



BY ANAGH PAL

# GAIN FROM GREEN

## Technology that does good while raking in profits is a smart business opportunity

**B**ack in 2008, financial analysts Merrill Lynch predicted that the world was on the cusp of the 'sixth revolution', which would rival the industrial revolution and all technological leaps. "We believe cleantech is at the beginning of a high-growth period, much like computing was in the early 1970s," Steven Milunovich, cleantech strategist for the firm, had said, adding that it would lead

to significant long term investment opportunities beginning 2010-11.

Three years and one rather messy financial crisis later, experts are still betting on the huge potential of the sector. With the world grappling with high oil prices, global warming and shortage of fossil fuels, few will disagree.

Cleantech Group, a market intelligence firm on cleantech innovation explains cleantech: "represents a diverse range of products, services, and processes, all intended to provide superior performance at lower costs, while greatly reducing or eliminating negative ecological impact, at the same time improving the productive and responsible use of natural resources". It distinguishes the

term from 'greentech' by virtue of broader market economics, greater financial upside and sustainability. (For the different industry verticals under cleantech, see [www.research.cleantech.com/browse-taxonomy](http://www.research.cleantech.com/browse-taxonomy).)

Cleantech is, thus, not just about providing a solution to customers; it's about doing good to the environment and generating attractive returns at the same time. However, for all its potential, the sector has not exactly taken off because of some of its inherent peculiarities.

**The funding requirement.** "Many cleantech companies successfully cross all the

## AREAS OF OPPORTUNITIES

**Water:** Clean water, water recycling, water treatment, purification and conservation

**Clean energy generation:** Solar, solar thermal, wind and biomass

**Energy efficiency:** Reducing energy consumption through waste heat recovery, efficiency of industrial and home equipment, reduction of transmission loss, storage

**Waste management and effluent**

**treatment:** Collection, disposal, transfer and recycling of municipal and industrial waste

**Lighting:** Efficient street lighting, commercial lighting, industrial lighting

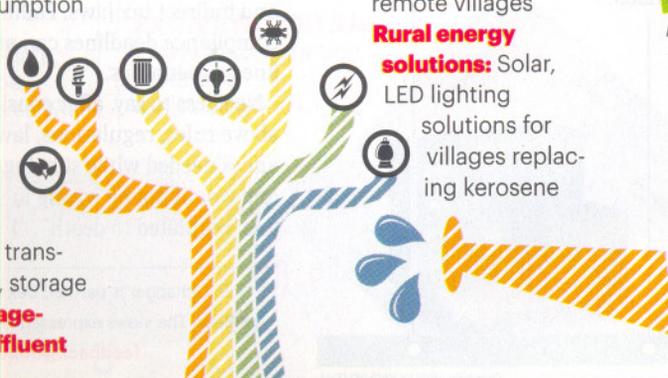
**Smart grid technology:** Application

of networking and computer technologies to make an electrical grid more efficient

**Distributed power generation technology:** De-

centralised electricity generation from small sources for remote villages

**Rural energy solutions:** Solar, LED lighting solutions for villages replacing kerosene



## THE FUNDING SCENE

### GOVERNMENT

Ministry of New and Renewable Energy (MNRE)  
[www.mnre.gov.in](http://www.mnre.gov.in); SIDBI Venture Capital (SVCL)  
[www.sidbiventure.co.in](http://www.sidbiventure.co.in)

### FOUNDATION ORGANISATION

International Finance Corporation [www.ifc.org](http://www.ifc.org)

### EARLY-STAGE FUNDING

Fusiontech Ventures [anil.paranjape@fusion-techventures.com](mailto:anil.paranjape@fusion-techventures.com)

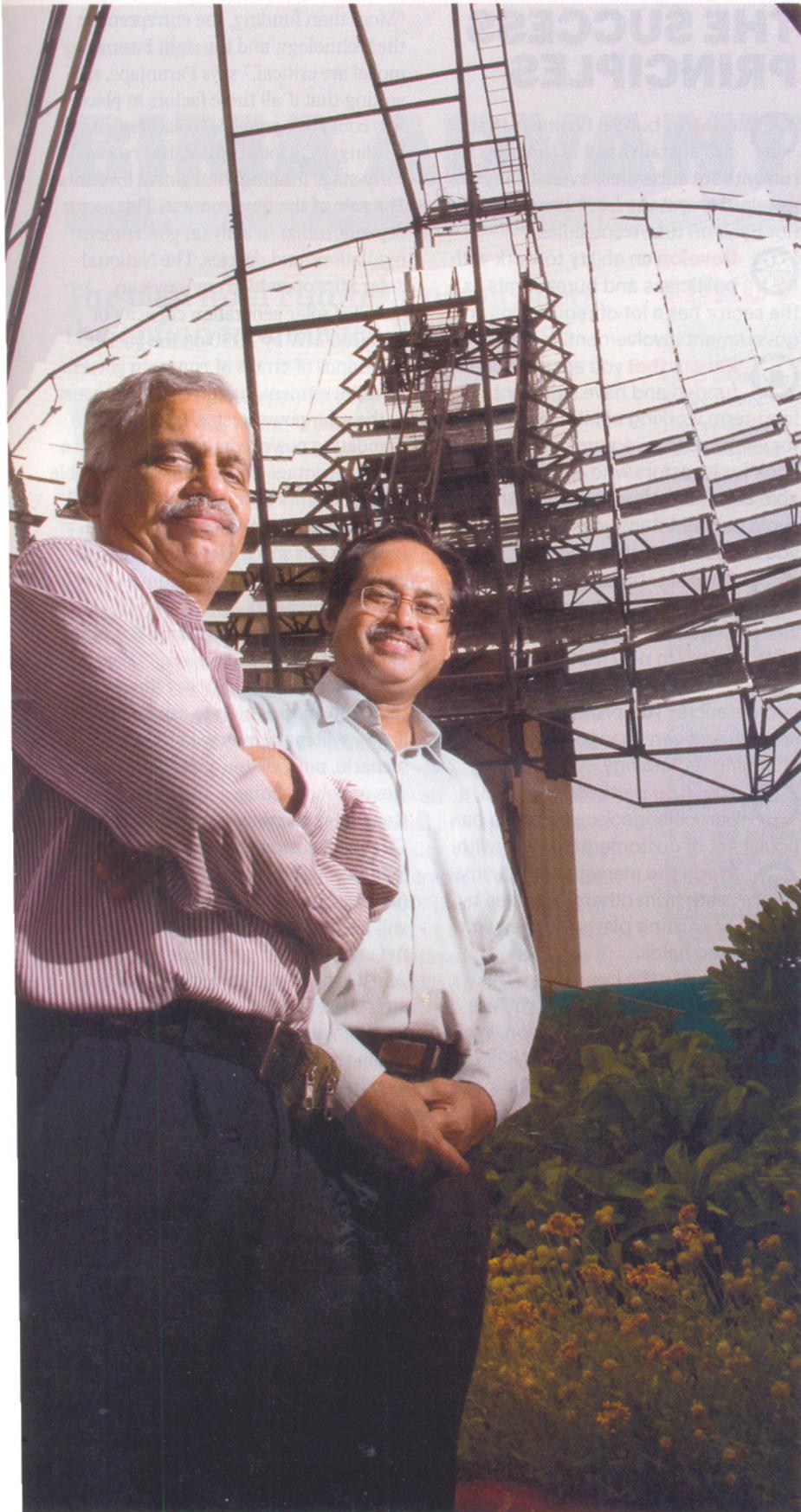
### VENTURE CAPITALISTS

Aavishkaar [www.aavishkaar.in](http://www.aavishkaar.in); Acumen Fund  
[www.acumenfund.org](http://www.acumenfund.org); Bessmer Venture Partners  
[www.bvp.com](http://www.bvp.com); IFCI Venture Capital Funds  
[www.ifciventure.com](http://www.ifciventure.com); Kleiner Perkins Caufield  
 & Byers [www.kpcb.com](http://www.kpcb.com); Nexus Evture Partners  
[www.nexusvp.com](http://www.nexusvp.com)

### INCUBATION AND MENTORING

New Ventures India [www.newventuresindia.org](http://www.newventuresindia.org);  
 CIIE, IIM Ahmedabad [www.ciieindia.org](http://www.ciieindia.org);  
 NSRCEL, IIM Bangalore [www.nsrcel.org](http://www.nsrcel.org)

Graphics: VARUN VASHISHTHA



VISHAL KOUL

technology hurdles, but stumble when it comes to the market," says Madhavan Nampoothiri, senior consultant, Energy Alternatives India, a consulting and research group dedicated to renewable energy and cleantech.

In comparison to IT start-ups, cleantech projects require high investment upfront. "A cleantech infrastructure project needs a large investment in capital expenditure; equipment or service providers requires funds for manufacturing facilities while early stage companies want capital for R&D," says Sandeep Singhal, co-founder, Nexus Venture Partners.

**Lack of early-stage funding.** "Early stage investor interest in India is sporadic, but some US angels (of Indian origin) invest directly in companies in India," says Sanjoy Sanyal, director, New Ventures India, which provides business development services to environmentally focused SMEs in emerging markets.

Being a relatively new field, cleantech has not gathered critical mass in this respect. Those who burnt their fingers during the financial crisis, says Nampoothiri, would rather invest in

Debt funding is more easily available in the early stages in India

**ASHOK D. PARANJAPE 55**

**SHIREESH B. KEDARE (R) 47**

Name of Company  
**Clique Solar**

What they do:  
Develop solar thermal energy technologies for heating and cooling

Founded in  
**2000**

Their advice to Cleantech Entrepreneurs

- Go to the market as fast as possible. Use feedback to innovate.
- Choose partners who can bring complementary skills to the business.

## Cleantech

“later stage businesses that promise safer investment and short-term returns”.

In view of the state of the economy, angel investors who had banked on egress strategies—instead of waiting for the long term—haven't been able to pull off successful exits. Says Anil Paranjape, director, Fusiontech Ventures, India's sole 'cleantech-only' early stage fund, “Some of the investments were made in me-too fashion and the companies faced a similar set of problems”.

**Other funding sources.** In comparison to equity funding, debt funding is more easily available in the early stages. Banks, for instance, fund cleantech projects, often under loan agreement deals with foreign banks. In India, the International Finance Corporation (a part of the World Bank) has bankrolled several cleantech projects, including Azure Power and Husk Power Systems, through debt-equity financing.

The Ministry of New and Renewable Energy (MNRE) foots up to 50 per cent of the project costs for certain renewable energy projects. It partly funded an R&D project for Clique Solar, which has developed a solar dish that helps reduce fuel and carbon emissions in heating and cooling processes. Gujarat promotes cleantech companies, but mostly focuses on renewable energy.

**Availability of research infrastructure.** “There is also a lack of labs and testing facilities for entry level firms,” says Kunal Upadhyay, CEO, Center for Innovation Incubation and Entrepreneurship, which is working with the Union government in the cleantech space. “An early partnership with the right institution or company can be very helpful,” says Aniruddha Sharma, of Carbon Clean Solutions (CCS), a company founded in 2009 by two IIT graduates to help power plants and industrial utilities reduce their carbon emissions.

**The promise ahead.** The future, though, is looking up. Manoj Gupta, who handled Nexus's cleantech portfolio till recently, says, “In the next two-three years the funding scenario will again become very exciting.” It is thus a good time to start work for sustainable and scalable cleantech enterprises in order to seek funding in a couple of years.

## THE SUCCESS PRINCIPLES



**Look** to build a business that can sustain itself in the long run without subsidies, even if they are required to get the business going. Do not bank on future subsidies.



**Develop** an ability to work with politicians and bureaucrats as the sector has a lot of regulations and government involvement.



**Ensure that** you are adequately funded and have sufficient long-term working capital, especially for ventures that require a lot of R&D. Look for investors who are knowledgeable about the cleantech industry, and avoid capital-intensive projects unless you are sure how they can be funded.



**Consider** timeframe for an opportunity to get commercialised and start generating profits.



**Adapt** to new trends and demands. Ensure that the core competencies you provide are broad enough and can change with fast-changing technology.



**Focus on** particular solution, a particular geography and a particular set of customers to begin with.



**Study the** market and industry. Learn from others' mistakes by talking to existing players in the same and related fields.



**Educate the consumer.** This is the key especially if you are working in the area of execution. While energy efficiency will work for B2B customers, energy availability could be the thrust in case of B2C businesses. How you pitch your product is also important, as the consumer needs to see visible economic benefits along with a viable solution to an existing need.



“More than funding, the entrepreneur, the technology, and the right business model are critical,” says Paranjape, suggesting that if all these factors in place, VCs could be agreeable to early stage funding. CCS, for instance, has received early-stage funding from global investors. **The role of the government.** This sector depends rather heavily on government regulations and policies. The National Solar Mission, which envisages an installed solar generation capacity of 200,000 MW by 2050 on the back of thousands of crores of rupees in government investment, has given a huge boost to the solar power sector. Initiatives like mandating power companies to source a fixed percentage of power from renewable energy sources have also helped. MNRE has a set of subsidies for different businesses in this space. However, a lack of clarity on several issues continues to confuse entrepreneurs.

Siddharth Nautiyal, director, Bessemer Venture Partners India, says, “There has been a fair amount of policy flux in this space. Businesses have to ask themselves if they will make money in the current scenario, not look towards future subsidies or policy changes.”

**Consumer awareness and education.** Cleantech customers, warns Nexus's Singhal, “will demand the same quality (as they from conventional technology), will negotiate as hard on price and will not care whether you are doing good”.

So it is necessary to demonstrate a direct, visible economic impact. The product pitch and the business model are crucial in this scenario. While B2C set-ups tend to work well if the entrepreneur is solving an energy availability problem—especially in the rural areas—B2B enterprises have an advantage as companies are more amenable to one-time investments for long-term savings. “With the help of tax sops like accelerated depreciation and the MNRE subsidy, the payback period for equity investment by a client can be as low as two years,” says Shireesh Kedare, co-founder, Clique Solar.

Upadhyay sums it up: “The challenges are many, but the opportunity is big.” So, those who start early will have the early-mover advantage. □

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