NTPC LIMITED

(A Govt. of India Enterprise)

CORPORATE ENGINEERING

NOTICE FOR EXTENSION OF EXPRESSION OF INTEREST (EOI) SUBMISSION DATE

Ref No.: NTPC/PE/ET&PR/3221203/EXT/1 Date: 05.01.2023

This is in continuation to our notice inviting Expression of Interest (EOI) No.: NTPC/PE/ET&PR/3221203 Dated 03.11.2022 for setting up a pilot project for Long duration Energy Storage (LDESS), uploaded on www.ntpctender.com website, having last date of EOI submission as 06.01.2023, the last date of submission stands extended to **10.02.2023.** This is the first extension of last date of EOI submission.

For detailed EOI and documents, please visit at www.ntpctender.com or may contact:

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EOI for Setting Up a Pilot Project for Long Duration Energy Storage System (LDESS).	
EOI No. NTPC/PE/ET&PR/3221203	**Dated 05 Jan 2023**
Queries and Clarification	
Queries	**NTPC Reply**
What is the expected service life (years) NTPC is expecting from the Lead Acid battery technology	This is EOI phase which is intended to obtained techno-commercial information from the party. Based on provided information from all parties, suitable technologies for bulk energy storage application with long discharge duration shall be identified and technical specification such as service life, application, geographical location, area for installation, expected cycles per day, charging source and its cost implication, connectivity (which is the part of specification), minimum and maximum ambient temperature, voltage of charge/ discharge etc. , payment terms, model of project execution shall be prepared based detail analysis of the data to be submitted by the participant in the EOI . Please refer excerpts in clause no. 2.0, *"The response(s) received in the EOI will be utilized by NTPC for:* *a) Identification for suitable technologies which fits the intended use case(s)* *AND/OR* *b) Formulation of specifications required for execution of demonstration/commercial project(s).* *The Applicants may express their interest in respect of their offerings along with other inputs as indicated in Annexures/formats given at Section-II of this EOI."* At this stage, party need to furnish all the techno-commercial inputs as requested in EOI and any other relevant additional inputs required for details comparative analysis among the technologies for Bulk energy storage application with long discharge duration.
What is the primary application for the project, i.e. peak management/ramp rate control/frequency control	
What geographical location will be used for the project set-up	
What are the expected cycles per day usage	
What will be the charging source of the battery bank and who will provide the connectivity with the source	
The charging power will be provided free of cost or on chargeable basis. If on chargeable basis, please provide the charges	
Can any exceptions occur where the battery bank be discharged below the pre-set cut off voltage?	
What will be the minimum and maximum ambient temperature at the pilot project site	
Please inform the payment terms	
We understand that the BESS will be setup on EPC model	
Please clarify if the BOP (if any) load should come from the battery pack or from the Grid? (As they will be running on the AC power)	Power required for complete system including BOP load shall be considered as charging power and accordingly round trip efficiency will be evaluated. It is up to Party take power for BOP from its battery pack or separately from grid.
Is it an On-grid or off-grid system	It is an on-grid system.
In case of off-grid solar system, what is the Solar irradiance	It is an on-grid system.
What will be the distribution of Load (e.g. 6 x 1MW unit or 3 x 2MW units)	Pilot project of capacity range is 1-6 MW/ 8 hours (i.e., 8-48 MWh) as mentioned in EOI.
What will be the available area for installation of battery bank? Does NTPC looking for a containerized solution	Area required for installation of complete system shall be submitted by the party . The offer must be complete in all respect.
What is the total area for the BESS installation	
Is the load variable or constant for every day? In case of variable load, what are the contributing factors?	Please refer reply at Sl. no. 1. As mentioned above, based on provided information from all parties, suitable technologies for bulk energy storage application with long discharge duration shall be identified and technical specification shall be prepared based detail analysis of the data to be submitted by the participant in the EOI. It is understood that variable/ constant nature of load may have cost implication. Therefore, It is suggested that you may consider both the case to work out cost figures to be furnished in EOI along with explanation of the same. This input shall help us in formulation of our specification/ use cases.

We understand that the BESS is technology agnostic and NTPC intends to select one type of each chemistry for pilot purpose	It to clarify that "Selecting one type of each chemistry for pilot purpose" is not the intent of this EOI. The intent of EOI is to identify suitable long duration energy storage solution inline with intent of EOI as mentioned in clause 2 of EOI which is as follows. (Please refer EOI document for more details) *"NTPC is exploring various alternatives for an efficient, economical, minimal self-discharge, scalable, environment friendly, sustainable, long duration energy storage system (LDESS) (except pump hydro energy storage) for setting up a pilot project of capacity range 1-6 MW/ 8 hours (i.e., 8-48 MWh).* *The initiative intends to identify suitable long duration energy storage solutions (LDESS) for a particular application in-line with intent of the EOI stated above, to analyse the techno-commercial feasibility and demonstrate their capabilities, characteristics, validating performance through pilot project and subsequently, adopting the same at commercial scale if found commercially viable in long run business scenario."*