



Excellence Enhancement Centre for Indian Power Sector

An Over View



BACKGROUND

Excellence Enhancement Centre (EEC) for Indian Power Sector was :

- Conceptualised as part of bilateral cooperation between Govt. of India and Govt. of Federal Republic of Germany.
- **Registered as a non-profit society under the Indian Societies Registration Act 1860.**
- An Implementation Agreement was signed between BEE, CEA, Ministry of Power and GIZ Germany on 08/04/2011 for establishment of Excellence Enhancement Centre.
- **As per this agreement Govt. of Germany, under Indo - German Energy Forum agreed to provide 1.66 Million Euro for establishment and functioning of EEC in initial years.**
- EEC Started functioning from February 2012 with an objective to facilitate performance improvement especially efficiency & reliability in Indian power sector by deployment of most advanced solutions regarding technology, process and personal skill.
- Modelled on the lines and with technical support of VGB, Germany – a voluntary association of German Power Sector Organizations including, Operators, Generators, T & D companies, Manufacturers and Regulators.



AIMS OF EEC

- ▣ To Promote Peer to Peer cooperation between Indian Power Sector Stakeholders by creating conditions for a profitable sharing of Technical Expertise among its members.
- ▣ To provide a common platform for Knowledge Sharing.
- ▣ To take up pilot projects for the benefit of Indian Power Sector.
- ▣ Create a “Technical Discussion Forum” for Indian Power Sector on EEC Website - Members can post questions / seek clarifications and also contribute by giving solutions based on their experience. This will also help in determining the topics for EEC Workshops & Training programs.
- ▣ Promote Indo German Energy Cooperation through collaboration with VGB Germany, Government of Germany & its agencies.



Governing Body of EEC*

President - Chairperson, CEA

Vice President - Member (Thermal), CEA

Member & Treasurer - Secretary, CBIP

Member - Director General, BEE

Member - Director (Technical), NTPC

Member - Director - IGEN, GIZ

Member - Director General, TERI

Member - Former Director (Tech.), NTPC

Member – Chief Executive Officer, EEC

Member - Chairman, STEAG Energy India

Member – VGB Germany Representative

Member Secretary - Chief Engineer (TPE & CC), CEA

** Likely to be expanded to have wider representation of Power Sector Organisations.*



List of EEC Members

EEC membership includes leading Power Sector organisations such as:

1. Central Electricity Authority (CEA)
2. NTPC Ltd.
3. Neyveli Lignite Corporation Ltd.
4. BHEL
5. TATA Power
6. GIZ
7. VGB
8. CBIP
9. Central Power Research Institute
10. National Power Training Institute
11. Energy Efficiency Service Ltd.
12. Gujarat State Electricity Corp. Ltd
13. Maharashtra State Power Gen. Co. Ltd.
14. Telangana State Power Gen Co. Ltd.
15. CESC Ltd.
16. J & K Power Development Corporation Ltd.
17. Chhattisgarh State Power Generation Corp. Ltd.
18. Ratnagiri Gas & Power Private Ltd.
19. Indraprastha Power Generation Co. Ltd.
20. STEAG Energy Services (India) Ltd.
21. NTPC-SAIL Power Company Pvt. Ltd.
22. KSB Pumps Ltd.
23. SIEMENS
24. DURAG India Instrumentation Pvt.
25. ACB India Ltd.



PAST ACTIVITIES OF EEC

During The Past Few Years EEC has organized :

1. **Advanced level Training Programs on:**

- Advances in Power Plant Chemistry
- Boiler Operation and Maintenance
- ESP O & M and Performance Enhancement
- Combustion Mechanism & Optimization
- Heat Rate Awareness and Performance Optimisation of Steam Turbine and its Auxiliary Systems.

140 Engineers from power utilities (Central/ State/ IPP's) were trained.

2. **Projects for the benefit of Indian Power Sector with technical support of VGB, Germany**

- ESP Performance Improvement through CFD Modelling at NTPC Ramagundam (500 MW unit)
- Compendium of Best Practices for Coal Based Power Plants in Germany

3. **Workshops in New Delhi, Kolkata and Bengaluru with VGB Germany expert faculty**

- Performance Improvement through Technology Interventions and Efficiency Improvements in Power Plants
- Power Plant Information System KISSY – (Kraftwerks information's system)



PAST ACTIVITIES OF EEC

4. Three Conferences / Workshops at Delhi, Mumbai & Hyderabad with support from VGB, Germany on “Supercritical Generation and Integration with Renewables - Learnings from German Experience”

It covered following important subjects of :

- i. German experience of last 2 - 4 years in operating Super Critical Coal based Thermal Power Plants:
 - Teething problems in Stabilizing Operations.
 - Difficulties faced and how they were overcome.
 - Critical parameters / processes to monitor in operating super critical units as against sub critical operation.
- ii. Injection of Solar/wind power on a fairly large scale into the Grid and its effect on the operational cycle of Conventional Thermal Power Plants.
- iii. How Indian Power Plants facing problems in achieving PAT targets (of improving Station Heat Rate by an average of 3-5%) can benefit by adopting and adapting specific best practices from the "Compendium of best Practices for coal based Power Plants".



ACTIVITIES OF EEC – 2016-17

S.No	Items	Action	Remarks
1.	New Membership Drive	Continued	6 nos. Members joined this year
2.	Seminar on “Meeting New Environment Norms for Thermal Power Generation – A Challenge”	Organized on 22 nd April, 2016 at New Delhi	<ul style="list-style-type: none"> ▪ 200 Delegates from 35 organization participated ▪ 15 nos. of Technical papers were deliberated.
3.	“Studies for Development of Guidelines for Water & Waste Water Usage in Coal Based TPP” under Research Studies on Power (RSOP)	Planned in June, 2016	<ul style="list-style-type: none"> ▪ Study to be conducted at two Thermal Power stations. ▪ MOU with CPRI finalized ▪ Start date June, 2016
4.	Regional Workshops on New Environment Norms	Planned in July, 2016	<ul style="list-style-type: none"> ▪ To be finalized with VGB & IGEF



ACTIVITIES OF EEC – 2016-17

5.	To work on two demonstration power plants for implementation of New Environment Norms with German Experience & with special focus on Selective Catalytic Reduction (SCR) technology application for Indian Coal	—	<ul style="list-style-type: none"> ▪ Need for a pilot project for SCR technology for Indian Coal is a priority ▪ To be discussed and finalized with VGB & IGEF
6.	<p>Detailed technical studies on two power stations with the intent:</p> <p>(i) To improve their design and operational flexibility for adoption to fluctuating renewables</p> <p>(ii) To improve their part load efficiency</p>	—	<ul style="list-style-type: none"> ▪ To be discussed and finalized with VGB & IGEF
7.	<p>It is proposed to organize a technical visit of power sector stakeholder to German Power sector stakeholders with special emphasis on</p> <ol style="list-style-type: none"> 1. Implementation of New Environment Norms 2. Adoption to fluctuating Renewables by Thermal Power Plant 	—	<ul style="list-style-type: none"> ▪ To be discussed and finalized with VGB & IGEF
8.	To identify relevant topics for EEC under Clean Coal Technologies and Ash utilization Technologies.	—	<ul style="list-style-type: none"> ▪ To be discussed and finalized with VGB & IGEF



EEC Present Challenges

- ▣ Financial support from GIZ, Germany was available to EEC upto 30th September, 2015. Presently EEC is meeting its operational expenses from fee received from its member organisations.
- ▣ The activities of EEC requires financial support till its membership base gets enlarged and EEC becomes self sustainable.
- ▣ In order to continue with the activities of EEC, it is suggested that continuation of financial support to EEC under IGEF programme for next 2-3 years.



Thank you

Excellence Enhancement Centre For Indian Power Sector

West Block-II, 1st Floor, Wing No. 5, Sector – 1, R. K. Puram New Delhi-110066

Tel. 91-11-26164297/26164295 Fax: 91-11-26164297

E: contact@eecpowerindia.com

ceoecips@gmail.com

mdecips@gmail.com

www.eecpowerindia.com