

# Energy's Role in Rural Income Generation:

## The Grameen Strategy

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Dipal C. Barua

Managing Director

Grameen Shakti

# Activities of Grameen Shakti

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Managing Director

Grameen Shakti  
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September'1998

# Grameen Shakti (GS)

- An affiliated company of Grameen Bank.
- A company “Not for Profit.”
- Established in June 1996.
- Operates through unit offices in rural areas to popularizing and delivering renewable energy to households.

# *Renewable Energy Program of Grameen Shakti*

- ☛ Solar Energy Program
- ☛ Wind Energy Program
- ☛ Biogas program
- ☛ Technician Training Program
- ☛ Research Program

# *Solar Energy Program*

- ☛ Marketing solar home system in remote areas.
- ☛ Awareness development of potential customers.
- ☛ Developed financial packages for different customer groups.
- ☛ Offer credit program.
- ☛ Provide after sales maintenance.

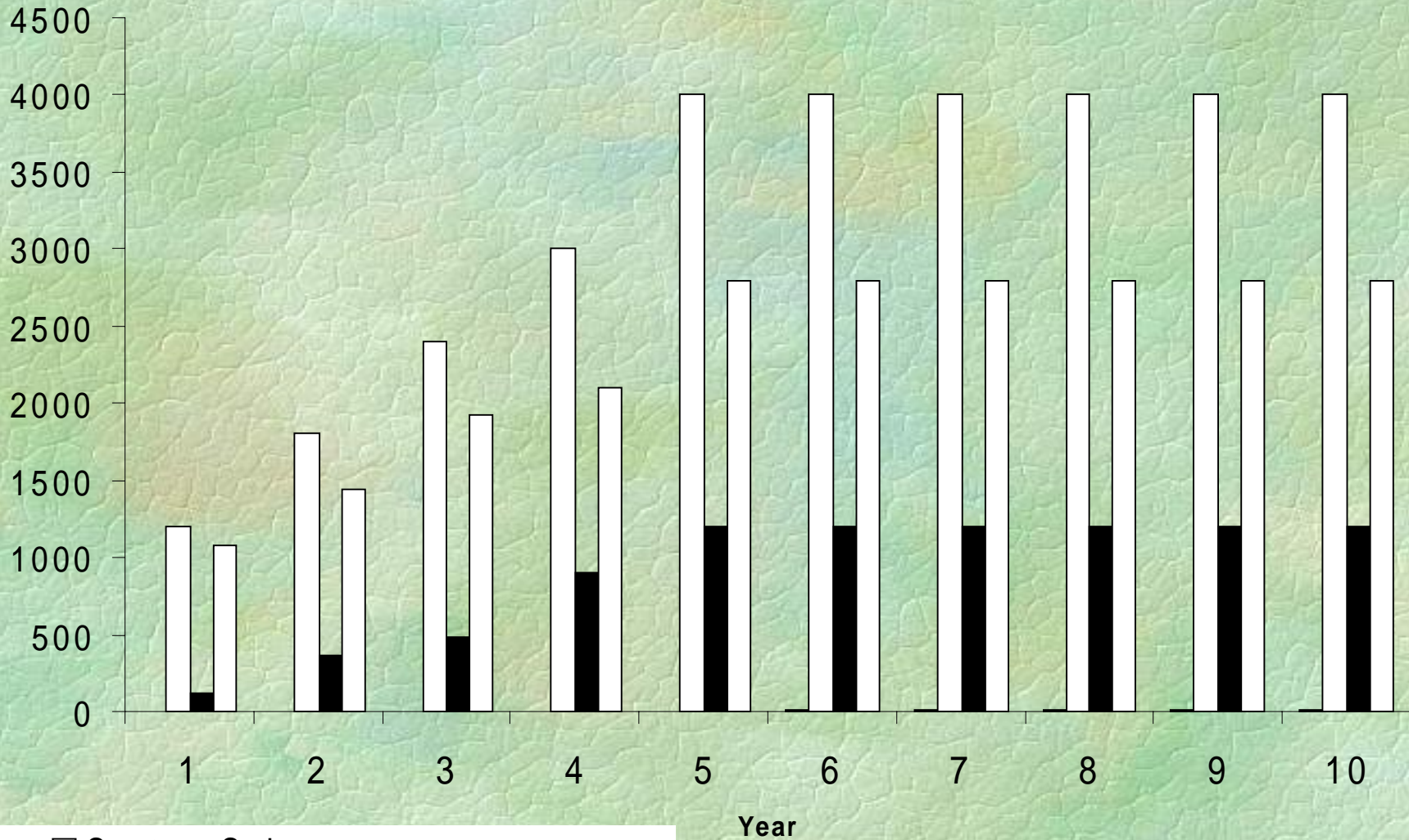
# Credit Policies of GS

- ☛ 25% down Payment.
- ☛ The remaining 75% of the cost must be repaid within 24 months with 8% service charge.
- ☛ To encourage the customers to pay 100% cash, Shakti offer 3% discount on the sales price.

## System Sold by Grameen Shakti Upto August'98

Area	System sold up to August'98		
	No. of Customer	No.of Panels	Watts
Tangail	103	140	4644
Mymenshing	154	191	7950
Comilla	31	33	1760
Shatkhira	30	30	1825
Khulna	9	9	500
Dhaka	20	27	1495
Total	347	430	18174

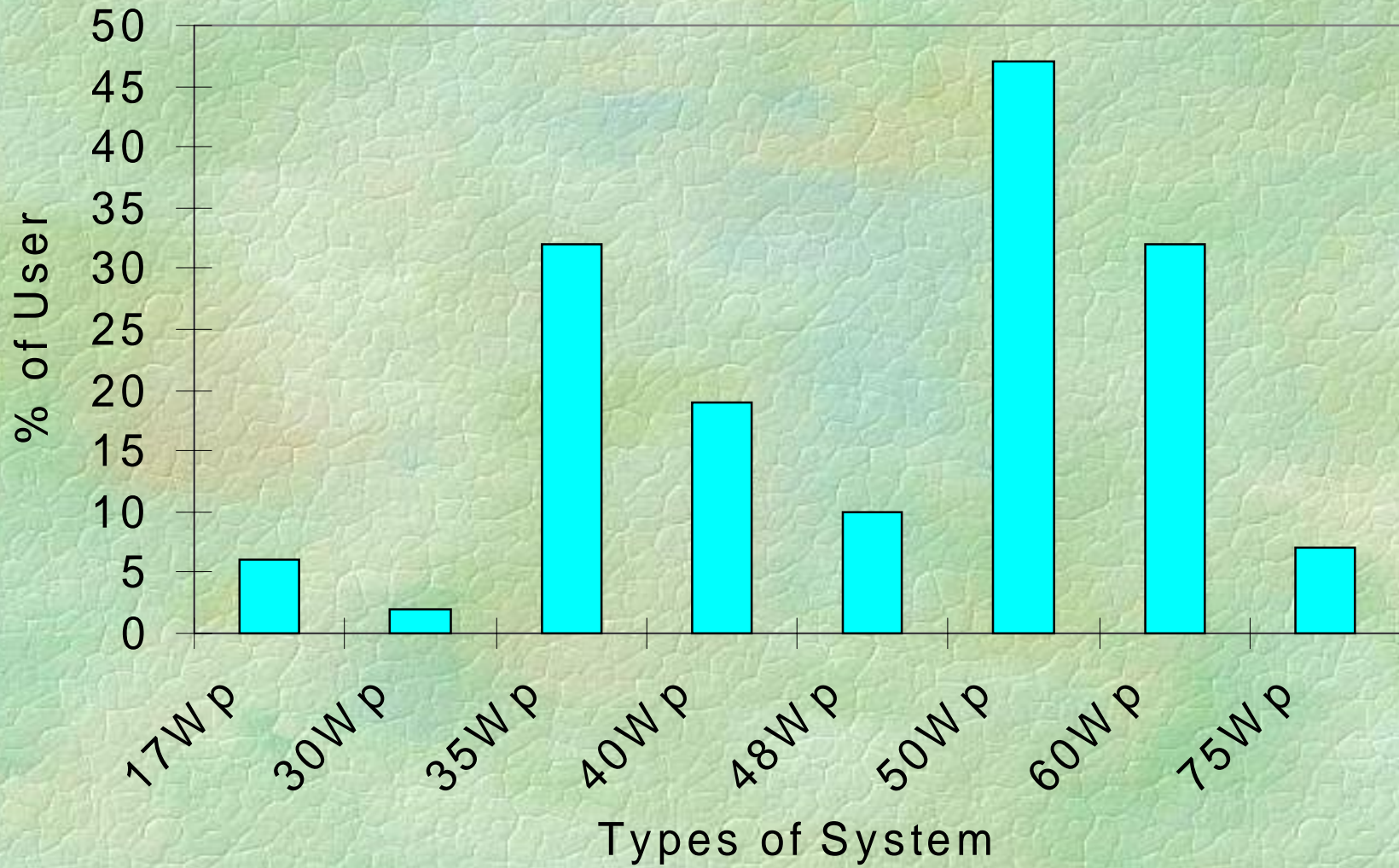
# Future Plan Of Grameen Shakti



□ System Sales  
■ Sale to Grameen member  
□ Sale to non-Grameen (General)



# Preference of System



## *Wind Energy Program*

- ☛ Shakti put two anemometer in two sites for measuring wind speed.
- ☛ Installed two wind turbine at Chokoria in Cox's Bazar.
  - 300W Turbine
  - 1kW Turbine
- ☛ Shakti installed four turbine for setting up the Micro-enterprize zone.
  - One 10 kW
  - Three 1.5 kW

# *Biomass Program*

## ☛ Bio-digester Project

- Cooking purpose
  - Shakti installed and supervise 28 brick Bio-digester at
    - » Sirajgang
    - » Pabna
    - » Rangpur
    - » Dinajpur
    - » Panchagar
    - » Thakurgaon
- Fish & Land Cultivation Purpose
  - The residue of the biogas plant is used in the ponds for fish cultivation.
  - These residues of the biogas plant also used in the field as fertilizer.

## Case Study: 1

### Saw Mill Owner

#### ☞ Project Location:

- Village: Baromedor , District: Tangail

#### ☞ System Description

- One 17W module
- 2 Lights

#### ☞ Total System Cost: US\$ 270

#### ☞ Payments:

- 25% Down Payments
- 75% loan, with 8% Service Charge
- Repayment period: 1 Year

Case-1

# Impact of Photovoltaics

## Direct Impact

- ☛ Extending working time:  
4 Hours/day
- ☛ 5.20 US\$ Extra Income  
per hour (25cft /hr@  
0.20US\$/cft)
- ☛ Increase quality of  
working.
- ☛ Better working  
environment

## Indirect Impact

- ☛ Increase income of the  
workers.
- ☛ Create employment's
- ☛ Increase social status.

## Case Study-2

# Electronics repair Shop

- ▲ Project Location:
  - ◆ Village: Dhalapara, District: Tangail
- ▲ System Description
  - ◆ One 34 W module
  - ◆ 2 Lights
  - ◆ 1 plug outlets
- ▲ Total System Cost: US\$ 354
- ▲ Payments:
  - ◆ 25% Down Payments
  - ◆ 75% loan, with 8% Service Charge
  - ◆ Repayment period: 1 Year

## Case-2

# Impact of Photovoltaics

## Direct Impact

- ▲ Extending working time: 4 Hours/day
- ▲ 0.52 US\$ Extra Income per hour
- ▲ Provide Better quality of work to the Customer by using DC Soldering Iron
- ▲ Increase Business

## Indirect Impact

- ▲ Use one lamp to his house which increased his social status.
- ▲ Healthier Environment
- ▲ Attract more customer.
- ▲ Get better entertainment by operating radio, TV, Cassette etc.

## Case Study-3

# Cellular Phone Shop

- ▲ Project Location:
  - ◆ Village: Nabinagari, District: Brahamanbaria
- ▲ System Description
  - One 50 W module, 4 Lights, 1 plug outlets for TV
- ▲ Total System Cost: US\$ 520
- ▲ Payments:
  - ◆ 25% Down Payments
  - ◆ 75% loan, with 8% Service Charge
  - ◆ Repayment period: 1 Year
- ▲ The owners rent two lamps to other two shops.



## Case-3

# Impact of Photovoltaics

## Direct Impact

- ▲ Creating a new business.
- ▲ 30.0 US\$ Extra Income per day (30 calls per day @ 1.0 US\$)
- ▲ Enjoy Better quality of Light.
- ▲ Better working environment.

## Indirect Impact

- ▲ Established a good network.
- ▲ Villagers are happy to getting the way to communicate with their relatives living abroad.
- ▲ Increase the business position of the locality by the communication system.

## Case Study-4

### Micro-utility Model

- ▲ Project Location:
  - ◆ Village: Kormel Bazar District: Comilla
- ▲ System Description
  - ▲ One 50 W module, Six 7W Light
  - ▲ Total Cost: US\$ 520
- ▲ Payments:
  - ◆ 25% Down Payments
  - ◆ 75% loan, with 8% Service Charge
  - ◆ Repayment period: 1 Year
- ▲ The owners rent the lamps to other shops.

## Case-4

# Impact of Photovoltaics

## Direct Impact

- ▲ Creating a new business.
- ▲ 12.500 US\$ Income per month @2.5 US\$/lamp per month)
- ▲ Explored an additional way of income
- ▲ Earning more from his shop by attracting more customer by brighter light.

## Indirect Impact

- ▲ The income of other shopkeepers has also increased due to the use of solar light.
- ▲ More customer is coming.
- ▲ Increased social status
- ▲ Villagers can marketing even at night time.

## Case Study-5 Barber Shop

- ▲ Project Location:
  - ◆ Village: Sagordighi
  - ◆ District: Tangail
- ▲ System Description
  - ▲ One 8 W solar lamp on rental basis
- ▲ Rent per month:
  - ▲ 2.5US\$ Repayment
- ▲ Daily hours of use: 4 Hours.

## Case-5

# Impact of Photovoltaics

## Direct Impact

- ▲ Increase of working hours.
- ▲ 5.00 US\$ extra income per day
- ▲ Enjoy Better quality of Light.
- ▲ Better working environment.
- ▲ Attract more customer.

## Indirect Impact

- ▲ Increase income of the customers.
- ▲ Providing better service to the villagers.
- ▲ Increase the business position of the locality..

# Impact of Photovoltaic on Household Specially on Women

- ☛ Eliminated the health hazard due to kerosene lamp.
- ☛ Providing better environment.
- ☛ Improving their children's education.
- ☛ Ensured the women's security.
- ☛ Able to work at night.
- ☛ Helped women to create income generating activities like sewing at night, basket making etc.

# Impact of Photovoltaics on Households

