

GENERAL ASSEMBLY OF NORTH CAROLINA

Session 2005

Legislative Fiscal Note



BILL NUMBER: House Bill 1296 (First Edition)

SHORT TITLE: Renewable Fuels Motor Fuels Tax Exemption.

SPONSOR(S): Representative Hackney

FISCAL IMPACT					
	Yes (X)	No ()	No Estimate Available ()		
	<u>FY 2005-06</u>	<u>FY 2006-07</u>	<u>FY 2007-08</u>	<u>FY 2008-09</u>	<u>FY 2009-10</u>
REVENUES					
Highway Fund, Highway Trust Fund, UST Funds	No specific estimate available on revenue reduction; A scenario with 1% market penetration indicates that potential revenue loss could be up to \$129 million per year. (See Assumptions and Methodology, page 3)				
EXPENDITURES					
Dept. of Revenue	Minimal				
POSITIONS (cumulative):					
PRINCIPAL DEPARTMENT(S) & PROGRAM(S) AFFECTED: Highway Fund and Highway Trust Fund; Commercial and Noncommercial Underground Storage Tank Programs; Water and Air Quality Account; Department of Revenue					
EFFECTIVE DATE: July 1, 2005					

BILL SUMMARY:

Amends Article 36C of GS Chapter 105 to exempt biodiesel, fuel alcohol, and gasohol from NC motor fuel taxes effective July 1, 2005. Requires Department of Revenue to report annually to Revenue Laws Study Committee on fiscal impact of the tax exemption.

Source: Bill Digest S.B. 1150

ASSUMPTIONS AND METHODOLOGY:

The bill would exempt biodiesel, fuel alcohol, and gasohol from the state motor fuel excise tax (assumed to average 26.3 cents per gallon over the next five years, based on forecasts by the Office of State Budget and Management).

G.S. 105-449.60 contains the following definitions of the fuels exempted in this bill:

(1) Biodiesel – “Any fuel or mixture of fuels derived in whole or in part from agricultural products or animal fats or wastes from these products or fats.” (*emphasis added*)

(12) Fuel alcohol – “Alcohol, methanol, or fuel grade ethanol.”

(14) Gasohol “A blended fuel composed of gasoline and fuel grade ethanol.” (*emphasis added*)

Because biodiesel and gasohol are defined in statute as mixtures or blends, the bill would also effectively exempt the petroleum diesel that is mixed with pure biodiesel (or B100, which is, according to the US Department of Energy, most commonly produced from soybean oil or recycled cooking oil from restaurants) or the gasoline that is mixed with fuel alcohol (ethanol) to make gasohol.

For example, a mixture of four gallons of petroleum diesel and one gallon of B100 biodiesel can be sold as five gallons of B20 biodiesel. Under this bill the entire five gallons is exempt from motor fuels tax, a savings of \$1.32 (5 gallons times 26.3 cents per gallon).

Similarly, one gallon of ethanol mixed with nine gallons of gasoline yields ten gallons of E10 gasohol and a potential motor fuels tax saving of \$2.63 (10 gallons times 26.3 cents per gallon). (10 percent ethanol is an important cutoff point. According to the *New York Times*, 6/12/05, “Cars, minivans, and sport utility vehicles can burn a mixture of up to 10 percent ethanol without special equipment; for percentages higher than that, special materials are needed to prevent the ethanol from damaging gaskets and seals.”)

In fact, because no minimum amount of B100 biodiesel or ethanol is specified in the statutes or the bill, the blends could contain even less than described above, resulting in an even greater number of gallons of petroleum diesel or gasoline being exempt from motor fuels tax.

The Department of Revenue reports that in calendar year 2004 approximately \$250,000 in motor fuel tax was collected on approximately one million gallons of the fuels, predominantly biodiesel, that would be exempted from tax in this bill. An additional four million gallons were purchased by users who are exempt from tax under current law.

No reliable forecasts are available on the future growth in consumption of these fuels with or without the tax exemption, although it can be expected that eliminating the tax would increase sales. Growth in consumption will depend to a great extent on the price of conventional petroleum fuels, the economics of ethanol or biodiesel production, and on policy decisions on incentives, such as that included in this bill, and mandates. Some of the specific factors that could affect the supply and demand picture for ethanol and biodiesel include:

- The price of corn, from which ethanol is made, or soybeans, a source of biodiesel.

- The cost of shipping ethanol. According to the *New York Times*, the cost of shipping ethanol over long distances is high because it must be sent by highway or rail tanker instead of through petroleum pipelines to avoid contamination.
- Changes in the federal ethanol subsidy of 51 cents per gallon.
- The fate in the US Congress of the amendment that the Senate added to the pending Energy Bill that would require the annual use of eight billion gallons of renewable fuels by 2012.
- The policy of the US Environmental Protection Agency and the states on the use of MBTE to oxygenate fuel. The Clean Air Act of 1990 requires the use of an oxygenate, either MBTE or ethanol, to help fight air pollution in certain metropolitan areas. The EPA recently refused to waive this requirement for California, New York and Connecticut. These states have banned MBTE and will continue to use ethanol. Had they received the waiver the demand for ethanol would have dropped.
- The costs and operating experience of any renewable fuels plants built in North Carolina.

Scenarios

While specific forecasts are not available, it is possible to examine the potential impact of various assumed levels of market penetration for biodiesel and ethanol. The fiscal impacts of 1% and 3% market penetration scenarios are shown below.

Biodiesel

The Department of Revenue collects motor fuels tax on approximately 1,000,000,000 gallons of petroleum diesel fuel per year. If enough biodiesel (B100) were produced to make up 1% and 3% of the total, and it were blended with petroleum diesel and sold as B20, the fiscal impact would be as shown in the table:

Biodiesel (B100) Market Penetration	Total Gallons B100	Exempt Gallons when sold as B20	Fuel Tax Loss at 26.3 cents per gallon
1%	10,000,000	50,000,000	\$13,000,000
3%	30,000,000	150,000,000	\$39,000,000

Ethanol

The Department of Revenue collects motor fuels tax on approximately 4,400,000,000 gallons of gasoline per year. If enough ethanol were produced to make up 1% and 3% of the total, and it were blended with gasoline and sold as E10, the fiscal impact would be as shown in the table:

Ethanol Market Penetration	Total Gallons Ethanol	Exempt Gallons when sold as E10	Fuel Tax Loss at 26.3 cents per gallon
1%	44,000,000	440,000,000	\$116,000,000
3%	132,000,000	1,320,000,000	\$347,000,000

Total

At an assumed 1% market penetration scenario for each fuel the total tax loss would be \$13,000,000 for biodiesel plus \$116,000,000 for ethanol for a total of \$129,000,000. At 3% the total tax loss would be \$39,000,000 plus \$347,000,000 for a total of \$386,000,000.

Impact of Motor Fuels Tax Reduction on Various Funds

The Office of State Budget and Management forecasts that the motor fuels tax rate (fixed rate of 17.5 cents per gallon plus variable rate) will average 26.3 cents per gallon over the next five fiscal years. While the number of gallons that would be exempted from tax under this bill is not known, each gallon exempt from tax would cause a revenue loss to the following funds, based on G.S. 105-449.125:

Highway Fund 19.35 cents

Highway Trust Fund 6.45 cents

Commercial and Noncommercial Leaking Petroleum Underground Storage Tank Cleanup Funds and Water and Air Quality Account 0.50 cents

Impact of Tax Change on Department of Revenue Expenditures

The Department of Revenue would have to make adjustments to its forms and software to implement this bill. The Department does not believe that the cost would be significant.

Appendix

***Information Provided by the North Carolina Solar Center
On Consumption and Price Trends for Biodiesel and Ethanol***

2004 NC Consumption of Biodiesel: approximately 1 million gallons of B100

NC Dept of Transportation (DOT) is using about 500,000 gallons of B100 annually in a B20 blend (20% Biodiesel/80% diesel); the rest is made up of use by local governments, universities, and the military. There are 4 public B20 pumps which in total sell approximately 50,000 gallons of B100 annually.

2004 NC Consumption of Ethanol: approximately 300,000 gallons

Ethanol is utilized as E85 (85% ethanol/15% gasoline) in E85 capable flex fuel vehicles (FFVs) by the NC Department of Administration Motor Fleet Management (MFM) in 2 stations they operate in Raleigh. They used about 200,000 gallons last year. MFM also uses E10- gasohol (10% ethanol/90% gasoline) in their stations in Raleigh and NC DOT has E10 at their station in Wilmington. This accounts for approximately 80,000 gallons of ethanol. There are no other fleets using ethanol and no ethanol blends available to the public at this time in North Carolina.

Biodiesel Prices and recent trends:

Biodiesel (B20) is available on a state purchasing contract to local government and school systems in all 100 counties. Over the past 3 years the incremental cost as compared to number 2 diesel has ranged from 2-35 cents per gallon. Generally the incremental cost has been about 20 cents per gallon. Currently in Wake County it is 17 cents more per gallon.

Prices are high currently because demand is up nationwide and supplies tight. This is expected to change with new plants coming on line by the end of the summer. There is a federal tax credit for Biodiesel blended with petroleum (\$1.00 per gallon for soybased biodiesel/.50 per gallon for recycled oil based Biodiesel) This should reduce the incremental cost as soon as supply is increased.

Ethanol Prices and recent trends:

For the past several years E85 has cost the state approx 20-35 cents more per gallon than regular 87 octane gasoline because of transportation costs and a very cumbersome federal tax credit that relied on an entity's alternative minimum tax liability. The Volumetric Ethanol Excise Tax Credit (VEETC) provides a 51 cents per gallon tax credit for ethanol blended with gasoline (in proportion to the amount blended) and has simplified the tax credit procedures. In addition, production of ethanol is up, along with the price of petroleum. Consequently, the price of ethanol is competitive with gasoline in North Carolina. Further, with the VEETC, prices at the pump for E85 could be lower than regular gasoline in NC. There are currently no service stations offering ethanol (E10 or E85) at the pump although recently several petroleum marketers have expressed interest.

SOURCES OF DATA: Department of Revenue; North Carolina Solar Center; Energy Information Administration, US Department of Energy; Office of State Budget and Management; New York Times; Washington Post.

TECHNICAL CONSIDERATIONS: (1) As noted, by exempting blends containing petroleum products the bill exempts the petroleum products contained in those blends or mixtures. Theoretically, the blends could have even less biodiesel than 20% and less ethanol than 10% assumed in the scenarios examined. (2) The Department of Revenue notes that current law exempts certain categories of users from motor fuels tax, while this bill exempts certain fuels.

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