

Minutes of the 8th meeting of Project Appraisal & Approval Committee (PAAC-EPC)

The 8th meeting of PAAC-EPC was held on July 16, 2018 at CPCB, Delhi. The meeting was chaired by Chairman, Central Board. List of Participants is placed at **Annexure-I**. Committee was briefed about the status of projects that have already been sanctioned as well as under consideration projects and funds accrued.

Chairman directed that a meeting of the Sub-Committee of PAAC-EPC to be convened at the earliest for the scrutiny and prioritization of remaining proposals. in view of upcoming winters. He emphasized that R&D proposals/devices intending to control of air pollution to be verified on priority, so that viable and successful technologies may be deployed to minimize & control air pollution episodes in upcoming winters.

Dr. JBV Reddy, Scientist, DST apprised the committee on status of EPC projects forwarded to DST for examination. He informed that an expert panel on technology solutions for mitigating air pollution has been constituted by DST for examination of all technology options related to air pollution control. Various meetings of the expert panel have been convened. The feedback/recommendations of the expert panel w.r.t EPC proposals have been conveyed to CPCB.

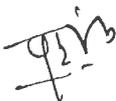
Seven proposals were placed before the committee for discussion. Observations and decisions are summarized below:

Approved Proposals:

- 1. Pilot project to demonstrate the effectiveness of air pollution mitigation by Pariyayantra filtration submitted by Manav Rachna Innovation and Incubation Centre:** This proposal discussed by the Expert panel constituted by DST, which recommended for a pilot study with 30 buses to assess its working and effectiveness. The expert panel has further recommended that the pilot study may be executed in guidance & supervisions of subject experts/ organization like IIT-Delhi from perspective of CFD analysis, while CRRRI and NTPC to mentor vehicle running & testing protocols. Further, PAAC-EPC requested Manav Rachna Innovation & Incubation Centre to submit periodicity for analysis of captured particles and DST to constitute a monitoring committee for monitoring progress and outcome of the pilot study.

The PAAC-EPC approved sanction of EPC funds for the pilot study using 30 buses to Manav Rachna Innovation and Incubation Centre at the cost of Rs. 19.74 Lakhs (Including GST).

- 2. Development of Emission Factors for emitted pollutants and toxic metals of Fire Crackers submitted by Amity University:** The Expert Panel constituted by DST has recommended this study with certain changes in the design specification of the fire cracker testing chamber. Amity University accordingly revised its design specification and the same was presented before PAAC-EPC. The committee opined that this study is crucial in view of the directions of the Hon'ble Supreme Court & development of future advisories/policies, hence DST to constitute an expert group for assessment of methodology & supervision of the study. The committee further requested Amity University to reduce project time line and submit the results by July 2019.

The committee in principle approved sanction of EPC funds for this study to Amity University at the cost of Rs. 39,67,500/- (plus taxes) subjected to confirmation of methodology & protocol through the expert group constituted by DST.

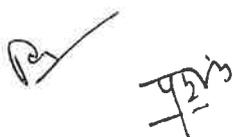
3. **Deployment and Evaluation of air purification units for traffic junction pollution abatement in Delhi submitted by NEERI:** The proposal aimed at deployment of WAYU (Wind Augmentation & Purifying Units) units at various traffic intersections for reduction of particulates and gaseous pollutants. NEERI informed that development of these units has been sponsored by DST and commissioning of such units is likely to reduce pollution from hot spots, particularly traffic intersections. The results of Mumbai pilot study were shared with the committee. NEERI also informed that the number of WAYU units to be deployed at a given traffic intersection may vary depending upon local topography and pollution load. The committee opined to deploy these units at 5 traffic intersections to verify its effectiveness.

The committee in principle approved utilization of EPC funds for deployment of WAYU units at 5 traffic intersections in Delhi. The revised proposal along with cost to be submitted by NEERI.

Proposals advised for DST examination:

4. **Validation and field evaluation of methanol blend M-15 Vehicles & portable genset submitted by ARAI, Pune:** The committee was sceptical on consideration of this study under EPC funding. ARAI, however justified the same stating the use of M15 fuel will reduce vehicular emissions and will promote energy security. Chairman advised for the examination of the proposal by DST prior to its discussion at PAAC-EPC.
5. **Fuel system materials compatibility with higher ethanol-gasoline blends (E85) submitted by ARAI, Pune:** Chairman advised for the examination of the proposal by DST prior to its discussion at PAAC-EPC.
6. **Heavy Duty vehicle fuel consumption calculation and validation through vehicle simulation tools submitted by ARAI, Pune:** The proposal aimed at fuel consumption calculations for Heavy Duty Vehicles (HDVs) using simulation tools. The committee was apprised that in case of heavy duty vehicles the testing is done on engine dynamometer only, with future addition of different chassis bodies on HDVs the fuel economy varies, hence simulation tools (VECTO software) will enable fuel consumption calculations for different categories of HDVs. It was suggested that ARAI to further revise the proposal in view of draft notification of MoPNG on fuel economy norms for HDVs. Representative from SIAM emphasized urgency of this study. Therefore, DST was requested to examine this proposal on priority for its further consideration by PAAC-EPC.
7. **Testing of Multiple Antenna High Density Ion Generator for Pollution Control in New Delhi submitted by Science & Technology Park, Pune:** The proposal was presented before the committee. Chairman advised for the examination of the proposal by DST prior to its discussion at PAAC-EPC.

Meeting ended with thanks to the Chair.



List of participants:

1. Shri S. P. Singh Parihar, Chairman, Central Pollution Control Board
2. Shri Satyendra Kumar, Deputy Secretary, MoEF&CC
3. Ms. Suman Dixit, U.S. (IFD), MoEF&CC
4. Dr. V. K. Soni, Head, EMRC, IMD/MoES
5. Shri P. K. Banerjee, Executive Director, SIAM
6. Dr. Rashid Hasan, Advisor, SIAM, New Delhi
7. Shri N. L. Goswami, Sr. Development Officer, DHI
8. Shri Neeraj Khare, officer Biofuel Cell, MoPNG
9. Shri J. B. V. Reddy, Sc. 'D', DST, New Delhi
10. Dr. M. P. George, Sc. 'D', DPCC
11. Dr. Jai Bhagwan Sharma, RO HSPCB, Gurugram
12. Dr. Anil Kumar Singh, RO UPPCB, Noida
13. Ms. Sapna Srivastav, ASO UPPCB, Ghaziabad
14. Shri Sohan Lal, JSO RSPCB, RO Bhiwadi

List of Proponents:

1. Dr. B. S. Gill, Advisor, Manav Rachna University
2. Ms. Prachie Sharma, PhD Scholar, Manav Rachna University
3. Prof. Tanu Jindal, Director, Amity University, Noida
4. Prof. A. L. Aggarwal, Prof. (Emiritus), AIES, Amity University, Noida
5. Dr. S. S. Thipse, Deputy Director, ARAI, Pune
6. Shri Suyog Gadgil, Deputy Manager, ARAI, Pune
7. Shri Sunil Gulia, Scientist Fellow, CSIR-NEERI, Delhi
8. Shri Sudheer Salana, Scientist Fellow, CSIR-NEERI
9. Shri Vikram Saraph, Group Director, Science and Technology Park, Pune
10. Dr. D. B. Jadhav, Sc. 'F', Science and Technology Park, Pune

CPCB Officials:

1. Shri V. K. Shukla, Head, Air Lab, CPCB
2. Mrs. Meetu Puri, SSA, AQM
3. Ms. Parinita Baruah, JRF, AQM
4. Shri Toshesh Bhargava, JRF, AQM
5. Shri H. R. Kaushik, JRF, IT Division
6. Shri Rakesh Chandra Dalakoti, MTS, AQM