Keynote Lunch: Innovative Partnerships: Developing Green Technology

Tuesday, September 20, 2011: 12:00 – 1:15 PM

I. Session Objective:

This keynote lunch session will prevent diverse stories of action on the theme of how innovative partnerships can lead to the development of green technology.

II. Summary of Discussion:

MODERATOR:
Van Jones, *founder, Rebuild the Dream*

SPEAKERS:
Thomas W. Hicks, *deputy assistant secretary of the navy for energy, U.S. Department of the Navy*
Jonathan Wolfson, *chief executive officer, Solazyme, Inc.*

Mr. Jones: We are still essentially in the post-whale oil strategy for liquid fuels. Jonathan Wolfson's work is pulling us into an era of new, renewable liquid fuels. Because he's in the private sector, he can do big things, but he's also partnered with our military to begin to scale up his new technologies.

Mr. Wolfson:

- We are committed to turning big ideas into action through cross-sector partnerships. Innovation is the relentless pursuit of success. The first time we tried to get investments for Solazyme, and we realized it was not going to work, it was very disappointing. We went back to our investors with a new idea, and they doubled down on their commitment to us. We all need to double down on alternative energy.
- Solazyme converts plant-based sugars into oil via algae, rapidly and efficiently at low cost and high volume. We can tailor the composition of those oils to heart-healthy nutritional oil or to specific compositions of fuel oil. Our process fits into existing distribution and refining infrastructures.
- As citizens, we need to protect the forward-looking decisions of our government even when times are tough. We do have laws that prevent the use of "dirty" alternative fuels, and we need to protect this.
- We realized that if we wanted to make a big difference, we would have to work with big oil. We went out selling our vision of an ideal, low-cost, custom oil, and every company wanted us to show that it could be scaled up. In 2010, we did the largest drop in microbial fuel oil deliveries in history to the US Navy. The Navy has run helicopters and boats on our oil. They are among the unsung heroes of green energy innovation today.

Mr. Jones: The folks in the Pentagon, not the folks in Berkeley, are leading the Green Revolution, and it's a story that must be told more often. In the Navy, saving energy is saving lives, both in present perils and in future perils, such as global warming.

Mr. Hicks:

- The Navy and Department of Defense rely too much on foreign oil. That degrades national security, negatively impacts our economy, and hurts our environment. Getting a gallon of gas to a Marine in Afghanistan is no easy task. Many convoys are ambushed. For every 50 fuel convoys, we have one American Marine killed or wounded. This is too high a price to pay. Price volatility of fuels impacts our ability to sail, fly, and to be ready for any mission.
- The Navy set up an experimental operating base where we have invited companies to come and innovate. Many of the technologies have worked. Within two months, we took the promising energy innovations into a war game environment. Just 6 months later, these technologies (including cool and light tents, photovoltaic generators, and solar blankets that power batteries) were taken into the most difficult fights in Afghanistan.

Marine patrols normally need a battery resupply every 2-3 days, but we were able to go out for 3 weeks without having to resupply.

- The Marines are in the process of equipping all its soldiers with these green technologies at a cost of $25 million, but they are saving $50 million annually in taxpayer money. The Marine Corps has committed to at least one new technology fair every year and to try to take those technologies into the field.
- We are working on a public-private partnership for alternative fuels. This billion dollar investment will receive half of its funding from government and the other half from industry. We know the impact of being tethered to the fuel supply of other nations. Every time we have changed fuel sources, people have said not to do it. They said that it was too expensive. They said that it was too untested. But they were wrong. We want to ignite another energy revolution now. Our goal is by 2020 to have half of our bases use net zero energy.

Mr. Jones: If we let recent green energy failures stop us, this could be a major break for us. We must keep momentum going that we have started. We have got some real challenges here, and we have to get the process right and the outcomes right. Failure is a step on the way to success, not a reason to stop.

III. Opportunities for Action:

- Innovation is messy. Without a tolerance for failure, there is no innovation. Failure is a part of the growing pains for a paradigm shift in the nature of our energy usage.
- Public-private partnerships, particularly from the military, are the key to showing that green energy can be scaled up. The US Navy has been a leader in testing and scaling up new green technologies.
- We know that we need to shift away from petroleum, but we need to be careful that we are not moving towards even dirtier alternatives.
- Idealism must meet realism in green energy policy, and we need to expand our idea of what "realistic" might mean; we need to take more risks in the energy sector.
- In addition to an environmental case, we must make the business case that alternative energy makes sense and can bring economic benefits.
- Those who are concerned about national security should also be brought into discussions about alternative fuel sources.