



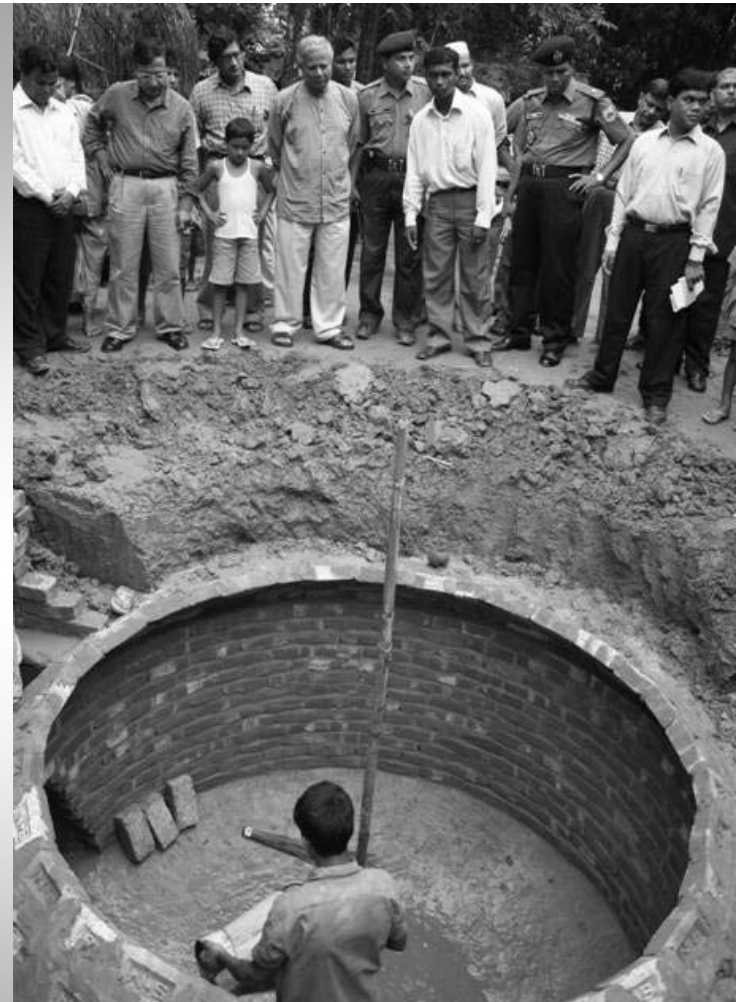
**Biogas Program
Boosting Green Business**

Biogas Program The First Market based Model in Bangladesh

Provides Soft Credit, Efficient
After-Sales Service and Ongoing
Quality Control

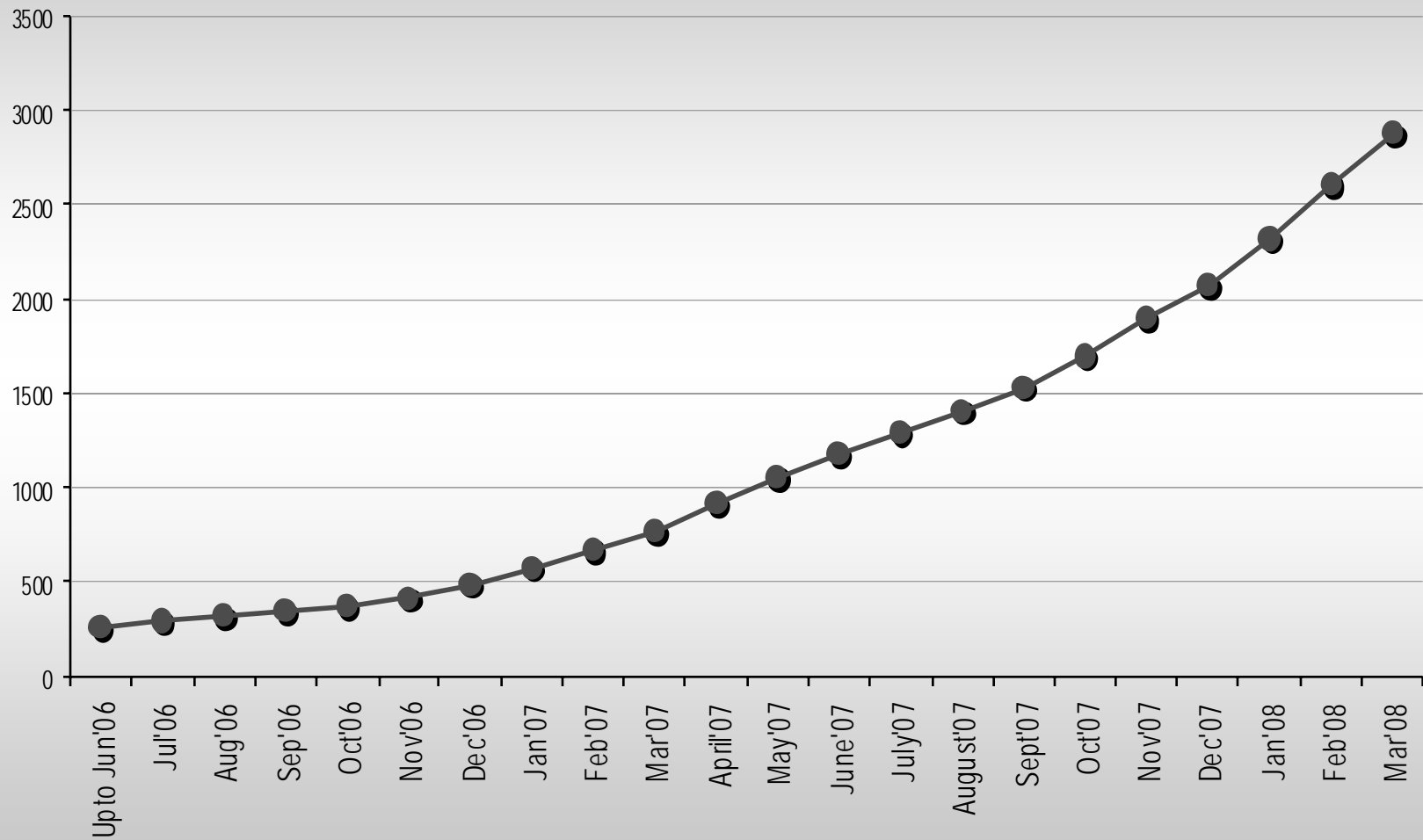
But, No Subsidies and Instead

Promotes linkages with Market
FORCES to create a Sustainable
Program



Dr. Muhammad Yunus, Chairman Grameen Shakti
and Dipal Chandra Barua, Managing Director,
Grameen Shakti, visits a biogas plant

Biogas Plant Construction Growth (cumulative)



Initially started as a pilot project in 2005 GS has

Constructed more than
3500 biogas plants,
around 300 large sized
biogas plants

Promoted Organic
Fertilizer business and
linkage between
Poultry/Live-stock,
Agriculture & biogas
technology

Experimented with
producing Electricity



Slurry Processing at a biogas plant

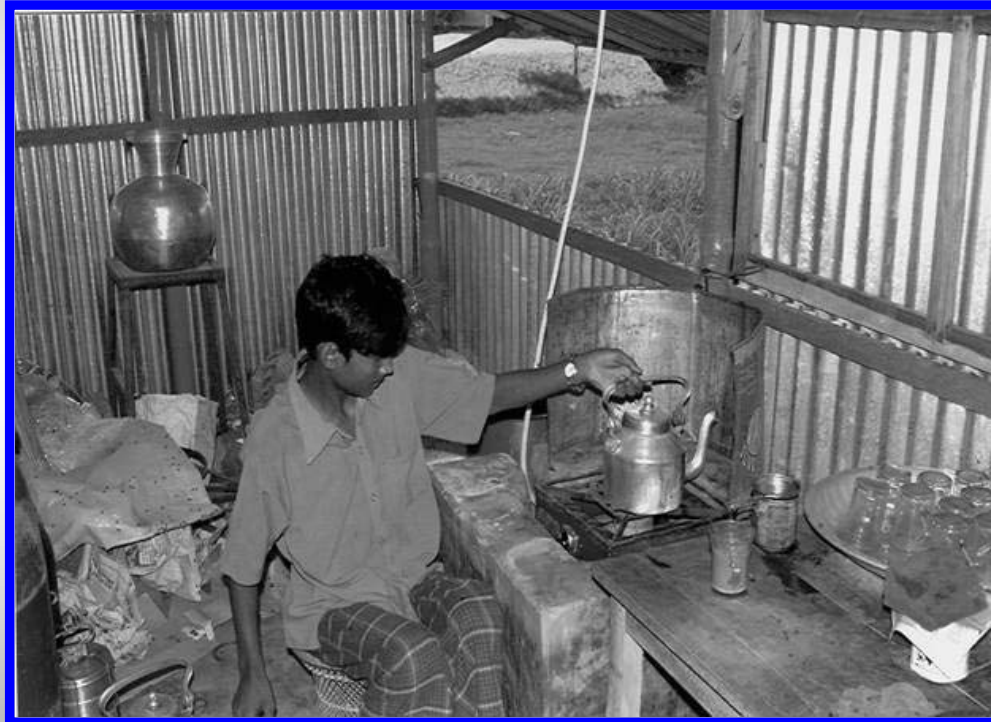
Households getting energy at cheaper cost than kerosene or fuel wood

We no longer have to collect fuel wood, The kitchen is clean and women folk have easier life and less risk of in-door air-pollution. We are also earn extra income by selling biogas to one more household and we use the slurry in our field



Small Business getting energy at cheaper cost than kerosene or fuel wood

We are renting biogas for our tea stall. We have to pay around Tk 400 per month which is cheaper than fire wood. We are also enjoying a smoke free environment



Demand is High among Livestock Owners

- Ms. Kononoor Begum has constructed a large sized biogas plant in her poultry farm . She is renting biogas to 5 houses and 1 teashop .
- She earns around Tk. 3200 per month .
- She saves Tk. 1200 per month as fuel and kerosene cost .
- The plant also generates electricity to warm up poultry eggs . She also uses the slurry as organic fertilizer which saves her Tk. 700 per month.
- She paid Tk . 9000 as down payment and she is paying Tk. 2300 as monthly installments



Producing Electricity

- More than 22 biogas plants generating electricity
- Usually used as a back up with diesel generators
- Many biogas plants running computers, ACs and small machines and pumping underground water.



Providing livestock with bio-gas plant for income generation to Monga affected people in Chilmari, Kurigram



Moving Towards a Greener & Fertile Bangladesh

- Agreement signed with two companies for organic fertilizer development
- Demonstration sites for organic fertilizers with individual farmers
- Exposure and training programs for farmers on organic fertilizers
- Tree plantation program

Organic Fertilizer Demonstration Plot. GS is promoting the use of organic fertilizers among farmers.



Many International Visitors are coming to see GS Biogas program

Dipal Barua, Managing Director, Grameen Shakti explaining biogas program to Ted Turner & Timothy Wirth (UN Foundation), USA. Professor Yunus looks on.



Improved Cook Stoves (ICS)

Promoting Improved Cook Stoves

Reduce women's health risks, Protect forest areas

Decrease fuel cost



Scaling Up Through Developing ICS Entrepreneurs.

- ❑ More than 12000 ICS constructed through 800 ICS technicians cum entrepreneurs
- ❑ They are constructing ICS under the supervision of GS
- ❑ Nearly 27 manufacturing units set up through seed capital and technical assistance for smooth supply of grates, chimneys etc .



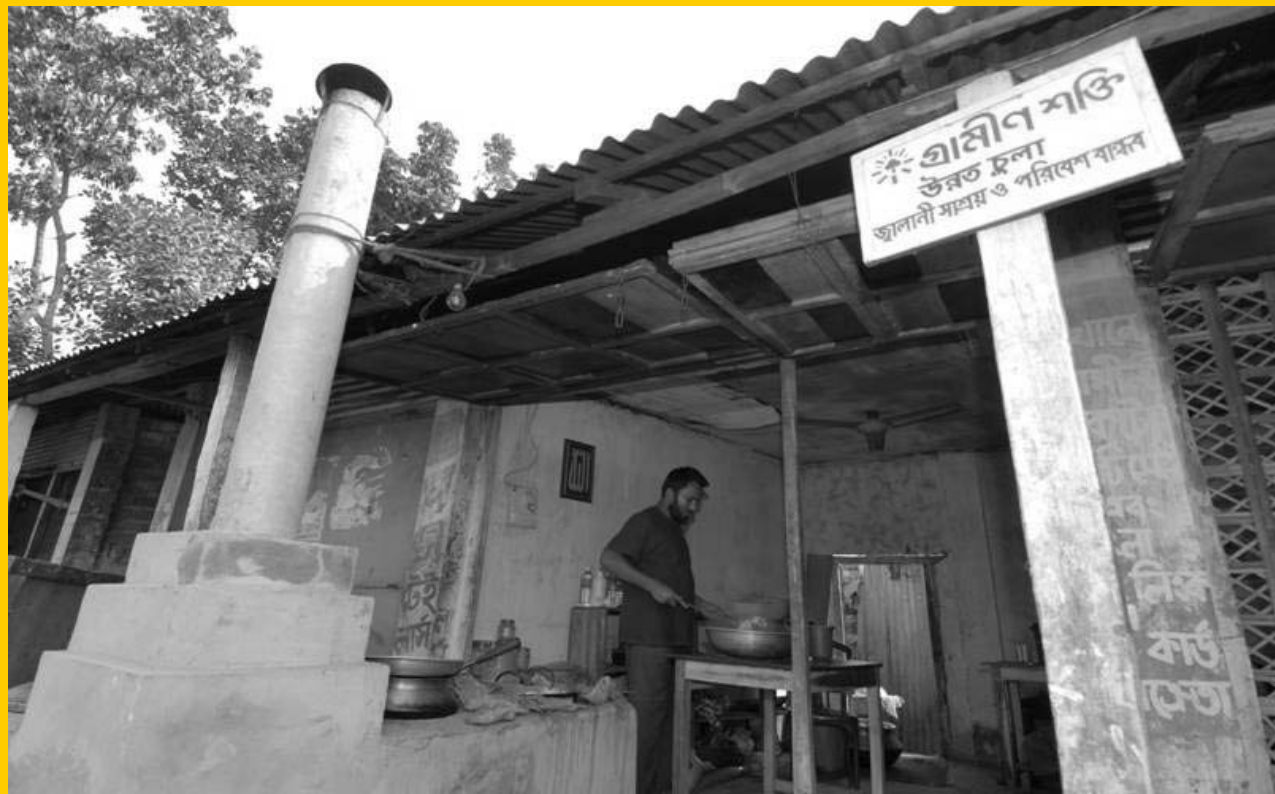
More & more rural women are switching to Improved Cook Stoves

- Smoke free kitchens, no soot
- Swifter and better cooking, More free time



Becoming popular in restaurants, street side shops

- No smoke attracting more customers
- Half the fuel cost doubling income



Promoting Improved Cook Stoves

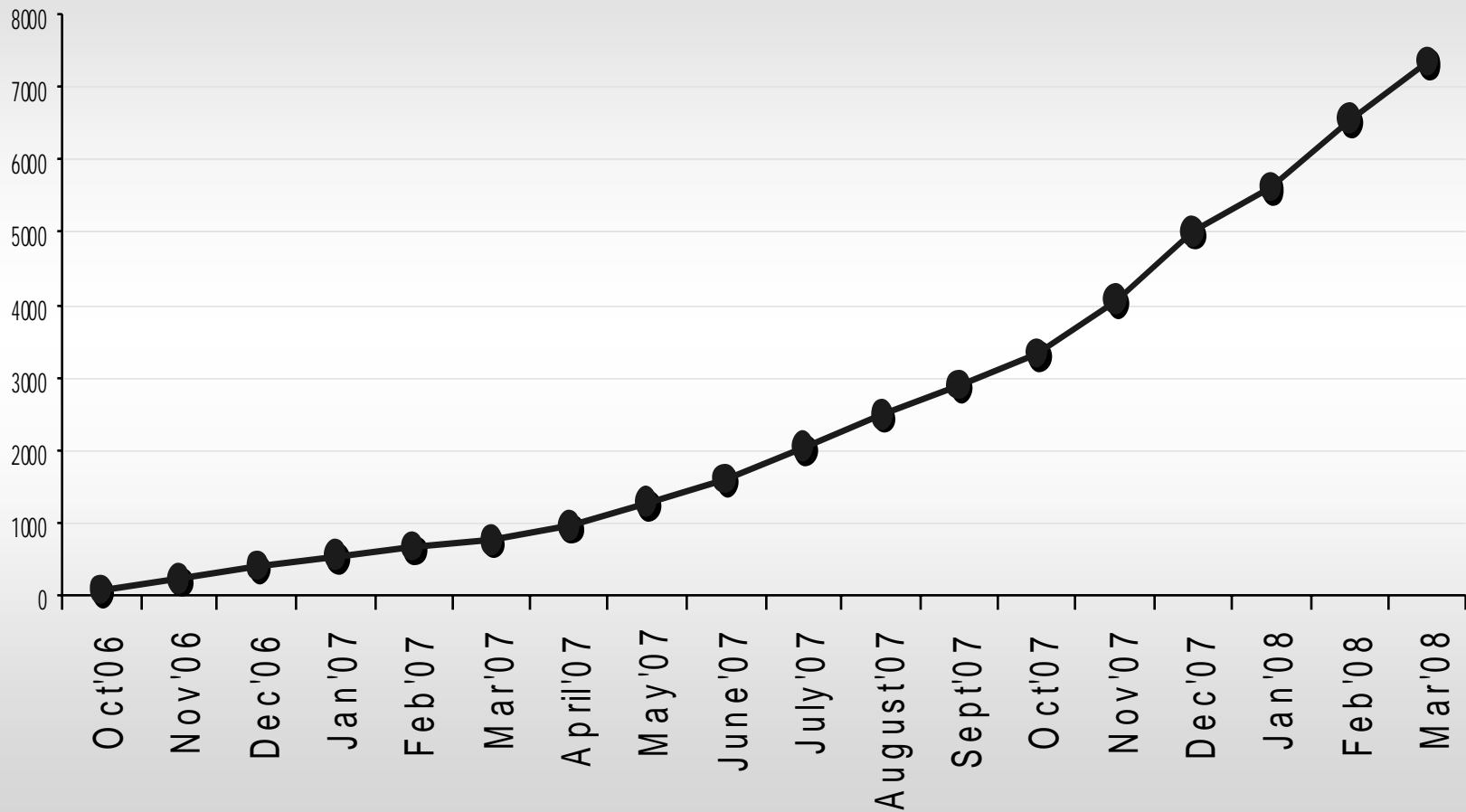


Fair at St . Martin Island



Training at Rangamati

Improved Cook Stoves (ICS) Growth (Cumulative)



Computer Education Center : Sakhipur, Tangail



International Collaboration

- **Replication** : India, Pakistan and many African countries have shown interest
- Joint Seminars/ Workshops i.e. with INFORSE, (South Asia) Planet Finance (Europe)
- Joint Venture with international companies for Technology Transfer and Capacity Building
- MOU with World Bank to get CDM benefits for installing one million SHS

The Way Forward

Road Map to 2015

Creating One Million Green Jobs in Rural Bangladesh

Solar program – Diversification & Scaling up

- Set up 1000 unit offices in the next 5 years to install one million SHSs by 2015
- Decentralize & scale up its production, marketing & repair, maintenance services by setting up 500 GTCs in the next 5 years
- Diversify and let many flowers bloom through RE entrepreneurs who will meet the energy needs of the people through innovative services

Biogas plants

- Install of 500,000 biogas plant within 2015.
- Scale up linkages between biogas technology, live stock, agriculture and income generation to create a sustainable program



Future Initiatives

Capacity Development & Regional Initiative : Replication

- Upgrade technical assistance program for entrepreneurship development and replication of GS model through linkage with other regional institutions
- Take up action research on Centralized PV systems, Wind-Solar hybrid systems and Micro hydro power systems
- Deploy modern technology and management for manufacturing renewable energy technology



Conclusion :



- ❑ Market Driven Approach—where the Consumer is the main force
- ❑ Social Entrepreneur—where a consumer is motivated to know about his/her rights
- ❑ Ownership Model –where Consumer is the implementer of change to meet his /her own needs
- ❑ Women as Agents of Social Change who take active part in changing their lives as well as the lives of their Communities
Micro-credit acts as the bridge linked with adaptive technology & income generation

National and International Awards



National and International Awards Received by Grameen Shakti

1. Energy Globe Award (Austria) 2002
2. European Solar Prize (Germany) 2003
3. USAID Best Theme Award 2003
4. Solar Prize 2004
5. IDCOL Award 2005
6. Ashden Award (UK) 2006
7. European Solar Prize (Germany) 2006
8. Tech Museum Award (USA) 2007
9. Right Livelihood Award (Sweden) 2007

Awards



Globe Award 2002



USAID Best Theme Award 2003



European Solar Prize 2006



European Solar Prize 2003



IDCOL Solar Prize 2004



Tech Museum Award 2007

Grameen Shakti Wins The Right Livelihood Award



“for bringing sustainable light and power to thousands of Bangladesh villages, promoting health, education and productivity”

Mr. Dipal Chandra Barua, Managing Director, Grameen Shakti receiving the Right Livelihood Award 2007 (Alternative Nobel Prize) on December 7 at Stockholm from Mr. Jakob Von Vexkull, Chairman, The Right Livelihood Award Foundation for vision & work uplifting humanity and making life more whole.



Mr. Dipal Chandra Barua, Managing Director, Grameen Shakti receiving the Tech Museum Award 2007 on November 7 at San Jose, USA.



The Ashden Awards for Sustainable Energy to Grameen Shakti (1st Prize)



Mr Dipal C. Barua of Grameen Shakti, Bangladesh with
HRH Prince Charles, Chief Patron of Ashden Awards, London 2006

The Ashden Awards for Sustainable Energy to Grameen Shakti (1st Prize)

June 15, 2006



Mr Dipal C. Barua of Grameen Shakti Bangladesh accepting the Ashden Award from Lord May of Oxford

The Managing Director of Grameen Shakti
Mr. Dipal C Barua receiving The European Solar
Prize from Herman Scheer, MP and President
of EUROSOLAR in Germany 2003.



The Managing Director of Grameen Shakti
Mr. Dipal C Barua receiving The European Solar
Prize from Herman Scheer, MP and President
of EUROSOLAR in Germany 2006.





Felicitations to our Chairman, Professor Muhammad Yunus for winning the Nobel Peace Prize 2006. Mr. Dipal C Barua Managing Director Grameen Shakti and Deputy Managing Director, Grameen Bank took part in the joy.

Thank you for your
Kind Attention

