



Registrar

National Electric Power Regulatory Authority
Islamic Republic of Pakistan

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No. NEPRA/R/DL/LAG-387/15714-20

September 20, 2017

Mr. Yousuf Anis Ahmed
Chief Executive
Sheikhoo Power (Private) Limited,
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Phone: +92-42-35728901

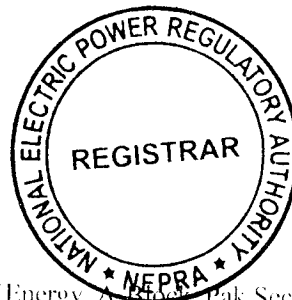
**Subject: Grant of Generation Licence No. IGSP/90/2017
Licence Application No. LAG-387
Sheikhoo Power (Private) Limited (SPPL)**

Reference: SPPL application vide letter No. SPPL/001/17 dated March 14, 2017 (received on March 15, 2017).

Enclosed please find herewith Determination of the Authority in the matter of Application of Sheikhoo Power (Private) Limited (SPPL) for the Grant of Generation Licence along with Generation Licence No. IGSP/90/2017 annexed to this determination granted by the National Electric Power Regulatory Authority (NEPRA) to SPPL for its 30.00 MW Bagasse based Co-Generation Facility located at 9 Km, Sanawan Langar Saraye Road, Pati Naich, Anwar Abad, Tehsil Kot Addu, District Muzaffargarh, in the province of Punjab, pursuant to Section 15 of the Regulation of Generation, Transmission and Distribution of Electric Power Act (XL of 1997).

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

**Enclosure: Generation Licence
(IGSP/90/2017)**



[Handwritten signature]
20/9/17
(Syed Safer Hussain)

Copy to:

1. Secretary, Power Division, Ministry of Energy, A-Block, Pak Secretariat, Islamabad.
2. Chief Executive Officer, Alternative Energy Development Board (AEDB), 2nd Floor, OPE Building, G-5/2, Islamabad.
3. Chief Executive Officer, NTDC, 414-WAPDA House, Lahore.
4. Chief Executive Officer, CPPA-G, ENERCON Building, Sector G-5/2, Islamabad.
5. Chief Executive Officer, Multan Electric Power Company (MEPCO), NTDC Colony, Khanewal Road, Multan.
6. Director General, Environment Protection Department, Government of Punjab, National Hockey Stadium, Ferozepur Road, Lahore.

National Electric Power Regulatory Authority
(NEPRA)

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

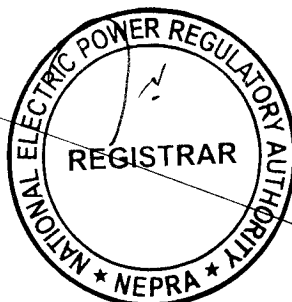
September , 2017
Case No. LAG-387

(A). Background

(i). In order to commercially harness the potential of the Renewable Energy (RE) resources in the country, the Government of Pakistan (GoP) has set up an entity in the name of Alternative Energy Development Board (AEDB) which acts as a one window facilitator for the prospective investors.

(ii). The GoP through AEDB has formulated "the Policy for Development of Renewable Energy for Power Generation 2006" (hereafter the RE Policy). Initially the scope of the RE Policy included development of Hydro, Wind, and Solar Technologies. Later on, the GoP amended the scope of the RE Policy to include power projects based on bagasse, biomass, waste-to-energy and bio-energy, using high-pressure (minimum 60 bar) boiler technology. Further, GoP also extended the applicability of the RE Policy for an additional five (05) years w.e.f. March 06, 2013. In consideration of the said, AEDB has issued Letter of Intent (LoI) to different entrepreneurs/ project developers. One of such LoI was issued to Shekhoo Sugar Mills Limited (SHKSML) for setting up a 30.00 MW bagasse based power project in district Muzaffargarh, in the province of Punjab. In order to implement the project, SHKSML incorporated a Special Purpose Vehicle (SPV) in the name of Shekho Power (Private) Limited (SHKPPL).

(iii). According to the terms and conditions of the LoI, the sponsors of the project (i.e. Shekhoo Sugar Mills Limited-SHKSML and other individuals) were required to approach the Authority for the grant of generation licence and acceptance of the already determined up-front tariff.



(B). Filing of Application

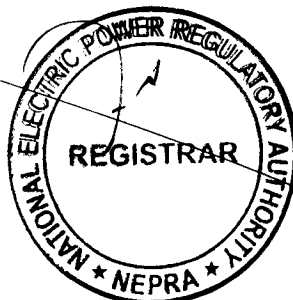
(i). SHKPPL submitted an application on March 15, 2017 for the grant of generation licence in terms of Section-15 of Regulation of Generation, Transmission and Distribution of Electric Power Act, 1997 (the "NEPRA Act") read with the relevant provisions of the NEPRA Licensing (Application and Modification Procedure) Regulations, 1999 (the "Licensing Regulations").

(ii). The Registrar examined the submitted application to confirm its compliance with the Licensing Regulations and observed that the application lacked some of the required information/documentation. Accordingly, SHKPPL was directed to submit the missing information/documentation and the same was received on March 24, 2017. 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 April 19, 2017 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 April 22, 2017.

(iii). In addition to the above, the Authority approved a list of stakeholders for seeking their comments for the assistance of the Authority 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 24, 2017, soliciting their comments for the assistance of the Authority.

(C). Comments of Stakeholders

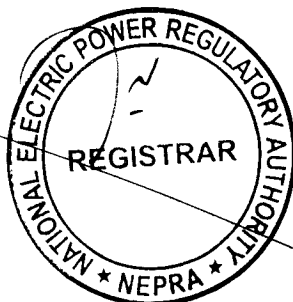
(i). In reply to the above, the Authority received comments from three (03) stakeholders. These included Anwar Kamal Law Associates (AKLA), Ministry of Petroleum & Natural Resources (MoP&NR) and AEDB. The salient points of the



comments offered by the said stakeholders are summarized in the following paragraphs: -

- (a). AKLA highlighted different issues pertaining to the power sector of the country including (a). surplus capacity; (b) underutilization of power plants; and (c). induction of new power plants on "take or pay" basis etc. Further, AKLA contested that RE power plants are not viable financially and economically due to higher upfront tariff and "must run condition". AKLA also questioned the induction of RE projects in the current scenario (i.e. reduction in oil prices, RLNG contract with Qatar, upcoming coal power projects and introduction of competitive market etc.), affordability vs. availability of electric power and long term PPAs on "take or pay" basis etc. AKLA stated that it is not against setting up of new power plants and in this regard a very careful estimate of required generation capacities should be made or the licences should be granted on "take and pay" basis;
- (b). MoP&NR stated that SHKPPL intends to install bagasse fired co-generation power plant and as such, no gas is required for utilization in this project. Therefore, the Ministry has no objection/comments for grant of generation licence to SHKPPL for its bagasse based power plant at district Muzafargarh, Punjab; and
- (c). AEDB confirmed issuance of Lol to the company and supported the grant of generation licence subject to fulfillment of all codal formalities.

(ii). The Authority reviewed the above comments of the stakeholders and in view of the observations of AKLA decided to seek the perspective of SHKPPL. In reply to the said, SHKPPL submitted that it is undertaking the project in terms of the RE Policy currently in vogue. SHKPPL stated that AKLA has not pointed out any

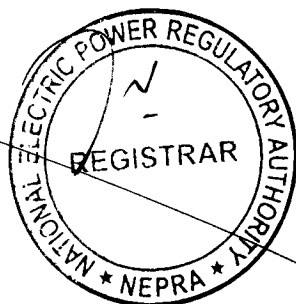


deficiency in its application for the grant of generation licence. Further, SHKPPL stated that AKLA has not identified any non-compliance or disregard of any provisions of the applicable regulatory and procedural regime on its part. SHKPPL submitted that its application for the grant of generation licence, all other steps and actions taken in pursuance of the project, are strictly in line with the applicable regulatory and policy framework. Further, SHKPPL highlighted that in terms of clause-8.2.1 of the RE Policy, it is mandatory for the power purchaser to evacuate all the energy offered to it by the power producer, failing which such plants shall be deemed to have dispatched and sold the energy to the power purchaser.

(iii). SHKPPL submitted that the “take or pay” regime provides the power producer an assured revenue stream that ensures an adequate return on the significant project capital investment and risks to which power producers are exposed. Moreover, it is often the most important means for a power producer to secure the substantial external debt financing on limited recourse terms that energy projects typically require. SHKPPL stated that the comments of AKLA are totally misplaced and is a myopic view of the situation. In particular, the comments are generally aimed towards the problems of the power sector and are not relevant to the project.

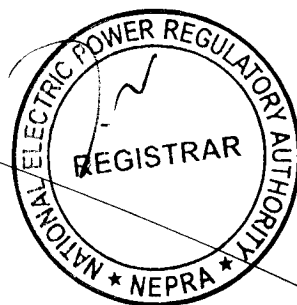
(iv). Further to the above, SHKPPL submitted that comments of AKLA are discrediting and contesting the valid and current policies of power generation duly approved by the GoP. Moreover, it is reiterated that as comments of AKLA are general and pertain to the overall state of the power industry, the same do not warrant any specific response from SHKPPL and are irrelevant to the project. The Authority may if it deems appropriate at its own discretion, take up the matters highlighted in the comments, which are extraneous to the project, in separate proceedings.

(v). SHKPPL submitted that all projects mentioned by AKLA in its comments are fossil fuel based power plants. It is erroneous to compare bagasse based power projects with fossil fuel based thermal power plants. Bagasse is an indigenous and renewable energy source. Fossil energy resources primarily consist



of natural gas and furnace oil. In this regard, it is pertinent to note that domestic oil supply is considered negligible in Pakistan and natural gas resources are also becoming scarce. On the other hand, while substantial coal deposits are available in the country, the cost of mining is very high. Additionally, import of fossil fuels leads to depletion of foreign exchange reserves. In light of the foregoing, the comparisons that AKLA has attempted to draw between bagasse based power projects and other fossil fuel based thermal power plants are unjustified and incorrect. In fact, AKLA has completely ignored the fact that bagasse based projects are foreign currency neutral and all fuel for such projects is locally generated and is readily available for use by power plants. In view of the above, SHKPPL requested the Authority to disregard the comments which are completely irrelevant and have no specific implication on the project.

(vi). The Authority considered the comments of the stakeholders, the reply of SHKPPL and observed that AKLA have raised certain observations regarding the project. The Authority observes that AKLA while submitting its comments has referred to its previous correspondences made on different issues including (a). surplus capacity; (b). capacity payment without supplying electricity; (c). addition of high cost renewable plants; (d). underutilization of power plants; and (e). induction of new power plants on "take or pay" basis and others. In this regard, the Authority observes that it has duly addressed the aforementioned objections/comments and sent a comprehensive reply to AKLA through letter no. NEPRA/SAT-I/TRF-100/17060, dated December 27, 2016. The Authority reiterates its earlier findings and observations given in the aforementioned letter and is of the considered opinion that there is considerable supply demand gap resulting in load-shedding and load management. It is substantiated by the fact that the proposed generation facility of SHKPPL is included in the future expansion plan of Multan Electric Power Company Limited (MEPCO) for which it has already given a consent to Central Power Purchasing Agency (Guarantee) Limited (CPPA-G) which acts an agent for the utilities. Further, CPPA-G has also filed a power acquisition request for purchasing power from SHKPPL. Regarding the observations of AKLA that RE projects should have "take and pay" tariff, the Authority hereby clarifies that it had already determined an upfront tariff for bagasse based projects which is on unit



delivered basis which means that a power producer/generation company is paid only for the energy it delivers. In view of foregoing, the Authority considers that the observations of AKLA stand addressed.

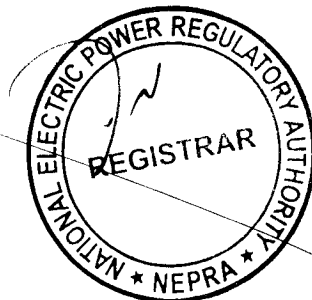
(vii). In consideration of the above and having addressed the comments/objections, the Authority considered it appropriate to proceed further in the matter of application of SHKPPL for the consideration of grant of generation licence as stipulated in the Licensing Regulations and NEPRA Licensing (Generation) Rules, 2000 (the "Generation Rules").

(D). Evaluation/Findings

(i). The Authority has examined the submissions of SHKPPL including the information provided in its application for the grant of generation licence. The Authority has also considered the feasibility study of the project, the Grid Interconnection Study (GIS), provisions of the RE Policy and the relevant rules & regulations.

(ii). The Authority has observed that SHKSML located at 9-Km Sanawan, Langar Saraye road, tehsil Kot Addu district Muzaffargarh, in the province of Punjab is the main sponsor of the project, which was set up in 1990. Initially the sugar mill had a cane crushing capacity of 4000 ton per day (TCD) which was gradually increased and currently stands at 16000 TCD. As part of the said facility, SHKSML owns, operates and maintains a generation facility/Captive Power Plant (CPP) with an installed capacity of 18.00 MW for which the Authority granted a generation licence (No. SGC/55/2009, dated November 12, 2009 and modification-I dated December 30, 2013). According to the provided information, SHKSML has a total net worth of around Rs. 2.00 billion. In consideration of the above, the Authority is of the considered opinion that the sponsor has reasonable financial and technical capability to develop small and medium sized generation facilities.

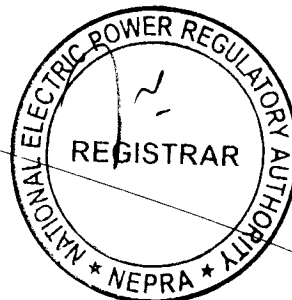
(iii). The Authority has observed that based on the financial strength and other evaluation parameters, AEDB issued Lol for setting up a 30.00 MW bagasse based generation facility/co-generation facility/power plant within SHKSML at the



above mentioned location. In order to implement the project, SHKSML incorporated a SPV in the name of SHKPPL under Section-32 of the Companies Ordinance 1984 (XLVII of 1984) having Corporate Universal Identification No. No. 0099199 dated April 26, 2016. The memorandum of association of SPV/project company includes *inter alia* power generation and its sale as one of its business objects. The Authority has observed that the SPV/SHKPPL carried out a feasibility study of the project including inter alia, proposed equipment for generation facility/co-generation facility/power plant, soil tests reports, technical details pertaining to selection of steam turbine generator and other allied equipment, electrical studies, environmental study and project financing etc. According to the feasibility study, the project company/SHKPPL will be setting up a 30.00 MW bagasse based generation facility/co-generation facility/power plant. In this regard, the sponsors have submitted necessary documents confirming that the proposed site of the project is in their name and possession.

(iv). In consideration of the above, SHKPPL has confirmed that the proposed generation facility/co-generation facility/power plant will be consisting of 1 x 30.00 MW of steam turbine (extraction cum condensing type) with high pressure (110 bar, 540°C) travelling grate boiler. According to the submitted information, the net efficiency of the proposed generation facility/co-generation facility/power plant will be at least 24.50%. The proposed generation facility/co-generation facility/power plant will only be utilizing bagasse for firing the boiler.

(v). The Authority has observed that the proposed generation facility/co-generation facility/power plant will utilize the bagasse generated from SHKSML. In this regard, SHKPPL has confirmed that the bagasse generated from SHKSML will be sufficient to operate the proposed generation facility/co-generation facility/power plant to meet with the required plant factor and plant availability as stipulated in the determination of the Authority No. NEPRA/R/TRF-UTB-2013/5152-54, dated May 29, 2013 for the upfront tariff for bagasse based projects. SHKPPL has also confirmed that if there is shortage of bagasse in the area due to change in pattern of crop of sugarcane, the bagasse will be purchased from the market for the operation of the generation facility/co-generation facility/power plant. In view of the above, the Authority is satisfied that



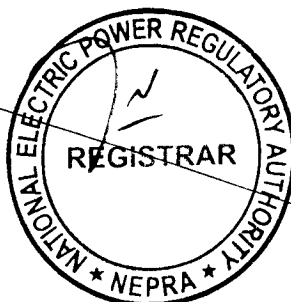
the project will have the required fuel for the operation of the proposed generation facility/co-generation facility/power plant.

(vi). The Authority has noted that SHKPPL carried out the required interconnection and system stability study for dispersal of electric power from the proposed generation facility/co-generation facility/power plant. According to the said study, the dispersal of electric power will be made at 132 kV voltage level. The dispersal/interconnection arrangement will be consisting of a 132 kV D/C Transmission Line (on ACSR LYNX Conductor) measuring about approximately half a kilometer ($\approx 0.600\text{KM}$) for making an In-Out of one circuit 132kV KAPCO–Muzaffargarh (old) transmission line connecting the generation facility/co-generation power plant of SHKPPL with system of MEPCO. The Authority is satisfied that MEPCO has reviewed the GIS and accorded approval of the same. Further, NTDC has also endorsed the above mentioned GIS for dispersal of electric power from SHKPPL.

(vii). The Authority is encouraged that the proposed project of SHKPPL will be utilizing bagasse which is RE source. However, the Authority has observed that the proposed generation facility/co-generation facility/power plant will be working as a conventional thermal power plant using steam turbine for generation of electric power/energy that may cause environmental concerns. In this regard, the Authority has observed that SHKPPL carried out the Initial Environment Examination Study and Environment Protection Department, Government of the Punjab (EPDGoPb) has issued a No Objection Certificate (NOC) for the construction of the project.

(viii). In terms of Rule-3 of the Generation Rules, the Authority may grant a generation licence to any person to engage in the generation business. In the particular case under consideration, the Authority has observed that SHKPPL has provided details of location, technology, size, net capacity/energy, interconnection arrangements, technical limits, technical functional specifications and other details specific to the generation facilities satisfying provisions of Rule-3(2) and Rule-3(3).

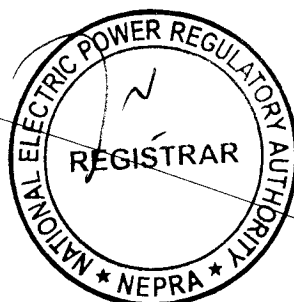
(ix). Regarding the Rule-3(5) of the Generation Rules which stipulates that the Authority may refuse to issue a generation licence where the site, technology,



design, fuel, tariff or other relevant matters pertaining to the generation facility/co-generation facility/power plant proposed in an application for a generation licence are either not suitable on environmental grounds or do not satisfy the least cost option criteria. In this regard, the Rule-3(5) of the Generation Rules stipulates the conditions pertaining to Least Cost Option Criteria 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/co-generation facility/power plant 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/co-generation facility/power plant 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/co-generation facility/power plant; 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, the Authority considers that the proposed project will result in optimum utilization of the RE which was earlier untapped, resulting in pollution free electric power. The Authority is of the considered opinion that bagasse is an indigenous fuel and such fuels should have a preference for the energy security. The Authority through its determination No. NEPRA/R/TRF-UTB-2013/5152-54, dated May 29, 2013 announced an upfront levelized tariff for the future bagasse projects which works out to be Pak. Rs. 10.4078/kWh which is very competitive considering the fact that not only cheap electric power will be generated but it will utilize the bagasse and other bio-mass which is otherwise burnt causing air and soil pollution.

(xi). As explained in the preceding paragraphs, the sponsors of the project carried out the grid interconnection study which concludes that the project will not face any constraints in transmission system. Further, being located at reasonable



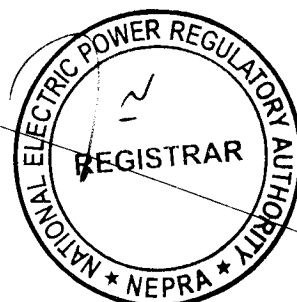
distance from the thick population, the project will not result in cost and right-of-way issue for the provision of transmission and interconnection facilities. The Authority has observed that MEPCO has included the project in its mid and long-term forecasts for additional capacity requirements. In view of the said, the Authority is of the considered view that the project of SHKPPL fulfills the eligibility criteria for grant of generation licence as stipulated in the NEPRA Act, rules and regulations and other applicable documents.

(E). Grant of Generation Licence

(i). The 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 reasons, the Authority is of the considered opinion that for sustainable development, all indigenous power generation resources including RE must be developed on priority basis.

(ii). The existing energy mix of the country is heavily skewed towards the thermal power plants, mainly operating on imported fossil fuel. The continuous import of fossil fuel 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 Energy Security Action Plan 2005 approved by the GoP, duly recognizes this very aspect of power generation through RE and envisages that at least 5% of total national power generation capacity (i.e. 9700 MW) to be met through RE resources by 2030.

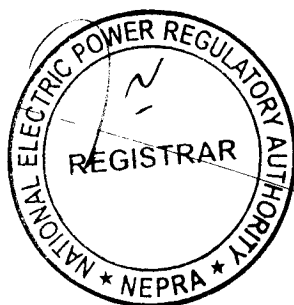
(iii). The Authority considers that the proposed project of SHKPPL is consistent with the provisions of Energy Security Action Plan 2005. The project will help in diversifying the energy portfolio of the country. Further, it will not only enhance the energy security of the country by reducing the dependence on imported fuel but will also help in reducing the carbon emission by generating clean electricity, thus improving the environment.



(iv). As explained in the preceding paragraphs above, SHKPPL has provided the details of location, technology, size, net capacity/energy, interconnection arrangements, technical details and other related information for the proposed generation facility/co-generation facility/power plant. In this regard, the Authority has observed that sponsors of the project have acquired approximately twenty eight (28) acres of land for setting up the generation facility/co-generation facility/power plant. The said details have been incorporated in Schedule-I of the proposed generation licence. In this regard, the Authority directs SHKPPL to utilize the said mentioned land for the exclusive purpose of setting up of the proposed generation facility/co-generation/power plant and not to change its use except with its prior approval.

(v). 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 SHKPPL, the COD of the proposed generation facility/co-generation facility/power plant will be September 30, 2018 and it will have a useful life of more than thirty (30) years from its COD. In this regard, SHKPPL has requested that the term of the proposed generation licence may be fixed to thirty (30) years consistent with the term of the proposed Energy Purchase Agreement (EPA) to be signed with the power purchaser. The Authority considers that said submission of SHKPPL about the useful life of the generation facility/co-generation facility/power plant and the subsequent request of SHKPPL to fix the term of the generation licence is consistent with international benchmarks therefore, the Authority fixes the term of the generation licence to thirty (30) years from COD of the project.

(vi). Regarding the tariff, it is hereby clarified that under Section-7(3)(a) of the NEPRA Act, determining tariff, rate and charges etc. is the sole prerogative of the Authority. As explained in the preceding paragraphs, the project is being developed in terms of the upfront tariff for bagasse based projects, announced vide determination of the Authority No. NEPRA/R/TRF-UTB-2013/5152-54, dated May 29, 2013. In this regard, SHKPPL has already submitted an application for acceptance of the said upfront tariff. The Authority has already admitted the said

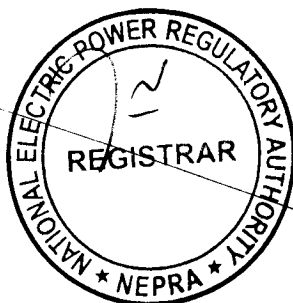


application and the same is expected to be decided in due course of time. Notwithstanding the said, the Authority directs SHKPPL to charge the power purchaser only such tariff which has been determined, approved or specified by it. In this regard, the Authority decides to include Article-6 in the proposed generation licence and directs SHKPPL to adhere to the provision of the said article of the generation licence in letter and spirit without any exception.

(vii). Regarding compliance with the environmental standards, as stated in the preceding paragraphs above, SHKPPL has provided the NOC from EPDGoPb and has confirmed that project 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 (i.e. Article-10) in the generation licence along with other terms and conditions making it obligatory for SHKPPL to comply with relevant environmental standards at all times. Further, the Authority directs SHKPPL to submit a report on a bi-annual basis, confirming that operation of its generation facility/co-generation facility/power plant is in compliance with the required environmental standards as prescribed by the concerned environmental protection agency.

(viii). The proposed generation facility/co-generation facility/power plant of SHKPPL will be using RE resource for generation of electric power. Therefore, the project may qualify for the carbon credits under the Kyoto Protocol. Under the said protocol, projects coming into operation up to the year 2020 can qualify for the carbon credits. SHKPPL has informed that the project will achieve COD by September 30, 2018 which is within the deadline of the Kyoto Protocol. In view of the said, an article (i.e. Article-12) for carbon credits and its sharing with the power purchaser has been included in the generation licence. Foregoing in view, the Authority directs SHKPPL to initiate the process in this regard at the earliest so that proceeds for the carbon credits are materialized. SHKPPL will be required to share the proceeds of the carbon credits with the Power Purchaser as stipulated in Article-12 of the generation licence.

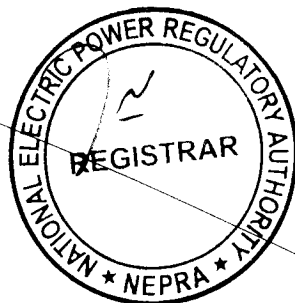
(ix). The Authority has observed that proposed generation facility/co-generation facility/power plant of SHKPPL will be supplying to the power purchaser



approximately 20.885 MW and 26.45 MW of clean electric power during crushing and off season respectively. In addition to supplying the national grid, SHKPPL also plan to supply to SHKSML to the tune of 6.065 MW and 0.50 MW during crushing season and off season respectively. According to Section-2(ii) of the NEPRA Act, a Bulk Power Consumer (BPC) is 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. In view of said, SHKSML qualifies as BPC under the NEPRA Act and accordingly the Authority declares it a BPC of SHKPPL.

(x). Regarding supply to SHKSML, the Authority observes that both SHKSML and SHKPPL are located within the same premises. Further, SHKSML will be supplied through two (02) underground cables/feeders of 11 KV voltage (measuring about 400 meters) not involving any public or third party property. 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 proposed arrangement to sell electricity to SHKSML. 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 in the name of SHKSML is located within the same premises and no public area is involved, the supply of power to SHKSML by SHKPPL does not constitute a distribution activity under the NEPRA Act, and SHKPPL will not require a distribution licence for supplying to SHKSML.

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

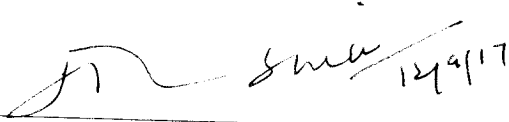


allowed to charge the agreed tariff subsequent to the grant of the generation licence.

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

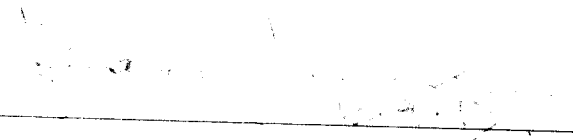
Maj. (R) Haroon Rashid
(Member)


14/9/17

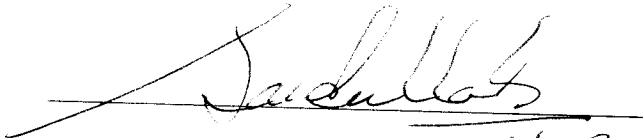
Syed Masood-ul-Hassan Naqvi
(Member)


14/9/17


Himayat Ullah Khan
(Member)

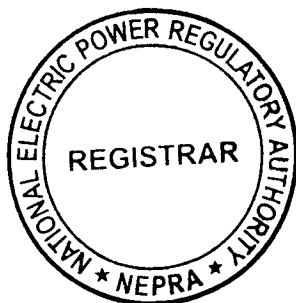

14/9/17

Saif Ullah Chattha
(Member/Vice Chairman)


14.9.2017

Tariq Saddozai
(Chairman)


14/9/17



20-9-17

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

GENERATION LICENCE

No. IGSP/90/2017

In exercise of the powers conferred upon under Section-15 of the Regulation of Generation, Transmission and Distribution of Electric Power Act, 1997, the Authority hereby grants a Generation Licence to:

SHEIKHOO POWER (PRIVATE) LIMITED

Incorporated Under Section-32 of the Companies Ordinance 1984 (XLVII of 1984) Having Corporate Universal Identification No. 0099199, dated April 26, 2016

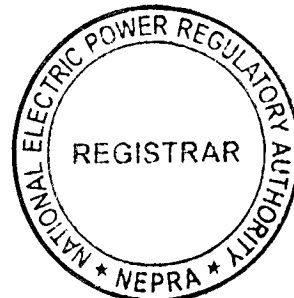
for its Bagasse based Generation Facility/Co-Generation Power Plant Located at 9-Km Sanawan-Langar Saraye Road Pati Naich, Anwar Abad, Tehsil Kot Addu, District Muzaffar Garh in the Province of Punjab

(Total Installed Capacity: 30.00 MW Gross ISO)

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

Given under my hand this on 20th day of September Two Thousand & Seventeen and expires on 29th day of September Two Thousand & Forty Eight.

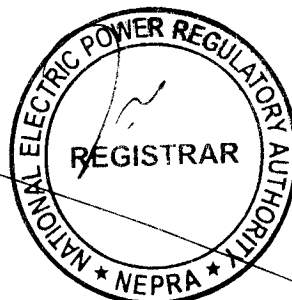
2 Registrar



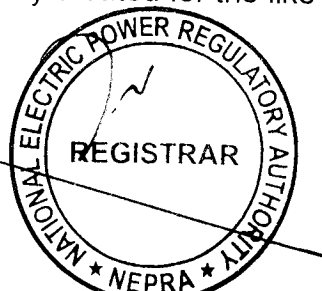
Article-1
Definitions

1.1 In this licence

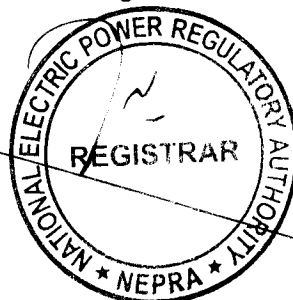
- (a). "Act" means the Regulation of Generation, Transmission and Distribution of Electric Power Act, 1997 as amended or replaced from time to time;
- (b). "AEDB" means the Alternative Energy Development Board or any other entity created for the like purpose established by the GoP to facilitate, promote and encourage development of renewable energy in the country;
- (c). "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, 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;
- (d). "Applicable Law" means the Act, relevant rules and regulations made there under and all the Applicable Documents;
- (e). "Authority" means the National Electric Power Regulatory Authority constituted under Section-3 of the Act;



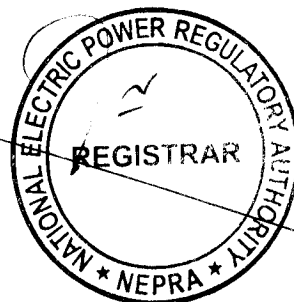
- (f). "Bulk Power Consumer (BPC)" means a consumer which purchases or receives electric power, at one premises, in an amount of one (01) megawatt or more or in such other amount and voltage level and with such other characteristics as the Authority may determine and the Authority may determine different amounts and voltage levels and with such other characteristics for different areas;
- (g). "Bus Bar" means a system of conductors in the generation facility/Co-Generation Facility/Power Plant of the Licensee on which the electric power from all the generators is collected for supplying to the Power Purchaser or BPC;
- (h). "Carbon Credits" mean the amount of Carbon Dioxide (CO₂) and other greenhouse gases not produced as a result of generation of energy by the generation facility/Co-Generation Facility/Power Plant and other environmental air quality credits and related emissions reduction credits or benefits (economic or otherwise) related to the generation of energy by the generation facility/Co-Generation Facility/Power Plant, which are available or can be obtained in relation to the generation facility/Co-Generation Facility/Power Plant after the COD;
- (i). "Co-Generation Facility/Power Plant" means the generation facility for simultaneous production of both electric power and heat or steam for industrial processes from a common fuel source;
- (j). "Commercial Operations Date (COD)" means the day immediately following the date on which the generation facility/Co-Generation Facility/Power Plant of the Licensee is commissioned;
- (k). "CPPA-G" means Central Power Purchasing Agency (Guarantee) Limited or any other entity created for the like purpose;



- (l). "Distribution Code" means the distribution code prepared by the concerned XW-DISCO and approved by the Authority, as it may be revised from time to time with necessary approval of the Authority;
- (m). "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/Co-Generation Facility/Power Plant, as may be amended by the parties thereto from time to time;
- (n). "Generation Rules" mean the National Electric Power Regulatory Authority Licensing (Generation) Rules, 2000 as amended or replaced from time to time;
- (o). "Grid Code" means the grid code prepared by NTDC and approved by the Authority, as it may be revised from time to time by NTDC with necessary approval by the Authority;
- (p). "GoP" means the Government of Pakistan acting through the AEDB which has issued or will be issuing to the Licensee a LoS for the design, engineering, construction, insuring, commissioning, operation and maintenance of the generation facility/Co-Generation Facility/Power Plant and has signed or will be signing an IA with the Licensee;
- (q). "IEC" means the International Electrotechnical Commission or its successors or permitted assigns;
- (r). "IEEE" means the Institute of Electrical and Electronics Engineers or its successors or permitted assigns;



- (s). "Implementation Agreement (IA)" means the implementation agreement signed or to be signed between the GoP and the Licensee in relation to this particular generation facility/Co-Generation Facility/Power Plant, as may be amended from time to time;
- (t). "Letter of Support (LoS)" means the letter of support issued or to be issued by the GoP through the AEDB to the Licensee;
- (u). "Licensee" means Sheikhoo Power (Private) Limited or its successors or permitted assigns;
- (v). "Licensing Regulations" mean the National Electric Power Regulatory Authority Licensing (Application & Modification Procedure) Regulations, 1999 as amended or replaced from time to time;
- (w). "MEPCO" means Multan Electric Power Company Limited or its successors or permitted assigns;
- (x). "NTDC" means National Transmission and Despatch Company Limited or its successors or permitted assigns;
- (y). "Policy" means the Policy for Development of Renewable Energy for Power Generation, 2006 of GoP as amended from time to time;
- (z). "Power Purchaser" means CPPA-G which will be purchasing electric power from the Licensee either on behalf of all XW-DISCOs or any single XW-DISCO, pursuant to the EPA for procurement of electric power;
- (aa). "XW-DISCO" means "an ex-WAPDA distribution company engaged in the distribution of electric power".



1.2 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 from time to time.

Article-3
Generation Facilities

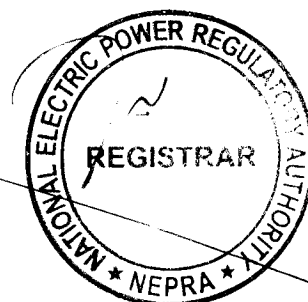
3.1 The location, size (capacity in MW), technology, interconnection arrangements, technical limits, technical functional specifications and other details specific to the generation facility/Co-Generation Facility/Power Plant of the Licensee are set out in Schedule-I of this licence.

3.2 The net capacity of the generation facility/Co-Generation Facility/Power Plant of the Licensee is set out in Schedule-II hereto. The Licensee shall provide the final arrangement, technical and financial specifications and other specific details pertaining to its generation facility/Co-Generation Facility/Power Plant before its COD.

Article-4
Term of Licence

4.1 This licence shall become effective from the date of its issuance and will have a term of thirty (30) years from the COD of the generation facility/Co-Generation Facility/Power Plant of the Licensee.

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 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 shall charge the Power Purchaser only such tariff which has been determined, approved or specified by the Authority.

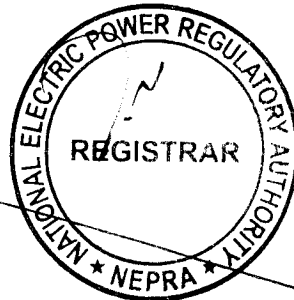
Article-7
Competitive Trading Arrangement

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 from time to time.

Article-10
Compliance with Environmental & Safety Standards

10.1 The generation facility/Co-Generation Facility/Power Plant of the Licensee shall comply with the environmental and safety standards as may be prescribed by the relevant competent authority from time to time.

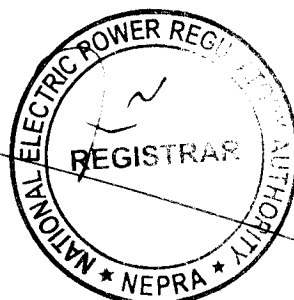
10.2 The Licensee shall provide a certificate on a bi-annual basis, confirming that the operation of its generation facility/Co-Generation Facility/Power Plant is in conformity with required environmental standards as prescribed by the relevant competent authority.

Article-11
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-12
Emissions Trading/Carbon Credits

The Licensee shall process and obtain expeditiously the Carbon Credits admissible to the generation facility/Co-Generation Facility/Power Plant. The Licensee shall share the said proceeds with the Power Purchaser as per the Policy.

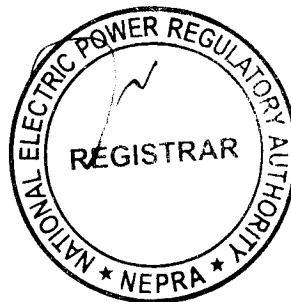


Article-13
Power off take Point and Voltage

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

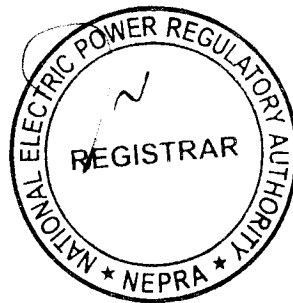
Article-14
Design & Manufacturing Standards

The generation facility/Co-Generation Facility/Power Plant of the Licensee shall be designed, manufactured and tested according to the latest IEC, IEEE or other equivalent standards. All the plant and equipment of the generation facility/Co-Generation Facility/Power Plant shall be unused and brand new.



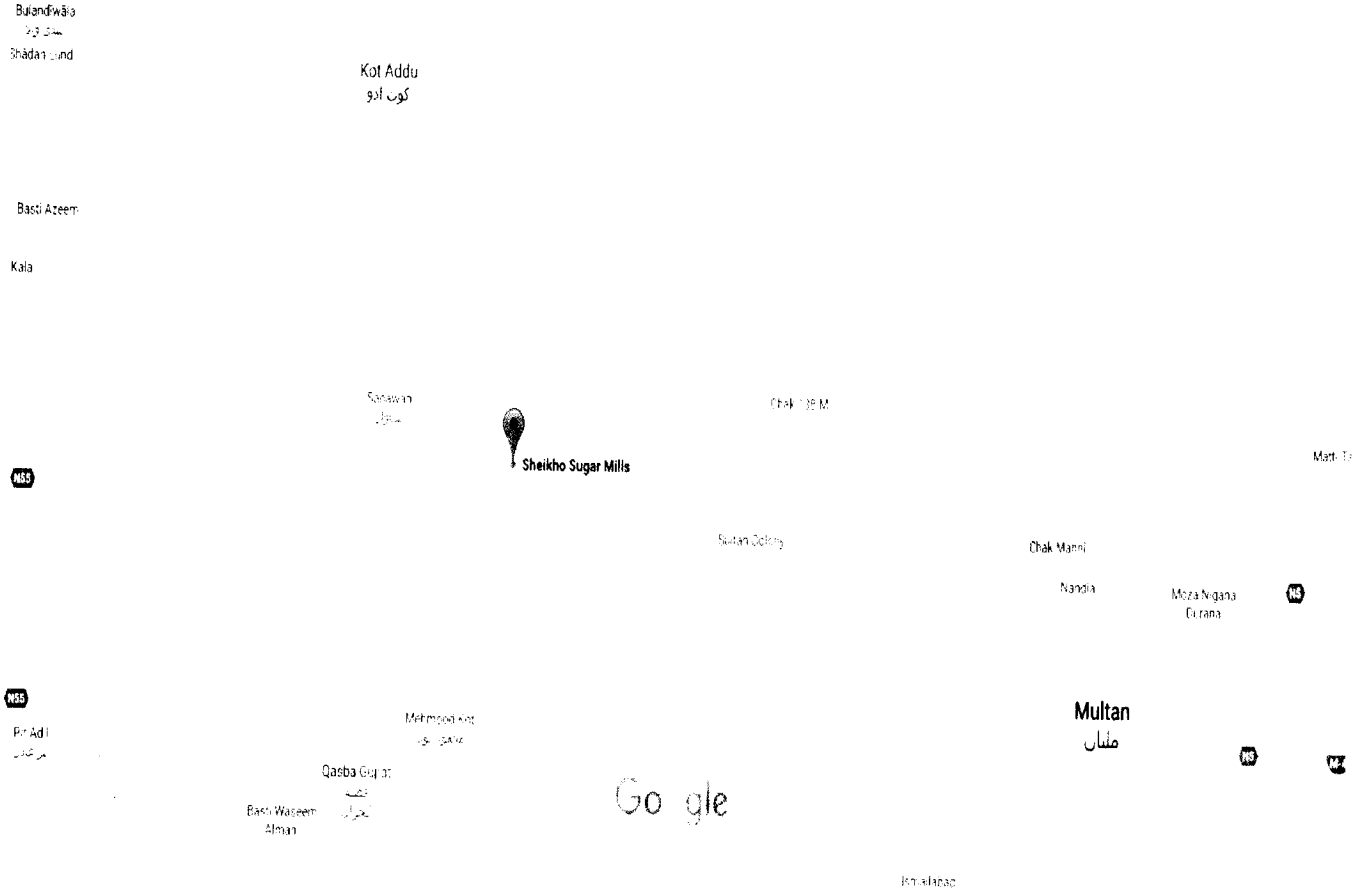
SCHEDULE-I

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.

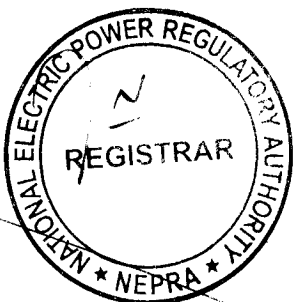


Generation Licence
 Sheikho Power (Private) Limited
 9-Km Sanawan-Langar Saraye Road
 Pati Naich, Anwar Abad, Tehsil Kot Addu
 District Muzaffar Garh
 in the Province of Punjab

**Location of the
 Generation Facility/Co-Generation Facility/Power Plant
 of the Licensee on Map of Pakistan**

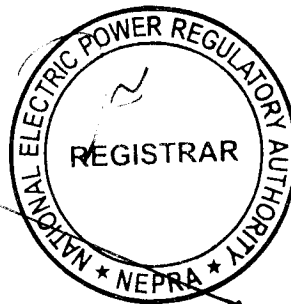


Site Address	Longitude	Latitude
Anwarabad, Tehsil Kot Addu, district, Muzaffargarh, Punjab, Pakistan	30° 17' 59.84" N	71° 3' 28.35" E



Generation Licence
Sheikhoo Power (Private) Limited
9-Km Sanawan-Langar Saraye Road
Pati Naich, Anwar Abad, Tehsil Kot Addu
District Muzaffar Garh
in the Province of Punjab

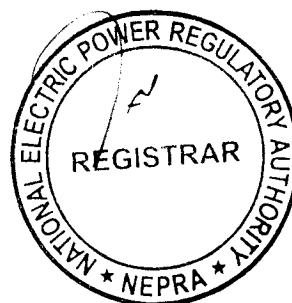
Location of the
Generation Facility/Co-Generation Facility/Power Plant
of the Licensee on Map of the Province of Punjab



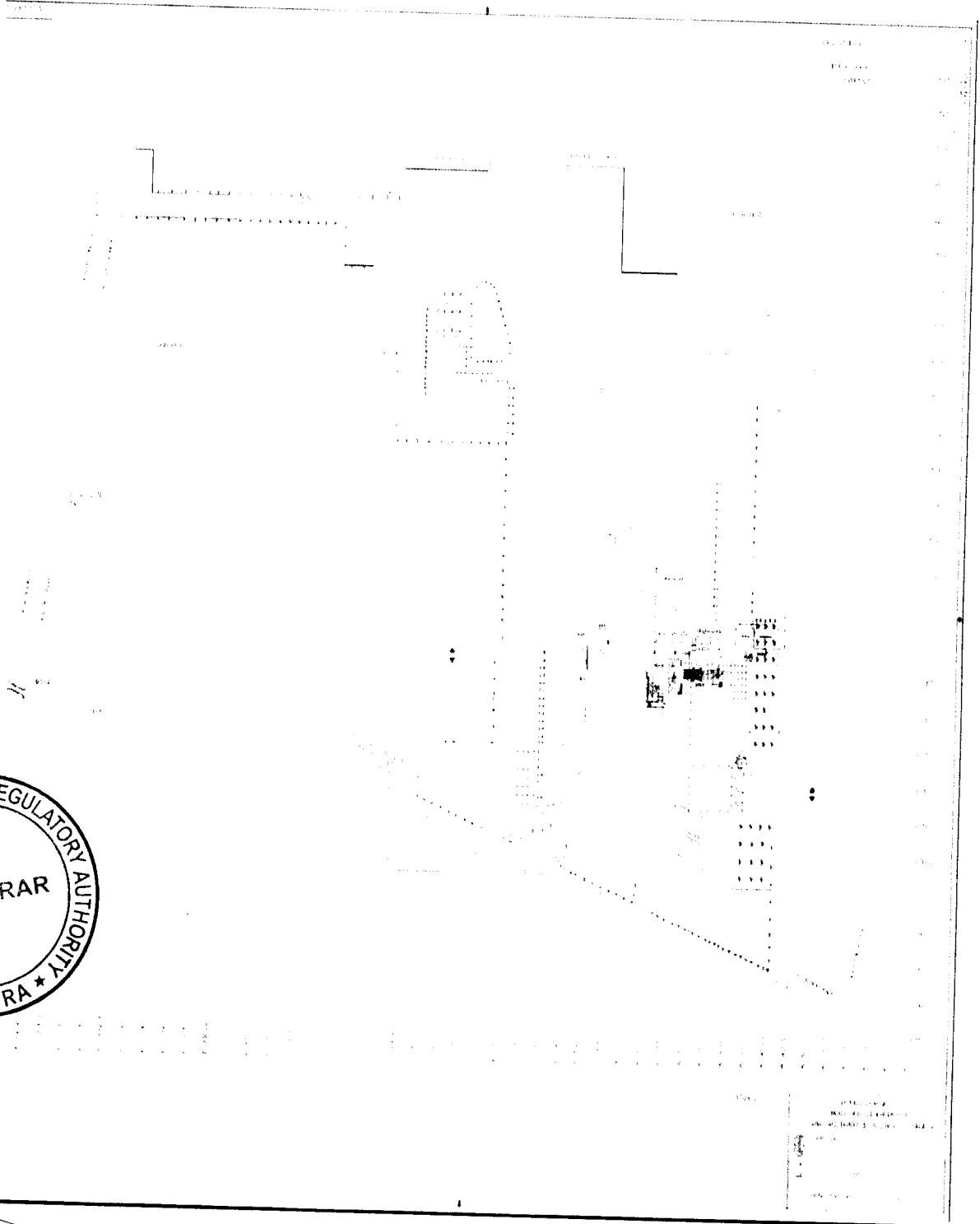
Land Coordinates
of the Co-Generation Facility/Thermal Power Plant of the
Company/Licensee

Site Address	Longitude	Latitude
9-Km Sanawan-Langar Saraye Road Pati Naich, Anwar Abad, Tehsil Kot Addu District Muzaffar Garh in the Province of Punjab	30° 17' 59.84" N	71° 3' 28.35" E

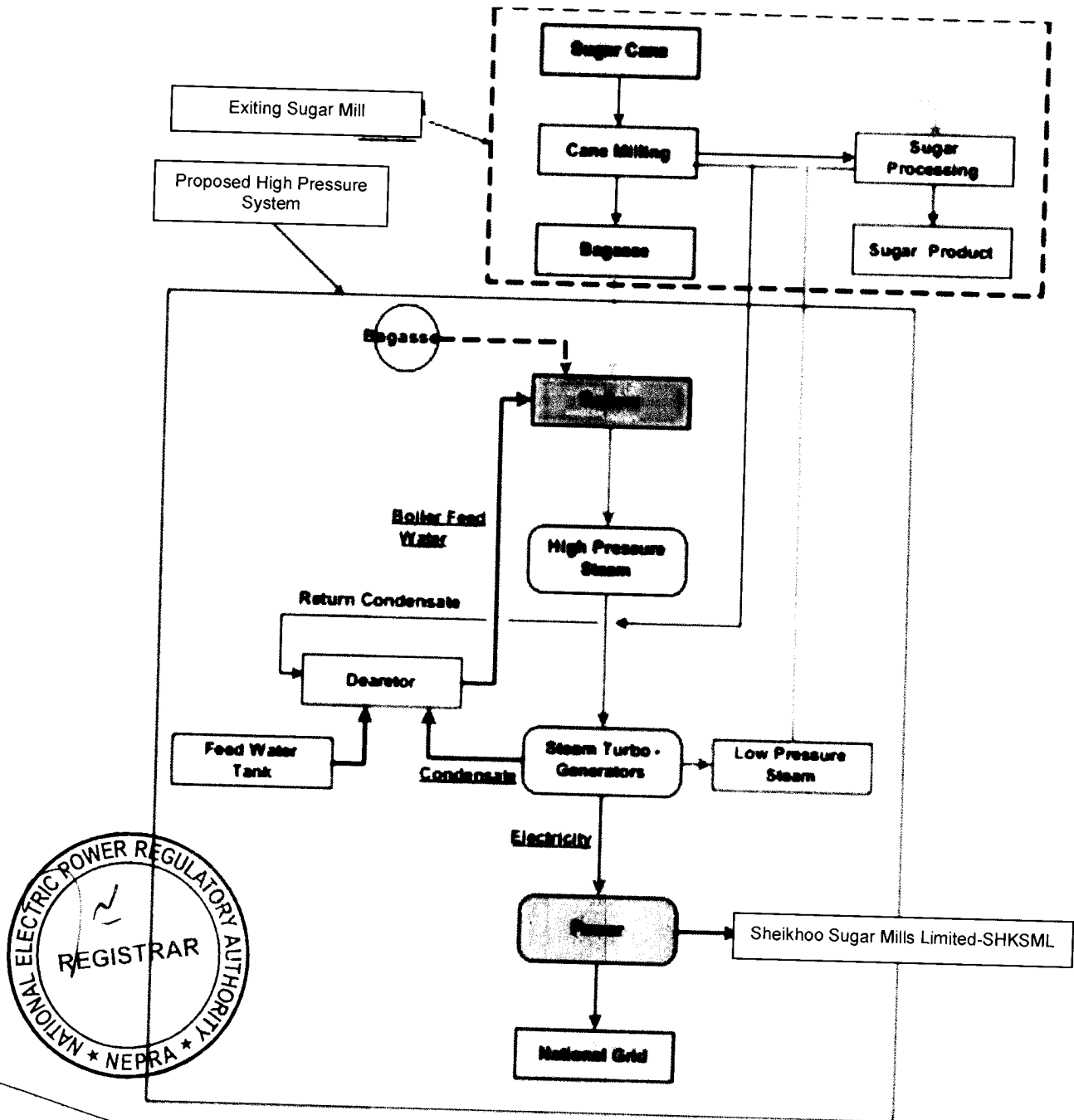
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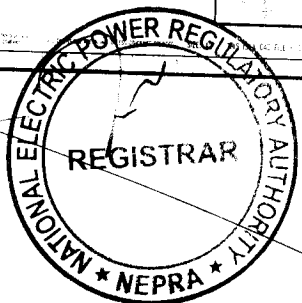
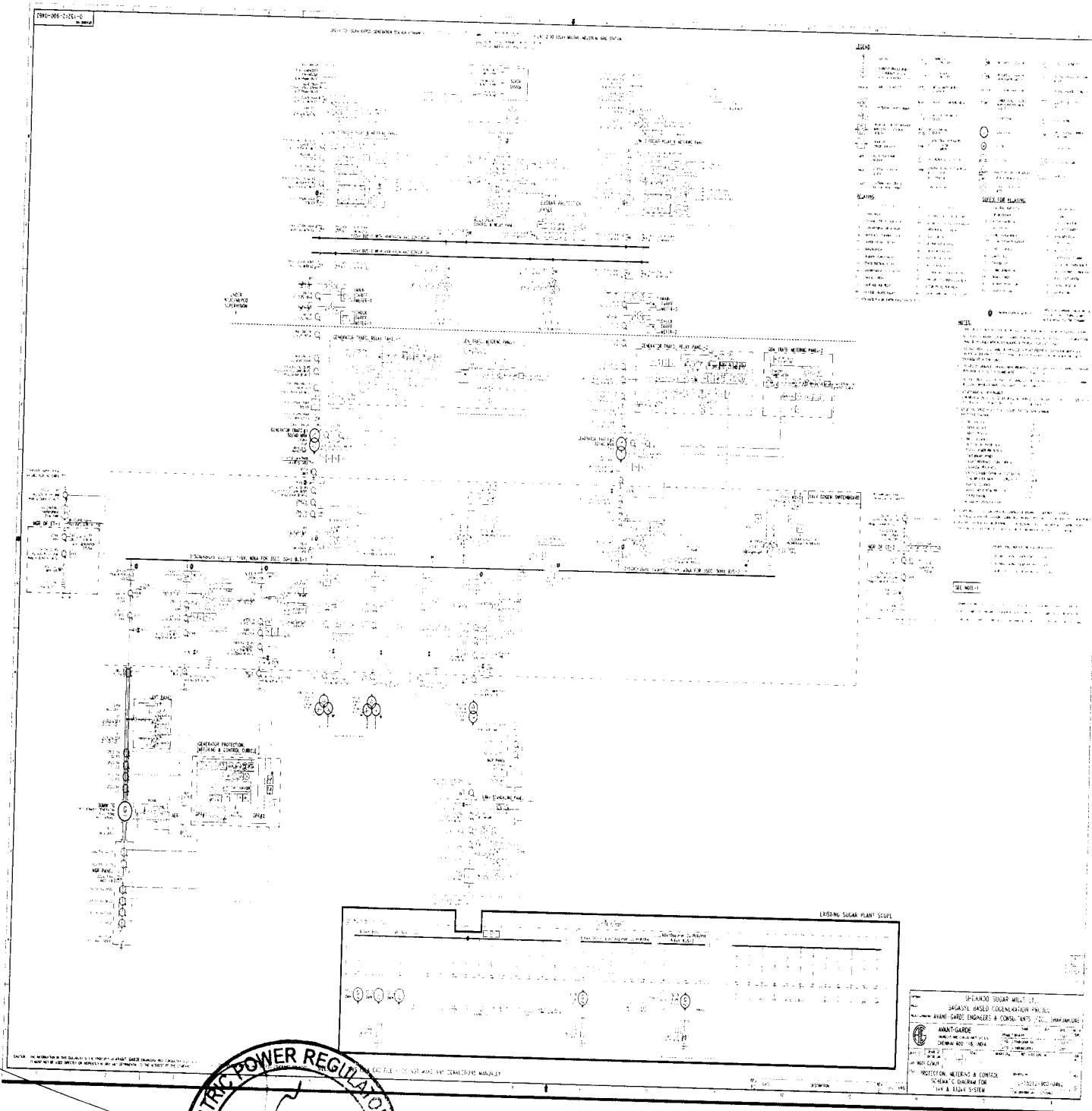
**Lay-out of the
Generation Facility/Co-Generation Facility/Power Plant
of the Licensee**



**Process Diagram of the
 Generation Facility/Co-Generation Facility/Power Plant
 of the Licensee**



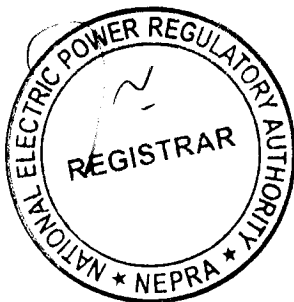
**Single line Diagram (Electrical) of the
 Generation Facility/Co-Generation Facility/Power Plant
 of the Licensee**



**Interconnection Arrangement for
Dispersal of Electric Energy/Power from the Generation
Facility/Co-Generation Facility/Power Plant**

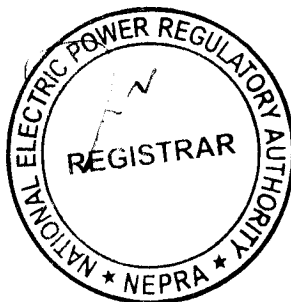
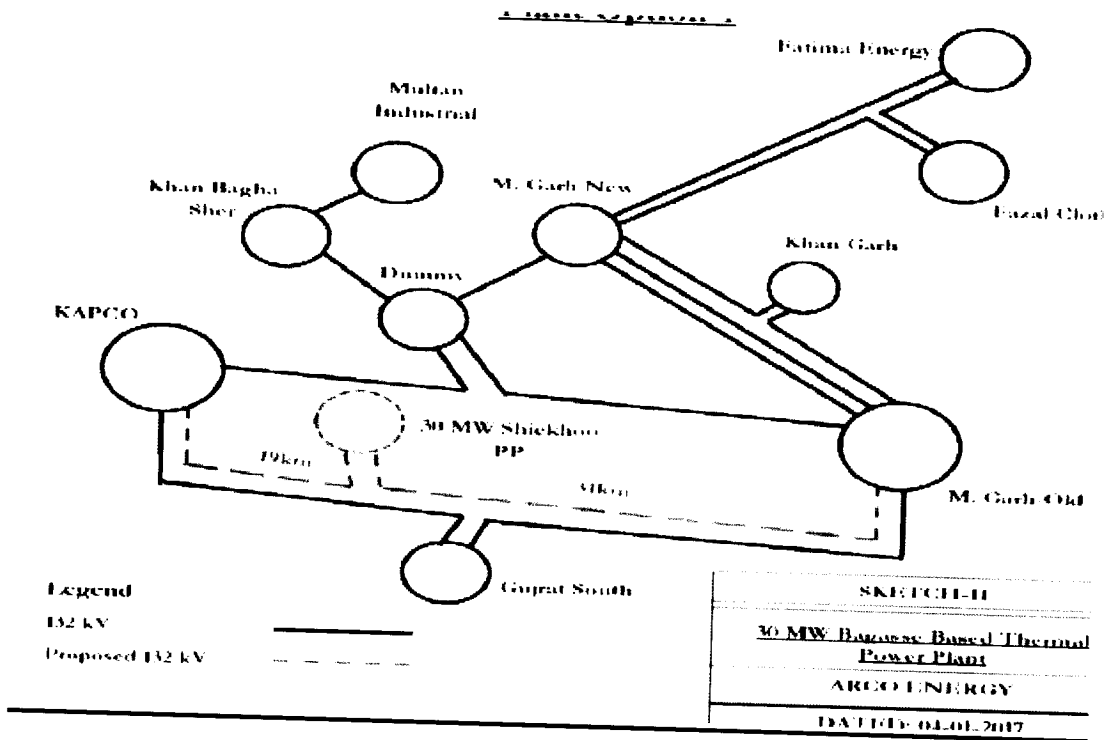
The electric energy/power from the Bagasse based Co-Generation Facility/Power Plant of Licensee will not only be supplied to a Bulk Power Consumer-BPC* (i.e. Sheikhoo Sugar Mills Limited-SHKSML as enumerated in this Schedule-I) but also to the load center of MEPCO.

- (2). The interconnection facilities/transmission arrangement for supplying to MEPCO from the above-mentioned generation facility shall be at 132 KV level. The dispersal/interconnection arrangement will be consisting of a 132 KV Single Circuit (S/C) Transmission Line (on ACSR LYNX Conductor measuring about 0.6 Kilo-Meter in length) making an In-Out of 132 KV S/C KAPCO-Muzaffargarh Old Transmission Line connecting the generation facility/Co-Generation Facility/Power Plant to the network of MEPCO.
- (3). The above dispersal arrangement is based on the approval of MEPCO regarding the Grid Interconnection Study. Any change in the above-mentioned arrangement for dispersal of electric energy/power as agreed by the Licensee, MEPCO or the Power Purchaser shall be communicated to the Authority in due course of time.



* The details pertaining to the BPC, supply arrangement and other related information is provided in the subsequent description of this Schedule-I.

**Schematic Diagram for
 Dispersal of Electric Energy/Power from the Generation
 Facility/Co-Generation Facility/Power Plant**



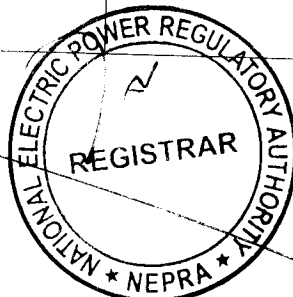
**Details of
 Generation Facility/Co-Generation Facility/
 Power Plant**

(A). General Information

(i).	Name of the Company/Licensee	Sheikho Power (Private) Limited
(ii).	Registered Office of the Company	65, Amin Building, the Mall Lahore, Punjab
(iii).	Business Address/ Office of the Company	F-19, Phase-1, Commercial Area, DHA, Lahore Cantt
(iv).	Location of the Generation Facility	9-Km Sanawan-Langar Saraye Road, Pati Naich, Anwar Abad, Tehsil Kot Addu, District Muzaffar Garh in the Province of Punjab
(v).	Type of the Generation Facility	Bagasse based, high-pressure generation facility/Co-Generation Facility/Thermal Power Plant.

(B). Configuration of Generation Facility

(i).	Installed Capacity/Size of the Generation Facility	30.00 MW
(ii).	Type of the Technology of the Generation Facility	Conventional Steam Turbine based Power Plant [1 x 30.00 MW extraction cum condensing Steam Turbine and One (01) Travelling grate bagasse fired boiler operating at 110 bar (kg/cm ²) and Producing 150 Tons of Steam Per Hour-TPH].
(iii).	Number of Units & Size of Each Unit of the Generation Facility	Steam Turbine 1 x 30.00 MW



(iv).	Make/Model/Type/ Year of Manufacture Etc. of each Unit of the Generation Facility	Steam Turbine	Hangzhou Steam Turbine Co. Limited-HTC/ SKODA, SIEMENS or equivalent etc.
		Boiler	Travelling grate type Boiler 150 TPH Capacity and 110 bar (kg/cm ²) of Wuxi Huaguang Boiler Co, Ltd China or equivalent.
(v).	Expected/ Anticipated COD of the Generation Facility	September 30, 2018	
(vi).	Expected Useful Life of the Generation Facility from COD	30 Years (Minimum)	

(C). Fuel/Raw Material Details

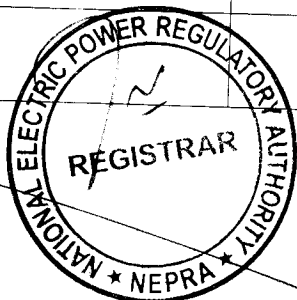
(i).	Primary Fuel	Bagasse	
(ii).	Alternate Fuel	Nil	
(iii).	Fuel Source (Imported/Indigenous)	Primary Fuel	Alternate Fuel
		Indigenous	Nil
(iv).	Fuel Supplier	Primary Fuel	Alternate Fuel
		Sheikho Sugar Mills Limited-SHKSML (primary)/other Bagasse/Biomass suppliers (if available in the nearby area)	Nil



(v).	Supply Arrangement	Primary Fuel	Alternate Fuel
		Through Conveyor Belts/Loading Trucks/Tractor Trolleys etc.	Nil
(vi).	Sugarcane Crushing Capacity	16,000 Ton per day	
(vii).	Bagasse Generation Capacity	4,720 Ton per day	
(viii).	Fuel Storage facilities	Primary Fuel	Alternate Fuel
		Bulk Storage	Nil
(ix).	Capacity of Storage facilities	Primary Fuel	Alternate Fuel
		Bulk Storage	Nil
(x).	Gross Capacity Storage	Primary Fuel	Alternate Fuel
		150,000 Metric Tons bulk storage	Nil

(D). Emission Values

		Primary Fuel	Alternate Fuel
(i).	SO _x	412mg/Nm ³	Nil
(ii).	NO _x	<80 ppm (mg/ Nm ³)	Nil
(iii).	CO ₂	Nil	Nil
(iv).	CO	Nil	Nil
(v).	PM ₁₀	50mg/Nm ³	Nil

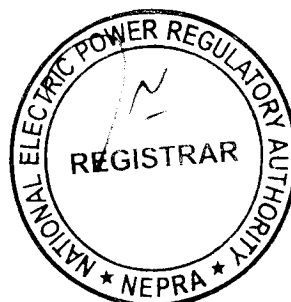


(E). Cooling System

(i).	Cooling Water Source/Cycle	Bore wells at site having RCC Cooling tower of induced draft counter flow type/Closed Loop.
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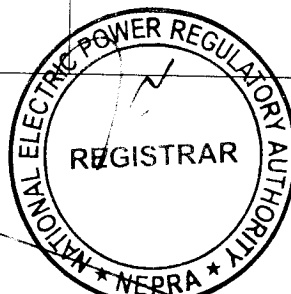
(F). Plant Characteristics

(i).	Generation Voltage	11.00 KV		
(ii).	Frequency	50 Hz		
(iii).	Power Factor	0.80 lagging - 0.95 leading		
(iv).	Automatic Generation Control (AGC)	Yes		
(v).	Ramping Rate	4 KW/Second (Tentative)		
(vi).	Time required to Synchronize to Grid	150 Minutes	80 Minutes	53 Minutes
		During cold start (i.e. when plant is started later than 72 hours after shutdown)	During warm start (i.e. when plant is started at less than 36 hours after shutdown)	During Hot start (i.e. when plant is started at less than 12 hours after shutdown)



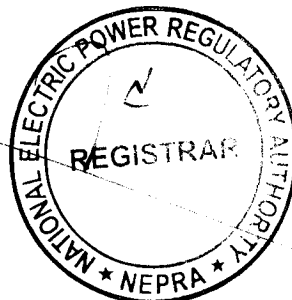
**Information Regarding
 Bulk Power Consumer(s)/BPC(s) to be Supplied by the Licensee [(i.e.
 Shekhoo Power (Private) Limited-SHKPPL)]**

(i).	No. of Bulk Power Consumers (BPCs)	One (01)	
(ii).	Name of the each BPC	Shekhoo Sugar Mills Limited (SHKSML)	
(ii).	Location of the BPCs (distance and/or identity of premises)	9-Km Sanawan-Pati Naich, Anwar Abad, Tehsil Kot Addu, District Muzaffar Garh in the Province of Punjab	
(iii).	Contracted Capacity and Load Factor of the BPC(s)	During Crushing Season	During Off Crushing Season
		6.065 MW (Max)	0.50 MW (Max)
(iv).	Specify Whether		
	(a).	The BPC is an Associate undertaking of the Licensee i.e. SHKPPL-If yes, specify percentage ownership of equity;	SHKPPL is a 100% owned subsidiary of SHKSML.
	(b).	There are common directorships:	No
(c).	Either can exercise influence or control over the other.	No	
(v).	Specify nature of contractual Relationship		
	(a).	Between BPC and the Licensee.	Supply of electric power on continuous basis
(b).	Between BPC and host distribution company i.e. MEPCO.	SHKSML is a B-2 Consumer of MEPCO	
(vi)	Any other network information deemed relevant for disclosure to or consideration of the Authority.	N/A	



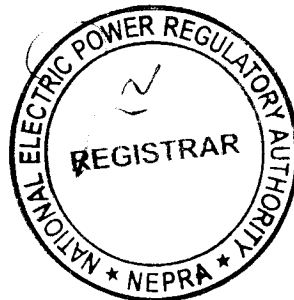
**Information Regarding
 Distribution Network for Supply of Power to Bulk Power Consumer
 [in the Name of Shekhoo Sugar Mills Limited (SHKSML) of the Licensee [(i.e.
 Shekhoo Power (Private) Limited-SHKPPL)]**

(i).	No. of Feeders	02 (Two)	
(ii).	Length of Each Feeder (Meter)	400 Meter (Approximately)	
(iii).	Length of Each Feeder to each Consumer	400 Meter (Each Feeder to SHKSML)	
(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 cables supplying power to SHKSML are located on private property owned by itself, without crossing of any Public or third party Private Property etc.	
(v).	Whether owned by SHKPPL, BPC or MEPCO-(deal with each Feeder Separately)		
	(a).	If owned by MEPCO, particulars of contractual arrangement	N/A
	(b).	Operation and maintenance responsibility for each feeder	The Operation and Maintenance is the responsibility of the BPC i.e. SHKSML.
(vi).	Whether connection with network of MEPCO exists (whether active or not)- If yes, provide details of connection arrangements (both technical and contractual)	Yes/SHKSML is a B-2 Consumer of MEPCO	
(vii).	Any other network information deemed relevant for disclosure to or consideration of the Authority.	N/A	



SCHEDULE-II

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

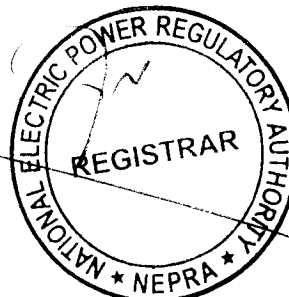


SCHEDULE-II

		<u>Season Operation</u>	<u>Off-Season Operation</u>
(1).	Total Installed Capacity of the Generation Facility	30.000 MW	30.000 MW
(2).	De-rated Capacity of Generation Facility at Reference Site Conditions	30.000 MW	30.000 MW
(3).	Auxiliary Consumption of the Generation Facility	03.050 MW	03.050 MW
(4).	Maximum Electric Power to be Supplied to Bulk Power Consumer (i.e. Shekhoo Sugar Mills Limited-SKHSML) from the Generation Facility at Reference Site Condition	6.065 MW	00.500 MW
(5).	Total Net Capacity of Generation Facility at Reference Site Condition	20.885 MW	26.450 MW

Note

All the above figures are indicative as provided by the licensee. The net capacity available to Power Purchaser for dispatch will be determined through procedure(s) contained in the Energy Purchase Agreement or any other Applicable Document(s).



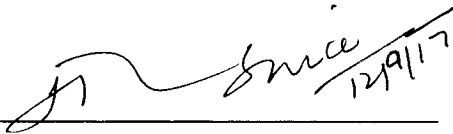
Authorization
by National Electric Power Regulatory Authority (NEPRA) to
Sheikhoo Power (Private) Limited

Incorporated Under Section-32 of the Companies
Ordinance 1984 (XLVII of 1984) Having Corporate Universal Identification
No. 0099199, dated April 26, 2016

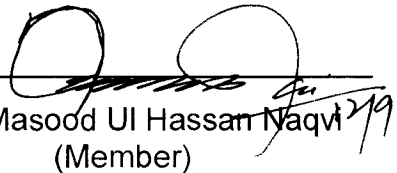
For
Sale to Bulk Power Consumer

Pursuant to Section-21 of the Act and Rule-7 of the NEPRA Licensing (Generation), Rules-2000, the Authority hereby authorizes Sheikhoo Power (Private) Limited-SKHPPL (the Licensee) to engage in second-tier supply business, limited to the following consumers:-

(a). Sheikhoo Sugar Mills Limited


12/9/17

Maj. (R) Haroon Rashid
(Member)


2/9

Syed Masood Ul Hassan Naqvi
(Member)


13.9.17

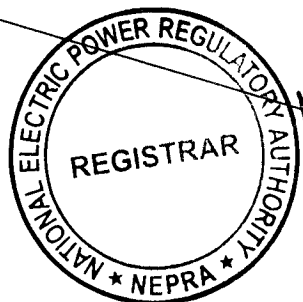
Himayat Ullah Khan
(Member)

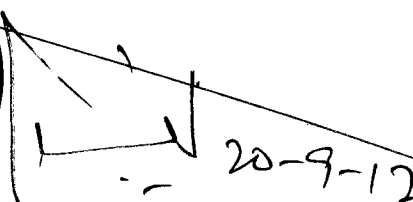

14.9.2017

Saif Ullah Chattha
(Member/Vice Chairman)



Tariq Saddozai
(Chairman)




20-9-17