

Urja Fuels Pvt. Ltd.

Sector Name: Chemicals/Power

Institute Name: Management Development Institute, Gurgaon

Team Name: Crusaders

Team Members:

Balesh Kothari	pg06balesh_k@mdi.ac.in	9971508101
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The Need

India's Central pollution control board has estimated the municipal solid waste (MSW) to increase from 130,000 MT per day (1997) to 821,000 MT by 2047. Consequently, the estimated requirement of land would increase from 20.2 square km (1997) to 169.9 square km by then which is a very expensive and undesirable alternative.

The business opportunity

The company, Urja Fuels, plans to profitably exploit the emerging opportunities in waste-management domain and address the country's growing energy needs, at the same time providing a sustainable source of income to the low-income group by processing scrap and waste plastics to produce liquid fuel.

Objective

To be one of India's leading producers of renewable and sustainable energy products. The incorporation of Plastic Waste to Fuel Plant is the first step towards achieving the goal of becoming the leading energy and waste problem solution providing enterprise in India.

Implementation

Technology: At the heart of the venture, lies a Japanese waste-conversion technology which is currently distributed by Ozmotech, a private company based in Australia. With this technology, we can convert plastic wastes to a liquid fuel with physical and chemical characteristics very similar to high-speed diesel. The process can handle all kinds of unwashed plastic waste except PVC and other hetro-atoms. The fuel obtained conforms with EN590:2000 standards and is fit

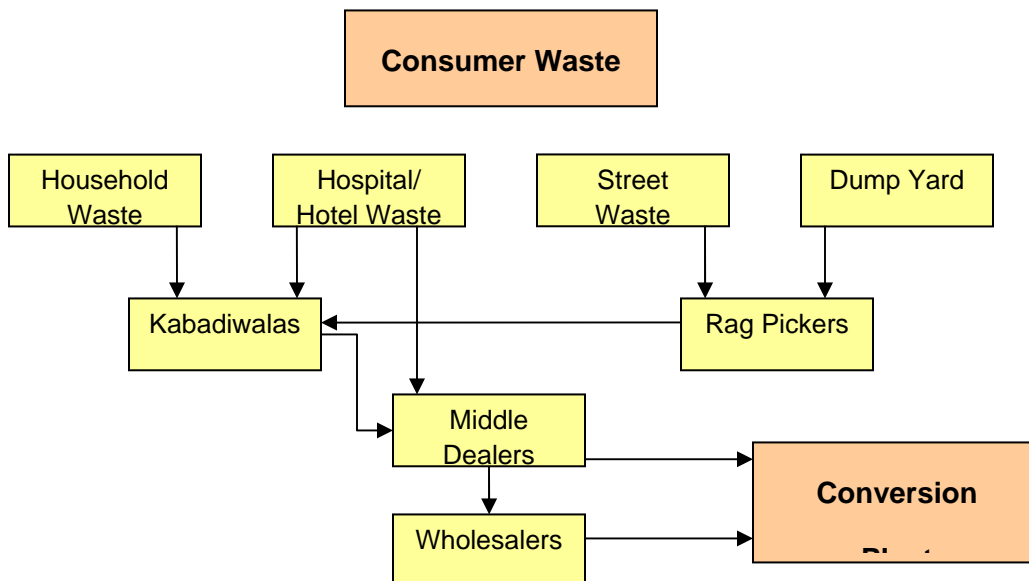
for stand-alone consumption in diesel engines, thus it is suitable for blending with commercial diesel oil.

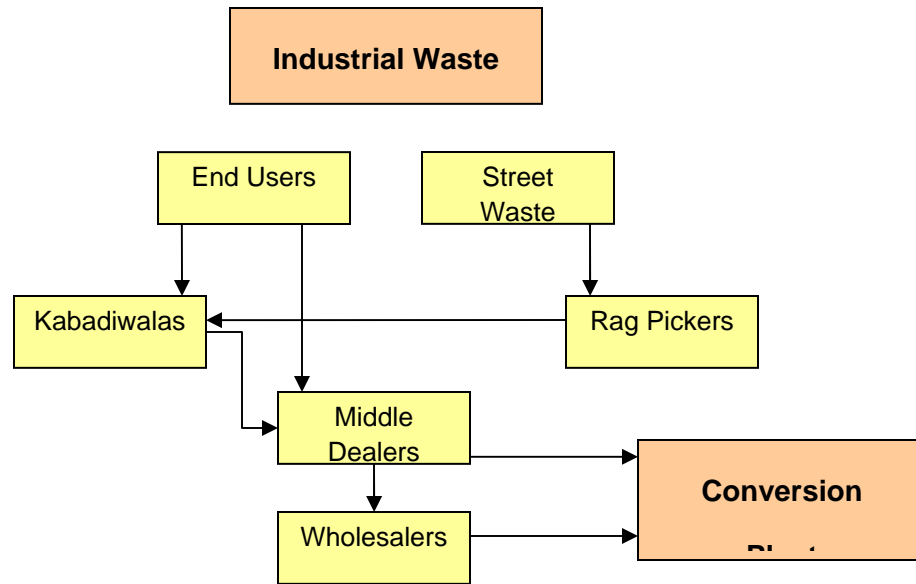
Sourcing of Waste Plastic

- The main sources of waste plastic are The four main sources of **consumer waste** are Household waste, Hotel/Hospital waste, Street waste, and Dump yard.

Based on our estimates the weighted average cost of plastic waste is approx \$233.5 /tonnes.

Sourcing of Waste Plastic





Facility: In our production facility, we propose to set up 3 modules each having a capacity of 30 tonnes. With the conversion efficiency of 95% and capacity utilization of 98% the plant is capable of producing 29000 tonnes of liquid fuel per annum.

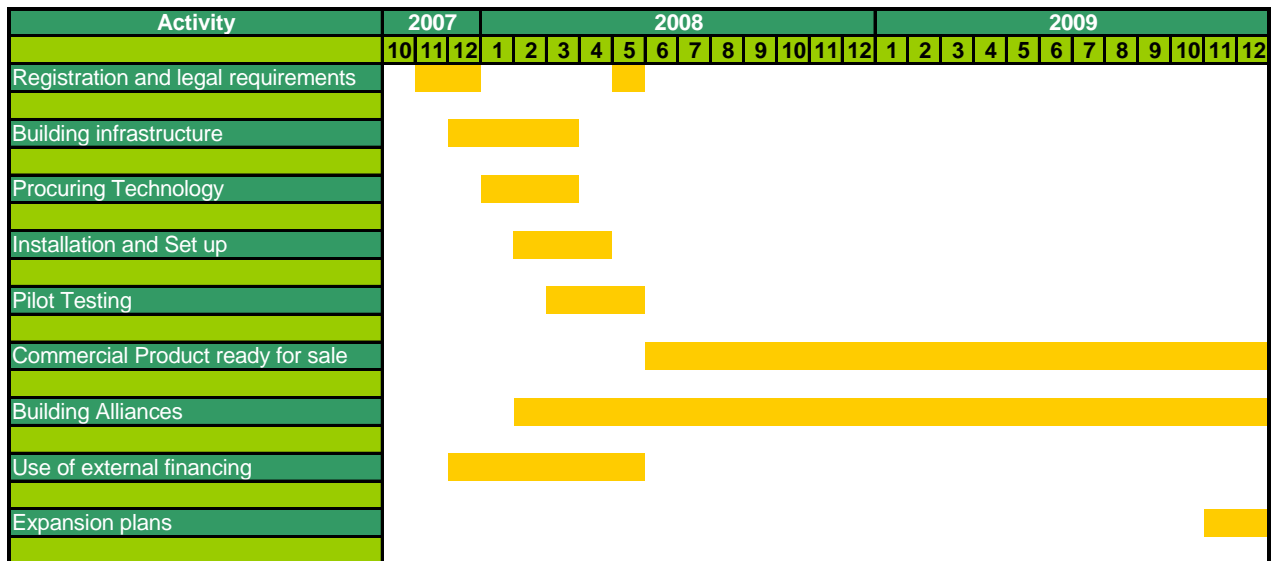
Selling strategy

We intend to brand this fuel as Urja - meaning energy. Urja fuel oil finds ready application as furnace oil in power plants and as substituting blend in diesel oil. Our target segments will be

- Refineries in Gujarat
- Shipping vessel operators
- Rural irrigation schemes

Proposed

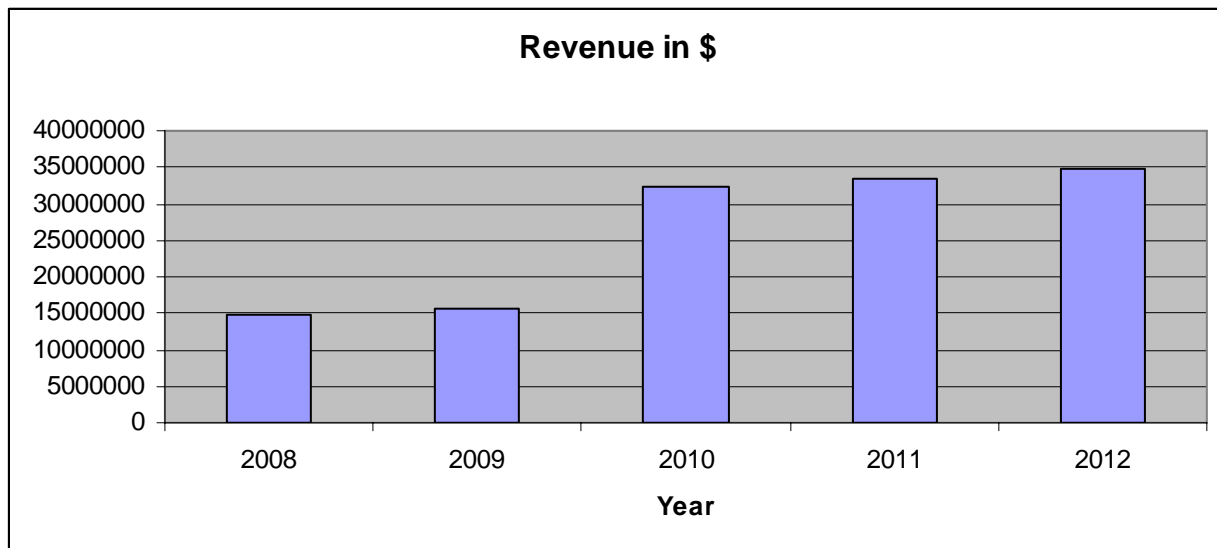
timeline:



Financials

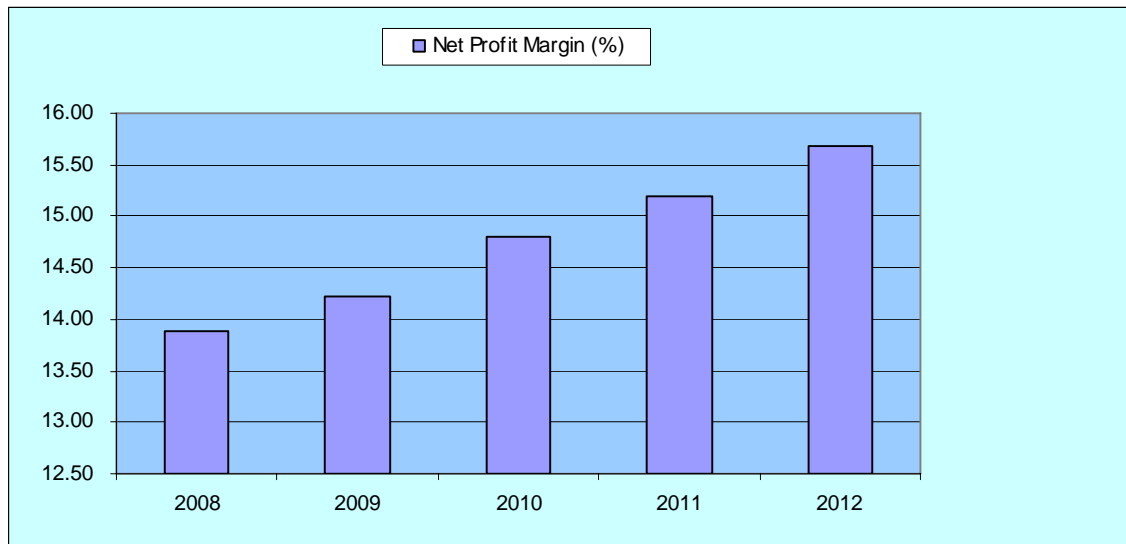
Proposed Funding of the plant: In the first phase of the project in January 2008, the initial seed capital invested in the project will be Rs. 30 crores (\$7.5 million) and a further debt of Rs. 60 crores(\$15 million) will be raised for the purchase of land, commissioning of technology, and other capital expenditures. Another round of similar funding will be made 2 years later in January 2010.

Revenue Analysis: Due to the high demand of industrial fuels and cheap price of the produced fuel, the company will be able to operate at 98% efficiency from the beginning. The fuel will be priced at Rs. 21/l (\$525/KL) which is almost 30% less than any other diesel. The revenue growth is a function of the selling price and the capacity of the plant.



Profitability: The net profit margin of the company is around 9.5% on average for the next 5 years with a steady increase. The IRR of the project is 31% with an ROE for the venture capitalist of 21%.

Profitability analysis



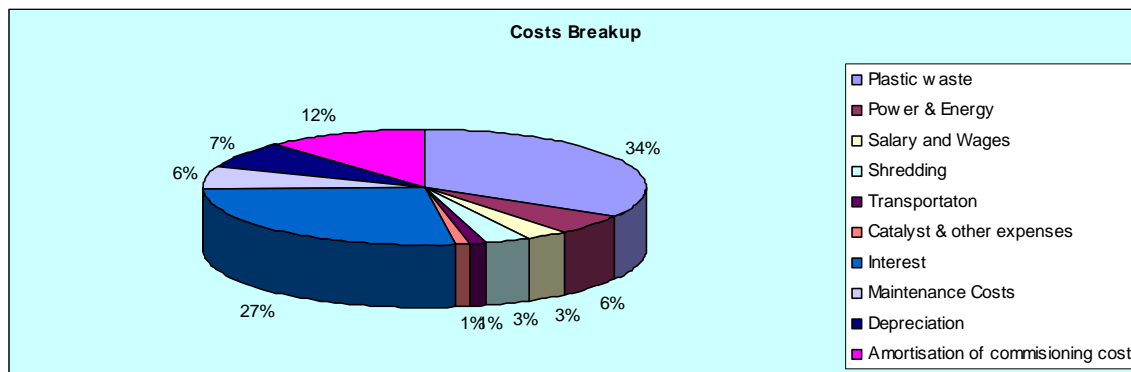
Projected Cash Flows in (\$)

Year	Cash Flows
0	-21307125
1	3958789.47
2	4114446.443
3	8636477.072
4	8973912.881
5	9324344.457
6	9688460.398
7	9688460.398
8	9688460.398
9	9688460.398
10	9688460.398
11	9688460.398
12	9688460.398
13	9688460.398

Cost Analysis

The various costs involved can be divided into capital costs, independent costs and utilization costs. The cost of commissioning Ozmotech plant would be around 6.25 million USD.

Breakup of Costs



Management Team

Urja Fuels will be setup by 5 MBA students from MDI, Gurgaon. Ms.Shachi Bajoria is the CEO of the company and will also be responsible for marketing. She is a second generation entrepreneur and has prior experience in Polymer Products industry. Mr. Jatin P Singh is the Chief of Operations. He graduated as Mechanical engineer and has five years experience in Project management and operations in the Indian Energy sector. Mr. Balesh Kothari is responsible for company's finance. With a graduate degree in Computer Science, he has been closely associated with his family run manufacturing enterprise. Mr.Anshul Jain and Mr. Balaji R will be responsible for other various operations of business.

Socio- economic impact

- The project is going to generate sustainable employment opportunities for lower income groups of rag pickers
- The plan involves development of the economy through an alternative method for generating fuel along with disposal of the plastic waste.
- The fuel produced is clean without any toxic by products generated; it will help us earn carbon credits.

The Venture Capital proposition

The company seeks to employ seed capital to fund the initial round of capital expenditure and hence its ability to sustain high returns for the venture capitalist will be crucial. This will necessitate a highly leveraged capital structure and therefore high interest payments – which will also reinforce financial discipline.

Based on financial projections, payback period is 2 years and 3 months. Thereafter we plan to raise another round of equity and debt (in Nov 2009) to double the capacity of the plant. The company is seeking investors who will contribute Rs. 75 Cr (approx. 18,000,000 USD). In return, investors will receive 49% ownership and 2 out of 5 seats of the board of directors.

The successful operation and upsizing of the project will lead to greater certainty in project's cash flows. This will also reinforce the faith of investing community in the capability of the management. Thereafter, Urja Fuels will go public in 2012. We propose an exit plan for the Venture Capitalist through a stake sale in the proposed IPO of the company.