



Overview of Fall 2011 Revenue Forecast



*Presentation to the
Senate Finance Committee
February 2, 2012
Alaska Department of Revenue*



Outline for Presentation



- **Fall 2011 Revenue Forecast for FY2012 and 2013**
 - Total Revenue
 - Unrestricted Revenue
 - Non-Oil Revenue
- **Components of Production Tax Forecast**
 - Oil Production Forecast
 - Oil Price Forecast
 - Lease Expenditures Forecast / Oil Company Spending
 - Tax Credits



Fall 2011 Revenue Forecast FY2012 and FY2013



FY 12 and FY 13 Total Revenue



Revenue Type	FY 12 (\$M)	FY 13 (\$M)
Unrestricted General Fund		
Oil Revenue	\$ 8,215.3	\$ 7,496.0
Other Sources (except Federal & Investment)	\$ 535.7	\$ 539.1
Investment Revenue	\$ 176.9	\$ 182.6
Subtotal Unrestricted	\$ 8,927.9	\$ 8,217.7
Designated General Fund		
Other Sources (except Federal & Investment)	\$ 307.9	\$ 308.1
Investment Revenue	\$ 12.4	\$ 41.8
Subtotal Restricted	\$ 320.3	\$ 349.9
Other Restricted Revenue		
Oil Revenue	\$ 958.0	\$ 891.9
Other Sources (except Federal & Investment)	\$ 203.1	\$ 203.2
Investment Revenue	\$ 2,991.8	\$ 3,746.0
Subtotal Restricted	\$ 4,152.9	\$ 4,841.0
Federal Revenue		
Oil Revenue	\$ 4.0	\$ 4.0
Federal Receipts	\$ 3,102.5	\$ 3,102.5
Subtotal Restricted	\$ 3,106.5	\$ 3,106.5
Total State Revenue	\$ 16,507.7	\$ 16,515.1



FY 12 & FY 13 General Fund Unrestricted Revenue



Revenue Type	FY 12 (\$M)	% Total	FY 13 (\$ M)	% Total
Royalty - Net PF / SF	\$ 2,085.2	23.4%	\$ 1,962.0	23.9%
Production Tax	\$ 5,376.4	60.2%	\$ 4,715.8	57.4%
Corp Income Tax	\$ 662.1	7.4%	\$ 728.4	8.9%
Property Tax	<u>\$ 91.7</u>	<u>1.0%</u>	<u>\$ 89.7</u>	<u>1.1%</u>
Subtotal Oil Revenue	\$ 8,215.3	92.0%	\$ 7,496.0	91.2%
Non-Oil Revenue	<u>\$ 712.6</u>	<u>8.0%</u>	<u>\$ 721.7</u>	<u>8.8%</u>
Total Revenue	\$ 8,927.9	100.0%	\$ 8,217.7	100.0%

Source: Fall 2011 Revenue Sources Book



FY 12 and FY 13 Unrestricted Non-Oil Revenue Detail



Revenue Type	FY 12 (\$M)	% Total	FY 13 (\$M)	% Total
Taxes				
Corporate Income	\$ 149.7	21.0%	\$ 152.5	21.1%
Mining	\$ 43.0	6.0%	\$ 48.4	6.7%
Insurance Premium	\$ 49.9	7.0%	\$ 50.1	6.9%
Tobacco	\$ 46.0	6.5%	\$ 46.0	6.4%
Motor Fuel	\$ 37.6	5.3%	\$ 37.8	5.2%
Other Taxes	<u>\$ 62.3</u>	<u>8.7%</u>	<u>\$ 63.3</u>	<u>8.8%</u>
Subtotal Taxes	\$ 388.5	54.5%	\$ 398.1	55.2%
Investments	\$ 176.9	24.8%	\$ 182.6	25.3%
Other *	<u>\$ 147.2</u>	<u>20.7%</u>	<u>\$ 141.0</u>	<u>19.5%</u>
Total Non-Oil	\$ 712.6	100.0%	\$ 721.7	100.0%

NOTE: This presentation only includes the portion of revenue that is included in the "Unrestricted General Fund" category.

*Other includes Charges for Services, Fines and Forfeitures, Licenses & Permits, Rents & Royalties, and Miscellaneous.



Components of Production Tax Calculation

- Production
- Price
- Lease Expenditures
- Tax Credits



Fall 2011 Oil Production Forecast



Three Categories of Forecasted Production



- 1) Currently Producing- Includes base production and enhanced recovery production from investment in rate enhancing activities (perforations, stimulations, well workovers, gas and water injection support).
- 2) Currently under Development- New projects that are currently funded or awaiting project sanction in near future.



Three Categories of Forecasted Production



- 3) Currently Under Evaluation- Includes technically viable projects in the stage where engineering, cost, risk and reward are being actively evaluated. Unfunded but are considered to have a high chance of being brought to fruition.



Factors That Affect Production Forecasting



1. GEOLOGY

- Rock type and formation characteristics
- Depth, thickness, pressure
- Oil & gas characteristics (oil gravity, viscosity, water content, etc.)

2. DEVELOPMENT PLAN

- Well density and development rate
- Well bore size and completion technique
- Artificial lift and enhanced oil recovery
- Facilities & surface operations

3. COMMERCIAL

- Project economics
- Oil price and market conditions
- Government Policy: access, regulation, taxation

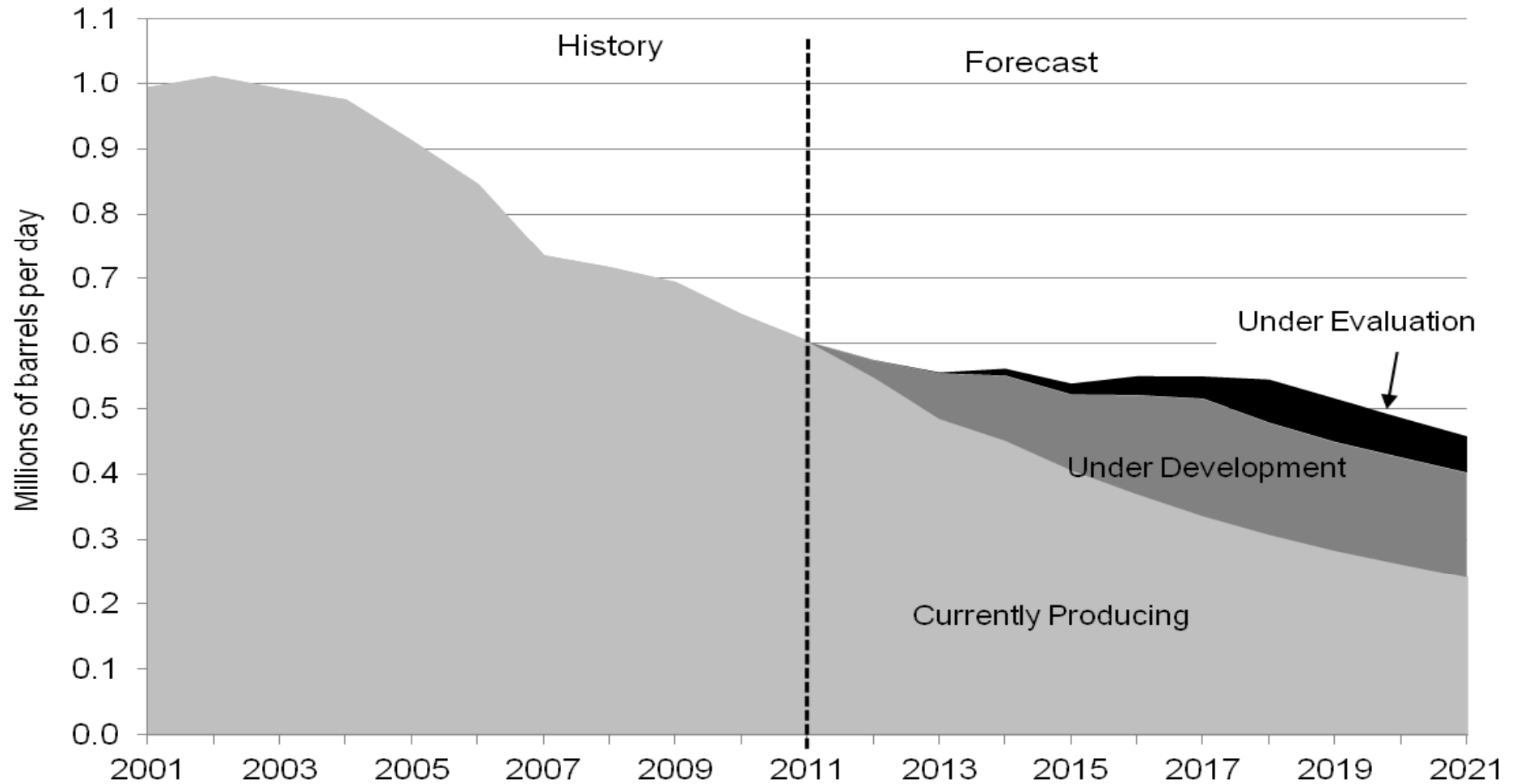
4. PRODUCTION PROFILE

- History, stage of depletion
- Use production profile to extrapolate trends

5. TIMING!



Forecasted ANS Production FY 2011 - 2021





ANS Production Forecast and Decline Rates, FY 2012 - 2021



Fiscal Year	Currently Producing	% Change from Prior Year	Under Development	Under Evaluation	Total ANS	% Change from Prior Year
2011	0.603	(6.3%)	0.000	0.000	0.603	(6.3%)
2012	0.548	(9.1%)	0.026	0.001	0.574	(4.7%)
2013	0.485	(11.6%)	0.069	0.001	0.555	(3.3%)
2014	0.451	(6.9%)	0.099	0.010	0.561	1.0%
2015	0.406	(10.0%)	0.115	0.017	0.538	(4.1%)
2016	0.369	(9.1%)	0.151	0.029	0.550	2.1%
2017	0.336	(9.1%)	0.179	0.034	0.549	(0.1%)
2018	0.307	(8.5%)	0.171	0.066	0.544	(0.9%)
2019	0.282	(8.1%)	0.166	0.066	0.515	(5.4%)
2020	0.262	(7.4%)	0.164	0.061	0.486	(5.6%)
2021	0.241	(7.7%)	0.161	0.056	0.458	(5.8%)



Production Forecast – Improvements in Methodology



- Created standardized reporting forms for production and reserve forecasting information.
- Petroleum Engineer and Petroleum Economists compiled the forecast information instead of reinterpreting data previously received.
- For first time, department received down time estimates requested historically and never provided.
- Followed up and met second time with industry to confirm department's assumptions and ensure forecast results were reasonable with the companies' projections.
- Production forecasting requires consideration of each project's geology, development plans, commerciality, production profiles, decline curves and timing.
- Department uses extensive well and field specific data acquired from producers, AOGCC, and DNR.
- New field development is very important in mitigating decline rates.



Conclusion on Production



- Production forecasting requires consideration of each project's geology, development plans, commerciality, production profiles, decline curves and timing.
- Department uses extensive well and field specific data acquired from producers, AOGCC, and DNR
- New field development is very important in mitigating decline rates.



Fall 2011 Oil Price Forecast



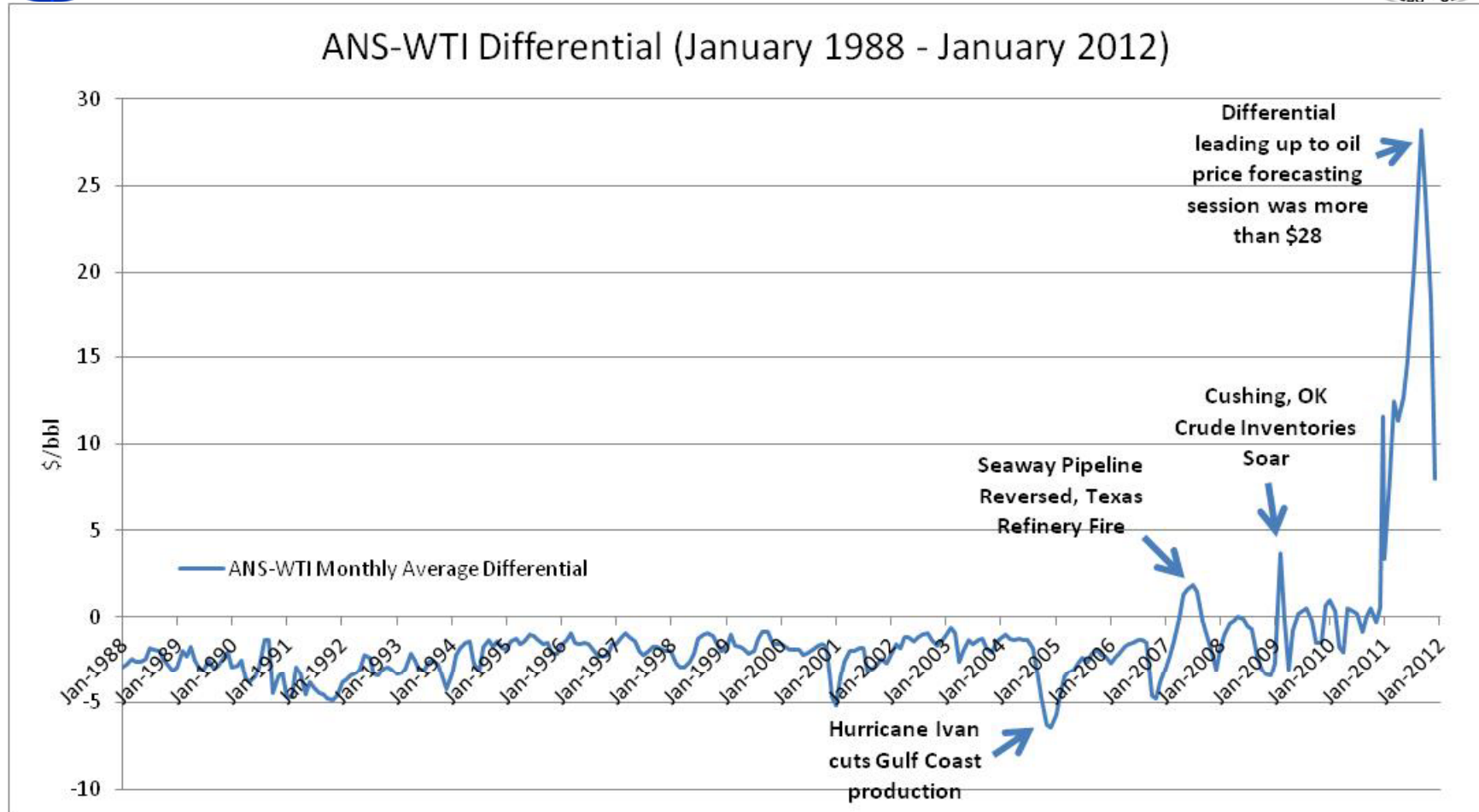
Price Forecast Methodology



- **Oil Price Forecasting Session held October 3, 2011, included 26 Participants from DOR, DNR, DOL, OMB, University, Legislative Finance and outside participants**
- **Forecasting Session Presentations included supply, demand, geopolitics, financial markets, outside expert forecasts, etc.**
- **FY 2011-2016: Average of participant forecast from Forecasting Session blended equally with NYMEX, EIA, and analysts to derive price forecast.**
- **Beyond FY 2016: Constant real price, 2.5% inflation**
- **Change in ANS-WTI differential methodology due to widening differential**



ANS-WTI Oil Price Differential



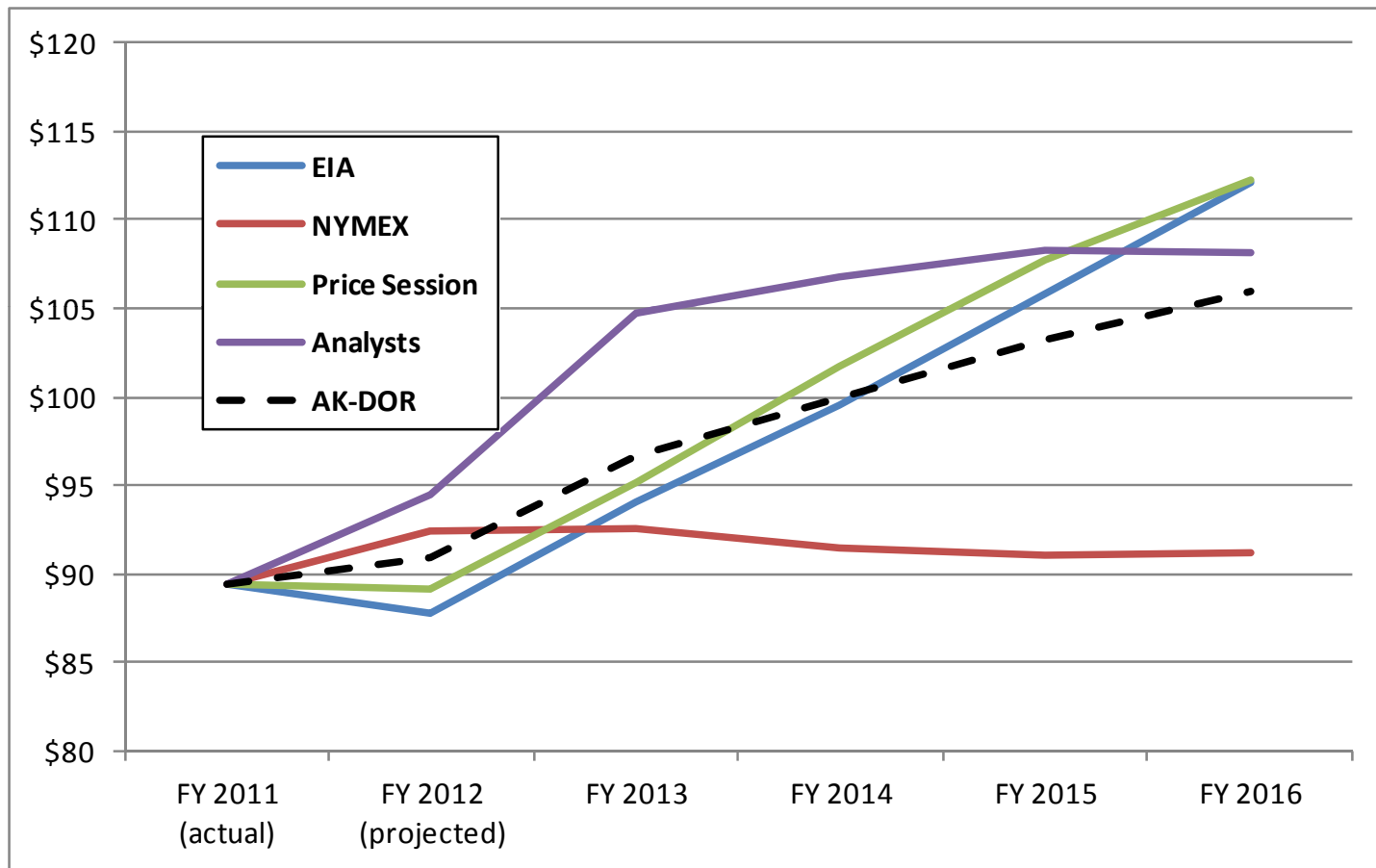
WTI, nominal dollars per barrel. Sources: DOR, Bloomberg, NYMEX, Energy Information Agency



ANS-WTI Oil Price Forecast Differential Methodology



- Forecast the Brent-WTI Differential using futures
 - Use the Brent-WTI futures spread
 - Forecast the ANS-Brent Differential using history
 - Use an assumption based on the historical ANS-Brent differential
 - Taken together these make the ANS-WTI Forecast
 - $(\text{Brent-WTI}) + (\text{ANS-Brent}) = \text{ANS-WTI}$
 - $\text{Brent-WTI} = \$26, \text{ANS-Brent} = -\1
 - $\$26 + -\$1 = \$25$
 - This differential narrows over time (currently \$16 per barrel) averaging \$18.41 for FY2012
-
- Differential peaked at ~\$29 during Sept 2011; dropped to a low of ~\$7 for a few days at end of December 2011; has climbed to ~\$13 today
 - RSB uses a differential of \$18.41 for FY12 and as of January 30, 2012 the average differential FY-to date was \$18.22



WTI, nominal dollars per barrel. Sources: DOR, Bloomberg, NYMEX, Energy Information Agency
Alaska Department of Revenue



Fall 2011 DOR Oil Price Forecast



	Real \$		Nominal \$	
	WTI	ANS	WTI	ANS
FY 2011 (actual)	89.39	94.49	89.39	94.49
FY 2012 (projected)	88.71	106.66	90.92	109.33
FY 2013	91.97	104.20	96.62	109.47
FY 2014	92.75	101.29	99.88	109.08
FY 2015	93.50	98.52	103.21	108.75
FY 2016	93.60	95.27	105.90	107.79

*Note: FY 2012 forecast includes one quarter of actual prices.

Forecast is made in terms of Real WTI , then adjusted using 2.5% inflation rate and a forecast differential to ANS.



Fall 2011 Lease Expenditure Forecast



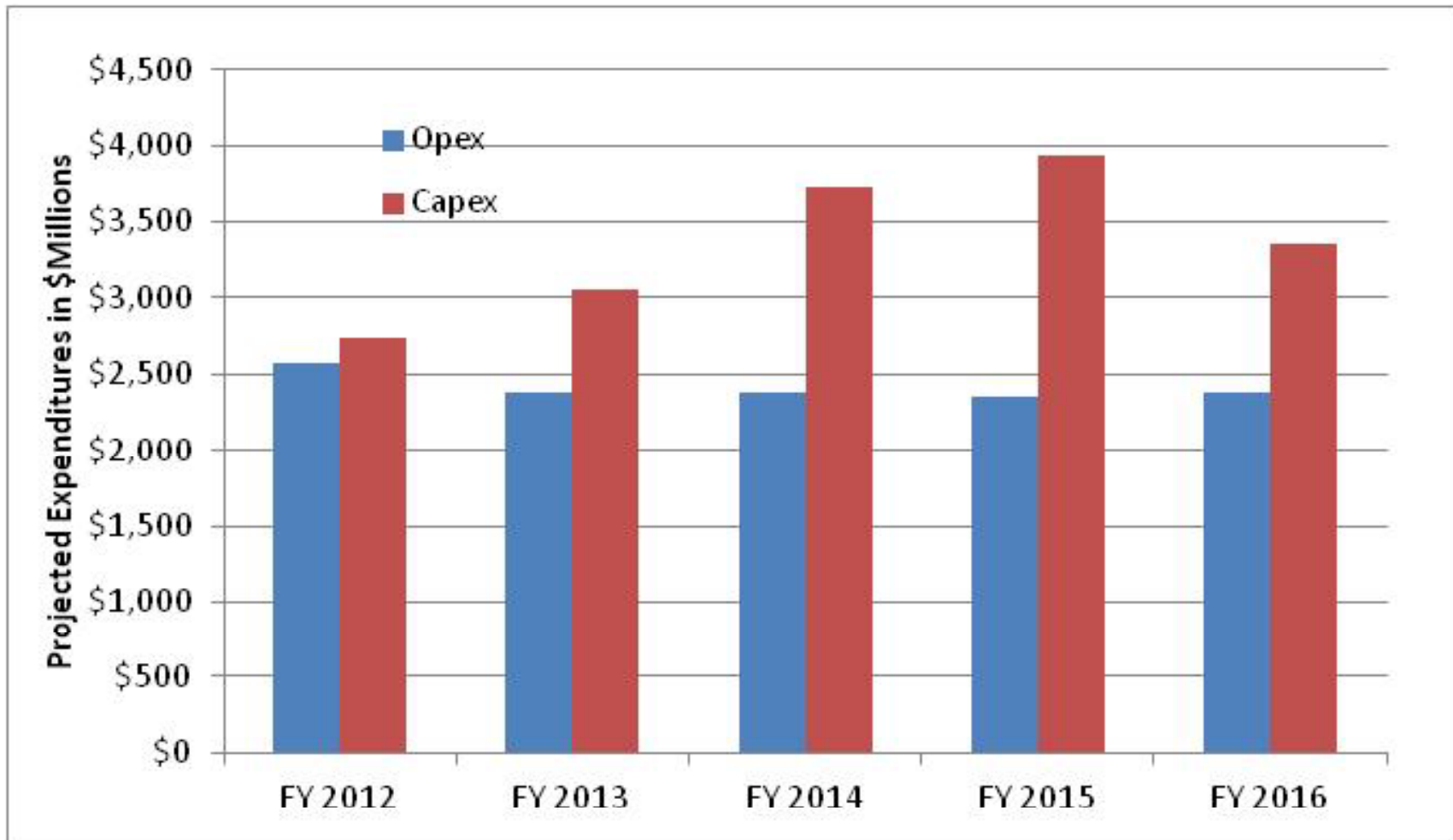
Lease Expenditure Forecast Methodology



- Request capital and operating lease expenditure projections from North Slope unit operators in the fall and the spring of each year in writing for the next five years from the current year
- Meet with and request spending projections from companies that are not currently producing but have announced drilling and/or development plans
- Review and coordinate with production forecast regarding anticipated developments outside the five-year time horizon received from operators
- Update long-term capital and operating expenditure projections based on new information



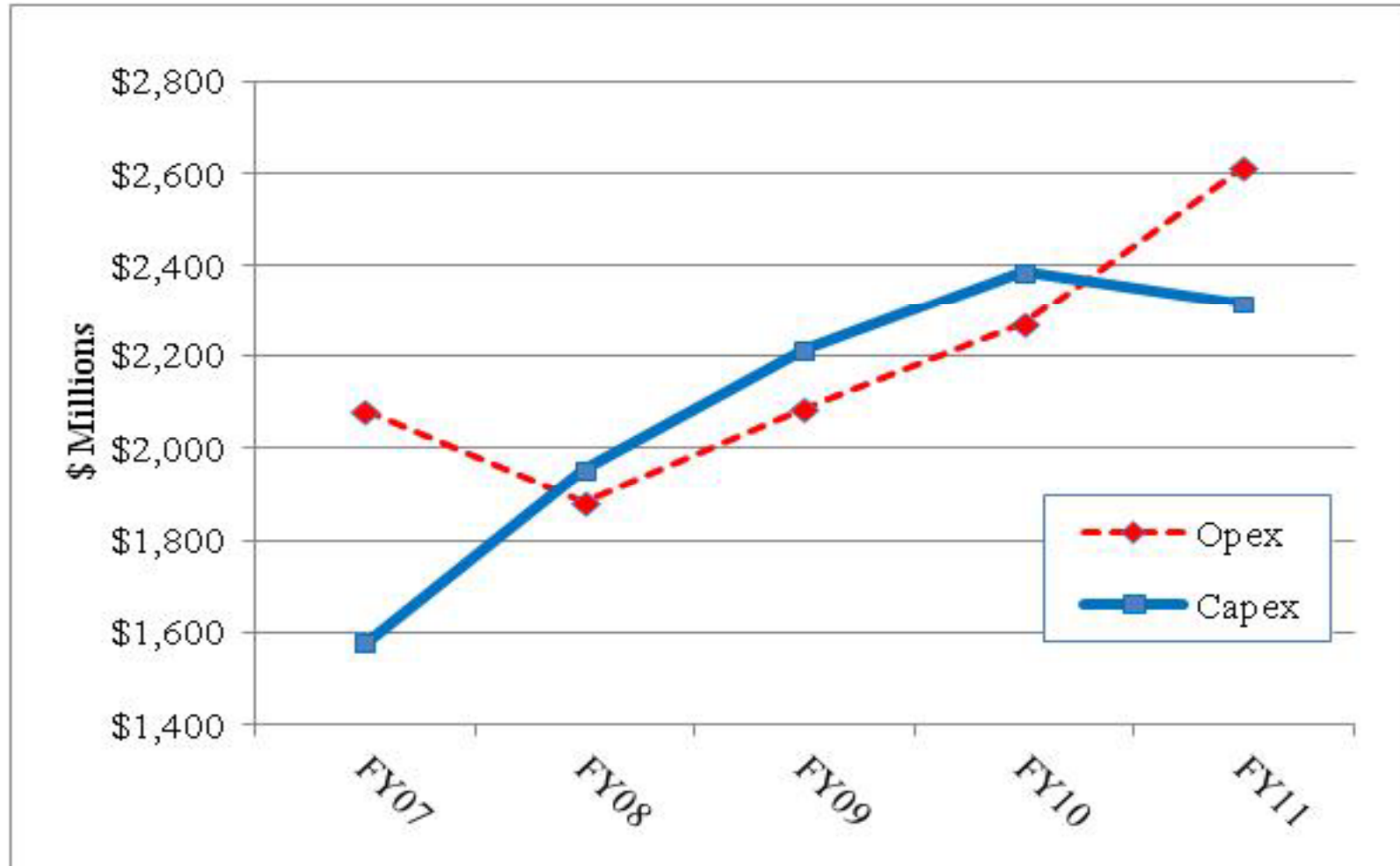
Forecasted North Slope Expenditures, FY 2012 – FY 2016



Source: Fall 2011 Revenue Forecast

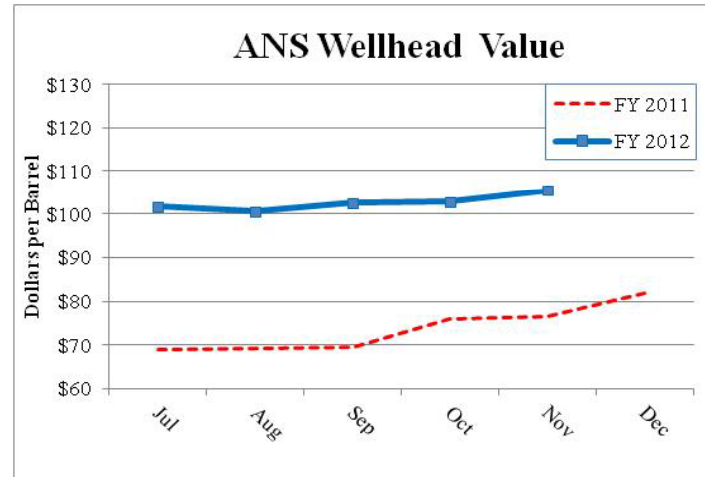


Historical Actual Expenditures, FY 2007 – FY 2011

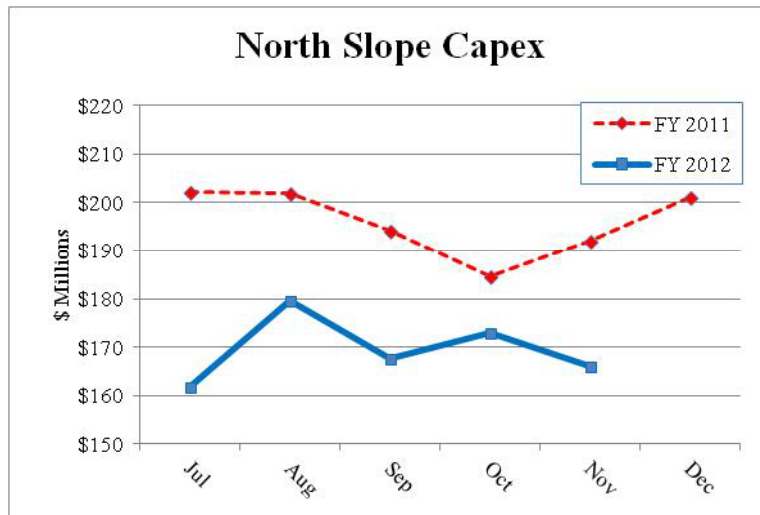




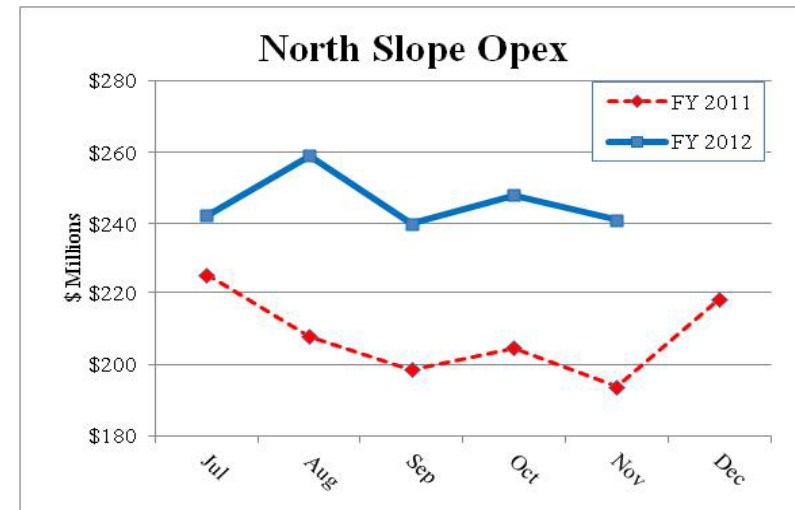
FY 2011 & FY 2012 Wellhead Values, North Slope Capex and Opex



FY12 avg up 43% through 5 months



FY12 down 11% through 5 months



FY12 up 19% through 5 months



Production Tax Credits Update



Credits Applied Against Production Tax Liability, by Fiscal Year (\$M)



	<u>Pre-2008</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011*</u>	<u>2012*</u>	<u>Total</u>
Capital Expenditure Credit	292	219	278	342	345	360	1,837
TIE Credits	171	73	0	0	0	0	244
Small Producer Credits	46	31	27	27	41	35	208
Exploration Credits	48	55	28	42	19	5	196
Totals	<u>557</u>	<u>378</u>	<u>333</u>	<u>412</u>	<u>405</u>	<u>400</u>	<u>2,485</u>

*estimated pending final true-up



Transferable Tax Credits Certificates Claimed by Fiscal Year (\$M)



<u>Credit Type</u>	<u>Pre- 2008</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012*</u>	<u>Total</u>
Capital Expenditure - .023(a)(1)	52.3	78.4	66.9	114.9	160.7	83.4	556.7
Capital Expenditure Exploration - .023(a)(2)	15.9	13.3	42.6	34.7	4.6	0.4	111.5
Net Operating Loss .023(b)	38.1	148.5	153.8	140.4	188.6	8.3	677.7
Well Lease Expenditure - .023(l)					9.4	23.8	33.2
Exploration -.025	<u>93.2</u>	<u>85.5</u>	<u>56.6</u>	<u>99.5</u>	<u>2.4</u>	<u>2.5</u>	<u>339.7</u>
Total	<u>199.6</u>	<u>325.7</u>	<u>320.0</u>	<u>389.5</u>	<u>365.7</u>	<u>118.4</u>	<u>1,718.9</u>

* through December 2011



Transferable Tax Credit Certificate Activity by Fiscal Year (\$M)



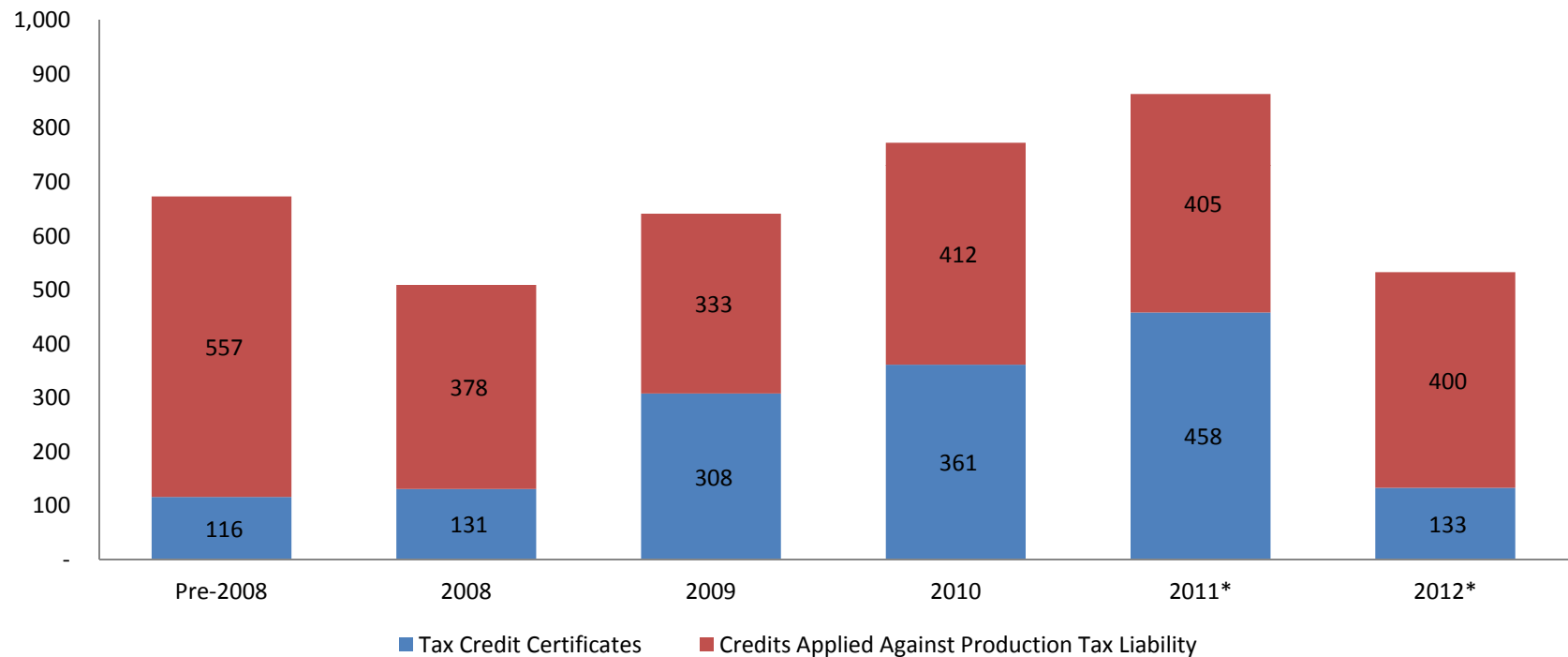
	<u>Pre-2008</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012*</u>	<u>Total</u>
Issued	116.0	130.8	308.0	361.3	458.0	132.9	1,507.1
Refunded	(54.6)	(54.1)	(193.1)	(250.5)	(450.2)	(273.5)	(1276.1)
Transferred/ Applied to Taxes	(52.3)	(62.7)	(46.6)	(20.0)	(7.4)	0	(189.0)
Activity by year	9.1	14.0	68.3	90.8	.3	(140.5)	
Transferable Tax Credit Certificates Outstanding	<u>9.1</u>	<u>23.1</u>	<u>91.5</u>	<u>182.3</u>	<u>182.6</u>	<u>42.0</u>	<u>42.0</u>

* through December 2011



Production Tax Credits

By Fiscal year



* Estimates pending final true-ups



Production Tax Credits



Total Production Tax Credit Impact through FY 2012 (\$M)

	<u>Pre- 2008</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011*</u>	<u>2012*</u>	<u>Total</u>
Tax Credit Certificates	116	131	308	361	458	133	1,507
Credits Applied Against Production Tax Liability	557	378	333	412	405	400	2,485
Total by Year	673	509	641	773	863	533	3,992

*Estimated pending final true-ups



The End Questions?