



## Woodstock Forever

This clean-tech start-up aims to reduce firewood consumption by rural entrepreneurs.

KUNAL N TALGERI

- **Mission** To sell energy-efficient stoves to grassroots entrepreneurs and help them cut down on the use of firewood.
- **Benefits** Users can save on fuel costs while 7-20 tonnes of firewood can be saved per stove per year.

**F**irewood is the cheapest fuel, which explains its popularity in rural India. It is also a big pollutant, but for the poor folk who use it for cooking, that's hardly a concern. For Svati Bhogle, though, it is a consuming interest. For nearly 20 years, the IIT-Bombay alumna has been involved in developing energy-efficient technology applications. Her decade-long association with non-profit organisation TIDE (Technology Informatics Design Endeavour) involved developing sustainable applications and technologies for targeted environments—grassroots-level entrepreneurs in rural south India

. In 10 years, however, TIDE sold less than 18,000 products—mainly household stoves, areca boiling stoves and textile stoves.

Bhogle believes the untapped potential of these applications is larger, attainable. Given TIDE's limitations because of its non-profit citizenry, she opted for the more energy-efficient option: a start-up venture that draws from TIDE's sustainability designs. The result: Sustaintech India, a private limited company that targets selling 77,000 fuel-efficient stoves to small-time entrepreneurs in Karnataka and Tamil Nadu in year five, from 6,000 in the second year. "Where the knowledge-IP (intellectual property) belongs to TIDE, the money will come into Sustaintech," says Bhogle. "We have created two mutually-dependent organisations: whatever profits come into Sustaintech, we will plough into TIDE." There is also the sustainability goal: a 30-40% reduction in the use of firewood. Sustaintech estimates more than 70,000 shops have the potential to use its energy-efficient stoves in Tamil Nadu alone, which can mean a significant level of reduction in carbon emissions.

### The Commercial Angle

From the beginning, Sustaintech's goals have been commercial—regardless of whether the organisation is perceived as a clean-tech, social or a plain start-up. Prices are around Rs 14,000-15,000, more expensive than the traditional stoves that consume more firewood and generate greater carbon emissions. The idea is that grassroots entrepreneurs (street food-vendors, tea stall owners, small and medium hoteliers), who buy branded and trademarked SIPL stoves will have reduced spends on firewood: each stove can save Rs 50-100 per day in fuel cost. The green angle: savings of 7-20 tonnes of firewood per stove per year, according to the Union Power Ministry agency, the Central Power Research Institute (CPRI).

All SIPL products are certified for energy savings by CPRI. To measure carbon savings, there is a Gold Standard Methodology for improved cook stoves and kitchen regimes that will be applied.

The fuel-efficient cooking stove typically has over 50 small mild steel rods that retain heat, which help conserve firewood because the user does not have to keep reheating the large pan. In addition to this, there are insulation bricks in the stove, which can retain temperatures up to 1,200 degree Celsius. At Rs 25 each, these insulation bricks are more expensive than the average ones that cost Rs 6-8. "TIDE has the intellectual property rights to design and assemble these special bricks, so that they cannot be replicated by imitators," says a project engineer of Sustaintech.

### Appetite For Expansion

Over the years, TIDE's competence has been design and development of sustainable technologies. And that is what drives Sustaintech. Production has been outsourced to fabricators, while Sustaintech is going the whole hog to stitch alliances that will crack open the grassroots markets. For instance, an agreement with Indian Overseas Bank has facilitated consumer finance.

Distribution alliances include partners like Rural Energy Network Enterprise (RENE) of the IFMR Trust, which will sell stoves in Thanjavur. In Madurai, there's Adharam Energy and Covenant Center for Development (CCD). It has its own outlet in Erode, Tamil Nadu, and plans to increase the number in other districts.

Cost efficiencies are built into production. For instance, a fabricator called Innovative Solutions is in Hosur, Tamil Nadu, which is an hour from Bangalore. With all clients currently in Tamil Nadu, Sustaintech does not have to pay inter-state taxes in Tamil Nadu. Innovative Solutions also undertakes distribution for SIPL. The latter is considering five more such fabricators in Coimbatore and Belgaum (in Karnataka) among others.

### Clean-Tech Ecosystem

Meanwhile, investors are understandably intrigued. At the time of writing, Sustaintech had reached the term-sheet stage of funding from a European consortium of three clean-tech investors, worth \$260,000 (Rs 1.2 crore).

Its preliminary funds came in mid 2008: a £40,000 (Rs 34 lakh, then) Ashden Award for Sustainable Energy prize. "We put part of that into a business plan, to conduct a market survey and develop the product for street food-vendors. We did all the start-up work with that money," recalls Bhogle. Sustaintech also got an interest-free loan of Rs 25 lakh from Villgro (formerly, the Rural Innovation Network). In all, Sustaintech's pool of funds will soon be at about Rs 1.4 crore—a far cry from the grants that TIDE would have to cobble together for specific research programmes. The start-up approach has given Bhogle more breathing space to plan expansion and rapid scalability.

The investor interest is particularly impressive given the current dismal picture for clean-tech start-ups: energy-equipment and bio-energy ventures, in particular, attract no more than 7% of private equity funding in India, according to Venture Intelligence.

"It is harder to grow a clean-tech company, and harder still to sell a company. So a private-equity investor will find it hard to invest because apart from zero visibility, he has few avenues to exit," explains Laura Parkin, Founder-CEO of the non-profit National Entrepreneurship Network, which partners with academic institutes and helps them build on-campus entrepreneurship ecosystems to support start-ups.

There is a silver lining, though, for start-ups like Sustaintech. "An interesting model that is gaining popularity is to invest in companies that are aggregators of renewable-energy assets in India," explains Shivani Bhasin Sachdeva, CEO of India Alternatives, a private equity fund.

For Bhogle, her heart is very much in the science of sustainable technologies. But she has evolved marvellously into focusing on generating funds and taking Sustaintech ahead.

"We have created two mutually-dependent organisations: whatever profits come into Sustaintech, we will plough into TIDE. The knowledge-IP belongs to TIDE."

The approach, so far, has been holistic—from design to pilot projects on distribution and end-user experience. SIPL has taken almost two-thirds of her time with TIDE. And Bhogle isn't out of energy just yet.

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