



**STATE BOARD OF EQUALIZATION  
STAFF LEGISLATIVE ENROLLED BILL ANALYSIS**

Date Amended	<b>Enrolled</b>	Bill No:	<b>AB 86XX</b>
Tax:	<b>Diesel Fuel</b>	Author:	<b>Florez</b>
Board Position:		Related Bills:	

**BILL SUMMARY**

This bill would amend the Diesel Fuel Tax Law to specifically exclude from the diesel fuel tax the water portion of a diesel fuel/water emulsion.

**ANALYSIS**

**Current Law**

Under existing Diesel Fuel Tax Law, Section 60022 defines “diesel fuel” to mean, in part, any liquid that is commonly or commercially known or sold as a fuel that is suitable for use in a diesel-powered highway vehicle. A liquid meets this requirement if, without further processing or blending, the liquid has practical and commercial fitness for use in the engine of a diesel-powered highway vehicle. Further, Section 60022 defines diesel fuel to include “any combustible liquid, by whatever name the liquid may be known or sold, when the liquid is used in an internal combustion engine for the generation of power to operate a motor vehicle licensed to operate on the highway, except fuel that is subject to the tax imposed in Part 2 (commencing with Section 7301) or Part 3 (commencing with Section 8601).

Section 60023 of the Diesel Fuel Tax Law defines "blended diesel fuel" to mean any mixture of diesel fuel with respect to which tax has been imposed and any other liquid on which tax has not been imposed. A change of law operative January 1, 2002, provides that "blended diesel fuel" includes any conversion of a liquid into diesel fuel. "Conversion of a liquid into diesel fuel" occurs when any liquid that is not included in the definition of diesel fuel and that is outside the bulk transfer/terminal system is sold as diesel fuel, delivered as diesel fuel, or represented to be diesel fuel.

Under both current law and the law operative on January 1, 2002, a diesel fuel/water emulsion sold as diesel fuel is subject to the excise tax of \$0.18 per gallon on the total gallons sold as diesel fuel, even though the gallons subject to the tax include the approximately 20 percent water by volume plus an additive mixture that is added to the diesel fuel in a blending unit of a fuel blender.

**Proposed Law**

This bill would, until January 1, 2007, exclude from the definition of “diesel fuel” the water portion of a diesel fuel/water emulsion of two immiscible liquids of diesel fuel and water, which emulsion contains an additive that causes the water droplets to remain

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suspended within the diesel fuel, provided the diesel fuel emulsion meets standards set by the California Air Resources Board (CARB). The state would continue to receive the excise tax on the diesel fuel portion of the fuel, plus the additive, but the water portion combined through the blending process would not be subject to the excise tax.

This bill would also, until January 1, 2007, exclude from the definition of "blended diesel fuel" a diesel fuel/water emulsion of two immiscible liquids of diesel fuel and water, which emulsion contains an additive that causes the water droplets to remain suspended within the diesel fuel, provided the diesel fuel emulsion meets standards set by the CARB.

This bill would also delete contradictory and confusing language in the definition of diesel fuel concerning the manner of use of the fuel.

This bill would become effective immediately.

### **In General**

The manufacturers of a diesel fuel/water emulsion sold under the trade name PuriNOx™ question whether the water portion is intended to be taxable within the meaning of the Diesel Fuel Tax Law. They argue that the purpose of the water is to reduce oxides of nitrogen (NOx) emissions and reduce particulate matter (PM) emissions, and the water does not contribute to the propulsion of the vehicle on the highway (which they believe is the basis for the excise tax on diesel fuel).

PuriNOx™ is created by combining commercially available diesel fuel, tap water and the requisite additive package, using a specially designed blending unit that involves water purification, precision metering and high shear mixing. The emulsion is then transported and/or stored before being pumped into the fuel supply tanks of centrally-fueled, fleet-operated, diesel-powered highway vehicles. Under the Diesel Fuel Tax Law, the excise tax is paid on the diesel fuel the blender uses when it is removed from the terminal rack. When PuriNOx™ is blended and then sold to fleet operators, the blender must report and pay the diesel fuel tax on the total gallons delivered, including the water and additive package.

The manufacturer touts the environmental benefits of its fuel. The CARB has verified that use of the PuriNOx™ diesel fuel/water emulsion results in a 14% reduction in NOx emissions and a 63% reduction in PM emissions. The air quality benefits are the main reason to use this fuel since there is no intrinsic economic value or business purpose other than attaining the state's environmental policy goals. In fact, it requires up to 120 gallons of PuriNOx™ in order to achieve the energy output of 100 gallons of conventional diesel fuel. This is another reason that the manufacturer argues that taxing the water portion of its diesel fuel imposes an undue burden on the highway use of the fuel.

### **Background**

In September 1997, the producers of a hydrocarbon emulsion fuel (diesel fuel, water, and an additive) came to the Board requesting clarification of their tax liability and reporting requirements. The current statutes basically make a distinction between fuel

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used in the engine of a diesel-powered highway vehicle (diesel fuel) and fuel used for propelling motor vehicles operated by the explosion-type engine (gasoline). Use fuel is generally defined as any fuel that is not covered by the gasoline tax or diesel fuel tax, including certain specified fuels (such as liquefied petroleum gas and ethanol). Under the current statute, a fuel emulsion could be taxed as gasoline, diesel fuel, or use fuel, depending upon the type of vehicle the fuel is used to propel on the highways, but the fuel can only be taxed at a rate of \$0.18 per gallon. Under current law, the state is collecting an excise tax on the water portion of the fuel that lowers the polluting effects of the fuel, but does not contribute to the propulsion of a vehicle on the roadway.

Different producers of fuel emulsions have argued that their product more closely resembles the specified use fuels and should therefore be taxed at an equitable rate. They reason that, compared to standard gasoline or diesel, anywhere from 20% to 50% more of their alternative diesel fuel is needed to travel the same distance. The producers cite the tax rate currently imposed on ethanol and methanol, which is half the rate for gasoline and diesel. Those fuels have been taxed at a lower rate since 1981 when a measure was enacted to stimulate the use of alcohol fuel. Proponents of that measure successfully argued that it takes twice as many gallons of ethanol or methanol to travel the same distance as a gallon of gasoline or diesel, thus justifying a tax rate at least half the rate imposed on fossil fuels. As previously stated, the Board has no authority to tax any alternative diesel fuel at a rate other than \$0.18 per gallon.

In 1998 the Board sponsored AB 2085 (Ortiz, et al) to tax alternative diesel fuels at a lower rate. That bill failed to pass out of the Assembly Appropriations Committee.

In 1999, Senator Ortiz introduced SB 448 which again contained an alternative diesel fuel rate reduction. That bill failed to pass out of the Senate Appropriations Committee.

In 2000, the Board co-sponsored AB 2061 (Lowenthal, Ch. 1072) which would have imposed a reduced excise tax rate of 9 cents per gallon on alternative diesel fuels from January 1, 2001 through December 31, 2005. That bill was gutted and amended to, among other things, appropriate \$500,000 from the General Fund to the State Air Resources Board for allocation for grants to air pollution control districts and air quality management districts for fiscal years 2000-01, 2001-02, and 2002-03.

## COMMENTS

1. **Sponsor and purpose.** This measure is sponsored by Lubrizol and is intended to reduce the use of traditional diesel fuel and provide a more equitable tax rate to expand the use of hydrocarbon fuel emulsions.

This bill is also intended to stretch the CARB funding for air emission reduction offsets applied to new power plants (NOx and PM Emissions Reduction Program). The sponsor believes that removing the state excise tax on the water portion of fuel would offset the awarded CARB dollars that could fund approximately an additional 1 million gallons of cleaner fuel in calendar year 2001.

2. **The September 14, 2001 amendments add a sunset date.** The exclusion proposed in this bill would now be repealed January 1, 2007. The earlier version of this measure had no sunset date.

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3. **Summary of the September 5, 2001 amendments.** The definition of “blended diesel fuel” was amended to exclude a diesel fuel/water emulsion of two immiscible liquids of diesel fuel and water, which contains an additive package that causes the water droplets to remain suspended within the diesel fuel, provided the diesel fuel emulsion meets the standards set by the CARB.

The amendments also added double joining language to the bill to avoid chaptering out problems between this measure and possibly AB 309 (Longville). AB 309 would conform the gasoline tax program with the diesel tax program and the federal gasoline tax law.

4. **What was the intent of the “blended diesel fuel” definition amendment?”.** The September 5, 2001, amendment to the definition of “blended diesel fuel” was intended by both the author and the sponsor to exclude the water in a diesel fuel/water emulsion of two immiscible liquids of diesel fuel and water. However, the amendment inadvertently left out the words “the water in,” thereby only excluding a diesel fuel and water emulsion of two immiscible liquids of diesel fuel and water.

If chaptered, the Board will administer the provisions of this bill as intended by the author and sponsor – thereby excluding from the definitions of “diesel fuel” and “blended diesel fuel” the water portion of a diesel fuel/water emulsion.

5. **Previously suggested technical amendments.** This measure does not specify what is meant by “standards set by the California Air Resources Board.” Accordingly, in the previous Board analysis, it was suggested that the bill specify exactly what constitutes “standards set by the California Air Resources Board.”

Board staff has since learned, based on a discussion with CARB staff, that the CARB does not set standards for diesel fuel emulsions. The CARB does, however, set standards to ensure that all diesel fuel sold in California meet pollution-cutting specifications. Accordingly, it is unclear what agency sets standards for diesel fuel emulsions. It is also unclear as to what “standards” these fuels must meet.

The previous Board analysis also recommended adding a provision requiring the CARB (or applicable agency) to notify the Board in writing when such a fuel meets its standards, and include in that notification the percentage of water contained in the qualifying fuel and an identifying product name.

6. **This bill could make reporting for interstate users more difficult.** This bill would exempt the water portion of a diesel fuel and water emulsion, as specified, from the diesel fuel tax. Interstate users would be burdened with additional record keeping and segregating for purposes of reporting the correct amount of tax on purchases of diesel fuel containing water emulsion if multiple types of water emulsion diesel fuel meet the standards as provided in this bill. Further, interstate users would have a different computation for each approved diesel fuel emulsion based on the percentage of water contained in such fuel for purposes of imposing and reporting the interstate user tax on diesel fuel under the International Fuel Tax Agreement.

While California may exempt the water portion of the fuel from diesel fuel tax, other jurisdictions in which the interstate user travels and reports and pays tax, may not.

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Accordingly, this measure could further complicate reporting for interstate users and could lead to additional reporting errors.

7. **This bill could extend the CARB funding under the Emissions Reduction Program.** On July 29, 2001, the CARB awarded Lubrizol \$2.25 million under the NOx and PM Emissions Reduction Program to pay for the installation of two PuriNOx™ blending units and the incremental cost of PuriNOx™ over conventional diesel that is used in California. According to the sponsor, the award will provide up to \$0.25 per gallon subsidies for the purchase of a minimum of 8 million gallons of PuriNOx™ diesel emulsion fuel to reduce NOx and PM emissions in the south coast and central valley air basins.

The NOx and PM Emissions Reduction Program was developed by the CARB in accordance with Executive Order D-24-01 issued by Governor Davis on February 8, 2001. This program is designed to create NOx and PM emission reductions by controlling emissions from mobile and stationary sources to beyond what is required by any federal, state, local, or legally binding requirements. Emission reductions from this program will be used to “fund” an emission reduction credit (ERC) bank to offset increases in emissions resulting from new and peaking power plants that are operating to meet California’s energy demand.

The sponsor claims that “if the excise tax on water in fuels was removed, the existing ERC Bank commitment could provide the necessary subsidies for an additional 996,480\* gallons of PuriNOx™ fuel in 2001.”

8. **This measure would allow water/diesel fuel emulsions to be introduced into the California fuel market at a lower tax cost to customers than the statutes currently allow.** That would provide an incentive for fuel consumers to use this type of fuel in their fleet of vehicles. To the extent that imposing a more equitable tax rate encourages use of an alternative diesel fuel, which may reduce air pollution, California would reap some of the benefits for which these fuels are being developed.

## **COST ESTIMATE**

No additional cost to implement the provisions of this bill. The workload associated with this bill would include notifying taxpayers, training Board staff, and revising returns and claim for refund forms. This workload is considered absorbable.

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\* ( 8,000,000 (gallons of PuriNOx™ purchased with the \$0.25 subsidies) X 17.3 percent (water contained in PuriNOx™) X \$0.18 (diesel fuel tax)) / \$0.25 per gallon subsidies

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## REVENUE ESTIMATE

### Background, Methodology, and Assumptions

This proposal would amend the diesel fuel tax law to provide that “diesel fuel” does not include the water in a diesel fuel/water emulsion of two immiscible liquids of diesel fuel and water, which contains an additive that causes the water droplets to remain suspended within the diesel fuel, provided the diesel fuel emulsion meets standards set by the California Air Resources Board. Currently, a diesel fuel/water emulsion sold as diesel fuel is subject to the excise tax of \$0.18 per gallon. The gallons subject to the tax includes the approximately 17.3% by volume water mixture that is added to the diesel fuel.

Based on information supplied by the proponents of this measure, it is estimated that about 4 million gallons of diesel fuel/water emulsion will be consumed annually for on-highway usage during the next few years. Approximately 17.3% of this fuel will constitute the water portion that will be exempt from the \$0.18 per gallon diesel fuel tax. The estimated gallonage that would be exempt would be 692,000 gallons annually. The excise tax revenue on this gallonage at a tax rate of \$0.18 per gallon would be \$125,000.

### Revenue Summary

The estimated revenue loss from exempting the water portion of a diesel fuel/water emulsion from the \$0.18 per gallon diesel fuel tax would be \$125,000 annually.

### Qualifying Remarks

The above estimate is based on the assumption that this fuel will be consumed in California regardless of whether or not this proposed partial excise tax exemption is granted. If we compare the revenue from the diesel fuel/water emulsion to that from traditional diesel fuel, the revenue figures show some differences. Due to the lower BTU content associated with such a diesel fuel/water emulsion, when compared to traditional diesel fuel, there is a 15% loss in fuel efficiency. To get the same mileage from 4 million gallons of the diesel fuel/water emulsion requires the consumption of only about 3.5 million gallons of traditional diesel fuel. The excise tax revenue on 3.5 million gallons of diesel fuel would amount to \$630,000. The excise tax on 4 million gallons of the diesel fuel/water emulsion with the proposed partial exemption would amount to \$595,000. This is a loss of excise tax revenue of \$35,000. However, there would be an increase in sales and use tax revenue. If we assume that both fuels sold for the same price per gallon, and if we assume that the price subject to sales tax is \$1.272 per gallon (this equates to a pump price of \$1.55 per gallon, from which the sales tax and the \$0.18 per gallon excise tax is removed) the state and local sales tax revenue on 3.5 million gallons of diesel fuel would amount to \$352,600 and the revenue on the 4 million gallons of the diesel fuel/water emulsion would amount to \$403,000. This is a gain of \$50,400. Overall, there is a gain in revenue of \$15,400.

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The partial excise tax exemption equates to a \$0.03 per gallon decline in the excise tax rate on this fuel. Since the cost of the extra fuel needed to gain the same fuel efficiency as traditional diesel fuel would greatly offset the excise tax savings, it is a reasonable assumption to expect that the consumption of diesel fuel/water emulsion will be based on factors other than this partial exemption.

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