



Legislation Text

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Fiscal Note

The Fleet Service agency currently purchases about 400,000 gallons of gasoline per year. The fuel bids often provide options for a 100% unleaded gasoline or a 90% gasoline / 10% ethanol blend (“gasohol”) purchase. Depending on the individual bid, a discount is usually offered for the 10% ethanol blended fuel. At the last bidding, discounts ranging from \$0.00 to \$0.025 (zero to two and a half cents) per gallon were offered for the blended fuel.

Although the purchase price may be cheaper, it does not necessarily follow that the blended fuel is the cheapest and most economically efficient fuel for the City of Madison on a mileage basis. Ethanol contains only about 61% of the energy of unleaded gasoline, and a mix of 90% gasoline / 10% ethanol contains only about 97% of the energy of 100% gasoline. Vehicles using the blended fuel therefore experience a less favorable mileage per gallon, requiring the purchase of more gallons of fuel.

By way of example, one could assume a City purchase price of \$3.00 per gallon for gasoline, and \$2.98 per gallon for the 10% ethanol blend. If the blended fuel contains only 97% of the energy as the pure gasoline, the price of the blend would have to be no higher than $\$3.00 * 97\% = \2.91 per gallon to make up for the difference in energy provided. At current prices, the 100% gasoline is therefore the cheapest and most economically efficient fuel on a per mile basis.

This resolution recommends that the City forego purchase of corn-based ethanol as a vehicle fuel. At current prices, this policy would not affect the City’s fuel purchases. Only if the price of blended fuel dropped below 97% of the price of gasoline would the City experience a potentially unfavorable economic impact.

Unfortunately, it may become increasingly difficult to procure pure gasoline. One of the City's current fuel vendors has indicated that this difficulty is anticipated. This resolution does not actually prohibit the purchase of blended fuel. The City may have to purchase blended fuel in the future, however, if no vendors offer a 100% gasoline alternative.

Title

Resolution for the City of Madison to Not Purchase or Use Corn Based Ethanol and Corn Based Ethanol Fuel Blends for its Fleet

Body

Whereas Some plant based fuels like ethanol have been shown to have less overall Carbon Dioxide (CO2) emissions than gasoline; and

Whereas CO2 emissions have been linked to a warming atmosphere, rising ocean levels and an increase in severe weather; and

Whereas a decrease in CO2 emissions will mitigate the warming of the atmosphere, rising ocean levels and increasingly severe weather; and

Whereas However, corn-based ethanol and corn-based ethanol fuel blends have been shown to have very little effect in the mitigation of CO2 levels; and

Whereas Ethanol made from cellulosic species such as switch grass and miscanthus have been shown to have a very large impact in the mitigation of CO2 levels; and

Whereas Shifting demand from corn based to cellulosic species based ethanol and ethanol fuel blends will decrease the cost of production, increase supply and make it readily available as an alternative fuel source;

Therefore be it Resolved The Sustainable Madison Committee recommends the City of Madison not purchase or use corn-based ethanol and corn-based ethanol fuel blends for the City Fleet.]