Life At A Village Before HPS
An Interesting Co-incidence -

Plenty of rice husk to serve 125K un-electrified villages in India

Rural Power Market

- 125,000 villages starving for power
  - 18,000 off-grid
- $102B rural power mkt.
  - Replacing diesel and kerosene

Rice Production

- ~132MT rice produced
- ~40MT husk
- ~27,000,000 MW

Source: World Energy Outlook 2006, World Resources Institute
• India currently meets over 60% of her electricity using thermal power which emits about 1 Kg of CO₂ per KWH of electricity produced.

• Current power options (kerosene lanterns, diesel generators) are uneconomical, unhealthy, polluting, inefficient and dangerous.

• Conventional energy receives 7 times more subsidy that renewable. IEA.
Sequesters 125-150 tonnes of CO₂ per year.

Energy:
- To run 200-600 households/shops, 5-10 irrigation pumps and small businesses.
- US$50 per household/year in kerosene and diesel savings.

Environment:
- Reduces indoor air pollution in rural communities.

Savings:
- 1 entrepreneur, 3 full-time workers, 5-10 part-time workers (mainly women).
Life Today
Carbon Neutrality
Carbon Dioxide from the Plant Absorbed by Rice Fields

HPS Plant
## HPS Revenue Sources (Revenue per Plant)

<table>
<thead>
<tr>
<th>Year</th>
<th>Revenue Sources</th>
<th>2010</th>
<th>2014</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Electricity Gen.</td>
<td>95%</td>
<td>50%</td>
</tr>
<tr>
<td></td>
<td>CER Sales</td>
<td>0%</td>
<td>4%</td>
</tr>
<tr>
<td></td>
<td>RHC</td>
<td>5%</td>
<td>13%</td>
</tr>
<tr>
<td></td>
<td>Corp Partners</td>
<td>0%</td>
<td>33%</td>
</tr>
</tbody>
</table>

As high as > 50% Unit level Margin and up to 20% IRR
Husk Power Systems – A new paradigm in Social Impact

Up to Rs 60,000 per plant
(Electricity and products)

Up to Rs 120,000 per plant
(Wages & Raw Material)
Extra Income Generation to 100’s of households

Power to Empower
Challenges

- Lack of availability of basic infrastructure (roads, rails etc) increasing transportation and operation costs
- Delay in Getting statutory licences.
- Ensuring safety of our customers and field employees.
- Policies exist but not implemented effectively.
- Strong inertia against change and a culture of suspicion and mistrust amongst people.
- Training and retaining Human resource.
- Capital-cost of it is very high.
Husk Power Systems

Husk Power Systems endeavors have been widely recognized by the media.

“2008 Social Enterprise of the Year”

“Most compelling idea to change the world.”
1-Drakness
2-Problem-use of fossil fuel,pollution(in a different perspective)i.e.lack of dev.crime,high birht rate
3-HPS solution-highlight-renewable,reliable,affordable,sustainable$values(Solar & Biomass.
4-Impact-waste utilisation,no pollution,jobs,liquidity to money ,ecosystem for dev.
5-Challenges-Trainning (HPU)and retaining HR,Cost of capital,(banks could play a crucial role)Policy exist but not implemented.
6-CER registration,subsidy.
7