**Ucilia Wang** Contributor

*I write about renewable energy, electric cars and water tech*

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# The 5 Solar IT Startups You Should Know

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In the basement of a co-working space in downtown San Francisco yesterday, 17 teams took turns to give an 8-minute pitch about the software and services they had developed to make selling, installing and shopping for solar simpler.

It looked like a typical demo day for aspiring Silicon Valley tech startups, except it was a first-ever competition by the U.S. Department of Energy's Sunshot Initiative, a solar research and development program that aims to drive down the average wholesale price of solar electricity to $0.06 per kilowatt-hour by 2020.

That price would make solar cost competitive to power from coal or natural gas, and SunShot, which has funded over 350 projects since 2011, is 70% there, said Minh Le, who heads SunShot.

The competition, called [Catalyst](#), is meant to promote innovations that can be brought to market fairly quickly. So it wasn't surprising to see that the [17 teams](#)' technologies were all about software. In fact, the competition was very much about creating IT solutions for solar.

"Solar is growing phenomenally in the country, but there's still inefficiency," Le said before he took stage to kickoff the contest. "With IT solutions, we can more rapidly accelerate the market.

The young solar market is in need of a lot of IT improvements. A recurring theme of the competition was a lack of software that would make it easier to coordinate the sales and engineering efforts. Sales people need to come up with a basic design of a solar energy system to give a credible quote to consumers, but the software they use often isn't the same as the software used by the engineers to design the system that will be installed. That could lead to a notable difference between the quote and the final price for the system. Another big challenge is help consumers find information about solar from independent sources and get the best deal.

The judges picked five winning teams and gave $30,000 to each. Here are the winners:

[1. Gridmates:](#) What makes this team a standout is the idea of donating energy to people in need across the globe. Gridmates' app converts the amount of

energy you want to donate into a dollar amount, and it then sends that money to someone or an organization to pay for utility bills. It's not designed only for the solar market, but it might appeal to those whose solar systems produce more electricity than needed and would like to "donate" that excess amount for a good cause. Gridmates' co-founder and CEO, George Koutitas, noted that U.S. utilities lose $11 billion in revenues each year from unpaid bills, so they might be interested in using Gridmates' program to reduce the losses.

Gridmates would make money from profit sharing with utilities, charging a fee from nonprofits to use Gridmates as a fundraising tool or from companies that use it for social responsibility programs.

2. PVComplete: The team set out to create a program to streamline the design of a solar energy system. Often, the program used by sales people to sketch a solar system for a potential customer isn't compatible with the program by an engineer to design the system that will be installed. PVComplete built a software design tool that is compatible with AutoCAD, the design and engineering program commonly used by solar installers — and the roofers and contractors that might want to enter the solar market. The tool lets sales people who don't know AutoCAD to create a design that can be easily picked up by engineers to complete the design.

3. Savenia Solar Ratings: Calling itself the Carfax of solar, Savenia created an online system to quantify the value of a solar energy system. A solar installer can use that number in its marketing pitch. A homeowners can use it to decide whether to go solar or market a home that's for sale. Savenia would need to get solar contracts or other documents to provide a credit rating. It plans to expand beyond rating solar systems to other energy efficient equipment. Savenia offers unofficial ratings for free but charges a fee for official, verified versions and access to any maintenance and operational history of each system.

4. Solar Site Design: It has developed the software for coordinating the sales, design and engineering process. Solar Site Design recruits sales agents, such as manufacturing reps who already have a customer base, and then trains them to use the program to gather data from potential customers and create a rough design of solar systems. Those data go into a Solar Site Design database for review by its staff before they are shared with companies that could complete the engineering and installation of the system. It gets paid by installers and contractors. Solar Site Design began delivering projects to SunEdison in February this year.

**5. UtilityAPI:** Getting energy consumption and other billing information from potential customers can be a manual, cumbersome process. Yet the billing data, which needs to cover months of energy use and pricing, is necessary for showing the likely costs and savings. Getting that historical data from utilities could take weeks. UtilityAPI's software automates that process by developing API adapters for extracting the billing history from a utility's computer system. Solar sales people could get the data easily online once they get permission from customers. By building an access to each utility, Utility API also can collect information that shows how much energy each home or business is using or saving after solar panels have been installed.