

Subject: Clarifications for “Procurement of 2,000 MW Energy Storage Capacity (For 8 Hours discharge with maximum 5 Hours continuous discharge) for 40 years from ISTS/InSTS Connected Pumped Hydro Storage Plant/s through competitive bidding.”

The below mentioned responses are clarification in nature and other terms and conditions of the RfS will remain unchanged

Sr. No.	Clause no. of Tender	Provision of Tender	Bidders Request	Clarification
1	Clause 3.9 (ii) of RfS	<p>The Bidder/s shall provide proof and credential as per Format – 6.14: Format for certificate from Statutory Auditor/ Chartered Accountant for Technical Criteria that demonstrates previous experience of successfully commissioning/operating Thermal or Hydro generation projects for capacity equivalent to that quoted by the Bidder under this Tender. (Addendum-IX)</p> <p>Or</p> <p>Bidder/s who demonstrates previous experience of successfully commissioning/operating of RE (renewable energy based) projects for cumulative capacity equivalent to 1.5 times the Quoted Capacity is also eligible Bidder/s. (Addendum-XI)</p> <p>Provided that the Commissioning Certificate issued by the competent statutory authority/ government authority, as per applicable regulations, is required to be submitted by the Bidder/s.</p>	<p>Here in case of technical experience demonstrated through Thermal and Hydro power project, Format – 6.14 is suggested to be submitted.</p> <p>However, in case of demonstrating previous experience of successful RE (renewable energy) commissioning, no particular format is advised to be used.</p> <p>Requesting MSEDCL to confirm which format/method is required to demonstrate RE commissioning experience for bid submission.</p>	Format – 6.14 can be used for demonstrating previous experience of commissioning RE project
2	Bid Information Sheet	<p>(H) Earnest Money Deposit (EMD) - Amount of Rs. 5,00,000/- (Indian Rupees Five Lakhs only) per Quoted Capacity (MW) by Bidder.</p> <p>The EMD can be submitted, along with the response to RfS, either:</p> <ol style="list-style-type: none"> in the form of bank guarantee; or in the form of online payment, with a copy of such payment/transaction receipt being submitted. 	For a developer bidding 2000 MW, EMD amount will be INR 100 Cr. In such case, requesting MSEDCL to submit multiple Bank Guarantees (e.g. 50 Cr + 25 Cr + 25 Cr), totalling to the required amount of EMD (INR 100 Cr in this case).	Multiple bank guarantees may be submitted.
3	Addendum IX	<p>Calculation of Actual AFC payable to Interstate Bidder after ERA.</p> <p>Row D – Total Annual Storage Cost Excluding Transmission Charges and Transmission loss component</p>	<p>Formula provided illustration has error. Requesting to correct formula should be: $D = B/(1+6)^{-24} - (17/1)$</p>	Please refer updated illustration as per Table A.

Sr. No.	Clause no. of Tender	Provision of Tender	Bidders Request	Clarification
		and Cycle loss component Rs D= C-14-17-23		
5	Section 3, Clause 3.4 of RFS	“...The successful Bidder/s shall be required to provide energy storage capacity quoted by him from PHSP/s and required to sign urs continuous discharge...”	Requesting MSEDCL to add the description with illustrations, stating that after 5 hrs of continuous discharge, further equivalent charging power will be provided in the same day to discharge next 3 hrs. As such, to clarify charging and discharging intervals and to confirm that 5 hrs storage per cycle is sufficient.	As per RfS
6	Addendum no. IX, Table A	For interstate state Developer All India Transmission Charges declared by NLDC for the month in which bid will be submitted are considered for calculation of total storage cost. Illustration is given in Table A enclosed	It is suggested that as per existing methodology provided in the addendum no.3 for calculation of additional cost towards ISTS charges, in place of making the calculation basis per unit cost of transmission charges, the calculation should be done on Tx charges cost per MW basis in order to capture exact impact of charges for transmitting such power for only 8 hours of the day. Table A considers 0.52 Rs/Unit as transmission charges during the prevalent month of bid submission as an example. Since, transmission charges are calculated for 24 hrs per day, whereas in case of PSP utilization is less than 24 hrs, the transmission charges shall be corrected accordingly.	As per MoP Guidelines of PSP projects and clarification sought from CEA, inter-state transmission charges are waived in case developer awards the construction work to the contractor by 30.06.2025.
This is to inform that MSEDCL had sought clarification from CEA regarding applicability of ISTS charges for Pumped Hydro Storage Projects in terms of Ministry of Power guidelines dated April 10, 2023. The clarification received from CEA , MoP in this regards is attached herewith. Pursuant to the said clarification from CEA, RfS clause No. 3.13 (i) is amended as below:				
7	Addendum IX : RfS clause 3.13 (i)	Bidding Component Selection of bidders shall be through a competitive bidding process, based on the lowest quoted Total Storage Cost discovered (expressed in INR/MW/annum) during E-Reverse		Bidding Component Selection of bidders shall be through a competitive bidding process, based on the lowest quoted Total Storage

Sr. No.	Clause no. of Tender	Provision of Tender	Bidders Request	Clarification
		<p>Auction. Bidder shall quote the combination of the following.</p> <ul style="list-style-type: none"> - Component A: Annual Fixed Charges (AFC) and - Component B: Cycle Loss (CL) [It cannot be changed in e-RA] <p>The Bidder/s shall quote the AFC (expressed in INR/MW/annum) and declare the Cycle Loss (expressed in %) of the Projects at the time of submission of response to Tender which is constant during the entire term of the ESFA.</p> <p><u>a.</u> For intra state Developer Total Storage Cost, which is combination of AFC & Cycle Loss, shall be arrived at and denominated up to two decimal places as per the below formula: Total Storage Cost = Component A+ (Component A x Component B). For illustration If a bidder declares a cycle loss of 15% for contracted capacity of 500MW with an annual fixed charge of INR 50,00,000/MW, then Total storage cost computed as per above formula shall be INR 57,50,000/MW/annum.</p> <p><u>For interstate state Developer</u> All India Transmission Charges declared by NLDC for the month in which bid will be submitted and weekly Transmission losses are considered for calculation of total storage cost for evaluation purpose only. Illustration is given in Table A enclosed</p>		<p>Cost discovered (expressed in INR/MW/annum) during E-Reverse Auction. Bidder shall quote the combination of the following.</p> <ul style="list-style-type: none"> - Component A: Annual Fixed Charges (AFC) and - Component B: Cycle Loss (CL) [It cannot be changed in e-RA] <p>The Bidder/s shall quote the AFC (expressed in INR/MW/annum) and declare the Cycle Loss (expressed in %) of the Projects at the time of submission of response to Tender which is constant during the entire term of the ESFA.</p> <p><u>a.</u> For intra state Developer Total Storage Cost, which is combination of AFC & Cycle Loss, shall be arrived at and denominated up to two decimal places as per the below formula: Total Storage Cost = Component A+ (Component A x Component B). For illustration If a bidder declares a cycle loss of 15% for contracted capacity of 500MW with an annual fixed charge of INR 50,00,000/MW, then Total storage cost computed as per above</p>

Sr. No.	Clause no. of Tender	Provision of Tender	Bidders Request	Clarification
				<p>formula shall be INR 57,50,000/MW/annum.</p> <p><u>For interstate state Developer:</u></p> <p>Average yearly Transmission losses (for FY 2023-24) shall be considered for calculation of total storage cost for evaluation purpose only. Illustration is given in Table A enclosed.</p> <p>Inter State bidder shall undertake to Award Construction Work of PSP to the Contractor for carrying out civil works (like Upper and Lower Reservoir along with the Dam /embankment or water conductor system along with power house), by 30.06.2025. It may be noted that, if such inter-state bidder fails to Award Construction Work as mentioned above the inter-state Transmission charges as per Monthly POC bill, corresponding to contracted quantum if any shall be reimbursed by the Developer /prospective successful bidder to MSEDCL.</p>

Sr. No.	Clause no. of Tender	Provision of Tender	Bidders Request	Clarification
				<p>For the purpose of undertaking as mentioned above the Bidder shall include the following in Format 6.1 – Format of Covering Letter:</p> <p>“We hereby undertake to award Construction Work of PSP to Contractor(s) for carrying out civil works (like Upper and Lower Reservoir along with the Dam /embankment or water conductor system along with power house), by 30.06.2025. In case of failure to do so, we further undertake to be liable for reimbursement of applicable inter-state transmission charges to MSEDCL”</p>

TABLE - A			
		Modifications	
1	Contract Capacity	1000	MW
2	Pumping Hours	10	Hr
3	Generation Hours	8	Hr
4	Availability	90%	%
5	AFC Quoted by Bidders	5000000.00	INR/MW/Annum
6	Cycle Loss	25%	%
7	Total Cost of Storage (in case of STU)	62,50,000.00	INR/MW/Annum
8	Capacity required for Pumping = $(3*1)/[(1-6)*2]$	1066.667	MW
9	CTU(inter-state transmission) Loss (Average loss of FY 2023-24)	3.54%	%
10	Scheduled power considering CTU loss = $8/(1-9)$	1106	MW
11	Extra Power required for pumping due to CTU loss = $(10-8)*2*365*4$	1,28,593.82	MWh/Annum
12	APPC Considered (FY 2023-24)	4.86	INR/kWh
13	Burden to MSEDCL due to extra pumping power = $11*12*1000$	62,49,65,971.39	INR/Annum
14	Bidders Quote considering declared cycle loss = $5*(1+6)$	6250000	INR/MW/Annum
15	Total Cost of Storage considering cycle loss = $14*1$	6,25,00,00,000.00	INR/Annum
16	Generation considering availability = $1*3*4*365$	26,28,000.00	MWh/Annum
17	Discharge received at Maharashtra Periphery considering CTU loss = $sr\ no\ 1*(1-9)$	964.6	MW
18	Power loss in discharge mode = $(Sr\ no\ 1-17)*3*365*4$	93,031.20	MWh/Annum
19	Burden for MSEDCL - power loss due to CTU loss at discharge = $18*12*1000$	45,21,31,632.00	INR/Annum
20	Total Burdern for MSEDCL - Considering CTU losses (charging and Discharging) = $19+13$	1,07,70,97,603.39	INR/Annum
21	Burden for MSEDCL to be considered for evaluation purpose = $20/Sr\ No.1$	10,77,097.60	INR/MW/Annum
22	Final rate to be considered for evaulation (i.e. Total Cost of Storage + CTU losses during charging and discharging) = $21 + 7$	73,27,097.60	INR/MW/annum
	IPO Rate to be displayed to bidder (Rs/MW/Year) (A)	73,27,097.60	INR/ MW/annum
	Final Rate Quoted by Bidder in ERA (RS/MW/Year) (B)	70,00,000.00	INR/ MW/annum

	Total Storage Cost C =B*1	7,00,00,00,000.00	INR/annum
	Total Annual Storage Cost Excluding Transmission Charges and Transmission loss component and Cycle loss component Rs D = C-20-15-(15-5*1)	4,67,29,02,396.61	INR/annum
	Total AFC excluding CTU losses and CTU charges (payable to bidder) E= D/1	46,72,902.40	INR/MW/annum



भारत सरकार
Government of India
विद्युत मंत्रालय
Ministry of Power
केन्द्रीय विद्युत प्राधिकरण
Central Electricity Authority
जल परियोजना आयोजन एवं अन्वेषण प्रभाग
Hydro Project Planning & Investigation Division

दिनांक: .07.2024

मुख्य अभियंता (विद्युत क्रय)
मैसर्स एमएसईडीसीएल,
5वीं मंजिल, प्रकाशगढ, बांद्रा (ई),
मुंबई - 51.

विषय - पण्ड हाइड्रो स्टोरेज परियोजनाओं के लिए आईएसटीएस शुल्क की छूट के संबंध में स्पष्टीकरण - संबंध में।

महोदय,

उपर्युक्त विषय पर हमारे कार्यालय का पत्र आवश्यक सूचना व कार्यवाही हेतु संलग्न है।

Signed by Amit Roy Singal
Date: 15-07-2024 11:16:40

भवदीय,

(अमित रॉय सिंगल)
उप निदेशक



भारत सरकार
Government of India
विद्युत मंत्रालय
Ministry of Power
केन्द्रीय विद्युत प्राधिकरण
Central Electricity Authority
जल परियोजना आयोजन एवं अन्वेषण प्रभाग
Hydro Project Planning & Investigation Division

Date: .07.2024

Chief Engineer (Power Purchase)
M/s MSEDCL,
5th Floor, Prakashgad, Bandra (E),
Mumbai - 51.

Sub:- Clarification regarding waiver of ISTS charges for Pumped Hydro Storage Projects - Regarding .

Reference is invited to the letter received from M/s MSEDCL dated 04.07.2024 vide which clarifications have been requested on the subject matter.

The clarifications requested on ISTS charges for Pump Storage Projects (PSPs) are furnished as under:

Query:

1. The clause mentions that the waiver is to be provided for projects where construction work is awarded by 30.06.2025. It is requested to clarify that the 'award of construction work' referred to in the above clause, is between which two parties. (i.e. who have to award of construction work to whom?)

Reply:

The 'award of construction work' may be referred as award of contract by the Developer of the PSP to the contractor for carrying out major civil works (like, Upper/ Lower reservoir alongwith dam/ embankment or Water Conductor System alongwith Power House).

2. Further, it is also requested to clarify whether the letter of award issued by MSEDCL to the winning bidder/PSP developer and PPA is also signed shall be considered as 'award of construction work'

mentioned in the above clause before 30.06.2025 and then the waiver of ISTS charges will be applicable or not?

Reply:

No.

It is reiterated that the 'award of construction work' may be referred as award of contract by the Developer of the PSP to the contractor for carrying out major civil works (like, Upper/ Lower reservoir alongwith dam/ embankment or Water Conductor System alongwith Power House).

Query:

3. Furthermore, it is also requested to clarify how many years the said waiver is applicable?

Reply:

As per clause no. 4 of Ministry of Power order dated 23.11.2021 (copy enclosed), PSPs shall be granted exemption from the payment of ISTS Charges for a period of 25 years.

Yours sincerely,

(Amit Roy Singal)
Deputy Director