

Economic Impact for New York State of Signing into Law the 2 Percent Biodiesel Blending Requirement for Heating Oil

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New York Governor Andrew Cuomo will soon have an opportunity to sign into law the recently-passed requirement to blend 2 percent biodiesel (B2) in all heating oil (Bioheat) sold in New York. The legislation requires all heating oil sold in the City of New York, Nassau, Suffolk, Westchester, and Rockland counties to contain at least 2 percent biodiesel by October 1, 2014, followed by the rest of the state by July 1, 2015. New York City implemented a 2 percent biodiesel requirement for heating oil in October 2012, so the statewide requirement will apply to the rest of the state. According to the Energy Information Administration (EIA), 1.2 billion gallons of No. 2 distillate fuel oil was used for heating in New York State in 2012. New York City already requires 2 percent biodiesel in all heating oil sold in the City, representing an estimated 9.6 million gallons of biodiesel.¹ Reflecting this, the statewide Bioheat requirement will create a new market for biodiesel of 14.4 million gallons.

Currently, New York State encourages the use of Bioheat (biodiesel blends) with a tax credit that extends through December 31, 2016. Residential taxpayers can claim a direct income tax credit of one cent for each percentage point of biodiesel used in each gallon of residential heating fuel. Estimating the cost of the Bioheat policy requires a consideration of how many residential consumers will take advantage of the credit as well as the number of consumers already using biodiesel blends because of economic factors. According to the EIA, New York households use about 500 gallons of home heating fuel annually, making the credit worth about \$10, an amount many consumers will not bother claiming.² Further, a considerable share of heating oil sold outside of New York City is already blended with biodiesel whenever it is economically beneficial, thereby reducing the number of additional gallons of biodiesel created by the blending requirement on which the credit should be calculated. Taking these

¹ Source: Adjusted Sales of Distillate Fuel Oil by End Use.

http://www.eia.gov/dnav/pet/pet_cons_821dsta_dcu_SNY_a.htm Metropolitan area estimates of home heating oil use are not available. However the Census Bureau reports that New York City accounts for about 40 percent of all New York housing units. We have used this as a proxy for home heating oil use in New York City.

² <http://www.eia.gov/consumption/residential/data/2009/index.cfm?view=consumption#fuel-consumption>. Table CE2.2. We assume that half of NY households will claim the credit.

factors into consideration, we estimate cost of the Bioheat blending requirement at approximately \$3 million annually.

The Bioheat blending requirement would increase the market for biodiesel, provide an important incentive for the expansion of biodiesel production in New York, and will support the construction and operation of a proposed 2 million bushel per year soybean crushing and soybean oil production plant in Upstate New York. This will have the impact of creating an important new market for New York soybean growers. The Bioheat requirement can be expected to have the following impacts for New York State:

- Increased value added (GDP) of \$32.5 million for New York State from increased biodiesel production and \$16.3 million from the proposed soybean crush plant, for a total annual impact of \$48.8 million for the state economy.
- Higher household income for New Yorkers. The economic activity generated by increased biodiesel production and soybean processing will generate \$24 million additional income for New York households and as much as \$1.5 million in personal tax revenues.
- As a consequence of increased economic activity taxes on production and corporate income would generate \$3.7 million annually. When combined with the increase in personal income taxes, the Bioheat blending requirement is expected to generate \$5.2 million of additional revenue, \$2 million more than would be lost by the tax credit and blending requirement.
- Increased economic activity is expected to support as many as 490 jobs in all sectors of the entire state economy.
- New York soybean growers would benefit from more than \$28 million of new revenue from the demand created by the new soybean processing plant.

The impact of the Bioheat blending requirement was estimated by applying New York specific economic impact multipliers for value added, earnings, and employment to the estimated annual expenditures associated with producing 14.4 million gallons of biodiesel supported by the B2 Bioheat blending requirement and crushing 2 million bushels of soybeans to produce soybean oil for biodiesel

production and soybean meal for the New York livestock, dairy, and poultry industry.³ The personal tax revenue implications were calculated by applying an average personal tax rate for New York of 6.3 percent to the household earnings supported by biodiesel production and soybean processing. The production and corporate income tax revenues were estimated by multiplying the GDP (value-added) impacts by the ratio of production taxes to GDP for New York published by the Bureau of Economic Analysis.⁴

At current prices and costs, the annual private sector expenditures to produce 14.4 million gallons of biodiesel amount to \$54 million. The majority of these expenditures are for feedstocks, which include used cooking oils and waste grease produced by the New York food service industry as well as soybean oil. The annual operating costs for the proposed 2 million bushel per year soybean crushing plant that would support biodiesel production are estimated at \$29.7 million, most of which represents the purchase of soybeans that would be produced by New York farmers.⁵ It is important to note that these are permanent, recurring expenditures associated with ongoing production activities.

These expenditures represent the purchase of output of other supplying industries and circulate throughout the entire state economy several fold. Consequently, this spending stimulates aggregate demand, supports the creation of new jobs, generates additional household income, and provides tax revenue. These estimates reflect the total impact of the Bioheat requirement for New York, including the direct effects from production as well as the indirect and induced effects on other sectors of the economy.

³ The multipliers used are RIMS II Type 2 multipliers for New York for NAICS 325190 (other organic chemical manufacturing) and 311222 (soybean processing) provided by the Bureau of Economic Analysis.

⁴ Bureau of Economic Analysis. Gross Domestic Product by State.

<http://www.bea.gov/iTable/iTable.cfm?reqid=70&step=1&isuri=1&acrdn=1#reqid=70&step=1&isuri=1>

⁵ The primary assumptions for our analysis include an average biodiesel feedstock price of \$0.40 per pound and that feedstocks account for 80 percent of biodiesel operating costs. The expenditures for soybean crushing include a 2013 year-to-date average soybean price of \$14.31 per bushel and \$0.52 per bushel cost for other operating expenses.

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Additional economic benefits would result from construction of the soybean crushing plant. However, since these impacts are transitory and are replaced by those provided by ongoing operations, we have not included these in our analysis.