



National Electric Power Regulatory Authority
Islamic Republic of Pakistan

2nd Floor, OPF Building, G-5/2, Islamabad
Ph: 9206500, 9207200 Fax : 9210215
E-mail: registrar@nepra.org.pk

Registrar

No. NEPRA/R/LAG-130/6669-71

July 08, 2009

Mr. Shuja Hussain
Chief Executive
Grange Power Limited
2nd Floor, 65-Z, Commercial Area,
DHA, Lahore

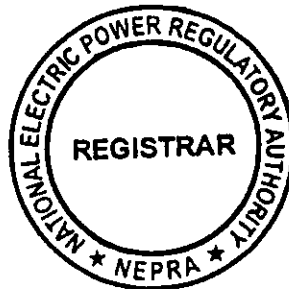
Subject: Generation Licence No. IGSP/22/2009
Licence Application No. LAG-130
Grange Power Limited (GPL)

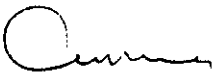
Reference: Your letter No. nil, dated December 16, 2008

Enclosed please find herewith Generation Licence No. IGSP/22/2009 granted by the Authority to Grange Power Limited (GPL) 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**
(No. IGSP/22/2009)




(Engr. Arshad Mehmood)

Copy to:

1. Chief Executive Officer, Multan Electric Power Company Limited (MEPCO),
MEPCO Headquarters, Khanewal Road, Multan
2. Director General, Pakistan Environmental Protection Agency, House No. 311, Main
Margalla Road, F-11/3, Islamabad.

National Electric Power Regulatory Authority
(NEPRA)
Islamabad – Pakistan

GENERATION LICENCE

No. IGSPL/22/2009

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 (XL of 1997), the Authority hereby grants a Generation Licence to:

GRANGE POWER LIMITED

Incorporated under the Companies Ordinance, 1984
Under Certificate of Incorporation

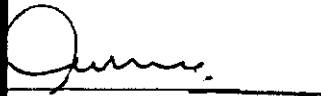
No. 0064883, dated March 25, 2008

For its Plant located on 15-KM Arifwala-Sahiwal Road
Tehsile & District Pakpattan, Punjab.

(Installed Capacity: 163.353 MW Gross ISO)

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

Given under my hand this 08th day of JULY, Two Thousand & Nine, and expires on 30th day of December, Two Thousand & Thirty Five.


Registrar





Article-1
Definitions

1.1 In this Licence

- (a) "Act" means the Regulation of Generation, Transmission and Distribution of Electric Power Act, 1997 (XL of 1997);
- (b) "Authority" means the National Electric Power Regulatory Authority constituted under section 3 of the Act;
- (c) "Licensee" means Grange Power Limited;
- (d) "Rules" mean the National Electric Power Regulatory Authority Licensing (Generation) Rules, 2000.

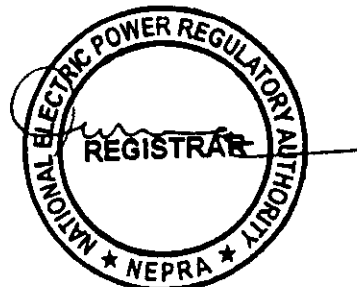
1.2 Words and expressions used but not defined herein bear the meaning given thereto in the Act or in the Rules.

Article-2
Application of Rules

This Licence is issued subject to the provisions of the Act and 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 functional specifications and other details specific to the power generation facilities of the Licensee are set out in Schedule-I to this Licence.



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

3.3 The Licensee shall provide the final arrangement, technical and financial specifications and other details specific to generation facilities before commissioning of the generation facilities.

Article-4
Term of Licence

4.1 The Licence is granted for a term of twenty five (25) years after the Commercial Operation Date.

4.2 Unless revoked earlier, the Licensee may ninety days (90) days prior to the expiry of the term of the Licence, apply for renewal of the Licence under the Licensing (Application and Modification Procedures) Regulation, 1999

Article-5
Licence fee

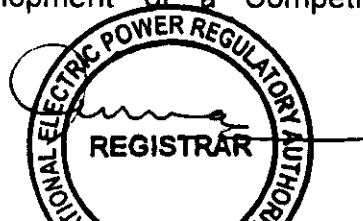
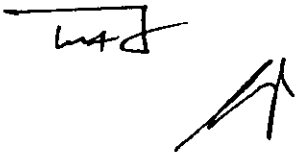
After the grant of the Generation Licence, the Licensee shall pay to the Authority the Licence fee, in the amount and manner and at the time set out in National Electric Power Regulatory Authority (Fees) Rules, 2002.

Article-6
Tariff

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

Article-7
Competitive Trading Arrangement

7.1 The Licensee shall participate in such measures 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 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

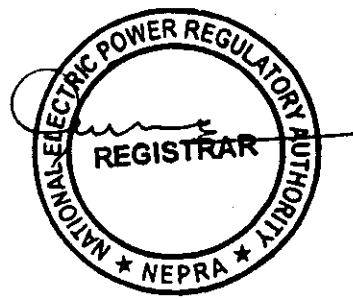

Compliance with Performance Standards

The Licensee shall conform to the relevant NEPRA rules on Performance Standards as may be prescribed by the Authority from time to time.

Article-10

Compliance with Environmental Standards

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

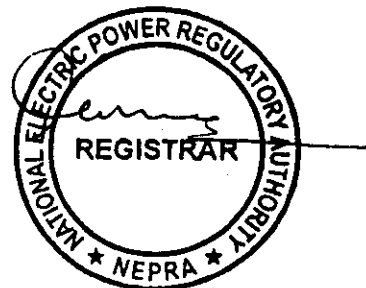


Article-11

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.

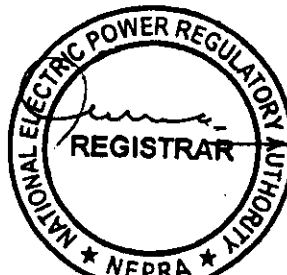
11.2 The Licensee shall be subject to such penalties as may be specified in the relevant rules made by the Authority for failure to furnish such information as may be required from time to time by the Authority and which is or ought to be or have been in the control or possession of the Licensee.



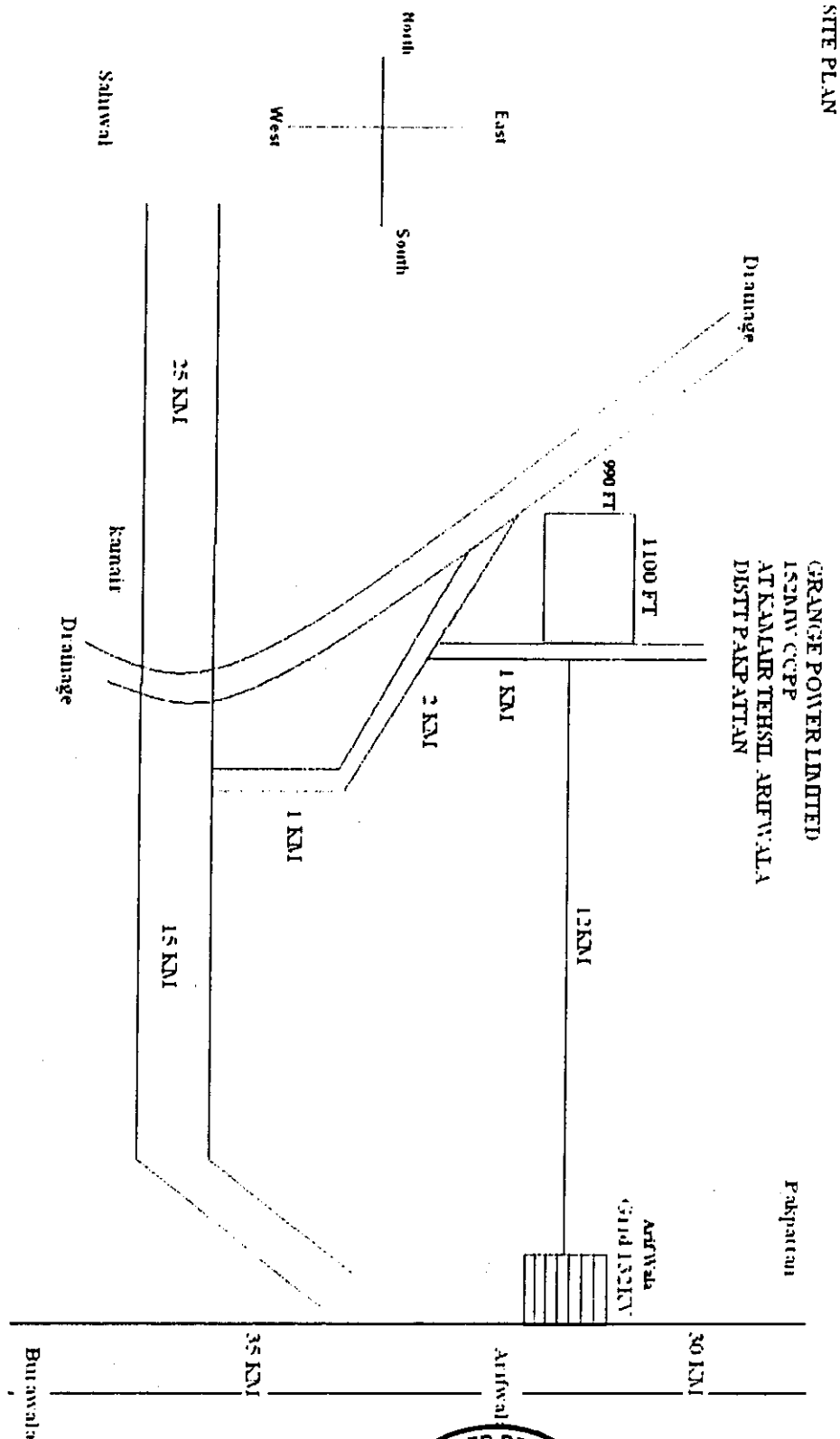
SCHEDULE-I

The location, size (capacity in MW) technology, interconnection arrangements, technical limits, technical functional specifications and other details specific to the Generation Facilities of the Licensee.

[Handwritten signature and scribbles]

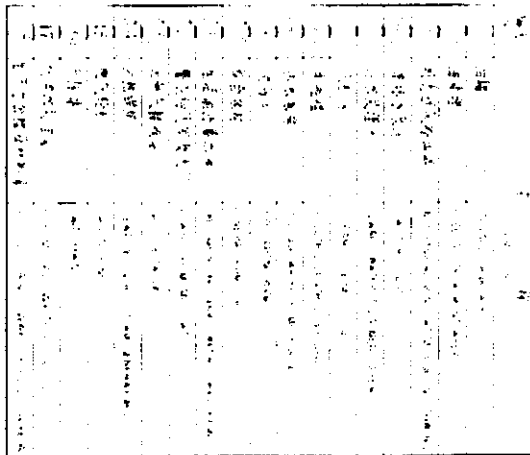
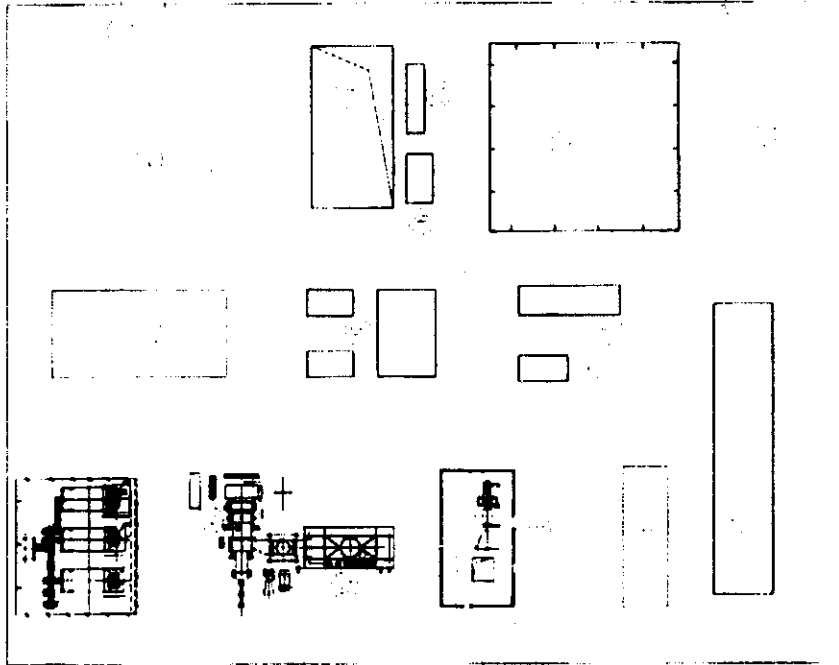


Plant Location of Grange Power Limited



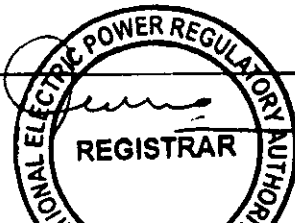
[Handwritten signature]

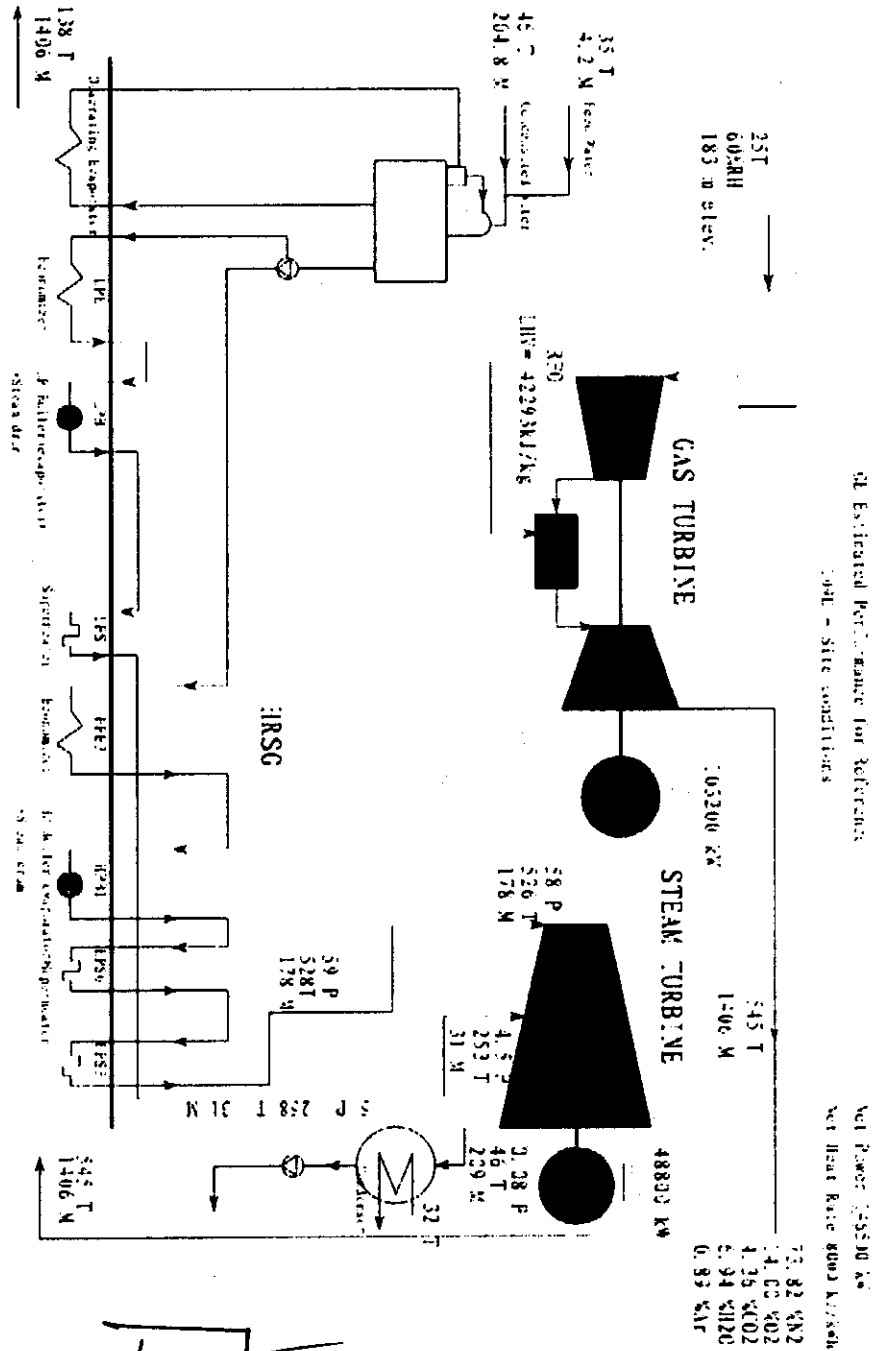




General layout		Scale	
1	2	3	4
5	6	7	8
9	10	11	12
13	14	15	16
17	18	19	20
21	22	23	24
25	26	27	28
29	30	31	32
33	34	35	36
37	38	39	40
41	42	43	44
45	46	47	48
49	50	51	52
53	54	55	56
57	58	59	60
61	62	63	64
65	66	67	68
69	70	71	72
73	74	75	76
77	78	79	80
81	82	83	84
85	86	87	88
89	90	91	92
93	94	95	96
97	98	99	100

[Handwritten signature]

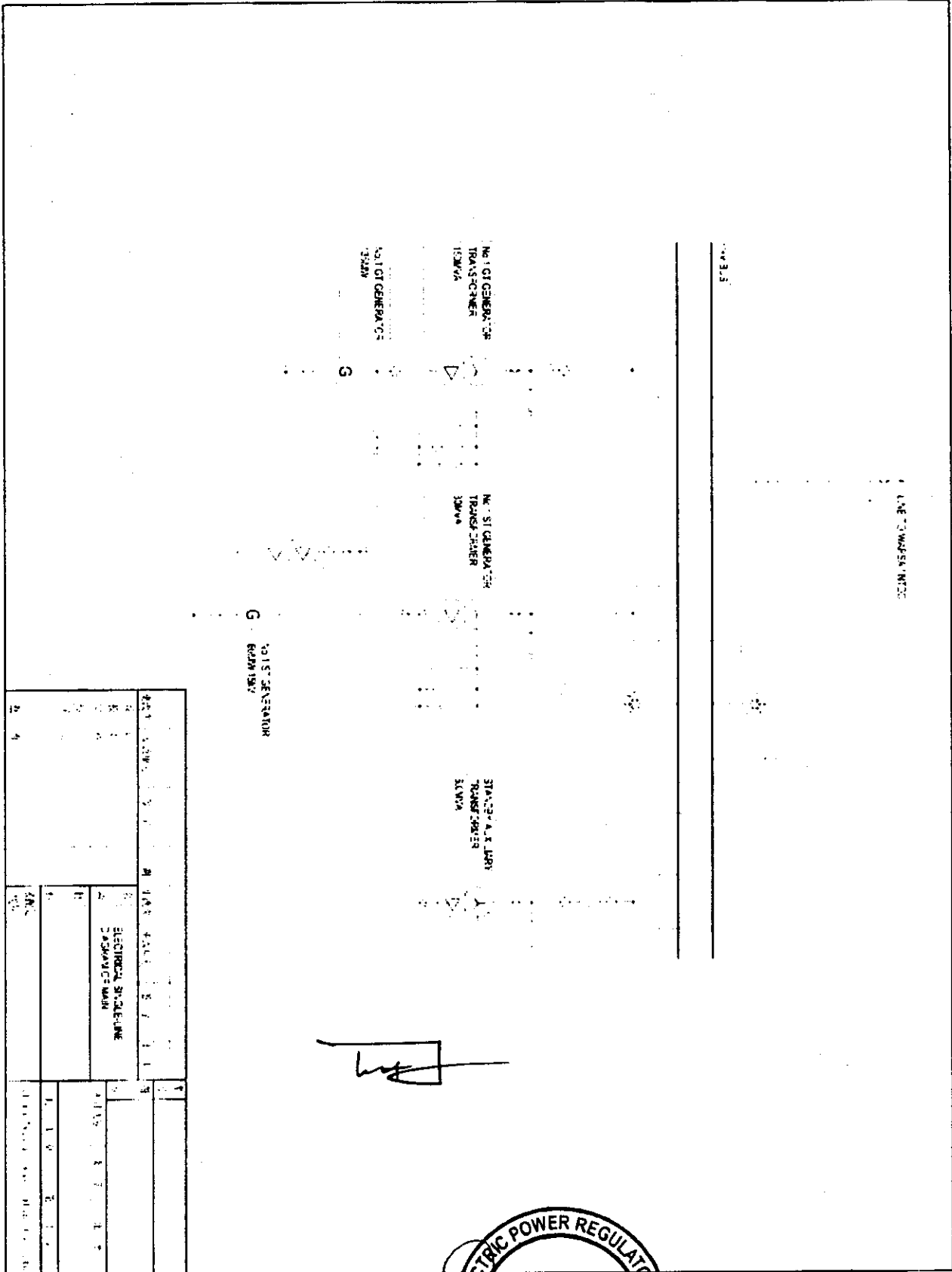




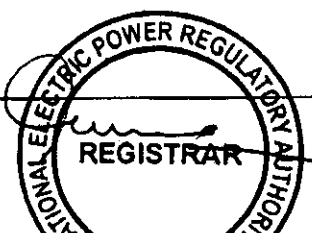
Prepared: T. Deveci, M. E. / N

Sl. No.	Description	Quantity	Unit	Remarks
1	Gas Turbine	1	Set	100% Site conditions
2	HRSG	1	Set	
3	Steam Turbine	1	Set	
4	Condenser	1	Set	
5	Cooling Water Pump	1	Set	
6	Generator	1	Set	
7	Transformer	1	Set	
8	Control System	1	Set	
9	Structural Steel	1	Set	
10	Electrical Equipment	1	Set	
11	Water Treatment System	1	Set	
12	Other Accessories	1	Set	





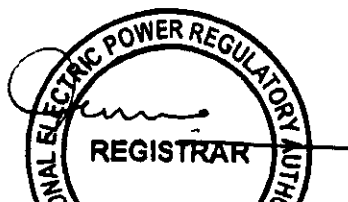
1	1015 GENERATOR	1015	1015
2	1015 GENERATOR	1015	1015
3	1015 GENERATOR	1015	1015
4	1015 GENERATOR	1015	1015
5	1015 GENERATOR	1015	1015
6	1015 GENERATOR	1015	1015
7	1015 GENERATOR	1015	1015
8	1015 GENERATOR	1015	1015
9	1015 GENERATOR	1015	1015
10	1015 GENERATOR	1015	1015
11	1015 GENERATOR	1015	1015
12	1015 GENERATOR	1015	1015
13	1015 GENERATOR	1015	1015
14	1015 GENERATOR	1015	1015
15	1015 GENERATOR	1015	1015
16	1015 GENERATOR	1015	1015
17	1015 GENERATOR	1015	1015
18	1015 GENERATOR	1015	1015
19	1015 GENERATOR	1015	1015
20	1015 GENERATOR	1015	1015
21	1015 GENERATOR	1015	1015
22	1015 GENERATOR	1015	1015
23	1015 GENERATOR	1015	1015
24	1015 GENERATOR	1015	1015
25	1015 GENERATOR	1015	1015
26	1015 GENERATOR	1015	1015
27	1015 GENERATOR	1015	1015
28	1015 GENERATOR	1015	1015
29	1015 GENERATOR	1015	1015
30	1015 GENERATOR	1015	1015
31	1015 GENERATOR	1015	1015
32	1015 GENERATOR	1015	1015
33	1015 GENERATOR	1015	1015
34	1015 GENERATOR	1015	1015
35	1015 GENERATOR	1015	1015
36	1015 GENERATOR	1015	1015
37	1015 GENERATOR	1015	1015
38	1015 GENERATOR	1015	1015
39	1015 GENERATOR	1015	1015
40	1015 GENERATOR	1015	1015
41	1015 GENERATOR	1015	1015
42	1015 GENERATOR	1015	1015
43	1015 GENERATOR	1015	1015
44	1015 GENERATOR	1015	1015
45	1015 GENERATOR	1015	1015
46	1015 GENERATOR	1015	1015
47	1015 GENERATOR	1015	1015
48	1015 GENERATOR	1015	1015
49	1015 GENERATOR	1015	1015
50	1015 GENERATOR	1015	1015



INTERCONNECTION SCHEME FOR THE DISPERSAL OF POWER DISPERSAL FROM GRANGE POWER LIMITED*

The Power from the Grange Power Limited shall be dispersed to system directly within MEPCO load center by constructing a new 132 KV D/C Transmission Line on ACSR Rail Conductor measuring about 14-KM from the Power Plant to 132 KV Arifwala Grid Station.

* As provided in the Interconnection Study (dated May, 2009) for Power Dispersal of Grange Power Limited carried out by Planning (Power) Department of NTDC and submitted by Grange Power Limited as part of the Generation Licence application



Plant Details[†]

1. General Information

(i).	Name of Applicant	Grange Power Limited
(ii).	Registered/Business Office	2 nd floor, 65-Z, Commercial Area, DHA, Lahore
(iii).	Plant Location	15-KM, Arifwala-Sahiwal Road, Tehsil & District Pakpattan, Punjab
(iv).	Type of Generation Facility	Thermal Generation

2. Plant Configuration

(i).	Plant Size Installed Capacity (Gross ISO)	163.353 MW	
(ii).	Type of Technology	Combined Cycle Power Plant	
(iii).	Number of Units/Size (MW)	Gas Turbine	1 x 109.00 MW
		Steam Turbine	1 x 54.353 MW
(iv).	Unit Make & Model	Gas Turbine	GE/ 9171 E
		Steam Turbine	G.E
(v).	De-rated Capacity at Mean Site Conditions	152.00 MW	
(vi).	Auxiliary Consumption	5.50 MW	
(vii).	Commissioning and Commercial Operation Date (COD)	December 31, 2010	
(viii).	Expected Life of the Facility from COD	25 years	

[†] As provided by the Applicant





3. Fuel Details

(i).	Primary Fuel	Residual Fuel Oil (RFO)	
(ii).	Back-up Fuel	Not applicable	
(iii).	Start-up Fuel	High Speed Diesel Oil (HSDO)	
(iv).	Fuel Source (Imported/Indigenous)	Imported/Indigenous	
(v).	Fuel Supplier	PSO/Shell	
(vi).	Supply Arrangement	Through Oil Tankers	
(vii).	No of Storage Tanks	Primary Fuel	Start-up Fuel
		2 Tanks	1 Tank
(viii).	Storage Capacity of each Tank	Primary Fuel	Back-up Fuel
		12,500 Tons	4,000 Liter
(ix).	Gross Storage (total)	Primary Fuel	Back-up Fuel
		25,000 Tons	4,000 Liter

4. Emission Values

(i).	SO _x	Primary Fuel	Back-up Fuel
		500 T/day	As per National Environmental Quality Standards (NEQS)
(ii).	NO _x	Primary Fuel	Back-up Fuel
		165 mg/nm ³	As per NEQS
(iii).	CO	Primary Fuel	Back-up Fuel
		100 mg/nm ³	As per NEQS



(iv).	PM ₁₀	Primary Fuel	Back-up Fuel
		50 mg/nm ³	As per NEQS

5. Cooling System

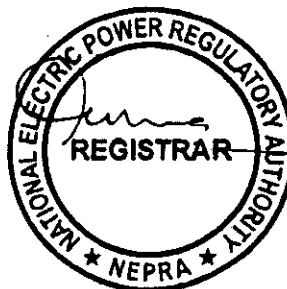
(i).	Cooling Water Source/Cycle	Underground water from tube well/Closed loop.
------	----------------------------	---

6. Plant Characteristics

(i).	Generation Voltage	11 KV or 15 kV				
(ii).	Frequency	50 Hz				
(iii).	Power Factor	0.8 lagging to 0.95 leading				
(iv).	Automatic Generation Control	Yes				
(v).	Ramping Rate	10 MW/min.				
(vi).	Time required to Synchronize to Grid and loading the complex to full load.	GT-Open Cycle		Combined Cycle		
		Cold	Warm	Cold	Warm	Hot
		45 min	30 min	130 min	85 min	42 min

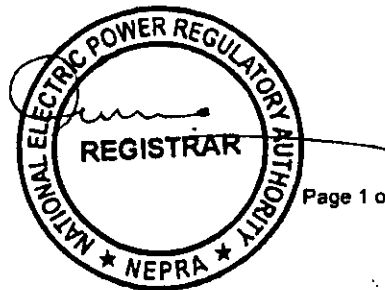
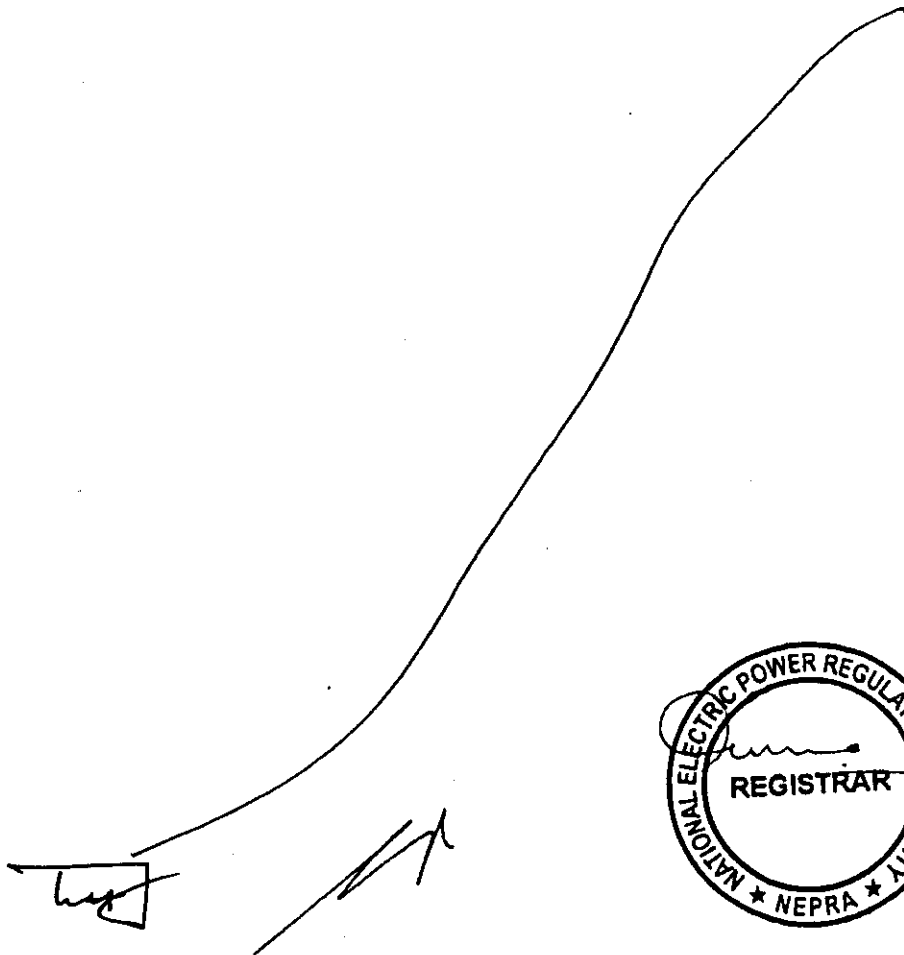
[Handwritten signature]

[Handwritten signature]



SCHEDULE-II

The net capacity of the Licensee's Generation Facilities



SCHEDULE-II*

1.	Installed Capacity Gross ISO	163.353 MW
2.	De-rated Capacity at Mean Site Conditions	152.00 MW
3.	Auxiliary Consumption	5.50 MW
4.	Net Capacity of the Plant at Mean Site Conditions	146.50 MW

Note

All the above figures are indicative as provided by the Licensee. The Net Capacity available to NTDC for dispatch and other purchasers will be determined through procedures contained in the Agreements or Grid Code.

* As provided by the applicant

