



## **Oil and Renewables Don't Mix**

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**May 2005**



Let me begin by stating unequivocally that I am an ardent renewable energy supporter. I believe that global climate change is a real threat, that meaningful actions should be taken to materially reduce the amount of emissions associated with our energy production and use, and that ever-advancing renewable energy technologies can play a large part in achieving this vision of a lower-emitting energy system.

However, I am troubled by those who claim that renewables can solve problems that they really can't. In particular, I am referring to those who have been playing off the increasing public concern in the U.S. about high oil prices and dependence on oil supplies from the Middle East, as a rationale for promoting renewable energy.

As but one recent example of many, consider a May 5 column by Molly Ivins criticizing the Bush Administration's energy policy, in which she states:

There is a perfect convergence of economic, environmental and energy considerations that all point in the same direction: renewable energy sources. With demand for gasoline soaring worldwide, with the economies of both China and India growing at staggering paces, with the world somewhere near its oil peak right now, our dependence on some of the world's most retrograde regimes is only going to get worse and more expensive.....Renewable energy sources are not pie-in-the-sky – they're here right now, and they're going to be a lot cheaper than oil.

While most of the individual assertions Ms. Ivins makes in her premise are factually supported, her overall argument and resulting conclusions don't hold up to my scrutiny. For instance, she notes in defense of her case that "wind power already has near competitive prices." However, wind power produces electricity – and the electricity sector is neither a meaningful consumer of oil in the U.S. nor produces a useful substitute for oil. As she herself rightly notes in her column, "the single cheapest thing we can do about oil is not use so much of it," but regrettably most forms of renewable energy (including not only the wind power she touts, but also solar energy as well) simply don't help achieve that aim at all.

Unless I'm missing something obvious, the only renewable energy source that can directly reduce oil consumption is biofuels – the use of agricultural and waste products to yield fuels similar to those of petroleum-based products. By being entirely silent on the topic of biofuels, Ms. Ivins not only overlooks the often-contested economic merits of biofuels relative to oil, but also ignores the concern that biofuels may not even be environmentally-neutral (much less beneficial) relative to oil.

I don't mean to singularly pick on Ms. Ivins. There are many others across the political spectrum, including President Bush himself, who are similarly confusing and thus entwining in an inappropriate manner the environmental and supply security issues in the



U.S. energy debate. Indeed, I am sympathetic to many of the stances that Ms. Ivins takes on energy policy. Yet, I must object to such tortured and ultimately flawed logic that she and so many others are offering in justification of energy policy recommendations. It's hard for me to abide by the "right answer" for the "wrong reasons". With the increasing chorus of such misguided perspectives, I can refrain no longer from rebutting.

In my view, the fundamentals of the intersection of renewables and oil in the U.S. energy story are much better restated thusly:

- To reduce both oil imports and the emissions associated with oil consumption, as opinion-leaders such as Ms. Ivins espouse, there is no other way but to reduce oil demand.
- Since almost all transportation is based on oil consumption, and the vast majority of oil demand is for transportation, the only way to meaningfully reduce oil demand is via changes in the transportation sector.
- Unless and until rechargeable electric vehicles, plug-in hybrids, or electric mass-transit are a significant player in transportation, increased adoption of most forms of renewable energy (e.g., wind, solar, geothermal) will not measurably reduce oil demand, because these renewables produce electricity.
- The one category of renewables that could make sense for transportation in the near-term and hence help reduce oil demand – biofuels – is presently of questionable economics and may offer only marginal environmental benefit.

The conclusion is therefore unambiguous: unfortunately, at present, oil and renewables generally don't mix.

This article is not written with the intent to disparage renewables. Quite the contrary, I offer these observations in the aim of helping the renewable energy sector. I have but two objectives with my comments:

- I don't want to see future negative public or industry backlash against renewables. If a forceful push for renewables (meaning, in most people's minds, wind and solar) is "sold" to the public with overly-bold and irresponsible claims that they can have a meaningful impact in reducing oil imports, renewable energy will be seen to fail in fulfilling its promise, and widespread disillusionment (or worse, distrust) will follow. This nascent sector should not have to endure another "boom and bust", as wind and solar energy experienced in the 1980's, when the hype supporting renewables was later replaced by grim disappointment and cynicism that worked strongly against renewables.



- I do want to see the renewable energy industry focus its efforts prudently. The oil issue is undoubtedly very “hot” right now – it’s clearly the biggest concern facing the energy industry, receiving uncommon levels of attention from companies, politicians and citizens alike. The subset of renewables (such as biomass) that can legitimately address the oil question should take advantage of the opportunity, and work to more definitively surmount the economic and environmental questions that widely surround their offering. However, for most renewables (such as wind and solar) that can’t effectively address the oil issue, their proponents should focus on their core opportunity – “green” electricity – and remain silent on the oil situation given its basic irrelevance to their interests.

It would be wonderful for someone to invent some currently-unimagined economically-viable technology or approach that links heretofore unconnected forms of energy. Absent that, please, let’s get the story straight: for the most part, renewables and oil are separate marketplaces. It does no good to delude ourselves within the industry and mislead the public by saying otherwise.

By my observation, clearer thinking on U.S. energy policy is needed in almost all quarters. For those of us in renewables, understanding the true nature of the convergence of renewables and oil can only better help all interested parties take more effective actions to achieve our common goals of reduced oil demand, increased energy supply security, reduced emissions, and maximum economic efficiency.