



**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/LAG-130/ 2559-64

February 24, 2016

Mr. Shuja Hussain,  
Chief Executive Officer,  
Grange Power Limited,  
2<sup>nd</sup> Floor, 65-Z, Commercial Area,  
DHA Phase III, Lahore.

**Subject: Modification-I in Generation Licence No: IGSP/22/2009  
Licence Application No. LAG-130  
Grange Power Limited (GPL)**

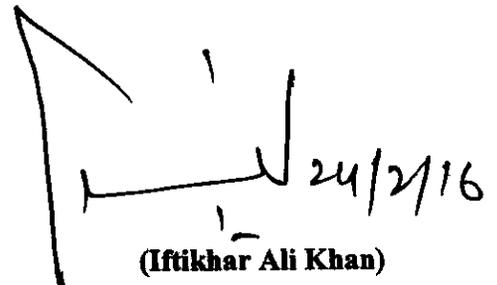
**Reference: Your application vide letter No. Nil, dated December 02, 2014.**

It is intimated that the Authority has approved "Licensee Proposed Modification" in Generation Licence No. IGSP/22/2009 (issued on July 08, 2009) in respect of Grange Power Limited (GPL), pursuant to Regulation 10(11)(a) of the NEPRA Licensing (Application and Modification Procedure) Regulations 1999.

2. Enclosed please find herewith determination of the Authority in the matter of Licensee Proposed Modification in the Generation Licence of GPL along with Modification-I in the Generation Licence No. IGSP/22/2009, as approved by the Authority.

**Encl:/As above**



  
(Iftikhar Ali Khan)

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, Multan Electric Power Company Limited (MEPCO), WAPDA Colony, Khanewal Road, Multan.
4. Director General, Environment Protection Department, National Hockey Stadium, Ferozpur Road, Lahore.
5. Managing Director, Private Power and Infrastructure Board (PPIB), 50-Nazimuddin Road, Sector F-7/4, Islamabad.

**National Electric Power Regulatory Authority**  
**(NEPRA)**

**Determination of Authority**  
**in the Matter of Licensee Proposed Modification of**  
**Grange Power Limited**

**February 16, 2016**  
**Case No. LAG-130**

**(A). Background**

(i). The Authority granted a Generation Licence (No. IGSP/22/2009 dated July 08, 2009) to Grange Power Limited (GPL) for an Installed Capacity of 163.353 MW, in terms of Section-15 of Regulation of Generation, Transmission and Distribution of Electric Power Act, 1997 (the NEPRA Act).

(ii). According to the above Generation Licence, the Generation Facility/Thermal Power Plant/Power Plant is to be located at 15-KM Arifwala-Sahiwal Road Pakpattan, Tehsil & District Pakpattan in the Province of Punjab, operating on Residual Furnace Oil (RFO).

**(B). Communication of Modification**

(i). GPL 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 through its letter December 02, 2014.

(ii). In "the Text of the Proposed Modification", GPL submitted that originally the project was envisaged to be a Combine Cycle Power Plant operating on RFO. Whereas, Now, GPL intends to install a Conventional Steam Turbine based generation facility to be operated on coal. *a*



(iii). Regarding the "Statement of Reasons in Support of the Modification", it was submitted that the Board of Directors of National Transmission and Despatch Company Limited (NTDC) in its meeting held on June 14, 2014 have recommended the implementation of the Project on imported coal instead of RFO.

(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", GPL submitted that it plans accepting Up-front Tariff for coal Power Projects which the Authority has announced. Further, GPL confirmed that proposed changes would not have any adverse impact on the QoS and its Performance under the Licence.

**(C). Processing of LPM**

(i). After completion of all the required information as stipulated in the Regulation 10 (2) and 10 (3) of the Regulations, the Registrar accepted the LPM for further processing.

(ii). Accordingly, the Registrar published the communicated LPM on December 24, 2014 in one (01) English and one (01) Urdu News Paper, informing the general public, interested/affected parties and other stakeholders about the communicated LPM and for submitting their views in favor or against the same.

(iii). Apart from the said, letters were also sent to Individual Experts, Government Ministries, different Departments and Various Representative Organization etc., conveying about the communicated LPM and publication of its notice in the press. Further, the said entities were invited to assist the Authority by submitting their views and comments in the matter.



**(D). Comments of Stakeholders**

(i). In reply to the above, the Authority received comments of four (04) stakeholders. These included Private Power & Infrastructure Board (PPIB), Punjab Mineral Development Corporation (PMDC), Ministry of Petroleum & Natural Resources (MoP&NR) and Ministry of Water & Power (MoW&P). The salient points of the comments offered by the above mentioned stakeholders are summarized in the following paragraphs: -

- (a). PPIB remarked that on the recommendations of board of NTDC it has approved the conversion of the project from RFO to coal. PPIB supported the communicated LPM of GPL;
- (b). PMDC submitted that the matter does not relate to Punjab mineral department therefore, it is not in a position to comment in the matter;
- (c). MoP&NR stated GPL intends to install Imported Coal Fired Thermal Power Plant for which no gas is required. Therefore, this Ministry has no objections/comments for the grant of Generation Licence to GPL; and
- (d). MoW&P expressed that the Authority may process the communicated LPM of GPL as per the provisions of the NEPRA Act, relevant rules and regulations.

(ii). The Authority reviewed the above comments of the stakeholders and found the same in favor of the communicated LPM. Accordingly, the Authority considered it appropriate to proceed further in the matter as stipulated in the Regulations and the NEPRA Licensing (Generation) Rules, 2000 (the Rules).



**(E). Approval of LPM**

(i). The Authority has observed that the existing Generation Licence (No. IGSP/L/22/2009 dated July 08, 2009) is for an installed capacity of 163.353 MW (consisting of 1 x 109.00 MW Gas Turbine and 1 x 54.353 MW Steam Turbine), operating on RFO. Whereas, now due to reluctance of the Power Purchaser to sign the Power Purchase Agreement, GPL intends to implement the project using Imported Coal by installing a Steam Turbine of 164.84 MW.

(ii). In terms of Regulation-10(5) of the Regulations, the Authority is entitled to modify any 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.

(iii). The Authority has considered the submissions of the Licensee/GPL and other proceedings pertaining to the communicated LPM. The Authority considers that the communicated LPM is reasonably necessary for the Licensee/GPL to effectively and efficiently perform its obligations under its Generation Licence. The communicated LPM will not have any effect on the performance of the Licensee/GPL of its obligations under the existing Generation Licence. The Communicated LPM has not caused the Authority to act or acquiesce in any act or omission in any manner contrary to the provisions of the NEPRA Act or relevant and regulations as the LPM is in line with the provisions of Section-26 of



the NEPRA Act and Regulation-10 of the Regulations. The Authority considers that the communicated LPM will be beneficial to the consumers as the change of fuel from RFO to Imported Coal will help in generating low cost electric power/energy for the National Grid. Further, the communicated LPM will ensure the continuous, safe and reliable supply of electric power to the Power Purchaser and consumers. Further, the Authority is convinced that the change of fuel from Imported Coal to RFO will not have any adverse impact on the QoS and Performance of the Licensee/GPL under its existing Generation Licence.

(iv). About the Impact on the Tariff of the communicated LPM, it is clarified that the Authority had granted the Licensee/GPL an Up-Front Tariff in terms of its Determination No. NEPRA/TRF-289/GPL-2015/1872-1874, February 13, 2015. The Authority is satisfied that the communicated LPM will have a positive impact on its Tariff as electric power generated from Imported Coal is cheaper than RFO.

(v). In view of the above, the Authority is satisfied that the Licensee/GPL 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. The already granted Generation Licence (No. IGSP/L/22/2009 dated July 08, 2009) in the name of GPL is hereby modified. The changes in "Face Sheet", "Articles of the Generation Licence", "Schedule-I" and "Schedule-II" of the 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 & conditions of the Generation Licence and other applicable documents.

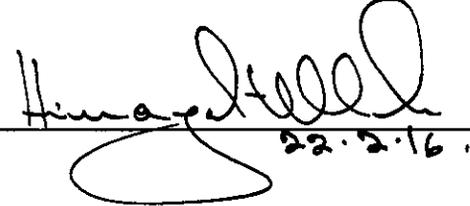


**Authority**

Syed Masood-ul-Hassan Naqvi  
(Member)

  
18/2/16

Himayat Ullah Khan  
(Member)

  
22.2.16

Khawaja Muhammad Naeem  
(Member)

— Away —

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

  
22/2/16

Brig. (R) Tariq Saddozai  
(Chairman)

  
23/2/16



24-2-2016

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

**GENERATION LICENCE**

**No. IS/GE/22/2009**

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 granted to **QAZANDE POWER LIMITED** (issued on dated July 22, 2009) (expiry of November 30, 2033), in the event of change in generation capacity under

the terms and conditions of the licence appearing on the face of

Schedule-I of the licence, to increase capacity from 1000 MW

instead of 530 MW.

The validity date of the Generation Licence is changed to January 30, 2049;

(ii) Changes in Articles of the Generation Licence attached as Revised/Modified Articles of Generation Licence;

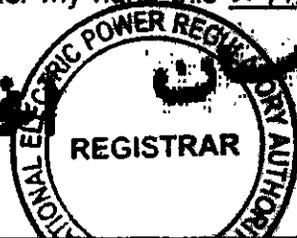
(iv) Changes in Schedule-I attached as Revised/Modified Schedule-I; and

(v) Changes in Schedule-III attached as Revised/Modified Schedule-III.

This Modification is given under my hand this 24<sup>th</sup> of February

Two Thousand & Sixteen.

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). "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). "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). "Commercial Operation Date (COD)" means the day immediately following the date on which the generation facility of the Licensee is commissioned;
- (f). "CPA Co" means "Central Power Purchasing Agency (Guarantee) Limited" or any other entity created for the like purpose;
- (g). "Distribution Code" means the distribution code prepared by MEPCO and approved by the Authority, as it may be revised from time to time by MEPCO with any necessary approval by the Authority;
- (h). "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;



- (i). "MEPCO" means "Multan Electric Power Company Limited and its successors or permitted assigns;
- (j). "IEC" means International Electrotechnical Commission or any other entity created for the like purpose and its successors or permitted assigns;
- (k). "IEEE" means the Institute of Electrical and Electronics Engineers and its successors or permitted assigns;
- (l). "Law" means the Act, relevant rules and regulations made there under and all the Applicable Documents;
- (m). "Licensee" means "Grange Power Limited" and its successors or permitted assigns;
- (n). "NTDC" means National Transmission and Despatch Company Limited and its successors or permitted assigns;
- (o). "Power Purchase Agreement" means the power 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;
- (p). "Power Purchaser" means the CPPA-G purchasing electric power (either on behalf of all XW-DISCOs including MEPCO) from the Licensee, pursuant to Power Purchase Agreement for procurement of electricity;



- (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 Rules and regulations issued under the Act.

Article-2  
Application of Law

This Licence is issued subject to the provisions of the Law, 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 to 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 valid from the date of its issuance (i.e. July 08, 2009) and will remain enforced for a term of thirty (30) years from the COD of the generation facility of the Licensee.

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 and manner and at the time set out in the National Electric Power Regulatory Authority (Regulation) Rules, 2002.

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

**Article-10**  
**Compliance with Environmental Standards**

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

10.2 The Licensee shall provide a certificate on a bi-annual basis, confirming that the operation of its generation facility is in line with environmental standards as prescribed by the relevant competent authority.



**Article-11**  
**Power off take Point and Voltage**

The Licensee shall deliver power to the Power Purchaser at the outgoing bus bar of its grid station. The up-gradation (step up) of generation voltage up to the required Interconnection voltage level 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**  
**Design & Manufacturing Standards**

All the components of the generation facility/power plant shall be designed, manufactured and tested according to the latest IEC, IEEE or any other equivalent standards. All plant and equipment shall be unused and brand new.



**Revised/Modified**  
**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 Facility of the Licensee are described in this Schedule.



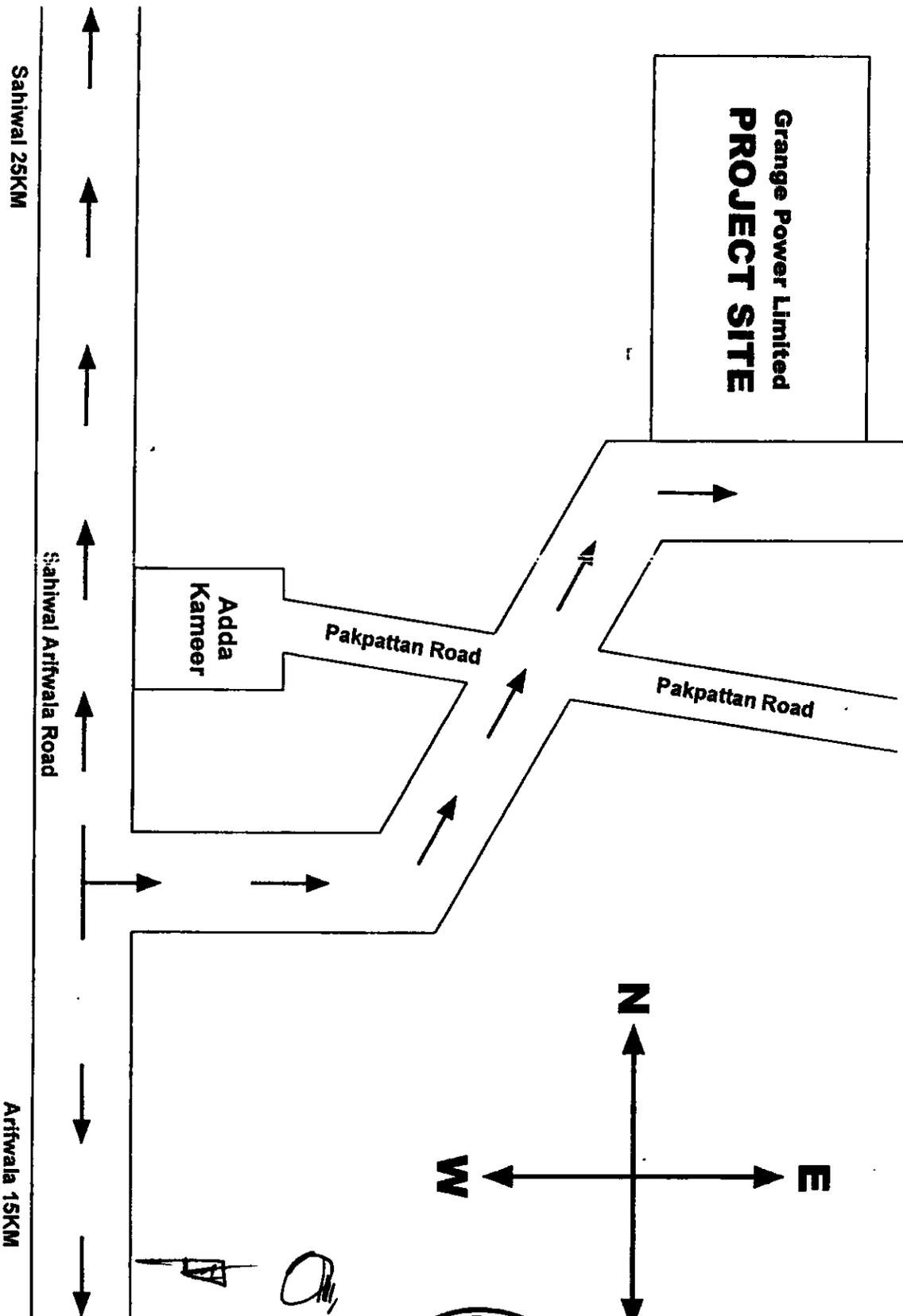


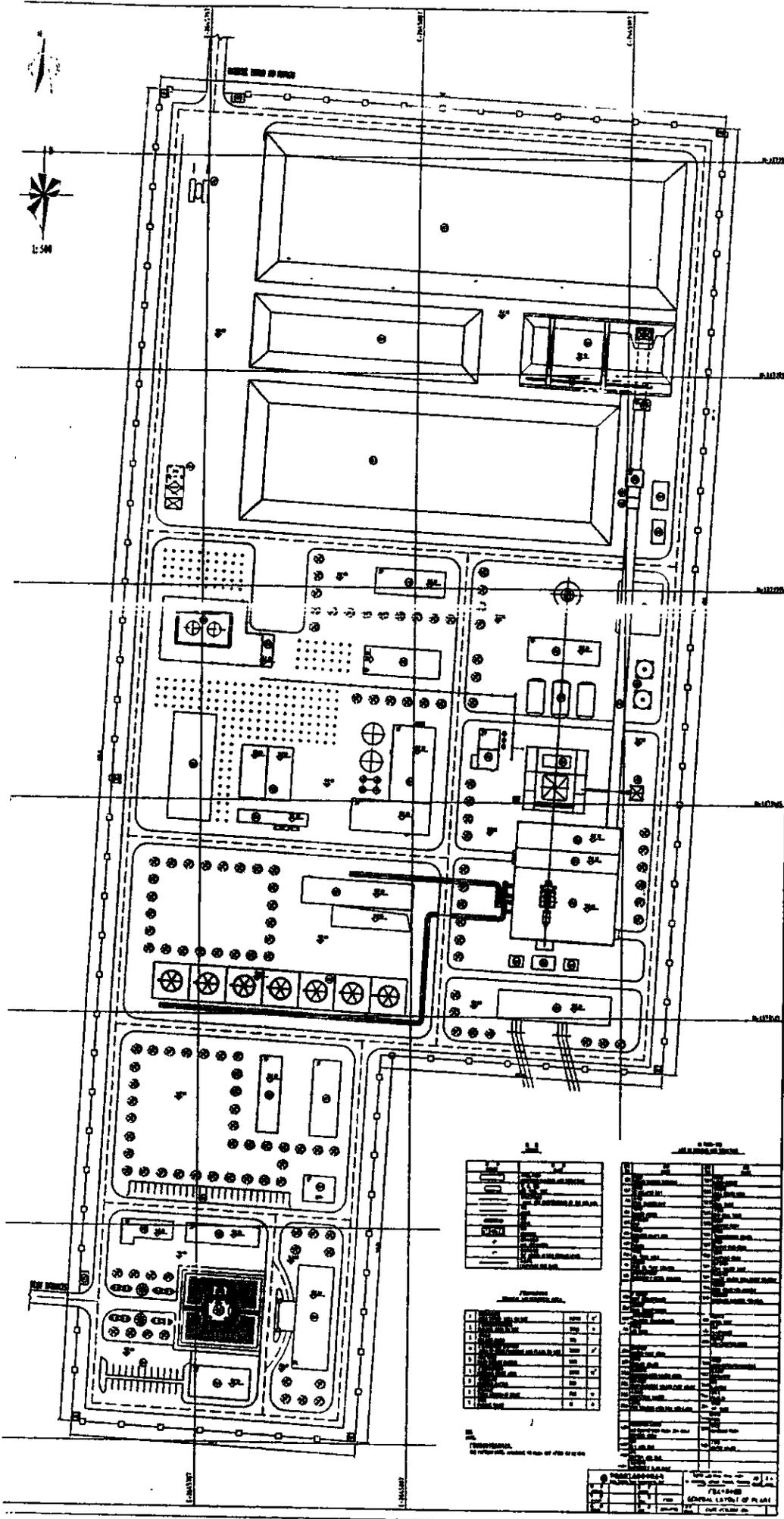
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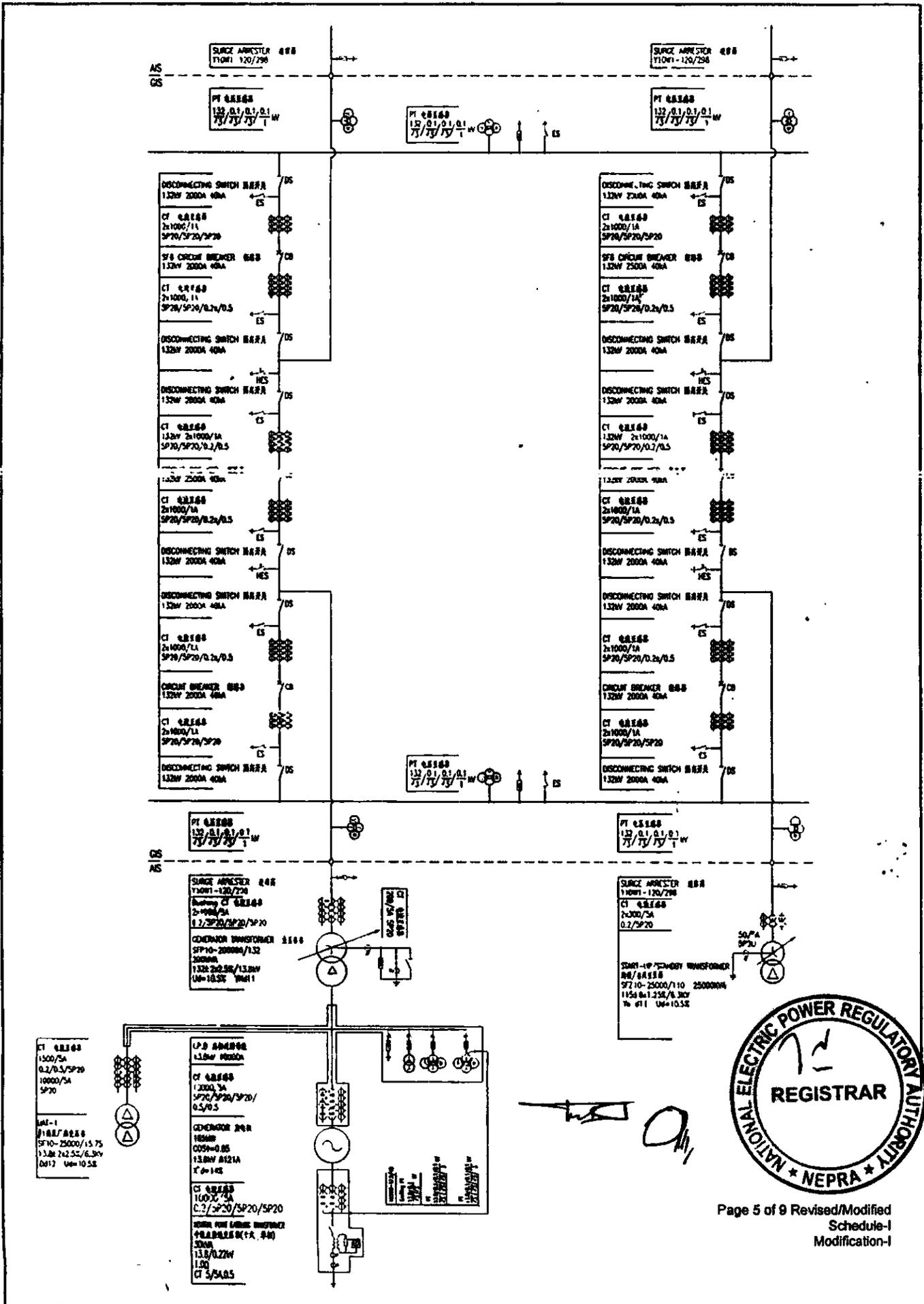




**PL**

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**Interconnection**  
**Arrangement/Transmission Facilities for Dispersal of**  
**Power from the Generation Facility/Power Plant of**  
**Grange Power Limited (GPL)**

The electric power generated from the imported coal based generation facility/Thermal Power Plant of the Licensee/GPL shall be dispersed to the load center of MEPCO.

(2). The proposed Interconnection Arrangement/Transmission Facilities for dispersal of will consist of new 132 KV Double Circuit (D/C) Transmission Line (Measuring about 14-KM) on ACSR Rail Conductor connecting the generation facility with 132 KV Arifwala grid station of MEPCO. In this regard, the Licensee shall adhere to the relevant provisions of the Distribution Code and Code to the extent applicable.

(3). Any change in the above mentioned Interconnection Arrangement/Transmission Facilities duly agreed by GPL, NTDC and MEPCO, shall be communicated to the Authority in due course of time.



**Detail of  
Generation Facility/  
Power Plant**

**(A). General Information**

(i).	Name of Company/Licensee	Grange Power Limited
(ii).	Registered/Business Office of Company/Licensee	2 <sup>nd</sup> Floor 65-Z Commercial Area DHA Phase-III Lahore, in the Province of Punjab
(iii).	Location of the Generation Facility	15-KM Arifwala-Sahiwal Road, Arifwala, Tehsil & District Pakpattan, in the Province of Punjab
(iv).	Type of Generation Facility	Thermal Power Plant

**(B). Plant Configuration**

(i).	Installed Capacity of the Generation Facility	164.84 MW	
(ii).	Type of Technology	Conventional Thermal Power Generation Facility with Sub-Critical Boiler and Steam Turbine	
(iii).	Number of Units/Size (Mw)	1 x 164.84 MW	
(iv).	Unit Make/Model/Type & Year of Manufacture Etc.	Steam turbine	Make Dongfang Turbine Co. Ltd. ("DTC"), China 1 x N164-13.24/535/535
		Boiler	Make CWPC China. 1 x HX543/13.7-II 1
(v).	Expected COD of the Generation Facility	January 31, 2019	
(vi).	Expected Useful Life of the Generation Facility from COD	30 years	



**(C). Fuel/Raw Material Details**

(i).	Primary Fuel	Imported/Local Coal	
(ii).	Start-Up Fuel	Light Diesel Oil/LDO	
(iv).	Fuel Source for each of the above (i.e. Imported/Indigenous)	The fuel coal is considered to import sub-bituminous coal and bituminous coal from the countries surrounding India Ocean, i.e. Indonesia, South Africa, Botswana or Australia, etc.	
(v).	Fuel Supplier for each of the above	Primary Fuel	Start-Up Fuel
		P.T. Modaco Energy Indonesia	Shell Pakistan/Pakistan State Oil/Any other OMC Company
(vi).	Supply Arrangement for each of the above	Primary Fuel	Start-Up Fuel
		Lorries/Railways Freight Wagons	Through Oil Tankers
(vii).	No. of Bunkers/Tanks/Open Yard	Primary Fuel	Start-Up Fuel
		One open yard	Two oil tanks
(viii).	Storage Capacity of each Bunkers/Tanks/Open Yard	Primary Fuel	Start-Up Fuel
		111,996 Tons (for 90 days Full Load Requirement)	800 m <sup>3</sup>
(ix).	Gross Storage	Primary Fuel	Start-Up Fuel
		111,996 Tons	1600m <sup>3</sup>



**(D). Emission Values**

		Primary Fuel	Start-Up Fuel
(i).	SO <sub>x</sub> (mg/Nm <sup>3</sup> )	<200	<200
(ii).	NO <sub>x</sub> (mg/Nm <sup>3</sup> )	<450	<450
(iii).	CO <sub>2</sub> (%)	<15	

**(E). Cooling System**

(i).	Cooling Water Source/Cycle	Underground Water from tube wells/Closed loop with cooling Tower
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**(F). Characteristics of the Generation Facility**

(i).	Generation Voltage	13.80 KV	
(ii).	Frequency	50Hz	
(iii).	Power Factor	0.8 (lagging) / 0.95(leading)	
(iv).	Automatic Generation Control (AGC) (MW control is the general practice)	Yes	
(v).	Load Ramping Rate (MW/min)	-	
(vi).	Time required to synchronize to Grid (Hrs.)	Cold state	6-8 hour
		Warm State	3-4 hours
		Hot State	1.5-2 hours
		Extreme hot state	< 1.5 hours



**Revised/Modified**  
**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

**Modification-I**



## SCHEDULE-II

(1).	Total Gross Installed Capacity of the Generation Facility	164.84 MW
(2).	De-rated Capacity of Generation Facility at Reference Site Conditions	164.84 MW
(3).	Auxiliary Consumption of the Generation Facility	014.84 MW
(4).	Total Installed Net Capacity of Generation Facility at Reference Site Condition	150.00 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 or any other applicable document(s).

