



What Big Companies Want From Green Startups

Unilever, IBM and other companies said they are constantly investigating green technologies that would help them conserve energy or sell products to customers who embrace efficiencies.

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What do big companies like Unilever, IBM or Frito-Lay want from cleantech startups? The answer appears to be technologies that will help them go "green" or sell the things they already understand.

[Unilever](#), which makes food as well as personal and household cleaning products, is interested in smart grid technologies, but not because it wants to enter the information technology market. The company is keenly interested in how consumers use water and other resources at home, said Phil Giesler, director of innovation and corporate ventures at Unilever.

"We realized that the major water use is not in the process of making the products but in how consumers use them," said Giesler at the Dow Jones Alternative Energy Innovation near San Francisco on Wednesday. Giesler joined other company executives on a panel about what large companies want to startups. "That realization has led us to come up with formulations that need less water" to use.

That was why Unilever invested in [EnergyHub](#) (via [Physic Ventures](#)), Giesler said. New York City-based EnergyHub has developed devices for monitoring and adjusting energy use at home. EnergyHub's offerings track electricity use, but there are other companies developing water monitoring devices (see [A Smart Grid for Water](#)).

Unilever also is interested in developing edible fuels. Giesler said some of the conventional edible oils, such as palm oils, are being used to make transportation fuels. As a result, forests have been cleared to plant more palm trees.

Algae could be a good source of edible oils, though it will likely take 10 or more years to bring it to market, he said.

[Frito-Lay](#), on the other hand, is interested in making potato chips using renewable energy. The company built a solar thermal power plant using parabolic troughs at factory in Modesto, Calif., and used it to advertise its SunChips brand. It's not looking to build a 3-megawatt renewable power plant that would provide all the electricity for its factory in Casa Grande, Arizona, said Al Halvorsen, director of environ sustainability at Frito-Lay.

The Casa Grande project could go all solar, or use both solar and biomass, he said. The company is evaluating whether to use a solar-thermal technology, which uses a field of mirrors to harness the sun's heat for power generation, or crystalline silicon solar panels. Thin-film solar panels, which use little or no silicon and are made popular by Tempe, Ariz.-based First Solar, are not as suitable because they aren't as good at converting sunlight into electricity as the crystalline silicon variety, Halvorsen said.

[Adobe Systems](#) is interested in devices and software that would make its three corporate buildings in San Jose, Calif., more energy efficient, said Randy Knox, senior director of real estate, facilities and security at Adobe Systems.

The company has deployed sensors for monitoring and adjusting the energy use in buildings, Knox said. Whenever utility Pacific Gas and Electric asks Adobe to reduce energy use during peak time, Adobe "can do it with a flip of a switch" instead of having to dispatch engineers and spend nearly an hour to accomplish the task, he added. The software developer also is interested in installing wind turbines and harnessing heat generated by its servers.

[IBM](#) is interested in all sorts of energy efficiency and resource management technologies, including developing a water-purifying membrane. But the information technology giant is particularly fond of technologies for managing the delivery and use of electricity over the grid, said Drew Clark, director of corporate strategy at IBM's Venture Capital Group.

That should come as no surprise, given IBM's heavy involvement in development software to manage information gathered from advanced meters and relayed back to utilities' offices. The company has launched test projects along with meters and other equipment made by other companies, many of them startups, that would feed utilities real-time data about energy use and report any equipment failure (see [IBM, EDF to Research Smart Grid Tech](#), [IBM Brings Smart Meters to Malta](#) and [IBM Snags Anther Smart Grid Deal](#)).

Of course, all these efforts would also promote IBM's computers and other hardware and software offerings for analyzing and storing the data.

Using energy efficiently in data centers is IBM's other passion, said Drew Clark speaking at the Dow Jones Alternative Energy Innovation near San Francisco Wednesday. That's why the company is working with startups such as Folsom, Calif.-based SynapSense to promote sensors and software that could help data center operators cut energy costs.