

FEATURES

Lighting Up Latin America

PATRICK DUNN / CONCENTRATE | FRIDAY, DECEMBER 20, 2013



"A few watts of electricity makes a big difference in a person's life," John Barrie says.

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As the founder and executive director of the non-profit [Appropriate Technology Collaborative](#), Barrie has personally brought more than a few watts into numerous homes around the world. ATC's mission is to design and introduce sustainable technologies for low-income communities. The Ann Arbor-based collaborative works primarily in Latin America, focusing on power solutions in areas where a traditional electrical grid just isn't an option.

"There's 1.6 billion people on the planet that don't have access to electricity," Barrie says. "A lot of them live in rural parts, and they're never going to get the electric grid out to them. A significant population of Africa is growing faster than the electric grid is. There's more people in Africa today without electricity than there was yesterday."

Barrie's original inspiration to get involved with the problem came in 2004, while visiting his son in Ecuador. Barrie had spent his career in architecture at that point, having started his own firm, John Barrie Associates Architects, in Ann Arbor in 1990. He says he was struck by the basic challenge of keeping homes comfortable without power through the cold nights and hot days of Ecuadorian mountain climates. So Barrie left his firm behind to found ATC, trading "relatively few well-off clients" for "a whole lot of very poor clients."

The collaborative has since developed and implemented a [variety of solar technologies](#), all priced under \$50, that provide enough power to run at least one light - or, sometimes more importantly, charge a cell phone.

"We realized that the people we were installing these systems for, the poorest people on the planet, had cell phones," Barrie says. "Usually the woman of the family will hike 90 minutes to charge a phone, wait for the phone to charge and

hike back to the village where she's from. And that kills almost a day's work. So everybody just loved it when we added a cell phone charger to our system."

ATC technologies usually begin with a design challenge to one of the collaborative's partner organizations, which have included teams from the University of Michigan, Summers-Knoll School and Michigan State University. Teams receive assistance along the way from Barrie (ATC's only full-time employee in the U.S.) and the collaborative's seven-member board, and the final product is posted online as an [open-source design](#).

Teams typically spend some time in countries like Guatemala and Nicaragua, where their completed work will be implemented. And you don't have to be part of a design team to participate - ATC invites [volunteers](#) on regular trips to install solar technology abroad.

"We have students and professionals who get to learn internationally," Barrie says. "They get to understand the circumstances people live in more so we can better provide solutions to people's problems."

Ironically, while ATC focuses primarily on problems beyond American borders, Barrie is now considering ways to introduce ATC technology to Detroiters coping with summer power outages.

"People are spending \$2 to charge a cell phone at a check cashing store or a bar or a local liquor store in Detroit," he says. "We can give them a solution that costs less than what people are spending right now. If they can put a solar panel on their window, they don't have to go hang out at a bar for a couple hours while their cell phone charges."

With that project in the works, as well as an initiative to start female-owned [solar businesses in Guatemala](#), Barrie says 2014 will be "a full year for us." Despite his decades in the architecture business, Barrie now seems wholly dedicated to what he calls a "much more rewarding" pursuit.

"It's actually a more creative profession, designing products for low-income people, and it's also a very needed profession," he says. "I feel like we're making a difference."

Patrick Dunn is an Ann Arbor-based freelance writer and regular contributor to Metromode and Concentrate.

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