



National Electric Power Regulatory Authority

Islamic Republic of Pakistan

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Registrar

No. NEPRA/R/DL/LAG-479/33754-60

October 01, 2020

Mr. Maqsood Ahmad,
Chief Executive Officer,
Atlas Energy Limited,
26/27 km, Lahore-Sheikhupura Road,
Sheikhupura.
Contact No. 056-3406193-94

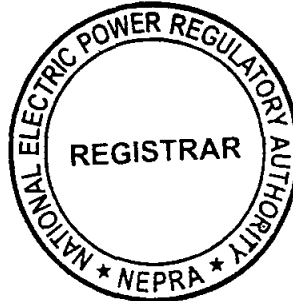
Subject: Grant of Generation Licence No. SGC/147/2020
Licence Application No. LAG-479
Atlas Energy Limited (ATEL)

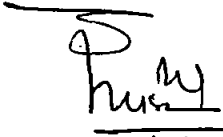
Reference: ATEL's application vide letter No. nil dated January 28, 2020.

Enclosed please find herewith Generation Licence No. SGC/147/2020 granted by National Electric Power Regulatory Authority (NEPRA) to Atlas Energy Limited (ATEL) for its 501.60 KWp Solar Power Plant located at 26/27km Lahore-Sheikhupura Road, Sheikhupura, in the province of Punjab, 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/147/2020)




01 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, Lahore Electric Supply Company Limited, 22-A, Queens Road, Lahore.
5. Director General, Environmental Protection Department, Government of Punjab, National Hockey Stadium, Ferozpur Road, Lahore
6. Secretary, Energy Department, Government of the Punjab, 8th Floor, EFU House, 6-D Main Gulberg, Jail Road, Lahore.

National Electric Power Regulatory Authority
(NEPRA)

Determination of the Authority
in the Matter of Application of Atlas Energy Limited for
Grant of the Generation Licence

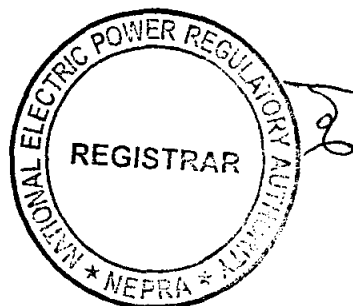
October 01
September , 2020
Case No. LAG-479

(A). Filing of Application

(i). Atlas Energy Limited (ATEL) submitted an application on January 29, 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 ATEL for submitting the missing information/documents as required under the said regulations. ATEL completed the submission of missing information/documentation by February 28, 2019. The Registrar submitted the matter before the Authority to decide the admission of the application or otherwise.

(iii). 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 March 10, 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



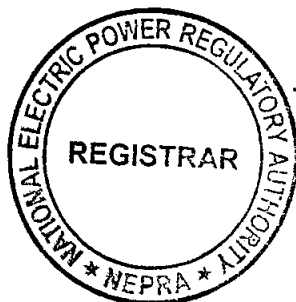
Licensing Regulations. Accordingly, notices were published in one (01) Urdu and one (01) English newspapers on March 16, 2020.

(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 March 16, 2020, soliciting their comments for assistance of the Authority.

(B). Comments of Stakeholders

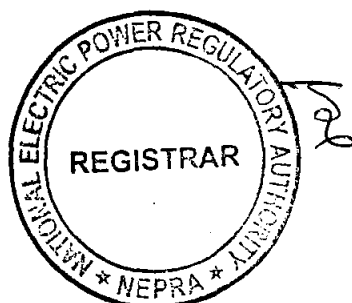
(i). In reply to the above, comments were received from Central Power Purchasing Agency (Guarantee) Limited (CPPAGL) only. The salient points of the comments offered by CPPAGL are summarized below: -

- (a). CPPAGL submitted that ATEL is planning to set up a Photo Voltaic (PV) cell based generation facility for supplying/selling to sister concern located near Sheikhpura in the province of Punjab. In light of the provisions of the NEPRA Licensing (Generation) Rules, 2000 (the "Generation Rules"), the Authority is required to scrutinize all applications for the generation licence on "Least Cost Option Criteria (LCOC)". According to the existing tariff structure for the end consumer, the more the number of units being sold, less will be the per unit rate for the fixed capacity charges and vice versa. In the view of foregoing, it is suggested that (a). a quantum for Distributed Generation needs to be ascertained in light of the demand projections (against which agreements/procurements have already taken place) while keeping in view the energy charge avoided by the Distributed Generation consumers/source against



which the capacity charge was supposed to be recovered (as per existing tariff structure of the end consumers); (b). a uniform tariff required to be introduced (in the existing end consumer tariff setting framework) for the Grid Connected Distributed Generator Consumer (be it for Net-Metering or Self-Consumption) by incorporating a new tariff category in the Schedule of Tariff-SOT; (c). a separate Category for Grid-Connected Distribution Generation (be it for Net-Metering or Self-Consumption) needs to be introduced through a Central Planning Mechanism in order to ensure proper registration and charge of respective tariff; (d). The design of the competitive wholesale market i.e. CTBCM has already been submitted to the Authority/NEPRA for regulatory approval in March 2018. Unless the design of the competitive wholesale market is approved and the wholesale market become functional, the retail suppliers could not carry out the sales/purchase transactions without any market framework. Therefore, the first prerequisite in this regard is to have an approved model of the competitive wholesale market from the regulator in order to proceed further towards the retail market.

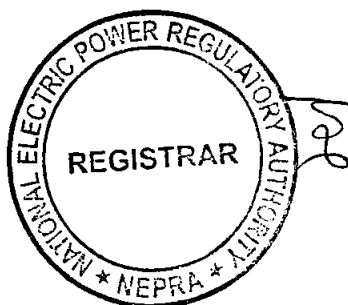
(ii). The Authority considered the above comments and in view of the observations raised, considered it appropriate seeking perspective of ATEL in the matter. On the said, it was submitted that the proposed generation facility is based on PV cell which is a clean energy and have no environmental concerns and will displace the fossil fuel based energy. Regarding the comments of CPPAGL about the provisions of the generation rules pertaining to the LCOC, ATEL submitted that it is up to the Authority



to evaluate generation licence application. ATEL added that the application/proposed generation facility fulfills the same considering the fact that this facility are being developed as on site facility and do not involve laying of long transmission lines; only a few meters of cables will be sufficient to connect the proposed facility to the potential Bulk Power Consumer (BPC) without any constraints.

(iii). Regarding burden for the balance/left over consumers, ATEL submitted that the best way is to increase sale and to widen the consumer base. In this regard, the Authority itself has suggested to CPPAGL and DISCO(s) in its determinations to clear the pendency of new connections which will result in widening of consumer base. Further, ATEL added that the addition of distributed power has more national benefits than the above risks. The benefits include (a). It will reduce the manufacturing cost of the product. ATEL facility is already manufacturing and exporting which will make it more competitive hence resulting in increase in export; (b). The electricity produced will be clean energy producing unlimited number of benefits to the environment and nation; (c). Electricity is being generated from Renewable Resource i.e. Solar which is reducing the import of fuel for the equivalent number of units being produced through imported fuel; (d). All imported fuels are paid in foreign currency and units produced through the above system will save the amount of foreign exchange required to buy the imported fuel for equivalent number of units as well as increase of cost due to devaluation of Rupee; (e). Useless rooftop space is being used for above generation, otherwise most precious national land of the country might have been used for the installation of any other power generation facility.

(iv). With regards to the proposal of CPPAGL to have a quantum of distribution generation the same is worth considering but the same is to be taken up with NTDC which is the relevant entity currently engaged in preparation of the future expansion plan and may specify such a quantum



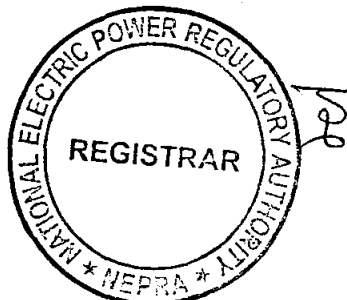
on pragmatic basis. Regarding proposal of CPPAGL to have the tariff reviewed for consumers having dual source from DISCO and have distributed generation facility, the Authority may consider the same and initiate proceedings to arrive at an informed decision. About the design of the CTBCM and opening of the retail market, we understand that BPC(s) are already allowed under the NEPRA Act to have supply from other than DISCO therefore, any market design must duly consider these provisions.

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

(C). Findings/Comments

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

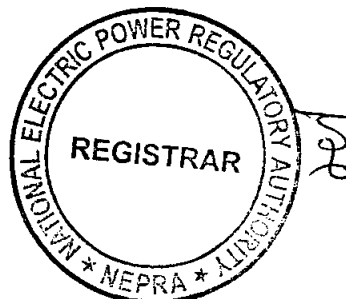
(ii). The Authority has observed that the applicant i.e. ATEL is an entity incorporated under Section 32 of the Companies Ordinance, 1984 (XLVII of 1984), having Corporate Universal Identification No. 0099710, dated May 18, 2016. It is a public limited company with the principal line of business to design, 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 biomass/waste-to energy power plant, and dealing in all other forms or services associated therewith.



(iii). The Authority has noted that the applicant company i.e. ATEL is a group company of the Shirazi Trading Company (Pvt.) Limited, has a portfolio involving "Business Solutions", "Health Care", "Industrial Solutions" and "Power Generation". It is pertinent to mention that ATEL is already involved in owning, operation and maintenance of a 225 MW oil fired generation facility near Shiekhupura in the province of Punjab supplying to National Grid for almost a decade now. ATEL/Shirazi Group is one of the strongest company in terms of financial and technical capabilities which now plans entering to the market of Renewable Energy (RE).

(iv). As explained above, the company i.e. ATEL pursuing a generation Licence has been incorporated to operate in the RE sector of the country and plans setting up different power plants based on RE. As explained above, in its application under consideration ATEL plans setting up PV based roof top facility of 501.60 kW_p at Atlas Autos Limited (Engine Manufacturing Plant) located at 26/27km Lahore-Sheikhupura Road, Sheikhupura in the province of Punjab. In consideration of the said, it is pertinent to mention that ATEL plans supplying to the aforementioned entity as BPC through cable located on private property owned by the BPC. According to the submitted information, the total cost of the project will be about Pak. Rs. 38.91 million which will be financed through a combination of debt (80% of the total cost of project i.e. Rs. 31.13 million) and equity (of 20% of the total cost of project i.e. Rs. 07.78 million). In this regard, a number of financial institution/commercial banks have shown their willingness to finance the debt portion of the project.

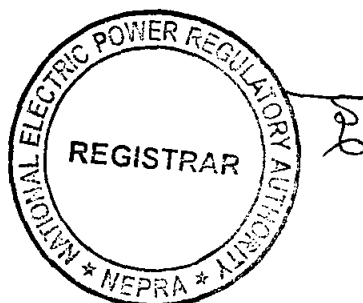
(v). The Authority has considered the submissions of ATEL and observed that the company carried out a feasibility study of the project including, *inter alia*, details of equipment of PV solar plant, PV-sitting details, power production estimates and other allied equipments. The review of the feasibility study reveals that for the proposed location to achieve the capacity of 501.60 kW_p the company will be installing 1254 PV cells each



of 400 Watt. In consideration of the said, it is clarified that the company plans installing PV cells 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 JKM400M-72H has been locked with Jinko Solar where the manufacturer has assured an average capacity factor of 15.45%.

(vi). As explained above, the supply from proposed generation facilities will be supplied to Atlas Autos Limited (Engine Manufacturing Plant). 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 respective BPC 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. 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 load of the above mentioned entity explained in the preceding Paras may be considered as BPC.

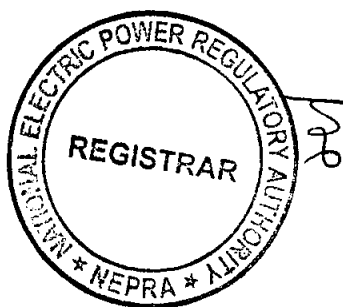
(vii). Further to the above, Section 2(v) of the NEPRA Act defines the term "Distribution" wherein the ownership, operation, management and control of distribution facilities located on private property and used solely to move or deliver electric power to the person owning, operating, managing and controlling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



included in the definition of "distribution". As explained above, the facility to be used for delivery of electric power to above BPC is 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 Atlas Autos Limited (Engine Manufacturing Plant) by ATEL does not constitute a distribution activity under the Act, and a distribution licence will not be required by the company.

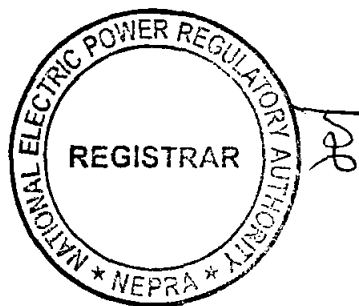
(viii). ATEL has informed that necessary due diligence has been completed and there will be no environmental impact of the proposed arrangement as PV cells will be utilizing only the existing infrastructure of roof top of buildings. Further, being the proposed sizing of the project, there is no requirement to have Initial Environmental Examination (IEE). ATEL has confirmed that it will comply with the concerned environmental standards. In view of the said, ATEL 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. The Authority has observed that ATEL 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 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/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 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 directly which only involve laying a few meters length of 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, 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 ATEL fulfills the eligibility criteria for grant of generation licence as stipulated in the NEPRA Act, rules and regulations and other applicable documents.

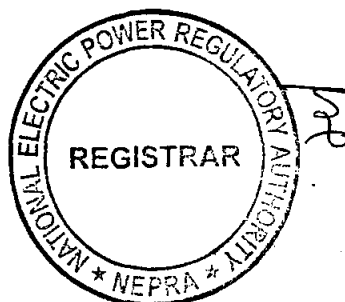


(D). Grant of Licence

(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, ATEL has approached for the grant of a Generation Licence for setting up PV based generation facility with Installed Capacity of 501.60 kWp for supplying to a BPC which is also existing consumer of its DISCO. The Authority considers that the above proposal of ATEL 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 ATEL in diversifying its portfolio but will

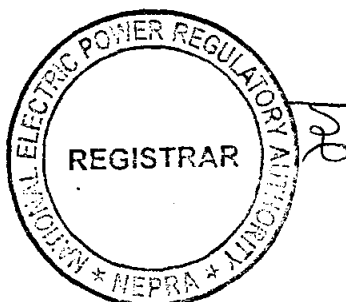


also enhance its energy security. Further, the project will also help in reducing the carbon emission by generating clean electricity, thus improving the environment.

(iv). As explained above, ATEL 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 land for setting up the PV based generation facility. The said details are being incorporated in the generation licence.

(v). The Authority has observed that proposed generation facility of ATEL will be used for supplying to 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 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 the above mentioned entity explained in the preceding Paras to be BPC of ATEL.

(vi). Regarding supply to the BPC, the Authority observes that the BPC and the proposed generation facility of ATEL are located within the same premises and the BPC will be supplied through 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 ATEL 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

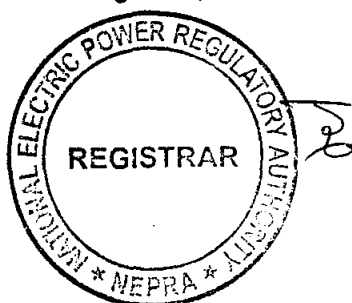


solely to move or deliver electric power to the person owning, operating, managing and controlling those facilities or to tenants thereof has not been included in the definition of "distribution". Based on the said considerations that the proposed BPC is located within the same premises and no public areas are involved, the supply of power to BPC by ATEL does not constitute a distribution activity under the NEPRA Act, and ATEL 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 ATEL, the Commercial Operation Date (COD) of the proposed generation facility/solar power plant/ Roof Top Solar will be December 31, 2020 and it will have a useful life of around twenty five (25) years from its COD. In this regard, ATEL 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 ATEL about the useful life of the generation facility/solar power plant/ Roof Top Solar and the subsequent request of ATEL 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, ATEL 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 ATEL to comply with relevant environmental standards at all times.

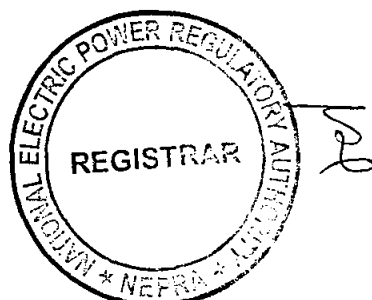
(ix). Regarding the rates, charges and terms and conditions of tariff between ATEL and its BPC, it is reiterated that under Section-7(3)(a) of the NEPRA Act, determining tariff, rate and charges etc. is the sole prerogative



of the Authority. However, the Authority observes that tariff between ATEL and its BPC, does not affect any other consumer or third party. Therefore for the purpose of tariff, the Authority considers it appropriate directing ATEL and its BPC to agree on a bilateral agreement and accordingly ATEL 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 stakeholder as explained above. In this regard, the Authority has observed that CPPAGL 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 ATEL fulfils the requirements prescribed under the relevant rules and regulations including LCOC as explained in preceding paragraph. 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 ATEL. 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

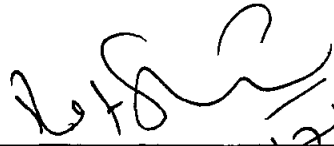


planning function by having suitable tools in the matter including the process of registration for entities like ATEL etc. As regards the approval of design of competitive wholesale market, the Authority through its determination NEPRA/DG(Lic)/LAM01-26389-398 dated December 05, 2019, has already approved the same. In consideration of the said, the observations of CPPAGL stand addressed and settled.


(xii). In view of the above, the Authority hereby approves the grant of generation licence to ATEL 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:

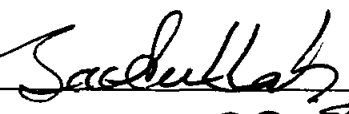
Rafique Ahmed Shaikh
(Member)


12/9/20


Rehmatullah Baloch
(Member)


22/9/2020


Engr. Bahadur Shah
(Member)

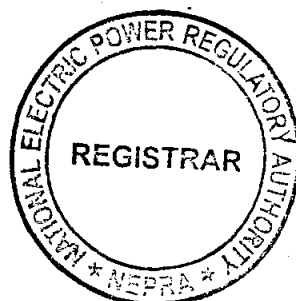

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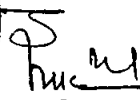
Saif Ullah Chattha
(Member/Vice Chairman)


23-9-2020

Engr. Tauseef H. Farooqi
(Chairman)


23-9-2020




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

Islamabad – Pakistan

GENERATION LICENCE

No. SGC/147/2020

In exercise of the powers conferred upon 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:

Atlas Energy Limited

Incorporated under Section-32 of the Companies Ordinance, 1984 (XLVII of 1984) having Corporate Universal Identification No. 0099710, dated May 18, 2016

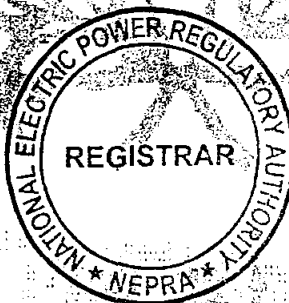
for its PV based Generation Facility/ Solar Power Plant/ Roof Top Solar Located at 26/27km Lahore-Sheikhupura Road, Sheikhupura, in the Province of Punjab

(Total Installed Capacity: ≈ 501.60 kWp)

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

Given under my hand this on 01st day of October September Two Thousand & Twenty and expires on 30th day of December Two Thousand & Forty-Five.

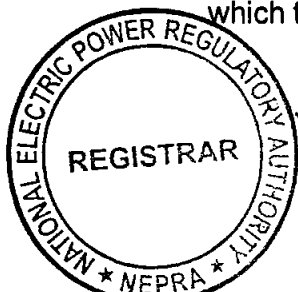

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Registrar



Article-1
Definitions

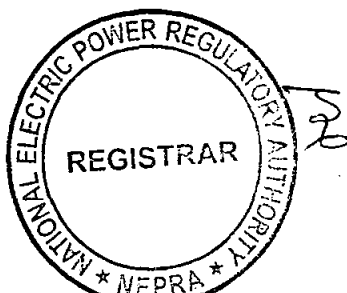
1.1 In this Licence

- (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/Roof Top Solar 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/Roof Top Solar of the Licensee is Commissioned;
- (i). "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;
- (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/ Roof Top Solar, 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



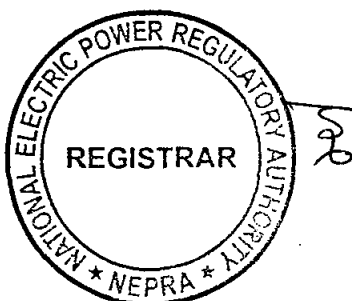
generation facility/Solar Power Plant/Roof Top Solar;

- (o). "Licensee" means Atlas Energy 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). "Roof Top Solar" means a cluster of photovoltaic cells installed on the roof top of a building or any other suitable place in the same location used for production of electric power; and
- (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 or 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 or 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 or 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 or Roof Top Solar, subject to the provisions of Section-14(B) of the Act.

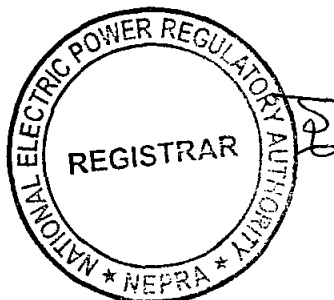
4.2 Unless suspended or revoked earlier, the Licensee may apply for renewal of this Licence ninety (90) days prior to the expiry of the above term, as stipulated in the Generation Rules read with the Licensing Regulations.

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

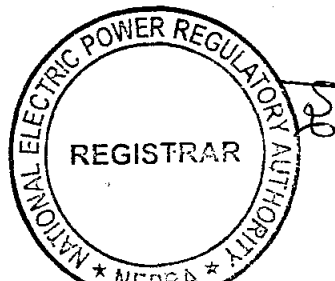
For the purpose of sub-rule (1) of Rule-19 of the Generation Rules, copies of records and data shall be retained in standard and electronic form and all such records and data shall, subject to just claims of confidentiality, be accessible by authorized officers of the Authority.

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 or 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 or 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

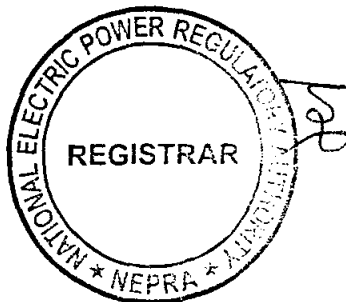
The Licensee shall deliver the electric power to the Power Purchaser at the outgoing Bus Bar of its generation facility/Solar Power Plant or Roof Top Solar. The Licensee shall be responsible for the up-gradation (step up) of generation voltage up to the required dispersal voltage level.

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.

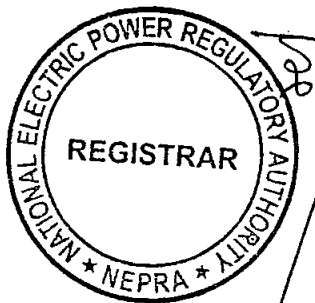
Article-13
Compliance with Applicable Law

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.

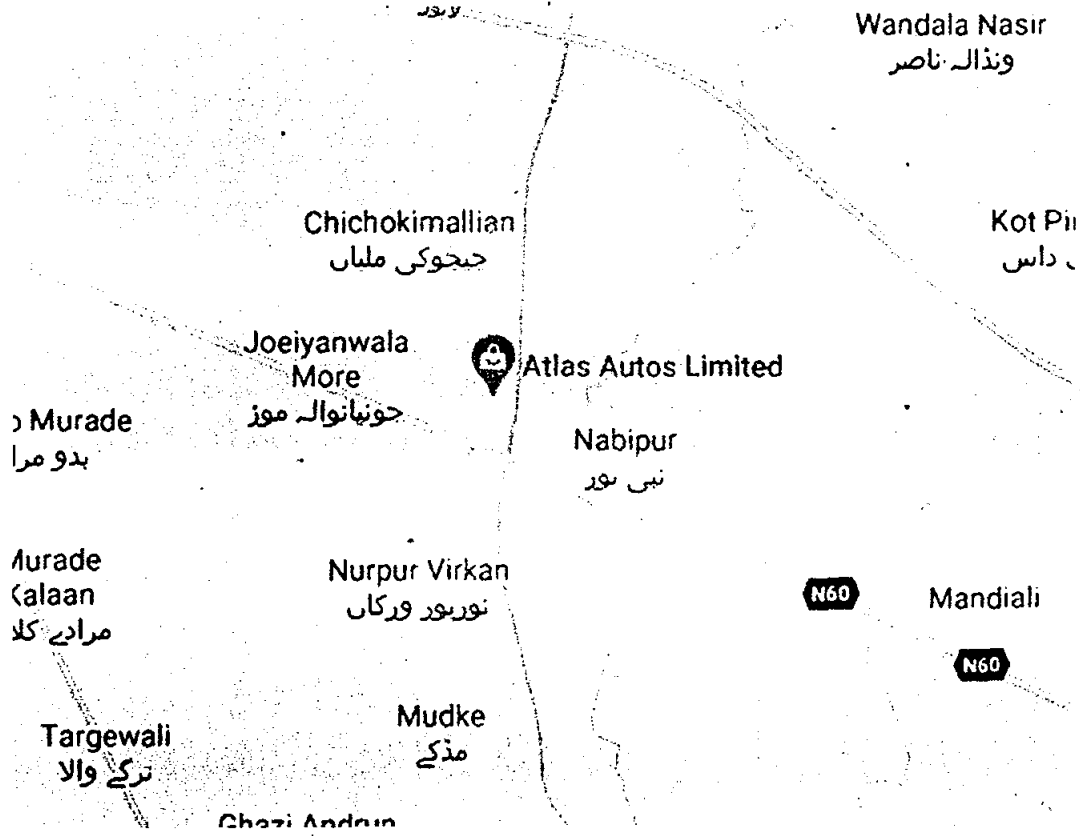


SCHEDULE-I

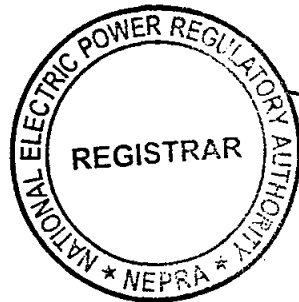
The Location, Size (i.e. Capacity in MW), Type of Technology, Interconnection Arrangements, Technical Limits, Technical/Functional Specifications and other details specific to the Generation Facilities of the Licensee are described in this Schedule.



**Location of the
Generation Facility/ Solar Power Plant/ Roof Top Solar
of the Licensee**



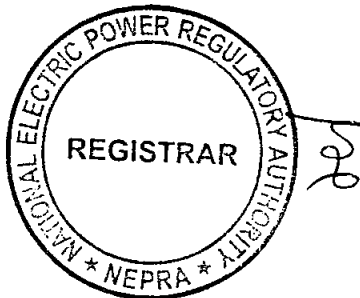
Atlas Autos Limited (Engine Manufacturing Plant)



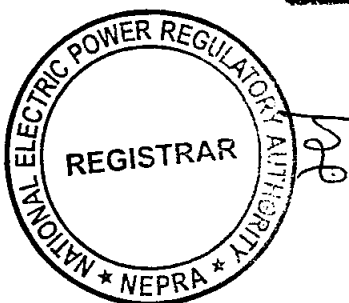
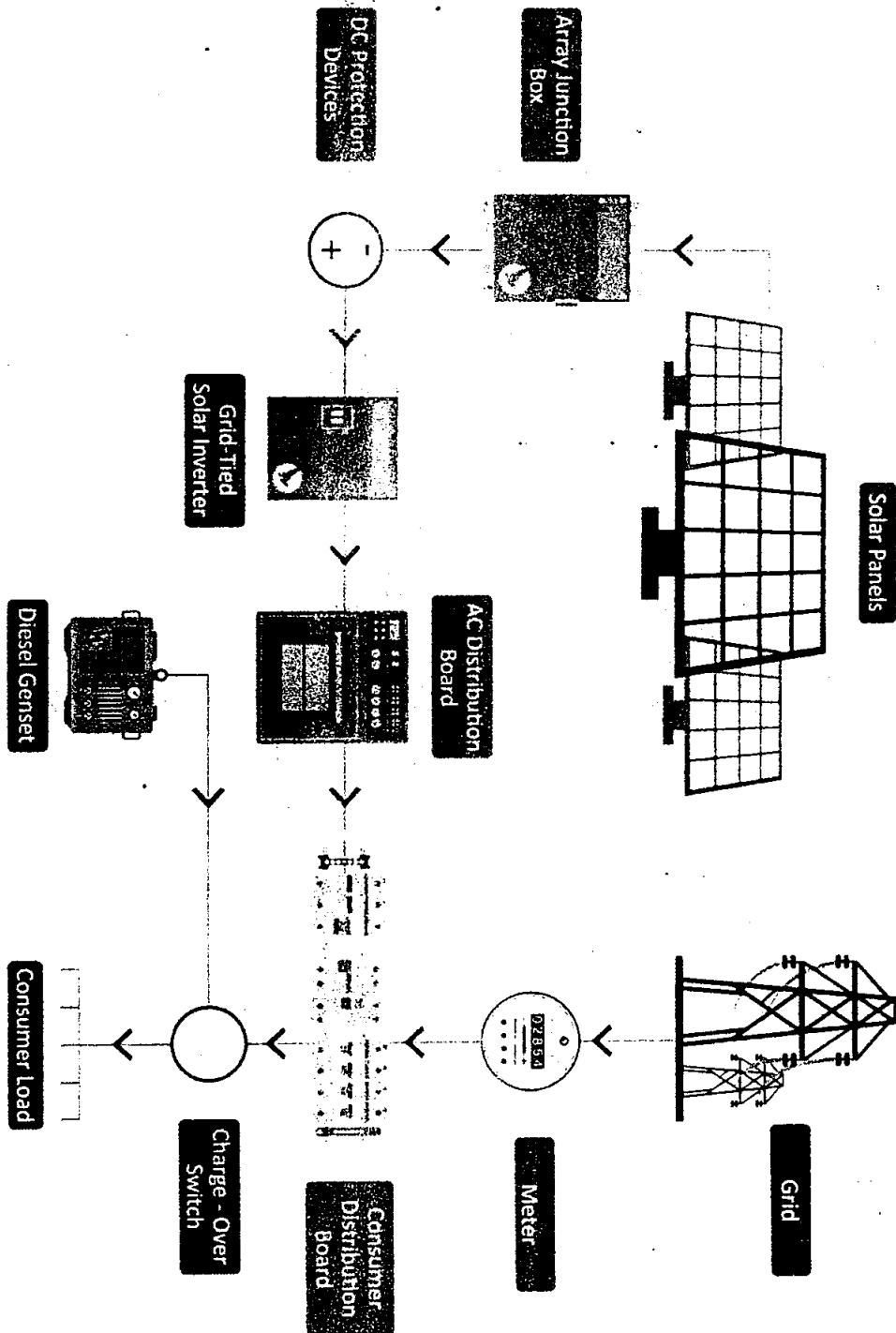
**Land Coordinates of the
Generation Facility/ Solar Power Plant/ Roof Top Solar
of the Licensee**



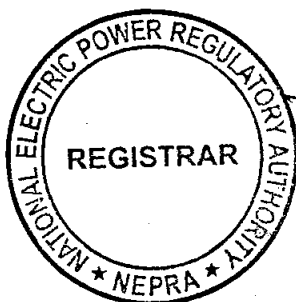
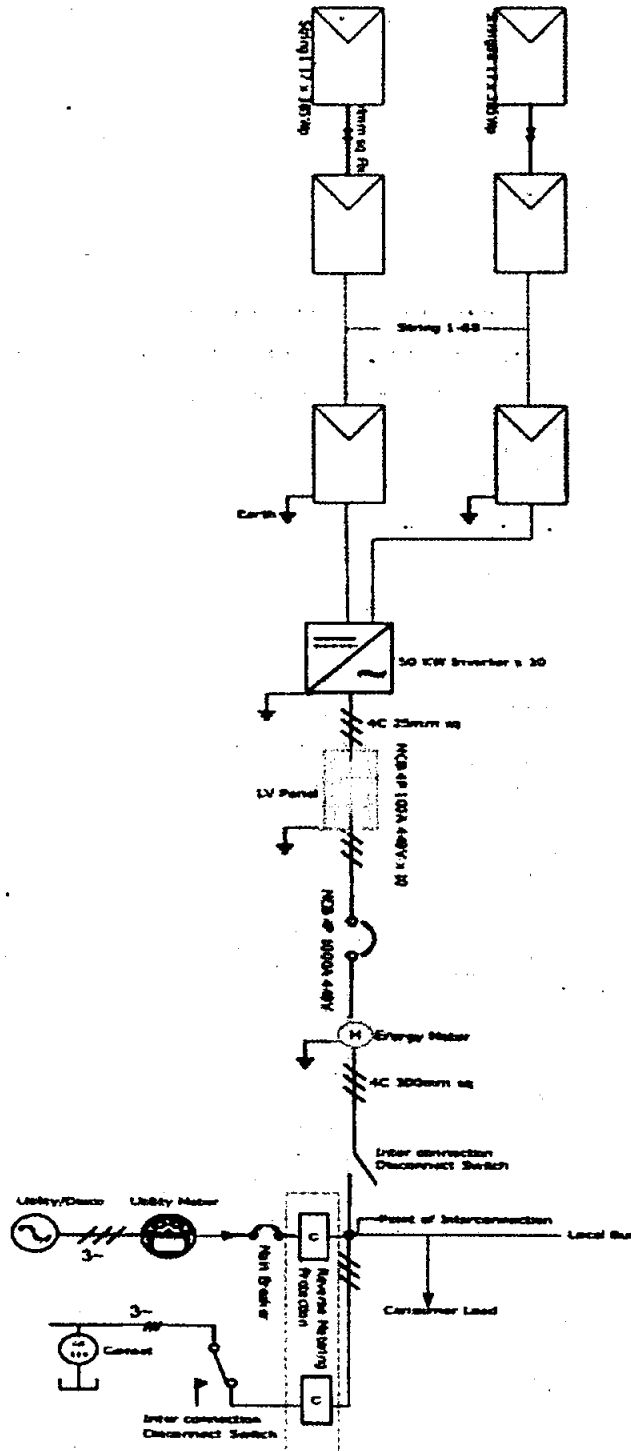
| <u>Serial Number</u> | <u>Location</u> | <u>Site Coordinates</u> | |
|--------------------------|--|-------------------------|--------------|
| 1. | Atlas Autos Limited (Engine Manufacturing Plant) | Latitude | 31°41'04.7"N |
| | | Longitude | 74°05'33.7"E |



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



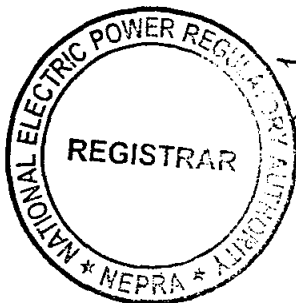
Single Line Diagram
Generation Facility/ Solar Power Plant/ Roof Top Solar
of the Licensee



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

The electric power generated from the proposed generation facility/Solar Power Plant/Roof Top Solar of the Atlas Energy Limited (ATEL)/Licensee will be delivered/supplied to Bulk Power Consumer (BPC) in the name of Atlas Autos Limited (Engine Manufacturing Plant) located at 26/27 km, Lahore-Sheikhupura Road, Sheikhupura, in the province of Punjab.

(2). The details pertaining to BPC, their respective 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.



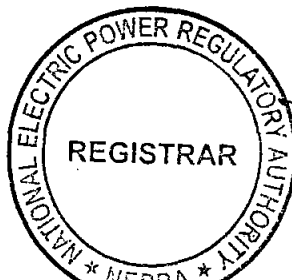
Details of
Generation Facility/Solar Power Plant/
Roof Top Solar

(A). General Information

| | | |
|--------|--|---|
| (i). | Name of the Company/Licensee | Atlas Energy Limited |
| (ii). | Registered/ Business office of the Company/Licensee | 26/27 Km, Lahore-Sheikhupura Road, Sheikhupura, in the province of Punjab. |
| (iii). | Type of the generation facility/Solar Power Plant/Roof Top Solar | Photovoltaic (PV) Cell |
| (iv). | Location(s) of the generation facility Solar Power Plant/ Roof Top Solar | Atlas Autos Limited (Engine Manufacturing Plant) 26/27 km, Lahore-Sheikhupura Road, Sheikhupura, in the province of Punjab. |

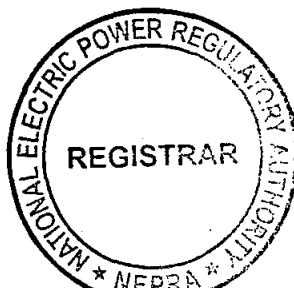
(B). Solar Power Generation Technology & Capacity

| | | | |
|--------|---|------------------------|--------|
| (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 | 501.60 kWp | |
| (iv). | No. of Panel/Modules | 1254 x 400 Watt | |
| (v). | PV Array | Nos. of Strings | 66 |
| | | Modules in a string | 19 |
| (vi). | Invertor(s) | Quantity | 7 |
| | | Make | Huawei |
| | | Capacity of each unit | 60 kW |

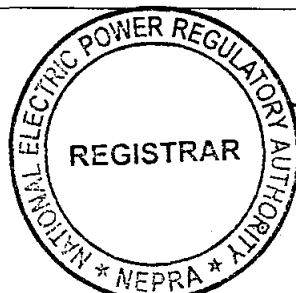


(C). **Technical Details of Equipment**

| | | |
|--|--|---------------------------------------|
| (a). <u>Solar Panels – PV Modules</u> | | |
| (i). | Type of Module | Cheetah HC JKM400M-72H |
| (ii). | Type of Cell | Mono crystalline |
| (iii). | Dimension of each Module | 2008x1002x40mm(79.06x39.45x1.57 inch) |
| (iv). | Total Module Area | 2.012016 m ² |
| (v). | Frame of Panel | Anodized aluminium alloy |
| (vi). | Weight of one Module | 22.5 kg |
| (vii). | No of Solar Cells in each module | 144 (6×24) |
| (viii). | Efficiency of module | 19.88% |
| (ix). | Maximum Power (P _{max}) | 400 Wp |
| (x). | Voltage @ P _{max} | 41.7 V |
| (xi). | Current @ P _{max} | 9.60 A |
| (xii). | Open circuit voltage (V _{oc}) | 49.8V |
| (xiii). | Short circuit current (I _{sc}) | 10.36A |
| (xiv). | Maximum system open Circuit Voltage | 1000VDC (IEC) |
| (b). <u>Inverters</u> | | |
| (i). | Type of Module | 60 kW |



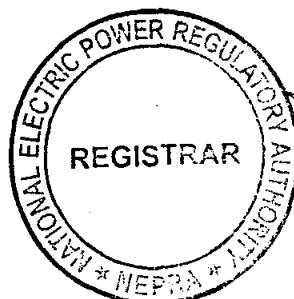
| | | | |
|---------|---------------------------------|-------------------------|---------------------------------|
| (ii). | Type of Cell | SUN2000-60KTL-M0 | |
| (iii). | Input Operating Voltage Range | 200 V to 1000 V | |
| (iv). | Efficiency of inverter | 98.7 % | |
| (v). | Max. Allowable Input voltage | 1100V | |
| (vi). | Max. Current | 22 A | |
| (vii). | Max. Power Point Tracking Range | 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) |



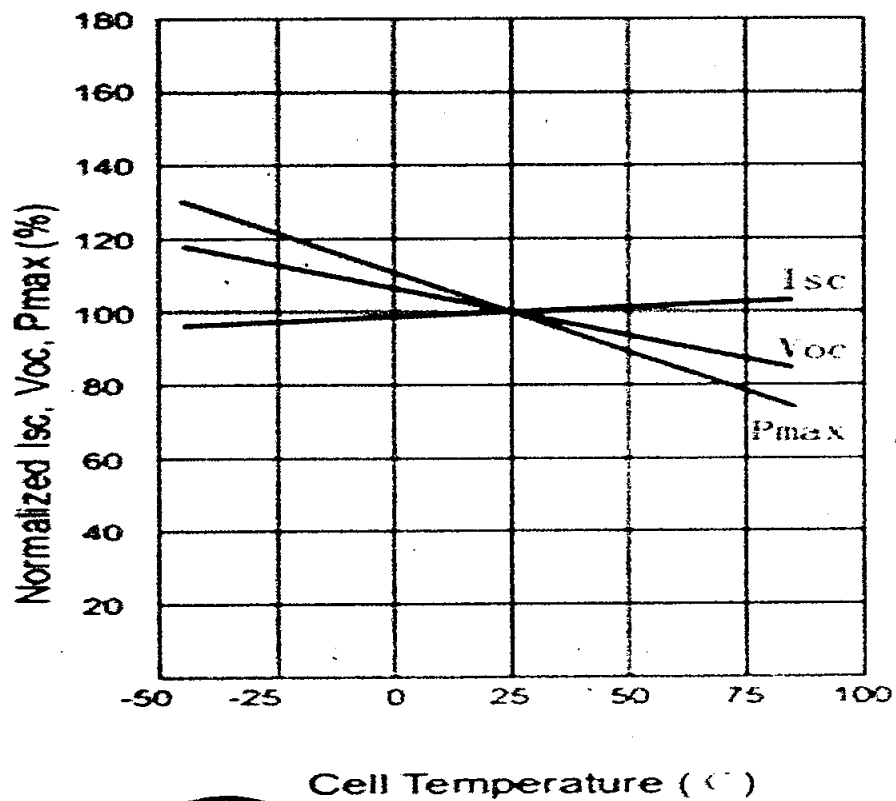
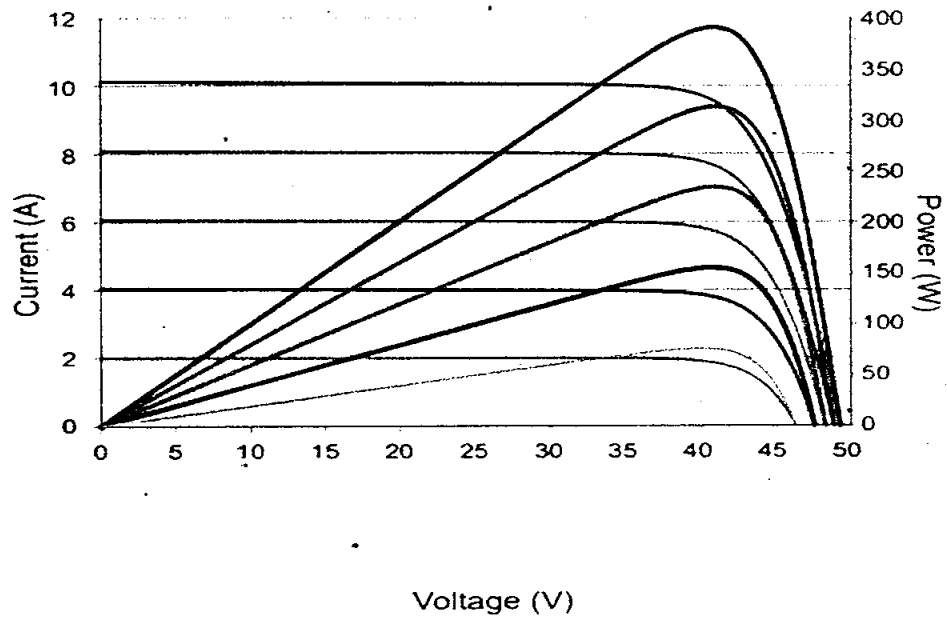
| | | | |
|------|-------------------------------|---|-------------------------|
| | | D | Overheat protection |
| | | E | Grid monitoring |
| | | F | Insulation monitoring |
| | | G | Ground fault monitoring |
| (c). | <u>Data Collecting System</u> | | |
| (i). | System Data | Continuous online logging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

(D). Other Details

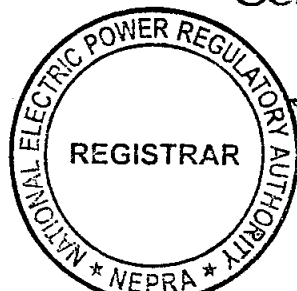
| | | |
|-------|--|-------------------|
| (i). | Expected COD of the generation facility Solar Power Plant/ Roof Top Solar | December 31, 2020 |
| (ii). | Expected useful Life of the generation facility Solar Power Plant/ Roof Top Solar from the COD | 25 years |



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



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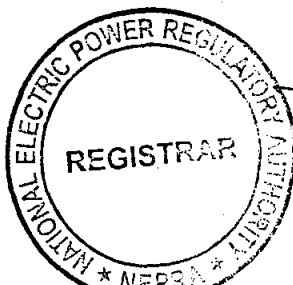


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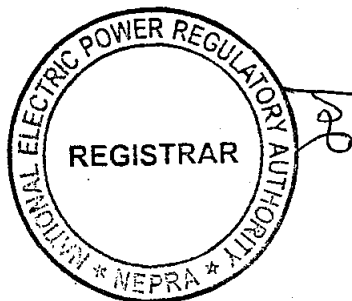
Information
Regarding Consumer i.e. Atlas Autos Limited (AAL) to be Supplied by the
Licensee i.e. ATEL

| | | |
|--------|--|--|
| (i). | No. of Consumers | One (01) |
| (ii). | Location of consumers (distance and/or identity of premises) | Atlas Autos Limited (Engine Manufacturing Plant) 26/27 km, Lahore-Sheikhupura Road, Sheikhupura, in the province of Punjab |
| (iii). | Contracted Capacity and Load Factor for consumer | 501.60 kW _P / 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 the Licensee |
| | (b). | Consumer and DISCO. |
| (vi) | Any other network information deemed relevant for disclosure to or consideration of the Authority. | NA |



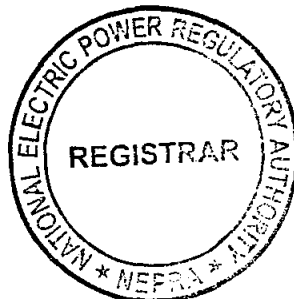
Information
Regarding Distribution Network for Supply of Electric Power Consumer
in the name of AAL

| | | |
|--------|--|---------------------------|
| (i). | No. of Feeders | 01 |
| (ii). | Length of Each Feeder (Meter) | 75 m |
| (iii). | Length of Each Feeder to each Consumer | 75 m |
| (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. | N/A. |
| (v). | Whether owned by ATEL, Consumer or DISCO-(deal with each Feeder Separately) | N/A. |
| | (a). If owned by DISCO, particulars of contractual arrangement | N/A. |
| | (b). Operation and maintenance responsibility for each feeder | AAL |
| (vi). | Whether connection with network of DISCO exists (whether active or not)- If yes, provide details of connection arrangements (both technical and contractual) | B3(14)T consumer of LESCO |
| (vii). | Any other network information deemed relevant for disclosure to or consideration of the Authority. | N/A. |



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.

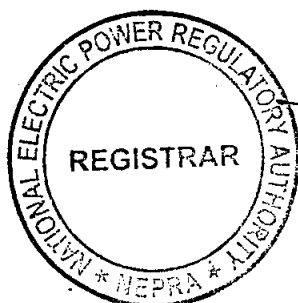


SCHEDULE-II

| | | |
|-----|---|-------------------------|
| (1) | Total Installed Capacity of the Generation Facility/Solar Power Plant/Roof Top Solar | 501.600 kW _P |
| (2) | Average Sun Hour Availability/Day (Irradiation on Inclined Surface) | 5 to 5.5 Hours |
| (3) | No. of days per year | 365 |
| (4) | Annual generating capacity of Generation Facility/Solar Power Plant/ Roof Top Solar (As Per Simulation) | 678.875 MWh |
| (5) | Total expected generation of the Generation Facility/Solar Power Plant/ Roof Top Solar during the twenty five (25) years term of this licence | 15,619.90 MWh |
| (6) | Annual generation of Generation Facility/Solar Power Plant/ Roof Top Solar based on 24 hours working | 4,394 MWh |
| (7) | Net Capacity Factor of Generation Facility/Solar Power Plant/ Roof Top Solar | 15.45% |

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
National Electric Power Regulatory Authority (NEPRA)
To Atlas Energy Limited (ATEL)

Incorporated under Section-32 of
the Companies Ordinance, 1984 (XLVII of 1984) having
Corporate Universal Identification No. 0099710, dated
May 18, 2016

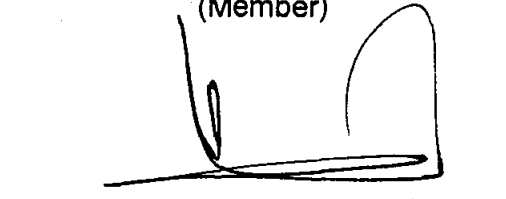
GENERATION LICENCE No. SGC/147/2020
For Sale to Bulk Power Consumer

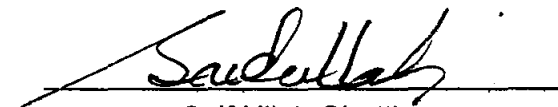
Pursuant to Section-22 of the Act and Rule-7 of the Generation Rules, the Authority hereby authorizes the ATEL (the Licensee) to engage in Second-Tier Supply business, limited to the consumer as follows:

- (a). Atlas Autos Limited (Engine Manufacturing Plant) located
at 26/27km Lahore-Sheikhupura Road, Sheikhupura, in the
province of Punjab

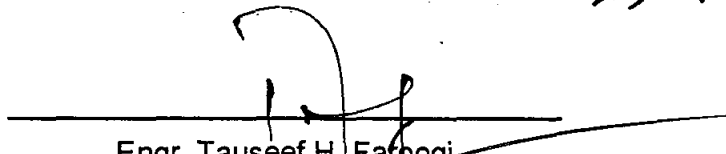

Rafique Ahmed Shaikh
(Member)

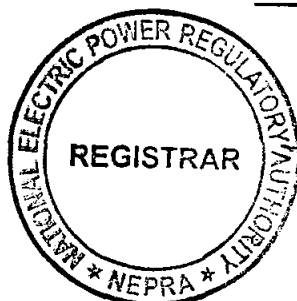

Engr. Rehmatullah Baloch
(Member)

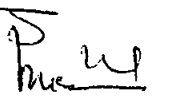

Engr. Bahadur Shah
(Member)


Saif Ullah Chattha
(Member)/Vice Chairman

23-9-2020


Engr. Tauseef H. Farooqi
Chairman




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