

WELCOME
From

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**TOPIC : Private Sector – India Environment Project Opportunities /
EU Technologies**

Audience : Venture Capitalist / Project Partner / RE Generators

Present RE Generation Scenario :

- 1). Renewable Energy development is certain to grow with mission statement and REC in INDIA**
- 2). Payment security is a big risk as the bleeding (Cash Negative) DISCOMs and State governments are not in a position to issue an escrow account similar to NVVNL + DISCOM which is a great / stumbling block for private sector with investment from reputed international companies to develop projects with new business ideas.**
- 3). REC mechanism is new and we are not sure how the money / cash flow will improve the expensive solar power generation through sale of certificates and payment assurance from RPOs on time due to their present negative cash flow. Thus no PPA projects (i.e REC route) have this danger of Negative Cash flow for the RE Generator, which will be a risky affair. Hence, risk mitigation actions must be initiated by State Governments for quick growth.**
- 4). RE Generation is feasible through Solar PV, Solar Thermal, Biomass, Wind in private sector. MSW with commercially proven technology is yet to materialise.**

Project Opportunities :

- 1). Solar PV / CSP project development : NVVNL or State Govt allotment, which is a time taking procedure and Political interference dependent and hence good quality players find it hard to realise due to in explicable delays, whims or poor Center / State government interactions . Policy formation or project allotment is not YET FREE from Political interests. (Refer the recent cancellations of RE Projects viz Mini Hydro (sanctioned 15 yrs ago !! Without any development from promoters!) and Solar PV projects sanctioned in 2009 by KREDL, which is a good step taken by KREDL)**
- 2). Agro Power Complex : Our Company initiative to derisk Government Interference by generating power at Grid parity with a self sustainable business plan. PILOT Plant to be created before launching a commercial scale size and units PAN INDIA and AFRICA.**
- 3). MSW Project opportunities with 200 TPD to 1000 TPD raw material (without steam turbine) will be aplenty on CPP or REC basis, but, needs a viable or commercially established technology from EU without steam generator concept as water and land availability at such Municipal Corporation is scarce.**
- 4). 100 or 200 MW Private Solar Parks with REC initiatives or PPA needs to be promoted with necessary lobbying with small investors investing in Solar Parks with fiscal incentives. This shall be similar to Wind Farms to avoid hassles dues application procedure for small project sizes, unique technology, good PMC, Substation utilisation with good grid connection etc**

**II. What is KK NESAR projects Private limited : ref.
www.kknesar.com**

III: How will be the objectives of APC be accomplished :

Having an MOU or creating a SPV or JV between PARTNERING COMPANY and KKNESAR for next 10 years with the business plan deliverables, to be worked out upon such MOU.

Tentative Project cost outlay:

a). Biomass power plant per MW	=	INR. 6 Crore (1.4 MUSD)
b). Solar PV plant per MW	=	INR. 14 Crore (3.0MUSD)
c). Cold Storage plant (5000 MT)	=	INR. 3 Crore (0.8 MUSD)
Total Agro – Power Complex cost	=	INR. 23 Crore (5.2 MUSD)

a). Tariff for Biomass power	=	Rs. 5 / unit for 20 yrs
a.1) Net units generated / Half MW	=	3 MU
b). Tariff for Solar PV	=	Rs. 12.5/ unit for 25 yrs
b.1) Net units generated / MW of solar	=	1.5 MU

c) Average Unit price = [3 x 5 + 12.5 x 1.5] / 4.5 = Rs. 7.5 / Unit

IV: Preliminary Details of Objectives :

1). Solar PV mountings on the roof top of structures of APC :

a). Upon structural design verification, a pilot project for 1 MW (~10,000 sq mtr surface area) shall be set up with necessary Captive power generation benefits on OFF GRID basis or REC with necessary subsidies from the State governments. Based on the success, capacity expansion can be studied vis-à-vis Capex needs through Project Financing from Abroad at less financial load, which is available.

b). Cold storage unit needs 250 kw . Consumption will 190 kwh/hour. Day power of Solar PV generates excess power @ an average 17% CUF, Remaining power generated will have to be sold to consumer, PPA related issues will be minimized and hence PARTNERING CO can foray in to Solar PV technology, before others FLOCK this field. The pilot plant will be launch pad. During Rainy / winter season or Solar PV shutdown, Biomass power plant may have to be run on part load. Thus this Hybrid power complex is more beneficiary and reliable.

c). The land required for the construction of Cold Storage can be best utilised by designing its roof to take the load of the Solar PV panels and its mountings. Also the covered area of Biomass power plant's roof shall also be designed to mount solar PV roof. The biomass storage yard, water pond area etc can be constructed with a covered area to receive solar pv panels. Thus the Solar PV mounting area will be very effective utilised thereby no waste land creation for the Cold storage system, which otherwise require 2.5 Acres for a stand alone Cold storage system. Please refer www.nabard.org for cold storage details.

2). Biomass Gasification :

a). Max. Size of plant shall be 1 MW due to Producer Gas Engine technology and large biomass management constraints. Power generated shall be for Captive purposes with MNRE benefits or such State govt benefits and technology promotion with Carbon credit benefits which can be set off with the present level of emission.

b). Biomass plant can either be fitted in the existing area of 20 m x 40 mtr of the plant with necessary Biomass procurement / management plan. If CLIENT has one such Biomass plant, this option is ruled out for obvious reasons.

A). KK Group Concept / Brainchild “ Agro – Power Complex” :

a). Indian economy sustains only when Food Security is ensured with the great reduction in wastage of Agricultural produce with necessary storage facilities in remote area where power availability is scarce.

b). Realising the same, KK Group has conceptualized to utilize NRE power generation while retaining the Agricultural land (Food Security) for better use, while providing necessary Storage facilities for many small and big formers by building many “Agro – Power Complexes” in many districts.

c). Essentially the “Agro – Power Complex” consists of the following:

1). Agricultural Land acquisition of 6 Acres (max) per “Agro – Power Complex”

2). Construction of Cold storage units as per NABARD to protect perishable goods of agriculture produce)of India with Covered roof having a surface area of around 10000 Sq. Mtr, which shall be sufficient to mount 1 MW equivalent Solar PV Panels on the roof top with our patented design and develop ~ 1.5 Million Units of Solar power per year, due to existing Solar PV technology constraints. Roof of the Biomass power plant can also be used.

3). If the Solar PV capacity is increased, the remaining area shall be used for Cultivation (Subcontracted to farmers) of high yield, Controlled temperature based Agri produce viz Floriculture, Vegetables & Fruits or even the local crop, which suits the mix of Biomass and give us high return in the respective seasons. Also have a tie up with rice mills and farmers for Biomass availability for 1MW plant on a continuity basis. This ensures the power in the morning by Solar PV and in the night by Biomass plant, if grid power is not available.

4). Cold Storage of suitable capacity to store the a.m. Agri produce and hence avoid wastage and increase the Project Profitability. This cold storage can also store the produce of other farmers, who wish to use our Project Cold storage facility on the Current Market Price for Storage and handling. Many Cold storage chain co's are available and we can subcontract this activity for all our projects.

5). If the grid connectivity is available nearby, the excess power (after captive consumption) generated can be sold to energy Buyers.

6). Building the rice mill and subcontract its operation (not envisaged in the first phase) to have the biomass and to promote the farmers to store their produce in the Godown and take away the final product. Project profitability depends on the location of Rice producing area. Hence, rice mill shall not be a part of 'Agro-Power Complex' in the first phase, but, LAYOUT provision can be made.

7). Each "Agro – Power Complex" shall thus produce 1 Mw Solar + 0.5 Mw Biomass = 1.5 MW power per location. The feasibility study is location specific and we can evolve a mechanism with standard design after the execution of the pilot "Agro – Power Complex" with a first project with our patented design and business model. However, we can add or delete few of the facility.

8). GRID or OFF GRID, PPA or No PPA, the "Agro-Power Complex" shall help many village farmers, job creation, avoidance wastage of agri produce, Offgrid Power supply to remote villages, Skill generation, Food security etc.. This requires to obtain necessary permission from the State government vis-à-vis its existing policies to enable us to get the necessary subsidy and to promote renewable energy generation with a Capitalistic idea and Socialist gains while ensuring food security.

Introduction of The Promoter, Mr. Praveen Kumar Kulkarni., BE (MECH),MIE

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- Gold Medalist from SLN College of Engineering, Gulbarga University, Industrial work experience over 23 years with PSU, MNCs.
- Industrial Career Started with a PSU, Tungabharda Steel Products Ltd, Hospet from 1988 to 1995. Executed engineering of 21 Hydro Mechanical Equipment projects (RG, VG, LB, EOT and Gantry Cranes) apart from Malpe Slipway machinery and Steel Plant equipments. Deputed to Japan for 5 months as part of UNIDO program to become JICA participant-1994. Introduced CAD in TSPL with software programs for design of Gates, Hoists and Cranes. Deputed to TSPL Hyderabad branch to assist business development of Steel Plant Equipments
- With SMS Demag India Ltd, German MNC) engineered Steel Melt Shop equipments of Jindal Vijay Nagar Steel Plant.
 - ◆ Apart from Head of Secondary refining equipments viz VD, VOD, RH, RHOB, SMS equipments, supported the pre-bid and business development activities thru ICB of SMS Demag Secondary refining equipments. Visited SMS Demag, Duisburg on company assignments
- ALSTOM Portugal / India (French MNC) hired as Consultant and Part of Management team to launch Hydro Mechanical Equipment in India in their Baroda factory. Prepared Business plans, Export support (1ME, Owenfalls, Uganda), tendering support to realise and launch Omkareshwar Project. Visited ALSTOM Lisbon, France, Grenoble on assignments and important missions
 - ◆ Project Manager of Omkareshwar HME (24 ME)
 - ◆ Implementation Manager to rebuild (15ME) Alstom Baroda factory to manufacture Hydro turbines, Generators and HME to cater to their Indian and Export Markets. Visited USA, Russia for special equipment evaluations, purchase and installations.
 - ◆ Project Director of Nam Ngum, Laos HME project (10ME)
- Established KK Group Cos to execute projects on EPC basis with a Collaborative business approach.

THANKS