



# National Electric Power Regulatory Authority

## Islamic Republic of Pakistan

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**Registrar**

No. NEPRA/R/LAG-493/27642-49

May 28, 2021

**Mr. Maaz Mashkooor**

Director

Burj DG (Private) Limited

16- Abdullah Haroon Road

3<sup>rd</sup> Floor, Faysal Bank Building, Karachi

**Subject: Grant of Generation Licence No. SGC/155/2021  
Licence Application No. LAG-493  
Burj DG (Private) Limited (BDGPL)**

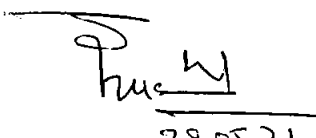
*Reference: Your letter No. nil dated 27.10.2020*

Enclosed please find herewith Determination of the Authority in the matter of application of Burj DG (Private) Limited (BDGPL) for the grant of generation licence along with Generation Licence No. SGC/155/2021 annexed to this determination granted by the National Electric Power Regulatory Authority (NEPRA) to BDGPL for its 923.32 KWp solar based generation located at Pearl Continental Limited, Mall Road, Lahore in the province of Punjab, pursuant to Section-14(B) of the Regulation of Generation, Transmission and Distribution of Electric Power Act, 1997 (NEPRA Amended Act).

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

Enclosure: As Above



  
28 05 21  
(Syed Safeer Hussain)

**Copy to:**

1. Secretary, Power Division, Ministry of Energy, 'A' Block, Pak Secretariat, Islamabad
2. Secretary, Ministry of Science & Technology, Government of Pakistan, Evacuee Trust Building, G-5, Islamabad
3. Managing Director, NTDC, 414 WAPDA House, Lahore
4. Chief Executive Officer, CPPA(G), 73 West, A.K. Fazl-ul-Haq Rd, Blue Area, Islamabad
5. Chief Executive Officer, Alternative Energy Development Board (AEDB), 2<sup>nd</sup> Floor, OPF Building, G-5/2, Islamabad
6. Chief Executive Officer, Lahore Electric Supply Company (LESCO), 22-A, Queens Road, Lahore
7. Director General, Environmental Protection Department, Government of the Punjab, National Hockey Stadium, Ferozpur Road, Lahore

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

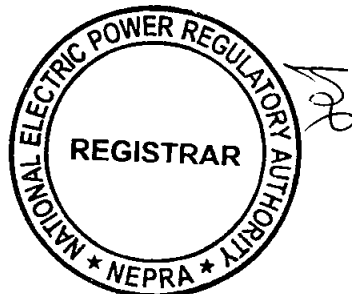
**Determination of the Authority**  
**in the Matter of Application of Burj DG (Private) Limited for**  
**Grant of the Generation Licence**

**May 28, 2021**  
**Case No. LAG-493**

**(A). Filing of Application**

(i). Burj DG (Private) Limited (BDGPL) submitted an application on November 17, 2020 for the grant of generation licence in terms of Section-14B of Regulation of Generation, Transmission and Distribution of Electric Power Act, 1997 (the "NEPRA Act") read with the relevant provisions of the NEPRA Licensing (Application and Modification Procedure) Regulations, 1999 (the "Licensing Regulations").

(ii). The Registrar examined the submitted application and found that application was deficient in terms of the Licensing Regulations. Accordingly, the Registrar directed BDGPL for submitting the missing information/documents as required under the said regulations. BDGPL completed the submission of missing information/documentation by December 02, 2020. The Authority considered the matter and found the form and content of the application in substantial compliance with Regulation-3 of the Licensing Regulations. Accordingly, the Authority admitted the application on December 15, 2020 for consideration of the grant of the generation licence as stipulated in Regulation-7 of the Licensing Regulations. The Authority approved an advertisement to invite comments of general public, interested and affected persons in the matter as stipulated in Regulation-8 of the Licensing Regulations. Accordingly, notices were published in one (01) Urdu and one (01) English newspapers on December 16, 2020.



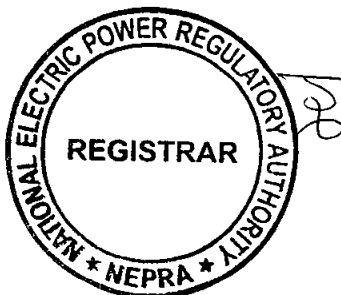
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(iii). In addition to the above, the Authority also approved a list of stakeholders for seeking their comments for its assistance in the matter in terms of Regulation-9(2) of the Licensing Regulations. Accordingly, letters were sent to different stakeholders as per the approved list on December 16, 2020, soliciting their comments for assistance of the Authority.

**(B). Comments of Stakeholders**

(i). In reply to the above, the Authority received comments from two (02) stakeholders which included Central Power Purchasing Agency (Guarantee) Limited (CPPAGL) and Lahore Electric Supply Company Limited (LESCO). The salient points of the comments offered by the said stakeholders are summarized in the following paragraphs as mentioned below: -

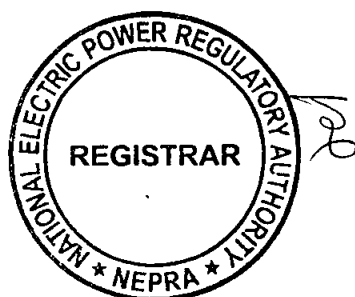
- (a). CPPAGL submitted that BDGPL is planning to set up generation facility proposed to be located at Pearl Continental Limited (PCL) Hotel in Lahore. The generation facility will utilize Photo Voltaic (PV) cells to be installed at the roof top of PCL for supplying to it as a Bulk Power Consumer (BPC). In this regard, the Authority is required to securitize the submitted application of BDGPL in terms of the relevant provisions of NEPRA Licensing (Generation) Rules, 2000 (the "Generation Rules"). The Generation Rules envisage "Least Cost Option Criteria (LCOC)" including but not limited to (a). the short-term and the long-term forecasts for additional capacity requirements; (b). the tariffs resulting or likely to result from the construction or operation of the proposed generation facility; and (c). the optimum utilization of various sites in the context of both the short-term and the long-term requirements of the electric power industry as a whole. As per the existing tariff structure the major portion of fixed charges (capacity payment, Use of System Charges-



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UoSC, Market Operation Fee-MoF and Distribution Margin-DM) is being recovered through sale of energy to end consumers (i.e. Volumetric Charges). As a result, the more the number of units being sold, the less will be the per unit rate for the fixed capacity charges and vice versa. The long term contracts with take-or-pay capacity regime are already committed resulting in capacity adequacy for the next few years. The Distribution Companies i.e. DISCO(s) are charged capacity charges (as fixed cost) which is independent of their end-consumer sales. However, DISCO(s) charges almost all of their Energy and Capacity Charges through a volumetric rate structure (i.e. per kWh basis) to the end consumers. Therefore, the regulator may provide for recovery of stranded costs arising on account of opt access/off-grid operation in the consumer-end tariff. The demand/supply planning cycle starting from demand projection to the approval of Integrated Generation Capacity Expansion Plan (IGCEP) may be adjusted to account for: (a). advance notices by the BPC(s) to exit the DISCO(s) and intimation to the planner to incorporate its planned generation capacity in the generation planning exercise as firm commitment; (b). recognition by the DISCO(s) in demand forecasting that the demand of this BPC will only be utilized for wires planning and not for sales; and (c). rationalization of timing of exit and return to the grid by the BPC. These changes are also very important for determining not only the period of stranded costs but also reducing further firm commitments for the pool to the extent of advance notices given by BPC(s) opting bilateral trade. If the stranded costs issue is not accounted for, then tariffs of different classes of remaining DISCO consumers will

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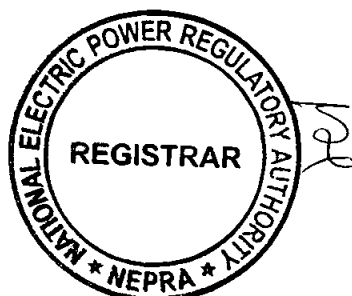


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tremendously increase in case of reduction at different levels of sales. In consideration of the said, CPPAGL suggested that (i). the quantum of Distributed Generation (DG) may be ascertained keeping in view the demand projections and energy charge being avoided by distributed generators; (ii). uniform tariff may be introduced or net metering/self-consumption through the introduction of a new tariff category; (iii). a separate category for net metering may be introduced in the central planning mechanism; (iv). under the current tariff structure, large consumers pay higher tariff to cross-subsidize the small consumers. Cross-subsidization is a policy/regulatory decision and is applicable to all consumers irrespective of purchasing electricity from DISCO(s) or having bilateral contract with generators and such big consumers cannot be discriminated on the basis that if the consumers opt for self-generation, it can avoid cross-subsidy. If this practice is continued, this in turn will become an undue incentive for the remaining regulated Bulk Power Consumers-BPC(s) to leave DISCO(s). Therefore, cross-subsidy charges should accordingly be charged to all the BPCs irrespective if they are DISCOs consumers or doing bilateral trade.

- (b). LESCO submitted that the company is planning to install a PV based generation facility at PCL for supplying to it. LESCO stated that PCL is its consumer and is bound under Section-22 of the NEPRA Act to give one (01) year notice before stopping purchasing from it. In view of the said, BDGPL cannot involve itself in selling electric power in the service territory of LESCO. The proposed scheme of arrangement if allowed will result in lesser sale of electric

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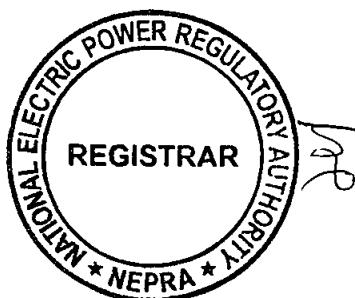


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power from LESCO resulting into losses to the company. Further, the proposal if implemented, will allow PCL not only to have a connection from LESCO but also from BDGPL which is neither permissible under the utility practices nor any law. CPPAGL through its different correspondence previously had raised various technical claims for similar schemes and the same may be considered as integral part of the comments of LESCO. Further to the said, it is submitted that LESCO is on the list of privatization and no action can be taken which may result in sale/transfer of the permits of the licensee and closing of any line of business etc.

(ii). The Authority considered the above comments and in view of the observations raised, considered it appropriate seeking perspective of BDGPL on the same. On the observations of CPPAGL, it was submitted that the evaluation of any application for the grant of licence is the regulatory mandate of the Authority. Regarding the provisions of the Rule-3(5) of the Generation Rules referred by CPPAGL pertaining to the LCOC, it was stated that the submitted application/proposed generation facility fulfils the same considering the fact that this facility is being developed as on-site facility and do not involve laying of long transmission lines as only a few meters of cables will be sufficient to connect the generation facility to the proposed BPC for which there are no constraints. About the proposal of CPPAGL to have a quantum of distributed generation, BDGPL supported the same but was of the view that the same may be taken up with NTDC which is the relevant entity entrusted with the preparation of the future expansion plan and may specify such a quantum on pragmatic basis. Regarding the proposal of CPPAGL to have tariff reviewed for consumers having dual source from DISCO and have distributed generation facility, BDGPL submitted that the same is prerogative of the Authority in terms of Section-7 of the NEPRA Act.

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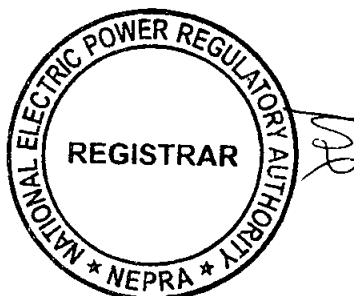
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(iii). About the comments of LESCO, it was submitted that the assertion of the utility that BDGPL cannot supply to PCL as BPC is not correct as the same is allowed under Section-22 of the NEPRA Act. About the observation of LESCO that PCL/BPC is required to give one-year notice as per the NEPRA Act, BDGPL submitted that the said provision is applicable once the BPC shifts to another utility however, in the current case the consumer intends to continue electric supply from LESCO as well as getting supply from it and therefore, the question of notice does not arise. About having double connection, the proposition is not new in fact the Authority has been allowing such arrangement in many of its determinations in similar arrangement being proposed and the same are publicly available and can be referred for reference. About the observation of LESCO that it is on the list of privatizations, BDGPL clarified that its application has been submitted in terms of the provisions of the NEPRA Act, relevant rules and regulations framed thereunder and needs to be processed accordingly which has no nexus with the possible privatization of the utility. Regarding the observations of CPPAGL raised in some previous cases referred by LESCO, it was submitted that these are of similar nature given in the current case and the same have been replied as explained above.

(iv). The Authority considered the above submissions and considered it appropriate to proceed further in the matter of the application of BDGPL for the consideration of the grant of the generation licence as stipulated in the Licensing Regulations and the Generation Rules.

**(C). Evaluations/Findings**

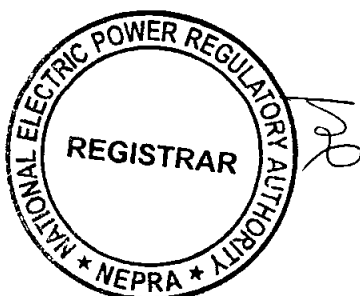
(i). The Authority examined the submissions of BDGPL including the information provided with its application for the grant of the generation licence, the comments of the stakeholders, rejoinder submitted by the company/applicant/BDGPL, the relevant rules & regulations in the matter.



(ii). The Authority has observed that the applicant i.e. BDGPL is an entity incorporated under Section-16 of the Companies Act, 2017 (XIX of 2017), having Corporate Universal Identification No. 0157069 dated September 03, 2020. It is a private limited company with the principal line of business to generate and sell electricity and to carry on all or any ancillary businesses relating to generation, production, sale, storage, supply and distribution of electricity and to provide such services as are associated with or required for the said business activities and completion installation of projects of generation and sale of electricity. Further, the Memorandum of Association (MoM) also envisages to perform all other acts which are necessary or incidental to the business of electricity generation, installation, storage, transmission, distribution, supply and sale subject to permission of concerned authorities. Also the MoM envisages to establish, construct, install, equip, operate, use, manage and maintain electricity generation power plants of all types and capacities subject to permission of the relevant authorities.

(iii). The Authority has noted that the applicant company i.e. BDGPL is a group company of the Burj Capital (BC) which is a leading Renewable Energy Company of the country involved in the clean energy business and has already set up a 50 MW wind farm at Jhampir in the province of Sindh. Further, a number of other projects of wind and solar are in different stages of implementation. Further, the sponsors of the group are planning to diversify their portfolio by investing in the segment of distribution generation whereby it is planned to set up generation facilities at the door step of the consumers/BPC(s) using PV cells. In view of the said, the Authority considers BDGPL/BC has the required financial and technical capabilities to implement the project.

(iv). The Authority has observed that BDGPL through its current application is pursuing a generation licence for setting up a PV based generation facility of 923.32 kW<sub>p</sub> to be located at PCL at Mall Road, Lahore in the province of Punjab. In consideration of the said, it is pertinent to mention that BDGPL plans supplying to the aforementioned entity/PCL as BPC through cable(s) located on

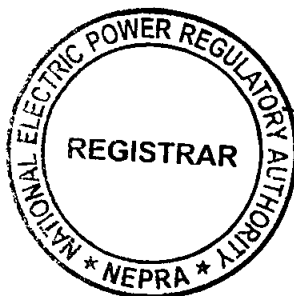




private property owned by the BPC. According to the submitted information, the total cost of the project will be about PKR. 99.00 million which will be financed through a combination of debt (80% of the total cost of project i.e. Rs. 79.20 million) and equity (of 20% of the total cost of project i.e. Rs. 19.80 million). In this regard, a number of financial institution/commercial banks have shown their willingness to finance the debt portion of the project.

(v). The sponsors of the project 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/panels and other allied equipment to be used in the solar power plant, electrical studies, environmental study and project financing etc. The review of the feasibility study reveals that for the proposed location to achieve the capacity of 923.32 kW<sub>p</sub> the company will be installing 2252 PV cells/panel each of 410 Watt. In consideration of the said, it is clarified that the company plans installing PV cells/panels from Tier-I manufactures including Jinko Solar, JA Solar or Renesola. It is pertinent to mention that the company has confirmed that deal for purchase of PV Cells of JAM72S10-410 W has been locked with JA Solar where the manufacturer has assured an average capacity factor of 15.94%.

(vi). The Authority has considered the submissions of BDGPL and has observed that the supply from proposed generation facility will be supplied to a BPC in the name of PCL as explained in the preceding paragraphs. According to the system study of the project, the dispersal to the BPC will be made at 220/400 Volt through cables located/placed on the roof top/private property owned by the BPC not involving any public or third party. In this regard, it is pertinent to mention BPC is a defined term as stipulated in Section-2 (ii) of the NEPRA Act. According to the said, a BPC is a consumer which purchases or receives electric power, at one premises, in an amount of one 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

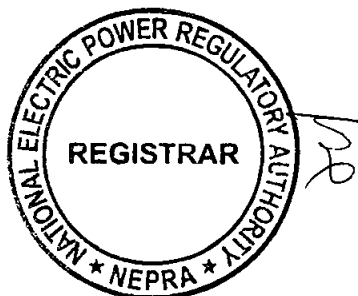


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voltage levels and with such other characteristics for different areas. In terms of Section 2 (xxva) of the NEPRA Act, for the purpose of specified means specified by regulations made by the Authority under the NEPRA Act. It is pertinent to mention that the relevant regulations in this regard are still under formation and in the absence of the same the Authority has been allowing even less than 1.00 MW to be treated as BPC therefore, the load of the above mentioned entity explained in the preceding Paras can be considered as BPC.

(vii). 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 above BPC are located on private property (without involving any public property or any third party) will be owned, operated, managed and controlled by the BPC therefore, the supply of electric power to PCL by BDGPL does not constitute a distribution activity under the NEPRA Act, and a distribution licence will not be required by the company.

(viii). Further, the Authority has also considered the submissions of BDGPL 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 infrastructure of roof top of buildings. Further, due to smaller sizing of the project/locations being developed as roof top solar, there is no requirement to have Initial Environmental Examination (IEE). BDGPL has confirmed that it will comply with the concerned environmental standards. In view of the said, the Authority considers that BDGPL is made obligatory to comply with the relevant environmental standards for which a separate article will be included in the proposed generation licence.



(ix). The grant of generation licence is governed by the provisions of Rule-3 of the Generation Rules. The Authority has observed that BDGPL has provided the details of the proposed generation facility about (a). location; (b). size; (c). technology; (d). interconnection arrangement; (e). technical limits; (f). technical functional specification and (g). other specific/relevant details as stipulated in Rule-3 (1) of the Generation Rules. According to the Rule-3(5) of the Generation Rules, the Authority may refuse to issue a generation licence where the site, technology, design, fuel, tariff or other relevant matters pertaining to the proposed generation facility/solar power plant/Roof Top Solar proposed in an application for a generation licence are either not suitable on environmental grounds or do not satisfy the least cost option criteria. In this regard, the Rule-3(5) of the Generation Rules stipulates the conditions pertaining to LCOC which includes (a). sustainable development or optimum utilization of the RE or non-RE resources proposed for generation of electric power; (b). the availability of indigenous fuel and other resources; (c). the comparative costs of the construction, operation and maintenance of the proposed generation facility/solar power plant/Roof Top Solar against the preferences indicated by the Authority; (d). the cost and right-of-way considerations related to the provision of transmission and interconnection facilities; (e). the constraints on the transmission system likely to result from the proposed generation facility/solar power plant/Roof Top Solar and the costs of the transmission system expansion required to remove such constraints; (f). the short-term and the long-term forecasts for additional capacity requirements; (g). the tariff resulting or likely to result from the construction or operation of the proposed generation facility/solar power plant/Roof Top Solar; and (h). the optimum utilization of various sites in the context of both the short-term and the long-term requirements of the electric power industry as a whole.

(x). In view of the above, the Authority considers that the proposal of BDGPL for installing PV based generation facility will result in optimum utilization of the RE which is currently untapped, resulting in pollution free electric power. It

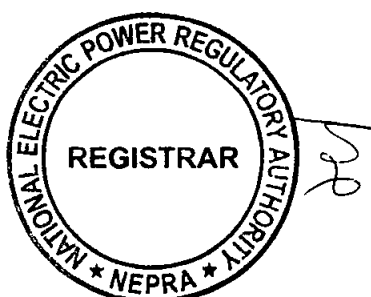


is pertinent to mention that solar is an indigenous resource and such resources should be given preference for the energy security. As explained in the preceding paragraphs above, the company will be supplying electric power to BPC(s) directly which only involve laying small feeder(s), this concludes that the project will not face any constraints in transmission of electric power. Further, being located in the same vicinity as that of the BPC, the project will not result in cost and right-of-way issue for the provision of interconnection facilities. In view of the said, the Authority considers that the project of BDGPL fulfills the eligibility criteria for the grant of the generation licence as stipulated in the NEPRA Act, rules and regulations and other applicable documents.

**(D). Grant of Licence**

(i). The Authority considers that sustainable and affordable energy/electricity is a key prerequisite for 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 priority basis.

(ii). The Authority observes that the existing energy mix of the country is heavily skewed towards the 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 downward trend making the same affordable for commercial use. The Authority is also encouraged to observe that the Govt. of Pakistan is planning to enhance the share of RE from its current level of 5% of the installed capacity to



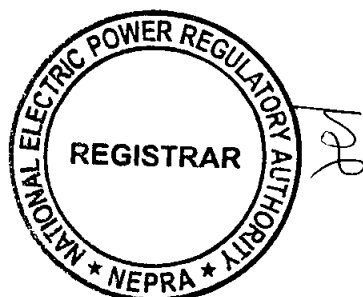
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30% of the total installed capacity by 2030. Furthermore, a number of initiatives are also being undertaken in the private sector in this regard.

(iii). The Authority has observed that in the current case, BDGPL has approached for the grant of a generation licence for setting up a PV based generation facility with a cumulative Installed Capacity of 923.32 kW<sub>p</sub> for supplying to PCL/BPC(s) which is also an existing consumer of the local utility i.e. DISCO. The Authority considers that the above proposal of BDGPL is in line with the provisions of the NEPRA Act, relevant rules and regulations framed thereunder and vision of the Govt. of Pakistan to enhance the contribution of RE in generation of electric power. The project will not only help BDGPL in diversifying its portfolio but will also enhance the energy security of the PCL/BPC. Further, the project will also help in reducing the carbon emission by generating clean electricity, thus improving the environment.

(iv). As explained above, BDGPL 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/ Roof Top Solar. 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. The said details are being incorporated in the generation licence.

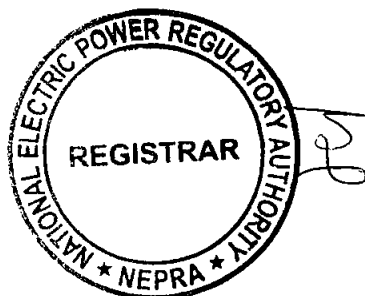
(v). The Authority has observed that proposed generation facility of BDGPL will be used for supplying to a BPC. According to Section-2(ii) of the NEPRA Act, a consumer which purchases or receives electric power at one premises, in an amount of one megawatt or more or in such amount and voltage level and with such characteristics as the Authority may determine/specify is treated as BPC. It is pertinent to mention that the relevant regulation in this regard are still under formulation and in the absence of the same the Authority has been allowing even amount of less than 1.00 MW to be treated as BPC therefore, the



Authority allows the above mentioned entity/PCL as explained in the preceding Paras to be BPC of BDGPL.

(vi). Regarding supply to the BPC, the Authority observes that the BPC and the proposed generation facilities of BDGPL are located within the same premises and the BPC will be supplied through underground cable/feeder of 220/440 volt. Pursuant to 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 territory of a distribution company. In view of the said, the Authority allows the BDGPL to sell electricity to BPC. 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 BDGPL does not constitute a distribution activity under the NEPRA Act, and BDGPL will not require a distribution licence for supplying to the BPC.

(vii). The term of a generation licence under Rule-5(1) of the Generation Rules is required to match with the maximum expected useful life of the units comprised in a generating facility. According to the information provided by BDGPL, the Commercial Operation Date (COD) of the proposed generation facility/solar power plant/ Roof Top Solar will be December 31, 2021 and it will have a useful life of around twenty five (25) years from its COD. In this regard, BDGPL has requested that the term of the proposed generation licence may be fixed as per the said useful life of generation facility/solar power plant/ Roof Top Solar. The Authority considers that said submission of BDGPL about the useful life of the generation facility/solar power plant/ Roof Top Solar and the subsequent request of BDGPL to fix the term of the generation licence is

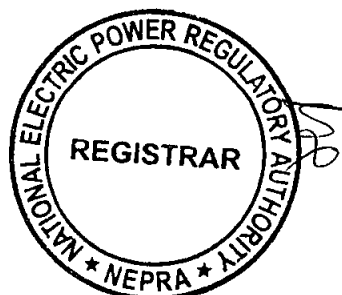


consistent with international benchmarks; therefore, the Authority fixes the term of the generation licence to twenty five (25) years from COD of the project.

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

(ix). Regarding the rates, charges and terms and conditions of tariff between BDGPL and its BPC, it is reiterated that under Section-7(3)(a) of the NEPRA Act, determining tariff, rate and charges etc. is the sole prerogative of the Authority. However, the Authority observes that tariff between BDGPL and its BPC, does not affect any other consumer or third party. Therefore for the purpose of tariff, the Authority considers it appropriate directing BDGPL and its BPC to agree on a bilateral agreement and accordingly BDGPL will be allowed to charge the agreed tariff subsequent to the grant of the generation licence.

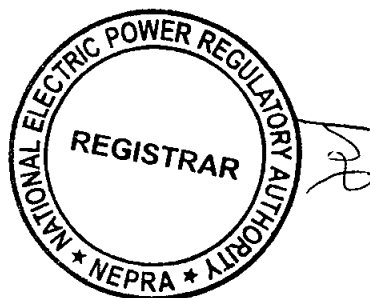
(x). The Authority has duly considered the comments of different stakeholders as explained above. In this regard, the Authority has observed that CPPAGL and LESCO have raised various concerns including (a). compliance of provisions of the Generation Rules; (b). determination of quantum of Distributed Generator (DG) in light of the demand projections; (c). introduction of a separate/new category of tariff for distributed generators connected consumers maintaining connection from the utility; (d). induction/inclusion of distribution generation in central planning through suitable mechanism of Registration etc.; (d). payment of Cross Subsidy Charges by large consumers to subsidize small consumers; (e). Treatment/recovery of the stranded cost likely to result due to shifting of BPC from the utility for which long term contracts have already been executed; (f). BDGPL cannot sell to PCL/BPC; (h). PCL being a consumer of LESCO, is required to give one year notice to LESCO if it plans to switch; (h).



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BPC cannot have dual supply i.e. from the utility as well as Generation Company; and (i). LESCO is on the list of privatization and prohibited to take any action which may result in its sale/transfer of its licence/permit or closing of any line of business.

(xi). In consideration to the above, the Authority has observed that BDGPL has submitted rejoinders to the above observations of the stakeholders as explained in the preceding paragraphs which the Authority considers pragmatic. 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 licence of BDGPL. Regarding the "Compliance of provisions of the Generation Rules", the Authority is cognizant of its responsibilities as stipulated under the NEPRA Act and the relevant and regulations and invariably examine any application submitted to it for the grant of generation licence. In the particular case of BDGPL the Authority has considered the submission and has given its findings in the preceding paragraph as explained at Para-C above, confirming the compliance of the criteria of the Generation Rules. About the "determination of quantum of DG in light of the demand projections" and "Induction/inclusion of DG in central planning, the Authority considers that CPPAGL has made similar types of observations in the matter of applications of Solis Energy Limited, Atlas Energy Limited, Shams Power (Pvt.) Limited and Zero Carbon (Pvt.) Limited etc., and the Authority had addressed the same in its determination for the said cases. In the particular case of BDGPL the Authority reiterates its earlier findings in the matter and directs CPPAGL, NTDC to work closely with DISCO(s) to rationalize the demand forecast to be incorporated in the proposed IGCEP. About the observations relating to (a). "the separate/new category of tariff" for consumer having connection from the utility as well as from the generation company/DG; (b). payment of Cross Subsidy Charges by large consumers; and (c). treatment/recovery of the stranded cost, the Authority considers that such matters are beyond the scope of current application of BDGPL for the generation licence

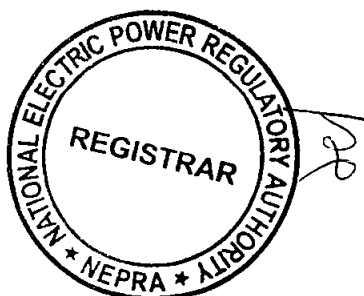




considering the fact that it is sectorial issue and needs more deliberations and input of the stakeholders to decide the same and the same will be applicable across the board including in the current case.

(xii). Further to the above, LESCO in its comments has raised the point that BDGPL cannot sell to PCL/BPC under Section-22 of the NEPRA Act. In this regard, the Authority has considered the said provision of the NEPRA Act and is of the considered opinion that the understanding of LESCO is not in line with the spirit of the said section and actually a generation company like BDGPL, is allowed supplying to a BPC located in the service territory of a Licensee (like LESCO). Regarding the observation of LESCO that BPC is to give one year notice if it plans to switch from it, the Authority considers that according to Section-22 (2) of the NEPRA Act, a consumer is required to serve a notice if it plans shift from the utility however, in the current case the proposed BPC/PCL has confirmed that it will continue to have the connection from LESCO therefore, the provision of one (01) year notice does not apply in the current case. Regarding the observation that PCL cannot have dual connection, the Authority considers that in terms of Section-22 of the NEPRA Act there is no prohibition for such an arrangement and the Authority has been allowing the same and accordingly allows PCL to have the connection from BDGPL while maintaining connection from LESCO. However, the Authority directs BDGPL and PCL to install suitable system for safety and protection of its facilities to avoid any unwanted situation. About the comment of LESCO that it is on the list of privatization, the Authority considers that BDGPL has submitted its application in terms of the provision of the NEPRA Act and the relevant rules and regulation made thereunder and the grant of generation licence which has no nexus with the privatization of LESCO. In view of the above, the Authority considers that the observations of CPPAGL and LESCO stand addressed and settled.


(xiii). In consideration of the above, the Authority hereby approves the grant of the generation licence to BDGPL on the terms and conditions set out in the generation licence annexed to this determination. The grant of the generation




licence will be subject to the provisions contained in the NEPRA Act, relevant rules, regulations framed thereunder and other applicable documents.

**Authority:**

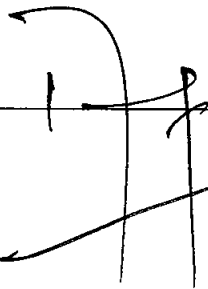
Rafique Ahmed Shaikh  
(Member)

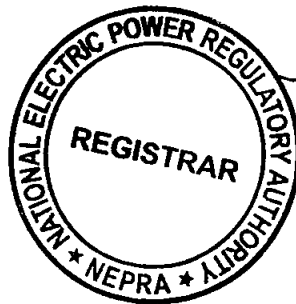
  
25/6/21

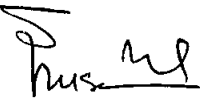
Rehmatullah Baloch  
(Member)

  
22/8/5/21

Engr. Tauseef H. Farooqi  
(Chairman)







28 05 21



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

**Islamabad – Pakistan**

**GENERATION LICENCE**

**No. SGC/155/2021**

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

**BURJ DG (PRIVATE) LIMITED**

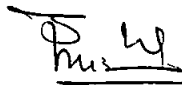
Incorporated Under Section-16 of the  
Companies Act, 2017 (XIX of 2017) Having Corporate Universal Identification  
No. 0157069, dated September 03, 2020

**for its PV based Generation Facility/Roof Top Solar/  
Solar Power Plant located at Pearl Continental Limited, Mall  
Road, Lahore in the Province of Punjab**

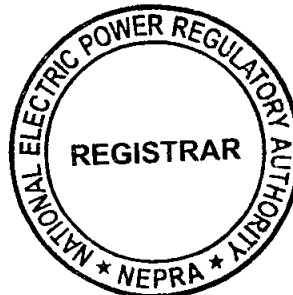
(Total Installed Capacity:  $\approx$  923.32 kWp Gross)

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

Given under my hand on 28<sup>th</sup> day of May Two Thousand & Twenty  
One and expires on 30<sup>th</sup> day of December Two Thousand & Forty-  
Six

  
28 05 21

**Registrar**

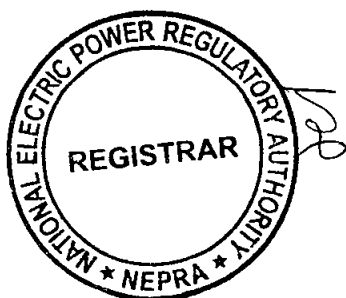




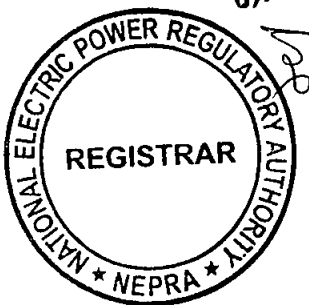
**Article-1**  
**Definitions**

**1.1** In this Licence

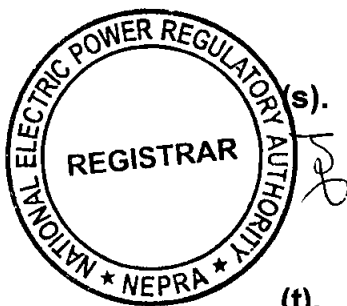
- (a). "Act" means the Regulation of Generation, Transmission and Distribution of Electric Power Act, 1997, as amended or replaced from time to time;
- (b). "Applicable Documents" mean the Act, the rules and regulations framed by the Authority under the Act, any documents or instruments issued or determinations made by the Authority under any of the foregoing or pursuant to the exercise of its powers under the Act, the Grid Code, the applicable Distribution Code, the Commercial Code if any, or the documents or instruments made by the Licensee pursuant to its generation licence, in each case of a binding nature applicable to the Licensee or, where applicable, to its affiliates and to which the Licensee or any of its affiliates may be subject;
- (c). "Applicable Law" means 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 which 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;



- (f). "Bus Bar" means a system of conductors in the generation facility/Solar Power Plant/Roof Top Solar of the Licensee on which the electric power from all the photovoltaic cells is collected for supplying to the Power Purchaser;
- (a). "Commercial Code" means the commercial code prepared under the National Electric Power Regulatory Authority (Market Operator, Registration, Standards and Procedure) Rules, 2015 as amended or replaced from time to time;
- (g). "Commercial Operations Date (COD)" means the day immediately following the date on which the generation facility/Solar Power Plant/Roof Top Solar of the Licensee is Commissioned;
- (h). "Commissioned" means the successful completion of commissioning of the generation facility/Solar Power Plant/Roof Top Solar for continuous operation and despatch to the Power Purchaser;
- (i). "Distribution Code" means the distribution code prepared by the concerned XW-DISCO and approved by the Authority, as may be revised from time to time with necessary approval of the Authority;
- (j). "Energy Purchase Agreement-EPA" means the energy purchase agreement, entered or to be entered into by and between the Power Purchaser and the Licensee, for the purchase and sale of electric energy generated by the generation facility/Solar Power Plant/ Roof Top Solar, as may be amended by the parties thereto from time to time;
- (k). "Generation Rules" mean the National Electric Power Regulatory Authority Licensing (Generation) Rules, 2000 as amended or replaced from time to time;



- (l). "Grid Code" means the grid code prepared and revised from time to time by NTDC with necessary approval of the Authority;
- (m). "Law" means the Act, relevant rules and regulations made there under and all the Applicable Documents;
- (n). "Licence" means this licence granted to the Licensee for its generation facility/ Solar Power Plant/Roof Top Solar;
- (o). "Licensee" means **Burj DG (Private) Limited** or its successors or permitted assigns;
- (p). "Licensing Regulations" mean the National Electric Power Regulatory Authority Licensing (Application & Modification Procedure) Regulations, 1999 as amended or replaced from time to time;
- (q). "Net Delivered Energy" means the net electric energy expressed in kWh that is generated by the generation facility/Solar Power Plant/Roof Top Solar of the Licensee at its outgoing Bus Bar and delivered to the Power Purchaser;
- (r). "Power Purchaser" means the BPC which will be purchasing electric power from the Licensee, pursuant to a EPA for procurement of electric power;
- (s). "Roof Top Solar" means a cluster of photovoltaic cells/panels installed on the roof top of a building or any other suitable place in the same location used for production of electric power";
- (t). "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 Licence is issued subject to the provisions of the Applicable Law, as amended or replaced from time to time.

**Article-3**  
**Generation Facilities**

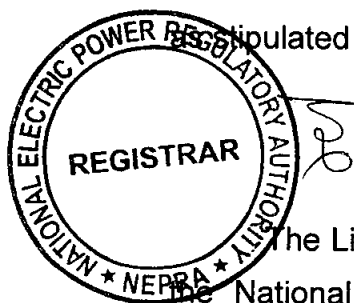
**3.1** The location, size (capacity in MW), technology, interconnection arrangements, technical limits, technical functional specifications and other details specific to the generation facility/Solar Power Plant/Roof Top Solar of the Licensee are set out in Schedule-I of this Licence.

**3.2** The net capacity/Net Delivered Energy of the generation facility/Solar Power Plant/Roof Top Solar of the Licensee is set out in Schedule-II of this Licence. The Licensee shall provide the final arrangement, technical and financial specifications and other specific details pertaining to its generation facility/Solar Power Plant/Roof Top Solar before it is Commissioned.

**Article-4**  
**Term of Licence**

**4.1** This Licence 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/Roof Top Solar, subject to the provisions of Section-14(B) of the Act.

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



**Article-5**  
**Licence fee**

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

**Article-6**  
**Tariff**

The Licensee is allowed to charge the Power Purchaser/BPC a mutually agreed tariff.

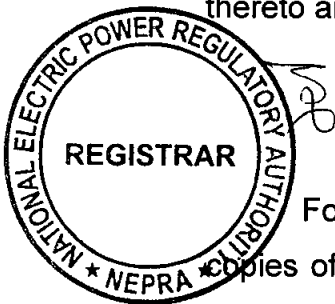
**Article-7**  
**Competitive Trading Arrangement**

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

7.2 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.

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

**Article-8**  
**Maintenance of Records**



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

**Article-9**  
**Compliance with Performance Standards**

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



**Article-10**  
**Compliance with Environmental & Safety Standards**

**10.1** The generation facility/Solar Power Plant/Roof Top Solar of the Licensee 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.

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

**Article-11**  
**Power off take Point and Voltage**

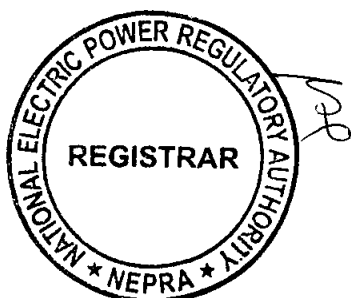
The Licensee shall deliver the electric power to the Power Purchaser at the outgoing Bus Bar of its generation facility/Solar Power Plant/Roof Top Solar. The Licensee shall be responsible for the up-gradation (step up) of generation voltage up to the required dispersal voltage level.

**Article-12**  
**Provision of Information**

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

**Article-13**  
**Compliance with Applicable Law**

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

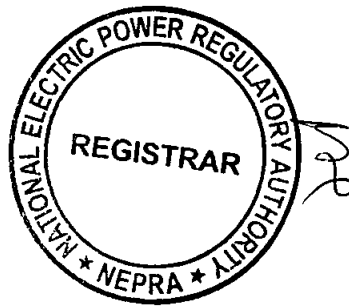


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## **SCHEDULE-I**

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 Licensee are described in this Schedule.



no



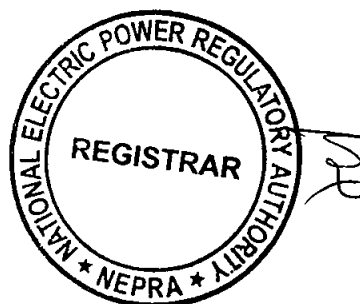
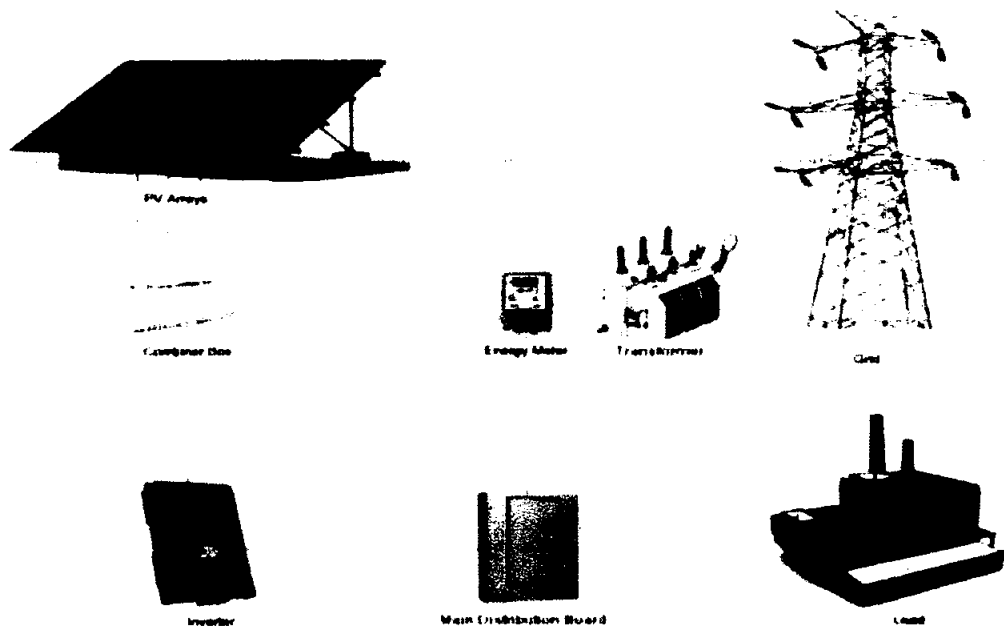
Land Coordinates of the  
 Generation Facility/Solar Power Plant/Roof Top Solar  
 of the Licensee



<u>Serial Number</u>	<u>Location</u>	<u>Site Coordinates</u>	
		Latitude	31°33'06.78" N
1.	Pearl Continental Limited Lahore	Longitude	74°20'18.63" E

## Process Flow Diagram of the Generation Facility/Solar Power Plant/Roof Top Solar of the Licensee

### ON GRID SOLAR SYSTEM

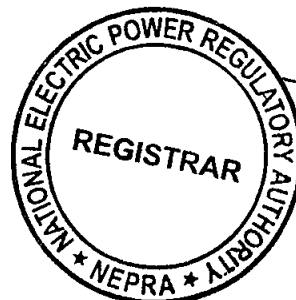




**Interconnection Arrangement/Transmission Facilities for  
Dispersal of Power from the Generation Facility/Solar Power  
Plant/Solar Farm/Roof Top Solar of the Licensee**

The electric power generated from the generation facility/Solar Power Plant/Solar Farm /Roof Top Solar of the Burj DG (Private) Limited-BDGPL/Licensee will be delivered/supplied to Pearl Continental Limited (PCL) Hotel 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.



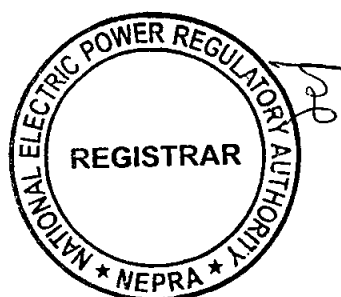
## Details of Generation Facility/Solar Power Plant/ Solar Farm

### (A). General Information

(i).	Name of the Company/Licensee	Burj DG Private Limited
(ii).	Registered/ Business office of the Company/Licensee	16 Abdullah Haroon Road, 3 <sup>rd</sup> Floor Faysal Bank Building, Karachi
(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	Pearl Continental Hotel Lahore located at Mall Road, Lahore, in the province of Punjab

### (B). Solar Power Generation Technology & Capacity

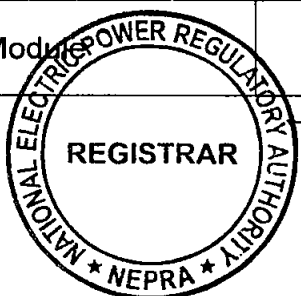
(i).	Type of Technology	Photovoltaic (PV) Cell	
(ii).	System Type	On-Grid	
(iii).	Installed Capacity of the generation facility Solar Power Plant/ Roof Top Solar	923.32 kW <sub>P</sub>	
(iv).	No. of Panel/Modules	2252 x 410 Watt	
(v).	PV Array	Nos. of Strings	136
		Modules in a string	12-18
(vi).	Inverter(s)	Quantity	3/11
		Make	Huawei
		Capacity of each unit	36/60 kW



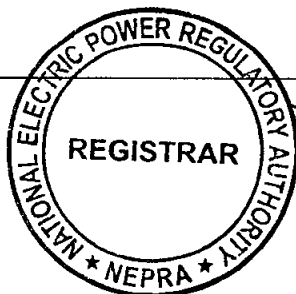


**(C). Technical Details of Equipment**

(a).	<u>Solar Panels – PV Modules</u>		
(i).	Type of Module	JA Solar JAM72S10-410/PR	
(ii).	Type of Cell	Mono crystalline	
(iii).	Dimension of each Module	2015±2mm×996±2mm×40±1mm	
(iv).	Total Module Area	2.00694 m <sup>2</sup>	
(v).	Frame of Panel	Anodized aluminium alloy	
(vi).	Weight of one Module	22.7 kg	
(vii).	No of Solar Cells in each module	144 (6×24)	
(viii).	Efficiency of module	20.4%	
(ix).	Maximum Power (P <sub>max</sub> )	410 W <sub>P</sub>	
(x).	Voltage @ P <sub>max</sub>	41.76 V	
(xi).	Current @ P <sub>max</sub>	9.82 A	
(xii).	Open circuit voltage (V <sub>oc</sub> )	50.12 V	
(xiii).	Short circuit current (I <sub>sc</sub> )	10.37 A	
(xiv).	Maximum system open Circuit Voltage	1000VDC (IEC)	
(b).	<u>Inverters</u>		
(i).	Type of Module	36kW	60kW



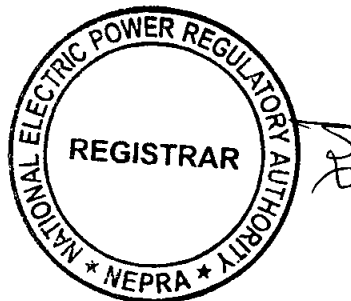
(ii).	Type of Cell	SUN2000-36KTL	SUN2000-60KTL-M0
(iii).	Input Operating Voltage Range	200 V to 1000 V	200 V to 1000 V
(iv).	Efficiency of inverter	98.6%	98.6%
(v).	Max. Allowable Input voltage	1100 V	1100 V
(vi).	Max. Current	22A	22A
(vii).	Max. Power Point Tracking Range	200 V to 1000 V	200 V to 1000 V
(viii).	Output electrical system	3 Phase AC	
(ix).	Rated Output Voltage	380 to 480	
(x).	Power Factor (adjustable)	0.8 Lagging-0.8 Leading	
(xi).	Power control	MPP tracker	
(xii).	Rated Frequency	50 Hz	
(xiii).	Environmental Enclosures	Relative Humidity	0-100%
		Audible Noise	50 DB @ 1m
		Operating Elevation	4000 m
		Operating temperature	-25 to +60°C
(xiv).	Grid Operating protection	A	DC circuit breaker
		B	AC circuit breaker
		C	DC overload protection (Type 2)



		D	Overheat protection
		E	Grid monitoring
		F	Insulation monitoring
		G	Ground fault monitoring
(c).	<b><u>Data Collecting System</u></b>		
(i).	System Data	Continuous online logging with data logging software to portal.	
(d).	<b><u>Unit Transformer</u></b>		
(i).	Not Applicable		

**(D). Other Details**

(i).	Expected COD of the generation facility Solar Power Plant/ Roof Top Solar	December 31, 2021
(ii).	Expected useful Life of the generation facility Solar Power Plant/ Roof Top Solar from the COD	25 years

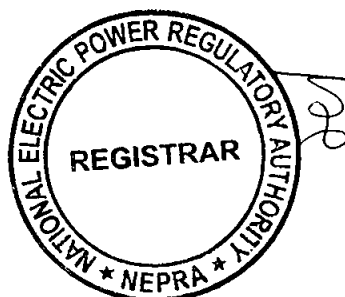


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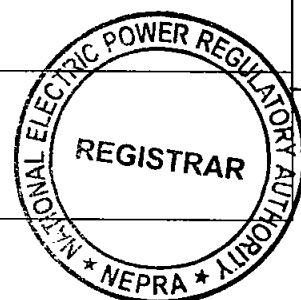
**Information**  
**Regarding Bulk Power Consumer(s)/BPC(s) to be**  
**Supplied by the Licensee**

(i).	No. of Consumers	One (01)
(ii).	Location of consumers (distance and/or identity of premises)	Pearl Continental Limited-PCL, Mall Road Lahore, in the province of Punjab
(iii).	Contracted Capacity and Load Factor for consumer	923.32 kWp/ 10 - 15%
(iv).	Specify Whether	
	(a).	The consumer is an Associate undertaking of the Licensee -If yes, specify percentage ownership of equity;
	(b).	There are common directorships:
	(c).	Either can exercise influence or control over the other.
(v).	Specify nature of contractual Relationship	
	(a).	Between each consumer and Licensee.
	(b).	Consumer and Distribution Company.
(vi)	Any other network information deemed relevant for disclosure to or consideration of the Authority.	Not Applicable

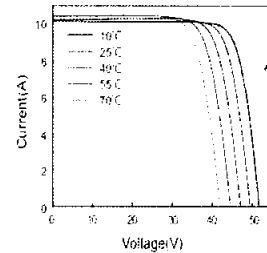
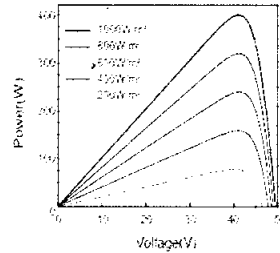
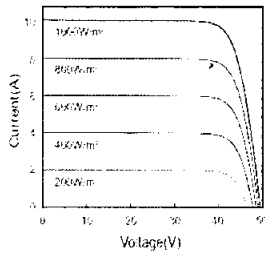


**Information**  
**Regarding Distribution Network for Supply of Electric**  
**Power to BPC**

(i).	No. of Feeders	One (01)
(ii).	Length of Each Feeder (Meter)	500-650 meter
(iii).	Length of Each Feeder to each Consumer	-do-
(iv).	In respect of all the Feeders, describe the property (streets, farms, Agri land, etc.) through, under or over which they pass right up to the premises of customer, whether they cross-over.	The underground cable supplying to BPC from the generation facility will be located on private property owned by BPC
(v).	Whether owned by Licensee, Consumer or Distribution Company -(deal with each Feeder Separately)	
	(a).	If owned by Distribution Company, particulars of contractual arrangement
	(b).	Operation and maintenance responsibility for each feeder
(vi).	Whether connection with network of Distribution Company exists (whether active or not)- If yes, provide details of connection arrangements (both technical and contractual)	Yes- A-2C(06)T consumer of LESCO
(vii).	Any other network information deemed relevant for disclosure to or consideration of the Authority.	NA

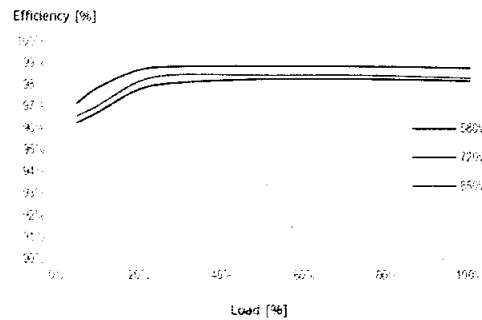


## V-I Curve Generation Facility/Solar Power Plant/Roof Top Solar of the Licensee



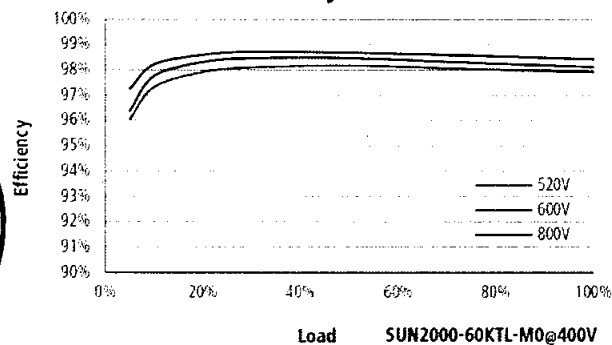
**JAM72S10-410PR**

### Efficiency Curve

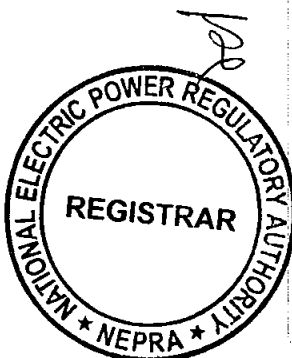


**SUN2000-36KTL**

### Efficiency Curve



**SUN2000-60KTL-M0**

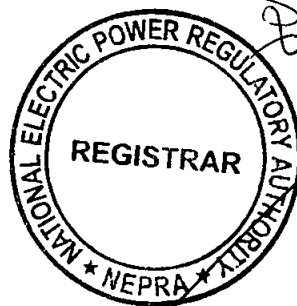


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## **SCHEDULE-II**

The Total Installed Gross ISO Capacity of the Generation Facility/Power Plant/Solar Plant (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 Licensee are given in this Schedule.

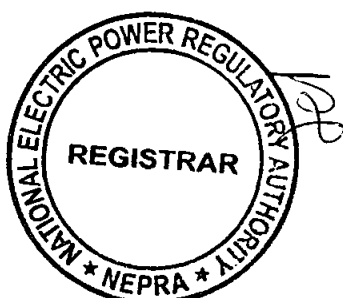


## **SCHEDULE-II**

(1).	Total Installed Capacity of the Generation Facility/Solar Power Plant/Solar Farm	923.32 kW <sub>p</sub>
(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)	1290 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	29541 MWh
(6).	Annual generation of Generation Facility/Solar Power Plant/Solar Farm based on 24 hours working	6192 MWh
(7).	Net Capacity Factor of Generation Facility/Solar Power Plant/Solar Farm	15.94%

**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).





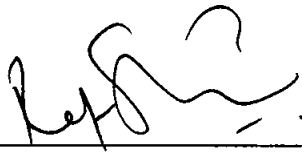
**Authorization**  
**by National Electric Power Regulatory Authority (NEPRA) to**  
**Burj DG (Private) Limited**

Incorporated under Section-16 of  
the Companies Act, 2017 (XIX of 2017) having Corporate Universal Identification  
No. 0157069, dated September 03, 2020

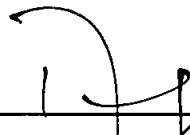
**NEPRA GENERATION LICENCE No. SGC/155/2021**  
**For Sale to Bulk Power Consumer(s)**

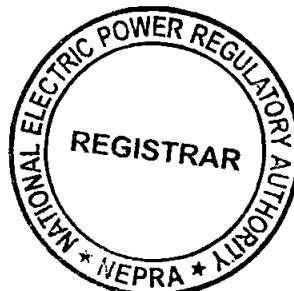
Pursuant to Section-22 of the Act and Rule-7 of the NEPRA Licensing (Generation) Rules, 2000, the Authority hereby authorize Burj DG (Private) Limited-(BDGPL) the Licensee to engage in second-tier supply business, limited to the following consumers:-

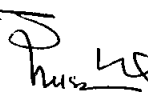
- (a). Pearl Continental Limited-PCL, Mall Road Lahore, in the province of Punjab

  
Engr. Rafique Ahmed Shaikh  
(Member)

  
28/5/21  
Engr. Rehmatullah Baloch  
(Member)

  
Engr. Tauseef H. Farooqi  
Chairman



  
28.05.21