



5R3M Company Ltd (Renewable Company Division)

(A sister concern of Taiga Green LLC, USA)

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Company Profile

Introduction

5R3M Company Ltd (Spin off from Mabel Energy Ltd), started its journey in renewable Company sectors in Bangladesh in 2009 with technical support from Taiga Green LLC, USA. Management of this company have extensive experience in solar business in Bangladesh Currently 5R3M companies Ltd Corporate office is in Old Kacukhet Mirpur

5R3M is developing innovative renewable Company products for Bangladesh Market: 1) Renewable Power Supply (RPS) with solar panels 2) Hybrid IPS – solar option added in regular IPS 3) solar home system for city dwellers 4) Solar pumps 5) Solar hot water system 6) IDCOL approved solar panels wholesale distributor. 5R3M developed Hybrid IPS by its own technology, an alternative and better solution from currently used IPS, for the first time in Bangaldesh. 5R3M also developed off-grid and grid tied system starting from 10W to large system suitable for urban populations.

Our Vision : Safeguard the future with solar Company.

We are convinced that solar Company can make an important contribution Nationwide towards securing and improving our present standard of living and also towards maintaining all our livelihoods. Through its visionary mindset and actions, 5R3M Solar has established itself as a pioneer in the photovoltaic industry. We also intend to live up to this claim in the future.

Our Mission : Make solar Company economical.

The mission of 5R3M Solar stands for the three pillars of our success:

1. High-yielding, leading-edge technology:

We are the worldwide pioneer in CIS technology. Our GeneCIS solar modules stand for high Company yields in combination with an especially aesthetic appearance.☐

2. Competence and professionalism on all levels:

We offer our customers everything from one source. In this way we can ensure the high quality of our products and solutions throughout the entire supply chain. We are the manufacturer, planner and consultant, product designer, installer and service provider.☐

3. Continuous progress:

We continuously develop CIS technology and also our system technology to make solar Company an attractive option for everyone. We take research and development very seriously in our company. We are working today on the solutions for tomorrow.☐

Company Profile

Company Data:

5R3M Company Ltd is a Renewable Company solution provider for Bangladeshi consumers. its has established 1st Aug 2009.

5R3M Company Ltd, Specializes in Solar power systems, system components both large and small scale.

5R3M Company Ltd's top management consists of engineers, who are vying to find Company solutions for Bangladeshi people.

5R3M Company Ltd is a subsidiary of Taiga Green LLC, USA. Taiga Green LLC USA, Operates in Arizona USA, and has been working on the renewable Company sector.

Taiga Green LLC has cutting edge renewable Company solutions and the latest solar industry standards. The same standards and technology is transferred to the 5R3M Company Ltd, Bangladesh operation.

Company Profile

Top Management:

Dr. Rafiqul Islam, Chairman, is a BUET graduate, and completed his Masters and PhD from Arizona State University (USA), currently working at Intel corporation, USA. He has over 6 years of experience working at Intel Corporations. He is also CEO of Taiga Green LLC, USA. His PhD research topics included in amorphous silicon thin film characterization and crystalline semiconductor materials which are being used in solar industry.

Rokshana Ruku: Managing Director, is a Masters & Interior Designer, She has vast Experience of Design Sector. She was lead designer of SHADAKALO, And also chief designer of M-CRAFT.

Abdur Rahman Mamun, Director of finance and sales, has vast finance experience working at banking sector. He is over viewing company finance and sales.

Mr. Sharfuddin I Ahmed, Advisor, he is a BUET graduate and a certified ISO 9000 Quality Management System Lead Auditor. He has over 31 years of service, spent 20 years in inspection and testing diesel/gas power and in carrying out various manufacturing plant quality management system appraisals in a British Company called Crown Agents. He is also an expert in solar mounting design for large systems.

Dr. Khawza Iftekhar Uddin Ahmed, Director of Engineering, 5R3M: Dr.Khawza completed BSc and MSc in from BUET, PhD from Arizona State University, USA. He is currently working at UIU as an associate professor and Director of 5R3M.

Rakibul Islam, Director, Admin and Supply chain: Mr. Rakibul Islam solar consultant on small and large solar installation. He also procures and manages supply chain of 5R3M renewable energy business

Taymur Reza Chowdhury Manager: Mr. Reza lead on customer service and quality of 5R3M Solar and other business. He implements "Customer First" throughout the company. He also provides finance service on fashion business "MeenaBali"

Engr. Shamim Reza, BscEEE, Sr. Solar Engr.: Mr. Shamim is Sr. Solar Engineer, takes lead on solar design and installation. He is also lead on electrical designs on residential and commercial buildings.

Mohammed Kuddus, Sr. Solar Installation superintend: Kuddus has extensive experience on solar installation and electrical engineering works. He is in charge 5R3M electrical works at the field including solar installation superintend



Company Profile

Employees:

Total Certified Engineer	: 5 Nos
Total Sales Employee	: 10 Nos
Total Manufacturer	: 3 Nos
Total Installer & Support	: 05 Nos
Extra Support	: 10 Nos

Being a Responsible company

We are committed to doing business responsibility and conducting ourselves in ways that earn the trust and respect of our customers, partners and neighbors. We have identified three areas of focus: ethical sourcing, environmental stewardship and community involvement.

5R3M Experience and management

- **Experience in Bangladesh**
 - o 5R3M has experience to support all your solar needs including solar PV systems, Solar Hot water, Engineering and sustainable energy related business (Please see our extended catalogue of current offering in Bangladesh)
 - o Installed KW ranges (~2 KWH System) system in Cox-bazaar (US pacific coastal guard in Bangladesh)- Example included
 - o Already installed numerous smaller AC systems >100W AC systems in Dhaka and Urban Areas in last couple of months.
 - o 5R3M received an order for commercial buildings (Multi-KW ranges) in Dhaka. 5R3M is working with Real estate companies for multi-KW ranges systems and provide support for all Power/electrical Solution.



Company Profile

- **Designed/Supervised/Installation by USA Engineers for larger System**
 - o 5R3M solar systems are designed by experienced USA trained engineers. Taiga Green LLC USA and 5R3M Company both will work together for large systems. For larger system >20KW DC Array systems, system will be designed by USA engineer and Taiga Green LLC USA will send an installer from USA to install and commissioning the solar systems. Local Engineer will support warranty, operation and maintenance.

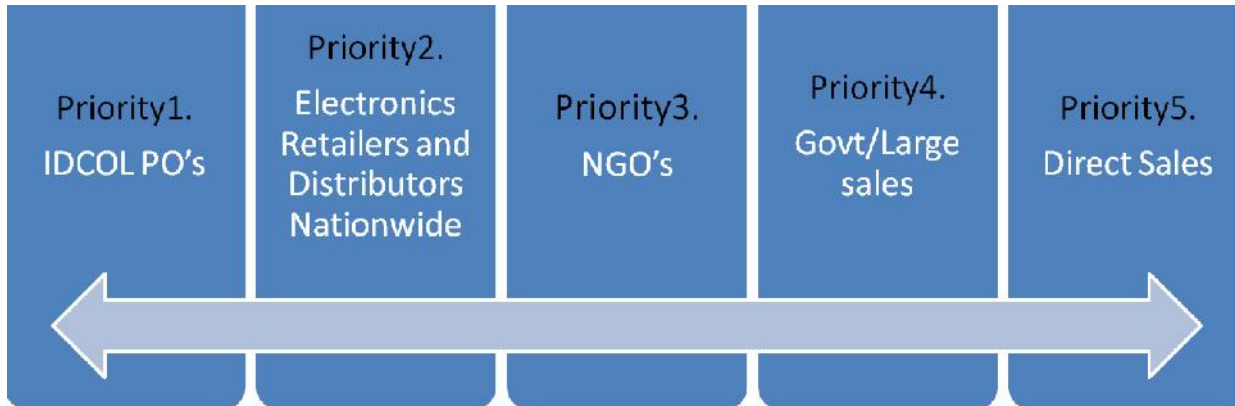
- **Best Price and Quality in the market**
 - o 5R3M/Taiga Green LLC, USA guaranteed to match or beat any prices in the market with same quality system. Our USA partner has agreement with world renowned companies in the solar market in USA and Europe/China.

- **5R3M Renewable Energy Business Management**
 - o 5r3M Business top managements are USA and/or BUET graduated and all are engineers. We have engineering mind and solution for your needs.

- **Customer Support**
 - o 5R3M already gained customer service excellence and one of the dedicated member will assign for your systems. 24 Hour response is guaranteed if within Dhaka.

Company Profile

5R3M Marketing strategy and priority



IDCOL commitment 50MW (SHS) by 2012

- **IDCOL cost saving using our solar panel:** 5R3M brings panels from international market and sells to IDCOL PO. 5R3M also designed DC systems to IDCOL POs

Bright roof top in megacities:

Only 32% of the population has access to the national grid. Approximately 1000–1200MW of electricity is supplied to Dhaka Megacity, while the existing demand is nearly 2000MW. As a result frequent load shedding takes place and most of the service sectors in the city are interrupted.

Marketing to megacities and Solar Power Producer: Currently approximately ~1000 MW power shortage in Dhaka city alone (Ref: Kabir et. al. Renewable Energy Journals and Govt. renewable energy policy) and solar can be a solution for city dwellers. Given the city's power crisis and geophysical situations, applications of either stand-alone or grid connected PV systems would be very effective and pragmatic for power supplement. Although currently Bangladesh don't have enough infrastructure for grid connected and net metering system, load estimation and design can be undersized to supplement existing grid facility. The conservative calculation of bright roof-tops from the Quickbird Scene 2006 of Dhaka city indicates that the city offers 10.554 square km of bright roof-tops within the Dhaka City Corporation (DCC) ward area (134.282 Square km) (Kabir, et. al 2009, article is in press, Renewable Energy). The application of stand-alone PV systems can generate nearly 1000MW of electrical power in roof top systems in city dwellers (small systems) and commercial application. 5R3M will start working with IDCOL and other leading organization to build grid connected infrastructures and net metering for city dwellers. 5R3M will play leading role in large installation for Govt and commercial projects such as telecommunication tower.

Company Profile

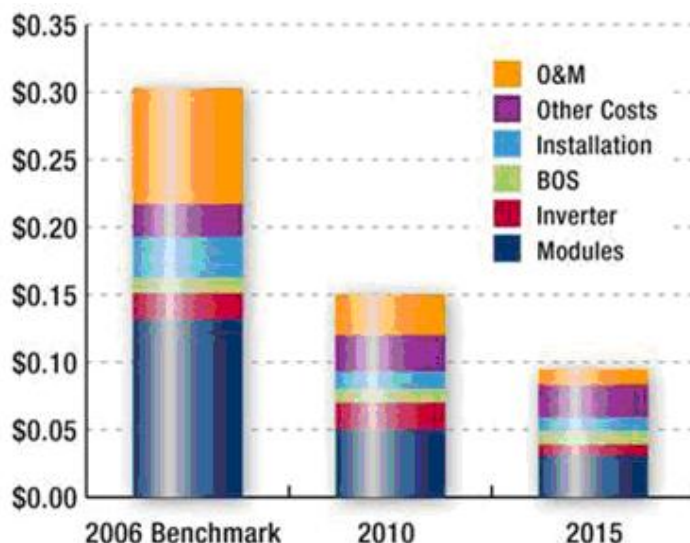
Larger system >5MW

In the case of larger system like more than 5 KW, this will become cost parity if we receive same subsidy that individual power producers receives. Prime minister office already set-up 21.6 KW solar system. Bangladesh bank is also confirmed for solar system (21KW for 1 Cr. Taka). Govt. takes initiative to set-up solar systems in

all govt. office. These will follow all real estate and bank in the future. 5R3M solar can install these systems with high profit margin. Currently Rahimafroze is providing system (Panels, battery, installation etc) with \$6.5/w in Prime Minister Office. 5R3M can provide these solutions with cheaper cost and with high cost/profit margin. 5R3M can provide this solution by \$5.5/w as of now and make ~\$1/w margin. In Prime Minister Office alone, the saving would have been 20 lac taka for her office and 5R3M also could have high margin profit (20% of the sales price 1 Cr Taka). See detailed calculation in the project

Individual solar power producers/solar firms or distributed mini-grid systems in rural areas/tourist locations and earning carbon credit:

In solar powered systems, Our calculation on 25KW, levelized cost become <2 US dollars/kwh. Furthermore, carbon credit can be sold to European nations (\$15/ton)s to reduce the cost. Based on our calculation on 25KW system grid connected with battery back up becomes 0.140\$/Kwh (~9.8 taka) If Bangladesh govt. provides subsidy to these solar farms, this can be profitable in the long run. This calculation was run assuming there will no electricity price hike in next 25 years which is not practical. We calculated worst case scenario. Typically electricity price will rise year over year. So with all these considerations, solar farms or power could be a part of government renewable energy policy to meet 5% by 2010 and 10% by 2020. Carbon credit market would be big plus for this venture. We are predicting carbon credit market itself will be big instrument in financial market. This venture could make us fore front to receive acknowledgement and become a large player in Bangladesh.



Company Profile

Cost parity to grid electricity: Govt. provides subsidy in coal-fired/furnance type power plant to generated electricity. If Govt. provides similar subsidy to the people of Bangladesh who use Solar, the cost would be parity to grid electricity (Pls. look at the analysis in the detailed report). If we can convince our Govt. to provide same subsidy, this county will not face electricity shortage by 2015.

- **Grid Net Metering:** 5R3M can bring technology for Grid connected systems and start net metering to sell solar to the grid. This will spur enthusiasm to the people and solar installations will increase exponentially.

Carbon credit

5R3M also consulting carbon credit market (\$15/ton), this credit can be achieved building solar farm in rural areas using our solar modules.



Company Profile

Product: (Retail Product)

5R3M IPS (200VA to KW Range)

5R3M Mini IPS (Single & Double Light)

5R3M Digital IPS (200VA to KW Range)

5R3M RPS (200VA to KW Range)

5R3M Digital RPS (200VA to KW Range)

5R3M True Online UPS (600VA to KW Range)

5R3M Solar Battery (35AH to 135 AH)

5R3M Deep Cycle Battery (50AH to 200AH)

5R3M Automobile Battery

5R3M Poly / Mono Crystalline Solar Modules (SR5- SR230W)

5R3M Thin Film Modules (MQS50-MQS90)

5R3M Solar Pest Control

Solar Education (Hand on training on solar System)



Company Profile

Product: (Corporate Product)

Utility Scale Solar Energy (25 KW to MW Range)

Rooftop Solar System (Grid-Tied, Non grid-tied, 5KW-40KW)

Rooftop Solar System (Battery Backed up, 5KW-40KW)

Small Home Solar Systems (1w-500w)

Solar Mini Power Station for School/ Hospital (1KW-10KW)

Solar Powered Drip irrigation for vegetable farming

Solar Power General Irrigation

5R3M Poly / Mono Crystalline Solar Modules (SR5- SR230W)

5R3M Thin Film Modules (MQS50-MQS90)

Grid / Non Grid Connected Inverter

Cables/ Switches / Design Services

Solar Pest ControlSolar Education (Hand on training on solar Syste

Quality:



5R3M Solar Panels are TUV, CE, VDE (International certification for Solar panel testing) certified.

All Solar Panels comes with 5 year workmanship guarantee, 25 years of 80% power warranty



All 5R3M systems has its individual warranty, One year After sales service.



5R3M will continue to put maximum emphasis on Quality on its products and services.

Capacity:

We are capable to maintain instant support for all product. We have stock all product.

Company Profile

Authorization

Solar Panel(worlds no:1)

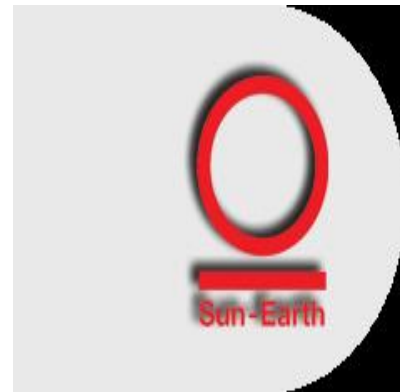
Japan

THE NEW VALUE FRONTIER



Solar Panel

China



Solar Water Pump
Germany

Sun. Power. Life.



PS Solar Pump Systems
Submersible Pump Systems for 4" and 6" Wells

Application

- Irrigation
- Water supply
- Water pump
- ...

Characteristics

- High efficiency
- Compact design
- High reliability
- Low maintenance
- ...



Solar Water heater

USA



Inverter (world Best)

USA

