

Business Meet on Cogeneration Technologies and Hands-on Training Report

Energy Management Centre - Kerala (EMC), Department of Power, Government of Kerala was set up to coordinate and enforce the Energy Conservation Act - 2001 (Central Act 52 of 2002) in Kerala. EMC aims to improve energy efficiency in all sectors in the state, including awareness and capacity building programs, research and development of related technologies, energy efficiency studies, demonstration programs, and implementation of energy efficiency projects. EMC provides training to socially committed people about the Energy Conservation Building Code (ECBC), and on industrial energy efficiency.

Success Stories

Recently, Travancore Titanium Products Limited (TTPL) has found a way to recover energy at its sulfuric acid plant as part of its cogeneration project by replacing the pressure-reducing de-superheater with a suitable micro turbine. This cogeneration plant is being set up with the technical and financial support of EMC, at the plant of TTPL, Thiruvananthapuram. EMC is exploring the possibilities of implementing more such cogeneration projects in Kerala.

Exploring Cogeneration Potential

Currently 1,041 industries are using boilers in Kerala. To explore the cogeneration potential at these industries, and to promote cogeneration/captive power plants in all applicable industrial and commercial sectors, a two-day business meet on "Cogeneration Technologies and Hands-on Training" was organized on 29-30 November 2022. The business meet provided an excellent platform for professionals and experts from Cogeneration Association of India (Cogen India) and other stakeholders, to discuss issues and challenges related to cogeneration in various industries. The business meet was jointly

conducted by EMC, State Department of Factories and Boilers, and Cogen India.

Business Meet Proceedings

Hon. Minister for Electricity, Sri K. Krishnankutty inaugurated the business meet. Dr. Harikumar, Director of EMC gave the welcome speech and opening remarks. Director of Department of Factories and Boilers, Sri P. Pramod gave the Kenote Address. The Special Address was given by Sri J. Dandegaonkar, Vice President of Cogen India and Chairman of National Federation of Co-operative Sugar Factories. Sri S. Khatal, Director General of Cogen India delivered the Felicitation. Finally Sri J. Daniel, Head - NMEEE & DSM Division, EMC gave the Vote of Thanks.

The business meet was divided into two segments, covering the theme exploring the possibilities of cogeneration in industries of Kerala. On the second day, hands-on training about cogeneration potential assessment was provided for empanelled energy auditors of EMC.

Mr Nikhil Chougale, Director - Business Development Enreco Energy Recovery Solutions, explained the benefits of using their micro turbines for cogeneration in industries - they are fully automatic, adapt to all pressure conditions to maximise output, and utilize excess energy of steam in steel plants, dairy process plants, fertilizer plants, chemical industry, and pharmaceutical plants, to generate electricity.

Mr Nalin Sha, Sr. Vice President - Biofuel & Green Chemistry, MITCON Consultancy & Engineering Services, talked about cogeneration potential assessment in Kerala. According to their study, there is a potential to generate nearly 1,000 MW of power using resources available by the year 2050. Coconut fronds, cashew apple and nuts, forestry residues, municipal solid waste, rice husk, and tapioca stalks are the major biomass available in Kerala.

Mr. Jayesh Goswami from EPCL Trigenation, conveyed the possibilities of trigeneration in the future by explaining its benefits and applications (Indian perspective). He also talked about gas engine fuel gas, hydrogen-ready gas engines, and battery energy storage systems.



From left: S. Khatal (Cogen India), Dr. Harikumar (EMC), P. Pramod (Dept. of Factories & Boilers), J. Dandegaonkar (Cogen India & NFCSF) and Johnson Daniel (EMC)

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Dr. Harikumar, Director, Energy Management Centre (EMC), Kerala giving opening remarks

Mr. Nilesh Jadhav from SITSON India covered the importance of waste heat recovery and power generation in cement industries. He also focused on technologies for waste heat from boilers (SITSON WHR boilers).

AG&P Pratham deals with LNG fuel in Kerala. It makes natural gas available to end-consumers through its integrated gas logistics platforms. Natural gas has various applications in various sectors and is primarily used as fuel in key industries. The company explained its benefits as a cost effective fuel and about its availability in Kerala.

Conclusion

Mr. D. Swain, Head, Department of Sugar Engineering,

National Sugar Institute, Kanpur began the session on 30 November, by focusing on the vast potential of cogeneration in Kerala. He concluded that, "Cogeneration will definitely add feathers to the dream of Kerala becoming the 1st state to have 100% own power and RES (renewable energy sources) power."

The final session was conducted by Sri J. Nagesh Kumar, Former Director, NPC Chennai. He explained the technical options for cogeneration such as steam turbines, gas turbines, reciprocating engines, etc. Also a few practical scenarios were explained and solved during the session with energy auditors.

In conclusion, EMC is planning to access the cogeneration potential and implement a few projects in Kerala. In this endeavour, EMC and Cogen India encourage all industries to join hands towards this initiative.

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Business Meet in Chennai

(Organized by Cogeneration Association of India)

Sugar Factories: The Future Innovative Energy Hubs

For the agenda and further details, please contact Cogen India.

Sugar mills/distilleries are welcome to participate.

For participant registration, please refer www.cogenindia.org or
email - cai@cogenindia.org or call 98-905-32178/98-193-66926

For companies who wish to sponsor the meet or make a presentation,
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