

APP Comments on Draft Guidelines to promote development of Pumped Storage Projects (PSP) in the country

S. no.	Clause no.	Existing Provision in the Draft Guidelines	APP comments
1.	2	<p>Measures already taken to Promote PSP</p> <p>a. States are encouraged to allocate the PSPs to CPSUs for early and prompt development.</p> <p>b. Notification of Energy Storage Obligation</p> <p>c. Waiver of ISTS and other Tx charges</p> <p>d. Budgetary support for Enabling Infrastructure (EI).</p>	<p>a. Annexure III, clause 3.1 may be modified for 100% ISTS waiver to be available for entire life of the PSPs for which construction work is awarded and PPA is signed before 30.06.2025 for the next 25 years.</p> <p>Rationale:</p> <p>To provide flexible feature to RE, ESS has to be integrated with the RE sources for faster and effective growth of RE. Hence ISTS waiver is required to achieve 500 GW RE targets. ISTS waiver is already available to Solar and Wind for last 6-7 years. The same waiver is also available for Hydro Projects. Currently, most of the PSP are under survey or for EC and it will be difficult for PSPs to avail ISTS waiver by 2025.</p> <p>b. Transmission lines from PSPs to nearest s/s, in-plant roads, telecom infra, temporary facilities for construction works shall be considered as Enabling Infrastructure and budgetary support shall be provided to the same.</p> <p>Rationale:</p> <p>Transmission line is already considered as Enabling Infrastructure in Draft National Framework for promoting Energy Storage.</p> <p>c. The period of ISTS benefits for input RE power as well as Output from PSP shall be aligned similar to recently issued policy on Hydro development.</p>

<p>2. 1</p>	<p>3.1</p>	<p>Allotment of project sites</p> <p>The State Governments may allot project sites to developers in the following manner:</p> <p>(i) On nomination basis to CPSUs and State PSUs</p>	<p>It is suggested to add the following provision for allotment of PSP projects.</p> <p><u>“(i) On nomination basis to CPSUs, State PSUs and <u>Private Developers</u>”, including self identified project sites.</u></p> <p>Rationale:</p> <p>It is pertinent to note that PSP projects are highly site-specific in their performance, costs and impacts. Hence, selection of suitable site would play a major role in construction and commercial viability of PSP projects.</p> <p>Private developers should be allowed to develop PSP projects for the sites solely identified by them as substantial money, time and effort is required for identifying a suitable site for PSP. In any case, the entire investment is to be made by the Developer and all the risks associated with the project have to be borne by the developer. Further, giving the site on nomination basis does not exempt the Developer from any approvals including environmental and forest approvals. Accordingly, we suggest that:</p> <ul style="list-style-type: none"> a) In the sites identified by States, private sector should also be considered for allocation on nomination basis along with CPSU and State PSUs. b) If any new potential PSP sites are identified by the private developers, such sites may be allocated to the private developers on nomination basis. <p>This will also provide the level playing field between PSUs and private developers.</p>
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3.	3.1	<p>Allotment of project sites</p> <p>The State Governments may allot project sites to developers in the following manner:</p> <p>(ii) Allotment through Competitive Bidding</p> <ul style="list-style-type: none"> o Bids to be called on parameters such as concession period of project or as specified by state/central govt. o Home state shall have the right of first refusal for 40% of the project capacity and tariff shall be fixed u/s 62 of EA,2003. <p>(iii) Allotment through TBCB</p> <ul style="list-style-type: none"> o Composite tariff (including the cost of input power) in case input power is arranged by the developer; or o Tariff for conversion of power from off-peak to peak if the input power is to be arranged by the procurer. 	<ul style="list-style-type: none"> a. Projects should be allotted through tariff based competitive bidding based on annual fixed charges, availability of project and plant efficiency. b. PSPs may also be required to be developed as industrial activity for commercial and industrial consumers by developers who may be allotted project sites with home State having right of first refusal up to 40% of project capacity through competitive bidding on the basis of fixed charges for project capacity offered to home state and availability and efficiency of the plant. The balance capacity may be used by the developer for commercial & industrial consumers or for blending with other RE capacities to bid against RE-RTC tenders or requirements. c. Tried and tested UMPP model used in the past for development of thermal projects where a SPV is created by PFC or REC for pre-construction activities such as preparation of feasibility report, initiating environment and forest clearance, etc, and carrying out the bidding process and finally the SPV is transferred to the successful bidder at a price to cover the expenses incurred by the SPV. d. To facilitate this, the MoP may prepare the bidding documents and identify through CEA off-riverine sites in Western Region and Southern Region where the geology is not fragile and environmental impact of the project is minimal. A few projects may be initiated by SPVs of REC/PFC under an initiative of MoP. The States should also be encouraged to develop projects through TBCB.
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4. 2	3.2	<p>Charges to be paid by the developer</p> <p>Developers shall begin construction within a period of 2 years from the date of allotment of the project, failing which, allotment of the project site shall be cancelled by the State. Further, in order to ensure the viability of the Pumped Storage Projects, States shall ensure that no upfront premium is charged for project allocation.</p>	<p>a. The proposal for no upfront premium to be charged by State Government is welcome and the States need to be persuaded to declare their policy in this regard.</p> <p>b. It is suggested that Developers shall be allowed a period of 3 years from date of allotment for starting construction work as Approval of TOR by MOEF, preparation of DPR, obtaining concurrence of CEA under Section 8 of the Act and environment, forest and other clearances are all very lengthy processes.</p>
5.	3.3	<p>Market Reforms</p> <ul style="list-style-type: none"> • Commission to notify peak and off-peak tariffs for generation to provide appropriate pricing signals. • ESS to be allowed to participate in proposed high price segment of day ahead market (HP-DAM) 	<p>a. PSP may be considered in HP-DAM segment and CERC may be advised to modify its order dated 16.02.23 accordingly.</p> <p>b. Debt Equity ratio may be relaxed to the extent 80:20 for determination of tariff.</p>
6.	3.3	<p>Market Reforms</p> <p>(iv) In the event of capacity contracted not being fully utilized by the contracting agency, the developer would be free to transfer the usage of the capacity to other interested entities so that resources do not remain idle.</p>	<p>The bidding parameter for PSP should be fixed charge per MW per month, availability of project and plant efficiency and any under utilization risk should be on the user.</p>
7.	3.4	<p>Financial Viability</p> <ul style="list-style-type: none"> • Central Government may notify a benchmark for PSPs considering 6-8 hours of operation. 	<p>It is suggested that the provision of notification of benchmark price by the Central Government may be deleted and the decision to develop a project may be left to the developers, the buyers, and the Appropriate Commission as per the provisions of the Act.</p>

		<ul style="list-style-type: none"> • PSP projects whose levelized cost (LC) of storage is within the benchmark cost of storage will be taken up for development. 	
8.	3.5	<p>Taxes and Duties</p> <ul style="list-style-type: none"> • Reimbursement of SGST on hydropower project components. • Exemption of stamp duty and registration fees for land procured by off-river PSPs • Power from PSPs shall be suitably considered to avoid double taxation. • Govt land may be provided on annual lease rent basis. 	<p>a. It is suggested that a separate green category may be created for PSP for custom Duty and GST taxation purposes as PSPs are essentially required for integration of large RE capacity targeted to meet our national goals for decarbonization.</p> <p>b. The clause may be modified to provide the clarity that storage as a service will not be levied applicable GST as ultimate output is the energy. This clarification is required to avoid imposition of GST on output power in spite recognizing storage as service. It will ensure viability of PSP and avoid any uncertainties during project life. It will also help to integrate RE with storage at optimal cost, thereby bringing down peak hour tariff.</p> <p>c. Carbon credit benefits shall be provided for mainstreaming of RE.</p>
9.	4.1	<p>Measures that concern other Ministries</p> <p>a. Utilization of exhausted mines to develop PSPs</p>	<p>It is suggested that the developer of the mines or those willing to rehabilitate such areas, may be allowed to develop PSPs on the exhausted mines and use capacity for own captive use or sell capacity to distribution licensees u/s 62 or sell capacity and energy in the marketplace.</p>
10.	4.2	<p>Measures that concern other Ministries</p> <p>PSPs where both reservoirs are built off-river, one reservoir is built off-river while existing on-river reservoir undergoes minor structural modification will be treated as B-2 category projects.</p>	<p>The Concept of Closed Loop off-river type PSP is totally different from Hydropower Schemes on River. We suggest that the following conditions may be addressed in the final PSP guidelines.</p> <p>a. It has been observed that while applying for EC, streams wherein water is not available perpetually are still considered part of any existing river and are not considered as off-river PSP, which leads to obtaining all the requisite EC as in case of River Valley Project despite awarding B-2 Category. Therefore, Off-river Reservoir</p>

			<p>may be clearly defined as a reservoir created on a stream in which water is not flowing perpetually (all 12 months).</p> <p>b. State Units may allow first time filling of Reservoirs from the nearby source of water, be it a near-by river or a near-by reservoir.</p> <p>c. In case water is taken (by PSP) from nearby source during Monsoon, when gates are open and water is being released from Dams, the Government should not charge water cost during such times. This will act as an incentive and Developer would plan to do first filling when water is available in plenty or would do recurring top-ups (of its reservoirs) during monsoon only.</p> <p>d. The requirement of stoplogs at intakes shall have to be reviewed, as the service gate will always remain open and will always be available for repairs/maintenance.</p> <p>e. As these schemes are away from River, very scanty Sedimentation may happen. Thus, clogging values provided in design of Trash rack needs to be updated. Technical specifications may be relaxed in this case, to optimize the intake's opening size.</p> <p>f. Physical model studies may not be made mandatory for PSPs. Instead CFD studies shall be made sufficient owing to large number of gates and their comparatively smaller sizes in hydraulic model.</p> <p>g. The taxes/duty on Equipment related to Asphalt lining should be subsidized to encourage purchase of equipment required to carry out asphalt lining on Embankments' slopes.</p> <p>h. Similarly, Tax/Duty/concession may be provided for purchase of mechanized grouting equipment to encourage use of these machines at site for effective and rapid grouting related works.</p>
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11.	4	Measures that concern other Ministries	<p>b.Recommendation by HLWG in respect of HPP in ESA of Western Ghat are not applicable to PSP and may be exempted for PSP as part of MOEFCC clearances.</p> <p>c.PSPs have no emissions, minimal effluents and minimal utilization of resources so it can be included in white category industries to fast track the development.</p>
12.	4.3	Measures that concern other Ministries Green Finance	<p>The life of a PSP project is higher than 40 years and lenders should accordingly consider a longer tenure loan for the project.</p> <p>Further to encourage development of PSH, Government of India should consider fiscal incentives like subsidy on interest on loan, Generation Based Incentive, capital subsidy, concessional rate of 5% GST on equipment and services for PSP</p>
13.	New	Suggestions for reducing construction timeline for PSP projects	<p>In order to bring down the construction time i.e. facilitating reduced gestation period of PSP Projects, following enables may be considered by the Central & State Governments</p> <ul style="list-style-type: none"> • Single Window Clearance for Land and Water Allocation • Expediting ToRs and related clearances • Provide CTU connectivity for power evacuation and delivery at the doorstep (based on capacity) / pooling station. Enhancement of transmission corridor (as per the plan for 500 GW RE) as seen for Mega RE parks & Off shore wind. • Seamless connection to the load centres taking care of load angles (through installation / coordination of Phase Measuring Units (PMUs).

			<ul style="list-style-type: none"> • Introduction of HVDC links to enable focused generation
14.	New	Recommendations to be made to State Governments	<p>a. 100% Waiver of STU Charges & Losses, ED, CSS, AS, Wheeling Charges on i/p and o/p power and connectivity charges for PSPs for entire life of project.</p> <p>Rationale:</p> <p>The State utilities and State Commissions may consider the energy procured for pumping by PSP to cause storage of water as non-generation activity. This aspect be clarified in policy as a generation activity and should not be subjected to Cross Subsidy surcharge and/or Additional Surcharge. The electrical energy used for pumping operation at PSP is not consumed by industry but is converted into potential energy and stored and re-used during high load or peak hours and should not be subjected to surcharge and additional surcharge by the distribution licensee.</p> <p>b. One-time water allocation on non-consumption basis and annual recouping water allocation for evaporation losses under concessional rates shall be facilitated by state government for all proposed PSPs.</p> <p>c. Further, States are recommended to align their policy to National Energy Storage policy along with covering the above state specific benefits.</p> <p>d. he water share in reservoir catering to more than one state should not be an impediment to developing PSP (using one of such reservoirs), as long as share of water of state is either agreed by specific state or else no consumptive water is drawn from such a reservoir and only buffer storage capacity is put to use by PSP.</p>

15.	New	Additional Suggestions	<p>a. Grid Connectivity - The power evacuation system shall not be part of storage project and it shall be built by CTU as per system's requirement and shall be the asset of CTU. ISTS Connectivity Charges shall be waived off (if any).</p> <p>b. Reduction in applicable rates for calculation of NPV for forest land - The Government may allow reduced rates of NPV (50% exemption) of applicable rates of forest land.</p>
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