

3/28/12
OVERVIEW:
DECOUPLING
OF OIL AND
GAS TAXES

<TARGET><BILL></BILL><SUBJECT>3-28-12 OVERVIEW
DECOUPLING OF OIL AND GAS
TAXES</SUBJECT><COMM>HRES27</COMM></TARGET>



"Decoupling" of Oil and Gas for Production Tax Purposes



*Presentation to the
House Resources Committee
March 28, 2012
Alaska Department of Revenue*



Overview



- **How Alaska's production tax works**
- **What is "decoupling"**
- **Why decouple?**
- **Decoupling Issues**
- **History: SB 305 in 2010**



Review: How Alaska's Production Tax Works



- Company specific tax
- Based on Production Tax Value (PTV)
 - Market price – Transportation Costs =
Gross Value at Point of Production (GVPP)
 - GVPP – Lease Expenditures =
Production Tax Value (PTV)
 - BOE = Barrel of Oil Equivalent
- Tax Rate
 - Base tax rate of 25% of “production tax value”
 - Progressivity applies when PTV is over \$30/BOE, and increases rate by 0.4% for each \$1 of PTV over \$30/BOE
 - Example: At a PTV of \$50/BOE, tax rate is 33% $(25\% + 0.4\% * \$20)$
 - At PTV of \$92.50/BOE progressivity changes to 0.1% per \$1 of PTV



FY 11 Production Tax Calculation



	Per Barrel	Barrels	Value (\$ million)
Avg ANS Oil Price (\$/bbl) & Daily Production (bbls)	\$94.49	602,723	\$56.9 / day
Annual Production (bbl)			
Total Annual Production/Value		219,993,895	\$20,786.7
Royalty and Federal barrels		(29,505,505)	(\$2,787.9)
Taxable barrels		190,488,390	\$17,998.8
Downstream (Transportation) Costs (\$/bbl)			
ANS Marine Transportation	(\$2.45)		
TAPS Tariff	(\$4.02)		
Other	(\$0.70)		
Total Transportation Costs	(\$7.17)	190,488,390	(\$1,365.8)
Lease Expenditures			
Deductible Operating Expenditures	(\$13.22)		(\$2,517.4)
Deductible Capital Expenditures	(\$8.52)		(\$1,622.9)
Total Lease Expenditures	(\$21.74)	190,488,390	(\$4,140.3)
Production Tax Value (PTV)			\$12,492.6
Production Tax			
Base Tax (25%*PTV)			\$3,123.3
Production Tax Value per barrel	\$65.58		
Progressive Tax = (14.2% * PTV)			\$1,778.1
Total Tax Due before credits			\$4,901.2
Credits Applied Against Taxes			(\$400.0)
Total Tax after credits			\$4,501.28

Source: Department of Revenue Fall 2011 Revenue Sources Book, Appendix D

This simple model assumes constant production, price, and expenditures for the entire year; results will differ from our larger model and forecast.



What is “decoupling”



- Under current law, gas production from major gas sales would be converted to “barrel of oil equivalent” and taxed in the same calculation as oil*
 - Current law equates 6 million British Thermal Units to one barrel of oil (AS 43.55.900)
 - “Decoupling” would calculate oil and gas tax for major gas sales separately.
- *special provisions exist currently that extend special tax rates to Cook Inlet Gas, and gas for in-state use, until 2022. However these types of production are still included in the statewide “progressivity” calculation



Conceptually, decoupling is simple...



Coupled
Oil & Gas Destination Value
- Oil & Gas transportation costs
= Oil & Gas GVPP
- Oil & Gas Upstream Expenditures
= Oil & Gas Production Tax Value
X Tax Rate
= Oil & Gas Tax Liability

Decoupled	
Oil Destination Value	Gas Destination Value
- Oil transportation costs	- Gas transportation costs
= Oil GVPP	= Gas GVPP
- Oil Upstream Expenditures	- Gas Upstream Expenditures
= Oil Production Tax Value	= Gas Production Tax Value
X Tax Rate	X Tax Rate
= Oil Tax Liability	= Gas Tax Liability



Why decouple?

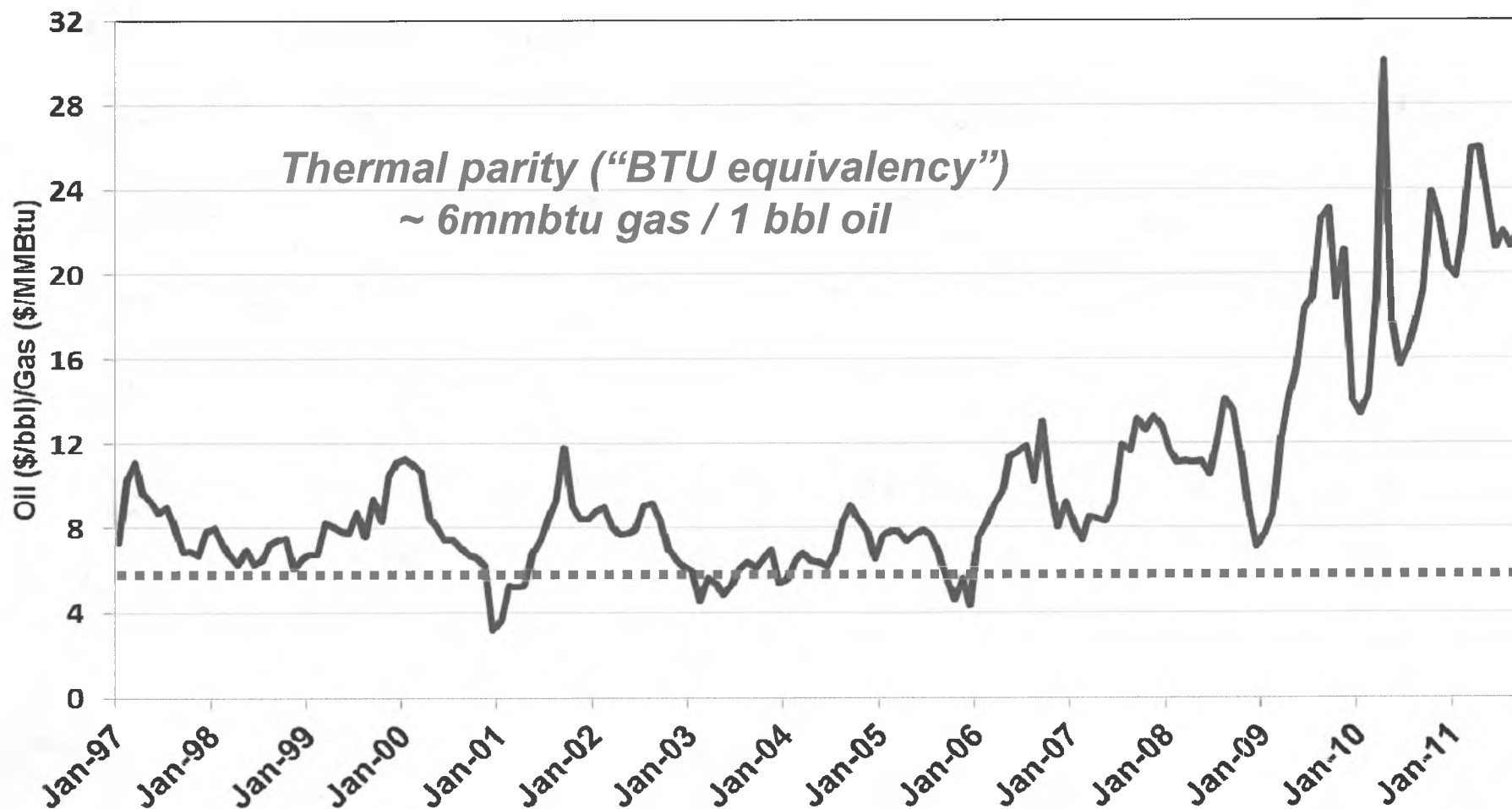
- Oil is different than gas (different uses, different resource endowments, different substitutes)
- Decoupling allows tax policy to be crafted specific to oil or gas production
- Oil is currently worth more than gas (per unit of energy)
- Gas value relative to oil (referred to as “Parity”) varies greatly over time



Oil price \neq 6 * gas price



Oil/Gas Parity WTI/Henry Hub





Why decouple?



- Including lower value gas in the same tax calculation as higher value oil reduces the average value per BOE and therefore reduces the progressive tax rate on oil
- By taxing oil and gas together, gas production reduces oil taxes even though oil operations are unaffected
- This has been called the “flip the switch” problem... as soon as major gas sales begin, state tax revenue could drop significantly, under certain price scenarios (including current prices)



Numerical Examples :

Assumptions



- **One Year “Income Statement” model**
- **DOR 2012 Profiles**
 - Oil: 450 Mbbl/d
 - Gas: 4.5 Bcf/d
- **Conversion**
6 Mcf = 1 boe
- **Costs allocation**
 - Opex: \$2,500,000,000
 - Capex: \$2,500,000,000
 - Costs split on the basis of gross value at the Point of Production (PoP)
- **Transportation**
 - Oil: \$11.00/bbl
 - Gas: \$4.5/MMBtu

bbl/d: Barrels of oil per day
Mbbl/d: Thousand barrels of oil per day
boe: Barrel of oil equivalent
Bcf/d: Billion cubic feet per day
Mcf: Thousand cubic feet
MMBtu: Million British thermal units

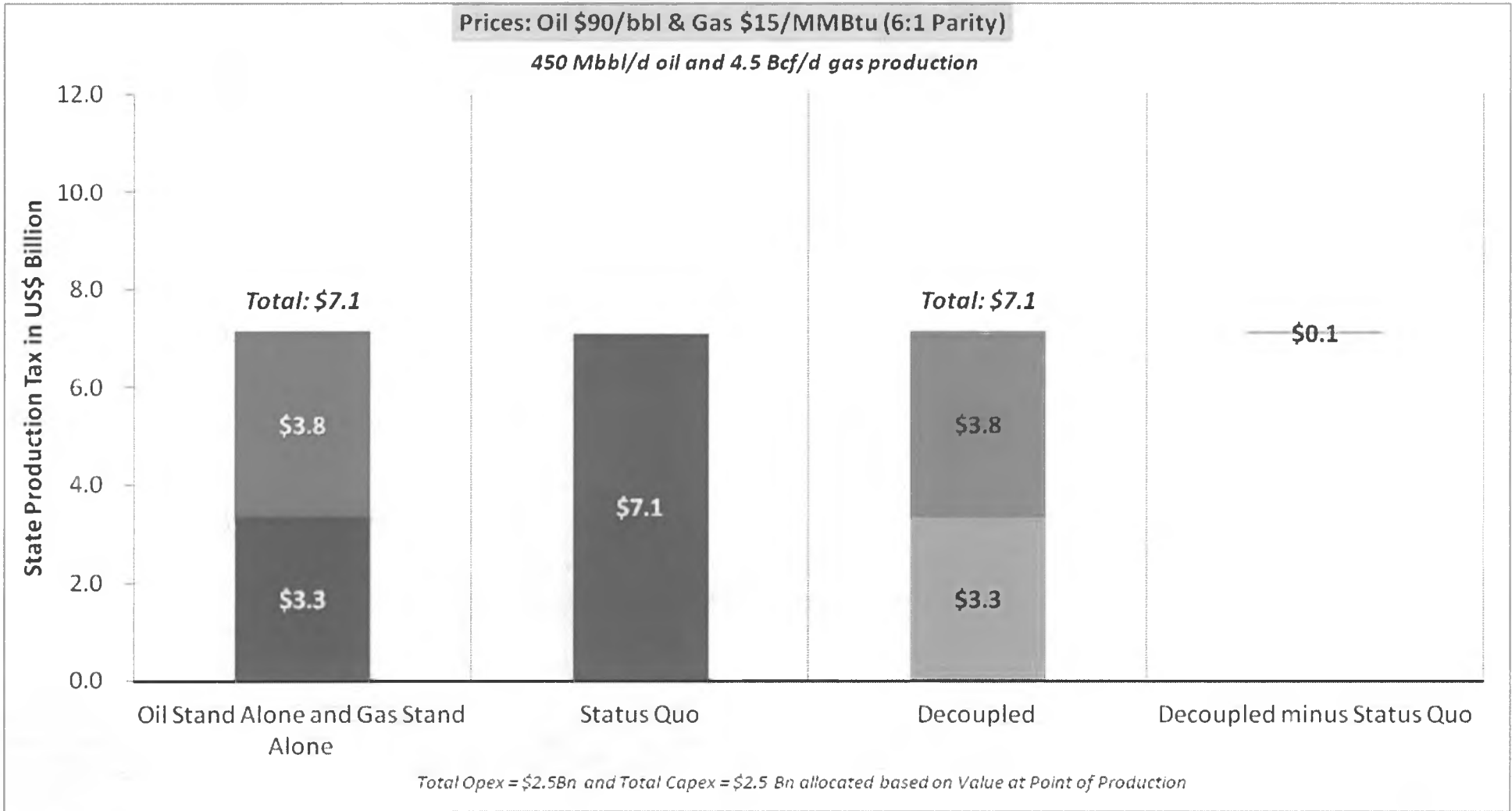


At high parity, Decoupled Revenue > Status Quo



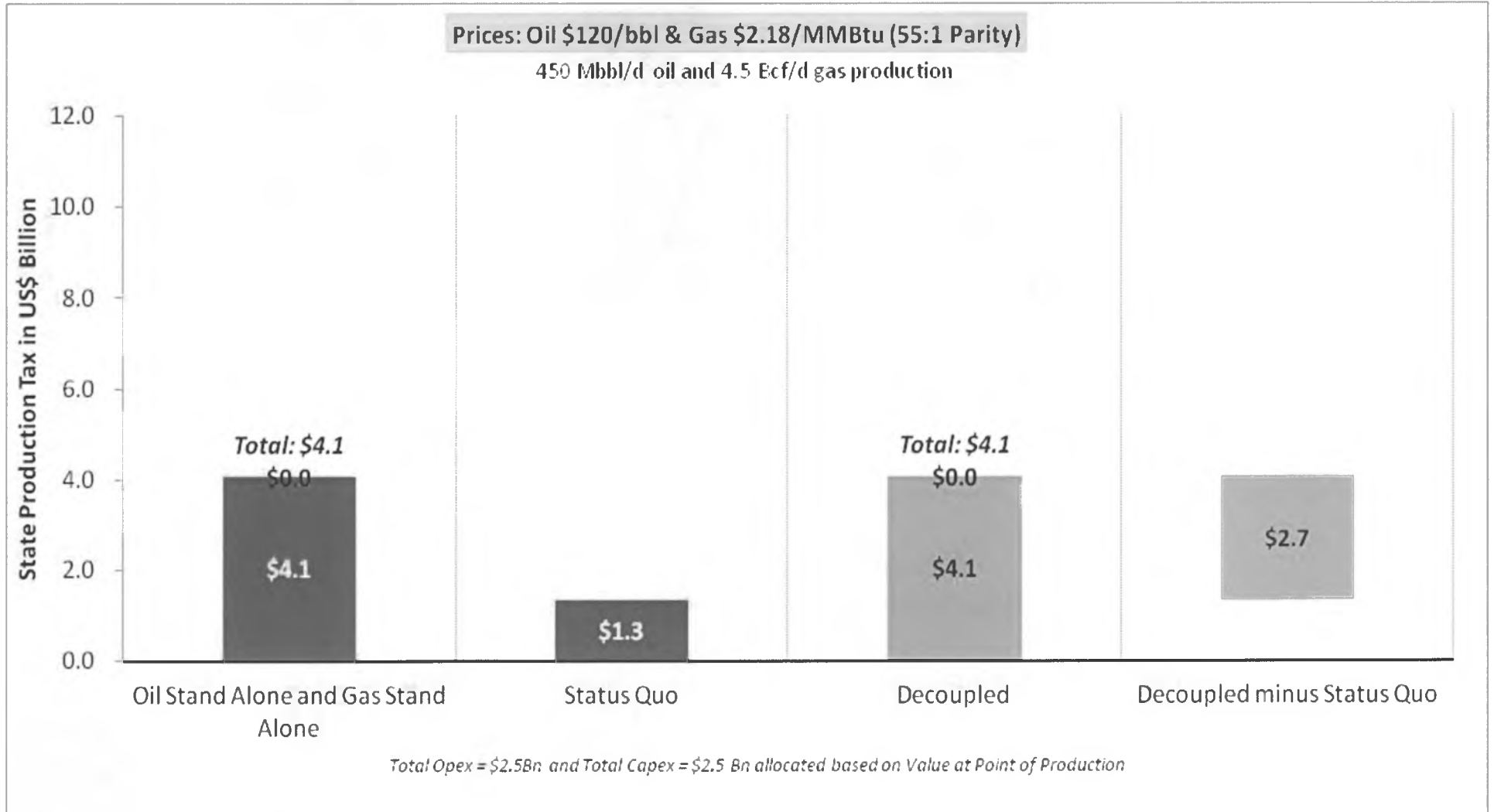


At 6:1 parity, Decoupled Revenue \approx Status Quo





At today's prices...





Observations

- **Decoupling provides for a state share similar to the status quo when gas prices are relatively high (less dilution of progressivity under status quo).**
- **Decoupling imposes a higher state share compared to the status quo when gas prices are relatively low.**
- **Decoupling generates revenue equal to or greater than “oil stand alone” revenue in all cases.**



Decoupling Issues: Cost Allocation



- **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**



Cost Allocation Examples

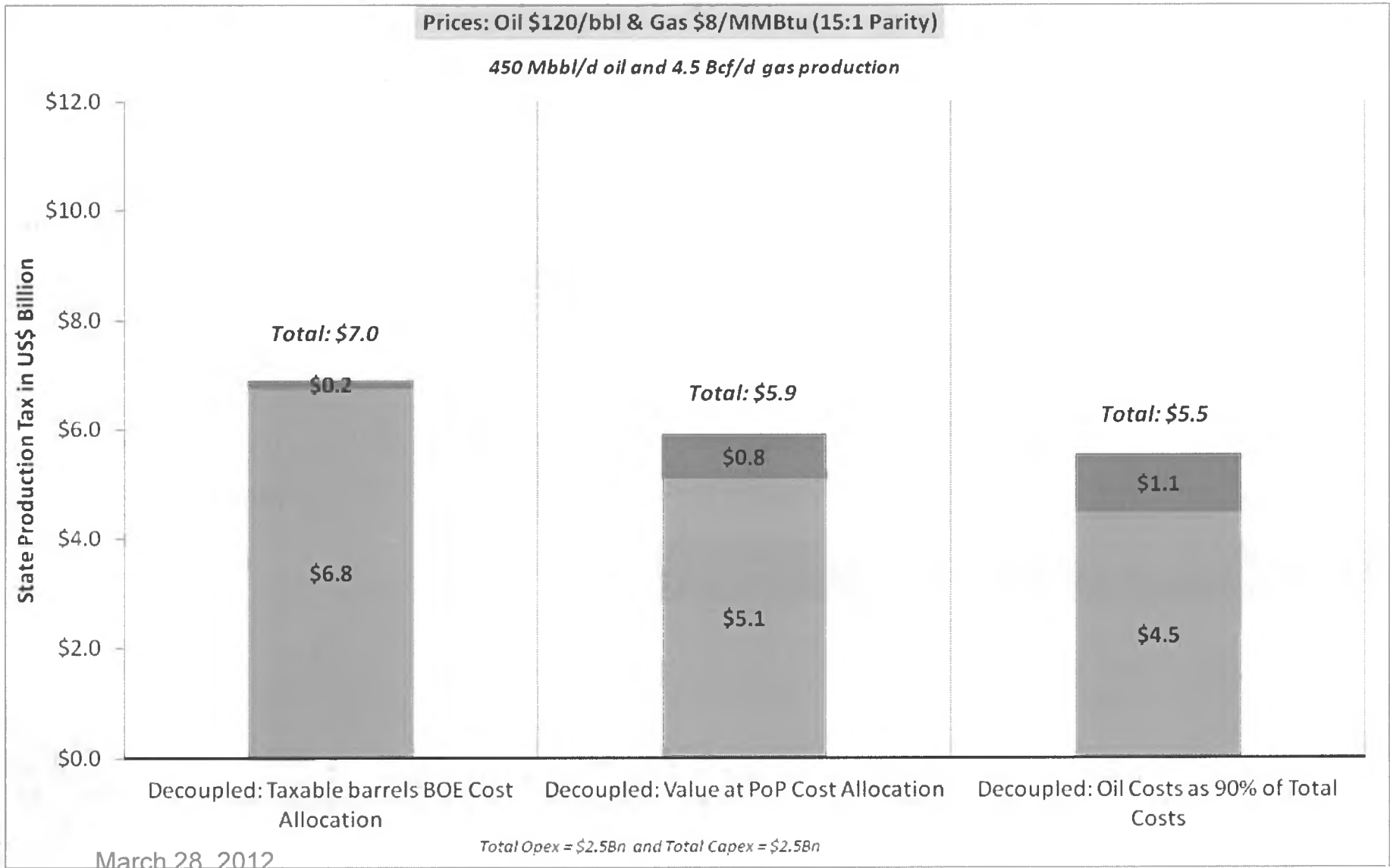


	Oil	Gas	Total
Production (Mmboe)	164	274	438
Gross Value at PoP (US\$MM) - \$120 and 15:1	17,903	5,749	23,652
Split Based on BOE (%)	38%	63%	100%
Cost Allocation (US\$MM)	1,875	3,125	5,000
Split Based on Gross Value at Pop (%)	76%	24%	100%
Costs Allocation (US\$MM)	3,785	1,215	5,000
Split Based on assumed "Actual" (%)	90%	10%	100%
Cost Allocation (US\$MM)	4,500	500	5,000

- Assumes \$120 / Bbl oil and \$8 / MMBtu gas



Impact of Allocation Methods on Decoupled Oil and Gas Revenue





Some Other Decoupling Issues to Consider



- **Potential impact on current gas production**
 - Cook Inlet gas
 - Gas used in state
 - Small quantities of other gas production (OCS)
- **Complexity of administration for state, taxpayers**
- **Specify gas tax now or save for another session?**
- **Balance between desire for revenue and making a major gas project attractive**
- **Treatment of Net Operating Loss for gas**



History: SB 305 in 2010



- Decoupled oil and gas for purposes of a major gas sale (solving the “flip the switch” problem)
- Held harmless most current gas production
- Provided one tax calculation for oil, Cook Inlet gas, and gas used in-state
- Provided a separate tax calculation for non-Cook Inlet gas that is exported out of state
- Specified GVPP cost allocation “to the extent possible”
- Extensive analysis by Legislature, administration, consultants
- Numerous technical issues raised and addressed
- Final bill is the basis of this year’s decoupling in SB 167

State of Alaska
Department of Revenue

Commissioner Bryan Butcher



SEAN PARNELL, GOVERNOR

333 Willoughby Avenue, 11th Floor

P.O. Box 110400

Juneau, Alaska 99811-0400

Phone: (907) 465-2300

Fax: (907) 465-2389

The Honorable Eric Feige
The Honorable Paul Seaton
Co-Chairs, House Resources Committee
Alaska State Legislature
Juneau AK, 99801

April 10, 2012

SUBJECT: Response to requests from House Resources Meeting on March 28, 2012

Dear Representatives Feige and Seaton:

Thank you for the opportunity to respond to requests made during our presentation titled "Decoupling of Oil and Gas for Production Tax Purposes" to the House Resources Committee on March 28, 2012. The requests and responses follow.

- 1.) Prepare charts similar to slides 11-14 using \$150 and \$175 oil and \$3 and \$8 gas (4 charts total).**

Please see attached slides.

- 2.) Look into releasing the model used to prepare these charts so the committee can run their own scenarios.**

These slides were generated from one of our models which tend to be somewhat complicated even for someone with an economic background. In order to avoid confusion, we prefer to sit down and walk through the model with anyone interested when time permits.

We hope our responses fully address your request.

Sincerely,

Bruce Tangeman
Deputy Commissioner

Enclosure

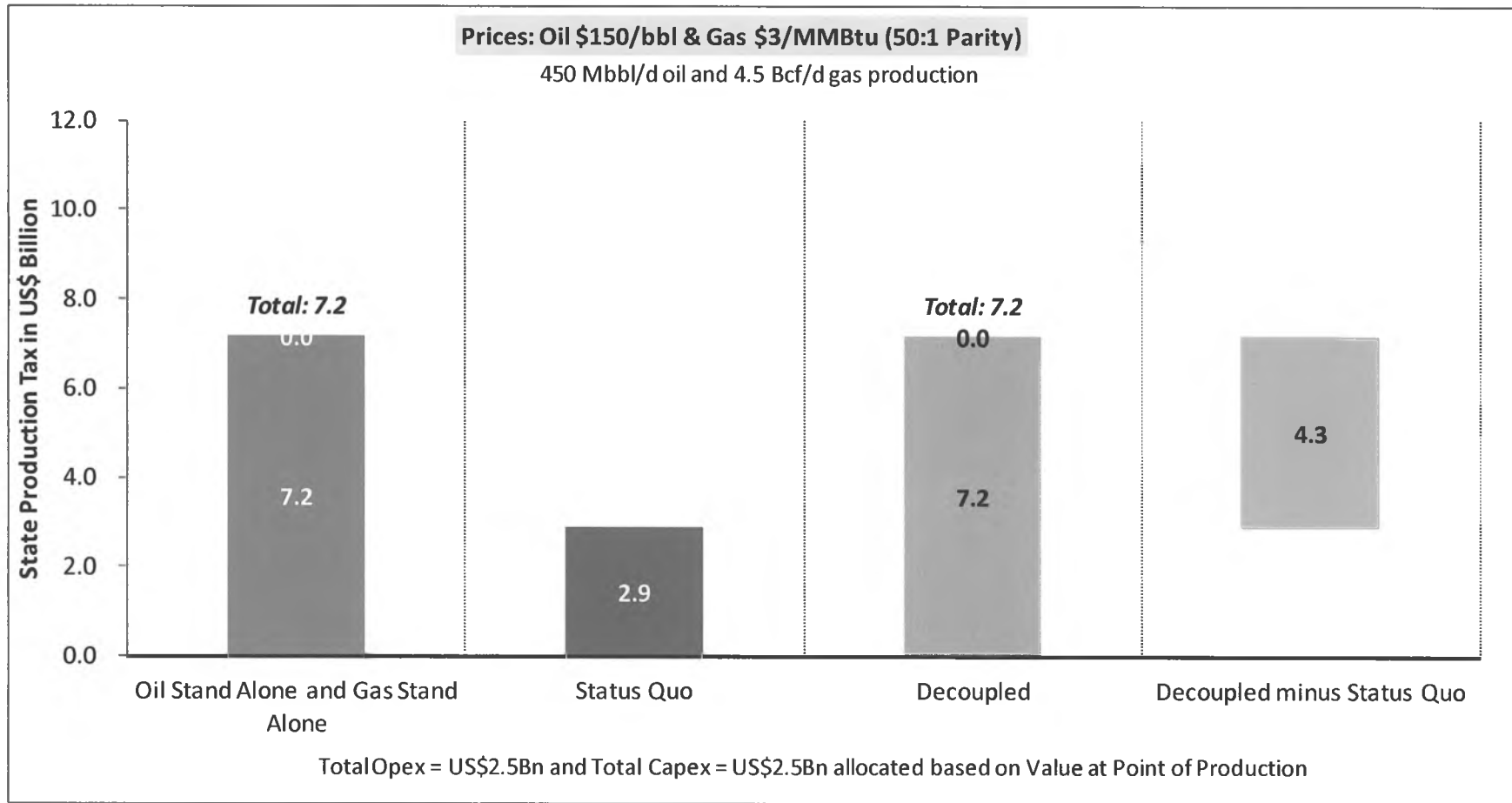
cc: The Honorable Peggy Wilson, Vice Chair, House Resources Committee
The Honorable Alan Dick, House Resources Committee Member
The Honorable Neal Foster, House Resources Committee Member
The Honorable Bob Herron, House Resources Committee Member
The Honorable Cathy Munoz, House Resources Committee Member
The Honorable Berta Gardner, House Resources Committee Member
The Honorable Scott Kawasaki, House Resources Committee Member



Decoupled vs. Status Quo



\$150/bbl Oil Price, \$3/MMBTU Gas Price

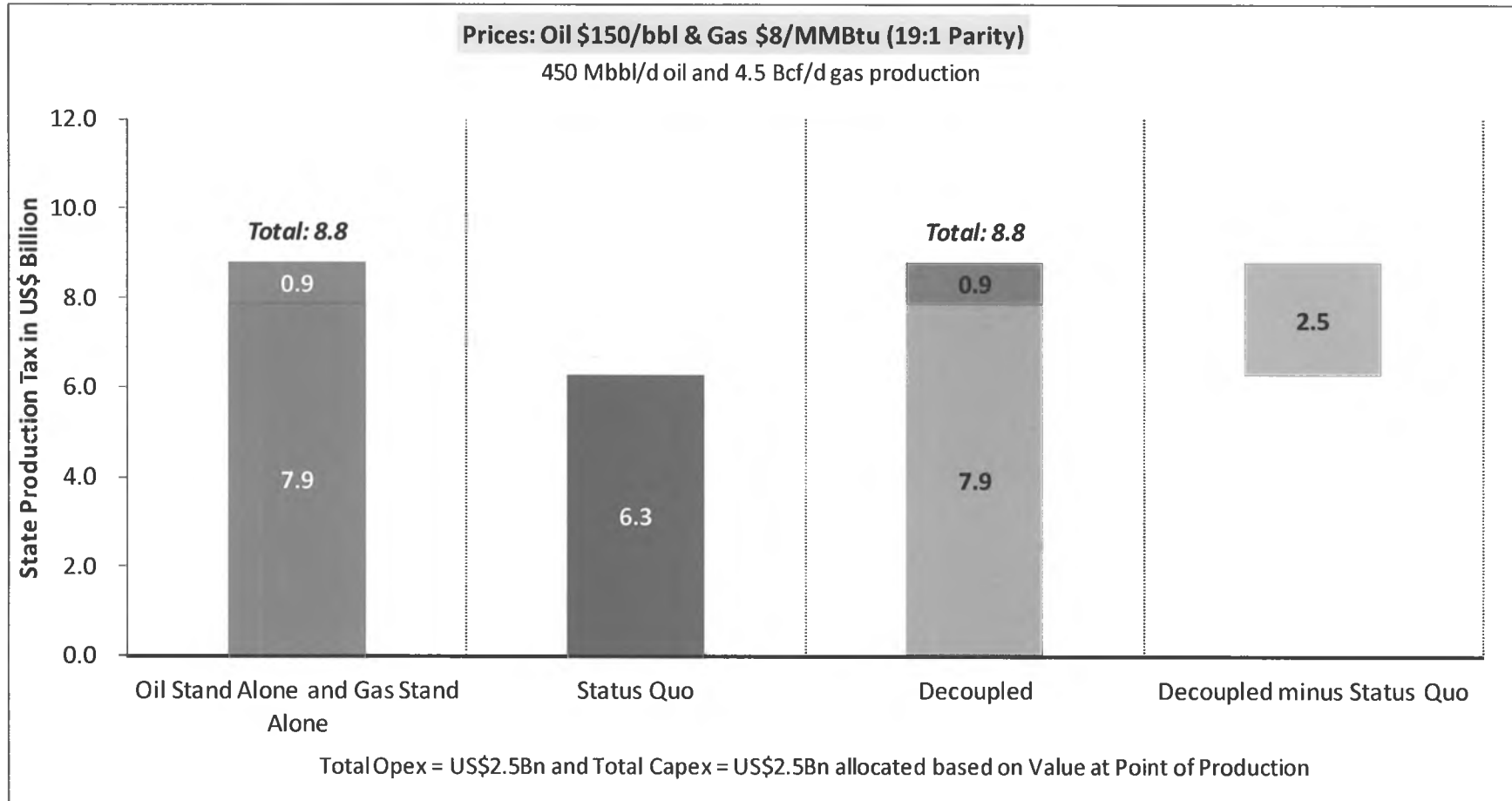


March 28, 2012



Decoupled vs. Status Quo

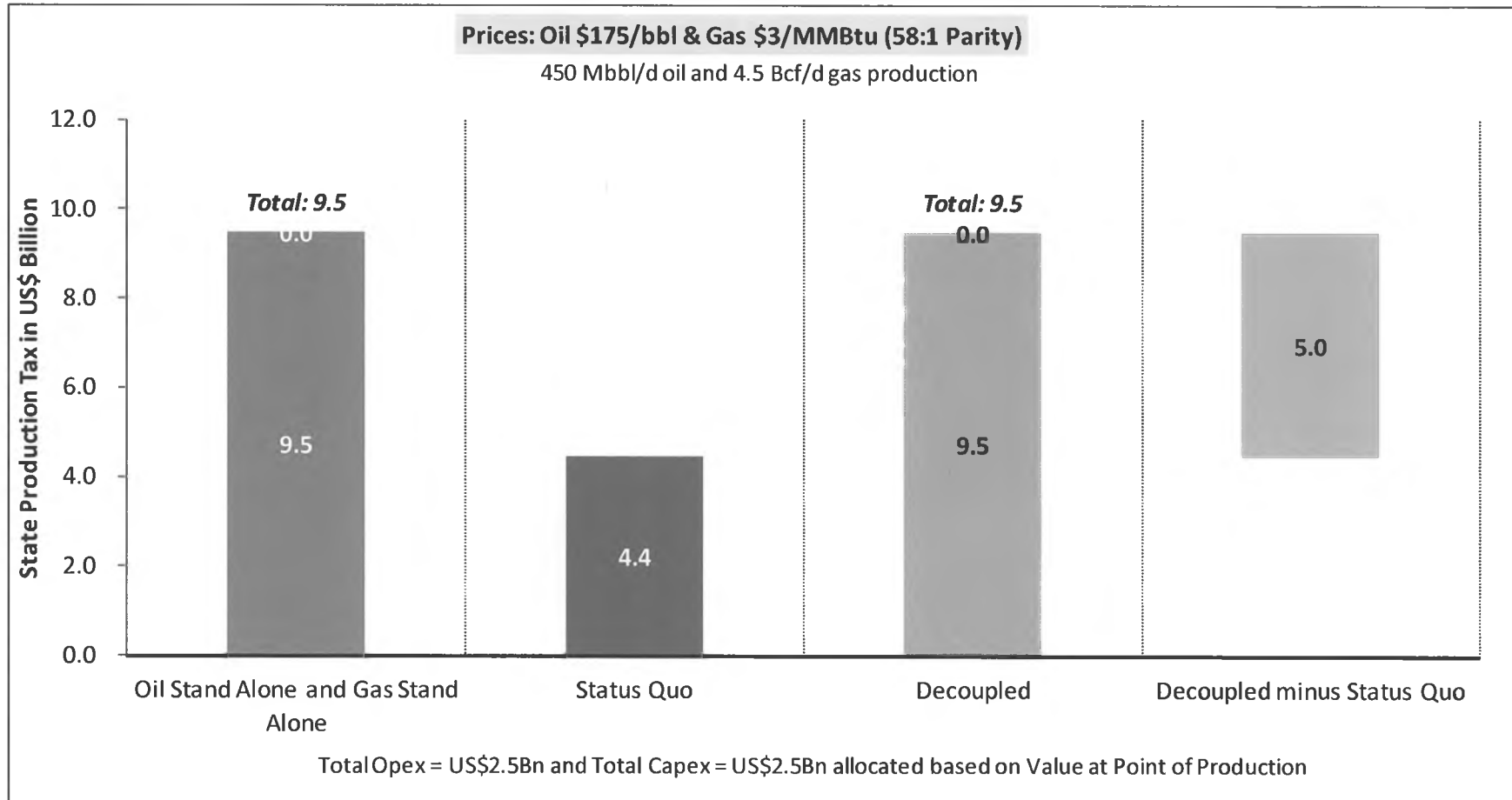
\$150/bbl Oil Price, \$8/MMBTU Gas Price





Decoupled vs. Status Quo

\$175/bbl Oil Price, \$3/MMBTU Gas Price

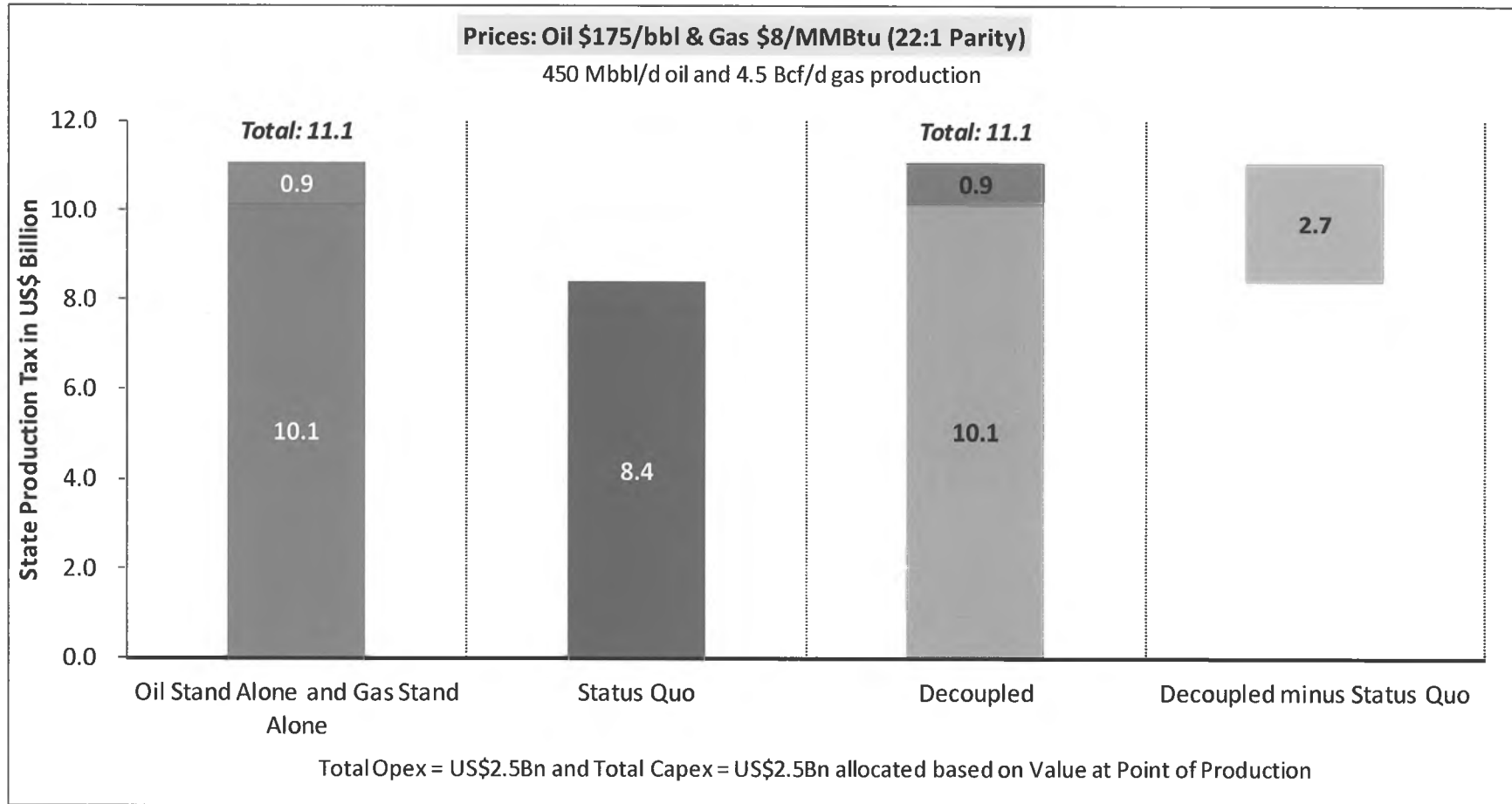




Decoupled vs. Status Quo



\$175/bbl Oil Price, \$8/MMBTU Gas Price



March 28, 2012