



Registrar

**National Electric Power Regulatory Authority**  
**Islamic Republic of Pakistan**

2nd Floor, OPF Building, G-5/2, Islamabad.

Tel : 9207200,9105225 Fax: 9210215

E-mai : office n nepra.org.pk

No. NEPRA/R/LAG-84/(60 -61

^6. Cq 2006

Mr. M. Adil Khattak  
Chief Executive Officer  
Attock Gen Limited  
Refinery P.O. Morgah  
Rawalpindi.

Subject: **Generation Licence IGSP/08/2006**  
**Licence Application No. LAG-84**  
**Attock Gen Ltd. (AGL)**

Please refer to your application No. AGL/po/5,31099/060616(2) dated 16.06.2006.

2. Enclosed here is Generation Licence No. IGSP/08/2006 granted b^ the Authority to Attock Gen Ltd. The Licence is granted to you pursuant to Section 15 of the Regulation of Generation, Transmission and Distribution of Electric Power Act (XL of 1990).

3. Please quote above mentioned Generation Licence No. for your futur@ correspondence with the Authority.

DA/as above.

9 ER RFGG.

ci


**REGISTRAR**

zo  
'rb

\* NEPRP

U=  
yam,

kr

  
4^ 4-a 6.  
(Mahjoob Ahmad Mirza)

Copy for information to Director General, Pakistan Environmental Prptection Agency,  
H. # 311, Main Margalla Road, F- 11/3, Islamabad.

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

**GENERATION LICENCE**

No. JS PL / 012006

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:

Attock Gen Limited (AGL)

Incorporated under the Companies Ordinance, 198  
Under Certificate of Incorporation

No. 0000004979/20051201 Dated December 1, 2005

For its Plant at Morgah Rawalpindi

(Installed Capacity: 165.285 MW Gross ISO)

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

Given under my hand this 15 day of SEPTEMBER 2005  
Thousand and Six, and expires on 15 day of FEBRUARY, 2010  
thousand and THIRTY TWO.

Registrar



*Handwritten signature*

## 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 Attock Gen Limited (AGL)
- (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.

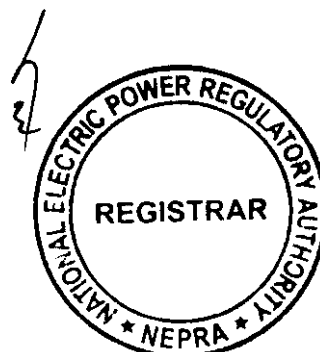
## Article 2 Application of Rules

This Licence is issued subject to the provisions of the Rule, 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-1 to this Licence.

  
(---^ k" \,



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

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

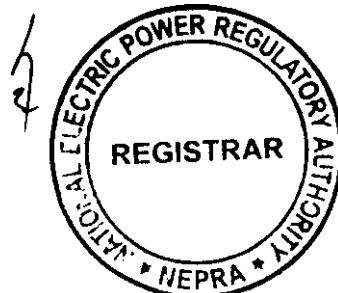
After the grant of the Generation Licence, the Licensee shall pay to the Authority the Licence fee, in the amount and manner and at the time set out in National Electric Power Regulatory Authority (Fees) Rules, 2002.

#### 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 contract is 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 standards 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

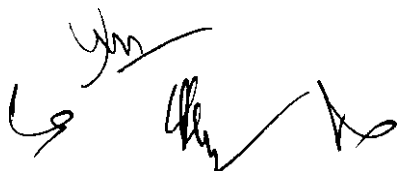
The Licensee shall conform to the relevant NEPRA rules on Performance Standards as may be prescribed by the Authority from time to time.

### 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.



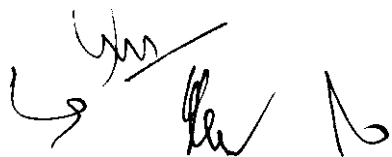
POWER RC

W  
REGISTRAR

y'

Page 4 of 5

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.



QpWER Rte

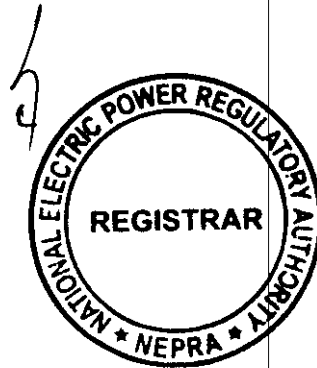
REGISTRAR

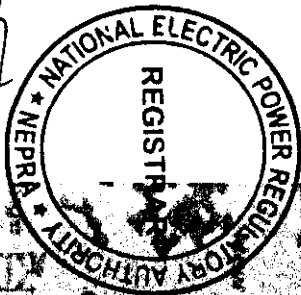


## SCHEDULE-I

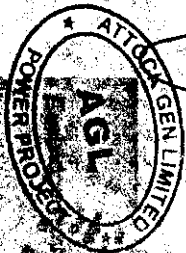
The location, size (capacity in MW) technology, interconnection arrangements, technical limits, technical functional specifications and other details specific to the Generation Facilities of the Licensee.

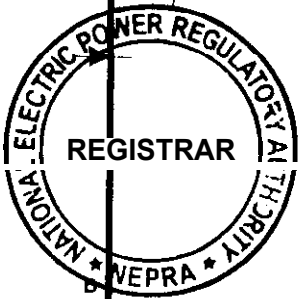
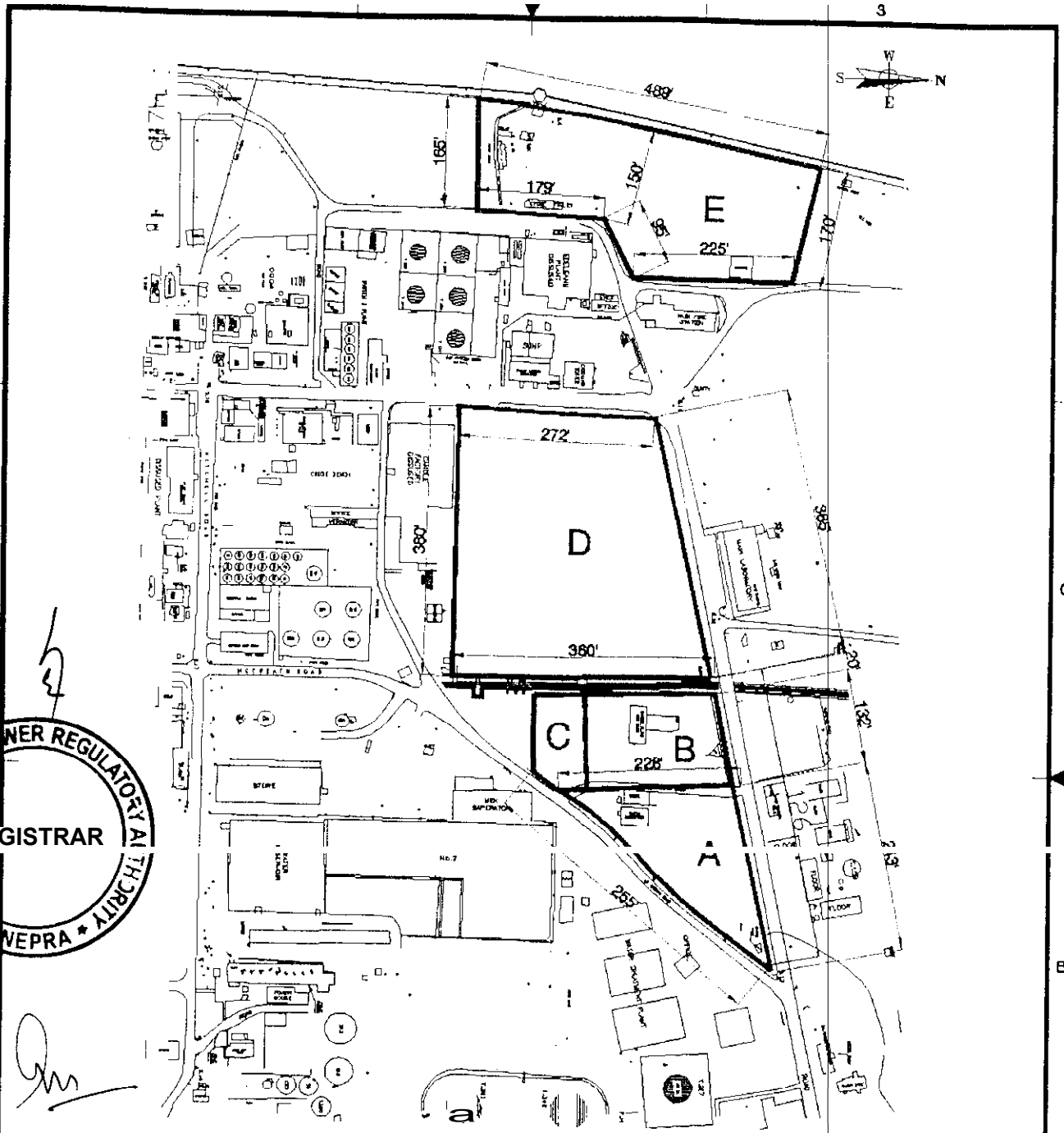
*Handwritten signature and initials*





# Location Plan of the AGL Power Plant





**AREA:-**

A-	32721 Sft	6.00	Main Power Plant +
C-B	36564 Sft	6.72	Control Room +
D-	120870 sft	22,22	workshop
E-	81955 Sft	15.06	Switch Yard

**LEGEND:-**

**AGL PROPOSED LOCATION**

DEPARTMENT **GINEERING** **ARL** **Attock Refinery Limited**

JOB TITLE: **PROPOSED 150 MW POWER PLANT**

DWG. TITLE: **SITE PLAN**

JOB NO: 1131 SHEET SIZE: DWG. TAG: 1-CL-001

dEJ'u BC  
 e a' ED  
 > FDFIA ry.EW  
 EJ L 6 nCN  
 ArFU IIU  
 STAHO

S.TPAIO  
 ST IQ  
 ST  
 r vD APPD  
 OOALE  
 SHAAEEL

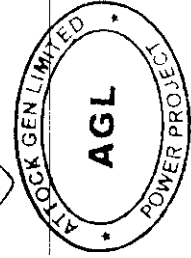
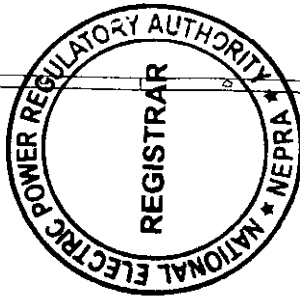
11AUG2006  
 MAY004  
 DU4  
 pFTE  
 DATE  
 26\*F 200 t

THIS DRAWING IS THE  
 PROPERTY OF AT10G  
 REFFLL F Y LIMITED PNP  
 DE 3L EE'R-  
 ODU C[0, LOANED ON  
 U GLOBED WITHOUT AIE  
 ARITTEN A"IFO-  
 YAL OF A A L

CBS\JOB:131\131C0001RD

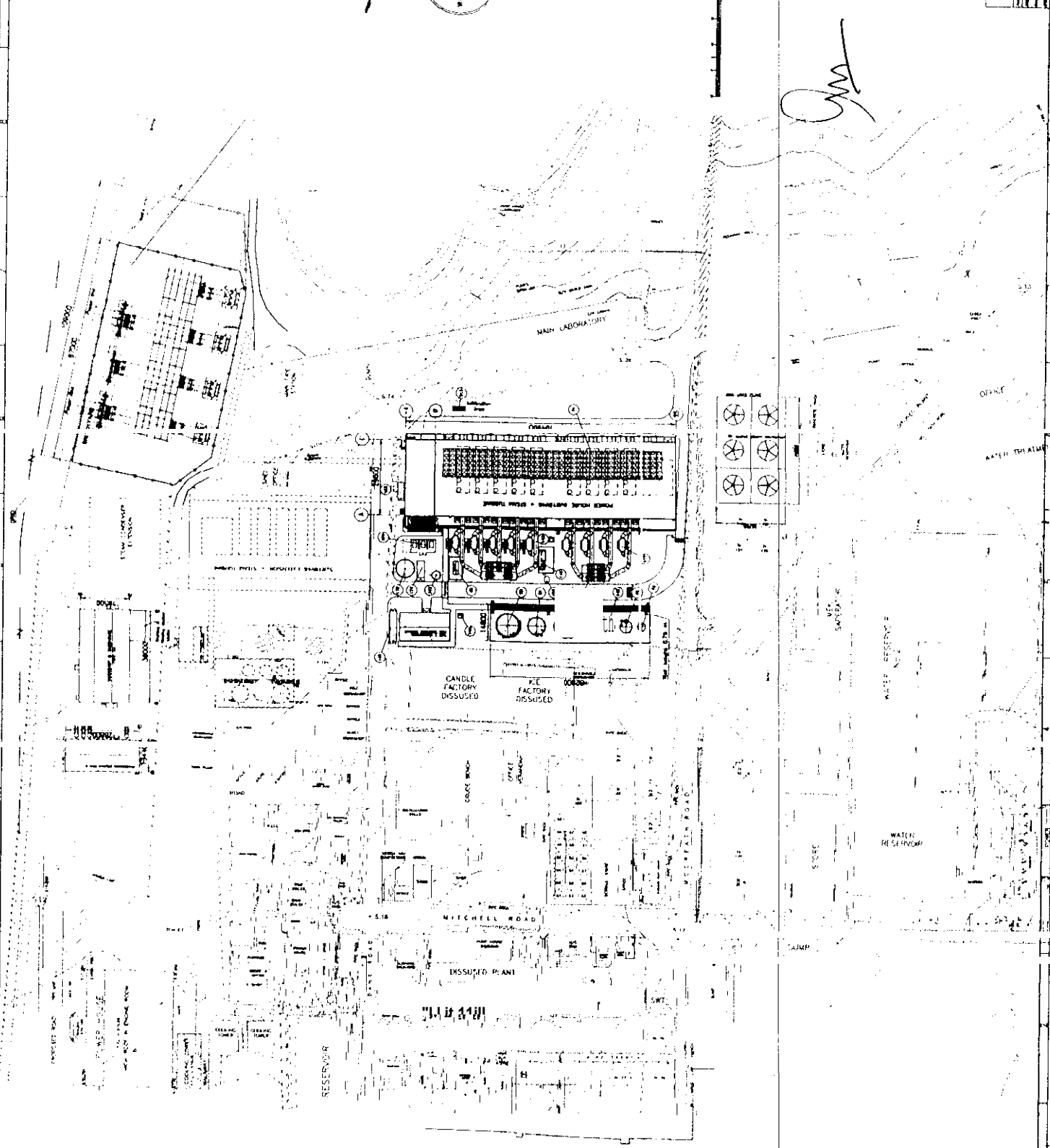
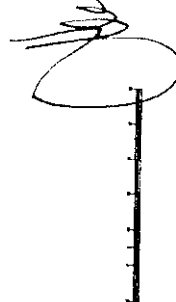
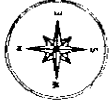
K 3  
 AGL  
 POWER PROJECT  
 of Schedule - I





Scale	1:1000
Author	...
Checked by	...
Date	...

Sl. No.	Particulars	Area (sq. m)	Remarks
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	...	...	...



gellmd `rpuld lameN  
 paliun-I ua!) )IoofV  
 auaaarl uoneJauap



## Plant Details

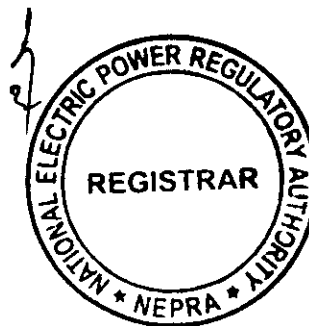
### 1. General Information

i.	Name of Applicant	Attock Gen Limited (AGL)	
ii.	Registered Office	P.O. Morgah, Rawalpindi	
iii.	Business Office	14-D, Morgah, Rawalpindi	
iv.	Plant Location	Attock Refinery Limited (ARL)	
v.	Type of Generation Facility	Thermal (Combined Cycle)	

### 2. Plant Configuration

	Plant Size Installed Capacity Gross ISO	165.285 MW	
ii.	Type of Technology	Diesel Combined Cycle Technology	
iii.	Number of Units/Size	9x 17.0305MW (Diesel Generating Sets)	
		1x12.01 Mw (Steam Turbine)	
iv.	Unit Make & Model	Wartsila/W1 8V46	
		Steam Turbine	
v.	De-rated Capacity at site conditions	159.834 MW	
vi.	Auxiliary Consumption	3.696 MW	
vii.	Commissioning and Commercial Operation date	February, 2008 (Anticipated)	
		Expected Life of the Facility from Commercial Operation Date	25 Years

*Handwritten signatures and initials.*



### 3. Fuel Details

i.	Primary Fuel	RFO	
ii.	Alternative Fuel	LFO/HSD	
iii.	Back-up Fuel	HSD	
iv.	Fuel Source (Imported/Indigenous)	Indigenous	
v.	Fuel Supplier	Attock Petroleum Limited (APL)	
vi.	Supply Arrangement	Through pipeline.	
vii.	No of Storage Tanks	5 storage tanks available with A L. Tanks of adequate quantity to be leased for AGL.	
viii.	Storage Capacity of each Tank	Total 33, 600 tons in 5 tanks of different sizes at ARL.	
ix.	Gross Storage	33600 Tons at ARL.	

### 4. Emission Values

i.	SO <sub>x</sub>	RFO	HSD		
		20 g/s			
ii.	NO <sub>x</sub>	67 g/s	-		
iii.	PM10	1.7 g/s	-		

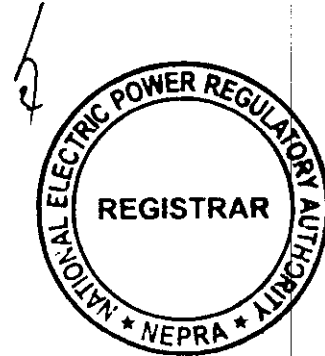
### 5. Cooling System

	Cooling Water Source/Cycle	Attock Refinery Limited/Cl sed loop (Shared/Leased)
--	----------------------------	---

**6. Plant Characteristics**

i.	<b>Generation Voltage</b>	<b>15.0KV</b>
ii.	<b>Frequency</b>	<b>50 Hz</b>
iii.	<b>Power Factor</b>	<b>0.8</b>
iv.	<b>Automatic Generation Control</b>	<b>Yes</b>
v.	<b>Ramping Rate</b>	<b>60 Minutes cold/ 30 minutes hot/Steam Turbine Generator 2 hours after Diesel Generator Sets achieved full load</b>
vi.	<b>Time required to Synchronize to Grid and loading the complex to full load.</b>	<b>As per dispatch</b>

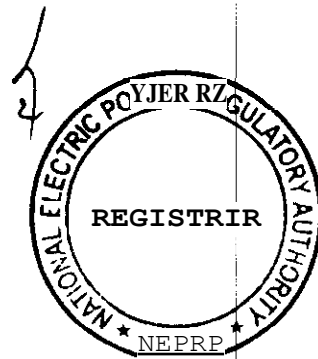
*[Handwritten signatures]*



## SCHEDULE-II

The net capacity of the Licensee's **Generation Facilities**

*[Handwritten signature]* *b*

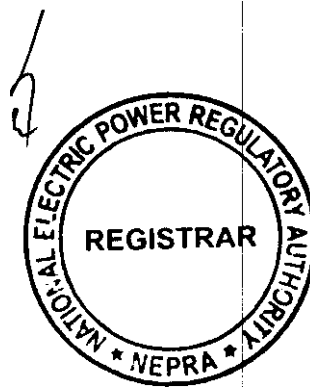
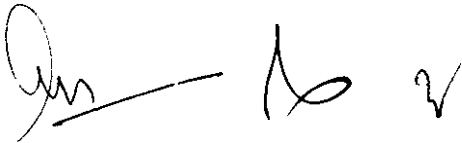


**SCHEDULE-II\***

1.	Installed Capacity Gross ISO	165.85 MW
2.	De-rated Capacity at Site Conditions	159.34 MW
3.	Auxiliary Consumption	3.66 MW
4.	Net Capacity of the Plant at Site Conditions	156.138 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.

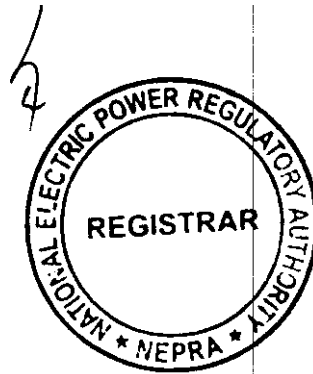


As provided by the applicant

## **INTERCONNECTION SCHEME FOR THE POWER DISPERSAL OF THE PLANT**

The power **generated** from the power **plant shall be** dispersed to the system directly **within the load** center of IESCO **by constructing** a new 132 KV Double Circuit Transmission **Line having a length of** 3 Kilometers (on AASC Greeley Conductor) **for making In-Out arrangement** of the existing 132 KV Rawalpindi Cantt-New Rewat transmission line at AGL grid station.

b

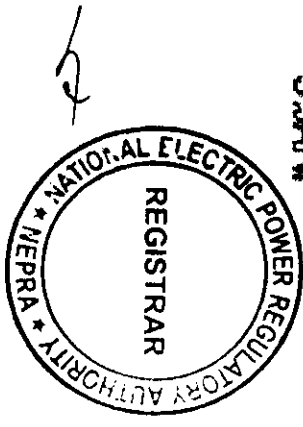




*[Handwritten signature]*



*[Handwritten signature]*



S.JANI  
OLD REMAT

S.JANI

NEW REMAT

AEC

KRL

DNC LINE

CHAKLALA

R.CANTT

SOAN

BAKRAMANDI

KTM

S.JANI

*[Handwritten marks]*



**National Electric Power Regulatory Authority**  
**NEPRA**

September 1, 2006

Application No. LAG-84

**Determination of the Authority in the Matter of Grant of  
Generation Licence to Attock Gen Limited (AGL)**

Attock Refinery Limited (ARL) is a Private Limited Company for refining petroleum products near Morgah, Rawalpindi. In the process it is producing Residual Fuel Oil/Low Sulphur Fuel Oil (RFO/LSFO). ARL has established AGL, as a special purpose Company for setting up a 165.285 MW (Gross) ISO Reciprocating Engine Combined Cycle power plant at ARL, Morgah, Rawalpindi for use of its own production of LSFO.

2. AGL, in accordance with Section 15 of NEPRA Regulation of Generation, Transmission and Distribution of Electric Power Act (XL of 1997), submitted an application on June 20, 2006 for the grant of a licence for its proposed generation facility. The application was admitted by the Authority on July 19, 2006.

3. As per the application submitted by AGL, the feasibility report of the project was prepared by M/s Electrowatt-Ekono Oy of Finland in collaboration with Elan Partners and Research & Development Consultants of Pakistan. The project is scheduled to be **commissioned** by February, 2008. The electricity generated from the proposed power plant will be procured by National Transmission and Despatch Company (NTDC). The power of the plant is proposed to be dispatched through 132 kV, 3 km-double circuit transmission line, to be constructed by NTD4. The newly constructed transmission line will be made In-Out at the proposed power plant by connecting Rawalpindi Cann. and New Rawat 132 kV grid stations.





4. NTDC vided letter No.COO/CPPA/CE-11/1096 **dated 01 .02.2006 requested for permission of procurement** of power from AGE to **the extent** of 160.06 MW, which was **granted** by the Authority **vide its decision** of February 24, 2006.

5. Pursuant to Regulation 8 of the NEPRA Licensing (Application and Modification Procedure) Regulation, 1999, the advertisement was published in daily news papers on July 21, 2006 soliciting comments from the interested/affected parties and general public. After considering the comments, the Authority held a hearing/conference on August 15, 2006 which was attended by the applicant, representatives of NTDC, IESCO and other experts/interested persons invited to participate in the hearing. No comments or view points were received in opposition to the grant of Generation Licence to AGL.

6. During the hearing AGE presented salient points of the project explaining that the proposed plant will be Reciprocating Engine Combined Cycle Power Plant with an installed capacity of 165.285 MW (gross) at ISO conditions. The power plant will comprise of 09 Reciprocating Engine generating sets (9x17.0305 MW), 09 Heat Recovery Steam Generators (HRSGs), and a Steam Turbine with an installed capacity of 12.01 MW. AGL further explained that the de-rated capacity of the plant will be 159.834 MW (gross) at mean site conditions (MSC) and net generating capacity of the plant will be 156.138 MW at MSC after taking in to account the auxiliary consumption of 3.696 MW.

7. The following points were explained during the hearing by AGE and commented on by other participants:

- Selection of Reciprocating Engines instead of Gas/Steam Turbines
- Term of Licence
- Availability/Reliability of Plant Operation.



2/4

- **Provision of primary and back up fuel storage**
- **Financing of Interconnection and Transmission Facilities (IF/TF)**

8. The applicant, interested persons and NTDC were heard and the issues were discussed during the hearing. The Participants proffered their comments and submitted arguments supporting their stance.

9. The Authority observes that the proposed technology will utilize indigenous LSFO produced at the refinery as primary fuel which will not only result in savings of foreign exchange but also increase Energy Security by effective utilization of indigenous fuel. It is also expected that the project will be able to achieve completion earlier than the technologies being considered to meet the immediate demand gap. In view of un-assured gas supply in the future and the imminent shortage of Generating Capacity with respect to Peak Demand, it would be in the interest of the consumers as well as the general public to utilize LSFO produced within the country for electricity generation.

10. The plant is located at Morgah, Rawalpindi, and it is expected to supply the load of IESCO at the load center. It will thus be compensating for the shortage of Hydel Power in winter months when Hydel Power in the north is unable to meet the winter demand of PESCO and IESCO.

11. Regarding term of licence, the Authority considers that a reasonable expectation of life of the equipment that is proposed to be installed is 25 years. Therefore, the term of the Licence is being granted for 25 years.

12. The Authority considers that the overall power system reliability of the area will improve with the addition of the proposed thermal power plant in the system generally served by a fluctuating Hydel generation. The quality of supply is also expected to be improved through increased reactive support and generation near load requirement.

13. Regarding provision of primary and backup fuel; the parent Company ARL has assured that sufficient resources are available to produce, store and supply LSFO to adjacent AGL plant.

WITH THIS, the Authority hereby approves the grant of Generation Licence to M/s Attock Gen Limited in the terms and form as annexed to this determination . The grant of such a Licence would be subject to the provisions contained in the NI;PRA Act and the relevant Rules framed thereunder.

**Authority**

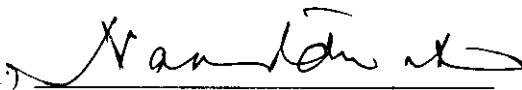
Abdul Rahim Khan (Member)



Zafar Ali Khan (Member)



Nasiruddin Ahmed (Vice Chairman/Membei)



Lt Gen (R) Saeed-uz-Zafar (Chairman)



National Electric Power Regulatory Authority

NEPRA

نقطة نقطة

September 1, 2006

**Application** No. LAG-84

**Determination** of the Authority **in the Matter** of Grant of  
**Generation Licence to** Attock Gen Limited (AGL)

Attock Refinery Limited (ARL) is a Private Limited Company for refining petroleum products near Morgah, Rawalpindi. In the process it is producing Residual Fuel Oil/Low Sulphur Fuel Oil (RFO/LSFO). ARL has established AGL, as a special purpose Company for setting up a 165.285 MW (Gross) ISO Reciprocating Engine Combined Cycle power plant at ARL, Morgah, Rawalpindi for use of its own production of LSFO.

2. AGL, in accordance with Section 15 of NEPRA Regulation of Generation, Transmission and Distribution of Electric Power Act (XL of 1997), submitted an application on June 20, 2006 for the grant of a licence for its proposed generation facility. The application was admitted by the Authority on July 19, 2006.

3. **As per the application submitted by AGL, the feasibility report of the project was prepared by M/s Electrowatt-Ekono Oy of Finland in collaboration with Elan Partners and Research & Development Consultants of Pakistan. The project is scheduled to be commissioned by February, 2008. The electricity generated from the proposed power plant will be procured by National Transmission and Despatch Company (NTDC). The power of the plant is proposed to be dispatched through 132 kV, 3 km-double circuit transmission line, to be constructed by NTDC. The newly constructed transmission line will be made In-Out at the proposed power plant by connecting Rawalpindi Cantt. and New Rawat 132 kV grid stations.**

LS [Signature]

4. NTDC vide letter No.COO/CPA/CE-11/1096 dated 01.02.2006 requested for permission of procurement of power from AGL to the extent of 160.06 MW, which was granted by the Authority vide its decision of February 24, 2006.

5. Pursuant to Regulation 8 of the NEPRA Licensing (Application and Modification Procedure) Regulation, 1999, the advertisement was published in daily news papers on July 21, 2006 soliciting comments from the interested/affected parties and general public. After considering the comments, the Authority held a hearing/conference on August 15, 2006 which was attended by the applicant, representatives of NTDC, IESCO and other experts/interested persons invited to participate in the hearing. No comments or view points were received in opposition to the grant of Generation Licence to AGL.

6. During the hearing AGL presented salient points of the project explaining that the proposed plant will be Reciprocating Engine Combined Cycle Power Plant with an installed capacity of 165.285 MW (gross) at ISO conditions. The power plant will comprise of 09 Reciprocating Engine generating sets (9x17.0305 MW), 09 Heat Recovery Steam Generators (HRSGs), and a Steam Turbine with an installed capacity of 12.01 MW. AGL further explained that the de-rated capacity of the plant will be 159.834 MW (gross) at mean site conditions (MSC) and net generating capacity of the plant will be 156.138 MW at MSC after taking in to account the auxiliary consumption of 3.696 MW.

7. The following **points were explained during the hearing** by AGL and **commented** on by other participants:

- **Selection of Reciprocating Engines instead of Gas/Steam Turbines**
- Term of Licence
- Availability/Reliability of Plant Operation.

- Provision of primary and back up fuel storage
- Financing of Interconnection and Transmission Facilities (IF/TF)

8. The applicant, interested persons and NTDC were heard and the issues were discussed during the hearing. The Participants proffered their comments and submitted arguments supporting their stance.

9. The Authority observes that the proposed technology will utilize indigenous LSFO produced at the refinery as primary fuel which will not only result in savings of foreign exchange but also increase Energy Security by effective utilization of indigenous fuel. It is also expected that the project will be able to achieve completion earlier than the technologies being considered to meet the immediate demand gap. In view of un-assured gas supply in the future and the imminent shortage of Generating Capacity with respect to Peak Demand, it would be in the interest of the consumers as well as the general public to utilize LSFO produced within the country for electricity generation.

10. The plant is located at Morgah, Rawalpindi, and it is expected to supply the load of IESCO at the load center. It will thus be compensating for the shortage of Hydel Power in winter months when Hydel Power in the north **is unable** to meet the winter demand of PESCO and IESCO.

11. Regarding term of licence, the Authority considers that a reasonable expectation of life of the equipment that is proposed to be installed is 25 years. Therefore, the term of the Licence is being granted for 25 years.

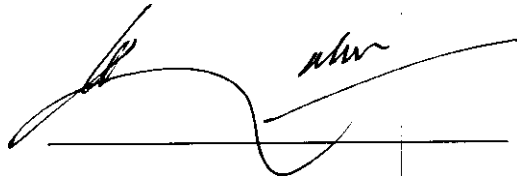
12. The Authority considers that the overall power system reliability of the area will improve with the addition of the proposed thermal power plant in the system generally served by a fluctuating Hydel generation. The quality of supply is also expected to be improved through increased reactive support and generation near load requirement.

13. Regarding provision of primary and backup fuel; the parent Company ARL has assured that sufficient resources are available to produce, store and supply LSFO to adjacent AGL plant.

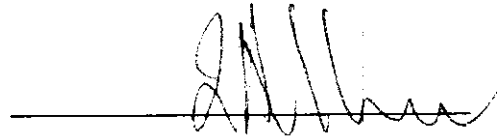
WITH THIS, the Authority hereby approves the grant of Generation Licence to M/s Attock Gen Limited in the terms and form as annexed to this determination. The grant of such a Licence would be subject to the provisions contained in the NEPRA Act and the relevant Rules framed thereunder.

**Authority**

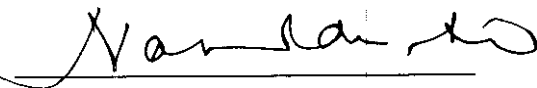
Abdul Rahim Khan (Member)



Zafar Ali Khan (Member)



Nasiruddin Ahmed (Vice Chairman/Member)



Lt Gen (R) Saeed-uz-Zafar (Chairman)

