

PEDA



PUNJAB ENERGY DEVELOPMENT AGENCY
Plot No. 1 & 2, Sector 33-D, Chandigarh
Ph.: 0172-2663328, 2663382 Fax : 0172-2662865

STATUS OF NRSE POWER PROJECTS BEING SET UP / FACILITATED BY PEDA

1. SMALL / MICRO HYDEL PROJECTS ON CANAL FALLS:

PEDA has identified 136 nos. Micro Hydel sites on canal falls with a total potential of 136 MW. Out of these 8 nos. sites have been taken as demonstration projects with the support of World Bank, Ministry of New-Renewable Energy, Government of India and Rural Electrification Corporation, Government of India, and the State Govt., Four projects on Abohar Branch Canal at Chupki, Narangwal, Tugal and Dalla with total power generation cap. of 5.5 MW with 90% World Bank loan, have been completed during f.y. 1999-2000. Another set of four MHPs on Bathinda Branch Canal at Khatra, Kanganwal, Bowani and Jagera with a total cap of 4.3 MW also have been commissioned. Apart from above 16 Nos. Mini Hydel projects have been completed and commissioned by private developers on BOO basis with a total capacity of 15.85 MW. Another 41 micro hydel sites with a total capacity of 27.31 MW are under execution by the private developers. In addition to this MoU for purchase of power from 21 nos. micro hydel sites with a total capacity of 231.35 MW have been signed with the private developers for the projects being set up by them in northern grid state. All these projects are scheduled to be commissioned by December 2010. Besides this, three nos. micro hydel projects with a total capacity of 17 MW have been proposed under JBIC programme in the first phase. The details are enclosed as Annexure- 1A to 1E

2. BIOMASS CO-GENERATION PROJECTS

Under the promotion of Co-generation programme of the MNRE, Govt. of India, in the State, 10.2 MW co-generation project has been put up in the joint sector with M/s Rana Sugars Limited with a state equity of Rs.255 lac at their sugar mill village Butter Seviyan, Teh. Baba Bakala, Distt. Amritsar. MNRE,GOI had provided a grant of Rs 430.04 lac and a soft loan of Rs 755.71 lac for this project. USAID grant of Rs 169.96 lacs for this Project of total cost Rs. 2370 lac has also been availed. The project had been commissioned in March'2002 & operating satisfactorily. In addition to this, six co-generation power projects in the sugar mill / industries with a total

capacity of 29.05 MW have also been facilitated by PEDDA. Four such co-generation projects in the sugar mills / industries with a total capacity of 91.5 MW are under commissioning. In addition to this, 6 no. such cogeneration projects with a total capacity of 39.05 MW are in the pipeline. The details of all these projects are enclosed as Annexure-II.

3. BIOMASS POWER PROJECTS

PEDDA has facilitated the setting up of 6MW biomass power project at Vill. Gulabbewala in Distt. Mukatsar in private sector with M/s. Malwa Power Pvt. Ltd. in accordance with the NRSE policy, PEDDA has provided complete project facilitation and support services for this project. State Electricity Regulatory Commission has approved the tariff for this project for sale of power to PSEB, PPA with the PSEB has been signed for this project. The total cost of this project is Rs. 21.50 crore. The project has been completed and commissioned in May'2005 and is operating satisfactorily. Another 30 no. projects with a total capacity of 332.50 MW are under execution. The detailed status is enclosed as Annexure-III

4. SOLAR POWER PROJECTS

Under Ministry of New and Renewable Energy, Govt. of India, programme for Demonstration of Grid Interactive Solar Photovoltaic System, 2 nos. (50Kwp Cap. Each) Grid Interactive Power plants have been installed at Mini Sectt. Building Chandigarh and Village Bajak. These projects have been installed with MNRE, GOI grant of Rs.200 lacs and soft loan of Rs.70.40 lacs from IREDA under World Bank Credit of Line and Rs. 51 lacs as State Govt. share for providing voltage support function and peak load shaving applications. Both these projects were commissioned during October 1999 and are operating satisfactorily. Another 200 KWp SPV grid interactive power project at Village Khatkar Kalan Distt. Nawanshehar, which is the largest such solar power plant and first of its kind in the country has been commissioned with 67% financial support from MNRE, Govt. of India in the State. This project has been planned as a Grid Interactive voltage support (T&D) project for boosting the voltage level and improvement of the power quality in the village along with providing total 100 nos. solar street lights in the village and on the

road leading to museum. This project is feeding Solar Power in the PSEB grid in the localised manner and providing power to 100 nos. streetlights also. Dr. A.P.J. Abdul Kalam, Hon'ble President of India, had dedicated this project to the Nation on the martyrdom day of Shaheed-e-Azam S. Bhagat Singh i.e. on March 23rd 2003. One SPV Power Plant of capacity 25 Kwp has been set up in the solar passive complex of PEDA at total cost of Rs. 76.00 lac. The plant has been completed and commissioned on 31.5.2004. The project is providing 25 KW power for lighting, fans, computers in the office.

Bids for setting up solar photovoltaic power plants of maximum capacity 5 MW invited through press on 'BOO' basis.

5. Waste to Energy Power Projects

PEDA has been sanctioned a project for setting up of 1MW power generation project based on Urban/Dairy waste at Haibowal Dairy Complex, by MNRE, GOI, as a demonstration project under UNDP/GEF Biomethanation programme with 50% central grant. Municipal Corporation, Ludhiana has allocated 2.42 acres of land within the complex to PEDA for the project on lease basis @Rs. 1/- per Sq. Mtr. annum for a period of 25 years. This project is based on BIMA technology provided by M/s Entec, Austria. The project was commissioned with the grid in Nov.2004 and is operating satisfactorily.

6. Wind Power

Memorandum of Understanding with M/s Suzlon Gujarat Wind Park Ltd., has been signed on 13th Dec.2007 for installation and commissioning of 2 no. wind power projects of 50 MW each in the Mukatsar and Hoshiarpur regions.

I. Small / Micro Hydel Projects (301.31 MW)

a) Projects Commissioned by PEDDA

S.No.	Name of Project	Capacity (MW)	Location	Date of Completion.
1.	Chupki	1.5	Abohar Branch Canal	24.5.1999
2.	Narangwal	1.5	Abohar Branch Canal	7.6.1999
3.	Tugal	1.5	Abohar Branch Canal	8.9.1999
4.	Dalla	1.0	Abohar Branch Canal	12.11.1999
5.	Bowani	1.0	Bathinda Branch canal	22.8.2002
6.	Khatra	1.0	Bathinda Branch canal	23.1.2001
7.	Jagera	1.0	Bathinda Branch canal	31.7.2003
8.	Kanganwal	1.3	Bathinda Branch canal	28.8.2001
	TOTAL	9.8 MW		

b Projects Commissioned by Private Developers

S.No.	Name of Project	Capacity (MW)	Location	Date of Completion.
A	M/s. Polyplex Corporation Ltd and its consortium, Noida			
1	Dolowal	1.4	Kotla Branch Canal	26.4.2003
2	Salar	1.5	Kotla Branch Canal	26.4.2003
3	Bhanubhura	1.3	Kotla Branch Canal	26.4.2003
4	Babbanpur	1.0	Kotla Branch Canal	1.7.2004
5	Killa Combined	1.75	Kotla Branch Canal	1.11.2005
6	Bugra			
7	Sahoke Combined	1.0	Kotla Branch Canal	1.11.2006
8	Harigarh			
9	Lohgarh Combined	2.0	Bathinda Branch Canal	10.10.2005
10	Maholi			
11	Dadahur Combined	2.0	Bathinda Branch Canal	18.11.2004
12	Chakbhai			
13	Sidhana Combined	1.2	Bathinda Branch Canal	25.10.2007
14	Baloke			
B	M/s. Gill Power Generation Co. Pvt. Ltd., Batala.			
15	Tibri Combined	2.7	Main Branch Upper	6.10.2006
16	Babehali			
	TOTAL	15.85 KW		

Ghaggar Branch		
(M/s. Shivalik Renewable Energy Ltd)		
19. Gujran	0.50	31 st March,2009
Sabroan Branch		
(M/s. Himalayan Renewable Energy Limited)		
20. Sathiali	0.61	31 st March,2009
21. Tughalwala	0.70	31 st March,2009
22. Harchowal	0.60	31 st March,2009
23. Sukhwal	1.00	31 st March,2009
24. Ladha Munda Atwal Combined		
25. Buttar	0.85	31 st March,2009
26. Ghaggar Bhana Combined		
M/s. Polyplex Corporation Ltd. & its Consortium		
27. Talewal	0.60	31 st March,2009
TOTAL	9.46	
M/s. Triveni Engineering & Industries Ltd.		
Abohar Branch Canal		
28. Khanpur	1.05	31 st March,2009
29. Sudhar	1.25	31 st March,2009
30. Akhara	1.10	31 st March,2009
31. Gholian	0.90	31 st March,2009
32. Channuwal	1.0	31 st March,2009
Main Branch Upper (UBDC)		
33. Dhariwal	2.4	31 st March,2009
34. Kunjar	1.2	31 st March,2009
35. Aliwal	0.9	31 st March,2009
TOTAL	9.8	

M/s. Utility Powertech Ltd.		
Ferozpur Feeder		
36. Gurdittiwala	1.950	31 st March,2009
TOTAL	1.950	
M/s. SKR Hydro Power Generators Pvt. Ltd.		
Lahore Branch Canal		
37. Parowal	0.40	31 st March,2009
Bathinda Branch Canal		
38. Bibiwala	0.40	31 st March,2009
TOTAL	0.80	
M/s. Paradise Power Generation Pvt. Ltd		
Abohar Branch Canal		
39. Smalsar	0.35	31 st March,2009
TOTAL	0.35	
M/s. DSL Power Pvt. Ltd.		
Bathinda Branch Canal		
40. Ralla	0.30	31 st March,2009
M/s. Polyplex Corporation Ltd.		
41. Terkiana	0.75	31 st March,2009
GRAND TOTAL	27.31	

d) **SMALL HYDRO PROJECT SITES FOR WHICH MOU HAS BEEN SIGNED FOR PURCHASE OF POWER FROM OUTSIDE PUNJAB STATE**

S. No.	Name of the Site	Capacity (MW)	Date of Signing of MoU with PEDDA	Expected Date of Commissioning
1	Bhilangana-III SHP Village: Ghuttu, Tehsil: Ghansali, Distt: Tehri. Uttaranchal.	24.00	15.2.2007	March,2009
2	Madkini SHP Madkot, Dist: Pithoragarh, (Uttarakhand)	18.00	25.6.2007	March,2009
3	Gangani SHP Barkot, Distt: Uttarkashi, (Uttarakhand)	12.00	25.6.2007	April,2009
4	Rishiganga SHP Vill: Raini, Distt: Chamoli, Uttarakhand	11.00	25.6.2007	Dec. 2008
5	Hanumanganga- SHP Hanumanchatti, Distt: Uttarkashi, Uttarakhand	4.95	25.6.2007	Dec.2007
6	Badyar SHP Barkot, Distt: Uttarkashi, Uttarakhand.	4.90	25.6.2007	Dec.2008
7	Siyangad (Uttarakhand)	11.50	5.6.2007	April,2011

	Kakoragad (Uttarakhand)	12.50	5.6.2007	April,2011
	Jalandharigad (Uttarakhand)	24.00	5.6.2007	April,2011
	TOTAL (Uttarakhand)	122.85MW		
8	Kurmi SHP Village Kurmi, Distt: Shimla (HP)	5.00	15.2.2007	Oct.2009
9	Behna-I SHP Village: Suinj, Distt: Mandi,(HP)	3.00	15.2.2007	Dec.2008
10	Ani (Behna) SHP Village: Firnu, Distt: Mandi (HP).	4.00	15.2.2007	Dec.2008
11	Makkan SHP Village: Nakrod, Distt: Chamba (HP)	5.00	15.2.2007	Oct.2009
12	Joiner SHP Vill: Tissa, Distt: Chamba, (HP)	5.00	30.5.2007	Dec.2010
13	Jirah SHP Village: Tosh, Distt: Kullu (HP)	4.00	15.2.2007	Oct.2009
14	Beas Kund SHP Village: Palchan, Distt: Kullu (HP)	5.00	15.2.2007	March,2009
15	Baragaon SHP Village Manglan, Distt: Kullu (HP)	24.00	15.2.2007	Oct.2009
16	Sarbari -II Vill: Near Shalang, Distt: Kullu,	4.50	9.5.2007	March.2009

	(H.P)			
17	Himani Chamunda Thingri SHP Dist: Kinnaur	5.00	23.2.2007	Aug.2010
18	Roura-II SHP Distt: Kinnaur	5.00	23.2.2007	Aug.2010
19	Kut HEP Vill: Kut Distt: Kinnaur (H.P)	24.00	9.5.2007	Dec.2010
20	Luni-II and Luni-III Dist: Kangra (H.P)	10.00	15.5.2007	March,2008
21	Upper Awa Distt: Kangra	5.00	15.5.2007	March,2008
	Total (HP)	108.50MW		
	Grand Total	231.35MW		

e) DETAIL OF MHP SITES IN PIPELINE BY PEDAs (UNDER JBIC FUNDING)

S.No.	Name of Canal System / Site	Proposed Potential (MW)
I	Bhakra Main Line(BML)	
1	Thablan	7.00
2	Saunda	5.00
3	Chanarthal	5.00
	TOTAL	17.00 MW

II. Co-generation Power Project :

Cogeneration Projects Completed and Commissioned in the state : (135.05MW)

Sr. No.	Name of the company	Capacity (in MW)	Projects commissioned on
1	Rana Sugars Ltd. Vill. Buttar Seviyan, Tehsil Baba Bakala, Distt. Amritsar.	10.2	March'2002
2	Chandigarh Distillers & Bottlers Ltd. Banur, Tehsil Rajpura, distt. Patiala	3.1	January'2005
3	Indian Acrylics Ltd. Vill. Harkishanpura, Tehsil Bhawanigarh, Distt. Sangrur	2.5	July'2003
4	Indian Acrylics Ltd. Vill. Harkishanpura, Tehsil Bhawanigarh, Distt. Sangrur	8	September'2006
5	Nahar Industrial Enterprises Ltd. Amloh Distt. fatehgarh Sahib.	7	September'2006
6.	A.B. Sugars Ltd. Vill. Randhawa, Distt. Hoshiarpur.	33	Jan'2008
7.	Rana Sugars Ltd. Vill. Buttar Seviyan, Tehsil Baba Bakala, Distt. Amritsar.	23	Dec'2007
8.	Abhishek Industries Ltd, Barnala	20	Feb,2008
9.	A.B.Grain Spirits Ltd,V. Kiri afghana, Gurdaspur	5.5	Feb,2008
10	Shreeyans Ind. Ltd., Ahmedgarh	3.5	February, 2008
11.	Nectar Life Sciences Ltd., Vill. Saidpura, Dera Bassi	6	February,2008
12	Chandigarh Distillers & Bottlers Ltd. Banur, Tehsil Rajpura, distt. Patiala	8.25	February'08
13	Setia Paper Mills Ltd., Mukatsar	5	Feb.,2008
	TOTAL	135.05	

**Co-generation Projects being commissioned by August, 2008
(68MW) :**

Sr. No.	Name of the Company	Type of industry	Cap. (MW)
1	Luxmi Energy & Foods Ltd., Khamano	Rice Mill	30
2	Abhishek Industries, Barnala	Paper Mill	20
3.	JCT Mill, Phagwara	Textile Mill	8
4.	A.B.C. Paper mill, Saila Khurd	Paper Mill	10
	TOTAL		68 MW

**Co-generation Projects being commissioned by August, 2009
(44 MW):**

Sr. No.	Name of the Company	Type of industry	Cap. (MW)
1	Piccadaly Sugars Ltd., Patran	Sugar	7
2	M/s. Suraj Solvents & Vanaspati Ltd., Ferozepur	Solvent	5
3.	Ishan Textile Mills Ltd, Amritsar	Textile	10
4.	Arihant industries Ltd. Ludhiana	Textile	10
5.	Wahid sandhar sugars, Phagwara	Sugar	12
	TOTAL		44 MW

Another 40 MW in pipeline in cooperative sector sugar mills under JBIC programme.- 2011

III. BIOMASS POWER PROJECT BEING SETUP IN THE STATE OF PUNJAB

Biomass Power Project Commissioned in the State :

S.No.	Name of the company	Site	Capacity	Date of Commissioning
1	M/s. Malwa Power Ltd.	Vill. Gullabewala, Distt. Mukatsar	6MW	April'05 PLF-90%

Phase-I : Total capacity 56MW

S. No.	Name of the company	Name of the Site/taluka and Distt.	Cap. (MW)	Date of Signing of MoU	Expected date of comm.	Status
1	M/s. Turbo atom – TPS Projects Ltd., New Delhi	Patti (Amritsar)	10	15.11.05 Extended till 31.3.2008	August'09	Land lease agreements under execution, DPR / Biomass Assessment Reports submitted extension granted uptill 31/6/2008 for land lease.
		Batala (Gurdaspur)	10			
		Malerkotla	20			
		Ferozepur	10			
2	M/s. Energen, Chandigarh	Talwandi Sabo (Mukatsar)	6	5.12.05 Extended till 31.3.2008	August'09	Land papers submitted DPR under approval clearances yet to be taken
3	M/s. Meenakshi Powers Ltd., Hyderabad	Fazilka (Ferozepur)	10	16.12.05 Extended till 31.12.2007	Allotment Cancelled	
	TOTAL		56 MW			

Phase-II : Total capacity 46MW

S. No.	Name of the company	Name of the Site/taluka and Distt.	Cap. (MW)	Date of Signing of MoU	Scheduled date of Comm..	Status
1	M/s. Dee Development Pvt. Ltd., Faridabad	Abohar	5	18.6.07	28.3.09	Land purchased, DPR approved, project clearances under progress empowered committee approved on 31/3/2008, implementation agreement to be signed.
2	Consortium of M/s. See sky Cargo and Travels Ltd.	Ajnala	10	18.6.07	28.3.09	DPR to be submitted / Land lease papers submitted
3	M/s. Meenakshi Infrastructure Pvt. Ltd., Hyderabad	Sunam	31	11.7.07	28.3.09	DPR submitted/ Land papers yet to be submitted
	TOTAL		46 MW			

Phase – III :Total Cap. : 220.5 MW

21Taluka sites were allocated to private developers for setting up of Biomass Power Projects (Cap. 220.5MW) on BOO basis to 5 nos. companies

S.No.	Name of the Site	Cap. MW	Name of the Company	Date of Allotment of site	Date of submission of DPRs / Land papers	Status / progress	Scheduled date of Comm.
1.	Nakodar	10	M/s MPPL-Kamala-Darshaw, Banaalore	15.10.2007	11.3.08	DPR / land papers yet to be submitted	24.8.2009
2.	Mansa	20	M/s Foods Fats Fertilizers,Hyderabad	15.10.2007	11.3.08		24.8.2009
3.	Patiala	10	M/s Orient Green Power Ltd, Chennai	15.10.2007	11.3.08		24.8.2009
4.	Ludhiana	15	M/s MPPL-Kamala-Darshaw, Bangalore	15.10.2007	11.3.08		24.8.2009
5.	Nawanshahar	10	M/s P&R Engg. Services,Chandigarh	15.10.2007	11.3.08		24.8.2009
6.	Barnala	10	M/s MPPL-Kamala-Darshaw, Bangalore	15.10.2007	11.3.08		24.8.2009
7.	Anandpur Sahib	5	M/s P&R Engg. Services,Chandigarh	15.10.2007	11.3.08		24.8.2009
8.	Nihal singh Wala & Bagha Purana	5	M/s MPPL-Kamala-Darshaw, Bangalore	15.10.2007	11.3.08		24.8.2009

9	Raikot	14	M/s MPPL-Kamala-Darshaw, Bangalore	15.10.2007	11.3.08		24.8.2009
10	Garhshankar	10	M/S MPPL- Kamala- Darashaw , Bangalore	15.10.2007	11.3.08	DPR / land papers yet to be submitted	24.8.2009
11	Jaito	13	M/s MPPL-Kamala-Darshaw, Banaalore	15.10.2007	11.3.08		24.8.2009
12	Amritsar	10	M/s Orient Green Power Ltd, Chennai	15.10.2007	11.3.08		24.8.2009
13	Malout (Closer to Mandi Dabwali)	10	M/s Universal Biomass, Ferozepur	15.10.2007	11.3.08		DPR / land papers submitted empowered committee approved on 31.3.08
14	Sultanpur Lodhi	9	M/s MPPL-Kamala-Darshaw, Bangalore	15.10.2007	11.3.08	DPR / land papers yet to be submitted	24.8.2009
15	Fatehgarh Sahib	11	M/s MPPL-Kamala-Darshaw, Bangalore	15.10.2007	11.3.08		24.8.2009
16	Amloh	6	M/s MPPL-Kamala-Darshaw, Bangalore	15.10.2007	11.3.08		24.8.2009
17	Bathinda	13.5	M/s MPPL-Kamala-Darshaw, Bangalore	15.10.2007	11.3.08		24.8.2009

18	Philaur	10	M/s MPPL-Kamala-Darshaw, Bangalore	15.10.2007	11.3.08		24.8.2009
19	Shahkot	10	M/s MPPL-Kamala-Darashah, Bangalore	15.10.2007	11.3.08		24.8.2009
20	Faridkot	9	M/s MPPL-Kamala-Darshaw, Bangalore	15.10.2007	11.3.08		24.8.2009
21	Ropar	10	M/s P&R Engg. Services, Chandigarh	15.10.2007	11.3.08		24.8.2009
	TOTAL	220.5					

SOLAR POWER PROJECTS

Punjab has considerable sun shine available for more than 330 days in a year with good insolation levels. This energy can be utilised for generation of power during the day time and also during night by storage options. Punjab has been meeting its electrical power requirements primarily through conventional thermal and hydro power generation. Cost of generation from coal continuous to escalate and more over it is polluting. The State is endowed with vast potential of solar energy estimated at 4-7 KWH / Sq mtr of solar insolation levels and the Government is keen to tap this resource for strengthening power infrastructure in the State by setting up Solar energy based power projects

Solar Power Projects has the following inherent advantages over thermal power generation :

- It is environment friendly and carbon neutral.
- It displaces fossil fuels such as coal, oil and gas.
- It is decentralized, because it is produced and consumed locally, losses due to transmission and distribution are negligible .
- It has low gestation period and photovoltaic systems are modular in nature.
- Solar Energy is available free of cost and helps in meeting local power requirements.

Based on the competitive bidding the allotment letters have been issued to four companies for total installed capacity of 17 MW scheduled for completion by Dec.'09. The details are as under :

S. No.	Name of the Site	Cap.	Name of the Company	Levelised Tariff matched as per NRSE Policy-2006	Date of Allotment	Date of Commissioning
1.	Nalash, Rajpura	5	M/s India Bulls Electricity Co. Ltd.	8.79	4 April,2008	Nov,2009
2.	Fatehgarh Sahib	5	M/s Moser Baer India Pvt.Ltd.	8.79	4 April ,2008– MoU signed	Nov,2009
3.	SherkhanBudhlada	5	M/s Power Quality & Electrical systems Inc.	8.79	4 April ,2008– MoU signed	Nov,2009
4.	Amritsar, Majitha	2	M/s. Azure Power (I) Pvt. Ltd.	8.79	4 April ,2008– MoU signed	Nov,2009
TOTAL = 4 sites, capacity 17 MW.						

WIND POWER PROJECTS

India is the fifth largest wind power producer in the World after Germany, USA, Denmark and Spain with a wind power generation capacity of 1870 MW. The gross wind energy potential in India has been estimated at 45000MW. About 11.3 billion units of electricity have been fed in to various state grids from these projects. The Wind Resource Assessment Programme (WRAP) carried out in India is to assess the wind potential. This programme is being implemented by state nodal agencies and C-Wet through Wind Energy Survey Project.

PEDA has signed an MoU with M/s. Enercon (India) Ltd., Mumbai for establishment of wind measurement station / equipment to carry out wind resource assessment in Rupnagar, Nawanshahar, Hoshiarpur and Gurdaspur Distt. in the state of Punjab for assessing wind speeds for installation of wind turbines for power generation. The work of monitoring the data is in progress. The company is to submit the DPR's by Dec, 2008 for the wind power projects after completing the wind assessment studies.

Recently M/s. Suzlon Gujarat Wind Parks Ltd. has signed an MoU with PEDA for establishment of 100 MW Wind Power Projects, 50MW each in Distt. Hoshiarpur and Distt. Mukatsar. The company is monitoring the work on war footing. The DPR's are to be submitted by Dec, 2008 after completion of the wind assessment studies.