

MINUTES OF 1ST TECHNICAL ADVISORY PANEL (TAP) MEETING - GREEN RATING PROJECT FOR FERTILIZER SECTOR

Date: 4th January, 2018

Venue: Centre for Science and Environment | 41, Tughlakabad Institutional Area, New Delhi-110062

OBJECTIVE OF THE MEETING

TAP is honorary advisory body with Green Rating Project. 1st TAP meeting was held to discuss about the Green Rating Project, Fertilizer sector key issues, selection criteria for Industries, deciding boundary of the study and questionnaire preparation.

PARTICIPANTS

The meeting was attended by following TAP members and CSE officials:

TAP members

Mr. I.D. Mall (Former Professor & Head- Department of Chemical Engineering- IIT Roorkee)

Mr. N.K. Verma (Former Additional, Director-CPCB, Sr. Project Coordinator, MoEF&CC),

Mr. S. Jaggia (Former Operation Director, KFL; Independent Director- KFL) and

Mr. V.S. Mathur (Executive Director, Corporate Governance Advisory Services)

CSE team members

Mr. Chandra Bhushan, Deputy Director General

Mr. Sanjeev K. Kanchan, Programme Manager

Ms. Sugandha Arora, Programme Officer and

Mr. Vinay Trivedi, Sr. Research Associate

The meeting started with a brief introduction of the attendees followed by a presentation by Mr. Sanjeev Kanchan on **“Green Rating Project – Process, Achievement & Plan”** which discussed about the green rating projects conducted by CSE previously in various sectors. This was followed by another presentation on **“India’s Fertilizer Sector – Overview and Key issues”** during which members discussed about the current scenario in fertilizer sector, existing environmental issues of the sector, approach to be followed for questionnaire preparation and secondary data collection and boundary of the study.

KEY POINTS DELIBERATED IN THE MEETING

On issues with fertilizer sector

- It was told that the subsidy regime was introduced in fertilizer sector to cover the difference between reasonable return on capital invested and administratively fixed maximum price of fertilizers for the benefit of the farmers. The method of calculation covered CAPEX + OPEX and other selected expenses + 12% return on Capital invested(Equity). Older plants had lower CAPEX compared to new Plants, hence had lower production cost thus lower reimbursement as subsidy. So much so that very old plants had NIL CAPEX. This was making revamp of old plants uneconomical where revamp was required and only newer plants were able to do revamps. When this was understood, a new Policy was framed to pay to urea manufacturers 85% of Import parity price of urea above 110% capacity utilization. The Urea Manufacturers found this attractive and lots of revamps were done and country benefitted a lot due to lesser import and lower payment outgo to industry. However this policy was scrapped in about 5 years. Now industry is paid only on the basis of older method of calculation without recognizing capital invested in revamps. Further GOI sue-motto fixed the new energy norms for different group of urea manufacturers to be effective from 01.04.2018 and left it to urea manufacturers to either revamp plants for reducing energy at their cost or loose payment for excess energy consumed. The subsidy payments to the manufacturer are also paid very late and thus they are forced to borrow from banks at heavy interest to meet working capital requirement.
- It was told that the SSP units are smaller, unorganized and majority are not members of FAI. However SPP units are not into rating purview, the team should keep this concern in mind.
- Team should also connect with FAI for the rating process.
- It was shared that many of fertilizer companies provide soil testing facilities to the farmer and suggest for fertilizer use.
- Team should do technology mapping of the companies to fetch information on revamping and technology upgradation in the plants.
- Many plants after revamping have got their capacity increased which is not accounted as baseline. This may be one of the reasons for showing higher capacity utilization.
- It was suggested to have the updated production data of all the 30 units for the year 2016-17 for analysis purpose.
- Kribhco Shyam Fertilizer limited (KSFL) is now Kribhco Fertilizer Limited (KFL). However, KFL is 100% subsidiary of KRIBHCHO but Management board of KFL is independent and from 14th January, YARA international will take over TCL, Babrala.
- Significance of neem coated urea was also discussed: Nearly 300-500 ppm neem oil is applied on the urea prills which helps in slow release of the nitrogen and better utilization (5-7%), acts as insecticide, reduces the possibility of its black-marketing to other industries. Other materials which increase fertilizer utilization are polycoating/formaldehyde. Some study claims that urea prill's coating by rubber milk can increase utilization upto 80%.

On sample selection and voluntary participation

- For plants having two or more units at same manufacturing site and utilizing common utilities, each plant data should be collected separately.
- For getting the confirmations from IFFCO, IGCL and GSFC, panel suggested to approach Dr. U.S. Awasthi, MD & CEO, IFFCO; Mr. Rajendra Sankhe, IGCL and Mr. A M Tiwari, IAS (Managing Director), GSFC. Customized letter need to be sent to these plants for participation.
- It was suggested not to include BVFCL Namrup units (2 nos.) in the sample as they are soon going to be closed permanently.
- RCF Trombay V plant has many manufacturing processes at the same site and is a bit complex to study. Similarly, processes at GNFC will also be little complicated.
- GSFC produces Phosphoric acid and ZIL is importing Phosphoric acid.

On boundary of the study

- Plants which are producing products other than urea like DAP & Complex will have additional facilities like phosphoric acid plant, Nitric acid plant, etc in the boundary of the plant. Other facilities can be excluded as proportioning is clear in these plants.
- Fertilizer use is not a plant specific subject. Therefore, plant's initiative to towards GHG emission reduction such as- techniques for urea coating for slow use, compost mixing, carbon disclosure, awareness to farmer etc can be captured.
- We should also try to include a brief report on SSP fertilizers. SSP units are small with no concern to safety, pollution and quality of product sent to the market.
- A report on bio-fertilizers can also be included. Bio-fertilizers can partially replace urea and, hence, can reduce huge subsidy burden.

On questionnaire preparation

- It was suggested to send questionnaire to units only in April as it will then be possible for us to capture the latest 2017-18 data.
- March 1st week was suggested for questionnaire finalization.
- For Naphtha/Fuel oil plants fire safety issues must be considered and for coal based handling and storage should be studied.
- Water balance, material balance and energy balance should be asked. Raw materials, processing chemicals and catalyst details must be accounted.
- Questionnaire should include only key indicators on design, operation, pollution source and control in each section.
- Since different technology group plants can have different energy saving technology possibilities. A list should be prepared of minimum energy saving technologies that urea plants must have.
- Water pricing, Groundwater quality and RWH etc, should be covered.
- The water consumption fertilizer sector has improved over the years. Present water consumption is around 5.5m³/tonne of Urea. Majority of water is used for cooling purpose. The

COC of cooling tower is in the range of 5-8. There are separate cooling towers for cooling NH₃, Urea and CPP process.

- ETP treated water from fertilizer an industry (urea) is generally used for horticulture purposes. It was told that few industries are also mixing untreated sewage in ETP for de-nitrification purpose.
- Soild wastes (Catalysts, Flyash, Oily waste, Hydraulic fuel oil etc.) generation, recycling and disposal should be captured.
- Certifications such as Environment management systems: ISO 140001, 18000 50000, SA8000 should be given weightage.
- We should also check the presence of on-site and off-site emergency preparedness plan of the plant.
- Any notice/directions/ cases/public complaints should be covered for compliance check.

On secondary data collection

- CSE should refer documents from and approach **FAI** for secondary data. FAI can facilitate the work by sharing their research within sector. FAI also has contacts with International Fertilizer Association (IFA). Global scenario data can be obtained from IFA.
- PAT scheme on fertilizer sector must also be studied for the purpose of secondary data.
- It was suggested to get FAI Book on 'Handbook of Technology' and 'Fertilizer Statistics', go through Hanumanta Rao committee report and B. B. Singh committee report to understand the technology comparison for ammonia and urea plant.

FUTURE PLAN & STRATEGY

Following tentative timelines have been discussed for further activities of Green Rating Project.

| S. No. | Planned Activity | Timeline (2018) |
|--------|---|-------------------|
| 1. | Questionnaire finalization | Mid- March |
| 2. | Plant surveys starts | March-April |
| 3. | Questionnaire analysis | April-May |
| 4. | Review and analysis of collected data and finalization of indicators for rating | September/October |
| 5. | Rating finalization and shortlisted industry visit | December |

Next TAP meeting will be on finalization of the questionnaire. Team will send the draft questionnaire to the TAP member well in advance.

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