

Natural Gas Week

VOLUME 24, NUMBER 5

www.energyintel.com

FEBRUARY 4, 2008

Copyright © 2008 EIG. Unauthorized access or electronic forwarding, even for internal use, is prohibited.

NATURAL GAS WEEKLY SPOT PRICES

Flow Dates: 1/29-2/4

Price Point	\$/MMBtu	Chg.	High	Low	Avg. Daily Vol.	Avg. Daily Deals	Feb. Bid Week
GULF COAST							
ANR SE	7.99	+0.09	8.20	7.80	131,857	27	7.99
Col. Gulf - Erath	7.95	-0.01	8.19	7.79	186,900	25	7.98
Col. Gulf - Rayne	7.95	+0.03	8.20	7.81	175,627	28	7.96
Florida Zone 1	7.96	+0.10	8.11	7.88	3,989	1	—
Florida Zone 2	8.06	+0.01	8.30	7.91	22,949	3	—
Florida Zone 3	8.24	-0.71	8.50	8.05	17,683	4	8.41
Henry Hub	7.94	+0.01	8.28	7.81	505,129	64	7.99
NGPL-LA	7.88	+0.25	8.17	7.70	5,714	3	7.78
Sonat	8.16	-0.50	8.49	7.90	78,679	15	8.23
Tenn 500 So La Z1	8.00	-0.20	8.31	7.78	156,280	28	8.08
Tenn 800 So La Z1	7.92	+0.02	8.18	7.70	79,978	16	7.95
Tetco ELA	8.00	-0.16	8.30	7.82	66,700	16	8.06
Tetco WLA	8.00	+0.09	8.25	7.79	51,484	13	7.98
TGT Zone SL	7.97	+0.06	8.19	7.81	29,354	5	7.97
Transco Station 45	8.02	+0.09	8.24	7.80	79,531	13	8.05
Transco Station 65	8.25	-0.10	8.67	7.96	281,007	46	8.30
Trunkline ELA	8.04	+0.19	8.18	7.82	33,521	7	8.00
Trunkline WLA	8.03	+0.12	8.18	7.79	53,457	9	8.00
Regional Average	8.02	-0.05					8.07
TEXAS (SOUTH/EAST)							
Carthage Hub	7.75	-0.05	7.96	7.58	81,514	13	—
Houston Ship Channel	7.73	-0.01	8.10	7.55	80,214	14	7.72
Katy Hub	7.79	+0.05	8.02	7.58	214,653	33	7.83
NGPL-South Texas	7.79	+0.03	7.97	7.60	106,557	15	7.75
NGPL-TexOk	7.62	-0.01	7.90	7.50	578,818	70	7.61
Tenn Zone 0	7.79	+0.05	7.96	7.64	25,789	5	7.82
Tetco-East Texas	7.83	+0.18	8.00	7.63	4,094	3	7.72
Tetco-South Texas	7.86	+0.11	7.98	7.63	72,448	14	7.73
TGT Zone 1	8.00	+0.21	8.19	7.70	54,262	9	7.95
Transco Station 30	7.83	+0.05	8.02	7.61	22,696	6	7.83
Regional Average	7.72	+0.01					7.73
TEXAS (WEST)							
El Paso Permian	7.54	-0.03	8.11	7.40	244,979	38	7.34
NNG Custer	—	—	—	—	—	—	—
Transwes E of Thoreau	7.70	+0.24	7.80	7.45	14,869	2	—
Waha Hub	7.59	-0.07	7.87	7.38	192,056	31	7.45
Regional Average	7.56	-0.04					7.37
MIDCONTINENT							
ANR SW	7.45	-0.11	7.82	7.30	53,853	11	7.25
CenterPoint East	7.48	-0.10	8.12	7.25	43,022	11	7.34
CenterPoint West	7.43	-0.10	7.84	7.26	33,919	7	—
NGPL-MC	7.53	+0.07	7.77	7.23	120,914	29	7.27
Oneok	7.59	-0.16	7.82	7.25	4,862	1	7.35
Panhandle	7.47	-0.12	7.85	7.25	200,145	37	7.26
Williams	7.39	+0.01	7.80	7.28	10,600	2	7.36
Regional Average	7.48	-0.05					7.28
GREAT PLAINS							
Emerson	7.93	+0.19	8.09	7.76	39,077	7	7.90
NNG Demarc	7.95	+0.06	8.28	7.69	72,763	15	7.76

(continued on p.2)

North Louisiana CBM Play Could Someday Rival Powder River Basin

Known for its oil and natural gas resources, Louisiana may soon add coalbed methane (CBM) to its list of energy reserves with a play stretching across the northern part of the state that several experts say could rival Wyoming's Powder River Basin.

"We are on the verge of something very big," said Diana L. Chance, one of those leading a very quiet charge to develop CBM resources — or as its known in the Bayou State, coal-seam natural gas.

"After a lot of years of work, the later part of this year could see the start of something really big for this state,"

(continued on page 9)

Sage Grouse Debate Enflamed By Court Ruling, E&P Said at Risk

Weighing between two and seven pounds, the sage grouse is a timid bird with unusual feathers and a rotund stature that hides when approached. Recent discussions among lawmakers, however, prove the legal controversy behind sage grouse protection is hardly as quiet or meek.

Earlier this winter, a federal judge ordered the US Fish and Wildlife Service (FWS) to reconsider sage grouse for possible protection as an endangered species, and since then, debate has intensified on how energy and wildlife should cooperate.

Because large amounts of land used for oil and gas production overlap with the sage steppe ecosystem, where the

(continued on page 11)

If March '08 Storage End Doesn't Best 2007 Finale, It Could Be Close

With January behind us, the US natural gas industry is beginning to get a clearer picture of where natural gas storage levels are likely to exit the withdrawal season. And while Mother Nature will have the final say, it looks like a

close race is on to see if this year's finale will best last year's record.

"Overall gas storage spent most of 2007 near the high end of the range and actually set new highs, and that glut kept prices fairly depressed," one gas futures trader in New York said. "But for the past

(continued on page 8)

See market story, p2

NATURAL GAS WEEKLY SPOT PRICES (cont.)

Flow Dates: 1/29-2/4

Price Point	\$/MMBtu	Chg.	High	Low	Avg. Daily Vol.	Avg. Daily Deals	Feb. Bid Week
NNG Ventura	8.15	-0.08	8.69	7.78	54,986	8	7.91
Regional Average	8.01	+0.04					7.81
UPPER MIDWEST							
Alliance	8.19	-0.06	8.38	8.00	84,129	10	8.25
ANR ML7	8.13	+0.07	8.40	8.11	20,323	2	8.25
Chicago Citygate	8.09	+0.19	8.50	7.95	268,517	30	8.05
Consumers	8.19	+0.14	8.37	8.06	61,932	14	8.16
MichCon	8.15	+0.22	8.35	8.00	190,438	29	8.04
Regional Average	8.14	+0.15					8.08
SOUTHEAST							
Tetco M1	8.02	+0.08	8.50	7.80	54,735	11	8.21
Transco Zone 4	8.40	-0.46	8.85	7.97	60,039	13	8.46
Transco Zone 5	8.71	-1.52	9.30	8.39	48,713	5	9.50
Regional Average	8.37	-0.77					8.32
APPALACHIA							
Col. Gas App. Pool	8.25	+0.05	8.60	8.02	291,419	50	8.30
Dominion North	8.34	-0.10	8.57	8.21	5,060	1	—
Dominion South	8.40	+0.02	8.70	8.17	208,575	42	8.51
Regional Average	8.31	+0.01					8.45
EASTERN CANADA							
Dawn	8.26	+0.12	8.41	8.10	202,717	31	8.29
Iroquois	8.60	-0.22	9.50	8.44	94,587	17	8.90
Niagara	8.43	+0.02	8.62	8.25	78,699	10	8.65
Regional Average	8.38	+0.03					8.33
NORTHEAST / MIDATLANTIC							
Algonquin	9.11	-3.76	10.06	8.50	83,747	16	12.16
Dracut	9.00	-3.96	9.95	8.65	25,401	4	11.10
Iroquois Zone 2	9.19	-3.81	10.00	8.70	44,693	10	—
Tenn Gas Zone 6	8.99	-3.50	9.85	8.60	57,752	12	11.50
Tetco M3	8.84	-2.49	9.48	8.48	228,705	48	10.23
Transco Z6 - NY	8.96	-3.40	9.75	8.52	237,126	33	11.79
Transco Z6 - Non-NY	8.90	-2.30	9.70	8.48	74,470	19	10.68
Regional Average	8.95	-3.19					11.04
ROCKIES							
Cheyenne Hub	7.57	+0.01	7.75	7.39	10,566	3	7.22
CIG	7.37	-0.14	7.70	7.16	29,557	7	7.10
Kern River / Opal	7.51	+0.01	7.80	7.27	183,051	35	7.12
NW Rockies	7.46	+0.41	7.68	7.29	10,515	3	7.02
Questar	7.26	-0.39	7.34	7.23	2,857	1	7.15
Regional Average	7.49	+0.02					7.11
SAN JUAN BASIN							
El Paso Bondad	7.57	+0.14	7.83	7.34	16,493	4	7.26
El Paso San Juan	7.55	-0.02	7.82	7.41	173,937	26	7.29
Regional Average	7.55	+0.00					7.28
PACIFIC NORTHWEST/WESTERN CANADA							
AECO	7.96	+0.58	9.09	7.65	166,071	17	7.43
Kingsgate	7.68	+0.25	7.92	7.53	15,714	3	—
Malin	7.86	+0.23	8.15	7.68	170,265	29	7.66
NW Sumas	8.90	+0.26	9.77	8.20	67,957	12	8.52
Stanfield	7.79	+0.07	8.05	7.60	56,214	7	—
Westcoast Station 2	8.23	+0.59	8.85	7.77	67,896	13	7.80
Regional Average	8.06	+0.33					7.63
CALIFORNIA							
Kern - Wheeler Ridge	7.88	+0.01	8.16	7.72	129,857	17	—
PG&E Citygate	8.10	+0.22	8.42	7.95	187,343	26	8.00
PG&E South	7.79	+0.04	8.12	7.71	89,171	9	7.72
SoCal	7.84	+0.14	8.02	7.66	155,052	18	7.59
Regional Average	7.93	+0.12					7.70
WEEKLY COMPOSITE SPOT PRICES							
Wellhead	7.89	-0.02					
Delivered	8.13	-0.77					

Forecasts Blow to NatGas Bulls; Very Warm February Taking Shape

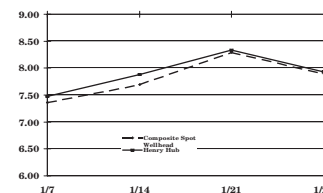
Even though February gas futures clung tightly to the \$8 mark up until expiry, market bulls taking on long positions in March gas futures have a new reason for concern, as some meteorologists are looking for a significantly warmer February.

"This week, we're looking for a major winter storm in the Midwest, but it will be followed by a powerful warm up for much of the nation," said Steve Gregory, chief risk consultant for WeatherIntel Services. "The models keep getting warmer, and if this keeps up, it might be the warmest February on record. In fact, Texas will see temperatures in the 80s over next two weeks."

According to Gregory's forecast, recent weather model runs continue to show a major warming trend starting this week, with every indication it will get progressively milder through the month and will include several strong warm spells, relative to normal.

The West should begin pulling out of its six-week bout with the cold during the second week of February.

Other well-known meteorologists, such as AccuWeather (continued on page 3)



Late news...

Now operational: Wyoming Interstate Company (Wic) has placed its Kanda lateral pipeline and accompanying mainline expansion in service. The 124-mile, 24-inch diameter lateral provides natural gas from the Uintah Basin to Wic's existing mainline in Sweetwater County, Wyoming. The Wic mainline system was also expanded with 20,600 hp of additional compression installed at the existing Wamsutter Compressor Station in Wyoming. The project cost \$189 million. Wic is a subsidiary of El Paso Pipeline Partners.

Open season: Spectra Energy Partners is conducting a non-binding open season through Feb. 29 to solicit participation in holding capacity on its East Tennessee Natural Gas pipeline system. The proposed expansion, called the Greenway Project, is expected to move new supplies of natural gas from the Appalachian Basin in southwest Virginia, West Virginia and Kentucky to Southeast and Mid-Atlantic markets. A Spectra Energy Partners spokesman said the exact nature of the required facilities, estimated to cost between \$300 million and \$500 million, will be determined from the results of the open season. With consideration given to shippers that desire a phase in of their contracted capacity, this project will allow contracts to begin as late as 2012.

Divisions bought: Pioneer Drilling will buy three Wedge Group production and service divisions for \$303 million. The deal includes Wedge Well Services, Wedge Wireline and Wedge Fishing and Rental Services and is expected to close by the end of the first quarter.

Forecasts ...

(continued from page 2)

er chief meteorologist Joe Bastardi, are also looking for a significant warm up in February.

"We've been looking at a potential blowtorch of a situation developing this month, which is likely to provide some significantly above-normal temperatures," Bastardi said.

The warming trend will be quite a contrast to an arctic blast late last month that produced a record draw from storage for the week ended Jan. 25. The Energy Information Administration reported withdrawals of 274 billion cubic feet for the week, eclipsing the previous record pull of 260 Bcf set in January 1997 and sinking gas in storage to a still healthy 2,262 Bcf.

The report was considered on the high side of expectations, as analysts surveyed forecast an average withdrawal in the mid- to upper 250s. Meanwhile, Bentek Energy pipeline flow data suggested a draw between 270 Bcf to 280 Bcf.

Last week's storage data compares with a 186 Bcf draw during the same week last year, while the five-year average draw was estimated around 185 Bcf. Looking to this week, early-bird predictions are for yet another large withdrawal of about 165 Bcf to 180 Bcf.

Even in the face of bearish weather forecasts and ample storage for the balance of the winter, natural gas futures prices have maintained unusual strength in recent weeks. While some traders remain naturally bullish on the gas market due to typical winter demand requirements, others question why the forward curve remains at about \$8.25 for the summer strip, and nearly \$8.40 for the 12-month strip.

"It's the usual story of winter speculation," said futures broker George Speicher in Houston. "This gas market strength and activity is not about fundamental news, but instead about the financial guys wreaking havoc on the market again. Plus, nobody's watching the hen house with all the action going on over at the Fed's pig pen."

The Nymex March gas futures contract lost 33.4¢ Friday to close at \$7.74/MMBtu, down 21.4¢ for the week. On Tuesday, the Nymex February gas rolled off the board at \$7.996. The Nymex three-day settlement average was \$8.024. Meanwhile, March crude oil tumbled \$2.79 Friday to close at \$88.96/bbl, losing \$1.75 for the week.

Technical indicators for March gas have shifted to bearish. On the downside, key support is seen at \$7.72, while \$7.57 and \$7.487 are the next lower objectives. On the upside, key resistance is seen at \$8.07 and \$8.123, while \$8.22 and the recent high of \$8.481 become the next major upside targets.

Friday's Commodity Futures Trading Commission's Commitment of Traders report for the week ended Jan. 29 showed noncommercials in about 69.1% short futures-only positions for the week.

Alan Lammey, Houston

Rex Kicks Tires on Extension to New York Citygate at Linden, NJ

First there was construction of Rockies Express West Pipeline from Colorado to Missouri. Then, plans started moving forward for the Rex East arm to Ohio, followed by an open season for a Northeast extension to New Jersey's western border.

Now, Rex is discussing plans to extend the Northeast con-

ductor further, right by the most heavily-populated metropolises in the nation: New York City.

Co-partnered by Kinder Morgan, ConocoPhillips and Sempra, Rex developed the first proposal aimed at taking near-overflowing gas supplies in the Rockies directly to high-demand Northeast markets.

Initially, Rex had proposed a 375-mile connector from Rex East's terminus in Clarington, Ohio, to Princeton, New Jersey. Through the new proposal, Rex would add 40 more miles, with an extension to Linden, New Jersey, conveniently located just across the Hudson River from Staten Island, New York.

"There was a lot of interest we received from prospective shippers," Kinder Morgan spokesman Joe Hollier said. "We proposed additional points of receipt in addition to those set out in the open season, and as a result of that, and from discussions with prospective shippers, we came up with another extension."

Although some have questioned if Rockies gas will get that far east, consensus among industry leaders and analysts is that the Transco citygate into New York at Linden would be an attractive destination as it routinely commands one of the highest price premiums in the nation.

It's still possible that Rex may propose other delivery points, or stick with the original terminus at Princeton. So far, no open season has been announced for the additional 40 miles.

"Currently, all Rex is doing is discussing with prospective shippers interested in contracting with the capacity at the Linden delivery point," Hollier said.

Rex West from Weld County, Colorado, began interim service on Jan. 12, and full service all the way to Audrain County, Missouri, is expected at the end of the month.

The Rex-East arm from Missouri to Clarington is awaiting a final environmental impact statement from the Federal Energy Regulatory Commission. Company officials hope to gain final regulatory approval this spring and begin full service by June 2009.

Lauren O'Neil, Washington

Appalachian Producers Vie for Attention with Booming Marcellus

With interest in Pennsylvania's core Marcellus Shale acreage exploding in recent months, several small and mid-sized independents have been on the road attempting to make the case that there are other areas of the Appalachian Basin that aren't getting their share of the attention (NGW Dec.24,1).

Chief among those companies is Equitable Resources. Equitable is "arguably the largest producer in Appalachia," Chief Executive Murry Gerber told investors and analysts last month at an Appalachia conference sponsored by BMO Capital, and is one of the only companies building enough pipeline

(continued on page 4)

INTRASTATE WEEKLY SPOT PRICES

Flow Dates: 1/29-2/4

Price Point	\$/MMBtu	Chg.	High	Low	Avg. Daily Vol.	Avg. Daily Deals	Feb. Bid Week
Louisiana Intras	—	—	—	—	—	—	—
Oklahoma Intras	—	—	—	—	—	—	7.35
South Texas Intras	7.81	+0.04	8.13	7.55	105,715	9	7.76
West Texas Intras	7.73	-0.00	7.98	7.38	96,743	12	7.83

Appalachian ...

(continued from page 3)

to fix the takeaway capacity issues that are restricting output.

According to Gerber, much of the old gathering and transmission system in the Appalachian Basin is sized for slow-growth vertical drilling. The recent surge in horizontal drilling and ensuing production increases, Gerber said, are overwhelming the system.

“The latent capacity to produce in the Appalachian Basin far exceeds the ability to get it to market at this point in time. And that is a key issue that will affect this basin for some considerable period,” Gerber said. “One of the reasons why the system hadn’t been drilled out in the past was because operators were chasing wells. Nobody really had the confidence in the ability of the wells to produce for long periods to commit to the significant investment needed to build the pipes.”

Equitable, according to Gerber, has that confidence. The company bills itself as “a utility, with gas production,” has 8,900 miles of gathering lines and 850 miles of interstate pipeline in its midstream system, and 2.5 trillion cubic feet of reserves — and those numbers are continually growing.

The focus of Equitable’s efforts thus far has been the Lower Huron and Cleveland shales in Kentucky and southern Virginia, which don’t attract as much attention because Equitable has “all the acreage attendant to that play — or at least a vast majority of it,” Gerber said. Both shales are very brittle, low pressure plays, he added.

“The low pressure caused Equitable and our partners — Halliburton, Schlumberger, etcetera — to come up with some thoughts on how to drill horizontal wells with air, and I think it’s fair to say at this point in time that that’s the only way that these low-pressure Devonian Shales could be attacked.”

Production for the year came in at 165 billion cubic feet of gas equivalent, a 38% increase over 2006, mainly driven by

the higher productivity of horizontal wells compared to vertical wells, Equitable said in its year-end earnings statement.

While Equitable has not released individual well data, the company said it drilled 38 horizontal wells during the fourth quarter. In Kentucky, Equitable drilled 26 Devonian wells, five targeting the Cleveland and 21 targeting the Huron. In West Virginia, the company drilled 10 Devonian wells, eight targeting the Huron, one targeting the low-pressure Marcellus in southern West Virginia and one targeting the Rhinestreet Shale. The company’s Virginia wells included two horizontal wells in the Lower Huron and one in the Nora coalbed methane field.

The Nora CBM field is a 50-50 joint venture with Range, encompassing about 1,600 producing wells and more than 300,000 gross acres under lease, and also has tight gas and shale gas potential, according to Range Chief Executive Rodney Waller (NGW Apr.23,p4).

“We really appreciate God putting this where he did, and that nobody else saw it before we were able to get in there and work with Equitable to really accentuate the value,” Waller said.

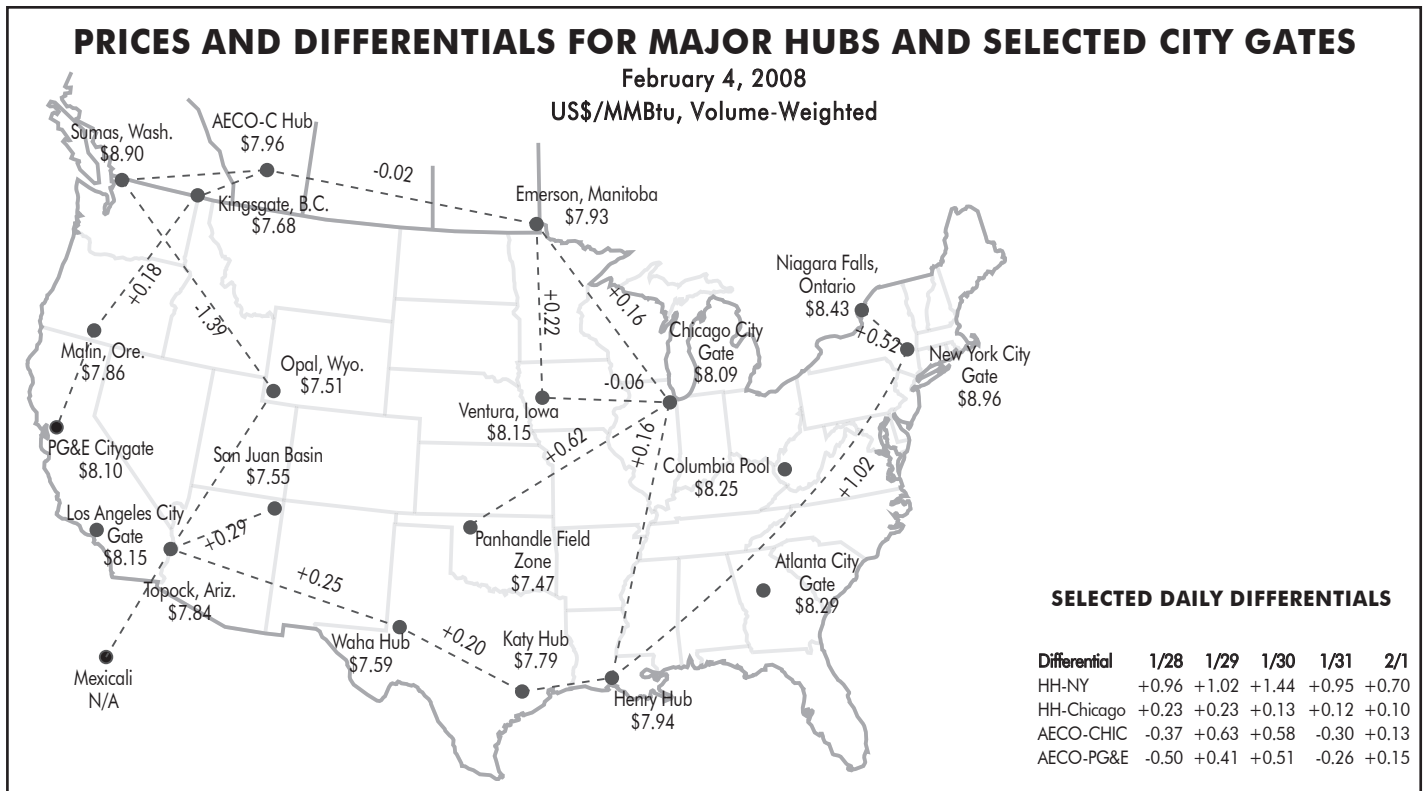
Tiny independent gas producer Unbridled Energy also pushed its Appalachian agenda at the conference, with Chief Executive Joseph Frantz stressing that it’s still “very, very early on,” in the Marcellus play (NGW Jan.21,p7).

“I think the Marcellus has a lot to be proved and unlocked, yet ... The lower Huron, however, has been proven over much bigger areas. And then we have this Hamilton [shale] that we’re going to experiment with, as well.”

Unbridled just formed a joint venture with Equitable to drill multiple horizontal wells on its Ohio River Devonian Shale play, targeting the Lower Huron. The company has operations in both Appalachia and the Western Canadian sedimentary basin.

Meanwhile, Penn Virginia, another small independent, is currently drilling three vertical and two horizontal wells target-

(continued on page 5)



Appalachian ...

(continued from page 4)

ing the Lower Huron, with results expected early on this year.

Additionally, Ray Dougherty, chief executive of NGAS Resources, told the crowd his company plans to test two horizontal Devonian wells in its Leatherwood field in the first quarter, in partnership with Equitable.

Greg Couturier, Washington

Fall River LNG Terminal Under Threat by Federal, State Bills

Plans for the Weaver's Cove LNG project in Fall River, Massachusetts, could be at risk if one or both of a pair of proposed bills are ultimately passed into law — one under active discussion in the US Senate, another in the Massachusetts state legislature.

The bill, sponsored by Massachusetts Sens. John Kerry and Ted Kennedy, was temporarily nixed by the the Senate Energy and Natural Resources Committee last week. It would have designated 40 miles of the Taunton River in Massachusetts as "wild and scenic" under the National Park Service's protected rivers system.

Because the Hess-owned Weaver's Cove terminal is planned for placement and operations along the Taunton River, the LNG project could be blocked from moving forward if the legislation were passed.

Committee staff said the bill was likely tossed aside because of LNG-related issues, but if those issues are worked out, it is likely the bill will come up again.

Massachusetts Rep. Barney Frank initially proposed the bill in the House, and has said its goal had nothing to do with LNG. But if enactment of the bill blocks Weaver's Cove, that would be an added benefit, he said.

Opponents of the terminal have said its operations would come too close to the town of Fall River. The US Coast Guard rejected Weaver's Cove's project application earlier this winter because LNG tankers would need to fit tightly under two nearby bridges, and that would create an unsafe situation, as Coast Guard Capt. Roy Nash wrote in his rejection letter.

The Federal Energy Regulatory Commission has already approved the project application, but Weaver's Cove is sub-

ject to final approval by the Coast Guard, not FERC.

Three Fall River-based businesses operating on the Taunton River spoke against the Senate bill because it could put job opportunities and business development in jeopardy, they say.

"If passed, this designation will prevent our company from maintaining and expanding our commercial waterfront facility and will cost the Commonwealth of Massachusetts much-needed jobs in manufacturing," Peter Duclos, president of Fall River-based Gladden Shipbuilding, told senators in prepared statements.

"I cannot see any benefit to the economy by designating the lower portion of the Taunton River wild and scenic, nor can I see any benefit to the environment," said Donald Church, president of Seaboats boating company, adding, "The only possible effect would be to stop economic development."

Other business leaders have said the Taunton, particularly its lower segment, should be excluded from the wild and scenic river network for a fundamental reason: it isn't wild or scenic, they say.

"There is, today, significant industrialization along [the lower segment] of the Taunton River including bridges, a power plant, sewage plants, marinas, shipyards and granite bulkheads," Shipbuilders Council President Allen Walker told senators.

Another bill under consideration by the Massachusetts legislature would not allow LNG terminals to be built within one mile of schools, homes, hospitals and similar locations. LNG tankers would need to stay 1,500 feet off the shore from those buildings. Because Weaver's Cove's would be in close proximity to several such locations in Fall River, the law would likely prevent the terminal from being built.

"His basic rationale is we need LNG, but you should not put it in a densely populated area," said Brian Pearson, legislative aide for Massachusetts Rep. David Sullivan, the bill's sponsor. "He is pro-LNG — there's no doubt about that. But not where a lot of people are."

Company officials for Weaver's Cove and Hess LNG say the terminal is needed to offset supply constraints in New England, and thereby stabilize gas prices.

"The bill filed will hurt Massachusetts residents, who are already facing skyrocketing heating costs, and businesses who are closing or in desperate need of additional supplies

(continued on page 6)

COMPOSITE SPOT WELLHEAD PRICE

January 2004 to Present
(\$/MMBtu)

Year	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Year
2008	7.83												
2007	6.25	7.79	6.52	7.07	7.34	7.03	6.03	6.10	5.53	6.49	6.60	6.89	6.72
2006	8.20	7.30	6.47	6.61	5.93	6.04	5.93	7.11	4.60	5.47	6.78	6.61	6.34
2005	6.05	5.99	6.77	6.99	6.26	6.91	7.50	8.99	11.24	12.32	8.88	12.24	8.13
2004	5.90	4.79	5.28	5.62	6.17	6.11	5.82	5.37	4.84	5.97	5.81	6.58	5.77

COMPOSITE SPOT DELIVERED-TO-PIPELINE PRICE

January 2004 to Present
(\$/MMBtu)

Year	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Year
2008	8.58												
2007	6.68	8.44	7.12	7.54	7.53	7.23	6.26	6.31	5.75	6.69	6.76	7.64	7.08
2006	8.28	7.55	6.69	6.77	5.99	6.14	6.15	7.28	4.91	5.69	7.00	6.90	6.59
2005	6.94	6.17	6.98	7.14	6.39	7.00	7.45	8.96	11.48	12.44	9.00	12.43	8.43
2004	6.30	4.82	5.32	5.65	6.20	6.12	5.86	5.43	4.93	5.97	5.98	6.73	5.90

Fall ...

(continued from page 5)

of energy at competitive prices," Weaver's Cove spokesman David Tamasi said.

Project leaders speculate that even if the legislation were passed into law in Massachusetts, it would likely be overturned because marine activities and LNG terminals fall under the jurisdiction of the federal government, not state law, they say.

"The legislation would attempt to direct the federal government over how it can control its waterways and the siting of LNG facilities," Tamasi said. "If passed, this bill would most likely be deemed unconstitutional by the courts since both activities — marine and LNG siting — are subject to regulation by the federal government, and the state cannot impose federal laws."

Lauren O'Neil, Washington

Little Fanfare for NGVs at Show; But Major NGV Advance Coming

Nearly every car company at the Washington Auto Show last week was talking up some kind of sexy, green, fuel-efficient option — this despite the fact that most of them couldn't actually build, sell or fuel the cars they were promoting.

However, two decidedly un-sexy natural gas vehicles (NGVs) — that can be built, sold and fueled — were relegated to the far corner of the convention hall next to several odd-looking, outdated, solar-powered contraptions, and were not being promoted by anyone.

Next to a green banner with the logo of Seal Beach, California-based Clean Energy was a dark blue four-door Mercury Grand Marquis — carrying all the charm of an unmarked police car — with a large "Powered by Clean, Domestic, Natural Gas" sticker on the driver's side door.

As if that car wasn't dull enough, the NGV parked next to it was a Honda Civic GX on loan from the DC Bureau of Parking Enforcement. Associating NGVs with parking tickets in the eyes of the car-buying public is not likely to earn any marketing awards.

The trunk of the Grand Marquis was open to reveal the current Achilles' heel of NGVs — a pair of CNG tanks tak-

ing up about half of the trunk space — highlighting the urgency of bringing to market a flat natgas tank that can fit underneath a vehicle (NGW Apr.2,p1). A gasoline tank may or may not be less dangerous than a pair of pressurized natural gas canisters, but at least it is out-of-sight, out-of-mind and not sitting right next to your luggage.

While the NGV showing last week in the passenger vehicle market was bordering on pathetic, NGVs are continuing their steady march forward in the commercial truck market.

Kenworth Truck Company announced last week that it will begin production of T800 LNG-fueled trucks at a manufacturing facility in Renton, Washington. Kenworth has signed an agreement with Westport Innovations to use that company's LNG fuel system technology. Westport will be opening a new LNG Fuel System Assembly Center in British Columbia to support Kenworth's initiative.

"This agreement with Kenworth creates a dramatic increase in LNG truck delivery capacity and further strengthens Westport's ability to efficiently meet the significant growth in market demand for environmentally clean LNG trucks from the [Los Angeles] ports and other fleet customers," said Westport President Michael Gallagher. Clean Energy recently opened a natural gas fueling station in the Los Angeles port area.

The Kenworth initiative is designed to coincide with an announcement by the ports of Los Angeles and Long Beach that a \$1.6 billion "Clean Truck Superfund" has been approved that will assist in the replacement of about 16,800 Class 8 trucks serving the ports with LNG-powered vehicles. Westport's LNG fuel system is currently the only fuel technology qualified to get financial support under the ports' Clean Truck program. The program aims to replace all diesel-powered vehicles by 2012.

Kenworth and Westport have already worked together on an aftermarket basis to equip T800s with LNG fuel systems and some of those trucks are already at work at the ports. Pacific Gas and Electric of San Francisco recently became the first utility in the nation to operate Kenworth's LNG-powered trucks.

The LNG to power the engines can be derived from pipeline gas or to attain even more of an environmental halo by operating on LNG produced from landfill gas, the supply of which is expected to grow (NGW Jan.21,p1).

(continued on page 7)

Trading Dates: January 28 - February 1		NATURAL GAS FUTURES										
NEW YORK MERCANTILE EXCHANGE (NYMEX) (HENRY HUB)												
	Monday		Tuesday		Wednesday		Thursday		Friday		Week's High-Low	Open Interest
	Last	Volume	Last	Volume	Last	Volume	Last	Volume	Last	Volume		
February 2008	8.095	14,526	7.996	43,243							8.120-7.900	
March 2008	8.042	34,929	7.943	15,379	8.045	54,097	8.074	59,342	7.740	—	8.130-7.720	166,330
April 2008	8.017	10,857	7.933	6,088	8.044	19,772	8.074	22,012	7.775	—	8.085-7.760	86,743
May 2008	8.060	2,483	7.985	2,956	8.094	6,252	8.125	9,106	7.845	—	8.110-7.860	66,191
June 2008	8.142	843	8.070	617	8.174	1,834	8.203	3,268	7.938	—	8.215-8.055	30,893
July 2008	8.225	586	8.153	992	8.254	945	8.281	1,795	8.024	—	8.285-8.130	24,954
August 2008	8.295	435	8.223	713	8.323	387	8.348	1,321	8.096	—	8.355-8.188	21,490
September 2008	8.307	194	8.235	1,677	8.333	278	8.357	673	8.105	—	8.320-8.170	16,866
October 2008	8.380	1,245	8.308	393	8.399	5,666	8.420	2,188	8.168	—	8.385-8.235	49,731
November 2008	8.620	681	8.553	1,470	8.644	602	8.672	315	8.448	—	8.620-8.520	28,222
December 2008	8.880	516	8.828	1,378	8.919	2,226	8.955	459	8.743	—	8.880-8.830	33,732
January 2009	9.085	1,088	9.033	164	9.124	3,079	9.165	2,315	8.958	—	9.085-8.990	52,711
February 2009					9.129	278	9.170	244	8.966	—	9.085-9.010	9,054
12-MONTH STRIP	8.346		8.272		8.396		8.487		8.234			
TOTAL VOLUME		73,218		78,107		101,829		106,136		—		

Little ...

(continued from page 6)

In related news, Clean Energy has contracted with four refuse operators for natural gas fueling services — one in Southern California, one in San Antonio, Texas, and two in Brooklyn, New York.

“In all cases, these are only initial deployments of natural gas vehicles in fleets that are expected to grow in size as older diesel trucks are replaced,” said Clean Energy Chief Executive Andrew J. Littlefair.

Michael Sultan, Washington

Exxon Smashes Profit Record; Firm Tops \$40 B with Fourth Qtr

Like a juggernaut, Exxon Mobil posted the largest annual profit by a US company — \$40.6 billion — as the world’s largest publicly traded energy company benefited from historic prices at year’s end. And in doing so, the Irving, Texas-based supermajor smashed several of its own records.

Exxon also set a US record for the biggest quarterly profit, posting net income of \$11.7 billion for the final three months of 2007, beating its own mark of \$10.71 billion in the fourth quarter of 2005. The previous record for annual profit was \$39.5 billion, which Exxon Mobil made in 2006.

Exxon Mobil’s revenue rose 30% in the fourth quarter to \$116.6 billion from \$90 billion a year ago. For the year, sales rose to \$404.5 billion, up from the \$377.64 billion it posted in 2006.

Elsewhere, Halliburton is starting to reap the rewards for its long-range plan to grow its Eastern Hemisphere operations by opening a second headquarters office in Dubai, as well as continued projects from around the world, including Mexico.

The company announced a 19% year-over-year increase in revenue in the fourth quarter, from \$3.5 billion in the year-ago quarter to \$4.2 billion this time around, due largely to increased worldwide activity, particularly in the Eastern Hemisphere. Over 55% of the company’s fourth-quarter revenue came from outside North America. Eastern Hemisphere revenue increased 27% year-over-year, while operating incoming in that region was up 26%.

Halliburton’s net income for the quarter was \$690 million

(75¢/share), up from \$658 (64¢/share) in the fourth quarter of 2006. For the full year, the company logged net income of \$3.5 billion, compared to \$2.3 billion in 2006.

Also reporting a hefty increase in its quarterly profits, Royal Dutch Shell reported fourth-quarter profit rose 60% due to asset sales and higher oil prices.

The company reported its net income was \$8.47 billion, up from \$5.28 billion in the October-December period a year earlier. Sales rose to \$107 billion from \$75.5 billion despite a fall in oil production. Full-year net profit was a record \$31.3 billion, up 23% from \$24.4 billion while sales rose 12% to \$356 billion.

ConocoPhillips posted a 37% increase in fourth-quarter profit, even as it produced less crude and natural gas than a year earlier. Its fourth-quarter net income rose to \$4.37 billion versus \$3.2 billion a year earlier. Chevron earned \$4.88 billion (\$2.32/share), from \$3.77 billion (\$1.74/share), a year earlier. Revenue rose 29% to \$61.41 billion from \$47.75 billion.

The first fourth-quarter reports released recently were a bit of mixed bag of results. Here are some:

Baker Hughes reported income of \$400.5 million (\$1.26/share), compared with \$326.2 million (\$1.02/share), in the year-ago period. Revenue rose 12% to \$2.74 billion from \$2.45 billion in the fourth quarter of 2006.

Enterprise Products Partners posted a 21.9% increase in net income to \$161.9 million (30¢/share), from \$132.8 million (25¢/share), a year earlier. Revenue rose 58.3% to \$5.3 billion from \$3.35 billion.

Smith International said that fourth-quarter earnings jumped 17%. Fourth-quarter earnings rose to \$167 million (83¢/share), from \$143 million (71¢/share), a year ago. Quarterly revenue jumped 15% to \$2.3 billion, from \$2 billion in the fourth quarter of fiscal year 2006.

Cameron International said fourth-quarter earnings jumped 30%. The company earned \$125.9 million (54¢/share), compared with a year-ago profit of \$96.5 million (42¢/share). Revenue rose 25% to \$1.34 billion, from \$1.08 billion in the prior-year period.

Staff reports

NORTH AMERICAN WEEKLY GAS STORAGE

(Billion Cubic Feet)

Region	Jan. 25 Week	Jan. 18 Week	Weekly Change	Year Ago	Yr. Ago Change	5-year Average	5-year Change
US							
East	1257	1402	-145	1482	-225	1221	36
West	285	325	-40	302	-17	296	-11
Producing	720	809	-89	813	-93	661	59
Total Lower 48	2262	2536	-274	2597	-335	2178	84
Canada							
East	154	178	-23	191	—	—	—
West	219	242	-24	157	—	—	—
Total Canada	373	420	-47	348	—	—	—
Total North American	2635	2956	-321	2945	—	—	—

Sources: Energy Information Administration; Canadian Enerdata.

NATURAL GAS BIDWEEK PRICES

Flow Dates: 2/1-2/29

Price Point	February Avg. \$/MMBtu	Chg. from Prev.	High	Low	Vol.	Deals	Prev. Bid-Week
GULF COAST							
ANR SE	7.99	+0.86	8.00	7.98	59,384	11	7.12
Col. Gulf - Erath	7.98	+0.83	7.98	7.97	266,000	13	7.15
Col. Gulf - Rayne	7.96	+0.83	7.99	7.92	148,508	21	7.13
Florida Zone 1	—	—	—	—	—	—	—
Florida Zone 2	—	—	—	—	—	—	—
Florida Zone 3	8.41	—	8.45	8.36	31,400	4	—
Henry Hub	7.99	+0.87	7.99	7.99	6,552	1	7.13
NGPL-LA	7.78	+0.80	7.78	7.78	6,000	2	6.97
Sonat	8.23	+0.97	8.26	8.20	113,500	15	7.26
Tenn 500 So La Z1	8.08	+0.88	8.13	8.07	33,594	12	7.19
Tenn 800 So La Z1	7.95	+0.84	7.99	7.95	25,418	9	7.12
Tetco ELA	8.06	+0.85	8.10	8.01	22,140	7	7.21
Tetco WLA	7.98	+0.87	8.00	7.97	18,855	7	7.11
TGT Zone SL	7.97	+0.82	7.97	7.97	10,000	2	7.15
Transco Station 45	8.05	+0.92	8.11	8.04	79,610	14	7.13
Transco Station 65	8.30	+0.96	8.40	8.23	110,419	19	7.34
Trunkline ELA	8.00	+0.86	8.01	8.00	30,000	4	7.14
Trunkline WLA	8.00	+0.80	8.00	8.00	10,262	2	7.19
Regional Average	8.07	+0.88	—	—	—	—	7.19
TEXAS (SOUTH/EAST)							
Carthage Hub	—	—	—	—	—	—	—
Houston Ship Chan	7.72	+1.04	7.80	7.64	95,000	19	6.68
Katy Hub	7.83	+0.89	7.83	7.83	8,800	2	6.94
NGPL-South Texas	7.75	+1.01	7.75	7.75	20,000	1	6.74
NGPL-TexOk	7.61	+0.91	7.70	7.47	160,000	20	6.70
Tenn Zone 0	7.82	+0.92	7.85	7.71	52,838	13	6.90
Tetco East Texas	7.72	+0.89	7.75	7.72	5,639	3	6.83
Tetco-South Texas	7.73	+0.88	7.77	7.73	71,748	8	6.86
TGT Zone 1	7.95	+0.86	8.06	7.91	34,664	9	7.10
Transco Station 30	7.83	+0.89	7.86	7.82	64,384	13	6.95
Regional Average	7.73	+1.00	—	—	—	—	6.73
TEXAS (WEST)							
El Paso Permian	7.34	+0.94	7.51	7.23	296,630	42	6.39
NNG Custer	—	—	—	—	—	—	—
Transwes E of Thor	—	—	—	—	—	—	6.37
Waha Hub	7.45	+1.00	7.50	7.38	135,000	17	6.45
Regional Average	7.37	+0.96	—	—	—	—	6.41
MIDCONTINENT							
ANR SW	7.25	+0.91	7.38	7.21	28,000	5	6.34
CenterPoint East	7.34	+1.17	7.44	7.31	18,500	7	6.16
CenterPoint West	—	—	—	—	—	—	—
NGPL-MC	7.27	+1.10	7.39	7.21	92,200	17	6.17
Oneok	7.35	+1.00	7.46	7.30	143,700	17	6.35
Panhandle	7.26	+1.05	7.36	7.18	337,346	56	6.21
Williams	7.36	+1.15	7.38	7.34	10,000	2	6.21
Regional Average	7.28	+1.06	—	—	—	—	6.23
GREAT PLAINS							
Emerson	7.90	—	7.92	7.89	49,933	7	—
NNG Demarc	7.76	+1.15	8.09	7.64	102,100	13	6.61
NNG Ventura	7.91	+0.78	7.92	7.89	8,000	2	7.13
Regional Average	7.81	+1.04	—	—	—	—	6.78
UPPER MIDWEST							
Alliance	8.25	+1.78	8.26	8.18	5,800	3	6.47
ANR ML7	8.25	—	8.25	8.25	3,200	1	—
Chicago Citygate	8.05	+0.79	8.23	7.96	122,200	21	7.27
Consumers	8.16	+0.72	8.20	8.10	90,600	21	7.43
MichCon	8.04	+0.62	8.15	7.95	105,400	23	7.41
Regional Average	8.08	+0.73	—	—	—	—	7.35
SOUTHEAST							
Tetco M1	8.21	+0.82	8.30	8.19	75,223	18	7.39
Transco Zone 4	8.46	+0.84	8.56	8.27	64,968	10	7.61

(continued on p.9)

If March ...

(continued from page 1)

few weeks, drawdowns of gas in storage have been running at higher-than-average levels, so natural gas inventories have been falling quickly toward more average levels, but it still looks like we may finish with about the same amount of gas in the ground this year. If we have another unusually mild summer, then we could see another year of lower-trending prices."

Natural gas storage data will be one of the most important energy-related metrics to watch in the next few weeks. If inventories sink below last year's finish, or even under the five-year average finish of 1,240 billion cubic feet, there could be a fundamental shift in the overall pricing structure for the summer season.

Projections for this year's ending indicate that stores will exit March near the 1,569 Bcf seen for the week ended Mar. 30, 2007. Based on the estimated Heating Degree Days (HDD) for the month of February, it wouldn't be out of the question to see a drawdown for the month just shy of 550 Bcf.

At current levels, that would bring inventories to a bit over 1,710 Bcf by the end of February. If March projections for another 195 Bcf to 210 Bcf in gas draw downs are on target, the industry would start the injection season with just over 1,510 Bcf in the ground — or about 70 Bcf less than last year and 185 Bcf less than the record set in 2006.

More normal winter weather has been responsible for the latest rally in gas prices, with recent cold snaps across the US prompting the faster-than-normal draw-downs in inventories. Even with the potential for a lower ending to storage inventories this year, early projections for another potentially mild summer could subdue the market bulls going forward, keeping natural gas prices contained in the same \$6 to \$8 range seen throughout 2007.

February weather also will be a key catalyst behind how storage inventories finish for the season. At present, some leading meteorologists are looking for warmish temperatures.

The latest model runs show another very strong push of warm air spreading across the entire central and eastern US during the first week of February, according to Steve Gregory, chief risk consultant for WeatherIntel Services. Relatively mild weather will continue through midmonth, when another surge of warming is likely to reinforce the warming trend.

From a demand perspective, most pundits agree that the mild summer of 2007, exacerbated by record LNG imports, was the primary catalyst leading to record-high storage inventories of 3,545 Bcf going into the 2007-08 winter season.

If similar summer fundamentals occur this year, then the US gas market could well see another record as global LNG production is rising along with US LNG import capacity (NGW Jan.21,p16).

"We might end this withdrawal season with either the same or a little less gas than we finished with last year, but if we get another mild summer and take into consideration the abundance of new supply on line this year, then we'll probably see the same sort of \$7 average pricing we had all year last year, along with the usual volatility," said a Texas-based gas trader.

Alan Lammey, Houston

NATURAL GAS BIDWEEK PRICES (cont.)

Flow Dates: 2/1-2/29

Price Point	February Avg. \$/MMBtu	Chg. from Prev.	High	Low	Vol.	Deals	Prev. Bid-Week
Transco Zone 5	9.50	+1.00	—	—	—	—	8.50
Regional Average	8.32	+0.85	—	—	—	—	7.48
APPALACHIA							
Col. Gas App. Pool	8.30	+0.88	8.50	8.26	45,617	14	7.42
Dominion North	—	—	—	—	—	—	—
Dominion South	8.51	+0.78	8.55	8.32	111,547	21	7.73
Regional Average	8.45	+0.83	—	—	—	—	7.62
EASTERN CANADA							
Dawn	8.29	+0.62	8.37	8.25	229,368	30	7.67
Iroquois	8.90	—	8.90	8.90	874	1	—
Niagara	8.65	+0.40	8.67	8.62	27,600	5	8.25
Regional Average	8.33	+0.64	—	—	—	—	7.68
NORTHEAST / MIDATLANTIC							
Algonquin	12.16	—	12.25	11.95	13,500	5	—
Dracut	11.10	-0.18	11.10	11.10	2,000	2	11.27
Iroquois Zone 2	—	—	—	—	—	—	11.87
Tenn Gas Zone 6	11.50	+0.04	11.50	11.50	1,250	1	11.46
Tetco M3	10.23	+1.07	10.41	10.19	77,265	17	9.15
Transco Z6 - NY	11.79	-1.37	13.10	10.22	94,317	25	13.16
Transco Z6 - Non-NY	10.68	+1.52	10.75	10.55	67,600	15	9.16
Regional Average	11.04	-0.46	—	—	—	—	11.49
ROCKIES							
Cheyenne Hub	7.22	+1.06	7.22	7.21	20,000	2	6.15
CIG	7.10	+1.10	7.32	—	56,000	14	6.00
Kern River / Opal	7.12	+1.12	7.31	7.07	307,900	44	6.00
NW Rockies	7.02	+1.09	7.17	7.00	60,281	8	5.93
Questar	7.15	+1.35	7.15	7.15	360	1	5.80
Regional Average	7.11	+1.10	—	—	—	—	6.01
SAN JUAN BASIN							
El Paso Bondad	7.26	+1.02	7.28	7.24	37,500	5	6.25
El Paso San Juan	7.29	+0.90	7.48	7.20	321,400	47	6.39
Regional Average	7.28	+0.90	—	—	—	—	6.38
PACIFIC NORTHWEST/WESTERN CANADA							
AECO	7.43	+1.21	7.80	7.28	191,427	31	6.22
Kingsgate	—	—	—	—	—	—	—
Malin	7.66	+0.86	7.82	7.54	50,000	8	6.80
NW Sumas	8.52	+1.06	8.61	8.36	40,941	10	7.46
Stanfield	—	—	—	—	—	—	—
Westcoast Station 2	7.80	+1.18	7.80	7.80	2,500	1	6.62
Regional Average	7.63	+1.08	—	—	—	—	6.55
CALIFORNIA							
Kern - Wheeler Ridge	—	—	—	—	—	—	—
PG&E Citygate	8.00	+0.89	8.21	7.87	137,000	20	7.10
PG&E South	7.72	+0.99	7.99	7.61	46,700	7	6.73
SoCal	7.59	+0.85	7.74	7.50	360,245	58	6.74
Regional Average	7.70	+0.89	—	—	—	—	6.81

CITYGATE PRICES

Price Point	February Avg. \$/MMBtu	Chg. from Prev.	High	Low	Vol.	Deals	Prev. Bid-Week
Austin, Tx.	7.57	+1.00	—	—	—	—	6.57
Denver, Co.	7.35	+1.10	—	—	—	—	6.25
Detroit, Mich.	8.20	+0.79	—	—	—	—	7.42
Los Angeles, Cal.	8.09	+0.85	—	—	—	—	7.24
Minneapolis, Minn.	8.01	+0.78	—	—	—	—	7.23
Nashville, Tenn.	8.01	+0.83	—	—	—	—	7.18
Philadelphia, Penn.	11.77	-1.37	—	—	—	—	13.14
Seattle, Wash.	8.58	+1.06	—	—	—	—	7.52
Washington, DC	11.75	-1.37	—	—	—	—	13.12

North Louisiana ...

(continued from page 1)

Chance told *Natural Gas Week*. Chance is president of Donner Properties of Shreveport, Louisiana. The company owns various mineral and surface interests in Louisiana, Texas, New Mexico and Oklahoma.

It has long been known that there are coal seams throughout North Louisiana, she said. Back in the late 1990s, there was a flurry of interest in developing the coal seams for methane, but low gas prices and technical issues made it a marginal project at best. All of that changed in 2002 when Devon Energy and King Drilling drilled test wells in Caldwell and LaSalle parishes and made a big discovery.

She said the result of the first tests showed that the lignite was actually a sub-bituminous coal with a high enough gas content for it to be economical. The 2002 tests led to several research projects by Clayton Breland with the Louisiana Geological Survey at Louisiana State University, Peter Warwick with the US Geological Survey and Gary Kinsland with the University of Louisiana at Lafayette.

Using a supercomputer at the Lafayette university's Louisiana Immersive Technologies Center, Chance said Kinsland digitized 500 well logs from across North Louisiana into a 3-D image that shows how widespread the targeted coal seams are. The information, to say the least, was impressive.

According to the computer study, some of the coal seams are 30 feet thick, and it is common to find anywhere from 20 to 30 seams in a well, though some are very thin.

"What they found was incredible," Chance said. The studies have shown that the coals in Louisiana are lignite at the surface, but at depths of 2,500 to 4,000 feet, where the natural gas is found, the coals are of a sub-bituminous grade. The kicker, she said, is that the deep coals contained more natural gas per ton than is normally found in the Powder River Basin.

The Powder River Basin covers an area of more than 12,500 square miles and has the estimated potential to yield around 39 trillion cubic feet of natural gas during a projected lifespan of 15 to 20 years, using traditional extraction techniques.

From the mid-1990s, when it was evident that there was something there, Chance said the state and members of the energy industry began working together to develop this new energy source. The first legislative hearing on coal-seam gas, was held in Baton Rouge in 2005.

The result of that and other meetings with a fairly receptive legislature was a change in state regulations that took into account CBM production and development — including tackling such issues as the treatment of waste water and land reclamation. Chance said Louisiana's severance tax on low-volume gas production is another key piece in the overall puzzle.

After more than a decade of work, the Coalbed Natural Gas Energy Consortium is being developed, Chance said. This consortium, which will be made up of large and small companies, will be a clearing house for the sharing of CBM-related data and technical information. A study group is currently setting up the rules and regulations for the consortium.

Chance said there are a number of reasons why she feels that, once started, "this is going to explode."

The first is that there is already an existing infrastructure of gathering systems to move the natural gas to production facil-

(continued on page 10)

North Louisiana ...

(continued from page 9)

ities and then to markets. The second is that, with the coal seams being on average between 3,000 and 3,400 feet deep, the average cost to drill and complete a well is about \$250,000. The early tests show the gas content to be economical and there is critical technical support available from the Louisiana Geological Survey and the University of Louisiana at Lafayette.

“The issues of water disposal, mineral ownership and

landowner cooperation are being or have been addressed,” she said. “But, most importantly, the current market price of natural gas supports the development.”

Several companies have projects under way, she said, with production rates from 10,500 to 250,000 cubic feet per day. Companies who have worked on CBM projects are GeoMet, Mark V Petroleum, Harvest Gas Management, Vintange Petroleum, EnerVest Operation, Southwestern Energy and Samson Resources.

(continued on page 11)

\$/MMBtu															
NGW'S MONTHLY WEIGHTED AVERAGES															
Price Point	Jan-08	Dec-07	Nov-07	Oct-07	Sep-07	Aug-07	Jul-07	Jun-07	May-07	Apr-07	Mar-07	Feb-07	Jan-07	2008 Average	2007 Average
Gulf Coast															
ANR SE	7.87	7.08	7.01	6.59	5.89	6.28	6.22	7.37	7.63	7.53	7.04	7.92	6.22	7.87	7.01
Col. Gulf - Erath	7.92	7.06	6.93	6.63	5.97	6.26	6.14	7.36	7.59	7.55	7.11	8.16	6.37	7.92	6.96
Col. Gulf - Rayne	7.90	7.04	6.96	6.65	6.00	6.20	6.20	7.36	7.63	7.63	7.18	8.22	6.48	7.90	6.98
Florida Zone 1	7.94	7.21	7.11	6.66	6.00	5.75	--	7.36	7.60	7.69	6.92	7.73	6.79	7.94	6.98
Florida Zone 2	8.07	7.19	7.07	6.80	6.05	6.29	6.35	7.38	7.64	7.34	7.11	8.13	6.37	8.07	7.11
Florida Zone 3	8.73	7.28	7.03	7.11	7.17	8.18	6.82	7.54	7.71	7.72	7.14	8.43	6.51	8.73	7.44
Henry Hub	7.87	7.10	7.01	6.68	5.97	6.23	6.20	7.48	7.64	7.55	7.09	8.11	6.34	7.87	7.00
NGPL-LA	7.73	6.79	6.02	6.53	5.87	6.26	6.01	7.29	7.37	7.28	6.73	7.45	6.09	7.73	6.70
Sonat	8.37	7.16	7.03	6.65	5.97	6.31	6.27	7.40	7.58	7.54	7.13	8.60	6.46	8.37	7.12
Tenn 500 So La Z1	8.00	7.04	6.95	6.60	5.94	6.41	6.24	7.33	7.67	7.61	7.14	8.76	6.47	8.00	7.04
Tenn 800 So La Z1	7.73	6.99	6.95	6.57	5.99	6.14	6.13	7.35	7.58	7.50	7.00	8.00	6.30	7.73	7.02
Tetco ELA	8.08	7.14	6.93	6.67	5.99	6.37	6.16	7.33	7.63	7.54	7.11	8.06	6.08	8.08	6.99
Tetco WLA	7.93	7.10	6.90	6.62	5.93	6.22	6.17	7.28	7.58	7.48	6.93	8.04	6.26	7.93	6.87
TGT Zone SL	7.86	7.11	6.90	6.61	5.82	6.27	6.12	7.33	7.63	7.53	7.00	8.21	6.50	7.86	7.09
Transco Station 45	7.95	6.99	6.99	6.69	5.98	6.26	6.22	7.39	7.61	7.56	7.02	7.84	6.15	7.95	6.87
Transco Station 65	8.22	7.23	7.09	6.76	5.98	6.59	6.26	7.47	7.69	7.62	7.14	8.50	6.40	8.22	7.14
Trunkline ELA	7.91	7.11	7.02	6.62	5.87	6.30	6.17	7.27	7.62	7.56	7.08	8.21	6.26	7.91	7.01
Trunkline WLA	7.96	7.06	7.12	6.66	6.09	6.35	6.18	7.44	7.62	7.50	7.05	8.23	6.48	7.96	7.11
Texas (South/East)															
Carthage Hub	7.70	6.63	6.06	6.51	5.63	6.11	5.88	7.02	7.31	6.96	6.46	7.13	6.41	7.70	6.53
Houston Ship Channel	7.77	6.72	6.18	6.78	6.12	6.06	5.91	7.36	7.48	7.29	6.56	7.19	6.65	7.77	6.88
Katy Hub	7.71	6.65	6.15	6.65	6.00	6.11	5.90	7.33	7.44	7.30	6.53	7.17	6.43	7.71	6.70
NGPL-South Texas	7.59	6.63	6.16	6.40	5.86	5.99	5.90	7.14	7.42	7.27	6.52	7.15	6.10	7.59	6.58
NGPL-TexOk	7.59	6.64	5.94	6.47	5.64	6.02	5.86	7.07	7.22	6.96	6.51	7.20	6.08	7.59	6.55
Tenn Zone 0	7.66	6.67	6.23	6.56	5.77	6.12	5.93	7.28	7.45	7.27	6.61	7.30	6.21	7.66	6.77
Tetco-East Texas	7.64	6.53	5.94	6.66	5.47	6.05	5.83	7.09	7.13	7.06	6.55	7.20	6.07	7.64	6.60
Tetco-South Texas	7.75	6.73	6.23	6.48	5.78	6.04	5.89	7.27	7.46	7.23	6.48	7.21	5.97	7.75	6.68
TGT Zone 1	7.79	6.96	6.82	6.64	5.90	6.23	6.14	7.30	7.60	7.47	6.97	8.00	6.37	7.79	6.94
Transco Station 30	7.78	6.69	6.26	6.57	5.94	6.00	5.94	7.30	7.49	7.29	6.60	7.18	6.11	7.78	6.69
Texas (West)															
El Paso Permian	7.50	6.57	5.63	6.32	5.35	5.83	5.80	6.66	6.90	6.68	6.03	7.01	6.11	7.50	6.33
NNG Custer	--	--	--	6.60	5.25	5.83	5.84	6.53	6.94	--	--	--	--	--	6.11
Transwes E of Thoreau	7.37	6.57	5.35	6.18	5.27	5.97	5.62	6.83	6.91	6.65	5.91	6.90	5.85	7.37	6.32
Waha Hub	7.56	6.56	5.67	6.45	5.38	5.94	5.88	6.91	7.17	6.99	6.10	7.10	6.27	7.56	6.43
Midcontinent															
ANR SW	7.42	6.44	5.41	6.26	5.31	5.77	5.74	6.61	6.71	6.64	5.94	7.19	6.14	7.42	6.41
CenterPoint East	7.59	6.32	5.60	6.27	5.26	5.80	5.82	6.71	6.82	6.85	6.22	7.01	6.13	7.59	6.42
CenterPoint West	7.40	6.34	5.36	6.22	5.21	5.76	5.73	6.68	6.83	6.79	6.14	7.21	6.44	7.40	6.21
NGPL-MC	7.36	6.39	5.34	6.20	5.30	5.68	5.65	6.52	6.73	6.66	5.97	7.00	5.90	7.36	6.24
Oneok	7.51	6.39	5.52	6.24	5.28	5.77	5.57	6.79	6.64	6.82	5.97	6.99	6.14	7.51	6.18
Panhandle	7.46	6.33	5.44	6.19	5.20	5.72	5.65	6.31	6.64	6.55	6.04	7.07	5.97	7.46	6.24
Williams	7.55	6.75	6.21	6.21	5.43	5.66	5.76	6.52	6.67	6.49	5.88	7.18	6.39	7.55	6.43
Great Plains															
Emerson	7.66	7.05	6.83	6.48	5.43	5.44	5.76	6.70	7.20	7.20	6.86	7.36	6.24	7.66	6.66
NNG Demarc	7.77	6.65	5.98	6.50	5.42	5.86	5.87	6.65	6.98	7.01	6.56	7.58	6.38	7.77	6.53
NNG Ventura	8.29	7.09	6.66	6.61	5.49	5.86	5.90	6.67	7.09	7.05	6.71	8.16	6.57	8.29	6.81
Upper Midwest															
Alliance	8.25	7.28	6.87	6.69	5.81	6.19	6.11	7.29	7.49	7.27	6.96	8.10	6.26	8.25	6.94
ANR ML7	8.15	7.35	7.23	6.86	6.12	6.33	6.20	7.55	7.93	7.71	7.32	8.08	6.26	8.15	7.05
Chicago Citygate	7.87	7.11	6.48	6.64	5.87	6.19	6.11	7.25	7.46	7.25	6.77	7.93	6.35	7.87	6.88
Consumers	8.15	7.30	7.21	6.90	6.04	6.24	6.37	7.61	7.83	7.75	7.15	7.70	6.28	8.15	7.02
MichCon	8.03	7.28	7.09	6.82	5.98	6.30	6.37	7.57	7.87	7.75	7.25	7.66	6.37	8.03	7.09

North Louisiana ...

(continued from page 10)

The main obstacle to exploiting the play is a lack of small rigs, Chance said. "All the drillers are booked. That's why I and others believe that the later part of 2008 and the early part of 2009 is when you will see this development really take off, and I think we will all be surprised at just how big a development this could turn out to be."

John A. Sullivan, Houston

Sage Grouse ...

(continued from page 1)

sage grouse lives, energy companies may need to significantly step up wildlife protection efforts — or halt operations in some areas — if the species was named endangered or threatened in the future.

The case that led to the ruling was a challenge to FWS actions by environmental group Western Watersheds Project, (continued on page 18)

NGW'S MONTHLY WEIGHTED AVERAGES (CONT.)															
\$/MMBtu	Jan-08	Dec-07	Nov-07	Oct-07	Sep-07	Aug-07	Jul-07	Jun-07	May-07	Apr-07	Mar-07	Feb-07	Jan-07	2008 Average	2007 Average
Southeast															
Tetco M1	7.90	7.11	6.99	6.70	5.96	6.41	6.30	7.62	7.74	7.64	7.13	7.98	6.41	7.90	7.05
Transco Zone 4	8.33	7.44	7.20	6.83	6.13	6.87	6.33	7.52	7.71	7.78	7.18	8.47	6.62	8.33	7.17
Transco Zone 5	10.01	7.76	7.50	7.18	6.28	6.83	6.62	7.60	7.91	7.84	7.59	9.31	6.92	10.01	7.77
Appalachia															
Col. Gas App. Pool	8.27	7.26	7.44	6.90	6.13	6.31	6.52	7.89	8.11	7.86	7.38	8.17	6.60	8.27	7.18
Dominion North	8.37	7.72	7.65	--	--	6.99	--	--	8.20	8.55	9.07	8.91	6.95	8.37	7.93
Dominion South	8.36	7.60	7.52	6.83	6.07	6.64	6.67	7.89	8.18	8.31	7.66	9.04	6.52	8.36	7.50
Eastern Canada															
Dawn	8.15	7.50	7.39	6.85	6.04	6.24	6.44	7.54	7.96	7.88	7.41	7.73	6.48	8.15	7.17
Iroquois	8.73	8.27	7.60	6.99	6.12	6.33	6.52	7.61	8.04	8.09	7.82	9.30	6.96	8.73	7.31
Niagara	8.39	7.78	7.57	6.93	6.13	6.35	6.53	7.65	8.05	8.09	7.63	8.33	6.73	8.39	7.30
Northeast / MidAtlantic															
Algonquin	11.76	12.34	7.93	7.19	6.55	7.00	6.91	8.06	8.31	8.52	8.25	10.60	7.41	11.76	8.15
Dracut	12.03	12.03	7.53	7.02	6.37	6.71	6.71	7.75	8.10	8.36	8.33	11.32	7.78	12.03	7.75
Iroquois Zone 2	14.40	12.05	7.90	7.09	6.25	7.08	6.80	8.00	8.26	8.49	8.33	11.30	7.73	14.40	8.21
Tenn Gas Zone 6	10.64	10.72	7.70	7.16	6.39	6.88	6.87	7.97	8.26	8.57	8.61	10.00	7.94	10.64	8.16
Tetco M3	10.13	8.30	7.73	7.14	6.46	6.98	6.85	8.02	8.24	8.41	8.37	9.81	7.20	10.13	7.93
Transco Z6 - NY	11.57	11.88	7.76	7.18	6.40	7.04	6.82	8.10	8.26	8.51	8.30	12.12	8.81	11.57	8.58
Transco Z6 - Non-NY	10.45	8.86	7.74	7.20	6.45	6.97	6.82	7.99	8.26	8.54	8.69	10.52	7.46	10.45	8.10
Rockies															
Cheyenne Hub	7.44	6.43	4.63	3.12	0.80	3.13	3.87	2.47	3.85	4.42	4.81	7.24	6.41	7.44	4.63
CIG	7.10	5.56	3.79	3.09	1.18	2.78	3.76	2.54	3.33	4.70	4.85	6.31	5.88	7.10	4.34
Kern River / Opal	7.14	5.64	3.29	2.80	1.21	3.04	3.82	2.75	3.92	4.55	4.93	6.32	5.79	7.14	4.80
NW Rockies	6.77	5.82	4.72	3.16	0.95	3.37	3.80	2.58	3.40	4.48	4.80	6.35	5.65	6.77	4.73
Questar	7.39	6.01	2.77	2.74	1.09	2.99	3.39	2.88	3.50	4.27	4.47	6.65	5.27	7.39	2.92
San Juan Basin															
El Paso Bondad	7.36	6.45	5.51	6.18	5.25	5.57	5.50	6.56	6.59	6.55	5.73	6.95	6.19	7.36	6.22
El Paso San Juan	7.50	6.54	5.44	6.27	5.24	5.56	5.50	6.52	6.68	6.65	6.09	6.92	6.12	7.50	6.32
Pacific Northwest/Western Canada															
AECO	7.54	6.42	6.16	6.28	4.87	4.89	5.19	6.13	6.71	6.97	6.94	7.23	6.22	7.54	6.26
Kingsgate	7.25	6.70	6.37	6.44	5.26	5.42	5.57	6.44	6.90	6.79	6.44	6.96	6.25	7.25	6.44
Malin	7.58	6.87	6.59	6.55	5.47	5.68	5.93	6.66	7.02	6.95	6.55	7.16	6.43	7.58	6.60
NW Sumas	8.41	7.59	7.29	6.72	5.26	5.40	5.55	6.36	6.86	6.78	6.55	7.22	6.46	8.41	6.57
Stanfield	7.67	6.81	6.66	6.50	5.31	5.43	5.74	6.48	6.91	6.89	6.57	7.04	6.26	7.67	6.48
Westcoast Station 2	7.83	6.85	6.45	6.39	4.88	5.00	5.14	6.08	6.51	6.45	6.39	6.77	6.10	7.83	6.18
California															
Kern - Wheeler Ridge	7.72	6.96	6.02	6.66	5.54	5.74	6.12	6.79	7.11	6.83	6.30	7.27	6.52	7.72	6.62
PG&E Citygate	7.97	7.21	7.00	7.01	5.93	6.10	6.30	7.09	7.47	7.36	6.90	7.55	6.74	7.97	6.97
PG&E South	7.57	6.90	5.37	6.58	5.40	5.89	5.97	6.75	7.02	6.95	6.22	7.19	6.39	7.57	6.48
SoCal	7.64	6.88	5.80	6.61	5.46	5.83	6.01	6.76	7.13	6.88	6.16	7.18	6.30	7.64	6.55
Intrastates															
Oklahoma	7.72	6.39	5.52	6.24	5.31	5.78	5.63	6.73	6.58	6.82	5.98	7.00	6.14	7.72	6.20
South Texas	7.78	6.72	6.17	6.64	6.09	6.02	5.89	7.36	7.48	7.35	6.59	7.21	6.34	7.78	6.90
West Texas	7.72	6.63	5.99	6.65	5.91	6.14	5.92	7.30	7.44	7.29	6.51	7.15	6.61	7.72	6.68

Note: The prices above are volume-weighted average prices for the price point and period indicated. The annual average and year-to-date prices are volume-weighted averages of the entire period shown and not simple averages of the component monthly averages.

Southeastern Nukes Get Reprieve from Drought

The current climate could conceivably threaten some nuclear reactors, and that's a literal statement, not a political one.

Some say the Southeast's year-long drought, broken briefly by a recent spate of rains, could impact nearly one-fourth of the nation's nuclear fleet if it continues unabated. Like fossil-fueled plants, nukes require considerable water for coolant purposes.

Charlotte, North Carolina-based Duke Energy, one of the largest investor-owned utilities in the country, recently reassured the public that its three nuclear plants were fine and that "tougher water restrictions would not be needed before August 2008."

More to the point, a vice-president of nuclear operations for Columbia, South Carolina, utility SCE&G proclaimed that its Summer Nuclear Plant "is nowhere near any lake levels or river flows that would inhibit operation because of the drought."

A cynic might point out that these recent rebuttals issued to wire services are to be expected from companies that are proposing new nuclear reactors at existing sites. Such responses could become spin for future funding and regulatory blessings.

But nuke owner-operators weren't alone in poo-hooing a Chicken Little reaction to what is, or isn't falling from the sky. A spokesman for the Nuclear Regulatory Commission in Region 2, which happens to embrace the nation's most drought-stricken area, told *Natural Gas Week* that such a doomsday occurrence is considered as an "outside" chance.

"That possibility is something," conceded the NRC's Ken Clark, "that we're keeping an eye on."

It's not as though natural gas will become the nation's baseload fuel anytime soon, even if the supply were there. And Clark noted that coolant water issues are not limited to nuclear generation.

"There's some concern for fossil and hydro plants as well," he said.

Indeed, one infamous example in the early days of energy market deregulation occurred in August 1999 when Cincinnati-based Cinergy defaulted on a number of power supply contracts, claiming force majeure, after a heat wave drained coolant tanks, impairing coal-fired plant performance and resulting in extreme power price volatility.

Power prices could rise, compared with previous periods, as nuclear output adjusts to keep up with available coolant water. Obviously, summer and early fall are times most threatening to nuke output.

Happily, recent rains in the Carolinas and other parts of the Southeast have brought respite to an area impacted by a yearlong dry spell. The region has captured the nation's sympathy, as in the case last fall of a chain of nurseries forced into bankruptcy, while one frivolous homeowner used much more than his share of the public water supply,

simply to keep his estate grounds lush.

The National Weather Service's recent drought maps, good through April, show near-term improvement in the Southeast, Mid-Atlantic and central West. So a respite in the Southeast this spring may be small comfort during a time with less power demand.

Those maps show an ongoing drought, however, in Southern California, part of the Texas Panhandle and South Texas. Intensified drought in the latter area could cast a metaphoric shadow over Exelon's plans to build a reactor on a greenfield site (NGW Dec.24,p9). The Chicago-based mega-utility signed a purchase order late last year with GE Hitachi Nuclear Energy for two Gen III+ Economic Simplified Boiling Water Reactors.

No doubt, some of the Southeast's largest water reservoirs have been impacted. The Associated Press reported

that Lake Norman, north of Charlotte, is hovering at more than a foot under the minimum required to effectively operate McGuire Nuclear Station, as stated in Duke Energy's operating license application.

Clark said that Duke has been doing modifications on its auxiliary feedwater system, which allow it to draw water from the uppermost of three lakes used in the process.

Just as a certain percentage of electrons traveling through transmission lines will be lost, some water is inevitably lost in the cooling process. Experts say the impact of evaporation can be substantial,

leading to the loss of almost half the water used for coolant purposes, depending upon variables such as ambient temperatures and equipment design.

Cooling towers are especially vulnerable to such losses. However, Clark pointed out that cooling towers are not an NRC requirement. Instead, they're required by the Environmental Protection Agency.

In Pennsylvania, where water supply is not an issue, the NRC last week approved a 13% uprate of PPL's Susquehanna Units 1 and 2, from about 1,200 MW to about 1,300 MW each.

If our climate is indeed growing warmer, perhaps all future reactors should be sited along the coastlines, as the ocean undoubtedly will rise as glaciers melt. Then again, too much water straining intake valves could push seaweed and other debris into the screens, a common — if not dire — problem regularly experienced by Pacific Gas & Electric's Diablo Canyon reactors, near San Luis Obispo on the West Coast.

Could drought affect our nation's security? You'll have to ask officials at Duke Energy's Catawba Nuclear Generating Station where a moat was dug after 9/11, to upgrade security at the plant, where large-scale use of reprocessed or mixed oxide fuel is being planned as an alternative to low-enriched uranium for light water reactors.

Bobette Riner, Houston

Persistent drought in the Southeast could threaten existing and planned nuclear stations in the region. However, recent rains have given nuke backers a blessed reprieve, and one of the region's largest utilities, Duke Power, says tougher water restrictions have been delayed until at least late summer 2008.

FutureGen Gasification Project Looks Near Death as Costs Spiral

Five years after Bush unveiled the FutureGen project in a State of the Union Address, efforts to build the world's cleanest coal-burning power plant for \$1 billion are all but dead.

It wasn't entirely the fact that the US Department of Energy, which was to underwrite three-fourths of the costs, woke up, smelled the coffee and realized that this particular latte was too pricey and decided to pull the plug. Odds that it would be built got longer as costs nearly doubled since it was first proposed.

It wasn't the fact that the 13 energy companies comprising the FutureGen Alliance — private partner with the feds on the project — selected Mattoon, Illinois, over Odessa, Texas, as the project's site, spurring rumors of political turf battles (NGW Dec.24,p9).

It wasn't the fact that coal generation can only get so clean — or else why are at least 33 other companies seeking permits to sequester carbon dioxide?

Instead maybe, just maybe — according to a policy blogger based in Illinois — it was the fact that the Alliance proposed paying its share through mortgage loans, a plan that unraveled as the sub-prime mortgage crisis deepened.

Bethany Jaeger, who is published in a news magazine put out by the Center for State Policy and Leadership at the University of Illinois at Springfield, says that although the DOE and the Alliance parted ways regarding the project's funding, FutureGen could very well be resurrected.

Calpine Emerges from Chapter 11 Protection

Houston-based independent power producer Calpine last week beat its self-imposed deadline to exit bankruptcy by one day.

When the company's reorg plan was approved in December by the US Bankruptcy Court, Southern District of New

York, spokesman Mel Scott told *Natural Gas Week* it expected to exit bankruptcy no later than Feb. 1 (NGW Dec.24,p9).

Calpine rose to fame building natural gas peaking plants in the early days of energy deregulation, then suffered a downturn after marketers imploded as a result of the West Coast power crisis — and fuel prices made peaker plants a less attractive option.

Last week, Calpine held an auction for one of the natural gas-fueled plants begun in 2001, but put on hold three-fourths of the way through construction. Cleveland-based FirstEnergy submitted the winning bid of \$253.6 million for the partially built, 707-MW natural gas combined-cycle generating plant in Fremont, Ohio.

The plant will have a maximum of 544 MW of load-following capacity and 163 MW of peaking capacity and, according to Calpine estimates, will require 12 to 18 months of additional construction costing \$150 million.

Although Calpine Chief Executive Robert P. May termed the project as "a non-strategic asset in the context of our successful Chapter 11 restructuring," he added that they "are extremely pleased with the bidding results for the divestiture of this asset and are now looking ahead to emerging from bankruptcy ... as a stronger and more competitive power company."

Indeed, the initial sale price proposed in an asset purchase agreement executed between Calpine and a Columbus-based power co-op, American Municipal Power, was \$124 million, about one-half the high bid in last week's auction.

SPOT ELECTRICITY TRADING

Trading Dates: January 28-February 1, 2008

NEW YORK MERCANTILE EXCHANGE (NYMEX) (HENRY HUB)

POINT	Avg. Price		Change	Year Ago	Month Ago
	This Week	Last Week			
Cinergy	\$11.80	\$22.75	-10.95	\$89.33	\$44.00
COB	86.80	92.56	-5.76	65.32	67.46
Comed	—	26.83	-26.83	84.17	15.83
Entergy	63.40	70.81	-7.41	73.50	43.75
ERCOT	58.38	64.88	-6.50	58.05	57.13
Into TVA	—	—	—	—	—
Mid-Columbia	84.73	89.72	-4.99	62.90	62.71
NEPOOL	81.93	113.13	-31.20	130.83	70.67
Palo Verde	66.60	63.96	+2.64	62.32	62.20
PJM-West	52.56	86.00	-33.44	105.83	31.83

Notes: (1) Prices in \$/MWh. (2) Prices are for next day peak delivery. Sources: Staff and wire reports.

COMPARATIVE FUEL PRICES

(Cash Market)

February 4, 2008

APPALACHIA

Appalachian Pool Divd (Util)	Ohio/Big Sandy River Coal
\$8.39/MMBtu	\$75.00/ton \$3.13/MMBtu

EAST COAST

New York City Gate	Heating Oil—No. 2*	Residual 0.30%	Residual 1%
\$8.94/MMBtu	252.80¢/gal \$18.23/MMBtu	\$84.59/bbl \$13.46/MMBtu	\$73.27/bbl \$11.65/MMBtu

GULF COAST

Natural Gas Texas Onshore Divd (Util)	Natural Gas Louisiana Onshore Divd (Util)
\$7.88/MMBtu	\$8.13/MMBtu

Heating Oil—No. 2*	Residual 0.70%	Residual 3%	WTI Cushing
248.14¢/gal \$17.89/MMBtu	\$74.50/bbl \$11.85/MMBtu	\$69.15/bbl \$11.00/MMBtu	\$91.37/bbl \$15.75/MMBtu

NOTES: (1) Residual=Residual Fuel Oil, priced exclusive of taxes; (2) WTI=West Texas Intermediate crude oil; (3) % = % of sulfur content. *Average sulfur content = 0.2%-0.5%.

SOURCES: Gas: Natural Gas Week; all prices volume-weighted. Oil: The weekly average of The Oil Daily's cash price postings.

Newfield Inks Contracts to Move Arkoma Basin NatGas Via New Pipe

Newfield Exploration has signed two agreements for firm transportation of a combined 250 million cubic feet per day of gas from the Woodford Shale play in the Arkoma Basin of southeastern Oklahoma.

The first agreement is for 200 MMcf/d of capacity on the Midcontinent Express pipeline, which is currently under development. The 500-mile natural gas pipeline will extend from southeast Oklahoma, across northeast Texas, northern Louisiana and central Mississippi, to an interconnection with the Transco Pipeline near Butler, Alabama. It will have an initial capacity of 1.4 billion cubic feet per day.

Newfield's gas will be delivered to Midcontinent Express at Bennington, Oklahoma through a new, 50-mile pipeline planned by MarkWest Energy Partners from the Woodford Shale.

Newfield also signed a five-year agreement to supply Laclede Energy Resources with gas through 2012. Laclede agreed to buy 40 MMcf/d in 2008 and 50 MMcf/d each following year through 2012.

"The Woodford Shale play is the fastest growing component of our portfolio today," said Newfield Chief Executive David Trice. Newfield's Woodford Shale output has grown from 25 MMcf/d in 2005 to 85 MMcf/d in 2006 and 165 MMcf/d in 2007.

The company expects a further increase to 250 MMcf/d in 2008.

Gulf of Mexico:

Pride International has landed a five-year contract in the Gulf of Mexico from BP worth about \$876 million for an ultra-deepwater drillship that is under construction and won't be ready for service until 2010.

Houston-based Pride International said the contracted drillship is being built at Samsung Heavy Industries' shipyard on the island of Geoje, South Korea. The ship is expected to be completed and ready to join the Pride International fleet, according to Samsung Heavy Industries, by the first quarter of 2010.

The five-year BP contract is expected to begin in the third quarter of 2010 and is equal to a dayrate of \$480,000.

The ship will be capable of working in waters up to 12,000 feet deep and drilling to a depth of 40,000 feet. In addition, the vessel is being modified to include a 160-ton crane that will allow the crew to carry out subsea construction, such as the placement of production trees and manifolds in water up to 10,000 feet without interfering with drilling operations.

At a cost of about \$730 million, the vessel will be the first of three ultra-deep drilling ships to join Pride International's fleet starting in 2010.

W&T Offshore has closed a deal to buy Apache's interest in the Ship Shoal 349 field off the coast of Louisiana for \$116 million in cash.

The subsalt field — also known as Mahogany — is currently producing 1,500 barrels per day of oil and 2.4 million cubic feet per day of gas. W&T Offshore said the field covers two fed-

eral offshore lease blocks, Ship Shoal blocks 349 and 359.

The company first acquired an interest in the field in 1999. With the closing of the Apache transaction, W&T Offshore now has a 100% working interest in the field.

California:

Foothills Resources has started drilling its GB 4 well on the deep Grizzly Bear prospect, which underlies the Grizzly Bluff Field in the Eel River Basin in Humboldt County. The 9,300-foot well will test potential gas plays below the Lower Rio Dell formation.

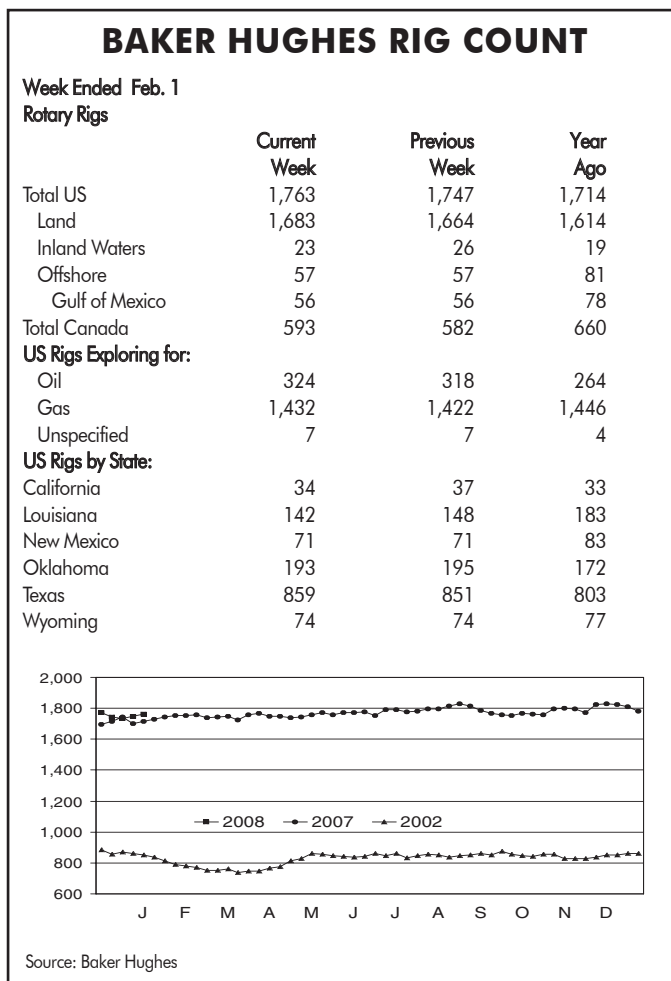
Foothills Resources President John Moran said the upper portion of the GB 4 well will be drilled as a twin to a well drilled in 1964 that tested 5 million cubic feet of gas per day over a four-day period from the Lower Rio Dell formation.

Moran said the wells drilled in the 1960s and 1970s were not put on production and were later abandoned because of the weak natural gas market at the time, and the expense of building a pipeline connection. The rising cost of natural gas could make it economical to develop the resource, he said.

Louisiana:

Ecco Energy has acquired a 3,600 acre lease in the Bate-man Lake and Sweet Bay Lake area in St. Mary Parish in a

(continued on page 15)



Regional Market Roundup

(continued from page 14)
deal valued at \$2.4 million.

Ecco Chief Executive Sam Skipper said the acreage had previously been under a letter of intent for a farm-out agreement with Vtex Energy. He said the property has already produced more than 120 Bcf of natural gas and that Ecco estimates it has at least 10 Bcf of proven reserves yet to be developed.

* * *

Grand Gulf Energy saw production from its assets in the US more than double in the fourth quarter of 2007.

A spokesman for the Perth, Australia-based company said the independent saw net production rise to 39.7 million cubic feet per day from 17.2 MMcf/d in the third quarter. Net average daily output rose to 442,000 cubic feet per day from 192 Mcf/d.

The spokesman said Grand Gulf saw its output boosted by the start of production from the ConocoPhillips-4 well in Terrebonne Parish at a gross rate of 3 MMcf/d.

* * *

Pryme Oil & Gas said it would postpone drilling on its Turner Bayou prospect after one of its first two wells on the project came up dry.

Brisbane, Australia-based Pryme said its Bordelon 25-1 well struck natural gas in the Frio formation as expected after the well reached 4,900 feet. A company spokesman said that the DuPuy 11-1 well was plugged after it failed to find hydrocarbons after reaching 4,990 feet.

The company has struck natural gas at its Raven and Saline Point projects, both in Louisiana.

Pennsylvania:

Consol Energy will acquire CNX Gas in a stock-for-stock transaction valued at \$932 million. The coal mining company current-

ly owns 81.7% of CNX's almost 151 million shares outstanding.

Under the terms of the buyout, Pittsburgh-based Consol Energy will offer CNX Gas stockholders 0.4425 shares of Consol for each CNX share held that Consol does not already own. Consol Energy officials said they expect the deal to close in the first half of the year.

CNX Gas reported last week that its quarterly production totaled 14.3 billion cubic feet, or an average of 155.6 million cubic feet per day, compared with 14.6 Bcf, or 158.9 MMcf per day, for the year-ago period. CNX said the production cut reduced its profit for the quarter by \$7.9 million (5¢/share). Prior quarter adjustments related to outside sales also reduced its profit by \$5.7 million (4¢/share). Total production from non-mining-related activity increased 10% to 124.3 MMcf/d at the end of 2007.

Also noted:

CEO named: E. Donald Terry has been appointed the interim president and chief executive of Houston-based Superior Offshore International. Terry's appointment followed the resignation of James J. Mermis as president and chief executive.

* * *

Facility opened: Flotek Industries has opened its CESI Chemical Research and Development Facility in The Woodlands, Texas. The facility was recently moved to Houston from Denver. Phillip Kaufman serves as vice president of research and development at CESI Chemical, a subsidiary of Flotek.

* * *

VP to resign: Philip G. Behrman, senior vice president of Worldwide Exploration for Marathon Oil said he will retire effective mid-year 2008. Until then, Behrman will continue to serve in his existing role.

GAS PRICE TRENDS																
(\$/MMBtu)	CALIFORNIA		ROCKY MTNS	NEW MEXICO	TEXAS				MID-CONT.	LOUISIANA			MID-WEST	APPA-LACHIA	SOUTH-EAST	NEW ENG.
	South	North			Gulf Coast Offshore	Gulf Coast Onshore	Central	West		Gulf Coast Offshore	Gulf Coast Onshore	Northern Louisiana				
	Feb 4, 2008															
Inter (well)	—	—	7.37	7.38	7.78	7.65	7.64	7.49	7.45	7.88	7.95	7.93	—	8.20	8.07	—
Intra (well)	7.66	—	7.34	—	7.79	7.67	7.64	7.49	7.43	7.88	7.95	7.92	—	—	—	—
Dlvd (pipe)	7.86	7.86	7.49	7.55	7.85	7.73	7.73	7.56	7.55	7.95	8.02	8.00	8.05	8.31	8.22	8.94
Dlvd (util)	7.86	7.86	7.82	7.70	—	7.88	7.90	7.64	7.80	—	8.13	8.14	8.09	8.39	8.63	9.09
January 2008																
Inter (well)	—	—	6.98	7.33	7.72	7.59	7.63	7.45	7.41	7.84	7.93	7.72	—	8.21	8.14	—
Intra (well)	7.65	—	6.95	—	7.73	7.61	7.63	7.45	7.39	7.84	7.93	7.71	—	—	—	—
Dlvd (pipe)	7.67	7.58	7.10	7.50	7.79	7.67	7.72	7.52	7.51	7.91	8.00	7.79	7.85	8.32	8.29	11.57
Dlvd (util)	7.67	7.60	7.43	7.65	—	7.82	7.89	7.60	7.76	—	8.11	7.93	7.87	8.40	8.84	11.57
Fourth Quarter 2007																
Inter (well)	—	—	4.41	5.90	6.49	6.32	6.32	6.13	5.92	6.82	6.82	6.75	—	7.14	6.92	—
Intra (well)	6.41	—	4.38	—	6.50	6.34	6.32	6.13	5.90	6.82	6.82	6.74	—	—	—	—
Dlvd (pipe)	6.43	6.68	4.53	6.07	6.56	6.40	6.41	6.20	6.02	6.89	6.89	6.82	6.73	7.25	7.07	8.82
Dlvd (util)	6.43	6.58	4.86	6.22	—	6.55	6.58	6.28	6.27	—	7.00	6.96	6.80	7.33	7.43	8.82
2007 Average																
Inter (well)	—	—	4.58	6.15	6.65	6.58	6.58	6.31	6.22	6.87	6.96	6.87	—	7.23	7.04	—
Intra (well)	6.54	—	4.55	—	6.66	6.60	6.58	6.31	6.20	6.87	6.96	6.86	—	—	—	—
Dlvd (pipe)	6.56	6.60	4.70	6.32	6.72	6.66	6.67	6.38	6.32	6.94	7.03	6.94	6.81	7.34	7.19	8.15
Dlvd (util)	6.56	6.59	5.03	6.47	—	6.81	6.84	6.46	6.57	—	7.14	7.08	6.88	7.42	7.60	8.15
February 2007																
Inter (well)	—	—	6.20	6.75	7.15	7.16	7.06	6.99	7.10	8.02	8.16	7.93	—	8.63	8.11	—
Intra (well)	7.17	—	6.17	—	7.16	7.18	7.06	6.99	7.08	8.02	8.16	7.92	—	—	—	—
Dlvd (pipe)	7.19	7.16	6.32	6.92	7.22	7.24	7.15	7.06	7.20	8.09	8.23	8.00	7.85	8.74	8.26	10.37
Dlvd (util)	7.19	7.17	6.65	7.07	—	7.39	7.32	7.14	7.45	—	8.34	8.14	7.93	8.82	9.07	10.37

NOTES: (1) Inter = Interstate Intra = Intrastate Well = Wellhead Dlvd = Delivered Pipe = Pipeline Util = Utility (2) This table presents historical data from the Gas Price Report. (3) R = Revised. (4) Mid-Cont. = Mid-Continent New Eng. = New England (5) Since Jan. 3, 1994, California prices have been divided into North to reflect gas delivered from Pacific Gas Transmission Co. to northern California and South to reflect gas delivered to southern California via the Transwestern Pipeline Co., El Paso Natural Gas Co. and Kern River Gas Transmission pipeline systems. Previous reporting for the state concentrated on southern California; thus, the historical prices in the South column properly reflect trading for southern California. Natural Gas Week has no similar history of prices for northern California. (6) All prices are volume-weighted.

New Rex Mirrors, Contrasts with Grandpa of West-East Pipes, TCPL

The last time natural gas flow patterns changed as much as they will when the Rockies Express (Rex) pipeline is completed next year was almost a half century ago, when North America's first west-to-east pipeline was constructed.

That was TransCanada PipeLines (TCPL), built to carry the massive natural gas discoveries found in Alberta during the post-World War II drilling boom to major population centers in eastern Canada, such as Toronto and Montreal, and industrial markets in the surrounding provinces of Ontario and Quebec.

As with Rex, producers were major backers of the project, which wouldn't have been built without their strong support. But there is one key difference: Rex is an entirely market-driven project, built without government guarantees. TCPL would not have been built without the financial backing of the Canadian federal government.

The issue was a hot topic in the Canadian Parliament during the summer of 1956. Several issues came under debate. One was over ownership — whether it should be private or government. And if private, should American interests be allowed?

The ultimate outcome was a 50-50 ownership split between US and Canadian investors and government-backed loans to cover the longer, more expensive all-Canadian route that the government demanded. An oil pipeline built earlier to carry crude produced in Alberta to refineries in eastern Canada followed a shorter route that crossed the US.

In 1957, construction began on the first line from the Alberta-Saskatchewan border going east. Gas flowed into Toronto and Montreal by the end of that year. When work was completed in October 1958, the line spanned more than 2,200 miles, the longest single pipeline ever built up to that date.

Rex doesn't have much romance in its history, reflecting the no-nonsense corporate culture of project developer and half-owner Kinder Morgan Energy Partners (KMP) of Houston. It is strictly business, intended to move gas from the Rocky Mountains to markets willing to pay the price a producer seeks.

Other partners in the \$4.4 billion project are units of Sempra Energy and ConocoPhillips, one of the major producers in the Rockies and a large capacity holder in the pipeline.

Another difference between the two pipes is the configuration. TCPL was designed primarily as a bullet line, to take gas from Alberta to the big eastern markets. Some gas was dropped off to small communities along its route, but those volumes were miniscule compared to what would be delivered at the eastern end.

Rex is a massive header system. It will interconnect with any pipeline it crosses that permits the connection. As every pipeline in North America these days seeks maximum operational flexibility, that means every market east of the Rockies, including the US Midcontinent, Southwest and Gulf of Mexico, could be tied into Rex.

As an example of its market-driven configuration, Rex is being built in phases, each of which has a commercial definition by its connection to a specific pipeline or trading hub.

Thus, each phase generates cash flow essentially from the first day of operations.

The first segment of the project connected the Meeker Hub in Colorado with the Wamsutter Hub in Wyoming, a 136-mile, 36-inch line that went into service in February 2006. Next was a 192-mile, 42-inch pipeline from the Wamsutter Hub to the Cheyenne Hub in Colorado that began moving gas a year later. The combined 328-mile segments have a capacity of about 750 million cubic feet per day following the startup of the Enterprise Products gas processing plant at Meeker last year.

Last month, the first transcontinental segment, Rex West, started flowing gas through 500 miles of 42-inch pipe from the Cheyenne Hub to Brown County, Kansas (NGW Jan.21,p2). It can deliver into Kinder Morgan Interstate Gas Transmission, Northern Natural Gas, Natural Gas Pipeline of America, and ANR Pipeline.

Already, Rex is having an impact on the market. Production rates have yet to rise more than incrementally, meaning that the volumes going into Rex, estimated at more than 400 MMcf/d the first week, caused reductions in deliveries into other pipes in the region. Prices also have flattened so that basis differentials now reflect little more than transportation tariffs in some areas.

Current plans call for Rex to terminate near Clarington, Ohio, near the Pennsylvania border, for a total length of 1,678 miles and a capacity of 1.8 billion cubic feet per day. If the sponsors proceed with a 375-mile extension as far as New Jersey and perhaps beyond (see p3), Rex would be almost as long as the original TCPL mainline.

Rig count: There were 562 rigs drilling for natural gas and oil in Western Canada as of Jan. 29, 30 more than reported for the previous week by the Canadian Association of Oilwell Drilling Contractors (CAODC).

During the same period a year ago, CAODC reported that 617 rigs were drilling in the region.

A total of 893 rigs are available in the region, the same as in the previous report, the CAODC said.

Working gas in all Canadian storage facilities fell to 57.2% of capacity as of Jan. 25, with a 46.8 billion cubic foot decrease from the week before, according to the most recent Canadian Enerdata gas storage survey.

A total of 373.3 Bcf of gas was in storage last week; capacity is 653.1 Bcf. Stores were 75.1% full a year ago.

Working gas levels in facilities west of the Manitoba-Saskatchewan border fell to 218.8 Bcf, down from 242.4 Bcf the week before; capacity is 402.1 Bcf.

Working gas levels east of the border fell to 154.4 Bcf, down from 177.7 Bcf the previous week; capacity is 251.0 Bcf.

The composite spot import price this week is US\$7.78/MMBtu for gas leaving Canada and entering the US through six border-crossing points.

Natural Gas Week's Feb.5, 2007, average for Canadian exports was US\$7.19/MMBtu.

Canada's average spot wellhead price is US\$7.40/MMBtu; the price for the same week a year ago was US\$6.60.

Barbara Shook, Houston

E. Canadian Shale Plays Taking Off; Australian Firm Targets Quebec

Australian coalbed methane player Molopo has agreed to acquire 1.85 million acres of land in an emerging shale gas play in the Canadian province of Quebec for \$3.2 million.

Molopo hopes to prove up a multiple-trillion cubic feet gas resource to sell into high-priced US gas markets.

The Australian company said 16 wells previously drilled in nearby acreage flowed gas from the Loraine and Utica shales. Those wells — most of which were drilled in the 1970s and targeted deeper and more conventional reservoirs — were not stimulated and indicated rates ranging up to 2.9 million cubic feet per day.

Molopo plans to spend \$1.2 million identifying prospective areas for initial drilling trials during the next 12 months.

Meanwhile, Calgary-based Triangle Petroleum — which has been probing the natural gas potential of shales in Nova Scotia — said last week that logs from two recently drilled wells suggest that the company has uncovered a “significant unconventional resource play” in the eastern Canadian province.

Two wells — the Kennetcook-1 and Kennetcook-2 — indicate a resource range of 89 billion cubic feet to 109 Bcf of gas in place per square-mile section from the shales of the Horton Bluff formation, Triangle said.

The wells were completed and fracture-stimulated in organic rich shale zones. Estimated gas in place for the completed zones is 42 Bcf per section for Kennetcook-1 and 76 Bcf per section for Kennetcook-2.

Triangle is an exploration company focused on emerging Canadian shale gas projects in Nova Scotia and New Brunswick, where it holds 584,000 gross acres, and on the established Fayetteville shale gas play in Arkansas, where it holds 20,000 gross acres.

The growing potential of Maritime Canada shale plays is thought to be behind a recent proposal for a 1.2 billion cubic foot per day pipeline originating at a new 4 Bcf storage project near Alton, Nova Scotia (NGW Jan.28,p12).

Indonesia Pushing Forward with CBM Plans

Indonesia's plans to develop coalbed methane as an energy source are slowly gaining momentum, despite some regulatory hiccups, with the first production sharing contract set to be inked in February.

The deal will be signed with a consortium of local and foreign firms already involved in coal mining, according to Evita Legowo, assistant to Indonesia's energy and mineral resources minister.

Indonesia has targeted CBM projects as a key element of its energy diversification policy. In-place reserves of CBM are estimated at 450 trillion cubic feet, and Jakarta is targeting output of 100 million cubic feet per day before 2015.

CANADIAN PRICE REPORT

(\$U.S. per MMBtu/\$Can per Gigajoule)

	— BRITISH COLUMBIA — Huntingdon/ Kingsgate/ Eastport			— ALBERTA —			SASKATCHEWAN	MANITOBA	— ONTARIO —		
	Total Province	Sumas Border	Eastport Border	Total Province	AECO-C* Hub	Empress Border	Total Province	Monchy Border	Emerson Border	Toronto City Gate	Niagara Border
	Spot	Spot	Spot	Spot	Spot	Spot	Spot	Spot	Spot	Spot	Spot
FEBRUARY 4, 2008											
Wellhead U.S. \$	8.14			7.69			7.69				
Canadian \$	7.75			7.32			7.32				
Delivered to Pipe U.S.\$	8.29	8.90	7.68	7.84	7.96	8.02	7.84	7.81	7.93	8.26	8.43
Canadian \$	7.89	8.47	7.31	7.46	7.58	7.63	7.46	7.43	7.55	7.87	8.03
JANUARY 2008 AVERAGE											
Wellhead U.S. \$	7.68			7.08			7.08				
Canadian \$	7.26			6.69			6.69				
Delivered to Pipe U.S.\$	7.83	8.41	7.25	7.23	7.54	7.68	7.23	7.61	7.66	8.15	8.39
Canadian \$	7.40	7.95	6.86	6.83	7.13	7.25	6.83	7.19	7.24	7.71	7.92
4TH QUARTER 2007 AVERAGE											
Wellhead U.S. \$	6.69			6.01			6.02				
Canadian \$	6.21			5.58			5.59				
Delivered to Pipe U.S.\$	6.84	7.16	6.52	6.16	6.29	6.41	6.17	6.48	6.80	7.31	7.45
Canadian \$	6.35	6.65	6.06	5.72	5.85	5.96	5.73	6.02	6.31	6.79	6.92
2007 AVERAGE											
Wellhead U.S. \$	6.35			5.89			5.88				
Canadian \$	5.90			5.48			5.47				
Delivered to Pipe U.S.\$	6.50	6.57	6.44	6.05	6.26	6.40	6.03	6.56	6.66	7.17	7.30
Canadian \$	6.04	6.11	5.98	5.62	5.82	5.95	5.61	6.09	6.18	6.66	6.78
FEBRUARY 2007 AVERAGE											
Wellhead U.S. \$	6.96			6.50			6.49				
Canadian \$	7.73			7.21			7.20				
Delivered to Pipe U.S.\$	7.09	7.22	6.96	6.62	7.23	7.51	6.61	7.26	7.36	7.73	8.33
Canadian \$	7.87	8.01	7.72	7.35	8.02	8.33	7.34	8.06	8.17	8.58	9.24

NOTES: Prices represent volume-weighted averages of the most recently reported gas sales contracts and price negotiations. *Denotes pricing at Alberta Energy Co.'s marketing hub in southeastern Alberta. R=Revised.

Sage Grouse ...

(continued from page 11)

in which Idaho US District Judge B. Lynn Winmill said the agency's exclusion of the species was influenced by politics instead of "the best science," as required by the Endangered Species Act. The interference of former Interior Department official Julie MacDonald, who resigned in May following accusations of alleged manipulation of wildlife protection studies, was also cited in the ruling.

Now, FWS must repeat a 12-month review of sage grouse populations. Western Watersheds Project has moved to take the matter further, requesting the agency finish by May 2008.

Wyoming's congressional delegation, however, says the Interior Department should appeal the decision. Right after the ruling, Sens. John Barrasso and Mike Enzi and Rep. Barbara Cubin released a statement supporting FWS' original decision on sage grouse.

"Wyoming depends on ranching, tourism, oil and gas development, mining and hunting. All could be curtailed or eliminated if such a listing decision were to occur," the lawmakers wrote in a letter to Interior Secretary Dirk Kempthorne. "The people of Wyoming have always been focused on protecting

the sage grouse and its habitats. Since the FWS decision not to list, the state has increased its efforts."

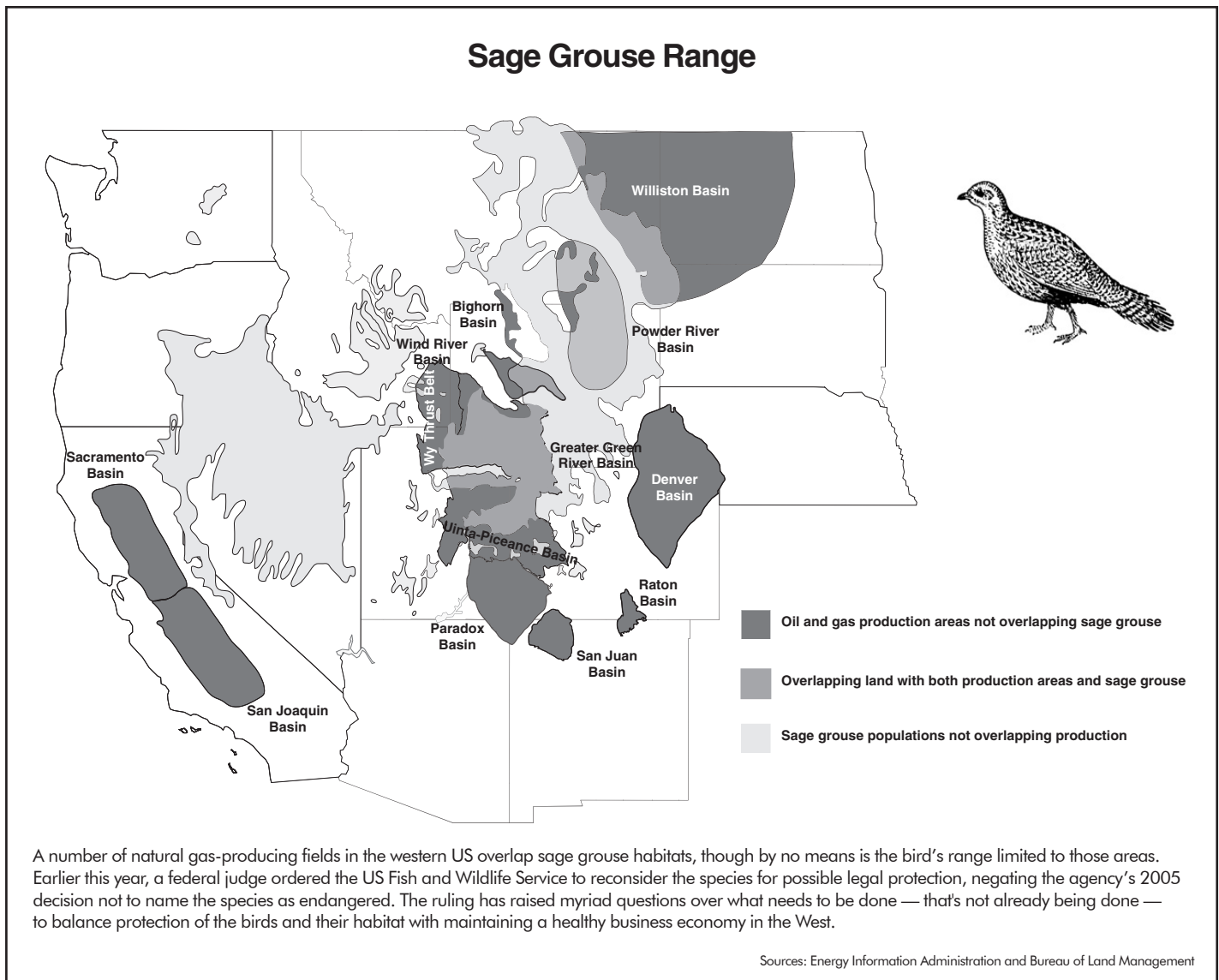
Although much of the wildlife debate currently centers on the sage grouse, FWS announced in January that it will begin to consider listing another animal dependent on western sagebrush for food and shelter: the pygmy rabbit, a one-pound, foot-long rabbit living in dense sagebrush areas where soil is loose enough to dig burrows. The FWS rejected a petition to list the species in 2005, but this past fall, Idaho US District Judge Edward Lodge said the agency must reconsider the species.

FWS will not comment on the sage grouse controversy or criticism of past wildlife studies because legal proceedings have not closed, an agency spokesman said. When FWS first chose not to list sage grouse in 2005, however, officials said their decision was based on findings indicating that 92% of sage grouse groupings occur in 10 major populations in eight Western states, five of which are "large and expansive," said FWS Director Steve Williams.

To outside opponents, a sage grouse listing won't be worth the economic cost to businesses and consumers in need of sagebrush lands for harvesting energy and other purposes, they say.

"Any activity permitted, authorized or licensed by the fed-

(continued on page 19)



Sage Grouse ...

(continued from page 18)

eral government — anything with a federal nexus — would require consultation with the [FWS] over potential impacts of sage grouse,” said Kent Holsinger, an attorney practicing endangered species law in the western Rockies.

“The practical result of this is in dollars and delays,” he said. “Consultations can drag on for months, and in some cases years. I know of a single consultation by a single company that has cost upward of \$1 million, with annual monitoring costs of up to \$200,000. So the economic impacts of a sage grouse listing would be absolutely devastating to the West.”

Sage grouse are known for a unique mating ritual, in which males dance on naturally elevated platforms called “leks” to attract females. The first American to name the bird was Meriwether Lewis, who encountered sage grouse during Lewis and Clark’s exploration of Western lands prior to the Louisiana Purchase in 1803.

Proponents of a sage grouse listing argue that oil and gas drilling — among other causes, such as grazing — severely disrupt the sage steppe ecosystem, and that interference with sage grouse habitat should be regulated more closely.

“Over the last 120 years or so, we’ve lost about 50 percent of that sage steppe ecosystem,” said Western Watersheds Project Executive Director Jon Marvel. “That decline has coincided with a decline in sage grouse numbers of about 80 percent, and overall it continues to decline. Without intervention to protect its remaining habitat, it is at high risk of extinction.”

“Since all gas development projects alter sage grouse habitat by building roads and drilling platforms — and changing the connectivity of the landscape for sage grouse by fragmenting it — there is no doubt there would be negative consequences that would be identified for sage grouse,” Marvel said.

If sage grouse were listed, energy producers may need to alter drilling techniques by combining or sharing pipelines, or by constructing transportation routes more carefully to tiptoe around sagebrush. The mitigation efforts that would be required are only speculative, as is the distance land users would need to stay from the birds.

“There’s controversy right now over how close activity can occur to a sage grouse lek. Some folks believe activity within a quarter mile of a lek would be acceptable. Others are pushing for no activities within seven miles of a lek,” Holsinger said.

Energy production overlaps sagebrush lands mostly in

Utah, Colorado, Idaho and Wyoming. Sage grouse can be found in 10 Western states, spanning the West Coast; eastward as far as South Dakota; and northward into Alberta and Saskatchewan.

Among those that would need to step up protection efforts if sage grouse were listed include energy producers in the northwestern Colorado Piceance Basin — often considered the largest natural gas field in the lower 48 — as well as Jonah field, one of the largest natural gas fields in Wyoming.

Some energy companies producing in sagebrush lands have begun drilling techniques designed to reduce landscape damage. Directional drilling, which involves a single large drilling pad instead of a handful of smaller drilling pads, is being used to reduce cumulative disturbance area. Also, a few companies are using wooden pads to minimize surface damage.

Conservation and land protection projects have been started by government agencies, nonprofits, business leaders and private citizens to protect sagebrush lands. Over 60 projects have formed in Wyoming alone, including efforts related to grazing management, habitat improvement and research, according to Tom Christiansen, sage grouse program coordinator for Wyoming Game and Fish.

The recent federal ruling wasn’t the first inquiry involving allegations that FWS manipulated endangered species decisions. In spring 2007, Interior Department Inspector General Earl Devaney found that former Deputy Assistant Secretary Julie MacDonald adjusted scientific findings and used bullying tactics during wildlife protection reviews. MacDonald later rebutted parts of the report as unfounded, adding that in her view, she should have been given an opportunity to respond before Devaney drew his conclusions and released them to the public.

Environmental group Center for Biological Diversity, currently seeking legal action against FWS decisions, says political games were behind past reviews of sage grouse along with two other species dwelling in western sagebrush lands: the white-tailed and Gunnison’s prairie dogs.

“This administration, particularly the Interior Department, has an incredibly poor record with regard to listing species under the Endangered Species Act that are significantly scientifically impaired,” said Center for Biological Diversity attorney Bill Snape, adding, “The sage grouse is just another example on that sad and sorry list of species that haven’t received protection, but should.”

Lauren O’Neil, Washington

Natural Gas Week is published every Monday by Energy Intelligence Group, Inc., Houston Tel.: 1 (713) 222-9700. Fax: 1 (713)222-2948. Washington Tel.: 1 (202) 662-0700. Fax: 1 (202) 783-8230. For subscription information, address changes and other customer service, call the Circulation Department in New York, N.Y., Tel.: 1 (212) 532-1112, Fax: 1 (212) 532-4479.

COPYRIGHT © 2008 by Energy Intelligence Group, Inc. (“EIG”) ISSN 8756-3037. *Natural Gas Week* ® is a registered trademark of EIG. All rights reserved. Access, distribution and reproduction are subject to the terms and conditions of the subscription agreement and/or license with EIG. Access, distribution, reproduction or electronic forwarding not specifically defined and authorized in a valid subscription agreement or license with EIG is willful copyright infringement. Additional copies of individual articles may be obtained using the pay-per-article feature offered at www.energyintel.com.

Information in this publication is provided to EIG by industry sources and other data providers. EIG does not warrant the accuracy, completeness, or any other aspect of that information. **ALL INFORMATION IS PROVIDED “AS IS.”** In no event shall EIG be liable for incidental or consequential damages. For price reporting methodology see “Free Resources” at www.energyintel.com.



Published by: Energy Intelligence Group, Inc.

Chairman: Raja W. Sidawi

President: Thomas E. Wallin

Editor: Tom Haywood (thaywood@energyintel.com)

Markets Editor: Michael Sultan

Editor-at-Large: Sarah Miller

Staff Reporters: Greg Couturier, Robert Dillon, Jeff Gosmano, Andrew Kelly, Alan Lammey, Lauren O’Neil, Bobette Riner, Barbara Shook, John Sullivan

Production Manager: Terry King. *Production Coordinator:* Katharina Martin

Japan Getting Closer to Shaking Off Shackles of LNG Dependence

The headline sounded ominous enough: "Japan Mines 'Flammable Ice,' Flirts with Environmental Disaster." But a closer reading revealed a more hopeful side.

Japan is poised to unlock the secret of mining methane hydrates, freeing itself within 10 years from almost total dependence on LNG imports.

Japan, through its public-private MH21 Research Consortium, is conducting drilling and production tests during the second phase of research into extracting natural gas from the world's vast methane hydrate deposits.

Pride probably helps explain Japan's intense motivation, but there is also a powerful economic incentive to hit the 2016 production goal, as Japan spent \$23.3 billion importing more than 3 trillion cubic feet of gas into the country, according to Bloomberg. More to the point, hydrate mining is thought to become economically viable with oil trading above \$54/bbl, and one major Japanese utility recently paid \$20/MMBtu for an LNG shipment.

State-controlled Japan Oil, Gas and Metals National Corp. (Jogmec) has joined US and Canadian efforts to coax gas from the voluminous reserves trapped in the arctic tundra. But of more interest to the Japanese are the methane hydrate deposits known to exist in deep water off its eastern coast. These are estimated to contain about 261 trillion cubic feet of reserves, or enough gas to satisfy the nation's needs for a century. And this doesn't include the probable reserves off its western coast.

Jogmec is hoping to apply knowledge gained in the tundra studies to a deep-ocean project focused on the Nankai Trough off Honshu Island, where 40 Tcf of methane is encased in 1,640-foot thick sheets of ice.

Moving from research to exploitation will happen, MH21 researchers say, but there are four major obstacles yet to be overcome.

Because it is a deep-ocean project, semi-submersible rigs or drilling ships capable of working in depths more than 1,600 feet will have to be designed exclusively for mining hydrates.

Also, hydrate deposits are found in sedimentary layers that have not yet hardened, and unique technical challenges and environmental hazards arise from drilling in unstable formations. For instance, there is the risk of triggering undersea landslides that could result in the uncontrolled release of methane into the atmosphere.

"Methane hydrate was a key cause of the global warming that led to one of the largest extinctions in the earth's history," University of Tokyo scientist Ryo Matsumoto told Bloomberg.

However, Matsumoto added: "By making the best use

GAS PRICE REPORT

(\$/MMBtu—Spot)
February 4, 2008

	Interstate Wellhead		Intrastate Wellhead		Delivered To Pipeline		Delivered To Utility	
	This Week	Bid Week for Feb	This Week	Bid Week for Feb	This Week	Bid Week for Feb	This Week	Bid Week for Feb
CALIFORNIA								
South	—	—	7.66	7.39	7.86	7.59	7.86	7.59
North	—	—	—	—	7.86	7.66	7.86	7.66
ROCKY MOUNTAINS	7.37	6.98	7.34	6.95	7.49	7.10	7.82	7.43
NEW MEXICO	7.38	7.12	—	—	7.55	7.29	7.70	7.44
TEXAS								
Gulf Coast, Offshore	7.78	7.76	7.79	7.77	7.85	7.83	—	—
Gulf Coast, Onshore	7.65	7.68	7.67	7.70	7.73	7.76	7.88	7.91
Central	7.64	N/A	7.64	N/A	7.73	N/A	7.90	N/A
West	7.49	7.30	7.49	7.30	7.56	7.37	7.64	7.45
MID-CONTINENT	7.45	7.19	7.43	7.17	7.55	7.29	7.80	7.40
LOUISIANA								
Gulf Coast, Offshore	7.88	7.90	7.88	7.90	7.95	7.97	—	—
Gulf Coast, Onshore	7.95	8.01	7.95	8.01	8.02	8.08	8.13	8.23
North	7.93	7.88	7.92	7.87	8.00	7.95	8.14	8.09
MIDWEST	—	—	—	—	8.05	7.90	8.09	8.05
APPALACHIA	8.20	8.34	—	—	8.31	8.45	8.39	8.54
SOUTHEAST	8.07	8.19	—	—	8.22	8.34	8.63	8.72
NEW ENGLAND	—	—	—	—	8.94	11.17	9.09	12.14
					Composite Wellhead	Delivered to Pipeline	12-Month Strip Nymex	
February 4, 2008					7.89	8.13	8.23	
2008 Outlook					7.94	8.12	—	

of our wisdom, knowledge and technology, we should be able to utilize this wisely as a new energy."

Other challenges appear less daunting: preventing a premature dissociation of the methane gas and water during the drilling process and stabilizing the position of the drilling rig as there are strong ocean currents in the research area.

But once Japan cracks this nut — and it will — who knows how the global gas market will be impacted by the sudden appearance of 11,000 Tcf in potential gas reserves.

* * *

The *Natural Gas Week* composite spot wellhead price this week is \$7.89/MMBtu, 2¢ less than last week and 10¢ more than the Feb. 5, 2007, average. The spot delivered-to-pipeline price this week is \$8.13/MMBtu, 77¢ less than last week and 23¢ less than last year's corresponding average.

Tom Haywood, Houston

Gas Market Reconnaissance — Natural Gas Week's Daily Guide to Natural Gas Markets

A daily assessment of the North American natural gas markets, delivering timely data & analysis on crucial market-relevant issues:

- Daily outlook on the likely direction of the next day's market moves
- Prompt-month gas forwards coverage
- Comprehensive monthly bidweek results
- Significant new analysis of emerging market trends
- Trends in natural gas prices, crude oil prices, and power markets
- Revamped tables emphasizing fundamental factors
- Extended coverage of fuel-on-fuel competition
- Quantification of the impact of nuclear outages on a region's gas demand
- Explanation of the effects on storage of nationwide heating and cooling degree-days

Sign up for a **Free one-month trial subscription** to *Gas Market Reconnaissance* by —
Email: sales@energyintel.com - Tel: (212) 532.1112 - Website: www.energyintel.com

The Energy Intelligence Top 100: Ranking The World's Oil Companies

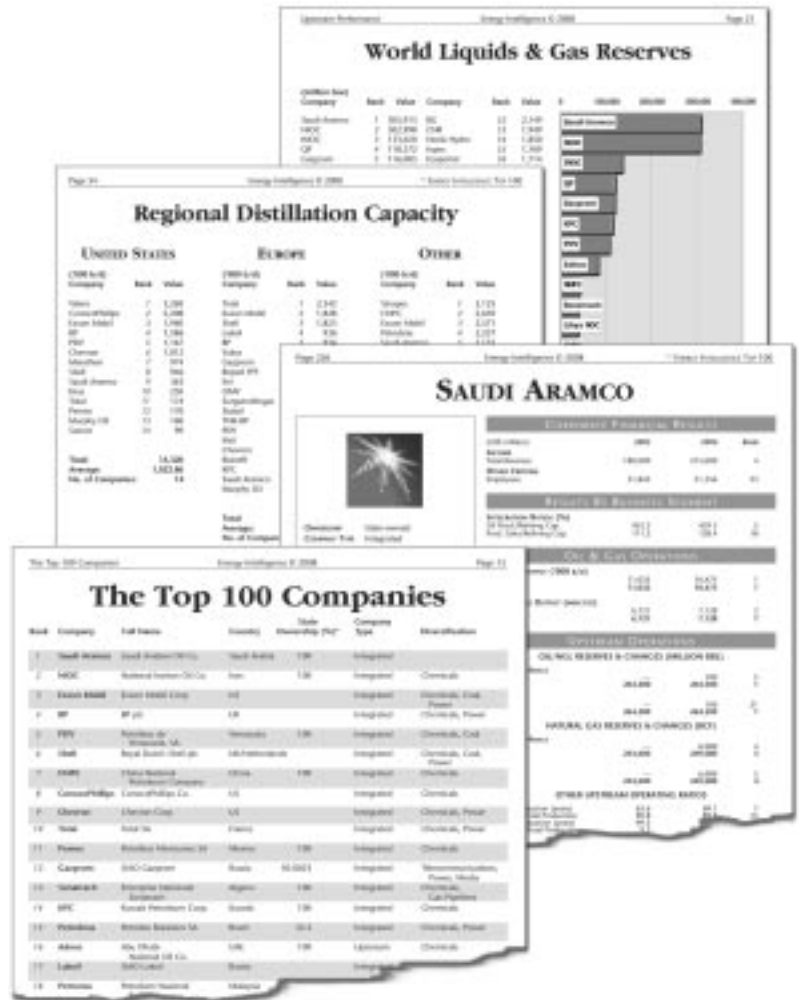
2008



The Energy Intelligence Top 100: Ranking The World's Oil Companies — The Standard Benchmark for Comparing the Leading Oil Companies

The *Energy Intelligence Top 100: Ranking The World's Oil Companies* is recognized throughout the industry as the leading resource for comparative assessments on the performance of all the world's oil companies, both state-owned and publicly traded. The essential reference tool for industry executives, senior managers and analysts allows you to:

- **Assess and compare** the assets, activities and results of the world's leading oil companies.
- **Keep track** of the important structural changes in the international oil business - with exclusive coverage of the national oil companies.
- **Compare hard-to-find data** on state-owned oil firms with that of the supermajors and other key private-sector players.
- **Learn who is expanding** production fastest, how successful companies are at replacing reserves and who are the new regional market share leaders.



The *Energy Intelligence Top 100* brings into sharper focus the important structural changes in the international oil business. It will help you to gauge the operational and economic performance of your competitors and benchmark your own position in the industry — without shuffling through stacks of annual reports and consultancy documents.



New Features for 2008

- New entrants include **Bashneft, Inpex, KNOC, Mitsui, Russneft, Turkmengas, Turkmenneft** and **YPFB**.
- A new **Corporate Responsibility** section that includes key corporate listings on greenhouse gas emissions, gas flaring, oil spills and injury.
- An expanded valuation section including multiple EV/EBITDA calculations and detailed data for share issues and repurchases.

The Leading Resource for Performance Assessments of the IOCs, NOCs and Independent Oil Companies

The *Energy Intelligence Top 100: Ranking The World's Oil Companies* allows you to find key details on market trends and key activities of the leading firms, all broken down by upstream, downstream and financial performance in more than 120 industry metrics. These include:

- **54 upstream criteria**, including world and regional reserves and production, oil and gas reserve replacement ratios, and detailed drilling activity data for exploration and development.
- **25 downstream criteria**, including world and regional distillation capacity, refinery conversion intensity, world and regional refinery runs, and detailed world and regional market share, service stations and product sales performance.
- **42 financial criteria**, including downstream and upstream revenue, operational cash flow, market capitalization, capital expenditures, upstream and downstream profit margins, and detailed data on finding costs and total debt.



“The Energy Intelligence Top 100 is an invaluable report that provides a wealth of data on comparative performance of the world’s top oil companies.”

— Marianne Kah, Chief Economist, *ConocoPhillips*

The Energy Intelligence Top 100 Methodology

We obtain data from the companies themselves and our information partner *Evaluate Energy*. Where official data are not available (for some state companies or other firms) *Energy Intelligence* develops informed estimates.

From a survey of over 130 companies, we compile and assess data for six key operating categories to determine the top 100 companies. We also provide more detailed rankings for more than 120 criteria.

All rankings are based on 2006 data, the latest available for such a wide group of firms.

Order the Print Version

Please send me the print version of **The Energy Intelligence Top 100** in the quantities listed below:

	SUBSCRIBER*			NON-SUBSCRIBER		
	Copies	Price	Amount	Copies	Price	Amount
Single Copy	1	\$1,095	\$ _____	1	\$1,195	\$ _____
Additional Copies	_____	\$1,040	\$ _____	_____	\$1,135	\$ _____
Total	_____		\$ _____	_____		\$ _____

* Subscriber = Active subscriber to any Energy Intelligence serial publication.

Please include appropriate sales tax in D.C. (5.75%), Houston (8.25%) and the remainder of Texas (6.25%).

Order the Electronic Version

Please provide me access to the electronic version of **The Energy Intelligence Top 100**.

	SUBSCRIBER*			NON-SUBSCRIBER		
	Copies	Price	Amount	Copies	Price	Amount
Single Copy	1	\$1,095	\$ _____	1	\$1,195	\$ _____

Please contact me about multiuser licensing of the electronic version of **The Energy Intelligence Top 100**.

Delivery & Payment Information

Company: _____

Name: _____

Title: _____

Dept: _____

Address: _____

City: _____

State: _____ Zip/Postal Code: _____

Country: _____

Phone: _____

Fax: _____

E-mail: _____

(Required)

Please bill me. Please note that all reports will be shipped or given web access after receipt of payment.

Check/Money Order: **payable to Energy Intelligence Group.**
(U.S. funds only)

Wire Transfer: Please contact us directly for wire transfer information. Email: sales@energyintel.com
Phone: +1 212 532 1112

Bill my Amex VISA MasterCard

Account Number: _____

Expire Date: _____

Signature: _____

Kindly fax or e-mail your order or subscription to:

Energy Intelligence

5 East 37th Street, 5th Floor, New York, NY 10016-2807

E-mail: sales@energyintel.com

Phone: (212) 532-1112

Fax: (212) 532-4479

visit our website at: www.energyintel.com