

**KK NESAR**  
PROJECTS PVT LTD, INDIA

**KK NESAR PARTICIPATES WITH  
INNOVATIVE IDEA PRESENTATIONS TO:**

- MNRE, India
- Indo German Chamber of Commerce
- Indo Canadian Chamber of Commerce and STEP
- French Embassy
- US India Chamber of Commerce
- Observer's Research Foundation – ORF
- Vibrant Gujarat Team
- GERMI
- SEMI
- TiE
- Indo Italian Chamber of Commerce
- European Business Technology Centre
- FP Research Program of Europe and UK
- LAMP (Legislative Assistance to Member of Parliament of India)
- CII
- FICCI
- VCCI
- Media Articles about NICHE Renewable energy Project implementation with low cost energy solutions
- PV Insider of UK

**WELCOME**

**From**

**KK NESAR Projects Pvt Ltd**

**(CIN NO: U74200GJ2009PTC058267)**

**270, Kadam Nagar,**

**Signum Apartments, Flat no: 302, Nizampura**

**VADODARA - 390 002**

**GUJARAT**

**INDIA**

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**E-mail : [praveenkulkarni@kknesar.com](mailto:praveenkulkarni@kknesar.com)**

**Web site : [www.kknesar.com](http://www.kknesar.com)**



**PROPOSAL : Harnessing The Affordable and Low Cost Renewable Energy generation through "SMALL ENTREPRENEURS WITH MENTOR"**

**Client : Venture Capitalist / Project Partner**

**Address : 270, Kadam Nagar, Vadodara, Gujarat, India**

**Contact Person : praveenkulkarni@kknesar.com**

**I. Key Objectives :**

- 1). Development of 20 to 50 MW Solar PV Power project with Small Entrepreneurs with investors with maintenance per single location per Village / Small town / Town / Taluka or Revenue District of a State with decentralised low cost & affordable renewable energy generation with grid stability.**
- 2). Deployment of world class technology with low cost debt fund to WOO Small Investors along with Partial Equity funding. Interest subsidy from Government can be envisaged.**
- 3). Maintenance of Project to ensure a low cost business model of Solar PV project Development with a modest revenue generation scheme with reduced tariff. Efficient design with less land usage / MW.**
- 4). Concept of " Let Experts from Financial Institution / Funding agency / Government Mentor contribute to the growth of Infrastructure Industry with " Stake Holding Capitalism" with skilled Entrepreneur generation in India / World. Good quality national asset generation under sustainable development actions with more transparency with rural job creation.**



THREE Entrepreneurs, atleast, one shall be born in that locality for inclusive growth

Part Equity + Full Debt fund from FI has interest rate, but, the Government shall provide interest subsidy due to low tariff PPAs with a transparent business plan with Board members from FI + Government till loan recovery.

Strategic Business Unit for 20 to 50 MW Solar PV: CEO  
Three Entrepreneurs shall deliver at least one function with 5% Project Equity

Financial Institute to lend the part equity + low cost debt fund through our JV / LLP counter guarantee for energy generation and Loan recovery. EPC company shall be from FI panel to get low cost products

**PROPOSED ORGANISATION**

HR: Shared

Sub-Contracting : TBA

BD: PKK & TBA

Finance Control: Shared

Implementation:

Quality/CI: Third Party

IT/SAP: Shared

Project Director:

PM: TBA

Land Acquisition

Billing and Receipts

Site Monitoring with O & M

Assured energy generation reports to get Interest subsidy



### Initial Steps involved :

1. Conceive / Develop the 20 to 50 MW Solar PV power project in Multiples of 5/10 MW with Ground mounted structures before we make a proposal to State government or local government for PPA with Interest subsidy
2. We approach 10 such Entrepreneur's group who want to have funding and EPC from us (i.e FI + Worlds' best EPC company + FI + KK NESAR as implementation agency with a PILOT plant too) and ready to supply the low cost energy to the government establishment with Interest Subsidy so that it will be advantageous to all stake holders:
3. Arrive at the costs up to evacuation, including taxation and its supply chain to reduce the cost of components with a long term supply contract
4. Prepare a finance model with 5% equity, 15% Equity fund with a board seat for Funding agency till this equity and debt is repaid and 80% Debt funding scenario. Interest rate for the 12 year Term loan shall be 1.5% including hedging. If a FI can provide EPC with financing with 4% to 8% Interest rate, Government shall reimburse the Interest subsidy to the project developers (small Entrepreneurs) to have the project interest of 1.5% per annum. Government shall advise the Entrepreneur to select the FI cum EPC company, which offers low interest rate with good / proven technology as a Mentor and to remain responsible for such technical advise.
5. Services of Entrepreneur shall be to be a project developer with small Equity, get remaining from from FI+EPC company and connecting to Grid and its maintenance for next 25 years with a signed PPA and Business and finance model.
6. What KK NESAR Expects: KK NESAR shall be provided with 50 MW allotment in lieu of the agency service from the stage of conceiving till the maintenance of plant for 25 years. The entire Equity and Debt fund for 50 MW solar PV power project (herein called as portion of KK NESAR) shall be in the form of loan @ net interest rate of 1.5% . The loan repayment shall be recoverable quarterly from the energy billing charges with deducing principle concept while leaving only Rs.55 lakhs /year (USD 100,000/year) for KK NESAR's internal needs to meet its promoter's contingency after paying all expenses related to its portion of 50 MW. Till the loan (both equity and debt) repayment, necessary control stakes shall be with Partner Co + FI with an open book policy which shall form the part of this project development activity.



The key advantages will be as given below:

1. **Financial Institution – Differential interest earning and to promote Clean tech with Friendly EPC companies who have the good equipment suppliers/**
  2. **EPC company : Assured Order generation with good quality vendor base**
  3. **Vendors : Assured order generation**
  4. **KK NESAR : Asset creation with an idea of distributing the wealth to many small entrepreneurs with learned business cases to provide energy at low cost to common man and hence sustainable solutions while promoting / harnessing Renewable Energy to illustrate and attract more small SMEs who can provide low cost services and maintain the plant till the plant life and hence large job creation in their native land with inclusive growth concept of COUNTRY FIRST culture.**
  5. **Government: No capital subsidy or Viable Gap funding, instead, pay the interest subsidy only against performance and create large amount of jobs through small entrepreneurs with responsibility and control in Board of small entrepreneurs to assure smooth bill payment from Government, thus, acting as a good Mentor. GDP Growth of the Country with low cost solutions with sustainability through Growth Engines called Small Entrepreneurs.**
  6. **Common Man : Low cost energy in their small town with good number of jobs for local.**
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- a). **No hassles to run around to get sanction / various approvals for 1 MW from various ministries or department. Thus, time and overheads will be reduced. Land acquisition related issues will be greatly reduced due to large area acquisition at low cost.**
  - b). **Assured power generation, smooth energy bill realisation, debt repayment including interest and mentored management with clarity, skilled professionals / Entrepreneurs themselves managing the site, hence, no worry of employee turnaround for small investors, which may increase the maintenance costs at later date. The maintenance costs will be less and the spares management will be far superior with less down time.**
  - c). **Tax administration, other FISCAL benefits will be uniform and transparent.**
  - d). **Low cost project development with good maintenance by credible organisation.**
  - e). **Wealth creation and distribution to small investors / Entrepreneurs with large employment generation at their native land, thus, inclusive growth with responsibility of contributing to the nation.**

# KK NESAR PROJECTS Pvt Ltd

Cell No: 0091 9898296247



## IRR and Cashflow : Sample Calculations

Determination of IRR and CASHFLOW		Cost / MW	700 lakhs		Total Cost of Project	700 lakhs		REC	upto2017	2018-2023							
		Floor price	0		0		0										
Solar Power Project																	
Units Generation	Unit	Year-->	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Installed Capacity	MW		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Gross Generation (per MW)	MU		1.55	1.55	1.55	1.55	1.55	1.55	1.55	1.55	1.55	1.55	1.55	1.55	1.55	1.55	1.55
Net Generation	MU		1.55	1.55	1.55	1.55	1.55	1.55	1.55	1.55	1.55	1.55	1.55	1.55	1.55	1.55	1.55
<b>Incomes Cash In</b>																	
Tariff with 5% Escalation / yr for 1st 10yrs	Rs / kwh		7.169563	5.00	5.25	5.51	5.79	6.08	6.38	6.70	7.04	7.39	7.76	7.76	7.76	7.76	7.76
REC Benefits 1 Mwh = 9300 rupees	Rs. Lakh		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Only from Energy Generation	Rs. Lakh		77.50	81.38	85.44	89.72	94.20	98.91	103.86	109.05	114.50	120.23	120.23	120.23	120.23	120.23	120.23
Total Incomes Cash In	Rs. Lakh		77.50	81.38	85.44	89.72	94.20	98.91	103.86	109.05	114.50	120.23	120.23	120.23	120.23	120.23	120.23
<b>KEY POINTERS / INDICATORS:</b>																	
ROE (19% @0to10yrs n 24% @11to25yrs)	Rs. Lakh		26.6	26.6	26.6	26.6	26.6	26.6	26.6	26.6	26.6	26.6	26.6	33.6	33.6	33.6	33.6
Depreciation (Normal)	Rs. Lakh		42.00	42.00	42.00	42.00	42.00	42.00	42.00	42.00	42.00	42.00	42.00	9.31	9.31	9.31	9.31
Working Capital (2Mrecv+1M of O&M)	Rs. Lakh		20.85	21.17	21.50	21.84	22.19	22.55	22.92	23.30	23.70	24.11	24.53	24.97	25.42	25.89	26.37
Total COG (Cost of Generation)	Rs./kwh		6.13	6.13	6.11	6.09	6.08	6.07	6.06	6.05	6.05	6.05	4.39	4.40	4.41	4.48	4.56
ROE / kwh	Rs./kwh		1.72	1.72	1.72	1.72	1.72	1.72	1.72	1.72	1.72	1.72	2.17	2.17	2.17	2.17	2.17
Depreciation (Normal) in Rs/kwh	Rs./kwh		2.71	2.71	2.71	2.71	2.71	2.71	2.71	2.71	2.71	2.71	2.71	0.60	0.60	0.60	0.60
COG (Without ROE and Depreciation) but (with O & M Charges+ Interest on (Debt+WC)+Wheeling Charges)	Rs./kwh		1.73	1.70	1.68	1.67	1.65	1.64	1.63	1.62	1.62	1.62	1.62	1.63	1.64	1.71	1.79
<b>Fixed Cost (Cash OUT)</b>																	
O & M Expenses	Rs. Lakh	0.0572	10	10.57	11.18	11.82	12.49	13.21	13.96	14.76	15.60	16.50	17.44	18.44	19.49	20.61	21.79
Interest on Term Loan	Rs. Lakh	2	11.20	10.27	9.33	8.40	7.47	6.53	5.60	4.67	3.73	2.80	1.87	0.93	0.00	0.00	0.00
Insurance fee	Rs. Lakh		0.70	0.71	0.72	0.73	0.74	0.75	0.77	0.78	0.79	0.80	0.81	0.82	0.84	0.85	0.86
Interest on Working Capital	Rs. Lakh	8	1.67	1.69	1.72	1.75	1.78	1.80	1.83	1.86	1.90	1.93	1.96	2.00	2.03	2.07	2.11
Repayment of Loan	Rs. Lakh		46.67	46.67	46.67	46.67	46.67	46.67	46.67	46.67	46.67	46.67	46.67	46.67	0.00	0.00	0.00
Wheeling Charges @0.25paise/kwh	Rs. Lakh	0.25	3.88	3.88	3.88	3.88	3.88	3.88	3.88	3.88	3.88	3.88	3.88	3.88	3.88	3.88	3.88
Total Fixed Cost	Rs. Lakh		74.11	73.78	73.49	73.24	73.02	72.84	72.70	72.61	72.56	72.57	72.62	72.74	26.24	27.40	28.63
Project Equity cash Out		-140.00															0
Cash FLOW	Rs. Lakh		3.39	7.59	11.95	16.48	21.18	26.07	31.16	36.44	41.94	47.66	47.60	47.49	93.99	92.82	91.59
Accrued Income (Cumulative Income)	Rs. Lakh	-140.00	-136.61	-129.02	-117.07	-100.59	-79.41	-53.33	-22.18	14.26	56.20	103.86	151.46	199.96	252.95	305.77	477.36
Project IRR based on yrly Incomes		-700.00	77.50	81.38	85.44	89.72	94.20	98.91	103.86	109.05	114.50	120.23	120.23	120.23	120.23	120.23	120.23
Project IRR based on yearly INCOMES			12.92%														
<b>INCOME TAX WITH P &amp; L</b>																	
Total Expenses	Rs. Lakhs		74.11	73.78	73.49	73.24	73.02	72.84	72.70	72.61	72.56	72.57	72.62	72.74	26.24	27.40	28.63
Depreciation	Rs. Lakhs		42.00	42.00	42.00	42.00	42.00	42.00	42.00	42.00	42.00	42.00	9.31	9.31	9.31	9.31	
Sub total of (expenses+Depreciation)	Rs. Lakhs		116.11	115.78	115.49	115.24	115.02	114.84	114.70	114.61	114.56	114.57	81.93	82.05	35.55	36.71	37.94
Total INCOME (Cash In)	Rs. Lakhs		77.50	81.38	85.44	89.72	94.20	98.91	103.86	109.05	114.50	120.23	120.23	120.23	120.23	120.23	120.23
Net Profit (+)/Loss(-) [Income-subtotal]	Rs. Lakhs		-38.61	-34.41	-30.05	-25.52	-20.82	-15.93	-10.84	-5.56	-0.06	5.66	38.29	38.18	84.68	83.51	82.28

# KK NESAR PROJECTS Pvt Ltd

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## IRR and Cashflow : Sample Calculations

Typical / Draft IRR Calculations per MW in Rupees which will be ensured to Retail Investors :

Note: Detailed IRR calculations shall be dependent on PPA tariff per kwh, Net interest rate and the EPC costs prevailing during the Project Execution

- O & M Expenses, Interest on Term Loan, Insurance fee, Interest on WC, Repayment of Loan
- Tax administration shall be the responsibility of the Entrepreneurs depending upon their individual / total profit and loss accounts.

Carry forward of losses (Cumulative)		0	-38.61	-73.02	-103.07	-128.59	-149.41	-165.33	-176.18	-181.74	-181.80	-176.14	-137.85	-99.66	-14.98	0.00	0.00
Taxable Income			-38.61	-73.02	-103.07	-128.59	-149.41	-165.33	-176.18	-181.74	-181.80	-176.14	-137.85	-99.66	-14.98	68.53	82.28
Income tax or MAT	Rs. Lakhs	33.99	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	23.3	28.0
<b>PROFIT AFTER TAX (PAT)</b>	<b>Rs.Lakhs</b>		<b>-38.6</b>	<b>-73.0</b>	<b>-103.1</b>	<b>-128.6</b>	<b>-149.4</b>	<b>-165.3</b>	<b>-176.2</b>	<b>-181.7</b>	<b>-181.8</b>	<b>-176.1</b>	<b>-137.8</b>	<b>-99.7</b>	<b>-15.0</b>	<b>45.2</b>	<b>54.3</b>

  

Project IRR based on Cumulative Income	86.9%		9	
Total Investment	700	Rs. Lakhs		
Debt	560		80 %	
Equity	140		20 %	
Total Accrued INCOME	1308			

  

Total Project cost	700 lakh	
Project Equity	140 lakh	
EPC Costs	595 lakh	595
Loan tenure	12 years	

  

Total interest paid on Term loan	73	Rs.Lakhs	RO Int%	2
Total interest paid on WC for 25 years	52		WC Int%	8



The key advantages of our KK NESAR design will be as given below:

Please take note of the NICHE design theme,

- which will give us an option to reduce the land requirement (Shed without roof / side sheeting- 30 or 40 m span x 300 m long x 3.8 m height (max) to accommodate 1 MW equivalent panels at 6 deg horizontal slope i.e almost flat roof.) . Dust Menace can be reduced in Deserts.
- allows right to cultivate below panels under Green house principle including an exploration of lettuce growing with LED lamps for photo synthesis, if the land can be made fertile through solar irrigation pumping system.
- allows to house inverters and its associated electrics below the PV panel's mounting structure
- cables along the rafters / purlins, (refer [www.kknesar.com](http://www.kknesar.com))
- allows good cleaning mechanism for PV panels located 3.8 mtr above the ground with water sprinklers along the ridge with gutter to collect the water for reuse,
- one can house containerised office or even permanent offices and living labour / site quarters below the panels, thus, many advantages with less land usage.
- Further, if NA (Non Agriculture) land is mandatory, a Dry food grain storage (or such location specific usage) is also envisaged on Food Corporation of INDIA storage guidelines, so our PV station shall support Food security program of Government of India as a multilateral benefits.....

Only the substation has to be outside the PV shed like area.... PILOT plant will provide us more learning with this unique design and INDIA specific needs.





## Introduction of The Promoter, Mr. Praveen Kumar Kulkarni., BE (MECH), MIE, Ex- JICA /UNIDO

Cell No: 0091 9898296247

- Gold Medalist from SLN College of Engineering, Gulbarga University, Karnataka India with Industrial work experience over 24 years with PSU, MNCs viz Tungabhadra Steel Products Ltd, SMS Demag German and ALSTOM Hydro. Implemented Hydro business of Alstom in India while heading few export project supplies by being Project Director / Manager for India, Africa and South East Asia Hydro power projects as part of Renewable energy generation promotion.
- Due to distinctions achieved, At the age 28, UNIDO (United Nations Industrial Development Organisation) selected for a high technology training on Material Handling equipment and was trained at Kyushu International Centre, Japan as JICA (Japan International Co-operation Agency) participant in 1993.
- Implemented new technology products / projects in INDIA with Innovative ideas which are adaptable with low cost technology solutions for the benefit of nation with sustainable business solutions.
- As an entrepreneur, established KK NESAR Project Private Ltd ([refer www.kknesar.com](http://www.kknesar.com)) to implement NICHE and Innovative Renewable Energy project Development interest in Projects Development at Baroda-Pune-Bangalore & Mumbai & MENA region
- Published many articles for the economic sustainability and to create awareness in developing economies to deploy Renewable Energy with cost effective solutions to provide energy at low cost / tariff ([refer www.kknesar.com](http://www.kknesar.com))
- Participated in Vibrant Gujarat Meets, Solorcon India, World Future Energy Summit 2013 Abu Dhabi, Indo Italian Chamber of Commerce meets, EBTC, Saskatchewan Trade Delegation with Canadian Premier at Mumbai, FP7 Research delegation of Europe and UK, Science and Innovation Center programs
- Presented Innovative business opportunity and idea of "Agro Power Complex" at European Business Technology Center (EBTC), Bangalore and "Why India is not Economical in PV Manufacturing" at UK's PV INSIDER organized seminar in Delhi
- Explored NICHE renewable energy business cases with Astonefield, INDIA with Mr.Ameet Shah, who is now Advisor to Mr.Barack Obama's US Department of Commerce Renewable Energy and Energy Efficiency Advisory Committee (RE & EEAC)
- Shared my opinion on "The Five Year Plan Myth: Will India ever achieve energy security?" with Mr. Mr. Ron Somers, President, U.S.-India Business Council, through Observer's Research Foundation, India and also expressed a keen interest to explore to implement NICHE business cases in USA to promote new generation entrepreneurs to deploy renewable energy with low cost solutions with Pilot projects with a financial model.



**OPEN FOR SUGGESTIONS / CRITICS / RENEWED STRATEGY / IMPROVEMENT IN BUSINESS CASE WITH GOOD QUALITY INVESTORS / PARTNERS**

**FINANCE NUMBER GENERATION WITH A SOLID BUSINESS PLAN WITH A CORE TEAM, BOARD, INVESTORS, LIKE MINDED STAKE HOLDERS WITH FUNCTIONAL DELIVERY, FIRST PROJECT CAPTURE ETC SHALL BE THE NEXT STEP**

However, various tracking technologies also require additional land area to be able to incorporate the flexibility of photovoltaic module orientation without casting shadow on each other.

**Table 2.5: Typical increase in yield and area requirement for various tracking philosophies for Gujarat.**

Type of Tracking	Energy Yield...	Land Requirement...
Fixed at optimum tilt	Reference case	Reference case
Fixed horizontal	Decreases by 8-9%	Decreases by 50-70%
Single-axis seasonal	Increases by 3-5%	Increases by 20-30%
Single-axis daily	Increases by 20-25%	Increases by 20-40%
Two-axis	Increase by 25-30%	Increases by 80-120%