

VentureBeat's best and worst of cleantech in 2010

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It's been quite a year for energy-related investments and other ventures looking to make some green from green. Here's a look back on the biggest successes and flops of 2010.

Best of cleantech in 2010:

Bloom Energy — The fuel cell maker made a big splash entrance with a [60 Minutes segment in February](#). It said its Bloom Boxes, which cost around \$800,000, can each power up to 100 American

homes. The company has installed the devices — essentially big fuel cells which can both store and produce energy — at high-profile companies like Google, FedEx, Wal-Mart and eBay. In September, it made its [biggest installation yet of 12 boxes at Adobe's San Jose campus](#).

Tesla IPO — Silicon Valley's electric-car wonder, the maker of the Roadster (pictured, right) and the upcoming 2012 Model S sedan had a blockbuster IPO in June. Shares started at \$17 and [jumped 40.5 percent](#) in the first day of trading in the midst of a lackluster cleantech IPO season. Though Tesla [has its share of skeptics](#) and its stock [dropped this week](#) on anticipation of new shares flooding the market, its debut was undoubtedly a success story in cleantech. The company's future now rests on whether it can successfully execute the manufacturing and delivery of the 2012 Model S, which it is assembling in its new Fremont factory — built, in another triumph, on the site of a former Toyota-GM joint venture which it [bought for a song](#).



BrightSource Energy — The company's 392-megawatt Ivanpah solar thermal project in California's Mojave Desert [won a \\$1.37 billion loan guarantee](#) from the DOE. When finished, it is expected to generate enough energy to power 140,000 homes. The project nabbed a [\\$300 million investment](#) from power plant heavyweight NRG Energy and BrightSource is [rumored](#)

to be [pursuing an IPO](#) in 2011. BrightSource's technology (pictured, right) uses a field of mirrors to concentrate sunlight onto a central tower, which uses the heat to boil water to generate steam that turns electric turbines.

Abound Solar – The company closed on [\\$510 million in funding this month](#) to expand production of its thin-film solar modules. Thin-film operations like Abound's are a [beacon of hope for U.S. cleantech manufacturing](#) and an answer to China's cheap manufacturing of polysilicon solar modules, DOE loan chief Jonathan Silver predicts. Solar analyst Nathaniel Bullard of Bloomberg New Energy Finance tells me that after the ramp-up, the next test for the company will be to secure a large supply contract with "a large, traditionally conservative procurer — a Wal-Mart or American Electric Power or Tenaska Resources — to prove the commercial mettle and not just technical capabilities of the product."

LEDs show some spark — The market for these energy-efficient lights is [poised to surge next year](#), according to analysts, and there are a bevy of lighting systems and LED makers [lining up to jump on the market opportunity](#) there, which, like electric trucks, can pitch their wares to businesses on the basis of generating big savings. Bridgelux opened a manufacturing plant in California; Taiwan LED parts manufacturer SemiLED [had a successful IPO this month](#), raising the question: Can American LED makers keep up?



Electric cars roll out en masse — The all-electric Nissan Leaf and partially electric Chevrolet Volt (pictured, left) [are on the roads as of December 2010](#), marking the official start of the wave of electric cars for the mass market. And more on the way: Electric sedan made by startup Coda and the Ford Focus Electric are slated for limited release next year. Public charging station projects [are racing to meet them](#), but some skeptics of electric cars say sales

will be stunted in the near term [due to lack of widespread charging infrastructure](#). (The [flip side](#), advocates say, is that the vast majority of charging will be done in car owners' homes.)

Smith Electric/electric trucks catch on — The likes of Frito Lay, UPS, Coca-Cola and FedEx have [adopted electric and hybrid trucks](#), putting the all-electric vehicles on the roads ahead of mass market EVs. One company grabbing those sales and buzz is Smith Electric, whose CEO Brian Hansel told me the company's trucks are [back-ordered until the second quarter of next year](#). The trucks demonstrate the potential money-saving benefits of electrified vehicles for commercial entities, using cold, hard cash to allure versus the [you'll-save-the-polar-bears](#) pitch of mass market consumer cars.

Opower — Energy efficiency company Opower just [raised \\$50 million](#) in a round led by Kleiner Perkins and Accel. The company has managed to sign on utilities to energy efficiency and engage customers with the innovative use of behavioral science.

Hara — Energy efficiency software company Hara has done well lately — the company has [nabbed high profile customers](#) out the gate (Hasbro, Coca-Cola, News Corp.) and recently [introduced its biggest software product to date](#), a module that helps search out energy-saving opportunities along companies' supply chains.

Honorable mention — For next year, keep an eye on the promising [building controls](#) and [demand response](#) sectors as well.

Worst of cleantech in 2010:

Applied Materials – The semiconductor company [shut down its thin-film solar business in July](#) and laid off 500 workers, an event that signalled tough times for thin-film solar makers. Fast Company recently chronicled the crash, saying the company [bungled \\$1.5 billion in product orders](#), continually missed production deadlines, then saw two of its biggest customers go bankrupt.



Tessera Solar — One almost hates to kick a company when it's down, but there's no doubt NTR's Tessera has suffered a rough bout of setbacks as of late. Today, power developer K Road announced it has [bought Tessera's Calico solar project](#) in California, once planned to be the proving ground and showcase for Tessera's Suncatcher solar technology (pictured, right). Just a few days ago, Southern California Edison [cancelled its power purchase agreement](#) for Calico. Overall, a disappointing end for a solar project that has been several years in the making. The company has also reportedly [laid off half its staff](#), lost executives at its sister company Stirling Energy and suffered a [court-ordered delay](#) on construction for its Imperial Valley solar project.

Solyndra – The company [yanked its IPO in June](#), then [closed its first factory](#). Not exactly a dream scenario for a startup that has reportedly raised around \$1 billion, got a [visit from President Obama](#) and won the DOE's flagship loan guarantee of \$535 million. On the other hand, at least one venture capitalist thinks Solyndra could make a turnaround and [re-pitch its IPO hopes in 2011](#), and DOE loan chief Jonathan Silver argues that the first factory [was always intended to close](#) because it wasn't as efficient as the second factory will be. For the sake of U.S. solar startups, keep your fingers crossed.



A123 -- The battery maker and MIT spinoff [IPO'd in September 2009](#), rising 50 percent to \$20.29 from an offering price of \$13.50 on its first day of trading. But the price has since come down, now trading at \$9.80. It has struggled since the IPO. In August, the company posted lackluster earnings and lost out on two high-profile bids for Chrysler and to build battery packs for the Chevrolet Volt — deals that [would have positioned the company as a formidable presence in the industry](#).

PetroAlgae — This biofuels company is pitching a massive \$200 million IPO despite having no history of revenues, ever. Analysts expect it to [withdraw or flop](#), and which could potentially harm the burgeoning sector of algae fuels.

Proposition 23 — Voters [said no](#) to the measure, so technically this was a good thing for green energy — but we're naming it as a “worst” for being on the ballot at all. This was a [failed measure](#) was backed by oil companies like Valero and Tesero and aimed to suspend California's AB 32 law, which requires the state to roll back greenhouse emissions to its 1990 levels by 2020. Had it passed, there almost certainly would have been ugly aftereffects for the country's clean energy innovation stronghold, California.