


# AGRO-BIOGENICS (Clean-Tech) Private Limited

## APIX\_PILOT

### ZERO-WASTE ZERO-CARBON BUSINESS-MODEL (ZW-ZC-BM)

Our business, working within democratic constitutions, would not be interested in Tax benefits, Subsidies and other Government/ outside controlled Doles. Instead, it would be our objective to build up a highly efficient and self-perpetuating new business that would be courted by others, for their economic benefits and Economic Power. However, Carbon Credits obtained would be elicited and passed on to Charities

Name	<b>AGRO-BIOGENICS (Clean-Tech) Private Limited</b>
Country:	<b>India</b>
Company Website	<a href="http://www.agro-biogenics.com/Index.htm">http://www.agro-biogenics.com/Index.htm</a>
Blog	<a href="http://zerowastezerocarbon.wordpress.com/">http://zerowastezerocarbon.wordpress.com/</a>
Year of Establishment	<b>August, 2010</b>
Registration Number	<b>U74900KA2010PTC054826 of 2010 - 2011</b>
Industry	<b>Clean Technology [Energy, Engineering materials, Recycling, Bio-petrochemicals)</b>
Phone Number	<b>91 80 32929584</b>
Contact person	<b>Hariharan PV (Chief Mentor &amp; Promoter)</b>
Address	<b>No.2, S-2, ROHINI, Syndicate Bank Colony, Off_Magadi Road Prashanth Nagar (Basaweshwar Nagar Post)</b>
City	<b>Bangalore</b>
State	<b>Karnataka</b>
Postal Code	<b>560079</b>
Logo	

### Management Team

Sr No	Salutation	First Name	Second Name	Title/ Appellation	Experience yrs	Background	Fields/ Subjects/ Remarks
1	Mr	Hariharan	P. Vaidyanathan	CMP & MD	38	Mech.Engi- neer BTech	Engineering, Industry, Tech. Products Development, Entrepreneur
2	Dr.	Pilaka	Murty	Director	35	PhD Mech Engineer Professor	Engineering, Academics, R & D (India and US)
3	Mr	Mohan	Das	Director	35	MS (Chem) Scientist	Wood Science, R & D Industry
4	Ms	Lalitha	Krishna	Director	20	Sociology Graduate	Social Projects and Management
5	Mr	Anand	Kumar	Director	20	Engineer BTech	Engineering & Infrastructure
6	Mr	Vaidyanathan	Hariharan	Director	5	BS (Chem); PGDCA	Administration and Liaison operation

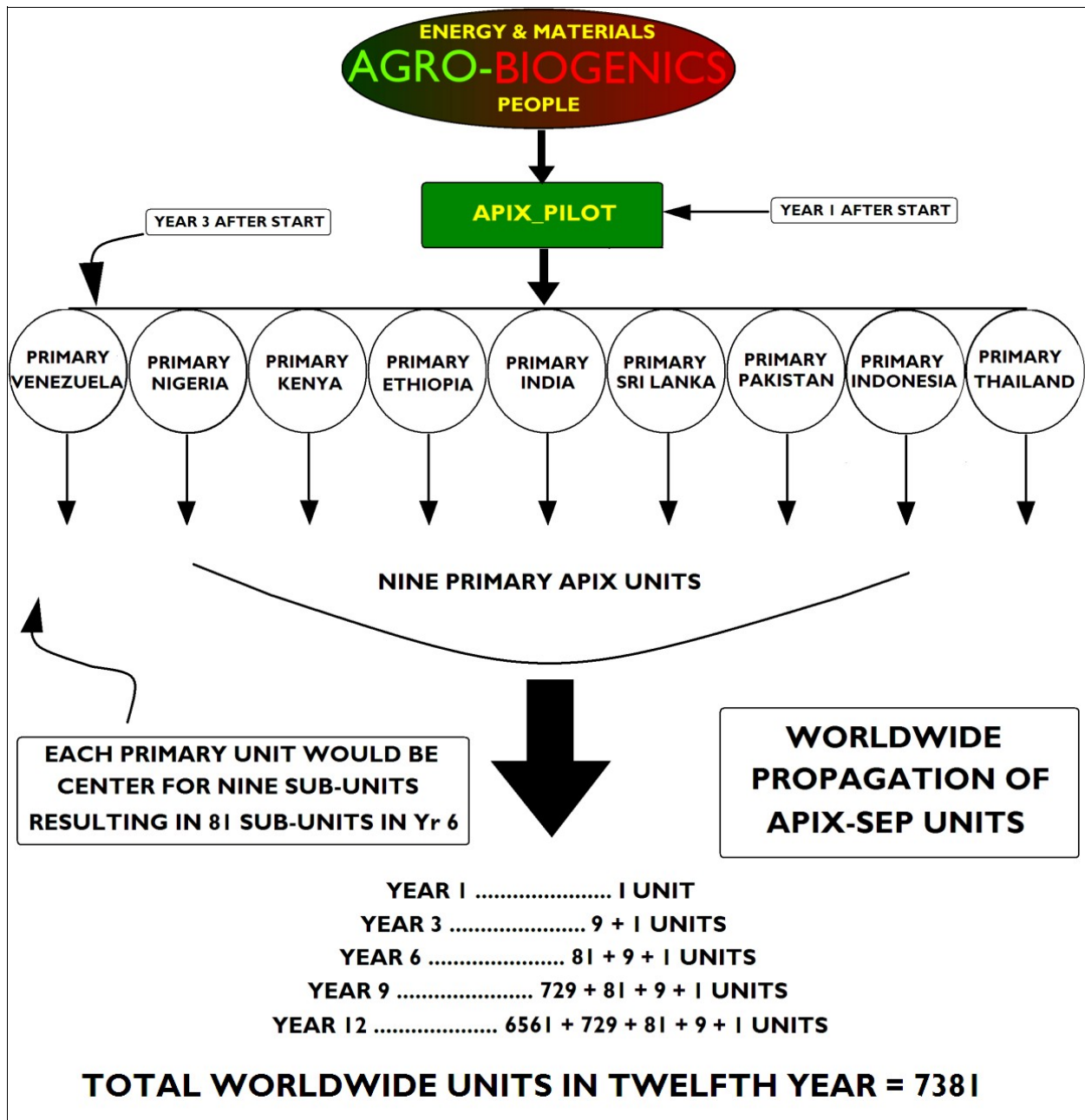
# AGRO-BIOGENICS (Clean-Tech) Private Limited

## BUSINESS PLANS & STRATEGY

Main Thrust	Closed-Loop Zero-Waste Zero-Carbon Business-Model (ZW-ZC-BM): Energy, Engg. Materials, Bio-Petrochemicals, CO2 Sink: the FUTURE MEGA-BUSINESS
The Business	ZW-ZC-BM set up at field level, through AGRO-POLYMER INDUSTRY-COMPLEX-SUSTAINABILITY ENGINEERED PROJECTS (APIX-SEP). Available Renewable Resources (RR) converted to: Energy, Engg. Materials, Bio-petrochemicals and processed foods. Village cluster industries using 1000 ha area RR (APIX_1000) could generate \$20 M businesses each. India has \$2 trillion potentials. APIX_Pilot to showcase \$200 M businesses in 6 yrs, on \$2.1 M investment & 300% ROI
The Team experience	Most Team members having 35+ yrs experiences in various fields: Engineering, Polymer Technology, Composites, Carbon Sequestration, Adhesives, Coatings, Corrosion technology, Renewable Resources and Alternate Energy, Agro-Resources and Biogas systems, New Products developments, Industry Setting up from concept, Small industries management, and Social businesses. Chief Promoter having worked/ developed the concepts for over 20 yrs
The Customer "PROBLEM"	Global Warming & Poverty (GWP) affect 160 nations; poverty compels people to migrate; high energy cost, scarcity of human material needs; environment degradation: these interrelated problems addressed
The "SOLUTION"	GWP answered, through APIX_1000 clusters, effecting non-fossil RR based integrated businesses in Energy, Engg. materials, chemicals, fuels, fertilizers and water. Local people get jobs locally. APIX_Pilot to showcase these AGRO-BIOGENICS technologies, attracting new entrepreneurs worldwide. Hundreds of Joint-ventures would be promoted, to set up APIX_1000 clusters; 150000 clusters in India to answer development needs
The MARKET	India's market defined based on RR availability: 100000 MW Power; 100 Million T Bio-petrochemicals; 100 M T Engg. Materials; 500 M T processed foods; 400 M jobs. 635000 villages (average cluster within 4 villages) would be benefited. All other tropical nations have various potentials, based on available RR. Total world potentials estimated @ \$4 trillion. APIX_Pilot would produce a fraction of these; planning over \$10 billion in 12 yrs
CUSTOMERS	APIX_1000 projects aim at hundreds of potential New Entrepreneurs in 160 nations. APIX_Pilot products Customers are households, commercial industries in a about ten Cities in India, out of 600 + cities/towns
Sales and Marketing strategy	Two Products systems: APIX_1000 clusters and Manufactured products. The former to be marketed through interactions at Government Development institutions (direct marketing & Conference Invitees). Invited audiences to be Officials and entrepreneurs. Product marketing through regular distribution/ sales channels for the individual product systems. Sales personnel would be trained from local villages through training and commission-incentives
BUSINESS-MODEL	Main Business-Model: Joint-Venture Partnerships elicit 49% stakes for technology, reducing stakes to 19% through "buy-back" in 5 <sup>th</sup> yr. The other: Owned manufacturing earns through products sales
COMPETITION & COMPETITORS	Clean-tech ventures: ZW-ZC-BM that is implemented by all-encompassing APIX-SEP does not seem to have immediate Competitor; the nearest is the "Bio-Refinery" conceived by NREL, US: <a href="http://www.nrel.gov/biomass/biorefinery.html">http://www.nrel.gov/biomass/biorefinery.html</a> which is "energy-centric", without other value added products; This APIX_Pilot Products compete with regular Crockery/ Melamine Crockery, Wood substitute Doors, and Chemical fertilizers
Competing Advantages and BARRIERS to entry	Joint-ventures offer FREE Know-how, continual Tech. support and patent rights transferred; individual products being patented; GREEN Certifications would be obtained; both form entry barriers. Products/ Technology/ Business form disruptive models
Long term STRATEGY and developments	The long term objective is to spread APIX-SEP all over India and worldwide, setting up hundreds of APIX_1000 clusters. Estimated potential in India alone is over 150,000 APIX-SEP units generating: 100,000 MW power; 500 M T processed foods; 100 M T bio-petrochemicals; 100 M T Engineered products; 300 M Cu. M of Bio-water -total values over \$3 trillion. Every other tropical country would have various range of potentials

# AGRO-BIOGENICS (Clean-Tech) Private Limited

## JOINT-VENTURE POTENTIALS



### ESTIMATED WORLDWIDE BUSINESSES OVER SIX YEARS

Target Year	APIX_Pilot	Primary units	Sub-units	Total Turnover (\$)	Total Net Profit (\$)	Agro-Biogenics (\$)
2012	1	---	---	9,000,000	1,500,000	1,500,000
2013	1	---	---	14,000,000	2,500,000	2,500,000
2014	1	---	---	29,500,000	5,500,000	5,500,000
2015	1	9	---	59,400,000	9,241,387	9,196,290
2016	1	9	---	180,528,339	33,355,909	26,292,352.
2017	1	9	---	226,270,750	43,359,577	31,446,193
2018	1	9	81	480,020,688	71,602,422	45,285,187
		Total 91 units		998,719,777	167,059,295	121,720,022

NOTE: Each Joint-Venture Partnership would be between the Venture partner and Agro-Biogenics (@ 49% equity initially, diluted to 19% in 5<sup>th</sup> year). The Primary Units in each nation would be offered 15% of the net earnings from the Sub-units. Each Primary unit, in turn, would have to shell 15% benefits to the “next-line” units... and this to continue all through down the line.

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## Business Stage & Financial Summary (Estimated)

Company Stage	Prototype ready
Currency shown	US Dollar (\$)
Promoter Equity	42, 300
Monthly net burn	204, 750 (Yr 2 operation, 2012)
Cumulative Turnover	\$199, 000, 000 in Six years operations, starting 2011
Positive Cash Flow	Positive from year 1 (2011). Cumulative Gross Cash Flow = \$35, 702, 945
Additional Investments made	Investments, to enhance Production from original level to six times value, made in year 3, 4 and 5; Total invested (from reserves) = \$4, 583, 333
Premoney value	4, 900, 000
Future Value	\$2,150,400,000 ... after 6 years (datum from year 2)
Capital sought	2, 083, 333
Exit offer	out of \$2,083,333, \$416,667 to be Redeemed Preference shares at \$1,041,667 in 5 years; balance @ 8% Debt repaid in 5 yrs; Investor offered 30% stake

## Financial Forecast

YEAR	Sales/ Revenue	Expenditure/ Outgo	Net Profits
2010	0	100, 000	(-) 100, 000
2011	1, 399, 843	1, 390, 018	9, 825
2012	9, 080, 926	7, 542, 025	1, 538, 901
2013	14, 030, 080	11, 434, 570	2, 595, 510
2014	29, 624, 520	23, 979, 345	5, 645, 175
2015	46, 886, 220	37, 733, 260	9, 152, 960
2016	98, 885, 280	79, 379, 480	19, 505, 800

## VENTURE-CONTEMPLATION INSTEAD OF A CONCLUSION!

**THE NEXT BIG-THING (TNBT)** is not the sophisticated explorations/ voyages to Pluto or the Stars nor the robotic gadgets or genetically modified cells in micro-bio-technology; but it would be the New Business Paradigm that simultaneously answers **GLOBAL WARMING** and **POVERTY (GWP)**. The “on-the-ground” development would be brought about through sustainable development and utilization of available Renewable Resources (RR). This results in: **ZERO-WASTE ZERO-CARBON BUSINESS-MODEL (ZW-ZC-BM)**, that would simultaneously mitigate Global Warming and Poverty (GWP), through Self-Regenerative Recycling (SRR), using available RR

# AGRO-BIOGENICS (Clean-Tech) Private Limited

## PROJECT FINANCE NEEDED (US \$)

1 Initial Expenses and Company formation etc .....	43, 480
2 Land arrangement (leased out Total 3 Acres) .....	108, 700
3 Site preparation, buildings and office .....	326, 090
4 Plant and Machinery, auxiliaries and Power systems .....	913, 050
5 Other Imponderables (12% of all above) .....	166,960
6 TOTAL FIXED CAPITAL .....	1, 558, 280
7 First year working expenses .....	567, 330
8 TOTAL PROJECT CAPITAL .....	2, 125, 610

### The following “returns” and incentives are planned to be offered to the INVESTORS:

- Investors who bring in the total Funds of \$2, 083, 333.33 would be offered 30% stake in the Promoter Shares of the Co
- Up to 50% of the Total Company's authorized shares (invested by the main promoters) would be Pledged to the Investors (on prorata basis), to be “released” as soon as the repayments are cleared as agreed up on. These pledges would be through “Charge creation” with the Registrar of Companies, as per the Companies Act
- Values, to an extent of \$416, 666.67 would be offered Redeemable (and partly convertible) PREFERENTIAL Shares; redeemed @ a value of \$1, 041, 666.67, if full shares are to be Preferential
- The Fund investors (opting for this arrangement) would be offered Special Director Posts (with Powers to involve in Financial management and also in the appointment of managerial personnel)
- The 30% Promoter Stakes would continue to be enjoyed by the Fund Investors, even after the repayments are over (planned to be within 5 yrs)
- Dividends are offered as per Share-holdings
- Director Perks would be offered
- The overall Returns expected are: Investments = \$ 2, 083, 333.33; Moneys retrieved within 5 yrs = \$6,500,000 (312%)
- Premoney Valuation = \$4, 900, 000

## THE FINANCIAL PROJECTIONS (APIX\_PILOT)

### ASSUMPTIONS:

- All computations made in Indian Rupees
- Banana Stems are purchased @ \$8.35/T
- The following effective production are noted, on the basis of 6000 hours of annual operations:
  - Banana Fiber substituted Crockery ..... 110 T
  - MS DOORS (wood Substitute Molded Doors) ..... 7360 T (327, 111 numbers)
  - Biofertilizer (solids) ..... 338.33 T
  - “GREEN” Sulfur ..... 7.5 T

Increments above this level would be on “prorata” basis
- Effective Annual productions: (Energy systems operate at 50% level in year 1) ...Production to Double in 4<sup>th</sup> yr; treble in 5<sup>th</sup> yr and sixfold in 6<sup>th</sup> yr

Description	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Shifts	1	3	3	3	3	3
Effective days	100	300	300	300	300	300
Effective hrs	600	4000	6000	6150	6300	6450
Crockery (T)	11	73.33	110	225.5	346.5	354.75
MSD (T)	736	4906.67	7360	15, 088	23, 184	47, 472
Biofertilizer T	169	225.55	338.33	714.38		
Sulfur (T)	3.75	5	7.5	15.37		

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5. Estimated Raw materials and Resources input: The following are needed (from yr 3) ... yr 3 costs escalate @ 3%, continuing that way annually:
  - Banana trees/ stems wastes ... 200,000 numbers ... 10000 T gross (10000 nos. for crockery & 190000 nos for Energy @ \$0.833 ... Total Power obtained Heat + Electricity = 550 KW)
  - Sawdust for Boards (based on 30% moisture) ... 5215 T @ \$62.5/ T
  - Plants/ fibrous vegetation etc (25% solids) [3650 T for Boards] ... @ \$62.5/ T
  - Glass fibers 830 T for Boards @ \$2.09/ Kg; Crockery Filler 10 T @ \$729/17/ T
  - Polymers @ \$2.19/ Kg 1486.5 T; Chemicals 208 T for Boards @ \$1.35/ Kg; Glass-Fiber mats for Boards 172.5 T @ \$3333.33/ T; Melamine etc 50 T @ \$3541.67/ T; Packaging for Crockery @ 9% Sales value of crockery ... Annual Cost increments are assumed @ 3% (from 3<sup>rd</sup> yr onward)
6. The First year productions of Energy and other related materials would be estimated @ 50% full values
7. Process wastage are considered = 1.5% of all raw materials input, inclusive of packaging (although we shall use almost all wastes too)
8. Salaries/ wages etc (see 2 above) are expected to increase annually @ 3%; first year's manpower @ 75% level; second year also at 75% level; 3<sup>rd</sup> yr on, at full level (with the 3% increment considered)
9. Maintenance and repair costs are @ 2.5% of raw materials (packaging inclusive)
10. Additional Overheads and imponderables @ 9% on sales
11. SALES: Molded Crockery @ \$11458/33/ T; Molded Strand Doors @ \$1666/67 per T; Biofertilizer @ \$260/42 per T; GREEN Sulfur @ \$833.33 per T [Annual increment @ 3% computed from Yr 3]
12. Working capital (WC) estimated @ 1/6<sup>th</sup> of sales; WC interests estimated @ 12.5% from 2<sup>nd</sup> yr on, (trial period we offset a portion of the debt funds for WC = 1/2 of estimated costs) [NOTE: Although the WC interests would be on the (70%) borrowings, we shall consider the total value for interest computations...thereby looking at "conservative costing"]
13. Overall finance costs estimated @ 10% of on Debt funds (Borrowings = Rs.8 Cr) ...interest paid in full from Year 1; additional costs on insurance etc @ 2.5% of sales [Note: This is a conservative costing, although actual interests are only 8%]
14. Depreciation is computed as follows (year 1, we consider only 30% value) ... see below
15. 10% of Net Profits are Donated to Charity, claiming 50% on the same as Tax rebate, the following year
16. Total Funds (\$2,125,610) brought in by Co-promoters are: \$2,083,333.33 by way of Preferential (\$416,666.67) + Debt (\$1,666,666.67). 30% shareholding offered + \$416,666.67 Preferential shares (redeemable @ 250% value, in 5<sup>th</sup> yr); Debt funds @ 8% interest (reducing balance) ... NOTE: For conservative estimate Debt interests are computed @ 10%
17. There would be annual "Directors' Perks, from year 2:

Directors' perks	---	208, 333.33	416, 666.67	625, 000	625, 000	1, 041, 666.67
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18. DEPRECIATION and WRITE-OFF VALUES: (\$1, 041, 666.67 invested in 3<sup>rd</sup> yr; depreciation on these @ 10% from 4<sup>th</sup> yr, added on; \$1, 250, 000 additional in 4<sup>th</sup> yr; and \$2, 291, 666.67 in 5<sup>th</sup> yr --- all from Cash flow reserves)

Depreciation (Rs.)	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Yr 6
@ 5.00% (Rs.)	300, 000	985, 000	935, 750	888, 962.5	844, 514.37	802, 288.65
@ 10.00% (Rs.)	1, 260, 000	4, 074, 000	3, 666, 600	8, 299, 940	13, 469, 946	23, 122, 951.4
Ten yr write-off (Rs.)	290, 400	968, 000	968, 000	968, 000	968, 000	968, 000
TOTAL (Rs.)	1, 850, 400	6, 027, 000	5, 570, 350	10, 156, 902.5	15, 282, 460.37	13, 893, 240.05
TOTAL (US \$)	38, 550	125, 562.5	116, 048.96	211, 602.13	318, 384.59	289, 442.5

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## ECONOMICS OF OPERATION (Molded Crockery 110 T + MSD ... 7257 T ... PRODUCTION DOUBLES in 4<sup>th</sup> yr; treble in 5<sup>th</sup> yr; Sixfold in 6<sup>th</sup> yr)

Description	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Yr 6
No. of shifts	1	3	3	3	3	3
No. of days	100	300	300	300	300	300
Effective hrs	600	4,000	6,000	6,150	6,300	6,450
<b>SALES (US \$)</b>				<b>DOUBLE</b>	<b>TREBLE</b>	<b>SIXFOLD</b>
Crockery Prodn. T	11	73.33	110	225.5	346.5	709.5
Boards Prodn. T	736	4906.67	7360	15,088	23,184	47,472
Crockery	6050000 (Rs.)	40,331,500 (Rs.)	62315000 (Rs.)	131578122.5 (Rs.)		
Molded Doors	58880000 (Rs.)	392,533,600 (Rs.)	606464000 (Rs.)	1280548736 (Rs.)		
Biofertilizer	2112500 (Rs.)	2819375 (Rs.)	4355998.75 (Rs.)			
Green Sulfur	150000 (Rs.)	200000 (Rs.)	309000 (Rs.)			
<b>TOTAL SALES (\$)</b>	<b>1,399,843.75</b>	<b>9,080,926.56</b>	<b>14,030,083.3</b>	<b>29,624,520.9</b>	<b>46,886,223.45</b>	<b>98,885,277.93</b>
<b>COST UNITS OF OPERATION/ PRODUCTION Shown in Rs. ... TOTAL COSTS IN US \$</b>						
Banana Plants	4000000	5333333.33	8240000			
Sawdust	1564500	10430000	16,114,350			
Plants/Fibers	1095000	7300000	11,278,500			
Fiber for Boards	8,300,000	55,333,333.33	85,490,000			
Glass-mat (Doors)	2,760,000	18,400,000	28,428,000			
Filler for crockery	35,000	233,333.33	360,500			
Polymer	15,608,250	104,055,000	160,764,975			
Chemical	1,352,000	9,013,333.33	13,925,600			
Melamine etc	850,000	5,666,666.67	8,755,000			
<b>Raw materials (\$)</b>	<b>740,932.29</b>	<b>4,495,104.17</b>	<b>6,944,935.93</b>	<b>14,664,232.23</b>	<b>23,208,829.98</b>	<b>48,948,527.62</b>
Packaging	544,500	3,629,835	5,608,350	11,842,031.02	12,494,786.87	26,352,100.5
Wastage (1½%)	541638.75	3290922.52	5084479.12	10735877.67	16897779.39	35638221.4
HR Costs	11,333,250	22,488,997.5	30,884,889.9	62,696,326.5	96,865,824.43	199,543,598.32
Maintenance	916272.21	5567143.94	8601243.85	18161526.39	28585410.14	60287991.2
Imponderables	6,047,325	39229602.75	60,609,959.88	127,977,930.3	202,548,485.3	427,184,400.66
<b>TOTAL COSTS (\$)</b>	<b>1,144,744.5</b>	<b>6,041,072.95</b>	<b>9,253,038.49</b>	<b>19,485,350.81</b>	<b>30,654,502.61</b>	<b>64,552,825.79</b>
<b>Gross MARGIN (\$)</b>	<b>255,099.25</b>	<b>3,039,853.61</b>	<b>4,777,044.81</b>	<b>10,139,170.09</b>	<b>16,231,720.84</b>	<b>34,332,452.14</b>
<b>FINANCIAL, OTHER RELATED COSTS, PROFITS/LOSS and CASH-FLOW (\$)</b>						
WC Interest	---	189,185.97	292,293.4	617,177.52	976,796.32	2,060,109.95
Debt-int	166,666.67	166,666.67	125,000	83,333.33	41,666.67	---
Insurance etc	34,996.09	227,023.16	350,752.08	740,613.02	1,172,155.58	2,472,131.95
Cash-loss/Profit	53,436.49	2,456,977.81	4,008,999.33	8,698,046.22	14,041,102.27	29,800,210.24
Depreciation etc	38,550	125,562.5	116,048.96	211,602.13	318,384.59	289,442.5
Gross Profit/loss	14,886.49	2,331,415.31	3,892,950.37	8,486,444.09	13,722,717.68	29,318,482.07
Tax rebate	---	-491.25	-76,945.05	-129,775.43	-282,258.84	-457,648.08
Taxes (34%)	5,061.41	792514.18	1,297,441.81	2,841,267.34	4,569,756	9,812,683.55
<b>Net Profit/Loss</b>	<b>9,825.08</b>	<b>1,538,901.13</b>	<b>2,595,508.56</b>	<b>5,645,176.75</b>	<b>9,152,961.68</b>	<b>19,505,798.52</b>
Charity donation	982.51	153,890.11	259,550.85	564,517.67	915,296.17	1,950,579.85
Gross Cash-flow	47,392.57	1,510,573.52	2,452,006.67	529,2261.21	8,556,050.1	17,844,661.17
Debt Repayment	---	416,666.67	416,666.67	416,666.67	416,666.67	---
<b>DIVIDENDS</b>	<b>---</b>	<b>416,666.67</b>	<b>625,000</b>	<b>2,083,333.33</b>	<b>3,125,000</b>	<b>6,250,000</b>
EPS (Rs.)	---	2000	3000	10000	15000	30000
Directors' perks	---	208333.33	416,666.67	625,000	1,041,666.67	1,250,000
Redeemed share	---	---	---	---	1,041,666.67	---
New Investment	---	---	1,041,666.67	1,250,000	2,291,666.67	---
Cash accrued	47,392.57	516,299.42	468,306.08	1,385,567.29	2,024,950.71	12,369,611.88
<b>Rs.10 Share enhances its value to Rs.15,000 by yr 4 end</b>						
<b>CARBON CREDITS Potential (year 3): 4,000 (value at current level = €60,000)</b>						

### FINANCE STRUCTURING

Promoters & Co-Promoters (Equity) .....	\$42,276.66
Preferential Shares allotted "for value received" (redeemable @ 250% value in 5 <sup>th</sup> yr) .....	\$416,666.67
Debt Finance (@ 8% pa, repayable in 5 yrs) .....	\$ 1,666,666.67
[Overall Finance costs are estimated @ 10% on total borrowings, for computations]	
<b>Upto \$ 2,083,333.33 brought in would be allocated as Preference shares + Debt funds</b>	
<b>Total repatriation on \$2,083,333.33 (including "perks") in 5 years = \$6,500,000(312%)</b>	

August 18 2010