# Roundtable on Technology Transfer, Policy and Climate Change

Goal 2020: Identifying issues, options, opportunities and frameworks towards demand side mainstreaming of climate friendly technologies through Technology Diffusion Centers

## Agenda

10:00 to 10:50 am	Registration
11:00 to 11:10 am	Welcome by Pawan Mehra, cKinetics - Introductions - Agenda walk-through
11:10 to 11:20 am	Opening remarks by Sunjoy Joshi (Distinguished Fellow, ORF) on issues shaping the likely need for TDC
11:20 to 12:20 pm	<ul> <li>Session I: Discussion framework by Upendra Bhatt, cKinetics</li> <li>Providing insight into the motivations behind the RT</li> <li>Summary of the questionnaire responses</li> <li>Moderated Group Exercise: Discussion on climate friendly prototypes that can be implemented in 24 months and taken to scale by 2020</li> </ul>
12:20 to 1:00 pm	Session II: Moderated by Samir Saran, ORF Discussion on Global experiences – indicative TDC like prototypes specific to Climate Change; e.g. EU's experiences at creating Technology Innovation Parks / Centers, UK Carbon Trust's idea of a network of Low Carbon
1:00 to 2:00 pm	Lunch
2:00 to 3:20 pm	Session III: Parallel working groups Working Groups 1- Technology Transfer framework Working Group 2 - Designing Technology Diffusion and Innovation Hub Ecosystem Working Group 3 – Prototype Rollouts and Mass Adoption
3:20 to 3:55 pm	Session IV: Summarising working groups deliberations Report back by working group session leads
3:55 pm	Vote of Thanks – by Roselin Dey, India Carbon Outlook







### Working Group 1: Policy construct

Issues to be discussed

- 1. Which sectors have the maximum potential to generate climate impact through policy change in next 10 years?
- 2. What should be the role and goals of the Technology Diffusion Center?
- 3. What specific interventions are required on the following dimensions for creation and enablement of the 'Technology Diffusion Center':
  - a. IPR regulation that can be implemented by GOI in the next 2 years
  - b. Technologies & IPRs to be sourced through: (a) multilateral frameworks; (b) Bilateral frameworks; To illustrate: e.g. Bilateral technology transfer under a MFN construct vs. a case for a global technology pool for carbon efficient technologies?
  - c. Policies required to enable mass adoption (Development vs. Diffusion goals match-up)
    - i. Infrastructure and Ease of Access
    - ii. Affordability
  - d. What financing constructs would be most relevant for a technology distribution center?
    - i. Catalyst Funds
    - ii. Management & monitoring criteria

Working Groups 1 participants

Lead: Mukul Sanwal, Former Policy Advisor, UNFCCC Rapporteur: Upendra Bhatt, MD, cKinetics

Members:

- 1. Sunjoy Joshi, Distinguished Fellow, ORF
- 2. Dr. Ramesh Jalan, Head, UNDP- Climate Community Solutions Exchange Network
- 3. Jason A Donovan, First Secretary, Unit Chief for Energy & ICT, US Embassy
- 4. Madeline Knox, DFID
- 5. Rebecca Ball, Australian Trade Commissioner







<u>Working Group 2: Designing Technology Diffusion and Innovation Hub Ecosystem</u> Goal: Ingredients for shaping up a comprehensive technology diffusion & innovation center addressing Indian needs for various climate efficient technologies

Issues

- 1. What needs do you think TDC can fulfill?
- 2. What should be the role of TDC on the following fronts:
  - a. IPR & Technology transfer: e.g. Green Exchange, IPR pooling center,
  - b. Incubation Center for developing new innovation capabilities and/or context specificity
  - c. Facilitating mass adoption across India: e.g. Advocacy & knowledge Center, Regional Adaptation Centers, Cluster development schemes /parks
  - d. Facilitating funding access
  - e. What should be the role with respect to regulation: e.g. Quasi regulator or determinant body of which technologies will be supported
- 3. What should be the operational form of TDC?
  - a. Virtual vs. Physical: e.g. Programs (such as DST-TePP) vs. Software Technology Parks /SEZs
  - b. Where should TDC funding come from: Domestic vs. International
  - c. Governance: Public-Private vs. public vs. market-led
  - d. What financing constructs would be most relevant for a technology distribution center?
    - i. Catalyst Funds
    - ii. Management & monitoring criteria
- 4. Which sectors do you think will benefit the most from a TDC formation

Working Group 2 participants Lead: Prof Rakesh Basant, IIM-A Rapporteur: Pawan Mehra, cKinetics Members:

- 1. Bishal Thapa, ICF
- 2. Poul Jensen, Director, EBTC
- 3. Mary E Tarnowka, Deputy Economic Minister Counselor, US Embassy
- 4. P.N. Shali, Director, Engineering Council of India (Formerly Advisor Planning Commission)
- 5. Dr. J.V. Rao, Director, NITRA
- 6. Deepak Amin, Advisor, Technopark/ DST
- 7. Prasanto Pal, Senior Scientist, TERI
- 8. Samir Saran, ORF
- 9. Tirthankar Mandal, WWF
- 10. Pradeep Nair, CCI







## Working Group 3: Prototypes rollout and mass adoption

Issues to be discussed

- 1. Questionnaire: Ranking of various prototypes identified in the pre-lunch session based on your outlook of their efficacy to create the desired level of impact?
- 2. What criteria should be used to determine efficacy and relevance of prototype to enable Carbon Intensity reduction milestones enshrined in govt policy? e.g.
  - a. Technology scale-up assessment
  - b. Cost-abatement trade-off
  - c. Political risk
  - d. Consumer behavior and adoption
- 3. What will facilitate mass adoption of prototypes of Top 3?

### Working Group 3 participants

Lead: V. Raghuraman, (Former Advisor CII), Principal Advisor, Jaguar Overseas Limited Rapporteur: Roselin Dey, India Carbon Outlook

Members:

- 1. Parikshit Srivastava, Senior Consultant, FINPRO
- 2. Anish De, CEO- Asia, Mercados Energy Markets International
- 3. Anuradha Bhavnani, Regional Director, Shell Foundation
- 4. Mamta Thangaraj, Semi Conductor Group, Cambridge
- 5. Lydia Powell, ORF
- 6. Ravi Sinha, Chairman, Choice Solar Solutions
- 7. Kunal Upadhyaya, CEO, Centre for Innovation, Incubation and Entrepreneurship, IIMA
- 8. Mr Matthew Sandelands, US Embassy
- 9. Sanjeev Saxena, NITRA







### **Round table participants**

**Anish De** is the CEO of Mercados EMI Asia. Anish is a specialist in private investment strategy in the energy sector, particularly related to the generation subsector, in hydro, wind and solar generation.

**Anuradha Bhavnani** is currently the Regional Director at the Shell Foundation. has worked with leading Global Multinationals across more than 12 countries. She is also an advisor to the Rockefeller Foundation on the Asian Climate Change and resilience Program Network (ACCCRN) and a Chairperson on the Board of CottonConnect South Asia.

**Bishal Thapa**, as the Director of ICF India's operations has been extensively involved in analysis of power markets, energy regulations, environmental policies and regional energy issues in South Asia. He developed the India Wholesale Power Outlook 2005 - a twenty year forecast of the power sector in India and has helped design emission markets, analyzed power markets and assisted in development of models to analyze these markets.

**Deepak Amin**, is an advisor to Technopark, Department of Science and Technology and a number of mass market initiatives such as Sanchetna, Grameen Foundation and Digital Partners.

**Dr. J. Venkata Rao**, Director NITRA is an M. Tech (Textile Technology) Ph. D and alumni IIT, Delhi. He has been an academician for 35 years and guided around 85 projects and is a regular contributor to national / international journals of repute. A dynamic leader and a scholar researcher, he is presently in the process of publishing a comprehensive book christened 'Chemical Processing of Cotton Knits for the benefit of textile industries'.

Jason Donovan is the First Secretary, Unit Chief for Energy & ICT, US Embassy.

**Kunal Upadhyay** currently spearheads Centre for Innovation, Incubation and Entrepreneurship, IIM A, to incubate innovative ideas and create a robust ecosystem for commercialization of high-tech innovations. Kunal is currently collaborating with industry and public agencies to set-up incubation funds in clean energy and telecom sector for bridging equity gap for early stage ventures. He has a deep interest in web and cleantech domain and has been instrumental in developing partnerships and launching several new initiatives at CIIE.

**Lydia Powell** is currently working as a Senior Fellow in ORF and is managing and coordinating research projects on energy, participating in research projects of energy and developing knowledge base on energy, editing and developing news letter on energy.

Madeline Knox, is Second Secretary Climate Change and Energy Unit, DFID

**Mary E Tarnowka** is Deputy Economic Minister Counselor at the US Embassy. In the past she has been Deputy Director & Senior Congressional Advisor, Office of Policy and Global Issues, EUR Bureau at U.S. Department of State and also has been Political and Economic Section Chief at U.S. Consulate Shanghai.

Dr Matthew Sandelands, is the Second Secretary Environment, at the U.S. Embassy

**Mukul Sanwal** is the former Special Advisor to the UNFCCC Secretariat, Bonn, Germany. He joined the Indian Administrative Service in 1971 and served in variuos poilcy positions in the Government of India. He was the principal negotiator at the UNCED, Agenda 21 and the Climate Change Treaty. He joined the United Nations as Policy Adviser to the Executive Director of the UNEP in 1993, and later moved in the same position to the UNFCCC Secretariat. He has written extensively on sustainable development, global environmental management and environmental law.







**P.N. Shali** has been a former Advisor and Counsellor in the Planning Commission and is currently the Director of the Engineering Council of India. He has been actively working to promote the science and practice of engineering for national development and To interact with the government at State and Central levels and help adoption of policies for betterment of the engineering profession.

**Parikshit Srivastava**, is Sr Consultant at Finpro which is a global expert network established by Finnish companies, with a task for promoting the growth and competitiveness of through internationalization.

**Pawan Mehra** is Managing Director at cKinetics, which is a venture accelerator catalyzing rapid adoption of low carbon sustainable growth practices in emerging economies through technology transfer, capital access and adaptation interventions. Pawan has been involved in building and scaling early-stage ventures: first as a venture capital investor with GVFL and McKenna Capital and then as an entrepreneur with Parsec Interact, Intellecap and cKinetics.

**Poul Jensen** is currently heading the European Business and Technology Centre in India and recently organized EBTC's first energy trade delegation to India. EBTC's vision is to become a reference point for promoting European clean technologies in India and to be recognised for the quality of its services, its knowledge of the Indian market and its capacity to reach out to the entire European business and research community.

**Pradeep Nair**, Clinton Climate Initiative is the Head of the Energy Efficiency Program for India. Areas of focus are Building Energy Efficiency, Clean Transportation, Efficient Lighting, Waste Management and Renewable Energy with an objective to reduce greenhouse gas emissions. In his role he serves both Government and Private Sector.

**Prosanto Pal** is a Senior Fellow in the Industrial Energy Efficiency Division at The Energy and Resources Institute (TERI). He has lead several multidisciplinary research projects in the fields of energy efficiency, technology demonstration and replication among SMEs and policy issues related to transfer of low carbon technologies to developing countries.

**Prof. Rakesh Basant** is currently a professor of Economics and Chairperson, Center for Innovation, Incubation and Entrepreneurship (CIIE) at IIM-A. Has been a recipient of the of the Ford Foundation Post-Doctoral Fellowship in Economics and has spent two years at the Economic Growth Center, Yale University, USA as a Visiting Research Fellow. His recent work has focused on competition policy, inter-organizational linkages for technology development, strategic and policy aspects of intellectual property rights in India.

**Dr. Ramesh Jalan** is currently working with UNDP and is heading Solution Exchange, an initiative of the UN agencies in India, working on building 'Communities of Practice' where development practitioners with similar interests connect to collaborate and share knowledge towards the objective of problem-solving.

**Ravi Sinha** is Chairma of Choice Solar which provides affordable durable consumer solar solutions for residents of rural un-electrified and marginally electrified India. The solutions focus in the area of lighting and charging.

Rebecca Ball, Trade Comissioner, Australian trade commission

**Roselin Dey** is from India Carbon Outlook which is an independent information marketplace tracking actions related to the carbon economy as well as their impact. It proactively promotes a data driven approach to enable action by local, regional as well as global practitioners.

**Samir Saran**, as the Vice President in ORF, is working on developing partnerships and implementing outreach and development programmes. His areas of expertise include regulation and policy, corporate Communications and media. In his past experience at Reliance Industries, he was specifically engaged with the regulatory aspects of the Oil & Gas Sector, Special Economic Zones and the emerging organised retail business in India.







**Sanjeev Saxena** is currently working as a senior scientific officer with NITRA. His areas of specialisation include the study of furnaces and boilers, designing of piping and insulation, designing and study of humidification plants & air conditioning systems, automation in boilers and humidification and conducting feasibility studies.

**Sunjoy Joshi** is currently heading the Centre for Resources Management, a division of Observer Research Foundation. He has served as Joint Secretary in the Ministry of Petroleum and Natural Gas and has also worked as the Managing Director of the Madhya Pradesh Energy Development Agency. Over 25 years of his career he has had occasion to acquire experience across both the conventional as well as the non-conventional energy sectors.

**Tirthankar Mandal** looks at technology interventions at the WWF and is currently finalising a report on technology transfer for clean energy technologies.

**Upendra Bhatt** is Managing Director at cKinetics, which is a venture accelerator catalyzing rapid adoption of low carbon sustainable growth practices in emerging economies through technology transfer, capital access and adaptation interventions. He was involved with the earliest wind power projects in India in the early 1990s and also engaged in development of joint-venture power projects across India.

**V. Raghuraman** is the Former Principal Adviser with the Confederation of Indian Industry (CII) and possesses over 34 years of experience in the energy sector. He was Secretary General of the Associated Chambers of Commerce and Industry of India (ASSOCHAM) and Deputy Director General of the National Productivity Council. His areas of specialization include energy management, energy conservation, industrial engineering and climate change.





