seemed to share a view that new gas storage in the Cook Inlet basin will prove to be a key factor in managing gas supplies for winter use, and that the necessary storage facilities will come at a cost. Storage facilities could also provide a gas market for small producers such as Aurora Gas, said Alan Dennis, royalty manager in Alaska's Division of Oil and Gas.

Price flexibility

However, as in models for the base pricing of gas, there needs to be flexibility from one contract to another in the way in which storage costs can be recovered, whether cost recovery comes from tiering the gas prices to different levels of delivery, or from a single, year-round "bundled" price. Dieckgraeff argued.

"One size fits all isn't the way we want to go here," he said.

RCA is also considering whether there may be value in legislative changes to state statutes, to specify how the commission should review utility gas supply contracts, perhaps with a specified pricing mechanism for the gas. These possibilities did not provoke any response from the conference participants, other than one comment that a statutory standard of the review for the contracts might be helpful in improving the review process.

Other topics discussed during the conference included the fact that the utilities in general support RCA pre-approval of their gas supply contracts, prior to tariff approval, as an essential means of eliminating the significant financial risk that would otherwise result from the possibility of the commission rejecting a contract after a tariff has gone into effect. Some conference participants also expressed concern that a too broad participation in utility tariff hearings, including the involvement of entities with unclear or inappropriate agendas, had in some cases unduly increased the length and cost of the hearings.

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S U B S C R I B E



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gas industry
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Week of November 08, 2009

Tax incentives proposed for gas storage

**Alaska Sen. French unveils bill offering tax
credits, property tax relief to encourage Cook
Inlet facilities for holding natural gas**

Wesley Loy

For Petroleum News

Alaska state Sen. Hollis French plans to introduce legislation to provide tax incentives for development of Cook Inlet natural gas storage capacity.

French, an Anchorage Democrat who sits on the Senate Resources Committee, said he's concerned about potential winter gas supply shortages for homes and businesses in Southcentral Alaska.

"Storage makes sense. It's like cutting an extra cord of wood in the summer to burn in the winter," French said in a Nov. 2 press release.

A problem with storage, however, is the considerable expense.

"According to studies and industry sources, development of an adequate storage system could cost companies \$100-\$200 million," the press release said.

French's five-page draft bill defines a Cook Inlet gas storage facility as a tank, a depleted reservoir, an injection well for gas storage, "or other structure in the state for the storage of gas that is produced from the Cook Inlet sedimentary basin and designated for sale and delivery in the state."

The bill has two major elements.

First, it offers a state corporate income tax credit. A company may apply as a credit against its tax liability "20 percent of the taxpayer's qualified capital investment in a Cook Inlet gas storage facility," the bill says.

It defines a qualified capital investment as a cash expenditure or contract struck between Dec. 31 of this year and Jan. 1, 2013, for development of a storage facility.

Another qualified capital investment is the cost of "cushion gas" necessary to pressurize the storage facility. This permanent inventory of cushion gas is a major initial cost factor for storage developers.

The credit could not exceed 50 percent of a company's total tax liability each year, the bill says.

The bill's second major element would exempt gas storage facilities and equipment from the state oil and gas property tax.

Storage already happening

While Cook Inlet gas fields are approaching depletion, the most pressing issue right now is deliverability — getting enough gas into the distribution grid during the coldest winter days to meet peak demand. Regulators, energy companies and elected officials have talked increasingly of the possible need for consumer conservation measures or even rolling power blackouts as early as this winter.

French, a former oil industry worker and Senate bipartisan majority member who's running against Republican Gov. Sean Parnell, has touted storage as a way to squirrel away summer gas production for use during winter.

The storage incentives are akin to state perks now in place to encourage exploratory drilling, French said.

But some storage efforts already are progressing without the benefit of the tax incentives he is proposing.

Chevron and Marathon have established three storage facilities in depleted reservoirs at the Swanson River, Pretty Creek and Kenai fields.

Enstar Natural Gas Co., the major gas utility for Southcentral Alaska, is working with Houston-based ANR Pipeline Co., a TransCanada Corp. subsidiary, on development of a new storage facility.

Aurora Gas also wants to develop a gas storage facility at its Nicolai Creek gas field.

French's bill will be considered once the Legislature opens its new session on Jan. 19.

Two types of tax incentives

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First, it offers a state corporate income tax credit. A company may apply as a credit against its tax liability "20 percent of the taxpayer's qualified capital investment in a Cook Inlet gas storage facility," the bill says.

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Storage already happening

While Cook Inlet gas fields are approaching depletion, the most

pressing issue right now is deliverability — getting enough gas into the distribution grid during the coldest winter days to meet peak demand. Regulators, energy companies and elected officials have talked increasingly of the possible need for consumer conservation measures or even rolling power blackouts as early as this winter.

French, a former oil industry worker and Senate bipartisan majority member who's running against Republican Gov. Sean Parnell, has touted storage as a way to squirrel away summer gas production for use during winter.

The storage incentives are akin to state perks now in place to encourage exploratory drilling, French said.

But some storage efforts already are progressing without the benefit of the tax incentives he is proposing.

Chevron and Marathon have established three storage facilities in depleted reservoirs at the Swanson River, Pretty Creek and Kenai fields.

Enstar Natural Gas Co., the major gas utility for Southcentral Alaska, is working with Houston-based ANR Pipeline Co., a TransCanada Corp. subsidiary, on development of a new storage facility.

Aurora Gas also wants to develop a gas storage facility at its Nicolai Creek gas field.

French's bill will be considered once the Legislature opens its new session on Jan. 19.

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vol. 14, No. 34

Week of August 23, 2009

Providing coverage of Alaska and northern Canada's oil and gas industry

Seeking CI gas storage

Enstar working with TransCanada subsidiary on Cook Inlet gas storage facility

By Alan Bailey

Petroleum News

Faced with a slowly increasing natural gas demand accompanied by steadily declining Cook Inlet gas deliverability, Enstar Natural Gas Co., the main gas utility in Southcentral Alaska, is working with Houston-based ANR Pipeline Co., a subsidiary of TransCanada, to establish a new Cook Inlet underground gas storage facility with an eventual capacity of up to 15 billion cubic feet, to alleviate a pending gas deliverability shortfall, John Lau, Enstar's director of transmission operations, told Petroleum News Aug. 17. The two companies plan to make a final decision by the end of this year on whether to proceed with construction of the facility, he said.

ANR would fund, build and operate the facility as a third-party operator, with Enstar and other utilities paying for storage space.

With Southcentral Alaska utility gas predominantly used for heating homes and business, gas demand in the cold of winter typically peaks at levels 10 times greater than the troughs in demand during the summer. And in the past this huge seasonal demand swing has been accommodated by full-service supply contracts, in which Cook Inlet gas producers take responsibility for upping the supply rates during the winter.

Years ago increasing gas delivery was simply a matter of opening up valves on gas wells, but now there isn't that excess deliverability, Lau said. Instead, the producers now need expensive infrastructure to accommodate the demand swings, he said.

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In addition, with 25 percent of its required gas supplies in 2011 not under contract, and no significant new gas supply contracts in the offing, Enstar is facing a supply crunch in about 16 months. And, since the Regulatory Commission of Alaska has rejected as too expensive all new gas supply contracts that Enstar has negotiated since 2001, Enstar anticipates that any new contracts that might fill the pending gas supply gap would involve constant rates of delivery year-round at constant pricing, an arrangement known in gas utility parlance as "flat gas."

"There's no one coming to us with contracts for us to take before the RCA anymore," Lau said. "So what we're looking at for contracts that we ... most likely will get in the future is that we're going to have to buy flat gas, or near flat gas."

The expected future introduction of these near constant delivery rate contracts will require Enstar to have access to a storage facility, to warehouse gas purchased in the summer for bolstering winter delivery. That storage need is the more pressing because of the possibility of the LNG export terminal on the Kenai Peninsula closing in 2011, when the current U.S. Department of Energy LNG export license expires — the LNG plant currently provides an invaluable service during severe cold weather by curtailing LNG production, to divert gas for utility use.

And even if gas from the North Slope starts flowing into Southcentral Alaska through a direct "bullet" pipeline from the slope, or through a spur line off a main North Slope gas line, Cook Inlet gas storage will be needed to enable a relatively constant flow of gas through the line year-round, to ensure viable pipeline operations, and to provide backup capacity for periods when the pipeline is shut-in.

Investigating options

Enstar has been investigating gas storage options for about three years and had proposed establishing its own storage facilities as part of the terms of two gas supply contracts that RCA rejected in 2008, Lau said. Subsequently, the utility has been considering options for storage that it now believes will be vital to the future of Southcentral utility gas supplies.

"Now we're looking at what we need in four years, six years, eight years," Lau said. "... The storage that's implemented here in the next couple of years, it'll be used in the Cook Inlet for decades to come."

And the gas producers will likely need to continue to operate their own storage facilities, to enable them to accommodate utility demand swings under the terms of some gas supply contracts, he said.

Although it would typically take about 36 months to permit, construct and fill a new underground storage facility, Enstar has asked ANR to work out how to make a new facility available to Enstar for the winter of 2011-2012, Lau said.

In fact, the coming winter of 2009-2010 could see a gas deliverability shortfall, if the weather becomes especially cold. But by 2011, under current supply arrangements, a shortfall will become certain, regardless of the weather, Lau said.

"We've identified dire consequences that will happen if we do not have gas



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available out of storage in the winter of 2011-2012," he said.

Four issues

ANR has extensive experience of operating gas storage in the Lower 48 and believes that the 2011 deadline for bringing the new Cook Inlet storage into operation is feasible, Lau said. But the aggressive project timeline will involve spending the next six months resolving four crucially important issues.

First of all, the companies need certainty about whether the Regulatory Commission of Alaska would approve Enstar's tariff changes for factoring in the fees that Enstar will need to pay to ANR for storage usage — Enstar must be sure that it will be able to recover the storage costs from the gas supply rates that it charges its customers, Lau said.

"No private entity will spend any capital on putting together any process or storage, unless they're sure they can recover their costs," he said.

Secondly the companies need to make sure that it will be possible to obtain the use of a suitable storage reservoir, given that all Cook Inlet field reservoirs are currently controlled by gas producers. Four possible reservoirs are under consideration and discussions are in progress with the relevant producers about gas storage possibilities, Lau said.

All of the reservoirs being considered are currently producing gas, a situation preferable to converting a completely depleted reservoir for storage, given that the remaining field gas, occupying perhaps 20 to 30 percent of the field reservoir, can be purchased as "pad gas," gas that simply supports the underground gas pressure and which would otherwise have to be injected into the reservoir, Lau explained.

The purchase of this in-place pad gas from the field owners would form a significant part of the capital cost of the gas storage project, he said.

A third issue is ensuring that all of the permits required to build and operate the storage facility can be obtained, including environmental permits and state approval of a gas storage lease in the chosen field reservoir.


The fourth challenge being addressed in the coming six months is the development of a viable business plan that would work effectively for all of the companies involved in some way with the gas storage project, Lau said.

Supply uncertainty

In addition to these primary challenges, significant uncertainty about the sources of future Southcentral Alaska add complications to Enstar and ANR's gas storage plans — future gas supplies could come from new gas discoveries in the Cook Inlet basin, through some form of gas line connecting to the North Slope or from the import of LNG. In particular the import of LNG through the existing LNG export facility on the Kenai Peninsula — a scenario that, based on current trends, Enstar thinks could come into play around 2014, 2015 — would impact the optimum way in which to design the new storage facility.

In fact, Enstar has started evaluating what additions will be made to Cook Inlet gas reserves in the coming years, to try to pin down the time when will begin to be necessary to boost Cook Inlet gas supplies by importing gas from elsewhere.

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In particular, the company wants to know how much of the reserve additions that the state has projected are certain rather than just being possible.

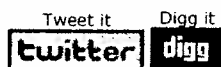
"When it comes to keeping customers warm we need 100 percent (certainty)," Lau said.

Enstar is also discussing with [ConocoPhillips](#) and Marathon, the owners of the LNG facility, the possibility of re-gasifying LNG, to support peak utility gas deliverability during severe winter cold. However, uncertainty regarding the renewal of the LNG export license in 2011 complicates that option — Enstar is seeking an opinion from the federal regulators on what the renewal decision is likely to be.

But the core question of establishing a new underground storage facility comes back to ensuring that utility gas continues to flow to consumers during the cold Alaska winter.

"It's not going to be cheap, but it's certain supply," Lau said.

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Vol. 14, No. 33

Week of August 16, 2009

Providing coverage of Alaska and northern Canada's oil and gas industry

More gas storage needed

Zager says a variety of storage options required; scope for conservation

Alan Bailey

Petroleum News

With winter cold in Southcentral Alaska perhaps three months away, the season is fast approaching when a severe cold snap could push the required delivery rate of utility natural gas for heating and power generation up to and perhaps beyond the limits of feasible production from gas wells in the Cook Inlet basin. One possible solution to this gas deliverability crunch is the use of gas storage facilities, to store excess gas produced during the summer and then release that gas into the utility system during the winter when demand is high.


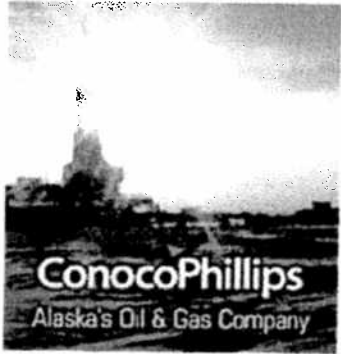

Three facilities

There are already three storage facilities successfully operating in depleted gas fields around Cook Inlet. Marathon operates one of these facilities in its Kenai gas field; Chevron operates two facilities, one in the Swanson River field on the Kenai Peninsula and one in the Pretty Creek field on the west side of the Cook Inlet. And Aurora Gas is proposing to establish an additional storage facility in its Nicolai Creek field south of Tyonek.

"At peak, when our storage is full, we can do in excess of 60 million cubic feet per day out of the combined (Chevron) systems," John Zager, Chevron's Alaska manager, told Petroleum News Aug. 4.

Both facilities can help support either the on-going high gas load of a typical winter or the peak load during particularly severe cold. However, Chevron tends to use Pretty Creek primarily to bolster the on-going winter load.

"We tend to turn that on and leave it on throughout the winter, whereas we tend to use Swanson more as a peaking field," Zager said.



Zager said that gas storage is critical to addressing the short to intermediate issues relating to the deliverability of utility gas. And a variety of different types of storage could address different delivery needs, such as continuous or needle peaking supply. In addition to the type of below-ground storage that has been implemented already, the above-ground storage of LNG would be especially suitable for needle peaking delivery of gas.

Not cheap

But none of the gas storage options is cheap.

"People want to talk about affordable gas, which is a great desire, but you need to look at security of supply too," Zager said.

Both Chevron and Marathon operate their storage facilities in support of their own operations, to ensure that they can meet their contracted gas supply obligations during the winter. But the storage supports long-term, full-service supply contracts, with constant gas pricing regardless of season variations in demand. This type of contract is disappearing, in part because it does not recognize the full cost of meeting winter demand, Zager said.

Instead, pricing will likely become more flexible, perhaps tiered to the gas demand level, thus opening possible gas storage roles for gas utilities, power utilities or perhaps third-party gas storage operators.

"The market will find an answer, given the opportunity," Zager said. "Tiered pricing may work. There may also be a mechanism whereby a utility and the customers would pay a capacity charge, whether they use the gas or not."

The concept of a capacity charge arises from the need to protect a gas storage operator from the risk of establishing and filling a storage facility, and then encountering a mild winter in which the storage is not needed — essentially the capacity charge would operate like an insurance premium, to ensure the availability of sufficient gas during exceptionally cold weather.

And then there is the risk associated with uncertainty in the future of the Cook Inlet gas market — in June Ethan Schutt, vice president for land and legal affairs for Cook Inlet Region Inc., a Native regional corporation with major land holdings around the Cook Inlet, told the Senate Resources Committee that CIRI had determined that the development of gas storage for third-party use in the Cook Inlet basin is very unattractive for private industry because of high development costs and high market uncertainty.

"Although the concept seems attractive and to serve a public purpose, the economics aren't worth the risk right now," Schutt said.

Technical challenges

However, aside from the commercial challenges of establishing a viable gas storage facility, anyone setting up an underground storage facility in the Cook Inlet basin faces some significant technical challenges. Whereas in the Lower 48 a company might construct an underground storage facility by using fossilized reef structures with large cavities, or by leaching salt from an underground salt dome to create a cavern that can be filled with gas, operators in the Cook Inlet basin have to use relatively poor reservoirs in muddy sandstones, Zager said.



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"We in the Cook Inlet do not have what are considered good storage reservoirs," he said.

Producing gas too fast from a Cook Inlet sandstone reservoir runs the risk of sand production through the gas wells, while issues such as water encroachment in the reservoir need to be considered. There's also the risk of losing gas that's pumped into a less-than-optimum reservoir for storage.

"The first time you're filling that reservoir with gas, you're just hoping it comes back out again," Zager said.

And the need to use a depleted gas field for storage limits the number of underground storage facilities that can be brought into use, as well as determining the locations of gas storage sites and possibly introducing issues relating to joint ownership of field leases. The need to locate a storage facility at a place on the Cook Inlet pipeline system where stored gas can be delivered at sufficient rate through the pipelines further limits the availability of gas storage locations — many Chevron properties are offshore, where storage operation does not seem to make much sense, Zager said.

And no one is going to take the risk of trying to establish an underground facility in a location other than a depleted field.

"My theory would be if nature hasn't been able hold gas for a long period of time, I'm not going to bet on it," Zager said.

New gas

Zager also cautioned that, although gas storage can help with short-term gas deliverability issues, the storage does not actually create any new gas to bolster supplies. In the longer term gas from new Cook Inlet discoveries, from the North Slope or from LNG imports will have to come on line, he said.

And, in the short term, gas conservation, through measures such as turning down thermostats, using wood stoves and deferring activities with high power or gas consumption, could go a long way to overcoming the peak gas deliverability hurdle.

"If on a cold day you could shave demand by 10 percent, that would equate to a nice-sized gas field or an entire storage facility," Zager said.

And building a new storage facility, including permitting, and perhaps drilling a new well and installing compression, would likely take a couple of years.

"It's not like if we decided now, we can have anything ready for this winter, or probably even next winter," Zager said.

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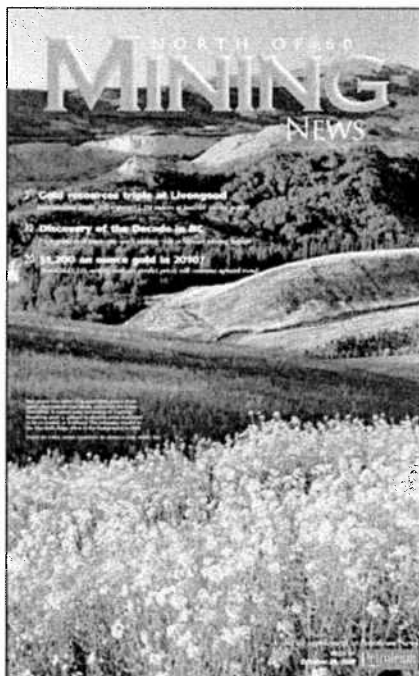
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12 of critical habitat for polar bears

October Mining News inside



The October issue of North of 60 Mining News is enclosed

Alberta's leader in a deep hole

Alberta Premier Ed Stelmach is in a struggle for his political life.

Consider this:

- His Progressive Conservative party got relegated to third place in a recent election to fill a vacancy in the provincial legislature.
- Support for his governing party has tumbled to 30 percent from 54 percent three years ago, when he was chosen to succeed Ralph Klein, and his own performance as leader has close to a 60 percent disapproval rating.

Klein, in what was widely seen as a poison dart, suggested Stelmach would need 70 percent support at the party's mandatory leadership review on Nov. 7 if Stelmach was to remain at the helm.

Alberta's Auditor-General Fred Dunn warned the province could lose C\$100 million in royalties this year because it allowed oil sands giants Suncor Energy and Syncrude Canada

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EXPLORATION & PRODUCTION

OK for Shell plan

MMS approves Beaufort Sea 2010 drilling if permitting requirements met

By ALAN BAILEY
Petroleum News

On Oct. 19 Shell passed another major milestone in its multiyear quest to start exploration drilling on Alaska's Arctic outer continental shelf, when the U.S. Minerals Management Service approved the company's new Beaufort Sea exploration plan, a plan involving the drilling of two exploration wells during the 2010 open water season using a single drillship, the Frontier Discoverer.

"The Minerals Management Service is committed to developing offshore energy resources responsibly," said MMS Director Liz Birnbaum. "Now that we have approved Shell's plan and reached this important milestone, we will continue to work with Shell to ensure that all activities are

And time is of the essence for completion of the permitting for both the Beaufort and Chukchi Seas: The company has said that it needs it to be in a position to make a go-or-no-go decision on the 2010 drilling at the start of that year, given the expense and effort involved in ramping up for any Arctic outer continental shelf drilling activity.

conducted in a safe and environmentally responsible manner."

Plan approval is subject to Shell obtaining all required permits and authorizations, including

see SHELL page 23

EXPLORATION & PRODUCTION

Cosmo back on track

Pioneer plans more appraisal work at offshore Cook Inlet prospect this year

By KAY CASHMAN
Petroleum News

Work on the Cosmopolitan oil prospect in Southcentral Alaska's Cook Inlet basin has ramped back up, operator Pioneer Natural Resources told Petroleum News Oct. 20.

In January, Pioneer put plans to drill an appraisal well on hold until 2010 because of low oil prices, although Tadd Owens said the company would continue to investigate the feasibility of commercial oil production from Cosmopolitan, which was discovered in 1967 by Pennzoil.

Owens, Pioneer's director of government and public affairs, also said Pioneer was "well positioned to ramp back up when prices recover."

"Pioneer will conduct additional appraisal work at Cosmopolitan during the fourth quarter of this year and first quarter of 2010. The company plans to work over and flow test the Hansen 1A L1 well — originally drilled in 2007 — in order to gain additional reservoir information."

—Tadd Owens, Pioneer Natural Resources Alaska spokesman

In August, Pioneer said it would continue with just one drilling rig in Alaska in 2009 and 2010 — at its offshore North Slope Oooguruk oil field —

see COSMO page 22

LAND & LEASING

Massive OCS feedback

NOAA, Natives oppose much of 2010-15 leasing plan; drillers, lawmakers endorse

By WESLEY LOY
For Petroleum News

A key scientific agency is advising the Obama administration against oil and gas leasing in large portions of the nation's Outer Continental Shelf.

The National Oceanic and Atmospheric Administration recommends that Alaska's North Aleutian basin, which takes in rich Bristol Bay commercial fishing and subsistence gathering grounds, be crossed off the government's proposed 2010-15 leasing schedule.

And NOAA also says no leasing should occur in Alaska's remote Chukchi Sea pending further

research into oil spill risk and Arctic cleanup capabilities.

NOAA's position was amid an extraordinary outpouring of public feedback the U.S. Minerals Management Service received by the Sept. 21 extended deadline to comment on the new offshore leasing plan, which would revise the current 2007-12 plan.

MMS, an Interior Department agency that regulates offshore oil and gas activity, said it received more than 450,000 comments on the plan, which the Bush administration released in its final days in office.

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KEN SALAZAR

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Petroleum News

A weekly oil & gas newspaper based in Anchorage, Alaska

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• NATURAL GAS

Mackenzie Gas Project mood on upswing on all sides

By GARY PARK

For Petroleum News

The key Canadian government and Imperial Oil leaders in the Mackenzie Gas Project are not even close to giving up on the scheme.

Environment Minister Jim Prentice said Oct. 14 the chances of a natural gas pipeline from Canada's Arctic have "never been closer" to success — a view strongly endorsed the next day by Imperial Chief Executive Officer Bruce March.

Prentice told the Calgary Herald's editorial board he is counting on the regulatory groundwork for the MGP to wrap up next spring.

March shares that view, saying the process is closer than ever to completion, although there is much work still to be done.

Despite an uncertain outlook for gas "those are the risks that all the developers and producers in the energy business know how to manage much easier than the risks" of the Joint Review Panel and other regulatory aspects of the MGP, he said.

"When we get to the point it is in our hands we will be thrilled," he said.

Prentice said he is confident the JRP, which is examining the socioeconomic and environmental aspects of the pipeline, will



JIM PRENTICE

deliver its final report close to the December target date.

Assuming that happens, the National Energy Board should hear its final arguments in April, allowing the regulators to deliver their conclusions and recommendations to the federal cabinet.

Several years late

"As you know, (the JRP is) several years late," Prentice conceded. "But my understanding is that they should be able to get this done by the end of December."

"It's easy to be dismissive, but the truth is this has been a lot of work for many years and we've never been closer (in 40 years) to having the regulatory and environmental part finished."

Meanwhile, Imperial and its co-venturers (Shell Canada, ConocoPhillips Canada, ExxonMobil Canada and the Aboriginal Pipeline Group) have been working on a fiscal framework with the Canadian government.

Prentice said those talks are upbeat, despite the slump in gas prices.

"I get the sense the proponents continue to be committed to the project," he said.

Inuvik Mayor Derek Lindsay told the Calgary Herald that he was living in Inuvik when the first serious attempt to develop Arctic gas fell through in 1977.

"I don't want to see that happen again," he said. "It crippled this town for 10 years."

If and when a pipeline gets a green light, there will be more activity in Inuvik and in the Beaufort Sea. •

• SAFETY & ENVIRONMENT

Uncertainty over Copenhagen talks

Prentice suggests financial crisis trumping environmental concerns; Obama administration looking at bilateral pacts with India, China a to break developed-developing country deadlock

By GARY PARK

For Petroleum News

Hopes for a global climate-change agreement are wilting in the buildup to December's United Nations-sponsored talks in Copenhagen, with the Canadian government suggesting that the financial crisis is trumping environmental concerns.

Environment Minister Jim Prentice said Oct. 14 he is far from sure an agreement will be reached in Denmark, not least because of the differences emerging between the United States and the European Union.

The Obama administration is also turning its energies to alternative bilateral pacts with India and China, with the intention of breathing fresh life into the deadlock between developing and economically advanced countries.

In a candid assessment, Prentice said "increasingly people are being realistic" about the chances for a full and complete agreement.

"There's probably too much work to be done in that time that is left," he said.

Prentice said it is likely that Copenhagen will achieve nothing more than "some agreed principles."

Whatever happens on the global stage, Prentice said Canada intends to roll out its own plans for reducing greenhouse gas emissions by 20 percent from 2006 levels by 2020.

If that happens, each Canadian province will have to carry its share of the load, which could involve more ambitious federal targets than Alberta is currently willing to introduce on its own, he suggested.

But Prentice said the road to Copenhagen has encountered the compelling argument that reducing poverty is a

greater priority for less-wealthy countries than reducing GHGs.

Some expect greater certainty

Despite Prentice's less than optimistic forecast for Copenhagen, there are petroleum industry leaders who expect greater certainty on issues such as cap-and-trade systems and carbon capture and storage.

Peter Voser, the chief executive officer of Royal Dutch Shell, told a Calgary conference that society "needs real progress on climate policy frameworks that put a price on emissions and promote CCS and other clean energy technologies."

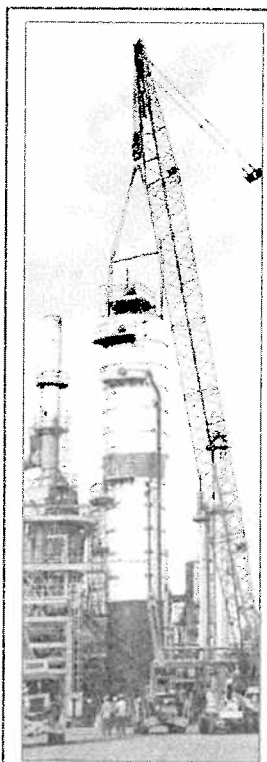
A spokesman for Environment Canada said the Canadian government remains committed to tabling a "full suite of specific policies (prior to the Denmark summit) covering all major sources of Canadian greenhouse gas emissions."

He conceded that federal plan will involve major revisions to the Canadian strategy released 18 months ago to cut GHGs by 20 percent by 2020 and 60 percent by 2050.

"The economic downturn and the renewed engagement by the new U.S. administration has required that we fine tune our approach to tackling climate change," he said.

The spokesman said there has been progress in talks between U.S. and Canadian officials seeking to harmonize climate

see UNCERTAINTY page 7



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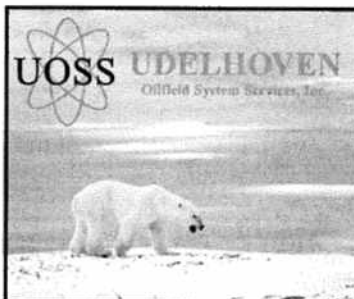
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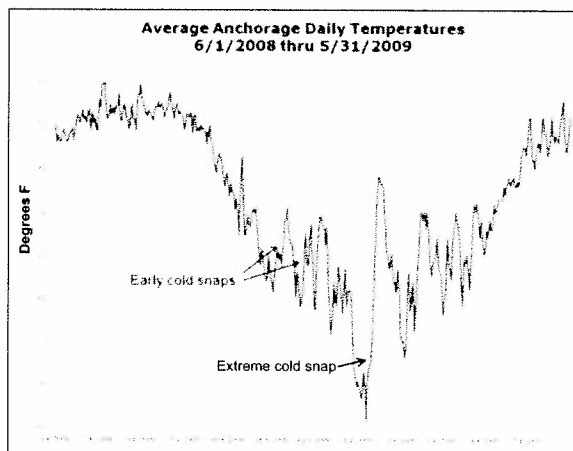


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A graph of daily temperatures in Anchorage between June 2008 and May 2009 demonstrates the extreme fluctuations in temperature that typify a Southcentral Alaska winter. In this particular winter two cold snaps in October and November followed by an extreme cold spell in January nearly brought the Cook Inlet natural gas delivery system to its knees, especially when coupled with two gas compressor failures.

● NATURAL GAS

Are Cook Inlet gas supplies in crisis?

As winter approaches, Chevron manager presents facts, figures about natural gas supply and demand in Southcentral Alaska

By **ALAN BAILEY**
Petroleum News

Natural gas has flowed out of the Cook Inlet basin with apparent ease for around 40 years, in some ways the life blood of Southcentral Alaska, firing heater furnaces, fueling power stations and supporting significant industrial activity. But does recent talk about gas shortages in the basin signal the beginning of the end for Cook Inlet gas? Or is the region merely transitioning through a period when gas supplies come more into balance with demand, following years of excess gas resources?

At the Oct. 15 meeting of the Alaska Geological Society, Steve Wright, Chevron's Alaska development manager, presented his perspectives on the Cook Inlet gas situation. Wright, an experienced oil industry geologist, now oversees Chevron's Cook Inlet oil and gas development program.

Most of the Cook Inlet gas comes from oil and gas fields discovered during the heyday of oil exploration in the 1960s and 1970s. And, after many years of production, gas reserves — the volumes of gas confidently thought to exist in proven gas reservoirs — have declined by about 80 percent, from about 8 trillion cubic feet to about 1.5 tcf, Wright said.

"The Cook Inlet gas reserve base is now believed to be at its lowest point for 40 years," he said.

At the same time the gas deliverability — the rate at which gas can be produced

and delivered to market — is also dropping.

"Total Cook Inlet gas deliverability has declined about 40 percent in the last three to four years," Wright said.

High investment

The declines in reserves and deliverability have come despite a high level of expenditure in Cook Inlet gas development in recent years, with something in excess of \$500 million being invested in just the last two years, Wright said.

"Over the past two years alone there have been 29 gas development wells drilled in 11 different gas fields around the basin," he said.

Development activities have included six wells in the Grayling Gas Sands; three wells in the Beluga River field; two winter-drilled wells on the west side of Cook Inlet; two development wells and a compression project in the Ninilchik field; three development wells in the North Cook Inlet field; eight development and storage wells in the Kenai field; and two development wells in the Happy Valley field.

That development activity probably slowed the annual rate of the gas deliverability decline to between 10 and 15 percent; the natural decline rate would likely be 15 to 20 percent, were there to be no development intervention, Wright said.

Production data from the Alaska Oil and Gas Conservation Commission indi-

see **GAS SUPPLIES** page 5

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GAS SUPPLIES

cates that the deliverability decline has become especially pronounced in the last three years, mainly as a consequence of production declines from the four big legacy gas fields: Beluga River, North Cook Inlet, Grayling Gas Sands and Kenai. In fact, the Ninilchik field, a good-sized field that came on line in 2003 as a result of modern exploration, has actually been increasing its production, Wright said.

Faced with declining deliverability, Cook Inlet gas producers have developed three underground gas storage facilities, to warehouse summer-produced gas to help meet peak demand levels in the winter.

Grim picture

A chart of historic and forecast annual gas production, published by the Alaska Department of Natural Resources in December 2006 and sometimes referred to as the "gas cliff," paints a grim picture of future gas production expectations. According to this chart, after a huge ramp-up in Cook Inlet gas production in 1965 to 1970, production continued to climb for another 10 years before leveling off and remaining fairly constant until around 2006-07. Using future production estimates based on known gas reserves, DNR predicted that production would plunge precipitously in subsequent years.

But current estimates of gas production for 2009 indicate an overall production level considerably lower than the projected value on the 2006 DNR graph, Wright said.

"You might conclude that the DNR forecast was somewhat optimistic overall," he said.

And an Alaska Natural Gas Development Authority projection of gas supplies versus gas demand shows annual supply volumes dropping below total gas demand around 2012-13, Wright said.

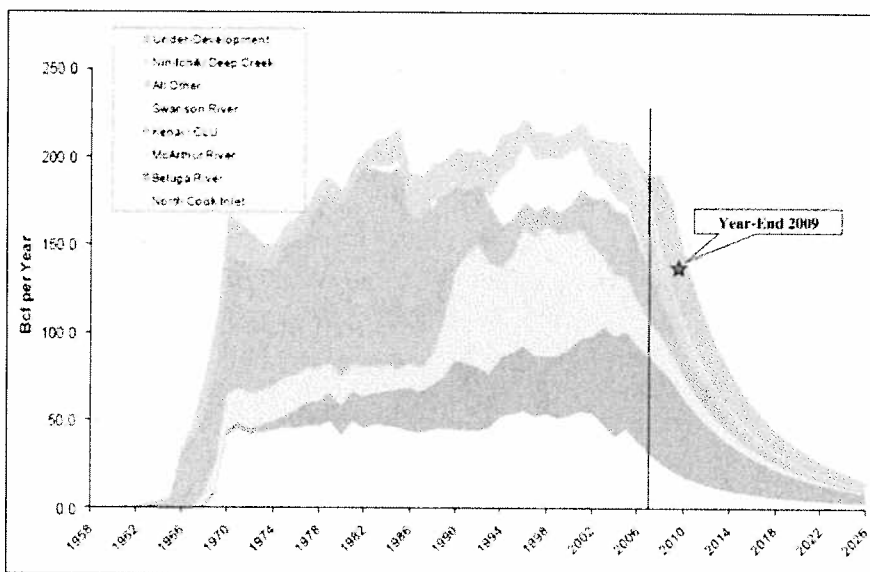
"After that point, total supply will not meet utility demand in the basin," he said.

Data presented to the Regulatory Commission of Alaska by Enstar Natural Gas Co., the main Southcentral Alaska gas utility, and by Chugach Electric Association, a major Southcentral electric utility, suggest shortfalls in utility gas supplies at around that same 2011-13 timeframe, Wright said.

Production figures from the LNG plant at Nikiski on the Kenai Peninsula also make sobering reading — the LNG plant was originally built to establish an export market for excess natural gas from the Cook Inlet basin.

According to data from ANGDA, in 2008 the LNG plant used on average about 180 million cubic feet per day of Cook Inlet gas, a gas volume that repre-

see GAS SUPPLIES page 6



A December 2006 Alaska Department of Natural Resources graph showing historic annual Cook Inlet natural gas production, and estimates of future production based on known gas reserves. A current estimate of total production for 2009 falls at a level below the 2006 DNR projection.

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GAS SUPPLIES

sented about 42 percent of the total amount of gas produced from the basin.

"Exports from the LNG plant have ramped down significantly this year, and the 2009 numbers may actually show those LNG volumes to be half of what they were in 2008," Wright said.

Urgent

Plots of projected daily gas deliverability versus daily gas demand show an even more urgent problem: Daily gas deliverability will likely fall below peak demand requirements during the cold of the winter, well before total annual gas production drops below annual gas needs.

With much of the utility gas being burned to heat buildings, daily temperatures in Southcentral Alaska form the key drivers behind gas consumption, Wright explained. And there is an obvious annual cycle of temperature changes between warm summers and cold winters, he said. But superimposed onto that broad cycle are chaotic day-to-day temperature fluctuations, fluctuations that become much more extreme during the winter than during the summer.

"That's obvious to all of us who live here and know that winter temperatures can vary by 30 or even 50 degrees over a couple of days," Wright said.

Those extreme temperature fluctuations, on top of an already heightened winter demand, place a huge stress on the gas deliverability system. And at no time has that stress become more apparent than in January 2009, when a series of events brought utility gas delivery to the brink of failure.

The problem started with two early winter cold snaps in October and November of 2008.

"The gas storage project operators at the three gas storage projects around the inlet had to start depleting the volumes that they had in the reservoirs very early, to meet the demand during these cold snaps," Wright said.

Levels halved

As a consequence, gas levels in the storage facilities had dropped to half of their start-of-winter levels by the end of 2008.

Then came an exceptional, extreme cold period in January, with day tempera-

"Exports from the LNG plant have ramped down significantly this year, and the 2009 numbers may actually show those LNG volumes to be half of what they were in 2008."

—Steve Wright, Chevron's Alaska development manager

tures averaging around minus 8 F to minus 10 F, and night temperature bumping 20 below zero for 10 days to two weeks: The semidepleted storage facilities struggled to keep up with the extreme gas demand.

"The reservoir pressures in the storage reservoirs were about half of what they had been," Wright said. "They could only deliver, because of the dynamics of gas flow, about a quarter of what their total deliverability would have been at the start of the winter."

The failure of two gas compressors, the machines used to drive gas through the gas pipeline system, then completed what Wright characterized as a perfect storm for gas supplies.

Then, as gas pressures in the gas transportation system started to fall rapidly, oil company and utility personnel swung into action.

"The producers and utilities went into emergency response mode and worked together very effectively and we were able to head off a potential catastrophic situation by supporting one another, moving gas around the system ... and working together to deal with this problem," Wright said.

The various stakeholders in the gas supply system have since been reviewing what happened in this emergency, refining contingency plans to deal with any similar situations in the future.

"What we do know is that these types of temperature scenarios can't be avoided," Wright said. "This is reality. What we've got to do is put plans in place to deal with those kinds of scenario when they develop."

Solutions?

But what's to be done about the bigger picture of dwindling Cook Inlet gas supplies?

Natural gas exploration in the Cook Inlet basin is especially challenging, thanks to a high-cost environment, a dwindling support industry, long development lead times and difficult operational logistics.

And the results of exploration over the past 10 years don't look too encouraging.

According to AOGCC data, eight different operators drilled 15 exploration wells and eight coalbed methane appraisal wells during that time period, Wright said.

"So we obviously had a lot of companies looking for gas," Wright said. "A lot of different ideas, concepts being generated, plays developed and wells drilled to test those concepts."

Five of the 15 exploration wells were classified as discoveries, with just two of the discoveries — the Ninilchik and Happy Valley fields — being deemed commercial.

"That translates to a commercial success rate of somewhere between 10 and 15 percent," Wright said. "Success rates for exploration in the Lower 48 are typically 50 percent or higher these days."

Moreover, in addition to land access being limited by the closure to oil and gas development of regions such as the Kenai National Wildlife Refuge, all of the moderate- to large-sized geologic structures that typify the reservoir settings of the established gas fields have now been drilled and tested, Wright said. Seasonal access restrictions on the western Cook Inlet coast result in a need to stage equipment over the winter. And, offshore, the listing of the Cook Inlet beluga whale and the increasing difficulty in renewing water discharge permits are raising new challenges for oil and gas development.

Wright also cautioned that, although there are explorers who want to drill offshore using a jack-up rig, a realistic time frame to bring a new offshore gas field on line, taking into account exploration, field appraisal, engineering, platform construction and development drilling, would likely be 10 years.

And, although there may well be potential to find new Cook Inlet natural gas resources in stratigraphic traps, subtle traps formed by the juxtaposition of rock strata, rather than the big structural traps of the established gas fields, discovering those subtle traps would be a major challenge, given the limitations of Cook Inlet seismic data. Essentially, the ancient river channels that would have generated these traps are quite narrow and cannot be resolved in the existing seismic, Wright said.

Other options

Other options being considered to bring new natural gas resources into Southcentral Alaska include a direct "bullet line" from the North Slope, or a spur line from a future main North Slope gas line. But first gas from a bullet line would be unlikely to appear before 2018, and first gas from a spur line might not flow until 2023.

Another possibility would be to import foreign LNG through the LNG plant on the Kenai Peninsula, although negotiating an acceptable LNG supply contract for the small quantities of utility gas required in Alaska could prove challenging, Wright said. And then there are possible alternative energy sources such as hydropower, geothermal power and CIRI's recently announced underground coal gasification plant.

But with so much uncertainty about the future, finding solutions will take a concerted effort by everyone, Wright said.

"We firmly believe that the best way to solve problems is through public and industry awareness, and working jointly," Wright said. "... There's no single entity, not a single producer, not a utility, not the regulatory agencies, not the State of Alaska, that can solve this problem on its own." ●

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NATURAL GAS

Village corporations seek pipeline help

Coalition controls 100 miles of gas line route along Alaska Highway, wants partner to help pursue jobs, training for megaproject

By WESLEY LOY
For Petroleum News

A coalition of Alaska Native village corporations is seeking help in pursuing employment and other opportunities should a natural gas pipeline be constructed through their region.

The four corporations are arrayed along the Alaska Highway between Delta Junction and the border with Canada.

The coalition includes the Dot Lake, Northway, Tetlin and Tanacross village corporations. They are united as Din e'h LLC. State records show the limited liability company was organized on June 16 of this year.

Din e'h translates to "the people" in the Athabaskan language of the Upper Tanana River valley.

Din e'h published an advertisement in the Oct. 11 edition of the Anchorage Daily News saying the group was "seeking a partner experienced in large project construction to provide capability, capac-

ity, and proven performance for a joint venture in gas pipeline bidding processes.

"The goal is to create jobs, train workers, and encourage long-term economic opportunities for the Alaska Native people of the Upper Tanana."

The group planned to talk with qualified firms at an Oct. 24 meeting in Anchorage.

Belinda Thomas, general manager for Din e'h, told Petroleum News in an Oct. 20 e-mail the group had attracted several mid-sized and large contenders for the work.

Din e'h is looking for "teaming partners" who have "a strong commitment to local capacity building," Thomas said.

According to the group's newspaper ad, the four villages together own the surface estate of about 100 miles of the gas pipeline route between Delta Junction and the Canadian border.

Competing gas line projects

The four Native village corporations

are among many localities likely to seek jobs or other benefits should major energy companies succeed in building a multibillion-dollar pipeline to carry the North Slope's prodigious natural gas reserves to market.

The project has been a dream of Alaska economic development boosters for decades, but the extreme cost and complexity of the project coupled with weak gas prices have kept the project from happening.

Currently, two competing projects are in the planning stages, with both aiming to hold open seasons next year to test interest among producers for signing long-term contracts to ship gas through a pipeline.

Both projects would follow the Alaska Highway into Canada, passing through the Din e'h region.

One project, called Denali, involves partners ConocoPhillips and BP. Pipeline operator TransCanada and ExxonMobil are teaming on the other project. ●

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UNCERTAINTY

change policies to advance "our respective environmental and energy objectives."

Voser said Shell endorses a cap and trade system that is at the core of the American Clean Energy and Security Act passed narrowly in June by the U.S. House of Representatives, viewing that as the lowest-cost means of reducing carbon dioxide emissions.

If that bill is adopted by the Senate, now seen as unlikely before 2010, the U.S. would be committed to lowering GHG emissions by 17 percent from the 2005 level by 2020 and 83 percent by 2050.

Alberta government hasn't wavered

The Alberta government has never wavered from its position that it will not support any national approach that erodes investment in the province's energy projects, notably the oil sands — something Prime Minister Stephen Harper put high on his list when he agreed to work with President Barack Obama on a joint climate change pact.

Harper reinforced that line after a meeting with Obama in mid-September when he reminded "all our American friends that

Canada is by far the largest supplier of energy to the United States."

"And we are determined to be a continental partner in dealing with the very linked problems of climate change and energy security."

However, the two leaders made no specific reference to the oil sands.

In a symbolic gesture, David Jacobson, the new U.S. ambassador to Canada, visited the oil sands on Oct. 14 in what was billed as an effort to help the Obama administration draft a policy on major sources of energy supply for the U.S.

He said officials in both countries recognize there must be a balance between the need for energy security and protecting the environment.

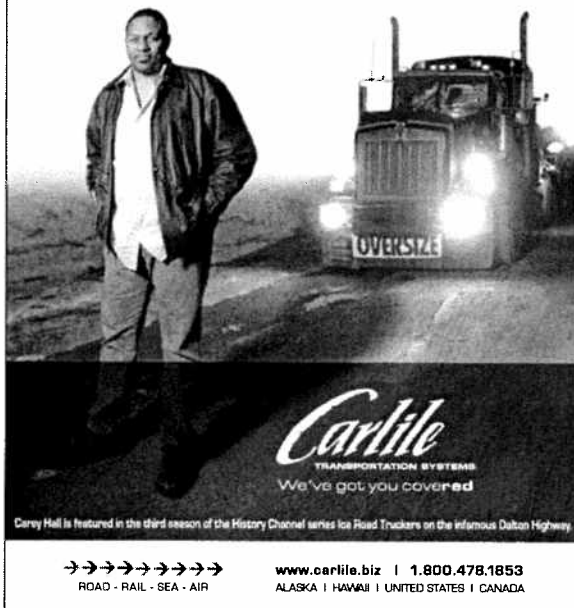
"I've learned a lot about the tremendous strides that have been taken over the last several years with respect to improving the environmental record in treating the oil sands," Jacobson told reporters in Calgary.

He echoed the suggestion by Prentice that a deal in Copenhagen is a long shot, noting that the U.S. health care debate has eclipsed work on energy legislation in Congress, meaning the chances of major energy policy decisions before the international conference are slim. ●

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Canadian trusts face 'brave new world'

NAL sets standard with 4 deals in recent months as it bulks up prior to joining corporate world once trusts lose tax-free shelters

By GARY PARK
For Petroleum News

NAL Oil & Gas Trust is rapidly becoming a leader among Canada's trusts as it settles on a future strategy with barely one year left before losing its tax-free status.

It struck an agreement Oct. 13 to take over Breaker Energy for C\$403 million (including the assumption of C\$93 million in net debt) — its fourth deal in recent months.

Launched six years ago by former executives of Alberta Energy Co. (a founding company of EnCana), NAL is moving into the midrange of Canadian oil and gas producers.

Assuming the Breaker transaction is concluded in early December, NAL expects to enter 2010 with production of

NAL's objective is to add "quality assets with upside opportunity through internal investment and acquisitions."

—NAL Oil & Gas Trust CEO Andrew Wiswell

31,000 barrels of oil equivalent per day from properties in Alberta, British Columbia and Saskatchewan.

It will have a proved-plus-probable reserve life index of 8.7 years from reserves of 96 million boe, undeveloped land of 550 acres and tax pools (or credits) of C\$1.2 billion (including Breaker's contribution of C\$270 million).

Breaker will contribute production of 6,700 boe per day (45 percent oil and gas liquids and the rest natural gas), 23 million boe of proved-plus-probable reserves

and 140,000 net undeveloped acres.

Deal follows earlier buys

The deal follows NAL's acquisitions of Alberta Clipper for C\$115 million and Spearpoint Energy for C\$16 million, plus a joint venture to exploit central Alberta's Cardium oil play.

The trust will issue about 25 million trust units at C\$12.54 each to finance the acquisition, which works out to C\$5.96 a Breaker share, a 12 percent premium to the junior company's preceding 20-day average trading price.

On a production basis, NAL is paying about C\$58,000 per flowing barrel and C\$16.91 per barrel for reserves, compared with ATB Financial's estimated average of C\$46,195 and C\$12.93.

Kim Page, an analyst with Wellington West Capital Markets, said that given the valuation metrics there is unlikely to be a counterbid.

Breaker President Dan O'Neil said blending his company's assets with NAL's strong financial position "will allow the combined entity to high-grade its opportunities and fully develop and expand Breaker's potential."

Breaker has pinpointed about 400 (350 net) low-risk development prospects, including 190 horizontal resource-style locations on its land, with the prospect of adding 2,900 boe per day in central Alberta and long-term gas opportunities in northeastern British Columbia of 50-100 billion cubic feet of recoverable gas.

NAL Chief Executive Officer Andrew Wiswell said the inclusion of Breaker will be another significant step in repositioning to convert NAL from a trust to a corporation in 2011, when the Canadian government will put both sectors on the same tax footing.

He said NAL's objective is to add "quality assets with upside opportunity through internal investment and acquisitions."

Action on the M&A front has been quietly gathering speed this year as trusts have decided what route they will take in the post-2010 world.

No single solution

The decision making comes three years after Canada's Finance Minister Jim Flaherty dropped a bombshell on the sector to avert a stampede by corporations in all sectors to join trust ranks and take advantage of a tax loophole.

Now that the initial anger has faded, the bulk oil and gas trusts seem resigned to joining the corporate world, though some will delay their transition while they use tax pools to reduce their taxable income beyond Jan. 1, 2011.

Some apparently believe that it will make no difference if they continue as trusts and some have trimmed their monthly cash payouts in favor of increasing capital spending to strengthen their reserves and production.

The conclusion is that there is no single solution for trusts plotting their future direction. Sayer Energy Advisors has reported that trusts completed C\$1.4 billion in unit issues in the first half of 2009, compared with a paltry C\$218 million in the same period of 2008, raising the total from unit issues and debentures to C\$2.1 billion.

Sayer said these moves could underscore M&A activity by trusts that want to expand their core operations before joining the corporate world in 2011.

In addition to NAL, the busiest acquirers have been Penn West Energy Trust and Zargon Energy Trust.

Blackmont Capital said that comparing the "real-world valuation parameters" of the NAL-Breaker deal with current market valuations of some intermediate producers, "a couple of them appear to be overvalued."

More capital appreciation

One thought taking hold is that the next generation of trusts will lean more toward capital appreciation from their transition income-generating priority, which could benefit the struggling service sector if it results in increased exploration and development, with an emphasis on horizontal wells and multifracturing work.

Meanwhile, Calgary-based investment dealer Peters & Co. has listed Pengrowth, Paramount Energy Trust and Peyto Energy Trust as relatively cheap takeover targets based on their expected 2010 cash flows per barrel of oil equivalent against their boe enterprise values.

"From an acquirer's viewpoint, desirable entities possess above average cash-flow generating capabilities and below average current valuation levels," the firm said.

Blackmont Capital said that comparing the "real-world valuation parameters" of the NAL-Breaker deal with current market valuations of some intermediate producers, "a couple of them appear to be overvalued."

In particular, the firm identified Birchcliff Energy and Progress Energy Resources as "expensive on a flowing barrel basis," while Celtic Exploration and Progress "look expensive on a reserve basis."

However, Blackmont said it was "dangerous to draw conclusions based only on this one transaction" adding it would "not expect market valuations to vary too widely from what real-world purchasers are prepared to pay for assets." •

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• ALTERNATIVE ENERGY

RCA to adopt net metering regulations

New regulations provide incentive for investment in renewable electric generation, allowing consumers to put power into utilities

By KRISTEN NELSON
Petroleum News

Renewable power generation may be coming to your neighborhood. And it may be built by your neighbor, thanks to proposed regulations that would require Alaska's largest utilities to allow hookups by such privately built generation to their power grids.

The Regulatory Commission of Alaska voted 4 to 1 on Oct. 14 to adopt regulations establishing net metering requirements for the state's largest electric utilities.

The vote ends a tussle between Alaska's electric utilities and proponents of net metering, who believe net metering will increase renewable energy development in the state, while utilities believe net metering will be a burden on other consumers.

Net metering allows a customer of an economically regulated utility to interconnect eligible onsite generation facilities with the electric utility's distribution system, the commission said in an Oct. 16 press release.

In 2008 RCA rejected net metering standards proposed by the Bush administration and began work on regulations targeted to Alaska, including workshops with participation by utilities and proponents of net metering.

The regulations commissioners approved are the result of work done since the Environmental Policy Act of 2005 created guidelines for net metering which state regulators were required to consider, but not to accept.

Alaska regulations

The new Alaska regulations apply to economically regulated electric utilities with total retail sales of 5 million kilowatt hours or more, which limits the RCA regulations to the state's largest electric utilities: Bethel Utilities Corp., TDX North Slope Generating, Alaska Power Co., Alaska Electric Light & Power, Homer Electric Association, Matanuska Electric Association, Municipal Light & Power, Chugach Electric Association and Golden Valley Electric Association, which sell from 39.1 million kilowatt hours (Bethel), to 1.349 billion kilowatt hours (Golden Valley Electric).

The affected utilities would be required to interconnect with eligible customer generation systems up to a systemwide total capacity of 1.5 percent of average retail demand. Eligible customer generation systems are limited to a total onsite capacity of 25 kilowatts.

Net metering customers would be billed for net consumption and receive bill credits when the customer's generation exceeds usage.

Technologies eligible for net metering generation are limited to solar photovoltaic, solar thermal, wind, biomass, hydroelectric, geothermal, hydrokinetic, ocean thermal, landfill gas and biogas energy. The commission may approve other sources that generally have similar environmental impact.

For and against

Summaries of comments on the proposed regulations by RCA staff highlighted some of the disputed issues between net metering proponents and the state's electric utilities.

Municipal Light & Power — one of two electric utilities serving the Anchorage

area — told the commission it believed net metering would cause more harm than good while the Alaska Power Association, which represents major consumer-owned power utilities in the state, including ML&P, said that although the proposed regulations did not reflect its preferred position, they were a reasonable compromise between two extremes.

The Alaska Center for the Environment said net metering would reduce utility bills for participating consumers, while the APA said public benefits of net metering would be privately subsidized by non-net metering consumers rather than through typical public means such as grants, tax incentives or similar methods.

ML&P said net metering would cause generation to be built that is not cost effective, burdening ratepayers as a group with higher costs, and requiring ratepayers who do not own net metered generation to subsidize the small minority of ratepayers who will install net metered generation.

Golden Valley Electric Association concurred, telling the commission that net metering is in conflict with the cost-causer cost-payer principle, requiring nongenerating members to subsidize members installing small renewable generation and forcing the utility electrical system to act as a battery for renewable generating facilities.

What about smaller utilities?

In response to comments that the 5 million-kilowatt-hour limit would prevent smaller utilities from utilizing net metering, RCA staff said if a utility is too small to be covered by the RCA regulations it

can enact its own net metering regulations.

"The regulations require certain larger utilities to enact net metering rules. Smaller utilities, or utilities that are outside of our authority to economically regulate, are exempted from the requirement and instead allowed to choose independently whether net metering makes sense for their system."

RCA staff said the limitations on net metering were imposed to protect the integrity of the systems:


"The Railbelt electric system, the largest interconnected 'grid' in Alaska is very small in comparison to the nationwide grid in the Lower 48 states and lacks

a robust transmission and distribution network."

TDX Sand Point Generating is a case in point, the staff said, with retail sales for their last fiscal year 4.254 million kilowatt-hours, an average retail demand of 485 kilowatts per day.

With the proposed 1.5 percent of average retail demand limit, TDX Sand Point could have up to 7.3 kilowatts of installed on-site consumer renewable generation, less than half of the proposed 25 kilowatt per installation limit proposed in the regulations.

see NET METERING page 10

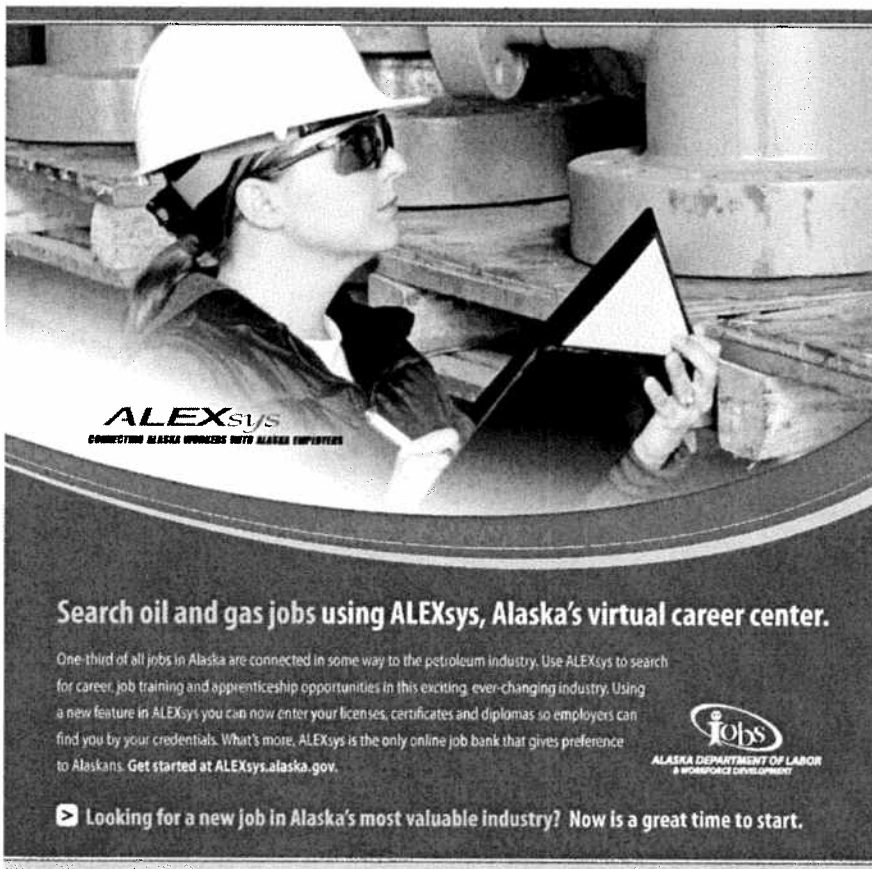


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GOVERNMENT

Senate passes bill with icebreaker funding

The full U.S. Senate has passed the 2010 Homeland Security Appropriations conference report that includes \$32.5 million in funding for enhancements to U.S. icebreaker capability, Sen. Lisa Murkowski, R-Alaska, said Oct. 20. The bill, which also appropriates U.S. Coast Guard funding for fiscal year 2010, now goes to President Obama for his signature.

The United States currently has just two working icebreakers, the Healy and the Polar Sea, with a third icebreaker, the Polar Star, currently in caretaker status.

Funding from the conference report that the Senate has just passed would pay to finish refurbishment of the Polar Star, to reactivate this icebreaker and extend its service life. The conference report would also require the Coast Guard to investigate whether a new heavy polar icebreaker class vessel should be built, or whether money should be spent on extending the service lives of the existing icebreakers — the Polar Sea has a remaining service life of five years, Murkowski said.

"While reactivation of our second heavy icebreaker helps, the U.S. must begin to plan for the long term replacement or extension of our ice breaker fleet," Murkowski said. "These vessels are becoming increasingly important as access to the Arctic, and its resources, increases due to climate change and a reduction in summer sea ice. Activities such as energy development, tourism, marine transportation and shipping will increase and the Coast Guard must have the resources to respond. This funding is a good start."

—ALAN BAILEY

The United States currently has just two working icebreakers, the Healy and the Polar Sea, with a third icebreaker, the Polar Star, currently in caretaker status.

continued from page 9

NET METERING

Smaller utilities also have different operating parameters, staff said, and interconnecting small non-firm generation may create operational problems, with scenarios varying from utility to utility.

But, RCA staff said, nothing in the regulations prevents a rural community from implementing net metering.

Limit at 1.5 percent

There were a number of objections to a limitation in the regulations of 1.5 percent — that is, a utility may refuse to interconnect for new net metering if that connection would cause net metering to exceed 1.5 percent of the utility's average demand.

APA, Chugach Electric Association and ML&P all pointed out that 1.5 percent was the agreement reached at the commission's technical conference.

RCA staff said the proposed regulations allow a utility to approach the commission regarding increasing the cap to allow additional net metering beyond the 1.5 percent of average retail demand.

"Staff believes it is the intent of the commission to allow a controlled trial of

On the Web

See previous Petroleum News coverage:

"RCA rejects federal net metering rules," in Sept. 14, 2008, issue at www.petroleumnews.com/pnads/853433629.shtml

"RCA starts net metering discussions," in Oct. 26, 2008, issue at www.petroleumnews.com/pnads/419740526.shtml

net metering that will limit the potential rate increase for consumers who do not choose to net meter. This cap is an essential part of limiting that financial risk."

Utilities are required to publish annually the result of the 1.5 percent of average retail demand calculation and the total nameplate capacity of interconnected net metering consumers, which will allow the commission to monitor how quickly interconnection is occurring and revisit net metering regulations as required, RCA staff said.

Commercial generation not included

There were objections to the limit of 25 kilowatts on consumer generation and the staff said that limit was chosen so that smaller consumer generators would have the opportunity to participate.

"With a larger generator capacity and a limited system capacity for net metering, the smaller systems could be squeezed out," RCA staff said.

Larger corporate consumers did not participate in the process, staff said, indicating a lack of serious interest at this time.

There were a large number of comments arguing that excess generation should be valued at the full retail rate rather than the discounted avoided-cost rate.

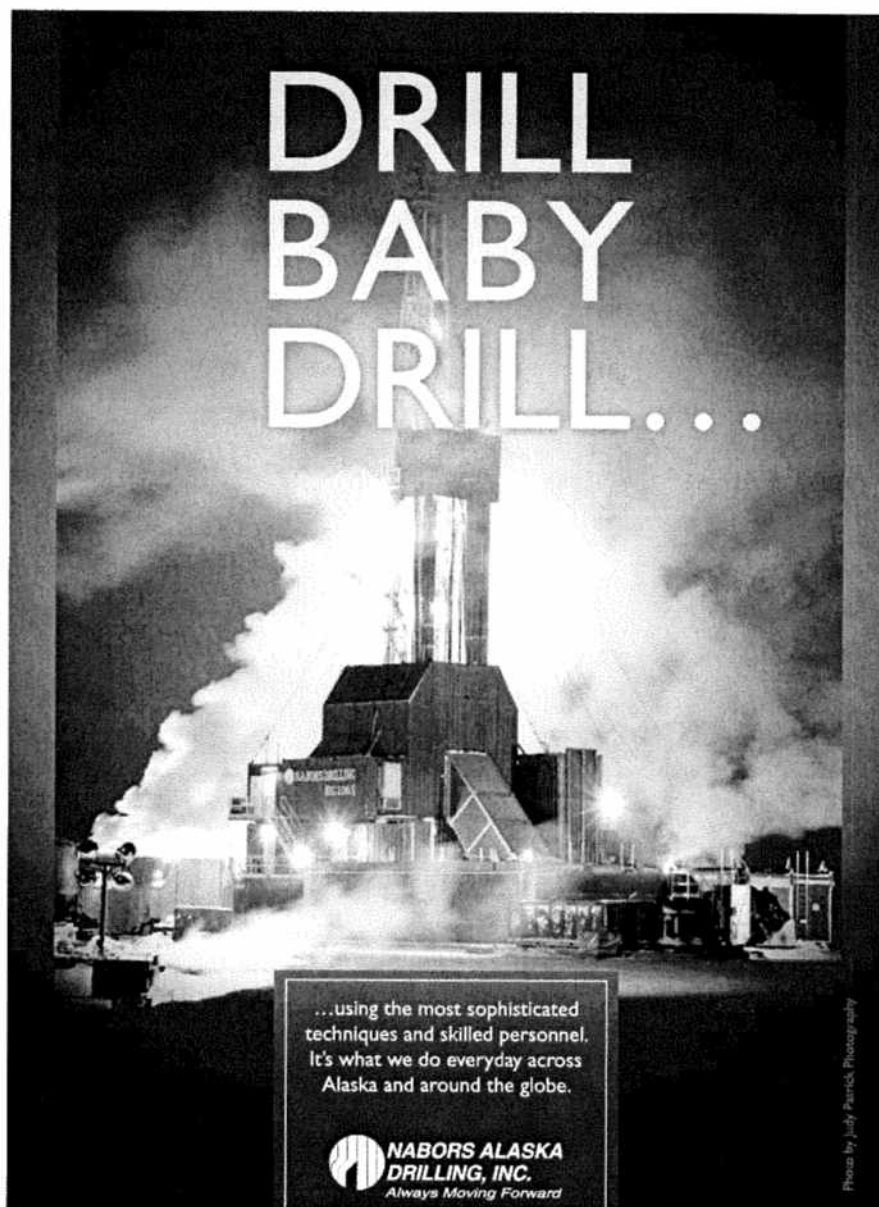
RCA staff said the language was based on "the compromise reached by the net metering advocates and the utilities at the technical conference. To alter this section at this juncture would undermine the fragile agreement that was reached by the participants. The net metering rules contained herein are designed to limit the potential negative financial effects of net metering" on those consumers who do not participate in net metering.

"Staff concurs that this mutes the benefits of net metering for those who participate in the program. Both sides on this issue have strongly argued their positions but neither side has any real experience with net metering in Alaska. Staff believes that going forward with the substance of the proposed regulation is the best way to build experience in net metering. The rules can be revisited in the future as needed and with actual data."

There were a number of objections to language in the proposed regulations allowing utilities to petition the commission for special rates for net-metered consumers "if the utility can demonstrate an adverse material rate impact on utility consumers that do not participate in the net metering program."

RCA staff said utilities always have the right to petition the commission for changes in the rates they charge, and it "believes the proposed language offers a protection to net metering consumers by requiring the utility to demonstrate that the effect of net metering is both 'adverse' and 'material' to consumers that do not participate in net metering."

The commission will release an order adopting net metering regulations, which become official once reviewed by the attorney general and the lieutenant governor. ●



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• SAFETY & ENVIRONMENT

Canada backs carbon capture

Governments commit C\$1.65B to 2 projects, claim they lead world in developing technology; others say industry should do cleanup

By GARY PARK

For Petroleum News

Canadian and Alberta taxpayers are starting to feel a rather large hand in their pockets as the two governments roll out plans for carbon capture and storage projects—their key technological initiative to remove greenhouse gas emissions from the atmosphere.

In early October, C\$865 million in public money was pumped into Royal Dutch Shell's planned C\$1.35 billion Quest project, with Chevron Canada and Marathon Canada as partners, to inject 1.1 million metric tons a year of carbon dioxide from the company's Edmonton-area heavy oil upgrader into underground storage, some of it for possible use in enhanced oil recovery.

Less than a week later, the governments announced they would contribute C\$781 million for a \$1.4 billion CCS project TransAlta plans to capture about 1 million metric tons a year from its coal-fired electricity plant in central Alberta.

These handouts are taking place amid mounting questions about whether largely untested CCS technology will achieve its hoped-for goals without causing a financial boondoggle.

Of the public share, Alberta will account for almost C\$1.2 billion, drawn over 15 years from the C\$2 billion it has earmarked to develop and test CCS technology.

'Clean energy superpower'

Prime Minister Stephen Harper said the TransAlta venture, with Capital Power and Paris-based Alstom as partners, meets the federal government's objectives of helping economic recovery and improving the environment.

"To keep Canada on the cutting edge, we are investing massively in scientific research and development. A major focus of these investments is our energy sector."

Harper said that in order for Canada to meet its goal of becoming an "energy superpower" it must be a "clean energy superpower."

Alberta Premier Ed Stelmach said the benefits of Project Pioneer will extend far beyond the TransAlta plant by offering "lessons on how other plants might be retrofitted here in Alberta and around the world."

The project was not on the original short list of three projects that Alberta tagged for its CCS money.

A spokesman for Greenpeace said governments should play no role in subsidizing CCS efforts by giant companies.

"Industry created this toxic mess and they should be fully and financially responsible for cleaning it up," said Mike Hudema.

He also described CCS as a "risky, expensive smokescreen," urging governments to invest more in renewable energy technology, such as wind and solar power, which he said will create more jobs over time.

Alberta Energy Minister Mel Knight defended the approach, arguing government must be a partner in developing CCS technology.

Federal Natural Resources Minister Lisa

Raitt, who joined Knight at the Quest announcement, said: "We have to start somewhere. We start today. There are some hurdles to CCS, but the good news is the technology has already been technologically proven."

Reduction in emissions pledged

The Canadian government has pledged to reduce greenhouse gas emissions by 20 percent below 2006 levels by 2020.

Graham Boje, vice president of health safety and sustainable development with Shell's Canadian division, cautioned that, despite the financial backing, Quest has yet to receive corporate sanctioning.

He said the project has a "long way to go before it becomes a fully operational CCS project. We're still in the project development phase and the final investment decision depends on a range of factors."

Boje said it will take about two years to complete engineering, undergo public con-

sultation and obtain regulatory approvals.

The Alberta government is still working on the two other projects that made its initial short list: the Alberta Carbon Trunk Line, a joint proposal by Enhance Energy and North West Upgrading to incorporate gasification, carbon dioxide capture transportation, enhanced oil recovery and storage, drawing on carbon dioxide from the Agrium fertilizer plant and the planned North West heavy oil upgrader; and an integrated gasification combined-cycle power generation plant proposed by Epcor Utilities and Enbridge at the Genesee site in central Alberta.

Coalbed methane recovery honored

The Alberta government derived some hope when an enhanced coalbed methane recovery project, led by the Alberta Research Council, landed an international award in London, England, earlier in October.

The recognition from the Carbon Sequestration Leadership Forum was for work completed last year involving the injection of carbon dioxide into deep, unmineable coal bed, displacing the underground methane with CO₂, reducing greenhouse gas emissions and improving the recovery of coalbed methane in the process.

Knight said the award established that the government-funded research council is a "global leader when it comes to contributing real solutions to address climate change."

The forum also endorsed a second Alberta project, co-led by ARC Resources and the research council, aiming to store carbon emissions from Alberta's industrial heartland region, north of Edmonton, in an underground reef formation, which is estimated to have the potential to handle 1 million metric tons a year of CO₂ by 2015 for more than 20 years. ●



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• SAFETY & ENVIRONMENT

F&W proposes polar bear critical habitat

200,541 square-mile area includes much of the outer continental shelf, the barrier islands and land along the Beaufort Sea coast

By ALAN BAILEY
Petroleum News

On Oct. 22 the U.S. Fish and Wildlife Service announced its proposed designation of critical habitat for the polar bear, following the May 2008 listing of the bears as threatened under the Endangered Species Act. The proposed habitat region encompasses a total area of 200,541 square miles of U.S. territory covering those areas of the Arctic Alaska offshore continental shelf where water depths are 300 meters (980 feet) or less in depth; barrier islands and spits along Alaska's northern coast; and polar bear, on-land denning habitat along the Beaufort Sea coast.

The onshore denning habitat consists of lands within about 20 miles of the northern coast of Alaska between the Canadian border and the Kavik River, and within about eight miles of the coast between the Kavik River and the city of Barrow.

The announcement of the proposed critical habitat designation triggers a 60-day public comment period.

But Strickland emphasized that federal agencies had already been conducting Endangered Species Act section 7 consultations for the polar bear, prior to the critical habitat designation, and that the recent U.S.

Minerals Management Service approval of Shell's Beaufort Sea exploration plan had successfully gone through this consultation process.

"This administration is fully committed to the protection and recovery of the polar bear," said Interior Assistant Secretary for Fish, Wildlife and Parks, Tom Strickland. "Proposing critical habitat for this iconic species is one step in the right direction to help this species stave off extinction, recognizing that the greatest threat to the polar bear is the melting of Arctic sea ice caused by climate change. As we move forward with a comprehensive energy and climate strategy, we will continue to work to protect the polar bear and its fragile environment."

Fish and Wildlife has also proposed the prohibition of international trade in polar bears and their parts, Strickland said.

Thorough evaluation

Although the Endangered Species Act

requires the Department of the Interior to, if possible, designate critical habitat at the time a species is listed under the act, Fish and Wildlife has not proposed the critical habitat designation until now because of the time that it has taken to conduct a thorough evaluation and peer review of its proposal, Fish and Wildlife said.

Under the terms of the Endangered Species Act, geographic areas designated as critical habitat contain features that the Department of the Interior considers essential for the conservation of a listed species and that may require special management or protection. And under section 7 of the act, federal agencies must ensure that any federally authorized activities are unlikely to jeopardize the continued existence of the species or to destroy or adversely modify the critical habitat.

Oil industry

The designated critical habitat area for the polar bear includes places where the oil industry is active: Fish and Wildlife will evaluate the economic impacts of the habitat designation, Strickland said.

But Strickland emphasized that federal agencies had already been conducting Endangered Species Act section 7 consultations for the polar bear, prior to the critical habitat designation, and that the recent U.S. Minerals Management Service approval of Shell's Beaufort Sea exploration plan had successfully gone through this consultation process. Onshore and offshore oil and gas activities have also already been subject to significant review and regulation under the Marine Mammals Protection Act.

"We believe that it will not be a significant additional burden on the industry ... but it does further heighten the importance of trying to minimize any kinds of activity in these critical areas that might adversely affect the bear," Strickland said of the proposed critical habitat designation.

Critical habitat receives an additional level of legal protection under section 7 of the Endangered Species Act, he said.

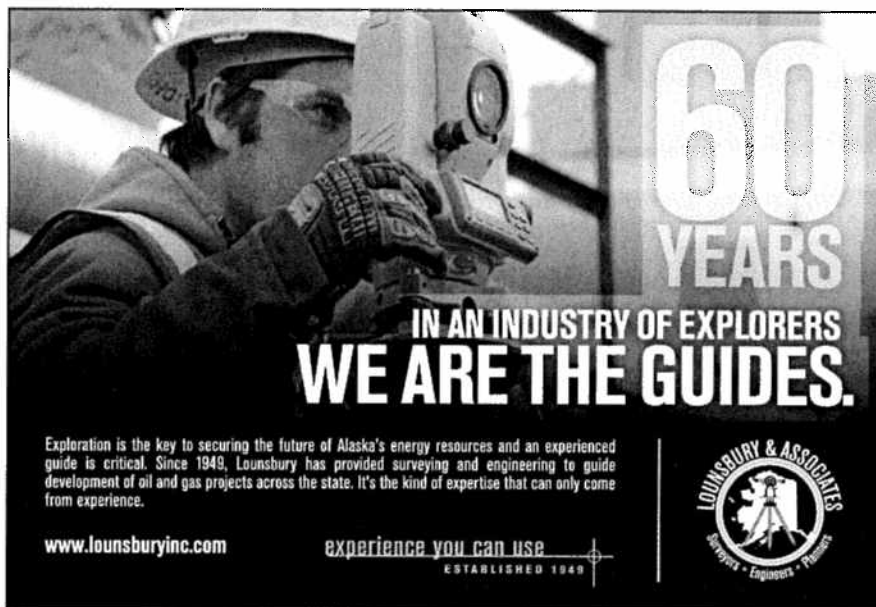
Fish and Wildlife has stepped up its funding efforts and is expanding its consultation capabilities, including the deployment of staff to the North Slope to support the development and implementation of community-based, polar bear-human interaction plans for the North Slope villages, said Sam Hamilton, director of the U.S. Fish and Wildlife Service.

Sea ice

About 93 percent of the designated habitat area is occupied by winter sea ice, Strickland said.

"Through eons of time polar bears have evolved and adapted to life on the sea ice, and they depend on this area for resting, breeding, hunting and feeding," Hamilton said. "Polar bears require sea ice as a platform for hunting and feeding on seals; seasonal long-distance movements; travel to terrestrial maternal denning areas; resting and mating."

The majority of the U.S. polar bears remain on sea ice year round and prefer the shallow areas of the continental shelf, he said. And, according to Fish and Wildlife, most polar bear populations use onshore



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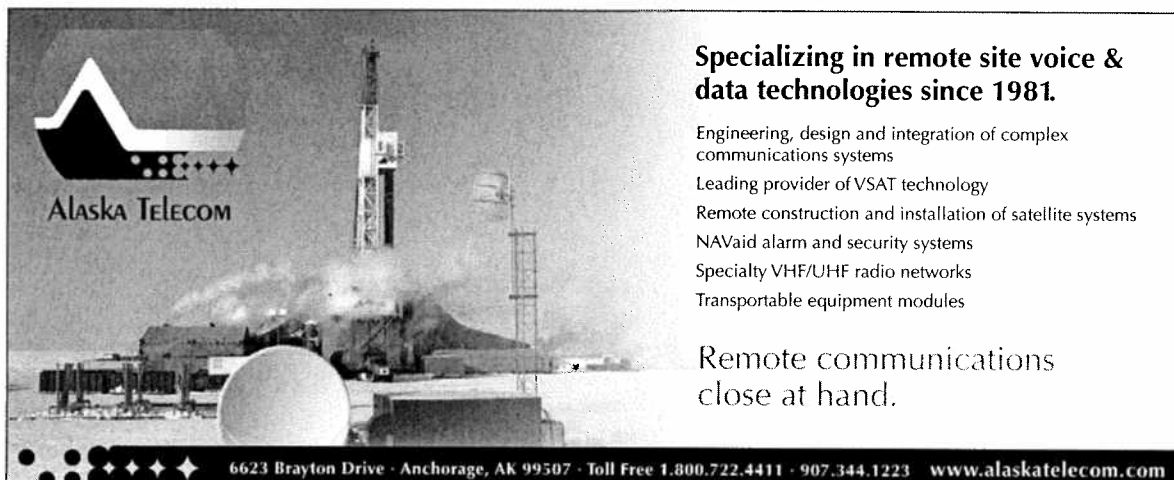
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• LAND & LEASING

B.C. lifts lid on new gas play

Government discloses 'sleeping dog' in Liard basin, west of Horn River; Montney plays; operators tight-lipped about plans, results

By GARY PARK
For Petroleum News

It's in a hush-hush mode right now, but E&P companies in British Columbia could be quietly extending the province's gas hot spot beyond the Montney and Horn River formations.

One of the first public hints came at a Northeast British Columbia Natural Gas Symposium in Calgary at the end of September, when a senior government official said the little-explored Liard basin — west of the Horn River shale gas basin and 65 miles northwest of Fort Nelson — is generating strong interest at monthly land auctions.

Vic Levson, executive director of the Resource Development and Geoscience Branch of the B.C. Energy Ministry, said the region is a "sleeping dog that has been lying quiet."

But bidders committed C\$48.3 million in the first seven months of 2009 to secure exploration rights in the basin, compared with C\$18.5 million for all of 2008, doubling the average price to C\$1,500 per hectare.

However, he said the companies are "keeping a pretty low profile," although some of the operators are shifting their exploration efforts to unconventional from conventional prospects.

The players include two majors — Apache and EOG Resources — while three juniors (a partnership of Questerre Energy and Transeuro Energy and Stone Mountain Resources) have embarked on evaluation programs.

Levson said the government is hopeful that the early exploration is the start of a new trend.

He said the province believes the basin is a "good target ... we'd like to see more companies" take an interest in the area.

The lightly explored Beaver River area (incorporating the Liard basin and Fold Belt region) 100 miles northwest of Fort Nelson, has stirred interest among producers interested in evaluating and testing the potential of Mississippian-aged shales.

B.C. tops land sales

Otherwise, British Columbia, having topped Canada's provincial land sales for the first time in 2008, remains the frontrunner.

For the first nine months of the year, it generated C\$330 million in successful bids, compared with C\$247 million in Alberta and C\$51 million in Saskatchewan.

That total was a starting C\$3.5 billion behind the total for the same period last year, with British Columbia down about C\$2 billion, Alberta off by C\$715 million and Saskatchewan taking a C\$797 million tumble, all paying the price for the industry-wide downturn.

British Columbia's per-hectare average price plunged to C\$1,281 from C\$3,820 in the first nine months of 2008; Alberta has edged up each quarter from C\$119 to C\$166 and C\$257, but lags far behind the 2008 average of C\$377; and Saskatchewan nosedived to C\$297 from C\$1,781.

There was no more hope for Alberta at its first October auction, which drew a mere C\$21.9 million in successful bids and an average C\$204 per hectare, compared with the C\$38.7 million and C\$329 per hectare at the comparable 2008 sale.

B.C. sees move to drilling

Otherwise, British Columbia is seeing the first signs that blockbuster land sales in 2007 and 2008 are being translated into drilling plans, although what is in store for

the upcoming peak winter season has yet to be disclosed.

For the first nine months of 2009, the regulator has approved 532 new well licenses. Although that is down more than 30 percent from the same period of 2008, the September permits totaled 68, the most in any month since March and only 11 behind September 2008.

Alex Ferguson, commissioner of the B.C. Oil and Gas Commission, said the mood among operators is more positive than it was a few months ago, but until companies complete their budget plans the government is in a "blind spot."

Over the past seven years, the commission has approved 32 experimental schemes for shale gas formations, allowing ongoing research in drilling, completion and/or production technology.

For Horn River those in the experimental phase include majors such as Imperial Oil, EOG Resources Canada and Hunt Oil

Company of Canada and smaller players such as Stone Mountain, Kodiak Bear Energy, Quicksilver Resources Canada and Storm Gas Resource.

EnCana has led the way in Horn River since 2001, listed as operator of 90 wells, 79 categorized as nonexperimental and five wells licensed as experimental, but not yet drilled, a commission report said.

It said that after completing its 2008 drilling program, EnCana reported average per well production rates of 5 million cubic feet per day, while the first wells of 2009 have posted flow rates of 9.5 million to 11 million cubic feet per day after 15 days.

The lightly explored Beaver River area (incorporating the Liard basin and Fold Belt region) 100 miles northwest of Fort Nelson, has stirred interest among producers interested in evaluating and testing the potential of Mississippian-aged shales. The commission said some promising results have already emerged from tests. ●



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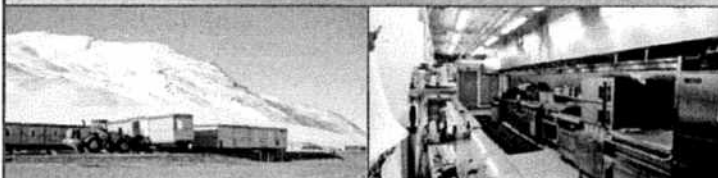
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Rosneft wants tax breaks for Arctic development

Russia needs to realistically assess the risks and costs of Arctic oil and gas development, Sergey Bogdanchikov, the president of state-owned oil company Rosneft, told the Murmansk International Economic Forum Oct. 15. Exploration drilling in the offshore Arctic can be done with far less certainty than drilling in traditional exploration areas in western Siberia, Bogdanchikov said. The cost of working in Arctic regions is also extremely high, he noted.

"Here we can already talk in quite concrete, specific terms, based on our development of the shelf off Sakhalin, and if you compare the figures from western Siberia, \$30 to \$50 to produce a ton of hydrocarbons, on the Far Eastern shelf we have about \$300 and it will be at least \$600 to \$700 to produce a ton of hydrocarbons here on the Arctic shelf," Bogdanchikov said. "Companies have to be prepared for this and our government, of course, also has to be prepared for it. When it determines a tax policy for the offshore regions it can't be identical for the Caspian, the Sea of Azov, the Black Sea and the Arctic Shelf. We hope for mutual understanding with the government here."

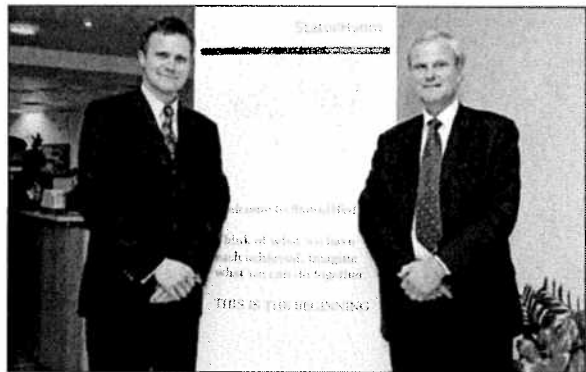
"We have to be honest above all with ourselves going into such a complex task as developing the Arctic shelf," Bogdanchikov said. "We are technologically backward here in the Russian Federation in virtually all the technology that is necessary."

At this point in Bogdanchikov's speech Alexei Miller, the CEO of Gazprom, Russia's other state-owned energy giant, interrupted to indicate that he agreed with the sentiment.

"We have to synchronize the following processes, the process of licensing on the shelf, the process of conducting geological exploration work and the process of preparing Russian industry, companies that are on both the regional and the national scale, in order to support these projects and to achieve the required production on time," Bogdanchikov said.

"When we're talking about investment of \$250 to \$300 billion, the question is whether this investment will go into Russian companies located in Russia or

see **ROSNEFT** page 16



StatoilHydro CEO Helge Lund and Bengt Lie Hansen, president of StatoilHydro in Russia, at the signing of the Shtokman phase 1 agreement.

OUR ARCTIC NEIGHBORS

StatoilHydro ready for Shtokman collaboration

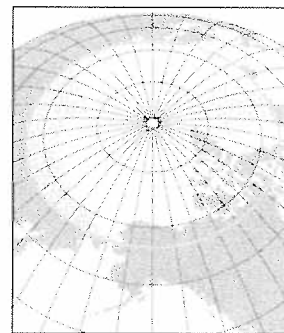
Norwegian company will use experience from Ormen Lange, Snøhvit to develop subsea installations for Russian Barents Sea project

By SARAH HURST
For Petroleum News

Norway's StatoilHydro is gearing up for the "mother of all projects" — developing the Shtokman gas field in the Russian part of the Barents Sea — Bengt Lie Hansen, the company's president in Russia, said in a speech at the Murmansk International Economic Forum Oct. 15. StatoilHydro is a partner in phase one of Shtokman, with a 24 percent interest in the Shtokman Development company. Russia's Gazprom has a 51 percent interest and France's Total has the remaining 25 percent.

StatoilHydro was trying for 20 years to get involved in Shtokman before signing the phase-one agreement in February 2008, Hansen said.

"(Shtokman) I think will be the locomotive for developments in the Arctic," he said. "And I think that will not only have implications for the investing companies, it will have lots of implications for the Murmansk region, as we have seen in



other areas where there are offshore developments, you see a lot of spinoff effects that you hardly are able to assess before you start out."

Shtokman will provide gas to Europe via the planned Nord Stream pipeline under the Baltic Sea, and to Atlantic mar-

see **SHTOKMAN** page 16



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No quick carbon fixes

Oil sands leader argues 'absolute' limits on oil sands' GHG would burden sector; Imperial boss says answers could take 100 years

By GARY PARK
For Petroleum News

Two leading players in the Alberta oil sands — the flashpoint of Canada's climate-change wrangling — have answered criticism that the sector is not doing enough to explain itself.

In the process, they got to grips with the range of challenges facing those seeking answers to greenhouse gas emissions.

Marcel Coutu, chief executive officer of Canadian Oil Sands Trust, which owns 36.7 percent of the giant Syncrude Canada operation, said oil sands producers should be allowed to raise GHGs, even if that means forcing other industrial sectors to shoulder a heavier share of meeting national climate change goals. Bruce March, chief executive officer of Imperial Oil, said it has taken 100 years to create the GHG problem and it will probably take another 100 years to meet growing global energy demand while dealing with climate change concerns.

Their comments came a month after Peter Voser, the new chief executive officer of Royal Dutch Shell, told a Calgary business summit that industry and governments have failed to promote the oil sands as a key answer to the energy needs of Asia and the wider world.

Arguing that oil sands opponents have done an effective job of trashing the resource, he called on industry and governments to play a more active role in promoting the oil sands and making a case for the future importance of unconventional oil.

New Alberta publicity campaign

The Alberta government has recently launched a three-year, C\$25 million publicity campaign to counter some of the negative publicity from environmental groups who have labeled the oil sands as "dirty oil."

The Canadian Association of Petroleum Producers, whose member companies account for more than 90 percent of Canada's oil and natural gas production, has also admitted it is lagging in the battle for hearts and minds and has pledged to answer public concerns about the industry's environmental impact.

But Voser insists the oil sands could be taking a larger international role in energy markets by building pipelines to the British Columbia coast, opening up tanker routes to Asia-Pacific markets.

Speaking at the same Calgary conference, federal Environment Minister Jim Prentice agreed Canada needs to be more active in promoting its technological gains in energy production.

"Canada's role must be perceived as the most environmentally cautious producer of energy of all kinds, from green energy to hydrocarbons, in the world," he said.

Intensity-based limits proposed

But Coutu warned that if the oil sands face an absolute limit on their GHGs, regardless of increasing output, that would "put a very, very heavy burden on a business that is in a growth mode" and a key driver of the Canadian economy.

Rather than stifle oil sands output, the Canadian government should impose intensity-based limits, reducing per-barrel GHGs, leaving other industries to

Marcel Coutu, chief executive officer of Canadian Oil Sands Trust, which owns 36.7 percent of the giant Syncrude Canada operation, said oil sands producers should be allowed to raise GHGs, even if that means forcing other industrial sectors to shoulder a heavier share of meeting national climate change goals.

pick up the slack, he said.

"What we have to do is prioritize what is most important to the economy and our quality of life," Coutu said. "At the end of the day I don't think there is a single element of our economy that is more important than energy."

He told the editorial board of The Globe and Mail that the vast majority of

GHGs result from the consumption of energy by motor vehicles, airplanes and heating homes and commercial buildings — rather than the production phase.

He said the oil sands account for only 5 percent of Canada's total emissions, suggesting that figure should be measured from a global perspective.

Coutu said Canada's net export energy role should also be taken into account, because Canada could end up being saddled with the environmental costs of products that are used in other countries.

March, speaking to the Calgary Chamber of Commerce on Oct. 15, said the industry and governments must work on policies that allow energy to be developed from all available sources — such as wind, solar, nuclear, hydroelectric and geothermal power — not just oil and gas.

"We also require new transformative technologies such as second generation

biofuels, which require long-term research investments, but will have the potential to effect change on a global scale," he said.

Exxon investing in algae

ExxonMobil, which owns 69.6 percent of Imperial, is planning to invest more than C\$600 million in a venture to develop biofuels from algae in a research and development venture with Synthetic Genomics, a privately held company that is concentrating on gene-based research.

March said this effort, which could bolster the world's transportation fuel supply and eventually reduce GHGs, needs long-term planning horizons to deal with climate change.

GHGs have been "created for 100 years and I believe it will take at least

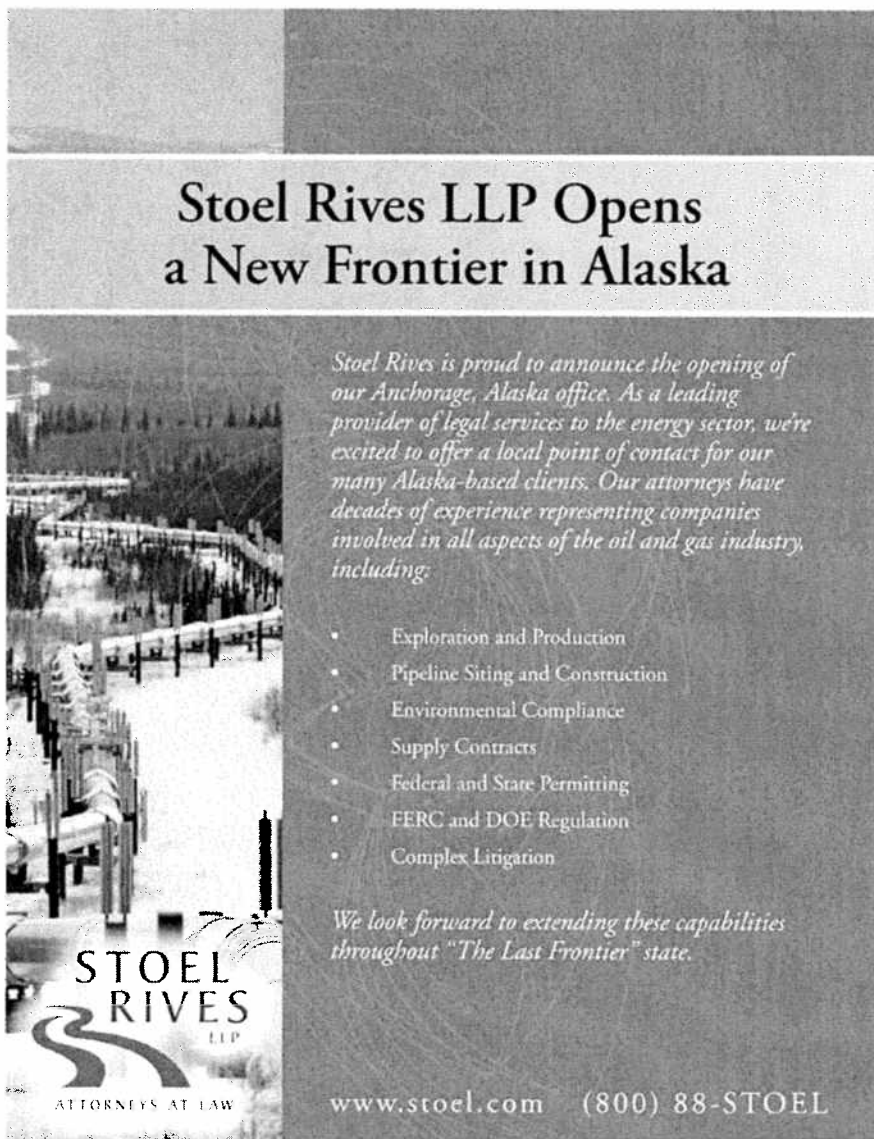
see CARBON FIXES page 16

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kets in the form of LNG, according to Hansen. StatoilHydro's experience developing the Ormen Lange gas field in the Norwegian Sea just south of the Arctic Circle and the Snohvit gas field in the Barents Sea will enable it to develop the subsea installations for Shtokman, he said.

"Tie these installations after they've been pre-drilled by floating units to the large floating unit, which will be the floating production ship, which will be disconnectable due to the harsh environment and the ice," Hansen said. "Bring the gas and the condensate onshore to Teriberka, a journey of about 600 kilometers (373 miles), for processing and ready for transportation as pipeline gas as well as LNG.

"StatoilHydro feels prepared for venturing north together and we think that we can bring three main elements to that table, called TPC," Hansen said. TPC stands for "technology enabler," "performing challenging development tasks" and "cooperation across borders." The

company has been an architect in developing technology on the Norwegian continental shelf and its skills in that regard are highly relevant in Russia, Hansen explained.

"We have been able to carry out megaprojects within cost and schedule — complex projects," Hansen said. "We know that these ... have a tendency to experience cost overruns and schedule slippages, which of course has a detrimental effect on the viability of the project. So no one can guarantee, but I think we have to use the best experience and the best expertise we can get hold of.

"And my last comment is cooperation," Hansen said. "I think that is very important: We have been able to drive the cooperation between the authorities, the suppliers, the research facilities and the oil companies to obtain maximum value for everyone involved, and I think that is also some luggage that we would like to bring to Russia, which I think can create even better results in the future. So we are looking forward to be one of the partners in developing these fantastic possibilities that we can see in the Arctic." ●

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