

Minutes of the 9th PAAC-EPC held on August 09, 2018 at CPCB

The Ninth meeting of Project Appraisal & Approval Committee (PAAC-EPC) was held on August 09, 2018 at CPCB. The meeting was convened under the chairmanship of Chairman, CPCB. List of participants is placed at **Annexure-I**. Committee was briefed about the status of EPC funds, status of proposals including sanctioned projects and DST's feedback regarding EPC proposals on mitigation technologies.

Thirteen Proposals (09 revisions and 04 new) were considered, and committee's decisions are as below:

A. Approved Proposals

(i) **Deployment and Evaluation of air purification units for traffic junction pollution abatement in Delhi (WAYU) submitted by NEERI:** PAAC-EPC during 8th meeting held on July, 16, 2018 in principle approved this pilot study for deployment of WAYU units at five traffic intersections in Delhi and NEERI was asked to submit revised proposal with deployment plan & costs. NEERI, subsequently presented revised proposal before PAAC-EPC and informed that the pilot study will be executed at five traffic intersections. Based on reconnaissance surveys at these sites, 54 Wayu units were estimated to be deployed.

PAAC-EPC approved utilization of EPC funds for the above pilot study to NEERI at a cost of Rs. 265.22 lakhs (Plus taxes as applicable) along with additional cost of hiring security personal along with civic charges for installation of these units as per actuals.

The committee asked NEERI to submit a detailed report on effectiveness of these units based on pilot experience for future reference. NEERI also offered O&M of these units post completion of the pilot study. PAAC -EPC decided to take decision in this regard in the near future.

(ii) **Conversion of End-of-life and In-use Diesel Vehicles in Electric Vehicles submitted by Indian Institute of Petroleum (IIP), Dehradun:** IIP's proposals intended to develop retro fitment kit for conversion of diesel vehicles to electric vehicles, retrofitting of two diesel vehicles into electric vehicles (one diesel based 3-wheeler and one diesel based passenger car) along with development of a 5 kW solar charging station. The retrofitting to electric vehicles shall be done as per the provisions of AIS 123. The committee found proposal to be useful as it will help in converting existing fleet of old polluting vehicles into cleaner electric vehicles. IIP will obtain type approvals (compliance with set of regulatory, technical and safety requirements) of the developed electric conversion kits from concerned agencies for wider application.

PAAC-EPC approved sanction of EPC funds for this study to IIP at a cost of Rs. 102 lakhs (Plus taxes).

(iii) **Proxy relationship of ultrafine particles number concentration, new particle formation and its growth rate in transport microenvironment in Delhi submitted by DTU:** As advised during 7th PAAC-EPC, DTU submitted revised proposal with study period of four months. The PAAC-EPC approved EPC funds for the above study to DTU at a cost of Rs 79,92,960/- (Plus applicable taxes). The SMPS (Scanning Mobility Particle Sizer Spectrometer) procured during the study may be returned to CPCB for utilization in other studies. Further, extension of study will be based on the outcome of results of four-month study.

A

- (iv) **Control of Dust Emissions using dust Suppressant submitted by Enviro Policy Research India Pvt. Ltd (EPRI) in association with NEERI;** proposal was placed before PAAC-EPC in view of deployment of possible solutions for pollution control especially in the upcoming winter. Dust emissions have been identified as one of the prominent sources of pollution in Delhi as per recent studies. The proposal was intended to demonstrate effectiveness of dust suppressant developed by EPRI. The demonstration would involve spraying suppressant at 3 locations twice a day for a period of three days. Further Committee asked NEERI to supervise the study in terms of selection of locations & monitoring protocols, evaluate and document the results. EPRI was asked to submit a revised proposal within a week indicating specific locations to be included in the study.

The PAAC-EPC in principle approved sanction of EPC funds to EPRI for demonstration purpose at a cost of Rs. 2,97,500/- (Plus taxes).

- (v) **Does Poor Air Quality from Crop burning in close proximity to residential areas adversely affects children's respiratory health submitted by TERI:** The proposal was related to assessment of health impacts of stubble burning amongst local residents. The committee advised for cost cutting on components related to air quality monitoring & hiring of machineries. The committee advised to use existing monitoring data and select study locations accordingly. Further TERI was advised to specify proximity of village to be selected for the study and make sample size of the study more representative with inclusion of studying impact on men, women and as well as children. Committee advised resubmission of the proposal accordingly.

The PAAC-EPC approved the proposal in principle.

B. Proposals requiring revision:

- (vi) **Indoor Air Quality Monitoring for Air Quality Management in Delhi-NCR submitted by CSIR-Central Scientific Instrumentations Organization (CSIO), Chennai:** The proposal was discussed through video conferencing. PAAC-EPC during its 7th meeting held on June 20, 2018 asked proponents to submit a revised proposal for prefeasibility study of limited duration at three locations for performance check & validation of the IAQ nodes to be developed during the study. CSIO submitted prefeasibility study proposal for two locations; the committee however felt that the selection of location was not rational. The committee also felt that the proposal was still lacking clarity on objective and outcome of the study. The committee requested CSIO for resubmission of proposal after consultation with CPCB.
- (vii) **Air pollution hot spots in western IGP: Implications on agroecosystem submitted by JNU:** The revised proposal focussed on development of Agroecosystem Service Index(ASI) as an advisory tool for farmers which will guide on soil health and support system vis-a vis mitigation of stubble burning in Western IGP. The committee felt that most of the cost was for the procurement of instruments related to soil analysis and expressed if the analysis part of the study could be outsourced. Proponent responded its inability due to requirements of continuous analysis. The committee decided to seek feedback from Ministry of Agriculture before further consideration of the proposal.
- (viii) **Multiple antenna high density ion generator for pollution control in New Delhi submitted by Science & Technology Park, Pune:** The proposal was recommended by DST for demonstration of the multiple antenna ion generator in Delhi to assess its effectiveness in bringing down levels of pollution in Delhi. Committee felt technology to be useful from perspective of pollution control. However, it was sceptical on implications of the negative ions on health of general public which may be exposed during

the demonstration. The committee decided to seek opinion of health experts, Ministry of Telecom & DST before agreeing for further consideration of the demonstration.

- (ix) **Development of hybrid land use regression model for spatially resolved exposure assessment of air pollutants and estimating the cardiovascular risk in Delhi city submitted by IIT Kanpur:** Based on the earlier recommendations of the PAAC-EPC, the revised proposal was submitted with reductions in both cost and timelines. During 7th meeting, the committee opined seeking feedback from MoEF&CC as it has also initiated health studies. The response from MoEF&CC was conveyed stating MoEF&CC's study to be carried out in 20 cities including Delhi shall be based on health surveys and spirometry analysis and will not cover component of modelling. The committee further advised proposal to be peer reviewed & discussed with health experts before its further consideration by PAAC-EPC.
- (x) **Cleaner Technologies for Industrial Pollution Control in Delhi submitted by NITIE, Mumbai:** The proposal was presented through video conferencing and intended to bring cleaner technologies in Industrial sectors in Delhi. The representative from Environment Department, Delhi government queried need for the study when as per recent studies, industrial sector is contributing less as compared to other sources in Delhi. Considering implementation of clean fuels and various industrial pollution control studies already carried out in Delhi, the committee advised that proposal may be forwarded to DPCC for comments.
- (xi) **Microscale air pollutant dispersion modelling for forecasting & management of air quality submitted by FLUIDYN Consultancy Pvt Ltd. Bangalore:** The proposal was related to Air Quality Management on a microscale environment using real-time monitoring/analysis, sources identification and forecasting using sensors & modelling tools. Proponents presented before the committee a case study of France wherein the system was used for air quality management in an outdoor stadium during sports event. The proponents however did not present any firm proposal for Delhi. The committee advised proponent to submit a firm proposal with clearly defined locations, methodology, deliverables & cost.
- (xii) **Proposal to study the regulatory effectiveness of the central pollution control board in relation to air pollution in the Delhi-NCR submitted by Vidhi Centre for Legal Policy:** PAAC-EPC during earlier meeting requested Vidhi to submit a revised proposal for a robust regulatory framework for air quality management in Delhi considering multiplicity of stakeholders involved vis-a vis functions of multiple agencies. Vidhi during 9th PAAC presented revised proposal for developing regulatory framework taking into consideration two major environmental concerns in Delhi i.e. Dust emissions from construction sites and waste burning. The PAAC-EPC, however opined for studying regulatory framework for Delhi considering various pollution sources vis-a vis role & responsibilities of agencies involved in air quality management. Vidhi was advised for resubmission of proposal after deliberation with CPCB.

C. Proposals for reconsideration

Following two proposals were screened out by DST, however, PAAC-EPC decided for reconsideration of these proposals through sub-committee PAAC-EPC:

- (iii) **Development of integrated multi-functional electric pole for reduction of air pollutants emanating from automobiles on roads of metropolitan cities submitted by Dr. Sunil Kumar Thamida, NIT, Warangal**

- (xiv) Design of low cost filters for separation of particulate matter and toxic gas from air submitted by IIT-Delhi

D. Proposals rejected

- (xv) Based on the recommendations of the DST, PAAC-EPC rejected proposal of design & development of a low-cost smoke level sensor for monitoring the agriculture stubble burning submitted by Forbes Marshall Pvt. Ltd.
- (xvi) **Investigations of the Impacts of Carbonaceous Aerosols & other short lived Climate Pollutants at Household level in Delhi-NCR and devising of mitigation measures submitted by Sriram Institute of Industrial Research:** The revised proposal was presented before the committee. The committee felt similar studies have already been carried out in the past also and the proposal submitted lacked clear approach and objectives. The PAAC-EPC rejected the proposal.

E. Other Issues

- (xvii) **Besides proposal, PAAC-EPC has accorded approval for the following:**

- As requested by DST, PAAC-EPC agreed to support funding of the meeting of the expert panel constituted by DST for Technology Solutions for Mitigating Air Pollution through EPC funds. Funding to include TA/DA to experts, Local transport, Expert fee & logistic charges for demonstration purpose as per government rules. Further M.S, CPCB was authorised to approve such requests.
- All the proponents at the time of submission of Expression of Interest(EoI) will submit undertaking submitting that funding has not been sought from other organization w.r.t to same proposal. The sanctioned proposals may also submit similar undertaking.
- CPCB in consultation with DST to constitute expert group for peer review of the proposals.

The meeting ended with vote of thanks to the Chair

List of participants:

1. Shri S. P. Singh Parihar, Chairman, Central Pollution Control Board
2. Dr. Prashant Gargava, Member Secretary, Central Pollution Control Board
3. Shri Satyendra Kumar, Deputy Secretary, MoEF&CC
4. Dr. V. K. Soni, Head, EMRC, IMD/MoES
5. Shri Rajan Kapoor, General Manager Coord (Ref), MoP&NG
6. Shri N. L. Goswami, Sr. Development Officer, DHI
7. Shri J. B. V. Reddy, Sc. 'D', DST, New Delhi
8. Shri Sandeep Singh, RO HSPCB, Faridabad
9. Shri M. Dwarakanath, SSO, Dept. of Environment, GNCTD
10. Shri K. M. Srivastava, AEE UPPCB, Noida
11. Ms. Sapna Srivastava, ASO UPPCB, Ghaziabad

List of Proponents:

1. Shri Sunil Gulia, Scientist Fellow, CSIR-NEERI, Delhi
2. Shri Sudheer Salana, Scientist Fellow, CSIR-NEERI
3. Shri Anand V. P., Scientist, CSIR-CSIO
4. Shri Robindro Lairenlakpam, Sr. Scientist, CSIR-IIP
5. Dr. D. B. Jadhav, Sc. 'F', Science and Technology Park, Pune
6. Shri Vikram Saraph, Group Director, Science and Technology Park, Pune
7. Prof. Usha Mina, Assoc. prof., JNU, New Delhi
8. Dr. Gazala Habib, Asst. prof., IIT Delhi
9. Dr. Rajeev Kumar Mishra, Asst. prof., DTU
10. Shri Shalendra Kumar Yadav, Research scholar, DTU
11. Dr. V. K. Varma, Joint Director, EPD, Shriram Institute
12. Dr. Jagdish Kumar, Asst. Director & Chief, Shriram Institute
13. Ms. Anju Singh, NIE, Mumbai
14. Shri Avick Sil, Regional Director, EPRI
15. Shri Alok Gupta, Head Regional, FLUIDYN
16. Ms. Geetanjali Sharma, Vidhi Centre for Legal Policy
17. Dr. Meena Sehgal, Fellow, TERI - Delhi

CPCB Officials:

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