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

SPONSOR Scott/Townsend/Petti-grew/Montoya, R. **ORIGINAL DATE** 1/30/21 **LAST UPDATED** **HB** 181

SHORT TITLE Oil and Gas Tax Changes **SB**

ANALYST Graeser

REVENUE (dollars in thousands)

Estimated Revenue					Recurring or Nonrecurring	Fund Affected
FY21	FY22	FY23	FY24	FY25		
	NFI				NA	Severance Tax Bond Fund and Severance Tax Permanent Fund

Parenthesis ( ) indicate revenue decreases

ESTIMATED ADDITIONAL OPERATING BUDGET IMPACT (dollars in thousands)

	FY21	FY22	FY23	3 Year Total Cost	Recurring or Nonrecur-ring	Fund Affected
Total		NFI				

Parenthesis ( ) indicate expenditure decreases

SOURCES OF INFORMATION
LFC Files

Responses Received From
Energy, Minerals and Natural Resources Department (EMNRD)

SUMMARY

Synopsis of Bill

House Bill (HB) 181 amends the Oil and Gas Severance Tax Act to exempt the oil and gas severance tax on carbon dioxide when captured carbon dioxide is used in an enhanced oil recovery project.

EMNRD provided the following synopsis of the bill.

HB 181 amends NMSA 1978, Section 7-29-2 to create new definitions for:

1) "captured carbon dioxide," which is CO2 captured from an industrial source or ambient air and would have been otherwise released as a greenhouse gas; and

2) "posted price" of oil.

HB 181 amends Section 7-29-4, which provides the oil and gas severance taxes imposed by the Act by excepting taxes on carbon dioxide until December 31st, 2030 for a qualified enhanced recovery project that involves the injection of captured carbon dioxide in the process of displacing oil and other liquid hydrocarbons that is demonstrated to sequester the carbon dioxide.

There is no effective date of this bill. It is assumed the effective date is 90 days after this session ends. (June 18, 2021). The abatement would cease after December 31, 2030.

FISCAL IMPLICATIONS

Captured carbon dioxide is not "severed and saved" from the soil, there would be no severance tax, emergency school tax, conservation tax, ad valorem production tax or ad valorem production equipment taxes imposed at the time the carbon dioxide is captured and sequestered or used in an enhanced oil recovery project. Because the capturing and sequestration of carbon dioxide is not taxable pursuant to the five oil and gas severance tax acts, the sales receipts from the powerplant or other industrial process plant to the oil and gas restoration contractor or well owner would be subject to the gross receipts tax at the state plus local rate applicable at the powerplant or similar facility. (See "Technical Issues" for further discussion.).

To the extent the bill could be amended to work, the provisions would be considered a tax expenditure. However, there might be adequate value in terms of public policy to help mitigate climate change. A document similar to a federal environmental impact statement should be prepared to discuss the economics and environmental mitigation issues.

SIGNIFICANT ISSUES

EMNRD indicatesthe bill will not accomplish the purpose of creating a tax abatement for the use of captured carbon dioxide.

As EMNRD explains:

HB 181 seeks to encourage the use of "captured carbon dioxide" in "qualified enhanced recovery projects" where carbon dioxide (CO2) is injected into underground hydrocarbon formations to increase production of hydrocarbons.

Captured carbon dioxide is defined in HB 181 to include CO2 that is either captured by equipment at an industrial facility before it becomes an industrial emission (e.g., at a coal fired power plant) or captured from the ambient air at a "direct air capture facility". At this time, neither method of CO2 capture is operational in New Mexico. (There are a number of facilities in other states. See Discussion below from a website reference.)

HB 181 creates a ten-year exemption from the severance tax for carbon dioxide when captured carbon dioxide is used in a qualified enhanced recovery project. NMSA 1978, §7-29-4(A)(10). Unfortunately, captured carbon dioxide from either an industrial source or ambient air is not subject to the oil and gas severance tax. The severance tax is applied to "products that are severed and sold". §7-29-4(A). "Severance" requires that a product be taken from

the soil; captured CO2 is not. NMSA 1978, §7-29-2(D) ("severance" means the taking from the soil of any product in any manner whatsoever).

If the sponsors intended that the tax exemption be applied to the oil that is produced from a qualified enhanced recovery project which uses captured carbon dioxide, then HB 181 needs to be redrafted.

HB 181 also requires the Taxation and Revenue Department (TRD) to promulgate rules to determine whether the captured carbon dioxide that is used in an enhanced recovery project is actually being geologically sequestered. NMSA 1978, §7-29-4(A)(10). This topic would appear to be outside the expertise of TRD.

Oil and natural gas producers and coal power plant operators have long been intrigued by the potential of capturing, sequestering, and using carbon dioxide so captured in enhanced recovery projects. During the era of coal-bed methane in the San Juan, some producers explored the potential of using carbon dioxide from the two big coal power plants injected into the coal bed seams to enhance recovery of natural gas. These efforts, apparently, were not economically feasible.

A useful website by Resources for the Future explaining the current state of the art in carbon capture follows:
https://www.rff.org/publications/explainers/carbon-capture-and-storage-101/

From the website:

The State of CCS

According to the Global CCS Institute's 2019 Status Report, 40 million metric tons of CO_2 from plants currently in operation or construction are captured and stored each year (for context, the United States alone emitted over 5 billion metric tons of CO_2 in 2018). Globally, there are 51 large-scale CCS facilities in operation or under construction. In the United States alone, there are 10 large-scale operational facilities, as shown in the map below. (The Global CCS Institute defines "large-scale facilities" as power plants capturing at least 800,000 metric tons of CO_2 annually and other industrial facilities capturing at least 400,000 metric tons of CO_2 annually.)

How CCS Works
Deploying CCS at a power plant or industrial facility generally entails three major steps: capture, transportation, and storage.

Several different technologies can be used to **capture** CO_2 at the **source** (the facility emitting CO_2). They fall into three categories: post-combustion carbon capture (the primary method used in existing power plants), pre-combustion carbon capture (largely used in industrial processes), and oxy-fuel combustion systems. For **post-combustion** carbon capture, CO_2 is separated from the exhaust of a combustion process. There are commercially available **pre-combustion** capture technologies used by industrial facilities; however, for power plants, pre-combustion capture is still in early stages. This technology involves gasifying fuel and separating out the CO_2. It may be less costly than other options; however, it can only be built

> into new facilities—to retrofit an existing facility for pre-combustion capture would be prohibitively costly. For **oxy-fuel combustion**, fuel is burned in a nearly pure-oxygen environment, rather than regular air, which results in a more concentrated stream of CO_2 emissions, which is easier to capture.
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> Once the CO_2 is captured, it is compressed into a fluid and **transported** to an appropriate storage site, usually by pipelines and/or ships and occasionally by trains or other vehicles. Finally, in the third step, the CO_2 is injected into deep, underground geological formations, where it is **stored** long term, rather than being released into the atmosphere. Storage sites used for CO_2 include former oil and gas reservoirs, deep saline formations, and coal beds.

One of the primary barriers to deployment, as described in the same website primer, is the cost of implementation. Other significant barriers are transportation challenges, storage issues, and uncertain public support.

> One of the most significant barriers to widespread deployment of CCS technologies is the high cost of the technologies. Although cost estimates vary widely, the greatest costs are typically associated with the equipment and energy needed for the capture and compression phases. Capturing the CO_2 can decrease plants' efficiency and increase their water use, and the additional costs posed by these and other factors can ultimately render a CCS project financially nonviable. (Increased water use may also pose problems for plants that already face water scarcity.) Additionally, since CCS deployment is in its early stages, financial returns on a CCS project are riskier than normal operations. Consequently, investors impose higher risk premiums (the minimum amount of expected return required to attract investment), which further increases the private cost of the necessary capital. Mitigating risk for investors is vital for incentivizing investment and development of CCS. In order to realize full-scale deployment, additional research and development is required to optimize technology design and integration. Presently, the Department of Energy's Carbon Capture Program is exploring these issues.
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> As highlighted in the Intergovernmental Panel on Climate Change's Special Report on Carbon Dioxide Capture and Storage, in order to accelerate CCS development, policies that increase demand and reduce the costs will be needed. Several different types of policies have the potential to bring down the costs of CCS and encourage research, development, and deployment, including carbon pricing policies, public investment and subsidies, and clean energy standards that credit companies generating electricity or other energy sources with CCS.

PERFORMANCE IMPLICATIONS

The LFC tax policy of accountability is not met since TRD is not required in the bill to report annually to an interim legislative committee regarding the data compiled from the reports from taxpayers taking the deduction and other information to determine whether the deduction is meeting its purpose. It would be useful for the industry to provide further information on the annual reduction in emitted carbon dioxide.

ADMINISTRATIVE IMPLICATIONS

As EMNRD notes, TRD probably does not have the expertise to determine if injected carbon dioxide is actually being geologically sequestered.

TECHNICAL ISSUES

Because carbon dioxide is not "severed" from the soil and is not taxed like oil and gas, HB181 is unlikely to create a financial incentive to capture carbon dioxide from powerplant or other industrial processes and to use that captured carbon dioxide in a tertiary enhanced oil recovery project. The definition at 7-29-2 NMS 1978 of the Oil and Gas Severance Tax Act clearly establishes the taxable activity.

> **7-29-2. Definitions.**
> As used in the Oil and Gas Severance Tax Act:
> A. …
> B. …
> C. "severance" means the taking from the soil of any product in any manner whatsoever;
>
> 7-29-4. Oil and gas severance tax imposed; collection; interest owner's liability to state; Indian liability.
> A. There is imposed and shall be collected by the department a tax on all products that are severed and sold, except as provided in Subsection B of this section. The measure of the tax and the rates are:
> (10) on carbon dioxide, helium and non-hydrocarbon gases, three and three-fourths percent of the taxable value determined pursuant to Section 7-29-4.1 NMSA 1978.

Not only would captured carbon dioxide not be subject to the oil and gas severance tax, it would not be subject to the emergency school tax, conservation tax, ad valorem production tax, or ad valorem production equipment taxes imposed at the time the carbon dioxide were captured and sequestered or used in an enhanced oil recovery project. Receipts from the sale of captured carbon dioxide would probably be subject to the gross receipts tax because the sale would not qualify for the exemption of 7-9-13.2. (Exemption; governmental gross receipts tax; receipts subject to certain other taxes.) nor would the injected carbon dioxide be considered as necessary for acidizing a well and would not qualify for the gross receipts tax deduction of 7-9-65. (Deduction; gross receipts tax; chemicals and reagents) might apply.

OTHER SUBSTANTIVE ISSUES

According to the Global CCS Institute's 2019 Status Report, 40 million metric tons of CO_2 from plants currently in operation or construction are captured and stored each year (for context, the United States alone emitted over 5 billion metric tons of CO_2 in 2018). Globally, there are 51 large-scale CCS facilities in operation or under construction. In the United States alone, there are 10 large-scale operational facilities. (The Global CCS Institute defines "large-scale facilities" as power plants capturing at least 800,000 metric tons of CO_2 annually and other industrial facilities capturing at least 400,000 metric tons of CO_2 annually.)

ALTERNATIVES

One possible strategy to provide a tax abatement for using carbon dioxide in an oil recovery project would be to add a subsection to 7-29-4 NMSA 1978 similar to the following:

(11) on oil and on other liquid hydrocarbons removed from natural gas at or near the wellhead produced from a qualified enhanced recovery project that involves the injection of captured carbon dioxide in the process of displacing oil and other liquid hydrocarbons that is demonstrated to sequester the carbon dioxide pursuant to rules promulgated by the department, zero percent until December 31, 2030 of the taxable value determined pursuant to section 7-29-4.1 NMSA 1978.

In addition, there would need to be an amendment to either the exemption from gross receipts tax at 7-9-13.2 NMSA 1978 or the deduction for process chemicals at 7-9-65 NMSA 1978.

This would remove the West Texas Intermediate oil price reference and set a temporary period where the oil or other liquid hydrocarbons produced in the innovative enhanced recovery project using captured carbon dioxide would be taxed at 0 percent.

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