



Feature No. 30: DESI Power



DESI Power is a business dedicated to providing independent energy sources to underserved villages in rural India. While it is easy to quantify the success of DESI projects – for example, its primary power plant can generate up to 10 percent return on investment – one must hear the story of Baharbari to truly understand the value of this enterprise.

Baharbari is a village rife with contradiction. Its 250 families are healthy and hard-working, the town itself rests upon fertile lands with adequate rainfall, yet poverty here is ubiquitous.

Farmers cannot afford to irrigate their crops during the dry season, local residents lack the resources they need to create sustainable livelihoods, and the village as a whole has been forgotten by government efforts to provide rural electrification.

DESI Power offered its services in Baharbari to help break this vicious cycle of poverty with innovative, private sector solutions that link energy generation with local value addition and job creation. The company built a biomass gasification plant in the village to provide a cheap, clean source of electricity that would fulfill a variety of the needs of local micro-enterprises and agricultural laborers. The Iisc – Netpro power plant runs on agricultural residues that are inexpensive to harvest such as Ipomea, a weed that is plentiful throughout the Indian countryside, and converts them into fuel that is used primarily to pump water and charge batteries.

This off-the-grid energy source provides immense benefits to the village: farmers can now irrigate their crops in the dry season with water sold by DESI, small businesses can process crops with electric machinery, and quality of life has improved overall as residents can now charge batteries to power small appliances. The results speak for themselves. Labor productivity is higher than ever in Baharbari and women have been empowered through new paid jobs such as creating rice husk briquettes to fuel the power station.

DESI Power systems also provide substantial environmental benefits. Biomass is still a lifeline for the poor in India, serving as a greater source of energy in the country than nuclear power. DESI Power plants utilize the biomass once burned inefficiently in conventional ovens and use it to generate power in a much more efficient manner with higher energy output and zero net CO₂ emission. The business model itself ensures the financial stability of DESI projects – villagers pay by the hour to use power for water pumps or chargers and the company estimates that its plants become sufficiently profitable within 3 to 4 years.

Looking ahead, DESI Power is seeking to create more success stories like Baharbari to convince skeptical investors of the value of decentralized power. The company plans to provide power and employment services in 100 villages within 25 km of Baharbari to expand its social impact. As similar power plants generate more jobs, produce financial returns and meet the needs of underserved populations, the positive impacts created for residents of Baharbari will be felt throughout the region.

Written by Derek Newberry, World Resources Institute ©2007 – The Rising Ventures Series features articles, announcements and profiles of investors and entrepreneurs related to the theme of innovative small and medium businesses (SMEs) in emerging markets that deliver social and/or environmental benefits. These businesses have been identified through the New Ventures (www.new-ventures.org) and Development through Enterprise (www.nextbillion.net) projects. To view other Features in the Series, visit <http://www.new-ventures.org/risingventures>.