HB

414

26-LS1592\E
Bullock
3/31/10

CS FOR HOUSE BILL NO. 414(RES)

IN THE LEGISLATURE OF THE STATE OF ALASKA

TWENTY-SIXTH LEGISLATURE - SECOND SESSION

BY THE HOUSE RESOURCES COMMITTEE

Offered:
Referred:

Sponsor(s): HOUSE RESOURCES COMMITTEE

A BILL

FOR AN ACT ENTITLED

"An Act relating to that part of the tax on oil and gas production that increases the rate of tax as the production tax value of oil or the BTU equivalent barrel of gas increases above $30, separating the determination of that rate between oil and gas, and making that rate distinct between oil and gas; relating to availability of a portion of the money received from the tax on oil and gas production for appropriation to the community revenue sharing fund; relating to the allocation of lease expenditures and adjustments to lease expenditures; and providing for an effective date."

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

*** Section 1.** AS 29.60.850(b) is amended to read:

(b) Each fiscal year, the legislature may appropriate to the community revenue sharing fund an amount equal to 20 percent of the money received by the state during the previous calendar year under AS 43.55.011(g) **and (p)**. The amount may not exceed

(1) $60,000,000; or

(2) the amount that, when added to the fund balance on June 30 of the previous fiscal year, equals $180,000,000.

*** Sec. 2.** AS 43.55.011(e) is amended to read:

(e) There is levied on the producer of oil or gas a tax for all oil and gas produced each calendar year from each lease or property in the state, less any oil and gas the ownership or right to which is exempt from taxation or constitutes a landowner's royalty interest. Except as otherwise provided under (f), (j), (k), and (o) of this section, the tax is equal to the sum of

(1) the annual production tax value of the taxable oil and gas as calculated under AS 43.55.160(a)(1) multiplied by 25 percent; and

(2) the sum, over all months of the calendar year, of the tax amounts determined under

(A) subsection (g) of this section**; and**

(B) subsection (p) of this section.

*** Sec. 3.** AS 43.55.011(g) is amended to read:

(g) For each month of the calendar year for which the producer's average monthly production tax value under **AS 43.55.160(a)(2)(A) - (E) of a** [AS 43.55.160(a)(2) PER] BTU equivalent barrel of [THE] taxable oil and gas is more than $30, the amount of tax for purposes of **(e)(2)(A)** [(e)(2)] of this section is determined by multiplying the monthly production tax value of the taxable oil [AND GAS] produced during the month**, gas produced during the month from a lease or property in the Cook Inlet sedimentary basin, and gas produced during the month from a lease or property outside the Cook Inlet sedimentary basin and used in the state** by the tax rate calculated as follows:

(1) if the producer's average monthly production tax value **under AS 43.55.160(a)(2)(A) - (E) of a** [PER] BTU equivalent barrel of [THE] taxable oil and gas for the month is not more than $92.50, the tax rate is 0.4 percent multiplied by the number that represents the difference between **the producer's** [THAT] average monthly production tax value **under AS 43.55.160(a)(2)(A) - (E) of a** [PER] BTU equivalent barrel **of taxable oil and gas** and $30; or

(2) if the producer's average monthly production tax value **under AS 43.55.160(a)(2)(A) - (E) of a** [PER] BTU equivalent barrel of [THE] taxable oil and gas for the month is more than $92.50, the tax rate is the sum of 25 percent and the product of 0.1 percent multiplied by the number that represents the difference between the **producer's** average monthly production tax value **under AS 43.55.160(a)(2)(A) - (E) of a** [PER] BTU equivalent barrel **of taxable oil and gas** and $92.50, except that the sum determined under this paragraph may not exceed 50 percent.

*** Sec. 4.** AS 43.55.011 is amended by adding a new subsection to read:

(p) For each month of the calendar year for which the producer's average monthly production tax value under AS 43.55.160(a)(2)(F) and (G) of a BTU equivalent barrel of taxable gas is more than $30, the amount of tax on the production of gas for purposes of (e)(2)(B) of this section is determined by multiplying the monthly production tax value of the taxable gas produced during the month other than gas produced from a lease or property in the Cook Inlet sedimentary basin or gas produced outside the Cook Inlet sedimentary basin and used ~~in the state~~ by the tax rate calculated as follows:

(1) if the producer's average monthly production tax value under AS 43.55.160(a)(2)(F) and (G) of a BTU equivalent barrel of taxable gas for the month is not more than $92.50, the tax rate is 0.4 percent multiplied by the number that represents the difference between the producer's average monthly production tax value under AS 43.55.160(a)(2)(F) and (G) of a BTU equivalent barrel of gas and $30; or

(2) if the producer's average monthly production tax value under AS 43.55.160(a)(2)(F) and (G) of a BTU equivalent barrel of taxable gas for the month is more than $92.50, the tax rate is the sum of 25 percent and the product of 0.1 percent multiplied by the number that represents the difference between the producer's average monthly production tax value under AS 43.55.160(a)(2)(F) and (G) of a BTU equivalent barrel of gas and $92.50, except that the sum determined under this paragraph may not exceed 50 percent.

*** Sec. 5.** AS 43.55.020(a) is amended to read:

(a) For a calendar year, a producer subject to tax under AS 43.55.011(e) - (i) **and (p)** shall pay the tax as follows:

(1) an installment payment of the estimated tax levied by AS 43.55.011(e), net of any tax credits applied as allowed by law, is due for each month of the calendar year on the last day of the following month; except as otherwise provided under (2) of this subsection, the amount of the installment payment is the sum of the following amounts, less 1/12 of the tax credits that are allowed by law to be applied against the tax levied by AS 43.55.011(e) for the calendar year, but the amount of the installment payment may not be less than zero:

(A) for oil and gas produced from leases or properties in the state outside the Cook Inlet sedimentary basin but not subject to AS 43.55.011(o), other than leases or properties subject to AS 43.55.011(f), the greater of

(i) zero; or

(ii) **an amount equal to** the sum of 25 percent and the tax rate calculated for the month under AS 43.55.011(g) multiplied by the remainder obtained by subtracting 1/12 of the producer's adjusted lease expenditures for the calendar year of production **applicable to the oil produced by the producer from those leases and properties** under AS 43.55.165 and 43.55.170 that are deductible for the leases or properties under AS 43.55.160, from the gross value at the point of production of the oil [AND GAS] produced from the leases or properties during the month for which the installment payment is calculated **added to the sum of 25 percent and the tax rate calculated for the month under AS 43.55.011(p) multiplied by the remainder obtained by subtracting 1/12 of the producer's adjusted lease expenditures for the calendar year of production applicable to the gas produced by the producer from those leases and properties under AS 43.55.165 and 43.55.170 that are deductible for the leases or properties under AS 43.55.160 from the gross value at the point of production of the gas produced from the leases**

or properties during the month for which the installment payment is calculated;

(B) for oil and gas produced from leases or properties subject to AS 43.55.011(f), the greatest of

(i) zero;

(ii) zero percent, one percent, two percent, three percent, or four percent, as applicable, of the gross value at the point of production of the oil and gas produced from all leases or properties during the month for which the installment payment is calculated; or

(iii) **an amount equal to** the sum of 25 percent and the tax rate calculated for the month under AS 43.55.011(g) multiplied by the remainder obtained by subtracting 1/12 of the producer's adjusted lease expenditures for the calendar year of production **applicable to the oil produced by the producer from those leases and properties** under AS 43.55.165 and 43.55.170 that are deductible for those leases or properties under AS 43.55.160, from the gross value at the point of production of the oil [AND GAS] produced from those leases or properties during the month for which the installment payment is calculated **added to the sum of 25 percent and the tax rate calculated for the month under AS 43.55.011(p) multiplied by the remainder obtained by subtracting 1/12 of the producer's adjusted lease expenditures for the calendar year of production applicable to the gas produced by the producer from those leases and properties under AS 43.55.165 and 43.55.170 that are deductible for those leases or properties under AS 43.55.160 from the gross value at the point of production of the gas produced from those leases or properties during the month for which the installment payment is calculated**;

(C) for oil and gas produced from each lease or property subject to AS 43.55.011(j), (k), or (o), the greater of

(i) zero; or

(ii) **an amount equal to** the sum of 25 percent and the tax rate calculated for the month under AS 43.55.011(g) multiplied by the remainder obtained by subtracting 1/12 of the producer's adjusted lease expenditures for the calendar year of production **applicable to the oil produced by the producer from those leases and properties** under AS 43.55.165 and 43.55.170 that are deductible under AS 43.55.160 for oil [OR GAS, RESPECTIVELY,] produced from the lease or property, from the gross value at the point of production of the oil [OR GAS, RESPECTIVELY,] produced from the lease or property during the month for which the installment payment is calculated **added to the sum of 25 percent and the tax rate calculated for the month under AS 43.55.011(g) multiplied by the remainder obtained by subtracting 1/12 of the producer's adjusted lease expenditures for the calendar year of production applicable to the gas produced by the producer from the lease or property under AS 43.55.165 and 43.55.170 that are deductible under AS 43.55.160 for gas produced from the lease or property, from the gross value at the point of production of the gas produced from the lease or property during the month for which the installment payment is calculated**;

(2) an amount calculated under (1)(C) of this subsection for oil or gas produced **before 2022** from a lease or property subject to AS 43.55.011(j), (k), or (o) may not exceed the product obtained by carrying out the calculation set out in AS 43.55.011(j)(1) or (2) or 43.55.011(o), as applicable, for gas or set out in AS 43.55.011(k)(1) or (2), as applicable, for oil, but substituting in AS 43.55.011(j)(1)(A) or (2)(A) or 43.55.011(o), as applicable, the amount of taxable gas produced during the month for the amount of taxable gas produced during the calendar year and substituting in AS 43.55.011(k)(1)(A) or (2)(A), as applicable, the amount of taxable oil produced during the month for the amount of taxable oil produced during the calendar year;

(3) an installment payment of the estimated tax levied by AS 43.55.011(i) for each lease or property is due for each month of the calendar year

on the last day of the following month; the amount of the installment payment is the sum of

(A) the applicable tax rate for oil provided under AS 43.55.011(i), multiplied by the gross value at the point of production of the oil taxable under AS 43.55.011(i) and produced from the lease or property during the month; and

(B) the applicable tax rate for gas provided under AS 43.55.011(i), multiplied by the gross value at the point of production of the gas taxable under AS 43.55.011(i) and produced from the lease or property during the month;

(4) any amount of tax levied by AS 43.55.011(e) or (i), net of any credits applied as allowed by law, that exceeds the total of the amounts due as installment payments of estimated tax is due on March 31 of the year following the calendar year of production.

*** Sec. 6.** AS 43.55.020(d) is amended to read:

(d) In making settlement with the royalty owner for oil and gas that is taxable under AS 43.55.011, the producer may deduct the amount of the tax paid on taxable royalty oil and gas, or may deduct taxable royalty oil or gas equivalent in value at the time the tax becomes due to the amount of the tax paid. If the total deductions of installment payments of estimated tax for a calendar year exceed the actual tax for that calendar year, the producer shall, before April 1 of the following year, refund the excess to the royalty owner. Unless otherwise agreed between the producer and the royalty owner, the amount of the tax paid under AS 43.55.011(e) - (g) **and (p)** on taxable royalty oil and gas for a calendar year, other than oil and gas the ownership or right to which constitutes a landowner's royalty interest, is considered to be the gross value at the point of production of the taxable royalty oil and gas produced during the calendar year multiplied by a figure that is a quotient, in which

(1) the numerator is the producer's total tax liability under AS 43.55.011(e) - (g) **and (p)** for the calendar year of production; and

(2) the denominator is the total gross value at the point of production of the oil and gas taxable under AS 43.55.011(e) - (g) **and (p)** produced by the

producer from all leases and properties in the state during the calendar year.

*** Sec. 7.** AS 43.55.160(a) is amended to read:

(a) Except as provided in (b) of this section, for the purposes of

(1) AS 43.55.011(e), the annual production tax value of the taxable

(A) oil [AND GAS] produced during a calendar year from leases or properties in the state that include land north of 68 degrees North latitude is the gross value at the point of production of the oil [AND GAS] taxable under AS 43.55.011(e) and produced by the producer from those leases or properties, less the producer's lease expenditures under AS 43.55.165 for the calendar year applicable to the oil [AND GAS] produced by the producer from those leases or properties, as adjusted under AS 43.55.170; [THIS SUBPARAGRAPH DOES NOT APPLY TO GAS SUBJECT TO AS 43.55.011(o);]

(B) oil [AND GAS] produced during a calendar year from leases or properties in the state outside the Cook Inlet sedimentary basin, no part of which is north of 68 degrees North latitude, is the gross value at the point of production of the oil [AND GAS] taxable under AS 43.55.011(e) and produced by the producer from those leases or properties, less the producer's lease expenditures under AS 43.55.165 for the calendar year applicable to the oil [AND GAS] produced by the producer from those leases or properties, as adjusted under AS 43.55.170; [THIS SUBPARAGRAPH DOES NOT APPLY TO GAS SUBJECT TO AS 43.55.011(o);]

(C) oil produced during a calendar year from a lease or property in the Cook Inlet sedimentary basin is the gross value at the point of production of the oil taxable under AS 43.55.011(e) and produced by the producer from that lease or property, less the producer's lease expenditures under AS 43.55.165 for the calendar year applicable to the oil produced by the producer from that lease or property, as adjusted under AS 43.55.170;

(D) gas produced during a calendar year from a lease or property in the Cook Inlet sedimentary basin is the gross value at the point of production of the gas taxable under AS 43.55.011(e) and produced by the

producer from that lease or property, less the producer's lease expenditures under AS 43.55.165 for the calendar year applicable to the gas produced by the producer from that lease or property, as adjusted under AS 43.55.170;

(E) gas produced during a calendar year from a lease or property outside the Cook Inlet sedimentary basin and used in the state is the gross value at the point of production of that gas taxable under AS 43.55.011(e) and produced by the producer from that lease or property, less the producer's lease expenditures under AS 43.55.165 for the calendar year applicable to that gas produced by the producer from that lease or property, as adjusted under AS 43.55.170;

(F) gas produced during a calendar year from leases or properties in the state that include land north of 68 degrees North latitude is the gross value at the point of production of the gas taxable under AS 43.55.011(e) and produced by the producer from those leases or properties, less the producer's lease expenditures under AS 43.55.165 for the calendar year applicable to the gas produced by the producer from those leases or properties, as adjusted under AS 43.55.170; this subparagraph does not apply to gas used in the state;

(G) gas produced during a calendar year from leases or properties in the state outside the Cook Inlet sedimentary basin, no part of which is north of 68 degrees North latitude, is the gross value at the point of production of the gas taxable under AS 43.55.011(e) and produced by the producer from those leases or properties, less the producer's lease expenditures under AS 43.55.165 for the calendar year applicable to the gas produced by the producer from those leases or properties, as adjusted under AS 43.55.170; this subparagraph does not apply to gas used in the state;

(2) AS 43.55.011(g) **and (p)**, the monthly production tax value of the taxable

(A) oil [AND GAS] produced during a month from leases or properties in the state that include land north of 68 degrees North latitude is the

gross value at the point of production of the oil [AND GAS] taxable under AS 43.55.011(e) and produced by the producer from those leases or properties, less 1/12 of the producer's lease expenditures under AS 43.55.165 for the calendar year applicable to the oil [AND GAS] produced by the producer from those leases or properties, as adjusted under AS 43.55.170; [THIS SUBPARAGRAPH DOES NOT APPLY TO GAS SUBJECT TO AS 43.55.011(o);]

(B) oil [AND GAS] produced during a month from leases or properties in the state outside the Cook Inlet sedimentary basin, no part of which is north of 68 degrees North latitude, is the gross value at the point of production of the oil [AND GAS] taxable under AS 43.55.011(e) and produced by the producer from those leases or properties, less 1/12 of the producer's lease expenditures under AS 43.55.165 for the calendar year applicable to the oil [AND GAS] produced by the producer from those leases or properties, as adjusted under AS 43.55.170; [THIS SUBPARAGRAPH DOES NOT APPLY TO GAS SUBJECT TO AS 43.55.011(o);]

(C) oil produced during a month from a lease or property in the Cook Inlet sedimentary basin is the gross value at the point of production of the oil taxable under AS 43.55.011(e) and produced by the producer from that lease or property, less 1/12 of the producer's lease expenditures under AS 43.55.165 for the calendar year applicable to the oil produced by the producer from that lease or property, as adjusted under AS 43.55.170;

(D) gas produced during a month from a lease or property in the Cook Inlet sedimentary basin is the gross value at the point of production of the gas taxable under AS 43.55.011(e) and produced by the producer from that lease or property, less 1/12 of the producer's lease expenditures under AS 43.55.165 for the calendar year applicable to the gas produced by the producer from that lease or property, as adjusted under AS 43.55.170;

(E) gas produced during a month from a lease or property outside the Cook Inlet sedimentary basin and used in the state is the gross value at the point of production of that gas taxable under AS 43.55.011(e) and

produced by the producer from that lease or property, less 1/12 of the producer's lease expenditures under AS 43.55.165 for the calendar year applicable to that gas produced by the producer from that lease or property, as adjusted under AS 43.55.170;

(F) gas produced during a month from leases or properties in the state that include land north of 68 degrees North latitude is the gross value at the point of production of the gas taxable under AS 43.55.011(e) and produced by the producer from those leases or properties, less 1/12 of the producer's lease expenditures under AS 43.55.165 for the calendar year applicable to the gas produced by the producer from those leases or properties, as adjusted under AS 43.55.170; this subparagraph does not apply to gas used in the state;

(G) gas produced during a month from leases or properties in the state outside the Cook Inlet sedimentary basin, no part of which is north of 68 degrees North latitude, is the gross value at the point of production of the gas taxable under AS 43.55.011(e) and produced by the producer from those leases or properties, less 1/12 of the producer's lease expenditures under AS 43.55.165 for the calendar year applicable to the gas produced by the producer from those leases or properties, as adjusted under AS 43.55.170; this subparagraph does not apply to gas used in the state.

* **Sec. 8.** AS 43.55.165(h) is amended to read:

(h) The department shall adopt regulations that provide for reasonable methods of allocating costs between oil and gas, between gas subject to AS 43.55.011(o) and other gas, and between leases or properties in those circumstances where an allocation of costs is required to determine lease expenditures that are costs of exploring for, developing, or producing oil deposits or costs of exploring for, developing, or producing gas deposits, or that are costs of exploring for, developing, or producing oil or gas deposits located within different leases or properties. **When determining a reasonable method of allocating lease expenditures between the production of oil and the production of gas, the**

department shall consider allocating lease expenditures in proportion to the BTU equivalent barrels of oil produced and gas produced from each lease or property.

*** Sec. 9.** AS 43.55.170 is amended by adding a new subsection to read:

(d) The department shall adopt regulations that provide for reasonable methods of allocating the adjustments to a producer's lease expenditures in (a) of this section and the payments and credits described in (b) of this section between oil and gas, between gas subject to AS 43.55.011(o) and other gas, and between leases or properties in those circumstances where an allocation of costs is required to determine lease expenditures that are costs of exploring for, developing, or producing oil deposits, or costs of exploring for, developing, or producing gas deposits, or that are costs of exploring for, developing, or producing oil or gas deposits located within different leases or properties. When determining a reasonable method of allocating the adjustments to a producer's lease expenditures between the production of oil and the production of gas, the department shall consider allocating the adjustments in proportion to the lease expenditures allocated to the production of oil and the production of gas under regulations adopted by the department under AS 43.55.165(h).

*** Sec. 10.** The uncodified law of the State of Alaska is amended by adding a new section to read:

TRANSITION: INSTALLMENT PAYMENTS OF TAX. A producer required to make an installment payment of tax under AS 43.55.020(a)(1) after December 31, 2009, and before the effective date of this Act, and that underpaid the amount due for the installment payment because of the retroactive application of secs. 2 - 4 and 7 of this Act, shall submit the amount of any underpayment on the date the first installment payment is due under AS 43.55.020(a)(1) after the effective date of this Act. Interest on the amount of an underpayment due because of the retroactive application of secs. 2 - 4 and 7 of this Act does not accrue until the day after the date the first installment payment is due under AS 43.55.020(a)(1) after the effective date of this Act.

*** Sec. 11.** The uncodified law of the State of Alaska is amended by adding a new section to read:

RETROACTIVITY. Sections 2 - 4 and 7 of this Act are retroactive to January 1, 2010.

* **Sec. 12.** This Act takes effect immediately under AS 01.10.070(c).

To: Rep. Craig Johnson
Rep. Mark Neuman
Co-Chairs, House Resources Committee

From: Roger Marks, Logsdon & Associates

Date: 4/2/10

Re: HB 414 - Oil/Gas Crossover Price for Production Tax Dilution Effect

On Wednesday March 31 we made a presentation on HB 414, the bill that would separate oil and gas for calculating the production tax. Oil and gas are combined under current law. Currently oil is valued much higher than gas. If that relationship endured to that time of a major gas sale, the addition of gas onto oil activity could dilute oil value, which could reduce oil taxes by a significant amount.

We presented Department of Revenue figures from February 24, 2010 that displayed the magnitude of the annual tax losses. They were as follows:

$8/mmbtu gas / $75/bbl oil (market prices): $0.3 billion
$8/mmbtu gas/ $100/bbl oil (market prices): $1.1 billion
$8/mmbtu gas / $120/bbl oil (market prices):$2.0 billion

The question arose in the committee as to what the crossover points might be, the prices where the dilution effect would be zero. The other question was whether dilution would only occur when the market price of oil was more than 6 times the price of gas, the ratio of BTUs in a barrel of oil to an mmbtu (million BTUs) of gas.

First, the crossover would be determined by three other factors in addition to the market prices. First, it would depend on the relative volumes of oil and gas. Second, it would depend on the difference in transportation costs between oil and gas. Finally, it would also depend on the relative upstream capital and operating costs for oil and gas.

Using the Department of Revenue assumptions we calculated the crossover points. The assumptions were as follows:

Oil

Production of 500,000 bbls/day
Transportation cost deduction of $6.50/bbl
Upstream capital costs of $2 billion
Upstream operating costs of $2 billion

Gas

Production of 4.5 bcf/day
Transportation cost deduction of $4.50/mmbtu
Upstream capital costs of $200 million
Upstream operating costs of $200 million

We computed crossover points for the three oil prices and one gas price used in the above illustration:

Crossover Point where Dilution Effect is Zero

At $75/bbl oil market price	Gas crossover point = $11/mmbtu gas market price
At $100/bbl oil market price	Gas crossover point = $15/mmbtu gas market price
At $120/bbl oil market price	Gas crossover point = $18/mmbtu gas market price
At $8/mmbtu gas market price	Oil crossover point = $60/bbl oil market price

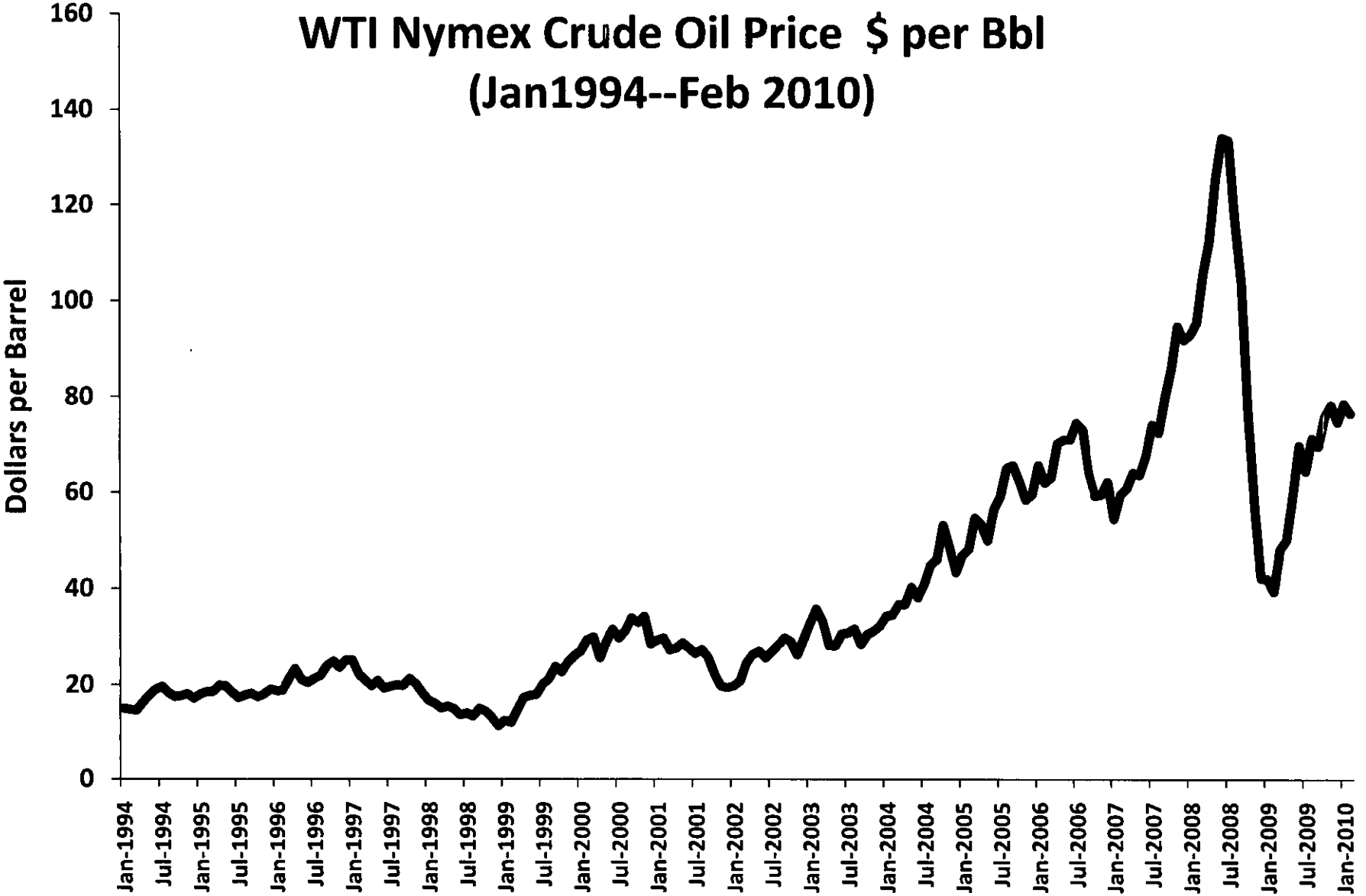
Monthly Oil and Natural Gas Price Analysis

Logsdon and Associates

April 2, 2010

Average Monthly Closing Prices for U.S. Crude Oil and Natural Gas as Reported on the New York Mercantile Exchange (NYMEX)

- West Texas Intermediate (WTI) oil and Henry Hub Gas prices are quoted daily on the NYMEX. The near month contract tracks very closely with the spot price since the delivery of physical barrels of WTI oil and Henry Hub gas underwrite the futures contract.
- The spot price is assessed by survey of buyers and sellers of physical cargos or lots or tranches. The near month NYMEX contract is determined in a regulated transparent market.
- The following charts illustrate both volatility and trend of oil and natural gas prices over the last 16 years.
- The charts start in 1994 because that is the first year that the natural gas contract was offered on the NYMEX.
- The price of oil is stated in dollars per barrel. The price of gas is stated in millions of British thermal units (btu), a measure of energy content.


WTI Nymex Crude Oil Price $ per Bbl
(Jan1994--Feb 2010)
Dollars per Barrel
160
140
120
100
80
60
40
20
0
Jan-1994
Jul-1994
Jan-1995
Jul-1995
Jan-1996
Jul-1996
Jan-1997
Jul-1997
Jan-1998
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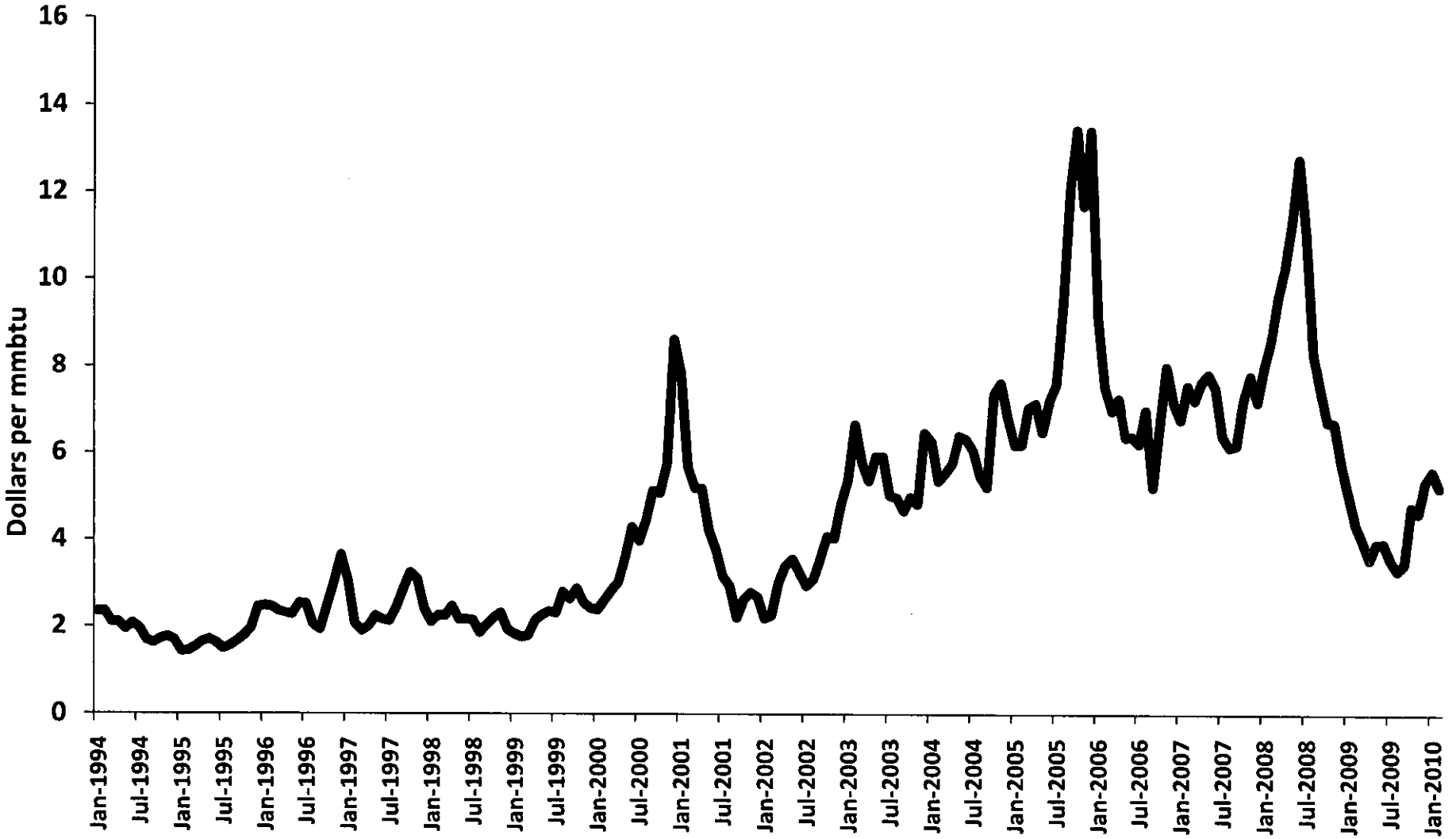
Jan-2010

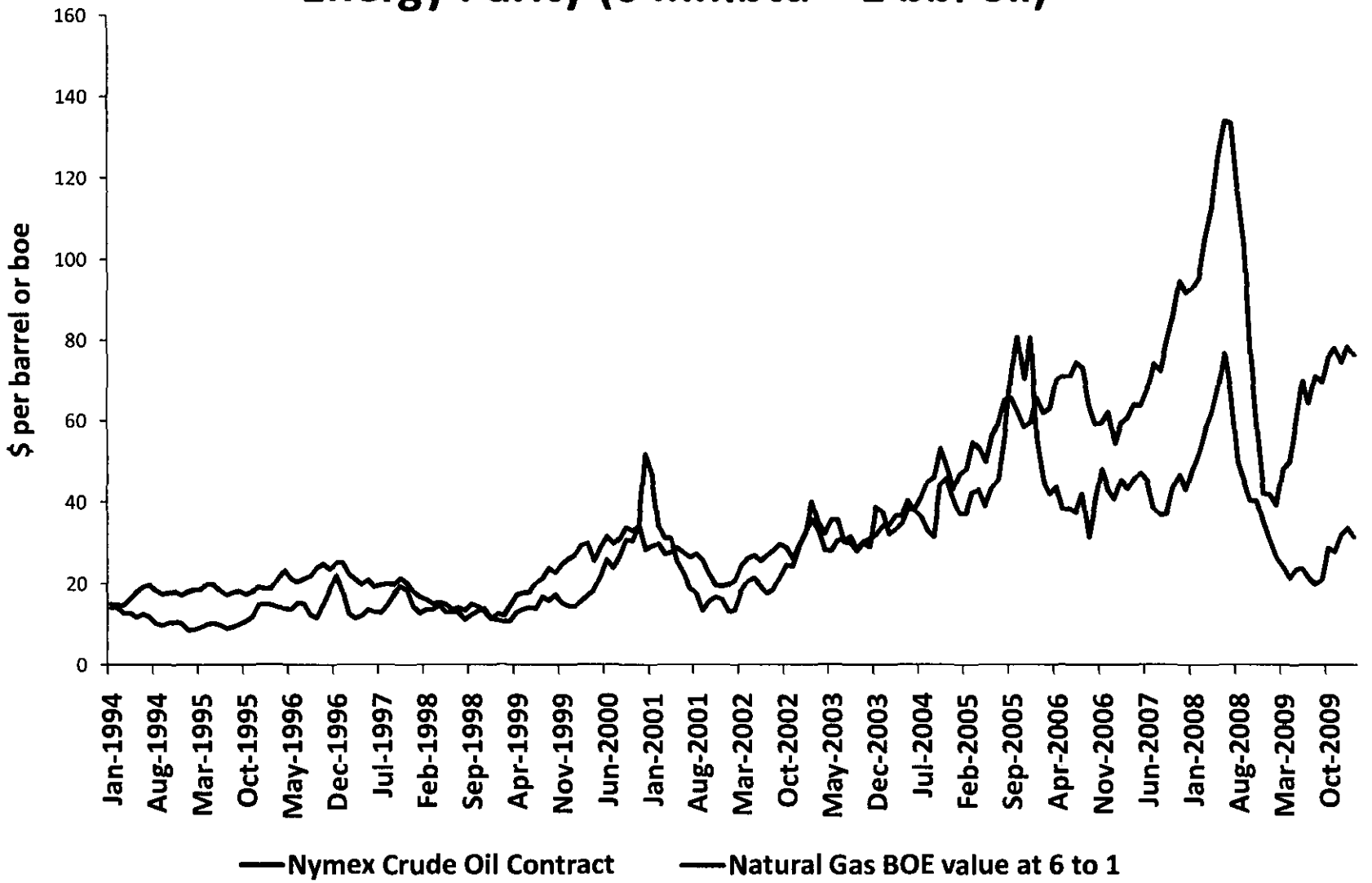
Henry Hub Nymex Natural Gas Futures
Jan 1994—Feb 2010 ($ per Million BTU)



Comparison of Oil and Gas on an Apples to Apples Basis

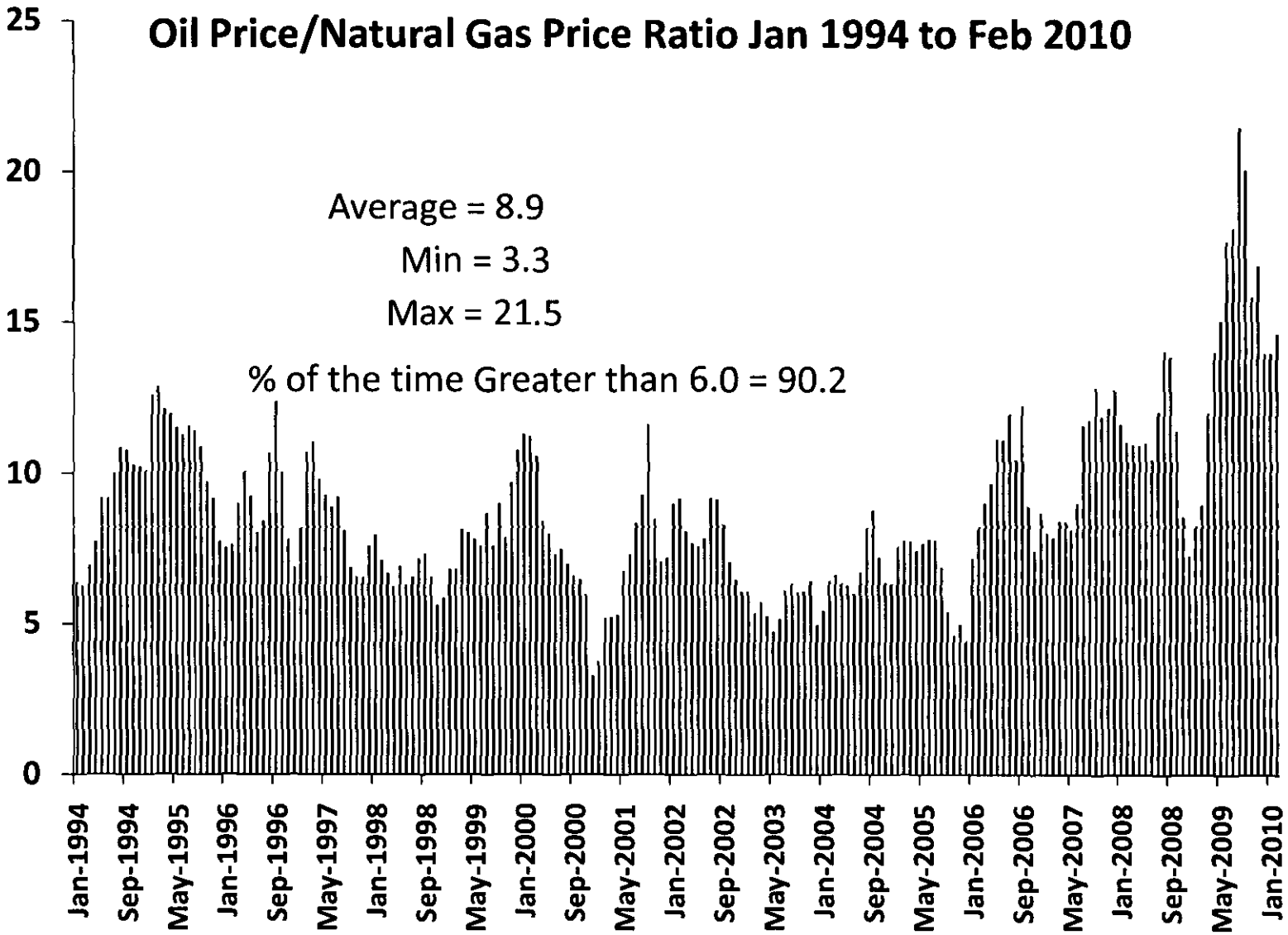
- The following chart makes an apples to apples comparison between the price of the two substances by converting the gas price to a barrel equivalent price based on the physical energy propertys of the two substances. There are six million btu's in a barrel of oil and gas prices are quoted per one million btu.
- What you see is that gas tends to be less valuable on a per btu basis.

Nymex Oil vs. Nymex Natural Gas if Gas Sold at Energy Parity (6 mmbtu = 1 bbl oil)



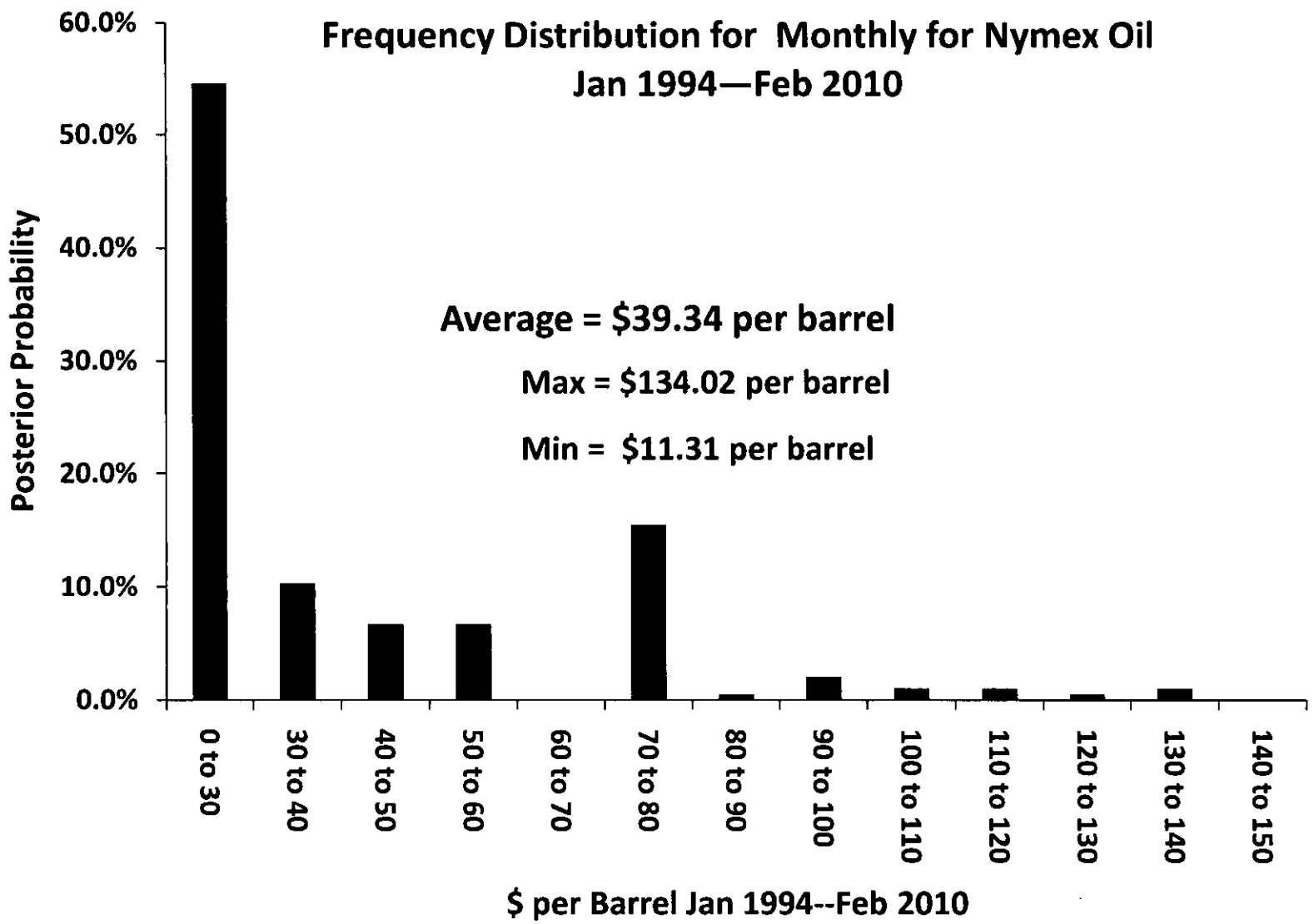
What is the historic number of btu's of gas needed to have the same value as a barrel of oil?

- The following chart makes this comparison.
- Clearly there have been some points in time when gas has sold at energy parity (6 to 1) or better with oil. This has not happened very often.
- The other thing to notice is that although there appears to be a partial correlation over time, the relationship between oil and gas prices is highly unstable from month to month.

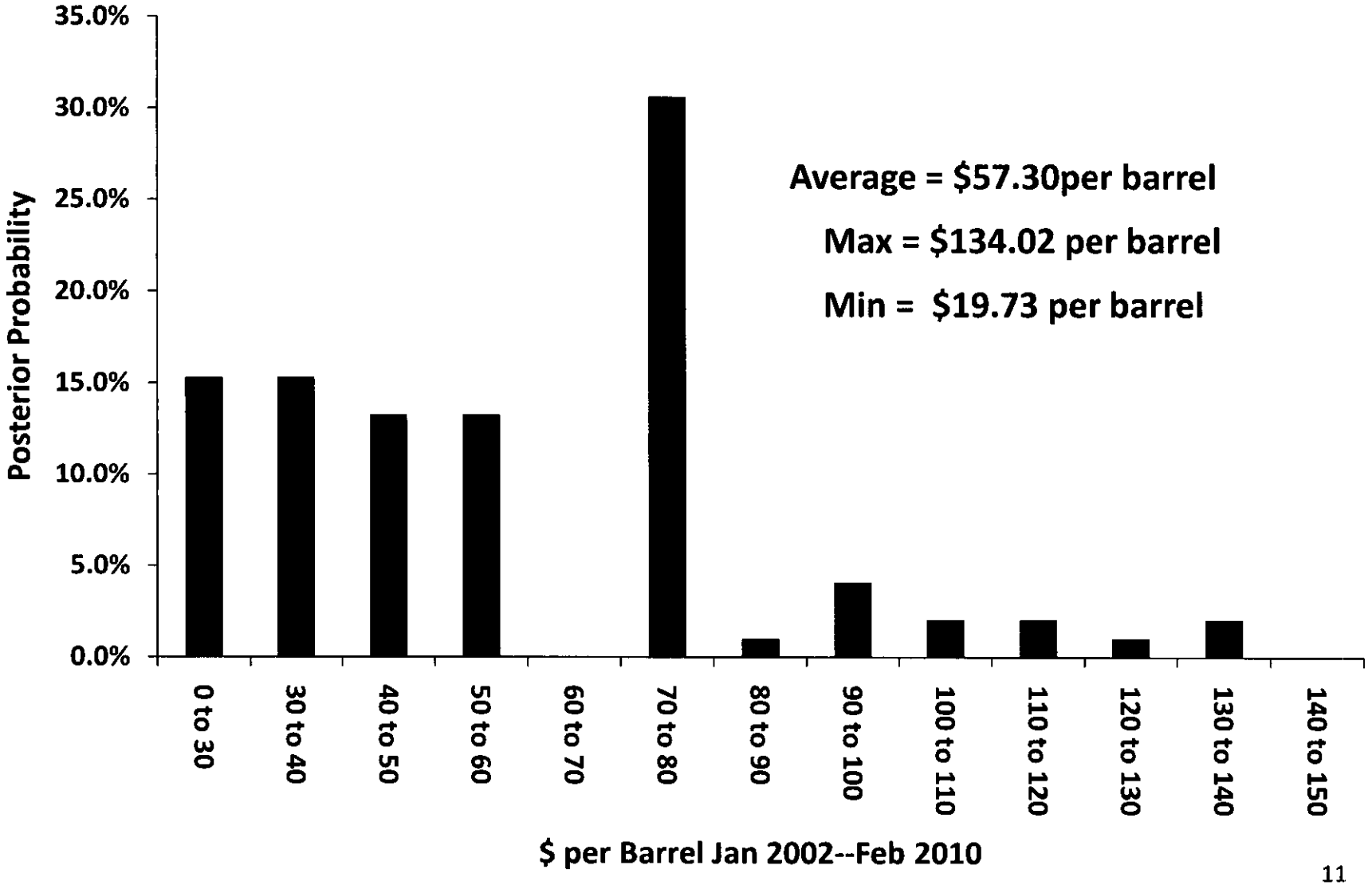

Oil Price/Natural Gas Price Ratio Jan 1994 to Feb 2010
Average = 8.9
Min = 3.3
Max = 21.5
% of the time Greater than 6.0 = 90.2
25
20
15
10
5
0
Jan-1994
Sep-1994
May-1995
Jan-1996
Sep-1996
May-1997
Jan-1998
Sep-1998
May-1999
Jan-2000
Sep-2000
May-2001
Jan-2002
Sep-2002
May-2003
Jan-2004
Sep-2004
May-2005
Jan-2006
Sep-2006
May-2007
Jan-2008
Sep-2008
May-2009
Jan-2010

Looking at oil and gas prices using frequency distributions

- The following charts are based on the percent of time that oil or gas prices fell within certain intervals.
- This is essentially a historical probability view.
- Three time periods are examined, long term medium term and shortterm. Jan 1994—Feb 2010, Jan 2002—Feb 2010. and Jan 2004—Feb 2010.
- Look for spikes and bunching, what statisticians call modes and central tendencies.
- The charts on the next two pages clearly show that we are in an evolving oil pricing world. The oil price frequency distribution shown between Jan 1994 and Feb 2010 on on the next page, shows that between 1994 and 2010, 55% of the time the price of oil was $30/bbl or less. In the next chart, covering 2002 through 2010, oil prices were $30/bbl or less only 15% of the time.


Frequency Distribution for Monthly for Nymex Oil
Jan 1994—Feb 2010
Average = $39.34 per barrel
Max = $134.02 per barrel
Min = $11.31 per barrel
Posterior Probability
60.0%
50.0%
40.0%
30.0%
20.0%
10.0%
0.0%
0 to 30
30 to 40
40 to 50
50 to 60
60 to 70
70 to 80
80 to 90
90 to 100
100 to 110
110 to 120
120 to 130
130 to 140
140 to 150
$ per Barrel Jan 1994--Feb 2010

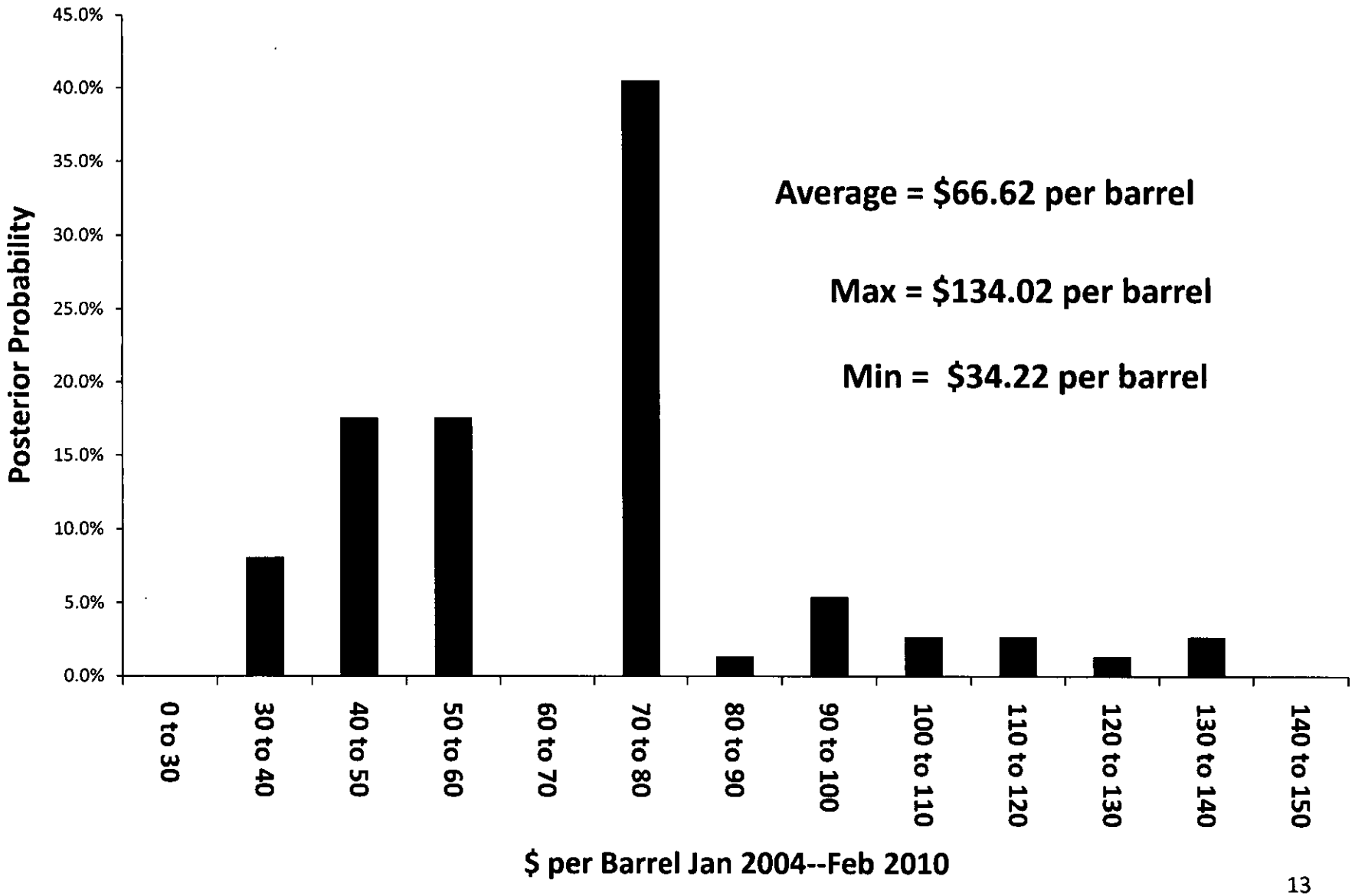
Frequency Distribution for Monthly for Nymex Oil
Jan 2002—Feb 2010



A much more recent shorter term view

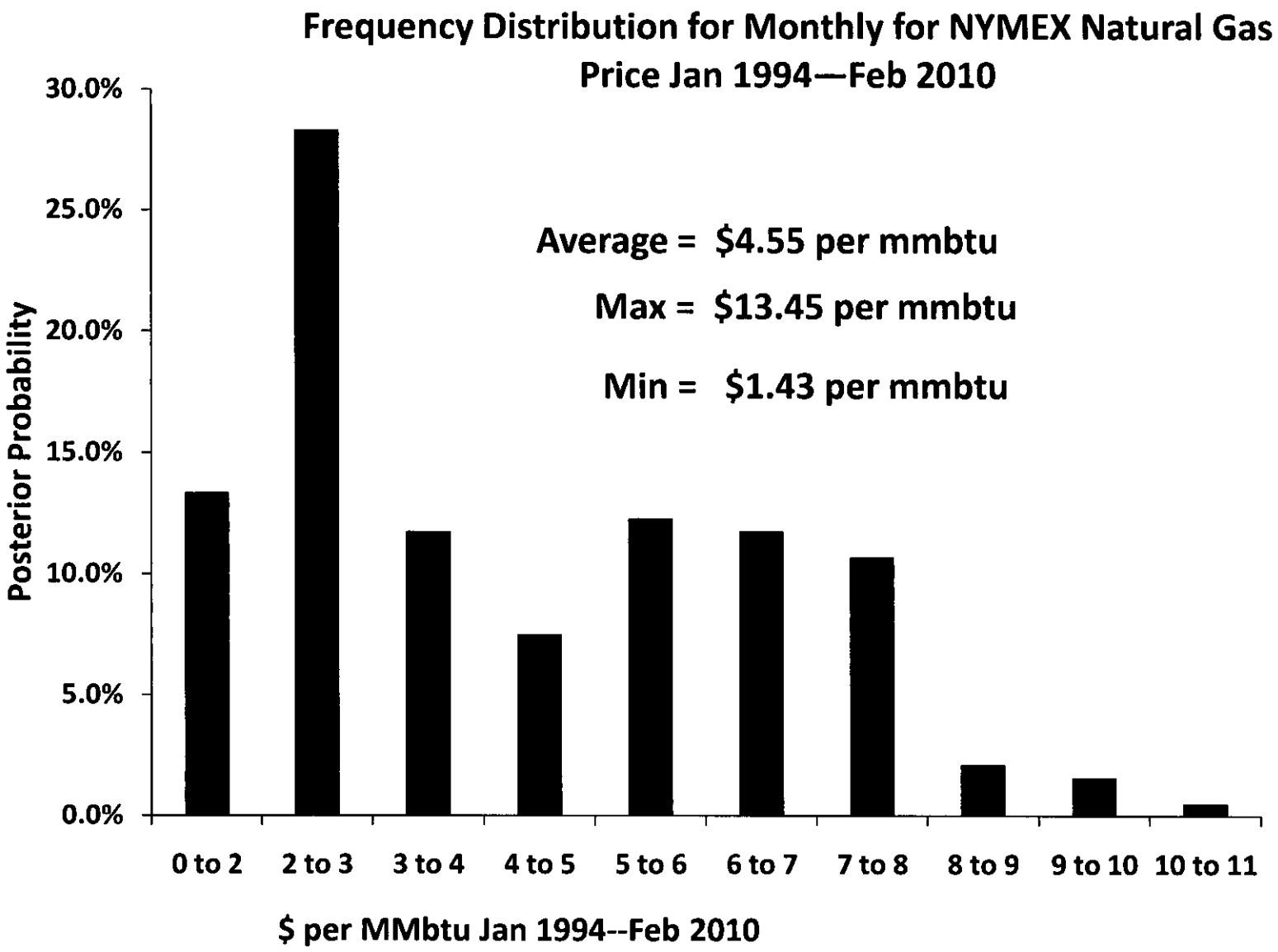
- The following chart shows the frequency distribution for oil prices from January 2004 through February 2010.
- Notice that for this most recent 6 year period that oil prices have traded in a pretty tight range between $70 and $80, 40% of the time.
- Connecting the spikes gives you a somewhat symetric shape. This suggests that at we are in a market that trends to a price in the $70 to $80 range.

Frequency Distribution for Monthly for Nymex Oil
Jan 2004—Feb 2010

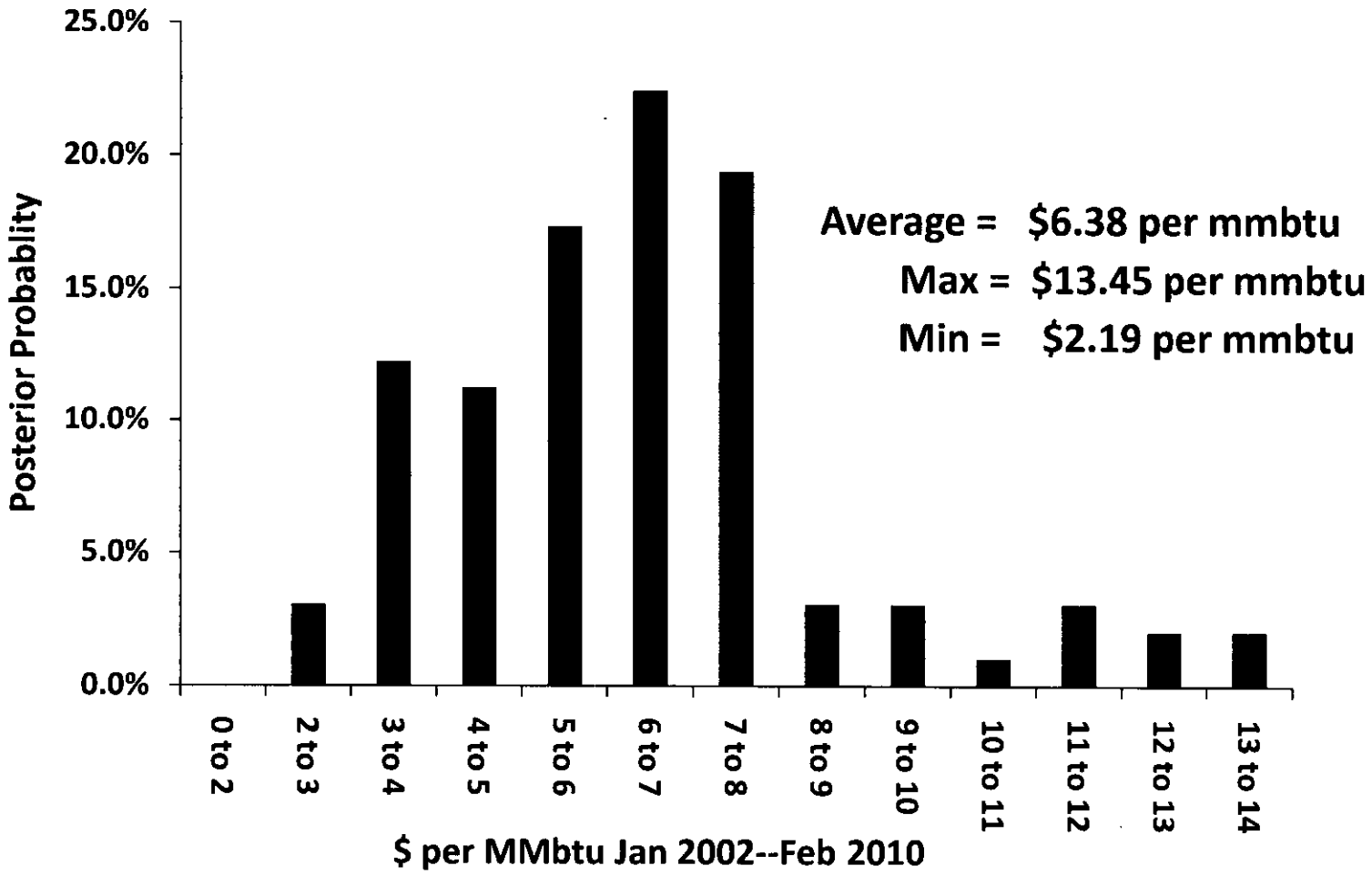


Gas Price Frequency Distributions

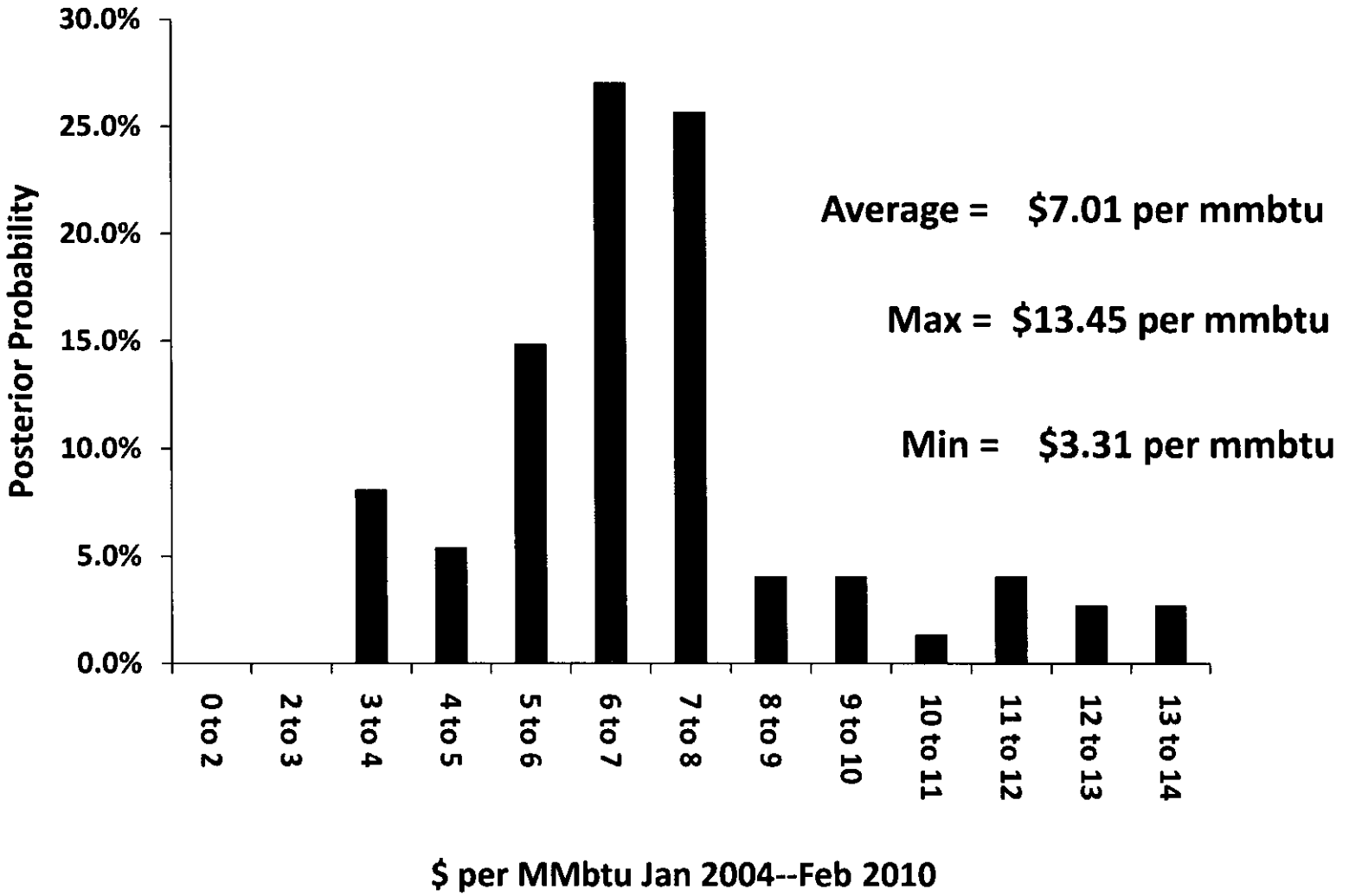
- Comparing the following three charts it can be seen that gas prices viewed over the longer time period of Jan 1994—Feb 2010 were most frequently in the $2-$3 range but relatively evenly distributed all the way up to $8 per mmbtu.
- Going to the distribution from Jan 2002 to Feb 2010 shows that dropping the earlier 8 years moves the distribution up to center around the $5 to $8 range.
- The final chart shows that distribution of gas prices from Jan 2004 to Feb 2010 where gas prices become more bunched in the region of $6 to $8 per mmbtu.
- The today's situation in the gas market with gas around $4 is consistent with the 16 year average ($4.55) rather than either the last 8 or 6 year averages of $6.38 and $7.01 respectively.


Frequency Distribution for Monthly for NYMEX Natural Gas Price Jan 1994—Feb 2010
Average = $4.55 per mmbtu
Max = $13.45 per mmbtu
Min = $1.43 per mmbtu
Posterior Probability
30.0%
25.0%
20.0%
15.0%
10.0%
5.0%
0.0%
0 to 2
2 to 3
3 to 4
4 to 5
5 to 6
6 to 7
7 to 8
8 to 9
9 to 10
10 to 11
$ per MMbtu Jan 1994--Feb 2010

Frequency Distribution Monthly for NYMEX Natural Gas Price Near Contract



Frequency Distribution Monthly for NYMEX Natural Gas Price Jan 2004—Feb 2010



HB 414:
The Separation of Oil from Gas for the Oil & Gas Production Tax

House Resources Committee
Logsdon & Associates
March 31, 2010

Premise of the Bill

- Under current law oil and gas are taxed together
- Oil is worth much more than gas
- The combining mechanism has the potential to materially reduces oil taxes even though oil operations are unaffected

Oil is Different than Gas

- Supply
  - Oil more geographically concentrated (fewer sellers: OPEC)
  - Oil supplies more depleted
  - Lower cost gas is more plentiful
- Demand
  - Oil has fewer substitutes
  - Gas has more substitutes
- Result: Oil is worth more than gas

BTU 9:1

West Coast ANS

- Market Price $80/bbl
- Less:
  - Shipping $2.07
  - TAPS $4.18
- Gross Value $73.75
- 6 mmbtu's / bbl
- $12.29 / mmbtu

North Slope Gas

- Market Price $6/mmbtu
- Less:
  - Tariff AK to AB $3.54
  - AB Hub $0.24
  - Tariff AB to L48 $0.85
- Gross Value $1.37/mmbtu
- On a straight BTU to BTU basis oil is worth nearly 9 X as much as gas

Some Things that have BTUs

- Oil
- Gas
- Coal
- Wood
- Asphalt
- Shoe Leather
- Rubber
- Coffee grounds
- Citrus rinds
- Corn cobs
- Dung

Mechanics of Current Tax

- 1) Oil gross value (market price less transport cost)
- 2) Gas gross value (market price less transport cost)
- 3) Oil + gas gross value gas = Combined gross value
- 4) Combined gross value – lease capital and operating costs = Combined oil & gas net value
- 5) Combined oil & gas net value / total oil & gas BOEs = p/BOE net value (see Slide # 7)
- 6) Progressivity factor (based on per BOE net value) plus 25% base rate = tax rate
- 7) Single tax rate applied to combined oil & gas net value

Barrel of Oil Equivalents (BOEs):
Putting Oil & Gas on an Apples / Apples Basis

- 4.5 billion cubic feet per day (bcf/d) of natural gas
- A cubic foot of North Slope gas will have about 1,100 BTUs
- Natural gas is measured in millions of BTUs (mmbtu)
- 4.5 billion cubic feet per day will have 4.95 million mmbtu's (4.5 X 1,100)
- A barrel of oil has about 6 mmbtu's
- 4.5 billion cubic feet per day will have the BTU equivalence of 825,000 barrels of oil (BOEs) (4,950,000 / 6)
- If there are 500,000 barrels of oil, total BOEs will total 500,000 + 825,000 = 1,325,000

Progressivity Mechanics

- "Trigger" = $30 net / BOE value
- "Slope" = 0.4%*
- Progressivity surcharge = (Net per BOE value - $30) X .004
- Example: if net value = $50
  - Base tax rate = 25%
  - Progressivity = ($50 – $30) X .004 = 8%
  - Total tax of 33% on net value

* Slope changes to 0.1% after $92.50 net per BOE value

HOW GAS IMPACTS OIL TAXES

	Oil Alone (p/bbl)
Market Price	$80.00
Transp cost	$5.00
Gross Value	$75.00
Costs	$20.00
Net (p/barrel or p/mmbtu)	$55.00
Base rate	25.00%
Progressivity	10.00%
Total tax rate	35.00%

HOW GAS IMPACTS OIL TAXES

	Oil Alone (p/bbl)	Gas (p/mmbtu)
Market Price	$80.00	$6.00
Transp cost	$5.00	$4.50
Gross Value	$75.00	$1.50
Costs	$20.00	$0.50
Net (p/barrel or p/mmbtu)	$55.00	$1.00
Base rate	25.00%	
Progressivity	10.00%	
Total tax rate	35.00%	
Daily bbls (oil) or mmbtu (gas)	500,000	4,950,000
Daily BOEs	500,000	825,000
Annual million bbls (oil) or million mmbtu (gas)	183	1,807
Annual BOEs (millions)	183	301

HOW GAS IMPACTS OIL TAXES

	Oil Alone (p/bbl)	Gas (p/mmbtu)	Combined Oil & Gas	
Market Price	$80.00	$6.00	Oil	
Transp cost	$5.00	$4.50	p/bbl net value	$55.00
Gross Value	$75.00	$1.50	Barrels (millions)	183
			Total oil net value ($mm)	$10,038
Costs	$20.00	$0.50	Gas	
			p/mmbtu net value	$1.00
Net (p/barrel or p/mmbtu)	$55.00	$1.00	mmbtu's (millions)	1,807
			Total gas net value ($mm)	$1,807
Base rate	25.00%			
Progressivity	10.00%		Total oil & gas net value	$11,844
Total tax rate	35.00%		Total BOEs	484
			Net value / BOE	$24.49
Daily bbls (oil) or mmbtu (gas)	500,000	4,950,000	NO PROGRESSIVITY!	
Daily BOEs	500,000	825,000		
Annual million bbls (oil) or million mmbtu (gas)	183	1,807		
Annual BOEs (millions)	183	301		

HOW GAS IMPACTS OIL TAXES

	Oil Alone (p/bbl)	Gas (p/mmbtu)
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Base rate	25.00%	
Progressivity	10.00%	
Total tax rate	35.00%	
Daily bbls (oil) or mmbtu (gas)	500,000	4,950,000
Daily BOEs	500,000	825,000
Annual million bbls (oil) or million mmbtu (gas)	183	1,807
Annual BOEs (millions)	183	301

Combined Oil & Gas	
Oil	
p/bbl net value	$55.00
Barrels (millions)	183
Total oil net value ($mm)	$10,038
Gas	
p/mmbtu net value	$1.00
mmbtu's (millions)	1,807
Total gas net value ($mm)	$1,807
Total oil & gas net value	$11,844
Total BOEs	484
Net value / BOE	$24.49

NO PROGRESSIVITY!

DEPARTMENT OF REVENUE EXAMPLES TO SENATE FINANCE - FEBRUARY 24, 2010

Oil Price	Gas Price	Oil Alone Progressivity Factor	Oil & Gas Combined Progressivity Factor	Reduction in Progressivity Factor	Oil Alone Tax ($billions)	Gas Alone Tax ($billions)	Total Tax if Taxed Separately ($billions)	Combined Tax ($billions)	Annual Tax Reduction from Combining ($billions)
$75	$8.00	5.38%	0.00%	5.38%	$1.7	$1.1	$2.8	$2.5	$0.3
$100	$8.00	15.38%	3.59%	11.79%	$4.0	$1.1	$5.1	$4.0	$1.1
$120	$8.00	23.38%	6.79%	16.59%	$6.4	$1.1	$7.5	$5.5	$2.0

* Oil
  Production 500,000 bbls/day
  Transportation cost deduction $6.50/bbl
  Upstream capital costs $2 billion
  Upstream operating costs $2 billion
** Gas
  Production 4.5 bcf/day
  Transportation cost deduction $4.50/mmbtu
  Upstream capital costs $200 million
  Upstream operating costs $200 million

How can you be so sure about future prices?

- We cannot
- Different price relationships would produce different outcomes
- Since the potential for these outcomes exist, the current tax structure adds another level of risk to an already large amount of uncertainty
- At current price relationships there is a risk of undermining state finances

How HB 414 Bill Works

- Under the current law there is a base tax rate of 25%
  - Plus progressivity based on the combined oil & gas net value / BOE
- The bill removes progressivity on gas
- Progressivity on oil continues to be calculated just on oil net value / barrel
- Exclusion of gas in the progressivity calculation does not reduce oil taxes
- Senate CS – includes progressivity on gas

Issue: Cost Allocation

- Costs to produce oil and gas are truly joint costs
- Current approach (AS 43.55.165(h)): gives department authority to adopt regulations for allocating costs between oil and gas:
  - As recipients of confidential cost data they are in the best position to evaluate costs
  - A regulatory process allows more time
  - The regulatory process is public
- BOE Approach
  - The same costs that **produce** oil **produce** gas
  - Since **produced** together, costs are allocated based on amounts **produced**
  - BOE method: putting oil & gas on apples/apples basis in terms of relative **produced** volumes

Issue: Tax Neutrality on Current Activity

- Currently some producers produce both oil and gas
- If separate oil and gas for calculating progressivity:
  - Oil progressivity will be undiluted by gas
  - Oil progressivity will go up
  - Taxes will increase
- Not intent of bill to raise taxes on current activity
- Proposed progressivity structure in Senate CS
  - One progressivity on oil, Cook Inlet gas, and other in-state gas calculated together
  - A second progressivity on export gas calculated distinctly
  - Replicates current situation and prevents major gas sale from diluting oil progressivity

HB 414

"An Act relating to the tax on oil and gas production; and providing for an effective date."

The Bill is intended to separate oil and gas production into two separate substances for purposes of the oil and gas production tax ACES AS 43.55. Oil would be taxed at its net production value at a combined rate of 25% and a progressive surcharge as taxable value increases above $30 per barrel. Gas would be taxed at a flat rate of 25%

Sec. 1.

- **AS 43.55.011(e)(2)**
  - Adds language to the statute that specifically identifies that oil is subject to a progressive tax rate.
  - Section (e) defines a base tax rate of 25% and a progressivity surcharge defined in Section (g). Most importantly, the progressive rate surcharge only applies to oil.

Sec. 2.,.3., and 4.

- **Sec. 2. AS 43.55.011(g) and (g)(1) and (g)(2)**
- These sections of the bill change the progressive rate surcharge so that it applies only to oil by removing gas from the progressive rate calculation, leaving the gas rate at a flat 25%

- **Sec. 3. AS 43.55.011(j)**
  - This change ensures that the comparison between the old ELF tax for Cook Inlet gas and a tax on the net production value of gas uses the 25% with no progressive rate.

- **Sec. 4. AS 43.011(o)**
  - Same as Sec.3 for non-Cook Inlet gas used in-state.

Sec. 5., 6., and 7.

- **Sec. 5. AS43.55.020(a)(1)**
  - Gas progressivity is removed from the calculation of the monthly installment payments.
- **Sec.6. AS 43.55.160(a)(2)**
  - For progressivity, the calculation of the monthly production tax value is only made for oil.
- **Sec. 7. AS 43.55.160(c)**
- Calculating the monthly share of the producer's costs of transportation for the calendar year for deriving production tax value for progressivity is for only done for oil.
- **Sec. 8. Takes effect immediately**

CS for Senate Bill 305 (Version T)

HB 414 as introduced has the language of the original SB305.

The following changes have been made in the CS for Senate Bill 305:

Title has been tightened to focus scope:

"An Act relating to **that part of the tax on oil and gas production that increases the rate of tax as the production tax value of oil or the BTU equivalent barrel of gas increases above $30, separating the determination of that rate between oil and gas, and making that rate distinct between oil and gas**; relating to the availability of a portion of the money received from the tax on oil and gas production for appropriation to the community revenue fund; relating to the allocation of lease expenditures and adjustment of lease expenditures; and providing for an effective date"

Progressivity on Oil and Gas

No change to formula:

Progressivity rate =

(production tax value per BTU equivalent barrel - $30) X .004

As in current law:

BTU equivalent barrels for gas = mmbtu / 6

Production tax value per BTU equivalent barrel for gas =

production tax value / BTU equivalent barrels

Two Progressivity Calculations

- Oil / CI Gas / Other In-State Gas
  - Progressivity calculated together
  - Same as current activity
  - No tax increase on current kinds of activity

- Export Gas (Major Gas Sale Gas)
  - Calculated distinctly
  - Will not dilute oil progressivity

Two Progressivity "Buckets"

Requirement that BTU Equivalent Barrels be considered as a method for allocating lease costs between Oil and Gas

- AS 43.55.165(h) is amended to require the department to consider allocating lease expenditures between oil and gas production in proportion to BTU equivalent barrels produced op each substances.
- The Department of Revenue already has regulations that use the BTU Equivalent method for allocating joint productions.
- The BOE method is relatively straightforward, knowable, and relatively stable.
- The Department has the resources, time, and procedures for examining this issue and ultimately it would be their decision.

Applicability Date

- Retroactive to January 1, 2010 for administrative expediency for both department and taxpayers; they will not have to split the year with two systems
- Will not result in any change in tax

ALASKA STATE LEGISLATURE
House Resources Committee

Craig Johnson, Co-Chair

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Sponsors Statement for HB 414 by the House Resource Committee

"An Act relating to the tax on oil and gas production; and providing for an effective date."

Currently there are companies doing business in Alaska that have both oil sales (from the North Slope) and gas sales (from Cook Inlet or elsewhere). The gas produced receives the same progressivity surcharge as the oil.

House Bill 414 by the House Resources Committee separates oil and natural gas for purposes of calculating the progressivity portion of the production tax under AS 43.55. Under this bill, the progressivity surcharge is calculated on oil only instead of on oil and gas combined. The progressivity surcharge remains unchanged at 0.4% per $1 of production tax value over $30 per barrel, then 0.1% per $1 of production tax value over $92.50. Under House Bill 414, natural gas will be taxed at 25% of production tax value with no progressivity surcharge.

Bill Section	Change	Notes
	"An Act relating to the tax on oil and gas production; and providing for an effective date."	The Bill is intended to separate oil and gas production into two separate substances for purposes of the oil and gas production tax ACES AS 43.55
Sec. 1.	**AS 43.55.011(e)(2)** Adds language that specifically identifies the production of oil for progressivity rate purposes	Section (e) defines a base tax rate of 25% and a progressivity surcharge defined in Section (g). Progressivity only applies to oil.
Sec. 2.	**AS 43.55.011(g)** The language referring to gas and its per BTU equivalent is removed to isolate the progressive rate tax calculation for oil. **AS 43.55.011(g)(1)** The language referring to gas and its per BTU equivalent is removed to apply the progressive rate calculation only to oil with a progressive rate of an additional 0.4% for each $/bbl above $30 up to $92.50 per barrel. **AS 43.55.011(g)(2)** The same changes are made in this subsection as in AS 43.55.011(g) (1) eliminating references to gas and per BTU equivalent to calculate the progressive rate for net production values greater than $92.50 at the rate of an additional 0.1%	This isolates the progressive tax rate calculation to apply to oil not gas. Since gas has been deleted from the calculation of the progressive rate, the rate on gas is set at 25% as set out in AS 43.55.011(e)(1)
Sec. 3.	**AS 43.55.011(j)** In comparing the lower of Sec. (e) tax and ELF tax for Cook Inlet production, progressivity does not apply for gas.	This change serves to make the comparison between the old ELF tax for gas and a tax on the net production value of gas multiplied by 25%

Bill Section	Change	Notes
Sec. 4.	**AS 43.011(o)** Same as Sec.3 for non-Cook Inlet gas used in-state.	This change serves to preserve the ELF limitation of the tax for gas developed outside the Cook Inlet before 2022 and used in State.
Sec. 5.	**AS43.55.020(a)(1)** The monthly installment payments for gas does not include a progressivity component	All other segregated leases or properties defined in statute only have a progressivity rate for oil
Sec. 6.	**AS 43.55.160(a)(2)** Monthly production tax values for deriving progressivity apply only to oil. (A) Applies only to North Slope oil (B) Applies only to Outside Cook inlet not North Slope Oil	
Sec. 7.	**AS 43.55.160(c)** Calculating the monthly share of the producers's costs of transportation for the calendar year for deriving production tax value for progressivity is for only oil.	
Sec. 8	**Takes effect immediately under AS 01.10.070(c)**	The bill takes effect after the governor's signature or the day after the expiration period on gubernatorial action.

FISCAL NOTE

STATE OF ALASKA
2010 LEGISLATIVE SESSION

Fiscal Note Number:
Bill Version: HB 414
() Publish Date:

Identifier (file name): HB414-REV-TAX-03-20-10
Title: Separate Oil & Gas Production Tax
Sponsor: (H) Resources Committee
Requester: (H) Resources Committee

Dept. Affected: Revenue
RDU: Taxation and Treasury
Component: Tax Division
Component Number: 2476

Expenditures/Revenues (Thousands of Dollars)

Note: Amounts do not include inflation unless otherwise noted below.

	Appropriation Required	Information					
OPERATING EXPENDITURES	**FY 2011**	**FY 2011**	**FY 2012**	**FY 2013**	**FY 2014**	**FY 2015**	**FY 2016**
Personal Services							
Travel							
Contractual	230.0						
Supplies							
Equipment							
Land & Structures							
Grants & Claims							
Miscellaneous							
TOTAL OPERATING	**230.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
CAPITAL EXPENDITURES							
CHANGE IN REVENUES ( )	**	0.0	**	**	**	**	**

***** Significant Impact Beyond FY 2016 - See Analysis Section for Additional Information *****

FUND SOURCE (Thousands of Dollars)

1002 Federal Receipts							
1003 GF Match							
1004 GF	230.0	0.0	0.0	0.0	0.0	0.0	0.0
1005 GF/Program Receipts							
1037 GF/Mental Health							
Other Interagency Receipts							
TOTAL	**230.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**

Estimate of any current year (FY2010) cost: 0.0

POSITIONS

Full-time	**0.0**	0.00	0	0	0	0	0
Part-time							
Temporary							

ANALYSIS: *(Attach a separate page if necessary)*

Bill Language

This bill separates oil and natural gas for purposes of calculating the progressivity portion of the production tax under AS 43.55. Under this bill, the progressivity surcharge is calculated on oil only instead of on oil and gas combined. The progressivity surcharge remains unchanged at 0.4% per $1 of production tax value over $30 per barrel, then 0.1% per $1 of production tax value over $92.50. Under this bill, natural gas is always taxed at 25% of production tax value with no progressivity surcharge.

Currently some companies have both oil sales from the North Slope and gas sales from Cook Inlet and elsewhere, both of which are included in their progressivity calculations that are applied to oil. By removing gas from the progressivity calculation these companies will likely face a higher tax rate and therefore an increase in tax liability. This bill does not contain provisions to offset any increase in tax from removing gas from the progressivity calculation. (continued)

Prepared by: Dan Stickel, Petroleum Economist — Phone 907-465-3279
Division: Tax Division — Date/Time 03-20-10; 6:27pm
Approved by: Ginger Blaisdell, Director — Date 03-20-10; 6:52pm
Administrative Services Division

(Revised 11/8/2009 OMB)

ANALYSIS CONTINUATION

Revenues
Removing gas from the progressivity calculation could potentially raise tax rates and increase tax for companies that currently produce both oil and gas (from Cook Inlet or elsewhere). The impact will vary from year to year, driven largely by oil and gas prices. Analysis of data from confidential tax returns yields estimates of what the revenue impact might have been in recent years. For CY 2008, removing gas from the progressivity calculation would have increased production tax revenue by about $140 million. For CY 2009, the production tax increase would have been about $20 million, and for CY 2010 the production tax increase would be about $50 million. At current prices (around $80 per barrel for North Slope oil, $7 per million cubic feet for Cook Inlet gas, $0.942 per million cubic feet for North Slope gas sold for in-state use) and assuming costs and production levels similar to 2009, removing gas from the progressivity calculation would cause an increase in tax liability of about $50-60 million per year. These estimates assume that costs are allocated on a British Thermal Unit (BTU) equivalency basis; other allocation methods would yield different estimates.

The revenue impact is presented as indeterminate because of the high degree of uncertainty regarding the impact of removing gas from the progressivity calculation, as well as the material impact of regulations yet to be developed for allocating costs between oil and gas.

Once major gas sales begin, applying progressivity to oil only is generally expected to result in higher state revenues than a combined tax. This effect occurs for two reasons: first, oil has historically commanded a price premium to natural gas on an energy equivalency basis; and second, transportation costs are lower in percentage terms for oil than for natural gas, resulting in a higher wellhead value. The revenue impact will be a function of numerous variables including oil and gas prices and production, lease expenditures, and the method chosen for allocating lease expenditures between oil and natural gas.

There are some scenarios under which the state could see a reduction in revenues from this bill. Without a progressivity surcharge on natural gas, this bill could reduce state revenue if the price relationship between oil and natural gas normalized (on an energy equivalency basis) at a time when natural gas was selling at a relatively high price. Also, since this bill will generally increase taxes on the major producers, it is possible that the tax change could be viewed as a disincentive to oil and gas exploration and development.

Expenditures
With the change in tax structure the Department will need to change its monthly reporting forms, annual tax returns, and databases. The contractual services costs for programming changes to the online tax information system and the monthly reporting system are estimated at $230,000. Aside from one-time costs, the provisions of this bill can be implemented using existing staff and resources.

Other Issues
This bill provides for an immediate effective date. Since the production tax is levied on an annual basis (payable in monthly installments), changing the tax calculations for only a portion of the tax year would create an additional burden with additional complexity for both the Department and the taxpayers for the 2010 tax year. Applying the tax change retroactive to January 1, 2010 would be preferred from a tax administration standpoint.

HB 414

Separating of Oil from Gas for the Oil & Gas Production Tax

This presentation was originally heard in Senate Finance on March 9, 2010 for Senate Bill 305, version 26-LS1577\R. The presentation was given by Logsdon & Associates and is accurate for HB 414, version 26-LS1592\A.

Premise of the Bill

- Under current law oil and gas are taxed together
- Oil is worth much more than gas
- The combining mechanism materially reduces oil taxes even though oil operations are unaffected

Oil is Different than Gas

- Oil more geographically concentrated (fewer sellers: OPEC)
- Oil supplies more depleted
- Gas is more plentiful
- Oil has fewer substitutes
- Gas has more substitutes

BTU 10:1

West Coast ANS

- Market Price $80/bbl
- Less:
  - Shipping $2.07
  - TAPS $4.18
- Gross Value $73.75

North Slope Gas

- Market Price $6/mmbtu
- Less:
  - Tariff AK to AB $3.54
  - AB Hub $0.24
  - Tariff AB to L48 $0.85
- Gross Value $1.37/mmbtu
- BOE Basis (X 5.5) = $7.54
- On a straight BTU to BTU basis oil is worth nearly 10 X as much as gas

Some Things that have BTUs

- Oil
- Gas
- Coal
- Wood
- Asphalt
- Shoe Leather
- Rubber
- Coffee grounds
- Citrus rinds
- Corn cobs
- Dung

Mechanics of Current Tax

- 1) Oil gross value (market price less transport cost)
- 2) Gas gross value (market price less transport cost)
- 3) Oil + gas gross value gas = Combined gross value
- 4) Combined gross value – lease capital and operating costs = Combined oil & gas net value
- 5) Combined oil & gas net value / total oil & gas BOEs = p/BOE net value (see Slide #6)
- 6) Progressivity factor (based on per BOE net value) plus 25% base rate = tax rate
- 7) Single tax rate applied to combined oil & gas net value

Barrel of Oil Equivalents (BOEs):
Putting Oil & Gas on an Apples / Apples Basis

- 4.5 billion cubic feet per day (bcf/d) of natural gas
- A cubic foot of North Slope gas will have about 1,100 BTUs
- Natural gas is measured in millions of BTUs (mmbtu)
- 4.5 billion cubic feet per day will have 4.95 million mmbtu's (4.5 X 1,100)
- A barrel of oil has about 5,500 BTUs
- 4.5 billion cubic feet per day will have the BTU equivalence of 900,000 barrels of oil (BOEs) (4,950,000 / 5.5)
- If there are 500,000 barrels of oil, total BOEs will total 500,000 + 900,000 = 1,400,000

Progressivity Mechanics

- "Trigger" = $30 net / BOE value
- "Slope" = 0.4%*
- Progressivity surcharge = (Net per BOE value - $30) X .004
- Example: if net value = $50
  - Base tax rate = 25%
  - Progressivity = ($50 – $30) X .004 = 8%
  - Total tax of 33% on net value

* Slope changes to 0.1% after $92.50 net per BOE value

How the Bill Works

- Under the current law there is a base tax rate of 25%
  - Plus progressivity based on the combined oil & gas net value / BOE
- The bill removes progressivity on gas
- Progressivity on oil continues to be calculated just on oil net value / barrel
- Exclusion of gas in the progressivity calculation does not reduce oil taxes

bp

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March 12, 2010

Senator Bert Stedman, Co-Chair
Senate Finance Committee
State Capitol, Room 516
Juneau, AK 99501

Re: Senate Bill 305

Dear Senator Stedman:

Please accept my apologies for being out of state and unable to return to Juneau in time for the Senate Finance Committee's hearing today on SB 305. I hope, though, that you and the Committee will receive this letter in time for your consideration of the Bill.

Our understanding of SB 305 is that it would determine the taxable net "production tax value" for oil under AS 43.55.160 of ACES separately from that for gas, so that the respective production-tax values would then be taxed separately as well. We further understand that the stimulus for this decoupling is concern that tax revenues under the present version of ACES could be materially reduced when major gas sales begin from the North Slope into a gas pipeline. Specifically, the concern is that the gross netback value for major North Slope gas sales into a pipeline may initially be significantly less on a BTU-equivalent barrel basis than the gross netback value per barrel for oil.

All other things being equal, such a development could indeed reduce state revenues under ACES. But not all other things will be equal. Major gas sales would also greatly increase the number of BTU-equivalent over which the deductible lease expenditures are spread, thereby significantly reducing the deductible cost per BTU-equivalent barrel. State revenues under ACES would decrease only if the reduction in gross netback value per Btu-equivalent barrel is greater than the offsetting reduction in deductible costs per Btu-equivalent barrel. State revenues could actually increase under the current version of ACES if the reduction in cost per barrel is greater than the reduction in netback per barrel.

Our concern with SB 305 as it now reads is that, in addressing this potential problem that may arise a decade from now, it would come into effect today and require allocation of costs between oil and gas long before the potential risk it addresses could begin to materialize. SB 305 does not change the present rule in AS 43.55.011(o) that North Slope gas sold for in-state consumption is taxed under a tax cap similar to the cap for Cook Inlet production. So the allocation of costs under SB 305 would only be for gas that is already capped under AS 43.55.011(o) or any small sales that don't qualify under section .011(o). Allocation threatens to make a mountain out of a molehill because the change in gas taxes due to cost allocation during the coming decade will be tiny relative to the tax when major gas sales begin, but the Department of Revenue will have to apply the allocation rules with strictest rigor lest it create a bad precedent for the major gas sales.

We understand that the impetus for enacting SB 305 this session is to avoid locking in the risk under the present law that major North Slope gas sales could materially reduce the overall tax under ACES. But we see a straightforward way to achieve that without all the problems and disputes that will arise by allocating costs to gas now. The solution is to add a Bill Section that defers the effective date for Sections 1 – 7 of SB 305 to the start of major gas sale deliveries from the North Slope into a gas pipeline for shipment. The Bill Section making such a deferral would be on the books as of the tax lock-in date and would thus be part of "the gas production tax in effect at the start of the first binding open season held under this chapter " for purposes of AS 43.90.320 — especially if the Committee adopts a letter of intent (or adds a statement of intent as a section of SB 305 itself) that specifically declares the deferred-effective-date provision to be part of the "tax in effect" as of that date for lock-in purposes. In other words, the substance in SB 305 could be locked in as of this year for AGIA purposes without triggering prematurely all the disputes and difficulties over allocating costs to gas before production for major North Slope gas sales begins.

Finally, whether or not you adopt our suggestion of deferring the effective date for decoupling, we would also ask that you not follow the pattern used during the ACES debate, where significant matters were left to the determination of the Department of Revenue. SB 305 currently uses the term "applicable to" to describe the allocation of lease expenditures between oil and gas. Such a broad term does not provide the industry or the Department of Revenue enough guidance of the legislative intent. There are instances already in use and available in the tax arena to model an allocation between oil and gas. For instance, ACES uses "BTU equivalent barrels" as a method to determine gas production in oil-equivalent terms in AS 43.55.024(c), the phase-out of the small-producer tax credit. Or, if you prefer, the allocation could be done on a basis of relative volumes as determined for the "extraction factor" in AS 43.55.072(f) for the oil and gas corporate income tax. The point is, no matter what cost allocation is performed for decoupling, you should make your choice clear in the Bill because that will clarify the obligation that taxpayers are held to, reducing latitude for argument about what compliance requires and making it easier for the Department of Revenue to enforce.

Thank you for your consideration of these comments.

Sincerely,

BP Exploration (Alaska) Inc.

Claire Fitzpatrick
Senior Vice President

cc: Senate Finance Committee
House Resources Committee

COMMENTS ON SB305

Senate Finance Committee

March 12, 2010

Topics

- Revenue Projections Under SB305 and Status Quo
- Cost Allocation
- Technical Issues Regarding SB305

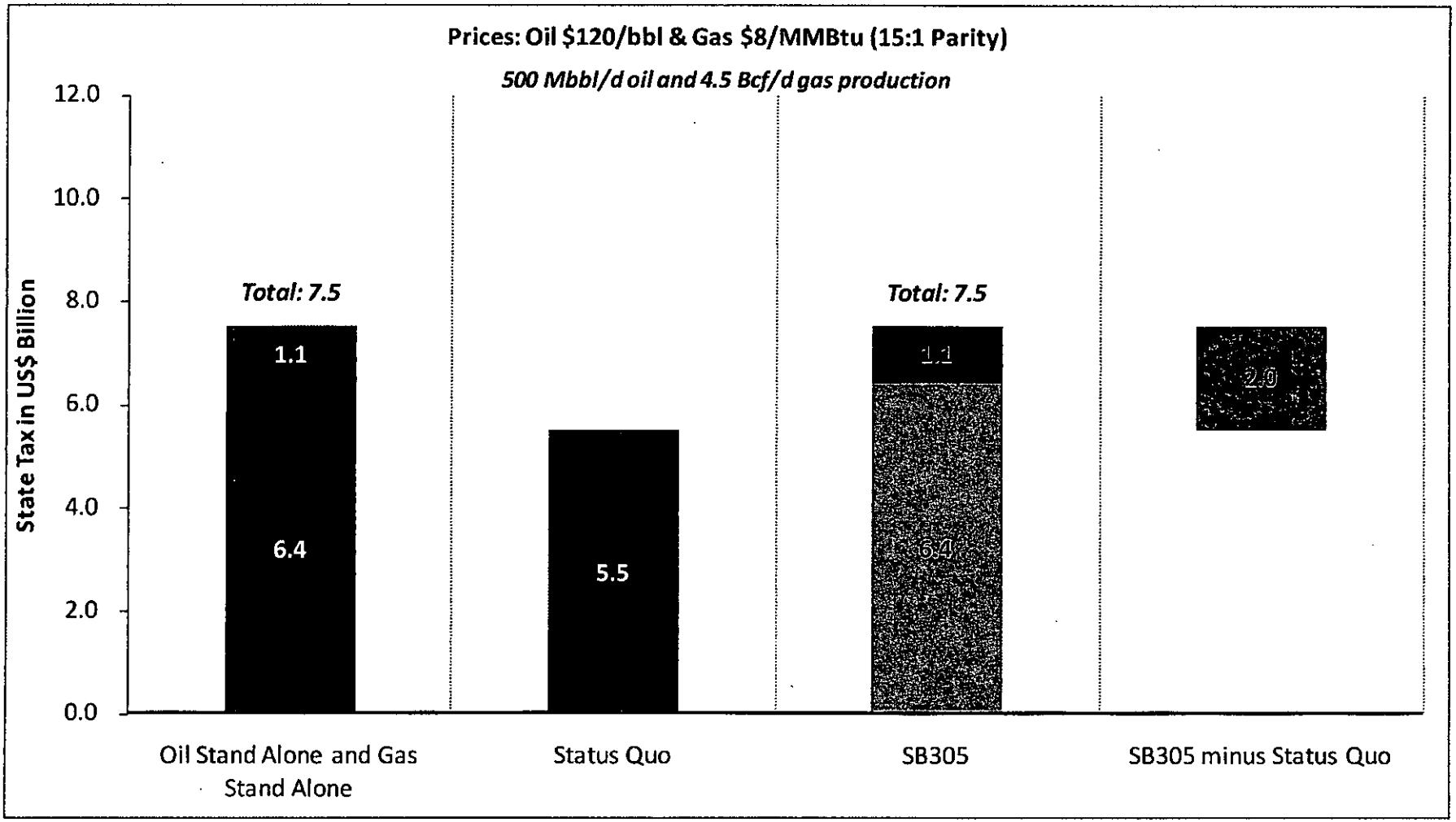
Revenue Projections Under SB305

- Using the Single Year "Income Statement" Model assumptions from previous DOR presentations
  - How does SB305 compare to the Status Quo at different oil to gas price parities?

"Income Statement" Model Assumptions

- Consistent with DOR presentation to Senate Finance Committee on February 24, 2010
- Production
  - Oil: 500,000 bbl/d
  - Gas: 4.5 Bcf/d
- BOE conversion
  6 Mcf = 1 BOE
- Costs allocation
  - Total Opex: $2,200,000,000
  - Total Capex: $2,200,000,000
  - Costs split 90%/10% for oil / gas
- Transportation
  - Oil: $6.5/bbl
  - Gas: $4.5/MMBtu

At high parity, SB305 > Status Quo

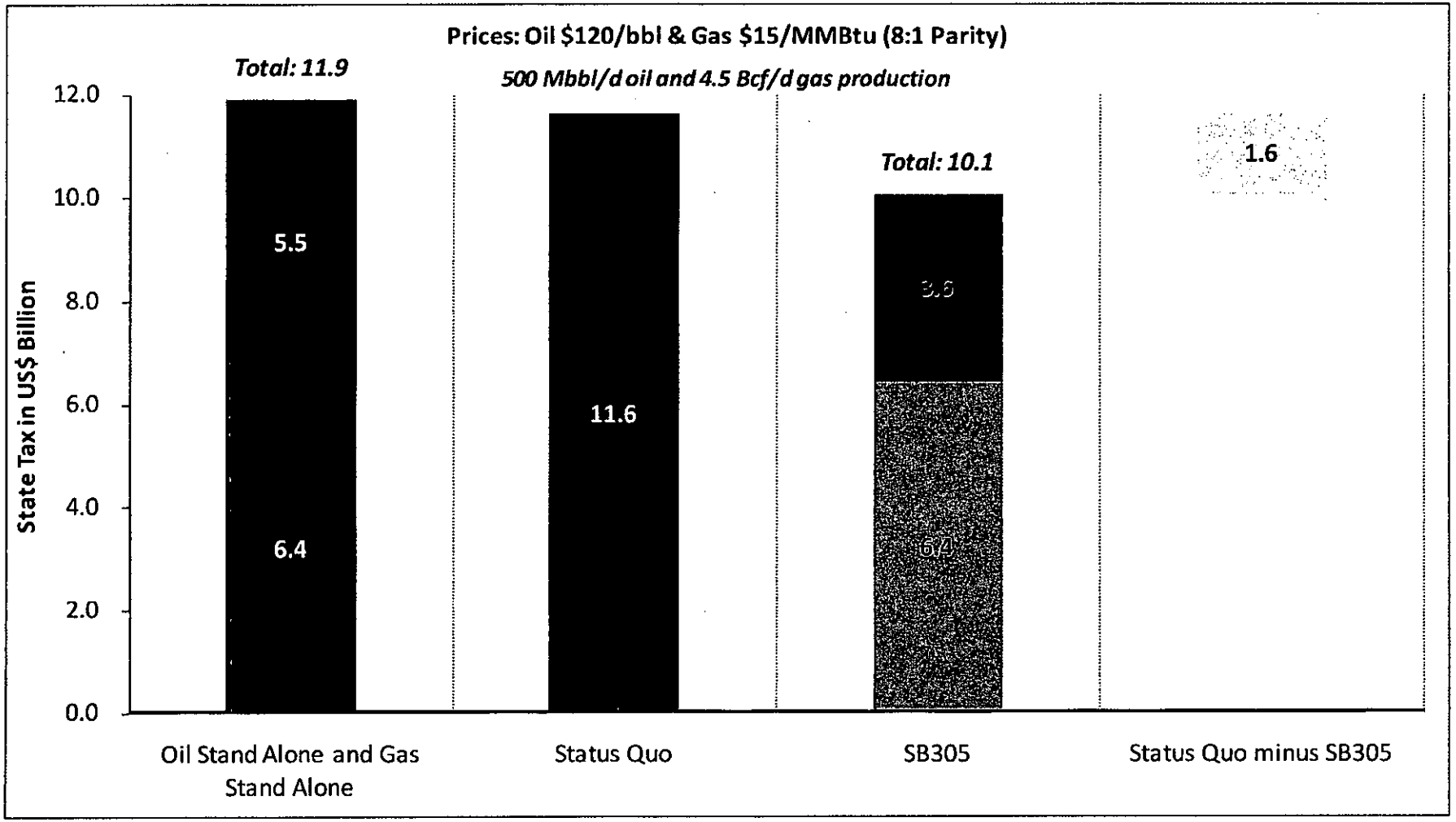


DOR

Note: Same as Commissioner presentation to Senate Finance Committee on February 24, 2010

3/12/2010

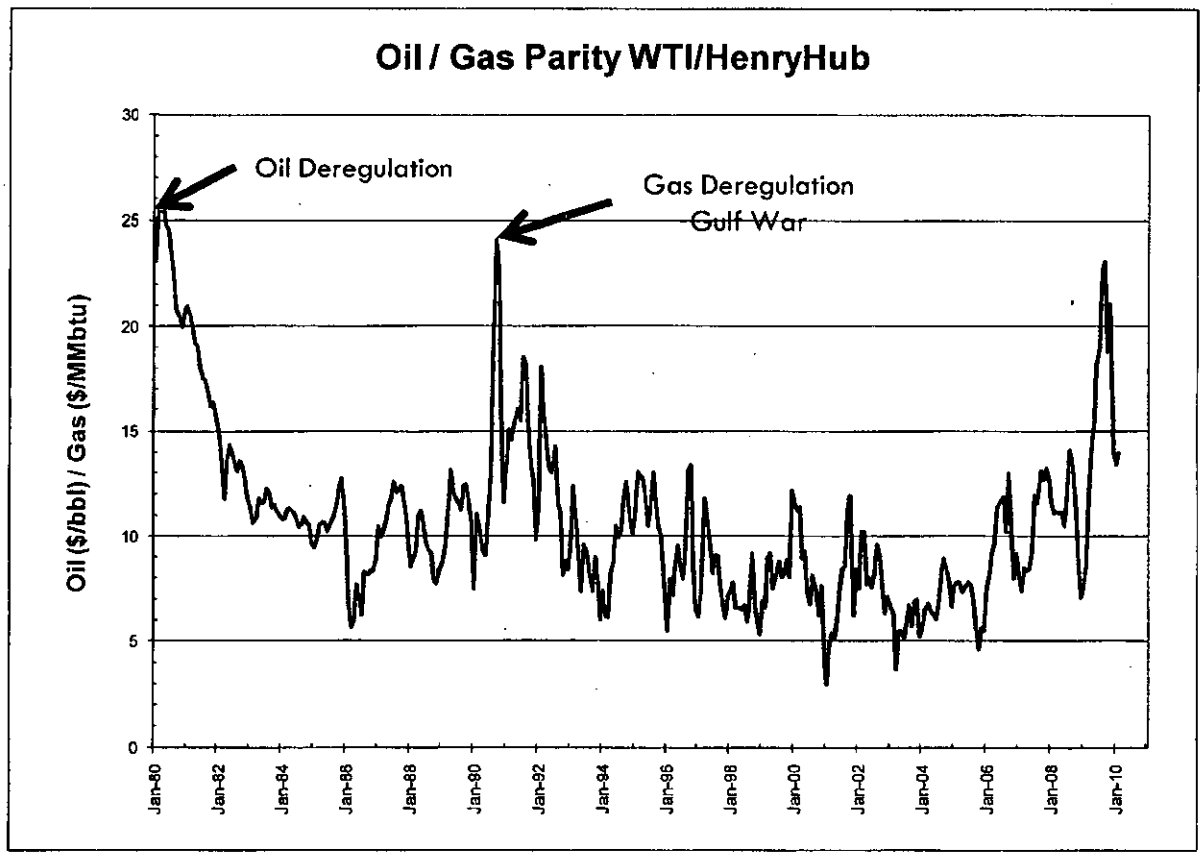
At lower parity, SB305 < Status Quo



Observations

- SB305 can lead to higher or lower state revenue compared to the status quo, depending on oil price and gas parity.
- SB305 provides for a lower state share compared to the status quo when upside profits and gas prices are relatively high (no gas progressivity).
- SB305 imposes a higher tax burden compared to the status quo when gas prices are relatively low.

The Oil/Gas Price Parity Guess....



....Where will it be in 2020 – 2045?

Topics

- Revenue Projections Under SB305 and Status Quo
- Cost Allocation
- Technical Issues Regarding SB305

Cost Allocation Issues

- With a separate oil and gas tax system, how costs are allocated between oil and gas has a significant impact on overall taxes owed
- Because oil and gas are generally produced together, it is not easy or straight forward to determine the costs "applicable to the gas [or oil] produced"
- The cost allocation method could result in uncertainty, disputes, and delays
- Cost allocation should be specified in the statute, and is a very important policy decision

Different Cost Allocation Options

- Detailed item by item attribution methods
- Formula or Rule based attribution methods

Item by Item Attribution Methods

- Used elsewhere in the world
- Generally self certified by the producers, checked by the regulator
- Historically attribution differences have led to a considerable number of disputes especially where there is significant difference in oil and gas tax rates (as we would have under SB305)
  - producer versus government
  - producer versus producer
    - Different producers are affected differently, so to the extent that producers have any discretion in how costs are allocated, it could result in disputes between working interest owners and delay investment decisions

Formula or Rule Based Methods

- May not accurately reflect the "true" purpose of the cost
- Examples include attributing costs based on
  - Proportion of Production (BOE)
  - Proportion of Sales (e.g. Gross Value at Point of Production)
  - Proportion of Reserves
  - Rule of dominant use - either gas or oil
  - Deemed oil unless item is 100% gas related
  - Combination of any of the above

Impact of Cost Allocation Choices

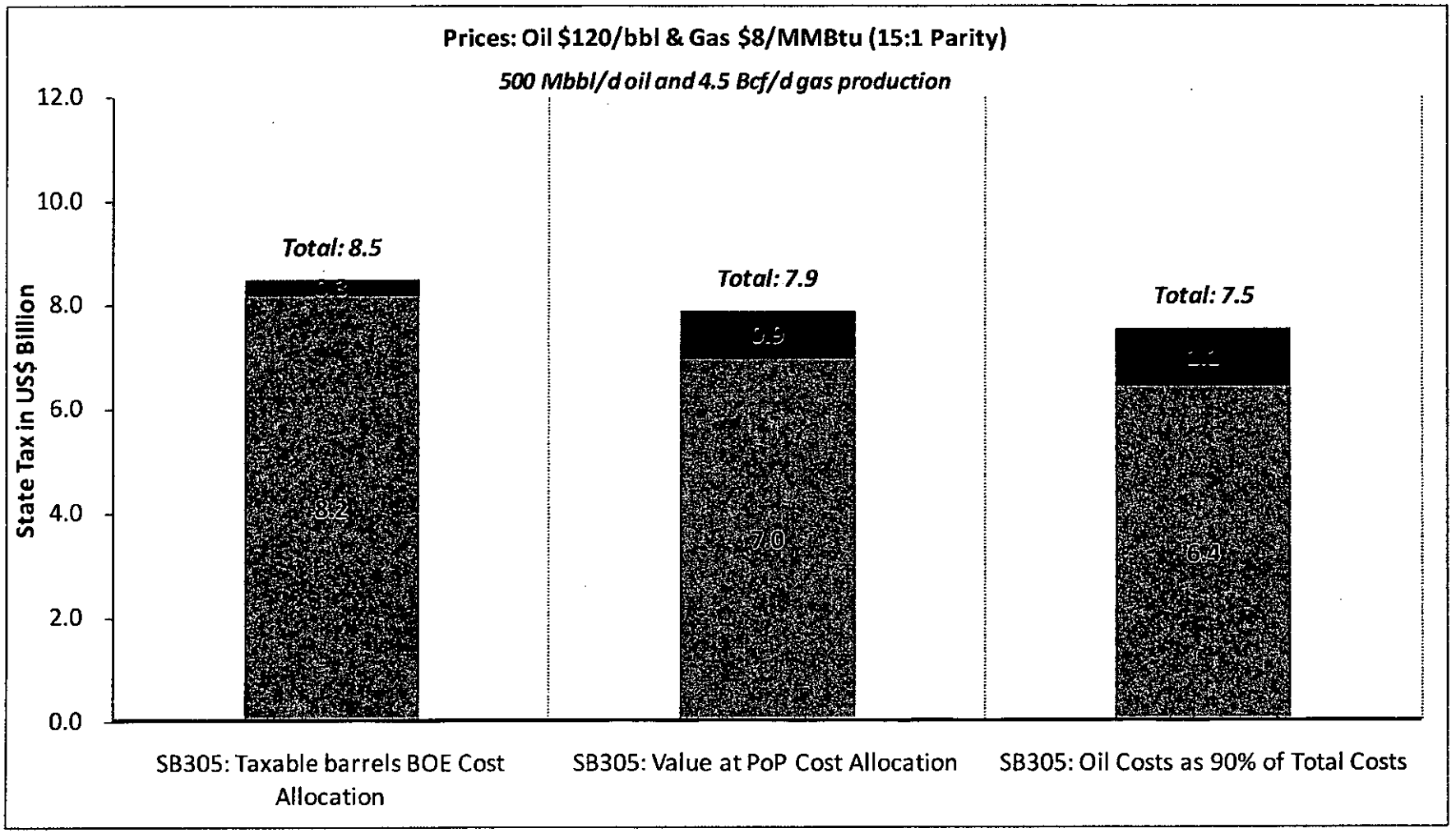
- SB305 requires the allocation of costs to oil or to gas, but does not describe the allocation method or guiding principles:
  - Actual allocation of individual costs would be highly impractical and would require significant auditing resources.

- To examine the potential economic impact of the allocation method, we compared three cost allocation possibilities:
  1. Costs allocated based on relative BOE production
  2. Costs allocated based on relative gross value at Point of Production (PoP)
  3. Assumed "actual" cost split of 90/10 between oil and gas

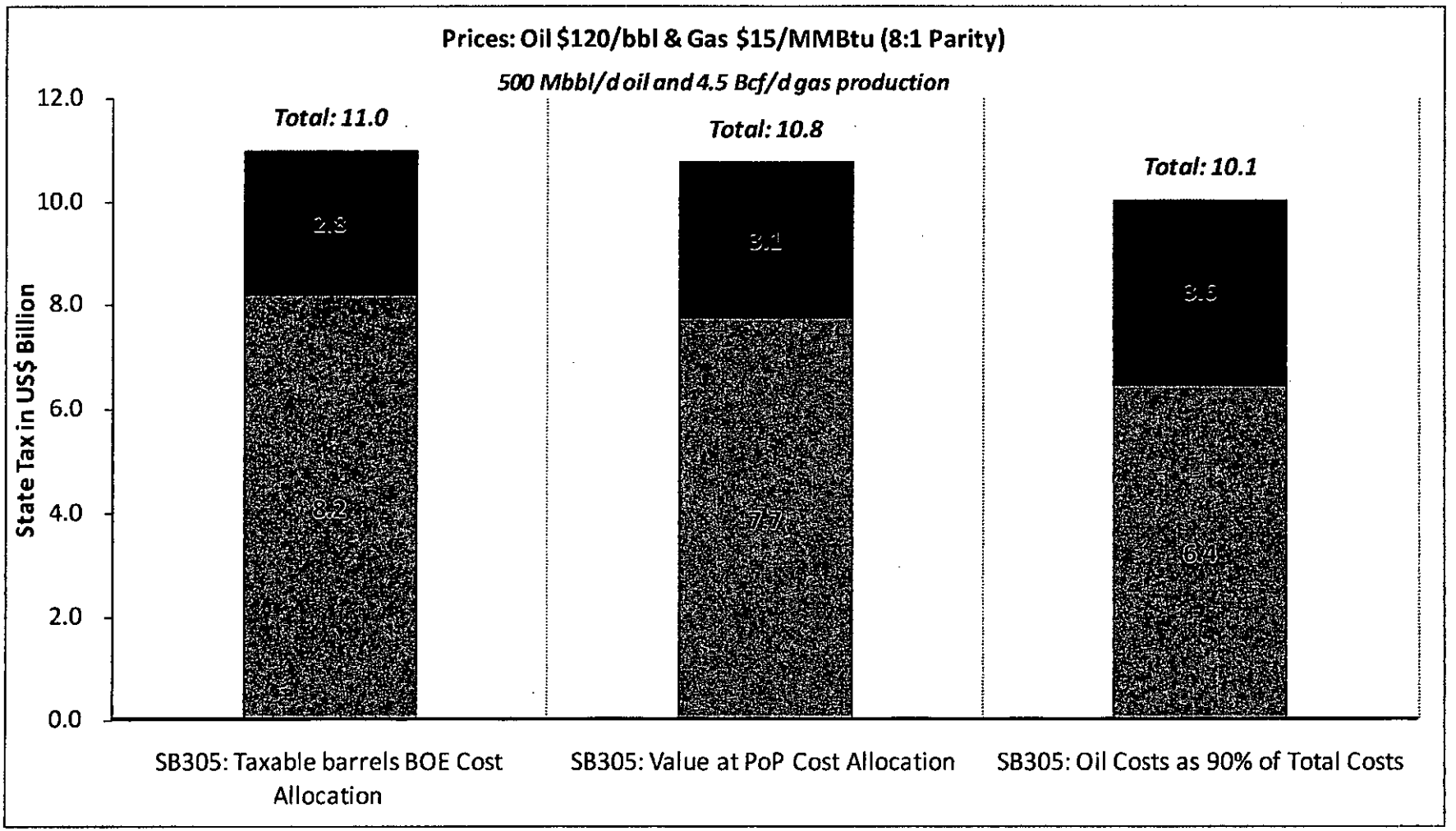
Cost Allocation Examples

	Oil	Gas	Total
Production (MMboe)	183	274	457
Gross Value at PoP (US$MM) – $120 and 15:1	20,714	5,749	26,463
Gross Value at PoP (US$MM) – $120 and 8:1	20,714	17,246	37,960
Split Based on BOE (%)	40%	60%	100%
Cost Allocation (US$MM)	1,760	2,640	4,400
Split Based on Gross Value at PoP (%) – 15:1	78%	22%	100%
Cost Allocation (US$MM)	3,444	956	4,400
Split Based on Gross Value at PoP (%) – 8:1	55%	45%	100%
Cost Allocation (US$MM)	2,401	1,999	4,400
Split Based on assumed "Actual" (%)	90%	10%	100%
Cost Allocation (US$MM)	3,960	440	4,400

Impact of Allocation Method on SB305 Revenue - Oil $120/bbl and 15 Parity ($8/MMBtu)



Impact of Allocation Method on SB305 Revenue - Oil $120/bbl and 8 Parity ($15/MMBtu)



Topics

- Revenue Projections Under SB305 and Status Quo
- Cost Allocation
- Initial Technical Issues Regarding SB305

SB305 Technical Issue

- Inconsistent treatment of negative production tax values - Current Monthly Installment Section .020 requires the tax estimates of NS, CI and other state areas to each be at least zero. SB305 lost this requirement when it deleted "greater of (i) zero...". Lack of this provision means a negative value in one region can reduce the estimated monthly tax values in other regions resulting in a lower total estimated monthly production tax value than provided under current law.

SB305 Technical Issue

- Timing of Adjustments under AS 43.55.170 (reimbursements) - SB305 revises Section 160(a)(1) and (2) to reference Lease Expenditures as adjusted under AS 43.55.170. Unclear if the adjustment is to occur before or after the allocation process. If after, then department needs authority and direction to allocate the Section .170 adjustments between oil and gas lease expenditures.

Conclusions

- Separating oil and gas taxes is not a panacea, and can raise new and different risks to state revenues compared to the status quo
- With uncertainties in the oil and gas markets and wildly fluctuating price forecasts, the tax system needs to be responsive to a wide range of potential price scenarios
- To achieve the state's objectives the tax system must balance the desire for revenue with creating an attractive investment climate for a gasline

The End