Stanford hosts 2010 Silicon Valley Energy Summit

By Josh Chan

A capacity crowd attended the 2010 Silicon Valley Energy Summit on June 25 at the Arrillaga Alumni Center. The daylong summit, sponsored by Stanford’s Precourt Energy Efficiency Center (PEEC) and the Silicon Valley Leadership Group, featured panel discussions with Silicon Valley executives, Stanford academics and venture capitalists on topics ranging from the future of public utilities to the government’s role in making California a successful player in the lucrative clean energy market.

Jim Sweeney, director of PEEC and professor of management science and engineering at Stanford, opened the summit by introducing four key themes:

- Blending policy and business opportunities to advance clean energy;
- Rising importance of a “smart grid” for delivering electricity;
- Investing in “greentech” energy to revitalize Silicon Valley’s economy; and
- Finding opportunities for companies to simultaneously increase energy efficiency and profitability.
**Smart grid**

In a keynote talk, Chris Johns, president of the Pacific Gas and Electric Company, defined the sometimes-hazy concept of the smart grid and explored its future potential.

"The smart grid is about marrying computing and communications with the traditional infrastructure of the power grid," Johns said. "What really defines the smart grid is the kind of networking and interactivity that becomes possible when we put all these technologies together."

In the future, Johns envisioned a more reliable and stable grid with diversified energy sources, such as solar and wind, that are cleaner but intermittent. The smart grid will also make it easier for customers to save money, he added, giving consumers more control over energy usage and pricing through the use of smart meters and appliances.

"Right now, California needs leaders who really understand how important the race for clean technology is for a state’s economic future," Johns said. "It’s just as much about jobs, investment, growth and competitiveness as it is about the environment itself."

**Just the facts**

George Shultz, a distinguished fellow at Stanford's Hoover Institution, served as "moderator/provocateur" of a panel on California’s carbon policy. "You are entitled to your opinion, but you are not entitled to your facts," Shultz said, then laid down two "facts":

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• The emission of carbon imposes a cost on society;
• The market will only sort out the most cost-effective way of producing energy if there is a level playing field.

Panelist Larry Goulder, a professor of economics at Stanford, focused his remarks on California Assembly Bill (AB) 32, the Global Warming Solutions Act. Signed into law in 2006 by Gov. Schwarzenegger, AB 32 requires California’s greenhouse gas emissions to be reduced to 1990 levels by 2020, a 15 percent reduction from today’s levels. AB 32 also mandates that 33 percent of the state's electricity come from renewable sources by 2020.

Goulder discussed the results of several studies forecasting the economic cost of AB 32. “Even if you take the higher range of cost, it’s not all that large relative to the overall economy,” he said. “If we look at what AB 32 would do to economic growth over the period 2010-20, instead of the California economy growing at an annual rate of 2.4 percent, it would grow at 2.3 percent. Many would say that is not a big change.”
California Jobs Initiative

The discussion then shifted to the California Jobs Initiative, which recently qualified for the November ballot and if passed would suspend AB 32 until California’s unemployment rate drops to 5.5 percent for four consecutive quarters. Panelist Peter Miller, senior scientist at the Natural Resources Defense Council, criticized this “dirty energy initiative” for its low unemployment-rate threshold – which, he said, has only been reached three times in the past three decades – and for the initiative’s substantial financial backing from Texas-based oil companies Valero and Tesoro.

Shultz warned that it would be an “unmitigated catastrophe” if the world saw California turn its back on fighting global warming. However, he closed the panel on a positive note. “I feel a sense of optimism if you keep the pressure on, particularly if we see that R&D is funded adequately and on a sustainable basis,” he said.

In another panel discussion, executives and partners from several venture capitalist firms pointed out that passage of the California Jobs Initiative could drastically impact the future of innovation and entrepreneurship in renewable energy. John Denniston, a partner with Kleiner Perkins Caufield and Byers, said that the failure of AB 32 would send a terrible signal to the investment and entrepreneurial communities, reducing California’s competitiveness in the burgeoning worldwide market for clean energy technology.
$6 trillion opportunity

United States Sen. Maria Cantwell (D-Wash.), chair of the Senate Subcommittee on Energy, delivered the closing keynote speech, expanding the scope of the discussion from Silicon Valley to the national and international level.

“In 2050, we’ll still have a huge chunk of our energy needs fulfilled by petroleum, but we can significantly diversify and jumpstart a sagging economy,” Cantwell said. “Clean energy, the economic opportunity of the 21st century, is the mother of all markets – a $6 trillion opportunity. This transformation to a clean energy economy will yield an incredible unleashing of economic opportunity for the United States and the world.”
Josh Chan is a writer intern at the Woods Institute for the Environment at Stanford University.

Relevant Web URLs:
Title: Precourt Energy Efficiency Center
URL: http://peec.stanford.edu

Title: Silicon Valley Leadership Group
URL: http://svlg.org