

Project Nivaran - An Integrated Rural Powerhouse

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Vision:

- To service the global market by utilizing the rich resources of rural India and in the process transforming the economic landscape of the Indian villages
- To develop and leverage the potential of the rural Indian market as the next growth driver to serve a sustainable business objective for all stakeholders

The Concept Origin:

The Indian Rural Market, a Growth Engine:

- 128 million households; A rural population nearly three times of urban India
- Large consuming class; 41 per cent of India's middle-class, 58 per cent of the total disposable income
- Surging middle and high income households; to grow from 80 million to 111 million by 2007
- Absolute size of the rural market expected to be double that of urban India

The Opportunity: With 70 per cent of the population, 25 per cent of GDP and 41 per cent of savings, rural India is all set to be the engine for corporate growth in the next decade. Consumption growth expected to be double-digit if infrastructure allows the consumer companies to reach new markets at reasonable costs.

Rural Sourcing, a Sustainable Business Opportunity:

- Huge crisis of non-renewable sources of energy by 2050!
- India's oil import bill Rs. 173000 crores in 2005-06
- 20 Million Unemployed Indians!
- 100 Million Hectares of wasteland in India!
- Global market for organic and processed food products: To increase to US\$ 102 Billion by 2020. India's market share: Presently <1%

The Opportunity: Devising a business solution utilizing under-tapped resources to deliver economic energy security and commercial benefits through optimal marketing of rural produce.

The Business Idea:

We aim at creating a viable renewable fuel source for India in the form of bio - diesel from Jatropha by utilizing the under-tapped resources in rural India. A distribution channel for bio-diesel would enable us to gain access to an ever-growing rural market. This strength in distribution would be extended to establish an organized retail network for the rural masses, simultaneously acting as a sourcing network for the rural produce.

Phase 1: Bio-Diesel – India’s path to self sufficiency

We intend to provide a sustainable solution to India’s biggest concern – Oil Dependency. We plan to use Jatropha as a source of renewable oil supply in the form of bio-diesel. Jatropha plant is a preferred indigenous source of bio-diesel which bears fruit for 30 years. It grows on wastelands under most unfavorable conditions, needs minimal care and can even survive long periods of drought. Hence it has the potential to provide energy security to the country by utilizing resources that have minimum opportunity cost.

Market: In-line with industry expectations, to blend 5% bio-diesel with diesel, the demand in 2007 is estimated to be 2.62 Million Metric-Tonnes. Subsequently, the blending percentage is slated to rise to 20%.

- *Oil Marketing Companies:* IOCL, HPCL, BPCL, Reliance Petroleum, Shell etc. HPCL & IOCL after substantial R&D are certain about the commercial viability of bio-diesel production from Jatropha and are scouting for supply-partners. This would be the market for supplying blended bio-diesel to the end-user.
- *Institutional Consumers:* This is the target market for our pure bio-diesel variant. It is made up of players like Indian Railways, State Roadways, Shipping Companies and other industrial companies using heavy engines and pumps. We will use direct marketing for meeting this segment’s needs.
- *Rural Consumer:* Bio-diesel can be used as a source for Rural Electrification. It can also fulfill the fuel needs of rural India to power the farm pumps and tractors.
- *Export Market:* European countries, Japan and US have come out with norms that have clear implications in terms of an increasing bio-diesel demand. It also has a huge market as a fuel blended with “Heating Oil”, which is used to heat homes in the colder regions of the world.
- *Carbon Trading under Kyoto Protocol*
- *By-products:* Oil-Cakes (NPK-Fertilizers) have a ready market, while glycerol has ready takers with pharma and cosmetic companies.

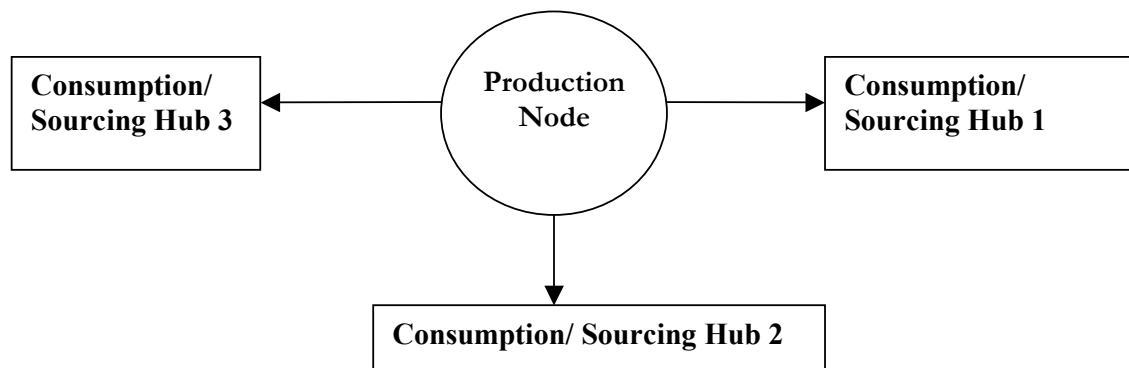
Implementation Strategy: The first step would be to get Expressions of Interests (EOI) from our potential customers like Railways, State Roadways, Oil marketing companies etc. This strategy would ensure ready customers for our produce and would minimize the risk of entering an undeveloped market.

We start the groundwork by identifying 20 major areas in the country and lease out 2 lakh Hectares of plantation, under the favorable policies of various state governments for Jatropha plantation (leasing cost as low as Rs 100/Hectare). After planting Jatropha saplings there would be a gestation period of

two years before we get our first yield of seeds. By the end of the 2nd Year, we would have set up trans-esterification plants (adhering to DIN/ASTM standards) of 100 Kilolitres/day of bio-diesel output in each of the 20 plantation hubs. This would be to cater to the needs of the institutional markets and the oil marketing companies.

After establishing a strong foothold with these customers, we plan to move to our next stage i.e. **tapping the rural market**. We plan to establish a strong distribution channel with retail outlets connected to each of the 20 production centers. We have opted for the hub and spoke model as the preferred distribution model for our bio-diesel produce. At the same time, it shall double up to include other revenue streams also, as explained below.

Phase 2:



Production Node:

This is where the Jatropha plantation and the Trans-esterification process for the production of bio-diesel takes place. (Phase 1)

Consumption/Sourcing Hubs:

These represent the areas in proximity to the Production Node which will be identified strategically on the basis of their consumption potential. These would essentially be near areas where substantial cultivation activity takes place. This will ideally satisfy our sourcing needs also, apart from consumption of our bio-diesel produce. The three primary activities will be carried out at these consumption hubs are:

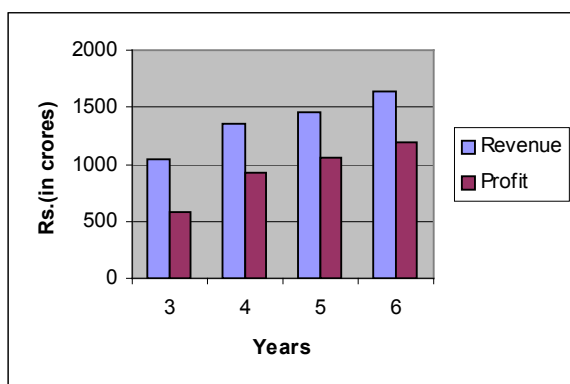
1. Each hub would have a bio-diesel dispensing outlet for the farmers to fulfil their fuel requirements in irrigation, tractors etc.
2. Within the same premises, a *customised retail store* shall operate where all the products for daily needs of the rural folk are made available. This would give players in the FMCG, pharmaceutical, consumer durable and financial sectors a platform to piggy-back on our distribution strength to gain penetration into the rural heartland. Besides, it will act as a centre for packaging products manufactured within the village and subsequently making the same available in the store.

- The hub will also act as a procurement centre for organic food and processed food products so that they can be channelled to the export markets.

Phase 3: Expansion

Based on the success of this project, we plan to further replicate this model to cover other rural markets.

Financials:



Fixed Financing Requirements:

- Phase1 (Bio Diesel): Rs 1200 Cr (Plantations)
- Phase2 (Distribution centres): Rs 500 Cr
- Phase 3 (Expansion): Rs 7000 Cr

Revenues to begin from: Yr 3

Break-Even Period for Bio-Diesel Project: 4 Yrs

IRR (bio-diesel project): 40%

- The above bar graph is representative of the Jatropha Bio-Diesel Project.
- Phase 1 includes 2 lakh hectares under cultivation for Jatropha
- Phase 2 includes setting up of 400 retail outlets
- Phase 3 is to further penetrate rural markets by opening about 2000 distribution centers and bringing 8 lakh hectares more under cultivation

Conclusion: Bio-diesel from Jatropha will be an Environmentally Benign Solution for Energy Security & Rural Economy of India, also opening up completely new opportunities for the company by fostering a mutually beneficial partnership with rural India.