



National Electric Power Regulatory Authority
Islamic Republic of Pakistan

Registrar

NEPRA Tower, Attaturk Avenue (East), G-5/1, Islamabad
Ph: +92-51-9206500, Fax: +92-51-2600026
Web: www.nepra.org.pk, E-mail: registrar@nepra.org.pk

No. NEPRA/R/DL/LAG-306/13681-85

September 14, 2015

Mr. Nadeem Khalid
General Manager
Khairpur Sugar Mills Limited
3rd Floor, Plot No. 15-C,
9th Commercial Lane, Zamzama,
DHA Phase-V, Karachi.

Subject: Grant of Generation Licence No. SGC/113/2015
Licence Application No. LAG-306
Khairpur Sugar Mills Limited (KRPSML)

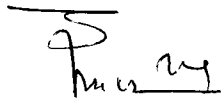
Reference: Your application vide letter No. KSM/PG/04, dated April 06, 2015 (received on April 06, 2015).

Enclosed please find herewith Determination of the Authority in the matter of Application of "Khairpur Sugar Mills Limited (KRPSML)" for the "Grant of Generation Licence" along with Generation Licence No. SGC/113/2015 annexed to this determination granted by the National Electric Power Regulatory Authority (NEPRA) to "Khairpur Sugar Mills Limited (KRPSML)" for its "12.00 MW Bagasse/Bio-Mass Generation Facility located on Naroo Dhoro-Tando Masti Road, Taluka Kot Diji, District Khairpur in the Province of Sindh" pursuant to Section 15 of the Regulation of Generation, Transmission and Distribution of Electric Power Act (XL of 1997).

2. Please quote above mentioned Generation Licence No. for future correspondence.

Enclosure: Generation Licence
(SGC/113/2015)




14 09 15
(Syed Safeer Hussain)

Copy to:

1. Chief Executive Officer, NTDC, 414-WAPDA House, Lahore
2. Chief Operating Officer, CPPA-G, 107-WAPDA House, Lahore
3. Chief Executive Officer, Sukkur Electric Power Company (SEPCO), Administration Block, Old Thermal Power Station, Sukkur.
4. Director General, Environment Protection Agency, Government of Sindh, Complex Plot No. ST-2/1, Korangi Industrial Area, Karachi.

National Electric Power Regulatory Authority
(NEPRA)

Determination of the Authority
in the Matter of Application of Khairpur Sugar Mills Limited
for the Grant of Generation Licence

September 03, 2015
Case No. LAG-306

(A). Background

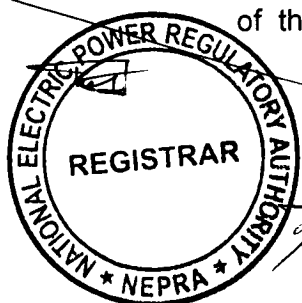
(i). Khairpur Sugar Mills Limited (KRPSML) is Maintaining and Operating a 12.00 MW Captive Power Plant (CPP)/Generation Facility/Co-Generation Power Plant. The said CPP is located at Naroo Dhoro, Tando Mastri Road, Taluka, Kot Diji, District Khairpur, in the Province of Sindh.

(ii). KRPSML offered Host DISCO i.e. Sukkur Electric Power Company Limited (SEPCO) for supplying about 4.00 MW surplus electric power from its above CPP. According to the Regulation of Generation, Transmission and Distribution of Electric Power Act, 1997 ("the NEPRA Act"), KRPSML is required having Generation Licence.

(B). Filing of Generation Licence Application

(i). In accordance with Section-15 of the NEPRA Act, KRPSML submitted an application on April 06, 2015 requesting for the grant of Generation Licence. The Registrar examined the submitted application to confirm its compliance with the NEPRA Licensing (Application and Modification Procedure) Regulations, 1999 (the "Regulations").

(ii). The Registrar observed that the application lacked some of required information/documentation. Accordingly, KRPSML was directed for submitting the missing information/documentation. KRPSML completed the missing information/documentation on May 14, 2015. The Authority considered the matter in its Regulatory Meeting (RM-15-459), held on June 09, 2015 and found the form and content of the application in substantial compliance with Regulation-3 of the Regulations. Accordingly, the Authority admitted the application for consideration of the grant of the Generation Licence as stipulated in Regulation-7 of the




Regulations. The Authority approved the advertisement [containing (a). the prospectus; (b). a notice to the general public about the admission of the application of KRPSML], inviting the general public for submitting their comments in the matter as stipulated in Regulation-8 of the Regulations. The Authority also approved the list of the relevant stakeholders for providing their comments or otherwise to assist the Authority in the matter. Accordingly, the advertisement was published in one Urdu and one English National Newspaper on June 13, 2015.

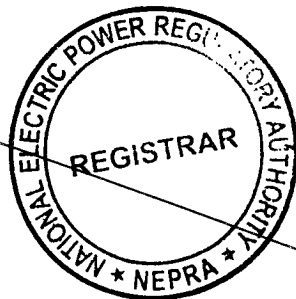
(iii). Apart from the above, separate letters were also sent to Government Ministries, their Attached Departments, Representative Organizations and Individual Experts etc. on June 17, 2015. The said stakeholders were directed for submitting their views/comments for the assistance of the Authority.

(C). Comments of Stakeholders

(i). In reply to the above, the Authority received comments from three (04) stakeholders. These included Board of Investment Govt. of Pakistan (BoI), The Federation of Pakistan Chambers of Commerce & Industry (TFoPCoC&I) and Ministry of Petroleum and Natural Resources (MoP&NR). The salient points of the comments offered by the said stakeholder are summarized in the following paragraphs:-

(a). BOI supported the request of KRPSML for the grant of Generation Licence subject to fulfillment of codal formalities;

(b). TFoPCoC&I commented that in view of the serious shortage of energy in the country, it is strongly recommend to expedite the processing of all applications of power projects pending with the Authority. Further, TFoPCoC&I stated that it has no objection if the Authority grants a Generation Licence to KRPSML; & 



(c). MoP&NR stated that the company intends to install a Bagasse Fired Thermal Power Plant. As the project does not require Natural Gas for its operation therefore, the ministry has no objection to the grant of Generation Licence to KRPSML;

(ii). The Authority considered the above comments of the stakeholders and found the same in favor of the grant of Generation Licence. In view of the said, the Authority considered it appropriate to process the application for the consideration of the grant of Generation Licence as stipulated in the Regulations and the NEPRA Licensing (Generation) Rules, 2000 (the Rules).

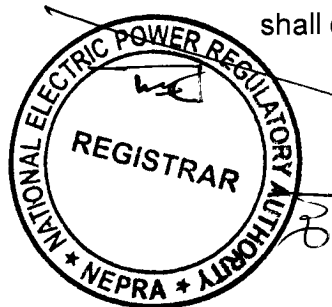
(D). Grant of Generation Licence

(i). The Authority considers that availability of sufficient electricity at affordable prices with a reasonable mix of Hydel, Thermal and other Renewable Energy (RE) is imperative for the sustainable economic development of the country. The country is currently facing severe shortage of electricity thus hampering the economic growth.

(ii). The Authority is well aware of the fact that installation of new power plants requires a considerable lead time. Therefore, the Authority considers it extremely important that in the short term period, the dormant capacity available with various Industrial Units (including Textile, Chemical and Sugar Mills) is brought into the National Grid. In the present case, KRPSML has offered to sell upto 04.00 MW Bagasse based surplus electric power from its CPP to SEPCO.

(iii). The Authority considers the above offer of KRPSML reasonable as significant amount of low cost RE will be available to SEPCO in the shortest possible time during the period of low hydel generation. Further, being located close to the cities of Rohri, Khairpur, Sukkur and its surrounding areas, the proposed arrangement will help SEPCO in mitigating the shortfall of electricity, enabling it supplying electric power to its consumers.

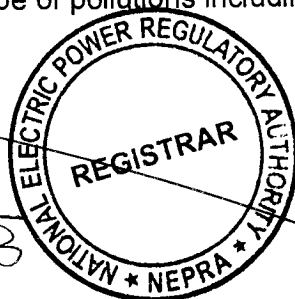
(iv). According to Rule-5(1) of the Rules, except where an applicant for a Generation Licence consents to a shorter term, the term of a Generation Licence shall commensurate with the maximum expected useful life of the units comprised



in a generation facility. The Generation Facility of KRPSML consists of five (05) Steam Turbines. The latest unit of the said generation facility of KRPSML was commissioned in 2014. KRPSML has estimated the useful life of this unit to be fifty (50) years from the Commercial Operation Date (COD). In this regard, it is clarified that the normal operating life of a Steam Turbine is taken as 30-35 years based on round the year operation. However, in sugar industry the steam turbines are operated upto a maximum of 4-5 months in a year during the crushing season. In view of the above, the Authority considers that a steam turbine installed in a sugar industry may have a useful life of more than fifty (50) years if maintained properly. In the present case, KRPSML has consented to a shorter term [of twenty (20) Years], therefore, the Authority fixes the term of the Generation Licence as twenty (20) years from the date of its issuance.

(v). Regarding the Tariff, it is hereby clarified that under Section-7(3)(a) of the NEPRA Act, the determining of tariff, rate and charges etc. is the sole responsibility of the Authority. In terms of Section-31 of the NEPRA Act read with relevant provisions of the NEPRA (Tariff Standards and Procedure) Rules, 1998, a Generation Company may file a Tariff petition for determination of its Generation Tariff. Further, in terms of Section-32 of the NEPRA Act read with relevant provisions of the NEPRA Interim Power Procurement (Procedures and Standards) Regulations, 2005, a Generation Company may approach a Transmission or Distribution company for filing a Power Acquisition Request (PAR) and for negotiating a Power Acquisition Contract (PAC). In this particular case, KRPSML has confirmed that after the grant of Generation Licence it will be approaching SEPCO for filing a PAR with the Authority. Further, a PAC will be negotiated with SEPCO and filed with the Authority for its approval. In view of the said, the Authority directs KRPSML to approach SEPCO for filing a PAR. The Authority directs KRPSML to charge only such tariff from the Power Purchaser which has been determined, approved or specified by the Authority as stipulated in Rule-6 of the Rules.

(vi). The Generation Facility of KRPSML for which Licence has been sought, is a Conventional Steam Turbine Power Plant mainly using Bagasse as fuel to be burned in low pressure boiler. Bagasse is a RE source which is considered as clean fuel. However, the operation of the CPP and the sugar mill may cause some other type of pollutions including Soil Pollution, Water Pollution

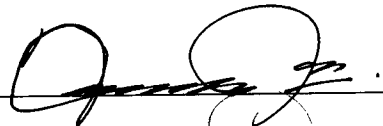


and Noise Pollutions etc. The Authority has considered these aspects and has made KRPSML obligatory to comply with the required rules and regulation on environment. Further, the Authority instructs KRPSML for submitting the required No Objection Certificate from Environmental Protection Agency of Govt. of Sindh (EPA, Sindh) in due course of time. In this Regard, the Authority directs KRPSML for submitting the proof of filing the Initial Environmental Examination-IEE or Environmental Impact Assessment-EIA with EPA, Sindh within thirty (30) days of issuance of this Determination. Further, the Authority directs KRPSML to submit a bi-annually report confirming that the operation of its CPP is compliant with required Environmental Standards of the EPA, Sindh.

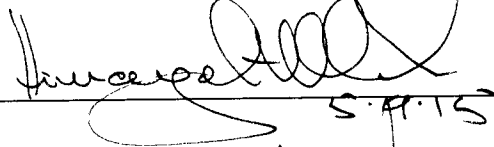
(vii). In view of the above, the Authority hereby decides to approve the grant of Generation Licence to KRPSML on the terms and conditions set out in the Generation Licence annexed to this determination. The grant of Generation Licence will be subject to the provisions contained in the NEPRA Act, relevant rules & regulations framed there under and the applicable documents.

Authority

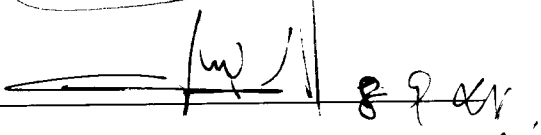
Syed Masood-ul-Hassan Naqvi
(Member)



Himayat Ullah Khan
(Member)



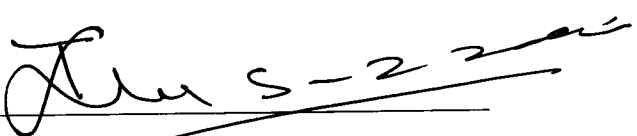

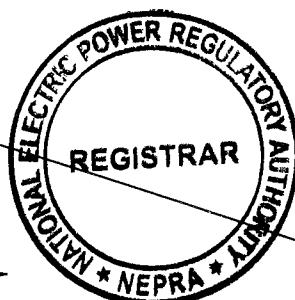
Khawaja Muhammad Naeem
(Member)



Maj. (R) Haroon Rashid
(Member)/(Vice Chairman)



Brig. (R) Tariq Saddozai
(Chairman)


11/9/15
14.07.15

**National Electric Power Regulatory Authority
(NEPRA)
Islamabad – Pakistan**

GENERATION LICENCE

No. SGC/113/2015

In exercise of the Powers conferred upon the National Electric Power Regulatory Authority (NEPRA) under Section-15 of the Regulation of Generation, Transmission and Distribution of Electric Power Act, 1997, the Authority hereby grants a Generation Licence to:

KHAIRPUR SUGAR MILLS LIMITED

Incorporated under the Companies Ordinance 1984
Certificate of Incorporation No. K-01549 of 1989-9, dated August 23, 1989

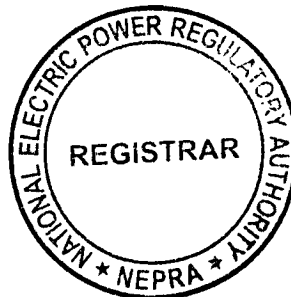
for its Bagasse/Bio-Mass based Generation Facility Located at Naroo Dhorotando Masti Road, Taluka Kot Diji, District Khairpur, in the Province of Sindh

(Total Installed Capacity: 12.00 MW Gross)

to engage in generation business subject to and in accordance with the Articles of this Licence.

Given under my hand this 14th day of September Two Thousand & Fifteen and expires on 13th day of September Two Thousand & Thirty Five.


14.09.15
Registrar

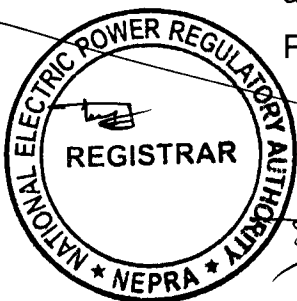




Article-1
Definitions

1.1 In this Licence

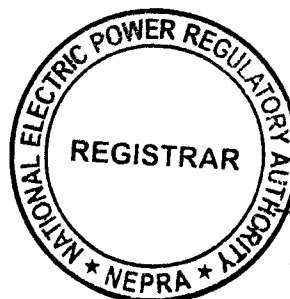
- (a). "Act" means "the Regulation of Generation, Transmission and Distribution of Electric Power Act, 1997";
- (b). "Authority" means "the National Electric Power Regulatory Authority constituted under Section-3 of the Act";
- (c). "Bus Bar" means a system of conductors in the generation facility of the Licensee on which the electric power of all the generators is collected for supplying to the Power Purchaser;
- (d). "Carbon Credits" mean the amount of Carbon Dioxide (CO₂) and other greenhouse gases not produced as a result of generation of energy by the generation facility and other environmental air quality credits and related emissions reduction credits or benefits (economic or otherwise) related to the generation of energy by the generation facility, which are available or can be obtained in relation to the generation facility/Co-Generation Power Plant;
- (e). "Co-Generation Power Plant" means the generation facility for simultaneous production of both electric power and heat or steam for industrial processes from a common fuel source;
- (f). "CPPA-G" means "Central Power Purchasing Agency (Guarantee) Limited" or any other entity created for the like purpose;
- (g). "Energy Purchase Agreement" means the energy purchase agreement, entered or to be entered into by and between the Power Purchaser and the Licensee, for the purchase and sale of electric



energy generated by the generation facility, as may be amended by the parties thereto from time to time;

- (h). "Licensee" means "Khairpur Sugar Mills Limited" and its successors or permitted assigns;
- (i). "Policy" means "the Policy for Development of Renewable Energy for Power Generation, 2006" of Government of Pakistan as amended from time to time;
- (j). "Power Purchaser" means CPPA-G on behalf of XW-DISCOs or any XW-DISCO including SEPCO which purchases electricity from the Licensee, pursuant to an Energy Purchase Agreement for procurement of electricity;
- (k). "Regulation" means "the National Electric Power Regulatory Authority Licensing (Application & Modification Procedure) Regulations, 1999" as amended or replaced from time to time;
- (l). "Rules" mean "the National Electric Power Regulatory Authority Licensing (Generation) Rules, 2000";
- (m). "SEPCO" means Sukkur Electric Power Company Limited and its successors or permitted assigns;
- (n). "XW DISCO" means "an Ex-WAPDA distribution company engaged in the distribution of electric power"

1.2 Words and expressions used but not defined herein bear the meaning given thereto in the Act or in the Rules.



Article-2
Application of Rules

This Licence is issued subject to the provisions of the Rules, as amended from time to time.

Article-3
Generation Facilities

3.1 The location, size (capacity in MW), technology, interconnection arrangements, technical limits, technical and functional specifications and other details specific to the generation facility of the Licensee are set out in Schedule-I of this Licence.

3.2 The net capacity of the generation facility of the Licensee is set out in Schedule-II hereto.

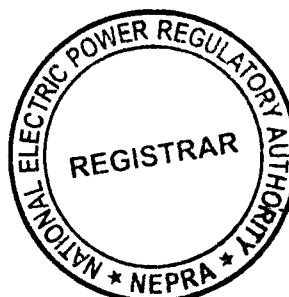
Article-4
Term of Licence

4.1 This Licence is effective from the date of its issuance and will remain valid for a term of twenty (20) years from the date of its issuance.

4.2 Unless suspended or revoked earlier, the Licensee may apply for renewal of the Licence within ninety (90) days prior to the expiry of the term of the Licence, as stipulated in the Regulations.

Article-5
Licence fee

After the grant of the Generation Licence, the Licensee shall pay to the Authority the Licence fee, in the amount, manner and at the time set out in the National Electric Power Regulatory Authority (Fees) Rules, 2002.



Article-6
Tariff

The Licensee shall charge only such tariff which has been determined, approved or specified by the Authority in terms of Rule-6 of the Rules.

Article-7
Competitive Trading Arrangement

7.1 The Licensee shall participate in such manner as may be directed by the Authority from time to time for development of a Competitive Trading Arrangement. The Licensee shall in good faith work towards implementation and operation of the aforesaid Competitive Trading Arrangement in the manner and time period specified by the Authority. Provided that any such participation shall be subject to any contract entered into between the Licensee and another party with the approval of the Authority.

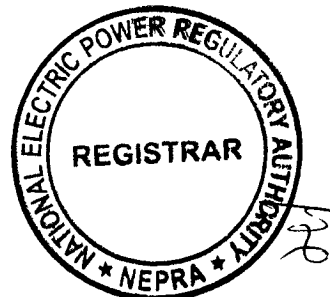
7.2 Any variation or modification in the above-mentioned contracts for allowing the parties thereto to participate wholly or partially in the Competitive Trading Arrangement shall be subject to mutual agreement of the parties thereto and such terms and conditions as may be approved by the Authority.

Article-8
Maintenance of Records

For the purpose of sub-rule (1) of Rule-19 of the Rules, copies of records and data shall be retained in standard and electronic form and all such records and data shall, subject to just claims of confidentiality, be accessible by authorized officers of the Authority.

Article-9
Compliance with Performance Standards

The Licensee shall comply with the relevant provisions of the National Electric Power Regulatory Authority Performance Standards (Generation) Rules-2009 as amended from time to time.



Article-10
Compliance with Environmental Standards

The Licensee shall comply with the environmental standards as may be prescribed by the relevant competent authority from time to time.

Article-11
Power off take Point and Voltage

The Licensee shall deliver electric power to the Power Purchaser at the outgoing Bus Bar of its generation facility. The up-gradation (step up) of generation voltage up to 11KV will be the responsibility of the Licensee.

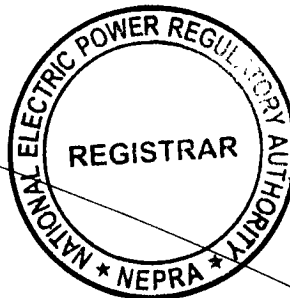
Article-12
Provision of Information

12.1 The obligation of the Licensee to provide information to the Authority shall be in accordance with Section-44 of the Act.

12.2 The Licensee shall be subject to such penalties as may be specified in the relevant rules made by the Authority for failure to furnish such information as may be required from time to time by the Authority and which is or ought to be or has been in the control or possession of the Licensee.

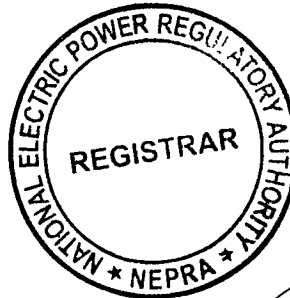
Article-13
Carbon Credits

The Licensee shall process and obtain Carbon Credits expeditiously and credit the proceeds to the Power Purchaser as stipulated in the Policy.



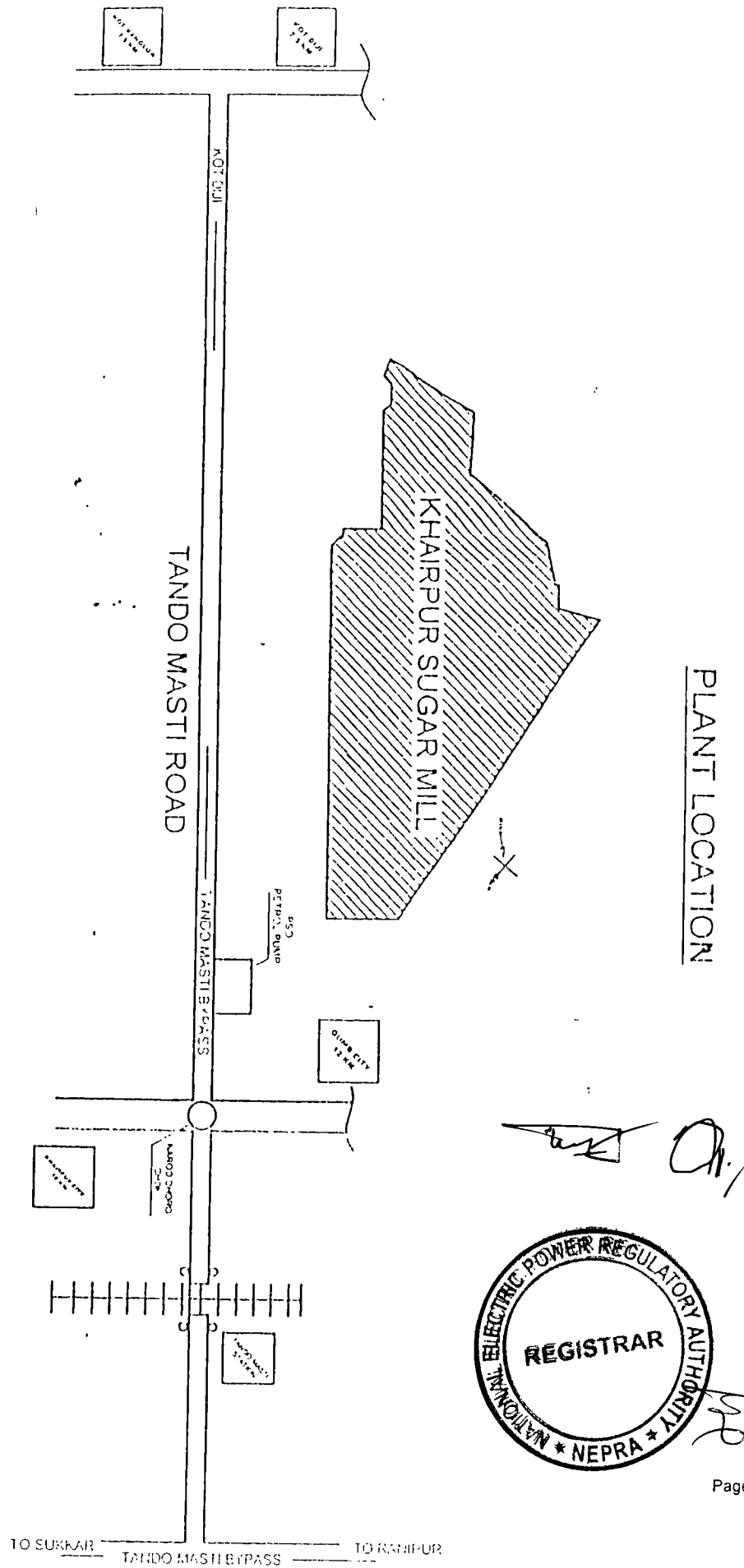
SCHEDULE-I

The Location, Size (i.e. Capacity in MW), Type of Technology, Interconnection Arrangements, Technical Limits, Technical/Functional Specifications and other details specific to the Generation Facilities of the Licensee are described in this Schedule.

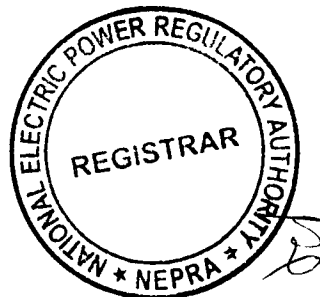
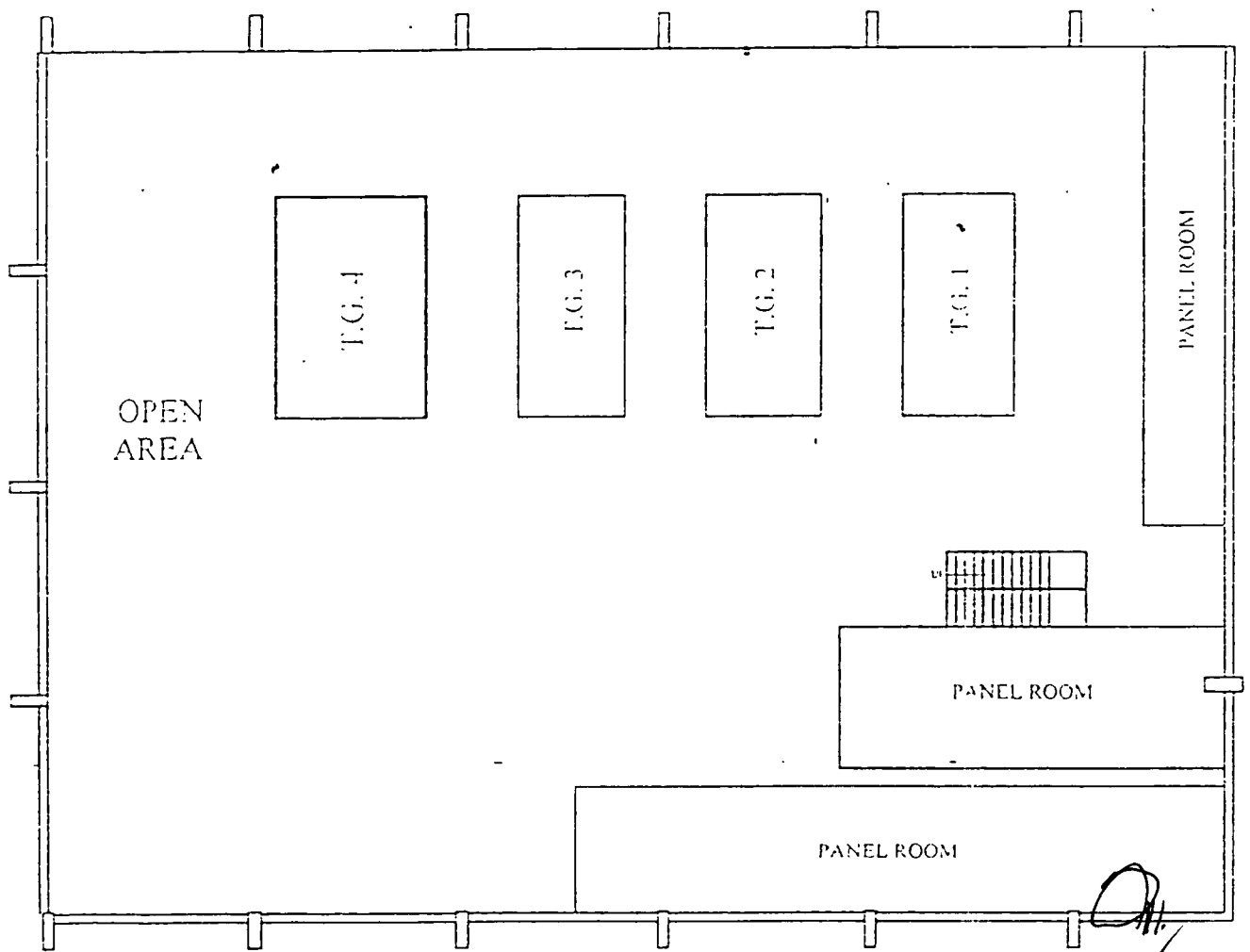


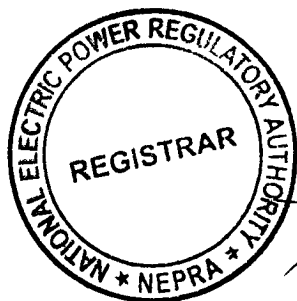
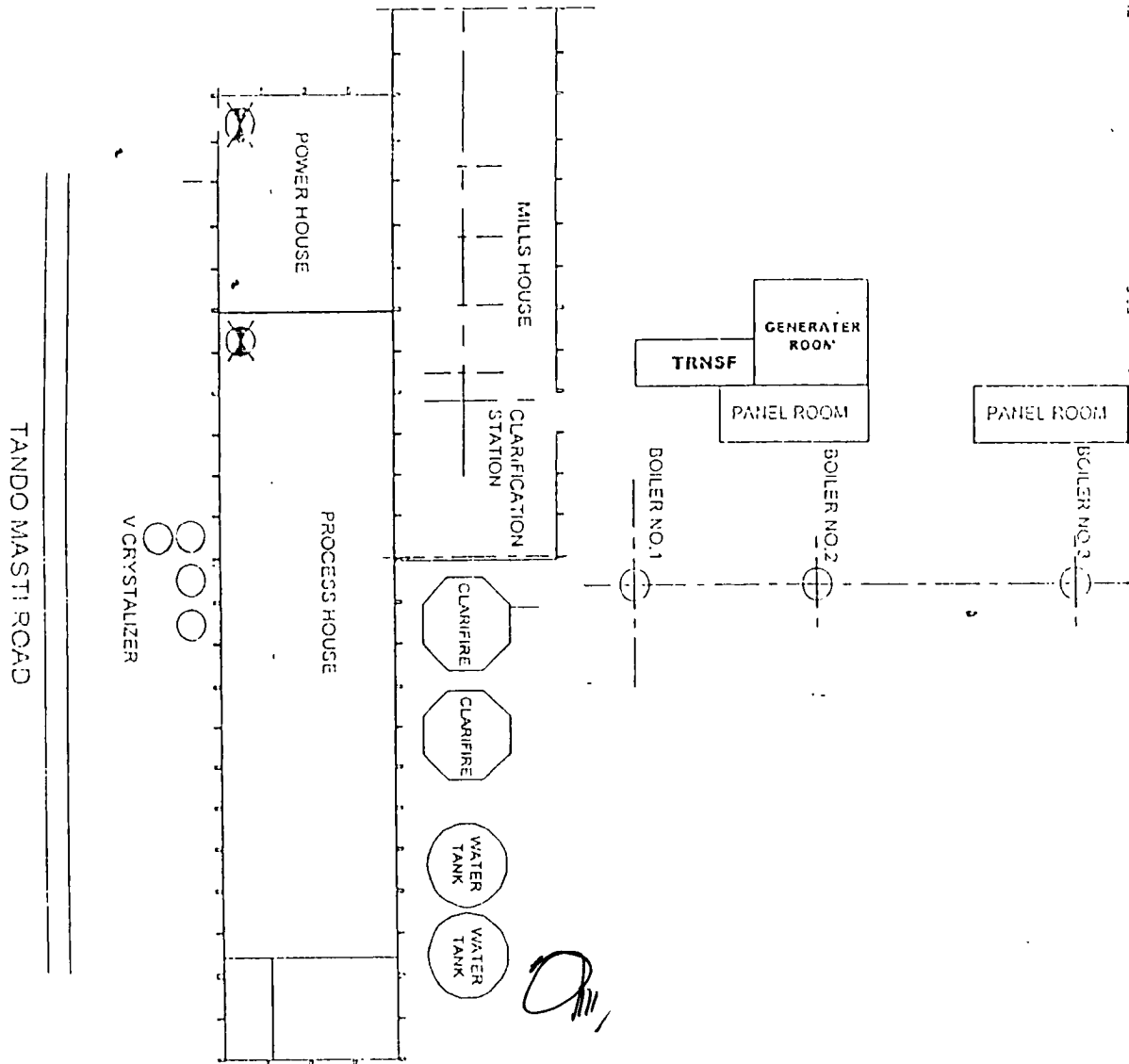
14

PLANT LOCATION

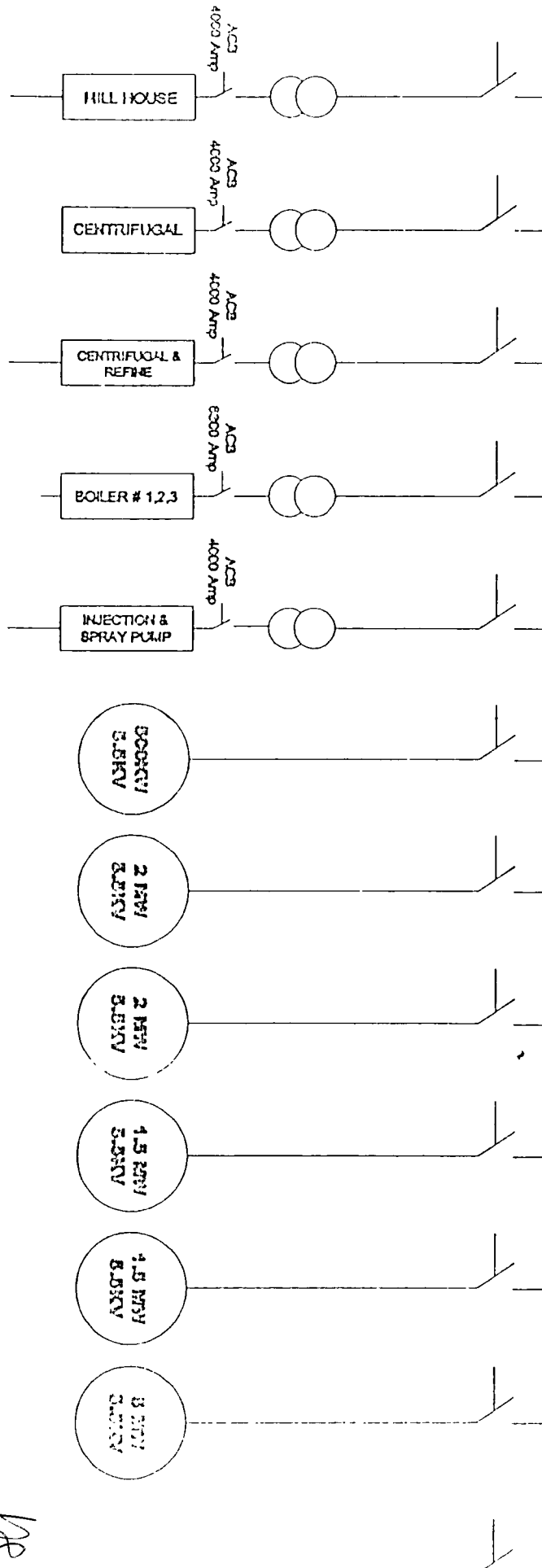


POWER HOUSE



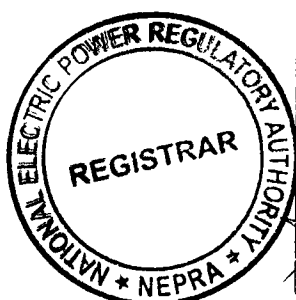


12 MW POWER HOUSE SINGLE LINE DIAGRAM
12 MW POWER HOUSE SINGLE LINE DIAGRAM



Step Up Transformer
 5.5 / 11 KV

WAPDA Export
 Feeder



**Interconnection Arrangement/
Transmission Facilities for Dispersal of Power from
the Generation Facility/Co-Generation Power Plant**

The electric power generated by the Licensee/Khairpur Sugar Mills Limited (KRPSML) from its Bagasse based Thermal Power Generation Facility shall be dispersed to the Load Center of SEPCO.

(2). The Interconnection/Transmission Arrangement for the above mentioned facilities will be at 11 KV voltage connecting the generation facility of KRPSML to 132 KV Grid Station of Kot Diji through overhead feeder(s) measuring about 7-KM in length.

(3). Any change in the above Interconnection Arrangement/Transmission Facilities as agreed by KRPSML and SEPCO shall be communicated to the Authority in due course of time.



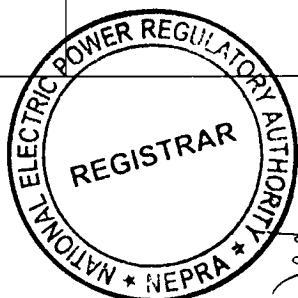
Detail of Generation Facility/Co-Generation Power Plant

(A). General Information

(i).	Name of the Licensee/ Company	Khairpur Sugar Mills Limited
(ii).	Registered/ Business Office	3 rd Floor, Plot No. 15-C, 9 th Commercial Lane, Zamazma, D.H.A, Karachi, in the Province of Sindh.
(iii).	Location of the Generation Facility/Co-Generation Power Plant	Naroo Dhoru, Tando Masti Road, Taluka, Kot Diji District Khairpur, in the Province of Sindh
(iv).	Type of the Generation Facility/Co-Generation Power Plant	Bagasse Fired Thermal Power Station.

(B). Plant Configuration

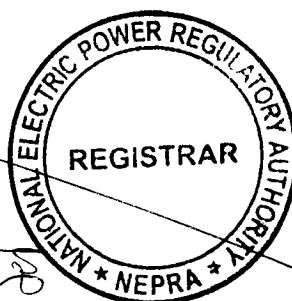
(i).	Size/ Installed Capacity of the Generation Facility/Co-Generation Power Plant	12.00 MW				
(ii).	Type of Technology	Back Pressure cum Low Pressure Boiler based Co-Generation Facility/Power Plant				
(iii).	Number of Units/Size (MW)	Unit No. -1	Unit No. -2	Unit No. -3	Unit No. -4	Unit No. -5
		2.00 MW	1.50 MW	1.50 MW	2.00 MW	5.00 MW
(iv).	Unit Make/ Model & Year of Manufacture	Unit No. -1	Unit No. -2	Unit No. -3	Unit No. -4	Unit No. -5
		Lanzhou Electric Manu- factory China	Shin- Nippon, Japan	Siemens	Lanzhou Electric Manu- factory China	Shandong Jinan Power Equip. China



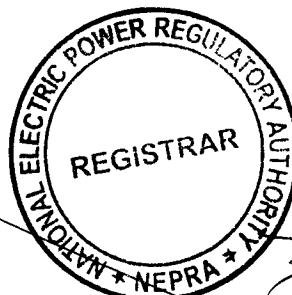
(v).	COD of the Each Unit of the Generation Facility/Co-Generation Power Plant	Unit No. -1	Unit No. -2	Unit No. -3	Unit No. -4	Unit No. -5
		1992	1996	1996	2002	2014
(vi).	Expected Useful Life of Each Unit of the Generation Facility/ Co-Generation Power Plant	Unit No. -1	Unit No. -2	Unit No. -3	Unit No. -4	Unit No. -5
		50 Years	50 Years	50 Years	50 Years	50 Years
(vii).	Expected Remaining useful Life of each Unit of the Generation Facility/Co-Generation Power Plant (at the time of grant of Generation Licence)	Unit No. -1	Unit No. -2	Unit No. -3	Unit No. -4	Unit No. -5
		27 Years	31 Years	31 Years	37 Years	49 Years
(viii).	Term of the Generation Licence of the Generation Facility/ Co-Generation Power Plant	20 Years				

(C). Fuel/Raw Material Details

(i).	Primary Fuel	Bagasse	
(ii).	Start Up/ Alternate Fuel	Furnace Oil	
(iii).	Fuel Source (Imported/ Indigenous)	Primary Fuel	Start Up/Alternate Fuel
		Indigenous	Indigenous/Imported



(iv).	Fuel Supplier	Primary Fuel	Start Up/Alternate Fuel
		Khairpur Sugar Mills Limited	Pakistan State Oil Limited/Shell Pakistan Limited
(v).	Supply Arrangement	Primary Fuel	Start Up/Alternate Fuel
		Through Conveyor Belts/Loading Trucks/Tractor Trolleys etc.	Through Oil Tankers
(vi).	Sugarcane Crushing Capacity	7000 Ton Crushing Per Day	
(vii).	Bagasse Generation Capacity	2100 Tons per day	
(viii).	Fuel Storage facilities	Primary Fuel	Start Up/Alternate Fuel
		Bulk Storage	One (01)
(ix).	Capacity of Storage facilities	Primary Fuel	Start Up/Alternate Fuel
		25,000 Tons Bulk Storage	500 Tons
(x).	Gross Storage Capacity	Primary Fuel	Start Up/Alternate Fuel
		25,000 Tons Bulk Storage	500 Tons



(D). **Emission Values**

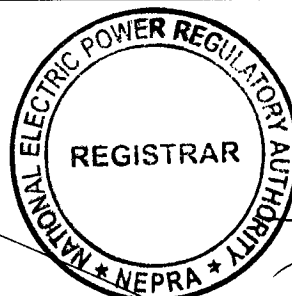
		Primary Fuel	Start Up/Alternate Fuel
(i).	SO _x	0%	As Per NEQs
(ii).	NO _x	2.2%	-Do-
(iii).	CO ₂	12%	-Do-
(iv).	CO	2%	-Do-
(v).	PM ₁₀	As Per NEQs	-Do-

(E). **Cooling System**

(i).	Cooling Water Source/Cycle	Canal water & filtration/Closed Loop Cycle
------	----------------------------	--

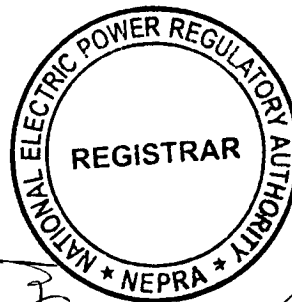
(F). **Plant Characteristics**

(i).	Generation Voltage	5.5 KV
(ii).	Frequency	50 Hertz
(iii).	Power Factor	0.8 Lagging-0.95 Leading
(iv).	Automatic Generation Control (AGC)	No
(v).	Ramping Rate	3.7 kW per second
(vi).	Time required to Synchronize to Grid	4 Hours for Cold start and 40 seconds to synchronize with Grid.



SCHEDULE-II

The Installed/ISO Capacity (MW), De-Rated Capacity At Mean Site Conditions (MW), Auxiliary Consumption (MW) and the Net Capacity At Mean Site Conditions (MW) of the Generation Facilities of Licensee is given in this Schedule



SCHEDULE-II

(1).	Total Gross Installed Capacity of the Generation Facility (1 x 2.00 + 1 x 1.50 + 1 x 1.50 MW + 1 x 2.00 MW + 1 x 5.00 MW)	12.000 MW
(2).	De-rated Capacity of the Generation Facility at Mean Site Conditions (1 x 1.60 + 1 x 1.20 + 1 x 1.20 MW + 1 x 1.60 MW + 1 x 4.00 MW)	09.600 MW
(3).	Auxiliary Consumption of the Generation Facility (1 x 0.135 MW + 1 x 0.101 + 1 x 0.101 MW + 1 x 0.135 MW + 1 x 0.337 MW)	00.809 MW
(4).	Net Capacity of the of the Generation Facility at Mean Site Conditions (1 x 1.465 MW + 1 x 1.099 MW + 1 x 1.099 MW + 1 x 1.465 MW + 1 x 3.663 MW)	08.791MW

Note

All the above figures are indicative as provided by the Licensee. The Net Capacity available to Power Purchaser for dispatch will be determined through procedure(s) contained in the Energy Purchase Agreement or any other applicable document(s).

