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

House Resources Committee Logsdon & Associates April 7, 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

	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%

	Oil	
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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

	Oil		:			
	Alone	Gas	:			
	(p/bbl) (p/mmbtu) : C		: Combined Oil & Gas	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	:			

	Oil		:	
	Alone	Gas	:	
	(p/bbl)	(p/mmbtu)	: Combined Oil & Gas	
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Annual BOEs (millions)	183	301	:	

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

					:			Total	:		Annual
					:			Тах	:		Тах
		Oil	Oil & Gas		:	Oil	Gas	if	:		Reduction
		Alone	Combined	Reduction in	:	Alone	Alone	Taxed	:	Combined	from
		Progressivity	Progressivity	Progressivity	:	Тах	Тах	Separately	:	Тах	Combining
Oil Price	Gas Price	Factor	Factor	Factor	:	(\$billions)	(\$billions)	(\$billions)	:	(\$billions)	(\$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 <u>potential</u> 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 = (production tax value per BOE - \$30) X .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 instate
 - 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"



- Cook Inlet Gas

- Other In-State 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
- 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 op each substances.

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 <u>produce</u> oil <u>produce</u> gas
- Since <u>produced</u> together, costs are allocated based on amounts <u>produced</u>
- BOE method: putting oil & gas on apples/apples basis in terms of relative produced volumes