

Testimony of Tom Todaro, CEO of AltAir Fuels, LLC
United States Senate Committee on Commerce, Science and Transportation
Subcommittee on Aviation Operations, Safety, and Security
July 28, 2011

Thank you for the opportunity to be here today.

My name is Tom Todaro and I am the founder and CEO of AltAir Fuels, a vertically-integrated refiner of renewable aviation and transportation fuels, as well as renewable chemicals. We are headquartered in Seattle, Washington.

Today I will focus on our approach to producing aviation biofuels, the benefits of this fuel to our land, our farmers, our security, and our ability to pay back our debts, and finally I will discuss ways that Congress can help accelerate the commercialization of these fuels.

First, let's talk about our approach. As an integrated refiner, we secure the raw materials, or feedstock, for our fuels from the most sustainable and economic sources. We refine the feedstock at our facilities and we enter into offtake sales agreements for the finished fuels. Our technology allows us to use many different types of sustainable feedstocks.

Today, our chosen feedstock is an oilseed called camelina, a member of the mustard seed family. Camelina grows in rotation with wheat and other grains in the western United States, including the Dakotas, Montana, Washington, Oregon and California.

Because camelina is designed to be grown on fallow land, in rotation with wheat or other grain crops, it does not displace food crops. In fact, camelina can actually improve soil and water quality compared with the chemical treatments that are typically used on fallow land. After we crush the seeds for the oil, the remaining meal can be fed to livestock and dairy. Camelina has relatively low demands for water or other nutrients, so it is a low-cost crop which helps lower the cost of the finished fuel.

Because of these factors, a peer-reviewed lifecycle analysis of the carbon emissions footprint of camelina-based jet fuel shows an 80 percent reduction compared to petroleum fuels.

To date, we have produced more than 500,000 gallons of renewable jet fuel from camelina. Our fuels have powered numerous aircraft and engines, including: Boeing 747s for Japan Airlines and KLM and engines made by Pratt & Whitney, Rolls Royce and GE. Last month, camelina powered two historic flights – the first transatlantic passenger flight – a Gulfstream owned by Honeywell and the first transatlantic cargo flight – a Boeing 787.

We have also powered numerous military aircraft, including the A10 Warthog; the F-22, F-16 and FA-18, which last spring made history by breaking the sound barrier on camelina-based jet fuel. The military flights were part of a comprehensive test program with the Air Force, Navy and Army. As Secretary of the Navy, Ray Mabus has said, for our men and women serving in Afghanistan and Iraq, producing renewable fuel at scale is not just an environmental or economic imperative, it is an operational

imperative, and all too often, a matter of life and death. The Department of Defense's mission, which we are proud to advance, is to protect our men and women in uniform and make us better warfighters.

One reason camelina-based jet fuel can accomplish this mission is that it can be dropped directly into existing infrastructure—our jet engines and diesel generators can't tell the difference between AltAir's renewable jet fuel and petroleum. The recently created specification for renewable jet fuel approved by the ASTM confirms the viability of our drop-in fuel process, (ASTM D7566-11: Specification for Aviation Turbine Fuel Containing Synthesized Hydrocarbons). When we begin production of our fuels next spring, we expect airlines to be flying on renewable jet fuel from airports on the west coast.

Our long term plan is to develop Renewable Jet Fuel production facilities across the US, using the locally-sourced, sustainable feedstock. Earlier this week, the USDA approved AltAir Fuels project under the Biomass Crop Assistance Program, or BCAP. This crucial 2008 Farm Bill program is designed to spur the growth of sustainable, non-food energy feedstocks across the country. BCAP provides critical feedstock risk mitigation and will help break the chicken-and-egg problem facing companies like mine that are aiming to build biorefineries to produce homegrown American fuel without enough certainty as to the price and availability of feedstock supply to secure financing. We applaud Secretary Vilsack and his staff's tireless efforts in revising BCAP to make the program more efficient and more workable. Their efforts will empower farmers across the country to reduce our dependence on foreign oil and grow our way out of the national debt while creating jobs in rural America.

As I speak, we are engaging with farmers in Washington, California and Montana to immediately enroll up to 50,000 acres of existing cropland that would otherwise be fallowed to produce camelina with annual funding from BCAP.

The economic impact of our model is significant. We estimate the creation of roughly 400 construction jobs and about 50 full time jobs for each biorefinery. Those numbers soar when you include the increased opportunities for farmers, crushers and transportation-related industries need to support the increased production of camelina. We estimate about 1 job for every 1,000 acres planted; at an estimated 5,000,000 potential acres for camelina, about 5,000 new or retained jobs could be created in rural America.

Given our commercial plans, and our vertically-integrated model, we believe that we can, and will, be producing homegrown renewable jet fuel at the same, or possibly slightly below, the current cost of conventional jet fuel derived almost entirely from foreign oil.

Perhaps more importantly, because we are securing ample supplies of feedstock, we can enter into long-term contracts at fixed prices that bring predictability and stability to customers, whether they are commercial airlines or military combat vehicles.

That said, there are a number of challenges facing this nascent industry. I want to spend my remaining time highlighting ways that Congress can help reduce or remove some of these obstacles to widespread commercialization.

First, we need to continue supporting farmers who choose to grow camelina. Funding for BCAP, which is currently at risk, must be reauthorized if we are going to grow our way out of the national debt, break our foreign oil dependence and create jobs in rural America. We also recommend that Congress consider the use of crop insurance for camelina to help overcome resistance from farmers who can't afford to take a risk on a relatively new energy crop.

Second, we need to ensure that EPA makes a clear determination that camelina-based jet and renewable diesel fuels qualify under the existing Renewable Fuel Standard.

Third, we should enable the US military to enter into long-term contracts -- 15 years or more -- for advanced biofuels. This allows investors to more easily fund production facilities because it lowers their risk.

In summary, let me say that renewable aviation fuel is a reality. There are no technological barriers for either the production or use of these domestic, renewable fuels. This homegrown energy is fueling our jetfighters and commercial planes in the US today. And I look forward to working with this Committee, the Congress and the Obama Administration to ensure that camelina-based fuels and other advanced biofuels continue to propel us towards a more prosperous, energy independent future

Thank you again for the opportunity to be here today. I am happy to answer questions.