

Minutes of the 1st Sector Learning Group Meeting of the Cement Sector



22nd & 23rd June, 2015, Jodhpur
(Rajasthan)

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The first Sector Learning Group (SLG) meeting of the Cement Sector was organized on 22nd June, 2015 at Jodhpur (Rajasthan). This SLG meeting was extended as a panel discussion between SLG members at the Cement Sector Best practice workshop organized on 23rd June, 2015, at Jodhpur (Rajasthan), to get feedback and suggestions of a wider set of stakeholders present in the workshop on the strategy, approach and key focus areas of SLG for the cement sector. The SLG meeting and best practice workshop was hosted by J K White Cement Works, Gotan (Rajasthan).

The Knowledge Exchange Platform (KEP) initiative was formally launched by Bureau of Energy Efficiency (BEE) in association with Institute for Industrial Productivity (IIP) on 26th February, 2015 for transfer of best practices in industries covered under the Perform Achieve and Trade (PAT) scheme. A joint Action plan of BEE and IIP detailing the roadmap for KEP was released at this launch event. In line with the commitments made in the Action Plan, the SLGs have been constituted for each of the PAT sector, which have representation from Industry Association, industry leaders and technical experts and will act as advisory group for development and implementation of sector specific strategies for KEP. The SLG members will also help in expanding the network of experts and developing strategy to promote peer to peer learning, outreach and rapid uptake of best practices and new technologies within each sector.

The list of the members of Cement sector SLG is at [Annexure-1](#). The members of Cement SLG, and invitees who participated in the first SLG meeting is at [Annexure-2](#) and the detailed agenda of the meeting is at [Annexure 3](#).

The meeting started with the welcome note by Shri. K. K. Chakarvarti, Expert Consultant, BEE. On behalf of Bureau of Energy Efficiency and Institute for Industrial Productivity, he welcomed the joint chairs and members to the first SLG meet for the cement sector. He started with the introduction of the mandate of KEP and the role of SLG members. He mentioned that KEP will be able to fulfil its objectives only with the pro-active industry support and emphasized on the need for constant input and feedback mechanism between industry and KEP.

This was followed by a presentation (provided at Annex-4) by Ms. Ritu Bharadwaj, Senior Program Manager, IIP, providing an overview of the KEP initiative detailing its objectives and key focus areas. She also updated the SLG members on the progress made under KEP and the expectations from of SLG members to support KEP in achieving its desired objectives.

The SLG discussion was initiated with opening remarks by Shri N A Viswanathan, Secretary General, Cement Manufacturers' Association and Shri B. K. Arora, President (Works), J K White Cement Works, who were nominated as the Joint Chairs by the SLG members present in the meeting on 22 June, 2015.

Shri N A Viswanathan, in his opening remark, emphasized that Knowledge Exchange Platform is an important initiative to help support cement industry in achieving its energy efficiency targets. He advised the members that initiatives like KEP can only be successful through a collaborative approach, continuity of interactions and openness to share experience and learning's. He mentioned that there is also a need for strong commitment and conviction of all SLG members to share information and ensure sustainability of KEP.

Shri B K Arora, in his opening remark, highlighted that 'exchange' is the most important element of the KEP initiative, for which effective strategies need to be worked out. He mentioned that achieving energy efficiency requires innovation, which often involves risk and high chances of failures, but even the failures provide a lot of learning's and KEP can focus on these aspects as well. He suggested that the ground level employees in cement plants are important for successful adoption on any new energy efficiency technology or approach and it is important to include them in the capacity building effort of KEP. Shri Arora assured of continued support by J K White cement to the KEP initiatives in future as well.



Shri N A Viswanathan and Shri B K Arora with SLG members and invitees at the SLG Meeting on 22nd June 2015

The SLG meeting that extended on 23 June, 2015, as a panel discussion in the Cement Sector best practice workshop on 23 June, 2015, was Chaired by Shri K. N. Rao, Director (Energy & Environment), ACC Limited. Shri Rao mentioned that, PAT scheme is although imposing targets

on the industry, but it also offers tremendous opportunity for saving resources as well as providing better financial returns to the industry. This is particularly important because the Indian cement industry is rapidly growing with increasing market demand where investment in energy efficient technologies would be important to not just ensure compliance with PAT but also to ensure sustainability of the industry as a whole. As second cycle of PAT is expected to have new targets, initiatives like KEP can play an important role in supporting industries meet these targets by bringing in international technologies and promoting exchange of best practices within the industry. He also mentioned that, it is important to sustain KEP beyond the span of 2 years for which industry will need to sit together and work out appropriate revenue models.



Shri K N Rao with panelists at the workshop on 23rd June 2015

The key discussion points and decision taken by the SLG members are as follows:

1. It was suggested that, KEP sectoral best practice workshops could also be theme specific with focus on specific process related aspects, for example clinker manufacturing, clinker coolers, raw meal grinding etc. as well as aspects related with maintenance and management system models like six sigma, quality circles, Kaizen etc. Apart from this, thermal energy conservation also plays an important role in achieving energy efficiency in cement industry, as it constitutes almost 70 % of the total energy consumption. Therefore, specific best practice workshop focused on thermal energy could also be organized.

[Action to be taken:KEP]

2. Shri K N Rao offered to support 2nd Cement sector Workshop at ACC, Chanda Plant (Maharashtra) for sharing of best practices. Similar offer was also conveyed by Shri Sanjay Jain, Asstt. Executive Director, Dalmia Bharat Cement Limited and representative from My Home Industries Limited to hold Cement Workshop to cover cement industries in the Southern part of India.

*[Action to be taken: ACC Ltd, Dalmia Bharat Cement Ltd, My Home Industries Ltd and
KEP]*

3. Sharing of best practices across sectors was identified as a very important area for enhancing performance of the cement industry. The members particularly identified the industry sectors as well as the key areas in which they could learn from the best practices being adopted by them. Thermal Power Stations, Iron & Steel, Aluminium and Pulp & Paper sector were identified as these key sectors from where cross-sectoral transfer of best practices could be facilitated by KEP. These were suggested in the areas of Waste Heat Recovery (WHR) from Iron & steel industry; grinding technology from Thermal Power, Aluminium and Sponge iron sector; Fan efficiency from Aluminium sector and Pumping efficiency from Pulp & paper sector. It was agreed that, KEP would catalyze cross sectoral knowledge transfer through the Forum of Industry Association constituted by BEE as well as by inviting cement fraternity in the best practice workshop of the sectors identified for knowledge transfer. It was informed that, KEP is planning the Pulp and Paper sector workshop at India Habitat Center on 21st August, 2015 and Thermal Power sector workshop at Dahanu, Maharashtra in the month of October/November, 2015. Cement sector representatives would be invited, as appropriate, in these workshops to facilitate sharing of cross sectoral best practices. Interactions of cement sector with thermal power sector will be of particular importance, as majority of cement plants have captive power plants and there will be a lot of opportunity to learn from best practices being adopted by thermal power sector.

[Action to be taken: KEP]

4. The members felt that, the Friendly Energy Efficiency exchange visits under KEP initiative would promote a healthy learning environment and an opportunity to gain practical knowledge on the best practices of the other industries and they agreed to support it by pledging to offer their plants for such exposure visits. Shri K. N. Rao announced that all 16 plants of their group will participate in the friendly exchange visits. It was agreed that, the initial approach to facilitate the friendly energy efficiency exchange visits will be to encourage the Industry to volunteer to be a part of this initiative, where energy professionals from one plant may visit another plant (within a particular sector or cross-sector), whoever agree to receive and send them. Post the completion of the mentioned approach, cross-cluster approach may be followed under this component.

[Action to be taken: ACC Ltd and KEP]

5. To support the agenda of international best practice sharing and scale up, it was proposed that, SLG may jointly work with KEP, to identify technology gaps and support KEP in preparing a database of key technologies that can help bridge this gap. KEP would then help in facilitating linkage of the industry with international technology suppliers/ service providers in targeted areas.

[Action to be taken: SLG and KEP]

6. It was suggested that, the sectoral workshops could also have presentations from international industries and technology providers on best practices. IIP through its network in China and other parts of the world would help in facilitating this.

[Action to be taken: IIP]

7. It was agreed that, KEP should not limit to sharing of innovative technologies but should also cover other issues like policy discussions on finance, trading, Alternate fuels and raw materials. These could be taken up through policy roundtables meetings, workshops and blogs. It was also proposed that, the second PAT cycle was one of the key areas that should be picked up by KEP for policy discussions. It was felt that the first cycle of PAT had come out with a lot of learning's which could be used for the design and implementation of 2nd cycle of PAT and KEP can help in facilitating these discussions.

[Action to be taken: KEP]

8. It was suggested that, SLG members may work jointly with KEP to bring in international technology providers and should asses the economic and commercial viability of the technologies.

[Action to be taken: SLG and KEP]

9. It was agreed that, training particularly of the operation staff was very important for successful adoption of energy efficiency technologies and practices. It was suggested that, cement industry could use existing 4 Regional Training Centers of cement industry for capacity building of their staff. It was also suggested that, many cement plants have adopted innovative models and they could be encouraged to develop energy efficiency operational manuals based on their best practices in vernacular language, so that it could be used for training of operators in other industries, as relevant. These manuals can also have pictorial representation so as to make it easier for the workforce to follow the practice.

[Action to be taken: Cement Plants and KEP]

10. An important technical area for immediate intervention of KEP was to promote the use of hazardous waste (SPL) generated by Aluminium industry as an Alternate fuel in cement industry. Although SPL has high calorific value and can be used as an alternative fuel in cement industry, it is not being adopted because of presence of cyanide (which is a hazardous chemical) as a result of which it cannot be used directly by the cement industry. There are international technologies available that can help in segregating cyanide from SPL after which it can be used as a fuel in cement industry. It was proposed that, KEP would help in bringing in information regarding these technologies and also facilitate discussions with the aluminium sector to jointly work out the strategies to unblock the existing barriers to the use of SPL from Aluminium sector in the cement industry.

[Action to be taken: SLG Aluminium, SLG Cement and KEP]

11. The policy and regulatory barriers with regard to use of Alternative fuels and raw materials in cement industry was identified key bottle-neck to promote the use of available waste as a fuel in cement industry. IIP has come out with five white papers for policy reforms in some of the priority areas and is working closely with Central and State Pollution Control Boards to bring out regulatory amendments. It was agreed that IIP would work closely with SLG to deal with some of the existing policy and regulatory issues being faced by the cement industry.

[Action to be taken: IIP and SLG]

12. It was proposed that, KEP with the help of Industries and technology providers should prepare a best practice compendium, in which, there can be case studies from the user side (Industry) and the supplier side (technology provider), which will make it easier to broadly understand the implementation benefits from both ends.

[Action to be taken: KEP]

13. It was suggested that, KEP can create an online interactive forum for key stake holders in the sectors to facilitate feedback, discussion and exchange of information. To facilitate this, KEP will launch a website with specific features that would support such interactions and online discussions.

[Action to be taken: KEP]

The discussion was followed by concluding remarks from the joint chairs.

Shri B K Arora mentioned that, industries should come forward to share their knowledge and best practices to enable the continuous adoption of energy efficiency practices and technologies. To achieve this, there is a need for free flow of information and technologies under KEP. He also said that the industries will have good learning from this platform and should actively participate in such deliberations and try to gain as much from this “Gyan Sagar”.

Shri Rao mentioned that, a significant portion of the energy can be saved through better technologies, which in many cases involve small investment like low cost retrofits, use of energy efficient devices and controls etc. or simply by better management measures. Many industry leaders have adopted energy efficiency measures and achieved both energy savings and better economic returns under the PAT initiative. However, in order to accelerate the pace of these efforts and achieve transformational impact, it is important that there is an active collaboration of industries with a platform like KEP to transfer their best practices to others. He summed up the discussion by saying “Let the water flow and we shall be sincere in delivering”.

In the end, Ms. P Samal, Asstt. Energy Economist, BEE, thanked the SLG Members for sharing their inputs and urged the industry to treat KEP as their own initiative.

Shri K. K. Chakarvarti and Ms. Ritu Bharadwaj conveyed that KEP will act as a linkage between the industry and BEE for 2nd cycle of PAT. They also conveyed their sincere gratitude to M/s. J K White Cement and its officials for extending their support and making all arrangements for hosting the first SLG meet and first workshop on “Best Practices in Energy Efficiency in Cement Sector” at Jodhpur, Rajasthan.

The meeting and discussion ended with a vote of thanks to Joint Chairs and all the members.

Members of the Cement Sector learning Group

S.No.	Name	Designation	Organization	
1	Shri S. K. Wali	Wholetime Director	J. K. Lakshmi Cement Ltd.	Chairman
2	Shri. K. N. Rao	Director	ACC Ltd.	Co-Chair
3	Shri L. Rajasekar	Executive President	UltraTech cement Ltd.	Co-Chair
4	Shri K. K. Chakarvarti	Expert Consultant	Bureau of Energy Efficiency	Member
4	Shri R. Bhargava	Vice President	Shree Cement Ltd.	Member
5	Shri Rajeev Sharma	Vice President (Technical)	J K White Cement	Member
6	Shri Sanjay Jain	Asstt. Executive Director	Dalmia cement (Bharat) Ltd.	Member
7	Dr. G. V. K. Prasad	Executive President (Oprn.)	The K. C. P. Ltd.	Member
8	Shri Ashwani Pahuja	Director General	NCCBM	Member
9	Dr. S.K. Handoo	Advisor (Technical)	CMA	Member
10	Ms. P. Samal	Asst. Energy Economist	Bureau of Energy Efficiency	Member
11	Shri Girja Shankar	Asst. Energy Economist	Bureau of Energy Efficiency	Member
12	Shri Gaurav Sharma	Program Officer	Knowledge Exchange Platform	Member

List of members and invitees who attended the Cement SLG meeting**on 22nd June, 2015 & 23rd June 2015 at Jodhpur (Rajasthan)**

S.No.	Name	Designation	Organization
1	Shri B K Arora	President (Works)	J K White Cement Works
2	Shri N. A. Viswanathan	Secretary General	Cement Manufacturer Association(CMA)
3	Shri K. N. Rao	Director (Energy & Environment)	ACC Limited
4	Shri K. K. Chakarvarti	Expert Consultant	Bureau of Energy Efficiency
5	Shri Biswajit Dhar	Sr. Vice President	Ultratech Cement Ltd.
6	Shri Rajeev Sharma	Vice President (Technical)	J K White Cement Works
7	Shri Sanjay Jain	Asstt. Executive Director	Dalmia cement (Bharat) Ltd.
8	Shri Ashutosh Saxena	Jt. Director	NCBM
9	Shri Tapendu Datta	Head - Energy Conservation & Renewable Energy & Projects	ACC Limited
10	Shri Dominic Fernandes	General Manager	ACC Limited
11	Shri Anil Badgoti	AVP (Com)	JK White Cement Works
12	Shri Arvind Asthana	Sr. Technical Expert	GIZ
13	Shri S. Vikash Ranjan	Technical Expert	GIZ
14	Ms. P Samal	Asstt. Energy Economist	Bureau of Energy Efficiency
15	Ms. Ritu Bharadwaj	Senior Program Manager	IIP India
16	Shri Nakul Sharma	Program Manager	BHC
17	Ms. Vinni	Program Associate	Knowledge Exchange Platform

Agenda of the Cement SLG meeting on 22nd June, 2015

**At Indana Palace, Opp. Military officer Quarter, Benayakiya Road, Shikargarh,
Jodhpur (Rajasthan)**

6.00 pm-7.30 pm on 22nd June, 2015(Monday) Hosted by J.K. White Cement, Gotan

6.00pm - 6.10 pm	<ul style="list-style-type: none"> • Opening Remarks by Joint Chairs • Presentation on KEP Initiatives by Ms. Ritu Bharadwaj, Senior Program Manager, IIP
6.10pm - 7.30pm	<p>Agenda for Discussions:</p> <ol style="list-style-type: none"> 1. Future Strategies to be adopted by KEP to promote energy efficiency in Cement Sector 2. To advise on Sector themes and cross sectoral themes and areas where the sectoral knowledge can be of use to other sectors 3. Guidance on Friendly Energy Efficiency Exchange visits within the sector 4. To help in mapping of innovative, new and cutting edge technologies for Cement sector 5. To help expand the network of experts within sector 6. To help develop strategy to promote peer to peer learning, outreach and rapid uptake of best practices and new technologies 7. To act as a node for initiating policy discussion Forums on themes those are of interest to the sector 8. Help KEP Secretariat in identifying technological gaps where international best practices/technology providers can be brought in for the benefit of the sector 9. Advise on various revenue models to make KEP a self-supporting initiative beyond the initial incubation period 10. Any other Agenda with the permission of Chair <p>Concluding Remarks by Chair</p>

Presentation on KEP Initiatives

**Cement Sector
1st SLG Meeting**

Knowledge Exchange Platform

Rationale behind KEP

- Industry accounts for more than half of the total commercial energy use in India (700 MTOE)
- Industry is energy intensive and offers good scope for energy savings and GHG mitigation through rational use of energy
- High bandwidth of specific energy consumption across units within a sector
- Better performing units desperately seeking information on innovative approaches and new opportunities to take them to next level
- Significant opportunities of learning across industry sectors
- Indian success stories can be good examples for neighboring countries/LDCs to follow

KEP is designed to provide a vibrant platform, anchored at BEE, to promote knowledge transfer with active industry participation.

KEP Objectives

- To encourage peer to peer learning by facilitating knowledge and information transfer within a particular sector
- Facilitate exchange of information and best practices across industry sectors in areas that have high replication potential
- Sharing of knowledge and capacity building on new and innovative approaches through international best practices
- Facilitate Policy Discussion Forums on Trading, Financing and other cross cutting issues

KEP: Vision

Short to medium term

Develop KEP as a vibrant Platform for sharing of knowledge and experience to support BEE and the industry in implementation of the PAT scheme

Long-term

Develop KEP as a self supporting Regional knowledge hub to promote Energy Management System (EnMS) in the industry sector

KEP: the Journey So Far

- KEP formally launched on 26th February, 2015 and a Secretariat for management of KEP established at BEE
- A joint Action plan of BEE and IIP detailing the roadmap for KEP released by Shri P. K. Sinha, Secretary, Ministry of Power
- SLGs constituted for all PAT sectors - 1st SLG meeting of Aluminium and Cement sectors are planned on 20th June, 2015 and 22nd June, 2015 respectively
- Sector level workshops and technology exhibitions being organised in partnership with Industry
 - Started this series with Aluminium Sector workshop in April, 2015 in partnership with Sesa Sterlite Limited
 - next sector-specific workshop is being planned for Cement sector in June, 2015 at Jodhpur (Rajasthan) in partnership with JK Cement
 - Paper and Pulp sector (at New Delhi), Textile sector (at Thane, Maharashtra) and Thermal Power Sector (at Dahanu, Maharashtra) workshops planned over next quarter
- Series of 'Blogs' initiated- first on 'Normalisation', where every queries of Industry and other stakeholders were addressed
- Facilitation of friendly energy efficiency exchange visits to encourage active learning- so far very positive response from industry
- Design and development of KEP website underway

Role of SLG

To ensure ownership of the industry and to act as a sounding board in matters relating to the sector

- To advise on the theme/contents and timing of the sectoral workshops
- To facilitate contribution from the sector in newsletters, roundtables etc.
- To advise on cross sectoral themes and areas where the sectoral knowledge can be of use to other sectors
- To act as a node for initiating policy discussion Forums on themes that are of interest to the sector
- Help KEP Secretariat identify international best practices/technology providers for the benefit of the sector
- Advise on field visits/exposure visits within and across the sectors for dissemination of success stories
- To advise on developing resources for the website that would be of interest to the sector
- Advise on various revenue models to make KEP a self supporting initiative beyond the initial incubation period



Feedback, comment and suggestions
requested at kep@beenet.in