



National Electric Power Regulatory Authority

Islamic Republic of Pakistan

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Web: www.nepra.org.pk, E-mail: registrar@nepra.org.pk

Registrar

No. NEPRA/R/DL/LAG-1211-7019-25

May 12, 2015

Mr. Muhammad Siddique Sahi
Project In-Charge (Co-Generation)
Shakarganj Energy (Pvt.) Limited
BOP Tower, 10-B, Block-E-2,
Main Boulevard, Gulberg-III, Lahore
Ph: 042-35783801-03

Subject: Modification-II in Generation Licence No. SGC/46/2009 Granted to Shakarganj Energy (Private) Limited on April 28, 2009

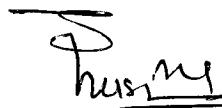
Reference: Your letter No. SEL/Bhone/1819, dated September 15, 2014

It is intimated that the Authority has approved "Licensee Proposed Modification" in Generation Licence No. SGC/46/2009 (issued on April 28, 2009) in respect of SEPL pursuant to Regulation 10(11) of the NEPRA Licensing (Application & Modification Procedure) Regulations, 1999.

2. Enclosed please find herewith determination of Authority in the matter of Licensee Proposed Modification in the Generation Licence of SEPL along with Modification-II in the Generation Licence No. SGC/46/2009, as approved by the Authority.

Encl:/As above




12.05.15
(Syed Safer Hussain)

Copy to:

1. Chief Executive Officer, Alternative Energy Development Board (AEDB), 2nd Floor, OPF Building, G-5/2, Islamabad.
2. Chief Executive Officer, NTDC, 414-WAPDA House, Lahore
3. Chief Operating Officer, CPPA, 107-WAPDA House, Lahore
4. Chief Executive Officer, Faisalabad Electric Supply Company (FESCO), Abdullahpur, Canal Bank Road, Faisalabad
5. Director General, Environmental Protection Agency, Government of Punjab, National Hockey Stadium, Ferozpur Road, Lahore

National Electric Power Regulatory Authority
(NEPRA)

Determination of Authority
in the Matter of Licensee Proposed Modification of
Shakarganj Energy (Private) Limited

May 04, 2015
Case No. LAG-121

(A). Background

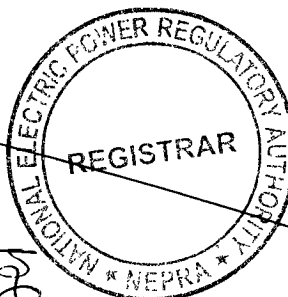
(i). The Authority in terms of Section-15 of Regulation of Generation, Transmission and Distribution of Electric Power Act, 1997 ("the NEPRA Act"), granted a Generation Licence (No. SGC/46/2009 dated April 28, 2009 and subsequent Modification-I dated June 29, 2011) to Shakarganj Energy (Private) Limited (SEPL), a company of the Crescent Group (CG).

(ii). The above Generation Licence was granted to SEPL for its 20.00 MW Generation Facility located at Village Bhone, 57-KM Jhang-Sargodha Road, Tehsil & District Jhang, in the Province of Punjab. The Authority allowed SEPL not supplying to Faisalabad Electric Supply Company Limited (FESCO) but also to a Bulk Power Consumer (BPC) in the name Shakarganj Mills Limited (SML).

(B). Communication of Modification

(i). SEPL in accordance with Regulation-10(2) of the National Electric Power Regulatory Authority Licensing (Application & Modification Procedure) Regulations, 1999 (the Regulations), communicated a Licensee Proposed Modification (LPM) in its existing Generation Licence on September 16, 2014.

(ii). In the "Text of the Proposed Modification", SEPL submitted that it intends to install one more Steam Turbine (ST) with an Installed Capacity of 16.5 MW at its above Generation Facility. Further, SEPL submitted that it intends supplying to another group company in the name of Crescent Hadeed (Private) Limited (CHPL) as a BPC.



(iii). Regarding the "Statement of the Reasons in Support of the Modification", SEPL submitted that with the Installation of New ST the Installed Capacity of its above Generation Facility will grow to 31.50 MW. Further, it will now have two BPCs thus requiring a modification in the current Generation Licence.

(iv). About the "Statement of the Impact on the Tariff, Quality of Service (QoS) and the Performance by the Licensee of its Obligations under the Licence", SEPL submitted that the proposed addition of capacity and the increase in BPC will not have any adverse impact on its Tariff, QoS and its Performance under the Licence.

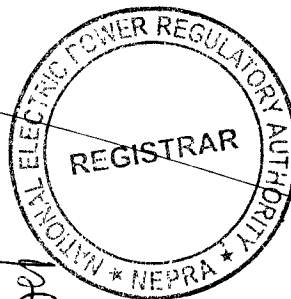
(C). Processing of LPM

(i). The Registrar examined the communicated LPM of SEPL and found the same not in compliant with the provisions of the Regulations. Accordingly, the Registrar directed SEPL for submitting the missing information. After completion of all the required information as stipulated under the Regulation 10 (2) and 10 (3) of the Regulations by SEPL, the Registrar accepted the LPM for further processing as stipulated in the Regulations.

(ii). The Registrar published the communicated LPM on December 30, 2015 in one (01) English and one (01) Urdu Newspaper, informing the general public and for submitting their views. Apart from the said, letters were also sent to Government Ministries, their attached Departments, Representative Organization and Individual Experts, etc. informing about the LPM. The said entities/individuals were invited to submit their views and comments in the matter for assisting the Authority.

(D). Comments of Stakeholders

(i). In reply to the above, the Authority received comments from two (02) stakeholders. These included Ministry of Water & Power (MoW&P) and FESCO. The salient points of the comments offered by the said stakeholders are summarized in the following paragraphs: -



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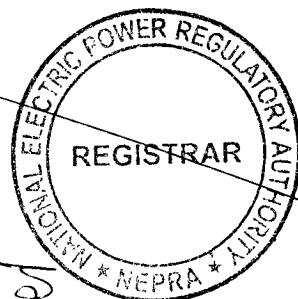
(a). MoW&P in its comments stated that the Authority may process the communicated LPM as per the provisions of the NEPRA Act, relevant rules and regulations;

(b). FESCO remarked that the reason given by SEPL in its communicated LPM is debatable. FESCO is interested in purchasing the low cost energy from SEPL at 132 KV Voltage. It was further submitted that FESCO is capable to meet with the electric power requirement of CHPL (under Tariff B-4) and will be ready to supply it.

(ii). The Authority examined the above comments of the stakeholders and observed that MoW&P has explicitly supported the communicated LPM of SEPL subject to the provisions of the NEPRA Act and the rules framed there under. Whereas, on the comments of FESCO, the Authority decided seeking perspective of SEPL. On the said, the Licensee/SEPL submitted that parties (i.e. FESCO and SEPL/Licensee) signed an Energy Purchase Agreement (EPA) on January 15, 2014. In accordance with the said agreement, SEPL is supplying to FESCO 4.00-6.00 MW (at 11 KV Voltage) during the Cane Crushing Season.

(iii). It was also submitted that the company/SEPL/the Licensee is now installing another ST which will enable it supplying to FESCO even in the Non-Crushing months. SEPL also clarified that CG is setting up a Steel Billet manufacturing facility in the name of CHPL, which is located adjacent to it. For its smooth operation, CHPL requires supply of electric power on a continuous basis. However, the same is not possible through FESCO as it carries load-shedding in the area in the range of 8-18 hours. In consideration of the said, SEPL intends supplying to CHPL also in addition to FESCO.

(iv). The Authority considered the above submissions of SEPL and found the same appropriate considering the fact a generation company cannot be forced supplying only to the Distribution Company. Accordingly, the Authority considered



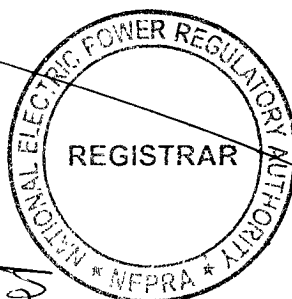
it appropriate to proceed further with the communicated LPM as stipulated in the Regulations and the NEPRA Licensing (Generation) Rules, 2000 (the Rules).

(E). Approval of LPM

(i). In terms of Regulation-10(5) of the Regulations, the Authority is entitled to modify a licence (subject to and in accordance with such further changes as the Authority may deem fit) if, in the opinion of the Authority such modification (a). does not adversely affect the performance by the licensee of its obligations; (b). does not cause the Authority to act or acquiesce in any act or omission of the licensee in a manner contrary to the provisions of the NEPRA Act or the rules or regulations made pursuant to the NEPRA Act; (c). is or is likely to be beneficial to the consumers; (d). is reasonably necessary for the licensee to effectively and efficiently perform its obligations under the licence; and (e). is reasonably necessary to ensure the continuous, safe and reliable supply of electric power to the consumers keeping in view the financial and technical viability of the licensee.

(ii). The Authority has observed that the existing Generation Licence (No. SGC/46/2009 dated April 28, 2009 and subsequent Modification-I dated June 29, 2011) is based on an Installed Capacity of 20.00 MW. SEPL now intends enhancing its Installed Capacity by Installing another ST of 16.50 MW. In this regard, SEPL has clarified that although, the Authority granted it a Generation Licence for installed capacity of 20.00 MW but it installed a ST of 15.00 MW only. The installation of the proposed ST of 16.50 MW will increase the Installed Capacity of its Generation Facility to 31.50 MW.

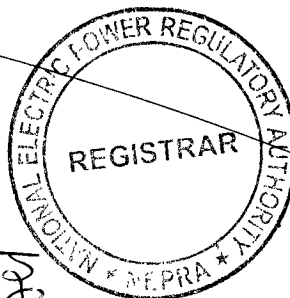
(iii). The Authority is well aware that presently there is severe shortage of electricity in the country and there is huge Supply-Demand gap. In view of this, the Distribution Companies are facing difficulties in serving their consumers. Due to the prevailing situation, the Industrial Units are forced to make their own arrangements to meet their electricity requirements.



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(iv). In view the above, the CG has set up a Distributed Generation Facility for supplying not only to the group companies but also to FESCO. The addition of another ST will result in enhancement of the Installed Capacity and will enable SEPL supplying upto 12.00 MW to CHPL. In this regard, it is clarified that pursuant to provisions of Section-21 of the NEPRA Act, a Generation Company (like the instant case of SEPL) can make sale of electric power to BPC within the Exclusive Service Territory of a Distribution Company. Whereas, BPC is a consumer which purchases or receives electric power at one premise in an amount of 1.00 MW or more. As explained above, the load level for CHPL is above the Minimum Level (1.00 MW), therefore for the purpose of supply of electric power, the Authority has considered CHPL as a BPC of SEPL as stipulated in the NEPRA Act. As per Section 2(v) of the NEPRA Act, where the ownership, operation, management and control of distribution facilities located on private property and used solely to move or deliver electric power to the person owning, operating, managing and controlling those facilities or to tenants thereof is not included in the definition of "distribution". The distribution facilities [i.e. two (02) Underground XLPE 11-KV cables, measuring about 500 meters] to be used for delivery of electric power to CHPL are located on private property (without involving any public property or any third party) will be owned, operated, managed and controlled by CHPL. Therefore, the supply of electric power to CHPL by SEPL does not constitute a distribution activity under the NEPRA Act and a Distribution Licence will not be required by SEPL.

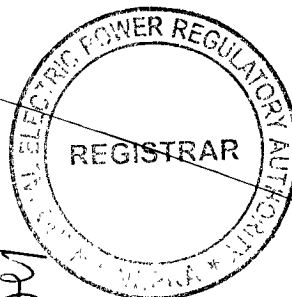
(v). In view of the above, the Authority is satisfied that the communicated LPM is reasonably necessary for SEPL /the Licensee to effectively and efficiently perform its obligations under its Generation Licence. The communicated LPM will not adversely affect the performance of SEPL of its obligations under the existing Generation Licence. Further, the communicated LPM will be beneficial to the consumers. In fact, the communicated LPM will ensure the continuous, safe and reliable supply of electric power to the Power Purchaser and consumers keeping in view the financial and technical viability of the licensee. The Authority has also examined the Impact on Tariff that the communicated LPM may have. In this regard, the Authority has observed that SEPL/the Licensee in terms of original Generation Licence (No. SGC/46/2009 dated April 28, 2009 and subsequent



Modification-I dated June 29, 2011) was allowed supplying to FESCO and SML. In order to supply to the Distribution Company, SEPL entered into an EPA with FESCO for supplying 4.00-6.00 MW from its Generation Facility. Whereas, for supplying to SML (to the tune of 8.00 MW-10.00 MW), SEPL executed a Bi-lateral Power Purchase Agreement (PPA) with SEL. In this regard, the Authority approved a Tariff for supplying to FESCO under the NEPRA Interim Power Procurement (Procedure and Standards) Regulations 2005. Whereas, for supplying to SML, the Authority allowed SEPL charging a mutually agreed rate as the same did not affect any third party. SEPL has confirmed that the proposed Installation of a New ST will not have any impact on the Tariff at which it is supplying to FESCO. Whereas, for supplying to CHPL, it will be signing another Bi-lateral PPA, containing the terms and condition including the rate and charges. In view of the said, the Authority is satisfied that the communicated LPM will not have any impact on the Tariff. Regarding the matter of rates, charges, terms and conditions of tariff between SEPL and its new BPC (i.e. CHPL), the same will not affect any other consumer or third party. Therefore, for the purpose of Tariff for CHPL as BPC, the Authority considers it appropriate directing SEPL and CHPL agreeing to a bilateral agreement/PPA and submitting the same to it for record. Accordingly, SEPL will then be allowed to charge the agreed tariff subsequent to the approval/issuance of the communicated LPM, in accordance with Rule-6(1)(b) of the Rules.

(vi). In view of the above, the Authority is satisfied that the communicated LPM of SEPL/the Licensee will not have any adverse impact on its existing Tariff. The Authority is convinced that SEPL/the Licensee has complied with all the requirements of the Regulations pertaining to the modification. Accordingly, the Authority in terms of Regulation 10(11)(a) of the Regulations approves the communicated LPM without any changes.

(vii). Accordingly, the already granted Generation Licence (No. SGC/46/2009 dated April 28, 2009 and subsequent Modification-I dated June 29, 2011) in the name of SEPL is hereby modified. The changes in "Face Sheet", "Articles of the Generation Licence", "Schedule-I" and "Schedule-II" of the

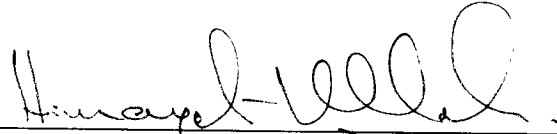


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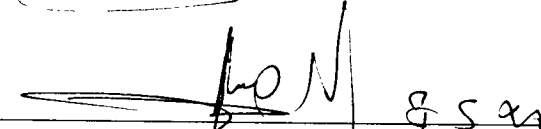
Generation Licence are attached as annexure to this Determination. The grant of the LPM will be subject to the provisions contained in the NEPRA Act, relevant rules framed there under, terms and conditions of the Generation Licence and other applicable documents.

Authority


Himayat Ullah Khan
Member


2.5.15

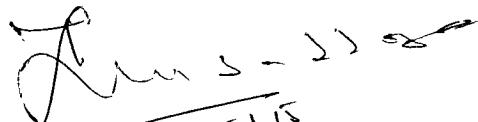
Khawaja Muhammad Naeem
Member

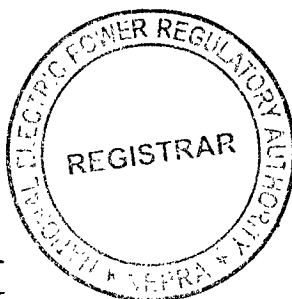

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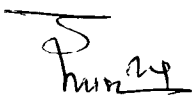
Maj. (R) Haroon Rashid
Member/Vice Chairman


01.5.15

Brig. (R) Tariq Sadozai
Chairman


9.5.15




12.05.15

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

GENERATION LICENCE

No. SGC/46/2009

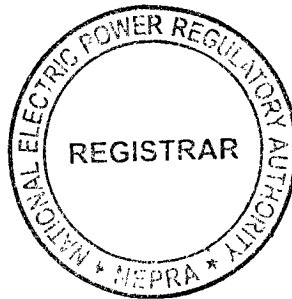
In exercise of the Powers conferred upon the National Electric Power Regulatory Authority (NEPRA) under Section-26 of the Regulation of Generation, Transmission and Distribution of Electric Power Act, 1997, the Authority hereby modifies the Generation Licence No. (SGC/46/2009 granted to Shakarganj Energy (Private) Limited issued on April 28, 2009 and subsequent Modification-I dated June 29, 2011) to the extent of changes mentioned as here under:-

- (i). the Installed Capacity of the Licensee/Shakarganj Energy (Private) Limited appearing on Original Face Sheet changed from 20.00 MW to 31.50 MW;
- (ii). Changes in Articles of the Generation Licence are attached as Revised/Modified Articles of the Generation Licence;
- (iii). Changes in Schedule-I are attached as Revised/Modified Schedule-I; and
- (iv). Changes in Schedule-II are attached as Revised/Modified Schedule-II;

This **Modification-II** is given under my hand this 12th of **May Two Thousand & Fifteen.**



Registrar

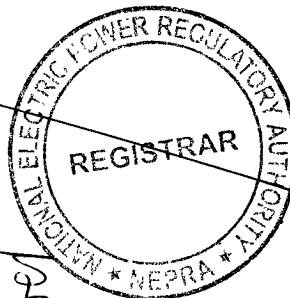




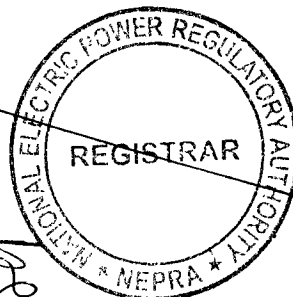
Article-1
Definitions

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). "Bulk Power Consumer" means a consumer who purchases or receives electric power, at one premises, in an amount of one megawatt or more;
- (d). "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;
- (e). "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 after the COD;
- (f). "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;
- (g). "Commercial Operations Date (COD)" means the day immediately following the date on which the generation facility of the Licensee is Commissioned;



- (h). "CPPA" means the Central Power Purchasing Agency of NTDC or any other entity created for the like purpose;
- (i). "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;
- (j). "FESCO" means Faisalabad Electric Supply Company Limited and its successors or permitted assigns;
- (k). "Grid Code" means the grid code prepared by NTDC and approved by the Authority, as it may be revised from time to time by NTDC with any necessary approval by the Authority;
- (l). "Licensee" means "Shakarganj Energy (Private) Limited" and its successors or permitted assigns;
- (m). "NTDC" means National Transmission and Despatch Company Limited and its successors or permitted assigns;
- (n). "Policy" means "the Policy for Development of Renewable Energy for Power Generation, 2006" of Government of Pakistan as amended from time to time;
- (o). "Power Purchaser" means NTDC (through CPPA) on behalf of XW-DISCOs or any XW-DISCO including FESCO which purchases electricity from the Licensee, pursuant to an Energy Purchase Agreement for procurement of electricity;
- (p). "Power Purchase Agreement" means the power purchase agreement, entered or to be entered into by and between the Bulk Power



Consumer(s) and the Licensee, for the purchase of electric power/energy generated by the generation facility of the Licensee, as may be amended by the parties thereto from time to time

- (q). "Regulation" means "the National Electric Power Regulatory Authority Licensing (Application & Modification Procedure) Regulations, 1999" as amended or replaced from time to time;
- (r). "Rules" mean "the National Electric Power Regulatory Authority Licensing (Generation) Rules, 2000";
- (s). "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.

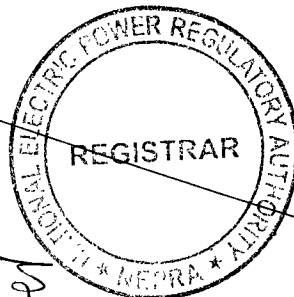
Article-2
Application of Rules

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.



3.3 The Licensee shall provide the final arrangement, technical and financial specifications and other specific details pertaining to its generation facility before its COD.

Article-4
Term of Licence

4.1 This Licence is effective from the date of its issuance (i.e. April 28, 2009) and will remain valid for a term of twenty (20) years from the COD of the first unit of 15.00 MW (i.e. November 01, 2009).

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

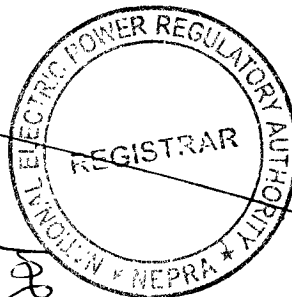
After the grant of the Generation Licence, the Licensee shall pay to the Authority the Licence fee, in the amount, manner and at the time set out in the National Electric Power Regulatory Authority (Fees) Rules, 2002.

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

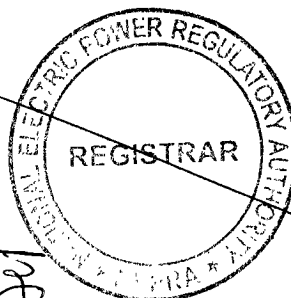
The Licensee shall comply with the relevant provisions of the National Electric Power Regulatory Authority Performance Standards (Generation) Rules-2009 as amended from time to time.

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.



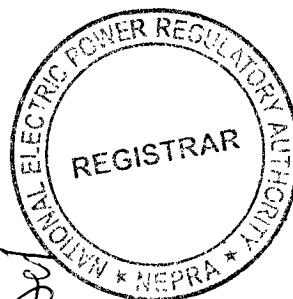
Article-12
Provision of Information

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 and the Bulk Power Consumers as per the Policy.

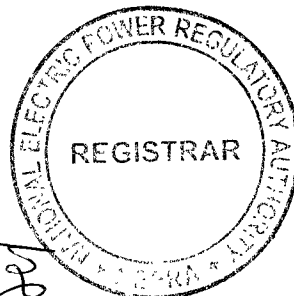
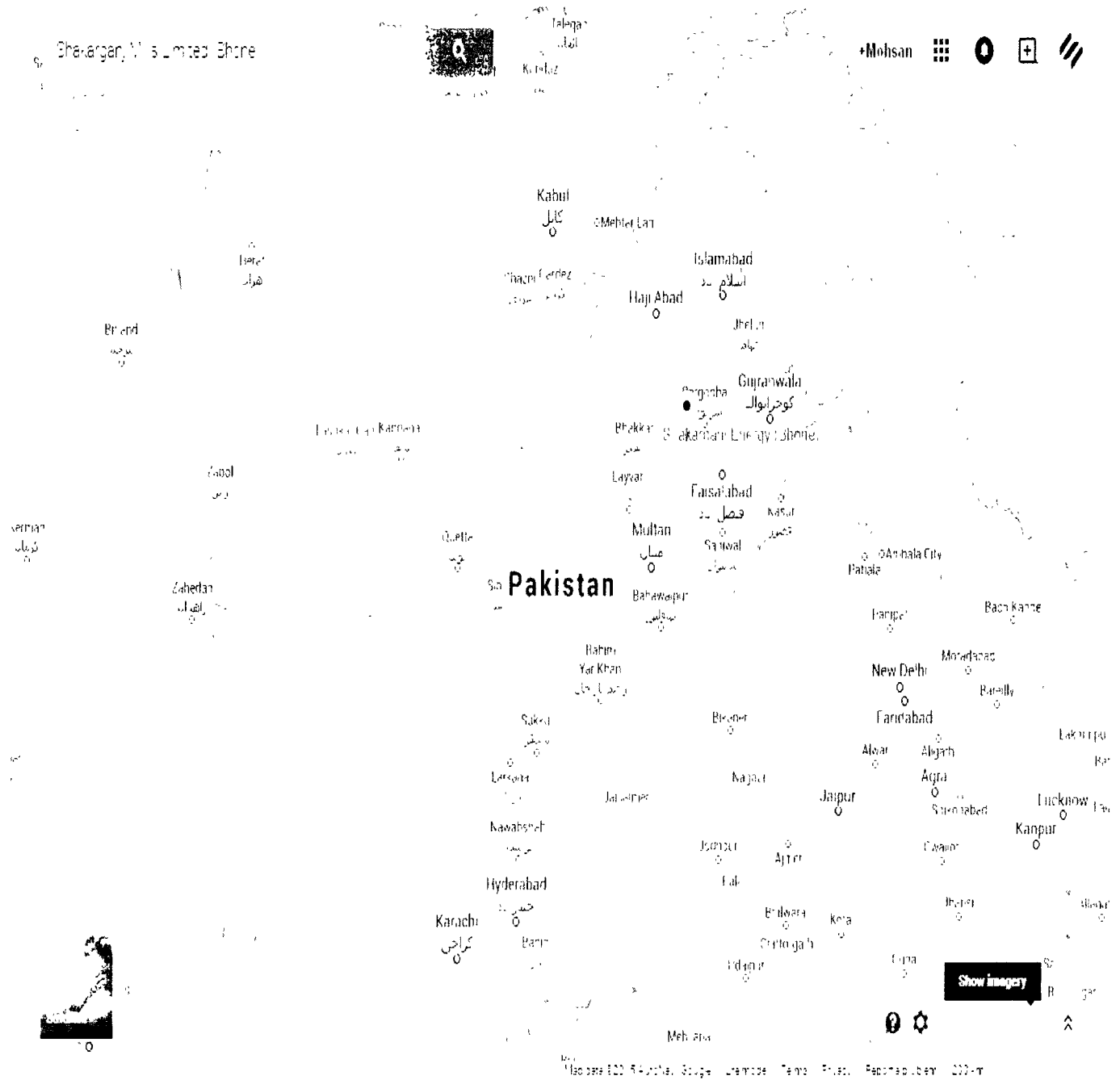


Revised/Modified
SCHEDULE-I
Modification-II

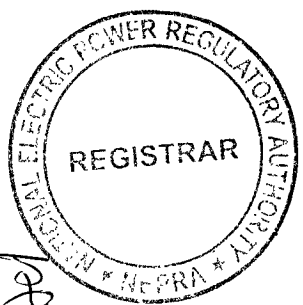
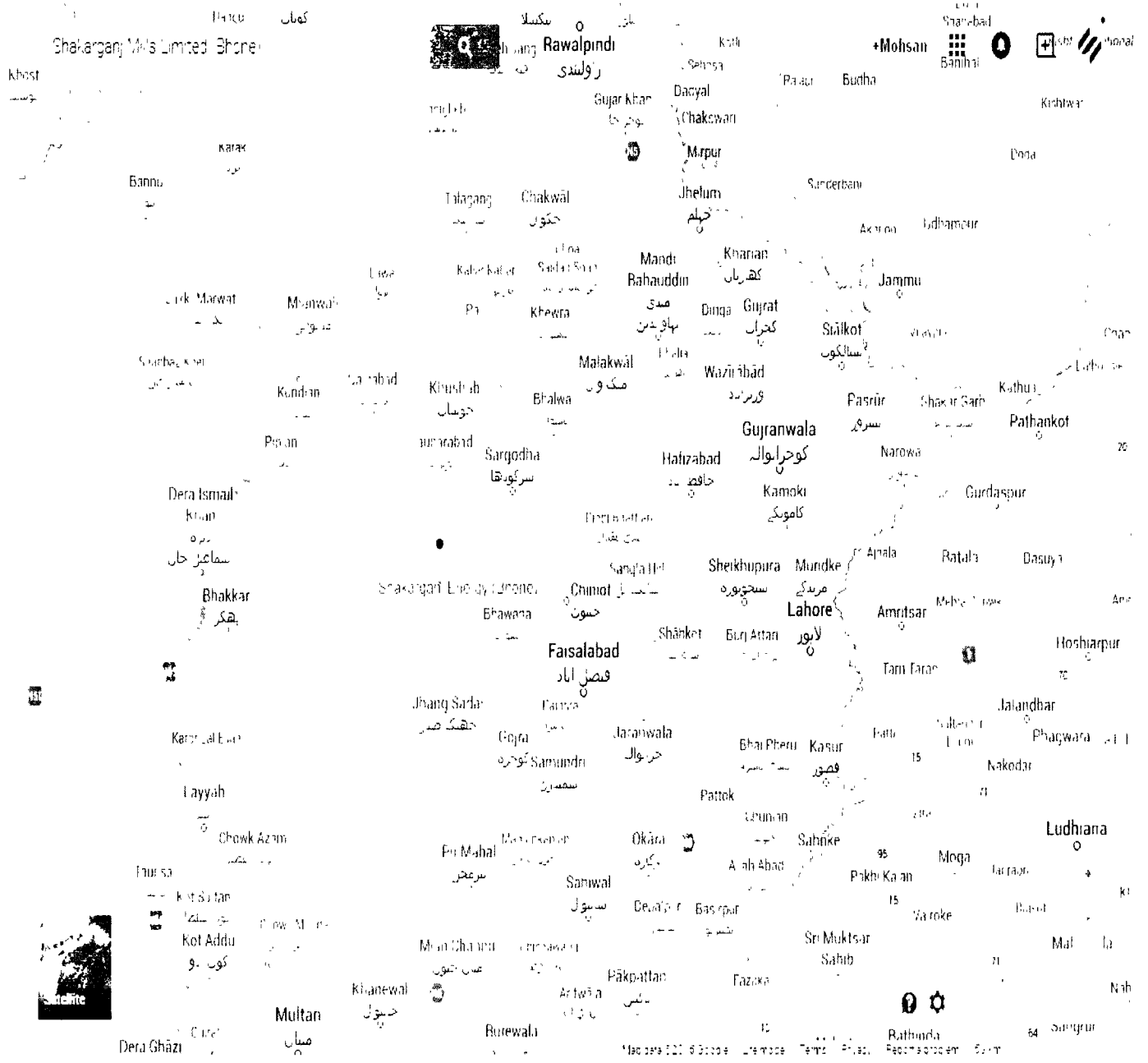
The Location, Size (i.e. Capacity in MW), Type of Technology, Interconnection Arrangements, Technical Limits, Technical/Functional Specifications and other details specific to the Generation Facilities of the Licensee are described in this Schedule



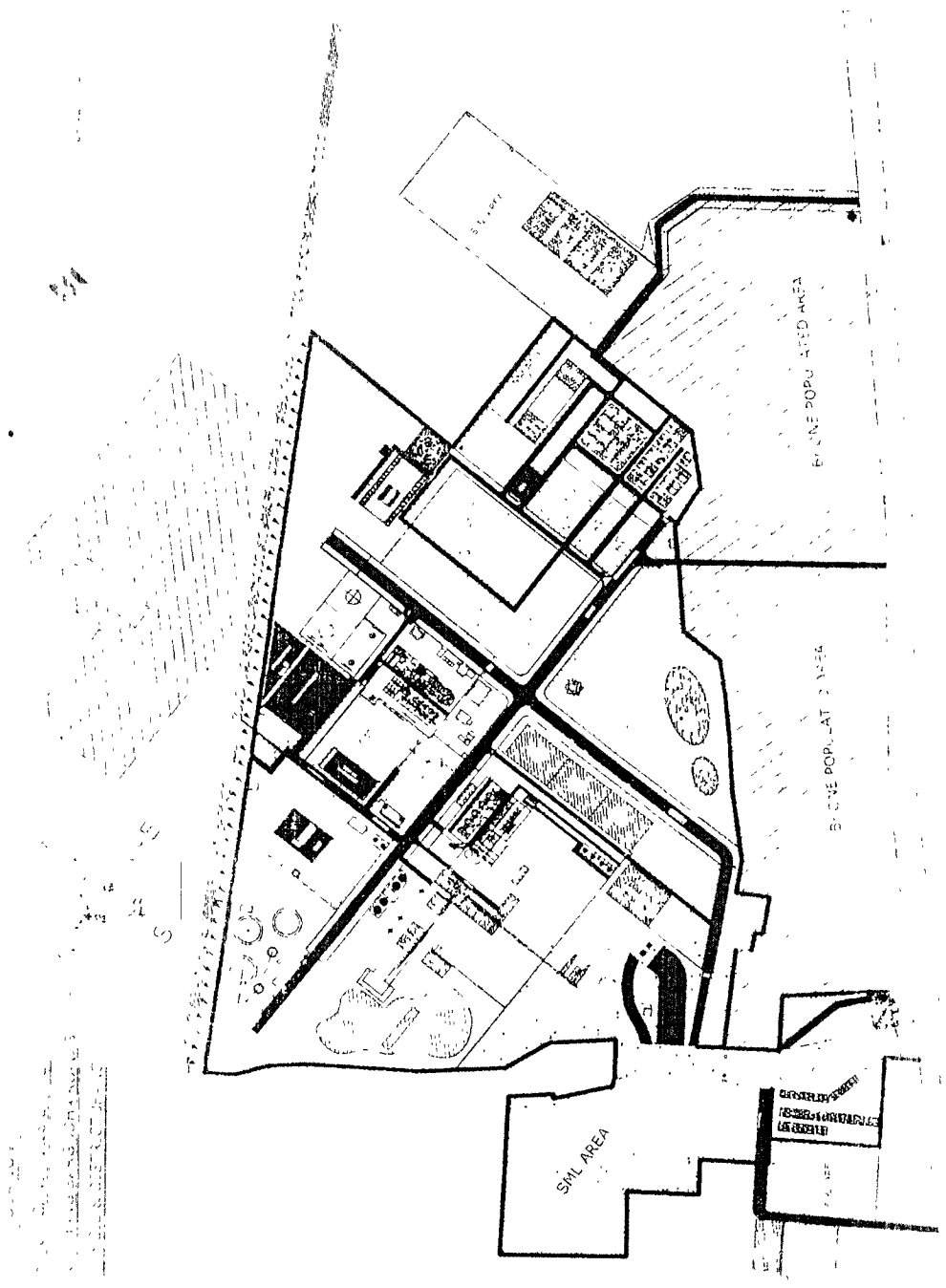
Location of the Generation Facility/Co-Generation Power Plant



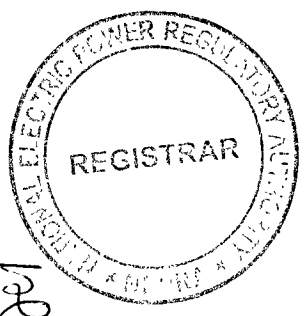
Location of the Generation Facility/Co-Generation Power Plant



Lay-Out of the Generation Facility/Co-Generation Power Plant

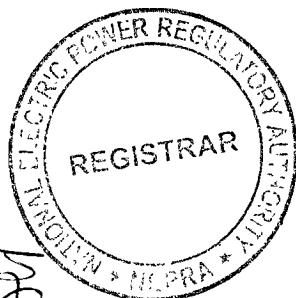
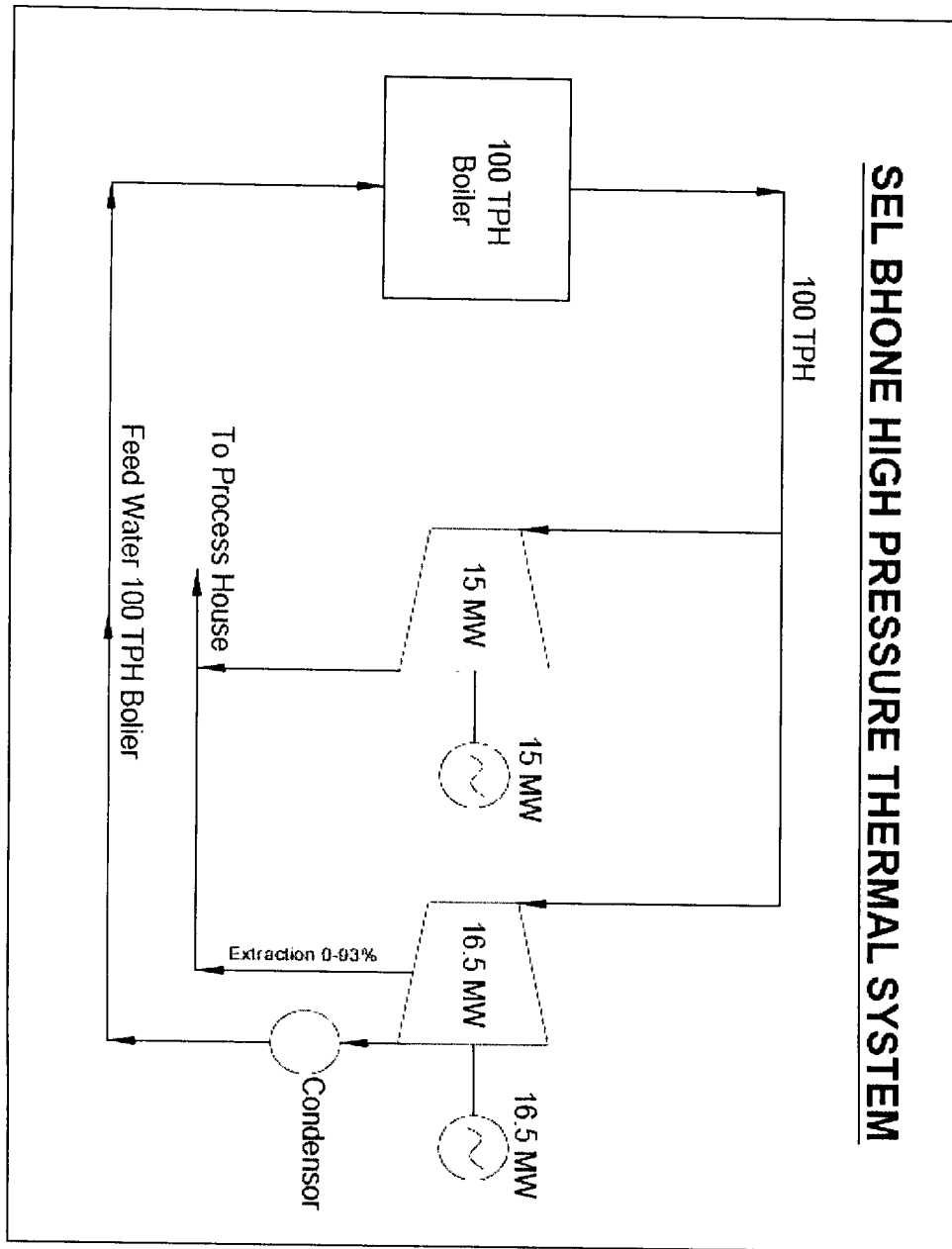


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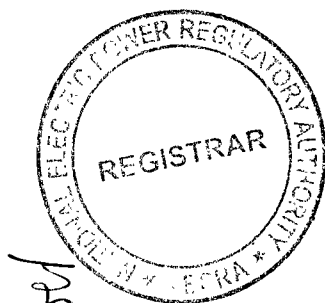
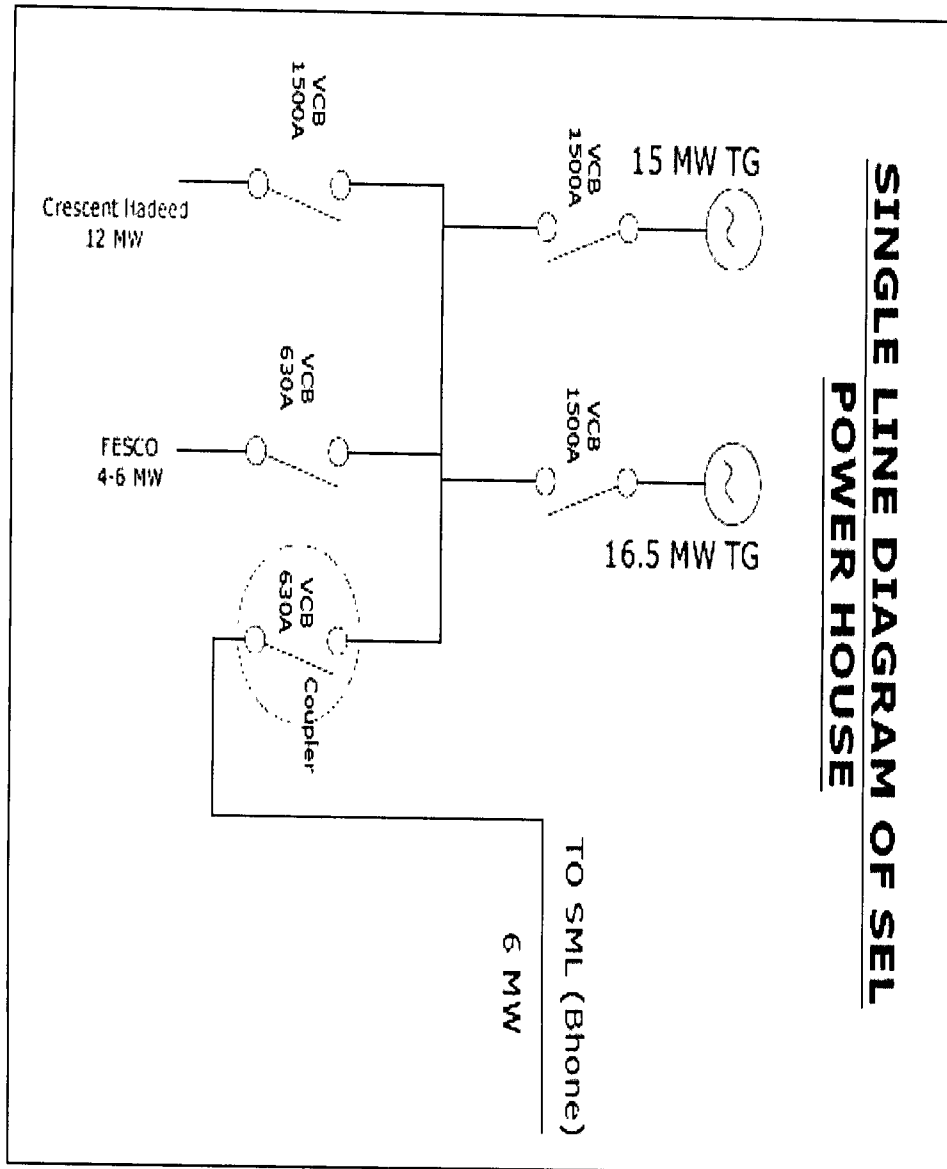


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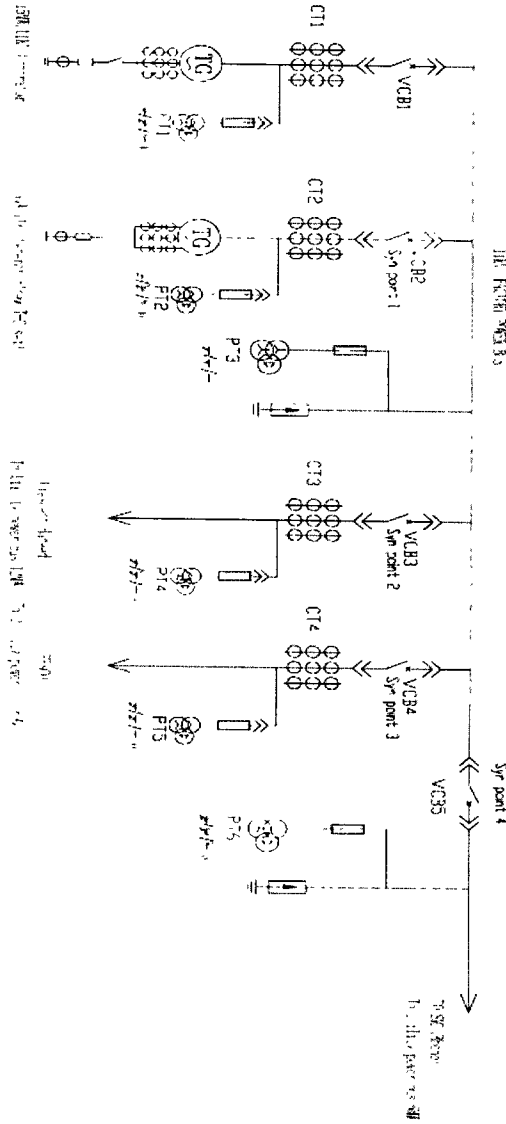
Schematic Diagram of the Generation Facility/Co-Generation Power Plant



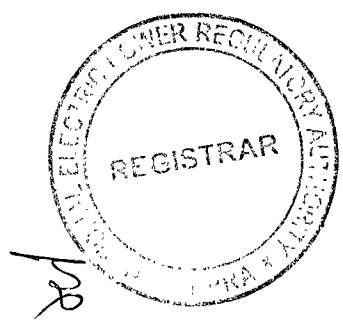
Single-Line Diagram of the Generation Facility/Co-Generation Power Plant



Single-Line Diagram of the Generation Facility/Co-Generation Power Plant



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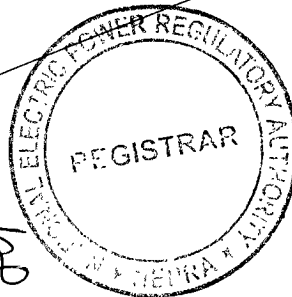
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**Interconnection Facilities/
Transmission Arrangements for Dispersal of Power from
the Generation Facility/Co-Generation
Power Plant**

The electric power from the Bagasse based Generation Facility/Co-Generation Power Plant of Shakarganj Energy (Private) Limited (SEPL) will not only be supplied to Bulk Power Consumers/BPCs* (i.e. Shakaganj Sugar Mills Limited-SML and Crescent Hadeed (Private) Limited-CHPL as enumerated in this Schedule-I) but also to the load center of FESCO to the tune of 4.00 MW-6.00 MW.

(2). The Interconnection Facilities (IF)/Transmission Arrangements (TA) for supplying to FESCO from the above mentioned Generation Facility/Co-Generation Power Plant shall be at 11KV level. The dispersal/interconnection arrangement for supplying to FESCO will be consisting of a 11 KV Feeder (on ACSR DOG Conductor) measuring about ten (10) Kilo-Meter connecting the Generation Facility/Co-Generation Power Plant with 66 KV Jahanian Shah Grid Nehang Jhang.

(3). Any change in the above mentioned IF/TA for dispersal of electric power as agreed by the Licensee and the Power Purchaser shall be communicated to the Authority in due course of time.



* The details pertaining to BPC, supply arrangement and other related information is provided in the subsequent description of this Schedule-I

**Detail of
 Generation Facility/Co-Generation
 Power Plant**

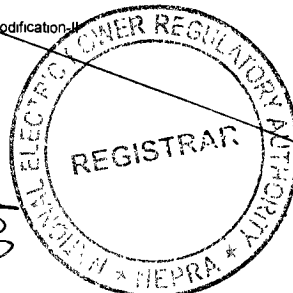
(A). General Information

(i).	Name of the Company/Licensee	Shakarganj Energy (Private) Limited
(ii).	Registered /Business Office	9 th Floor, SIDCO Avenue Center, 264-R.A. Lines, Karachi, in the Province of Sindh
(iii).	Location of the Generation Facility/Co-Generation Power Plant	57-Km, Jhang Sargodha Road, Bhone, Jhang, in the Province of Punjab
(iv).	Type of the Generation Facility/Co-Generation Power Plant	Bagasse based High Pressure Co-Generation Thermal Power Plant

(B). Plant Configuration

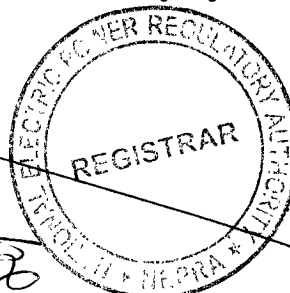
(i).	Size/ Installed Capacity of the Generation Facility/Co-Generation Power Plant	31.50 MW.		
(ii).	Type of Technology	Conventional Steam Turbines based Power Plant with one 15.00 MW Back Pressure Steam Turbine Generator Set & one 16.50 MW Extraction/Condensing Steam Turbine Generator Set		
(iii).	Number of Units/Size (MW)	Steam Turbine	Unit No. 1	Unit No. 2 [†]
			15.00 MW	16.50 MW

[†] This Unit is being added in the Generation Licence through this Modification-II



(iv).	Unit Make/Model/Type & Year of Manufacture Etc.	Steam Turbine	Unit No. 1 QINGDAO JIENENG Steam Turbine Group – Co. Ltd Model – QFW – 6 – 4, 2004	Unit No. 2 Guangzhou SKODA-JINMA Turbine Ltd.
		Boiler	Dumping Grade Type High Pressure Boiler 100 TPH Capacity and 65 Bar Pressure of FCB Design Local/or of Indian Origin	
(v).	COD of the Each Unit of the Generation Facility/Co-Generation Power Plant	Unit No. 1	Unit No. 2	
		November 01, 2009	July 01, 2015	
(vi).	Expected Useful Life of Each Unit of the Generation Facility/ Co-Generation Power Plant at the time of Grant of Original Generation Licence (No. SGC/46/2009, April 28, 2009)	Unit No. 1	Unit No. 2	
		20 Years	Not Installed	
(vii).	Expected Useful Life of Each Unit of the Generation Facility/ Co-Generation Power Plant at the time of issuance of Modification-I [‡] (Dated June 29, 2011)	Unit No. 1	Unit No. 2	
		17 Years & 10 Months (approximately)	Not Installed	

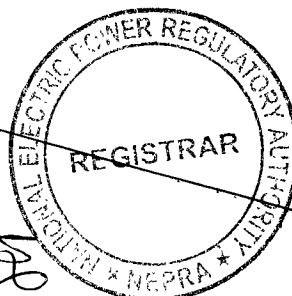
[‡] Location of the Generation Facility/Co-Generation Power Plant was changed from, 38-KM Jhang-Muzafargarh Road at Dargai Shah, District Jhang to Village Bhone, 57-KM Jhang-Sargodha Road, Tehsil, & District Jhang in the Province of Punjab.



(vii).	Expected Useful Life of Each Unit of the Generation Facility/ Co-Generation Power Plant at the time of issuance of this Modification-II (Dated May 12, 2015)	Unit No. 1	Unit No. 2
		13 Years & 11 Months (approximately)	30 Years
(vi).	Expected Useful Life of the Generation Facility/Co-Generation Power Plant (based on the COD of the latest Installed Unit i.e. Unit No.2)	30 Years (Minimum)	

(C). Fuel/Raw Material Details

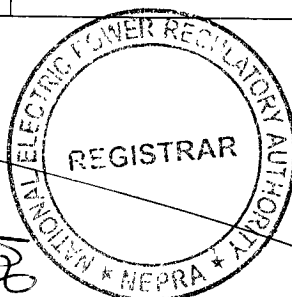
(i).	Primary Fuel	Bagasse	
(ii).	Alternate Fuel	Furnace Oil	
(iii).	Fuel Source (Imported/Indigenous)	Primary Fuel	Alternate Fuel
		Indigenous	Indigenous/Imported
(iv).	Fuel Supplier	Primary Fuel	Alternate Fuel
		Shakarganj Mills Limited-SML (primary)/Other Bagasse /Biomass suppliers (if available in the nearby area)	Pakistan State Oil (PSO)/Shell Pakistan Limited (Shell)



(v).	Supply Arrangement	Primary Fuel	Alternate Fuel
		Through Conveyor Belts/Loading Trucks/Tractor Trolleys etc	Through Oil Tankers/Bowsers etc.
(vi).	Sugarcane Crushing Capacity of SML	8000 Ton Crushing Per Day	
(vii).	Bagasse Generation Capacity of SML	2400 Tons Per Day	
(viii).	Fuel Storage facilities	Primary Fuel	Alternate Fuel
		Bulk Storage	Storage Tanks
(ix).	Capacity of Storage facilities	Primary Fuel	Alternate Fuel
		30,000 Metric Tons bulk storage	One (01) Tank
(x).	Gross Storage Capacity	Primary Fuel	Alternate Fuel
		30,000 Metric Tons Bulk Storage	1 x 500 M ³

(D). **Emission Values**

		Primary Fuel	Alternative Fuel
(i).	SO _x (mg/Nm ³)	0	To be provided
(ii).	NO _x (mg/Nm ³)	188	-do-
(iii).	CO (mg/Nm ³)	560	-do-
(iv).	PM (mg/Nm ³)	912	-do-

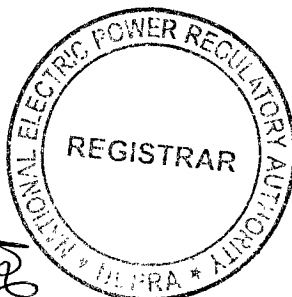


(E). Cooling System

(i).	Cooling Water Source/Cycle	Tube wells /Closed Loop with Cooling Tower
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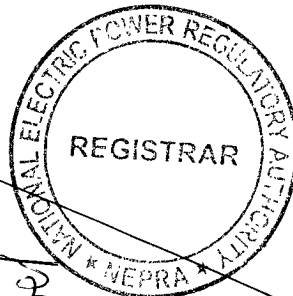
(F). Plant Characteristics

(i).	Generation Voltage	11.00 KV
(ii).	Frequency	50 Hz
(iii).	Power Factor	0.80 lagging - 0.95 leading
(iv).	Automatic Generation Control (AGC)	Yes
(v).	Ramping Rate	1 MW per Minute
(vi).	Time required to Synchronize to Grid	15 Minutes and 16.5 Minutes



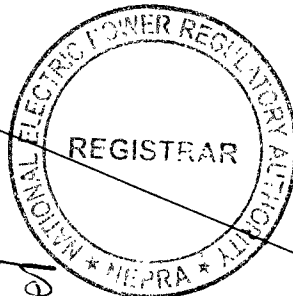
**Information Pertaining to the Bulk Power Consumer
 [in the name Name of Shakarganj Mills Limited-SML of the Licensee (i.e.
 Shakarganj Energy (Private) Limited-SEPL)]**

(i).	Location of consumers (distance and/or identity of premises)		57-KM Jhang-Sargodha Road, Tehsil & District Jhang, in the Province of Punjab.	
(ii).	Contracted Capacity and Load Factor for consumer		During Crushing Season	During Off Crushing Season
			08.00 MW	00.50 MW
			10.00 MW	01.00 MW
(iii).	Specify Whether			
	(a).	The consumer is an Associate undertaking of the SEPL-If yes, specify percentage ownership of equity;	Yes/5%	
	(b).	There are common directorships:	Yes	
	(c).	Either can exercise influence or control over the other.	Only to the extent as envisaged in the Power Purchase Agreement	
(iv).	Specify nature of contractual Relationship			
	(a).	Between SML and SEPL	Firm supply of Electric Power on continuous basis	
	(b).	Between Consumer and FESCO.	SML is B-3 Consumer of FESCO	
(v).	Any other network information deemed relevant for disclosure to or consideration by the Authority.		N/A	



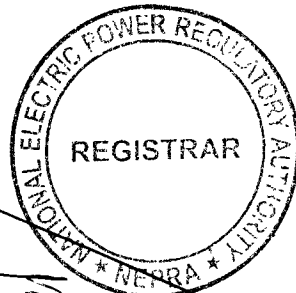
Information Regarding
Distribution Network for Supply of Power to Bulk Power Consumer
[in the Name of Shakarganj Mills Limited-SML
of the Licensee (i.e. Shakarganj Energy (Private) Limited-SEPL)]

(i).	No. of Feeder(s)	One (01)
(ii).	Length of the Feeder (Meter)	50 Meter
(iii).	In respect of all the Feeders, describe the property (streets, farms, Agri land, etc.) through, under or over which they pass right up to the premises of customer, whether they cross-over.	The 11 KV cable supplying power to SML is located on private property owned by SML, without crossing of any Public or third party Private Property etc.
(iv).	Whether owned by SML, Consumer or FESCO-(deal with each Feeder Separately)	
	- If owned by FESCO, please furnish particulars of contractual arrangement	N/A
	- Operation and maintenance responsibility for each feeder	The Operation and Maintenance is the responsibility of SML.
(v).	Whether connection with network of FESCO exists (whether active or not)- If yes, provide details of connection arrangements (both technical and contractual)	Yes/SML is B-3 Consumer of FESCO
(vi).	Any other network information deemed relevant for disclosure to or consideration by the Authority.	N/A



Information Pertaining to the Bulk Power Consumer
[in the name Crescent Hadeed (Pvt.) Limited-CHPL
of the Licensee (i.e. SEPL)]

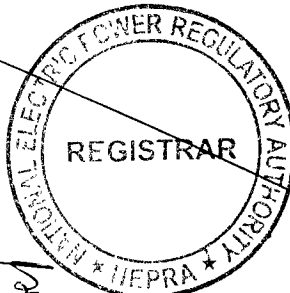
(i).	Location of consumers (distance and/or identity of premises)	57-KM Jhang-Sargodha Road, Tehsil and District Jhang Province of Punjab	
(ii).	Contracted Capacity and Load Factor for consumer	During Crushing Season	During Off Crushing Season
		12.00 MW	12.00 MW
(iii).	Specify Whether		
	(a).	The consumer is an Associate undertaking of the SEPL-If yes, specify percentage ownership of equity;	CHPL and SEPL are group companies of Crescent Group
	(b).	There are common directorships:	No
	(c).	Either can exercise influence or control over the other.	No
(iv).	Specify nature of contractual Relationship		
	(a).	Between consumer and SEPL.	CHPL and SEPL are group companies of Crescent Group
	(b).	Consumer and FESCO.	N/A
(v).	Any other network information deemed relevant for disclosure to or consideration by the Authority.		N/A



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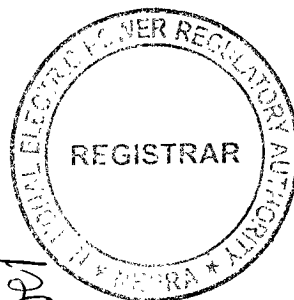
**Information Regarding
 Distribution Network for Supply of Power to Bulk Power Consumer
 [in the name Crescent Hadeed (Pvt.) Limited-CHPL
 of the Licensee (i.e. Shakarganj Energy (Private) Limited-SEPL)]**

(i).	No. of Feeder(s)	Two (02)
(ii).	Length of Each Feeder (Meter)	500 Meter
(iii).	In respect of all the Feeders, describe the property (streets, farms, Agri land, etc.) through, under or over which they pass right up to the premises of customer, whether they cross-over.	The 11 KV cable supplying power to CHPL is located on private property owned by CHPL, without crossing of any Public or third party Private Property etc.
(iv).	Whether owned by CHPL, Consumer or FESCO-(deal with each Feeder Separately)	
	- If owned by FESCO, please furnish particulars of contractual arrangement	N/A
	- Operation and maintenance responsibility for each feeder	The Operation and Maintenance is the responsibility of CHPL.
(v).	Whether connection with network of FESCO exists (whether active or not)- If yes, provide details of connection arrangements (both technical and contractual)	N/A
(vi).	Any other network information deemed relevant for disclosure to or consideration by the Authority.	N/A



SCHEDULE-II
Revised/Modified
Modification-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

		<u>During Crushing Season Operation</u>	<u>During Off Crushing Season Operation</u>
(1).	Total Gross Installed Capacity of the Generation Facility	31.5 MW	16.5 MW
(2).	De-rated Capacity of Generation Facility at Reference Site Conditions	30.0 MW	16.0 MW
(3).	Auxiliary Consumption of the Generation Facility	0.80 MW	0.80 MW
(4).	Total Installed Net Capacity of Generation Facility at Reference Site Condition	29.20 MW	15.20 MW

Note

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

