

Alaska Public Policy Options in a Declining Oil Production Regime: Fiscal Options on a Falling Tide

Selected Trends and Considerations

Dev't by Mark A Foster & Associates (MAFA)

Dev't for Commonwealth North Fiscal Action Coalition,

30 Aug 2012

Overview

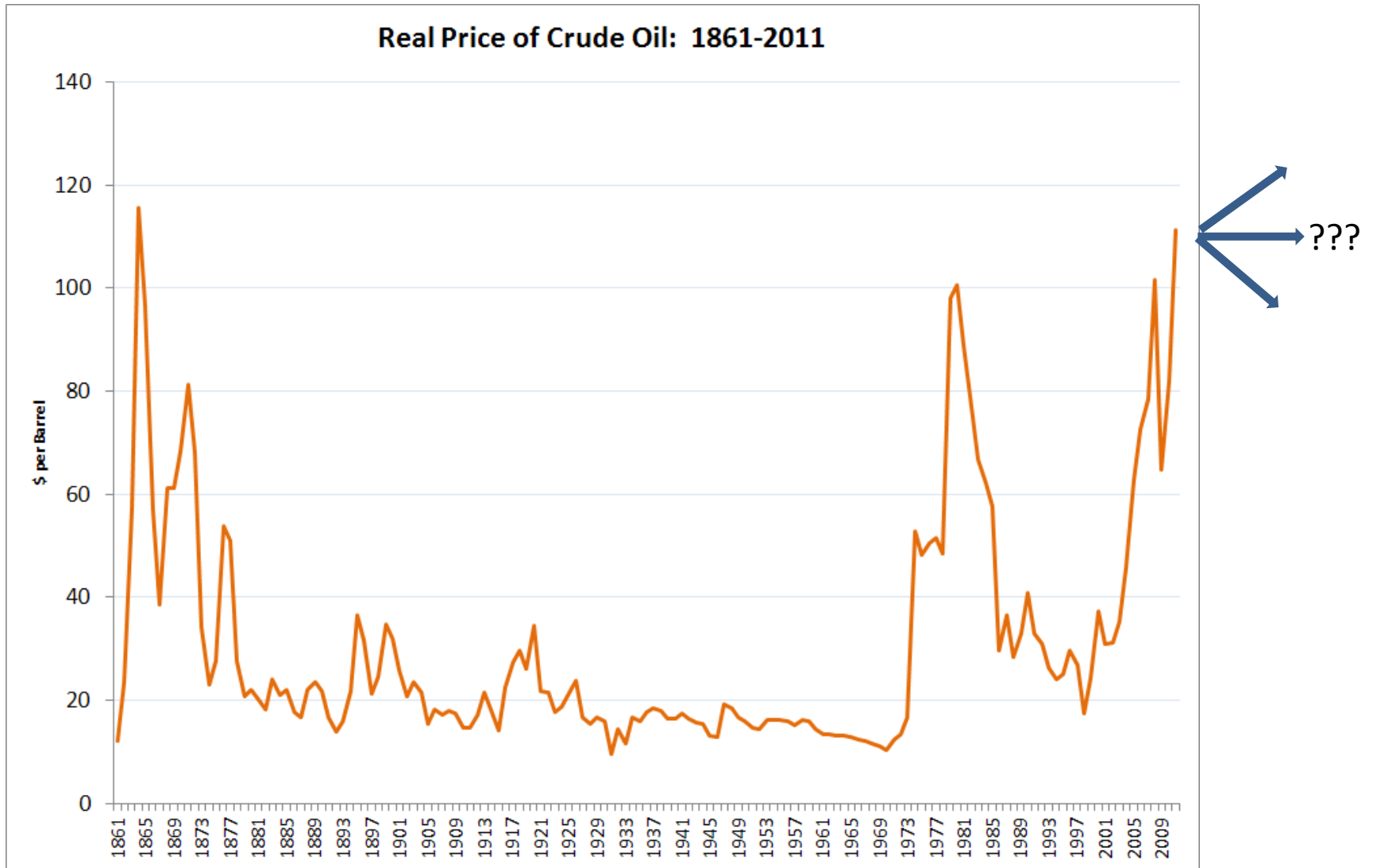
- Disclosures
- History
- Outlook
 - Revenue: Oil Price, Oil Volume, Cost of Exploration & Development, Oil Tax Regime
 - Expense: Op Ex + Cap Ex
 - Fiscal Reserves: PF investments + dividends, Op Ex and/or Cap Ex direct or indirect support, Buy down unfunded liabilities
- Policy Evaluation Metrics

Disclosures

- Mark Foster has been providing business and economic consulting services to a wide variety of public and private clients since 1993, shortly after a term on the Alaska Public Utilities Commission where prominent cases included TAPS Settlement Methodology, Quality Bank, In-State Telecommunications Competition, AIDEA Healy Clean Coal Power Plant Certification. Corporate clients have included Agrium, B.P. North America, B.P. Central Functions, and Chevron. Public sector clients have included Alaska Energy Authority, Alaska Hospital Association, Alaska Native Tribal Health Consortium, Alaska Natural Gas Development Authority, Anchorage School District, City of Palmer, Denali Commission, Municipality of Anchorage, Northern Economics – SOA DEC, State of Alaska Department of Health & Social Services (ACA Impact and Health Care Outlook), UAA-ISER. Mark became the President/Chief Operating Officer of ATU-Long Distance shortly after working with ATU during the development of the Telecommunications Act of 1996 and continued with ACS as President/COO of ACS-Long Distance and V.P. Product Development & Network Architecture for ACS.
- Mark recently served on the board of Anchorage Municipal Light & Power, where he served as the chair of the Audit & Finance Committee (2009)
- Clients in 2012: UAA-ISER Review of Railbelt Energy Markets, UAA-ISER Review of Alaska Fuel Supply Chain, National Energy Policy Institute – Clean Energy Standard Policy Options, Kuukpik – North Slope Oil and Gas and Pipeline Development Options, Natural gas development options, UAF Power Plant Options & Solar PV Integration Opportunities, Anchorage School District Long Range Fiscal Plan, Alaska Center for Energy & Power Railbelt Energy Options, McCool Carlson Green Centennial Hall Capital & Operating Cost Model and Analysis,
- Mark currently serves on the board of directors of Alaska Power & Telephone, where he chairs the Audit Committee, and HydroWest Holdings
- Mark has accepted a position as the Executive Director of the Office of Management & Budget for the Anchorage School District starting in September, 2012
- The presentation and opinions expressed have been independently developed for public presentation to stimulate conversation about a potential range of public policy considerations and do not necessarily reflect the opinions of CWN or any clients or employers.
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History

Price of Oil – The Long View (Source: BP Statistical Review, 2012)



History

The Pipeline Boom

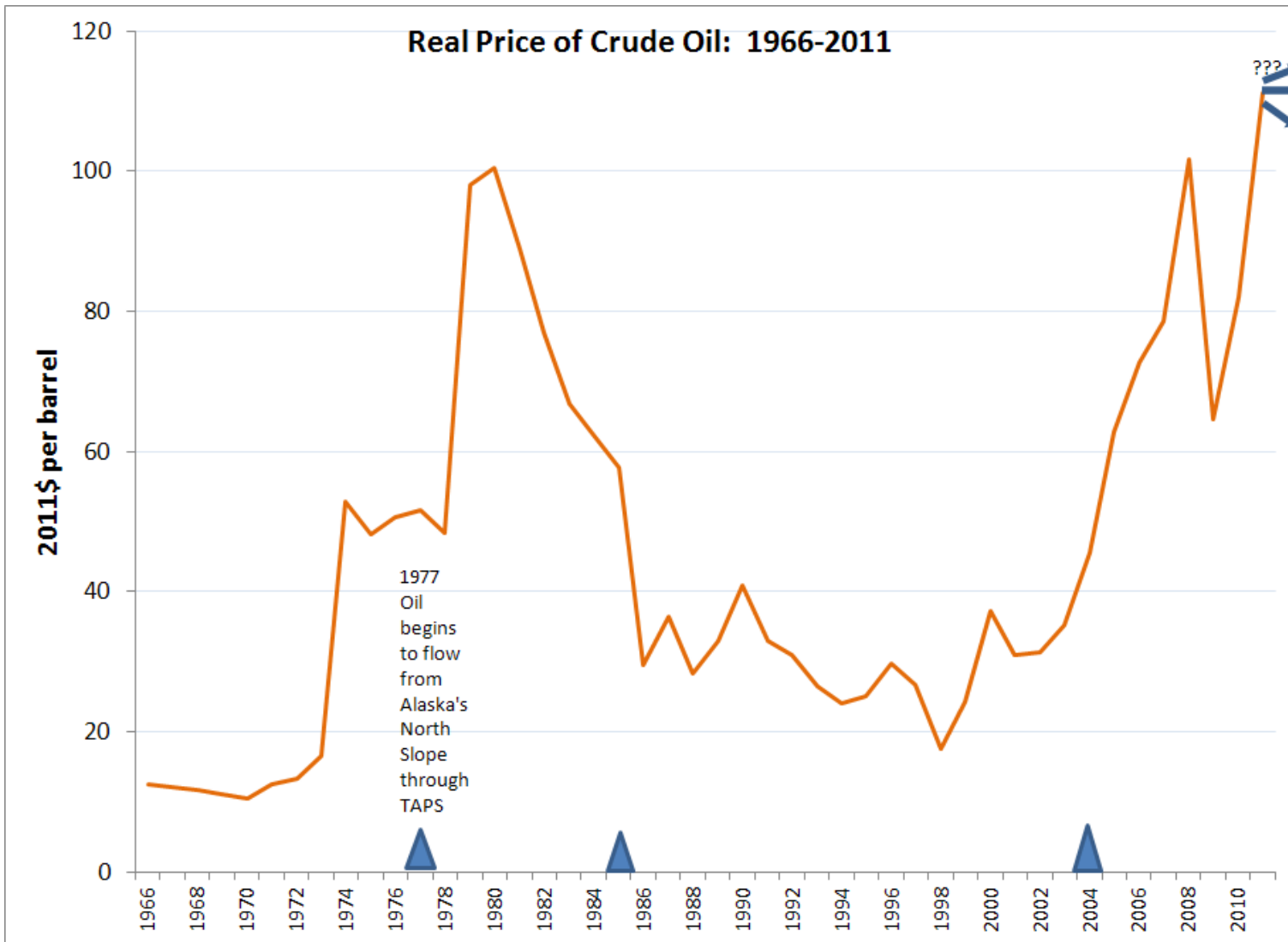
- Trans Alaska Pipeline System (1974-1977)
- Project Cost Estimates [Source: GAO Report on TAPS]

1969	1973	1977
\$0.9 Billion	\$4 Billion	\$9 Billion

- Alaska North Slope (ANS) oil begins to flow in 1977
- Economic impacts on wages, benefits and productivity continue to echo through the economy, both public and private sectors

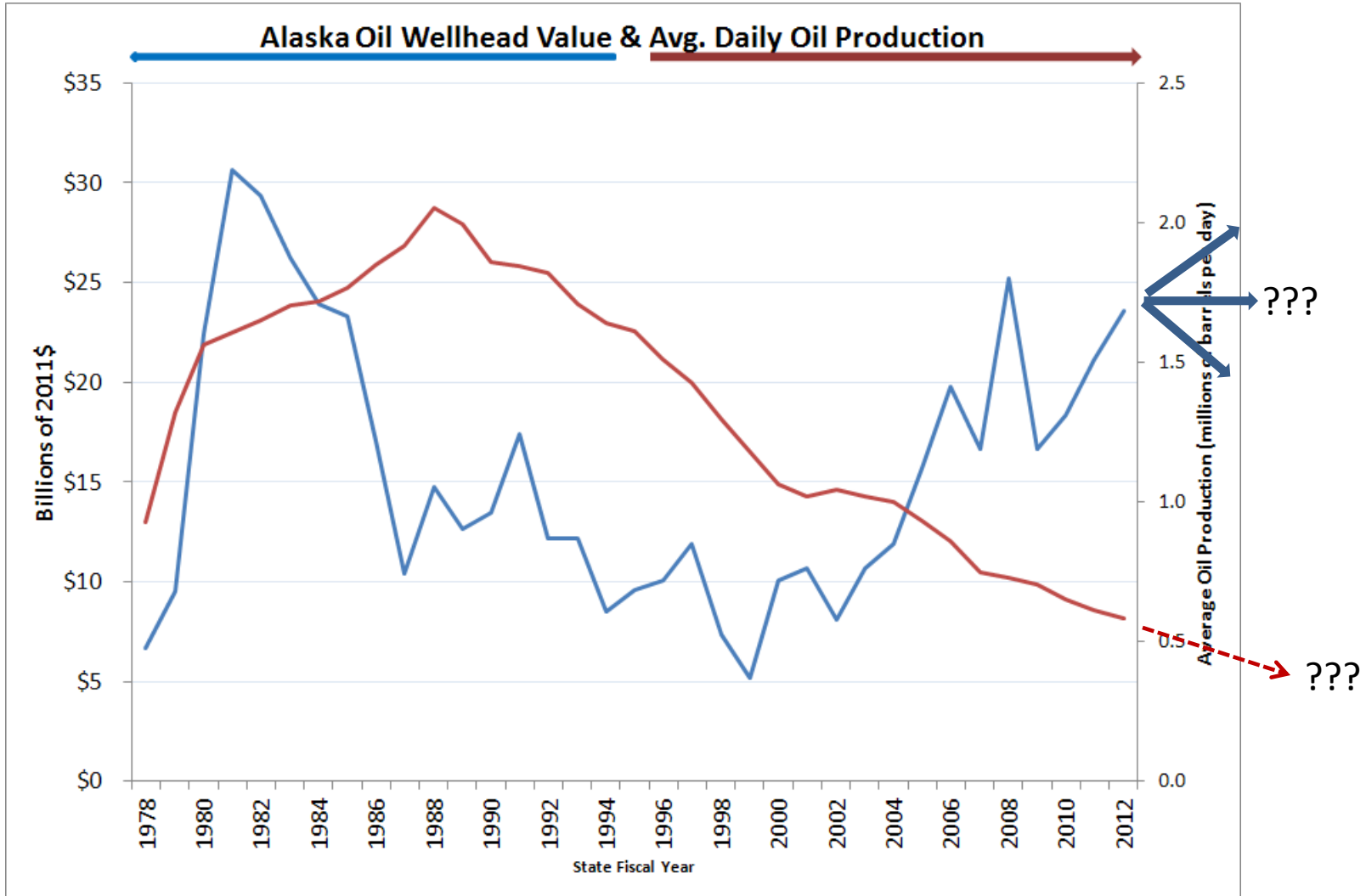
History

Real Price of Oil – Alaska's ANS Era (Source: BP Statistical Review, 2012)



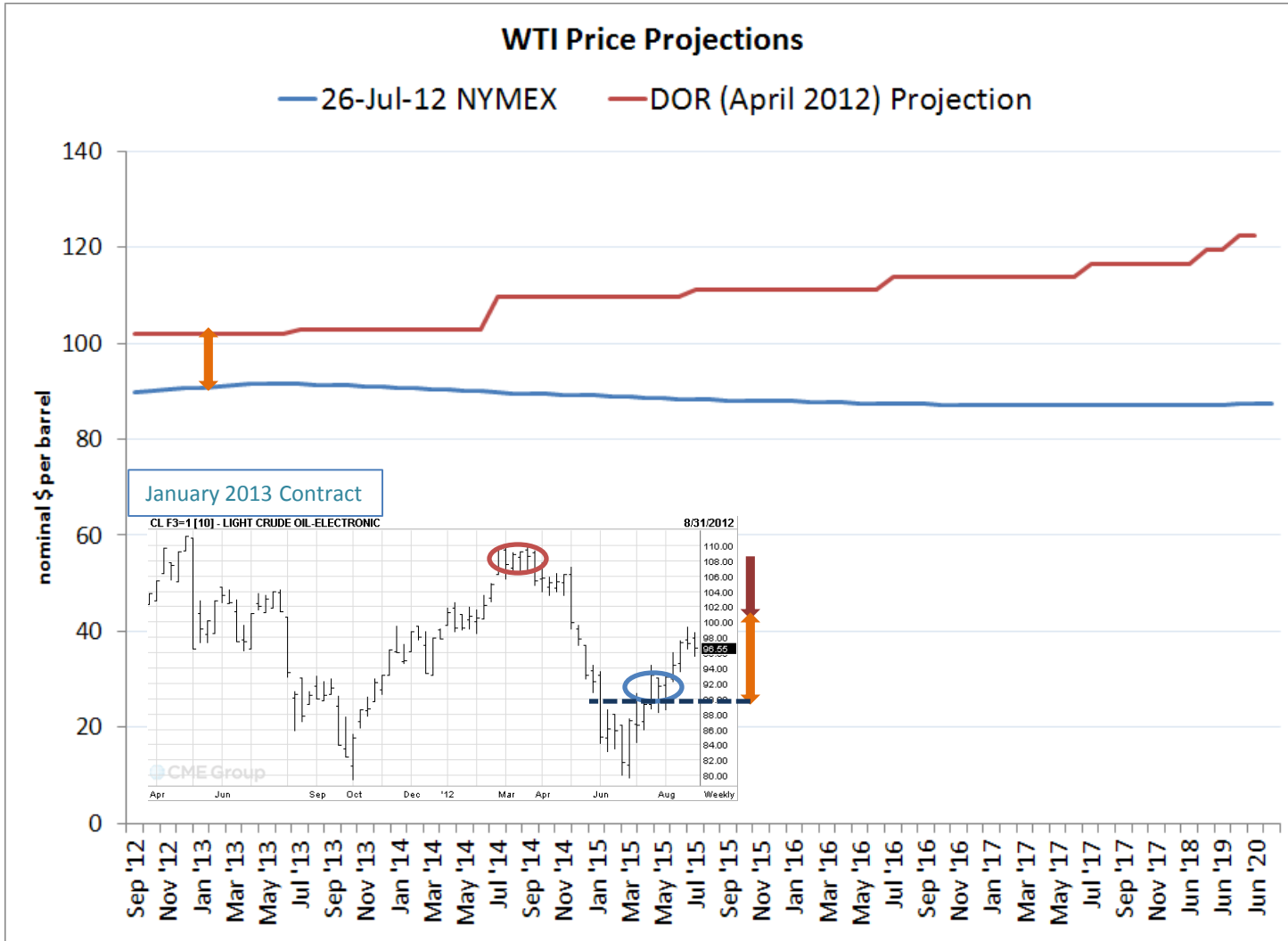
History

Alaska Oil (ANS + CI) Wellhead Value [Source: MAFA Compilation of DNR Reports]



Outlook

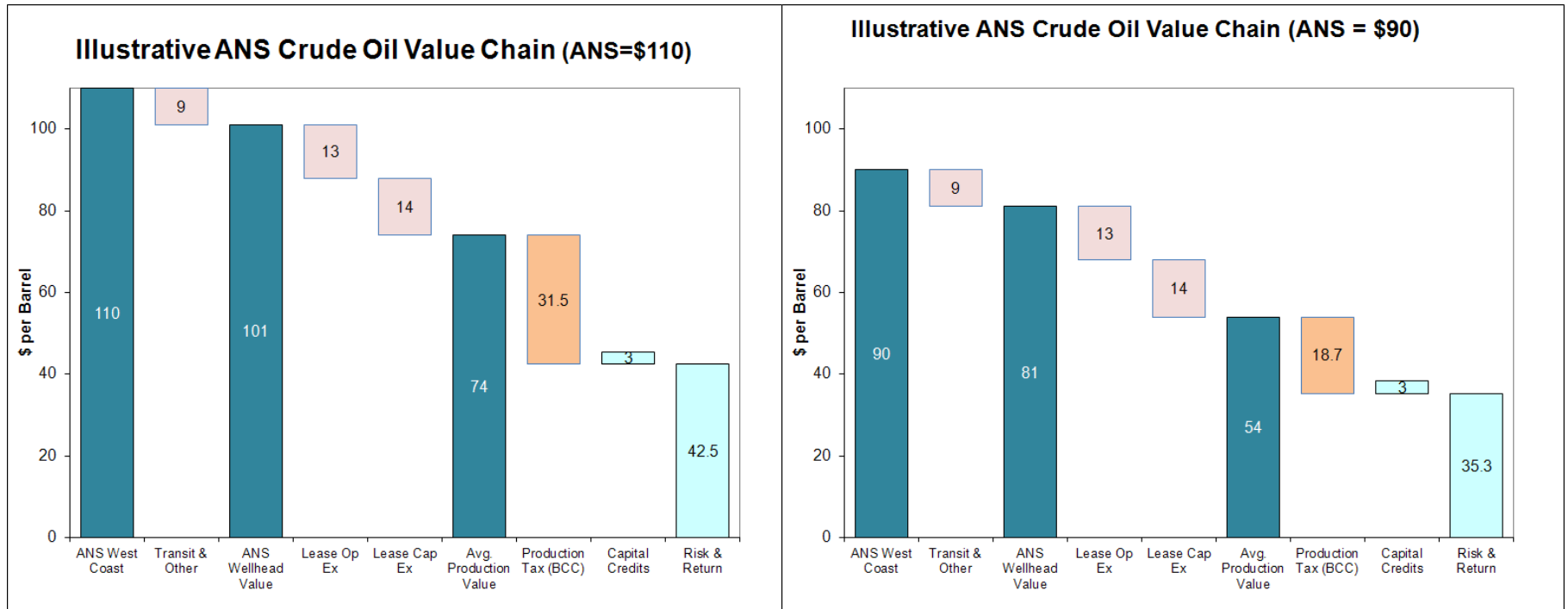
April 2012 SOA Oil Price Forecast vs. July 26 NYMEX (“Mark to market”)



NB: WTI has been trading at a discount to world crudes including ANS West Coast for some time. The DOR projection, like Goldman Sachs, suggest that that WTI will begin to re-converge on world oil prices (aka Brent and others) in the coming years. In the meantime, we use the WTI to WTI [SOA projection vs. NYMEX] as one way to “mark to market” the State’s oil revenue forecasts.

Outlook

The Value Chain in ANS Crude Oil – *Illustrative Review*

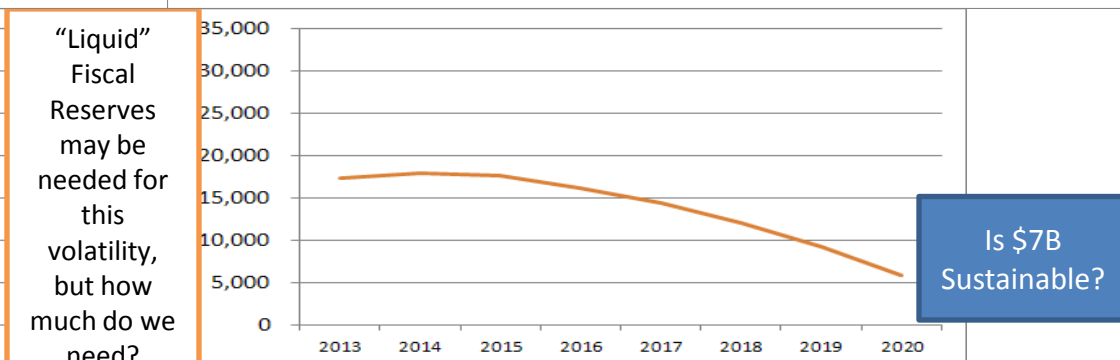
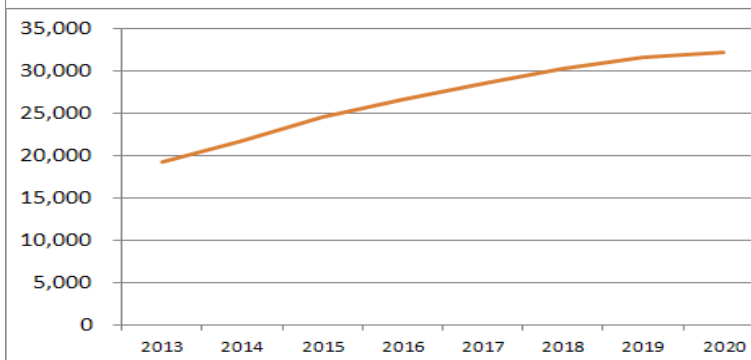
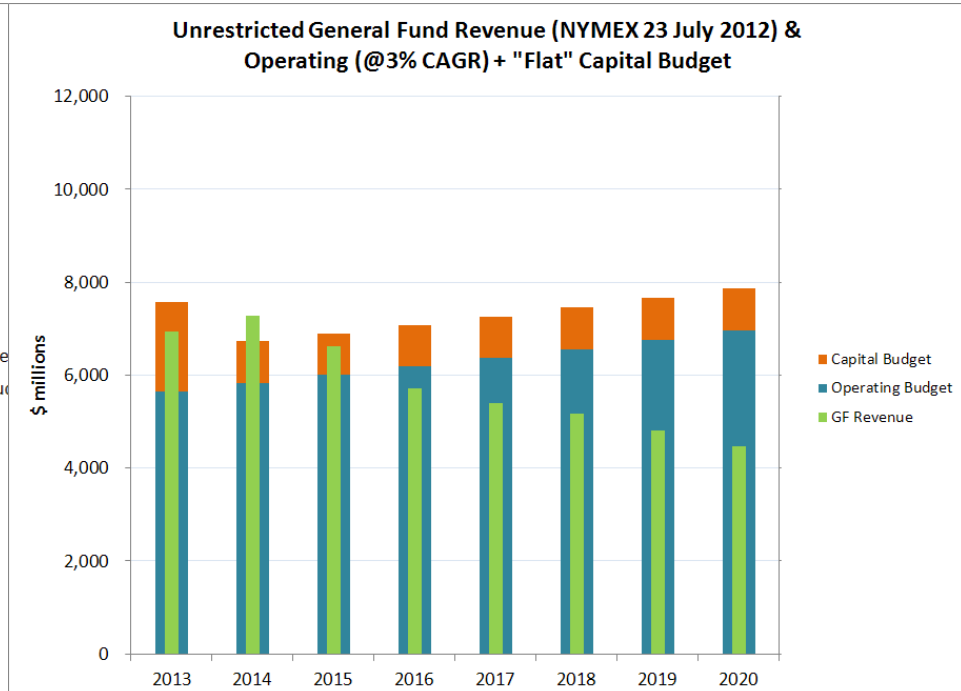
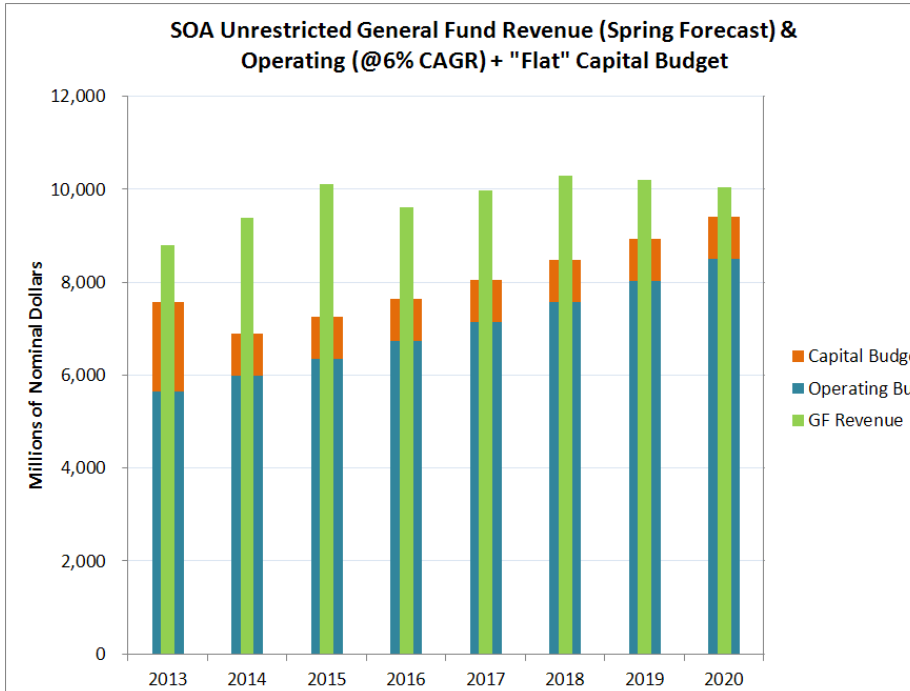


All other things being equal, an 18% decline in the ANS market price of oil (from \$110 to \$90) reduces net SOA oil tax revenue on the order of 45% (from \$28.5 to \$15.7)

What if we combine a drop in price toward recent market prices with the decline in production predicted in the SOA Spring Forecast (April 2012)...

Outlook

April 2012 SOA Revenue Forecast vs. "Mark to Market" in July



"Liquid" Fiscal Reserves may be needed for this volatility, but how much do we need?

Is \$7B Sustainable?

Outlook

State fiscal options under high *price & revenue* volatility on declining barrels under State oil & gas leases

	Basic Policy Choices	
	Near Term (next 4 years)	Longer Term (next K-16 cycle)
Monitor revenue outlook and make adjustments as appropriate	How much can we afford?	How much can we afford?
Monitor spending outlook and make adjustments as appropriate		
Monitor and manage fiscal reserves and make adjustments as appropriate	How can we prudently use reserves to manage a transition toward the longer term	



Outlook

So how much is enough in the long term?

Household Analogies	State of Alaska	
Save for reasonable retirement; shift from earned income to investment income	<p>Long term spending levels are related to long term income prospects from all sources; convert resource endowment into income endowment ~\$6B per year* (Goldsmith, March 2012)</p>	<ol style="list-style-type: none"> 1. Do we believe \$7-8B should be the “new normal”? 2. How do we manage down to \$6B from over \$7B? 3. Do we believe that now is the time to “go long” with 20 to 50+ year investments, e.g., use fiscal reserves to leverage long-term investments in <u>[fill in the blank]</u> which simultaneously take money off the table and help contain other appetites? 4. What, if anything, should be done to address other debts, deferred maintenance, or unfunded balance sheet liabilities, \$11B-\$16B
Assist children with college/career education fund		
Assist children with wedding, down payment on house		
???		

Outlook

The Challenges – Two Emerging Perspectives

What is required to sustain \$7B/year long term spending?	What is required to manage down to \$6B/year long term sustainable spending?
Belief that world economic growth and oil supply/demand characteristics will sustain 90 th percentile [post 1977 era] crude oil prices	Belief that world economic growth and oil supply/demand characteristics <i>may not</i> sustain 90 th percentile crude oil prices
Belief that 90 th percentile crude oil prices and competitive investment climate will drive additional exploration & development on *State of Alaska* leases	Belief that real reductions in OP EX and CAP EX appetites are required and are politically possible– how have we made real spending reductions in the past?*
Fiscal reserves could be used as cushion to enable continuation/expansion of tax breaks to try and incentivize E&D	Fiscal reserves could be used as cushion to enable tax expenditures or tax reductions to try and incentivize E&D
Fiscal reserves could be used to help buy down unfunded balance sheet liabilities	Fiscal reserves could be used to help buy down deferred maintenance that accumulates during the 1990s, early 2000s

Outlook

How to manage down to \$6 Billion...notes from *across the spectrum*

- Revenue
 - Continue high yield harvest and share harvest between savings, op & cap ex; manage down to \$6B as savings are drained
 - Reduce high yield harvest [price may do it for us and/or tax rate changes under discussion] and use savings to transition toward lower real spending [roughly analogous to 1986-1998 for State Real Spending per capita except State savings substitutes for growth in federal spending]
- Expense
 - Phase out non-core functions, see for example the history of the longevity bonus phase out
 - Phase out non-core functions efficiently provided by private sector
 - Convert pensions from defined benefit to defined contribution, PERS/TRS DB=>DC case study
 - Concentrate on cost containment, Medicaid high growth segments case study (House Finance 2004-2008)
 - Convert defined health benefits to...[cost sharing, bundles with insurance, affordable care organizations, vouchers]
 - Convert entitlements to vouchers or block grants
 - Limit cap ex to core state and local gov't functions
- Fiscal Reserves
 - Transfer to permanent fund [PF-Dividend support]; take \$ off the front table to force fiscal discipline
 - Invest in infrastructure [Construction pension fund support]
 - Continue to build for future contingencies [gold that is available for all future uses]
 - Buy down balance sheet liabilities [PERS + TRS Unfunded Accrued Liabilities, \$11B+]
 - Use to support OP EX + CAP EX if expenses exceed revenue [FY13 under NYMEX market to market for July...]
- Christmas Tree Combinations
 - Reductions in revenue combined with 1) increases in expenditures and decreases in savings [end of session “deals”], 2) reductions in expenditures and strategic use of savings to plug gaps and leverage high value opportunities [end of session “deals” that favor holding the line and strategic investment]
 - Increase in revenue associated with an oil price spike...

Outlook

How might we measure fiscal policy success?

- GDP Growth or reduction in rate of decline
- Wellhead value growth or reduction in rate of decline
- Employment
- Per capita income
- What are the prospects for children entering Kindergarten this fall who would be in line to graduate from the University of Alaska in 2030
- Others...
- Let's run a few excel revenue, expense, fiscal reserve simulations...

About the same time as the PERS/TRS unfunded liability is projected to come back into balance with pension fund assets...*if* earnings average 8% per year nominal...

Appendix – Response to Q's

- Notes on How does Alaska's unfunded pension liabilities compare to other states, see Center for Retirement Research report on post GASB unfunded liability presentation analysis:
 - <http://crr.bc.edu/working-papers/how-would-gasb-proposals-affect-state-and-local-pension-reporting-2/>
- Notes on oil price outlook
 - <http://www.eia.gov/forecasts/steo/>
 - <http://www.sciencemag.org/content/337/6095/633.summary>
 - <http://blogs.ft.com/nick-butler/2012/07/12/oil-unlimited/>
 - <http://belfercenter.ksg.harvard.edu/publication/22144/oil.html>
- Long Run Oil Price History Histogram
 - See next slide

Appendix – Response to Q's

World Oil Price: Real 2011 \$/bbl (1861-2011)		
Bin	Frequency	Cumulative %
5	0	0.00%
10	1	0.66%
15	24	16.56%
20	43	45.03%
25	24	60.93%
30	12	68.87%
35	10	75.50%
40	5	78.81%
45	1	79.47%
50	3	81.46%
55	5	84.77%
60	3	86.75%
65	5	90.07%
70	3	92.05%
75	1	92.72%
80	2	94.04%
85	2	95.36%
90	1	96.03%
95	0	96.03%
100	2	97.35%
105	2	98.68%
110	0	98.68%
More	2	100.00%

BP Statistical Review (2012)

World Oil Price: Real 2011 \$/bbl (1977-2011)		
Bin	Frequency	Cumulative %
5	0	0.00%
10	0	0.00%
15	0	0.00%
20	1	2.86%
25	2	8.57%
30	6	25.71%
35	5	40.00%
40	3	48.57%
45	1	51.43%
50	2	57.14%
55	1	60.00%
60	1	62.86%
65	3	71.43%
70	1	74.29%
75	1	77.14%
80	2	82.86%
85	1	85.71%
90	1	88.57%
95	0	88.57%
100	1	91.43%
105	2	97.14%
110	0	97.14%
More	1	100.00%

BP Statistical Review (2012)