Renewable Energy Realities for Both Sides of the Atlantic

Contributed by Culture Change
23 August 2010

In the past week Culture Change's independent oil industry analyst Jan Lundberg weighed in on renewable energy, electrification and overpopulation for a high-level Europe audience and for the U.S.'s iconic environmental group, the Sierra Club.

For Europe, Jan's message focuses on ground rules for imagining renewable energy on a massive scale. For the Sierra Club, Jan passed along to its Executive Director and magazine his concerns regarding oil's overwhelming role today and what that means for electrification and electric cars.

The view from Culture Change is seldom allowed in or heard by corporate media and sometimes even progressive media on oil, so feel free to raise a cheer, and don't forget to support Culture Change so we can keep our voice heard. Please donate online now. Thank you.

From Europe:

Discussion - August 2010:

"By how much should we expect renewables to replace fossil fuels over the next 20 years?"

From the About page of www.commentvisions.com: "This program is by Comment:Visions which explores the personal views of thinkers, innovators and scientists about possible solutions to global warming, overpopulation and dwindling resources. It is a unique partnership between the global TV channel, euronews and the Brussels-based newspaper, European Voice (The Economist Group), in association with Shell."

Jan's comments are below; click here for All commentators's statements

Jan Lundberg's photo and bio: commentvisions.com/members/jlundberg/profile

Photo of Jan Lundberg by Shirin Fatemeh Wertime

Jan C. Lundberg, Editor, Culture Change, said: On August 18, 2010

Renewable energy cannot go very far in replacing today’s fossil fuels use, and just how much depends on changes in lifestyle and population size. Only 25% of energy needed today is in the form of electricity, and renewables just produce electricity (excepting biomass which has limited potential if a whole systems approach is taken, e.g., the need for food).

Renewable energy systems also depend on petroleum-derived components and much oil-dependent transportation. But there is a future for renewable energy on a local, decentralized basis. The real answer to oil-addiction, peak oil, and greenhouse gas emissions lies in using much less energy per capita. This will also come to pass in the aggregate with a smaller population size, as present petroleum-oriented agriculture cannot be sustained. The challenge ahead is already here, so an event like the BP-Gulf disaster has triggered a grassroots effort to rapidly wean consumers off oil: World Oil Reduction for the Gulf (WorldOilReduction.org), a coalition.

In a recent report on http://www.CultureChange.org, “Can the world run on renewables, nuclear energy and geo-sequestration? The negative case” author Ted Trainer assumed a global energy supply in a year-2050 scenario of about twice the present amount. This would feature a saving of one third of demand by energy conservation, improved efficiency and general technical advance, with a “safe” greenhouse gas emission rate of 80% of emissions that can be captured and geo-sequestered. If all possible renewable energy were maximized, solar would comprise about 75% of it: solar electric and solar thermal investment would have to be $377 trillion. When averaged over an assumed 25-year plant lifetime this would be 33 times the present amount of world annual energy investment, $450 billion. (see culturechange.org)

Bio:

Jan C. Lundberg is a speaker, writer, publisher, known for running what was widely considered “the bible of the oil industry” for the U.S., Lundberg Survey Inc. In 1979 the firm predicted the Second Oil Shock.
After 14 years there, Jan left for-profit work to found the nonprofit Sustainable Energy Institute, now Culture Change. For over twenty years he has studied peak oil, energy alternatives, and conservation based primarily on grassroots change in lifestyle. Demonstration projects include Sail Transport Network and Pedal Power Produce, and the Auto-Free Times magazine (now CultureChange.org). Educated in Europe and on the high seas, he has observed diverse cultures which have contributed to his world view and musical compositions. His eco-rock song “Have a Global Warming Day” was heard on CNN-International.

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The mainstream U.S. environmental movement: will it cling to cars and pavement?

The U.S. environmental movement, specifically the mainstream/funded wing, is in close alignment with the Democratic Party on many aspects of energy and transportation. In the Sierra Club's magazine, Sierra, an editorial by the exective director Michael Brune was titled "Beyond BP." Culture Change took the opportunity to bring up some energy and transportation issues, and he responded by saying his staff would check out Jan's statements:

Michael Brune, Exec. Director, Sierra Club

Dear Mr. Brune,

Kudos for a fine issue, with no car ads. Keep it up!

In your "Beyond BP" editorial you were most on track regarding oil addiction and lessons of the BP-Gulf disaster when you called for more walking and bicycling. This is because transportation's energy requirement in the U.S. is 93% from oil, and there are inconvenient truths regarding electrification.

Losing oil-dependent transportation (and petroleum-based agriculture) is a dilemma not amenable to energy substitution. This is because the alternatives are not at all ready on the scale needed for our huge population, and they cannot compare with oil's net-energy or versatility. That's why we need to be aware of peak oil and its main consequence, petrocollapse. You're aware of the old peak-oil bell curve by M. K. Hubbert, but it cannot be applied globally as to its mild descent because reserves in the ground (in harder to get places) are not necessarily going to get to the refineries and into end-users' hands -- as demand peaks and significant supply will be interrupted, say by a geopolitical event in the Middle East. This will mean a repeat of the 1970s' oil shocks, this time with terminal effects on the corporate economy. Investment in a new energy infrastructure, or building the rail improvements that we'd like to have, to maintain a

semblance of today's economy, is already unaffordable thanks to the waste extended mostly to wars and new highway construction.

The vision of a "clean" grid totally through renewable energy is not feasible on the scale that many hope for, given the investment environment today and most likely in future. Even if it were, who needs all the asphalt for 250 million "clean" electric vehicles expected to run around on -- crushing animals to the tune of a million a day? The oil industry, that's who. But the roads we already have cannot even be maintained in this pre-collapse phase.

Sincerely,

Jan Lundberg

independent oil industry analyst

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(formerly the Auto-Free Times and the Alliance for a Paving Moratorium)

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His reply:

Thanks for your thoughts Jan. I'll share them with the gang here.

Michael Brune

Executive Director

Sierra Club

What he wrote:

Beyond BP

Restoring the gulf will take decades. But we can start getting off oil now.

It's late at night And I'm in my New Orleans hotel room. It's been a long day. Early this morning I met up with Sierra Club staff and volunteers, a marine biologist, and a few reporters in Port Sulphur, a town about an hour south of here on the west bank of the Mississippi River. From there we traveled by boat to bear witness to the effects of BP's oil disaster.

It looks a lot worse out on the water than it does on TV. The Gulf of Mexico is literally a sea of oil, with countless orange-brown waves of sludge washing into its beautiful salt marshes. We passed oil-drenched pelicans and dolphins, with no rescue crews anywhere nearby. It was heartbreaking.

The United States burns a lot of oil—almost 20 million barrels daily, a quarter of the entire world's daily production. It fouls our air and water, changes our climate, and pollutes our politics, but what do we actually use it for? A small amount is burned to produce electricity and heat homes, somewhat more goes to manufacturing plastics and other industrial products, but more than two-thirds powers our cars and trucks.

Lots of folks—including Presidents George W. Bush and Barack Obama—have called our societal dependence on oil an addiction. That's not quite true. It isn't oil that Americans are addicted to; it's convenient and cheap mobility. If we can find ways to get from Point A to Point B without financing terrorism and cooking the planet, there's no reason we can't finally move—as BP's 2000 corporate rebranding effort put it—"beyond petroleum."

Here's the good news: When the Exxon Valdez ran aground 21 years ago, we didn't have the wealth of alternatives to oil that are available today. For example, we could save more than 25 percent of the oil that's extracted from the Gulf of Mexico if we used alternate energy sources for home heating and electricity production. We could save more than the total amount of oil produced in the gulf (or all the oil we import from the entire Persian Gulf) by moving freight from highways to railways and repowering commercial vehicles with cleaner fuels.

As individuals, there is much that we can and must do to cut oil consumption, starting with walking, biking, and riding transit whenever possible. The single most effective thing we can do as a country to get off oil, however, is to electrify transportation. The days of tinkering around with tiny increases in fuel economy should be long gone. As detailed in "The Latest From the Labs," page 38, even the dirtiest electricity is cleaner than internal combustion. Happily, the alternatives are already here—or arriving soon. Tesla Motors is developing a second-generation electric vehicle to complement its popular Roadster. Nissan's all-electric Leaf goes on sale in December. General Motors' plug-in Volt will be available in 2011, followed by Toyota's plug-in Prius in 2012.

We need to remember that going electric isn't simply a matter of switching vehicles and installing charging stations. It requires real changes to the transmission grid. It means a solid commitment to building a clean-power sector based on renewable energy—not coal. Just as our fossil-fuel-based economy is integrated, so too must be our alternatives: Moving beyond dirty oil and coal go hand in hand.

Getting America off dirty energy is patriotic, principled, and farsighted. Fifty years from now, will we be glad that our corporate leaders and policymakers chased after every last barrel of oil from the Arctic to the Amazon? Or will we rejoice that, back in 2010, we embraced the challenge to get off oil within a generation?

Spend a day awash in oil on the gulf, and that question becomes a no-brainer. The gulf region will need decades to recover from this mess. For the families of the workers killed on the rig, life will never be the same. Let's wring at least one positive thing out of this tragedy and move beyond oil once and for all.

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