National Electric Power Regulatory Authority
Islamic Republic of Pakistan

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Registrar

No. NEPRA/DG (Lic)/GCA-03/8140-47 May 31, 2024

Mr. Sohail Sadiq
Executive Director (Finance)
Maple Leaf Power Limited
42-Lawrence Road, Lahore

Subject: **Grant of Generation Concurrence No. SGC/C/01/2024**
Generation Concurrence Application No. GCA-03
Maple Leaf Power Limited (MLPL)

Reference: Your letter No. MLPL/NEPRA/03/23 dated 18.09.2023

Enclosed please find herewith Determination of the Authority in the matter of application of Maple Leaf Power Limited (MLPL) for the grant of concurrence for its proposed 25 MWp solar based generation facility at 45-KM Mianwali-Iskandarabad near Dadu Khel, District Mianwali in the province of Punjab. The Generation Concurrence No. SGC/C/01/2024 granted by the Authority to MLPL for the above said project, pursuant to Section-14(B)(5) of the Regulation of Generation, Transmission and Distribution of Electric Power Act, 1997 as amended and replaced from time to time is annexed to the determination.

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

Enclosure: As Above

(Syed Zawar Haider)

Copy to:

1. Secretary, Power Division, Ministry of Energy, 'A' Block, Pak Secretariat, Islamabad
2. Secretary, Energy Department, Government of Punjab, EFU House, 8th Floor, 6-D Jail Road, Lahore
3. Managing Director, Private Power & Infrastructure Board (PPIB), Ground & 2nd Floors, Emigration Tower, Plot No. 10, Mauve Area, Sector G-8/1, Islamabad
4. Managing Director, National Transmission & Despatch Company (NTDC), 414 WAPDA House, Lahore
5. Chief Executive Officer, CPPA(G), 73 West, Shaheen Plaza, A.K. Fazl-e-Haq Rd, Blue Area, Islamabad
6. Chief Executive Officer, Faisalabad Electric Supply Company (FESCO), Abdullahpur, Canal Bank Road, Faisalabad
7. Director General, Environmental Protection Department, Government of the Punjab, National Hockey Stadium, Ferozpur Road, Lahore

National Electric Power Regulatory Authority (NEPRA)

Determination of the Authority in the Matter of Application of Maple Leaf Power Limited for the Grant of Generation Concurrence

May 31st, 2024
Case No. GCA-03

(A). Filing of Application

(i). Maple Leaf Power Limited (MLPL) submitted an application on September 18, 2023 before the Authority for the grant of concurrence for its proposed power generation plant in terms of Section-14B(5) of Regulation of Generation, Transmission and Distribution of Electric Power Act, 1997 (the "NEPRA Act").

(ii). The Registrar examined the submitted application and found the form and content of the application in compliance with Regulation-3 of the NEPRA (Application, Modification, Extension and Cancellation) Procedure Regulations, 2021 (the "Licensing Regulations"). Accordingly, the Authority registered the application for consideration for the grant for concurrence as stipulated in the Licensing Regulations. The Authority published a notice in one (01) Urdu and one (01) English newspaper on December 01, 2023 to invite comments of the general public, interested and affected persons in the matter as stipulated in Regulation-7 of the Licensing Regulations.

(iii). In addition to the above, the Registrar also sent letters on December 05, 2023, to different stakeholders including but not limited to Govt. Ministries, their attached departments, various Authorities/corporations/companies and other representative organizations for soliciting their views and comments for assistance of the Authority in terms of provisions of the Licensing Regulations.

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(B). Comments of Stakeholders

(i). In response to the above, the Authority received comments from three (03) different stakeholders which included the Board of Investment (BOI), the Punjab Power Development Board (PPDB) and the Faisalabad Electric Supply Company Limited (FESCO). The salient points of the comments that the above mentioned stakeholders offered are summarized below: -

(a). The BOI in its comments did not express any reservations to the request of MLPL for the grant of concurrence for its proposed 25.00 MW Photo Voltaic (PV) based generation facility and stated that the Authority may proceed in the matter as per policy/rules in vogue;

(b). PPDB expressed that MLPL holds a Generation Licence (No. SGC/119/2016 dated December 20, 2016) for its 40.00 MW coal based generation facility for supplying electric power to Maple Leaf Cement Factory Limited (MLCFL) as its Bulk Power Consumer (BPC). Now, MLPL has requested for the grant of concurrence for establishing a PV based generation facility of 25.00 MW to be set up within the premises of MLCFL at Iskandarabad, district Mianwali in the province of Punjab which envisages a total investment of US$ 11.52 million. The electricity generated from the said solar power plant will be delivered to MLCFL as its BPC on mutually agreed rates and terms and conditions. PPDB supported the request of MLPL as the same is in line with set targets under the Alternative and Renewable Energy Policy, 2019 and therefore, the Authority may consider the application as per prevailing law(s); and

(c). FESCO stated that the Authority granted a Generation Licence to MLPL for its coal based generation facility of

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40.00 MW and authorized it to supply electric power to MLCFL under the provisions of the NEPRA Act, Rules and Regulations. Now, MLPL intends to set up a 25.00 MW PV based generation facility in the same vicinity. In this regard, MLPL should not extend its distribution network in the service territory of FESCO. Further, FESCO being the Supplier of the Last Resort (SoLR) is currently feeding MLCFL through two separate connections having sanctioned load of 10.00 MW and 40.00 MW. In this regard, MLCFL against its peak demand of 47.34 MW is drawing around 20.50 MW from its coal based generation facility whereas FESCO is providing the balance load demand of 26.80 MW. In view of the hybrid nature of the consumer, the Authority may have to determine tariff for the remaining energy purchased from FESCO as SoLR and the same is necessary considering the fact that the new load factor of the remaining energy will be different from the original one. Further to the said, FESCO stated that there has been a considerable drop in the units sold to MLCFL and Maximum Demand Indicator (MDI) of said BPC after the installation of the coal based generation facility. In view of the said, MLCFL has managed to avoid the cross subsidy, capacity charges and other charges/taxes payable to the national exchequer on account of capacity that FESCO had already allocated to its BPC(s) which resulted in an increase in tariff for other regulated consumers of the utility.

(ii). The Authority considered the above comments of the stakeholders and in view of the observations of FESCO, considered it appropriate seeking the perspective of MLPL. On the said, it was submitted that the proposed PV based facility is being set up on a land/area which MLCFL owns and is also the BPC in this particular case. In this regard, the distribution network will be laid on the property of

BPC without involving public land/property or any third party. Further, on the observations of FESCO that due to the setting up of the coal based generation facility the supply from the utility has decreased and there will be further reduction due to the installation of the PV solar based generation facility which will result in MLCFL avoiding the cross subsidy and capacity charges. In this regard, MLPL submitted that the instant issue is still under deliberation before the Authority and petition on Use of System Charges, Stranded Cost and Cross Subsidy is yet to be finalized. MLPL confirmed that it will comply with any methodology which is approved by the Authority in this regard in letter and spirit.

(iii). The Authority considered the above submissions of MLPL and in view of the submitted clarification, considered it appropriate to process the submitted request of MLPL for the grant of concurrence for its proposed PV based generation facility as stipulated in the relevant rules and regulations.

(C). Findings/Comments

(i). The Authority has considered/examined the submissions of MLPL including the information provided with its application, comments of the stakeholders, rejoinder submitted by MLPL, and the relevant rules & regulations in the matter and the observations in the matter are explained in the following paragraphs.

(ii). The Authority observed that the applicant i.e. MLPL is an entity incorporated under Section-32 of the Companies Ordinance, 1984 (XL VII of 1984), having Corporate Universal Identification No. 0095705 dated October 15, 2015. It is unlisted public limited company with the principal line of business to develop, design, operate and maintain the electricity power generation plant and to engage in the business of generation, sale and supply of electricity. Further, the Memorandum of Association (MoA) envisages to perform all other acts that are necessary or incidental to the business of electricity generation, transmission, distribution and supply subject to permission from NEPRA. Also the MoA envisages to identify, design, develop, construct, acquire, procure, manage, manufacture, operate,

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maintain and own electricity generation station(s) using conventional and non-conventional energy sources.

(iii). As explained above, MLPL in its application under consideration of the Authority has envisaged to set up 25.00 MW PV based generation facility to be located at Iskandarabad, near Daud Khail, district Mianwali in the province of Punjab within the premises of MLCFL. In this regard, MLPL plans to supply the generated electric power to MLCFL as BPC, through cables/wires located on the property of the said entity. According to the submitted information, the total cost of the project will be about USD 11.517 million which will be financed through a combination of debt (60% of the total cost of the project i.e. USD 06.910 million) and equity (of 40% of the total cost of the project i.e. USD 04.606 million).

(iv). The sponsor carried out a feasibility study of the project including *inter alia*, solar power plant equipment details, PV-sitting details, power production estimates based on solar irradiation data of the project sites, soil tests reports, technical details pertaining to selected photovoltaic (PV) cells and other allied equipment to be used in the solar power plant, electrical studies, environmental study, project financing etc. The review of the feasibility study reveals that the generation facility will be consisting of two (02) non contagious sites. The site-I will have an installed capacity 10.00 MW and in order to achieve the said capacity, the feasibility study has proposed installing 17,416 PV modules each of 575 Watt. Similarly, for the site-II which will have a total installed capacity of 15.00 MW will be consisting 26,096 PV modules each of 575 Watt. In consideration of the said, it is clarified that the company plans installing PV cells from Tier-I manufacturers including Jinko Solar, JA Solar, Trina Solar, Renesola or LONGI. It is pertinent to mention that the company has confirmed that the deal for purchase of PV Cells of 72HL4-BDV with Jinko Solar Solar has been locked and the manufacturer has assured an average capacity factor of 18.6%.

(v). The Authority has considered the submissions of MLPL and has observed that the supply from proposed generation facility will be supplied to MLCFL as a BPC in terms of the relevant provisions of the NEPRA Act. According to the

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system study of the project, the dispersal to the BPC will be made at 6.3kV through feeders/cables/wires located on the private property of BPC. In this regard, it is pertinent to mention that BPC is a defined term as stipulated in Section-2 (ii) of the NEPRA Act. According to the said, a BPC means a consumer who purchases or receives electric power, at one premises, in an amount of one (01) megawatt or more or in such other amount and voltage level and with such other characteristics as the Authority may specify and the Authority may specify different amounts and voltage levels and with such other characteristics for different areas.

(vi). Further to the above, Section-2(v) of the NEPRA Act defines the term "Distribution" wherein the ownership, operation, management and control of distribution facilities located on private property and used solely to move or deliver electric power to the person owning, operating, managing and controlling those facilities or to tenants thereof is not included in the definition of "distribution". As explained above, the facilities to be used for delivery of electric power to MLCFL/the BPC are located on private property (without involving any public property or any third party) and will be owned, operated, managed and controlled by the BPC, therefore, the supply of electric power to BPC by MLPL does not constitute a distribution activity under the Act, and a distribution licence will not be required by the company.

(vii). Further, the Authority has also considered the submissions of MLPL that necessary due diligence has been completed and there will be no environmental impact of the proposed arrangement as PV cells/panels will be utilizing only the existing space/infrastructure of the MLCFL for which the company/MLPL has submitted the NOC from the Environmental Protection Department, Govt. of Punjab for the said project. In this regard, MLPL has confirmed that it will comply with the concerned environmental standards. In view of the said, the Authority considers that MLPL is made obligatory to comply with the relevant environmental standards for which a separate article will be included in the concurrence for the proposed generation facility.

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(viii). The Authority considers that the proposed project will result in optimum utilization of the RE which was earlier untapped, resulting in pollution free electric power. It is pertinent to mention that solar is an indigenous source and such resources should have a preference for the energy security. As explained in the preceding paragraphs above, the company will be supplying generated electric power to a BPC directly which only involves laying a small length of feeder on the private property which concludes that the project will not face any constraints in transmission of power. In view of the said, the Authority considers that the project of MLPL has a case for grant of concurrence for its proposed generation facility as stipulated in the NEPRA Act and relevant rules, regulations and other applicable documents.

(D). Grant of Concurrence

(i). The Authority considers that sustainable and affordable energy/electricity is a key prerequisite for the socio-economic development of any country. In fact, the economic growth of any country is directly linked with the availability of safe, secure, reliable and cheaper supply of energy/electricity. In view of the said, the Authority is of the considered opinion that for sustainable development, all indigenous power generation resources especially RE must be developed on a priority basis.

(ii). The Authority observes that the existing energy mix of the country is heavily skewed towards thermal power plants, mainly operating on imported fossil fuels. The continuous import of fossil fuels not only creates pressure on the precious foreign exchange reserves of the country but is also an environmental concern. Therefore, in order to achieve sustainable development, it is imperative that indigenous resources especially RE, are given priority for power generation and their development is encouraged. The Authority is really encouraged to observe that with each passing day, the cost of RE technologies is showing a downward trend making the same affordable for commercial use. The Authority is also encouraged to observe that the GoP is planning to enhance the share of RE from its current level of 5% to 30% of the total installed capacity by 2030. Furthermore, a number of initiatives are also being undertaken in the private sector in this regard.

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(iii). The Authority has observed that in the current case, MLPL has approached for the grant of generation concurrence for setting up a PV based generation facility with a cumulative installed capacity of 25 MWp for supplying to MLCFL/BPC(s) which is also an existing consumer of the concerned utility i.e. FESCO. The Authority considers that the above proposal of MLPL is in line with the provisions of the NEPRA Act, relevant rules and regulations framed thereunder and the vision of the GoP to enhance the contribution of RE in generation mix. The project will not only help MLPL in diversifying its portfolio but will also enhance the energy security of MLCFL/BPC. Further, the project will also help in reducing carbon emissions by generating clean electricity, thus improving the environment.

(iv). As explained above, MLPL has provided the details of location, technology, size, net capacity/energy yield, interconnection arrangements, technical details and other related information for the proposed PV based generation facility/solar power plant. In this regard, the Authority has observed that sponsors of the project have acquired/available with them the required premises/space for setting up the distinct PV based generation facilities and the same are being incorporated in the concurrence to be issued for the proposed generation facility.

(v). The Authority has observed that the proposed generation facility of MLPL will be used for supplying electric power to a BPC. According to Section-2(ii) of the NEPRA Act, a consumer who purchases or receives electric power at one premises, in an amount of one megawatt or more or in such amount and voltage level and with such characteristics as the Authority may determine/specify, is treated as BPC. Accordingly, the Authority allows the above mentioned entity/MLCFL as explained in the preceding Paras to be BPC of MLPL.

(vi). Regarding supply to the BPC, the Authority observes that the BPC and the proposed generation facilities of MLPL are located within the same premises and the BPC will be supplied through underground/overhead cable/feeder of 6.3 KV. Pursuant to the proviso to Section-21 of the NEPRA Act, the Authority is empowered to allow a generation company to sell electric power to a BPC located in the service

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territory of a distribution company. In view of the said, the Authority allows the MLPL to sell electricity to BPC subject to obtaining Electric Power Supply Licence under Section-23E of the NEPRA Act. Further, under Section-2(v) of the NEPRA Act, ownership, operation, management and control of distribution facilities located on private property and used solely to move or deliver electric power to the person owning, operating, managing and controlling those facilities or to tenants thereof has not been included in the definition of "distribution". Based on the said considerations that the proposed BPC is located within the same premises and no public or third party properties are involved, the supply of power to BPC by MLPL does not constitute a distribution activity under the NEPRA Act, and MLPL will not require a distribution licence for delivering electric power to the BPC.

(vii). The Authority has observed that according to the information provided by MLPL, its generation facility/Solar Power Plant/Solar Farm will achieve Commercial Operation Date (COD) by June 30, 2024 and will have a useful life of twenty five (25) years from its COD. In this regard, the Authority considers that normally a PV based solar generation facility has a useful life of twenty-five (25) to thirty (30) years. In view of the fact that MLPL has requested for a shorter term therefore, the Authority fixes the term of the proposed concurrence to twenty five (25) years from its COD.

(viii). Regarding compliance with the environmental standards, MLPL has confirmed that it will comply with the required standards during the term of the generation concurrence. In view of the importance of the issue, the Authority has decided to include a separate article in the generation concurrence along with other terms and conditions making it obligatory for MLPL to comply with relevant environmental standards at all times.

(ix). The Authority has duly considered comments of the stakeholders which were mostly found supportive except FESCO which had raised certain issues including (a). laying of distribution network in its territory. (b). determining separate tariff for consumers taking supply from the utility as well as from any third party source (c). drop in the sold units and MDI of MLCFL after the installation of 40 MW

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coal power plant of MLPL thereby avoiding cross subsidy and capacity charge allocated, resulted in increase in tariff for other regulated consumers of FESCO.

(x). In consideration of the above, the Authority has observed that MLPL has submitted rejoinder to the above observations of FESCO as explained in the preceding paragraphs however, the Authority considers it appropriate to give its findings on the above mentioned observations and address the same in the current determination in the matter of application for the grant of generation concurrence of MLPL. Regarding the comments of FESCO that MLPL should not extend its distribution network in the territory of FESCO, the Authority has considered the submissions of MLPL confirming that no separate feeder(s) will be installed outside the boundary of the above mentioned BPC/MLCFL instead only a small feeder will be laid on the private property of the BPC, therefore, there will not be any intrusion in the territory of any other entity. On the observations of FESCO regarding hybrid nature of MLCFL and subsequent rationalization of tariff to avoid any burden on the regulated consumer, the Authority iterates that through its determination dated January 11, 2021 pertaining to the inclusion of "Wheeling Cost" in the tariff determination of DISCO(s) under Annual & Multi-Year Tariff Regime (FY 2018-19 & FY 2019-20) and Determination of the Authority in the Matter of Petition of GEPCO for Determination of its Supply of Power Tariff Under MYT Regime for the FY 2020-21 to FY 2024-25 (Case No. Nepra/TRF-563/Gepco-2021), dated June 02, 2022 it has decided that Hybrid BPC(s), keeping connection from DISCO as backup will be charged the Fixed Charges based on 50% of the sanctioned load or actual MDI for the month, whichever is higher. In view of the said, the Authority has already initiated the process of suitable amendments in the relevant regulation allowing BPC(s) to have dual connection i.e. from the Competitive Supplier and SoLR. Further, the Authority is in the process of deciding the petitions of XW-DISCO(s) pertaining to the Use of System Charges [UoSC(s)] including the cross subsidy and stranded cost and all the related issues will be decided there which will be applicable to BPC(s) availing supply other than the utility while keeping connection from DISCO(s) as well. In this regard, MLPL has also confirmed that it will comply with any methodology which is approved by the Authority in letter and spirit. In view of the

said, the Authority considers that the observations of FESCO stand addressed and settled.

(xi). In consideration of the above, the Authority hereby approves the grant of generation concurrence to MLPL on the terms and conditions set out in the generation concurrence annexed to this determination. The grant of generation concurrence will be subject to the provisions contained in the NEPRA Act, relevant rules, regulations framed thereunder and other applicable documents. The grant/approval is restricted to the generation of electric power from the generation facility of MLPL only and not for sale/supply of electric power to the BPC. The supply of electric power to BPC is subject to approval of the Authority for the Supplier Licence application submitted by MLPL under Section-23E of the NEPRA Act.

Authority

Engr. Maqsood Anwar Khan
(Member)

Engr. Rafique Ahmed Shaikh
(Member)

Engr. Mathar Niaz Rana (nsc)
(Member)

Amina Ahmed
(Member)

Engr. Waseem Mukhtar
(Chairman)

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National Electric Power Regulatory Authority
(NEPRA)
Islamabad – Pakistan

GENERATION CONCURRENCE
No. SGC/C/01/2024

In exercise of the powers conferred upon the National Electric Power Regulatory Authority (NEPRA) under Section-14(B)(5) of the Regulation of Generation, Transmission and Distribution of Electric Power Act, 1997 (XL of 1997), as amended or replaced from time to time, the Authority hereby grants a Concurrence to:

MAPLE LEAF POWER LIMITED

Incorporated under Section-32 of
the Companies Ordinance, 1984 (XLVII of 1984) having Corporate Universal Identification No. 0095705, dated October 15, 2015

for its PV based Generation Facility/Solar Power Plant/Solar Farm located at 45-KM, Mianwali-Iskanderabad near Daud Khel, District Mianwali in the Province of Punjab

(Installed Capacity: 25.00 MW_P)

to engage in generation of electric power business subject to and in accordance with the Articles of this Concurrence.

Given under my hand on 31ST day of May Two Thousand & Twenty Four and expires on 29th day of June Two Thousand & Forty-Nine

Registrar

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Article-1
Definitions

1.1 In this Concurrence

(a). "Act" means the Regulation of Generation, Transmission and Distribution of Electric Power Act, 1997 (Act No. XL of 1997), as amended from time to time;

(b). "Applicable Documents" means the rules and regulations framed by the Authority under the Act, any documents or instruments issued or determinations made by the Authority under any of the foregoing or pursuant to the exercise of its powers under the Act, the Grid Code, the applicable Distribution Code, the Market Commercial Code if any, or the documents or instruments made by the Generation Company pursuant to its Concurrence, in each case of a binding nature applicable to the Generation Company or, where applicable, to its affiliates and to which the Generation Company or any of its affiliates may be subject;

(c). "Applicable Law" means the Act and all the Applicable Documents;

(d). "Authority" means the National Electric Power Regulatory Authority constituted under Section-3 of the Act;

(e). "Bulk Power Consumer (BPC)" means a consumer who purchases or receives electric power, at one premises, in an amount of one (01) megawatt or more or in such other amount and voltage level and with such other characteristics as the Authority may specify and the Authority may specify different amounts and voltage levels and with such other characteristics for different areas;

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(f). "Bus Bar" means a system of conductors in the generation facility/Solar Power Plant/Solar Farm of the Generation Company on which the electric power from all the photovoltaic cells is collected for supplying to the BPC;

(g). "Commercial Operations Date (COD)" means the day immediately following the date on which the generation facility/Solar Power Plant/Solar Farm of the Generation Company is Commissioned;

(h). "Commissioned" means the successful completion of commissioning of the generation facility/Solar Power Plant/Solar Farm for continuous operation and despatch to the BPC;

(i). "Concurrence" means this concurrence granted to the Generation Company for its generation facility/Solar Power Plant/Solar Farm in terms of Section 14B(5) of the Act;

(j). "Distribution Code" means the distribution code prepared and revised from time to time by the concerned XW-DISCO with necessary approval of the Authority;

(k). "Generation Company" means **Maple Leaf Power Limited** or its successors or permitted assigns;

(l). "Grid Code" means the grid code prepared and revised from time to time by NTDC with necessary approval of the Authority;

(m). "Licensing Regulations" means the National Electric Power Regulatory Authority Licensing (Application, Modification, Extension and Cancellation) Procedure Regulations, 2021 as amended or replaced from time to time;

(n). "Market Commercial Code" means the market commercial code prepared and revised from time to time by Market Operator with necessary approval of the Authority;

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(o). "Market Operator" means a person responsible for organization and administration of trade in electricity and payment settlements among generators, licensees and consumers;

(p). "Net Delivered Energy" means the net electric energy expressed in kWh that is generated by the generation facility/Solar Power Plant/Solar Farm of the Generation Company at its outgoing Bus Bar and delivered to the BPC;

(q). "Solar Power Plant/Solar Farm" means a cluster of photovoltaic cells located on ground in the same location used for production of electric power; and

(r). "XW-DISCO" means an Ex-WAPDA distribution company engaged in the distribution of electric power".

1.2 The words and expressions used but not defined herein bear the meaning given thereto in the Act or rules and regulations issued under the Act.

Article-2
Applicability of Law

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

Article-3
Generation Facilities

3.1 The location, size (capacity in MW), technology, interconnection arrangements, technical limits, technical functional specifications and other details specific to the generation facility/Solar Power Plant or Solar Farm of the Generation Company are set out in Schedule-I of this Concurrence.

3.2 The net capacity/Net Delivered Energy of the generation facility/Solar Power Plant or Solar Farm of the Generation Company is set out in Schedule-II of this Concurrence. The Generation Company shall provide the final

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arrangement, technical and financial specifications and other specific details pertaining to its generation facility/Solar Power Plant/Solar Farm before it is Commissioned.

Article-4
Term of Concurrence

4.1 This Concurrence shall become effective from the date of its issuance and will have a term of twenty five (25) years from the COD of the generation facility/Solar Power Plant/Solar Farm, subject to the provisions of Section-14(B) of the Act.

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

Article-5
Concurrence Fee

The Generation Company shall pay to the Authority the Concurrence Fee as stipulated in the National Electric Power Regulatory Authority (Fees) Regulation, 2021 as amended or replaced from time to time.

Article-6
Competitive Trading Arrangement

6.1 The Generation Company shall participate in such manner as may be directed by the Authority from time to time for development of a Competitive Trading Arrangement.

6.2 The Generation Company 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 Generation Company and another party with the approval of the Authority.

6.3 Any variation or modification in the above-mentioned contracts for allowing the parties thereto to participate wholly or partially in the Competitive

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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-7
Maintenance of Records

The Generation Company shall maintain the copies of records and data in standard and electronic form and all such records and data shall, subject to just claims of confidentiality, be accessible by authorized officers of the Authority.

Article-8
Compliance with Performance Standards

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

Article-9
Compliance with Environmental & Safety Standards

9.1 The generation facility/Solar Power Plant/Solar Farm of the Generation Company shall comply with the environmental and safety standards as may be prescribed by the relevant competent authority as amended or replaced from time to time.

9.2 The Generation Company shall provide a certificate on a bi-annual basis, confirming that the operation of its generation facility/Solar Power Plant/Solar Farm is in conformity with required environmental standards as prescribed by the relevant competent authority as amended or replaced from time to time.

Article-10
Power off take Point and Voltage

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

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Article-11
Provision of Information

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

Article-12
Compliance with Applicable Law

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

Article-13
Corporate Social Responsibility

The Generation Company shall provide the descriptive as well as monetary disclosure of its activities pertaining to corporate social responsibility (CSR) on an annual basis.

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SCHEDULE-I

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

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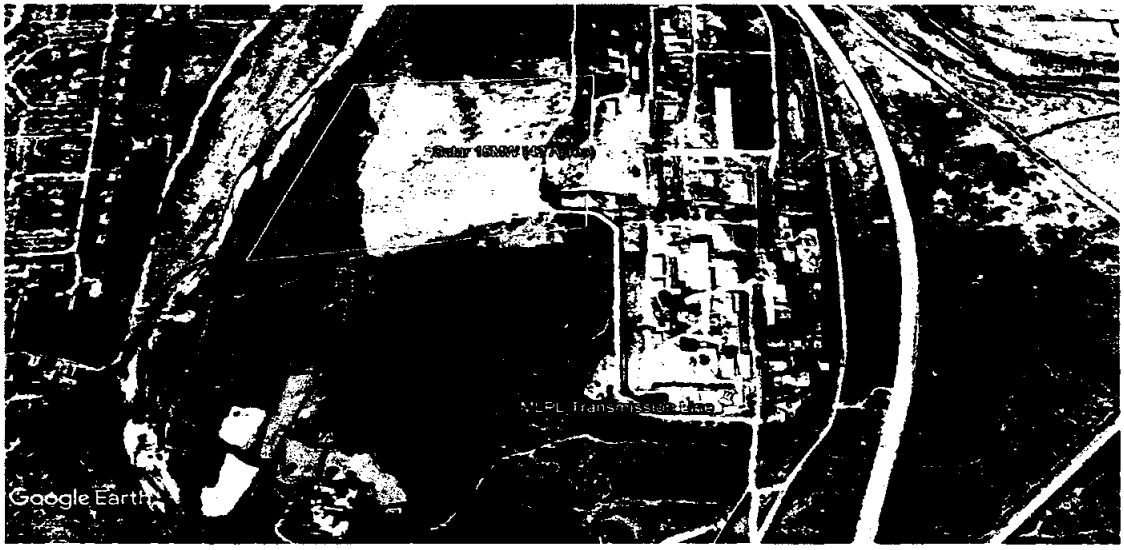
Location of the Generation Facility/Solar Power Plant of the Generation Company

Location-I (10.00 MW)



Location-II (15.00 MW)

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Land Coordinates of the Generation Facility/Solar Power Plant of the Generation Company

Sr. No.	Latitude	Longitudes
1	32°54'9.57"N	71°36'15.98"E
2	32°54'14.50"N	71°35'23.13"E

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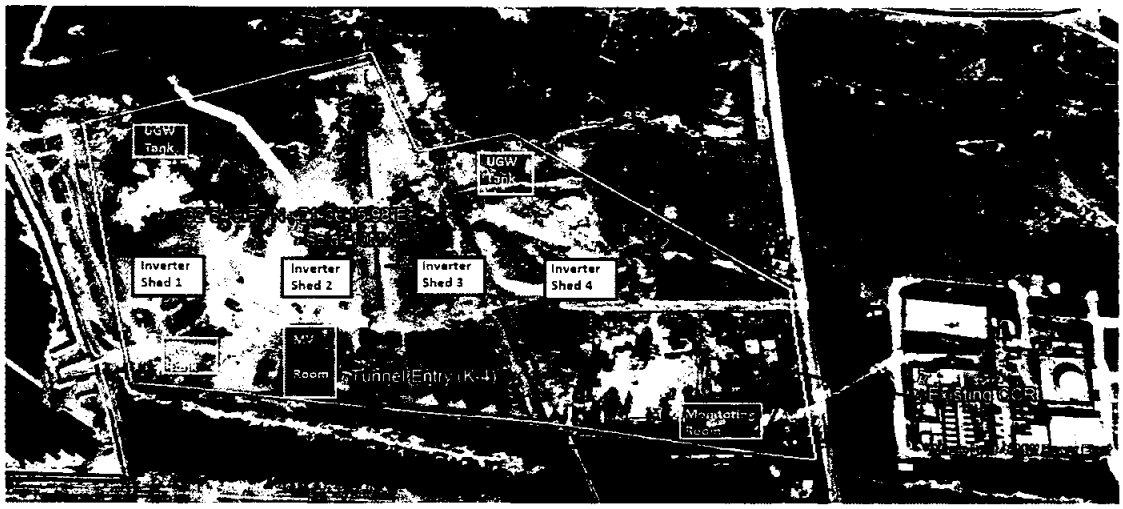
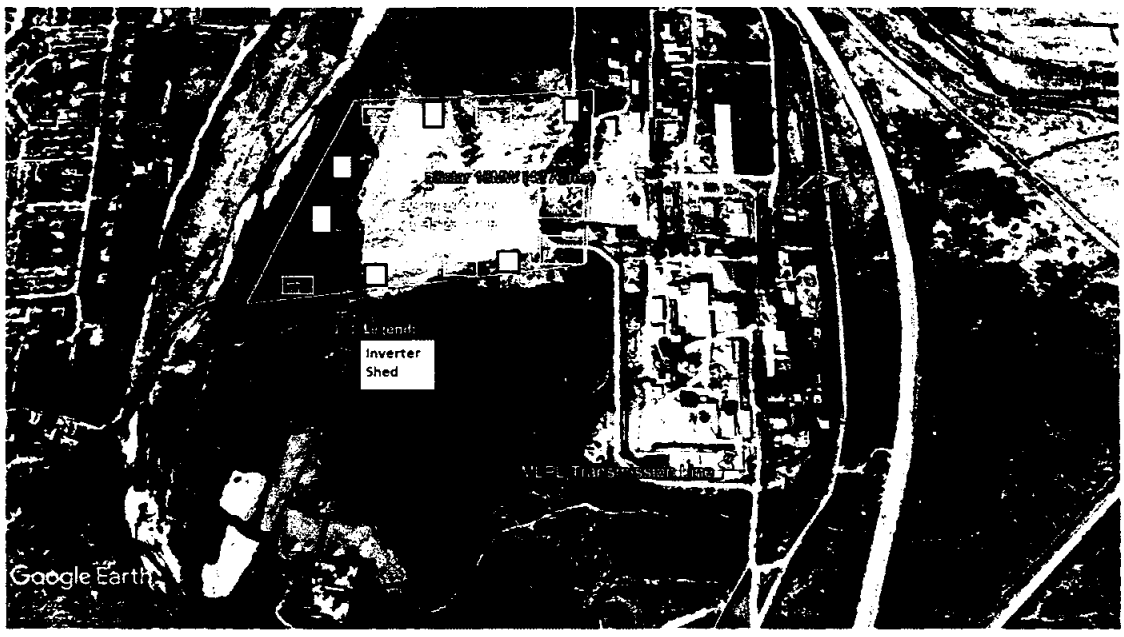
Process Flow Diagram of the Generation Facility/Solar Power Plant of the Generation Company



Location-I (10.00 MW)



Location-II (15.00 MW)

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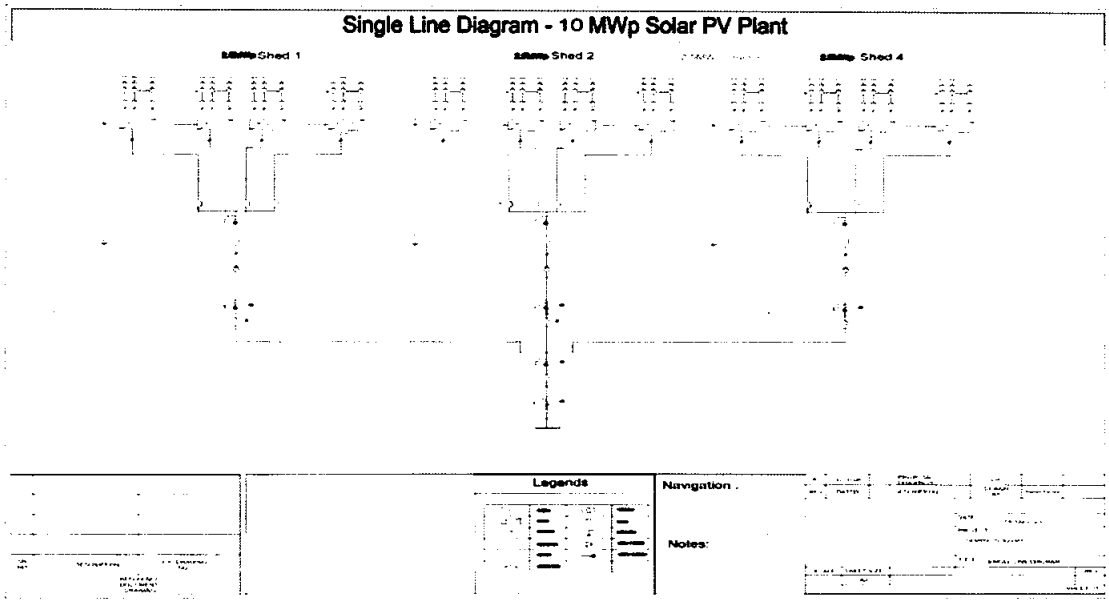
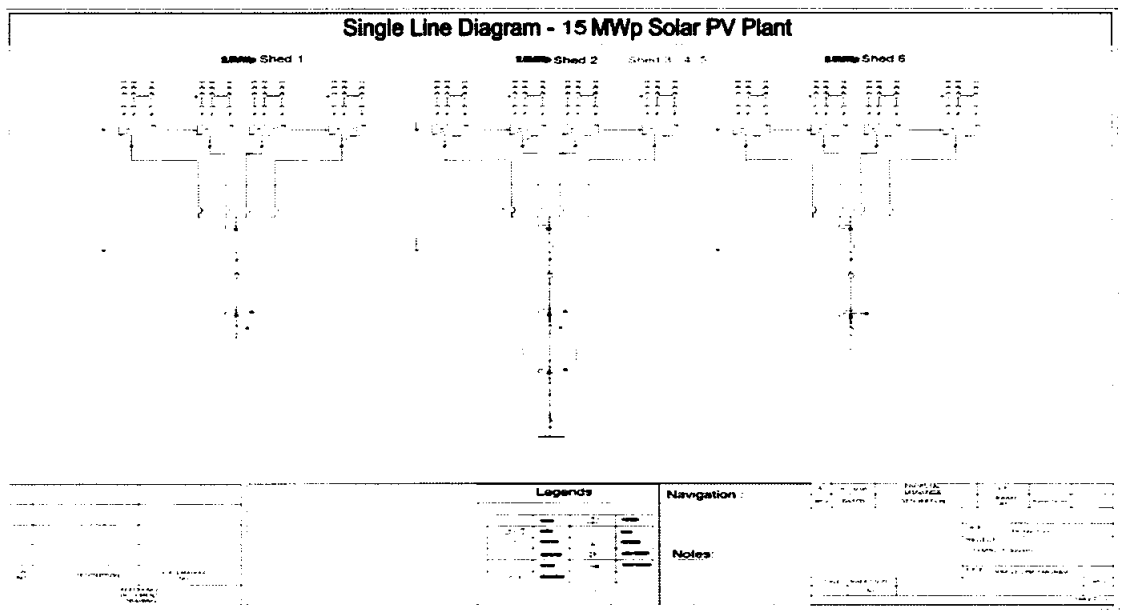
Single Line Diagram of the Generation Facility/Solar Power Plant/Solar Farm of the Generation Company



Location-I (10.00 MW)



Location-II (15.00 MW)

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Interconnection Arrangement/Transmission Facilities for Dispersal of Power from the Generation Facility/Solar Power Plant/Solar Farm of the Generation Company

The electric power generated from the generation facility/Solar Power Plant/Solar Farm of the Maple Leaf Power Limited-MLPL/Generation Company will be delivered/supplied to Maple Leaf Cement Limited as a Bulk Power Consumer (BPC).

(2). The details pertaining to BPC, the supply arrangements and other relating information are provided in the subsequent description of this schedule. Any changes in the said, shall be communicated to the Authority in due course of time.

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Details of Generation Facility/Solar Power Plant/ Solar Farm

(A). General Information

(i).	Name of the Company/Licensee	Maple Leaf Power Limited
(ii).	Registered/ Business office of the Company/Licensee	42-Lawrence Road, Lahore
(iii).	Type of the generation facility/Solar Power Plant/Solar Farm	Photovoltaic (PV) Cell
(iv).	Location(s) of the generation facility Solar Power Plant/ Solar Farm	45-KM, Mianwali-Iskanderabad Near Daud Khel, District Mianwali in the province of Punjab

(B). Solar Power Generation Technology & Capacity

(i).	Type of Technology	Photovoltaic (PV) Cell	
(ii).	System Type	On-Grid	
(iii).	Installed Capacity of the generation facility Solar Power Plant/ Solar Farm (MW/KW)	Location-I	10.00 MW_P
		Location-II	15.00 MW_P
		Total	25.00 MW_P

(C). Technical Details of Equipment (Location-I)

(a).	**Modules**	
(i).	Type of Module	Tiger Neo N-type 72HL4-BDV
(ii).	Type of Cell	N type Mono-crystalline
(iii).	Dimensions of Each Module	2278×1134×30 mm
(iv).	Weight	32 kg
(v).	No of Modules	17416 Nos.
(vi).	Total Ground Area Used	28 Acre
(vii).	Module Frame Anodized	Anodized Aluminum Alloy
(viii).	Nominal Max. Power (P max)	575 Wp (0.40% Annual Degradation)
(ix).	Opt. Operating Voltage (Vmp)	42.44 V
(x).	Opt. Operating Current (Imp)	13.55 A

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(xi).	Open Circuit Voltage (Voc)	51.27 V
(xii).	Short Circuit Current (Isc)	14.31A
(xiii).	Module Efficiency	23.37%
(xiv).	Operating Temperature	-40°C~+85°C
(xv).	Max. System Voltage	1500 VDC
(xvi).	Quality Management System	ISO9001:2015
(xvii).	Environment Management System	ISO14001:2015
(xviii).	Occupational health and safety management system	ISO45001:2018
(xix).	No of Strings	622
(xx).	Modules in each Strings	28
(xxi).	Net Capacity Factor	18.6
(b).	**Inverters**	
(i)	Manufacturer	Huawei
(ii)	Capacity of Each Inverter	330,000 VA
(iii)	No. of Inverters	32
(iv)	Rated Power	275,000 W at 45 °C and above temperature
(v)	Max Input Voltage	1,500 V
(vi)	Max output Current	240.3 A
(vii)	Efficiency	≥99.0%
(c).	**Transformers**	
(i)	Manufacturer	PEL
(ii)	Rating (KVA)	2500
(iii)	Number of Transformers	4
(iv)	Cooling Type	ONAN
(v)	Rated MV Voltage	6300 V
(vi)	Rater LV Voltage	800 V
(vii)	Temperature Rating	50 °C
(viii)	No Load Losses	2.9 kW
(ix)	Impedance (%)	6%
(d).	**Switchgear**	
(i)	LV Swtichgear	2000A, 800VAC, IP-54, Indoor, Floor Standing
(ii)	MCCB- i/p (Inverters to LV Panels)	MCCB TP 320A 50Hz Icu=25KA @ 1150 VAC
(iii)	ACB- o/p (LV Panels to Transformers)	E2.2H/E9 2500 Ekip Touch LSI FHR ACB Fixed Icu=Ics=65KA @ 900 VAC
(iv)	VCB- i/p (Transformers to MV Busbar)	3AHAAA6-2, 1250A, 6.3KV/12KV, Type Tested
(v)	LBS- o/p (MV Panel Outgoing)	3AHAAA6-2, 1250A, 6.3KV/12KV, Type Tested

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(e).	Control & Monitoring	
(i)	Weather Monitoring System	Pyranometer MS-80 Class-A sensor
		Humidity & Ambient Temperature
		Module Temperature with RS485
		Wind Speed Sensor
(ii)	Power Meter	Model: EEMMA770-2907945, Make: Phoenix Germany
(iii)	Server PC	DELL Server R340
(iv)	SCADA	PcVue SCADA
(v)	Data Loggers/ Inverter Manager	SmartLogger3000A

(D). Technical Details of Equipment (Location-II)

(a).	Modules	
(i)	Type of Module	Tiger Neo N-type 72HL4-BDV
(ii)	Type of Cell	N type Mono-crystalline
(iii)	Dimensions of Each Module	2278×1134×30 mm
(iv)	Weight	32 kg
(v)	No of Modules	26096 Nos
(vi)	Total Ground Area Used	42 Acre
(vii)	Module Frame Anodized	Anodized Aluminum Alloy
(viii)	Nominal Max. Power (P max)	575 Wp (0.40% Annual Degradation)
(ix)	Opt. Operating Voltage (Vmp)	42.44 V
(x)	Opt. Operating Current (Imp)	13.55 A
(xi)	Open Circuit Voltage (Voc)	51.27 V
(xii)	Short Circuit Current (Isc)	14.31A
(xiii)	Module Efficiency	23.37%
(xiv)	Operating Temperature	-40°C~+85°C
(xv)	Max. System Voltage	1500 VDC
(xvi)	Quality Management System	ISO9001:2015
(xvii)	Environment Management System	ISO14001:2015
(xviii)	Occupational health and safety management system	ISO45001:2018
(xix)	No of Strings	932
(xx)	Modules in each Strings	28
(xxi)	Net Capacity Factor	18.6%
(b).	Inverter	
(i)	Manufacturer	Huawei
(ii)	Capacity of Each Inverter	330,000 VA
(iii)	No. of Inverters	48

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(iv)	Rated Power	275,000 W at 45 °C and above temperature
(v)	Max Input Voltage	1,500 V
(vi)	Max output Current	240.3 A
(vii)	Efficiency	≥99.0%
(c).	**Transformers**	
(i)	Manufacturer	PEL
(ii)	Rating (KVA)	2500
(iii)	Number of Transformers	6
(iv)	Cooling Type	ONAN
(v)	Rated MV Voltage	6300 V
(vi)	Rater LV Voltage	800 V
(vii)	Temperature Rating	50 °C
(viii)	No Load Losses	2.9 kW
(ix)	Impedance (%)	6%
(d).	**Switchgear**	
(i)	LV Swtichgear	2000A, 800VAC, IP-54, Indoor, Floor Standing
(ii)	MCCB- i/p (Inverters to LV Panels)	MCCB TP 320A 50Hz Icu=25KA @ 1150 VAC
(iii)	ACB- o/p (LV Panels to Transformers)	E2.2H/E9 2500 Ekip Touch LSI FHR ACB Fixed Icu=Ics=65KA @ 900 VAC
(iv)	VCB- i/p (Transformers to MV Busbar)	3AHAAA6-2, 1250A, 6.3KV/12KV, Type Tested
(v)	LBS- o/p (MV Panel Outgoing)	3AHAAA6-2, 1250A, 6.3KV/12KV, Type Tested
(e).	**Control & Monitoring**	
(i)	Weather Monitoring System	Pyranometer MS-80 Class-A sensor
		Humidity & Ambient Temperature
		Module Temperature with RS485
		Wind Speed Sensor
(ii)	Power Meter	Model: EEMMA770-2907945, Make: Phoenix Germany
(iii)	Server PC	DELL Server R340
(iv)	SCADA	PcVue SCADA
(v)	Data Loggers/ Inverter Manager	SmartLogger3000A

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(E). Other Details

(i).	Expected COD of the generation facility Solar Power Plant/Solar Farm	June 30, 2024
(ii).	Expected useful Life of the generation facility/Solar Power Plant/ Solar Farm from the COD	25 years

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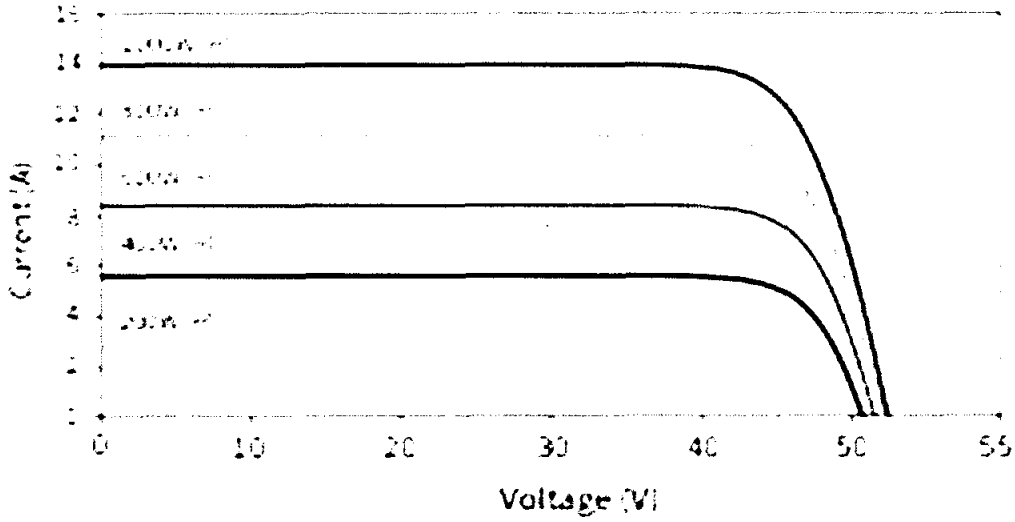
V-I Curve
Generation Facility/Solar Power Plant/Solar Farm of the Generation Company



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SCHEDULE-II

The Total Installed Gross ISO Capacity of the Generation Facility/Solar Power Plant/Solar Farm (MW), Total Annual Full Load (Hours), Average Sun Availability, Total Gross Generation of the Generation Facility/Solar Farm (in kWh), Annual Energy Generation (25 years Equivalent Net Annual Production-AEP) KWh and Net Capacity Factor of the Generation Facility/Solar Farm of Generation Company are given in this Schedule.

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SCHEDULE-II

(1).	Total Installed Capacity of the Generation Facility/Solar Power Plant/Solar Farm	25 MW_P
(2).	Average Sun Hour Availability/ Day (Irradiation on Inclined Surface)	5 to 5.5 Hours
(3).	No. of days per year	365
(4).	Annual generating capacity of Generation Facility/Solar Power Plant/Solar Farm (As Per Simulation)	40,857 MWh
(5).	Total (approximated) expected generation of the Generation Facility/Solar Power Plant/Solar Farm during the twenty five (25) years term of this licence	966,519.3 MWh
(6).	Annual generation of Generation Facility/Solar Power Plant/Solar Farm based on 24 hours working	219,000 MWh
(7).	Net Capacity Factor of Generation Facility/Solar Power Plant/Solar Farm	18.6 %

Note

All the above figures are indicative as provided by the Licensee. The Net Delivered Energy available to Power Purchaser for dispatch will be determined through procedures contained in the Energy Purchase Agreement (EPA) or the Applicable Document(s).

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