

# Hawaii Tribune Herald

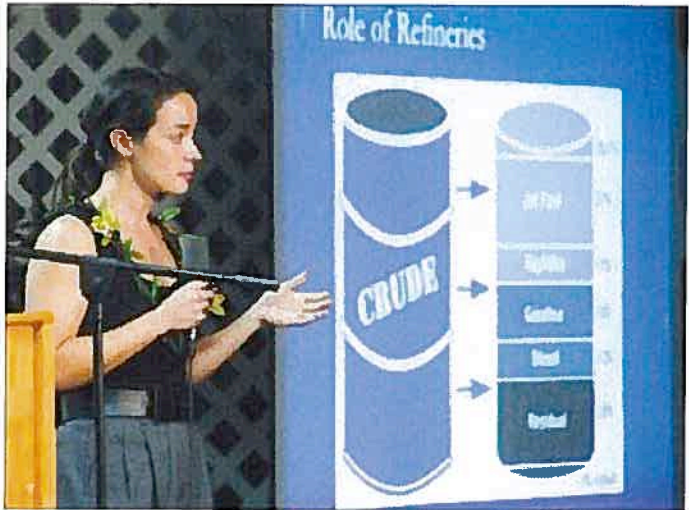
## Energy freedom begins at home

Consumers can do what government will struggle with

by Bret Yager  
*Tribune-Herald Staff Writer*

Energy experts and local lawmakers sounded the alarm on rising fuel prices Friday, calling for greater energy self-sufficiency on Hawaii Island.

One message: Small steps residents can take at home will not only make a difference, but are actually much more viable than large, uncertain efforts funded from outside.



**Makena Coffman, of the University of Hawaii at Manoa's Department of Economics, speaks Friday at the Hawaii Island Energy Forum about the economic implications for Hawaii engendered by rising fuel prices. - William Ing/Tribune-Herald**

As outside help becomes less likely in tough economic times, Hawaii should look to itself for answers, said Gail Tverberg, a risks and oil markets analyst. Think in terms of encouraging everyone to grow a garden, harness solar energy and build small hydroelectric projects to meet household energy needs, she said.

Do more to teach agriculture in schools, invest in a bicycle, use boats as a cheap mode of transportation that won't wear out the highways. Try the bootstrap approach, Tverberg said, "as opposed to huge government programs that take 20 years, a zillion dollars and are less likely to get done, especially given the economic situation we're talking about."

Maurice Kaya, former chief technology officer with the state Department of Business, Economic Development and Tourism, raised the specter of \$200-per-barrel oil and \$6-a-gallon gasoline by the end of the year in the nation's most oil-dependent state.

"Have I got your attention?" Kaya asked. "What are you going to be doing when oil is \$200 a barrel?"

Economists, utility company CEOs and other experts gathered at the Hilo Hawaiian, not just to paint a dire picture of a costly, oil-dependent future but to sketch a path out of the crisis. The all-day event, "Hawaii Island Energy Forum: Business Challenges, Business Opportunities and the New Energy Reality," was sponsored by The Kohala Center.

"Folks, the crisis is here and it's going to be a long one," Kaya said. "It's about time we started doing something about it."

Soaring oil prices cause such economic turmoil not just because they drain fuel budgets, but because they're linked to the cost of everything else -- electricity, food, vacations, even highway repair. This intertwining places a stranglehold on the economy during times of high oil prices, economists said.

The answer is to move toward small scale, sustainable energy solutions, said Tverberg. Small-scale, low-infrastructure, low-cost projects make sense, she said. Tverberg predicted the repair and maintenance of large-scale, emerging and experimental technologies will be a real challenge in the future.

"Giant wind turbines -- we may not be able to maintain them 20 to 30 years from now," she said.

"You need a lot of people doing small gardens," she said.

There's been a buzz lately about biofuel, but Tverberg advised against dedicating much of the Big Island's farm land to fuel crops.

"I'd stay away from large-scale energy cropping," she said. "You get so little in return for your square footage."

Tverberg sees a bleak picture ahead -- fewer tourists, more expensive imports, rising default rates, depreciating stocks and bonds, fewer people going out to eat or sending kids to college, even failing insurance companies.

"We're going to need to rely more on ourselves," she said. "If the lack of oil is permanent, we may have a situation where it feels like a permanent recession, where the amount of activity is much lower."

The Big Island is better situated than a lot of places, Tverberg said. It has an abundance of open land without the large populations of the mainland. Also, the island is home to many people who are ready to take alternative energy seriously, she said.

"There is going to be less and less big investment dollars," she said. People will be going after such money "all at the same time, and the money isn't going to be there."

There are reasonable steps that can be taken now, Kaya said. A 30-percent reduction in energy consumption is possible through better technology in many buildings. He said Hawaii County needs to be more aggressive in demanding energy-efficient construction, even if it's initially more expensive.

"We need the council to not be swayed by arguments based on first cost," he said. "We've seen it over and over."

Exemplary "green" projects include the new UH-Hilo Student Life Center and the 'Imiloa Astronomy Center of Hawaii, Kaya said.

More renewable energy sources should be developed, including geothermal, wind and biofuel, said Kaya, who challenged utility companies to create a new business model based on less use of fossil fuels.

"You and I know things are not happening fast enough," he said. "People feel helpless in the grip of Big Oil. Businesses are failing and confidence in government is low."

Jay Ignacio, CEO of Hawaii Electric Light Co., noted power bills average \$260 a month, with 2008 electricity rates at 41 cents per kilowatt hour, up from 29 cents in 2007 -- an increase due to the cost of fossil fuels burned at the power plants. Green solutions that didn't make economic sense in the past have become much more attractive, he said.

"There is this sense of urgency," Ignacio said. "We have this dragging need, from a business standpoint, to make these changes."

HELCO needs to reduce the amount of electricity lost the transmission system, estimated at 7 to 9 percent, he said. The utility is also working on an eight-megawatt expansion of geothermal production, and is considering three proposals that would use biomass to produce energy. There also needs to be a host of greater efficiency measures at the consumer end, he said.

The advantage of converting to biofuel on the production end is that the system is already in place, he said. However, biofuel prices aren't yet comparable to regular fuel. He cautioned that any steps toward renewables must be taken prudently to avoid embracing faulty technology or compromising a reliable flow of power.

"We're already ahead of the curve on renewables," he said. "The Big Island is at 35 percent."

People's activity must be separated, or "decoupled," from fossil fuels, said Makena Coffman, an associate professor at UH-Manoa's Department of Economics.

"A lot of efficiency measures are economical; we are actually losing money by not doing them. It's a matter of putting together the puzzle," Coffman said.

The conference also had presentations by several other speakers, plus remarks by Mayor Harry Kim and County Council Chairman Pete Hoffmann.

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