

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

Registrar

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-106/14/6/7-22

October 05, 2015

Mr. Badar ul Hasan Chief Financial Officer Nishat Mills Limited (NML) 7 - Main Gulberg, Lahore.

Subject:

Modification-I in Generation Licence No: SGC/40/2008

Licence Application No. LAG-106 Nishat Mills Limited (NML)

Reference:

Your application vide letter No. Nil, dated January 27, 2015 (received on January

28, 2015).

It is intimidated that the Authority has approved "Licensee Proposed Modification" in Generation Licence No. SGC/40/2008 (issued on September 02, 2008) in respect of Nishat Mills Limited (NML), pursuant to Regulation 10(11)(a) 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 NML along with Modification-I in the Generation Licence No. SGC/40/2008, as approved by the Authority.

#### Encl:/As above



(Syed Safeer Hussain)

#### Copy to:

- 1. Chief Executive Officer, NTDC, 414-WAPDA House, Lahore
- 2. Chief Executive Officer, CPPA-G, 6<sup>th</sup> Floor, Shaheed-e-Millat Sectariat, Jinnah Avenue, Blue Area, Islamabad.
- 3. Chief Executive Officer, Faisalabad Electric Supply Company Limited (FESCO), Abdullahpur, Canal Bank Road, Faisalabad.
- 4. Chief Executive Officer, Lahore Electric Supply Company (LESCO), 22-A, Queens Road, Lahore.
- 5. Director General, Environment Protection Department, Government of Punjab, National Hockey Stadium, Ferozpur Road, Lahore.

## National Electric Power Regulatory Authority (NEPRA)

#### <u>Determination of the Authority</u> <u>in the Matter of Licensee Proposed Modification of</u> <u>Nishat Mills Limited</u>

September 30, 2015 Case No. LAG-106

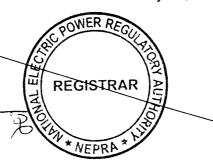
#### (A). Background

- (i). The Authority had granted a Generation Licence No.SGC/40/2008, dated September 02, 2008 to Nishat Mills Limited (NML) in terms of Section-15 of the Regulation of Generation, Transmission and Distribution of Electric Power Act, 1997 ("the NEPRA Act").
- (ii). The above mentioned Generation Licence was granted for an installed capacity of 77.886 MW for a term of ten (10) years and consists of three (03) distinctly located Generation Facilities/Power Plants. These included (a).Generation Facility-I/Power Plant-I with an installed capacity of 25.70 MW located at 5-KM, Nishat Avenue, off 22-KM, Ferozepur Road Lahore, (b). Generation Facility-II/Power Plant-II with an installed capacity of 14.3 MW located at 12-KM Sheikhupura-Faisalabad Road Bhikki, District Sheikhupura and (c). Generation Facility-III/Power Plant-III with an installed capacity of 37.886 MW located at Faisalabad-Sheikhpura Road, Nishatabad, Faisalabad.
- (iii). The Authority had also allowed a Second Tier Supply Authorization (STSA) to NML, for supplying to a Bulk Power Consumer (BPC) in the name of Masood Textile Mills Limited (MTML) to the tune of 1.2 MW, housed inside the premises of NML as its tenant.

#### (B). Submission of Modification

(i). In accordance with Regulation-10 of the NEPRA Licensing (Application & Modification Procedure) Regulations, 1999 ("the Regulations"), NML communicated a Licensee Proposed Modification (LPM) in its above mentioned Generation Licence on January 28, 2015.





Page 1 of 8

- (ii). In the "Text of the Proposed Modification", NML submitted that it has set up three new Generation Facilities/Power Plants. These included (a). Generation Facility IV/Power Plant-IV with an installed capacity of 4.22 MW located at 7-KM Nishat Avenue, off 22-KM Ferozepur Road, Lahore; (b). Generation Facility-V/Power Plant-V with an installed capacity of 1.744 MW located at 21-KM Ferozepur Road near Masjid Ibrahim Lahore; and (c). Generation Facility-VI/Power Plant-VI with an installed capacity of 19.38 MW located at 20-KM Sheikhupura-Faisalabad Road, Ferozwatwan, Sheikhupura. Further, NML submitted that the term of its Generation Licence was for ten (10) years from the date of its issuance. The same is going to expire on March 30, 2018. NML stated that it intends to get the term of the Generation Licence re-fixed based on the addition of new Generation Facilities/Power Plants.
- (iii). Regarding the "Statement of the Reasons in Support of the Modification", NML submitted that there is severe shortage of power supply with the utility companies. In view of the said, adequate power is not available to meet with the electric power needs of growing business of the Company. Therefore, new Generation Facilities/ Power Plants are being added to accommodate the electric power needs of its various textile units. Accordingly, it is imperative for NML to get its existing Generation Licence modified.
- (iv). About the statement of "the Impact on the Tariff, Quality of Service (QoS) and the Performance by the Licensee of its obligation under the Licence", NML submitted that as all the additional generated electric power will be utilized by NML and its attached industrial units, so there will be no impact on the tariff with MTML. Further, the proposed addition will not have any impact on the QoS and performance of its obligations under the Generation Licence.

#### (C). Processing of Modification

(i). After completion of all the required information as stipulated under the Regulation-10 (2) and 10 (3) of the Regulations, the Registrar accepted the application for further processing under the Regulation-10 (4) of the Regulations.

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(ii). The Registrar published the communicated LPM in one (01)

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Page 2 of 8

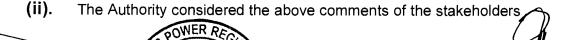
English and one (01) Urdu daily Newspaper on February 26, 2015, informing the general public about the modification and for submitting their views/comments in the matter.

(iii). Apart from the above, separate letters were also sent to Government Ministries/their attached Departments, representative organizations and individual experts, inviting their views and comments for the assistance of the Authority.

#### (D). Comments of Stakeholders

- (i). In response to the above, the Authority received comments from three (03) stakeholders. These included Sui Northern Gas Pipeline Limited (SNGPL), Ministry of Water and Power (MoW&P) and Faisalabad Electric Supply Company (FESCO). The salient points of the comments offered by the above mentioned stakeholders are summarized in the following paragraphs: -
  - (a). SNGPL commented that the new plants to be included in the Generation Licence are not based on Natural gas.

    Therefore, it has no objection to the modification;
  - (b). MoW&P stated that, upon provision of certain information regarding approval for installation of new Gas Turbines/ Diesel Engines and their technical specifications, the Authority may process the LPM; and
  - (c). FESCO informed that NML is a consumer of FESCO under B-3 tariff and is getting 4.950 MW from it. At the same time NML is selling 1.2 MW power to MTML. FESCO expressed that a Generation Company engaged in sale of electric power to a BPC may not at the same time be allowed to purchase energy from another Distribution Company to avoid recycling of power.



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Page 3 of 8

and observed that SNGPL expressed no objection to the communicated LPM. Whereas, FESCO and MoW&P supported the modification with certain observations. In view of the said, the Authority considered it appropriate seeking the perspective of the Licensee on the comments/observations of the stakeholders.

- (iii). On the observations of MoW&P, the Licensee/NML confirmed that the relevant competent authority has already allowed the installation of new Steam Turbine(s)/Diesel Engine(s). It also provided the required technical specifications of Steam Turbines being installed. Whereas, on the objections of FESCO, it was clarified that its load requirement at Generation Facility-III/Power Plant-III is 41.96 MW. However, only 4.950 MW is being purchased from FESCO for meeting the contingency requirements of the textile unit. Rest of the electric power requirements are being met with using in-house generation facilities.
- (iv). The Authority considered the above clarifications and found the same adequate. Accordingly, the Authority considered it appropriate to process the communicated LPM of NML as stipulated in the Regulations and the NEPRA Licensing (Generation) Rules, 2000 ("the Rules").

#### (E). Approval of Modification

- (i). The Authority has observed that it granted a Generation Licence No. SGC/40/2008, dated September 02, 2008 to NML consisting of three (03) Generation Facilities/Power Plants located at different/distinct locations as explained at Para (A) above. Further, the Authority also allowed NML an STSA for supplying power to one (01) BPC in terms of Section-22 of the NEPRA Act and Rule-7 of the Rules.
- (ii). The Authority has also observed that the current modification of NML pertains to addition of three (03) more Generation Facilities/Power Plants established recently. These included (a). Generation Facility-IV/Power Plant-IV installed at 7-KM, Nishat Avenue, off 22-KM, Ferozepur Road, Lahore; (b). Generation Facility-V/Power Plant-V set up at 21-KM, Ferozepur Road near Masjid Ibrahim Lahore; (c). Generation Facility-VI/Power Plant-VI located at 20-

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REGISTRAR Page 4 of 8

KM, Sheikhupura-Faisalabad Road, Ferozwatwan, District Sheikhupura. Further, NML intends to get the term of its Generation Licence re-fixed based on the said new Generating Units/Facilities. Apart from the said, NML also intends to supply 2.00 MW of electric power from its Generation Facility-I/Power Plant-I to a Manufacturing Unit (i.e. Unit No.39) located within Plant-IV at a distance of 2-KM by laying a feeder passing through Public Property. Further, NML also intends supplying another 2.00 MW from the same generation facility (i.e. Generation Facility-I/Power Plant-I) to another newly set up Textile Manufacturing facility (i.e. Unit No. 69) located about 3.2 KM away from it, by laying another feeder also passing through public property. Apart from the said, NML plans to supply 7.50 MW electric power from Generation Facility-II/Power Plant-II to its Manufacturing Unit (i.e. Manufacturing Unit-VI) located about 10.00 KM from it, by laying Double Circuit 11 KV line (i.e. two (02) 11 KV Feeders) passing through public/private property.

- (iii). The Authority is well aware that presently there is severe shortage of electricity in the country and there is huge Demand-Supply gap. In view of this, the Distribution Companies are facing difficulties in serving their consumers. Due to the prevailing situation, the Industrial Units are forced to make their own arrangements to meet their electricity requirements. In view of the said, the Authority considers that the initiative/proposal of NML/the Licensee of installing/adding more generation capacity to meet with the demands of its various Industrial Units is plausible.
- (iv). In this regard, it is clarified that the Authority is empowered in terms of the Section-26 of the NEPRA Act read with Regulation-10 of the Regulations to modify any licence, In this regard, Regulation-10(5) of the Regulations outlines the criteria for modifying any 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 the NEPRA Act; (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.

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Page 5 of 8

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.

- (v). The Authority considers that the current modification (a). does not adversely affect the performance of the Licensee/NML of its obligations. The LPM has not caused the Authority to act or acquiesce in any act or omission of the Licensee/NML in a manner contrary to the provisions of the NEPRA Act or the rules or regulations made pursuant to the NEPRA Act. The modification is likely to be beneficial to Licensee/NML and its affiliated industrial concerns as uninterrupted electric power will be available to the said Units of Licensee/NML. In fact, the modification is reasonably necessary for Licensee/NML to effectively and efficiently perform its obligations under the licence. Further, the modification is necessary to ensure the continuous, safe and reliable supply of electric power to the new Industrial concerns/affiliated units keeping in view the financial and technical viability of the Licensee/NML.
- (vi). The Authority has observed that for supplying to new Industrial concerns/affiliated units (located across the public property), the Licensee/NML will be required laying Feeder(s) on public property/road which is part of the Service Territory of LESCO for which it has exclusivity in terms of Section-21 and Article-7 of its Distribution Licence No. 03/DL/2002, dated April 01, 2002. In terms of Article-9 of its said Distribution Licence, LESCO is obligated to offer its distribution system to any Licensee supplying to a BPC, for which the Authority has been determining the use of system charges. In consideration of the said, LESCO may consider providing the connectivity for transporting the electric power for a BPC/affiliated unit from a generating company. Reportedly, in this particular case LESCO has not shown any intention to construct the proposed overhead Feeder/underground cable connecting the generation facility of the Licensee/NML to its prospective affiliated units as stated above. Whereas, Licensee/NML and its affiliated prospective Industrial Units are ready to construct such facilities. However, the construction of Feeder/laying of overhead Feeder/underground cable by the Licensee/NML and its proposed Industrial Units/Affiliated Units has implications, as it will require Modification in the Distribution Licence of LESCO for carving out part of its Service Territory to accommodate this overhead DOWER REG

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Page 6 of 8

Feeder/underground cable. In this regard, the Authority does not consider the Modification in the Distribution Licence of LESCO desirable as it will restrict the future expansion of the DISCO. Therefore, the Authority is of the view that NML or prospective Industrial Units/Affiliated Units may construct the distribution lines at their cost and hand over the same, either on lease basis or through outright sale to LESCO. However, LESCO would not connect the said facilities with its main distribution system. Further, operation and maintenance of the facilities may be carried out by Licensee/NML, prospective Industrial Units/Affiliated Units or LESCO on mutually agreed terms and conditions. Accordingly, the Authority directs Licensee/NML, its affiliated units/Industrial Units and LESCO to agree to a mutually beneficial arrangement for laying the Feeder/cable to allow supplying to the prospective proposed Industrial Units/Affiliated Units without violating the exclusivity of the DISCO. In laying the overhead Feeder/underground cable, the Licensee/NML and Industrial/Affiliated Units must adhere to all relevant construction, safety and operational standards. However, in case of any dispute, the matter may be referred to the Authority for adjudication and decision.

(vii). In accordance with Rule-6 of the Rules, the licensee is allowed to charge only such tariff for the provision of electric power as may be determined approved or specified by the Authority. Regarding the matter of rates, charges, terms and conditions of tariff between NML and its affiliated Units/Industrial Units, the same will not affect any other consumer or third party. Therefore for the purpose of tariff, the Authority considers it appropriate directing NML and its Affiliated Units/Industrial Units agreeing to a bilateral agreement and submitting the same to it for approval and record. Accordingly, NML will then be allowed to charge the agreed tariff subsequent to the approval of the LPM in the Generation Licence, in accordance with Rule-6(1)(b) of the Rules.

(viii). As explained above, NML also requested to get the term of its Generation Licence (going to expire on March 30, 2018), re-fixed as new generating units are being added to the Generation Licence. In this regard, the Authority has considered the provisions of Rule-5 (1) of the Rules which states that the unless the Licensee agrees to a shorter term, the term of the Generation Licence will be commensurate with the maximum expected useful life of the units comprised in the Generation Facility/Facilities. In this regard, the Authority has

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Page 7 of 8

observed that in terms of Article-4 of the already issued Generation Licence, NML may apply for renewal of the Licence ninety (90) days prior to the expiry of the term of the Licence. The existing Generation Licence is valid up till March 30, 2018. Therefore, the Licensee/NML may approach the Authority for extension of the term of its Generation Licence before January 01, 2018.

(ix). The Authority is satisfied that the Licensee/NML has complied with all the requirements of the Regulations pertaining to the LPM. Accordingly, the Authority in terms of Regulation-10(11)(a) of the Regulations approves the communicated LPM with changes i.e. addition of different generation facilities and allowing supplying to different industrial units/affiliated units without re-fixing the term of the Generation Licence. Accordingly, the already granted Generation Licence (No. SGC/40/2008, dated September 02, 2008) in the name of the Licensee/NML is hereby modified. The changes in "Face Sheet", "Articles of the Generation Licence", "Schedule-I" and "Schedule-II" of the Generation Licence are attached as annexures to this determination whereas the STSA will remain unchanged. The grant of the LPM will be 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**

Syed Masood-ul-Hassan Naqvi (Member)

Himayat Ullah Khan (Member)

Khawaja Muhammad Naeem (Member)

Maj. (R) Haroon Rashid (Member)/(Vice Chairman)

Brig. (R) Tariq Saddozai (Chairman) Jus-22

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Page 8 of 8

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

#### **GENERATION LICENCE**

No. SGC/40/2008

In exercise of the Powers conferred upon under Section-26 of the Regulation of Generation, Transmission and Distribution of Electric Power Act 1997, the Authority hereby modifies the Generation Licence No.SGC/40/2008 dated September 02, 2008 and expiring on March 30, 2018, granted to Nishat Mills Limited to the extent of changes mentioned as here under:-

- (a). Installed capacity mentioned in the Face Sheet may be read as 128.241 MW instead of 77.886 MW:
- (b). Changes in Articles of the Generation Licence attached as Revised/Modified Articles of the Generation Licence;
- (c). Changes in Schedule-I attached as Revised/Modified Schedule-I; and
- (d). Changes in Schedule-II attached as Revised/Modified
  Schedule-II.

This Modification-I is given under my hand on this \_\_\_\_\_\_ day of

October Two Thousand & Fifteen

Registrar



### Article-1 Definitions

#### 1.1 In this Licence

- (a). "Act" means the Regulation of Generation, Transmission and Distribution of Electric Power Act, 1997 (XL of 1997);
- (b). "Authority" means the National Electric Power Regulatory Authority constituted under section-3 of the Act;
- (c). "Bulk Power Consumer-BPC" means a consumer who purchases or receives electric power at one premises, in an amount of one megawatt or more;
- (d). "Co-Generation Power Plant" means the generation facility for simultaneous production of both electric power and heat or steam for industrial processes from a common fuel source;
- (e). "FESCO" means Faisalabad Electric Supply Company Limited and its successors or permitted assigns;
- (f). "LESCO" means Lahore Electric Supply Company Limited and its successors or permitted assigns;
- (g). "Licensee" means Nishat Mills Limited and its successors or permitted assigns;
- (h). "Power Purchaser" means any BPC or affiliated industrial unit of the Licensee which purchases electricity from the Licensee, pursuant to a Power Purchase Agreement for procurement of electricity;
- (i). "Power Purchase Agreement" 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 electrical power/energy

REGISTRAR

generated by the generation facility, as may be amended by the



Page 2 of 6 of Revised/Modified Articles (Modification-I) parties thereto from time to time;

- (j). "Regulations" means "National Electric Power Regulatory Authority Licensing (Application & Modification Procedure) Regulations, 1999 as amended or replaced from time to time";
- (k). "Rules" means "the National Electric Power Regulatory Authority Licensing (Generation) Rules, 2000";
- 1.2 Words and expressions used but not defined herein bear the meaning given thereto in the Act or in the Rules.

### Article-2 Application of Rules

This Licence is issued subject to the provisions of the Rules, as amended from time to time.

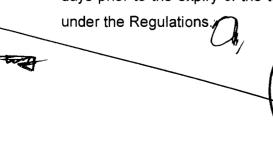
### Article-3 Generation Facilities

- 3.1 The location, size (capacity in MW), technology, interconnection arrangements, technical limits, technical functional specifications and other details specific to the power generation facilities/Co-Generation Power Plant of the Licensee are set out in Schedule-I of this Licence.
- 3.2 The net capacity of the generation facilities/Co-Generation Power Plant of the Licensee is set out in Schedule-II hereto.

### Article-4 Term of Licence

- **4.1** This Licence is valid from the date of its issue (i.e. September 02, 2008) and will remain valid upto March 30, 2018.
- 4.2 Unless suspended or revoked earlier, the Licensee may within ninety (90) days prior to the expiry of the term of the Licence, apply for renewal of the Licence

REGISTRAR



Page 3 of 6 of Revised/Modified Articles (Modification-I)

#### <u>Article-5</u> Licence fee

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

#### Article-6 Tariff

The Licensee shall charge only such tariff which has been determined, approved or specified by the Authority in terms of Rule-6 of the Rules.

#### <u>Article-7</u> <u>Competitive Trading Arrangement</u>

- 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

- **8.1** The Licensee shall keep complete and accurate record and data in respect of all aspects of the generation business and the second-tier supply business, in their original as well as in electronic form.
- **8.2** Without prejudice to the provisions of sub-rule 15(3) of the Rules, unless provided otherwise under the law or the applicable documents, all record and data shall be maintained for a period of five (5) years after the creation of such record or over the content of the c

REGISTRAR

Page 4 of 6 of Revised/Modified Articles (Modification-I)



data. The Licensee shall not destroy or dispose off any such record or data after the aforesaid period without thirty days prior written notice to the Authority. The Licensee shall also not dispose off or destroy any record or data which the Authority directs the Licensee to preserve.

**8.3** For the purpose of sub-rule (1) of Rule-19 of the Rules, copies of records and data shall be retained in standard and electronic form and all such records and data shall, subject to just claims of confidentiality, be accessible by authorized officers of the Authority.

#### <u>Article-9</u> <u>Generating Capacity Reserve Requirements</u>

The installed generating capacity of the Licensee shall not fall below 85% (95% in the case of single consumer on a feeder) of the connected load and generating capacity of the largest installed unit of the Licensee.

### Article-10 Compliance with Performance Standards

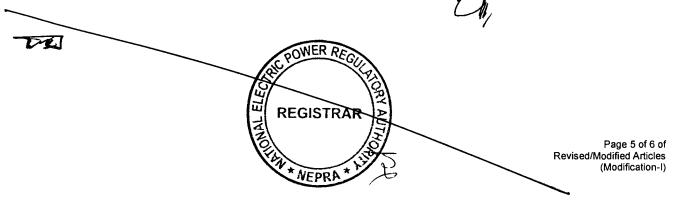
The Licensee shall comply with the relevant provisions of the National Electric Power Regulatory Authority Performance Standards (Generation) Rules, 2009 as amended from time to time.

### Article-11 Compliance with Environmental Standards

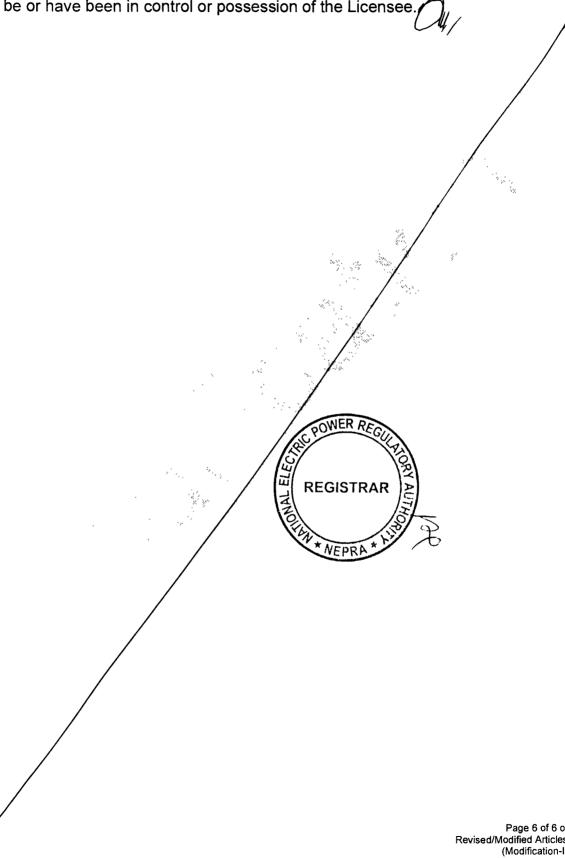
The Licensee shall comply with the environmental standards as may be prescribed by the relevant competent authority from time to time.

### Article-12 Provision of Information

**12.1** The obligation of the Licensee to provide information to the Authority shall be in accordance with Section 44 of the Act.



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



Page 6 of 6 of Revised/Modified Articles (Modification-I)

#### SCHEDULE-I (Revised/Modified) Modification-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



Page 1 of 57 of Revised/Modified Schedule-I (Modification-I)

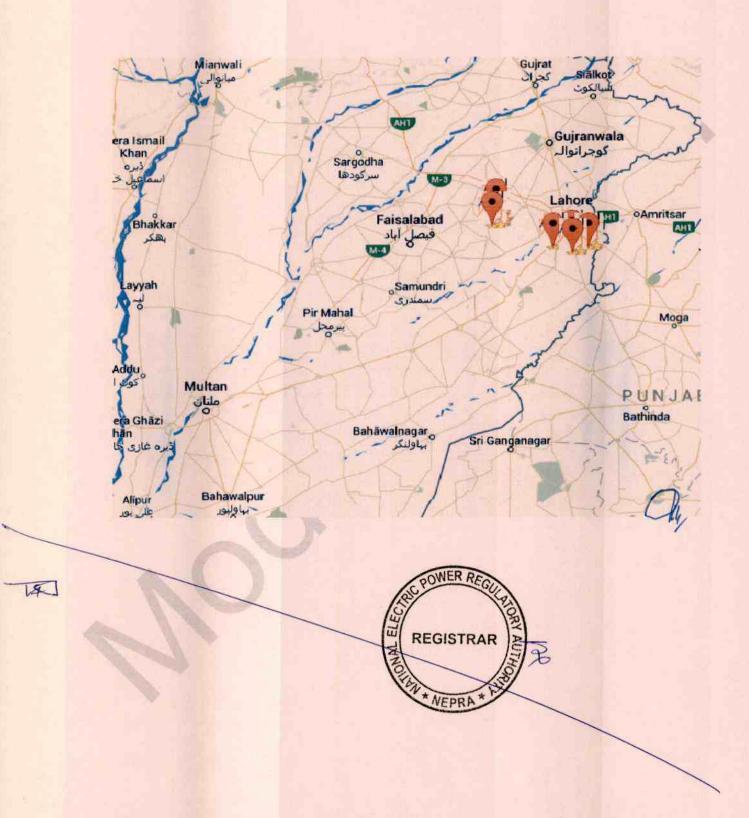
## Location of All the Generation Facilities/Power Plants of the Licensee/NML on the Map of Pakistan







## Location of All the Generation Facilities/Power Plants of the Licensee/NML on the Map of the Province of Punjab



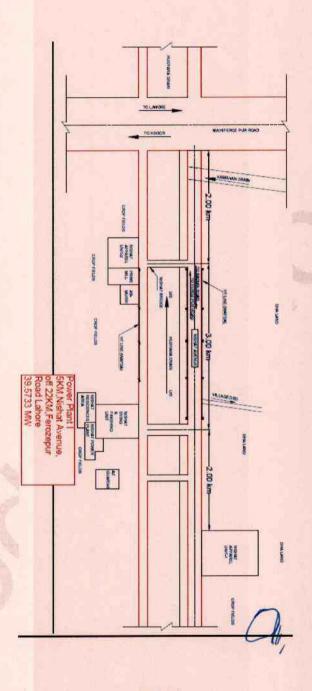
## General Information About the Licensee/Nishat Mills LimitedNML

(i).	Name of Company/ Licensee.	Nishat Mills Limited		
(ii).	Registered /Business Office Address.	Nishat House, 53-A, Lawrence Road, Lahore, in the Province of Punjab.		
		Generation Facility-I/ Power Plant-I	5 KM, Nishat Avenue, off 22 KM, Ferozepur Road Lahore.	
	Location of Generation Facilities/Power Plants.	Generation Facility-II/ Power Plant-II	12 KM, Sheikhupura- Faisalabad Road Bhikki, Sheikhupura.	
-		Generation Facility-III/ Power Plant-III	Sheikhupura-Faisalabad Road, Nishatabad, Faisalabad.	
(iii).		Generation Facility-IV/ Power Plant-IV	7 KM, Nishat Avenue, off 22 KM, Ferozepur Road, Lahore.	
		Generation Facility-V/ Power Plant-V	21 KM, Ferozepur Road near Masjid Ibrahim Lahore.	
		Generation Facility-VI/ Power Plant-VI	20 KM, Faisalabad- Sheikhupura Road, Ferozwatwan Sheikhupura.	





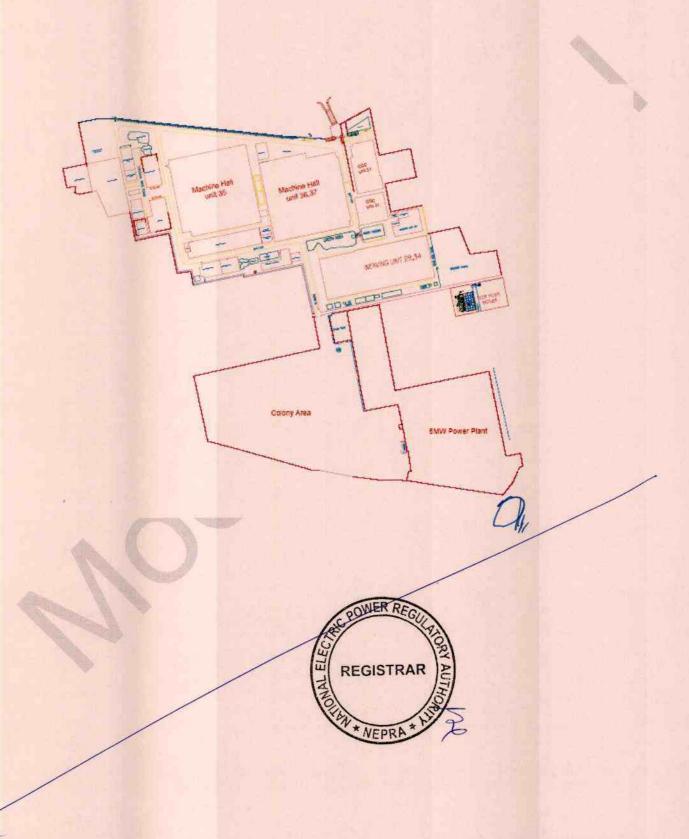
# Location of the Generation Facility-I/Power Plant-I of the Licensee/NML





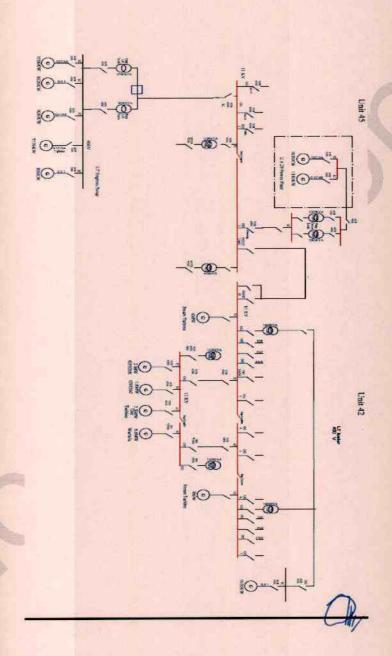


# Layout of the Generation Facility-I/Power Plant-I of the Licensee/NML



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# Single line Diagram (Electrical) of the Generation Facility-I/Power Plant-I of the Licensee/NML







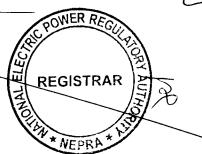
#### <u>Detail</u> of Generation Facility-I/ <u>Power Plant-I</u>

#### (A). Plant Configuration

(i).	Installed Capacity of the Generation Facility-I/Power Plant-I (Gross ISO).	39.5733 MW		
(ii).	Type of Technology.	Gas Turbine (G (GE) and Diese	T), Steam Tui I Engine (DE)	rbine (ST), Gas Engine
		Unit No.1	1x3.44 MW	Centaur C40 USA
		Unit No.2	1x1.10 MW	Saturn S20 USA
		Unit No.3	1x6.30 MW	HTC NG 32/25 China
		†Unit No.4	1x9.00 MW	HTC NG 40/45 China
	Units/Size/Make & Model.	Unit No.5,7%	3x1.00 MW	G3516A USA
(iii).		Unit No.8	1x1.10 MW	G3516B USA
		Unit No.9	1x2.00 MW	G3520E USA
		Unit No.10	1x1.90 MW	G3520C USA
		-Unit No.11	1x8.73 MW	20V34DF Finland
		Unit No.12-13	2x1.0 MW	D3512 USA
		Unit No. 14	1x1.0 MW	KTA50G3 UK
		Unit No. 1	2002	
		Unit No. 2	2005	
	Commercial	Unit No. 3	2012	
	Operation Date-	Unit No. 4	2015	
(iv).	COD (of each Unit) of the	Unit No. 5-7	2002	
(14).	Generation	Unit No. 8	2005	
	Facility-I/Power	Unit No. 9	2013	
	Plant-I.	Unit No. 10	2008	
		Unit No. 11 Unit No. 12-13	2015	
		Unit No. 12-13	2001 2006	
	Expected Heaftel	Unit No. 14	25	
(v).	Expected Useful Life (years) of			
	Life (years) or	Unit No. 2	25	

<sup>†</sup> New Addition

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Page 8 of 57 of Revised/Modified Schedule-I (Modification-I)

			in the Province of Punjab
	each Unit of the	Unit No. 3	30
	Generation	Unit No. 4	30
	Facility-I/Power Plant-I from COD.	Unit No. 5-7	25
		Unit No. 8	25
		Unit No. 9	25
		Unit No. 10	25
		Unit No. 11	25
		Unit No. 12-13	25
		Unit No. 14	25
	Remaining	Unit No. 1	19
	Useful Life	Unit No. 2	22
	(years) of each	Unit No. 3	Not installed at that time.
	Unit of the	Unit No. 4	Not installed at that time.
	Generation	Unit No. 5-7	19
(vi).	Facility-I/Power Plant-I at the time of grant of Generation Licence dated September 02, 2008.	Unit No. 8	22
( , , ,		Unit No. 9	Not installed at that time.
		Unit No. 10	25
		Unit No. 11	Not installed at that time.
		Unit No. 12-13	18
		Unit No. 14	23
	Remaining	Unit No. 1	12
	Useful Life	Unit No. 2	15
	(years) of each	Unit No. 3	27
	Unit of the	Unit No. 4	30
	Generation	Unit No. 5-7	12
(vii)	Facility-I/Power	Unit No. 8	15
(vii).	Plant-I at the	Unit No. 9	23
	time of issuance	Unit No. 10	18
	of this	Unit No. 11	25
	Modification	Unit No. 12-13	11
	dated October <u>⇔5</u> **, 2015.	Unit No. 14	16

#### (B). <u>Fuel Details</u>

(i).	Primary Fuel.	Natural Gas (NG), Coal and Biomass.
(ii).	Alternative Fuel.	Heavy Fuel Oil (HFO)/Diesel Oil (DO).
(iii).	Fuel Source for each of the above (i.e. Imported/ Indigenous).	Imported/Indigenous.

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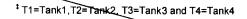


Page 9 of 57 of Revised/Modified Schedule-I (Modification-I)

	1		·	7		1111	HE FIONI	ice of Punjac	
	Fuel Supplier for	NG	Coal	Biomass	HFO		DO		
(iv).	each of the above.	SNGPL	Imported & Local	Local	1 .	Imported & Local		Imported & Local	
(v).	Fuel Supply Arrangement	Through	Pipelines/	Trucks/Tan	ks.		<del></del>		
(vi).	No of Storage	NG	Coal	Biomass	HFO	HFO			
(VI).	Tanks/ Trucks.	NA	02 Trucks	01 Trucks	04 Tank	s 🦸	04 Tank	ss.	
		NG	Coal	Biomass	HFO		DO		
	Storage				, <b>⊤1</b> ‡∖	169 Tons	T1	154600 Liters	
(vii).	Capacity of each Tank.	NA	10000	10000	T2	169 Tons	T2	42900 Liters	
			MT each	MT	Т3	144 Tons	ТЗ	75398 Liters	
				9 P	T4	144 Tons	T4	75398 Liters	
(viii).	Gross Storage.	N/A	20000 MT	10000 MT	626 Tons		3482 Liters		

#### (C). <u>Emission Values</u>

	* 1	NG	Coal	Bio-Mass	HFO	DO
(i).	SO <sub>x</sub>	-	≤400 mg/Nm³	≤400 mg/Nm³	150 mg/Nm <sup>3</sup>	-
(ii).	NO <sub>x</sub>	248 mg/Nm <sup>3</sup>	450 mg/Nm <sup>3</sup>	400 mg/Nm <sup>3</sup>	540 mg/Nm <sup>3</sup>	-
(iii).	со	171 mg/nm³	200 mg/Nm <sup>3</sup>	250 mg/Nm <sup>3</sup>	300 mg/Nm³	





Page 10 of 57 of Revised/Modified Schedule-I (Modification-I)

(iv).	PM <sub>10</sub>	-	Dust ≤50 mg/Nm³	Dust ≤50 mg/Nm³	Max 105 mg/nm³	-
	1				_	i

#### (D). Cooling System

(i).		Irrigation Department, Government of Punjab/Water
, ,	Source/Cycle.	Turbines (ground water).

#### (E). Plant Characteristics

		GT	GE	DE <sup>*</sup>
(i).	Generation Voltage.	11KV & 0.4 KV	11KV & 0.4 KV	11KV & 0.4 KV
(ii).	Frequency.	50Hz	50Hz	50Hz
(iii).	Power Factor.	0.8 Lagging	0.8 Lagging	0.8 Lagging
(iv).	Automatic Generation Control (AGC).	Yes	Yes	Yes
(v).	Ramping Rate.	25 KW/Second	15 KW/Second	18 KW/Second
(vi).	Time required to Synchronize to Grid and loading the complex to full load.	Not connected to grid 2.3 Minutes to Synchronize	Not connected to grid 2.5 Minutes for all gas engines	Not connected to grid 2.8 Minutes

#### (F). <u>Interconnection Arrangement</u>

(i). The electric power from the Generation Facility-I/Power Plant-I shall be dispersed to the Designated Affiliated Units/Industrial Concerns of the Licensee/NML (i.e. unit No.39 and Unit No.69). The detail of the same is provided in the subsequent section to follow.





Page 11 of 57 of Revised/Modified Schedule-I (Modification-I)

## Information Pertaining to the Designated Affiliated Unit/Industrial concern (i.e. Unit No. 39) of the Licensee/NML Supplied from the Generation Facility-I/Power Plant-I of the Licensee/NML

(i).	Unit/I 39)	tion of the Designated Affiliated ndustrial Concern (i.e. Unit No. of the Licensee/NML (distance or identity of premises).	Nishat Mills Limited-NML (Unit No. 39) Located within Generation Facility-IV/Power Plant-IV i.e. 7 KM, Nishat Avenue, off 22 KM, Ferozepur Road, Lahore.
(ii).	the D	racted Capacity and Load Factor of Designated Affiliated Unit/Industrial ern (i.e. Unit No. 39).	2.00 MW/Variable.
	Spec	ify Whether	
(iii).	(a).	The Designated Affiliated Unit/Industrial Concern (i.e. Unit No. 39) is an associate undertaking of the Licensee/NML-If yes, specify percentage ownership of equity;	The Designated Affiliated Unit/Industrial Concern (i.e. Unit No. 39) is an associate undertaking of the Licensee/NML with common directorship. The percentage ownership of equity is 100%;
	(b).	There are common directorships;	Yes.
	(c).	Can exercise influence or control over the other.	Yes.
		fy Nature of Contractual ionship.	
(iv).	(a).	Between the Designated Affiliated Unit/Industrial Concern (i.e. Unit No. 39) and the Licensee/NML;	Firm supply of electricity on a continuous basis.
	(b).	Between Designated Affiliated Unit/Industrial Concern (i.e. Unit No. 39) and host DISCO.	Yes. Connection With LESCO exists under tariff B-2 and sanctioned load is 485 KW.
(v).	releva	other network information deemed ant to disclosure to or deration by the Authority.	N/A O





Page 12 of 57 of Revised/Modified Schedule-I (Modification-I)

# Information Regarding Distribution Network for Supply of Electric Power to the Designated Affiliated Unit/Industrial concern (i.e. Unit No. 39) of the Licensee/NML Supplied from the Generation Facility-I/Power Plant-I of the Licensee/NML

(i)	No. 5	f Cooder(e)	0 (04)
(i).	NO. O	f Feeder(s).	One (01)
(ii).	Length of Feeder.		Feeder No.1
	In res	spect of the Feeder, describe the	2.4 KM The Feeder passes through the
(iii).	etc.) passe custo	rty (streets, farms, Agriculture land through which under or over it es right up to the premises of mers, whether it crosses over or es near the DISCO(s) lines.	Licensee NML, Public Property (Rohi Nala Road) and Property of Affiliated Unit/Yes Crosses over and near the LESCO(s) line.
	Desig	ner owned by the Licensee/NML, nated Affiliated Unit/Industrial ern (i.e. Unit No. 39) or DISCO.	
(vi).	(a).	If owned by DISCO, furnish particulars of contractual arrangement;	The feeder will be constructed by the Licensee/NML or the Designated Affiliated Unit/Industrial Concern (i.e. Unit No. 39) and will be handed over to LESCO through sale or lease as decided by the parties mutually;
	(b).	Operation and Maintenance responsibility of the Feeder.	The Operation and Maintenance of the Feeder will be by LESCO or the Licensee/NML or the Designated Affiliated Unit/Industrial Concern (i.e. Unit No. 39) as decided by the parties mutually.
(V).	DISCO yes, arrang	ner connection with network of O exists (whether active or not), if provide details of connection gements (both technical and actual).	Yes.
(vi).	releva	other network information deemed int for disclosure to or deration by the Authority.	N/A OU

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Page 13 of 57 of Revised/Modified Schedule-I (Modification-I)

## Information Pertaining to the Designated Affiliated Unit/Industrial Concern (i.e. Unit No. 69) of the Licensee/NML Supplied from the Generation Facility-I/Power Plant-I of the Licensee/NML

(i).	Unit/l	tion of the Designated Affiliated ndustrial concern (i.e. Unit No. 69) IML (distance and/or identity of ises).	
(ii).	the D	racted Capacity and Load Factor of Designated Affiliated Unit/Industrial ern (i.e. Unit No. 69).	
	Spec	ify Whether	
(iii).	(a). The Designated Affiliated Unit/Industrial concern (i.e. Unit No. 69) is an associate undertaking of the Licensee/NML-If yes, specify percentage ownership of equity;		The Designated Affiliated Unit/Industrial concern (i.e. Unit No. 69) is an associate undertaking of the Licensee/NML with common directorship. The percentage ownership of equity is 100%.
	(b).	There are common directorships;	Yes.
	(c).	Can exercise influence or control over the other	Yes.
	Spec Relat	ify Nature of Contractual	
(iv).	(a).	Between the Designated Affiliated Unit/Industrial concern (i.e. Unit No. 69) and the Licensee/NML;	Firm supply of electricity on a continuous basis.
	(b). Between the Designated Affiliated Unit/Industrial concern (i.e. Unit No. 69) and host DISCO.		No Connection With LESCO.
(v).	releva	other network information deemed ant to disclosure to or deration by the Authority.	N/A Oly

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Page 14 of 57 of Revised/Modified Schedule-I (Modification-I)

## Information Regarding Distribution Network for Supply of Electric Power to the Designated Affiliated Unit/Industrial concern (i.e. Unit No. 69) of the Licensee/NML Supplied from the Generation Facility-I/Power Plant-I of the Licensee/NML

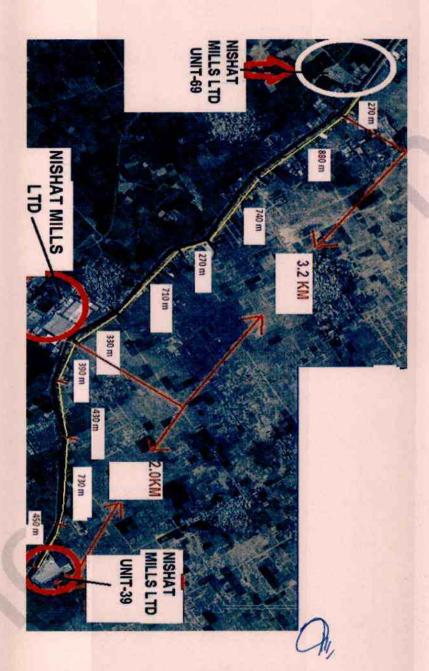
r -					
(i).	No. of Feeder(s).		One (01)		
(ii).	Length of Feeder.		Feeder No.2 2.7 KM		
(iii).	In respect of the Feeder, describe the property (streets, farms, Agriculture land etc.) through which under or over it passes right up to the premises of customers, whether it crosses over or passes near the DISCO(s) lines.		The Feeder passes through the Licensee/NML, Public Property (Rohi Nala Road) and Property		
(vi).	Whether owned by the Licensee/NML, the Designated Affiliated Unit/Industrial concern (i.e. Unit No. 69) or DISCO.				
	(a).	If owned by DISCO, furnish particulars of contractual arrangement;	The feeder will be constructed by the Licensee/NML or the Designated Affiliated Unit/Industrial concern (i.e. Unit No. 69) and will be handed over to LESCO through sale or lease as decided by the parties mutually.		
	(b).	Operation and Maintenance responsibility of the Feeder.	The Operation and Maintenance of the Feeder will be by LESCO or the Licensee/NML or the Designated Affiliated Unit/Industrial concern (i.e. Unit No. 69) as decided by the parties mutually.		
(v).	Whether connection with network of DISCO exists (whether active or not), if yes, provide details of connection arrangements (both technical and contractual).		No.		
(vi).	releva	other network information deemed ant for disclosure to or deration by the Authority.	N/A		

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Page 15 of 57 of Revised/Modified Schedule-I (Modification-I)

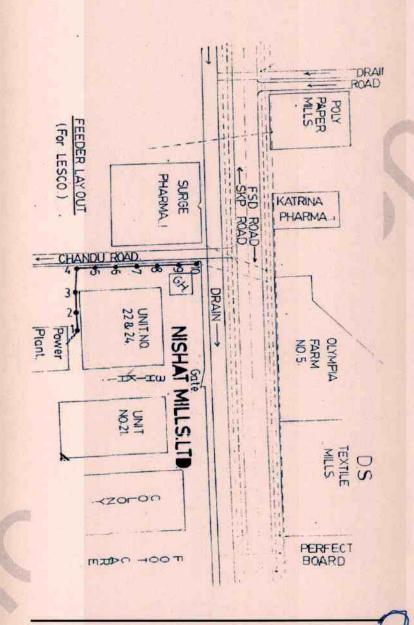
Supply Route from the Generation Facility-I/Power Plant-I of the Licensee/NML to Designated Affiliated Units/Industrial concerns (i.e. Unit No. 39 and Unit No. 69) of the Licensee/NML







# Location of the Generation Facility-II/Power Plant-II of the Licensee/NML





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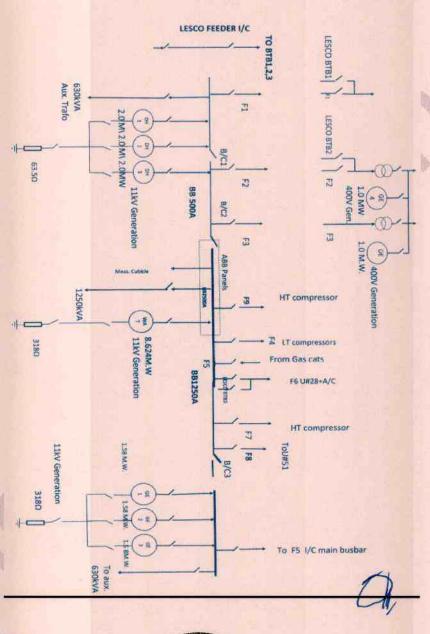
Page 17 of 57 of Revised/Modified Schedule-I (Modification-I)

# Layout of the Generation Facility-II/Power Plant-II of the Licensee/NML



Page 18 of 57 of Revised/Modified Schedule-I (Modification-I)

# Single line Diagram (Electrical) of the Generation Facility-II/Power Plant-II of the Licensee/NML







#### <u>Detail</u> of Generation Facility-II/ <u>Power Plant-II</u>

#### (A). Plant Configuration

(i).	Installed Capacity of the Generation Facility-II/Power Plant-II (Gross ISO).	21.364 MW		
(ii).	Type of Technology.	Furnace Oil, GE and DE		
	Units/Size /Make & Model.	Unit No.	Capacity (MW)	Make/Model
;		Unit No.1-3	1.58	Gas Engine(Caterpillar) G3516C USA
		Unit No. 4	1.0	Gas Engine(Caterpillar) G3516A USA
(iii).		Unit No. 5-7	Ž.0	Daihatsu Engine(HFO) 8DL32 Japan
		Unit No. 8	1.0	Diesel Engine(Caterpillar) D3512 USA
		Unit No. 9	8.6240	Wartsila Engine(gas/liquid) 20V34DF Finland
	Commercial Operation Date- COD (of each Unit) of the Generation Facility-II/Power Plant-II.	Unit No.1-3	2010	
		Unit No. 4	2001	
(iv).		Unit No. 5-7	1995	
		Unit No. 8	1990	
		Unit No. 9	2014	
	Expected Useful Life (years) of each Unit of the Generation	Unit No.1-3	25	
(v).		Unit No. 4	25	
		Unit No. 5-7	25	

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Page 20 of 57 of Revised/Modified Schedule-I (Modification-I)

	· · · · · · · · · · · · · · · · · · ·		in the Province of Punjab	
	Facility-II/Power Plant-II from	Unit No. 8	25	
	COD.	Unit No. 9	25	
	Remaining	Unit No.1-3	Not installed at that time.	
	Useful Life (years) of each Unit of the Generation Facility-II/Power Plant-II at the time of grant of Generation Licence dated September 02, 2008.	Unit No. 4	18	
		Unit No. 5-7	12	
(vi)		Unit No. 8	07	
		Unit No. 9	Not installed at that time.	
	Remaining Useful Life (years) of each Unit of the Generation Facility-II/Power Plant-II at the time of issuance of this Modification dated October 05 <sup>+(-)</sup> 2015.	Unit No.1-3	20	
		Unit No. 4	11	
		Unit No. 5-7	05	
(vi)		Unit No. 8	-	
(*1)		Unit No. 9	24 Qu	





#### (B). Fuel Details

(i).	Primary Fuel.	Heavy Fuel Oil (HFO) and NG				
(ii).	Alternative Fuel.	Diesel Oil (DO)				
(iii).	Fuel Source for each of the above (i.e. Imported/ Indigenous).	Imported/Indigenous				
	Fuel	NG	HFO	1	DO	\$Ser
(iv).	Supplier for each of the above.	SNGPL	Oil Marketing Company (OMC)		омс	
(v).	Fuel Supply Arrangement	Through Pipelines			Tankers	
(1.4)	No of	NG	HFO		DO	
(vi).	Storage Tanks.	N/A	02.T	anks	03 Ta	nks
		NG	HFO	HFO		
(vii)	Storage	.,	T1 937.588 Tons		T1	22680 Liters
(vii).	Capacity of each Tank.	N/A	T2 959.784 Tons		T2	22680 Liters
					Т3	46000 Liters
(, ;:::\	Gross	NG′;	HFO		DO	
(viii).	Storage.	N/A	N/A 1897.372 Tons 91360 Liter		) Liters	

#### (C). <u>Emission Values</u>

		NG	HFO	DO
(i).	SO <sub>x</sub>	Not Detected	1500 mg/Nm <sup>3</sup>	Not Detected
(ii).	NO <sub>x</sub>	288-391mg/Nm <sup>3</sup>	530-565 mg/Nm <sup>3</sup>	434-436 mg/Nm <sup>3</sup>
(iii).	co	608-796 mg/Nm <sup>3</sup>	51-316 mg/Nm <sup>3</sup>	205-206 mg/Nm <sup>3</sup>

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Page 22 of 57 of Revised/Modified Schedule-I (Modification-I)

(iv).	PM <sub>10</sub>	32.40-38.70 mg/Nm <sup>3</sup>	43.10-60.23 mg/Nm <sup>3</sup>	42.20 mg/Nm <sup>3</sup>
-------	------------------	--------------------------------	--------------------------------	--------------------------

#### (D). Cooling System

(i).	Cooling Water Source/Cycle.	Ground Water Turbines.

#### (E). Plant Characteristics

		HFO	GE	DE
(i).	Generation Voltage.	11KV	11KV & 0.4 KV	0.4KV
(ii).	Frequency.	50Hz	50Hz	50Hz
(iii).	Power Factor.	0.8 Lagging	0.8 Lagging	0.8 Lagging
(iv).	Automatic Generation Control (AGC).	Yes	Yes	Yes
(v).	Ramping Rate.	20 KW/Sec	15 KW/Sec	20 KW/Sec
(vi).	Time required to Synchronize to Grid and loading the complex to full load.	Not Connected to Grid 07 Minutes to Synchronize	Not Connected to Grid 10 Minutes to Synchronize	Not Connected to Grid 03 Minutes to Synchronize

#### (G). <u>Interconnection Arrangement</u>

(i). The electric power from the Generation Facility-II/Power Plant-II shall be dispersed to the Designated Affiliated Unit/Industrial Concern (i.e. Manufacturing Plant-VI) of the Licensee/NML. The detail of the same is provided in the subsequent section to follow.





Page 23 of 57 of Revised/Modified Schedule-I (Modification-I)

### Information Pertaining to the Designated Affiliated Unit/Industrial Concern (i.e. Manufacturing Plant-VI) of the Licensee/NML Supplied from the Generation Facility-II/Power Plant-II of the Licensee/NML

(i).	Unit/I Manu Licen	tion of the Designated Affiliated ndustrial Concern (i.e. afacturing Plant-VI) of the see/NML (distance and/or identity emises).		
(ii).	the D	racted Capacity and Load Factor of Designated Affiliated Unit/Industrial ern (i.e. Manufacturing Plant-VI).	7.50 MW/Variable.	
	Spec	ify Whether	· .	
(iii).	(a).	The Designated Affiliated Unit/Industrial Concern (i.e. Manufacturing Plant-VI) is an associate undertaking of the Licensee/NML-If yes, specify percentage ownership of equity;	The Designated Affiliated Unit/Industrial Concern (i.e. Manufacturing Plant-VI) is an associate undertaking of the Licensee/NML with common directorship. The percentage ownership of equity is 100%.	
	(b).	There are common directorships	Yes.	
	(c).	Can exercise influence or control over the other.	Yes.	
	Speci Relat	ify Nature of Contractual ionship.		
(iv).	(a). Between the Designated Affiliated Unit/Industrial Concern (i.e. Manufacturing Plant-VI) and the Licensee/NML;		Firm supply of electricity on a continuous basis.	
	(b).	Between the Designated Affiliated Unit/Industrial Concern (i.e. Manufacturing Plant-VI) and host DISCO.	Yes. Two separate Connections With LESCO exist under tariff B-3 (with sanctioned load of 4.95 MW and 3.65 MW).	
(v).	releva	other network information deemed ant to disclosure to or deration by the Authority.	N/A	

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Page 24 of 57 of Revised/Modified Schedule-I (Modification-I)

## Information Regarding Distribution Network for Supply of Electric Power to the Designated Affiliated Unit/Industrial Concern (i.e. Manufacturing Plant-VI) of the Licensee/NML Supplied from the Generation Facility-II/Power Plant-II of the Licensee/NML

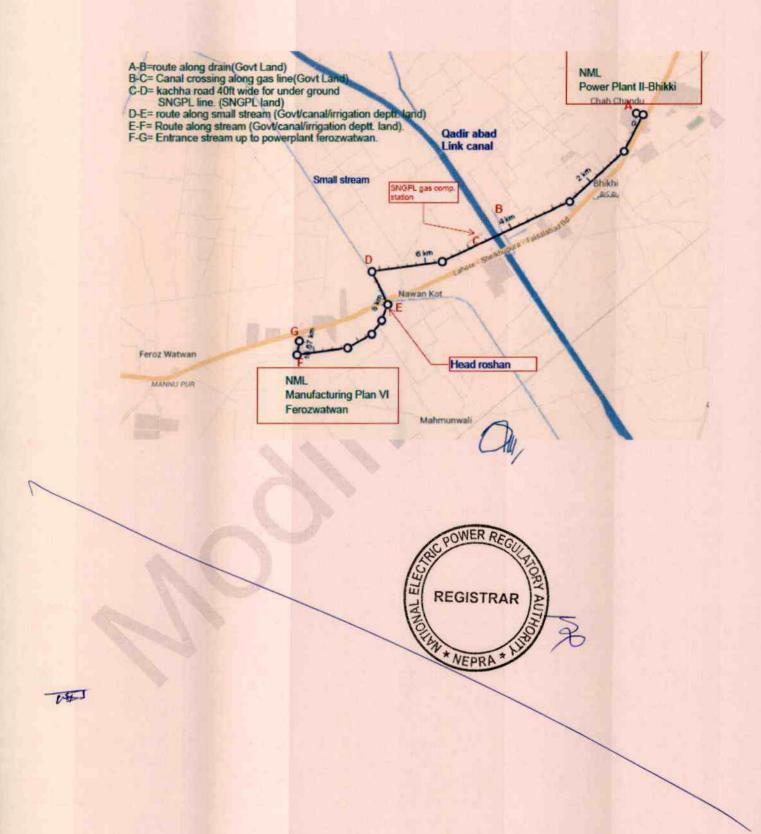
(i).	No. of	f Feeder(s).	Two (02)		
(ii).	Lengt	h of Feeder(s).	Feeder No.1 Feeder No.2  12.50 KM 12.50 KM		
(iii).	prope etc.) to passe custor	spect of the Feeders, describe the rty (streets, farms, Agriculture land through which under or over they right up to the premises of mers, whether they crosses over or near the DISCO(s) lines.	The Feeders will pass through the Licensee/NML, Public Property (Faisalabad-Sheikhupura Road) and Property of the Designated Affiliated Unit/Industrial Concern (i.e. Manufacturing Plant-VI). Yes they Cross over and Pass near the LESCO line.		
	Whether owned by the Licensee/NML, Designated Affiliated Units/Industrial concerns or DISCO.				
(vi).	(a).	If owned by DISCO, furnish particulars of contractual arrangement;			
	(b).	Operation and Maintenance responsibility of the Feeder.	of the Feeder or the L Designated Unit/Industrial Manufacturing	`	
(v).	DISCO yes, arrang	ner connection with network of O exists (whether active or not), if provide details of connection gements (both technical and actual).		Yes.	
(vi).	releva	other network information deemed ant for disclosure to or deration by the Authority.		N/A OL	

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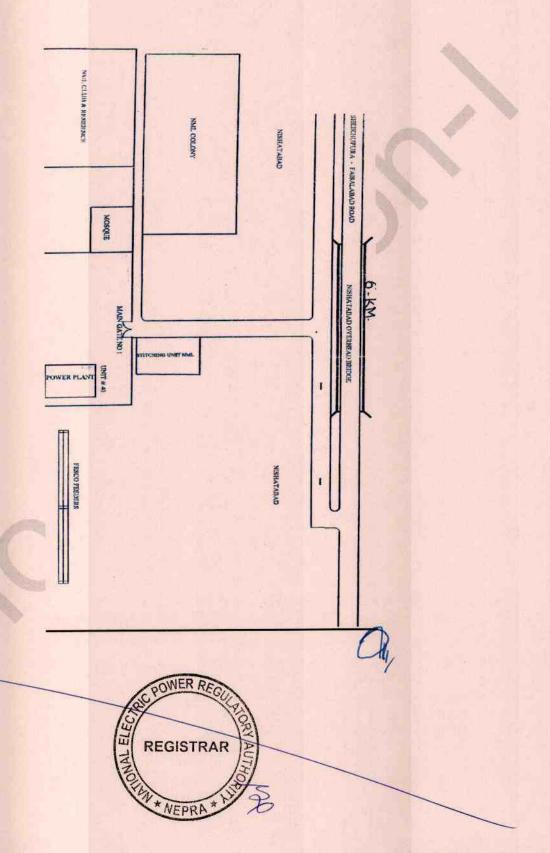


Page 25 of 57 of Revised/Modified Schedule-I (Modification-I)

### Supply Route from the Generation Facility-II/Power Plant-II of the Licensee/NML to Designated Affiliated Unit/Industrial concern (i.e. Manufacturing Plant-VI) of the Licensee/NML

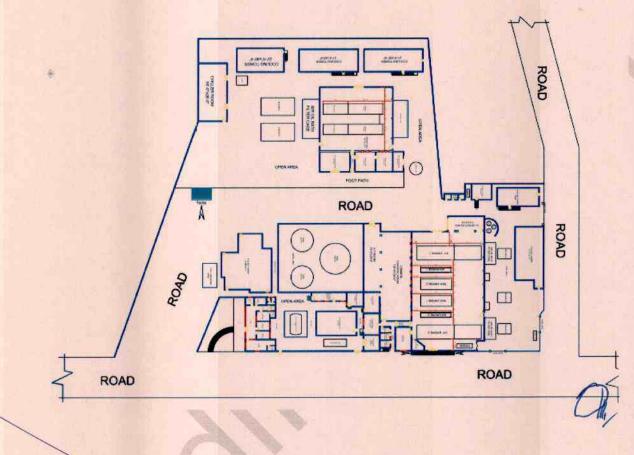


# Location of the Generation Facility-III/Power Plant-III of the Licensee/NML



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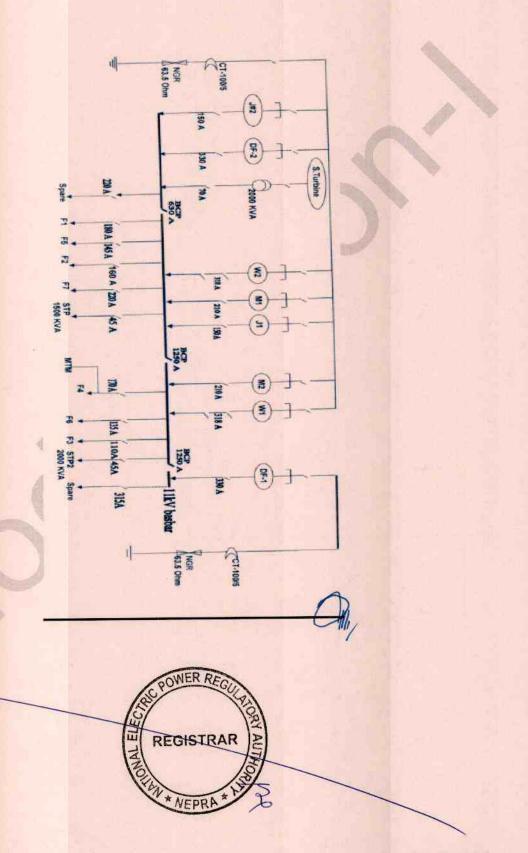
# Layout of the Generation Facility-III/Power Plant-III of the Licensee/NML







# Single line Diagram (Electrical) of the Generation Facility-III/Power Plant-III of the Licensee/NML





#### <u>Detail</u> of Generation Facility-III/ <u>Power Plant-III</u>

#### (A). Plant Configuration

(i).	Installed Capacity of the Generation Facility-III/ Power Plant-III (Gross ISO).	41.960 MW			
(ii).	Type of Technology.	GE, DE and ST	ν;	and the second s	
		Unit No.	Capacity (MW)	Make/Model	
		Unit No.1	1.2	STM-C2 Germany	
		Unit No. 2 & 3	<b>5</b> .9	GE (Wartsila) 18V32DF Finland	
(iii).	Units/Size /Make & Model.	Unit No. 4 & 5	5.9	GE (Wartsila) 18V34SG Finland	
		Unit No. 6 & 7	5.88	Mak Engine (HFO) 16M453C Germany	
	· A	Unit No. 8 & 9	2.7	GE (Jenbacher) JGS620GS-N.L Austria	
		Unit No.1	2008		
	Commercial Operation	Unit No. 2 & 3	2008-11		
(iv).	Date-COD (of each unit) of	Unit No. 4 & 5	2004-2005		
	the Generation Facility-III.	Unit No. 6 & 7	1991		
		Unit No. 8 & 9	2005-2006		
(.)	Expected	Unit No.1	30		
(v).	Useful Life (years) of the	Unit No. 2 & 3	25		

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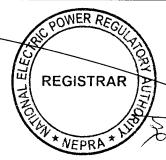
Page 30 of 57 of Revised/Modified Schedule-I (Modification-I)

			in the Province of Punjab
	Generation Facility-III from COD.	Unit No. 4 & 5	25
		Unit No. 6 & 7	25
		Unit No. 8 & 9	25
	Remaining Useful Life	Unit No.1	29
	(years) of each Unit of the	Unit No. 2 & 3	23-25
(vi).	Generation Facility-III at	Unit No. 4 & 5	22
	the time of grant of Generation Licence dated September 02, 2008.	Unit No. 6 & 7	08
		Unit No. 8 & 9	22-23
	Remaining	Unit No.1	23
	Useful Life (years) of each	Unit No. 2 & 3	18-21
(vii)	Unit of the Generation  (vii). Facility-III at the time of issuance of this Modification dated October	Unit No. 4 & 5	14
(*").		Unit No. 6 & 7	01
		Unit No. 8 & 9	15

#### (B). Fuel Details

(i).	Primary Fuel.	HFO and NG		
(ii).	Alternative Fuel.	Diesel Oil (DO)		
(iii).	Fuel Source for each of the above (i.e. Imported/ Indigenous).	Imported/Indigenous		
(iv).	Fuel Supplier for each of	NG HFO DO		DO
(10).	the above	SNGPL	OMC	OMC

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Page 31 of 57 of Revised/Modified Schedule-I (Modification-I)

(v).	Fuel Supply Arrangement.	Through Pipelines	Tankers		Tankers		
(vi)	No of Storage	NG	HFO	HFO		DO	
(vi).	Tanks.	-	01 Tan	01 Tanks		02 Tanks	
	Storage	NG	HFO		DO		
(vii).	Capacity of each Tank.	y of	T4	1800	T1	250 m <sup>3</sup>	
	each rank.		T1 Tons		T2	250 m <sup>3</sup>	
(v.iii)	Gross	NG	HFO	HFO			
(VIII).	(viii). Storage.	-	1800 Tons		500 m <sup>3</sup>		

#### (C). Emission Values

		ИГО	- PO
	1	HFO	DO
(i).	SO <sub>x</sub>	900 mg/nm <sup>3</sup>	Nil
(ii).	NO <sub>x</sub>	487 mg/nm <sup>3</sup>	241.2 mg/m <sup>3</sup>
(iii).	СО	560 mg/nm <sup>3</sup>	483.8 mg/m <sup>3</sup>
(iv).	PM <sub>10</sub>	150 mg/nm <sup>3</sup>	-

#### (D). Cooling System

(i).	L.COULDO VVSTOL SOULCOLL VCIO	Irrigation Department, Government of Punjab/WASA/Water Turbines.
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#### (E). Plant Characteristics

		ST	GE	DE
(i).	Generation Voltage	0.4KV	11KV	11KV
(ii).	Frequency	50Hz	50Hz	50Hz
(iii).	Power Factor	0.8 Lagging	0.8 Lagging	0.8 Lagging

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Page 32 of 57 of Revised/Modified Schedule-I (Modification-I)

(iv).	Automatic Generation Control (AGC)	Yes	Yes	Yes
(v).	Ramping Rate	25 KW/Sec	8-15 KW/Sec	14 KW/Sec
(vi).	Time required to Synchronize to Grid and loading the complex to full load	Not connected to grid 03 Minutes to Synchronize	Not connected to grid 6.2 Minutes to Synchronize	Not connected to grid 05 Minutes to Synchronize

#### (F). <u>Interconnection Arrangement</u>

(i). The electric power from the Generation Facility-III/Power Plant-III is mostly used for self consumption. Further, 1.2 MW surplus electric power being dispersed to designated Bulk Power Consumer-BPC in the name of Masood Textile Mills Limited (MTML) which is a tenant of the Licensee/NML. The detail of the same is provided in the subsequent section to follow.



Page 33 of 57 of Revised/Modified Schedule-I (Modification-I)



#### Information Pertaining to the BPC (i.e. MTML) of the Licensee/NML

(i).	Location of BPC (i.e. MTML) (distance and/or identity of premises).		6-KM Faisalabad-Sheikhpura Road, Nishatabad, Faisalabad. (Inside the premises of the Licensee/NML as its tenet).
(ii).	Contracted Capacity and Load Factor of BPC (i.e. MTML).		1.2 MW/Load Factor = 0.90%
	Specif	y Whether	
(iii).	(a).	BPC (i.e. MTML) is an associate undertaking of the Licensee/NML-If yes, specify percentage. ownership of equity;	ŅÖ.
	(b).	There are common directorships;	No.
	(c).	Either can exercise influence or control over the other.	No.
		y Nature of Contractual onship.	*,
(iv).	(a).	Between BPC (i.e. MTML) and the Licensee/NML.	Firm Supply of Electricity on Continuous basis.
	(b).	BPC (i.e. MTML) and host DISCO.	No network connection exists with FESCO.
(v).	Any other Network Information deemed relevant to disclosure to or consideration by the Authority.		N/A Oly



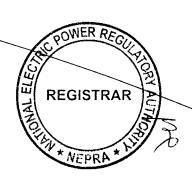


Page 34 of 57 of Revised/Modified Schedule-I (Modification-I)

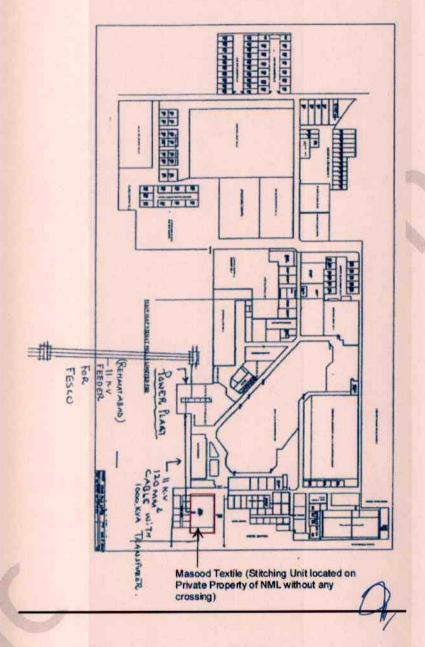
### Information Regarding Distribution Network for Supply of Power to MTML of the Licensee/NML

(i).	No. o	of Feeder(s)	One (01)
(ii).	Leng	th of Feeder	200 Meter
(iii).	(stree which prem	spect of the Feeder, describe the property ets, farms, Agriculture land etc.) through under or over it passes right up to the ises of customer, whether it crosses over sses near the DISCO(s) lines.	The 11 KV underground cable supplying power to MTML (which is a tenant of the Licensee) is located on private property of NML, without crossing any FESCO(s) lines.
	Whether owned by the Licensee/NML, BPC (i.e. MTML) or DISCO.		
(iv).	(a).	If owned by DISCO, please furnish particulars of contractual arrangement.	Owned by the Licensee/ NML.
	(b).	Operation and Maintenance responsibility for Feeder.	Operation and Maintenance is responsibility of the Licensee/NML.
(v).	exists detai	ther connection with network of DISCO (whether active or not), if yes, provide is of connection arrangements (both pical and contractual).	No.
(vi).		other network information deemed relevant sclosure to or consideration by NEPRA.	N/A O

194



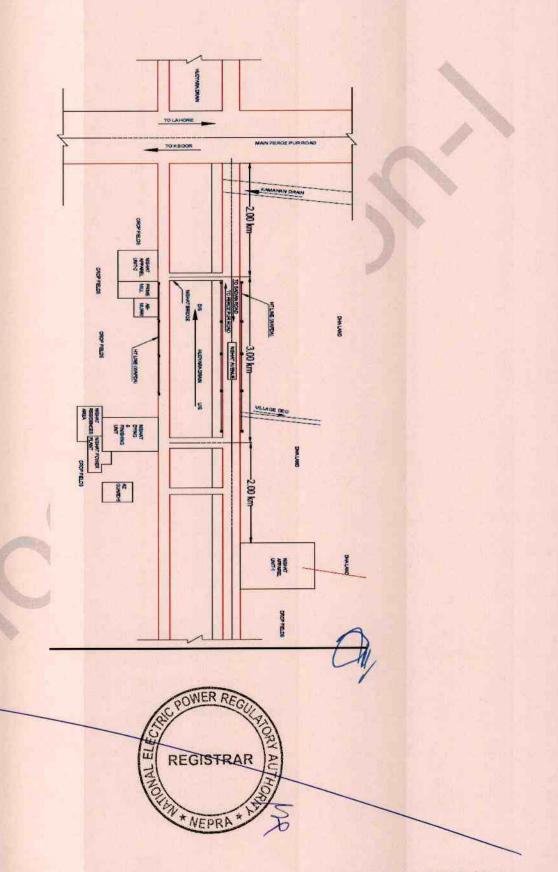
### Location of BPC (i.e. MTML) of the Licensee/NML





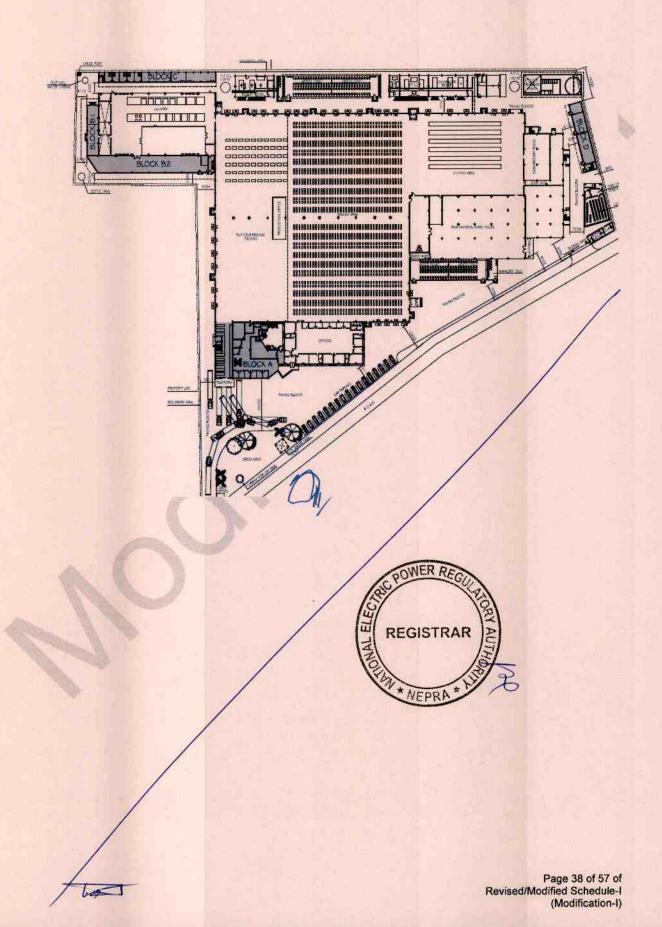
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# Location of the Generation Facility-IV/Power Plant-IV of the Licensee/NML

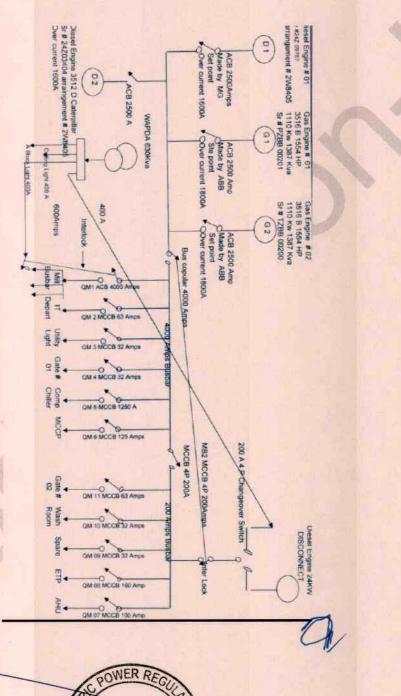


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### Layout of the Generation Facility-IV/Power Plant-IV of the Licensee/NML



### Single line Diagram (Electrical) of the Generation Facility-IV/Power Plant-IV of the Licensee/NML







#### <u>Detail</u> of Generation Facility-IV/ <u>Power Plant-IV</u>

#### (A). Plant Configuration

(i).	Installed Capacity of the Generation Facility-IV/ Power Plant-IV (Gross ISO).	4.220 MW		ng Ag
(ii).	Type of Technology.	GE and DE		
		Unit No.	Capacity (MW)	Make/Model
	Units/Size	Unit No.1 & 2	1.11	GE (Caterpillar) 3516B USA
(iii).	(iii). Onits/Size /Make & Model.	Unit No. 3	1.0	DE(Caterpillar) 3512D USA
		Unit No. 4	1.0	DE(Caterpillar) 3512D USA
	Commercial Operation	Unit No.1 & 2	2007	
(iv).	Date-COD (of each Unit) of the Generation	Ůnit No. 3	2001	
	Facility- IV/Power Plant- IV	Unit No. 4	1993	
	Expected Useful Life	Unit No.1 & 2	25	
(v).	(years) of each Unit of the Generation	Unit No. 3	25	
	Facility- IV/Power Plant- IV from COD.	Unit No. 4	25	

154



Page 40 of 57 of Revised/Modifled Schedule-I (Modification-I)

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(vi)	Remaining Useful Life (years) of each Unit of the Generation Facility- IV/Power Plant- IV at the time of grant of Generation Licence dated September 02,	Unit No.1 & 2	Not installed at that time.
		Unit No. 3	Not installed at that time.
	2008.	Unit No. 4	Not installed at that time.
Unit of the Generation Facility- (vii). IV/Power PI IV at the tim of issuance this Modification dated Octob	Useful Life (years) of each Unit of the	Unit No.1 & 2	17
		Unit No. 3	11
	IV/Power Plant- IV at the time of issuance of	Unit No. 4	03

#### (B). Fuel Details

(i).	Primary Fuel.	HSD and NG			
(ii).	Alternative Fuel.	Diesel Oil (DO)	Diesel Oil (DO)		
(iii).	Fuel Source for each of the above (i.e. Imported/ Indigenous).	Imported/Indigenous			
(iv)	Fuel Supplier for each of the	NG	DO		
(iv).	above.	SNGPL	ОМС		
(v).	Fuel Supply Arrangement	Through Pipelines Tankers			
	Read 4 of 57 a				

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Page 41 of 57 of Revised/Modified Schedule-I (Modification-I)

(vi).	No. of Storage Tanks.	NG	DO	
		-	02 Tanks	
	(vii). Storage Capacity of each Tank (in Tons).	NG	DO	
(vii).			T1	2000 m <sup>3</sup>
			T2	2000 m <sup>3</sup>
(viii).	Gross Storage (in Tons).	NG	DO	
		-	4000 m <sup>3</sup>	

#### (C). Emission Values

		7,3345		
		DO	, HSD	NG
(i).	SO <sub>x</sub>	Nil	Nife S	Nil
(ii).	NO <sub>x</sub>	162.6-252.8 mg/Nm <sup>3</sup>	162.6-252.8 mg/Nm <sup>3</sup>	162.6-252.8 mg/Nm <sup>3</sup>
(iii).	со	226.25-250.8 mg/Nm <sup>3</sup>	226.25-250.8 mg/Nm <sup>3</sup>	226.25-250.8 mg/Nm <sup>3</sup>
(iv).	PM <sub>10</sub>	A STATE OF THE STA	-	-

#### (D). Cooling System

(i). Cooling Water Source/Cycle	Ground Water
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#### (E). Plant Characteristics

		GE	DE
(i).	Generation Voltage.	0.4 KV	0.4 KV
(ii).	Frequency.	50 Hz	50 Hz
(iii).	Power Factor.	0.8 Lagging	0.8 Lagging
(iv).	Automatic Generation Control (AGC).	Yes.	Yes.

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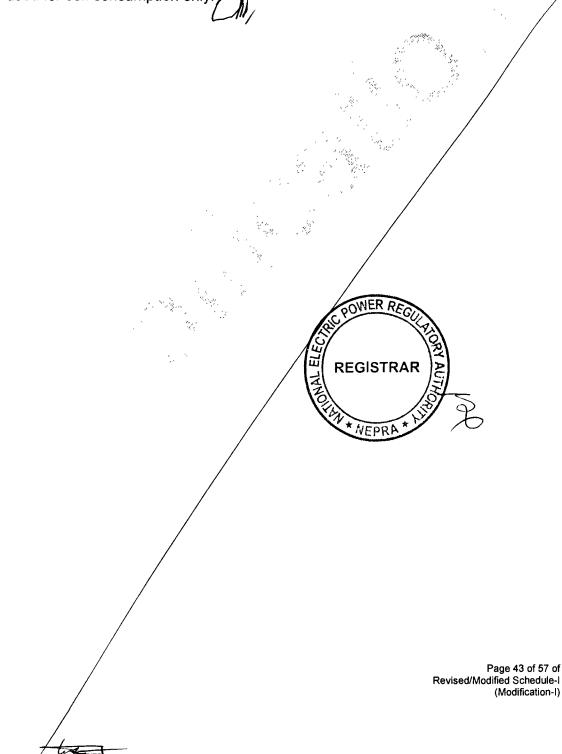
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Page 42 of 57 of Revised/Modified Schedule-I (Modification-I)

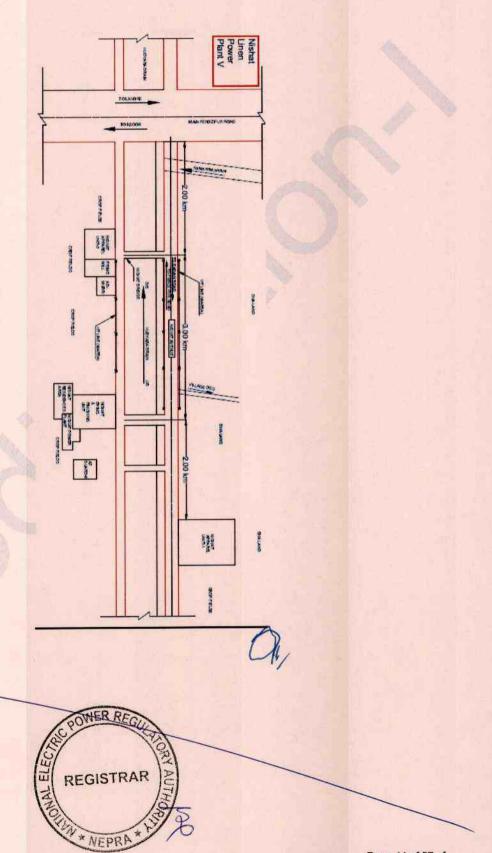
(v).	Ramping Rate.	15 KW/Second	15 KW/Second
(vi).	Time required to Synchronize to Grid and loading the complex to full load.	Not Connected to Grid. 3 Minutes to Synchronize	Not Connected to Grid. 3 Minutes to Synchronize

#### (F). <u>Interconnection Arrangement</u>

(i). The electric power from the Generation Facility-IV/Power Plant-IV is used for self consumption only.



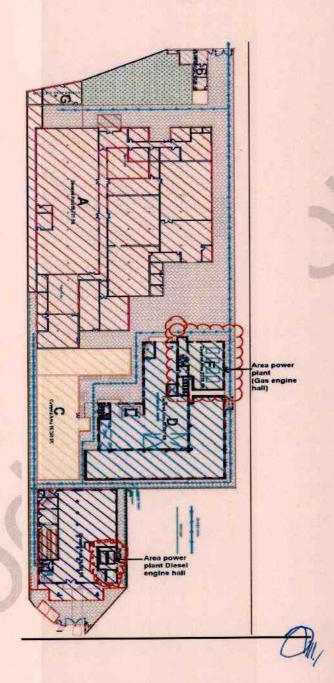
# Location of the Generation Facility-V/Power Plant-V of the Licensee/NML



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Page 44 of 57 of Revised/Modified Schedule-I (Modification-I)

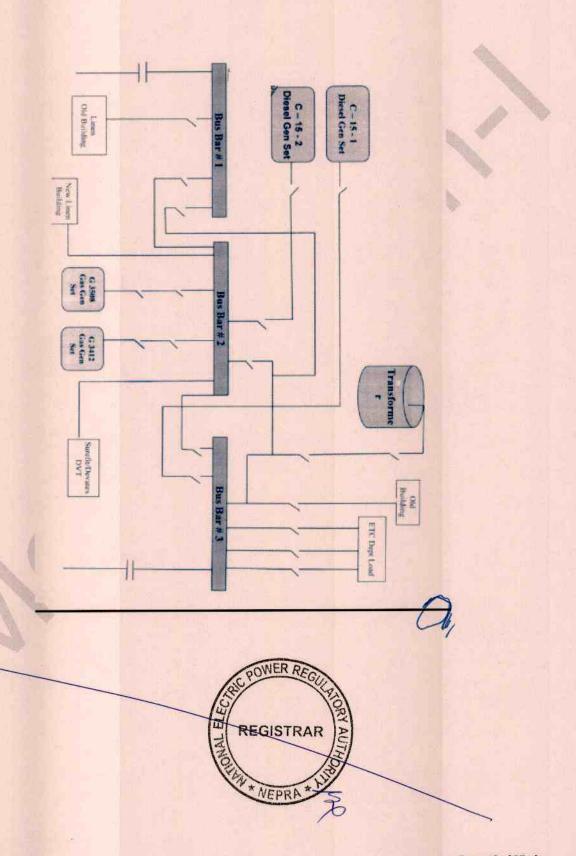
# Layout of the Generation Facility-V/Power Plant-V of the Licensee/NML







# Single line Diagram (Electrical) of the Generation Facility-V/Power Plant-V of the Licensee/NML



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#### <u>Detail</u> of Generation Facility-V/ <u>Power Plant-V</u>

#### (A). Plant Configuration

(i).	Installed Capacity of the Generation Facility-V/ Power Plant-V (Gross ISO).	1.7 <b>44 MW</b>		25 - NA 45
(ii).	Type of Technology.	GE and DE		
		Unit No.	Capacity (MW)	Make/Model
		Unit No.1	0.360	GE (Caterpillar) G3412 USA
	Units/Size /Make & Model.	Unit No. 2	0.480	GE(Caterpillar) G3508 USA
(iii).		Unit No. 3 & 4	0.400	DE(Caterpillar) C15 USA
		Unit No. 5	0.052	DE(Olympian) 65-5 Czech Republic
		Unit No. 6	0.052	DE(Olympian) 65-9 UK
	Commercial Operation Date-COD (of each Unit) of the Generation	Unit No.1	2001	
		Unit No. 2	2005	
(iv).		Unit No. 3 & 4	2010	
	Facility- V/Power Plant-	Unit No. 5	2010	
	V.	Unit No. 6	2013	
	Expected	Unit No.1	25	
(v).	Useful Life (years) of each	Unit No. 2	25	
(V).	Unit of the Generation	Unit No. 3 & 4	25	
	Facility-V/ Power Plant-V	Unit No. 5	25	
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Page 47 of 57 of Revised/Modified Schedule-I (Modification-I)

	in the Province of Punja				
	from COD.	Unit No. 6	25		
	Remaining	Unit No.1	18		
	Useful Life (years) of each	Unit No. 2	22		
	Unit of the Generation	Unit No. 3 & 4	Not installed at that time.		
(vi).	Facility- V/Power Plant- V at the time of grant of Generation Licence dated September 02, 2008.	Unit No. 5	Not installed at that time.		
		Unit No. 6	Not installed at that time.		
	Remaining Useful Life	Unit No.1	11		
	(years) of each Unit of the Generation	Unit No. 2	15		
(vii).	Facility- V/Power Plant- V at the time of issuance of this Modification dated October Os;**2015.	Unit No. 3 & 4	20		
		Unit No. 5	20		
		Unit No. 6	23		

#### (B). Fuel Details

(i).	Primary Fuel.	NG			
(ii).	Alternative Fuel.	DO	DO		
(iii).	Fuel Source for each of the above (i.e. Imported/ Indigenous).	Imported/Indigenous			
(iv).	). Fuel Supplier for each of the above	NG	DO		
(10).		SNGPL	OMC		
(V).	Fuel Supply Arrangement.	Through Pipelines	Tankers		

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Page 48 of 57 of Revised/Modified Schedule-I (Modification-I)

(v).	Fuel Supply Arrangement.	Through Pipelines	Tankers	
(vi).	No. of Storage Tanks.	-	02 Tanks	
,	Storage Capacity of each Tank.	-	T1	11000 Liters
(vii).			T2	3000 Liters
(viii).	Gross Storage.	NG	DO	
(VIII).		-	14000 Liters	

#### (C). Emission Values

		DO	NG
(i).	SO <sub>x</sub>	112 mg/Nm <sup>3</sup>	112 mg/Nm <sup>3</sup>
(ii).	NO <sub>x</sub>	112 mg/Nm <sup>3</sup>	112 mg/Nm <sup>3</sup>
(iii).	со	636 mg/Nm <sup>3</sup>	636 mg/Nm <sup>3</sup>
(iv).	PM <sub>10</sub>	-	-

#### (D). Cooling System

	(i).	Cooling Water Source/Cycle.	Ground Water
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#### (E). Plant Characteristics

		GE	DE			
(i).	Generation Voltage	0.4 KV	0.4 KV			
(ii).	Frequency	50 Hz	50 Hz			
(iii).	Power Factor	0.8 Lagging	0.8 Lagging			



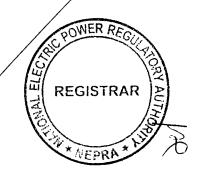


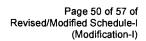
Page 49 of 57 of Revised/Modified Schedule-I (Modification-I)

(iv).	Automatic Generation Control (AGC)	Yes	Yes
(v).	Ramping Rate	15 KW/Second	15 KW/Second
(vi).	Time required to Synchronize to Grid and loading the complex to full load.	Not connected to grid. 3 Minutes to Synchronize	Not connected to grid. 2 Minutes to Synchronize

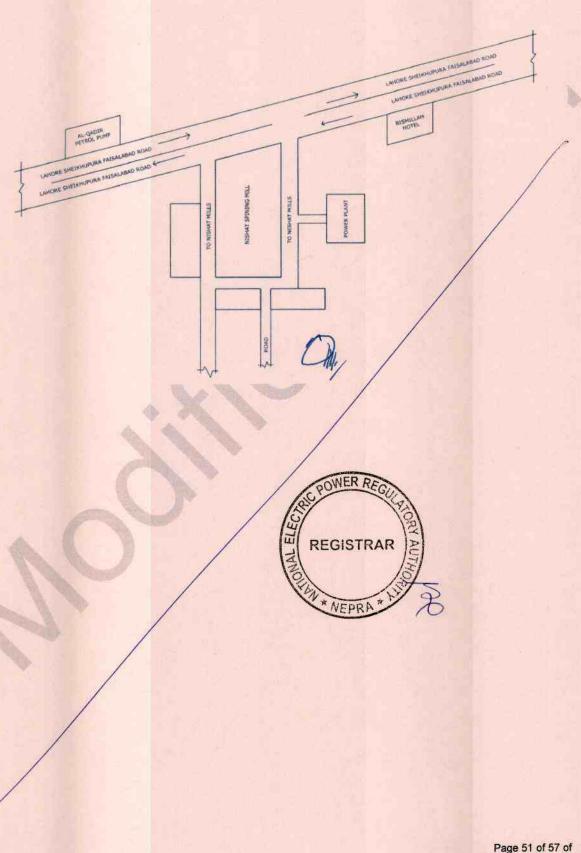
#### (F). <u>Interconnection Arrangement</u>

(i). The electric power from the Generation Facility-V/Power Plant-V is used for self consumption only.

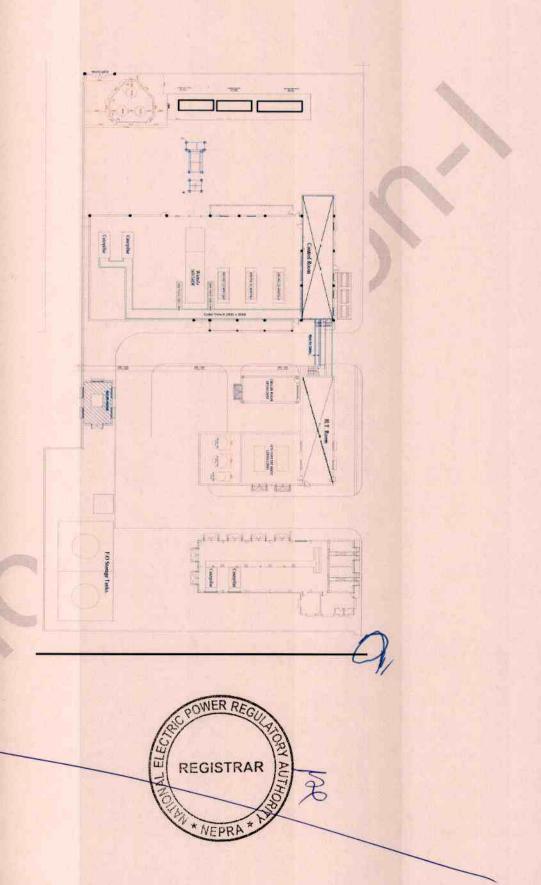




# Location of the Generation Facility-VI/Power Plant-VI of the Licensee/NML

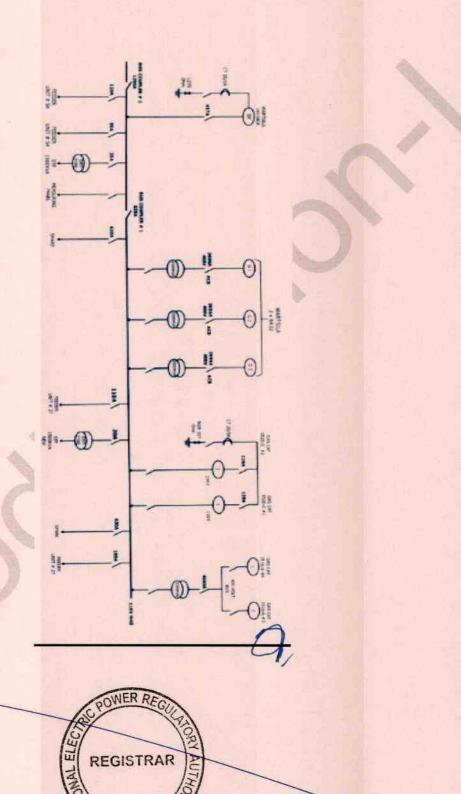


# Layout of the Generation Facility-VI/Power Plant-VI of the Licensee/NML





## Single line Diagram (Electrical) of the Generation Facility-VI/Power Plant-VI of the Licensee/NML



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#### <u>Detail</u> of Generation Facility-VI/ <u>Power Plant-VI</u>

#### (A). Plant Configuration

(i).	Installed Capacity of the Generation Facility-VI/ Power Plant-VI (Gross ISO).	19.380 MW		
(ii).	Type of Technology.	GE, DE		
		Unit No.	Capacity (MW)	Make/Model
		Unit No.1	6.88	Wartsila 16V34DF
(iii).	Units/Size	Unit No. 2, 3 & 4	2:20	Wartsila 6R34LN
	/Make & Model.	Unit No. 5 & 6	1.95	GE (Caterpillar) G3520-C
		Unit No. 7 & 8	1.00	GE (Caterpillar) G3516-A
	Commercial Operation Date-COD (of each Unit) of the Generation Facility- VI/Power Plant- VI.	Unit No.1	2014	
(i. A		Unit No. 2, 3 & 4	2011	
(iv).		Unit No. 5 & 6	2010	
		Unit No. 7 & 8	2002	
	Expected	Unit No.1	25	
	Useful Life of each Unit of	Unit No. 2, 3 & 4	25	
(v).	the Generation Facility-	Unit No. 5 & 6	25	
	VI/Power Plant- VI from COD.	Unit No. 7 & 8	25	
(vi).	Remaining Useful Life	Unit No.1	Not installed a	t that time

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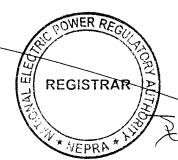
Page 54 of 57 of Revised/Modified Schedule-I (Modification-I)

	T-:		in the Province of Punjab
	(years) of each Unit of the	Unit No. 2, 3 & 4	Not installed at that time.
	Generation Facility- VI/Power Plant- VI at the time of grant of Generation Licence dated September 02, 2008.	Unit No. 5 & 6	Not installed at that time.
		Unit No. 7 & 8	19
	Remaining Useful Life (years) of each Unit of the Generation	Unit No.1	24
		Unit No. 2, 3 & 4	06
		Unit No. 5 & 6	20
(vi).	Facility- VI/Power Plant- VI at the time of issuance of this Modification dated October 05 <sup>th</sup> , 2015.	Unit No. 7 & 8	12

#### (B). Fuel Details

(i).	Primary Fuel	HFO and NG		
(ii).	Alternative Fuel.	DO		
(iii).	Fuel Source for each of the above (i.e. Imported/ Indigenous).	Imported/Indigenous		
(iv).	Fuel Supplier for each of	NG	HFO	DO
(10).	the above.	SNGPL	ОМС	OMC
(v).	Fuel Supply Arrangement	Through Pipelines	Tankers	Tankers





Page 55 of 57 of Revised/Modified Schedule-I (Modification-I)

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(vi).	No. of Storage Tanks.	-	09 Tanks		03 Tanks	
(vii).	Storage Capacity of each Tank.	NG	HFO		DO	
		-	T1	150 Tons	T1	150 Tons
			T2	30 Tons		
			ТЗ	30 Tons		16 Tons
			T4	16 Tons		
			Т5	16 Tons		
(viii).	Gross Storage.	-	242 Tons		166 T	ons

#### (C). Emission Values

		HFO COMP	DO
(i).	SO <sub>x</sub>	25.8 mg/nm³	- -
(ii).	NO <sub>x</sub>	425.6 mg/nm³	348.4 mg/nm³
(iii).	co	188.8 mg/nm³	196.3 mg/nm³
(iv).	PM <sub>10</sub>	158.8 mg/nm³	-

#### (D). Cooling System

	(i).	Cooling Water Source/Cycle.	Ground Water.
1			

#### (E). Plant Characteristics

		GE	DE
(i).	Generation Voltage.	0.4KV & 11KV	0.4 KV & 11KV
(ii).	Frequency.	50Hz	50Hz

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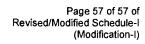
Page 56 of 57 of Revised/Modified Schedule-I (Modification-I)

(iii).	Power Factor.	0.8 Lagging	0.8 Lagging
(iv).	Automatic Generation Control (AGC).	Yes	Yes
(v).	Ramping Rate.	15 KW/Second	15-20 KW/Second
(vi).	Time required to Synchronize to Grid and loading the complex to full load.	20~30 second to synchronize	7.6 Minutes to full load

#### (F). Interconnection Arrangement

(i). The electric power from the Generation Facility-VI/Power Plant-VI is used for self consumption only.







#### SCHEDULE-II Revised/Modified Modification-I

The Installed Capacity/ISO Capacity (MW), De-Rated Capacity at Mean Site Conditions (MW), Auxiliary Consumption (MW) and the Net Capacity at Mean Site Conditions (MW) of Generation Facilities of Licensee is given in this Schedule.



Page 1 of 2 Revised/Modified Schedule-II Modification-I



#### **SCHEDULE-II**

Sr. No.	Description	Installed Capacity (Gross ISO) (MW)	De-rated Capacity at Mean Site Conditions (MW)	Auxiliary Consumption (MW)	Net Capacity at Mean Site Condition (MW)
(1).	Generation Facility- I/Power Plant-I	39.573	32.000	01.800	30.200
(2).	Generation Facility- II/Power Plant-II	21.364	18.000	00.700	17.300
(3).	Generation Facility- III/Power Plant-III	41.960	34.000	01.400	32.60
(4).	Generation Facility- IV/Power Plant-IV	04.220	03.590	00.045	03.545
(5).	Generation Facility- V/Power Plant-V	01,744	01.400	00.080	01.320
(6).	Generation Facility- VI/Power Plant-VI	19.380	16.085	00.750	15.335
Gra	and Total	128.241	105.075	4.775	100.300

Note

All the above figures are indicative as provided by the Licensee. The net energy/electric power available to BPC/Affiliated Units/Industrial Units of the Licensee-NML for dispatch will be determined through procedures contained in the bi-lateral agreements.

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Page 2 of 2 Revised/Modified Schedule-II Modification-I