

OUTLOOK

Business

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Imperatives**

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Getting Organic

Ecofamily is a cheaper and environment-friendly alternative to household LPG.



ECOFRIENDLY: SERI Gas costs just ₹7 per kilogramme; domestic LPG, ₹33.

Nandita Datta

Rajah Vijay Kumar is more of a scientist than a businessman—a fact underlined by the number of patents in his name. This probably explains why he has decided to give away his latest innovation to public sector outfit ITI in exchange for a token royalty.

Designed and developed by Kumar and his team of researchers at Scalene Green-ergy, Ecofamily is an organic natural gas plant for use by households in lieu of their conventional cooking gas. The organic gas produced by Ecofamily—branded SERI Gas—has similar combustible properties as fossil-fuel based natural gas but without the undesirable impurities like butane, propane, pentane, etc. Not only is SERI Gas pure and clean, it's also much cheaper (₹7 per kg versus ₹33 per kg for domestic LPG).

Scalene is not new to this business, having developed a patented technology to produce organic natural gas a few years ago. This technology, which allows any bio-degradable waste to be used as feedstock, consumes very little power and has zero discharge. It has been used to produce 0.5-5MW capacity gas plants for corporates and large organisations.

"These remotely-operated, fully-automated gas plants are 100% carbon neutral," says Kumar. Although reluctant to reveal client names, he admits more than a dozen projects have been executed on a turnkey basis, both in India and abroad. Work is in progress for a few more projects.

With its technology catching the fancy of clean energy enthusiasts, Scalene has been playing host to a slew of visitors to its Bangalore campus. One such meeting with a group of visitors from the Ministry of New & Renewable Energy of the Government of India led to the birth of a new product idea. Kumar recalls, "We were chatting to this team from MNRE led by Dr AR Shukla and he suggested we expand our addressable market and target households as well as small businesses."

It seemed a great idea but there were challenges galore. For one, the end-user

NILOTPAL BARUAH



profile was very different. Scalene was used to dealing with technicians who understood the technology and the biological process; households would be a totally new ballgame.

Second, the product would have to be scaled down to a size where it would fit into the utility area of a residential apartment. Third, pricing would be crucial—households were unlikely to buy a product, however 'green', if the upfront investment was high. Fourth, mass-selling would require a minimum production scale and marketing reach. Scalene was essentially a research-based organisation that was focusing on clean energy and medical electronics.

Every scientist loves a challenge and Kumar is no exception. He went back to his drawing-board and finally came up with a design that substituted most of the mechanical parts with electronics, thereby reducing the size of the gas plant to a mere 15 square feet. The process was also simplified—all one had to do was drop the waste into a dustbin-like apparatus and then let the machine take over.

The product, christened Ecofamily, can

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—Rajah Vijay Kumar, Chairman & Chief Scientific Officer, Scalene Greenery

process a minimum of 3 kg waste per day up to maximum of 9 kg. And it can be any organic waste—food waste, animal waste, human waste, farm waste, newspapers, water hyacinth, agricultural waste, etc. It generates a minimum of 0.5 kg of gas per day, which can go up to a maximum of 1.5 kg. Storage is in-built; it’s safe because the gas is stored at 0.2kg/square cm pressure. Kumar says Ecofamily is as safe as firewood and as efficient as LPG! Installation, too, isn’t a problem as the outlet pipe directly connects to a gas stove just like your conventional LPG cylinder.

Currently, Ecofamily consumes one unit of electricity to produce 1 kg of gas, but efforts are on at Scalene’s R&D lab to ex-

plore other options like solar panels, gas-powered engine, etc. Kumar insists Scalene does not view this product as a business venture and, therefore, is content with a small royalty that will be used for further research. “ITI has the manufacturing capabilities and a nationwide distribution network and, hence, is best suited to take Ecofamily to consumers across India. Our strength is research and that’s what we want to focus on,” adds Kumar.

ITI says it has received a lot of enquires and is optimistic about Ecofamily’s future. The company has received an order for 1,000 units from MNRE for demonstrations. “Until now everyone had just heard about this product. People need to see it first-hand and get a feel of the thing. Mass production will begin thereafter,” says Ramesh Keshav Murthy, General Manager of ITI. He believes the

spiralling price of LPG will lead more and more households towards Ecofamily. “You can recover your cost in one-to-two years depending on your purchase price,” he argues. Murthy is tight-lipped about pricing, but says Ecofamily will not be expensive and with government subsidy it’ll become even more affordable. Market sources put the price at anywhere between ₹25,000 and ₹40,000.

Scalene Greenery is part of the Bangalore-based Organization de Scalene, a research-based group that seeks to develop intelligent technologies for the benefit of mankind. Apart from green energy, the ₹80 crore group focuses on medical engineering and has pioneered products like Haemoseis (a 3D analysis of the heart) and cytotron (regeneration and degeneration of human tissues for patients with cancer and arthritis).

For Kumar, the low-profile Chairman and Chief Scientific Officer, Ecofamily is just another feather in his cap. The man’s already moved on to the next technology frontier.

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