

Workshop on the Search for Game Changing Energy Technologies for the Developing World

May 15-16, 2013 Reliance Corporate Park, Thane-Belapur Road, Ghansoli, Navi Mumbai – 400 701, India



Agenda

Day 1 - May 15

Introduction

Moderator: Ajit Sapre

10:00 Introductory Remarks

Ajit Sapre, Reliance Industries

10:10 Inaugural Remarks

*Hital R. Meswani, Executive Director
Reliance Industries*

10:20 Meeting Objectives

Sally Benson, Stanford University

Keynote Address

10:30 Emerging Paradigm for Accelerated Inclusive Growth with a Sustainable Energy Future: More from Less for More

*R.A. Mashelkar, Former Director
General of the India Council of Scientific
& Industrial Research*

Session 1: Needs and Challenges to Providing Energy in the Developing World *Moderator: Swaroop Sarangan*

11:15 Clean Energy Access for the 3 Billion in Rural Areas and its Cobenefits for Health, Agriculture and Climate Change

*Veerabhadran Ramanathan, University of California at San Diego & UNESCO
Professor at TERI University, India*

11:50 *Break*

12:05 Report on Site Visits by Stanford Visitors

Hrishi Goel, Stanford University & Love Sarin, Reliance Industries

12:15 Experiences from Various Energy Generation Sectors

*B.C. Jain, Ankur Scientific
Nikhil Jaisinghani, Mera Gao Micro Grid Power
Amitabh Verma*

1:30 Lunch

- 2:20 Perspectives from Various Energy Application Areas:
- Emerging frugal innovations in energy Anil Gupta, *Indian Institute of Management, Ahmedabad*
 - Issues in rural energy innovations [Anil Rajvanshi, Nimbkar Agricultural Research Institute](#)
 - Understanding cooking needs and practices Mark Thurber, *Stanford University*

Session 2: Mapping Stanford Technologies to the Developing World

Moderator: Richard Sassoon

- 3:20 Overview of GCEP Portfolio and Approach Sally Benson, *Stanford University*
- 4:00 *Break*
Stanford technical area discussion
- 4:20 ➤ Fossil Fuels – Carbon Mitigation and Advanced Combustion Lynn Orr, *Stanford University*
- Renewables – Solar and Electrochemistry Bruce Clemens, *Stanford University*
- Bioenergy Jennifer Milne, *Stanford University*
- Energy Systems Analysis Charles Barnhart, *Stanford University*
- 5:50 Open Discussion on Applying Stanford Technologies to the Developing World Moderator: Richard Sassoon, *Stanford University*
- 6:00 *Adjourn*
- 7:30 *Dinner at Sheraton Four Points, Vashi* Dinner speaker. Dr. Kirit Parikh, *Former member Planning Commission, Government of India.*

Day 2 - May 16

Session 3: Technical Opportunity Areas ;Moderator: Pete Hanik

- 10:00 Industry Perspectives:
- The DuPont Experience in Identifying Technical Opportunity Areas in Energy Markets in the Developing World Homi Bhedwar, *DuPont*
 - Opportunities for Innovation in the Energy Field in the Developing World – A perspective from Reliance Industries Ajit Sapre, *Reliance Industries*
 - A Perspective from GE on Identifying Technical Opportunity Areas in Energy Markets in the Developing World Vinay Jammu, *General Electric*

11:30	Overview of Breakout Sessions	Pankaj Mehta, <i>Reliance Industries</i>
11:45	<i>Break</i>	
12:00	Breakout sessions on the needs for breakthrough energy technologies, criteria for their successful implementation, and identification of opportunity areas in the Developing World	
	1. Renewable Energy	Dr. Anil Rajvanshi , <i>Nimbkar Agricultural Research Institute</i> & Jennifer Milne, <i>Stanford University</i>
	2. Electricity Grid	Sydney Lobo, <i>TATA Power</i> & Emilie Hung, <i>Stanford University</i>
	3. Fuels and Transportation	Swaroop Sarangan, <i>Reliance Industries</i> & Richard Sassoon, <i>Stanford University</i>
	4. Water and Cooking Applications	Arjun Bhattacharyya, <i>GE</i> & Mark Thurber, <i>Stanford University</i>
1:30	<i>Lunch</i>	
2:30	Review of Breakout Sessions	Breakout Session Leaders
3:30	<i>Break</i>	
	Session 4: Discussion Session on Collaborative Approaches and Next Steps	
3:45	Moderated discussion between Stanford, Reliance, GCEP Sponsors, and Indian academic personnel on future collaboration / path forward	Pete Hanik, <i>Reliance Industries</i> & Richard Sassoon, <i>Stanford University</i>
	Concluding Remarks	
5:00	Summary of Meeting Accomplishments	Sally Benson, <i>Stanford University</i>
5:10	Concluding Remarks	Ajit Sapre, <i>Reliance Industries</i>
5:30	<i>Adjourn</i>	

The [Global Climate and Energy Project](#) is a groundbreaking university-industry partnership that supports fundamental research on sustainable, efficient technologies that significantly reduce greenhouse gas emissions and are cost effective when deployed at scale.

GCEP was established in 2002 with the support of corporate sponsors ExxonMobil, GE, Schlumberger and Toyota. DuPont became a sponsoring partner in 2011.