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The Efficiency Network

Rob Campbell and Troy Geanopulos ran an energy-efficiency company sold to Constellation Energy in 2009. Now, they run The Efficiency Network, TEN.

It's another energy-efficiency company, with a grand mission: to make energy-efficiency simple enough that facilities managers that have long put off making decisions because they didn't feel confident in the cost, performance or payback of upgrade projects, feel empowered to say yes.

"There's a part of the market that's been underserved by energy efficiency for decades now. That is commercial and industrial," Campbell said. "Our business is designed to compete with the No. 1 competition for our business, which is nothing."

First comes the data.

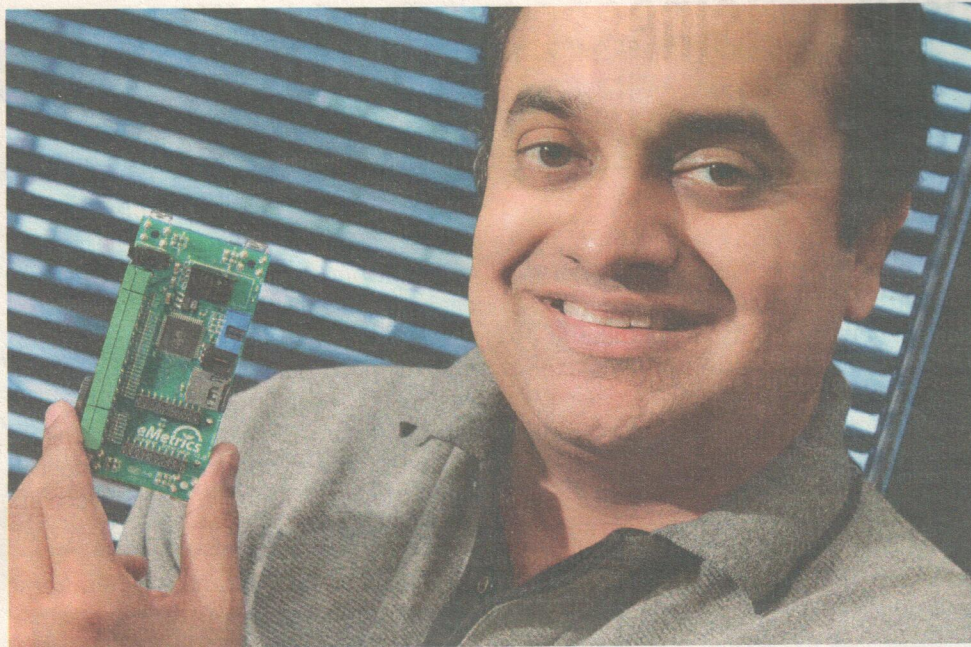
TEN has a digital warehouse of publicly available metrics, such as the federal government's Energy Star warehouse and its Commercial Buildings Energy Consumption Survey, manufacturers' data of different building products, utility rates and incentives available for energy-efficiency upgrades.

The company's engineers then plug in the clients' building data and their specific energy efficiency goals and generate recommendations for projects. That's communicated through a dashboard where a facilities manager can see how those recommended projects are looking in terms of estimated construction cost, energy savings, payback period, even environmental benefits.

"That's the engine behind this company, the automated platform that merges technology with energy expertise," Geanopulos said. "We like to call it machine intelligence."

As one thing changes in the database — a great new product comes on the market or a rebate expires — the dashboard automatically updates the vitals for that client's projects.

Incorporated in February 2012, TEN is a 15-person company based in Carnegie, with 12 contractors in its "network" and growing. That means when the TEN dashboard says a project will cost so much money, its estimate is partly based on what the contractors in its network charge.



JOE WOJCIK

Parag Batavia, president of eMetrics, also is CEO of robotics firm Neya Systems.

It also has a list of banks interested in funding energy efficiency work, some of them local.

The company's technology, which Geanopulos said is just as cost-effective for institutional, nonprofit and traditional government contracting as for commercial applications, is still evolving, but TEN already is working with clients, including the United Steelworkers Union downtown. It expects to be profitable this year.

eMetrics

When Parag Batavia first had the idea for his company, eMetrics, he envisioned a neighborhood where residents competed for the biggest decrease in their energy use.

By the time his concept came to life, the neighborhood turned into a university — Chatham University — where last year students in two buildings raced against their peers to show the most energy not used. Their prize: a party and Facebook fame.

The key was finding a population that likes to compete but one that has no financial incentive to save energy, i.e. where the user is not the payer.

The six-week competition worked like this: eMetrics clamped its sensors onto the power lines that ran to each dorm room allowing it to gather data on that granular scale and transmit it in real time. It then updated the results on Facebook, providing a constant and visible way to measure their performance in the competition.

"We saw a lovely 10 percent reduction in usage," Batavia said. "And that was enough to validate the concept."

It could have been more but for the sabotage.

Apparently, one student had an issue with the resident adviser, knew the competition was ongoing and left all the lights on all the time to drive up the meter.

That, too, was a good learning experience for eMetrics, which has developed a method to screen for this kind of mischief in the future.

Batavia, CEO of Neya Systems, a robotics company in Wexford, has been working on eMetrics concurrently for the past three years. The companies are separate, although he leads them both. In 2010, eMetrics received \$160,000 from the Tech Collaborative and Idea Foundry to develop its concept and contracted with Neya to build the custom hardware — gadgets the size of a bread box that could be clamped on and off at various sites to monitor one room one day and another the next — and the software to monitor it.

The effort culminated in the Chatham University trial last year.

Initially, Batavia intended to expand the offering to hotels, where room occupants similar to students don't pay for the energy they use. But he decided to stick with student dorms for the immediate future.

While universities have an interest in reducing their energy bills, they often don't have specific-enough information

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