



GOVERNMENT OF THE PUNJAB
ENERGY DEPARTMENT

Dated Lahore the 01st December, 2022

NOTIFICATION

NO.SO(POWER)ED/20-10/2022. Pursuant to approval of the Provincial Cabinet and in order to promote optimal use of available hydropower potential sites in Punjab, the 'Guidelines for Development of Small Hydropower Projects in Captive Mode' under Section 8 of the Punjab Power Development Board (PPDB) Act, 2011 are hereby notified with immediate effect:

**GUIDELINES FOR DEVELOPMENT OF SMALL HYDROPOWER PROJECTS IN
CAPTIVE MODE**

Background and Purpose:

Punjab Power Development Board (PPDB) was established in 1995 for implementation of the power policies and facilitation of power projects in public, private and public-private-partnership in Punjab. PPDB inter alia, facilitates the development of Hydropower Projects (HPPs) in IPP mode on BOOT Model through Punjab Power Generation Policy-2009 (the "Policy"). The policy envisages the development of power projects through private investors for supplying generated energy to national grid.

Punjab has a hydel potential of 700 MW at 789 sites out of which 18 sites for 265 MW are at different stages of development process, including 135MW Taunsa HPP at Muzaffargarh. The hydel potential in Punjab exists at the heads available at Punjab canal network; canals and barrages. These potential HPP sites typically have small heads, majority of which is below 3 meters. Due to low head, costs of projects are relatively higher. Hence, many of potential hydropower sites are not suitable for commercial sale of electricity to the national grid.

In view of the above, an initiative for optimal utilization of HPP sites not suitable for their connection to the national grid was envisaged. Based on the Punjab Hydropower Resource Re-Authentication Report by the World Bank in June 2014, 68 sites having capacity in range of 0.5 to 2.0 MW were shortlisted for development in captive mode. Guidelines for Establishment of Small Hydropower Projects under Captive Mode (the "Guidelines") were drafted and detailed technical due diligence was conducted regarding identification of hydel potential sites. The aim of these Guidelines is to exploit the existing hydropower potential and incentivizing the Small & Medium Enterprises (SMEs) / industries for self-use of generated energy for their existing and new

establishments. The Guidelines will hence cause employment generation in rural areas and support development of local industry.

In line with the functions and role entrusted to the PPDB under the Punjab Power Development Board Act-2011 and in order to promote optimal use of Small Hydropower (as more exhaustively defined hereinafter) power resource in Punjab, employment generation in rural areas and support development of local industry in Punjab, the following guidelines for development of Small Hydropower generation plant(s) primarily for captive use of power for new and/or existing SME are hereby notified.

PART – I

Title, Commencement, Applicability and Definitions

1. Title and Commencement:

- (i) These Guidelines may be called the "Guidelines for Development of Small Hydropower Projects in Captive Mode in Punjab – 2019" (the "Guidelines").
- (ii) The Guidelines shall come into force at once.

2. Applicability:

The Guidelines shall be applicable for development of Small Hydropower generation potential for setting up Captive Power Plant(s) (CPP) for supply to a SME in Punjab. The CPP project will be developed on Build-Own-Operate (BOO) basis under agreed terms & conditions.

3. Scope:

These Guidelines have been framed in line with the functions and role entrusted to PPDB under the PPDB Act-2011. These Guidelines provide the framework for development of CPP in a capacity range of up to 2 MW or as amended from time to time with the approval of PPDB Board.

4. Definitions:

- a) "Act" means the Punjab Power Development Board Act, 2011;
- b) "Capacity" means the capacity up to 2 MW of the Captive Power Plant or as amended from time to time with the approval of PPDB Board;
- c) "Captive Power Plant (CPP)" means a power plant setup by small and medium business enterprise primarily for self-consumption;
- d) "Facilitation Fee" means a fee paid to PPDB by the Sponsor on quarterly basis amounting to PKR [500] / kW of the installed capacity of CPP starting from the PCD, for the term of the CPP, revised every five (5) years on basis of CPI index.

- e) "Land Lease Agreement (LLA)" means the land lease agreement between the captive power generator and the relevant department of GoPb;
- f) "Letter of Interest (LOI)" means LOI to be issued in accordance with these Guidelines, as provided in Section 7 hereof;
- g) "Letter Of Support (LOS)" means LOS to be issued in accordance with these Guidelines, as provided in Section 8 hereof;
- h) "Policy" means the Punjab Power Generation Policy
- i) "Project Completion Agreement (PCA)" means the agreement between the Sponsor and the Energy Department GoPb for ensuring completion and operation of Project under agreed terms & conditions;
- j) "Project Completion Date (PCD)" means the date of completion of project under PCA in line with the approval of POE;
- k) "POE" means the Panel of Experts of PPDB;
- l) "Site" means the site with Small Hydro potential identified by the PPDB or by prospective sponsor(s) for development of CPP, for supply of power to small and medium enterprise;
- m) "SME" means small and medium enterprise having: a) employment size of up to two hundred and fifty (250) personnel; b) paid up capital up to Pakistani Rupees twenty-five (25) million; and c) annual sales up to Pakistani Rupees two hundred and fifty (250) million;
- n) "Sponsor" means developer of Captive Power Plant for captive use of SME;
- o) "Term of Project" will initially be for 30 years from the Project Completion Date. The Term is extendable with the approval of GoPb;
- p) "Water Use Agreement (WUA)" means the agreement between Sponsor and the Punjab Irrigation Department;
- q) Words and expressions used but not defined in the Guidelines shall have the same meaning as in the Act and Policy made there under.
- r) Words imparting the singular shall include the plural and vice versa.

PART – II

5. Advertisement:

For the development of CPP, identified by PPDB or prospective Sponsor(s), advertisements for inviting Expression of Interest (EOI) shall be widely circulated and published in;

- a) Two national daily newspapers;
- b) On the website of PPRA (www.ppra.punjab.gov.pk) and Energy Department (www.energy.punjab.gov.pk)

6. Prequalification:

The Prequalification Document (PQD) shall be issued upon Sponsor's registration with PPDB on payment of PKR 20,000/- and deposition of PQD fee of PKR 50,000/-. Pre-qualification of prospective sponsors shall be conducted based on;

- a) Technical strength
- b) Financial strength
- c) Proof of existing SME / proposal for new SME

The PQD will clearly describe Sponsors' required credentials in above areas and also the evaluation criteria for ranking of successful Sponsor. LOI will be issued to the 1st ranked applicant who secures the highest qualifying scores with the approval of PPDB Board.

7. Issuance of Letter of Interest (LOI)

Consequent upon evaluation of Statement of Qualification (SOQ), approval of PPDB Board for successful Sponsor and submission of Bank Guarantee of PKR 100,000/-, LOI shall be issued. The LOI Bank guarantee shall be valid for a period of nine (9) months. LOI will be issued with a validity period of three (3) months for completion and approval of feasibility study by the Panel of Experts (POE) appointed by PPDB. The POE will be headed by MD PPDB and duly represented by the concerned departments of the GoPb including Irrigation Department, Industries Department and Environment Department.

Provided that the Sponsor is diligently pursuing the conduct of feasibility study, extension in validity of LOI for conduct feasibility study, up to three months, may be granted by PPDB Board upon recommendations of POE subject to an extension of three (3) months in the validity of LOI Bank Guarantee. In the event of non-compliance of timelines / terms of LOI and relevant requirements of the Guidelines, the Bank Guarantee shall be encashed and the LOI shall be terminated with the approval of PPDB Board.

The feasibility study of CPP will determine small hydropower site development viability and will also include the following:

- (i) Technical viability of the site.
- (ii) Plant / powerhouse layout for the generation of electric power from the small hydropower resource including technology, equipment, and plant factor
- (iii) Project cost, financing plan, financing terms, tariff calculations.
- (iv) Suitability of the Project to provide electricity to proposed SME
- (v) Safe, reliable and sustainable operations of the canal shall be ensured
- (vi) Initial Environmental compliance under applicable law(s) if applicable
- (vii) Required project construction and completion time
- (viii) Safeguard against any direct or consequential damage to structure or operation of canal

In case the POE decides that the project is non-feasible or financially non-viable, the LOI will be cancelled and the Bank Guarantee will be returned to the Sponsor with the approval of PPDB Board.

After approval of feasibility study by the POE, the Sponsor will be required to submit Performance Guarantee for issuance of LOS within a period of one (1) month of the approval of the feasibility study. In case the Sponsor fails to submit the LOS Performance Guarantee, as described above, the respective LOI Bank Guarantee shall be encashed and LOI shall be terminated with the approval of PPDB Board.

8. Letter of Support (LOS)

Upon approval of feasibility study and submission of Performance Guarantee amounting to PKR 500/kW, LOS will be issued with the approval of PPDB Board. Pursuant to the terms and conditions of the LOS, the Sponsor shall be responsible for executing PCA, WUA and LLA within a LOS validity period of six (6) months. A onetime extension in LOS validity period of up to three (3) months due to reasons beyond control of the Sponsors may be accorded with the approval of PPDB Board subject to an extension of three (3) months in the validity of LOS Bank Guarantee.

Upon submission of LOS's Performance Guarantee, LOI Bank Guarantee submitted by the Sponsor will be returned. The Sponsor will be required to start construction work at site within one (1) month of expiry of LOS. The Sponsor will be required to maintain validity of the Performance Guarantee of a period of twelve (12) months. Arrangement of project financing, within the validity of LOS, will be sole responsibility of the Sponsor.

In case the Sponsor fails to start construction at site within one (1) month of expiry of LOS, the respective LOS Performance Guarantee will be encashed and LOS will be terminated. In case the Sponsor commences construction to the satisfaction of PPDB then the LOS's Performance Guarantee shall be returned.

9. Provision of Land

POE shall approve the layout and land requirement for the CPP. GoPb shall lease government land for CPP under the LLA, if available, for the Term of the Project under the applicable laws. Acquisition of any private land, if required by the CPP, will be sole responsibility of the Sponsor. Arrangement of land for the SME will be sole responsibility of the Sponsor. Such land for the SME will have the status of industrial land.

10. Construction Start

Project construction will take place under the Project Completion Agreement. The Sponsor will be required to commence the construction of the CPP within one (1)

month of expiry of LOS. In case of new SME, establishment of SME, in parallel execution, will be carried out under the provisions of the Project Completion Agreement.

11. Use of Generated Energy

The Sponsor shall primarily use the generated energy for its SME.

12. Surplus Power

The Sponsor may supply surplus power, in excess to its requirement to the national grid or bulk power consumer. The Sponsor shall comply with the requirements prescribed under the NEPRA Act, Rules and Regulations in relation to supply of surplus power including but not limited to registration and licensing, wheeling and open access.

13. Water Use charges in case of Hydropower Generation Plants

Water use charges @ Rs.1500/kW per annum paid in advance at the start of each quarter of three months will be paid to the Irrigation Department GoPb by the Sponsor for use of irrigation water. There will be a ten (10) percent increase in the above water use charges every five years. The water use charges will be based on CPP installed capacity.

14. Environmental Laws

The Sponsor shall ensure compliance to all Environmental laws, rules, procedures and guidelines of the Pakistan Environmental Protection Agency (PEPA) and Punjab Environmental Protection Agency (Punjab-EPA) during project construction and operation. Any special applicable laws, procedures, standards shall be mandatorily followed by the Sponsor in setting up of the CPP.

15. Applicable Laws

All relevant laws of Pakistan, as amended from time-to-time, shall be applicable.

16. Establishment of SME

The establishment of new SME and/or any extension of existing SME shall have the same milestones for simultaneous completion as that of CPP. In the event of non-establishment of SME, a suitable extension for its completion can be granted keeping in view the PCD of CPP. Simultaneous commercial operation of CPP and the SME shall be ensured.

In the event, the CPP meets with the completion timelines and establishment of SME lacks achievement of these milestones, then the Sponsor will pay water use charges under the Water Use Agreement. In the event of non-compliance of synchronization of timelines in respect of the CPP and the SME after necessary extensions with the approval of PPDB Board, the relevant agreements shall be terminated and concession of CPP under these Guidelines shall be withdrawn.

17. Amendments / Interpretation of Provisions of the Guidelines

GoPb, through PPDB Board, shall have the powers to amend, vary, and clarify on any matter related to interpretation of any provisions under the Guidelines, in consultation with the concerned government departments / agencies.

18. Requirement for a License:

The Sponsors shall not be required to obtain license from the NEPRA for construction, operation and maintenance of the CPPs.

19. Duties and Levies:

The duties and levies on electricity generated from the CPPs and resources used therefor shall be levied as per applicable laws.

20. Plant and Machinery:

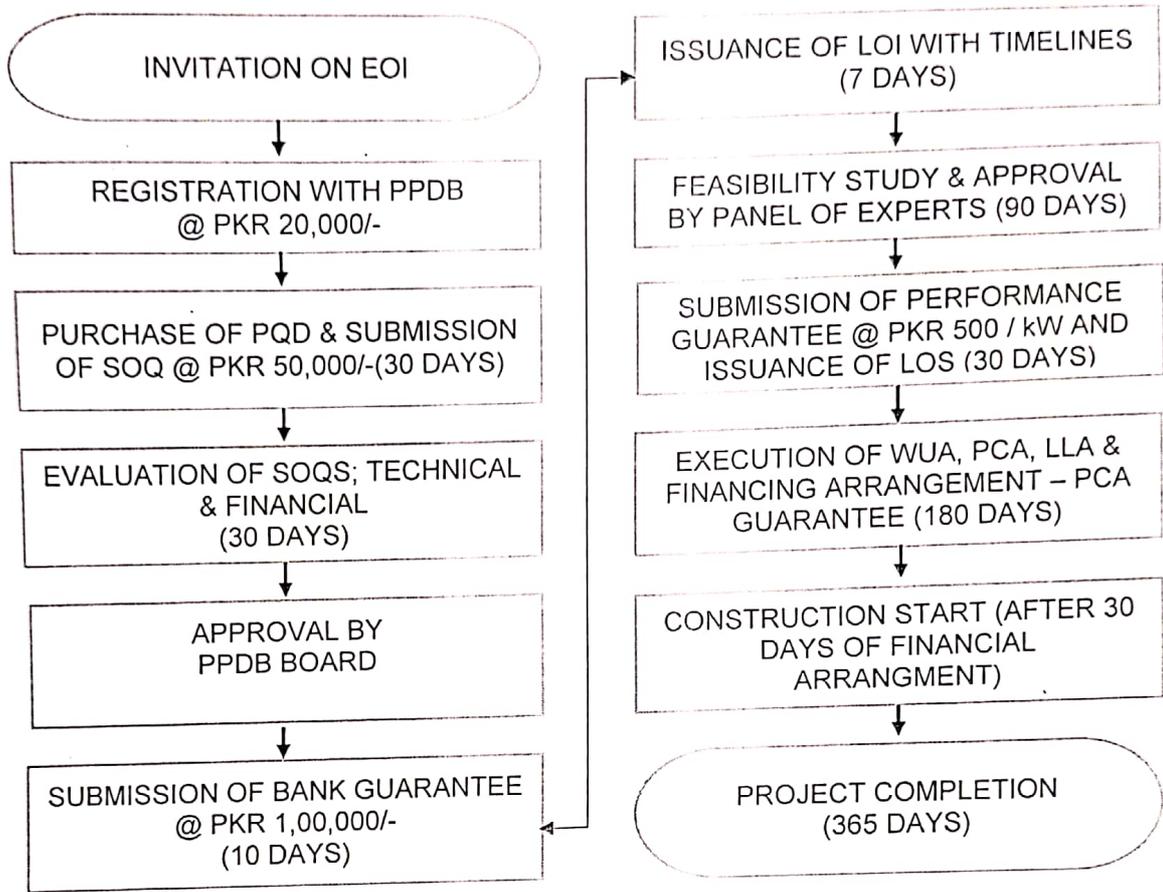
The plant and machinery for the setting up of the CPPs shall be new and unused.

21. Facilitation Fee

The Sponsor shall pay a Facilitation Fee, on quarterly basis, to PPDB amounting to PKR [500] / kW of the installed capacity of CPP starting from the PCD for the term of the CPP revised every five (5) years on basis of CPI index.



DEVELOPMENT OF SMALL HYDROPOWER PROJECTS IN CAPTIVE MODE



(MUHAMMAD AJMAL BHATTI)
SECRETARY ENERGY

NO. & DATE EVEN

A copy is forwarded for information and necessary action to the:

1. Principal Secretary to Chief Minister, Government of the Punjab
2. Senior Member Board of Revenue, Government of the Punjab
3. Chairman PPDB Board / Secretary, GoPb, Energy Department
4. Additional Secretary (Staff) to Chief Secretary, Punjab
5. Managing Director, Punjab Power Development Board (PPDB)
6. Superintendent, Punjab Government Printing Press, Lahore with the request to publish the Notification in the Extra Ordinary issue of Punjab Government

Gazette and to supply ten copies of the Gazette Notification to this Department immediately

7. PSO to Minister for Energy, Government of the Punjab
8. PS to Secretary (I&C), Government of the Punjab, S&GA Department
9. PS to Secretary, Government of the Punjab, P&D Department
10. PS to Secretary, Government of the Punjab, Finance Department
11. PS to Secretary, Government of the Punjab, Irrigation Department
12. PS to Secretary, Government of the Punjab, Industries Department
13. PS to Secretary, Government of the Punjab, Environment Department
14. PS to Secretary, Government of the Punjab, Energy Department



SECTION OFFICER (T&P)

SITE INFORMATION

Sr. #	Project Location	District	Coordinates	Design Discharge	Design Head	Capacity
				(m^3 /s)	(m)	(MW)
1	Hakra Branch Canal (HR Gulab Ali) RD 89+750	Bahawalnagar	N 29.700064 E 73.300330	57.51	1.30	0.7
2	Bahawal Canal Upper RD 43+500	Bahawalpur	N 29.727777 E 72.486305	77.58	1.80	1.4
3	Thal Main Line Lower 237+000	Bhakkar	N 31.925394 E 71.232961	91.88	1.47	1.3
4	Thal Main Line Lower RD 373+000	Bhakkar	N 31.571230 E 71.137191	77.66	1.34	1.0
5	Lower Gugera Canal RD 120+000	Faisalabad	N 31.246022 E 73.246308	52.18	1.78	1.0
6	Lower Gugera Canal 65+000	Faisalabad	N 31.319497 E73.397280	63.28	1.64	1.0
7	LCC Main Lower RD. 19+850	Hafizabad	N 32.046388 E 73.697777	85	0.54	0.45
8	Jhang Branch Upper Canal, RD 37+025	Hafizabad	N 31.893138 E 73.529638	84	1.00	0.84
9	Northern Branch Canal 24+320	Mandi-Baha- Ud- Din	N 32.353791 E 73.039694	70.07	1.62	1.1
10	Northern Branch Canal RD 10+265	Mandi-Baha- Ud- Din	N 32.365917 E 73.081993	72.48	1.37	1.0
11	Thal Main Line Lower RD 0+000	Mianwali	N 32.507630 E 71.556172	144.12	1.52	3.0
12	Lower Bari Doab Canal 463+350	Sahiwal	N 30.559972 E 72.738666	101.04	1.38	1.4
13	Lower Bari Doab Canal 542+168	Sahiwal	N 30.546750 E 72.493833	86.45	1.42	1.2
14	Pakpattan Canal RD 319+893	Sahiwal	N 30.329520 E 72.870085	62.33	1.83	1.0
SUB-TOTAL MW)						16.39