

Bulleted Summary of This Bill

Section 2: Low Carbon Fuel Standard

Section 2: Fuels Part 1

*The average lifecycle CO₂ emissions across **all** transportation fuel are required to be 10% less by 2023 than they were in 2005. By 2030 and after, they must be 20% less.

*In calculating lifecycle emissions either here or under the existing Renewable Fuel Standards:

- Emission during the **production** of shale oil or tar sands will be not counted. **Unlike the controversial Waxman version of LCFS, this version will not discourage these important emerging contributors to energy security.**
- A number of specific new technologies to make liquid or gaseous fuel will be certified initially as low-carbon sources of fuel, until they reach 1% market penetration and are then reassessed by EPA.
- The 10% calculation and the EPA system to implement it must give credit to natural gas and electricity used in transportation, supplied by refuelers or aggregators who choose to opt in.
- The “10%” will be an average based on energy content, not volume, but electricity will be weighted up based on the higher average miles per unit of energy which it provides.
- The Secretary of Agriculture will have the right to insert inputs into the lifecycle calculation for fuels made from corn stover, distinguishing the two different cases of farms which subscribe to USDA conservation programs versus those which do not.
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* A safety valve of \$4 gallon is available as an alternative for fuel providers who choose be exempt from the system.

Section 3: Fuels Part 2

USDA will implement a new price support program (a guarantee of a certain minimum price) of:

*\$75 per barrel of oil equivalent for crude oil or other liquid transportation fuel produced from coal;

*\$100 per barrel of oil equivalent for renewable transportation fuel, whether liquid or gaseous, or biological or nonbiological.

Section 4: Research

From existing funding, DOE and NSF will create at least three aggressive new joint breakthrough R&D programs aimed at universities, small businesses and other entities normally eligible for NSF funding, each to provide grants no larger than \$2 million each for a total of no less than \$20 million per year:

- A program to develop new types of batteries, suitable for use in plug-in cars, to cost half as much or less as the best batteries currently available on the market, along with research on lifetimes and safety;
- A program to develop new affordable and flexible powerplants to use liquid or gaseous fuels on-board a car with an efficiency of at least 50%;
- A program to develop new technologies for producing renewable liquid or gaseous fuels for transportation.

Section 5: Open Fuel Standard for Transportation, Vehicles Part 1

As with the recent new open standards for television, a small investment will be required to allow more competition in the market for liquid fuel in cars, and to allow a greater use of alcohol fuels without a need to change the blend wall. (Section 6 provides tax credits to cover most of the cost).

A certain share of new cars from each manufacturer are required to possess “GEM” fuel flexibility, the ability to run on gasoline, ethanol (E850 and methanol(M85), or any mix thereof.

The required percentage is 10% by 2012; 20% by 2013; 50% by 2014; 70% by 2015; 80% thereafter.

Waiver provisions are available for manufacturers who have special difficulties in meeting the standards.

Section 6: Extension of Tax Credits Under IRS Code Section 30B – Alternative Fuel Vehicles

* The main change in Section 30B is to extend the tax credits already provided in section 30B for all types of vehicle – fuel cell, alternate fuel, hybrid, and also plug-in hybrid, but not lean burn. The tax credits shall now remain in effect until one-third of the cars on the road qualify for at least one of these categories; at that point, they are cut in half, and are discontinued only when 2/3 of the cars on the road qualify.

* Credits are extended even further for those qualified cars which also qualify as “futuristic” – fuel cell cars, electric cars or plug-in hybrids with an all-electric driving range of at least 40 miles and ability to use alternate liquid or gaseous fuels. Those continue at full level until futuristic cars account for one-third of new car sales, and at half level until they account for 2/3.

*Plug-ins – both light and heavy – will still qualify for large tax incentives, as at present, until those large incentives run out. After that, they obtain credits based on the same formula used for alternate fuel vehicles in section 30B.

*Alternate fuel vehicles are required **to be flexible** – to run either on petroleum and a gaseous fuel, or to have full GEM flexibility – in order to qualify, after the credits under existing law run out.

* Hybrid vehicles are required to be alternate fuel vehicles (i.e. flexible) in order to qualify after 2011.

* New alternate fuel or plug-in vehicles shall receive a credit based on a fraction of the “incremental cost,” as at present. **In addition**, credits are available to cover the same fraction of the cost of conversion, for retrofits which convert an existing vehicle to a qualifying vehicle.

Section 7. Extension of Tax Credits Under IRS Code Section 30C – Refueling Stations

* Credits continue in full force (50%) until at least one third of the commercial refueling stations for liquid or gaseous transportation fuel (“gas stations”) have at least one qualifying alternate pump or recharge post; they remain in effect at half force until 2/3 do. Because of this long extension, a lifetime cumulative credit limit of \$400,000 per gas station is also added.

* To qualify for the credits, after present law expires, liquid fuel pumps must be “GEM flexible,” giving the gas station owner full flexibility to switch liquid fuels. All commercial gaseous fuel pumps qualify. Electric recharge stations must meet basic standards of public accessibility and interoperability.

* The cost of retrofit up to \$50,000 is also eligible for an 80% credit. This may actually reduce costs, insofar as retrofits are typically much cheaper than new tanks.