



National Electric Power Regulatory Authority Islamic Republic of Pakistan

Registrar

NEPRA Tower, Attaturk Avenue (East), G-5/1, Islamabad.
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Web: www.nepra.org.pk, E-mail: registrar@nepra.org.pk

No. NEPRA/R/LAG-335/18978-83

November 20, 2017

Mr. Suhail A. Khan,
Vice President (Polyester & Soda Ash Business),
ICI Pakistan Limited,
ICI House, 63 Mozang Road,
Lahore.
Ph: 042-36311271-81

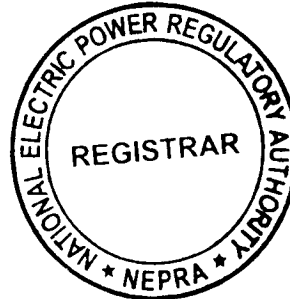
Subject: **Generation Licence No: SGC/122/2017**
Licence Application No. LAG-335
ICI Pakistan Limited (ICIPL)

Reference: *ICIPL's application vide letter dated October 06, 2016 (received on October 07, 2016).*

Enclosed please find herewith Generation Licence No. SGC/122/2017 granted by National Electric Power Regulatory Authority (NEPRA) to ICI Pakistan Limited, pursuant to Section 15 of the Regulation of Generation, Transmission and Distribution of Electric Power Act (XL of 1997). Further, the determination of the Authority in the subject matter is also attached.

2. Please quote above mentioned Generation Licence No. for future correspondence.

Enclosure: **Generation Licence (SGC/122/2017)**



Hussain
20/11/17
(Syed Safer Hussain)

Copy to:

1. Chief Executive Officer, NTDC, 414-WAPDA House, Lahore
2. Chief Executive Officer, CPPA-G, ENERCON Building, Sector G-5/2, Islamabad.
3. Managing Director, Private Power and Infrastructure Board (PPIB), 50-Nazimuddin Road, Sector F-7/4, Islamabad.
4. Director General, Environment Protection Department, Government of Punjab, National Hockey Stadium, Ferozpur Road, Lahore.
5. Chief Executive Officer, Lahore Electric Supply Company Limited, 22-A, Queens Road, Lahore.

National Electric Power Regulatory Authority
(NEPRA)

Determination of the Authority
in the Matter of Application of ICI Pakistan Limited
for the Grant of Generation Licence

November 20, 2017
Case No. LAG-335

(A). Background

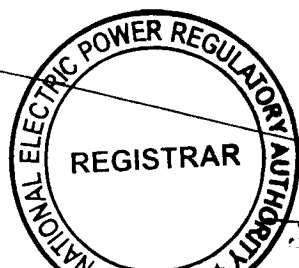
(i). Yunus Brothers Group (YBG) is one of largest industrial conglomerates and leading export houses in the country having diversified investments in different sectors including cement, textile, chemicals, real estate development and energy.

(ii). One of the subsidiary of YBG in the name of ICI Pakistan Limited (ICIPL) has set up a 15.00 MW coal based generation facility/Thermal Power Plant at 30 KM Lahore-Sheikhupura Road, district Sheikhupura, in the province of Punjab.

(B). Filing of Application

(i). ICIPL submitted an application on March 18, 2016 for the grant of generation licence in terms of Section-15 of Regulation of Generation, Transmission and Distribution of Electric Power Act, 1997 (the "NEPRA Act") read with the relevant provisions of the NEPRA Licensing (Application and Modification Procedure) Regulations, 1999 (the "Licensing Regulations").

(ii). The Registrar examined the submitted application and found the same in substantial compliance with the Licensing Regulations. Accordingly, the case was submitted for consideration of the Authority for admitting the application of ICIPL for further processing or otherwise. The Authority considered the matter 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 on May 11, 2016 for consideration of the grant of the generation licence as stipulated in Regulation-7 of the Licensing Regulations. The Authority approved an advertisement to



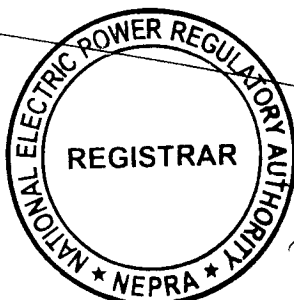
invite comments of general public, interested and affected persons in the matter as stipulated in Regulation-8 of the Licensing Regulations. Accordingly, notices were published in one (01) Urdu and one (01) English newspapers on May 17, 2016.

(iii). In addition to the above, the Authority also approved a list of stakeholders for seeking their comments for assistance of the Authority in the matter in terms of Regulation-9(2) of the Licensing Regulations. Accordingly, letters were sent to different stakeholders as per the approved list on May 18, 2016.

(C). Comments of Stakeholders

(i). In response to the above, the Authority received comments from three (03) stakeholders. These included Board of Investment (BoI), Ministry of Petroleum & Natural Resources (MoP&NR) and Lahore Electric Supply Company Limited (LESCO). The salient points of the comments offered by the said stakeholders are summarized below: -

- (a). BoI supported the grant of generation licence to ICIPL subject to a consumer friendly tariff and fulfilment of all codal, technical and relevant rules & regulations;
- (b). MoP&NR remarked that company intends to install coal based thermal power plant for which no gas is required. Therefore, the ministry has no objection to the grant of generation licence to ICIPL; and
- (c). LESCO stated that ICIPL is planning to set up a coal based generation facility for which it submitted an interconnection study for vetting/reviewing. In this regard, certain objections were raised and now the company has submitted the revised study after addressing all discrepancies. ICIPL intends to wheel the generated electric power using the network of LESCO and the matter will be finalized once approval of interconnection study is accorded.



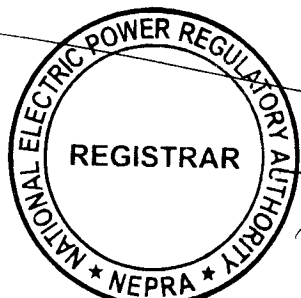
(ii). The Authority reviewed the comments of the above stakeholders and found the same supportive. Later on, ICIPL informed the Authority that initially it had planned supplying to Sundar Industrial Estate, Khyber Pakhtunkhwa Economic Zone or LESCO either directly or through the wheeling arrangement. However, the management has dropped the option of wheeling and decided supplying directly to LESCO. In view of the said and considering the fact that LESCO has approved the Grid Interconnection Study (GIS) of the project, the Authority considered it appropriate to proceed further in the matter of application of ICIPL for consideration of the grant of generation licence as stipulated in the Licensing Regulations and NEPRA Licensing (Generation) Rules, 2000 (the "Generation Rules").

(D). Evaluation/Findings

(i). The Authority has examined the submissions of ICIPL including the information provided in its application for the grant of generation licence. Further, the Authority has also considered the feasibility study of the project, the GIS, the relevant rules & regulations.

(ii). As explained in the preceding paragraphs, ICIPL is a subsidiary company of YBG. The group has total assets of more than Rs. 90.00 billion. ICIPL is a public limited company originally incorporated in the name of Khewra Soda Company Limited under Indian Companies Act, VII of 1913 vide SIND 1014 of 1952-53 dated May 13, 1952. The name of the company was later changed to ICI Pakistan Manufacturers Limited and subsequently to ICIPL vide KAR No. 1014 dated April 01, 1987 under Section-40(1) of the Companies Ordinance, 1984 (XLVII of 1984). The registered office of the company is ICI House, 5-West Wharf, Karachi and business office is located at 63-Mozang, Lahore. The Memorandum of Association of the company, inter alia, includes generation of electric power and its supply thereof.

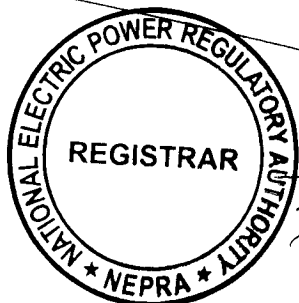
(iii). The Authority has observed that ICIPL has set up a 15.00 MW imported coal based generation facility/Thermal Power Plant at about 30-km Lahore-Sheikhupura Road, Sheikhupura, in the province of Punjab. The generation facility/Thermal Power Plant has been set up in area measuring



about 12 acres in the vicinity of main polyester complex of the company. In this regard, the sponsors have submitted necessary documents confirming that the proposed site of the project is in their name and possession.

(iv). In consideration of the above, ICIPL has confirmed that the proposed generation facility/Thermal Power Plant will be consisting of 1x 15.00 MW Steam Turbine, two (02) Boilers and One (01) Generator. It is pertinent to mention that in view of the size of the project, the company has selected Circulating Fluidized Bed (CFB) Boilers. Each of the boiler may generate 50 tons/hour of steam and will be supplying to the Steam Turbine which will then be connected to the Alternator for generating electric power. CFB is a leading technology for combustion of a wide range of fuels because of its inherent advantage over conventional boilers like Grate or Stoker. This includes fuel flexibility, excellent heat transfer, low NO_x and SO_x emissions to meet required National Environmental Quality standards (NEQs). In this regard, the Authority has observed that the selected boilers are of sub-critical series (with steam temperature of 485°C and a pressure of 53 bars). The reported gross efficiency of the generation facility/Thermal Power Plant will be around 28% whereas the net efficiency of the same will be 25.1% after allowing the auxiliary consumption.

(v). Regarding fuel for the proposed generation facility/Thermal Power Plant, the Authority has observed that the boilers will be fueled by imported bituminous/sub-bituminous/lignite coal imported (from Australia, Indonesia, South Africa or Botswana) supplied through Lucky Commodities (a group company of YBG) which is already involved in import of the coal from the above mentioned countries for its two cement plants located near Karachi and D.I. Khan. The coal imported from South Africa and Indonesia will be transported to the generation facility through train/trucks which will be stored in one open yard having capacity of 6000 Tons (i.e. storage for 28 days). The storage capacity of shed area for dry coal will be 1800 Tons (i.e. for seven days of full load operation). Whereas, the coal bunker storage capacity will be 16 to 18 hours of full load operation.

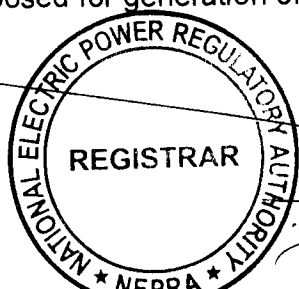


(vi). The Authority has observed that ICIPL carried out the required GIS for dispersal of electric power from the proposed generation facility/Thermal Power Plant. According to the said study, the dispersal of electric power will be made at 11 kV voltage level. The dispersal/interconnection arrangement will be consisting of three (03) 11 kV feeders [measuring about one and half (1.5) kilometer on ACSR Osprey conductor] connecting the generation facility/Thermal Power Plant to 132/11 kV ICI public grid station of LESCO. It is pertinent to mention that LESCO has already approved the said dispersal/interconnection arrangement of the generation facility/Thermal Power Plant.

(vii). The Authority has noted that the proposed generation facility/Thermal Power Plant for which generation licence has been sought is based on imported coal. The coal based generation facility/Thermal Power Plant may be harmful to environment because of emission of Green House Gases (GHG) and production of ash and other effluents. In this regard, ICIPL confirmed that proposed generation facility/Thermal Power Plant will meet local regulatory emissions limits. The company has also carried out the required Initial Environment Examination Study and submitted the same for the consideration and approval of Environmental Protection Department, Government of Punjab (EPDGoPb). In this regard, the Authority is satisfied that EPDGoPb has issued No Objection Certificate (NOC) for the construction of the project.

(viii). In terms of Rule-3 of the Generation Rules, the Authority may grant a generation licence to any person to engage in the generation business. In the particular case under consideration, the Authority has observed that ICIPL has provided details of location, technology, size, net capacity/energy yield, interconnection arrangements, technical limits, technical functional specifications and other details specific to the generation facility/Thermal Power Plant satisfying the provisions of Rule-3(2) and Rule-3(3).

(ix). The Rule-3(5) of the Generation Rules stipulates the least cost option criteria necessary for the grant of generation licence which includes (a). sustainable development or optimum utilization of the RE or non-RE resources proposed for generation of electric power; (b). the availability of indigenous fuel

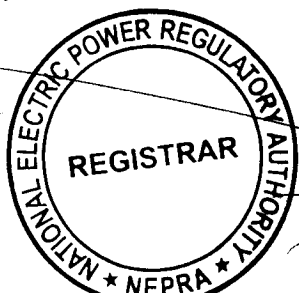


and other resources; (c). the comparative costs of the construction, operation and maintenance of the proposed generation facility/Thermal Power Plant against the preferences indicated by the Authority; (d). the cost and right-of-way considerations related to the provision of transmission and interconnection facilities; (e). the constraints on the transmission system likely to result from the proposed generation facility/Thermal Power Plant and the costs of the transmission system expansion required to remove such constraints; (f). the short-term and the long-term forecasts for additional capacity requirements; (g). the tariff resulting or likely to result from the construction or operation of the proposed generation facility/Thermal Power Plant; and (h). the optimum utilization of various sites in the context of both the short-term and the long-term requirements of the electric power industry as a whole.

(x). As explained in the preceding paragraphs, ICIPL carried out the GIS which concludes that the project will not face any constraints in transmission system. Further, being located at reasonable distance from the thick population, the project will not result in costs and right-of-way issues for the provision of transmission and interconnection facilities. It is pertinent to mention that LESCO has included the project in its mid and long-term forecasts for additional capacity requirements. Further, LESCO submitted Power Acquisition Request (PAR) for procuring of power from the generation facility/Thermal Power Plant and the same has been admitted by the Authority. In view of the clarification and justifications given above, the Authority is of the considered view that the project of ICIPL fulfills the eligibility criteria for grant of generation licence as stipulated in the NEPRA Act, rules and regulations and other applicable documents.

(E). Grant of Generation Licence

(i). The Authority considers that electricity is a fundamental element for the economic growth of any country. 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.). Further to the said, the Authority considers that increasing electricity consumption per capita can directly stimulate economic growth and indirectly achieve enhanced social

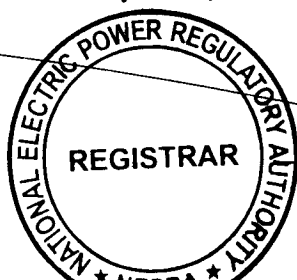


development. The Authority is of the considered opinion that the economic growth of any country is directly linked with the availability of safe, secure, reliable and cheaper supply of electricity.

(ii). As explained in the preceding paragraphs, the Authority considers that ICIPL has provided the details of location, technology, size, net capacity/energy yield, interconnection arrangements, technical details and other related information for the proposed generation facility/Thermal Power Plant. In this regard, the Authority has observed that sponsors of the project will be utilizing around twelve (12) acres of land for setting up the generation facility/Thermal Power Plant. In this regard, the Authority directs ICIPL that the aforementioned land shall be exclusively used for the proposed generation facility/Thermal Power Plant and any other generation activity cannot be carried out on this land except with the prior approval of the Authority.

(iii). The term of a generation licence under Rule-5(1) of the Generation Rules is required to match with the maximum expected useful life of the units comprised in a generating facility. According to the information provided, the generation facility/Thermal Power Plant of ICIPL has already achieved the Commercial Operation Date (COD) on June 30, 2015 and will have a useful life of more than thirty (30) years from its COD. However, ICIPL has requested that the term of the proposed generation licence may be fixed to fifteen (15) years. The Authority considers that information provided by ICIPL about the useful life of generation facility/Thermal Power Plant and the subsequent request to fix the term of the generation licence is acceptable. Foregoing in view, the Authority fixes the term of the generation licence to fifteen (15) years from date of its issuance.

(iv). Regarding the tariff, the Authority hereby clarifies that under Section-7(3)(a) of the NEPRA Act, determining tariff, rate and charges etc. is its sole prerogative. In this regard, a specific article (i.e. Article-6) has been included in the generation licence. The Authority through Article-6 of the generation licence directs ICIPL to charge the power purchaser only such tariff which has been determined, approved or specified by it. Further, the Authority directs ICIPL to adhere to the Article-6 of the generation licence in letter and spirit without any exception.

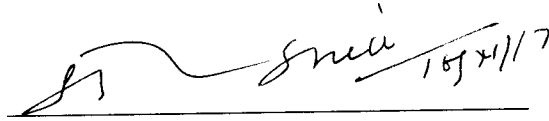


(v). As explained in the preceding paragraphs, ICIPL has already obtained NOC from EPDGoPb. Further, the Authority directs ICIPL to ensure that its project complies with the environmental standards during the term of the generation licence. In view of the said, the Authority has included a separate article (i.e. Article-10) in the generation licence along with other terms and conditions. Further, the Authority directs ICIPL 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.

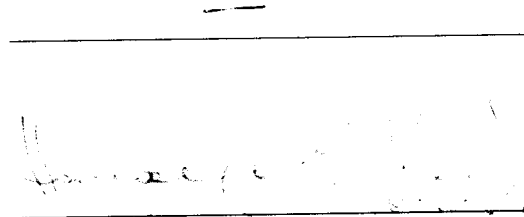
(vi). In view of the above, the Authority hereby approves the grant of generation licence to ICIPL on the terms and conditions set out in the generation licence annexed to this determination. The grant of generation licence will be subject to the provisions contained in the NEPRA Act, relevant rules, regulations framed thereunder and other applicable documents.

Authority:

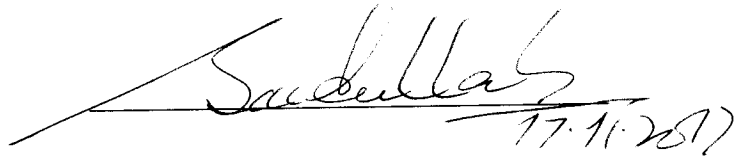
Maj. (R) Haroon Rashid
(Member)


17/11/17

Syed Masood-ul-Hassan Naqvi
(Member)

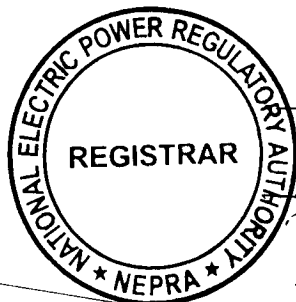


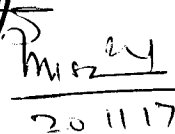
Himayat Ullah Khan
(Member)


17-11-2017

Saif Ullah Chattha
(Member/Vice Chairman)

Tariq Saddozai
(Chairman)




20/11/17

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

GENERATION LICENCE

No. SGC/122/2017

In exercise of the Powers conferred upon under Section-15 of the Regulation of Generation, Transmission and Distribution of Electric Power Act, 1997, the Authority hereby grants a Generation Licence to:

ICI PAKISTAN LIMITED

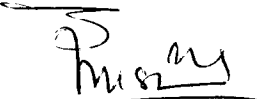
Incorporated under the Companies Act, VII of 1913
Having Incorporation No. SIND 1014 of 1952-1953, dated May 13, 1952
(Now having Corporate Universal Identification No. 0000535)

**for its Imported Coal based Generation Facility/Thermal
Power Plant Located at 30-KM Lahore-Sheikhupura Road,
District Sheikhupura, in the Province of Punjab**

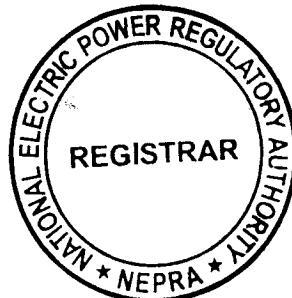
(Installed Capacity: 15.00 MW Gross ISO)

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

Given under my hand on 20th day of November Two
Thousand & Seventeen and expires on 19th day of
November Two Thousand & Thirty Two.


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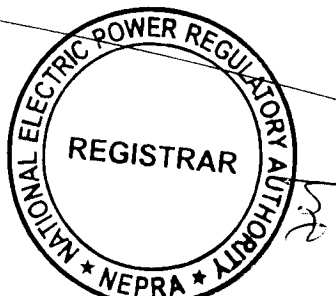
Registrar



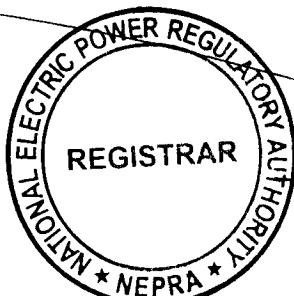
Article-1
Definitions

1.1 In this licence

- (a). "Act" means the Regulation of Generation, Transmission and Distribution of Electric Power Act, 1997 as amended or replaced from time to time;
- (b). "Applicable Documents" mean the Act, the rules and regulations framed by the Authority under the Act, any documents or instruments issued or determinations made by the Authority under any of the foregoing or pursuant to the exercise of its powers under the Act, the Grid Code, the applicable Distribution Code, if any, or the documents or instruments made by the Licensee pursuant to its generation licence, in each case of a binding nature applicable to the Licensee or, where applicable, to its affiliates and to which the Licensee or any of its affiliates may be subject;
- (c). "Applicable Law" means the Act, relevant rules and regulations made there under and all the Applicable Documents;
- (d). "Authority" means the National Electric Power Regulatory Authority constituted under Section-3 of the Act;
- (e). "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;
- (f). "Commercial Operations Date (COD)" means the day immediately following the date on which the generation facility/Thermal Power Plant of the Licensee is commissioned;
- (g). "CPPA-G" means Central Power Purchasing Agency (Guarantee) Limited or any other entity created for the like purpose;



- (h). "Distribution Code" means the distribution code prepared by the concerned XW-DISCO and approved by the Authority, as it may be revised from time to time with necessary approval of the Authority;
- (i). "Generation Rules" mean the National Electric Power Regulatory Authority Licensing (Generation) Rules, 2000 as amended or replaced from time to time;
- (j). "Grid Code" means the grid code prepared and revised from time to time by NTDC with necessary approval of the Authority;
- (k). "LESCO" means Lahore Electric Supply Company Limited or its successors or permitted assigns;
- (l). "Licensee" means ICI PAKISTAN LIMITED or its successors or permitted assigns;
- (m). "Licensing Regulations" mean the National Electric Power Regulatory Authority Licensing (Application & Modification Procedure) Regulations, 1999 as amended or replaced from time to time;
- (n). "Power Purchase Agreement (PPA)" means the power purchase agreement, entered or to be entered into by and between the Power Purchaser and the Licensee, for the purchase of electric power generated by the generation facility/Thermal Power Plant of the Licensee, as may be amended by the parties thereto from time to time;
- (o). "Power Purchaser" means CPPA-G which will be purchasing electric power from the Licensee either on behalf of all XW-DISCOs or any single XW-DISCO, pursuant to the PPA for procurement of electric power;
- (p). "Thermal Power Plant" means the generation facility using fossil fuel for generation of electric power;



- (q). "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
Applicability of Law

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

Article-3
Generation Facilities

The location, size (capacity in MW), technology, interconnection arrangements and other details specific to the generation facility/Thermal Power Plant of the Licensee are set out in Schedule-I of this licence. The net capacity of the generation facility/Thermal Power Plant of the Licensee is set out in Schedule-II of this licence.

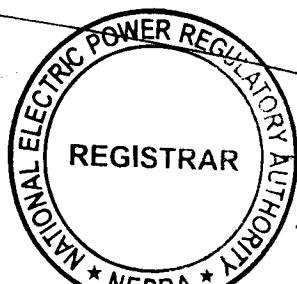
Article-4
Term of Licence

4.1 This licence shall become effective from the date of its issuance and will have a term of fifteen (15) years from the date of its issuance.

4.2 Unless suspended or revoked earlier, the Licensee may apply for renewal of this Licence ninety (90) days prior to the expiry of the above term, as stipulated in the Licensing Regulations.

Article-5
Licence fee

The Licensee shall pay to the Authority the licence fee as stipulated in the National Electric Power Regulatory Authority (Fees) Rules, 2002 as amended or replaced from time to time.



Article-6
Tariff

The Licensee shall charge the Power Purchaser 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.

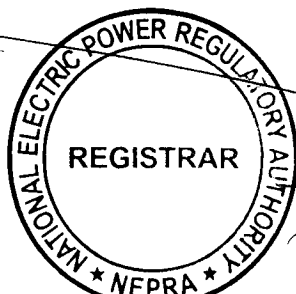
7.2 Any variation or modification in the above-mentioned contracts for allowing the parties thereto to participate wholly or partially in the Competitive Trading Arrangement shall be subject to mutual agreement of the parties thereto and such terms and conditions as may be approved by the Authority.

Article-8
Maintenance of Records

For the purpose of sub-rule(1) of Rule-19 of the Generation 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 or replaced from time to time.



Article-10
Compliance with Environmental & Safety Standards

10.1 The generation facility/Thermal Power Plant of the Licensee shall comply with the environmental and safety standards as may be prescribed by the relevant competent authority from time to time.

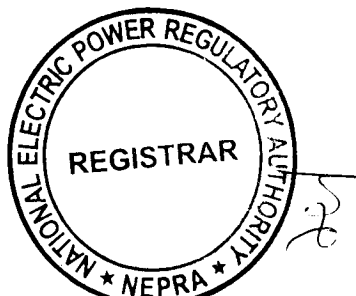
10.2 The Licensee shall provide a certificate on a bi-annual basis, confirming that the operation of its generation facility/Thermal Power Plant is in conformity with required environmental standards as prescribed by the relevant competent authority.

Article-11
Provision of Information

In accordance with provisions of Section-44 of the Act, the Licensee shall be obligated to provide the required information in any form as desired by the Authority without any exception.

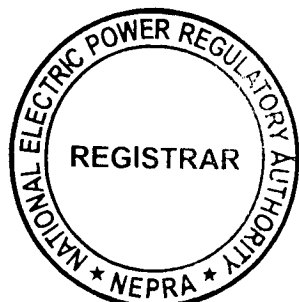
Article-12
Power off take Point and Voltage

The Licensee shall deliver the electric power to the Power Purchaser at the outgoing Bus Bar of its generation facility/Thermal Power Plant. The Licensee shall be responsible for the up-gradation (step up) of generation voltage up to the required dispersal voltage level.

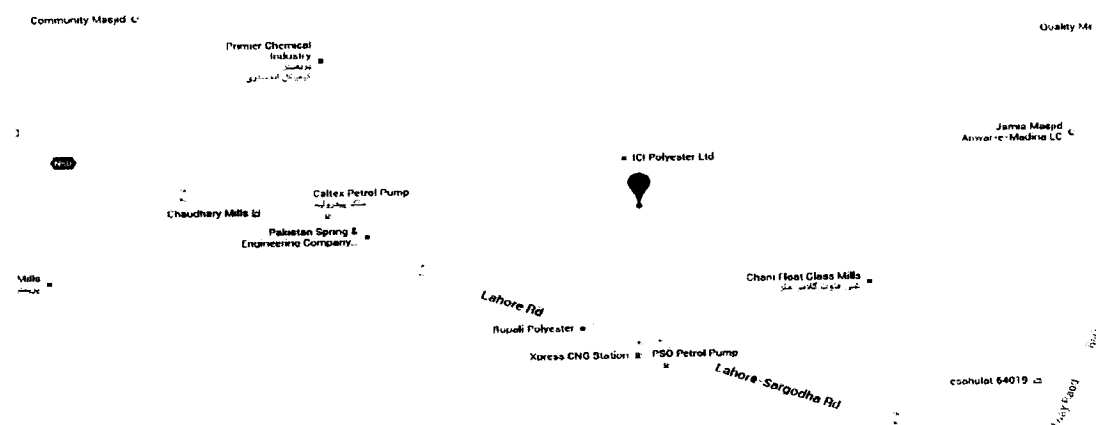
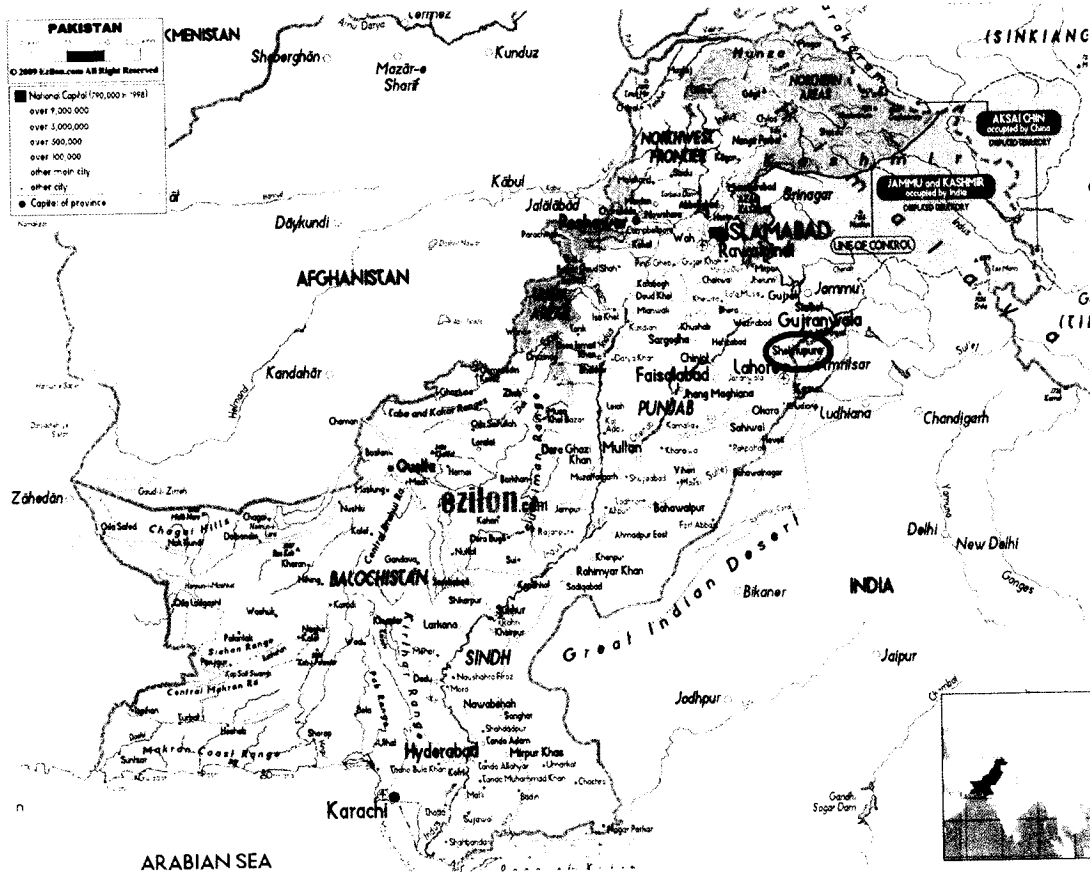


SCHEDULE-I

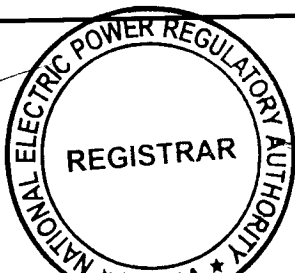
The Location, Size (i.e. Capacity in MW), Type of Technology, Interconnection Arrangements, Technical Limits, Technical/Functional Specifications and other details specific to the Generation Facilities of the Licensee are described in this Schedule



**Location of the
 Generation Facility/Thermal Power Plant
 of the Licensee on Map of Pakistan**

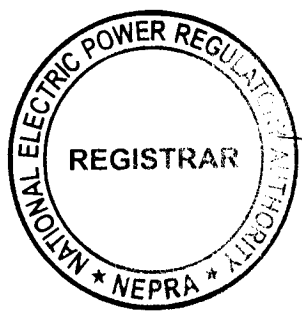
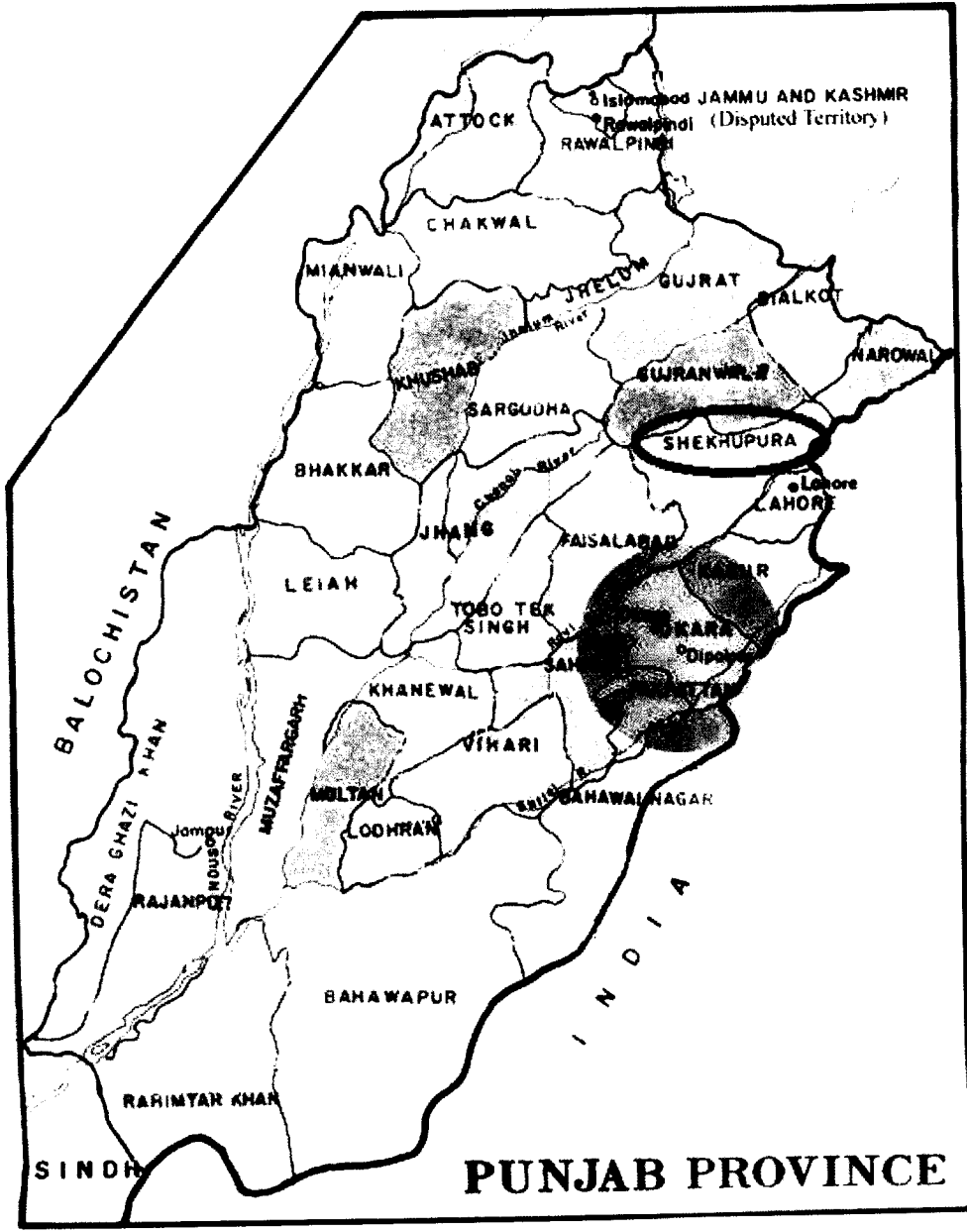


Site Address	Longitude	Latitude	Site Elevation
30 km Lahore Sheikhupura Road, District sheikhupura, Punjab, Pakistan.	74°3'19"E	31°41'37"N	214 meters



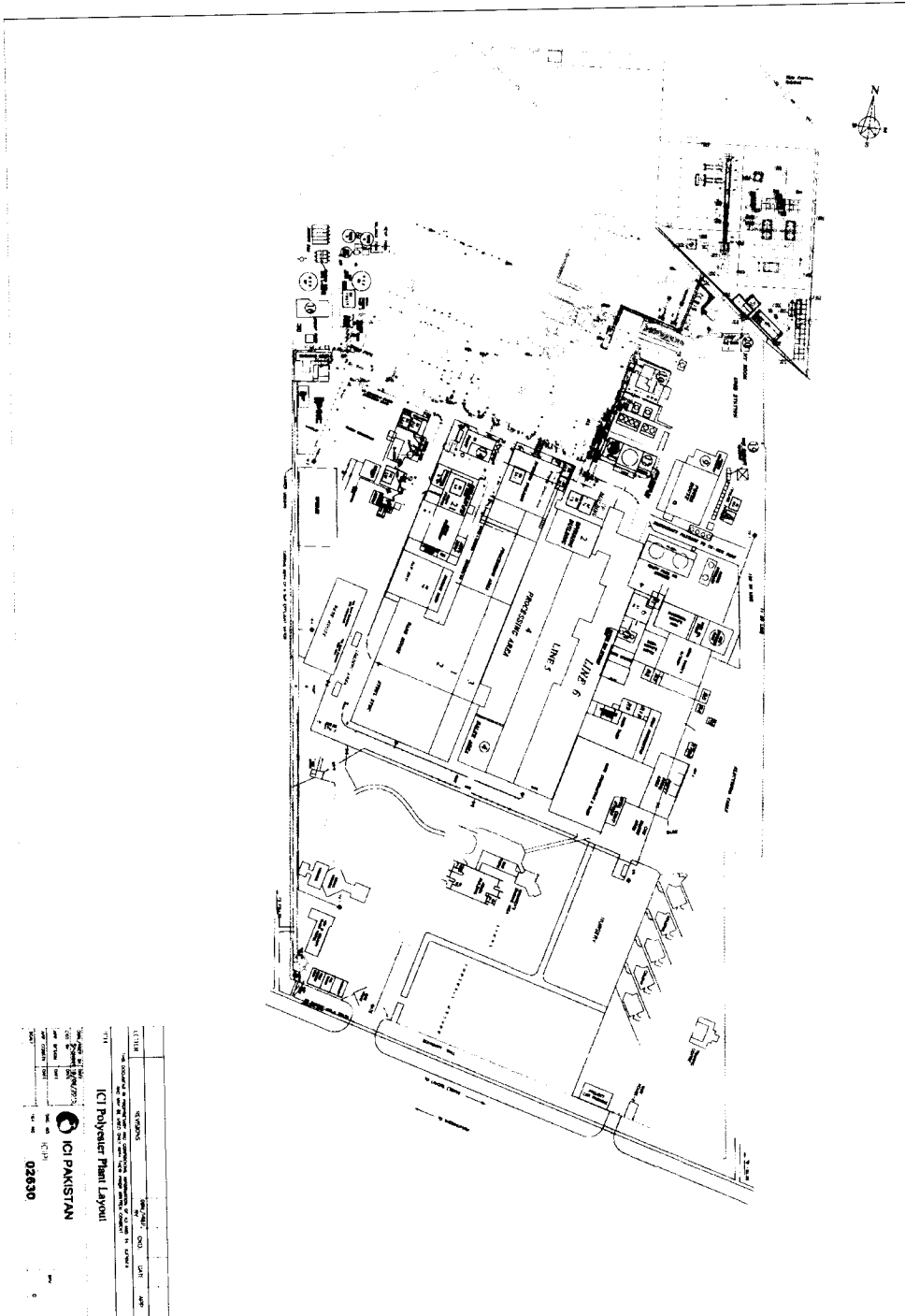
Generation Licence
ICI Pakistan Limited
30-KM Lahore-Sheikhupura Road
Sheikhupura, District Sheikhupura
in the Province of Punjab

**Location of the
Generation Facility/Thermal Power Plant
of the Licensee on Map of the Province of Punjab**



Generation Licence
ICI Pakistan Limited
30-KM Lahore-Sheikhupura Road
Sheikhupura, District Sheikhupura
in the Province of Punjab

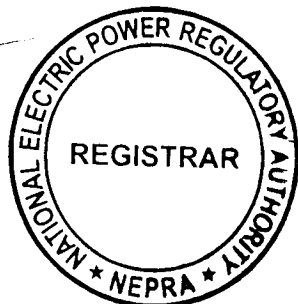
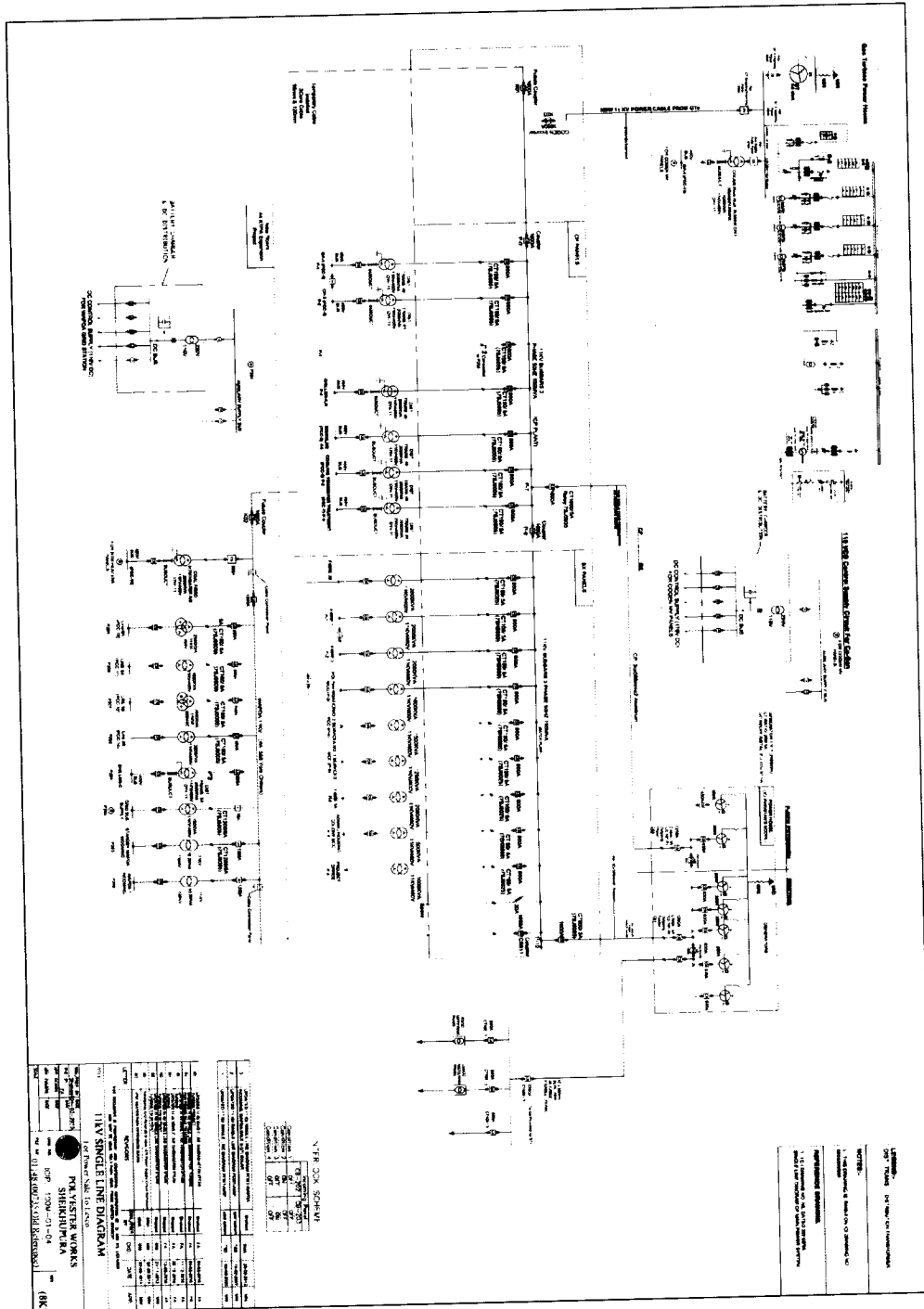
Lay-out of the
Generation Facility/Thermal Power Plant
of the Licensee



DATE	NO. OF SHEETS	TOTAL SHEETS
10/01/2010	1	1
PROJECT TITLE		
ICI Polyester Plant Layout		
DRAWN BY		
M. A. KHAN		
CHECKED BY		
M. A. KHAN		
SCALE		
AS SHOWN		
PROJECT NO.		
026330		
DRAWING NO.		
026330		
DATE		
10/01/2010		
DRAWING TITLE		
ICI PAKISTAN		



Single line Diagram (Electrical)
of the Generation Facility/Thermal Power Plant
of the Licensee

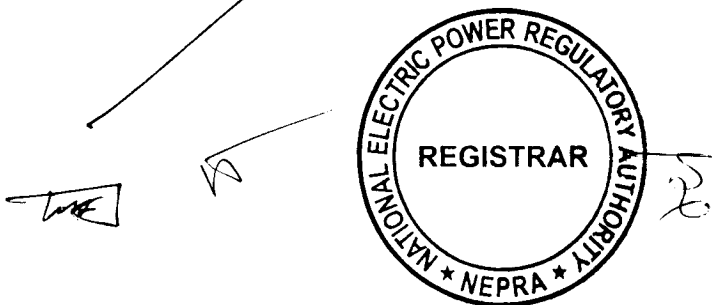


**Interconnection Arrangement for
Dispersal of Electric Energy/Power from the Generation
Facility/Thermal Power Plant**

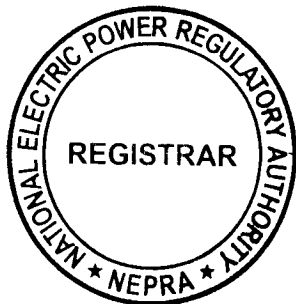
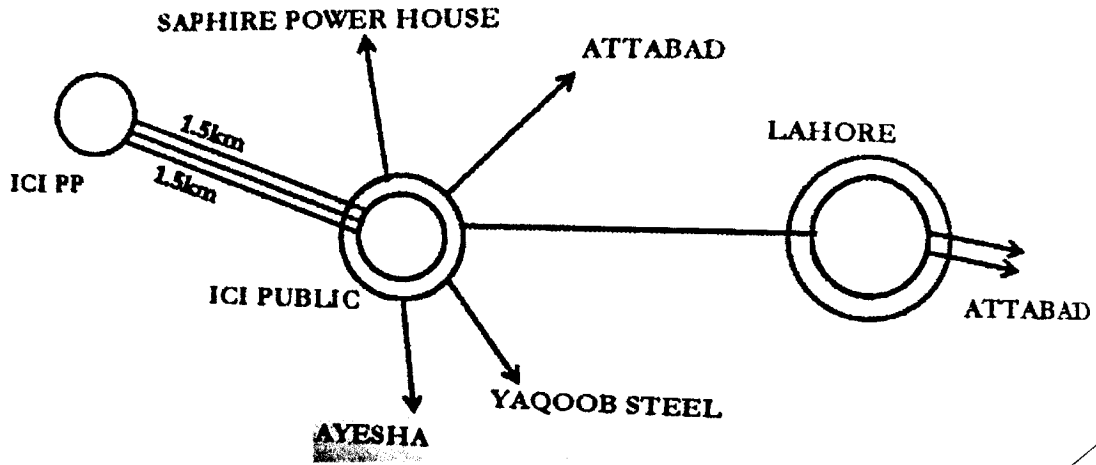
The electric power from the coal based generation facility/Thermal Power Plant of the Licensee shall be dispersed to the load center of LESCO. In this regard, the interconnection arrangement will be on 11 KV voltage level.

(2). The dispersal/interconnection arrangement will be consisting of three (03) feeders at 11 KV voltage level (measuring about 1.5 KM in length on ACSR Osprey conductor) connecting the generation facility/Thermal Power Plant of the Licensee to 132/11 KV ICI Public grid station of LESCO.

(3). The above dispersal arrangement is based on the Grid Interconnection Study (GIS) approved by LESCO. Any change in the said mentioned GIS shall be communicated to the Authority in due course of time.



Schematic Diagram for
Dispersal of Electric Energy/Power from the Generation
Facility/Thermal Power Plant



Details
of Generation Facility/Thermal Power Plant
of the Licensee

(A). General Information

(i).	Name of the Company/Licensee	ICI Pakistan Limited
(ii).	Registered Office of the Company/Licensee	5-West Wharf Road, Karachi
(iii).	Business Office of the Company/Licensee	63-Mozang, Lahore
(iv).	Location of the Generation Facility	30-KM Lahore-Sheikhupura Road, Sheikhupura, in the Province of Punjab
(v).	Type of Generation Facility	Thermal Power Plant

(B). Plant Configuration

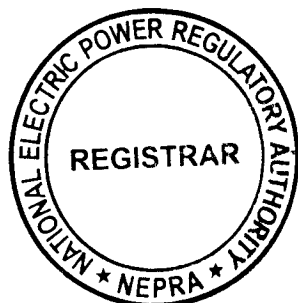
(i).	Installed Capacity of the Generation Facility	15.00 MW	
(ii).	Type of Technology	Circulating Fluidized Bed, Single Steam Drum water Tube Boilers (53 bar) & Extraction cum condensing Steam Turbine	
(iii).	Number of Units/Size of each Unit	1 x 15.00 MW	
(iv).	Unit Make/Model/Type & Year of Manufacture etc.	Boilers	2 x 50 ton/hr., 53 bar, 485 °C Wuxi Huaguang Industrial Boilers Ltd. (Model: XG-50/5.3M Sub.)
		Steam Turbine	HLTC, Hangzhou Chinen Turbine Power Co. Ltd. (Model: C15-4.9/2.4)
		Generator	Hangzhou Hangfa Electrical Equipment Co. Ltd.-Turbo Generator (Model: QF-W15-2)



(v).	Commercial Operation Date (COD) of the Generation Facility	June 30, 2015
(vi).	Minimum Expected Useful Life of the Generation Facility	Fifteen (15) years

(C). Fuel/Raw Material Details

(i).	Primary Fuel	Imported Coal	
(ii).	Startup Fuel	Light Diesel Oil (LDO)	
(iii).	Fuel Source (Imported/Indigenous)	Primary Fuel	Startup Fuel
		Coal from South Africa	Indigenous/Imported
(iv).	Fuel Supplier	Primary Fuel	Alternate Fuel
		Lucky Commodities	Shell Pakistan/Total
(v).	Supply Arrangement	Required capacities to be supplied via trucks/trains	Required capacities to be supplied via Oil Tankers
(vi).	No. of Storage Bunkers/Tanks/Open Yard	One Open Yard Storage at Power Plant with Capacity of 6000 Tons	One Oil Tank
(vii).	Storage Capacity of each Bunkers/Tanks/Open Yard	Stockyard space dry coal shed with Capacity of 1800 Tons	1 x 18000 Liters
(viii).	Gross Storage	7800 Tons approx.	18000 Liters



(D). Emission Values

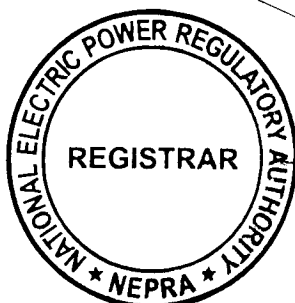
		Primary Fuel	Startup Fuel
(i).	SO _x (mg/Nm ³)	<400	As per NEQ's
(ii).	NO _x (mg/Nm ³)	<200	-do-
(iii).	CO ₂ (%)	<20	-do-

(E). Cooling System

(i).	Cooling Water Source/Cycle	Ground water/Closed Cycle Cooling System
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(F). Plant Details

(i).	Generation Voltage	11 KV
(ii).	Frequency	50 Hz
(iii).	Power Factor	0.8 lagging & 0.95 leading
(iv).	Automatic Generation Control (AGC)	Yes
(v).	Ramping Rate (MW/min)	10% of full load per minute (approx.)
(vi).	Time required to Synchronize to Grid	6-8 hours for cold start



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



SCHEDULE-II

(1).	Total Gross Installed Capacity of the Generation Facility	15.0 MW
(2).	De-rated Capacity of Generation Facility at Reference Site Conditions	13.5 MW
(3).	Auxiliary Consumption of the Generation Facility	1.5 MW
(4).	Net Capacity of Generation Facility at Reference Site Condition	12.0 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 Purchase Purchase Agreement or any other applicable document(s).

