

SB 305: The Separation of Oil from Gas for the Oil & Gas Production Tax

House Resources Committee
Logsdon & Associates
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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 reduce 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
($4.5 \times 1,100$)
- 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 = $(\$50 - \$30) \times .004 = 8\%$
 - 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	Gas	:	
	(p/bbl)	(p/mmbtu)	:	Combined Oil & Gas
			:	
Market Price	\$80.00	\$6.00	:	Oil
Transp cost	\$5.00	\$4.50	:	p/bbl net value
Gross Value	\$75.00	\$1.50	:	183
			:	Barrels (millions)
			:	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
Total tax rate	35.00%		:	\$11,844
			:	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)	:	Combined Oil & Gas
Market Price	\$80.00	\$6.00	:	Oil
Transp cost	\$5.00	\$4.50	:	p/bbl net value
Gross Value	\$75.00	\$1.50	:	Barrels (millions)
			:	Total oil net value (\$mm)
Costs	\$20.00	\$0.50	:	Gas
			:	p/mmbtu net value
Net (p/barrel or p/mmbtu)	\$55.00	\$1.00	:	mmbtu's (millions)
			:	Total gas net value (\$mm)
Base rate	25.00%		:	Total oil & gas net value
Progressivity	10.00%		:	Total BOEs
Total tax rate	35.00%		:	Net value / BOE
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	:	
			:	\$24.49

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

		Oil	Oil & Gas		Oil	Gas	Total		Annual
		Alone	Combined	Reduction in	Alone	Alone	if	Combined	Tax
		Progressivity	Progressivity	Progressivity	Tax	Tax	Taxed	Tax	Reduction
Oil Price	Gas Price	Factor	Factor	Factor	(\$billions)	(\$billions)	Separately	(\$billions)	from
							(\$billions)		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 SB 305 Works

No change to progressivity formula:

Progressivity on oil and gas:

Progressivity rate =

$$(\text{production tax value per BOE} - \$30) \times .004$$

Total tax rate = 25% base tax rate + progressivity rate

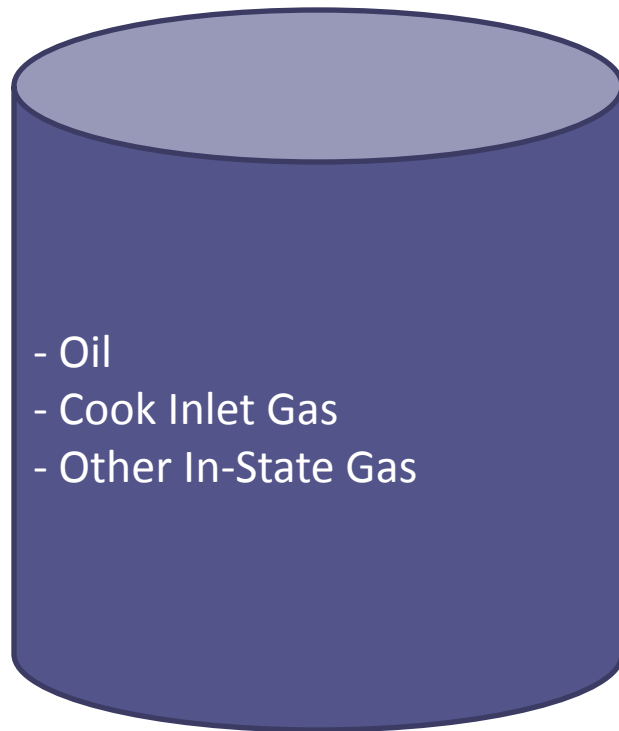
How Progressivity Operates Now

- Each company calculates one statewide progressivity rate based on all activity and the production tax value per BOE
- Company divides operations into 5 segments
 - 1) Cook Inlet oil
 - 2) Cook Inlet gas
 - 3) North Slope oil and gas except gas used in-state
 - 4) Non-North Slope / Non-Cook Inlet oil and gas except gas used in-state
 - 5) Non-Cook Inlet gas used in-state
- For each segment:
 - For each segment calculate tax liability based on total tax rate (base 25% rate plus statewide progressivity rate) and the segment's production tax value
 - For segments 1, 2, and 5 tax liability is lower of ELF or above

SB 305: Instead of One Statewide Progressivity Calculation: Two Progressivity Calculations

- **FIRST: Oil / CI Gas / Other In-State Gas**
 - Progressivity calculated together
 - Same as current activity
 - Same 5 segments treated as now
 - No tax increase on current activity
- **SECOND: Export Gas (Major Gas Sale Gas)**
 - Calculated distinctly: segment unto itself
 - Will not dilute oil progressivity

SB 305: Two Progressivity “Buckets”



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
- 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 barrel of oil equivalents (BOE) produced on each substance.

Cost Allocation: BTU Barrel of Oil Equivalent (BOE) Approach

- This is the approach DOR adopted to implement the existing statute for the same cost allocation purposes as this bill
- 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