The first Sector Learning Group (SLG) meeting of the Iron & Steel Sector was organized on 3rd March 2016, at Raipur, Chhattisgarh.

The Knowledge Exchange Platform (KEP) initiative was 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 Institute for Industrial Productivity (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 First meeting of SLG Iron & Steel was held under the Chairmanship of Shri Vivek Agrawal, Chief Operating Officer, Godawari Power & Ispat Limited. The list of the members of Iron & Steel SLG is at Annexure-1. The members of Iron & Steel 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 Chairman, Shri Vivek Agrawal, Chief Operating Officer, Godawari Power & Ispat Limited and members to the first SLG meet for the iron & steel sector.

This was followed by a presentation (Annexure-4) by Shri Chakarvarti, providing an overview of the KEP initiative detailing its objectives and key focus areas. He informed the members that Knowledge Exchange Platform (KEP) has made considerable progress towards achievement of its objectives, in particular getting active involvement of the industry sector. He 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. To enhance the effectiveness of this platform, he requested industry to actively participate in meetings and round table discussions, willing to share knowledge and forward constant feedback and suggestions to KEP.

The SLG discussion was initiated with opening remarks by Chairman, Shri Vivek Agrawal, Chief Operating Officer, Godawari Power & Ispat Limited.

Shri Agarwal, in his opening remarks, mentioned KEP is a robust platform which will help industries to prepare an action plan to reduce their energy consumption and contribute their bit in the national energy saving goals. He requested the industry members to come forward with commitment in order to scale up this initiative and explore various strategies and in-house operations to enhance energy efficiency.
SLG members and invitees at the SLG Meeting on 3rd March, 2016

The opening remarks by the Chairman were followed by agenda wise discussion between SLG members.

The key discussion points and decision taken by the SLG members under each agenda item is as follows:

**Agenda no. 1: Future Strategies to be adopted by KEP to promote energy efficiency in Iron & Steel Sector**

1. It was discussed that, small group activities should be promoted in the industries through KEP which would help industries to develop work that is satisfying and fulfilling by raising workers’ capabilities and making effective use of their ingenuity and also contribute to the improvement and development of the industry.

   [Action to be taken: KEP]

2. It was suggested that a separate section of Iron & Steel sector can be created on KEP website which would comprise of energy efficiency benchmarking of the best operating industries, which would help other industries to reduce their energy consumption. Representatives from Chhattisgarh State Renewable Energy Development Agency (CREDA) agreed to provide technical assistance to support this agenda.

   [Action to be taken: KEP and CREDA]
Agenda No. 2: To advise on Sector themes and cross sectoral themes and areas where the sectoral knowledge can be of use to other sectors

1. Sharing of best practices across sectors was identified as a very important area for enhancing performance of the iron & steel 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. Cross-sectoral transfer of various best operating practices in automation. Measurements, technology parameters in Cement kilns, measurement and monitoring could be facilitated by KEP.

   [Action to be taken: KEP]

Agenda 3: Guidance on Friendly Energy Efficiency Exchange visits within the sector

1. Members were requested to submit the consent forms of their plants on Friendly Energy Efficiency Exchange Visits to KEP, which have already been circulated to them. At the end of these friendly energy efficiency exchange visits, the DCs would be required to submit a simple form providing information of the new technology/best practices that was learned by the participating DCs. The SLG members suggested that BEE may write a letter to top management (CEO/CMD) on this subject, so as to expedite the entire process.

   [Action to be taken: BEE and SLG]

Agenda 4: To help in mapping of innovative, new and cutting edge technologies for Iron & Steel sector

1. The SLG members would help KEP in identifying innovative cross-cutting technologies available both at national as well as international level.

   [Action to be taken: SLG and KEP]

Agenda 5: To help expand the network of experts within sector

1. It was proposed that, industries can nominate the sector-specific experts and forward their names to KEP for uploading this consolidated information. This will help in development of database of sector-specific experts that will be put up on the KEP website.

   [Action to be taken: SLG and KEP]

Agenda 6: To help develop strategy to promote peer to peer learning, outreach and rapid uptake of best practices and new technologies

1. It was proposed that the SLG members would help in developing a strategy to promote this agenda.

   [Action to be taken: SLG]
Agenda 7: To act as a node for initiating policy discussion Forums on themes those are of interest to the sector

1. It was agreed that issues pertaining to policy discussions would be dealt at the level of SLG. It was proposed that, the second PAT cycle was one of the key areas that should be picked up by KEP for policy discussions. This was particularly important as new DCs are expected to join the next PAT cycle. It was discussed that more standardization needs to be brought in the 2nd cycle of PAT particularly in view of all the learnings that have been generated from the 1st cycle of PAT. KEP through policy discussion forums between BEE and industry can help in achieving this.

[Action to be taken: BEE and KEP]

Agenda 8: Help KEP Secretariat in identifying technological gaps where international best practices/ technology providers can be brought in for the benefit of the sector

1. It was proposed that SLG members would assist KEP in identifying innovative cross-cutting technologies available both at national as well as international level.

[Action to be taken: SLG and KEP]

Agenda 9: Advise on various revenue models to make KEP a self-supporting initiative beyond the initial incubation period

1. It was discussed that it is important to evolve KEP as a self-sustaining initiative for which SLG will work jointly with KEP to identify viable revenue model.

[Action to be taken: SLG and KEP]

The discussion on the agenda points was followed by concluding remarks from the Chairman. Shri Vivek Agrawal 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. He requested the industries to share their best practices with KEP so that it can be published on KEP Website.

Members also appreciated the support provided by Godawari Power & Ispat Limited to KEP in the organisation of the SLG Meeting and Workshop on Best Practices in Energy Efficiency in Iron & Steel sector on 3rd March, 2016 and 4th March, 2016 respectively at Raipur, Chhattisgarh.

In the end, Shri K. K. Chakarvarti on behalf of BEE and IIP, thanked the Chairman and SLG Members for sharing their inputs and urged the industry to treat KEP as their own initiative.

*****
## ANNEXURE 1

### Members of the Iron & Steel Sector learning Group

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Name</th>
<th>Designation</th>
<th>Organization</th>
<th>Role</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Shri Pranab Sarkar</td>
<td></td>
<td></td>
<td>Member</td>
</tr>
<tr>
<td>2</td>
<td>Ms. Bonya Mukherjee</td>
<td>AGM(EMD)</td>
<td>Bhilai Steel Plant</td>
<td>Member</td>
</tr>
<tr>
<td>3</td>
<td>Shri K K Chakarvarti</td>
<td>Expert Consultant</td>
<td>Bureau of Energy Efficiency</td>
<td>Member</td>
</tr>
<tr>
<td>4</td>
<td>Shri Anil Kumar Singh Rana</td>
<td>Sr. General Manager</td>
<td>SMS</td>
<td>Welspun Steel Ltd.</td>
</tr>
<tr>
<td>5</td>
<td>Shri Nimish Parikh</td>
<td>Head Energy Management</td>
<td>Essar Steel India Ltd</td>
<td>Member</td>
</tr>
<tr>
<td>6</td>
<td>Shir Deependra Kashiva</td>
<td>Executive Director</td>
<td>SIMA</td>
<td>Member</td>
</tr>
<tr>
<td>7</td>
<td>Shri K Sudhakar</td>
<td>DGM(O)-EMD</td>
<td>Visakhapatnam Steel (RINL)</td>
<td>Member</td>
</tr>
<tr>
<td>8</td>
<td>Shri Partha Chattopadhyay</td>
<td>Chief Operating Officer (Sponge Business)</td>
<td>Tata Sponge</td>
<td>Member</td>
</tr>
<tr>
<td>9</td>
<td>Shri Kumar Rohit</td>
<td>Dy.Mgr</td>
<td>Jindal Steel and power Limited., Raigarh</td>
<td>Member</td>
</tr>
<tr>
<td>10</td>
<td>Shri Baljeet Singh</td>
<td>Sr.GM(E&amp;I) &amp; Energy Auditor</td>
<td>Aarti Steels Ltd</td>
<td>Member</td>
</tr>
<tr>
<td>11</td>
<td>Shri Vishwas M Joshi</td>
<td>Energy Manager</td>
<td>M/s Mukand Ltd</td>
<td>Member</td>
</tr>
<tr>
<td>12</td>
<td>Shri Sameer Pandita</td>
<td>Asst. Energy Economist</td>
<td>Bureau of Energy Efficiency</td>
<td>Member</td>
</tr>
<tr>
<td>13</td>
<td>Shri Girja Shankar</td>
<td>Asst. Energy Economist</td>
<td>Bureau of Energy Efficiency</td>
<td>Member</td>
</tr>
<tr>
<td>14</td>
<td>Ms. Vinni</td>
<td>Project Officer</td>
<td>Knowledge Exchange Platform</td>
<td>Member</td>
</tr>
</tbody>
</table>
**ANNEXURE 2**

**List of members who attended the Iron & Steel SLG meeting on 3rd March, 2016**

<table>
<thead>
<tr>
<th>S. No.</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>Shri Vivek Agrawal</td>
<td>Chief Operating Officer</td>
<td>Godawari Power and Ispat Limited</td>
</tr>
<tr>
<td>2</td>
<td>Shri K K Chakarvarti</td>
<td>Expert Consultant</td>
<td>Bureau of Energy Efficiency</td>
</tr>
<tr>
<td>3</td>
<td>Shri Anil Kumar Singh Rana</td>
<td>Sr.General Manager</td>
<td>SMS</td>
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<tr>
<td>4</td>
<td>Shri Kumar Rohit</td>
<td>Manager</td>
<td>Jindal Steel and power Limited, Raigarh</td>
</tr>
<tr>
<td>5</td>
<td>Shri Rajeev Gyani</td>
<td>Executive Engineer</td>
<td>CREDA</td>
</tr>
<tr>
<td>6</td>
<td>Shri Sanjeev Jain</td>
<td>Chief Engineer</td>
<td>CREDA</td>
</tr>
<tr>
<td>7</td>
<td>Shri Kamran Shaikh</td>
<td>Assistant Engineer</td>
<td>CREDA</td>
</tr>
<tr>
<td>8</td>
<td>Shri Vinod Pillai</td>
<td>Director</td>
<td>Godawari Power and Ispat Limited</td>
</tr>
<tr>
<td>9</td>
<td>Shri T Bose</td>
<td>Head Corporate Affairs</td>
<td>Godawari Power and Ispat Limited</td>
</tr>
<tr>
<td>10</td>
<td>Shri Lakshman Prasad</td>
<td>Advisor [Mineral Resources and Environment]</td>
<td>Godawari Power and Ispat Limited</td>
</tr>
<tr>
<td>11</td>
<td>Shri Anil Kumar Patra</td>
<td>AVP - S.Iron-Production</td>
<td>Electrotherm India Limited</td>
</tr>
<tr>
<td>12</td>
<td>Shri Vishal Vashishtha</td>
<td>Energy Manager</td>
<td>Nalwa Steel and Power Ltd</td>
</tr>
<tr>
<td></td>
<td>Name</td>
<td>Position</td>
<td>Organization</td>
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</tr>
<tr>
<td>13</td>
<td>Shri Debashis Roy</td>
<td>Manager</td>
<td>Nalwa Steel and Power Ltd</td>
</tr>
<tr>
<td>14</td>
<td>Shri V V Gokhale</td>
<td>Sr Manager Operation</td>
<td>JSW Steel Dolvi</td>
</tr>
<tr>
<td>15</td>
<td>Shri Yogesh Mhatre</td>
<td>Asst Manager E &amp; A</td>
<td>JSW Steel Dolvi</td>
</tr>
<tr>
<td>16</td>
<td>Shri A. K. Asthana</td>
<td>Sr. Technical Expert</td>
<td>GIZ</td>
</tr>
<tr>
<td>17</td>
<td>Ms. Vinni</td>
<td>Project Officer</td>
<td>Knowledge Exchange Platform</td>
</tr>
</tbody>
</table>
SECTOR LEARNING GROUP (SLG) MEET FOR IRON & STEEL SECTOR
3rd March, 2016 (Thursday)
at Raipur, Chhattisgarh

PROGRAM AGENDA

<table>
<thead>
<tr>
<th>Time</th>
<th>Agenda</th>
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<tbody>
<tr>
<td>06.00pm - 06.05pm</td>
<td>• Welcome address by KEP</td>
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<tr>
<td>06.05pm - 06.10 pm</td>
<td>• Opening Remarks by Chairman of SLG</td>
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<tr>
<td>06.10am-07.15 pm</td>
<td>Agenda for Discussions:</td>
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<tr>
<td></td>
<td>1. Future Strategies to be adopted by KEP to promote energy efficiency in Iron &amp; Steel Sector.</td>
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<td>2. To advise on Sector themes and cross sectoral themes and areas where the sectoral knowledge can be of use to other sectors.</td>
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<td>8. Help KEP Secretariat in identifying technological gaps where international best practices/technology providers can be brought in for the benefit of the sector.</td>
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<td></td>
<td>9. Advise on various revenue models to make KEP a self-supporting initiative beyond the initial incubation period.</td>
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<td>10. Any other Agenda with the permission of Chair.</td>
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Concluding Remarks by Chairman

07.30pm               DINNER
Presentation on KEP Initiative

KNOWLEDGE EXCHANGE PLATFORM-
1st Sector Learning Group Meet for
Iron & Steel Sector
3rd March, 2016

Rationale behind KEP

- 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
- Sectors covered under PAT Scheme needs to be supported with knowledge exchange and capacity building

KEP is designed to provide a vibrant platform, anchored at BEE, to promote knowledge transfer with PAT industry participation.
KEP Objectives and Vision

- 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: Major progress achieved so far

- KEP Secretariat established at BEE
- Formal launch of KEP on 26th February 2015 (attended by 400 participants)
- MoU signed between BEE and IIP on 26th February, 2015
- KEP Action plan released by Secretary, MoP
- The inaugural issue of KEP newsletter released by Secretary, MoP
KEP LAUNCH

KEP: Major progress achieved so far

First Best Practices Workshop for Aluminium Sector held at Jharsuguda on 24th April, 2015 and attended by around 190 participants.
KEP: Major progress achieved so far

First Best Practices Workshop for Cement Sector held at Jodhpur on 23rd June, 2015 and attended by around 150 participants.

Participants at the Pulp & Paper Workshop
KEP: Major progress achieved so far

First Best Practices Workshop for exchange of Best Practices in Thermal Power Sector organised on 28th October, 2015 attended by around 230 participants

Shri Rajendra Nandi, Project Director, Sr. Vice President, Dahanu Thermal Power Station, delivering his inaugural address

Participants at the 1st Thermal Power Sector Workshop

KEP: Major progress achieved so far

First Best Practices Workshop for exchange of Best Practices in Textile Sector organised on 28th November, 2015,

Shri Harish K Chatterjee, Vice President (Manufacturing), Raymond Limited, delivering his inaugural address

Participants at the 1st Textile Sector Workshop
KEP: Major progress achieved so far


![Participants at the 1st Fertiliser Sector Workshop](image1)

Policy Roundtable on “Efficient Market for ESCerts in India” on 6th August 2015 at Bureau of Energy Efficiency, New Delhi

![Participants at the Roundtable on Efficient Market for ESCerts in India](image2)
Policy Roundtable on “Promoting Use of Spent Pot Liners (SPL) in Cement Co-processing” on 22nd September, 2015 at BHABHA Chamber, SCOPE Convention Centre, New Delhi

Participants at the Roundtable on Promoting Use of SPL in Cement Co-processing

First Joint Task Force meet on “Promoting use of Spent Pot Liners in cement co-processing” on 8th January, 2016 at India Habitat Centre

Participants at the First Joint Task Force meet on Promoting Use of SPL in Cement Co-processing
KEP website Launch (www.knowledgeplatform.in) was launched officially at the Pulp & paper sector workshop.

- The website is designed to simultaneously serve as a knowledge resource bank and a platform to host multiple discussion forums.
- The resource bank is classified for individual sectors where in best practices and technology case studies on energy efficiency are uploaded.
- The discussion forums enable participants/visitors to access, discuss and suggest on various topics.

KEP: Major progress achieved so far

- 8 Sector Learning Groups (SLG) for all PAT Sectors established
- First SLG meet of Aluminium Sector held on 20th June, 2015 at Bhubaneswar
- First SLG meet of Cement held on 22nd June, 2015 at Jodhpur
- First SLG meet of Paper Sector held on 20th August, 2015 at New Delhi
- First SLG meet of Thermal Power Sector held on 27th October, 2015 at Dahanu
- First SLG meet of Textile Sector organized on 27th November, 2015 at Thane (Maharashtra)
- First SLG meet of Fertiliser sector organized on 15th February, 2016 at Jagdishpur, U.P.
- 60 industries have agreed for Friendly Energy Efficiency Exchange Visits
- Fertilizer Sector workshop on 16th February, 2016 (Jagdishpur).
- Sponge Iron Sector Workshop on 4th March, 2016 (Rajpur)

- KEP Newsletter: KEP has initiated quarterly newsletter series and so far produced 4 newsletters containing 16 detailed case studies from Aluminium, Cement, Chlor-Alkali, Fertiliser, Pulp & Paper, Iron & Steel, Textile and Thermal Power sectors, 4 policy papers and 5 technology overviews.
Role of SLG

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

- Future Strategies to be adopted by KEP to promote EE in TPS
- 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