Minutes of the 26th meeting of Project Appraisal & Approval Committee (PAAC-EPC)

26th meeting of the Project Appraisal and Approval Committee (PAAC) for utilisation of EPC funds, chaired by Chairman, CPCB, was held on October 10, 2023 via video conferencing. Members of technical group (TG), which evaluates the proposals received for consideration under EPC funds, also participated in the meeting. List of participants is placed at Annexure - I.

02. AQM division briefed the committee about the status of EPC funds and proposals received for consideration under the said funds.

03. A total of 139 proposals have been received, out of which a decision has been taken on 116 proposals. Out of these 116 proposals, 31 projects have been sanctioned by the committee and 85 proposals have been rejected. From the balance 23 proposals, 10 proposals are under consideration of TG, 7 proposals are to be placed before PAAC for taking a decision, 4 revised proposals are awaited from proponents and, comments are awaited from concerned ministries/CAQM/departments on 2 proposals.

04. Subsequently, AQM division apprised the committee about the agenda of the meeting, involving seeking post-facto approval on extended operation & maintenance of the Smog Tower project and other payments for smog tower project, and taking decisions on closure of smog tower project relating to installation and commissioning, and, deliberations and discussions on 1 revised proposal (out of 31 proposals already sanctioned) & 7 proposals having recommendations of TG. Further, final findings are to be presented before the PAAC for 3 projects, wherein study has been completed. The observation and decisions of the committee are summarized below:

A. **Post facto approval for extension of O&M of Smog Tower Project and other payments:**

The committee was briefed that the O&M of the Smog Tower project was awarded to TPL SBG Services, for an initial period of two years, i.e. until 06 September 2023, during which its performance would be evaluated by IIT Bombay. IIT Bombay requested CPCB for an extension till December 2023 for testing of indigenously developed filters. The request was agreed to by Advisory Committee, which is tasked with overseeing the progress of the project and to review its performance and guide for improvement, and, accordingly, payment for additional 04 months (September - December 2023) O&M was processed. Further, as per the O&M agreement, the approval of PAAC is also required for extension/termination of O&M agreement, hence post facto approval is sought from PAAC. PAAC approved 04 months' extension of O&M agreement and the main smog tower project (related to IITB's part for performance evaluation of the tower), until December 2023, to facilitate the evaluation of the indigenous filters, with additional cost implication of Rs. 50,37,756/-, excluding applicable Project Management Consultancy (PMC) charges of NBCC (15%), taxes, energy costs, internet and other such costs (on an actual basis). Chairman, CPCB expressed that Parliamentary assurances have been made regarding the smog tower project, and it should be ensured that testing of the Smog Tower is completed by IIT Bombay by December 2023.

Furthermore, PAAC was briefed about additional payments made for the Smog Tower project, including Rs. 75 lakhs towards part of the final payment for the Smog Tower project (covering costs for silencer, clock, digital display, transplantation, etc.), Rs. 22,69,214.26/- for camera installation at the Smog Tower, Rs. 20,31,853/- for additional/balance payment for filter purchase, Rs. 6,35,430/- for the installation of Internet, IP camera, and phone at the site, Rs. 1,63,764/- for filter disposal, and Rs. 1,12,100 for charges related to the Smog Tower inauguration. These payments were necessary for seamless O&M of the smog tower. PAAC accorded its concurrence for the said payments.

PAAC was also apprised that as per the tripartite smog tower MoU, the scope of TPL was limited till installation and commissioning of the tower, which has been completed. However, an approval from

Delhi Urban Art Commission (DUAC) is awaited, for which TPL is already pursuing the matter. PAAC recommended that main smog tower project pertaining to TPL may be closed and balance payment may be released on receipt of DUAC approval.

Dr. Rashid Hasan, SIAM, sought to know about the performance of the Smog Tower. Chairman, CPCB expressed that once the findings are reviewed by experts, a meeting may be convened with the presence of PAAC and Technical Group members, to apprise them about the tower performance.

B. **07 proposals having recommendation of Technical Group:**

Observations made by the Technical Group on 07 proposals examined by it, were discussed during the meeting and deliberations of PAAC are summarised below:

i. **Mitigation of Crop residue burning and its conversion into paper and lignin by IIT Roorkee:** TG had not recommended the proposal for further consideration as the proposal was for development of a new process and is not directly related to air quality improvement/management in Delhi-NCR. PAAC accepted the recommendations of TG and rejected the proposal.

ii. **Moulded Fibre Packaging Materials from Rice Straw by M/s Ecobloom Pulpware LLP:** TG had not recommended the proposal for further consideration as it was regarding industrial process development and setting up of pilot plant for commercial purpose. PAAC accepted the recommendations of TG and rejected the proposal.

iii. **Life Cycle Assessment of Bio-fuels (Ethanol blended gasoline, bio diesel, Compressed Bio Gas) for assessing the GHG benefits and process benchmarking by ARAI:** TG had not recommended the proposal for further consideration as the proposal was not directly aligned with the mandate of air quality improvement and management in Delhi-NCR and funding for such projects having national-level perspective of GHG emissions, global warming, and climate change may be sought from MoEF&CC or MNRE.

Dr. Hasan, SIAM expressed that biofuels are low-carbon alternate fuels which fall within the framework of EPC funds and that this proposal should be considered as it could provide valuable information for policy amendments and course corrections.

MS, CPCB expressed that instead of GHG benefit, focus may also be laid on reduction in terms of parameters notified under NAAQS. Dr. Hasan agreed that both air pollutants and GHGs may be studied.

Prof. V.K. Minocha, Chairman of the TG, pointed out that there is substantial funding available for projects related to biofuels/alternate fuels, and GHG emissions. He highlighted that the emphasis of the TG while evaluating proposals was to specifically improve Delhi's air quality rather than address national level as EPC funds are intended for improving air quality in Delhi-NCR. ARAI responded that they had approached MNRE for funding, but their emphasis has now shifted to hydrogen fuel.

PAAC expressed that a project having national level impact will also impact on Delhi-NCR's air quality and vice versa. Hence, the proposal may be revised by ARAI with emphasis on air pollutants as well as GHGs, and may subsequently be reconsidered by the TG.

iv. **Hydrogen-diesel dual fuel compression ignition engines to reduce local and global emissions by IIT Bombay:** TG had not recommended the proposal as it appeared to be more academic/research-oriented, and is more relevant for vehicle/ DG set manufacturers, and not directly aligned with the mandate of air quality improvement/management in Delhi-NCR.

Professor Minocha, Chairman of the TG, pointed out that the proposal, as presented, did not address the issue of air pollution in Delhi-NCR, and the proponent may rework the proposal to demonstrate the potential in terms of air quality improvement.

Dr. Shankar Agarwal, member of the TG, apprised the PAAC that the proposal seemed to be in very initial stage and the Principal investigator (PI) was advised to test the prototype and then submit a proposal to CPCB for conducting a pilot study.

PAAC expressed that a project with national level impact may also be considered, provided that it also has the potential to address the issue of air quality in Delhi-NCR and also trials/experiments are conducted in Delhi. PAAC recommended that the proposal may be reconsidered by TG, and the proponent may be advised to present a revised proposal with emphasis on air quality improvement in Delhi-NCR.

v. **SILENCE (Spreading Information, learning about Environmental Noise Control and Education) by CSIR-NPL:** TG had not recommended the proposal for further consideration as awareness regarding noise pollution does not fit under the mandate of air quality improvement/management in Delhi-NCR. PAAC accepted the recommendation of TG and rejected the proposal.

vi. **Studies on BTEX Monitoring in Delhi NCR, Ozone Forming Potential and Carcinogenic Health Impacts by Amity University:** TG had not recommended the proposal as the study proposed use of only secondary data, and employs a non-standard methodology, and has limited utility in terms of improvement in air quality in Delhi-NCR. PAAC accepted the recommendation of TG and rejected the proposal.

vii. **Spatial variation and diversity of airborne biological particles in Delhi city by NITK Surathkal:** The proposal was discussed in 23rd PAAC meeting where it was recommended that NITK Surthkal may associate with IIT Delhi which has approached CPCB for cohort study. In this regard, no response was received from PI despite reminders. Further, PI was also invited in previous TG meetings, however, PI neither attended the meeting nor responded to CPCB communication.

Hence, TG had recommended that the proposal may be considered as withdrawn. PAAC accepted the recommendation of TG and rejected the proposal.

C. **Heavy Duty vehicle fuel consumption calculation and validation through vehicle simulation tool by ARAI:** PAAC was informed that the project was sanctioned to ARAI during the 24th PAAC meeting held on 06.10.2022. The proposal aims to develop a simulation-based Fuel consumption (FC) calculation methodology for India, along with drive cycles for buses, LCV, and ICV/MCV. The original cost of project was Rs. 425 lakhs, and ARAI was approved a cost of Rs. 255 lakhs (excluding GST). Balance funding of Rs. 170 lakhs was to be arranged by ARAI. However, at the time of signing of MoU, ARAI informed that its contribution would be in kind (in terms of manpower and lab & testing services). Since contribution in kind cannot be accounted for, F&A division, CPCB had suggested that a revised proposal may be sought from ARAI, limiting to funds requirement from CPCB. ARAI subsequently submitted the revised proposal, limiting the budget requirement to Rs. 255 lakhs (excluding GST), with a commitment to carry out all activities as per the scope. CPCB's liability in terms of fund requirement remains unchanged.

Chairman, CPCB expressed that the tool seems to be of more use to ARAI, and its specific utility for Delhi-NCR is not clear. Thus, it would be more appropriate for this proposal to be taken up by ARAI from its own funds.

Dr. Hasan, SIAM expressed that a lot of pre-commencement activities have already taken place for the project, and the study would help in developing next level of emission norms. ARAI expressed that the TG had asked it to limit the proposal scope to NCR, by selecting the vehicles usually plying in NCR region. Further, ARAI is also contributing in the project, by providing its infrastructure and testing

services, and the project cost is mainly on account of field studies to be carried out in NCR. ARAI further expressed that it will develop drive cycles specifically for the NCR region. Though the tool developed under the study would be useful for all of India, it will also benefit Delhi-NCR as improving fuel efficiency helps reduce emissions. Further, findings of this study may also lead to development of other norms, which may be more stringent. PAAC recommended that the proposal utility for Delhi-NCR may be re-examined by MS, CPCB and TG.

D. **Final findings of 03 project for project closure:**

i. **Delhi air quality experiment: A paradigm shift in source apportionment**

ii. **Bi-weekly action plan for effective and efficient management of PM2.5 concentrations in the Delhi city**

iii. **Pilot project to demonstrate the effectiveness of air pollution mitigation by Pariyayantra filtration**

These projects could not be taken up for discussion due to paucity of time. It was expressed that final findings of these projects would be discussed in next PAAC meeting.

05. Chairman, CPCB expressed that utilization certificates (UCs) for all sanctioned projects should be obtained from the respective institutes/organizations, and efforts should be made to expedite the utilization of remaining funds. It was also decided unanimously that gap funding for implementation of micro-level action plans for non-attainment cities in Delhi-NCR could be considered for funding depending upon the priority / urgency of the need and also taking into account the funds available. Further, other cities which are not being funded under NCAP/XV-FV could also be funded for preparation/implementation of micro-level action plans for undertaking mitigation/pollution control and abatement measures related to the air pollution hotspots.

06. Prof. Minocha suggested that installation of fountains at intersections in Delhi may also be considered as it would not only be aesthetically pleasing but is also expected to yield significant outcomes in terms of local pollution reduction. Dr. Rakesh Kumar, CSIR expressed that funding may be directed towards research & development in those areas where much research has not happened so far, such as low dust generating C&D activities, ventilation design for tandoors, etc. It was expressed that other PAAC members may also provide their suggestions to CPCB regarding possible avenues for utilisation of EPC funds and these would be compiled and deliberated specifically.

Meeting ended with a vote of thanks to the chair.

***

Annexure - I

List of PAAC members:

1. Sh. Tanmay Kumar, Additional Secretary, MoEF&CC and Chairman, CPCB
2. Sh. Bharat Kumar Sharma, Member Secretary, CPCB
3. Dr. K.S. Jayachandran, MS, DPCC
4. Dr. V.K. Soni, Scientist-F & Head, EMRC
5. Dr. J.B.V. Reddy, Scientist F, DST
6. Sh. Kapil Verma, Director (Ref.), MoPNG
7. Sh. Harsh Prabhakar, Executive Engineer, MoRTH
8. Sh. R.K. Jaiswal, Development Officer, MoHI
9. Dr. B.M.S. Reddy, SEE, DPCC
10. Sh. Pradeep Sharma, CEO 1, UPPCB
11. Sh. Prasoon Tripathi, Under Secretary, MoEF&CC
12. Sh. D.K. Gupta, RO Greater Noida, UPPCB
13. Sh. Vikash Mishra, RO Ghaziabad, UPPCB
14. Smt. Sapna Srivastav, RO Bulandshahr, UPPCB
15. Sh. Ashutosh Chauhan, RO Moradabad, UPPCB
16. Sh. Manoj Kumar Rastogi, EO, NPP Bulandshahr
17. Sh. Nirmal Kashyap, SEE, HSPCB
18. Dr. Rashid Hasan, Senior Advisor, SIAM
19. Sh. Sandeep Garg, SIAM

List of Technical Group members and Special Invitees:

1. Dr. Rakesh Kumar, OSD, CSIR
2. Prof. V.K. Minocha, Head of Civil Dept., DTU
3. Dr. Shankar Aggarwal, Senior Principal Scientist, CSIR-NPL
4. Sh. Ankush Tewani, Scientist D, CPCB

Invitees:

1. Dr. S. Juttu, General Manger, ARAI
2. Dr. S.S. Thipse, Senior Deputy Director, ARAI
3. Sh. S.N. Tripathi, Professor, IIT Kanpur
4. Sh. Sri Harsha Kota, Professor, IIT Delhi

CPCB Officials:

1. Sh. P.K. Gupta, Scientist-F & Head, AQM Division
2. Sh. Ankush Tewani, Scientist D, AQM
3. Sh. Gautam Kumar Sharma, Scientist C, AQM
4. Sh. Toshesh Bhargava, SRF, AQM