



Registrar

National Electric Power Regulatory Authority

Islamic Republic of Pakistan

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No. NEPRA/DG (Lic)/LAG-525/ **9236-44**

June 23, 2025

Chief Executive Officer

Central Power Generation Company Limited
Thermal Power Station, Barrage Road
Guddu, District Kashmore

Subject: **Grant of Generation Licence No. GL/29/2025**
Licence Application No. LAG-525
Central Power Generation Company Limited (CPGCL)

Reference: Your letter No. & dated nil (received on 08.03.2023)

Enclosed please find herewith Determination of the Authority in the matter of application of Central Power Generation Company Limited (CPGCL) for the grant of generation licence along with Generation Licence No. GL/29/2025 annexed to this determination granted by the National Electric Power Regulatory Authority (NEPRA) to CPGCL for its 776.70 MW Gross thermal power generation facility located at Guddu, District Kashmore in the province of Sindh, pursuant to Section-14B of the Regulation of Generation, Transmission and Distribution of Electric Power Act, 1997/Amendment Act 2018.

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

Enclosure: As Above


(Wasim Anwar Bhinder)

Copy to:

1. Secretary, Power Division, Ministry of Energy, 'A' Block, Pak Secretariat, Islamabad
2. Secretary, Privatization Division, Ministry of Privatization, Kohsar Block, Pak Secretariat, Islamabad
3. Secretary, Energy Department, Government of Sindh, 3rd Floor, State Life Building -3, Dr. Zia-ud-din Ahmed Road, Karachi
4. Managing Director, National Grid Company of Pakistan Ltd, 414 WAPDA House, Lahore
5. Chief Executive Officer, CPPA(G), 73 West, Shaheen Plaza, A.K. Fazl-ul-Haq Rd, Blue Area, Islamabad
6. Managing Director, Private Power & Infrastructure Board (PPIB), Ground & 2nd Floors, Emigration Tower, Plot No. 10, Mauve Area, Sector G-8/1, Islamabad
7. Chief Executive Officer, Independent System and Market Operator of Pakistan (Guarantee) Limited (ISMO), Faiz Ahmed Faiz Road, H-8/1, Islamabad
8. Director General, Environmental Protection Agency, Government of Sindh, Plot No. ST/2/1, Sector 23, Korangi Industrial Area, Karachi

National Electric Power Regulatory Authority
(NEPRA)

Determination of the Authority
in the Matter Application of Central Power Generation Company
Limited for the grant of Generation Licence for its 747 MW
Combined Cycle Power Plant

June nd23, 2025
Case No. LAG-525

(A). Background

(i). In terms of the then Section 15 (now Section-14B) of the Regulation of Generation, Transmission and Distribution of Electric Power Act, 1997 (the "NEPRA Act"), CPGCL hold a Generation Licence (No. GL/02/2002, dated July 01, 2002, and subsequent modifications) with an installed capacity of 1819.70 MW.

(ii). The above generation capacity included not only the generation facility of the Old TPS Guddu and Unit-6 of TPS Quetta, but also the newly commissioned and operational 776.70 MW combined cycle power plant (CCPP), commonly referred to as the 747 MW Plant or the New TPS Guddu.

(iii). Meanwhile, the Government of Pakistan (the "GoP"), decided to privatize some of its generation facilities, including the New TPS Guddu, and directed CPGCL to exclude the said plant from its existing Generation Licence and obtain a separate/new generation licence for the same.

(B). Filing of Application

(i). In consideration of the above directions of the GoP, CPGCL was required to submit two distinct applications (a). one seeking modification in its existing licence for exclusion of the New TPS Guddu and (b). a new application for the grant of a separate/new Generation Licence for the said plant.¹

(ii). CPGCL submitted the application for the separate/new Generation Licence for the New TPS Guddu, in terms of Section-14B of the NEPRA Act read with the relevant provisions of the NEPRA Licensing (Application, Modification,

¹ The processing of the Licensee Proposed Modification (LPM) of CPGCL for exclusion of New TPS Guddu from its existing generation licence, has been concluded through separate/parallel proceedings.



Extension and Cancellation) Procedure Regulations, 2021 (the "Licensing Regulations (the "Licensing Regulations"), on March 09, 2023.

(iii). The Registrar examined the submitted application to confirm its compliance with the Licensing Regulations and observed that the application was short of some of the required information/documentation. In view of the said, the Registrar directed CPGCL for submitting the missing information/documentation which were submitted on March 31, 2023.

(iv). Accordingly, the Registrar registered the application of CPGCL and submitted the draft of the notice to be published for seeking comments of stakeholders for approval of the Authority. The Authority decided to hold the matter temporarily to first consider the broader issues concerning the transition of the regulatory framework from licensing to concurrence for the generation companies.

(v). Later on, the Authority decided that applications for the grant of generation licence submitted before the stipulated deadline given under Section-14B(5) of the NEPRA Act (i.e., April 26, 2023) shall be processed under the existing regulatory framework, including the current application of CPGCL. Accordingly, the Registrar published a notice in one (01) Urdu and one (01) English newspaper on August 29, 2023, inviting comments of the general public, interested and affected persons in the matter as stipulated in Regulation-8 of the Licensing Regulations.

(vi). In addition to the above, the Registrar also sent separate letters on August 29, 2023, to different stakeholders, including but not limited to the Govt. Ministries, their attached departments, various Authorities/corporations, different companies and representative organizations, soliciting/seeking their views and comments for the assistance of the Authority in terms of the provisions of the Licensing Regulations.

(C). Comments of Stakeholders

(i). In reply to the above-mentioned notices, the Authority received comments from five (05) stakeholders including National Transmission and Dispatch Company Limited (NTDC), Board of Investment (BoI), Central Power Purchasing Agency (Guarantee) Limited (CPPA-G), Private Power & Infrastructure



Board (PPIB) and Ministry of Energy, Petroleum Division (MoEPtD). The salient points of the comments offered by stakeholders are summarized below: -

- (a). NTDC submitted that the New TPS Guddu is located at a critical location within the National Grid and plays a pivotal role in maintaining the power balance in the system. The said plant operates on local/indigenous gas, and therefore, is cheaper and higher in the Economic Merit Order (EMO). In view of the said, the request of CPGCL for a separate/new generation licence for this power plant may be considered; however, the Licensee be obligated to comply with the relevant provisions of the Grid Code 2023;
- (b). Bol submitted that an affordable and smooth supply of energy is the backbone for the economic and industrial growth in the country. The Authority may proceed with the submitted application of CPGCL as per the relevant policy/rules in vogue and steps required in the current situation of the Energy Sector;
- (c). CPPA-G remarked that the request of CPGCL for a separate/new generation licence for the New TPS Guddu is in line with the directives of the Ministry of Energy Power Division (MoEPD) dated December 31, 2021, therefore, the same is supported;
- (d). PPIB explained that the New TPS Guddu (commissioned in December 2014) is an important project vis-à-vis the energy security of the country, as it utilizes indigenous gas. The plant is higher in the EMO, primarily due to the usage of cheaper indigenous gas and the higher efficiency, which is around 49%. In consideration of the utilization of indigenous gas, economical tariff, lower cost of electricity generation, higher in merit order and over 21 years of remaining useful life, PPIB supports issuance of a separate/new generation licence to CPGCL for the plant; and
- (e). MoEPtD submitted that CPGCL has been using 50 MMCFD natural gas from Kandhkot Gas Field (KGF) for Guddu Power Plant since 2003 without a formal Gas Supply Agreement (GSA) with Sui Northern Gas Pipelines Limited (SNGPL). Further, the offtakes of



CPGCL from Pakistan Petroleum Limited (PPL) remain consistently below the potential of 180 MMCFD, not only reducing profitability but also adversely affecting the national exchequer and an amount of Rs. 6.182 billion against take or pay is still outstanding against CPGCL. Notwithstanding the above, MoEPtD has no objection if a generation licence is granted to CPGCL however, the Authority is requested to advise CPGCL for the resolution of the above matters with SNGPL and PPL.

(ii). The Authority considered the above comments of the stakeholders and in view of the observations of MoEPtD, considered it appropriate seeking the perspective of CPGCL. In this regard, CPGCL submitted that it is actively engaged with both PPL and SNGPL to resolve the outstanding take-or-pay liabilities and execute the pending GSA. In this regard, CPGCL requested the Authority to consider its case for the grant of a generation licence as MoEPD has not objected the same.

(iii). The Authority considered the above submissions of CPGCL and considered it appropriate to proceed further in the matter, in a manner as stipulated in the relevant provisions of the NEPRA Act, the NEPRA Licensing (Generation) Rules 2000 (the "Generation Rules") the Licensing Regulations, and other applicable documents.

(D). Evaluation/Findings

(i). The Authority has examined the entire case in detail, including the existing Generation Licence of CPGCL, the information provided in its application for a new/separate Generation Licence, received comments of the stakeholders, the submitted rejoinder in the matter, and the relevant rules & regulations. The observations/findings of the Authority are explained in the following paragraphs.

(ii). CPGCL is a public limited company incorporated, having Company Registration No. L 09677 of 1998-99 dated October 26, 1998, under Section 32 of the Companies Ordinance, 1984 (XLVII of 1984). Initially, CPGCL owned and operated the assets of XW-GENCOs relating to Old TPS Guddu, TPS Sukkur, and TPS Quetta. Later on, CPGCL obtained a Generation Licence (No. GL/03/2002, dated July 01, 2002, and subsequent modifications dated April 26, 2013, and July



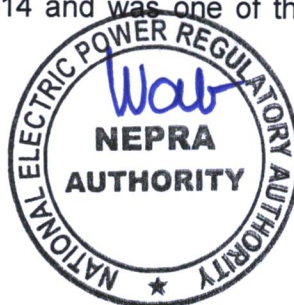
10, 2019) for its three (03) distinct Generation Facilities, including Old TPS Guddu, New TPS Guddu and Unit-6 of TPS Quetta.

(iii). In this regard, it is relevant to mention that the New TPS Guddu was previously included in the Generation Licence of CPGCL through the LPM dated April 26, 2013. The plant consists of two gas turbines (2x255.60 MW), two Heat Recovery Steam Generators (HRSGs) and one steam turbine (1x265.50 MW). The gross ISO installed capacity of the New TPS Guddu is 776.70 MW, whereas at mean site conditions, it is 747 MW. The plant achieved its Commercial Operation Date (COD) on December 17, 2014, and began supplying to the national grid.

(iv). The GoP has included the New TPS Guddu in its privatization program, selecting it as a candidate for the same. In light of the decision by the Cabinet Committee on Privatization (CCoP) and to facilitate the process, MoEPD directed CPGCL to carve out the plant from its existing Generation Licence and obtain a separate one for the same. Accordingly, CPGCL filed this application under the relevant provisions of the NEPRA Act, rules, and regulations for obtaining a separate Generation Licence for the plant.

(v). In terms of Section 14B and subject to sub-section (5)] of the NEPRA Act, no person shall, except under authority of a licence that the Authority may issue, construct, own, or operate a generation facility. Further, an application for the grant of a licence for a generation facility is required to specify (a) the type of facility for which the licence is applied; (b) the location of the generation facility; and (c) the expected life of the generation facility. Also, in terms of the Rule-3 of the Generation Rules, the Authority may grant a generation licence to any person to engage in the generation business for which it is required to submit the location, size, technology, interconnection arrangements, technical limits, technical functional specifications and other details specific to the generation facilities of the licensee.

(vi). In consideration of the above, it is confirmed that CPGCL has provided all the above details relating to its New TPS Guddu, complying with the requirements of the NEPRA Act and the Generation Rules. The Authority considers that the New TPS Guddu which is operating on the cleaner fuel of indigenous natural gas since 2014 and was one of the most efficient generation



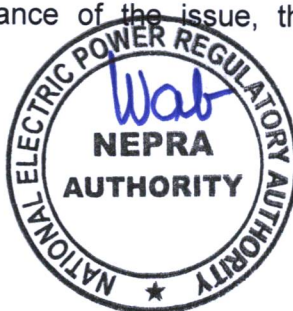
facilities at the time of its commissioning therefore, the said generation not only fulfils the requirements for environmental consideration but also that of the least cost option criteria stipulated in the Generation Rules.

(vii). The Authority has also considered the comments of the stakeholders favoring the separate licence for New TPS Guddu; therefore, there is no need for any further deliberation on the issue or holding any public hearing fulfilling the requirement of the Generation Rules. In view of the said and considering the requirement of a separate/new licence required for the privatization process, the Authority considers that CPGCL has a case for the grant of the licence for the New TPS Guddu.

(viii). Regarding the term of the Generation Licence, Rule-5(1) of the Generation Rules stipulates that the term of a generation licence is to be consistent with the maximum expected useful life of the units comprised in a generating facility, except where an applicant consents to a shorter term. In this regard, the Authority clarifies that the generation facility of New TPS Guddu was commissioned in 2014 and its expected useful life was estimated to be thirty (30) years from its COD. Accordingly, the Authority for the purpose of a new/separate licence sets the term of as thirty (30) years from its COD (i.e., December 17, 2014), subject the Section 14-B of the NEPRA Act.

(ix). Regarding the tariff, the Authority hereby clarifies that under Section-7(3)(a) of the NEPRA Act, determining tariffs, rates, charges, etc., is the sole prerogative of the Authority. In this regard, the Authority through its determination No. NEPRA/TRF-322/CPGCL-2015/5716-5718, dated April 26, 2016, has already granted a tariff to CPGCL for the said plant. In view of the said, the Authority, through Article 6 of the generation licence, directs CPGCL to charge the power purchaser only such tariff which has been determined, approved or specified by the Authority. The Authority directs CPGCL to adhere to Article-6 of the generation licence in letter and spirit without any exception.

(x). About the compliance with the environmental standards, the Authority has noted that CPGCL has submitted that the New TPS Guddu is fully compliant with the relevant environmental standards (i.e., NEQS) and conditions of the NOC provided by the Environmental Protection Agency, Govt. of Sindh (EPAGoS). Given the importance of the issue, the Authority has included a



specific article in the Generation Licence along with other terms and conditions, making it obligatory for CPGCL to comply with relevant environmental standards at all times. Further, CPGCL is directed to submit a report on a bi-annual basis, confirming that the operation of its generation facility is compliant with the required environmental standards as prescribed by the concerned environmental protection agency.


(E). Approval of the Authority

(i). In view of the above, the Authority considers that the application of CPGCL for the grant of a separate Generation Licence for the New TPS Guddu, which is already in operation, is compliant with the relevant rules and regulations. Further, the separate Generation Licence is a prerequisite for privatization of the said generation facility/power plant by the GoP.

(ii). Foregoing in view, the Authority hereby approves the grant of a separate Generation Licence for the New TPS Guddu to CPGCL, on the terms and conditions set out in the Generation Licence annexed to this determination. The grant of Generation Licence is subject to the provisions contained in the NEPRA Act, relevant rules, regulations framed thereunder and other applicable documents.

Authority:

Maqsood Anwar Khan
(Member)



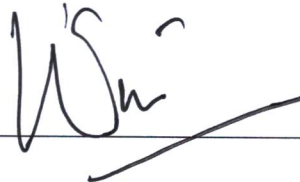
Rafique Ahmed Shaikh
(Member)



Amina Ahmed
(Member)



Waseem Mukhtar
(Chairman)



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

GENERATION LICENCE

No. GL/29/2025

In exercise of the powers conferred upon the National Electric Power Regulatory Authority (NEPRA) under Section-14B of the Regulation of Generation, Transmission and Distribution of Electric Power Act, 1997/Amendment Act, 2018, the Authority hereby grants a Generation Licence to:

**Central Power Generation Company Limited
incorporated under Section 32 of the Companies Ordinance, 1984,
having Company Registration No. L 09677 of 1998-99**

**for its Combined Cycle Power Plant Located at Guddu, district
Kashmore, in the province of Sindh**

(Total Installed Capacity: 776.70 MW Gross)

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

Given under my hand this on 23rd day of June Two Thousand
& Twenty Five and expires on 16th day of December Two
Thousand & Forty Four.


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 from time to time;
- (b). "Applicable Documents" means 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, the Commercial Code, 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 and 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/Power Plant of the Licensee on which the electric power from all the generators is collected for supplying to the Power Purchaser;
- (f). "Commercial Code" or "Market Commercial Code" means the commercial code prepared and maintained by the market operator pursuant to sections 23A and 23B of the Act and approved by the Authority, from time to time;
- (g). "Commercial Operations Date (COD)" means the day immediately following the date on which the generation facility/Power Plant of the Licensee is commissioned;



- (h). "Commissioned" means the successful completion of commissioning tests of the generation facility/Power Plant as stipulated in the PPA;
- (i). "CPPA-G" means Central Power Purchasing Agency (Guarantee) Limited or any other entity created for the like purpose;
- (j). "Distribution Code" means the distribution code prepared and revised from time to time by the concerned XW-DISCO with the necessary approval of the Authority
- (k). "Distribution Licensee" means the person to whom a licence for distribution of electric power has been granted by the Authority under the Act;
- (l). "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 and sale of electric energy generated by the generation facility/Power Plant, as may be amended by the parties thereto from time to time;
- (m). "Generation Rules" means the National Electric Power Regulatory Authority Licensing (Generation) Rules, 2000, as amended or replaced from time to time;
- (n). "Grid Code" means the code prepared and revised from time to time by the System Operator with the necessary approval of the Authority
- (o). "Power Plant " means the generation facility/combined cycle power plant of the Licensee for the production of electric power using natural gas as a primary source;
- (p). "IEC" means "the International Electrotechnical Commission or its successors or permitted assigns;





- (q). "IEEE" means the Institute of Electrical and Electronics Engineers or its successors or permitted assigns;
- (r). "Licensee" means **Central Power Generation Company Limited** or its successors or permitted assigns;
- (s). "Licensing Regulations" mean the National Electric Power Regulatory Authority Licensing (Application, Modification, Extension and Cancellation) Procedure Regulations, 2021 as amended or replaced from time to time;
- (t). "NTDC" means National Transmission and Despatch Company Limited or its successors or permitted assigns;
- (u). "Power Purchaser" means CPPA-G, which will be purchasing electric energy from the Licensee either on behalf of all or any single XW-DISCO, pursuant to a PPA for the procurement of electric energy;
- (v). "SCADA System" means the supervisory control and data acquisition system for gathering of data in real time from remote locations to control equipment and conditions;
- (w). "System Operator" means a person licensed under Section-23G and 23H of the Act to administer system operations, dispatch and power system planning; and
- (x). "XW-DISCO" means an Ex-WAPDA distribution company engaged in the distribution and supply of electric power.

1.2 The words and expressions used but not defined herein bear the meaning given thereto in the Act or Generation Rules and Licensing Regulations issued under the Act.



Article-2
Applicability of Law

This licence is issued subject to the provisions of the Applicable Law, as amended or replaced 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 generation facility/Power Plant of the Licensee are set out in Schedule-I of this licence.

3.2 The net capacity of the generation facility/Power Plant of the Licensee is set out in Schedule-II of this licence. The Licensee shall provide the final arrangement, technical and financial specifications and other specific details pertaining to its generation facility/Power Plant.

Article-4
Term of Licence

4.1 The generation facility/Power Plant of the Licensee achieved COD on December 17, 2014 and has completed about eleven (11) years of operation against an estimated operational life of thirty (30) years.

4.2 This licence shall be effective from the date of issuance and will have a term of about nineteen (19) years approximately, with validity up to December 16, 2014, subject to Section 14-B of the Act.

4.3 Unless suspended or revoked earlier or the Licence ceases to have effect, 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) Regulations, 2021 as amended or replaced from time to time.

Article-6
Tariff

The Licensee shall charge only such tariff from the Power Purchaser 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 the development of a Competitive Trading Arrangement.

7.2 The Licensee shall, in good faith, work towards the 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.

7.3 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/Power Plant of the Licensee shall comply with the environmental and safety standards in accordance with the NEPRA Power Safety Code, 2021 and such other 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/Power Plant is in conformity with required environmental standards as prescribed by the relevant competent authority.

Article-11
Power off take Point and Voltage

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

Article-12
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-13
Compliance with Applicable Law

The Licensee shall comply with the provisions of the Applicable Law, guidelines, directions and prohibitory orders of the Authority as issued from time to time.

Article-14
Design & Manufacturing Standards

The generation facility/Power Plant of the Licensee shall be designed, manufactured and tested according to the latest IEC, IEEE standards or any other equivalent standard in the matter. All the plant and equipment of the generation facility/Power Plant shall be unused and brand new.

Article-15
Power Curve

The Power Purchaser shall verify the power curve of the generation facility of the Licensee, as part of the Commissioning tests, according to the latest IEC/IEEE standards and shall be used to measure its performance.

Article-16
Corporate Social Responsibility

The Licensee shall comply with the NEPRA Social Investment Guidelines, 2021, as may be amended from time to time and submit a report on its activities pertaining to Corporate Social Responsibility (CSR) on an annual basis.

Article-17
Compliance with the Cyber Security Regulations

The Licensee shall comply with the National Electric Power Regulatory Authority (Security of Information Technology and Operational Technology) Regulations, 2022 as amended from time to time.





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.



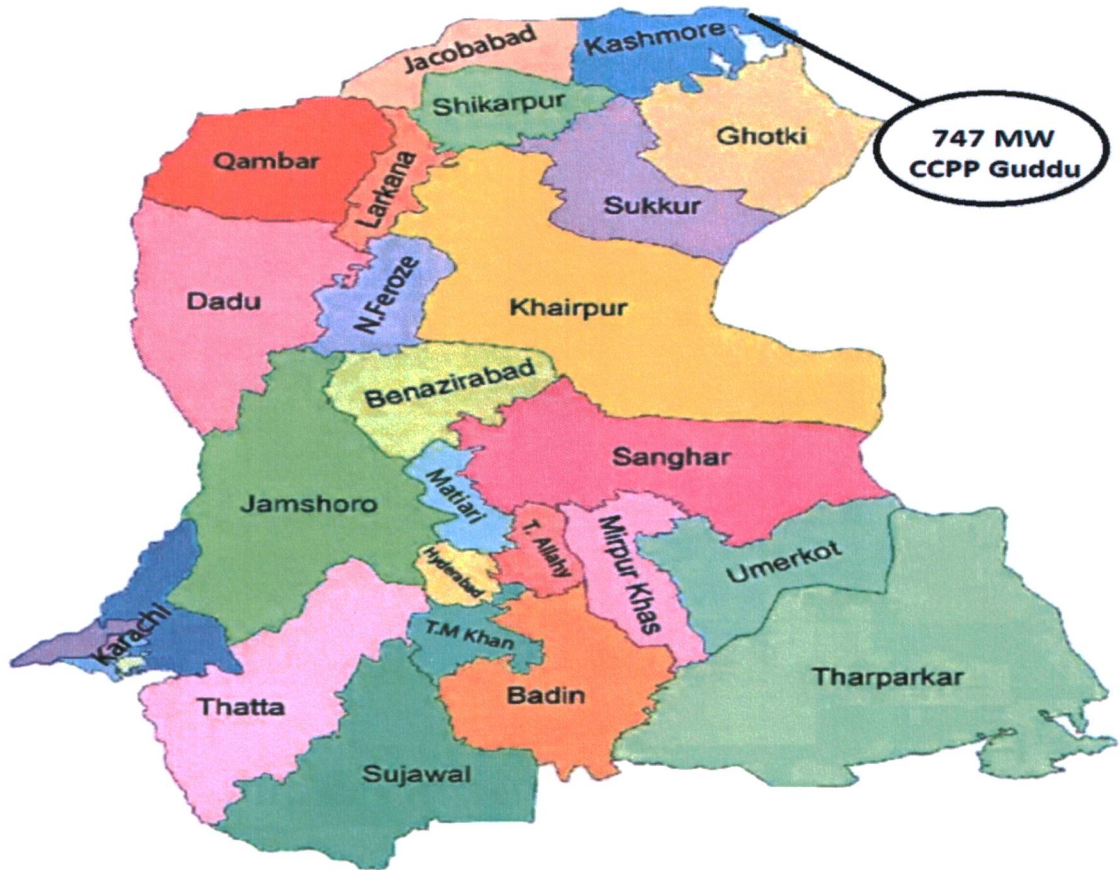
**Location of the
Generation Facility/Power Plant of the Licensee
on the Map of Pakistan**



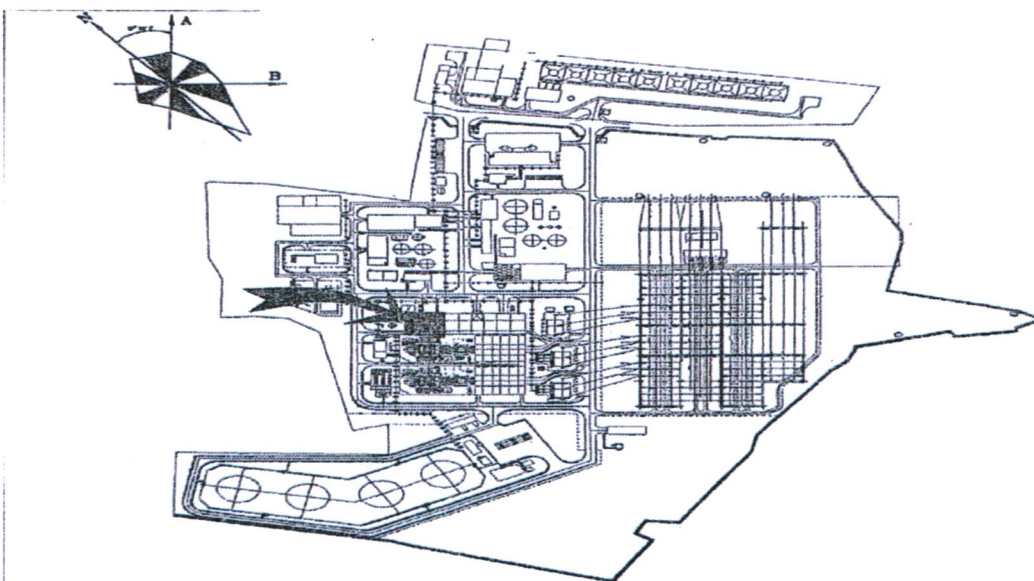
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**Location of the
Generation Facility/Power Plant of the Licensee
on the Map of the Province of Sindh**



**Layout of the
Generation Facility/Power Plant of
the License**



KEY PLAN

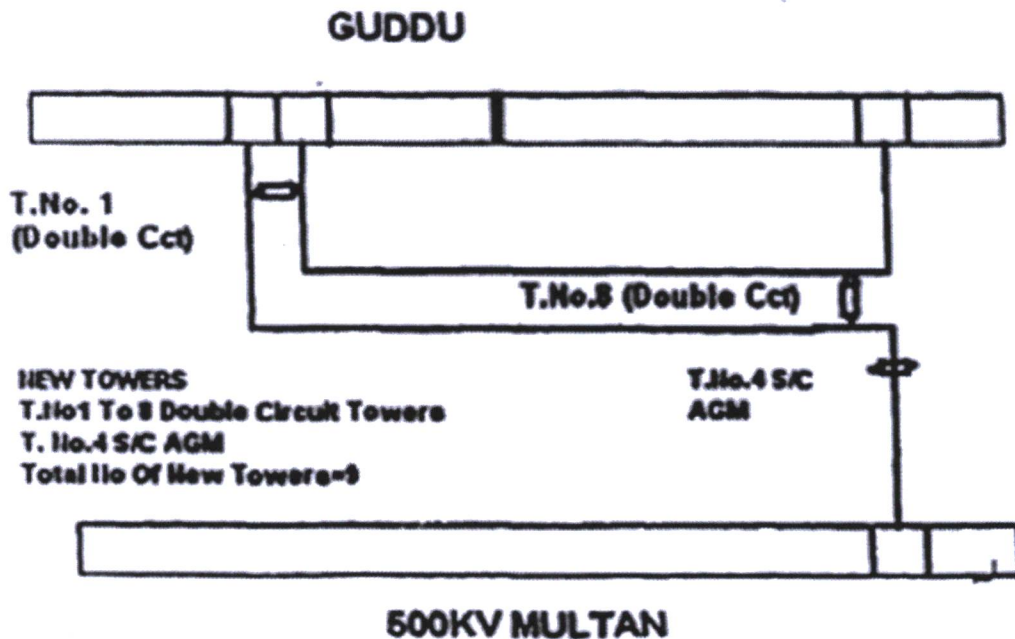


**Interconnection Arrangement Schematic Diagram for
Dispersal of Electric Energy/Power from the Generation
Facility/Power Plant of the Licensee**

The electric power generated from the generation facility/Power Plant of the Licensee is being dispersed through the 500 KV Sub-Station and Transmission Line link with the following scope:-

- (a). A 500 kV substation has been constructed at 747.00 MW CCPP Project Guddu;
- (b). A 500 KV D/C Transmission Line measuring about 2.5 Km, from 500 KV Sub-station of 747 MW CCPP to 500 KV Existing Transmission Line Guddu- Multan circuit-III will be constructed by making an In-Out arrangement.

**SINGLE LINE DIAGRAM SHOWING THE ARRANGEMENT FOR
LOOPING IN & OUT OF 500kv S/C T/L GUDDU-MULTAN(3RD)**



Detail of
Generation Facility/Power Plant
of the Licensee

(A). General Information

(i).	Name of the Licensee/ Company	Central Power Generation Company Limited (CPGCL)
(ii).	Registered/Business Office of the Licensee/ Company	Thermal Power Station, Barrage Road Guddu, in the Province of Sindh
(iii).	Location of the Generation Facility	at Guddu, District Kashmore, in the Province of Sindh
(iv).	Type of Generation Facility	Thermal Power Plant

(B). Plant Configuration

(i).	Installed Capacity/ Plant Size of the Generation Facility	776.70 MW	
(ii).	Type of Technology	Combined Cycle Power Plant	
(iii).	Number of Units/Size (MW)	2x255.60 MW Gas Turbine + 1x265.50 MW Steam Turbine	
(iv).	Unit Make/Model/Type & Year of Manufacture Etc.	Gas Turbines	General Electric/G.E./PG9351(MS 9001 FA)
		Steam turbine	Harbin Turbine Company, China.
(v).	COD of the Generation Facility	December 17, 2014	
(vi).	Expected Useful Life of the Generation Facility from COD	30 years	

(C). Fuel Details

(i).	Primary Fuel	Natural Gas (NG)
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(ii).	Alternative/Back-Up Fuel	High Speed Diesel (HSD)	
(iii).	Fuel Source (Indigenous/Imported)	Indigenous/ Low Btu/Non-Pipeline Quality Gas	
(iv).	Fuel Supplier for each of the above	Primary Fuel	Alternative/Back-Up Fuel
		PPL & SNGPL	PSO
(v).	Supply Arrangement for each of the above	Primary Fuel	Alternative/Back-Up Fuel
		Pipeline	Oil Tankers
(vi).	No. of Storage Bunkers/Tanks/ Open Yard	Primary Fuel	Alternative/Back-Up Fuel
		Not Applicable	Four (04) Tanks
(vii).	Storage Capacity of each Bunker/Tank/Open Yard	Primary Fuel	Alternative/Back-Up Fuel
		Not Applicable	17,715 M ³
(viii).	Gross Storage	Primary Fuel	Alternative/Back-Up Fuel
		Not Applicable	70, 860 m ³

(D). Emission Values¹

		Primary Fuel	Alternative/Back-Up Fuel
(i).	SO _x	275 PPM	Not Applicable
(ii).	NO _x	15 PPM	42 PPM
(iii).	CO	25 PPM	20 PPM
(iv).	PM ₁₀	50mg/Nm ³	Not Applicable

¹All emission will remain within permissible limits of NEQS.



(E). Cooling System

(i).	Cooling Water Source/Cycle	Raw Water/Canal Water, Open Cycle & Closed Cycle.
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(F). Plant Characteristics

(i).	Generation Voltage	15 KV		
(ii).	Frequency	50Hz		
(iii).	Power Factor	0.85		
(iv).	Automatic Generation Control (AGC) (MW control is the general practice)	Yes		
(v).	Ramping Rate (MW/min) ²	GT-1	GT-2	ST
		17.357/Min	17.357 MW/Min	1.891MW/Min
(vi).	Time required to synchronize to the Grid (Minutes) ³	Hot Start	Warm Start	Cold Start
		160 Minutes	360 Minutes	660 Minutes



² These numbers are indicative as provided by the Licensee. The final numbers will be determined through the procedures contained in the Power Purchase Agreement (PPA) and approved in the tariff determination.

³ These numbers are indicative as provided by the Licensee. The final numbers will be determined through the procedures contained in the Power Purchase Agreement (PPA) and approved in tariff determination.

SCHEDULE-II

The Total Installed Gross ISO Capacity (MW), De-Rated Capacity At Reference Site Conditions (MW), Auxiliary Consumption (MW) and the Net Capacity At Reference Site Conditions (MW) of the Generation Facility/Power Plant of Licensee is given in this Schedule



SCHEDULE-II

(1).	Total Installed Gross Capacity (MW) of the Generation Facility/CCPP at ISO conditions	$2 \times 255.60 + 1 \times 265.50$ =776.70
(2).	Total De-Rated Capacity (MW) of the Generation Facility/CCPP at mean site conditions (30 °C)	$2 \times 243 + 1 \times 261$ =747
(3).	Auxiliary Consumption (MW) of the Generation Facility/CCPP at mean site conditions (30 °C)	26.21
(4).	Net Capacity (MW) of the Generation Facility/CCPP at mean site conditions (30 °C)	$747 - 26.21$ =720.79

Note

All the above figures are as provided by the Licensee. The Amount of Auxiliary Consumption and Capacity available to Power Purchaser for dispatch, etc. will be determined through procedures contained in the Power Purchase Agreement (PPA), Tariff Determination and the Applicable Document(s).

