



National Electric Power Regulatory Authority

Islamic Republic of Pakistan

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

Registrar

No. NEPRA/R/DL/LAG-453/36369-75

October 15, 2020

Mr. Usman Ahmad,
Chief Executive Officer,
Nizam Power (Private) Limited,
G-30/4, KDA Scheme No. 5, Block-8, Clifton,
Karachi.
Contact No. 021-3536-0583

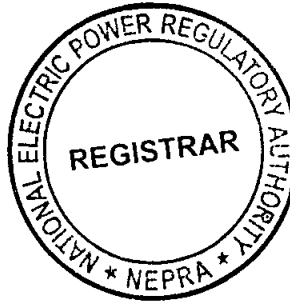
Subject: Grant of Generation Licence No. SGC/150/2020
Licence Application No. LAG-453
Nizam Power (Private) Limited (NPPL)

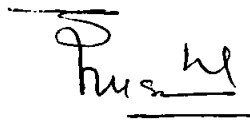
Reference: NPPL's application vide letter No. nil (received on March 15, 2019)

Enclosed please find herewith Generation Licence No. SGC/150/2020 granted by National Electric Power Regulatory Authority (NEPRA) to Nizam Power (Private) Limited (NPPL) for its 09.50 MWp Solar Power Plant located at Quetta Cantonment, in the province of Baluchistan, pursuant to Section 14B of the Regulation of Generation, Transmission and Distribution of Electric Power Act, 1997/Amendment Act, 2018. Further, the determination of the Authority in the subject matter is also attached.

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

Enclosure: Generation Licence
(SGC/150/2020)




15 x 20
(Syed Safeer Hussain)

Copy to:

1. Secretary, Ministry of Energy, Power Division, A-Block, Pak Secretariat, Islamabad.
2. Chief Executive Officer, Alternative Energy Development Board (AEDB), 2nd Floor, OPF Building, G-5/2, Islamabad.
3. Managing Director, NTDC, 414-WAPDA House, Lahore.
4. Chief Executive Officer, Quetta Electric Supply Company (QESCO), 14-A Zarghoon Road, Quetta.
5. Director General, Environmental Protection Department, Government of Balochistan, Zarghoon Road, Quetta.
6. Chief Secretary, Government of Balochistan, Balochistan Secretariat, Quetta.

National Electric Power Regulatory Authority
(NEPRA)

Determination of the Authority
in the Matter of Application of Nizam Power (Private) Limited
for the Grant of Generation Licence

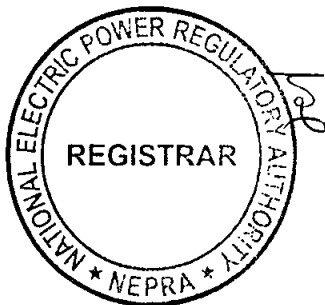
October 15, 2020
Case No. LAG-453

(A). Filing of Application

(i). Nizam Power (Private) Limited (NPPL) submitted an application on March 15, 2019 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 NPPL for submitting the missing information/documents as required under the said regulations. NPPL completed the submission of missing information/documentation by April 15, 2019. The Authority considered the matter and found the form and content of the application in substantial compliance with Regulation-3 of the Licensing Regulations.

(iii). Accordingly, the Authority admitted the application on May 23, 2019 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 newspaper on May 28, 2019.



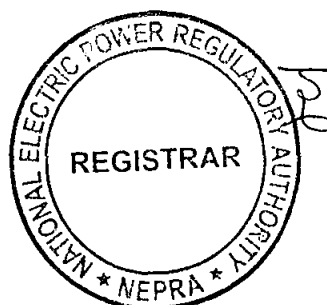
(iv). In addition to the above, the Authority also approved a list of stakeholders for seeking their comments for its assistance in the matter in terms of Regulation-9(2) of the Licensing Regulations. Accordingly, letters were sent to different stakeholders as per the approved list on May 29, 2019, soliciting their comments for assistance of the Authority.

(B). Comments of Stakeholders

(i). In reply to the above, comments were received from three (03) stakeholders. These included Central Power Purchasing Agency (Guarantee) Limited (CPPA-G), Ministry of Science and Technology (MoST) and Alternate Energy Development Board (AEDB). The salient points of the comments offered by the said stakeholder are summarized below:

(a). CPPA-G submitted that the Authority may consider the provisions of the Least Cost Option Criteria (LCOC) as provided in the NEPRA Licensing (Generation) Rules, 2000 (the "Rules"). Furthermore, it stated that as per the existing tariff structure, the major portion of fixed charges including capacity payments, UoSC, MOF, DM, etc., is being recovered through sale of energy to end consumers. In this regard, any scheme that decreases the energy sale from central/CPPA-G pool to end consumers may result in an increase in the rate of fixed capacity charges for other consumers and stranded costs at the central pool level;

(b). In addition to the above, CPPA-G stated that the increase in grid defection, due to rapid deployment of roof top solar/self-generation, may result in death spiral for the utilities. Accordingly, CPPA-G suggested: (i). the quantum of distributed generation may be ascertained

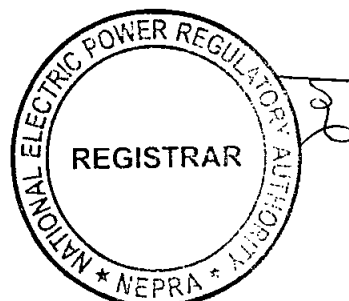


keeping in view the demand projections and energy charge being avoided by distributed generators; (ii). uniform tariff may be introduced for net metering/self-consumption through the introduction of a new tariff category; (iii). a separate category for net metering may be introduced in the central planning mechanism; and (iv). The design of competitive wholesale market i.e. CTBCM may be approved;

(c). MoST supported the grant of generation licence to NPPL and stated that it would help overcome electricity shortfall in the country. Moreover, it may be ensured that the panels are IEC and UL certified. MoST submitted that it cannot comment on the financial and other ToRs of the project; and

(d). AEDB supported the grant of generation license to NPPL for its proposed 7.722 MW solar power project located at Quetta.

(ii). The Authority considered the above comments of CPPA-G and MoST and considered it appropriate seeking perspective of NPPL. On the comments of CPPA-G, it was submitted that Rule 3(5) of NEPRA Licensing (Generation) Rules, 2000 which relate to the project specifics "site, technology, design, fuel, tariff or other relevant matters pertaining to the generation facility" does not relate to DISCO or cost of electricity at national pool. Responding to LCOC, NPPL submitted that before LCOC the first criteria is sustainable development or optimum utilization of the renewable or non-renewable energy resources proposed for generation of electric power. Mainstreaming of renewable energy and greater use of indigenous resources can help diversify Pakistan's energy mix and reduce the country's



dependence on imported fuel, thereby mitigating against supply disruptions and price fluctuation risks.

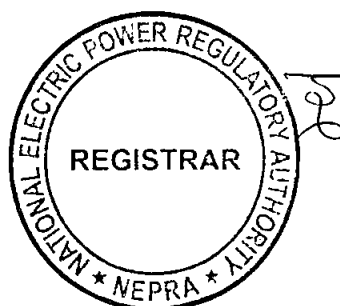
(iii). In reply to increase in fixed charges, NPPL submitted that: (i). one of the major source of decrease in billable energy from DISCO is T&D losses- project falls in the jurisdiction of QESCO whose T&D losses are 22.4% (PER-DISCO 2018 by NEPRA); (ii). the recoverability of revenue at QESCO is 46.1% (lowest in all DISCOs); and (iii). load shedding hours on daily basis by QESCO is 5.8 hours. NPPL further added that QESCO reported numbers of SAIFI and SAIDI are fourth highest amongst all DISCOs. Thus, this project will positively impact this shortfall. On the comments of MoST, NPPL submitted that panel manufacturer will be Tier-1 and compliant to all International Standards including UL and IEC certifications.

(iv). The Authority considered above submissions of NPPL and considered it appropriate to proceed further in the matter of the application of NPPL for the consideration of grant of Generation Licence application as stipulated in the Licensing Regulations and NEPRA Licensing (Generation) Rules, 2000 (the "Generation Rules").

(C). Findings/Comments

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

(ii). The Authority has observed that the applicant i.e. NPPL is an entity incorporated under Section 32 of the Companies Ordinance, 1984 (XLVII of 1984), having Corporate Universal Identification No. 0088462, dated May 23, 2014. It is a private limited company with the principal line of business to design, insure, build, establish, own, operate, maintain, manage electric power generating plants for the generation, supply & transmission of

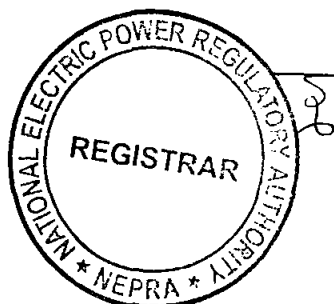


electric power and in relation thereto including solar energy system, its manufacturing through poly silicon and chemical technology, processing, casting, cell manufacturing, module manufacturing and installation thereof, installing, running, owning and managing energy power plant, and dealing in all other forms or services associated therewith.

(iii). The Authority has duly considered the provisions of the Memorandum of Association and Article of Association of the company and has observed that the applicant company i.e. NPPL is a subsidiary of Nizam Energy (Private) Limited, one of the largest installers and integration experts of solar solutions in Pakistan and a second-tier subsidiary of H. Nizam Din & Sons (Private) Limited. Nizam Energy (Private) Limited is the leading wholesaler, distributor and integrator of solar systems and components in Pakistan. Whereas, H. Nizam Din & Sons (Private) Limited have business in textile, hospitality, recycling, energy and retail. Nizam group have a nationwide network of offices in Karachi, Lahore and Islamabad. The annual turnover exceeds USD 50 million and is growing annually 20% per year.

(iv). In addition to above, the application for grant of generation licence under consideration envisages setting up generation facilities for MES at three (03) different locations of Quetta Cantonment. Initially the company envisaged to have total Installation of two locations to be 07.72 MW_P (i.e. 04.08 MW_P at 95 EME Site and 03.64 MW_P at Mola Dad Site) however, the same was changed to 9.50 MW_P. NPPL has increased the capacity of 95 EME Site to 04.40 MW_P and that of Mola Dad Site to 03.47 MW_P. Furthermore, NPPL has added one more site for feeding Khuzdar & Jinnah Camp to the tune of 01.63 MW_P. According to the submitted information, the total cost of the project will be about PKR 1298 million which will be financed through 20% equity (PKR 259.6 million) and 80% debt (PKR 1038.4 million).

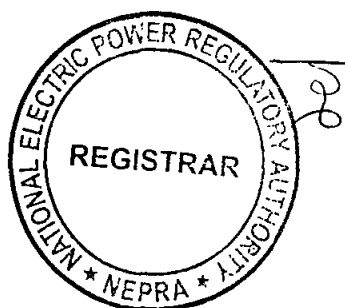
(v). The Authority has considered the submissions of NPPL and observed that the company carried out a feasibility study of the project



including, *inter alia*, details of equipment of PV solar plant, PV-sitting details, power production estimates and other allied equipments. The review of the feasibility study reveals that for the proposed location to achieve a total capacity of 09.50 MW_p the company will be installing 23,464 PV monocrystalline cells each of 405 Watt. In consideration of the said, it is clarified that the company plans installing PV cells from Tier-I manufacturer namely JAM72D10 405/MB model. It is pertinent to mention that the company has confirmed that deal for purchase of PV Cells has been locked with JA Solar where the manufacturer has assured a capacity factor of 25.46%.

(vi). As explained above, the supply from proposed generation facilities will be supplied to MES. The proposed location of generation facilities is Quetta Cantonment. According to the system study of the project, the dispersal to the Bulk Power Consumer (BPC) will be made at 11kV through underground cables/feeders located on private property owned by the respective BPC(s) not involving any public or third party. In this regard, it is pertinent to mention BPC is 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 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.

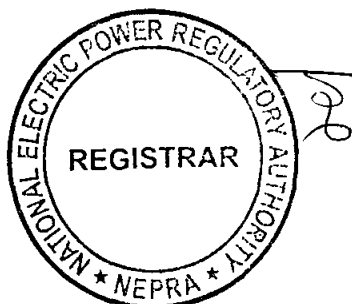
(vii). Further to the above, Section 2(v) of the NEPRA Act defines the term "Distribution" wherein the ownership, operation, management and control of distribution facilities located on private property and used solely to move or deliver electric power to the person owning, operating, managing and controlling those facilities or to tenants thereof is not included in the definition of "distribution". As explained above, the



distribution facility to be used for delivery of electric power to aforementioned entity is located on private property (without involving any public property or any third party) will be owned, operated, managed and controlled by the entity being supplied therefore, the supply of electric power to this entity by NPPL does not constitute a distribution activity under the Act, and a distribution licence will not be required by the company.

(viii). NPPL has informed that necessary due diligence has been completed and there will be no environmental impact of the proposed arrangement. Further, being the proposed sizing of the project, there is no requirement to have Initial Environmental Examination (IEE). NPPL has confirmed that it will comply with the concerned environmental standards. In view of the said, NPPL is being made obligatory to comply with the relevant environmental standards for which a separate article has been proposed to be included in the proposed generation licence.

(ix). The grant of a generation licence is governed by the provisions of Rule-3 of the Generation Rules. It is pertinent to mention that NPPL has provided the details of the proposed generation facilities 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/ solar farm proposed in an application for a generation licence are either not suitable on environmental grounds or do not satisfy the LCOC. 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

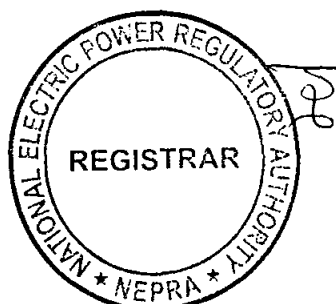


comparative costs of the construction, operation and maintenance of the proposed generation facility/solar power plant/ solar farm against the preferences indicated by the Authority; (d). the cost and right-of-way considerations related to the provision of transmission and interconnection facilities; (e). the constraints on the transmission system likely to result from the proposed generation facility/solar power plant/solar farm 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/solar farm; 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 consideration of the above, it is considered 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 to a BPC(s) directly which only involve laying a few meters length of underground cable/feeder which concludes that the project will not face any constraints in transmission of power. Further, being located in the same vicinity of the BPC(s), the project will not result in cost and right-of-way issue for the provision of interconnection facilities. In view of the said, it is considered that the project of NPPL fulfills the eligibility criteria for grant of 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

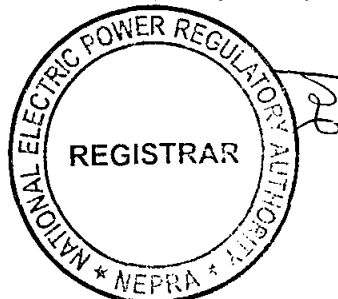


view of the said, the Authority is of the considered opinion that for sustainable development, all indigenous power generation resources especially RE must be developed on priority basis.

(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 RE resources 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 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, NPPL has approached for the grant of a Generation Licence for setting up a generation facilities with a cumulative Installed Capacity of 09.50 MW_p for supplying to the BPC(s) which are also existing consumers of its respective DISCO. The Authority considers that the above proposal of NPPL 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 NPPL in diversifying its portfolio but will also enhance the energy security of the BPC(s). Further, the project will also help in reducing the carbon emission by generating clean electricity, thus improving the environment.

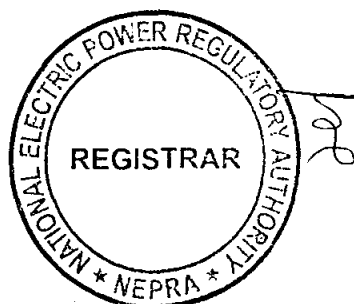
(iv). As explained above, NPPL has provided the details of location, technology, size, net capacity/energy yield, interconnection arrangements,



technical details and other related information for the proposed PV based generation facilities/solar power plants/ solar farms. In this regard, the Authority has observed that sponsors of the project have acquired/available with them the required land 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 facilities of NPPL will be used for supplying to different BPC(s). 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(s). It is pertinent to mention that the relevant regulation in this regard are still under formation 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 all the above mentioned entities explained in the preceding Paras to be BPC(s) of NPPL.

(vi). Regarding supply to the BPC(s), the Authority observes that the BPC(s) and the proposed generation facilities of NPPL are located within the same premises and the BPC(s) will be supplied through underground cable/feeder of 11kV. 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 NPPL 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(s) are located within the same premises and no public areas are involved, the supply of power to BPC(s) by

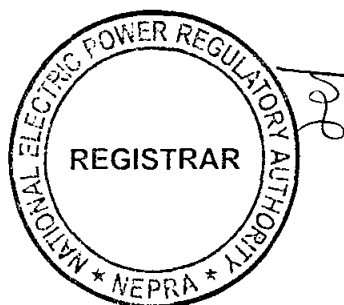


NPPL does not constitute a distribution activity under the NEPRA Act, and NPPL will not require a distribution licence for supplying to the BPC(s).

(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 generation facility. According to the information provided by NPPL, the Commercial Operation Date (COD) of the proposed generation facilities/solar power plants/ solar farms will be December 31, 2020 and it will have a useful life of around twenty five (25) years from its COD. In this regard, NPPL has requested that the term of the proposed generation licence may be fixed as per the said useful life of generation facilities/solar power plants/ solar farms. The Authority considers that said submission of NPPL about the useful life of the generation facilities/solar power plants/solar farms and the subsequent request of NPPL 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 subject to Section-14 B of the NEPRA Act.

(viii). Regarding compliance with the environmental standards, NPPL 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 NPPL to comply with relevant environmental standards at all times.

(ix). Regarding the rates, charges and terms and conditions of tariff between NPPL and its BPC(s), 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 NPPL and its BPC(s), does not affect any other consumer or third party. Therefore for the purpose of tariff, the Authority considers it appropriate directing NPPL and its BPC(s) to agree on a bilateral agreement and accordingly NPPL will be

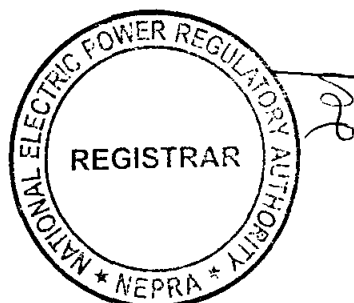


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allowed to charge the agreed tariff subsequent to the grant of the generation licence.

(x). The Authority has duly considered the comments of different stakeholders as explained above. In this regard, the Authority has observed that CPPA-G has raised various concerns including (a). compliance of the LCOC; (b). new tariff for consumers having dual connection; (c). specifying share of distributed generation in the IGCEP; and (f). approval of design of competitive wholesale market.

(xi). In consideration to the above, the Authority hereby confirms that it has duly considered the relevant provisions of related rules to confirm that proposal of NPPL fulfils the requirements prescribed under the relevant rules and regulations including LCOC as explained in preceding paragraphs. About the proposal of CPPAGL to have a new tariff for such consumers having dual supply arrangement (i.e. from the grid through DISCO as well as self-generation/third party source as in the current case), the Authority considers this an important issue but at the same time is of the view that it is not relevant to current case being an application of a generation licence. The Authority is cognizant of the situation and has already included this issue as part of the proceedings for the tariff petitions of the DISCO(s) which is under deliberation and is expected to be decided in due course of time without affecting the grant of generation licence to NPPL. Regarding the suggestion to specify the share of distributed generation in the IGCEP, the Authority considers that planning function needs special consideration to have a true picture of the demand-supply situation of the system. The Authority emphasizes that DISCO(s) and NTDC must refine their process to capture a true picture for the future requirements by revitalizing their planning function by having suitable tools in the matter including the process of registration for entities like NPPL etc. As regards the approval of design of competitive wholesale market, the Authority through its determination NEPRA/DG(Lic)/LAM01-26389-398 dated December 05, 2019, has already




approved the same. In view of the above, the concerns of CPPA-G stand addressed and settled.

(xii). In consideration of the above, the Authority hereby approves the grant of generation licence to NPPL on the terms and conditions set out in the generation licence annexed to this determination. The grant of generation licence will be subject to the provisions contained in the NEPRA Act, relevant rules, regulations framed thereunder and other applicable documents.

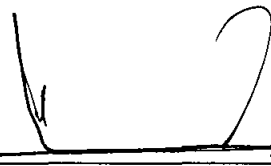
Authority:

Rafique Ahmed Shaikh
(Member)


26/9/20

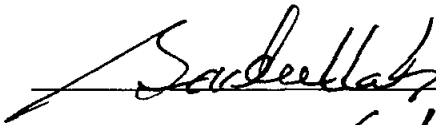
Rehmatullah Baloch
(Member)

(Did not Attend- Away)

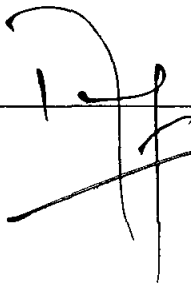


Engr. Bahadur Shah
(Member)

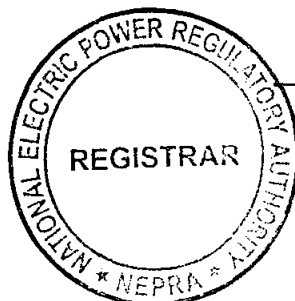
Saif Ullah Chattha
(Member/Vice Chairman)

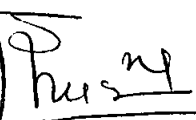

6.10.2020

Engr. Tauseef H. Farooqi
(Chairman)








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

GENERATION LICENCE

No. SGC/150/2020

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

NIZAM POWER (PRIVATE) LIMITED

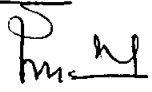
Incorporated Under Section-32 of the
Companies Act, 1984 (XLVII of 1984) Having Corporate Universal
Identification No. 0088462, dated May 23, 2014

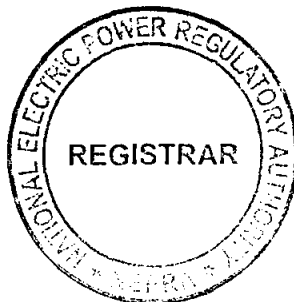
**for its Generation Facilities/ Solar Power Plants/ Solar Farms
Located at Quetta Cantonment, in the Province of Baluchistan**

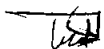
(Total Installed Capacity: \approx 9.50 MW_P Gross)

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

Given under my hand this on 15th day of October Two Thousand & Twenty and expires on 30th day of December Two Thousand & Forty-Five.


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Registrar

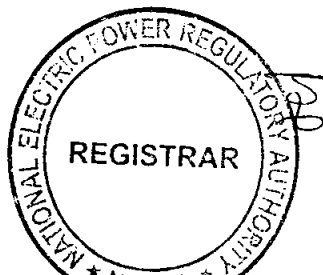




Article-1
Definitions

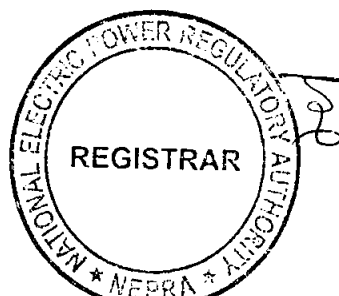
1.1 In this Licence

- (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 of the Licensee on which the electric power from all the photovoltaic cells is collected for supplying to



the Power Purchaser;

- (g). "Commercial Code" means the National Electric Power Regulatory Authority (Market Operator Registration, Standards and Procedure) Rules, 2015 as amended or replaced from time to time;
- (h). "Commercial Operations Date (COD)" means the day immediately following the date on which the generation facility/Solar Power Plant of the Licensee is Commissioned;
- (i). "Commissioned" means the successful completion of commissioning of the generation facility/Solar Power Plant for continuous operation and despatch to the Power Purchaser;
- (j). "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;
- (k). "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, as may be amended by the parties thereto from time to time;
- (l). "Generation Rules" mean the National Electric Power Regulatory Authority Licensing (Generation) Rules, 2000 as amended or replaced from time to time;
- (m). "Grid Code" means the grid code prepared and revised from time to time by NTDC with necessary approval of the Authority;
- (n). "Licence" means this licence granted to the Licensee for its generation facility/Solar Power Plant/Solar Farm;

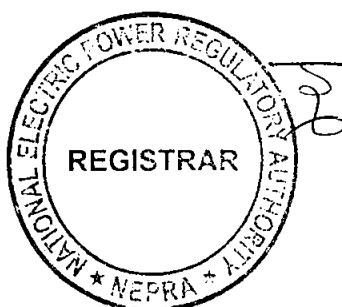


- (o). "Licensee" means **Nizam Power (Private) Limited** or its successors or permitted assigns;
- (p). "Licensing Regulations" mean the National Electric Power Regulatory Authority Licensing (Application & Modification Procedure) Regulations, 1999 as amended or replaced from time to time;
- (q). "Net Delivered Energy" means the net electric energy expressed in kWh that is generated by the generation facility/Solar Power Plant/Solar Farm 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). "Solar Farm" means a cluster of photovoltaic cells installed on the ground 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 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 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 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, subject to the provisions of Section-14(B) of the Act.

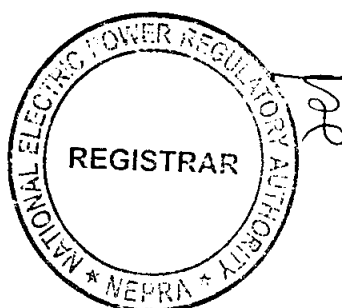
4.2 Unless suspended or revoked earlier, the Licensee may apply for renewal of this Licence ninety (90) days prior to the expiry of the above term, as stipulated in the Generation Rules read with the Licensing Regulations.

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. The Licensee shall in good faith work towards implementation and operation of the aforesaid Competitive Trading Arrangement in the manner and time period specified by the Authority. Provided that any such participation shall be subject to any contract entered into between the Licensee and another party with the approval of the Authority.

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

Article-8
Maintenance of Records

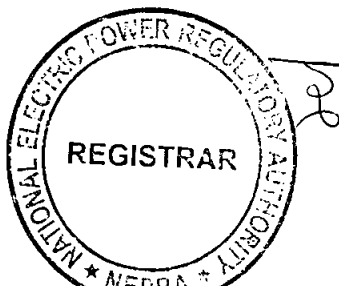
For the purpose of sub-rule (1) of Rule-19 of the Generation Rules, copies of records and data shall be retained in standard and electronic form and all such records and data shall, subject to just claims of confidentiality, be accessible by authorized officers of the Authority.

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 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 is in conformity with required environmental sta

ndards as prescribed by the relevant competent authority as amended or replaced from time to time.

Article-11
Power off take Point and Voltage

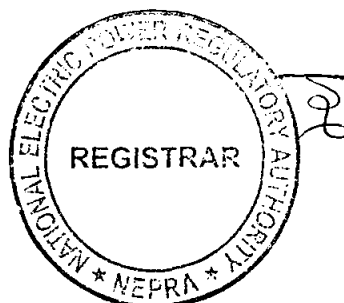
The Licensee shall deliver the electric power to the Power Purchaser at the outgoing Bus Bar of its generation facility/Solar Power Plant. The Licensee shall be responsible for the up-gradation (step up) of generation voltage up to the required dispersal voltage level.

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

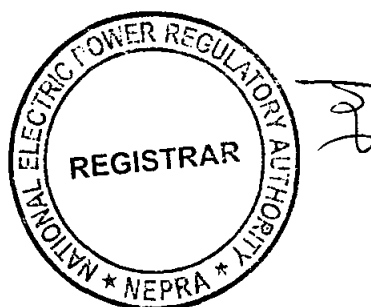
The Licensee shall comply with the provisions of the Applicable Law, guidelines, directions and prohibitory orders of the Authority as issued from time to time.



SCHEDULE-I

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







**Location of the
Generation Facilities/Solar Power Plants/Solar Farms
of the Licensee**



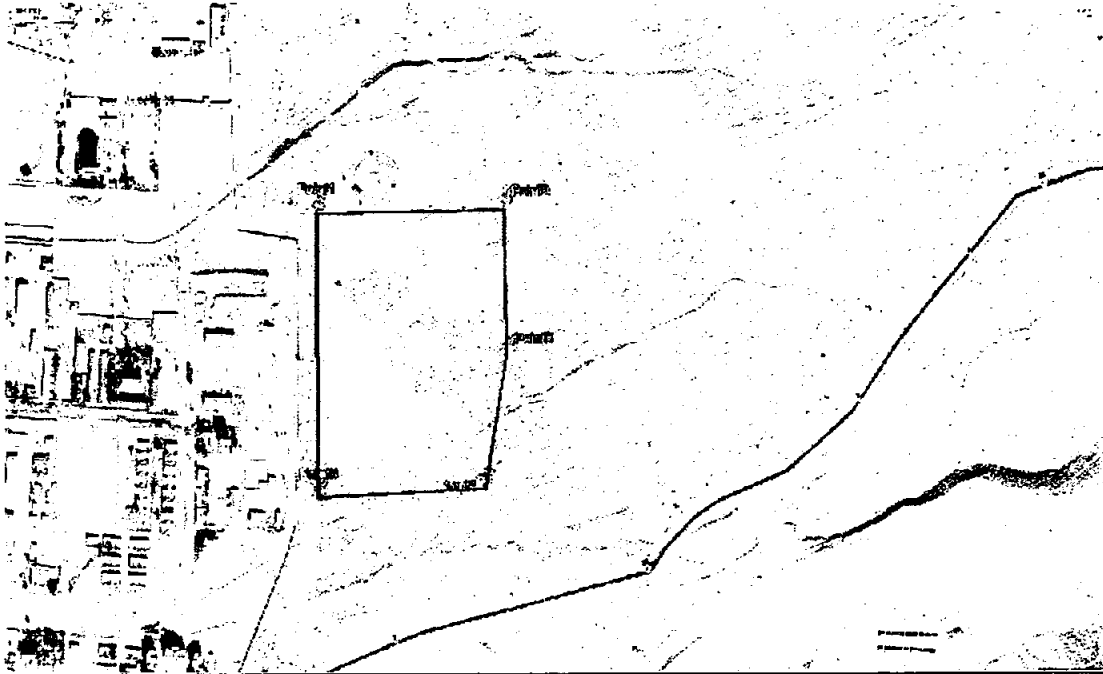
Location-I: Military Engineering Services (MES) Mola Dad

Location-II: MES 95 EME

Location-III: MES Khuzdar and Jinnah Camp

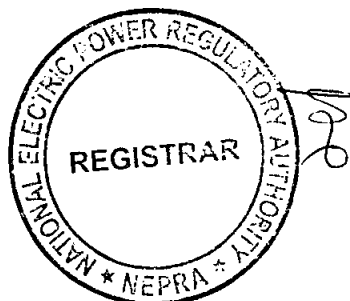


Land Coordinates of the
Generation Facilities/Solar Power Plants/Solar Farms
of the Licensee

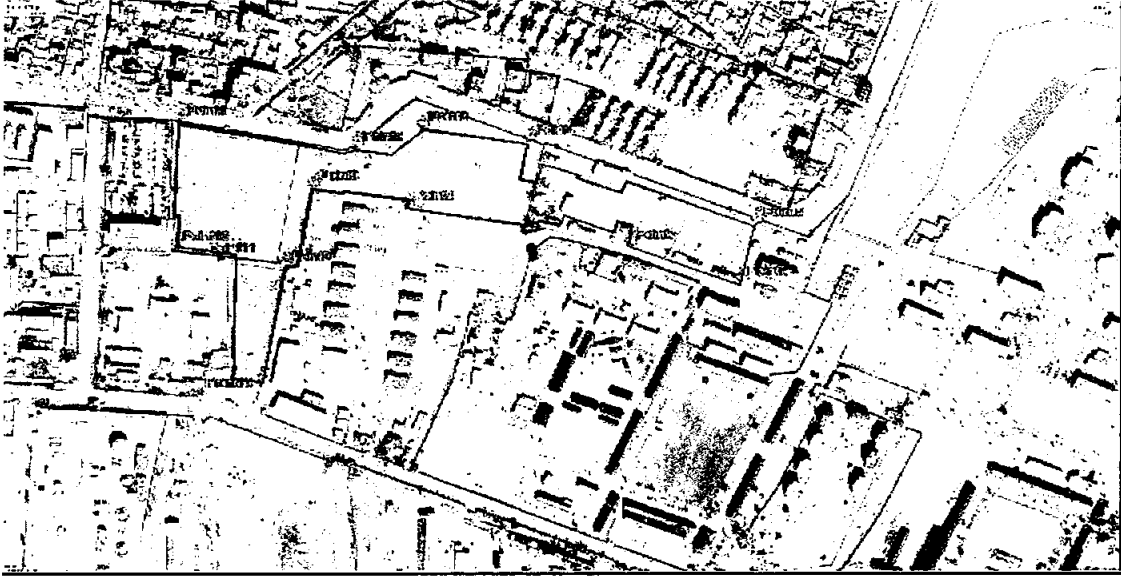


Location-I: MES Mola Dad

Total Project Land (14 Acres)			
<u>Serial Number</u>	<u>Location</u>	<u>Latitude</u>	<u>Longitude</u>
1.	Point 1	30°12'10.08"N	67°02'50.81"E
2.	Point 2	30°12'10.25"N	67°02'58.17"E
3.	Point 3	30°12'00.40"N	67°02'50.83"E
4.	Point 4	30°12'00.76"N	67°02'57.42"E
5.	Point 5	30°12'05.55"N	67°02'58.00"E

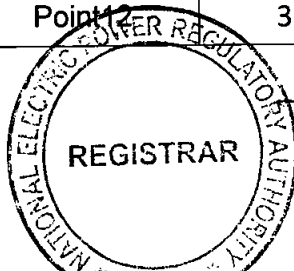


**Land Coordinates of the
Generation Facilities/Solar Power Plants/Solar Farms
of the Licensee**

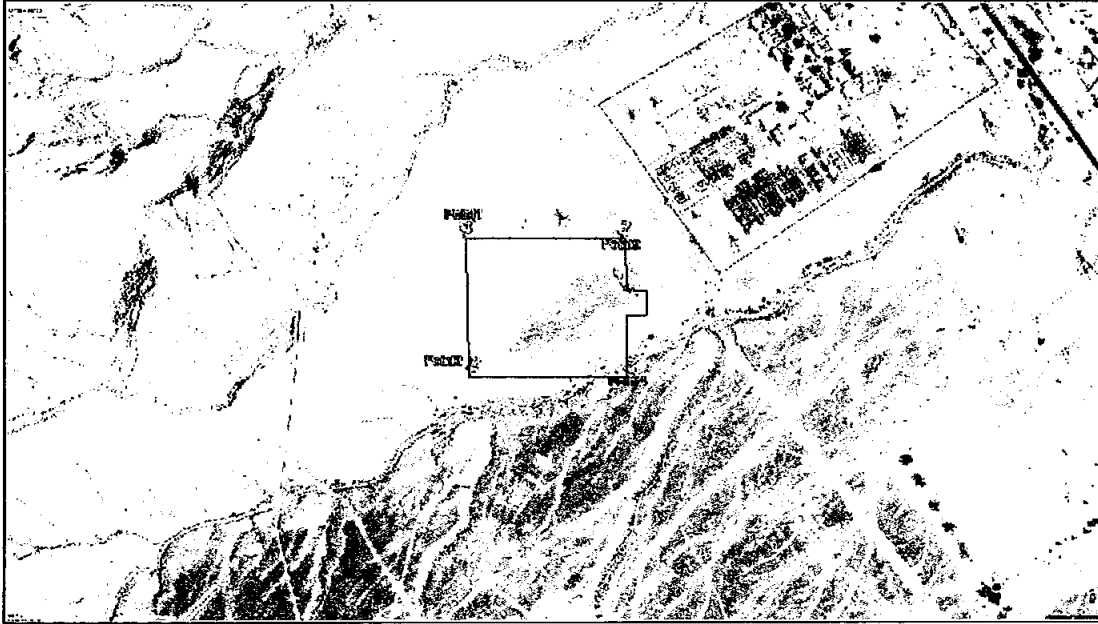


Location-II: 95EME Quetta

Total Project Land (14.6 Acres)			
<u>Serial Number</u>	<u>Location</u>	<u>Latitude</u>	<u>Longitude</u>
1.	Point 1	30°13'53.79"N	67°00'48.72"E
2.	Point 2	30°13'52.77"N	67°00'55.62"E
3.	Point 3	30°13'53.56"N	67°00'58.24"E
4.	Point 4	30°13'52.98"N	67°01'02.26"E
5.	Point 5	30°13'49.76"N	67°01'10.92"E
6.	Point 6	30°13'47.41"N	67°01'10.31"E
7.	Point 7	30°13'48.88"N	67°01'06.11"E
8.	Point 8	30°13'50.43"N	67°00'57.59"E
9.	Point 9	30°13'51.23"N	67°00'53.94"E
10.	Point 10	30°13'43.50"N	67°00'51.97"E
11.	Point 11	30°13'48.57"N	67°00'50.89"E
12.	Point 12	30°13'48.83"N	67°00'48.66"E

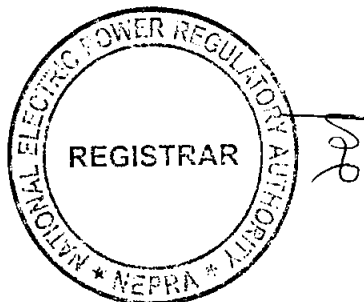


**Land Coordinates of the
Generation Facilities/Solar Power Plants/Solar Farms
of the Licensee**

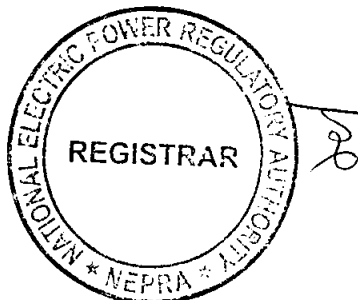
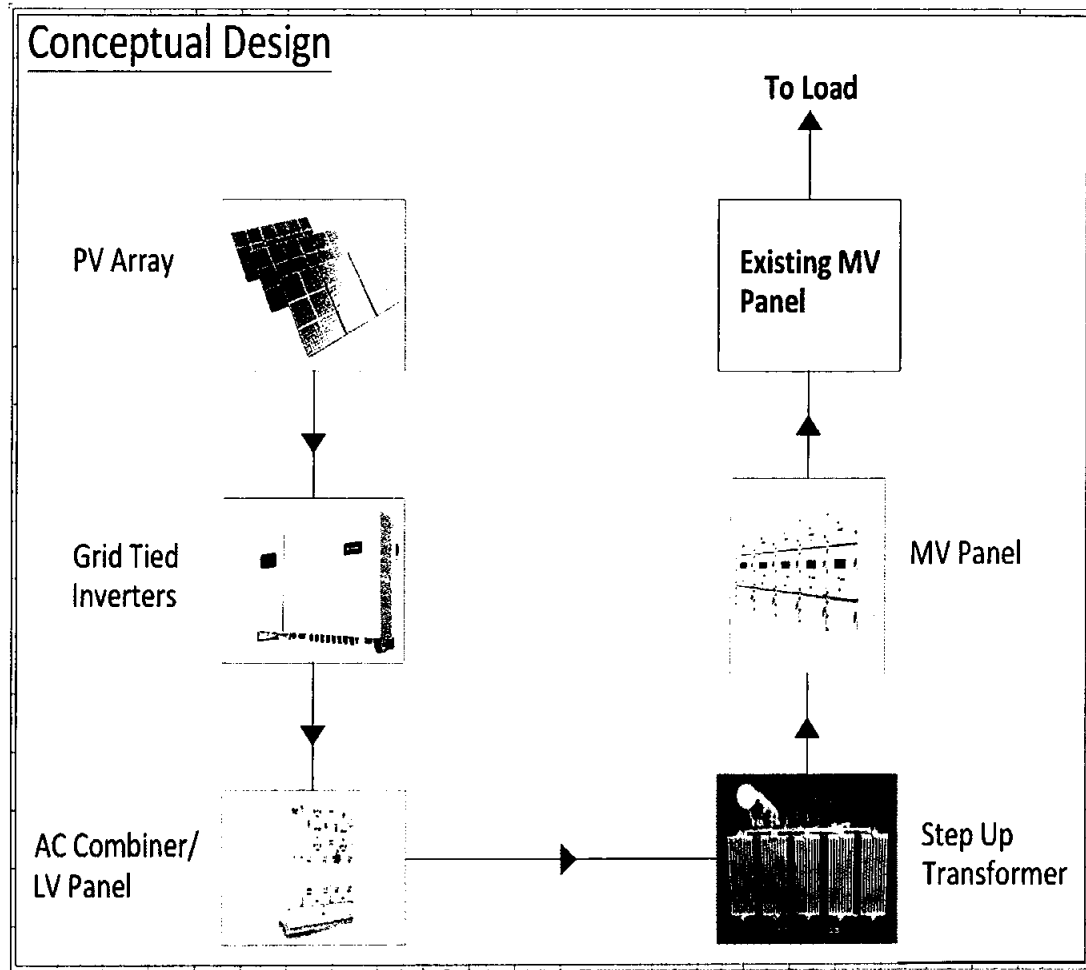


Location-III: MES Khuzdar and Jinnah Camp

Total Project Land (6.62 Acres)			
<u>Serial Number</u>	<u>Location</u>	<u>Latitude</u>	<u>Longitude</u>
1.	Point 1	27°45'41.93"N	66°37'29.19"E
2.	Point 2	27°45'41.83"N	66°37'35.24"E
3.	Point 3	27°45'36.83"N	66°37'29.43"E
4.	Point 4	27°45'36.80"N	66°37'35.49"E



Process Flow Diagram
of the Generation Facilities/Solar Power Plants/Solar Farms
of the Licensee


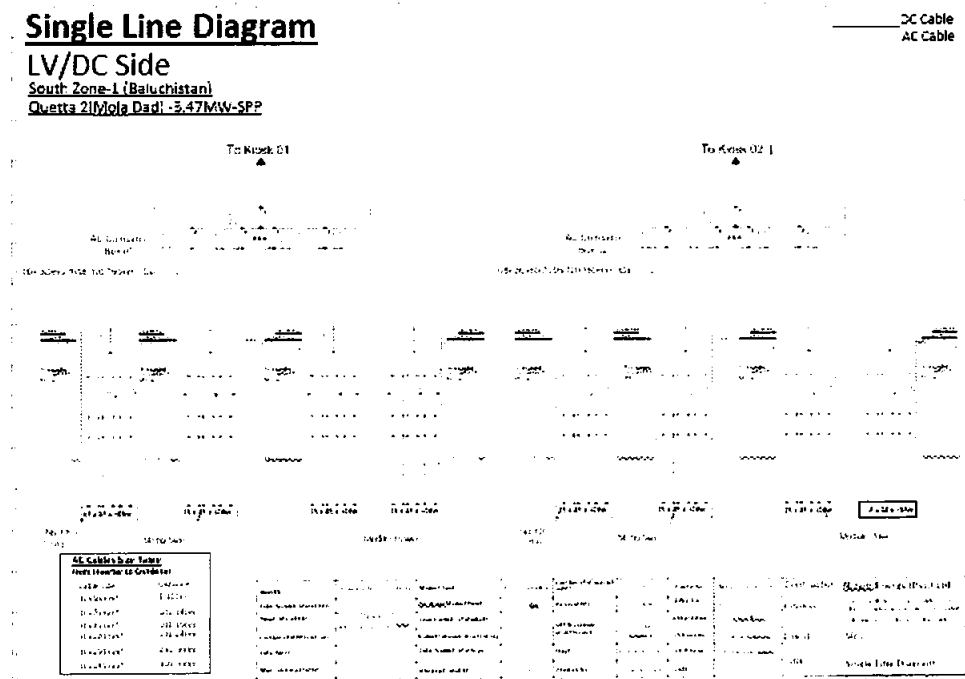


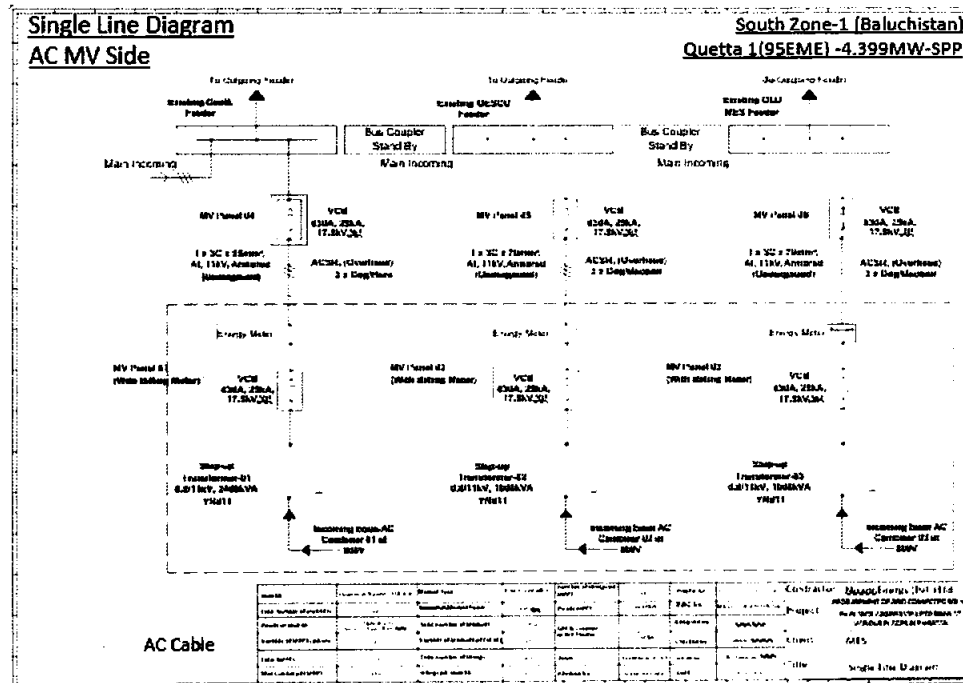
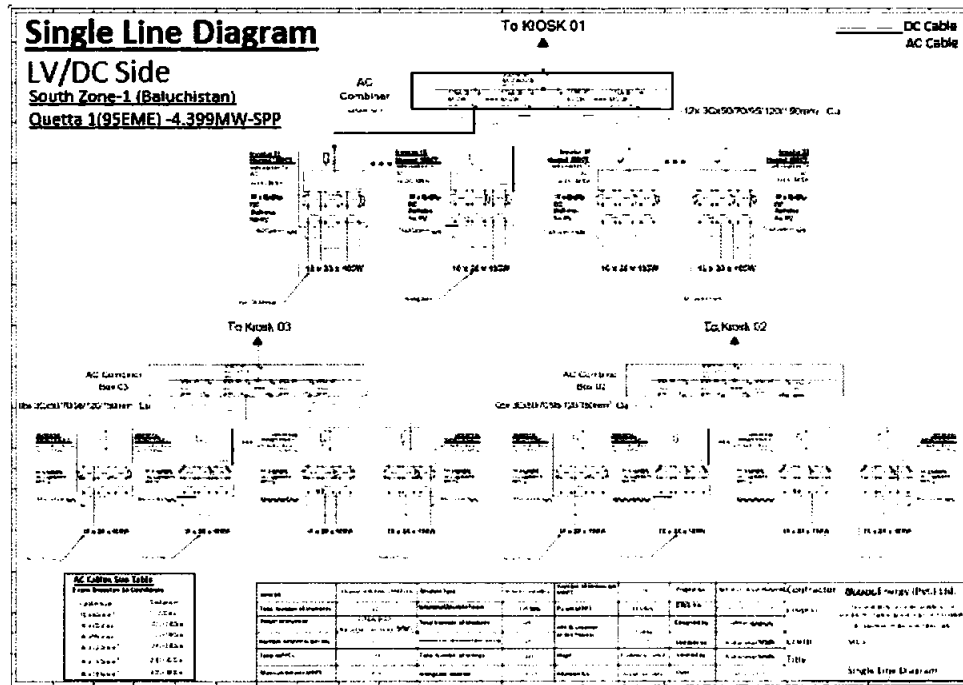


LV/DC Side

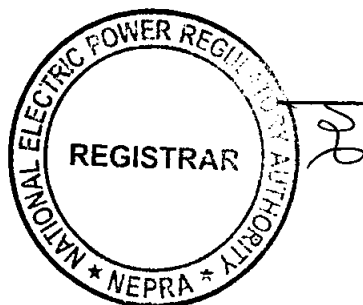
South Zone-1 (Baluchistan)

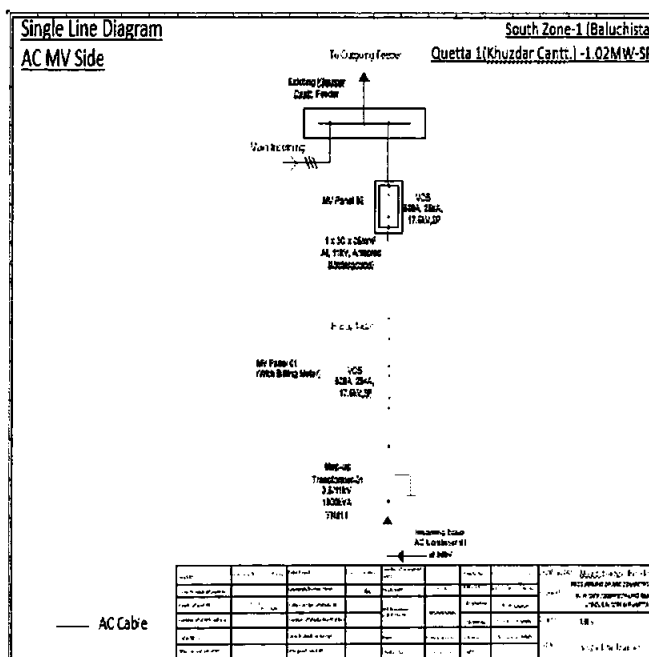
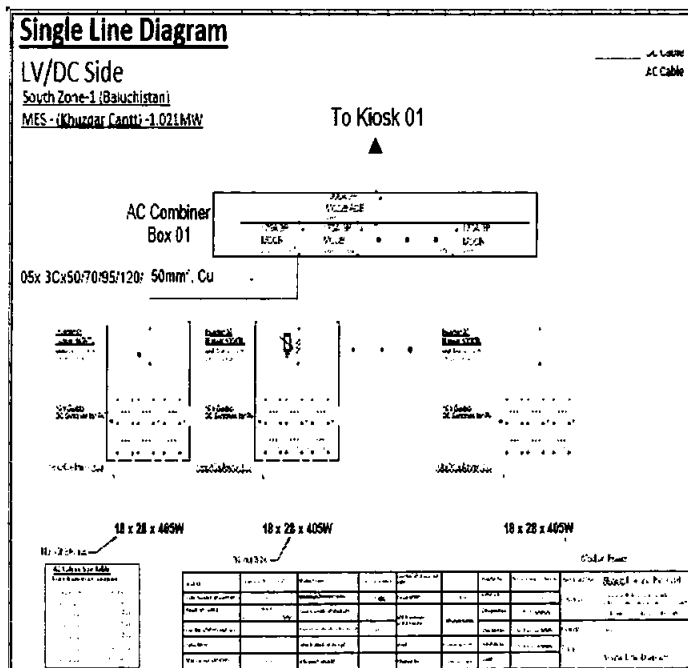
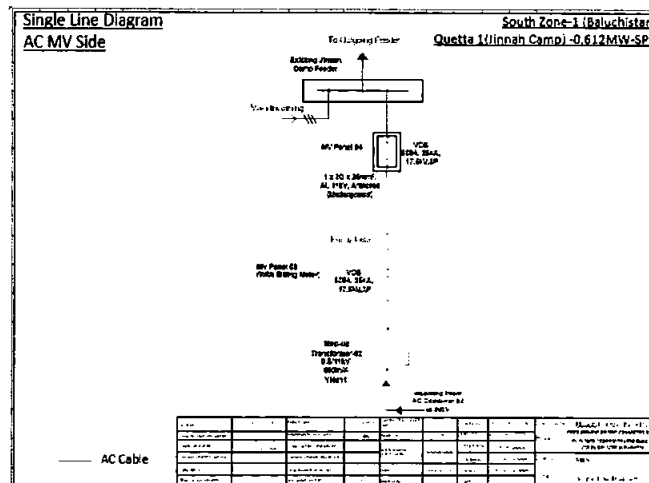
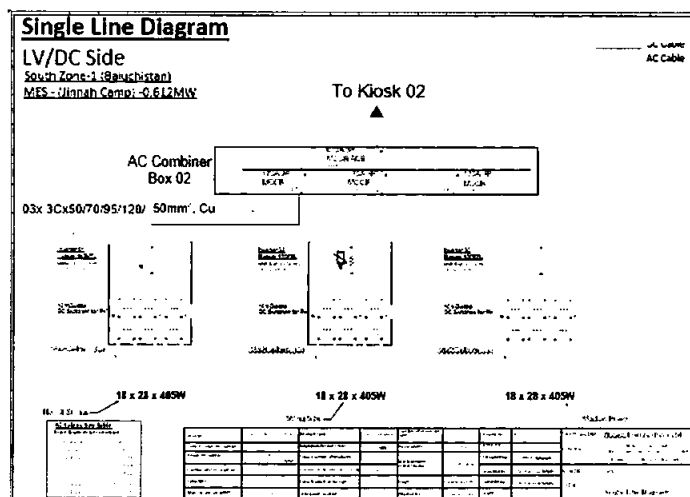
Quetta 21/10/19 Dad! -3.47MW-SP?

A circular stamp with the text "NATIONAL ELECTRIC POWER REGULATORY AUTHORITY" around the top inner edge and "REGISTRAR" in the center. At the bottom, it says "★ NEPRA ★".

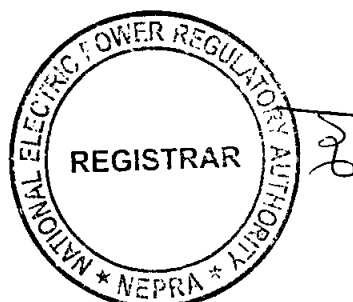


Location-II: MES 95 EME





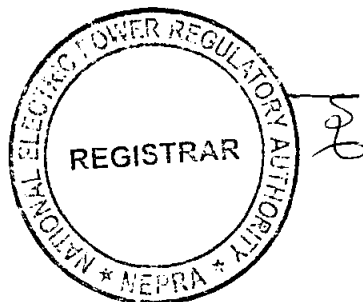
Location-III: MES Khuzdar and Jinnah Camp



**Interconnection Arrangement/Transmission Facilities
for Dispersal of Power from the Generation Facilities/Solar
Power Plants/Solar Farms of the Licensee**

The electric power generated from the distinct/different generation facilities of the Licensee will be delivered/supplied to a Bulk Power Consumer (BPC) in the name of MES located at Quetta Cantonment: Mola Dad, 95 EME and Khuzdar and Jinnah Camp, in the province of Balochistan.

(2). The details pertaining to BPC, supply arrangement and other relating information is provided in the subsequent description of this Schedule. Any change in the said, shall be communicated to the Authority in due course of time.



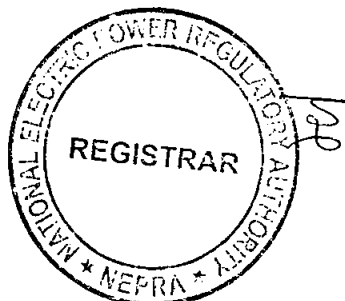
Details of Generation Facilities/Solar Power Plants/ Solar Farms

(A). General Information

(i).	Name of the Company/Licensee	Nizam Power (Private) Limited	
(ii).	Registered/ Business office of the Company/Licensee	G-30/4 KDA Scheme No. 5, Block-8, Clifton Karachi, in the Province of Sindh, Pakistan.	
(iii).	Location(s) of the generation facilities/ Solar Power Plants/ Solar Farms	Location-I	MES for its Quetta Cantonment at Mola Dad, in the Province of Quetta
		Location-II	MES for its Quetta Cantonment at 95 EME, in the Province of Quetta
		Location-III	MES for its Khuzdar Cantonment at Khuzdar and Jinnah Camp, in the Province of Quetta
(iv).	Type of the generation facilities/ Solar Power Plants/ Solar Farms	Solar Photovoltaic (PV)	

(B). Solar Power Generation Technology & Capacity

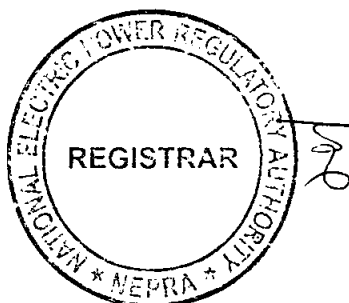
(i).	Type of Technology	Photovoltaic (PV) Cell	
(ii).	System Type	On Grid	
(iii).	Installed Capacity of the generation facilities/ Solar Power Plants/ Solar Farms (MW _P)	Location-I	03.47 MW _P
		Location-II	04.40 MW _P
		Location-III	01.63 MW _P



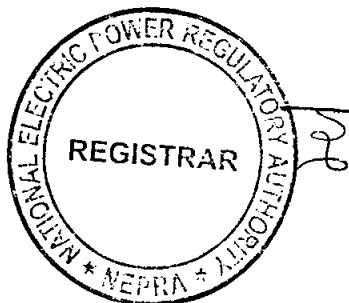
		Total	09.50 MW_p	
(iv).	Number of Panel/Modules	Location-I	8568×405 Watt	
		Location-II	10864×405 Watt	
		Location-III	4032×405 Watt	
(v).	PV Array	Location-I	No. of Strings	306
			Modules in a string	28
		Location-II	No. of Strings	388
			Modules in a string	28
		Location-III	No. of Strings	144
			Modules in a string	28

(C). Technical Details of Equipment

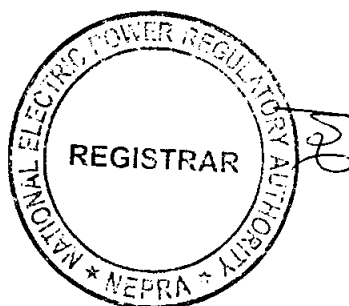
(a).	<u>Solar Panels – PV Modules</u>	
(i).	Type of Module	JAM72D10 405/MB
(ii).	Type of Cell	Monocrystalline
(iii).	Dimension of each Module	2037×1005×30mm
(iv).	No. of Panels	23,464
(v).	Total Module Area	2.047185 m ²
(vi).	Frame of Panel	Frameless Dual Glass



(vii).	Weight of one Module	30.4 kg	
(viii).	No of Solar Cells in each module	144	
(ix).	Efficiency of module	19.80%	
(x).	Maximum Power (P_{\max})	405 W	
(xi).	Voltage @ P_{\max}	42.28 V	
(xii).	Current @ P_{\max}	9.58 A	
(xiii).	Open circuit voltage (V_{oc})	49.82 V	
(xiv).	Short circuit current (I_{sc})	10.2 A	
(xv).	Maximum system open Circuit Voltage	1394.96 V	
(b).	<u>PV Array</u>		
(i).	Nos. of Strings	Location-I	306
		Location-II	388
		Location-III	144
(ii).	Modules in a string	Location-I	28
		Location-II	28
		Location-III	28
(c).	<u>Inverters</u>		
(i).	Capacity of each unit	175 kW	
(ii).	Manufacturer	Huawei Sun2000-185KTL-H1	
(iii).	Input Operating Voltage Range	500-1500 V	



(iv).	Number of Inverters	47	
(v).	Efficiency of inverter	99.03%	
(vi).	Max. Allowable Input voltage	1500 V DC	
(vii).	No. of MPPTs per inverter	9	
(viii).	Max. Current Per MPPT	26 A	
(ix).	Max. Power Point Tracking Range	500-1500 V	
(x).	Output electrical system	800 V, 3W + PE	
(xi).	Rated Output Voltage	800 V	
(xii).	Power Factor (adjustable)	0.8 LG - 0.8 LD	
(xiii).	Power control	MPP tracker	
(xiv).	Rated Frequency	50/60 Hz	
(xv).	Environmental Enclosures	Relative Humidity	0-100%, condensing
		Operating Elevation	4000 m
		Operating temperature	-25 to +60°C
(xvi).	Grid Operating protection	A	Input side disconnection device
		B	Anti-Islanding Protection
		C	AC over current protection
		D	DC reverse polarity function
		E	PV array string fault monitoring
		F	AC surge arrestor



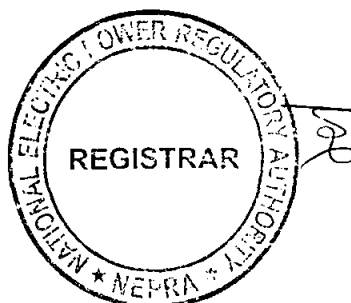
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		G	DC surge arrestor	
		H	DC insulation resistance detection	
(d).	<u>Data Collecting System</u>			
(i).	System Data	Continuous online logging with data logging software to portal.	Huawei Weather Station	
			Huawei Smart Logger	
			Huawei NetEco 1000S	
			Internet/Ethernet and RS485	
(e).	<u>Transformer</u>			
(i).	Rating	Location-I	Location-II	Location-III
		1x1900kVA and 1x1600kVA	1x2400kVA and 2x1000kVA	1x1000kVA and 1x630kVA
(ii).	Type of transformer	Oil Immersed, YNd11	Oil Immersed, YNd12	Oil Immersed, YNd13
(iii).	Purpose of transformer	Step-up (0.8/ 11kV)	Step-up (0.48/11kV)	Step-up (0.48 /11kV)
(iv).	Output Voltage	11 kV	11 kV	11 kV

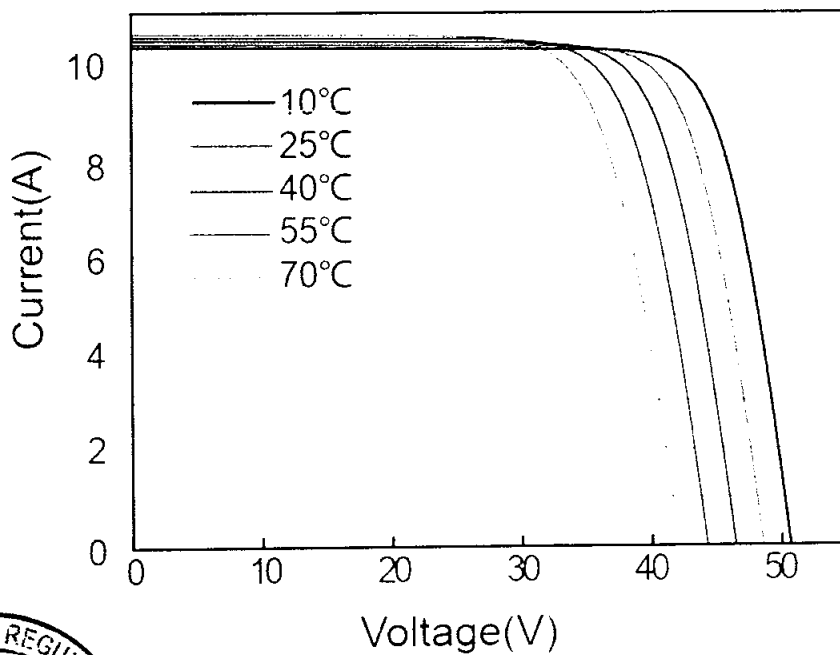
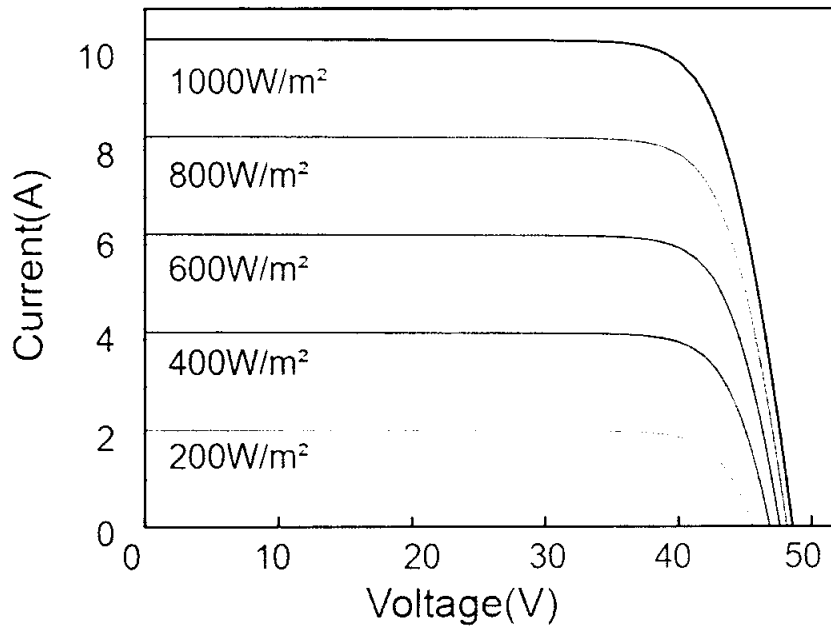
(D). Other Details

(i).	Expected COD of the generation facilities/ Solar Power Plants/ Solar Farms	December 31, 2020
(ii).	Expected useful Life of the generation facilities/ Solar Power Plants from the COD	25 years



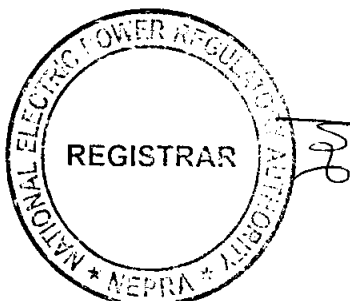
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V-I Curve
of the Generation Facilities/Solar Power Plants/ Solar
Farms of the Licensee



Information
Regarding Consumer(s)/ BPC(s) i.e. MES Quetta to be
Supplied by the Licensee i.e. NPPL

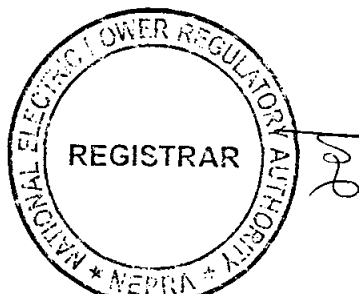
(i).	No. of locations	Three units (03) of MES
(ii).	Location of consumers (distance and/or identity of premises)	MES for its Quetta Cantonment at Mola Dad, in the Province of Quetta
		MES for its Quetta Cantonment at 95 EME, in the Province of Quetta
		MES for its Khuzdar Cantonment at Khuzdar and Jinnah Camp, in the Province of Quetta
(iii).	Contracted Capacity	09.50 MW _P /90%
(iv).	Specify Whether:	
	(a).	The consumer is an Associate undertaking of the NPPL - 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 the consumer and NPPL



(b).			
Consumer and QESCO			
Sanctioned load of 2500 kW	New MES	MES Mola Dad	Location-I
Sanctioned load of 3000 kW	C&SC		
Sanctioned load of 3000 kW	Cantonment	MES 95 EME	Location-II
Sanctioned load of 1500 kW	QESCO		
Sanctioned load of 1500kW	Old MES		
Sanctioned load of 1200 kW	Khuzdar Cantonment	MES Khuzdar and Jinnah Camp	Location-III
Sanctioned load of 1000 kW	Jinnah Camp		

Information
Regarding Distribution Network for Supply of Electric
Power to BPC in the name of MES

Sr. No.	Description	Location-I		Location-II		Location-III	
(i).	No. of Feeders	Two (02)	New MES	Three (03)	Cantonment	Two (02)	Khuzdar Cantonment
			C&SC		QESCO		Jinnah Camp
					Old MES		
(ii).	Length of Each Feeder (Meter)	200m		1000m		300m	
(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 11 kV feeders supplying power to Mola Dad, 95 EME and Khuzdar and Jinnah Camp substation are located on private property owned by the MES Quetta itself, without crossing of any public or third- party private property etc.					
(v).	Whether owned by Nizam Power Pvt. Ltd., Consumer or QESCO- (deal with each Feeder Separately)						
	(a).	If owned by QESCO, particulars of contractual arrangement	NA				
	(b).	Operation and maintenance responsibility for each feeder	Each BPC(s) will be responsible for operation and maintenance of its respective feeder.				



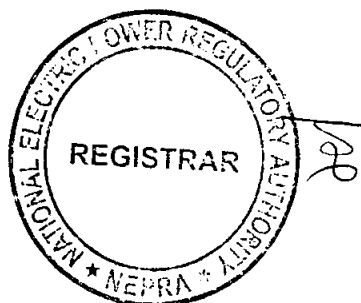
(vi).	Whether connection with network of QESCO exists (whether active or not)- If yes, provide details of connection arrangements (both technical and contractual)	Location-I		Location-II			Location-III	
		MES Mola Dad		MES 95 EME			MES Khuzdar and Jinnah Camp	
		New MES	C&SC	Cantonment	QESCO	Old MES	Khuzdar Cantonment	Jinnah Camp
		C-2b(29)T						
(vii).	Any other network information deemed relevant for disclosure to or consideration of the Authority.	NA		NA			NA	



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.

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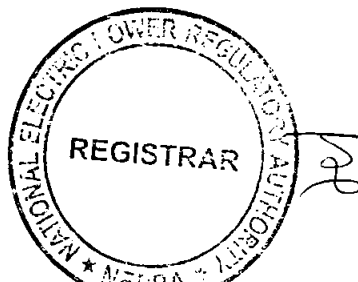
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SCHEDULE-II

(1).	Total Installed Capacity of the Generation Facilities/Solar Power Plants/Solar Farms	09.50 MW _P		
		Location-I	Location-II	Location-III
		MES Mola Dad	MES 95EME	MES Khuzdar and Jinnah Camp
		03.47 MW _P	04.40 MW _P	01.63 MW _P
(2).	Average Sun Hour Availability/Day (Irradiation on Inclined Surface)	8 to 8.5 Hours		
(3).	No. of days per year	365		
(4).	Annual generating capacity of Generation Facilities/Solar Power Plants/Solar Farms (As Per Simulation)	21,197 MWh		
		Location-I	Location-II	Location-III
		7,919 MWh	9,706 MWh	3,572 MWh
(5).	Total expected generation of the Generation Facilities/Solar Power Plants/Solar Farms during the twenty-five (25) years term of this license	484,270MWh		
		Location-I	Location-II	Location-III
		180,919 MWh	221,745 MWh	81,606 MWh
(6).	Annual generation of Generation Facilities/Solar Power Plants/Solar Farms based on 24 hours working	58.074 MWh/day		
		Location-I	Location-II	Location-III
		21.696 MWh/day	26.592 MWh/day	9.786 MWh/day
(7).	Net Capacity Factor of Generation Facilities/Solar Power Plants/Solar Farms	25.46%		
		Location-I	Location-II	Location-III
		26.05%	25.18%	25.46%

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 of
Authority to Nizam Power (Private) Limited
(NPPL)

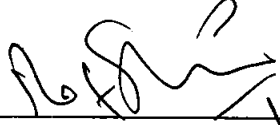
**Incorporated under Section-32 of the
Companies Act, 1984 (XLVII of 1984) Having Corporate
Universal Identification No. 0088462, dated May 23, 2014**


GENERATION LICENCE No. SGC/150/2020
For Sale to Bulk Power Consumer(s)


Pursuant to Section-22 of the Act and Rule-7 of the Generation Rules, the Authority hereby authorizes the NPPL/(the Licensee) to engage in Second-Tier Supply business, limited to the consumer(s) as follows:


- (1). MES for its Mola Dad Site, in the province of Baluchistan (Location-I)
- (2). MES for its 95 EME Site, in the province of Baluchistan (Location-II)
- (3). MES for its Khuzdar and Jinnah Camp, in the province of Baluchistan (Location-III)

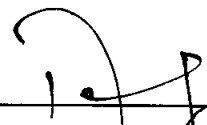
Authority


Rafique Ahmed Shaikh
(Member)


Rehmatullah Baloch
(Member)


Engr. Bhadur Shah
(Member)


Saif Ullah Chattha
(Member)/Vice Chairman


Tauseef H. Farooqi
(Chairman)



Second Tier Supply
Authorization
for the Bulk Power Purchaser

15 x 20