



**Registrar**

# National Electric Power Regulatory Authority Islamic Republic of Pakistan

NEPRA Tower, Attaturk Avenue (East), G-5/1, Islamabad  
Ph: +92-51-9206500, Fax: +92-51-2600026  
Web: www.nepra.org.pk, E-mail: registrar@nepra.org.pk

No. NEPRA/R/LAG-03/10551-57

April 13, 2020

Chief Executive Officer,  
Northern Power Generation Company Limited,  
Mehmood Kot Road,  
TPS, Muzaffargarh.

**Subject: Modification-IV in Generation Licence No: GL/03/2002  
Licence Application No. LAG-03  
Northern Power Generation Company Limited, (NPGCL)**

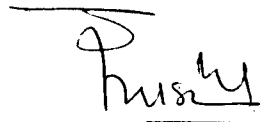
**Reference:** NPGCL's Licensee Proposed Modification (LPM) vide its letter dated February 15, 2018.

The Authority has approved the Modification in Generation Licence No. GL/03/2002 in respect of Northern Power Generation Company Limited (NPGCL), pursuant to Regulation 10(11) of the NEPRA Licensing (Application and Modification Procedure) Regulations 1999.

2. Enclosed please find herewith determination of the Authority in the matter of Licensee Proposed Modification in the Generation Licence of NPGCL along with Modification-IV in the Generation Licence No. GL/03/2002, as approved by the Authority.

**Enclosure: As above**



  
13 04 20  
(Syed Safer Hussain)

Copy to:

1. Secretary, Power Division, Ministry of Energy, A-Block, Pak Secretariat, Islamabad.
2. Managing Director, NTDC, 414-WAPDA House, Lahore.
3. Chief Executive Officer, CPPA-G, ENERCON Building, Sector G-5/2, Islamabad.
4. Chief Executive Officer, Faisalabad Electric Supply Company (FESCO), Abdullahpur, Canal Bank Road, Faisalabad.
5. Chief Executive Officer, Multan Electric Power Company (MEPCO), NTDC Colony, Khanewal Road, Multan.
6. Director General, Environment Protection Department, Government of Punjab, National Hockey Stadium, Ferozepur Road, Lahore

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

**Determination of the Authority**  
**in the Matter of the Licensee Proposed Modification in the**  
**Generation Licence of Northern Power Generation Company**  
**Limited with respect to Change in Auxiliary Consumptions**

**April <sup>13</sup>, 2020**  
**Case No. LAG-03**

**(A). Background**

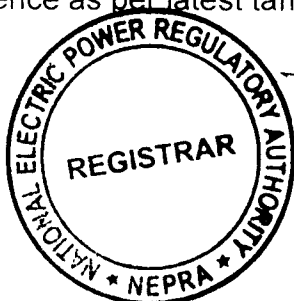
(i). The Authority granted a Generation Licence (No. GL/03/2002, dated July 01, 2002 and subsequently modified from time to time) to Northern Power Generation Company Limited (NPGCL/GENCO-III). According to the existing Generation Licence, NPGCL is operating a fleet of three (03) generation facilities with a cumulative installed capacity of 2059.65 MW.

(ii). According to the latest modification dated May 02, 2018, the generation fleet of NPGCL/GENCO-III consists of 1350.00 MW Thermal Power Station Muzaffargarh (TPS Muzaffargarh), 144.00 MW Gas Turbine Power Station, Faisalabad (GTPS, Faisalabad) and 565.65 MW Combined Cycle Power Plant at Nandipur (CCPP Nandipur).

**(B). Communication of Modification**

(i). In accordance with Regulation-10(2) of the National Electric Power Regulatory Authority Licensing (Application & Modification Procedure) Regulations, 1999 (the Licensing Regulations), NPGCL/GENCO-III communicated an LPM to the Authority on February 16, 2018.

(ii). In the text of the proposed modification, NPGCL/GENCO-III proposed to revise the auxiliary consumption of its different plants provided in its Generation Licence as per latest tariff determination/dependable capacity test.



(iii). Regarding the statement of the reasons in support of modification, NPGCL/GENCO-III, inter alia, stated that the Authority had provisionally mentioned the Operational Auxiliary Limits in the Generation Licence issued on July 01, 2002. As these values were provisional and had to be revised as per dependable capacity tests but could not be revised in the Generation Licence. Therefore, these values need to be revised.

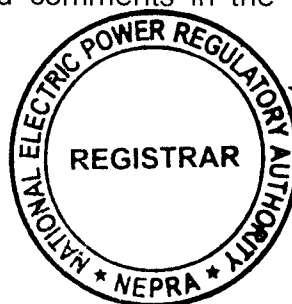
(iv). About "statement of the impact on the tariff, quality of service and the performance by the licensee of its obligations under the licence", NPGCL/GENCO-III informed that there is no impact of the proposed amendment on the tariff, quality of service and the performance by the Licensee of its obligation under the license.

### **(C). Processing of LPM**

(i). After completion of all the required information as stipulated under the Regulation 10 (2) and 10 (3) of the Licensing Regulations by NPGCL/GENCO-III, the Registrar placed the matter before the Authority for its consideration. The Authority considered the matter and directed to process the LPM as per the latest tariff determination/dependable capacity test.

(ii). Accordingly, the Registrar published the communicated LPM on April 20, 2018 in one (01) English and one (01) Urdu newspaper (Business Recorder and Jang), informing the general public about the communicated LPM and inviting their comments within a period of fourteen (14) days from the date of the said publication.

(iii). Apart from the above, separate letters were also sent to government ministries, their attached departments and representative organizations etc. on April 20, 2018. Through the said letters, the stakeholders were informed about the communicated LPM and publication of notice in the press. Further, the said entities were invited to submit their views and comments in the matter for assisting the Authority.



**(D). Comments of Stakeholders**

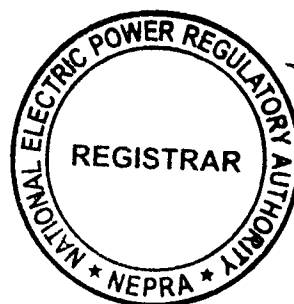
(i). In reply to the above, the Authority received comments from two (02) stakeholders including GENCO Holding Company Limited (GHCL) and Sui Northern Gas Pipelines Limited (SNGPL). The salient points of the comments offered by the above-mentioned stakeholders are summarized in the following paragraphs: -

(a). GHCL commented that it has no objection to the proposed modification and the auxiliary consumption figure may be allowed in accordance with the latest tariff determination figures, allowed by NEPRA since these figures are based on the test carried out by an independent engineer. Further, it is agreed that impact of varying load on percentage auxiliary consumption of machines may be allowed as the percentage auxiliary consumption varies with the variation in load and cannot be fixed as a benchmark for the purpose of performance monitoring.

(b). SNGPL submitted that it has no comments to offer in the matter as the matter pertains to auxiliary consumption of different plants of NPGCL as provided in its Generation Licence as per latest tariff determination/dependable capacity test.

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

(iii). Meanwhile, NPGCL/GENCO-III through its letter dated September 13, 2018 submitted a request to add Re-gasified Liquefied Natural Gas (RLNG) as an alternate fuel in its Generation Licence and to club/consider the new request with the above LPM. However, the Authority did not accede to the request and directed NPGCL/GENCO-III to file a separate LPM for inclusion of RLNG as an alternate fuel in its Generation Licence.



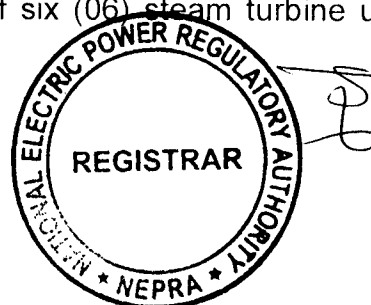
**(E). Findings/Analysis**

(i). The Authority examined the entire case in detail including the already granted Generation Licence of NPGCL, modifications allowed/made in the Generation Licence, information submitted along with the application of LPM, comments of stakeholders and relevant rules & regulations.

(ii). In this regard, the Authority has observed that in terms of Section-26 of the NEPRA Act read with Regulation-10 of the Licensing Regulations, it is empowered modify any licence through modification proposed by the Authority or the Licensee. In this regard, Regulation-10(2) of the Licensing Regulations stipulates that a licensee may, at any time during the term of a licence, communicate to the Authority an LPM setting out (a). the text of the proposed modification; (b). a statement of the reasons in support of the modification; and (c). a statement of the impact on the tariff, quality of service and the performance by the licensee of its obligations under the licence.

(iii). Regarding criteria of modification in licence, the Authority has observed that in terms of Regulation-10(5) of the Licensing Regulations, the Authority is entitled to modify a licence subject to and in accordance with such further changes as the Authority may deem fit if, in the opinion of the Authority such modification (a). does not adversely affect the performance by the licensee of its obligations; (b). does not cause the Authority to act or acquiesce in any act or omission of the licensee in a manner contrary to the provisions of the NEPRA Act or the rules or regulations made pursuant to it; (c). is or is likely to be beneficial to the consumers; (d). is reasonably necessary for the licensee to effectively and efficiently perform its obligations under the licence; and (e). is reasonably necessary to ensure the continuous, safe and reliable supply of electric power to the consumers keeping in view the financial and technical viability of the licensee.

(iv). According to the existing Generation Licence, the cumulative installed capacity of NPGCL/GENCO-III is 2059.65 MW, consisting of 1350 MW TPS Muzaffargarh, 144 MW GTPS Faisalabad and 565.65 MW CCPP Nandipur. The 1350 MW TPS Muzaffargarh consists of six (06) steam turbine units (i.e. 3x210

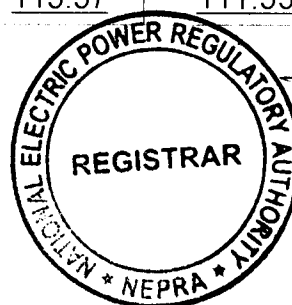


MW steam turbines of T.P.E, U.S.S.R and 1x320 MW + 2x200 MW steam turbines of CMEC China) installed during 1993 to 1997, using RFO as a primary fuel whereas natural gas is used as alternate fuel.

(v). Similarly, the 144 MW GTPS Faisalabad consists of 5 units (i.e. 4x25 MW gas turbines of AEG Kanis Germany and 1x44 MW steam turbine of HPEEC, China. The gas turbines were installed in the year 1975 whereas the steam turbine was commissioned in December 1994 for operation of the units in combined cycle mode. Whereas the 565.65 MW CCPP of Nandipur consists of 3x122.1 MW gas turbines of G.E and 1x199.35 MW steam turbine of Dongfang China, installed in the year 2014.

(vi). Considering the de-rated capacities as mentioned in schedule-II of the Generation Licence, the unit-wise allocation of auxiliary consumption to different units of the generation facilities of NPGCL/GENCO-III ranges from 0.76% (Min.) to 9.0% for unit-8 of GTPs Faisalabad and unit-5&6 of TPS Muzaffargarh respectively. The detail of the auxiliary consumption as per existing Generation Licence is given below:-

Power Station	Unit Detail	Installed Capacity (MW)	De-rated Capacity (MW)	Net Capacity after Auxiliary Cons. (MW)	Auxiliary Cons. (MW)/ %age of De-rated capacity
TPS Muzaffargarh / Plant-I	Unit No.1	210	200	188	12MW/ 6.0%
	Unit No.2	210	200	188	12MW/ 6.0%
	Unit No.3	210	200	188	12MW/ 6.0%
	Unit No.4	320	300	276	24MW/ 8.0%
	Unit No.5	200	200	182	18MW/ 9.0%
	Unit No.6	200	200	182	18MW/ 9.0%
	<u>Sub-Total-I</u>	<u>1350</u>	<u>1300</u>	<u>1204</u>	
GTPS Faisalabad/ Plant-II	Unit No. 5-7	75	58.57	57	1.57MW/ 2.68%
	Unit No. 8	25	19	18.81	0.19 MW/ 1.0%
	Unit No. 9	44	38	35.72	2.28 MW/ 6.38%
	<u>Sub-Total-II</u>	<u>144</u>	<u>115.57</u>	<u>111.53</u>	



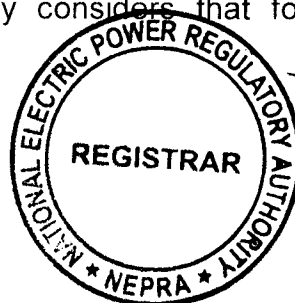
CCPP Nandipur/ Plant-III	Unit No.1-3	366.30	331.8	321.53	10.27MW/ 3.19%
	Unit No. 4	199.35	194.49	188.47	6.02 MW =3.097%
	Sub-Total-III	565.65	526.29	510.00	
<b>Grand Total</b>		<b>2059.65</b>	<b>1941.96</b>	<b>1825.53</b>	

(vii). Regarding the existing figures/numbers of auxiliary consumption of the units of TPS Muzaffargarh and GTPS Faisalabad, the Authority has observed that as per the original Generation Licence of NPGCL/GENCO-III, these figures are indicative only and based on the historic average auxiliary consumption provided by the licensee. Further the net capacities were required to be determined through procedure contained in the grid code, applicable documents or the bilateral contracts.

(viii). In this regard, through the current LPM, NPGCL/GENCO-III has proposed to change/revise the auxiliary consumptions of unit 1-6 of TPS Muzaffargarh, unit 1-4 of GTPS Faisalabad, unit 5-9 of GTPS Faisalabad and unit 1-2 of SPS Faisalabad as per latest tariff determination/dependable capacity test.

(ix). In this regard, the Authority has observed that through its determination dated May 02, 2018 the Authority excluded the in-efficient and outlived generating units (i.e. unit 1-4 of GTPS Faisalabad and unit 1-2 of SPS Faisalabad) from the Generation Licence of NPGCL. NPGCL/GENCO-III filed review petition against the determination of the Authority. However, the Authority through its Order dated February 28, 2019 decided to retain its earlier decision and rejected the review petition. In view of the said, the Authority considers that unit 1-4 of GTPS Faisalabad and unit 1-2 of SPS Faisalabad are no more part of the generation fleet of the NPGCL, therefore, revision of the auxiliary consumptions of these units does not merit consideration.

(x). Further, in the communicated LPM, NPGCL/GENCO-III has requested for revision of auxiliary consumptions at 100% Maximum Continuous Rating (MCR) as well as 50% MCR as per determined tariff/dependable capacity test and provision of percentage auxiliary consumption for part load operation of machines. In this regard, the Authority considers that for the purpose of



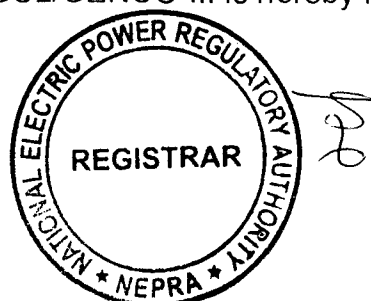
incorporation in the Generation Licence, only auxiliary consumption as a percentage of 100% MCR or installed capacity/de-rated are relevant. Accordingly, the relevant portion of the LPM communicated by NPGCL is reproduced below.

Power Station	Unit No.	Installed Capacity (MW)	De-Rated Capacity (100% MCR) (MW)	%age Aux Cons on 100% MCR	Final %age Cons on 100% MCR after Trans.
TPS Muzaffargarh	1	210.00	190.00	7.47	7.93
	2	210.00	182.50	7.34	7.80
	3	210.00	183.50	6.62	7.09
	4	320.00	272.20	9.18	9.64
	5	200.00	181.44	7.36	7.82
	6	200.00	173.88	8.63	9.08
	Sub Total	1350.00	1183.52	-	-
GTPS Faisalabad	Units 5-9	144.0	117.00	2.15%	2.15%
	Sub Total	144.0	117.00	-	-

(xi). In view of the above, the Authority has observed that according to the submissions of the NPGCL/dependable capacity test that there is a significant reduction in de-rated capacity and auxiliary consumptions (and subsequently in net dependable capacity) of TPS-Muzaffargarh whereas there is a slight improvement in the de-rated capacity and auxiliary consumption for unit 5-9 of GTPS Faisalabad. In this regard, NPGCL/GENCO-III has also filed a revised tariff petition-2019 based on the net capacities as communicated in the LPM.

#### (F). Decision of the Authority

(i). In view of the above, the Authority in terms of Section-26 of the NEPRA Act read with Regulation-10(11) of the Licensing Regulations approves the communicated LPM in the Generation Licence (No. GL/03/2002) of NPGCL/GENCO-III, to the extent of change/revision of auxiliary consumptions of TPS Muzaffargarh and Unit No. 5-9 of GTPS Faisalabad. Accordingly, the Generation Licence (No. GL/03/2002) of NPGCL/GENCO-III is hereby modified.





(ii). The modifications in the Generation Licence are attached as annexure to this determination. The modification in the Generation Licence is subject to the provisions contained in the NEPRA Act, relevant rules framed there under, terms & conditions of the Generation Licence and other applicable documents.

**Authority**

Rafique Ahmed Shaikh  
(Member)

*Rafique*  
6/4/20

Rehmatullah Baloch  
(Member)

Din not Attend

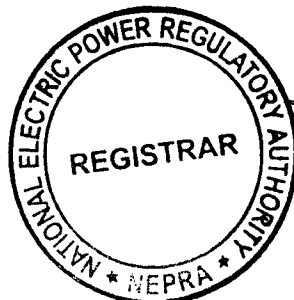
Saif Ullah Chattha  
(Member)

*Saif Ullah*  
8.4.2020

Engr. Bahadur Shah  
(Member/Vice Chairman)

Did not Attend

Tauseef H. Farooqi  
(Chairman)



*Tauseef*

13 04 20

*[Signature]*

*[Signature]*

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

**Islamabad – Pakistan**

**GENERATION LICENCE**

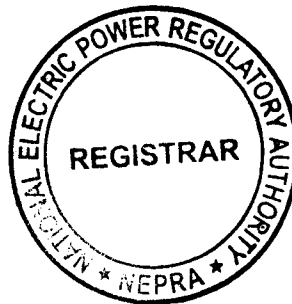
**No. GL/03/2002**

In exercise of the powers conferred under Section-26 of the Regulation of Generation, Transmission and Distribution of Electric Power Act, 1997, the Authority hereby modifies the Generation Licence (No. GL/03/2002) granted to Northern Power Generation Company Limited/NPGCL/GENC0-III (issued on July 01, 2002, subsequently modified on April 18, 2014, October 31, 2014 & May 02, 2018 and expiring on June 30, 2027), to the extent of changes mentioned as here under:-

- (a). Changes made in the **Schedule-II** of the Generation Licence are attached as **Annexure-A**.

This **Modification-IV** is given under my hand on this **13<sup>th</sup>** day of **April** **Two Thousand & Twenty**

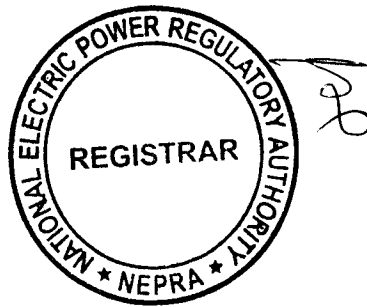
Registrar

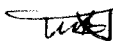


  
13 04 20



## Annexure-A



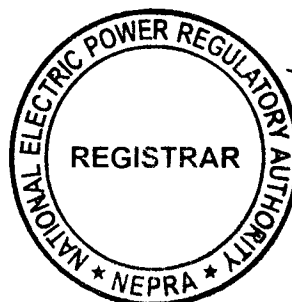




(i). **Changes made in Schedule-II of the Generation Licence**

The detail appearing at Schedule-II of the generation licence is replaced with the following:-

Power Station	Unit Detail	Installed Capacity (MW)	De-Rated Capacity (MW)	Auxiliary Consumption (%age of De-Rated Capacity)	Net Capacity (MW after Auxiliary Consumption)
Thermal Power Station (TPS) Muzaffargarh /Plant-I	Unit No.1	210	190	7.93%	174.93
	Unit No.2	210	182.5	7.8%	168.27
	Unit No.3	210	183.5	7.09%	170.49
	Unit No.4	320	272.2	9.64%	245.96
	Unit No.5	200	181.44	7.82%	167.25
	Unit No.6	200	173.88	9.08%	158.09
	<b>Sub-Total-I</b>	<b>1350</b>	<b>1183.52</b>		<b>1085.05</b>
Gas Turbine Power Station (GTPS) Faisalabad/ Plant-II	Unit No. 5-9	144	117.00	2.15%	114.48
	<b>Sub-Total-II</b>	<b>144</b>	<b>117.00</b>		<b>114.48</b>
CCPP Nandipur/ Plant-III	Unit No.1-3	366.30	331.8	3.19%	321.53
	Unit No. 4	199.35	194.49	3.097%	188.47
	<b>Sub-Total-III</b>	<b>565.65</b>	<b>526.29</b>	<b>3.10%</b>	<b>510.00</b>
<b>Grand Total (Sub-Total-I+ Sub-Total-II + Sub-Total-III)</b>		<b>2059.65</b>	<b>1826.81</b>		<b>1709.53</b>



Based on Natural Gas based Operation