

Summit takes a look at a world without oil

Allison Bruce; Ventura County Star , February 10, 2007

The future of **energy** has to be one without oil. But what direction **energy** production may take depends on economic, political and environmental factors, as well as what people and businesses are willing to do.

No matter what course is taken, it has to be a definitive solution, said Paul Roberts, a journalist and author of "The End of Oil." "If we go for a patchwork solution, we'll be back here in five to 10 years," he said. "This is an opportunity to reinvent the way we use **energy**, produce **energy** and think about **energy**."

Roberts was one of many speakers at the Concept to Commerce: Emerging **Energy** Technologies **Summit** on Friday at UC Santa Barbara.

The conference started with the discussion of carbon-based fuels, such as oil and natural gas. It continues today, expanding further on **energy**-conscious communities and future **energy** sources. More than 500 people signed up for the **summit**.

The purpose of the **summit** is to take an unbiased look at how to make the transition from carbon-based fuels to sustainable alternative fuels. Toward that end, it brings together those in the industry, academics - including some of UCSB's own Nobel laureates - those in government and private investors. It tackles the social, political and economic factors that come into play with any fuel discussion.

The **summit**, hosted by the university's Technology Management Program, was devised as a three-year series. Last year's conference introduced the range of new technologies and the people behind them. This year's takes a closer look at the technologies, barriers to their success and solutions. Next year, this initial series will wrap up with the creation of an action plan for moving to alternative fuels in the future.

Relevant issue

UCSB Chancellor Henry Yang said the conference is particularly timely following the international report on global warming, which he said has moved the future of **energy** to the top of people's minds both nationally and internationally.

Roberts said it is both a compelling and frustrating time to be talking about **energy**. Though there is concern about future supplies of fossil fuels and their negative effects, there is an expectation the transition to alternative fuels will simply happen, without people having to do anything to make it happen, he said.

"We have a confidence that no matter how bad things get that solutions are being generated 'out there,'" he said. He called it "faith-based **energy** policy." In the past, that was true. **Energy** sources moved gradually from wood to coal and coal to oil. But he's not confident that will be the case this time.

One of the concerns is that demand for oil continues to rise, not being checked by rising prices. In the U.S., people continue to buy large gas-guzzling vehicles, and developing countries are making huge leaps to a post-industrial society that demands a lot of **energy**.

All of that comes together at a time when the actual supply of oil is questionable, with much debate over whether the oil supply has "peaked" - reaching the point where supplies will start to diminish - or still has decades before that point is reached.

Oil politics slippery business...

If it were just a matter of cost, carbon-based fuels would continue to be the fuels of the future, said Severin Borenstein, director of the University of California **Energy** Institute and a professor at UC Berkeley.

If people are willing to live with their current **energy** prices, fossil fuels are the way to go. Fossil fuels include oil, but can also include coal converted to liquid and other technologies.

There are political challenges with oil. Oil is often locked up in unstable countries, and even oil found in the U.S. is not immune to market forces.

"The problem is not foreign oil," Borenstein said. "The problem is oil."

There is a single oil market, he said. And oil, even oil under U.S. soil, belongs to the company that finds and extracts it. "It isn't your oil. It is your oil when you are ready to pay for it at the world price," he said.

But there are fossil-fuel solutions that don't carry the political baggage of oil. "Coal conversion to liquid could reduce the consumption of oil and reduce the geopolitical challenges", Borenstein said.

But where that solution falls short is in environmental problems. He said the current **energy** policy crisis is one of environmental issues. So far, the U.S. does not put a value on the cost of greenhouse gas emissions, which means alternative fuel sources continue to be much more expensive than carbon-based ones.

Even as new technology is making those alternatives cheaper, it also is making fossil fuels cheaper. It becomes a horse race, with fossil fuels in the lead unless the cost of greenhouse gases is worked into their price, he said.

Amory Lovins came to the conference offering technological and marketplace solutions to reduce oil dependency.

Lovins is CEO of the Rocky Mountain Institute and consulting physicist for the **energy** industry and many governments, including our own. One of his books is "Winning the Oil Endgame," which was written for business and military leaders to look at what it would take to end U.S. use of oil by 2040.

Efficiency is the key...

He said the best way to cut back on oil consumption is to create efficiencies that reduce **energy** consumption. That means changes such as lighter, more efficient cars and planes.

About 70 percent of oil consumption is tied to transportation, he said, and a lot of that **energy** is wasted. New efficiencies in transportation could cut back oil use dramatically - and the use of ethanol and other alternative fuel sources could remove the need for oil.

Lovins made a point that the ethanol he advocates isn't the expensive corn-based fuel. He said cellulosic ethanol, made of woody fibers and grasses, creates more **energy**. Brazil already has replaced a quarter of its **energy** needs with ethanol from sugar cane, he said.

Lovins said some companies are already starting to make changes because of bottom-line benefits. Whether or not someone believes in climate change, saving **energy** is cheaper than buying it, he noted. By reducing **energy** use, which reduces emissions, companies such as IBM and DuPont save money. That's a huge incentive for companies to increase efficiency - better than any government requirement.

"Smart companies are racing to get to the profits before their competitors do," he said. Roberts said the challenge is to start making changes now. Even as oil use goes down during a transition period, that transition could take decades during which there will still be a huge demand for oil.

"There is no time to wait. ... The time is now," he said.