

SB 1675 - California Renewable Diesel Standard
Frequently Asked Questions

- Q: What does SB 1675, the California Renewable Diesel Standard do?**
A: This legislation states that diesel fuel dispensed in the state of California contain at least 2% biodiesel by 2008, and increase to 5% by 2010 as the Air Resources Board and Energy Commission determine environmental compliance and supplies are sufficient.
- Q: What is the current status of SB 1675?**
A: The bill will be heard in the Assembly Appropriations on August 9. It passed three Senate Committees, the full Senate Floor, and Assembly Transportation.
- Q: Why does California need this bill?**
A: As the nation's leading consumer of petroleum for transportation, our state is highly dependent on diesel fuel. Yet the impact resulting from the production, distribution, and consumption of diesel has imposed serious economic, health, and environmental impacts on California and the nation. This bill will simultaneously stabilize fuel prices, reduce emissions, and create and expand markets for California's farmers and restaurateurs. Numerous legislatures, administrations, and agencies in California have affirmed the need for our state to reduce its petroleum consumption. This bill is consistent with those recommendations, most recently enumerated in the state's *Integrated Energy Policy Report*, *Recommendations for a Bioenergy Action Plan for California*, the *Climate Action Team Report*, and *Reducing California's Petroleum Dependence*.
- Q: Why mandate the use of renewable diesel instead of letting the market decide?**
A: It is only reasonable to assume market forces will prevail when there is competition in a market. Currently there is little to no competition in the transportation fuels market: it is virtually dominated by the petroleum industry. Since the petroleum industry does not produce renewable diesel, and because there is no other competition for diesel fuels, there is no incentive to make renewable diesel available. As a result, truckers, fleets, and motorists are generally left without alternatives, even when those alternatives have shown to be more cost-effective as biodiesel has been compared to unblended petroleum diesel.
- Q: What is renewable diesel?**
A: Renewable diesel is a wholly renewable, domestically produced, petroleum-free fuel that can be used as a replacement for diesel. The most common form is 'biodiesel', which is non-toxic and biodegradable. Biodiesel reduces petroleum consumption, provides lower emissions than diesel, similar engine performance, creates jobs and markets for American farmers, and helps promote a diversified fuel portfolio for the state.

Q: What is a biodiesel 'blend'?

A: Renewable diesel can be mixed with petroleum-diesel to create a blend. With biodiesel, the blend is indicated by B, followed by the percentage of biodiesel in the blend. This bill would create a blend of B2 (2% biodiesel) by 2008, and B5 by 2010.

Q: How much petroleum usage will this displace?

A: The B2 standard would reduce petroleum consumption by an estimated 61.5 million gallons a year. The B5 standard would reduce petroleum consumption by 162.5 million gallons per year.

Q: What impact will this have on diesel emissions?

A: By 2010, this standard is estimated to reduce CO emissions by over 4805 tons per year (tpy); CO2 emissions by over 1 million tpy; SOx emissions by more than 481 tpy; and PM emissions by over 666.3 tpy. Additionally, biodiesel's emissions are considered to be 'carbon neutral' because the CO2 it emits was absorbed in the growth of the feedstock that produced the fuel.

Q: What impact will this have on NOx emissions?

A: This bill would require the B2 and B5 blends to comply with existing air quality standards, including NOx. Biodiesel blends of B20 or higher may result in quantifiable increases in NOx emissions. However, the introduction of ultra-low sulphur diesel to California, new 2007 clean diesel engines, and the availability of cost-effective after-market NOx treatments will enable the B2 and B5 blends stipulated in this bill to comply with air standards. New biodiesel blends can actually reduce NOx emissions below diesel levels.

Q: Will this make diesel fuel more expensive per gallon?

A: Presently, blends of B2 are selling for slightly less than unblended diesel at Los Angeles and San Francisco wholesale racks. Because the price of biodiesel is historically stable and petroleum-diesel is highly volatile, any cost premiums would depend on the price of petro-diesel. Biodiesel's price stability not only makes it cost-competitive with petroleum diesel, but can help stabilize diesel fuel prices. The American Trucking Association – in its recent endorsement of the use of B5 – wrote: "biodiesel may be an effective means to extend the supply of diesel fuel."

Q: Will fueling stations have to be modified to accommodate these blends?

A: No. California's existing diesel fueling stations are already capable of handling the low-level blends called for in this bill.

Q: Will vehicles have to be modified to accommodate these blends?

A: No. Existing diesel vehicles will not require any modifications to accommodate these low-level blends of B2 and B5. Engine and vehicle manufacturers warranty the use of B5, and many are now providing warranties for B20 and B100.

Q: Will this positively or negatively impact engine performance?

A: Positively. Biodiesel's improved lubricity can compensate for lubricity that will be lost with nationwide phase-in of ULSD. Biodiesel also has a solvent effect in engines that can remove carbon and soot build-up. Biodiesel does contain slightly less energy than diesel, but this is made up for by biodiesel's higher cetane, which allows the fuel to burn more completely and efficiently than diesel.

Q: Will this effect engine starting in cold conditions?

A: Cold-start issues related to biodiesel are not expected to be a concern in California, where temperatures in the majority of the state rarely approach freezing. In climates where temperatures routinely drop below freezing, biodiesel (like diesel) must receive special attention to prevent the fuel from forming wax crystals and gelling. At the B2 and B5 blends called for in this bill, cold start issues will be no different than with regular diesel fuel.

Q: Will use of B2 by 2008 and B5 by 2010 void engine warranties?

A: No. Diesel engine, vehicle, and fuel and emissions equipment manufacturers universally accept use of up to B5. Many – such as DaimlerChrysler and Case New Holland - will now warranty some of their engines to use up to B20.

Q: Will biodiesel be allowed with existing retrofit equipment?

A: The Air Resources Board recently announced it approves the use of biodiesel blends up to B20 with diesel emissions equipment that has previously received ARB verification.

Q: Can the biodiesel industry meet the increased demand this bill would generate?

A: The biodiesel industry has confirmed that it will be able to meet the expected increase in demand created by this standard. In 2005, 75 million gallons of biodiesel were produced (a three-fold increase from the previous year), though industry presently has the capacity to produce 354 million gallons a year. Nationwide plant expansions expected to be completed within 17 months will increase production capacity to 632 million gallons per year.

Q: Why B2 and B5?

A: B2 is an incremental approach to B5 and a level at which emissions reductions and petroleum displacement becomes significant. B5 represents a level that the biodiesel industry has indicated it can meet and is universally accepted by diesel engine, vehicle, and equipment manufacturers.

Q: What happens if supplies are insufficient or compliance with environmental standards is threatened?

A: The bill does not go into effect until Air Resources Board states no adverse impact will occur as a result. The California Energy Commission will have the authority to suspend the rule if supplies are deemed insufficient.

Q: Where will the biodiesel come from?

A: Like petroleum, biodiesel is an openly traded commodity, so it could come from whichever supplier offers the lowest price provided the fuel they supply meets the Air Resource Board's lifecycle emissions standards. However, there is more than enough biodiesel produced in the US to meet the nation's needs. Presently, there are 5 suppliers in California producing over 21 million gallons per year. Furthermore, it is anticipated that California growers' proximity to market will enable them to provide a lower-cost feedstock than that grown and shipped from other states.

Q: Will waste-vegetable oil be part of this supply?

A: Yes. Biodiesel can be produced from used vegetable oil – or waste grease. In California, food processors and restaurants produced over 36 million gallons of waste grease in 2004. Though markets already exist for portions of this commodity, it is considered a good source for biodiesel.

Q: Who will enforce this standard?

A: Enforcement of this standard will be performed in the same manner of today's enforcement of existing diesel and gasoline fuel standards. This authority rests with the Department of Food & Agriculture's Division of Measurement Standards and the California Air Resources Board.

Q: Are there standards for biodiesel?

A: Yes. The biodiesel used in California will have to comply with standards proscribed by the American Society for Testing and Materials' (ASTM) standard D-6751 unless or until the state sets its own standard. The diesel fuel portion will continue to be held to the ASTM standard D-975.

Q: Will California be the first state to implement a renewable diesel standard?

A: No. In 2005 Minnesota began its renewable diesel program that has set a B2 standard for every gallon of diesel fuel sold in that state. Legislatures in Washington, Iowa, and Louisiana recently approved similar bills for biodiesel and ethanol. Alabama, Hawaii, Idaho, Kansas, and Missouri all have proposed renewable fuel standards in their legislatures right now.

Q: Will this bill increase food prices by having biodiesel crops compete for land?

A: No. Crops that are used to produce oil for biodiesel do not compete with food crops. Biodiesel is sometimes derived from cover crops planted in between cycles of food crops. Other times biodiesel crops are planted on lands that are not in use because of high levels of selenium or the soil is too rocky and dry. Biodiesel is also derived from the waste products of other agricultural products, as well as from used cooking oils from restaurants.

Q: Will biodiesel compete with ethanol or other alternative fuels?

A: No. Biodiesel can only be used in compression-ignition (diesel) engines, while ethanol is used in spark-ignition ignitions (which, today, run on gasoline). Ethanol can, however, be used in the production of biodiesel.

Q: Who is Energy Independence Now and how is this effort funded?

A: Energy Independence Now (EIN) is a non-profit organization dedicated to catalyzing California's transition to a clean, renewable energy economy. EIN's work on biodiesel is solely funded through a dedicated grant from Patagonia's Environmental Grants Program as part of that company's participation in the 1% for the Planet program. EIN receives general support from foundation grants.