F I S C A L I M P A C T R E P O R T

SPONSOR Keller **ORIGINAL DATE** 03/09/09 **LAST UPDATED** **HB**

SHORT TITLE Oil & Gas Revenue Predictability **SB** 684

ANALYST White

APPROPRIATION (dollars in thousands)

Appropriation		Recurring or Non-Rec	Fund Affected
FY09	**FY10**		
	Indeterminate	Recurring	Severance Tax Bonding Fund

(Parenthesis ( ) Indicate Expenditure Decreases)

REVENUE (dollars in thousands)

Estimated Revenue			Recurring or Non-Rec	Fund Affected
FY09	**FY10**	**FY11**		
	Indeterminate	Indeterminate	Recurring	Severance Tax Bonding Fund

(Parenthesis ( ) Indicate Revenue Decreases)

ESTIMATED ADDITIONAL OPERATING BUDGET IMPACT (dollars in thousands)

	FY09	FY10	FY11	3 Year Total Cost	Recurring or Non-Rec	Fund Affected
Total		$ 120.0	$ 120.0	$ 240.0	Recurring	General Fund

(Parenthesis ( ) Indicate Expenditure Decreases)

SOURCES OF INFORMATION
LFC Files

Responses Received From
Department of Finance and Administration (DFA)
Energy Minerals and Natural Resources Department (EMNRD)

Responses Not Received From
Taxation and Revenue Department (TRD)

SUMMARY

Synopsis of Bill

Senate Bill 684 would permit the State Board of Finance (BOF) to enter into commodity hedging contracts in order to "establish a desired level of predictability and reduced volatility of tax receipts" within the Severance Tax Bonding Fund (STBF). In order for BOF to enter into such contracts it must find that such a contract would:

- Address information asymmetry
- Be in the best interests of the state
- Result in a more stable and less volatile revenue stream to the state

The proposed legislation would also appropriate monies within the STBF for the purpose of making net payments and costs associated with the contracts. Any net revenues derived from the contracts would be paid back into the STBF "as though they were the revenues actually derived from those severance taxes."

All hedging contracts entered into pursuant to the proposed legislation would require review and assistance of a BOF financial advisor, BOF legal counsel, and the Legislative Finance Committee (LFC). The status of all hedging contracts entered into by BOF would need to be reported to the members of BOF and LFC monthly in addition to an annual report to the legislature.

FISCAL IMPLICATIONS

There are a number of different types of derivative products which allow a party to hedge against various forms of uncertainty and volatility. The contracts specifically authorized under this proposed legislation are futures, forward rate transactions, cap transactions, floor transactions, and collar transactions. The most likely transaction for BOF to enter into would be a price floor. In this arrangement BOF would purchase put contracts in order to synthetically place a floor under the price of natural gas. A put is a derivative product which gives the purchaser of the contract the right to sell an underlying asset at a pre-determined strike price.

Figure 1:

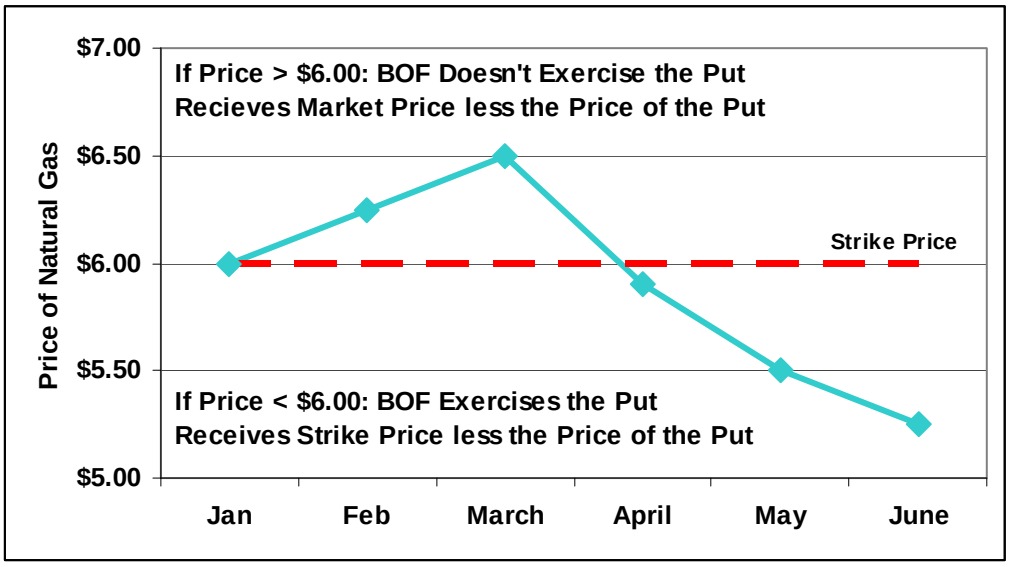
Example of a Price Floor	
Natural Gas Volume (MCF)	1,000,000
Price of Put Contract / MCF	$0.20
Total Cost of Put Contract	($200,000)
Put Strike Price	$6.00
Total Revenues at Strike Price	$6,000,000
Net Proceeds if Market Price = $5.50 With Hedge	$5,800,000
Net Proceeds if Market Price = $5.50 Without Hedge	$5,500,000
Net Savings / (Loss)	$300,000
Net Proceeds if Market Price = $6.50 With Hedge	$6,300,000
Net Proceeds if Market Price = $6.50 Without Hedge	$6,500,000
Net Savings / (Loss)	($200,000)

In the example illustrated in Figure 1, BOF would be attempting to put a floor under one million MCF (thousand cubic feet) of natural gas. In the example BOF would purchase a put for $0.20

per MCF giving it the right to sell natural gas at a strike price of $6.00. If the price of natural gas then goes down to $5.50 as shown in the example, BOF will exercise the put contracts and sell at $6.00 per MCF and thus receive $6 million in revenue. If you then subtract out the $200,000 premium paid for the puts, BOF would receive $5.8 million in net revenue. This scenario represents a net gain to the STBF of $300,000 relative to what it would have received had BOF not entered into a hedging contract.

If the price of natural gas were to rise to $6.50 however, BOF would have no need for the $6.00 floor price it created. BOF then would not exercise its put contracts and sell at $6.50 and thus receive $6.5 million in revenues. Even though BOF did not exercise its put contracts it still paid a $200,000 premium for them and the STBF would only receive $6.3 million in revenue. This scenario would represent a net loss of $200,000 relative to what the STBF would have received had BOF not entered into a hedging contract. However, it would ensure that total revenues would never fall below $5.8 million allowing the state to budget its capital outlay expenditures without having to worry about potential decreases in commodities prices.

Figure 2:



The appropriation and revenue impacts of the proposed legislation would be determined based upon future moves in commodities markets and future decisions made by BOF and its advisors. Therefore the appropriation and revenue impacts of this bill are indeterminate. This bill however does have an estimable impact on the BOF operating budget. The bill explicitly states that BOF "may hire one or more individuals who are experienced in hedging contracts to manage the hedging contract program." While there is no explicit appropriation included in this bill, BOF estimates that an additional FTE to manage this program would cost approximately $120,000 annually in salary, benefits, subscriptions, and work space.

SIGNIFICANT ISSUES

The proposed legislation would help to stabilize potential revenues to the STBF. The STBF supports senior severance tax bonds (STB) and supplemental severance tax bonds (SSTB). Senior STB proceeds are currently utilized to fund capital outlay appropriations made by the Legislature and Governor each year. SSTB proceeds are used in a similar manner however they are specifically earmarked for use by the Public School Capital Outlay Council (PSCOC).

During the December 2008 consensus revenue estimate senior severance tax bonding capacity was determined to be $385.7 million. Due to the fact that a variety of different appropriations have already been made from the fund for FY09 and because of certain changes made as part of House Bill 9 only $133.9 million is left over for additional appropriations. Supplemental severance tax bonding capacity has remained unchanged from its December estimate of $198.9 million.

Figure 3:

FORECAST OF CAPITAL OUTLAY AVAILABLE	
Severance Tax Bonding	
	FY09
Senior STB Capacity - December 2008	**385.7**
Issued Bonds (December 2008)	
Spaceport (Laws 2006 Chapter 622)	***(33.0)***
2007SS - DOT maintenance (20%)	***(7.8)***
2007SS - GRIP II (40%)	***(15.5)***
2007SS - GRIP I (40%)	***(15.5)***
*North/South Valley Sewer***	***(2.0)***
GRIP (HB10 2008 SS)	***(75.0)***
Miscellaneous Projects	***(20.5)***
Authorized Unissued	*(11.4)*
Water Project Fund (Statutory 10% of STB)	*(38.6)*
Spaceport (Laws 2006 Chapter 622)	
2007SS - DOT maintenance (20%)	*(1.8)*
2007SS - GRIP II (40%)	*(3.8)*
2007SS - GRIP I (40%)	*(3.8)*
GRIP (HB10 2008 SS)	
HB9 Deauthorization	*24.6*
HB9 Swap for GF	*(47.7)*
NET Senior STB CAPACITY	**133.9**
Sweep	n/a
Transfer to Permanent Fund	n/a
NET Supplemental STB CAPACITY	**198.9**

These capacity numbers are a direct function of the amount of revenue expected to flow into the STBF and the amount of long-term debt outstanding. Therefore the capacity numbers which are used for budgeting purposes could change at a moment's notice if there is a drastic change in oil and gas prices. The proposed legislation seeks to mitigate potential volatility through the use of derivatives products. The use of these products could significantly decrease the amount of uncertainty associated with the budget process, but could also expose the state to high premiums and potential collateral calls. While this legislation would provide BOF with an extremely effective tool in the mitigation of commodity price volatility it could also have unintended consequences. Therefore if the proposed legislation were enacted, BOF would need to be extremely cautious in its execution of these contracts and would most likely have to rely heavily on an outside financial advisor.

ADMINISTRATIVE IMPLICATIONS

Department of Finance and Administration (DFA):

> The bill will require monthly reporting to the Board [of Finance] as well as monthly and annual reporting to the Legislative Finance Committee. The Board will also be required to promulgate an administrative code rule on energy hedging. These tasks can be accomplished with existing resources.
>
> The bill allows the Board to hire one or more experts to manage the hedging program. However, without an appropriation, the Board will not be able to hire an expert to manage the program. Without and additional FTE, the workload will be absorbed by existing staff. Existing staff may not have time or resources to study the program to the extent necessary for the Board to make the findings required to enter into a hedging contract, and the program may not be utilized. In addition, because the use of derivatives is highly specialized, it would not be efficient to hire an FTE for the management of this program, but would probably make more sense to contract for independent expert advisory services.

TECHNICAL ISSUES

Department of Finance and Administration (DFA):

> The term "state severance taxes" is defined as taxes levied on the severance of oil or natural gas by the Oil and Gas Severance Tax Act. The Oil and Gas Severance Tax Act imposes only one tax, the oil and gas severance tax (Section 7-29-4 NMSA 1978). Since the bill only allows hedging against one tax, it could be made clearer by amending references to "state severance taxes" to directly reflect the oil and gas severance tax. Also, Page 1, line 23 through Page 2, line 2 could be revised to read, "The purpose of hedging contracts shall be to establish a desired level of predictability and reduced volatility of oil and gas severance tax receipts in accordance…"
>
> It is unclear how the Board [of Finance] would be able to find that a contract would "address information asymmetry" as required by the bill. The concept of information asymmetry was noted as a possible problem with a similar bill introduced in 2007. The idea is that state experts may not have as much expertise about energy hedging as do experts at contract counterparties, for whom energy hedging may be a full-time job. However, it is not feasible for the Board to make a determination that a contract would address information asymmetry.

OTHER SUBSTANTIVE ISSUES

Other states which rely heavily on energy revenues have looked at hedging to mitigate revenue volatility.

Alaska, which is more dependent on oil revenues than any state in the union, has studied this issue in depth and determined use of its "budget reserve fund" is essentially performing the same function as would a derivatives contract. Alaska puts all of the revenues into a Constitutional Budget Reserve Fund (CBRF) which requires a three-fourths majority vote to appropriate from. This fund is similar to New Mexico's tax stabilization reserve which is designed to accommodate revenue volatility.

Texas and **Louisiana** both have statutes allowing the use of hedging contracts to mitigate volatility in energy revenues, however to LFC's knowledge neither have as of yet actually entered into any such contracts.

Wyoming, according to an economist with their legislature, thinks that a reserve fund similar to Alaska is the prudent way to protect against volatility. "The basic strategy for Wyoming is when the state realizes a surplus of revenues, usually due to energy activity, more money is placed into rainy day accounts and the mineral trust fund. The state is also very active in developing its energy infrastructure to export oil, gas, and coal to the markets that need these commodities." – Senior Economist, Economic Analysis Division, State of Wyoming.

ALTERNATIVES

By setting aside a certain portion of oil and gas revenues, as New Mexico currently does with its Land Grant and Severance Tax Permanent Funds (LGPF and STPF), the state is to some extent already hedging its general fund exposure to variations in oil and gas prices. This does not provide protection for the severance tax bonding fund however. A less pricey alternative to the proposed legislation could be to intentionally underestimate the expected revenue to the STBF. For example, if the consensus revenue group forecasts the price of a barrel of oil to be $100, BOF staff could intentionally underestimate their future revenues at 80 percent. This means that BOF staff would estimate severance tax bonding capacity with oil prices at $80 instead of $100. Therefore if oil prices were to drop unexpectedly the state would be protected down to $80 without giving up any potential upside benefits or having to pay a costly premium.

Department of Finance and Administration (DFA):

> Perhaps a more cost-effective way to stabilize the amount of capital available each year for appropriation from the STBF would be to allow the Board [of Finance] to set aside a certain percentage of STBF revenues when oil and gas prices are high into a new severance tax reserve fund. Balances of the new fund could be appropriated in years when oil and natural gas prices are low to reduce volatility of capital outlay funds.

WHAT WILL BE THE CONSEQUENCES OF NOT ENACTING THIS BILL

If the proposed legislation is not enacted the STBF may continue to be exposed to fluctuations in oil and gas revenues as a result of unpredictability throughout commodities markets.

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