

**Agenda of workshop on “Efficiency and Load Shifting Opportunities in Heating Ventilation and Air-Conditioning (HVAC) Systems”**

**Date: 18 December 2009 - Timing 9:30 AM to 6 PM**

**Venue: Exchange Plaza, NSE Auditorium, Ground Floor, National Stock Exchange, Bandra Kurla Complex, Bandra (East), Mumbai - 400 051**

<b>Timing</b>	<b>Topic</b>	<b>Panel/speakers</b>
<b>09:30 AM to 10:00 AM</b>	<b>Registration</b>	
<b>10:00 AM to 10:30 AM</b>	<b>Inaugural session</b>	
	Workshop background (HVAC systems in the context of demand-side management programs) and agenda	Dr. Mahesh Patankar, MERC DSM Consultant
	Introductory remarks	Mr. Banmali Agrawala, Executive Director, Tata Power
	Keynote address	Mr. V. P. Raja, Chairman, MERC
	Vote of thanks	Mr. Ashok Sethi, Vice President, Tata Power
<b>10:30 AM to 11:30 AM</b>	<b>Session I: Energy efficiency in Central ACs</b>	<b>Session Chairman: Mr. Ashok Sethi, Tata Power</b>
	Challenges and opportunities in HVAC systems	Mr. Shishir Athale, Sudnya Energy Services Limited
	Case study: Efficiency optimization through control systems	Mr. Sri Chari, Online Energy Manager
	Case study: Retrofitting central HVAC system	Mr. Joydeep Mukherjee, Voltas Limited
<b>11:30 AM to 11:45 AM</b>	<b>Refreshments break</b>	
<b>11:45 AM to 01:00 PM</b>	<b>Session II: Thermal Storage in Commercial HVAC</b>	<b>Session Chairman: Mr. S. B. Kulkarni, Member, MERC</b>
	Thermal storage technologies and brief case studies	Ms. Arti Kemkar, Director, Kehems Systems
	Thermal storage technologies and brief case studies	Mr. Girish Dandur, Greencon
	Case study: Thermal storage installation at Gadkari Rangayatan, Thane	Mr. Sunil Pote, Deputy City Engineer, Thane Municipal Corporation
	Case study: Thermal storage installation at National Stock Exchange, BKC	Mr. Mahesh Haldipur and Mr. Kiran Dusane, National Stock Exchange
<b>01:00 PM to 02:00 PM</b>	<b>Lunch</b>	

<b>02:00 PM to 03:00 PM</b>	<b>Session III: EE opportunities in home systems</b>	<b>Session Chairman: Mr. V. L. Sonavane, Member, MERC</b>
	BEE standards & labelling initiative	Mr. Manas Kundu, ICPCI
	EE opportunities in ceiling fans	Mr. Daljit Singh, Prayas Energy Group
	Case studies in energy efficiency HVAC home applications	Mr. Shirish Deshpande, Energetic Consulting
<b>03:00 PM to 04:00 PM</b>	<b>Session IV: Solar ACs and emerging HVAC technologies</b>	<b>Session Chairman: Mr. Sanjay Sethi, Secretary, MERC</b>
	Heat exchanger coupled with air-conditioning systems	Prof. Milind Rane, IIT-Bombay
	Solar air-conditioning systems	Mr. Gunjan Rustagi, Thermax Limited
	Variable Refrigerant Volume case study	Mr. Manas Kundu, ICPCI
<b>04:00 PM to 04:15 PM</b>	<b>Refreshments break</b>	
<b>04:15 PM to 05:00 PM</b>	<b>Session V: Typologies of utility-driven DSM programs in HVAC sector</b>	<b>Session Chairman: Prof. Rangan Banerjee, IIT-Bombay</b>
	Presentation on possible programs in thermal storage and central HVAC systems	Utility representative
	Presentation on possible programs in the home systems	Utility representative
<b>05:00 PM to 5:45 PM</b>	<b>Panel discussion on EE and demand-shifting opportunities in HVAC sector: Proposed panel: Mr. V. P. Raja, Chairman, MERC; Mr. V. L. Sonavane, Member, MERC; Mr. Anup Mondal, Vice President, Reliance Infrastructure Mr. Ashok Sethi, Vice President (License Area Operation) Mr. Arvind Mulay, Deputy General Manager, BEST Undertaking Prof. Rangan Banerjee, IIT-Bombay; Mr. Daljit Singh, Prayas Energy Group; Summing up by Mr. Sanjay Sethi, Secretary, MERC</b>	
	<b>Vote of thanks</b>	Utility representative