



October 25–27, 2012
Indira Gandhi Institute of Development Research,
Mumbai, India

**ENERGY SECURITY AND DEVELOPMENT—
 THE CHANGING GLOBAL CONTEXT**

AES 2012

Program

Thursday October 25	
14.00 hrs	Registration
15.00–16.30 hrs Auditorium	Inaugural Programme <i>Welcome: Prof. S. Mahendra Dev, Director, Indira Gandhi Institute of Development Research, Mumbai</i> <i>Curtain Raiser: Prof. B. Sudhakara Reddy, Indira Gandhi Institute of Development Research, Mumbai</i> <i>Address by the Chief Guest: Sri Rajesh Tope, Minister for Energy, Government of Maharashtra</i> <i>Inaugural address: Sri P. Padmanabhan, Executive Director, Bharat Petroleum Corporation, Mumbai</i> <i>Keynote address: Prof. Noam Lior, University of Pennsylvania, USA</i> <i>Vote of thanks</i>
16.30–17.00hrs	Coffee Break
17.00–18.30 hrs Auditorium	Plenary Session Chair: Mario Giampietro, Professor, Universitat Autònoma de Barcelona, Spain
	<i>Setting the Stage: Energy security—The ‘Present crisis of faith’</i> B. Sudhakara Reddy, Conference Chair and Professor, IGIDR <i>The tertiary economy: A threat to the global economy</i> Mark Brown, Professor, University of Florida, Florida, USA
19.00 hrs	Conference Banquet – Hosted by Prof. S. Mahendra Dev, Director, IGIDR

Friday October 26	
Seminar Room 1	Session I: Energy Technology Assessment
9.00–11.00 hrs	Chair: Riccardo Basosi, Professor, University of Siena, Siena, Italy <i>Environmental life cycle analysis of non-conventional thin film photovoltaics: The case of dye-sensitized solar devices</i> Maria Laura Parisi and Riccardo Basosi, University of Siena, Siena, Italy <i>A life cycle assessment of nuclear electricity system</i> Mohit Jain, Birla Institute of Technology and Science, Goa <i>Metabolic patterns of societies: The feasibility and desirability of energy scenarios</i> Mario Giampietro, Universitat Autònoma de Barcelona, Spain

	<p><i>Planning for integrating low-carbon options in a resource-constrained electricity system: A mathematical model-based assessment</i> A. Amrutha, P. Balachandra and M. Mathirajan, Indian Institute of Science, Bangalore, India</p> <p><i>Assessing environmental costs and benefits of wood-based bioenergy options: a life cycle assessment perspective</i> Elvira Buonocore, Alessandro Paletto and Pier Paolo Franzese, Parthenope University of Naples, Naples, Italy</p> <p><i>Smart grid technologies adoption by electrical utilities in India: challenges and solutions</i> Rajesh Holmukhe and Dinesh Hegde, National Institute of Industrial Engineering, Mumbai, India</p>
11.00–11.30 hrs	Coffee Break
11.30–13.00 hrs	<p>Session 2: Energy Security Chair: P. Balachandra, Principal Research Scientist, Indian Institute of Science, Bangalore, India</p>
	<p><i>Financial issues affecting energy security</i> Gail Tverberg, Our Finite World, Kennesaw, Georgia, USA</p> <p><i>Pipeline politics—A case study of India's gas sector</i> Hippu Salk Kristle Nathan, Sanket Kulkarni and Dilip R Ahuja, National Institute of Advanced Studies, Bangalore, India</p> <p><i>Access and transition to LPG cooking fuel by households in rural India: An assessment of policy and action</i> Debesh Patra, Bharat Petroleum Corporation Ltd, Mumbai, India</p> <p><i>Measuring energy security of China</i> Jin Yang and Bin Chen, Beijing Normal University, Beijing, China</p> <p><i>Leveraging renewable energy certificates (REC) market for attaining sustainable energy security for India</i> Kapil Narula, IGIDR, Mumbai, India</p> <p><i>Diet changes in Japan and the inter-linkages between energy security and food security</i> Alexandros Gasparatos, University of Oxford, Oxford, United Kingdom</p>
13.00–14.00 hrs	Lunch Break
14.00–15.30 hrs	<p>Session 3: Energy Analysis and Modeling Chair: K. Narayanan, Professor, Indian Institute of Technology, Mumbai, India.</p>
	<p><i>Rebound effect and structural change</i> Franco Ruzzenenti, Francesco Piccolo and Riccardo Basosi, University of Siena, Siena, Italy</p> <p><i>Emergy-based evaluation of natural capital and ecosystem services of Inner Mongolia Xilinguole League, China</i></p>

	<p>Baohua Yu, Sergio Ulgiati, Guangshuo Dai, Xiaobin Dong, and Xinshi Zhang, <i>Beijing Normal University, Beijing, China</i></p> <p><i>Useful work analysis in Portugal from 1856 to 2009</i> André Serrenho, Benjamin Warr, Robert Ayres, Tânia Sousa and Tiago Domingos, <i>Instituto Superior Técnico, Lisbon, Portugal</i></p> <p><i>Energy consumption and India's economic growth: A disaggregated analysis</i> Zulquar Nain and Wasim Ahmad, <i>University of Hyderabad, Hyderabad, India</i></p> <p><i>Development of electricity market in India—Opportunities and challenges</i> Jyoti Prasad Painuly and Rahul Banerjee, <i>Central Electricity Regulatory Commission, New Delhi, India</i></p>
15.30–16.00 hrs	Coffee Break
16.00–17.30 hrs	<p>Session4: Energy and Sustainability Chair: Jyoti K. Parikh, <i>Executive Director, Integrated Research for Action and Development, New Delhi, India</i></p>
	<p><i>Microalgae for sustainable energy production</i> Gerhart Braunegg, Martin Koller, Anna Salerno and Hans Schnitzer, <i>Graz University of Technology, Graz, Austria</i></p> <p><i>Changing scenario of Indian electricity supply industry: Analysis of short-term power market with specific reference to Rajasthan</i> Dipti Sharma, <i>Malaviya National Institute of Technology, Jaipur, India</i></p> <p><i>Sustainable energy as a complex societal problem using the Compram Methodology</i> Dorien Detombe, <i>International Research Society on Methodology Societal Complexity, Amsterdam, Netherlands</i></p> <p><i>Energy consumption in Tunisia over 1990–2008: A decomposition analysis</i> Essaber Jouini Sana, <i>ISCAE University of Manouba, Manouba, Tunisia</i></p> <p><i>Feasibility study on setting up of infrastructure for electric vehicles, parallel with the conventional road transport system and its economic impact</i> Deepanjan Majundar, Bijoy Kumar Majhi and Atanu Dutta, <i>Jadavpur University, Kolkata, India</i></p>
17.30–19.00 hrs Auditorium	<p>Special Plenary Chair: Dilip Ahuja, <i>Professor, National Institute of Advanced Studies, Bangalore, India</i></p>
	<p><i>Energy security: Role of institutions</i> Dr. Pramod Deo, <i>Chairman, Central Electricity Regulatory Commission, New Delhi, India</i></p> <p><i>Energy concepts for smart cities</i> Hans Schnitzer, <i>Professor, Graz University of Technology, Graz, Austria</i></p>

Saturday October 27

09.00–11.00 hrs Seminar Room 1	<p>Session 5: Energy–Environment–Economy Nexus Chair: Cor van Dijkum, Professor, Utrecht University, The Netherlands</p> <p><i>Integration of emission reduction and environmental management goals for sustainable urban development</i> Ramakrishna Nallathiga, Construction Industry Staff College, Hyderabad, India</p> <p><i>Energy transition scenarios and their CO₂ implications till 2050</i> Jyoti Parikh and Probal Ghosh, Integrated Research for Action and Development, New Delhi, India</p> <p><i>Towards a new economic optimum generated by energy-matter consumption. The case of urban modernization of Timisoara</i> Vasile Dogaru, West University of Timisoara, Timisoara, Romania</p> <p><i>Characterizing energy poverty: Implications for policies for energy access</i> Trupti Mishra, Indian Institute of Technology, Mumbai, India.</p> <p><i>How sustainable is coal power generation in China? A joint application of energy synthesis and carbon footprint</i> Bo Lou and Sergio Ulgiati, South China University of Technology, Guangzhou China</p> <p><i>Does energy intensity affect labour productivity in Indian firms? – Preliminary estimates</i> Mohanram M, Haripriya Gundimeda and Vinish Kathuria, Indian Institute of Technology, Mumbai, India</p>
11.00–11.30 hrs	Coffee Break
11.30–13.00 hrs	<p>Session 6: Energy Efficiency and Renewable Energy Chair: Sudhir Chella Rajan, Professor, Indian Institute of Technology, Chennai, India</p> <p><i>Stakeholders’ perceptions of bioenergy—Global coverage and policy implications</i> Pradipta Halder, Qu Mei, Javier Arevalo Pardo de Donlebun, Blas Mola-Yudego and David Gritten, University of Eastern Finland, Finland</p> <p><i>Agricultural residue-based power generation: A viable option in India</i> S Murali, R. K. Morchhale and Rajnish Shrivastava, Advanced Materials and Processes Research Institute, Bhopal, India</p> <p><i>Trade and investment in RETs: A study of BRICs</i> Varadurga Bhat, Karnatak University, Dharwad, India</p> <p><i>A k-means clustering algorithm-based assessment of demand for power in Indian villages—A case study of Tumkur district</i></p>

	<p>Deepak Paramashivan Kaundinya, Balachandra Patil and Ravindranath, <i>Indian Institute of Science, Bangalore, India</i></p> <p><i>Governing energy for sustainable development: An analytical framework for energy governance in India</i> Bibhu Prasad Nayak and Veena Aggarwal, <i>The Energy Research Institute, New Delhi, India.</i></p> <p><i>A methodology for regional allocation of energy saving target in China</i> Lixiao Zhang and Yueyi Feng, <i>Beijing Normal University, Beijing, China</i></p>
13.00–14.00 hrs	Lunch Break
14.00–16.00 hrs Seminar 1	<p>Session 7 A: Poster Presentations Chair: Dinesh Hegde, <i>Professor, National Institute of Industrial Engineering, Mumbai, India</i></p>
	<p><i>Analysis of energy use and potential for cleaner production in rice milling: An empirical study</i> K. M. Basappaji, <i>N.N. College of Engineering, Shimoga, India</i></p> <p><i>Unsustainable growth and the search for sustainable solutions</i> Sergio Ulgiati, Amalia Zucaro and Mark T. Brown, <i>Parthenope University of Naples, Naples, Italy</i></p> <p><i>Field efficiency determination using ICT: A case study of IT-Mediated agriculture extension system of Jharkhand, India</i> Rajashree Padhi and Shambhu kumar, <i>Jamia Millia Islamia, New Delhi, India</i></p> <p><i>Relationship between energy security crisis and Geo-political intervention in the case of Persian Gulf war</i> Prachi Yadav, <i>Amity Law School, New Delhi, India</i></p> <p><i>The development of India's natural gas market and the role of LNG—An analysis of emerging trends</i> Rajeev Ramesh Lala, <i>Jawaharlal Nehru University, New Delhi, India</i></p> <p><i>Energy efficiency market in India: Issues and challenges</i> A.V Nagavarma and J.C Prasad, <i>D.N.R. College, Bhimavaram, India</i></p> <p><i>Legal imperatives of non-conventional energies</i> K. Rajendra and A. Sridhar, <i>NALSAR University of Law, Hyderabad, India</i></p> <p><i>Energy and green job design using financial innovative techniques: Implications for developing countries</i> R. Venkatamuni Reddy, <i>Acharya Bangalore B School, Bangalore</i></p> <p><i>Demand side management: The lucrative strategy for the Indian electricity sector</i> S. Subramanian and G. Balachandran, <i>Institute for Social and Economic Change, Bangalore, India</i></p>

	<p><i>Modelling a thermodynamic-based comparative framework for urban sustainability: Incorporating economic and ecological losses into energy analysis</i> Gengyuan Liu, Zhifeng Yang and Bin Chen, Beijing Normal University, Beijing, China</p> <p><i>Domestic energy consumption pattern in Maharashtra with special reference to Thane district</i> Mary Vimochana and Nirmala Kannan, Ratnam College, Mumbai, India</p>
14.00–16.00 hrs SEANZA Room	<p>Session 7 B: Poster Presentations Chair: Vijaylaxmi Pandey, Associate Professor, IGIDR, Mumbai</p>
	<p><i>Renewable energy technologies for workshops on Indian railways</i> Suresh D. Mane and N. Nagesha, South Western Railway, India</p> <p><i>A critical analysis of nuclear power development in India & uranium demand forecast: A case study</i> Harishankar Vidyarthi, National Institute of Financial Management, Faridabad, India</p> <p><i>Life-cycle assessment of micro CHP systems fuelled by low-temperature geothermal and solar energy</i> Franco Ruzzenenti, Duccio Tempesti, Enrica Salvatici, Giampaolo Manfrida and Riccardo Basosi, University of Siena, place, Siena, Italy</p> <p><i>Energy security and legal aspects</i> Tanuj Agarwal, University of Petroleum and Energy Studies, Dehradun, India</p> <p><i>Energy sustainability issues in agricultural systems: Lessons from developed and developing countries</i> Patrizia Ghisellini, Marco Setti and Sergio Ulgiati, University of Bologna, Bologna, Italy</p> <p><i>Ecological debt: The cross-border embodied energy trade</i> Antonio Philomena and Karla Cozza, Instituto Justiça Ambiental, Brazil</p> <p><i>Proactive energy policy towards global energy security</i> Anand Pratikkumar, Gujarat Urban Development Company Ltd, Ahmedabad.</p> <p><i>Joining the Dots: Regulating off-grid renewable energy sector in India</i> Gopal K. Sarangi, Debajit Palit and Arabinda Mishra, TERI University, New Delhi, India</p> <p><i>Biotechnology can contribute to energy and environmental goals—A perspective</i> Akram Khan, Aligarh Muslim University, Aligarh, India</p> <p><i>Energy infrastructure and its impact on economic growth: A study from 1990–2008</i> Nilotpal Bal, Jawaharlal Nehru University, New Delhi, India</p>

	<i>The energy security problem of China and India in the radical changing of global energy pattern</i> Quan Yi and Jinghua Liu, Fujian Academy of Social Sciences, Fuzhou, China
15.30–16.00 hrs	Coffee Break
16.00–17.30 hrs Auditorium	Valedictory session Welcome: Prof. S. Mahendra Dev, Director, IGIDR, Mumbai Valedictory Address: Sri Suresh P Prabhu, MP (former Union Minister for Power, Government of India) Workshop Conclusion: Prof. Sergio Ulgiati, Parthenope University of Napoli, Italy Vote of Thanks: Prof. B. Sudhakara Reddy, IGIDR, Mumbai
18.00–19.30 hrs	Cultural Programme–Kuchipudi Dance Recital by Kuchipudi Kalakendra, Mumbai.

Sunday October 28	
9.00 hrs	City Tour