

Statement by Senator Tom Harkin

Hearing on Biofuel Programs and Biofuel Infrastructure Issues
Senate Committee on Energy and Natural Resources
April 7, 2011

Chairman Bingaman and Ranking Member Murkowski, thank you for holding this hearing and for inviting me to offer my views on the status and future of biofuels. I have supported the production and use of biofuels as a key strategy for America for decades, so I welcome this opportunity to provide my current perspectives and recommendations.

We're all familiar with America's addiction to oil and our dangerous dependence on foreign oil. That message has been delivered countless times for decades, with powerful amplification every time oil prices rise. When those prices rise, we repeatedly decry the fact that we haven't solved this problem. Many think it's as though we're banging our heads against the wall, with no progress made nor any policy solutions in sight.

I'm here to offer a different perspective that recognizes our continuing challenges with respect to our addition to oil, but which also applauds some noteworthy successes. My message is that we've taken real steps to reduce our dependency on oil, and we have made substantial progress, but that there are also further steps within our reach.

The first thing we've done is to increase vehicle efficiency, and that has dramatically reduced our need for oil.

Even more remarkable, our biofuel production now totals about 13 billion gallons per year, and equals nearly 10 percent of our gasoline supply. While 10 percent might not sound too impressive, that is more than all the gasoline that Great Britain and France combined use in a year. Please think about that. For the first three decades that we bemoaned our oil dependency dilemma, no alternative fuels played any significant role in powering our cars and trucks. But over this past decade, contributions from ethanol and biodiesel have risen to nearly 10 percent of demand.

Given the size of our liquid fuels market, this is a remarkable accomplishment. Biofuels truly are working for us. Congress played a key role in this. In addition to the biofuels tax credits that we established in the 1970's, we also adopted the Renewable Fuel Standard in the 2005 energy bill, and we adopted a revised, more aggressive RFS2 in 2007 to put us on this trajectory.

So my message to your committee, Senator Bingaman, to the Congress, and to the American people, is not a message of doom and gloom about our continuing dependence on oil. Nor is it a message of idle hope. My message is one of optimism – optimism grounded in what we have done, and confidence that we can do much more. Our Renewable Fuel Standard calls for 36 billion gallons of biofuel by 2022. We can do that. We will do that. We must do that, and we must make sure that our federal biofuels policies' support this pace of biofuels expansion.

Success isn't a slam dunk. We have some major challenges. The biggest challenge is that our marketplace for transportation fuels is not yet equipped to absorb the increasing volumes of biofuels required by the Renewable Fuel Standard. This issue is especially acute for ethanol, which is the leading biofuel today, and which, despite real promise in other biofuels, will almost certainly remain the dominant biofuel for at least 2 more decades. Our problem is that nearly all of our ethanol is used in the form of E10, which is a 10 percent blend of ethanol with gasoline and which can be sold for use in all gasoline-powered vehicles. We use very little ethanol at higher blend levels, both because very few

vehicles can legally use higher blends, and because such higher blends are available at very few refueling stations. With ethanol nearing 10 percent of our total gasoline supplies, we're facing what's called the "blend wall." This is a very serious limitation to expanding the use of ethanol. While the Environmental Protection Agency has announced that E15 will be approved for use in vehicles that are model year 2001 or newer, this only offers limited and temporary ethanol expansion potential.

I want to point out that even this marketplace limitation, from a longer-term perspective, is a clear sign of our success. Hitting this 10 percent blend wall is a result of that success! Ten years ago, when gasoline was essentially the only fuel, almost no one would have predicted this problem, that by 2011 we would be struggling with how to help an alternative to gasoline climb over a 10 percent barrier.

However, with leadership in Congress, these challenges can be addressed. Thank you for including Senate bill S.187, the Biofuels Market Expansion Act of 2011, among the discussion topics for this hearing. I introduced this bill, along with Senators Johnson, Klobuchar, and Franken, on the very first legislative day of this Congress to highlight its importance. This measure consists of three main components.

- 1) The first is a requirement that a large majority of automobiles manufactured for sale in the United States be "flex-fuel" vehicles, meaning that they can utilize a wide range of ethanol blends, all the way from E0, straight gasoline, to E85. This is easy to do, and I've been told that it only costs about \$100 per vehicle, and possibly less. Almost all cars sold in Brazil have been flex-fuel vehicles for several years now.
- 2) The next provision expands the number of blender pumps that can provide higher blends of ethanol across the country. It does that by requiring that major fuel distributors, those distributing the fuels sold at more than 50 refueling stations, install blender pumps at increasing numbers of their stations over a six-year period. It also authorizes grants for owners of smaller numbers of filling stations to install blender pumps that will dispense fuels with higher ethanol contents.
- 3) This bill also authorizes loan guarantees for the development of biofuel pipelines to move ethanol from its major production regions to other areas of the nation. There is already serious interest in building a pipeline from the Midwest to the New York harbor. But, investment commitments for such a large project require a loan guarantee because of the associated uncertainties and risks.

This Biofuels Market Expansion bill that you are looking at today is one way to address the marketplace and infrastructure challenges associated with supporting the further roll out of biofuels. There may well be better ways, different provisions that are more broadly acceptable while accomplishing the same purpose, and I look forward to working with your committee and our colleagues across the Senate in formulating and passing a bill. Indeed, many think we should revisit our whole federal policy framework for biofuels, including consideration of financial provisions such as the ethanol tax credits, and I agree with that. I understand that the ethanol industry intends to propose biofuels policy reform, including possible reductions in tax credits for ethanol coupled with provisions to support market expansion. I think that is commendable. I only wish that other industries would do the same – including the oil industry, which is getting very lucrative and unnecessary subsidies.

In addition to addressing the marketplace and infrastructure challenges that biofuels currently face, I'd also like to note the importance of accelerating the development and commercialization of cellulosic ethanol and other advanced biofuels. Frankly, about 3 or 4 years ago, advanced biofuel technology seemed to be poised to take off. Unfortunately, the fact that technologies were not quite ready, along with the financial meltdown that froze investments for new technologies, has cost us about

3 or 4 years. We now need to make sure that advanced biofuels' development and commercialization gets the federal support it needs in order to get back on a fast track.

I also want to take this opportunity to address the environmental charges that some have raised relative to ethanol. One question that continues to be raised has to do with the energy payback of ethanol. Authoritative analysis released last summer by the Department of Agriculture concludes that ethanol delivers about twice as much energy as is used in its production. That analysis takes into account the lower energy content of ethanol as well as the energy contents remaining in the main byproduct, the distillers grains that are used for livestock feed. We should also consider petroleum payback since a key benefit of biofuels is displacement of imported oil. Ethanol from corn actually delivers the equivalent of about 12 times as much energy as is contained in the petroleum used in its production.

As we consider alternative fuels, I agree that we should be examining their environmental impacts. In this regard, I would point out that we are using increasing amounts of fuels from tar sands, and surely we can all agree that the energy and water requirements for ethanol are far less than for those fuels.

There are also some who assert that corn ethanol is a mistake and that we should focus on "drop-in" fuels such as biobutanol or green gasoline. I agree that there is real promise and potential to drop-in fuels, and I wholeheartedly support their further development, but their widespread use and application is realistically decades away. I think it will be 20 years before they contribute 10 percent of our fuels, so that would be a 2-decade mistake. In the meantime, we are likely to see very substantial commercialization of cellulosic ethanol. By all means, we should continue apace with the development of drop-in fuels, but this is not an either-or proposition. Until drop-in fuels are commercially viable, we should continue to support ethanol.

Finally, some have expressed serious concerns about the impact of biofuels production on deforestation in developing countries. I understand that deforestation is a major contributor to increases in atmospheric greenhouse gases, and I fully support the need for controlling such land use changes. However, I believe the most effective way to limit environmentally destructive land-use change elsewhere is through land use policies. Limiting the development of biofuels in the United States seems to me a very uncertain and likely ineffective approach to reducing deforestation in Indonesia.

As one who has a strong environmental record and has authored or supported numerous conservation programs, I hope that our environmental groups revisit their prioritization of alternative, environmentally responsible strategies for America to reduce our dependence on oil. In this real world of energy policy, a stance against ethanol may well be a stance in favor of tar sands oil.

Let me close by repeating my belief that biofuels have been -- and will continue to be -- our most important supply-side strategy for reducing dependence on imported oil. Those biofuels lower transportation fuel costs by increasing fuel supplies, and that saves us money at the pump, as well as reducing our dependence on foreign oil. Biofuels also are cleaner today than gasoline, by any measure, and their environmental impacts are steadily declining as we improve efficiencies and reduce emissions in our biorefineries. We should be pleased with our record with ethanol and biofuels. We definitely should enable their expanding contributions to resolving our most critical energy problem.

Senator Bingaman and Senator Murkowski, I congratulate you and your committee members for your leadership on charting strategies for addressing our oil problem. Thank you for this very timely consideration of our national biofuels policy issues. You led the formulation and passage of the renewable fuel standards that set the trajectory for biofuel contributions. We should all celebrate that

success, and we must stay on that course. Thank you for inviting me to testify today on a subject that I consider to be so vital to our future energy economy, and I look forward to working with you and our colleagues across the Senate on reforming federal biofuels policy to assure their continuing and expanding contributions to our transportation fuel supplies.