



Bricks Made from Fly Ash

Generated from Rice Husk Power Plant
(A Green Project)



9th Social Business Design Lab
Saturday 16th November 2013

What do we want to do?

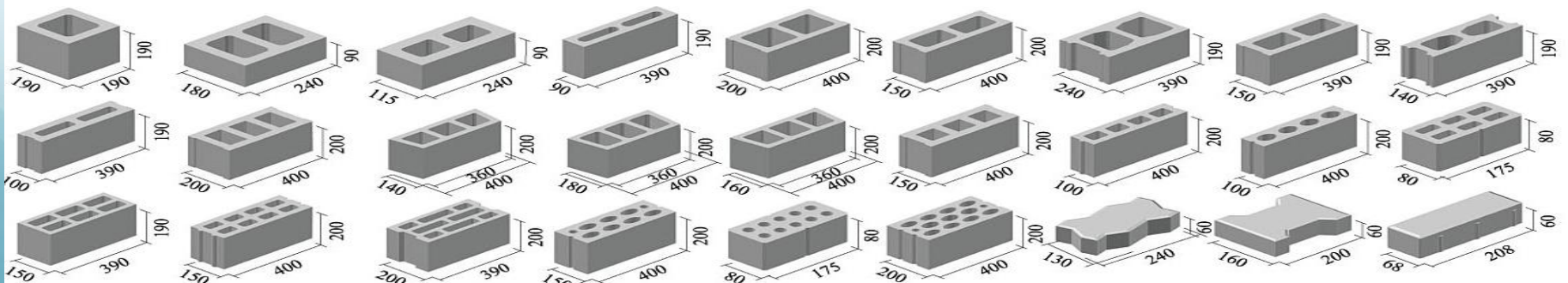
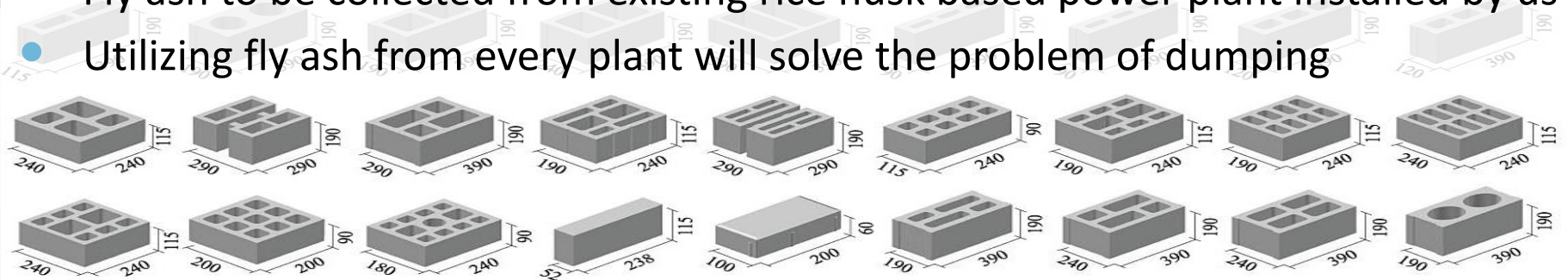
Bricks made from fly ash generated from rice husk power plant

Social objectives

- Affordable, reliable and environmentally friendly bricks made from fly ash

Business model

- Fly ash to be collected from existing rice husk based power plant installed by us
- Utilizing fly ash from every plant will solve the problem of dumping



Entrepreneur & Link industry

- Main entrepreneur: Mr Sarkar Ardhendu (Ripon), mechanical engineer and owner of a large machinery sales business in Bangladesh
- This is a link project of the proposed rice husk based power plant



- Useable fly ash from proposed rice husk power plant approx. 500 Tons/Year
- Required fly ash for brick production approx. 700 Tons/Year

**Yearly Revenue per plant:
26,250,000 Tk**

- **Total production** of fly ash bricks:
approx 35,000,00 Pcs/Year
at 80% capacity
- **Cost of production:** 6.57 Tk/Pcs
- **Selling price:** approx .7.50 Tk/ Pcs
- **Yearly sales:** approx. 26,250,000/- Tk



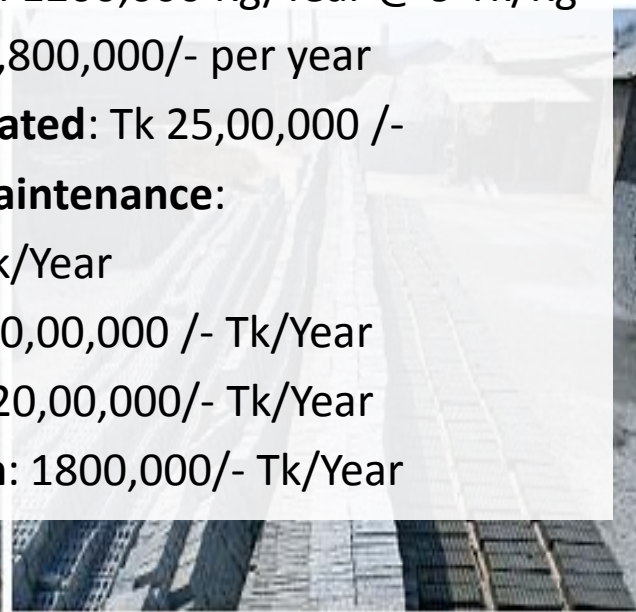
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**Yearly Production Cost:
23,000,000 Tk**

- **RM Fly Ash:** 7,000,000 kg/@ 0.50 Tk
= Total Tk 3,500,000/- per year
- **Sand & Stone:** 900,000 Kg/@ 1 Tk
= Total Tk 900,000/- per year
- **Cement cost:** 1200,000 Kg/Year @ 9 Tk/Kg
= Total Tk 10,800,000/- per year
- **Labour & related:** Tk 25,00,000 /-
- **Repairs & maintenance:**
5,00,000/- Tk/Year
- **Elec. Cost.:** 10,00,000 /- Tk/Year
- **Other Cost:** 20,00,000/- Tk/Year
- **Depreciation:** 1800,000/- Tk/Year



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Yearly Profit: 3,250,000 Tk

Revenue:	Tk 26,250,000
– Cost:	Tk 23,000,000
Profit:	Tk 3,250,000

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Required Investment

- Land for plant location for brick plant: 35,00,000 Tk.
- Equipment (automatic plant) total: 90,00,000 Tk.
- Accessories for fly ash brick plant: 25,00,000 Tk.
- Installation & commissioning: 10,00,000 Tk.
- Civil work total: 20,00,000 Tk.
- Initial working capital: 50,00,000 Tk.
- Other amount breakup: details given in financial proposal
- **Total for Fly Ash Brick plants: 20.3 million Tk**

Based on anticipated operating surplus after ramp-up phase, pay-back of investment within 6 years

Social impact

- Bring affordable, reliable and environmentally sustainable house building material thereby reducing carbon emission by 1500 tons per year

- Cost reduction for civil construction by min. 10%
- Significant cost savings for any kind of construction work



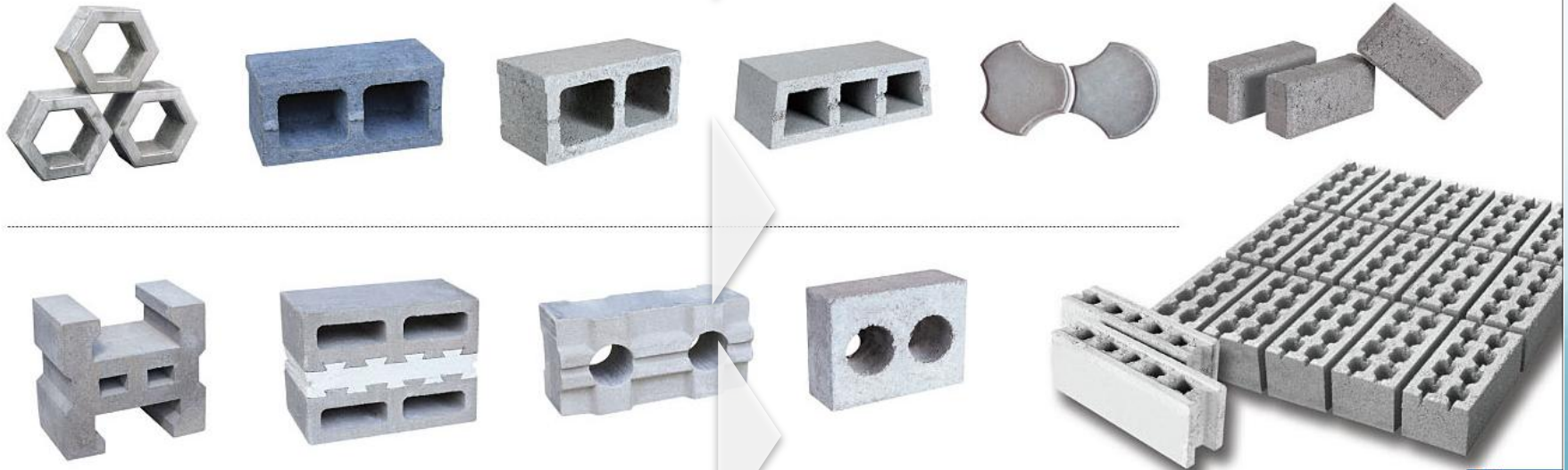
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- Cost effective for owner, reduce building dead weight

- Reducing the demand for conventional paving bricks



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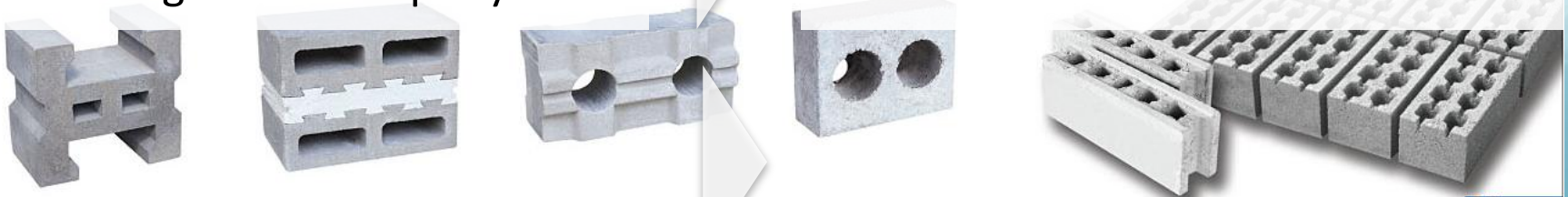
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- Reducing the demand for conventional paving bricks

- Reduce firewood harvesting for conventional brickworks
wood savings: 380 tons per year
coal savings: 700 tons per year

- Reduce land excavation for conventional paving bricks and mud consumption by 9000 tons per year



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- Less heat transfer due to hollow brick structure

- Creation of employment: 20 jobs at the brick plant