

SOLAR PV & SOLAR THERMAL : Manufacture & Marketing : Expansion PROJECT

- Company name : KOTAK URJA
- Year of Formation : Sept' 1997
- Type of registration : PRIVATE LIMITED
- Location : Bangalore, India.
- No. of Directors : 2
- Name of Chairman : Mr Kamal S Kotak
- No. of Employees : 91
- Nature of Business : SOLAR Energy products
Manufacture, Marketing,
Installation, Service
- Range of Products :
 - a) **Solar PV** (65% of sales)
comprises of PV Modules : 3 Wp to 180 Wp and PV applications : Home lights, Street lights, Lanterns, UPS - Inverters, Small Power plants (upto 10 KW)
 - b) **Solar Thermal** (35% of sales)
comprises of solar domestic water heaters flat plate and ETCs, industrial water heaters, air heaters, crop dryers, space heating, swimming pool heating, industrial effluent evaporators, safe drinking water systems,



SOLAR PV & SOLAR THERMAL - EXPANSION PROJECT

• Management Team

- Mr Kamal S. Kotak - Chairman, Er, MBA
- Dr Kasiviswanathan - Director, Phd.
- Mr Sunil Kotak - Member : Board, MBA-Fin
- Mr K. Srinivas Kumar – VP (operations), Er
- Mr Raghunandan SS - GM - Engg & Proj, Er
- Mr Manoj Kumar – GM – Mktg , Er

The Operations team has **solar production and field experience** in various companies as **BHEL, TATA BP Solar**, with combined experience of **over 55 years** between them.



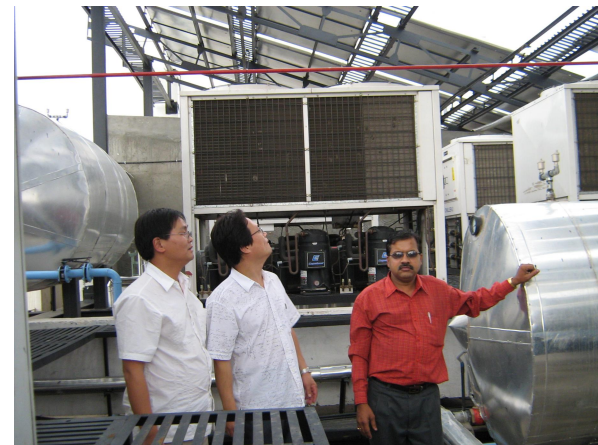
• KOTAK's

- Since 1927
- Major trading house, family holdings in banking (**KOTAK Mahindra Bank**), Textile raw matls, Chemicals, Engg components and machinery, (Represent NGK – Japan, Mitsubishi, Toshiba interests in India)
- Respected for honesty, integrity and a good brand.

• STRATEGIC PARTNERS for expansion

- For PV – In House Application Dev., Machinery from Spire Corp – USA or Belval – Europe for Quality linked Automation
- For Thermal –

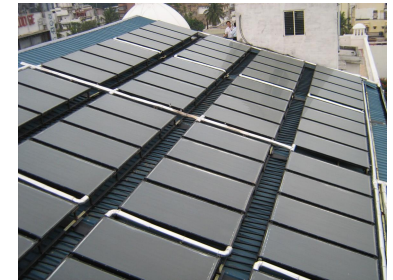
Sunshore Corp. – China for ETC and tanks ;
Conserval Engineering Inc.– Canada drying plus other inhouse developments.
MOU already in existence in thermal.



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- **FOCUS Areas for GROWTH**

- PV Modules - Exports
- PV Applications :
 - Home Lighting Systems – Rural Areas, Suburbs
 - Street Lighting Systems – Industry, Hotels, Resort
 - UPS – Inverter based – Banks, Business houses
 - Power Plants - upto 25 KW for remote hamlets
- Thermal systems
 - For crop drying – vegetables, fruits etc.
 - For safe drinking water – stand alone : community
 - Water heaters – household and industry
 - Effluent evaporators – for industry



- **TECHNOLOGY :**

- Already **proven installations** both existing **in-house** and **with associates** already tied up with for thermal and PV. Only machinery needs to be set up.



- **MARKETING and SERVICE**

- Existing Network - Regional Offices, Dealers. Needs scaling up.

SOLAR PV & SOLAR THERMAL : EXPANSION PROJECT

	Yr 2004 -05	Yr 2005 - 06	Yr 2006 - 07	Yr 2007 - 08	Yr 2008 - 09
Annual Sales	USD 2.02 million (Rs 9.0 cr)	USD 2.91 million YOY : 44% (Rs 12.60 cr)	Projected USD 5.61 million (Rs 25.0 cr) YOY : 92%	Projected USD 10.11 million (Rs 45.0 cr) YOY : 80%	Projected USD 14.60 million (Rs 65.0 cr) YOY : 44%
Operational Profits (EBITDA)	USD 0.08 m	USD 0.10 m	USD 0.43 m	USD 1.087 m	USD 1.63 m
Prodn - PV annually	Only applications. No Module line prodn. 250 KW	0.4 MW	1.8 MW	3.0 MW	5.0 MW
Prodn - THERMAL	5000 sq.mtrs	7000 sq.mtrs	9000 sq.mtrs	12000 sq.mtrs	18000 sq.mtrs
Equivalent Carbon savings - PV	83 tons (@1.5 tons per 4.5 KW installation)	100 tons – agst installation done (not recorded or claimed)	450 tons – proj.agst.installati ons done / plannd (not recorded or claimed till now)	650 tons – projected agst. Installation for 65% of prodn. Planned.	1080 tons – Projected agst. Installation for 65% of prodn. Planned.
Equivalent carbon savings - THERMAL	3750 tons @1.5 tons per 2 sqm or 100 L). All installations only	5250 tons All installations only	6750 tons – proj.	9000 tons – proj.	13500 tons - proj

Investment Required

- Investment Required: USD 3 Million
- Investment required in 3 phases
- Rate of Return Expected: 11% - 14% (does not take into account CDM revenues)

	FY 06-07*	FY 07-08*	FY 08-09*	FY 09-10*	FY 10-11*
Revenues	USD 5.4 m	USD 9.7 m	USD 14.1 m	USD 20.6 m	USD 31.5 m
Net Profit	USD 0.6 m	USD 1.07 m	USD 1.55 m	USD 2.27 m	USD 3.5 m

USD/INR Exchange rate taken at 1USD = Rs.46.

CDM Revenues not taken into account

* Projected

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- Milestones Covered :
 - Identification of Expansion Areas – PV and Thermal
 - Discussion with strategic partners – in house and associates – done
 - Quotations for machinery for SPV and Thermal – Taken
 - Discussion with bankers (PNB) on expansion plan – preliminary clearance taken.

- Next Steps – Milestones for future
 - Identification of fund sources / investors and methodology - target completion – Jan 2007
 - Preparation of final report in consultation with bankers and auditors & land identification - Feb 2007
 - Final Discussion with suppliers - April 2007
 - Completion of Procurement / Construction of land and building : May 2007
 - Completion of construction and procurement of machinery : Nov / Dec 2007
 - Trial production and commissioning and increase of marketing infrastructure – Jan / Feb 2008
 - Regular operations / production – April 2008

