

RE Practices in Bangladesh – Wind Energy Water pumping Windmill

Design and Installed by Local Government Engineering Department, Bangladesh



Technical Data:

- Rotor dia. 2.75m
- No of blades 24
- Starting wind speed 1.8 m/s
- Pump type semi rotor reciprocating suction pump
- Output 20,000 liters/day, 10m head at 4.0 m/s wind velocity

Water Pumping Windmill, designed by LGED

Introduction:

- Low cost
- Locally manufactured
- Minimal maintenance

Uses of Wind Pump:

- Villages
- Schools
- Rural Clinics
- Farms (irrigation & livestock)
- Small scale industries
- Nature/Wildlife reserves
- Land Drainage
- Salt Production
- Waste water treatment
- Aerations

Project Developer

Sustainable Rural Energy (SRE), Local Government Engineering Department
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Source:

Renewable Energy & Environmental Information Network (REEIN)

E-mail: reein@dhaka.net, myreein@yahoo.com, reeinorg@hotmail.com,
reeinorg@gmail.com ; Website: <http://www.reein.org>

RE Practices in Bangladesh – Wind Energy

Wind Energy Programme under Bangladesh Center for Advanced Studies (BCAS)

Wind energy installation under Renewable Energy Programme (REP):



Energy Resource : Wind Turbine
Type of installation : Water pumping wind mill Irrigation
No of installation : 1
Capacity of installation : 1X1.0 kW, 3X1.5 kW, 1X10 kW
Cost of Installation :
Location of Installation : Patenga (Coastal Area), Chittagong)
Functional Status : Functioning
Type of installation : Resource Assessment

Project Developer

Bangladesh Center for Advance Studies (BCAS)
Non-Government Organization (NGO)
COAST Trust, House # 9/4, Road # 02, Shaymoli,
Dhaka-1207, Bangladesh.

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RE Practices in Bangladesh – Wind Energy

Demonstration of 10 kW Wind-Solar hybrid power system facilitates biodiversity and conservation research works and promotes ecotourism infrastructures at St. Martin's Island at bay of Bengal, Cox's Bazar district, Bangladesh



Wind, 5kWp -Solar, 5kWp Hybrid System at St. Martins Island, Cox's Bazar, Bay of Bengal, Bangladesh

Expected benefits from Wind-Solar Hybrid System: Demonstration of 10 kW Wind-Solar hybrid power system at St. Martin's Island facilitates biodiversity and conservation research works and promotes ecotourism infrastructures. Electricity to Laboratory, Central Plaza, Dormitory, Barrack House, Motel, Water pump etc. smoothly operates research work

Hardware Used:

For Solar PV Part:

- Solar module : Kyocera 125Wp (Multi Crystalline)
- Number of Solar module : 44
- Capacity of Solar module : 5000 Wp
- Inverter : XANTREX, USA, 2nos @ 4.5kW
- Battery : VARTA, 100Ah , 44 nos

Wind Turbine:

- Wind turbine : Whisper 175 (15 ft), Made in USA
- Rotor Diameter = 15 ft
- Tower height = 70 ft
- Weight = 175 lbs(55kg)
- Start up wind speed : 7.1 mph(3.1 m/s)
- Voltage : 24, 32, 48 V,DC
- Number of turbines : 7
- Capacity of each : 3.2kW (at wind speed of between 3-4 m/s)
- Peak power : 3.2kW@27 mph (12m/s)

Other accessories:

- Computer : Pentium - IV, Compaq
- Printer : Laser Printer
- Refrigerator : Caravall Brand
- Water Filter = EVA, 2 hp, 210 lit capacity UV resistant water filter
- Water pump = Pedrollo

Source:

Renewable Energy & Environmental Information Network (REEIN)

E-mail: reein@dhaka.net, myreein@yahoo.com, reeinorg@hotmail.com, reeinorg@gmail.com ; **Website:** <http://www.reein.org>

Wind Energy Business in Bangladesh – List of Companies

Bangladeshi Trading Corporation

- **Business type:** manufacturer, wholesale supplier, exporter, importer
- **Product types:** solar water pumping systems, energy efficient homes and buildings, power conditioning equipment, wind energy assessment equipment, backup power systems.
- **Address:** 51, Siddeshwari, Dhaka, Bangladesh 1217
- **Telephone:** 88-02-8333280

First Bangladesh Technologies

- **Product types:** photovoltaic systems, wind energy systems (small), solar water heating systems.
- **Service types:** consulting, installation, project development services
- **Address:** H - 64, Road 17, Block E, Banani, Dhaka, Dhaka Bangladesh 1213
- **Telephone:** (880 2) 88 11 768
- **FAX:** (880 2) 8828836

OmniTech

- **Business type:** manufacturer, wholesale supplier
- **Product types:** DC to AC power inverters, uninterruptible power supplies UPS, solar electric power systems, wind turbines (small), batteries lead acid, solar water pumping systems.
- **Service types:** design
- **Address:** 79 Satmasjid Road (1st Floor), Dhanmondi R/A, Dhaka Bangladesh 1209
- **Telephone:** +(8802) 8120298, 8115302
- **FAX:** +(8802) 9556475

Xebec & Partners Limited

- **Business type:** manufacturer, retail sales, wholesale supplier, importer
- **Product types:** solar electric power systems, telecommunication batteries, fluorescent lighting, marine power systems, remote home power systems, wind energy systems (large).
- **Service types:** installation, construction, maintenance and repair services
- **Address:** H-71 (2nd Floor) New Airport Road, Amtoli, Mohakhali, Dhaka1212 Bangladesh
- **Telephone:** 880 2 988 2024
- **FAX:** 880 2 882 5379

Source:

Solar Energy Business in Bangladesh

Website: <http://energy.sourceguide.com>