National Electric Power Regulatory Authority
Islamic Republic of Pakistan

Registrar

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

No. NEPRA/R/DL/LAG-344/ 14632-37

October 21, 2016

Mr. Javed Ahmad Kayani
Chief Executive Officer
Chanar Energy Limited
7-A, Muslim Town
Lahore

Subject: **Grant of Generation Licence No. IGSPL/71/2016**
Licence Application No. LAG-344
Chanar Energy Limited (CEL)

Reference: Your application vide letter No. nil, dated May 17, 2016 (received on May 19, 2016).

Enclosed please find herewith Determination of the Authority in the matter of Application of "Chanar Energy Limited (CEL)" for the "Grant of Generation Licence" along with Generation Licence No. IGSPL/71/2016 annexed to this determination granted by the National Electric Power Regulatory Authority (NEPRA) to CEL for its 22.0 MW Baggase/ Biomass based Co-Generation Facility located at 407 GB, Pindi Sheikh Musa Road, Tehsil Tandlianwala, District Faisalabad in the province of Punjab" 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
(IGSPL/71/2016)

NATIONAL ELECTRIC POWER REGULATORY AUTHORITY
REGISTRAR
NEPRA

21.X.16

(Syed Safeer 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 Executive Officer, CPPA-G, 6th Floor, Shaheed-r-Millat Secretariat, Jinnah Avenue, Blue Area, Islamabad
4. Chief Executive Officer, Faisalabad Electric Supply Company Limited (FESCO), Abdullahpur, Canal Bank Road, Faisalabad
5. Director General, Environment Protection Department, Government of Punjab, National Hockey Stadium, Ferozepur Road, Lahore.

National Electric Power Regulatory Authority (NEPRA)

Determination of the Authority in the Matter of Application of Chanar Energy Limited for the Grant of Generation Licence

October 18, 2016
Case No. LAG-344

(A). Background

(i). The electric power sector of the country is experiencing a demand-supply gap. In order to reduce the said deficit, all efforts are being made to develop indigenous as well as imported resources. Government of Pakistan (GoP) has set up Alternative Energy Development Board (AEDB) for development of Renewable Energy (RE) resources in the country. Further, GoP through AEDB formulated the Policy for Development of Renewable Energy for Power Generation 2006 (the RE Policy) for the development of small hydro, wind, and solar technologies.

(ii). Later on, the GoP amended the scope of the policy to include power projects based on bagasse, biomass, waste-to-energy and bio-energy, using high pressure (minimum 60 bar) boilers. Further, GoP also extended the applicability of the policy to be continued for an additional five years w.e.f. March 06, 2013. In accordance with the said amendments, AEDB issued Letter of Intent (LOI) to different entrepreneurs/ power developers including Chanar Energy Limited (CEL), for setting up a bagasse based power project to be located at Chak 407 GB, Pindi Sheikh Musa Road, Tehsil Tandlianwala, District Faisalabad, in the Province of Punjab on fast track basis.

(B). Filing of Generation Licence Application

(i). CEL in accordance with Section-15 of Regulation of Generation, Transmission and Distribution of Electric Power Act 1997 (hereafter referred to as the NEPRA Act), filed an application on May 17, 2016 requesting for grant of a generation licence. Registrar examined the submitted application and observed that complete information has not been submitted in terms of the NEPRA Licensing (Application and Modification Procedure) Regulations, 1999 (the Licensing Regulations). In view of the said, Registrar requested CEL for submitting the

NATIONAL ELECTRIC POWER REGULATORY AUTHORITY
REGISTRAR
NEPRA

missing/required information/documents as stipulated in the Licensing Regulations. CEL provided the required information/documentation on May 25, 2016.

(ii). After completion of the required information, Registrar submitted the application for consideration of the Authority. The Authority considered the matter in its regulatory meeting held on June 23, 2016 and found the form and content of the application in substantial compliance with Regulation-3 of the Licensing Regulations. Accordingly, the Authority admitted the application for consideration of the grant of the generation licence as stipulated in Regulation-7 of the Licensing Regulations. The Authority approved the advertisement containing (a). the prospectus of the company; and (b). a notice to the general public about the admission of the application of CEL, to invite the general public for their comments in the matter as stipulated in Regulation-8 of the Licensing Regulations. The Authority also approved the list of the persons for providing their comments to assist the Authority in consideration of the above mentioned application of CEL. Accordingly, the advertisement was published in one Urdu and one English national newspaper on June 28 & 29, 2016 respectively.

(iii). Apart from the above, separate letters were also sent to government ministries, their attached departments, representative organizations and individual experts etc. on June 29, 2016 to seek comments in the matter for the assistance of the Authority.

(C). Comments of Stakeholders

(i). In reply to the above, the Authority received comments from only three (03) stakeholders including Ministry of Petroleum and Natural Resources, AEDB and Ministry of Water & Power. The salient points of the comments offered by the said stakeholders are summarized in the following paragraphs: -

NATIONAL ELECTRIC POWER REGULATORY AUTHORITY
REGISTRAR
NEPRA

(a). Ministry of Petroleum and Natural Resources commented that CEL intends to install bagasse based cogeneration power plant and as such no gas is required for utilization in the project, therefore, this ministry has no objections/comments to the grant of generation licence to CEL;

(b). AEDB submitted that it has issued LoI to CEL and supports the grant of generation licence to CEL subject to submission of all codal formalities of NEPRA in the matter; and

(c). Ministry of Water & Power commented that NEPRA may process the generation licence application as per provisions of NEPRA Act and GoP Policy guidelines while safeguarding the environmental aspects.

(ii). The above comments of stakeholders were examined and found to be favorable for grant of generation licence to CEL. In view of the said, it was considered appropriate to process the generation licence application of CEL as stipulated in the NEPRA Act, the Licensing Regulations and NEPRA Licensing (Generation) Rules, 2000 (the Licensing Generation Rules).

(D). Analysis of the Authority

(i). The Authority examined the entire case in details including the information provided by CEL along with the generation licence application.

(ii). The main features of the application under consideration are that applicant company i.e. CEL is a Public Limited Company under Section-32 of the Companies Ordinance 1984 (XLVII of 1984) having Registration No. 0088977, dated June 26, 2014. The Memorandum and Articles of Association of CEL inter alia, include electric power generation and its sale thereof.

(iii). CEL is planning to install a new 22.00 MW bagasse based co-generation facility at 407 GB, Pindi Sheikh Musa Road Tehsil Tandlianwala, District Faisalabad using high pressure (110 bar) boiler. According to the provided information, the proposed co-generation facility will be consisting of one (01) 22.00MW extraction cum condensing type turbo generator of Hangzhou Steam Turbine Co. Limited, China. The associated high pressure boiler (110 TPH Capacity) is made of Wuxi HuaYun Power Engineering Co. Limited, China.

(iv). The fuel/bagasse for the proposed co-generation power plant will be provided by Chanar Sugar Mills Limited located in the close vicinity of CEL. Further, CEL will also purchase bagasse from the market to operate the co-generation facility during the crushing season and off-crushing season till the availability of the stock. The project can use other bio-mass including rice husk, cotton stalk, corn and maize cobs etc. in combination with bagasse or separately.

NATIONAL ELECTRIC POWER REGULATORY AUTHORITY REGISTRAR NEPRA

(v). Regarding grid interconnection of the project, the Authority observes that in accordance with the terms and conditions of the LOI issued by AEDB, CEL carried out interconnection study through Power Planners International. In this regard it is clarified that NTDC has approved the said study for interconnectivity purpose. Further, the concerned DISCO (i.e. FESCO) has confirmed that its system has capacity to absorb the power generated by CEL and technically it is feasible, being in the vicinity of load centre.

(vi). According to the said interconnection study, the surplus/spillover power to the tune of 19.30 MW from CEL shall be dispersed to the load center of FESCO at 132 kV level, through a 132 kV double circuit transmission line (measuring around 4.0 KM on Lynx conductor). Further, electric power to the tune of 3.50 MW will be supplied to a Bulk Power Consumer (BPC) in the name of Chanar Sugar Mills Limited using 500 meter feeder at 11.00 KV. The distribution facilities to be used for delivery of electric power to the BPC are located on private property (without involving any public property or any other third party) and will be owned, operated, managed & controlled by the BPC.

(vii). Regarding land of the project, the Authority has observed that CEL has acquired 78 Kanal land in Chak No. 407 GB, Pindi Sheikh Musa Road Tehsil Tandlianwala, District Faisalabad in the Province of Punjab as shown in schedule-I of the licence. In this regard, the Authority directs CEL that the aforementioned land shall be exclusively used for the proposed bagasse based co-generation power plant and CEL cannot carry out any other generation activity on this land except with prior approval of the Authority.

(viii). Regarding feasibility study of the project, it is observed that CEL has submitted a document tilted feasibility study which fulfills the requirements of the Regulation 3(5)(h) of the Licensing Regulations.

(ix). Regarding the impact of the project on environment, the Authority is of the opinion that the proposed project is based on bagasse which is considered as a clean fuel. In this regard, CEL has confirmed that its proposed project will comply with the environmental standards. Further, CEL has provided a copy of the necessary NOC issued by Environmental Protection Department, Govt. of the Punjab.

NATIONAL ELECTRIC POWER REGULATORY AUTHORITY
REGISTRAR
NEPRA

(x). In view of the clarification and justifications given above, the Authority is of the considered view that the project of CEL fulfills the eligibility criteria for grant of generation licence as given under the NEPRA Act, rules and regulations for grant of generation licence.

(E). Grant of Generation Licence

(i). Energy is fundamental input to economic activity and thus to human welfare and progress. The importance of electricity in the development of the economy of any country is beyond any doubt. The economic growth of any country is directly linked with the availability of safe, secure, reliable and cheaper supply of electricity. The electricity consumption per capita has a strong correlation to the social development indices (human development index, life expectancy at birth, infant mortality rate, and maternal mortality) and economic indices (such as GDP per capita etc.). Increasing electricity consumption per capita can directly stimulate faster economic growth and indirectly achieve enhanced social development. In view of the said reasons, the Authority is of the considered opinion that for sustainable development all indigenous power generation resources including coal, hydel, wind, solar and other RE resources must be developed on priority basis in the public and private sector.

(ii). The existing energy mix of the country is heavily skewed towards the costlier thermal power plants, mainly operating on imported furnace oil. The import of furnace oil for electric power generation not only causes depletion of the precious foreign exchange reserves of the country but is also an environmental concern. Therefore, in order to achieve sustainable development it is imperative that indigenous RE resources are given priority for power generation and their development be encouraged. The Energy Security Action Plan 2005 (ESAP) of GoP, also recognizes this very aspect of power generation through RE and envisages that at least 5% of total national power generation capacity to be met through RE resources by 2030. The Authority considers that the proposed project of CEL is consistent with the provisions of ESAP. The project will help in diversifying the energy portfolio of the country. Further, it will not only enhance the energy security of the country by reducing the dependence on imported furnace oil but will also help reduction in carbon emission by generating clean electricity, thus improving the environment.

NATIONAL ELECTRIC POWER REGULATORY AUTHORITY
REGISTRAR
NEPRA

(iii). The term of a generation licence under the Rule-5 (1) of the Licensing Generation Rules, is to commensurate with the maximum expected useful life of the units comprised in a generating facility. According to the international benchmarks available, the useful life of steam turbine is normally taken at least thirty (30) years from its commercial operation date (COD). In view of the said, the Authority hereby sets the term of the generation licence of CEL for thirty (30) years from COD of the project.

(iv). Regarding tariff that CEL will charge from its power purchaser/CPPA-G, it is clarified that the Authority through its determination No. NEPRA/R/TRF-UTB-2013/5152-5154 dated May 29, 2013 has specified upfront tariff for new bagasse based co-generation power projects. The Authority directs CEL to charge the power purchaser only such tariff which is determined, approved or specified by the Authority. Further, for supplying to its BPC (i.e. Chanar Sugar Mills Limited), CEL may enter into a contract with the BPC on the mutually agreed terms and submit the same to the Authority for approval.

(v). Regarding compliance with the environmental standards, the Authority directs CEL to ensure that the project will comply with the environmental standards during the term of the generation licence. In view of the said, the Authority has included a separate article along with other terms and conditions that the licensee will comply with relevant environmental standards. Further, the Authority also directs CEL to submit a report on a bi-annual basis, confirming that operation of its project is compliant with required environmental standards as prescribed by the concerned environmental protection agency.

(vi). The proposed co-generation power plant/generation facility of CEL will be using RE resources for generation of electric power. Under the Kyoto Protocol, RE projects coming into operation up to the year 2020 qualify for the carbon credits therefore, the project may qualify for the carbon credit under the said Protocol. In view of the said, the Authority directs CEL to initiate the process in this regard at the earliest so that proceeds for the carbon credits are materialized. CEL shall be required to share the proceeds of the carbon credits with the power purchaser as stipulated in Article-12 of its generation licence.

NATIONAL ELECTRIC POWER REGULATORY AUTHORITY
REGISTRAR
NEPRA

In view of the above, the Authority hereby decides to approve the grant of generation licence to CEL on the terms 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 other Applicable Documents.

Authority

Maj. (R) Haroon Rashid
(Member)

Syed Masood-ul-Hassan Naqvi
(Member)

Himayat Ullah Khan
(Member/Vice Chairman)

Tariq Saddozai
(Chairman)

NATIONAL ELECTRIC POWER REGULATORY AUTHORITY
REGISTRAR
NEPRA

National Electric Power Regulatory Authority
(NEPRA)
Islamabad – Pakistan

GENERATION LICENCE

No. IGSPL/71/2016

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:

CHANAR ENERGY LIMITED

Incorporated under the Companies Ordinance, 1984
Under Certificate of Incorporation No. 0088977, dated June 26, 2014

for its Bagasse/Biomass based Co-Generation Facility Located at 407 GB, Pindi Sheikh Musa Road Tehsil Tandlianwala, District Faisalabad, in the Province of Punjab

(Installed Capacity: 22.0MW Gross ISO)

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

Given under my hand this 21st day of October Two Thousand & Sixteen and expires on 30th day of July Two Thousand & Forty Eight.

21.X.16

Registrar

NATIONAL ELECTRIC POWER REGULATORY AUTHORITY
REGISTRAR
NEPRA

Article-1
Definitions

1.1 In this Licence

(a). "Act" means the Regulation of Generation, Transmission and Distribution of Electric Power Act, 1997;

(b). "Applicable Documents" have the same meaning as defined in the Rules;

(c). "Authority" means the National Electric Power Regulatory Authority constituted under section 3 of the Act;

(d). "Bulk Power Consumer" or "BPC" means a consumer who purchases or receives electric power, at one premises, in an amount of one megawatt or more or in such other amount and voltage level and with such other characteristics as the Authority may determine and the Authority may determine different amounts and voltage levels and with such other characteristics for different areas;

(e). "Bus Bar" means a system of conductors in the generation facility of the Licensee on which the electric power is collected for supplying to the Power Purchaser;

(f). "Commercial Operations Date (COD)" means the Day immediately following the date on which the generation facility of the Licensee is Commissioned;

(g). "CPPA-G" means Central Power Purchasing Agency (Guarantee) Limited or any other entity created for the like purpose;

NATIONAL ELECTRIC POWER REGULATORY AUTHORITY ★ NEPRA ★ REGISTRAR

(h). "Distribution Code" means the distribution code prepared by XW-DISCO(s) and approved by the Authority, as it may be revised from time to time with necessary approval of the Authority;

(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/ wind power plant, as may be amended by the parties thereto from time to time;

(j). "FESCO" means Faisalabad Electric Supply Company Limited and its successors and permitted assigns;

(k). "Financing Documents" will have the same meaning as defined in the respective Implementation Agreements to be signed by the Licensee for its Generation Facility;

(l). "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 necessary approval by the Authority;

(m). "IEC" means "the International Electro-technical Commission and its successors or permitted assigns;

(n). "IEEE" means the Institute of Electrical and Electronics Engineers and its successors or permitted assigns;

(o). "Licensee" means **Chanar Energy Limited** and its successors or permitted assigns;

(p). "NTDC" means National Transmission and Despatch Company Limited and its successors and permitted assigns;

NATIONAL ELECTRIC POWER REGULATORY AUTHORITY
REGISTRAR
NEPRA

(q). "Policy" means the Policy for Development of Renewable Energy for Power Generation, 2006 of Government of Pakistan as amended from time to time;

(r). "Power Purchaser" means CPPA-G on behalf of XW-DISCOs or any XW-DISCO which purchases electricity from the Licensee, pursuant to a Energy Purchase Agreement for procurement of electricity;

(s). "Project Agreements" will have the same meaning as will be defined in the respective Implementation Agreements to be signed by the Licensee for its Generation Facility;

(t). "Security Documents" means relevant standard security package agreements and documents including Letter of Support (LOS), Implementation Agreement and Energy Purchase Agreement to be executed by the Licensee for its Generation Facility;

(u). "Regulations" mean the National Electric Power Regulatory Authority Licensing (Application & Modification Procedure) Regulations, 1999 as amended or replaced from time to time;

(v). "Rules" mean the National Electric Power Regulatory Authority Licensing (Generation) Rules, 2000; and

(w). "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.

NATIONAL ELECTRIC POWER REGULATORY AUTHORITY
REGISTRAR
NEPRA

Article-2
Applicability of Law

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

Article-3
Generation Facility

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

3.2 The net capacity of the Licensee's generation facility 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 Wind Farm before its commissioning.

Article-4
Term of Licence

4.1 This Licence is granted for a term of thirty (30) years after the Commercial Operation Date of the generation facility of the Licensee.

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

Article-5
Licence fee

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

NATIONAL ELECTRIC POWER REGULATORY AUTHORITY REGISTRAR NEPRA

Article-6
Tariff

The Licensee shall charge only such tariff which has been determined, approved or specified by the Authority.

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 (Generation) Rules 2009 as amended from time to time.

NATIONAL ELECTRIC POWER REGULATORY AUTHORITY
REGISTRAR
NEPRA

Article-10
Compliance with Environmental & Safety Standards

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

Article-11
Provision of Information

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

11.2 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-12
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 132 KV will be the responsibility of the Licensee.

Article-13
Emissions Trading /Carbon Credits

The Licensee shall process and obtain emissions/carbon credits expeditiously and share the proceeds with to the power purchaser, as per the Policy.

NATIONAL ELECTRIC POWER REGULATORY AUTHORITY
REGISTRAR
NEPRA

Article-14
Design & Manufacturing Standards

The generation facility of the Licensee shall be designed, manufactured and tested according to the latest IEC standards or other equivalent standards. All plant and equipment shall be un-used/brand new and of relevant IEC/IEEE standard.

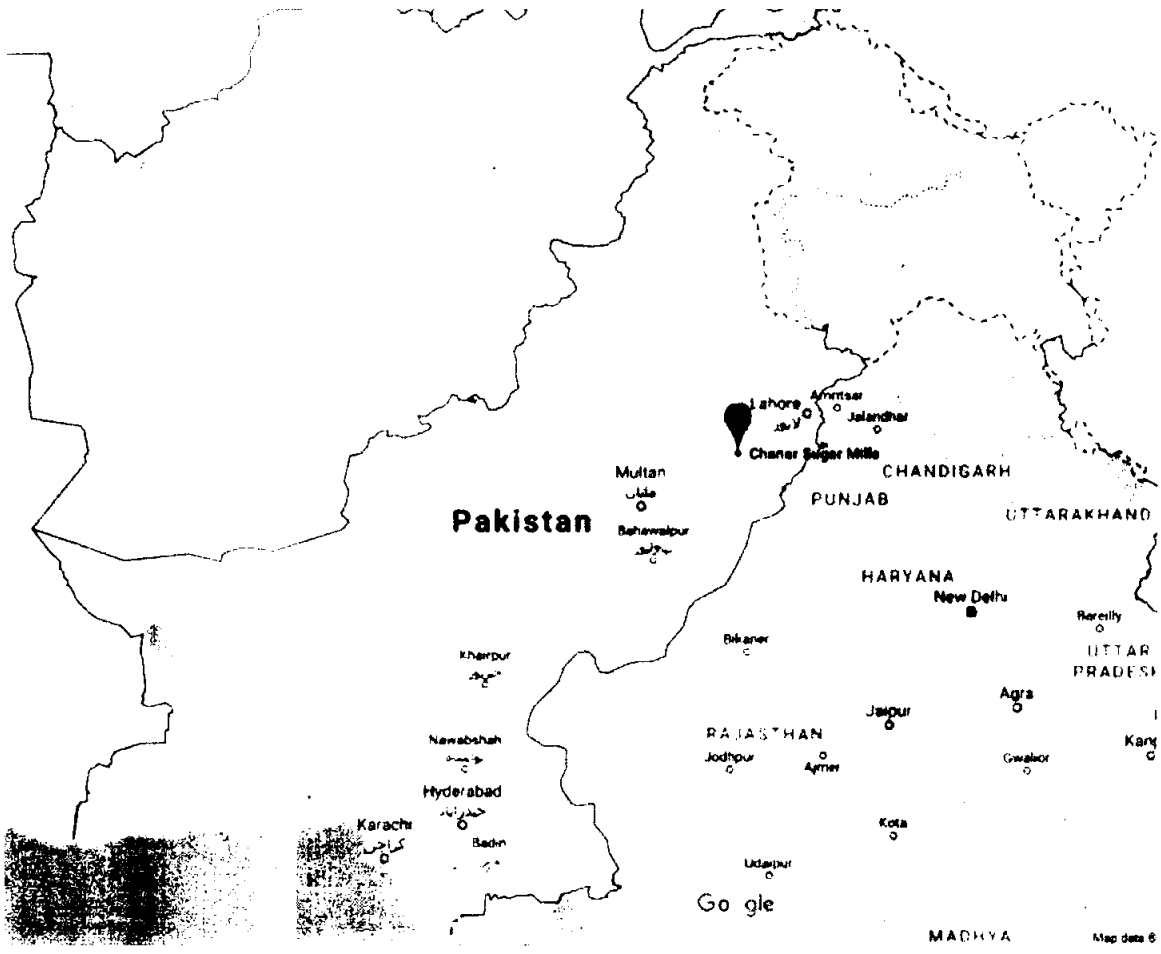
NATIONAL ELECTRIC POWER REGULATORY AUTHORITY
REGISTRAR
NEPRA

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.

NATIONAL ELECTRIC POWER REGULATORY AUTHORITY
REGISTRAR
NEPRA

Site Location of the Co-Generation Facility/ Thermal Power Plant of Chanar Energy Limited (CEL)



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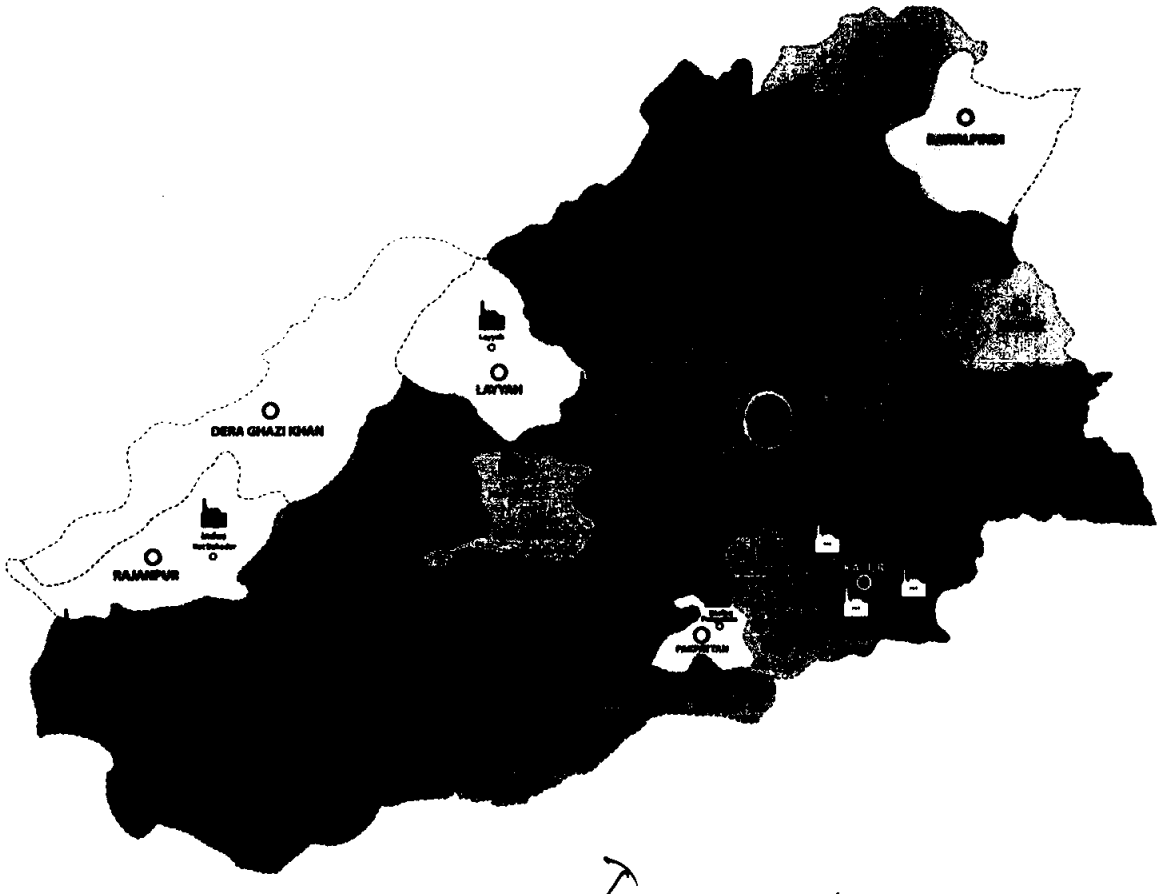
REGISTRAR
NEPRA

Site Map of the
Co-Generation Facility/ Thermal Power Plant of CEL



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REGISTRAR
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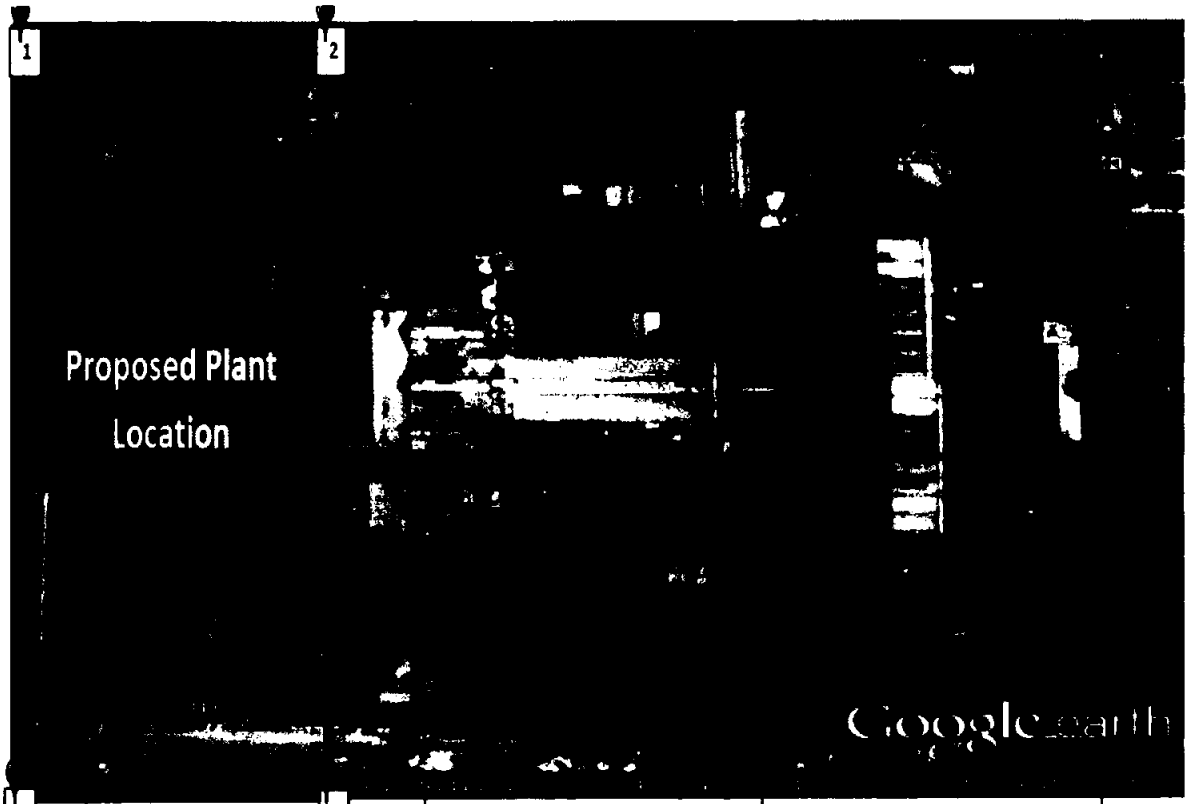
Land Coordinates of the Co-Generation Facility/ Thermal Power Plant of CEL



Sr. No.	Longitude	Latitude
1.	30°58'37.0"N	73°08'57.3"E
2.	30°58'33.8"N	73°09'00.1"E
3.	30°58'31.0"N	73°08'47.4"E
4.	30°58'27.8"N	73°08'50.1"E

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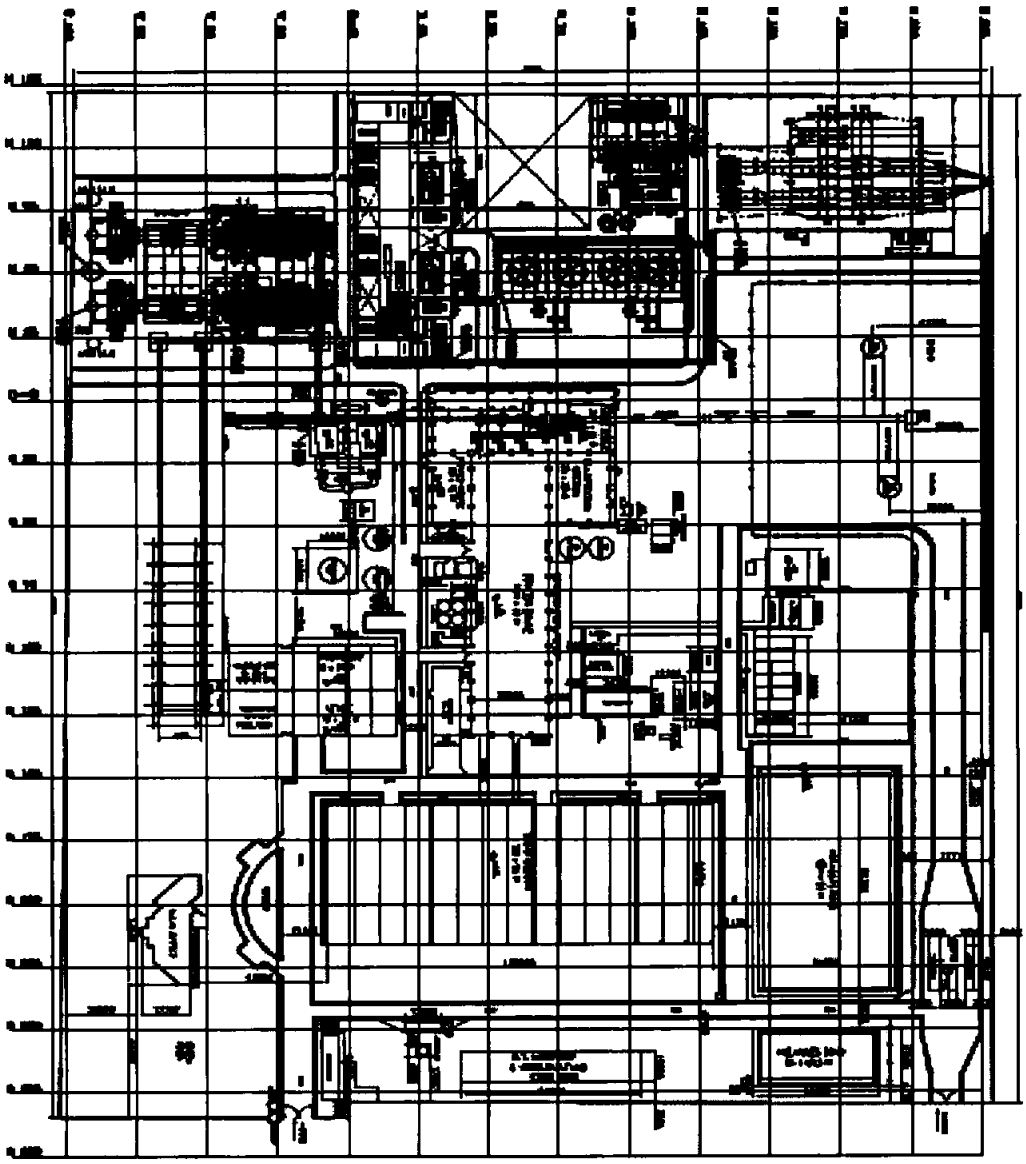
REGISTRAR
NEPRA

Layout of the
Co-Generation Facility/ Thermal Power Plant of CEL



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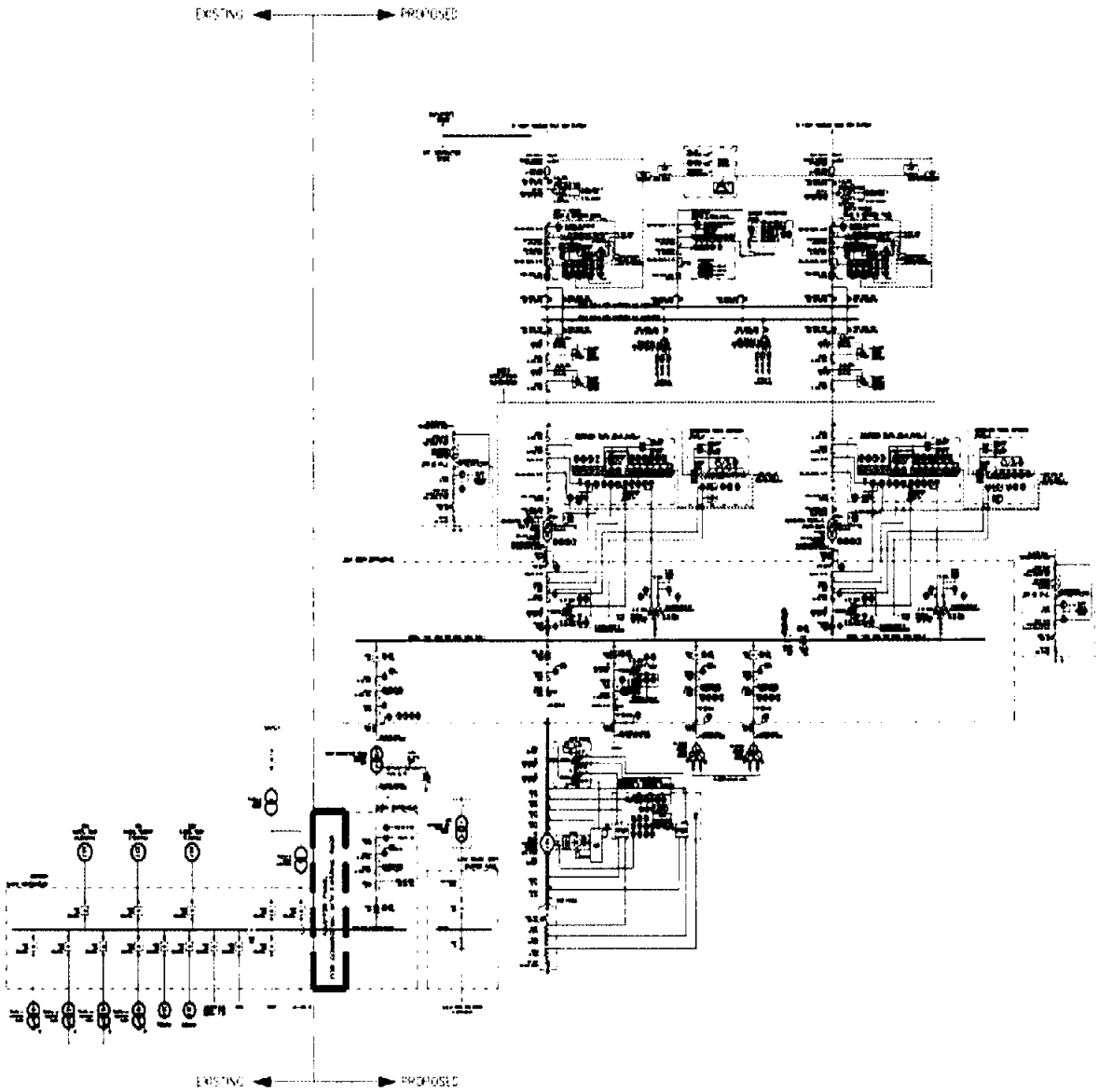
REGISTRAR
NEPRA

Single Line Diagram (Electrical) of the Co-Generation Facility/ Thermal Power Plant of CEL



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REGISTRAR
NEPRA

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

The electric power generated from the Bagasse based Thermal Power Generation facility of Chanar Energy Limited (CEL) will be supplied to a Bulk Power Consumer in the name of Chanar Sugar Mills Limited and load center of FESCO.

(2). The interconnection facilities/transmission arrangements for supplying power from co-generation facility of CEL shall be at 132 kV level, consisting of looping in-out arrangement of existing Tandlianwala-Sahiwal new 132 kV single circuit transmission line at CEL. The interconnection/dispersal arrangement will be a 132 kV double circuit transmission line (measuring around 4.0 KM on Lynx conductor) connecting the co-generation facility of CEL with the system of FESCO.

(3). Any change in the above mentioned interconnection facilities /transmission arrangements for dispersal of power as agreed by the licensee, the power purchaser and FESCO shall be communicated to the Authority in due course of time.

NATIONAL ELECTRIC POWER REGULATORY AUTHORITY
REGISTRAR
NEPRA

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

(A). General Information

(i).	Name of Applicant	Chanar Energy Limited.
(ii).	Registered /Business Office	7 – A New Muslim Town, Lahore
(iii).	Plant Location	Chak No. 407 GB, Pindi Sheikh Musa Road, Tehsil Tandlianwala, District Faisalabad
(iv).	Type of Generation Facility	Bagasse based, high-pressure co-generation Thermal power Plant.

(B). Plant Configuration

(i).	Plant Size Installed Capacity	22.00 MW.	
(ii).	Type of Technology	Conventional Steam Turbine based Power Plant (with Extraction cum condensing Steam Turbine with 110 bar (kg/cm2) boiler.	
(iii).	Number of Units/Size (MW)	Steam Turbine	1 x 22 MW
(iv).	Unit Make/Model/Type & Year of Manufacture Etc.	Steam Turbine	Hangzhou Steam Turbine Company Limited/ EHNK40/56/20
		Boiler	Wuxi HuaYun Power Engineering Co. Limited, China Travelling Grate Boiler of 110 TPH Capacity and 110 Bar (kg/cm^2) pressure
(v).	Commercial Operation Date of the Generation Facility (Anticipated)	July 31, 2018	
(vi).	Expected Useful Life of the Generation Facility from Commercial Operation Date	30 Years (Minimum)	

NATIONAL ELECTRIC POWER REGULATORY AUTHORITY
REGISTRAR
NEPRA

(C). Fuel/Raw Material Details

(i).	Primary Fuel	Bagasse	
(ii).	Alternate Fuel	Biomass	
(iii).	Fuel Source (Imported/Indigenous)	Primary Fuel	Alternate Fuel
		Indigenous	Indigenous
(iv).	Fuel Supplier	Primary Fuel	Alternate Fuel
		Chanar Sugar Mills Limited (primary)/Other bagasse / biomass suppliers (if available in the nearby area)	biomass suppliers (if available in the nearby area)
(v).	Supply Arrangement	Primary Fuel	Alternate Fuel
		Through Conveyor Belts/Loading Trucks/Tractor Trolleys etc.	Through Conveyor Belts/Loading Trucks/Tractor Trolleys etc.
(vi).	Sugarcane Crushing Capacity	7,200 Ton Crushing Per Day	
(vii).	Bagasse Generation Capacity	2,160 Tons per day	
(viii).	Fuel Storage facilities	Primary Fuel	Alternate Fuel
		Bulk Storage	Bulk Storage
(ix).	Capacity of Storage facilities	Primary Fuel	Alternate Fuel
		65, 000 tons bulk storage	Included as part of the Primary Fuel Storage
(x).	Gross Storage Capacity	Primary Fuel	Alternate Fuel
		100,000 tons Bulk Storage	Included as part of the primary fuel storage

NATIONAL ELECTRIC POWER REGULATORY AUTHORITY
REGISTRAR
NEPRA

(D). Emission Values

		Primary Fuel	Alternative Fuel
(i).	SO_x (mg/Nm^3)	Traces	Traces
(ii).	NO_x (mg/Nm^3)	<250 ppm	<250 ppm
(iii).	CO_2	11% to 13%	11% to 13%
(iv).	CO (mg/Nm^3)	Traces	Traces
(v).	PM_{10}	150 mg /nm^3	150 mg /nm^3

(E). Cooling System

(i).	Cooling Water Source/Cycle	Deep well Turbine Pump/ Underground Water/ Closed Loop

(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	3.2 KW Per Second	
(vi).	Time required to Synchronize to Grid	During cold start	150 minutes
		During warm start	90 minutes
		During Hot start	60 minutes

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Information regarding
Bulk Power Consumer to be supplied by the Licensee (i.e. Chanar Energy Limited)

(i).	No. of Consumers		One (01)
(ii).	Name of the Bulk Power Consumer (BPC)		Chanar Sugar Mills Limited. (CSML)
(iii).	Location of BPC (distance and/or identity of premises)		CSML is located immediately next to Chanar Energy, the same is also clear from plant location diagram.
(iv).	Contracted Capacity and Load Factor for BPCs		Load:3,500 KW Load Factor: 0.80
(v).	Specify Whether		
	(a).	The consumer is an Associate undertaking of the Licensee -If yes, specify percentage ownership of equity;	BPC mentioned above is an associated undertaking of the CEL. CSML currently holds 5% of CEL equity. Further, both companies are having same members as shareholders and Board of Directors.
	(b).	There are common directorships:	Yes
	(c).	Either can exercise influence or control over the other.	Yes
(vi).	Specify nature of contractual Relationship		
	(a).	Between the BPC and the Licensee	Supply of electric power and steam on continuous basis during crushing season
	(b).	Between BPCs and FESCO.	The CSML is B-3 consumer of FESCO
(vii)	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 Supplying Electric Power to Bulk Power Consumer By the Licensee (i.e. Chanar Energy Limited)

(i).	No. of Feeders		01 (One)
(ii).	Length of Each Feeder (meters)		< 500 meter
(iii).	Length of Each Feeder to each Consumer		As above
(iv).	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.		11 KV feeders supplying electric power to BPC is located on private property owned by BPC.
(v).	Whether owned by Licensee, BPC or Distribution Company FESCO-(deal with each Feeder Separately)		Owned by the respective BPC
	(a).	If owned by FESCO, please furnish particulars of contractual arrangement	N/A
	(b).	Operation and maintenance responsibility for each feeder	The Operation and Maintenance is the responsibility of BPC.
(vi).	Whether connection with network of FESCO exists (whether active or not)- If yes, provide details of connection arrangements (both technical and contractual)		Yes, the BPC is B-3 Consumers of FESCO
(vii).	Any other network information deemed relevant for disclosure to or consideration by the Authority.		N/A

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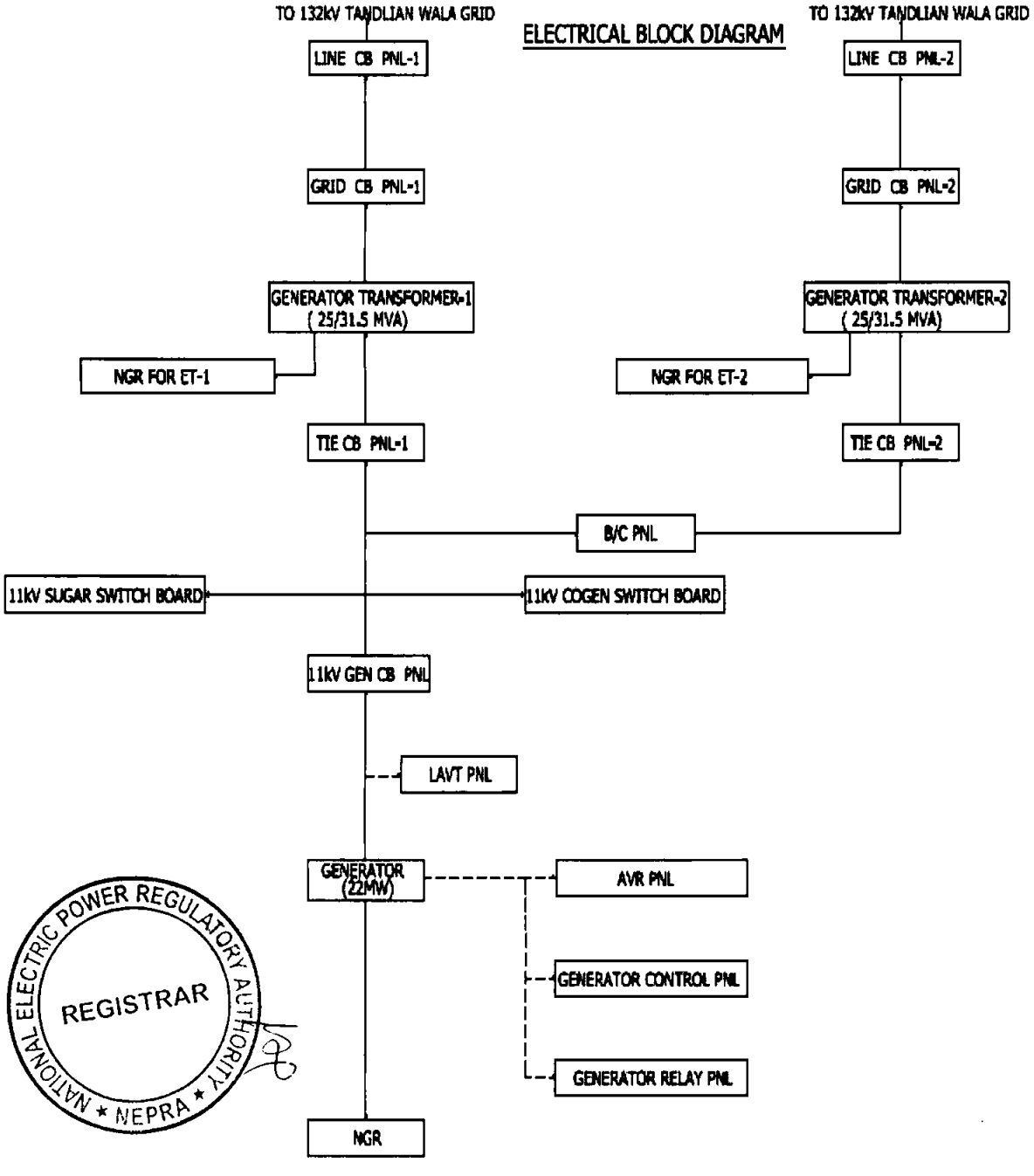
Schematic Diagram
for Supplying Electric Power to Bulk Power Consumers from Co-Generation Facility/Thermal Power Plant



Authorization
by National Electric Power Regulatory Authority (NEPRA) to Chanar Energy Limited

Incorporated under the Companies Ordinance, 1984
Under Corporate Universal Identification No. 0088977, dated June 26, 2014

For
Sale to Bulk Power Consumer

Pursuant to Section-21 of the Act and Rule-7 of the NEPRA Licensing (Generation) Rules-2000, the Authority hereby authorize Chanar Energy Limited-CEL (the Licensee) to engage in second-tier supply business, limited to the following consumers:-

(a). Chanar Sugar Mills Limited

19/4/16

(Maj. (R) Haroon Rashid)
Member

(Syed Masood Ul Hassan Naqvi)
Member

21.10.16.

(Himayat Ullah Khan)
Vice Chairman / Member

—

(Tariq Saddozai)
Chairman

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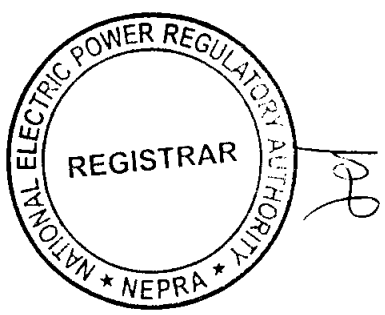
21.X.16

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 are given in this Schedule



SCHEDULE-II

		Season Operation	Off-Season Operation
(1).	Total Gross Installed Capacity	20 MW	22 MW
(2).	De-rated Capacity at Mean Site Conditions	20 MW	22 MW
(3).	Auxiliary Consumption	2.0 MW	2.2 MW
(4).	Net Capacity of the Plant at Mean Site Conditions	18.0 MW	19.8 MW

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 power purchase agreement/bi-lateral agreement or any other applicable document(s).

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