

Tiruchirappalli Regional Engineering College Science and Technology Entrepreneurs Park Tiruchirappalli - 620 015.

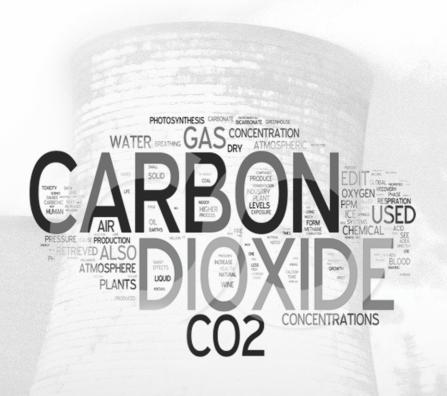
Knowledge Partner



Technologies for Carbon Capture, Transport and Storage and Cleaner Coal

Skill Leverage Programme on CCT - CCS Technologies

Project funded by the European Union



23rd - 25th January, 2012 at Trichy



The Project ...

The Indian Thermal Power Sector is poised to grow exponentially to meet the country's huge power demands. It is envisaged that there will be nearly 6 fold increase in power requirement in the next 20 years. India being the third largest coal mining nation in the world, it's share of coal energy generation stands at 55%, compared to that of the world's share of 20.3%. Similarly, India's share of carbon emission due to coal is 69.78%, while that of globe is 41.2%. However, India has voluntarily committed to reduce its CO₂ emissions by 20 to 25% from its 2005 level. This is highly challenging, considering the facts that the per capita consumption of the power in India is very low, the whopping demand for energy and its per capita CO₂ emission being 20 times lesser than US and other developed countries.

India's heavy dependence on coal based power generation, criticality of energy demands and ambitions of CO_2 emission reduction targets, all warrant concerted efforts in capacity development in CCT and CCS technologies, primarily aimed at the country's Thermal Power sector, the CO_2 emission major.

In order to assist the Indian Thermal Power Sector to address the challenges of reducing CO₂ emissions, TREC-STEP, in partnership with Bharat Heavy Electricals Ltd, India's largest public sector manufacturer of power plant equipments, has taken up a major development initiative, funded by the European Union, under its project for 'Developing a Cluster for Clean Coal Technologies (CCT) and Carbon Capture and Storage (CCS) for the Indian Thermal Power Sector'. This would be a first-of-its-kind initiative in India, for launching CCT - CCS initiatives and a new set of innovative actions in this vital development front. With a comprehensive set of actions covering awareness building, capabilities development, demonstration and deployment projects, innovation development and dissemination platforms, this project is expected to promote a groundswell for CCT and CCS initiatives in India.

Capacity Leverage Programmes in CCT and CCS

Under this unique EU supported project, among other project initiatives, TREC-STEP has planned to organize a series of Capacity Leverage Programmes in CCT and CCS domains, for the benefit of the Indian thermal power players, policy makers, entrepreneurs and innovators, academicians, etc. This Skill Leverage Programme in CCT - CCS technologies, for the Indian Thermal Power Industry, 'Technologies for Carbon Capture, Transport and Storage and Cleaner Coal', in association with Ernst and Young as the knowledge partner, is aimed at facilitating 'Change Champions' and building a constituency for CCT - CCS agenda in the future, for the Indian Thermal Power Sector.



Programme Structure

This three day Skill Leverage programme will provide an overview of global CCS initiatives covering all essential technologies, regulatory and policy interventions in carbon capture and storage and Clean Coal Technology domains. This programme is intended for Thermal Power Players, Policy makers, Academicians and other technical personnel with an interest in Clean Coal Technologies and Carbon Capture and Storage.



TOPICS OVERVIEW 09:30 AM - 10:00 AM **Inaugural Session CCS Overview** Climate Change and CCS:CCS Requirement, Scale & Context Session I 10:15 AM - 11.15 PM Stages of CCS project development 23rd Jan '12 Cost of typical project and possible finance mechanisms Regulation and Policies surrounding CCS CCS Value Chain Session II Sources of CO₂, present and future potential 11:25 PM - 12:45 PM Aspects of end to end CCS programme management Lunch Break CO₂ Capture Basis for CO₂ Capture Session III Power Plant CO₂ Capture Systems 01:45 PM - 03:00 PM Post Combustion Capture Systems Tea Break Session IV Oxyfuel Combustion and Pre-Combustion Capture Systems 03:30 PM - 05:15 PM Networking Dinner

Venue: The SRM Hotel Race Course Road, Khajamalai, Tiruchirappalli-23 Tamilnadu

TOPICS OVERVIEW Session I DAY 2 Gasification, Adsorption and Emerging Technologies 09:30 AM - 11.00 AM 24th Jan '12 Tea Break Environmental, monitoring, risk and legal aspects of Capture Systems 11:30 AM - 12:30 PM Cost of CO₂ Capture Session III Transport of CO₂ 12:35 PM - 01:15 PM · Pipeline Transportation Lunch Break Transport of CO₂ Marine Transportation Session IV 02:00 PM - 03:30 PM Risk, Safety and Monitoring aspects of CO₂ Transportation Legal framework surrounding CO₂ transportation Tea Break Session V **Summary and Group Task** 04:00 PM - 05:30 PM Roadmap for Indian Thermal Power Sector on CCS design **Networking Dinner**

TOPICS OVERVIEW DAY 3 Storage of CO, Session I 09:30 AM - 10.30 AM Underground Geological Storage 25th Jan '12 Ocean Storage Tea Break **Clean Coal Technologies** Introduction and Need for CCT Session II 11:00 AM - 01:00 PM Types of CCT Clean Coal Technology in Coal Mining Lunch Break Clean Coal Technology in power Plants DeSOx DeNOx Session III 02:00 PM - 03:30 PM Fluidized Bed Combustion Combined Heat and Power (CHP) Generation Super critical Technology and Ultra Super Critical Technology Session IV **Summary and Group Task** 04:00 PM - 05:00 PM **Networking Dinner**



About Ernst & Young...



Ernst & Young is a globally recognized leader in knowledge management. Ernst & Young has invested in developing processes and systems to create, share and reuse their intellectual capital on a global scale, enabling effective delivery the most relevant insights for you. Ernst & Young operates from 8 cities in India (www.ey.com/india) with a work force of over 7500 people, who work towards the firm's vision of being the trusted business advisor that contributes most to the success of people and clients by creating value and confidence. Global Tax Advisory Services, Risk Advisory Services, Transaction Advisory Services and Business Advisory Services are the core services offered by the firm in India.

About TREC-STEP...



TREC-STEP is a multi-dimensional developmental organization promoted in 1986, by the central and state governments of India, along with financial institutions and other institutions, for promoting technology and entrepreneurship initiatives. It is a technology business incubator with a strategic focus on promoting new entrepreneurial start-up ventures into successful high growth business ventures. TREC-STEP has worked with a number of international developmental organizations in development projects, such as the UNDP, the UNIDO, the European Commission, the World Bank infoDev, the British Council Division, etc. TREC-STEP has worked almost with all the government agencies, development agencies and major financial institutions in India, in development projects focusing on the technology and entrepreneurship domain. TREC-STEP has also won many awards and accolades from the Government of India, the World Bank, the European Union and others. For more information, kindly visit www.trecstep.com ...

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A Project Implemented by

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