As seasons change you need a partner that can evolve and adapt to you, a partner that makes a real difference to your organization. We, some people come together in the block that aspires to freeze our footprints in today’s dynamic Global Business. Starting with Engineering, Retailing, Trading, and Merchandising to Sustainable & Clean Power Generation, our solutions are tailored to your needs; designed to adapt to the future.

Although our team is a new starter to reckon with, the pool of professionals we withhold are well seasoned and experts in our respective trades. Our pool of professionals and offshore allies have years of proven expertise in Retailing, Trading, Merchandising and Clean Energy Solutions that can provide your organization the competitive edge. We provide business solutions that are specific to your need which is the perfect blend of technology and touch of human element using diversified channels of communication marked with creativity. Partnering with us will help you connect your business with our wide pool of buyers and suppliers, relationships, research outcomes and thus will surely take your business to more places you have ever imagined!

Thanking You
Team, Trade Harbor
www.tradeharbor.org
Trade Harbor is the researcher, organizer, finance arranger, Project land arranger, Mortgage Land provider, active members of Local EPC, the authorized representative of international EPC, arranger of all permissions of power & fertilizers sales & management, and the controller & manager of the project for the next 20+ years.
Biogas production from poultry, dairy and agro waste and biogas purification and compression for Electricity Generation & Organic Fertilizers Production

Himmel Brücke Bio Electric Limited
An Eco-Mind Effort to Produce Bio Power & Organic Fertilizers
The concept of biogas production from poultry and cattle waste is not new in Bangladesh. The technology has walked quite far through time and has brushed up itself to become well accepted to poultry and dairy farmers since the first biogas plant constructed in 1972 in the country.

As an eco-friendly renewable energy source this technology is widely acclaimed and accepted not only in Bangladesh but also all around the world.

Proposed Project Plan

In this project we propose to construct overland biogas digester adopting co-digestion technique for biogas production and multilevel purification and compression system for Production of Electricity.
The main Raw Materials to be used in the project are Poultry Waste (Chicken Dung), Cow Dung and Mixed Green Waste (Agro residue). The project will be designed to collect raw materials from medium and large sized commercial poultry and dairy farms within the maximum 50 ~ 60km surrounding area of the project. Poultry farms having minimum 30,000 birds and cattle farms having 50 cattle will be selected and will be brought under the dung collection program. Agro residues will be collected from the nearby vegetable wholesale market. There is will be long term (at least 6 years) dung purchase contract with each farm.

Conceptually there will be specially designed trucks dedicated for poultry raw, cow dung and green waste collection. These trucks and containers are specially designed in such a way so that there will be no bad odor or spillage outside during transportation. Collection sources will determine the transport plan and the number of specially designed vehicles.
Developed Countries adopted large sized biogas plants and producing 20% of their electricity requirements, Denmark-for example. Denmark even planned to produce almost 100% of their electricity consumption requirements by 2050.

Biogas plant-based electricity generation & fertilizers production can help tackle deforestation, provide clean energy solution for the environment. Such plant also gives best organic fertilizers that improve crop yields compared to traditional manure. It consequently contributes to food security for beneficiaries and the community in general that is currently a crying need in Bangladesh.

Objectives
a) Enable the Bangladesh Government to fulfill its Renewable Energy targets by 2020
b) Invest in large size biogas power - beneficial to stakeholder’s involved as well the environment and society
c) Invest in “high probability of success" projects
<table>
<thead>
<tr>
<th>Type of Biogas Plant</th>
<th>Overland Pre-Fabricated plant following Wet, Dry or Semi-dry fermentation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Amount of dung required (Per Day)</strong></td>
<td>Total: 240 tons (+/- 10%) consisting of Chicken Dung: 74%, Cow Dung: 13%, Green Waste: 13%</td>
</tr>
<tr>
<td><strong>Biogas Production Capacity (Per Day)</strong></td>
<td>18,000 m³ (cubic meter)/day (+/- 10%)</td>
</tr>
<tr>
<td><strong>After De-carbonization (Per Day) (Equivalent to Natural gas with higher methane density)</strong></td>
<td>8775 m³ (cubic meter)/day (+/- 10%)</td>
</tr>
<tr>
<td><strong>Power Generation (Per Day)</strong></td>
<td>02 Megawatt (+/- 10%)</td>
</tr>
</tbody>
</table>
| **Purification Technology** | CO₂: Membrane Separation or Chemical Absorption  
H₂S: Oxygen Dozing and/or Dry Chemical |
| **By Product** | Organic Fertilizers |
| **Raw Dry Slurry (Per Day)** | 80 tons (+/- 10%) / day |
| **Quantity of Processed Fertilizer (Per Day)** | 60 tons (+/- 10%) / day after processing |
| Cost of Project (Approx.) | BDT 90,00,00,000/- , BDT 100,00,00,000/-  
Initial Working Capital: 10 million (BDT) ** Excluding Land  
** includes IDCP (Interest During Construction Period) |
|--------------------------|--------------------------------------------------|
| Revenue from Electricity | BDT 17,66,60,000/- , per Year  
[ Calculation: Total Kilowatt x Sales Rate Per Unit x Total hour generation per day x 365 days = 2000 Kilowatt x BDT 11 x 22 hours x 365 days ] |
| Revenue from Fertilizer sales | BDT 32,85,00,000 /-, per Year (@ BDT 15.00/- Per Kg)  
[ Calculation: 60,000 Kgs ,per day x BDT 15.00/- x 365 days] |
| Total Revenue | BDT 50,51,60,000/-, Per Year |
| Raw Material Cost, O & M expenses, Admin and Miscellaneous Expenses | BDT 12,00,00,000 - Per year |
| Gross Income | BDT 38,61,60,000/- - Per Year |
| **Financer** | IDCOL (Infrastructure Development Company Limited)  
http://www.idcol.org/ |
<table>
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<tbody>
<tr>
<td><strong>Rate of interest</strong></td>
<td>6%</td>
</tr>
<tr>
<td><strong>Loan Tenure</strong></td>
<td>IDCOL: 12 years</td>
</tr>
<tr>
<td><strong>Security against Loan</strong></td>
<td>BDT 45-50 cr. (Land mortgage/BG)</td>
</tr>
<tr>
<td><strong>Total Principal</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Total Interest</strong></td>
<td></td>
</tr>
<tr>
<td><strong>EMI</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Total Payment (Principal + interest)</strong></td>
<td></td>
</tr>
</tbody>
</table>

![Chart showing loan details](chart.png)
<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gross income</td>
<td>50,51,60,000.00</td>
</tr>
<tr>
<td>(-) Bank Loan (Principal + Interest)</td>
<td>8,19,71,418.00</td>
</tr>
<tr>
<td>(-) Total Cost</td>
<td>12,00,00,000.00</td>
</tr>
<tr>
<td><strong>Net Income (Per Year)</strong></td>
<td>30,31,88,582.00</td>
</tr>
<tr>
<td><strong>Net Income (Per Month)</strong></td>
<td>2,52,65,715.17</td>
</tr>
</tbody>
</table>

**Pay Back**

Without Withdrawal Profit: 2.3 years
Project Land  
Size: 15 Acre (minimum 12 acre)

Criteria:

1. Land must have the options to release 2,00,000 liter fresh water to the environment. Near to River, Canal or such places are required.
2. Should not be a crowd place within 2 kilometers radius.
3. Road Transportation is easy to the project land. At least a 40 feet container Trailer can reach to the land.
4. The land must be nearer to the PDB/REB substation. The station should not be more than 8-12 kilometers far from the project land.

Seed Finance  
BDT 15 cr. is required as cash capital for necessary licenses, civil works, workforce & other expenses (as per the requirements of Equity Adjustment)

Mortgage  
BDT 45-50 cr. as security to Bank to avail Bank Loan
Alset Power Co. is engaging in a brand new and very promising field of electrical/science and technology. As a technology it is likely to evolve at a rapid pace. Our ability to stay part of that evolution is key to the success of Alset Power Co. and its partners.

The Project is financed/Monitored/Technical/ & strategic knowledge, provided by:

- German Cooperation
- GIZ
- Ministry of Foreign Affairs of Denmark
- DANIDA
- IFC
- World Bank Group
- Green Climate Fund
- IDCOL

Together for Tomorrow
Seed Bangla Limited [http://www.seedbangla.com/]

SEED stands for Sustainable Energy and Environmental Development. Since its establishment in 2003 Seed Bangla Limited is working in the field of alternative energy and fuel system. It is clear that the biomass range of products is evolving at an exponential rate with technological development especially in the industrial heat and power market. These continuous development has meant the scope and range of products have increased to allow the use of including not only agricultural residues but also waste like cow dung, poultry litter, human waste etc. Besides construction of Biogas plants, Seed Bangla Limited also focuses on solar power, waste management, CBG (converted fuel system to biogas) generator etc.

Today Seed Bangla is truly diversified and offers a one-stop center for delivering all type of alternative energy products to the ever-expanding market. So far it has credited itself with 1200 home-based and commercial biogas plant constructions, 450 home-based solar PV systems. The largest plant we constructed in Paragon 500m and 1400m generating approximately 600KW of electricity, in Phenix 1400m generating 400KW of electricity and Kazi Farms Group 10 units of 350m for generating 1500KW of electricity. These are also claimed to be the largest biogas plant in the country.

All our projects are technically supported by GIZ (Gesellschaft fur Internationale Zusammenarbeit), and in some cases financially supported by IDCOL (Infrastructure Development Company Limited), IFC (International Finance Corporation), SNB and KFW.
HEEE is provide sustainable engineering solutions which meet the requirements of ecological recycling and green development.

HEEE is the front-runner of biogas and bio-methane industry in China, as the EPC contractor, HEEE has built the first agricultural CDM project in China, the biggest agricultural biogas power generation project in China and the biggest mixed raw materials bio-methane project in China.

Founded in 1992, HEEE is a leading company in China specializing in biogas and bio-methane engineering, using anaerobic technologies to treat high solid content organic waste, the business scope include research and development, treatment process design, equipment supply and installation, commissioning and general contracting.

HEEE has built more than 200 large-scale biogas and bio-methane projects both in China and abroad, mainly in agricultural, municipal and industrial domain, raw materials include livestock manure, crop straw, fruit and vegetable waste, municipal sludge, food waste, pharmaceutical waste, alcohol waste, vinasse, etc. HEEE undertook 14 state-level R&D programs and 863 programs, obtained 2 state-level Science & Technology Progress 2nd Grade Award, 2 state-level Science & Technology Progress 3rd Grade Award, 3 Ministry-level Science & Technology Progress 1st Grade Awards, 1 Province-level Science & Technology Progress 1st Grade Award, 5 Province-level Science & Technology Progress 2nd Grade Award, HEEE also holds 20 invention and utility patents.
42000 meter cube/day Bio Methane Project

Shandong Minhe, China
2MW Biogas Project
--Beijing, China

Zhangshanying, Yanqing, Beijing  2007

MOA Large-scale Demonstration Project:
Key projects of Ministry of Science and Technology “11th Five-year plan” for Science & Technology Support program;
UNDP/GEF Large-scale Biogas Power Generation Demonstration Project
12,000 meter cube/day Bio-Methane Project
--Jiangsu Defeng Poultry, China

Jiangsu Dafeng Poultry Waste 12,000m³/d Bio-methane Project
COFCO Dongtai 300,000 Pigs Farm Biogas Power Generation Project

3,000,000 Pigs Farm Biogas Power Generation Project
--COFCO Dongtai, China
2,200,000 meter cube/day Bio-Methane Project
--Xinjiang Hutubi Cattle Farm, China
1,00,000 meter cube/day Bio Methane Project
--CGN Hengshul mixed raw material, China
Taiwan Shi’an Farm 0.8MW chicken manure biogas power generation project

0.8 MW chicken manure biogas power generation Project
--Taiwan Shi’an Farm, Taiwan
TPK Cassava Alcohol Wastewater 7.2MW Biogas Power Generation Project

--TPK Cassava Alcohol, China
Bangladesh Paragon 500,000 laying hens Biogas Power Generation Project

5,00,000 laying hens Biogas Power Generation Project
--Paragon Group, Bangladesh
This agreement is to acknowledge that the information provided by Novelty Engineering Corporation, Trade Harbor & Seed Bangla Limited in this business plan is unique to this business and confidential; therefore, anyone reading this plan agrees not to disclose any of the information in this business plan without the express written permission of Novelty Engineering Corporation, Trade Harbor & Seed Bangla Limited. It is also acknowledged by the reader of this business plan that the information furnished in this business plan, other than information that is in the public domain, may cause serious harm or damage to Novelty Engineering Corporation, Trade Harbor & Seed Bangla Limited and will be kept in the strictest confidence.

Upon request, this document is to be immediately returned to Novelty Engineering Corporation, Trade Harbor & Seed Bangla Limited.

Signature ______________________

Name (typed or printed) ______________________

Date ______________________

This is the business plan for Novelty Engineering Corporation, Trade Harbor & Seed Bangla Limited. The presentation of this business plan does not imply an offering of securities.