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What Works

Clean Sweep

By Suzie Boss

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Clean Sweep

E+Co connects the dots between energy, poverty, and the environment By Suzie Boss

Wilkin Solar, an E+Co borrower that sells solar systems and lanterns throughout Ghana, installed four solar-powered street lights in the town of Jama, Ghana.

PHOTOGRAPH BY STEPHEN MCGEE

Across much of the developing world, the dinner hour comes with a billow of smoke. That's because many of the world's 2 billion people who live without electricity continue to cook with wood, dung, and charcoal. These solid fuels may seem cheap, but their hidden costs are quite high. Burning them sends carbon into the atmosphere, exacerbating global warming. And the indoor air pollution they cause leads to chronic, even fatal, respiratory disease.

"One of the myths is that poor people cannot afford to buy modern energy," laments Phil LaRocco, cofounder and CEO of E+Co, an energy investment firm headquartered in Bloomfield, N.J. "That's nonsense! People pay dearly for 19th-century energy."

For 15 years, E+Co has demonstrated an alternative scenario. The nonprofit organization has grown a portfolio of 200-plus small companies that produce clean energy in developing countries across Africa, Asia, and Latin America. These enterprises bring modern energy to some 4 million people, offset more than 3 million tons of carbon per year, and generate upwards of $8 million in new income. E+Co has invested $35 million in these companies and mobilized $172 million in cofinancing.

The thinking behind E+Co began in 1990, before most of the world was worrying about climate change. LaRocco and Christine Eibs Singer, both previously with the Port Authority of New York and New Jersey, took on a research question for the Rockefeller Foundation: Where should we intervene to improve the global environment? LaRocco sums up their findings: "If you care about the global environment, then you need to care about energy," particularly in the developing world. "There's not enough public sector money in the world" to develop clean energy in emerging markets, he adds.

LaRocco and Singer took their findings and launched E+Co in 1994 with a blend of public and private resources, including foundation grants, government funding, and private investment. From the start, E+Co turned traditional development thinking on its head. Instead of delivering energy through top-down initiatives like large-scale utilities, it looks for small enterprises that can take hold locally. Rather than bringing in Western business experts, E+Co hires regional field staff who recruit and support entrepreneurs in their own communities.

Recognizing the organization's results, *Financial Times* named E+Co the Sustainable Investor of the Year for 2008. Judges called the organization's approach "an inspiration." Indeed, E+Co's efforts are inspiring others to see the connections between energy, poverty, and climate change. "We're linking the three sides of this triangle," says Singer, E+Co's deputy executive director.

Energizing Entrepreneurs

E+Co's portfolio of small enterprises—solar, wind, hydro, biogas, and other projects—proves that there's no shortage of clean energy ideas or entrepreneurs in emerging markets. In Ghana, a company called Toyola sells cookstoves that are 40 percent more efficient

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than traditional charcoal stoves. Entrepreneurs Suraj Wahab and Ernest Kyei borrowed $70,000 from E+Co to start their business. Now, Toyola creates revenue and jobs all along the supply chain, from scrap-metal collectors to metal fabricators to sales staff who peddle the stoves for $10 apiece. "If there's a Henry Ford of the cookstove business," LaRocco says, "his name is Suraj."

Willing entrepreneurs represent an abundant but largely untapped resource, reports the Aspen Network of Development Entrepreneurs (ANDE) in a recent background paper. The report also notes, however, that technical assistance for small business—so accessible in the United States—is simply not available in many developing markets.

GROW GREEN BUSINESSES

Support local entrepreneurs and proven solutions

Bundle capital with technical assitance

Fund growth

Report financial, social, and environmental returns

E+Co unleashes this entrepreneurial potential with a three-part model that combines technical assistance with capital. First, the organization helps entrepreneurs develop solid business plans. Field staff use a toolkit and their understanding of local issues to help would-be entrepreneurs analyze their market and select clean energy products. The business development process is thorough but not over-sophisticated. "It's hard work, but it's B-follows-A work," LaRocco says.

Similarly, the organization prefers proven solutions to cutting-edge technologies. For example, La Esperanza, a small hydroelectric plant in Honduras that is one of E+Co's biggest projects, is a rehabilitated facility that provides renewable energy. "We want to create delivery of environmentally superior energy goods and services *today*," explains Singer. Adds LaRocco: "This is blue-collar work. We are not a show horse. We are a workhorse."

Part two of E+Co's model is to lend seed capital, typically $25,000 to $500,000 at average annual interest rates ranging from 8 to 12 percent. Getting to yes requires approval from an independent, unpaid investment committee made up of finance professionals. The experts bring a deep understanding of niche energy markets and small- to medium-sized enterprises. "These are not easy folks," LaRocco acknowledges. It's not unusual for them to devote a 90-minute conference call to a single enterprise. "They provide our quality control."

In part three of the model, E+Co provides access to growth capital. "We realized we couldn't just do $30,000 of services, $100,000 of seed capital, and then hope the World Bank or somebody would step in and help an enterprise grow," explains LaRocco.

In the case of La Esperanza, for instance, Ron Turner, a Canadian-born resident of Honduras, started with $250,000 in seed funding. But to expand the facility's capacity from 500 kilowatts to 13 megawatts, he needed $10 million. E+Co approved a $1 million expansion loan and helped Turner structure a deal that secured the additional third-party capital. La Esperanza went on to become the first enterprise to sell certified greenhouse gas emission reductions to the World Bank-managed Community Development Carbon Funds. It also won the World Clean Energy Award in 2007.

MEASURING EVERYTHING

E+Co relies on concrete metrics to convince diverse investors to fund the organization. A triple bottom line scorecard rolls up data from 30 indicators across three categories: financial, social, and environmental. LaRocco admits that he can be swayed by stories of lives improved. But he's also hard-nosed about numbers, and so looks to the scorecard to see that the portfolio's average annual return is 8 percent. Other investors may care about how much carbon the companies in the portfolio remove from the atmosphere (3.3 tons annually) or how many trees they've replanted (268,000). "Which row of beans gets you the most excited? We're trying to find a common space where we're all happy," he says.

Such attention to bean counting dates to the organization's early days, when much of E+Co's funding came from grants with specific reporting requirements. Grant funding has become a smaller piece of the pie now that loan repayments generate revenue to reinvest. New investors, such as high net worth individuals and socially minded companies like the Body Shop, have also come on board.

E+Co is similarly analytical when it comes to evaluating risk. Although the organization steers clear of untested energy ideas, it sometimes approves demonstration projects that bring proven products to new markets. A recent loan of $86,000 funded a solar-powered grinding mill in West Africa. "It was going to be either hugely successful or a complete failure," LaRocco says. "We could afford to lose $86,000 to find out." The project showed that solar power could replace diesel for grinding grain. Now five more villages are replicating the project.

GROWING THE SPACE IN BETWEEN

With a pipeline of entrepreneurs, E+Co must now make sure the funds keep flowing. "We have a working model, but it's stuck at its current level," LaRocco admits. Getting unstuck will take establishing a recognized asset class where investors can expect steady but modest returns. "We know we can deliver reliable returns of 3 to 6 percent" after accounting for all costs, he says, citing 15 years' worth of evidence. "If we had unlimited access to capital at 3 percent a year, we could grow and grow and grow. Then all our people could focus on implementation rather than on raising working capital."

E+Co's loans fall into what LaRocco calls "the space in between": bigger than microfinance but smaller than corporate-size deals. This "missing middle" is unfamiliar territory for many public and private investors. "Our goal is to start a movement," Singer says, so that small and growing enterprises have ready access to capital. Global acceptance of microfinance has taught her the value of aggregating players "to speak with one voice." Through the Aspen Institute, E+Co has teamed up with allies such as Root Capital to launch ANDE. By developing common metrics and documenting best practices, ANDE aims to grow awareness of and capital for small and growing enterprises. Singer has also reported on E+Co's ambitious growth plan at the Clinton Global Initiative.

E+Co remains alert to new ideas, such as a recent deal to sell its investees' carbon offsets to Goldman Sachs. But it stays focused on an energy finance model that works. "We're plodders," says LaRocco. "We do what works and bring more people to it. That's about as innovative as dirt." ■