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February 16, 2017

Honorable Don Parsons
Chairman, House Energy, Utilities, and Telecommunications
401 State Capitol
Atlanta, Georgia 30334

SUBJECT: Fiscal Note
House Bill 205 (LC 40 1355ER)

Dear Chairman Parsons:

This bill would impose a 3 percent severance tax on the sale price of all oil and gas removed from the ground in Georgia. One-third of the revenue would be remitted to the county where the oil and gas was extracted, while the remaining two-thirds would be remitted to the state. Additionally, the bill would require the Department of Natural Resources (DNR) to regulate the exploration and extraction of oil and gas through hydraulic fracturing. The bill allows for the creation of an Oil and Gas Board if at least 12 drilling permit applications are received, increases the drilling permit fee from $25 to $500, and increases the maximum bond security requirement from $50,000 to $100,000. The bill does not include an effective date, but it is assumed to be effective July 1, 2017.

Impact on State Revenue
Georgia State University's Fiscal Research Center (FRC) estimated that state revenue could increase between $2,700 and $204,800 in fiscal year 2019 (Table 1), the first full year of the bill's impact. Revenue is projected to increase in subsequent years. Local government revenue would be one-half of the state estimates. It should be noted that FRC considers the estimates to be "highly speculative." The estimates are dependent on natural gas prices reaching $6.00 per thousand cubic feet (current forecast is below $4.00 in near term) and production being either similar to past levels in Alabama (low estimate) or 100 times those levels (high estimate). Details of FRC's analysis are in the appendix.

Table 1. Estimated State Revenue Effects of LC 40 1355ER

	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022
High Estimate	$65,000	$204,800	$286,700	$301,000	$316,000
Low Estimate	$1,300	$2,700	$2,900	$3,000	$3,200

DNR's Environmental Protection Division (EPD) estimates no significant increase in permit fee revenue due to the small number of drilling permit applications received in the past. No applications have been received in the past five years.

Impact on State Agency Costs

The Department of Revenue (DOR) estimates that it would incur additional costs should the tax be collected. DOR estimated one-time costs of approximately $276,610, including $260,000 for IT system changes and $16,610 for training, form updates, computer equipment, and taxpayer outreach.

DOR would also need additional compliance agents and auditors depending on the volume of tax filings. Each compliance agent costs approximately $63,750 annually and requires approximately $3,200 in equipment. Each audit agent costs approximately $89,650 annually and requires approximately $10,350 in equipment, training, and travel expenses. While data is available to allow FRC to estimate the dollar amount of revenue from oil and gas extractors, we are unable to determine the number of taxpayers that would be affected by this bill. Without an estimate of tax filings, we cannot determine the impact to DOR's workload and the number of agents that would be needed. DOR officials estimated a need for two agents and two auditors if there were 1,500 filings.

EPD estimates no significant change to its costs as a result of this bill. As noted above, EPD has an existing permit application for drilling and has not received any applications for this permit type in over five years.

Sincerely,

Greg S. Griffin

Greg S. Griffin
State Auditor

Teresa A. MacCartney

Teresa A. MacCartney, Director
Office of Planning and Budget

GSG/TAM/rm

Analysis by the Fiscal Research Center

The severance tax created by HB 205 applies at a 3 percent rate on the sale price of any gas or oil removed from the ground in Georgia. This severance revenue would be split between state and local governments, with two-thirds going to the state and one-third going to the county in which the given wellhead is located. The law would preclude any additional state or local taxes from being applied to oil or gas extracted in Georgia. It should be noted that Georgia currently does not produce any oil or natural gas, according to the latest Energy Information Administration (EIA) data. According to a 2013 Atlanta Journal-Constitution article describing drilling activity in Northwest Georgia, nor had Georgia ever produced any material amounts of oil or natural gas as of that time. Thus it is possible that the proposed severance tax will raise no revenue over the forecasted period.

However, a portion of North Georgia does sit on the Conasauga Shale, a geological formation that runs thorough Alabama and into Southeast Tennessee, and is estimated to hold significant natural gas reserves. The Buckeye Exploration Company, based in Oklahoma, secured roughly 7,000 acres of mineral rights in Northwest Georgia over the Conasauga Shale formation and drilled some exploratory wells in 2010. Based on the results of those test wells and gas prices at the time, Buckeye Exploration did not pursue additional drilling. Thus the estimates that follow are grounded in the experience of Alabama, where significant drilling activity occurred for six-years during 2005-10 in the same Conasauga Shale formation.

- The total amount of gas extracted and sold in all six years was quite small, about 130 million cubic feet, per the Alabama oil and gas board.
- The drilling in the unproven Conasauga Shale formation was motivated by quickly rising gas prices, going from an annual average price of $4.88 in 2003 to $7.33 per thousand cubic feet (Mcf) in 2005 (EIA.gov, U.S. Natural Gas Wellhead Price).
- By 2009, gas prices had fallen substantially to $3.67 per Mcf and by 2010, drilling ceased as prices averaged $4.48 per Mcf for that year.
- EIA forecasts natural gas prices in the short term to be $3.66 per Mcf in 2017 and $3.85 per Mcf in 2018 (forecasted prices were per million British thermal units and converted to a price per Mcf by multiplying by a factor of 1.032).

It is widely understood that at forecasted prices for natural gas of less than $4 per Mcf, further exploration in North Georgia of the Conasauga Shale formation is not economically feasible. It is estimated that natural gas prices would have to reach roughly $6 per Mcf for the Conasauga Shale formation exploration to resume. This price level corresponds roughly to the $5.89 per Mcf average price of natural gas from 2003-05, which prompted the initial exploration of this formation in Alabama.

To estimate the amount of revenue the new severance tax could raise, given high enough prices for production to be presumed feasible, it is assumed that natural gas prices rise to an annual average of $6 for the first year of the estimation period. It is further assumed that prices continue to rise by 5 percent annually, the rate at which EIA estimated prices increase from 2017-18.

Two estimates are provided, the first a low estimate that assumes production similar to the average annual production in Alabama from 2005-10. The second is significantly more optimistic, assuming that producers are considerably more successful, with annual production of 100 times the annual average from Alabama. In both cases, a six-month lag is assumed before higher prices lead to production; a further 18-month lag is assumed before production reaches the optimistic case assumed production level.

Again, these estimates are highly uncertain, depending first on a substantial increase in the price of natural gas for the exploration to begin. Second, the experience from the Alabama drilling suggests that extracting gas from the Conasauga Shale formation may prove difficult. Third, for the tax to produce revenue approaching $1 million annually, the amount of natural gas found would have to be greater than 250 times the amount extracted in Alabama. Thus, as Georgia currently does not produce any oil or gas, the amount of revenue raised by the new severance tax could well be zero over the entire forecast period.