

Briefings and Dialogue:

Hawaii's Pathway to Energy Independence: Bioenergy Opportunities from the Federal Perspective

Chairman Collin Peterson

Committee on Agriculture, U. S. House of Representatives

- April 9, 2007 - 8:00 a.m. – 10:00 a.m. Prince Kuhio Hotel
- 7:30 AM – Registration
- 8:00 AM – Breakfast
- 8:25 AM – Welcoming Remarks by Sharon Miyashiro – Hawaii Energy Policy Forum Co-Chair
- 8:30 AM – Remarks by Rep. Hermina Morita – Hawaii Legislative Initiatives in Bioenergy
- 8:35 AM – Introduction of Chairman Peterson by Congressman Neil Abercrombie
- 8:40 AM – Presentation by Chairman Peterson
- 9:55 AM -Closing Remarks by Mike Hamnett – Hawaii Energy Policy Forum Co-Chair

Collin Peterson lost the U.S. House of Representatives election in 1986 by 100 votes. Until he become Agriculture Committee Chairman, nobody paid attention. His style is to “tell it like it is”.

Congressman Peterson is in the process of writing the next Farm Bill. The Farm Bill will be written in public in committee which has not been done since 1981. In May, it will start to be written up in 5 to 6 committees which have joint jurisdiction. It will be done by the July 4th break and then taken to the floor of the house. From there, plans are to get it to the president by 9/30 when the current bill expires.

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There is competition among commodities such as corn, soy, rice, etc. We are now in a new era, this time we are developing the feedstocks for emerging bioenergy.

Minnesota has been the leader in the country on renewable fuels. Collin Peterson started working on ethanol in 1976. The state senate was able to pass the first agriculture financing bill to get the first ethanol plant built in Minnesota. Eventually, Minnesota passed a tax credit for ethanol plants. Ten to twelve years ago, Minnesota mandated that 10% of their fuel had to be ethanol. Tax credits will not work if there is no market already developed. It is most critical in Hawaii to establish that market.

At the federal level, there is movement in the direction of flex fuel vehicles and E85 pumps. Minnesota now has a 20% mandate which has not yet been implemented because EPA will not authorize to go to 20%. Brazil is blending to 23% currently but were previously blending to 26%. Their cars are made by GM and Ford just as our cars are made by GM and Ford. The 10% blending mandate in Minnesota created the market. Now Minnesota has 19 ethanol plants, 18 of which are owned by farmers and one owned by ADM (Arthur Daniels Midland).

In Minnesota, the ethanol industry is locally owned. They started putting in E85 pumps there and now have 350 E85 pumps. There are 1100 E85 pumps nationwide. For incentive, Minnesota offered a credit of \$30,000 for any gas station to put in an E85 pump. Congressman Peterson believes if Hawaii gets the ethanol market in place, it will "take off". The oil companies did everything they could to stop the spread of ethanol in Minnesota. They drove down the price of oil and bankrupt a lot of industries.

The MTBE situation helped develop the market for ethanol out. Congressman Peterson indicated the internal combustion engine was invented to run on alcohol. In 1912, Henry Ford wrote that he would have a partnership with a farmer so they could grow the fuel required to run his vehicle. At that time, oil started to become

cheap. The diesel engine was invented to run on peanut oil. The internal combustion engine became more powerful and started to knock. This required an octane boost in the fuel. Lead was added to the fuel to provide this boost but it was later determined that this was poisoning the people. MTBE which is manufactured from oil and gas was later added to fuel. MTBE plants were built but it was determined that MTBE was contaminating water supplies. MTBE was then abandoned and ethanol became the preferred blending component to oxygenate motor fuel.

The 7.5 million gallon renewable fuel standard helped the industry take off in Minnesota. The last two ethanol plants in Congressman Peterson's district were built in 2005. They produce 60 million gallons a year combined and cost \$165 million to build. They are now paid off.

At \$5 corn, there is a 17% return so there is money to be made for Hawaii. Ethanol production could provide a tremendous economic boom for Hawaii and get Hawaii off foreign oil. 85% of Hawaii's gasoline demand could be produced here based on the land available so Hawaii could run on E85 fuel. In Hawaii, annual motor fuel demand is 450 million gallons. Based on this, 10% ethanol would require 45 million gallons per year. This is enough for one ethanol plant.

The car companies can build flex fuel cars at the same cost. There would be a limited number of models but if the fuel is available, the car companies will build the flex fuel cars. Hawaii uses a lot of diesel which could be replaced with biodiesel. The economics are not as good as ethanol because the soy feedstocks are too valuable. Ethanol can be profitable without the 51% tax credit. The biodiesel tax credit ends in 2008. It should be extended but until it is, banks may not provide financing. Because biodiesel is not profitable without the tax credit, we need more economic feedstocks for biodiesel. Algae may be an option because it is ½ the cost of traditional oils. We need to determine what feedstocks make sense for Hawaii.

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The Agriculture Committee would like to support the development of bioenergy in Hawaii. There will need to be funding provided for research and to work with the university and the private sector, who are already doing work on this, to determine the feedstocks for biodiesel. We need to figure out a way for the legislature to create the market. A 20% mandate is the goal nationally. If we get 10 – 15 – 20 states, we could do it at the federal level. Minnesota is the first state that has a biodiesel mandate (5%). Minnesota now has 3 biodiesel plants. Loan guarantees are needed to make this happen but the market comes first.

In Minnesota, there is room for 2 more ethanol plants based on the current corn supply. Next year, Iowa will import corn to meet their corn needs. There is currently a lack of stainless steel to build a corn ethanol plant. A plant cannot be built before 2010 due to lack of stainless steel. Previously, the #1 product in Congressman Peterson's district was sugar beets which was the most profitable. Currently, the most profitable commodity is ethanol.

Cellulosic ethanol is the next step. The goal is to produce 40% of the motor fuel in the US via agriculture. In order to do this, we need cellulosic ethanol. A cellulosic ethanol plant needs 20 miles around the plant to supply the feedstock. This would result in a \$300 million plant every 40 miles.

Ethanol production brings money and good high paying jobs to the rural U.S. There are about 35 employees at each of the Minnesota ethanol plants. These plants need people such as engineers, MBAs, etc. to run. These people then change the community.

Shirts are now being made out of corn which is softer than cotton. Plastics are also being made out of corn. Everything not made out of wood or steel is made out of petroleum. These are just some of the small industries that grow up around the ethanol plants due to the peripheral opportunities. One sign of the success of the ethanol industry is people moving back from the big cities to the rural areas.

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We should not just support renewable fuels. We also need to support wind, solar, etc. The first priority needs to be conservation including an increase in the mileage standard for cars and insulating our houses. California's per capita energy use is 40% of the US use. This shows that with focus, significant energy conservation is possible.

Right now the cheapest feedstock for biodiesel is animal fat. In the US, this will result in all animal fat going to biodiesel where it is now used for soaps, etc. Then palm oil will replace animal fat in soaps. Currently, there is a 54% tariff on ethanol but no tariff on biodiesel. That means that palm oil can be imported into the US and can get \$1 even if it destroys rainforests. Nancy Pelosi set up a committee on energy independence and global warming. By June, there should be a framework to move us through the committees. Out of that we may see credit limits on foreign imports. We will see some activity on that coming up. Also, we will see an industry start to develop for carbon sequestering.

Ethanol plants will likely be producing hydrogen in 15 to 20 years. So this is the right place to be energy-wise. Hawaii is currently paying money to ship in fuel and to ship out sugar. Instead, it makes sense to produce fuel here from local crops.

The committee organized by Nancy Pelosi will address GHG emission legislation. \$20 million in carbon credits will be traded this year by the Chicago Climate Exchange. This is a preferable effort instead of government legislation to regulate GHG emissions. In North Dakota, there is a lot of coal which is currently very inexpensive. However, the price will likely increase due to CO₂ emissions from coal. We will have an answer by the end of this session.

The biodiesel tax credit expires in 2008. Congressman Peterson has introduced a bill to extend the tax credit permanently. This would be much better for securing financing. Now the democrats are being fiscally conservative. We need to start

paying our bills. We can no longer run up the deficits. We need tax cuts and credits and need to come up with the money to offset. Maybe some tax credits to oil and the richest citizens need to be reallocated. There is a difference between tax cuts and tax credits. A tax incentive should create business that would not normally be there. This trickles down and creates greater revenue overall. The oil industry gets more tax incentives that we do. The U.S. should have a war tax now. Instead, the young people are sacrificing and having to pay when they return.

Neil Abercrombie:

The chairman of the Agriculture Committee has asked us for our proposals. We need your proposals now. Not next year. Not six months from now. Let the Chairman of the Senate know. Let your local representative know. We need demonstration projects now. Hawaii can be a laboratory for the rest of the country. Please come up with proposals that we can translate into legislation at the federal level.

Additional Summary Notes

- Congressman Peterson drafting revisions for reauthorization of the Farm Bill.
 - The Farm Bill will be written in public by committee, which has not been done since 1981.
 - Tentative process: In May, drafts will be written by 5 to 6 committees which have joint jurisdiction. It will be done by the July 4th break, and then taken to the floor of the House. From there, plans are to get it to the President by 9/30 when the current bill expires.
 - There is competition among commodities such as corn, soy, rice, etc. We are now in a new era, this time we are developing the feedstocks for emerging bioenergy.

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- Minnesota has been the leader on renewable fuels. Collin Peterson shared the Minnesota experience. He started working on ethanol in 1976. The state senate was able to pass the first agriculture financing bill to get the first ethanol plant built in Minnesota. Eventually, Minnesota passed a tax credit for ethanol plants. Ten to twelve years ago, Minnesota mandated that 10% of their fuel had to be ethanol. Tax credits will not work if there is no market already developed. It is most critical in Hawaii to establish that market.
- At the federal level, there is movement in the direction of flex fuel vehicles and E85 pumps. Minnesota now has a 20% mandate which has not yet been implemented because EPA will not authorize to go to 20%. Brazil is blending to 23% currently but were previously blending to 26%. Their cars are made by GM and Ford just as our cars are made by GM and Ford. The 10% blending mandate in Minnesota created the market. Now Minnesota has 19 ethanol plants, 18 of which are owned by farmers and one owned by ADM (Arthur Daniels Midland).
- In Minnesota, the ethanol industry is locally owned. They started putting in E85 pumps there and now have 350 E85 pumps. There are 1100 E85 pumps nationwide. Minnesota offered an incentive credit of \$30,000 for any gas station to put in an E85 pump. Congressman Peterson believes if Hawaii gets the ethanol market in place, it will “take off”.
- The MTBE situation helped develop the ethanol market, but it was determined to be contaminating water supplies and led to ethanol becoming the preferred blending component to oxygenate motor fuel.
- The 7.5 million gallon renewable fuel standard helped the Minnesota industry take off. The last two ethanol plants in Congressman Peterson’s district were built in 2005. They produce 60 million gallons a year combined and cost \$165 million to build. They are now paid off.

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- At \$5 for corn, there is a 17% return so it is profitable. Ethanol production could provide a tremendous economic boom for Hawaii and get Hawaii off foreign oil. 85% of Hawaii's gasoline demand could be produced locally so Hawaii could run on E85 fuel. In Hawaii, annual motor fuel demand is 450 million gallons. Based on this, 10% ethanol would require 45 million gallons per year. This is enough for one ethanol plant.
- The car companies can build flex fuel cars at the same cost. There would be a limited number of models but if the fuel is available, the car companies will build the flex fuel cars. Hawaii uses a lot of diesel which could be replaced with biodiesel. The economics are not as good as ethanol because the soy feedstocks are too valuable. Ethanol can be profitable without the 51% tax credit. The biodiesel tax credit ends in 2008. It should be extended but until it is, banks may not provide financing. Because biodiesel is not profitable without the tax credit, we need more economic feedstocks for biodiesel. Algae may be an option because it is ½ the cost of traditional oils. We need to determine what feedstocks make sense for Hawaii.
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steel. Previously, the #1 product in Congressman Peterson's district was sugar beets which was the most profitable. Currently, the most profitable commodity is ethanol.

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