



The Energy Content of the State of the Union

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Topic: [Alternative energy](#)

Tags: [cellulosic ethanol](#), [corporate average fuel economy](#), [ethanol](#), [spr](#) [[list all tags](#)]

During the course of the President's State of the Union Address he spoke to the energy situation in these words

It is in our vital interest to diversify America's energy supply -- and the way forward is through technology. We must continue changing the way America generates electric power -- by even greater use of clean coal technology ... solar and wind energy ... and clean, safe nuclear power. We need to press on with battery research for plug-in and hybrid vehicles, and expand the use of clean diesel vehicles and biodiesel fuel. We must continue investing in new methods of producing ethanol -- using everything from wood chips, to grasses, to agricultural wastes.

We have made a lot of progress, thanks to good policies in Washington and the strong response of the market. Now even more dramatic advances are within reach. Tonight, I ask Congress to join me in pursuing a great goal. Let us build on the work we have done and reduce gasoline usage in the United States by 20 percent in the next ten years -- thereby cutting our total imports by the equivalent of three-quarters of all the oil we now import from the Middle East.

To reach this goal, we must increase the supply of alternative fuels, by setting a mandatory Fuels Standard to require 35 billion gallons of renewable and alternative fuels in 2017 -- this is nearly five times the current target. At the same time, we need to reform and modernize fuel economy standards for cars the way we did for light trucks -- and conserve up to eight and a half billion more gallons of gasoline by 2017.

Achieving these ambitious goals will dramatically reduce our dependence on foreign oil, but will not eliminate it. So as we continue to diversify our fuel supply, we must also step up domestic oil production in environmentally sensitive ways. And to further protect America against severe disruptions to our oil supply, I ask Congress to double the current capacity of the Strategic Petroleum Reserve.

America is on the verge of technological breakthroughs that will enable us to live our lives less dependent on oil. These technologies will help us become better stewards of the environment -- and they will help us to confront the serious challenge of global climate change.

I gave the whole quote, since it was interesting to see the inclusion of biodiesel to a greater extent than I recall seeing emphasized before. The MSM had foretold the increase in emphasis on ethanol, 35 billion gallons a year is some 2.28 million barrels a day or somewhere around 10%, and it would appear that the intent is to mandate this percentage in the national fuel fix. However, while this thrilled the Senator from Iowa, corn ethanol cannot be the total answer, since

the impacts on world food supplies (as well as our own) would be severe, and may well still be, as corn prices will inevitably rise.

Yet there are still significant challenges to the use of ethanol. To remind you let me again put up the comparative chart that was given by the Department of Agriculture at the end of last year.

	Corn Ethanol	Cellulosic Ethanol	
Capital costs	\$1.25 - \$1.50	\$4.30 - \$5.50	per gallon
Ethanol yield	98	70 - 80	Gallons/ton
Conversion process	Simple	Complex	
Enzyme cost	\$0.03	\$0.30	per gallon
Alcohol content	14 - 20%	4%	
Transportation & Preparation	Low	High	cost

The current [DOE Biomass Program](#) which focuses on ethanol, had, until this evening, the goal of replacing 30% of the nations gasoline by 2030, and to make cellulosic ethanol cost competitive with gasoline by 2012 (which is now 5 years away). The University of Tennessee has recently [concluded](#) that to achieve 25% by 2025

To meet the 25x'25 vision, contributions from America's fields, farms and forests could result in the production of 86 billion gallons of ethanol (15 billion from corn and the remainder from residues, wastes, and dedicated energy crops) and 1.2 billion gallons of biodiesel. That amount of biodiesel fuel has the potential to decrease gasoline consumption by 59 billion gallons in 2025. Both scenarios are based on continued yield increases in major crops, strong contributions from the forestry sector, utilization of food processing wastes, and the use of 50-100 million acres for dedicated energy crops, like switchgrass. The study assumes that the technology needed to produce cellulosic ethanol will be available and competitive by 2012.

The plan has already created [the Biomass Research & Development Initiative](#) and it funded 17 projects last year, which are listed in a pdf file through that web page.

There is one other thing that I would like to note that may not get much attention. It is the line "I ask Congress to double the current capacity of the Strategic Petroleum Reserve." Hmm, the drop in the price of oil must have grabbed someone's attention.

Let's see, if the size of the SPR is now authorized at [one billion barrels](#) and we are now going to double this, then the US will be on the market for a billion barrels of oil. Say we fill it over 5 years, then we would need to buy 200 million barrels a year or around 547,000 bd. Now, at a time when [Cantarell](#) may drop by 500,000 bd, that suggests that the US might be going to the rest of the world with an increased demand for 1 mbd before the end of the year. So I guess that even if the current prices have slowed demand, the powers that be will continue to up it.

I have not commented on Senator Webb's response on behalf of the Democratic party, which did not propose, but rather looked for suggested solutions from elsewhere, at least as I read it.

Further, this is the seventh time the President has mentioned energy independence in his state of the union message, but for the first time this exchange is taking place in a Congress led by the Democratic Party. We are looking for affirmative solutions that will

strengthen our nation by freeing us from our dependence on foreign oil, and spurring a wave of entrepreneurial growth in the form of alternate energy programs. We look forward to working with the President and his party to bring about these changes.



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