



Dr. Paritosh Nandi holds an M.Tech degree in Energy Science and Technology, and a Ph.D degree in Solar Energy Engineering from Jadavpur University, Kolkata. He is a Certified Energy Manager and a Certified Energy Auditor by the Ministry of Power, Government of India. In his professional career he has worked for leading solar energy companies in India and abroad. He has over 22 years of experience on Research and Development projects in solar energy application. He has a good command over design development of MW level solar firms in both SPV and CSP route. For the last seven years, he has been instrumental in developing Clean Development Mechanism (CDM) projects with various organizations.

**Renewable Energy Solution** is Dr. Nandi's passion and his focus is on grid-connected and off-grid projects on Solar PV and Solar Thermal including, but not limited to, projects of Jawaharlal Nehru National Solar Mission (JNNSM). Over the years Dr. Nandi has had substantial exposure to Concentrated Solar Power starting from Site Selection and Prefeasibility Report to Installation and Commissioning of Solar Power Plants.

In order to reduce the consumption of fossil fuels, **Green Building**, which comes under the purview of water and energy efficiency segment, is a sustainable solution. Dr. Nandi has worked on Green Building solutions as mandated by USGBC. Being a Certified Energy Auditor, he feels that **Energy Audit and Energy Management** issues are to be taken more vociferously in the country than what it is now since there is higher energy usage intensity per household in India when compared to western counterparts which is also suggestive of the fact that current wastage in India is much higher. Dr. Nandi takes keen interest in ESG which includes Carbon advisory services and Clean Development Mechanism (CDM).

Dr. Nandi is currently heading a group of companies promoted by him that are in the diversified businesses of Publications to Renewable Energy. He is also the President of a Charitable Trust that regularly undertakes **Corporate Social Responsibility (CSR)** projects for empowering rural women through a safer access to clean energy thereby promoting a better standard of life apart from implementing rural solar electrification systems, water heating and lighting through solar in old-age homes, schools and hospitals.

Dr. Nandi has authored several publications in Scientific Journals, Conference Proceedings and Technical Reports worldwide. He is also a referee for various international journals and acts as a **Reviewer** for the evaluation of research proposals related to the field of energy and energy efficiency especially those on solar energy devices and systems. He has been reviewing articles from journals like Energy, Solar Energy, Journal of Cleaner Production, Renewable and Sustainable Energy Review, the Journal of Renewable and Sustainable Energy of American Institute of Physics and so on. He is an **Editorial Board Member** of 'Energy and Power' from Scientific & Academic Publishing.

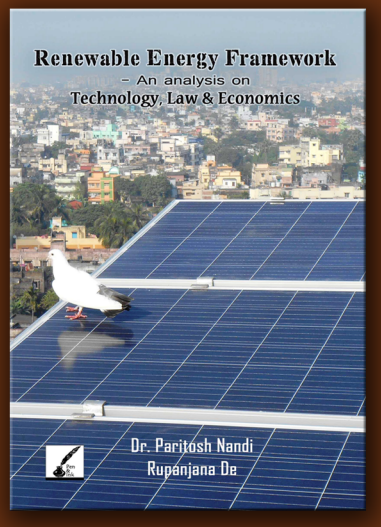
Dr Nandi has been **biographed** in Marquis Who's Who in Science and Engineering in 2007 and Marquis Who's Who in the World in 2008 and 2012.



**Dr. Paritosh Nandi**  
M. Tech, Ph.D.  
✉ paritoshnandi@yahoo.com  
☎ +91-8420046473  
DIN No. 00399421

Qualified  
Online Proficiency Test for  
Independent Directors  
conducted by IICA

## Book Authored



# Interviews

dailyo.in/bangla/variety/solar-renewable-mission-grid-energy-security-new-renewable-energy-ministry/story/1/23089.html

২০২২ সালে ১৭৫ গিগাওয়াট অর্চিরাচিত শক্তি উৎপাদন করার লক্ষ্য

২০২২ সালের মধ্যে যাতে ভারত ১৭৫ গিগাওয়াট অর্চিরাচিত শক্তি উৎপাদন করতে সক্ষম হয় সেই লক্ষ্যে ভারতের নিউ অ্যান্ড রিনিউয়েবল এনার্জি (এমএনআরই) মন্ত্রক বিভিন্ন দীর্ঘ ও বিশেষ কয়েকটি পদক্ষেপ করেছে। এই ১৭৫ গিগাওয়াট রিনিউয়েবল শক্তির মধ্যে প্রায় ১০০ গিগাওয়াট শক্তি হবে সৌরশক্তি। সৌরশক্তি উৎপাদন করার জন্য বিভিন্ন প্রকল্প চালু করা হয়েছে, যেমন - সৌর উদ্যান, আট সিটি প্রজেক্ট, সৌর গ্রিডস কাঙ্ক্ষিত (সোলার ডিস্ট্রিক্টস), সোলার ক্যামেল ব্যাঙ্ক, সৌর পাম্প এবং সৌর বৃক্ষ প্রকল্প। এখন বিশ্বের নানা জায়গায় পরিশোধিত (অপ্রচলিত) শক্তিকে কী করে আরও বাড়ানো যায় তা নিয়ে লক্ষ্যে নানা গবেষণা। এই বিষয়ে ভারতও পিছিয়ে নেই। তাই এই রিনিউয়েবল শক্তির উৎপাদন বৃদ্ধি ও তার সম্প্রসারণের মধ্য দিয়ে ভারত সরকার শক্তির প্রসার করতে চাইছে, এবং এই বিভাগটিরই আরও শক্তিশালী করণে চাইছে। এই প্রসারের কাজে সেওয়ান আরও ফার্মপ বন্ড, আঙ্গারের চাপপাশে জলবায়ু পরিবর্তন ঝুঁক, এনার্জি সিস্টেমস, এনার্জি ইনভেস্টমেন্টস, এনার্জি অ্যান্ড গ্রিডস, এনার্জি স্ট্রাকচারিস, এনার্জি ইনভেস্টমেন্টস, এনার্জি অ্যান্ড গ্রিডস প্রকল্প। জাতীয় সৌর মিশনের এই বিশাল লক্ষ্যমাত্রা অর্জনের কারণে জলবায়ু পরিবর্তন ঝুঁকি পদক্ষেপ করেছে। ২০১৭ জানুয়ারি থেকে ২০১৭ নভেম্বর পর্যন্ত জাতীয় ভারত

## Drive of the nation towards innovation: e-vehicles on the road!

The growth of EVs will lead to substantial changes in the automotive value chain, including technology, manufacturing systems, ownership models, distribution and aftermarket support.

**Q. To briefly share your view about the Electric Vehicle industry in India.**

A. A Wheels-of-usage revolution drives the nation towards innovation. The automotive sector will create more than 60 million additional jobs with nearly 200 billion USD annual revenue. The major push came from Government of India's policy announcement of 100% EV by 2030. Through the target deadline, the national leader, Government of India had notified FAME India Scheme (Faster Adoption and Manufacturing of (Hybrid & Electric) Vehicles in India) for implementation with effect from 1st April 2015, with the objective to support hybrid/electric vehicles market development and manufacturing ecosystem. The scheme has a focus areas i.e. Technology Development, Demand Creation, Fleet Policies and Charging Infrastructure. The FAME India Scheme is aimed at incentivizing all vehicle segments i.e. 2 Wheelers, 4 Wheelers, Passenger 4 Wheelers, Light Commercial Vehicles and Buses. The scheme covers Hybrid & Electric technologies like NEDD Hybrid, Strong Hybrid, Plug in Hybrid & Battery Electric Vehicles. Against the backdrop of initiatives of the national government and the initiative from other countries our thoughts got consolidated on venturing into EV/BEV/EVehicles Pvt Ltd which was registered with Startup India in 2017 and our prototype runs on e-cycles. 4 Wheelers have been successfully completed.

**Q. What do you have to say about Transportation being the key element in smart cities in the world?**

A. By 2050 around 55 core people will live in Indian cities and this large volume calls for a devise of smart mobility solution including carbon footprint to be met. In secondary connectivity including last mile connectivity. The key elements are livability including the

radiation and some part of its large-scale deployment in transportation sector makes good sense. With respect to component supply a transformational shift is expected with deployment of electric vehicles (EV). In regard to existing automotive parts suppliers. The growth of EVs will lead to substantial changes in the automotive value chain, including technology, manufacturing systems, ownership models, distribution and aftermarket support. Battery in EV cost around 10% and it is expected to come down with falling lithium ion battery prices from 2500 kWh to 1000 kWh. EV is relatively simpler to build with only 20 moving parts against around 2,000 in an internal combustion engine vehicle. With respect to current status update from Society of Manufacturers of Electric Vehicles (SMEV), Gujarat, West Bengal, Uttar Pradesh, Rajasthan and Maharashtra have emerged as the top five states in terms of e-vehicle sales. SMEV also surveyed that all electric 2 wheelers and 4 wheelers which were sold between 2016 and 2017 and are successfully running. The study showed that 92% vehicles were sold in Maharashtra, 2388 in Rajasthan, 2467 in UP, 2946 in West

degrades throughout the operating period. There are other energy solutions in terms of charging the EV with Solar or other renewable energy sources. Solar Chargers are already a reality. First Generation Biofuels (Ethanol, Biodiesel and Biogas) will have a share around 2% of road transport fuel. Government policy on biofuels remains in required for furtherance of the said share. Advanced Biofuel like Cellulosic ethanol, Bio Synthetic gas, Algae bio-fuels and Sugar based hydrocarbons are in the R&D stage and these can be future transport fuels of cost economics are sustainable.

**Q. What are your thoughts on Security in the Transport Sector?**

A. Air transport with the increasing use of electronic systems and internet connectivity, cyber-attacks on Aircraft systems in flight will have a significant consequence on the entire air transport ecosystem. Transportation hubs for air, sea and rail have been local points for terrorist threats and other crises such as people and drug trafficking. A number of simulation activities have been undertaken to ensure facilities are robust to support passenger flows, such as check-in gates.

**Q. By 2050 around 55 core people will live in Indian cities and this large volume calls for a devise of smart mobility solution reducing carbon footprint to be met. In secondary connectivity including last mile connectivity.**

Dr. Paritosh Nandi  
Rupanjana De

## EDUCATION

- Ph.D ( Engineering) on Solar Energy Application from Jadavpur University, Kolkata
- M.Tech in Energy Science and Technology from Jadavpur University, Kolkata

## CERTIFICATION

- Certified Energy Auditor and Certified Energy Manager by the Bureau of Energy Efficiency (BEE), Ministry of Power, Government of India
- Advanced Executive CDM Training Programme by Carbon Minus India
- Energy Conservation Workshop by Indian Institute of Chemical Engineers
- Certification on Lead Auditor course for ISO 9001:2000 in 2005 from SGS
- Diploma in French Language from Jadavpur University

## PROFESSIONAL SUMMARY

- Extensive research onto the field of Renewable energy, Solar Thermal & Photovoltaic applications and Energy Conservation.
- Implemented business case with prominence on NPV, IRR and RoI
- Solid exposure on Energy Sectors, Power Sector Regulations, ISO 14001 & 9001 regulations & functionalities
- Project management on Energy Efficiency, Regulatory Affairs, Carbon Market, Requirements Gathering, System Appreciation, Strategy planning, Domain & Business Consulting

## CORE COMPETENCIES

- Sustainability, Climate Change, Renewable Energy, Clean Development Mechanism (CDM) functionality, Solar Photovoltaic (SPV), Solar Thermal, Concentrated Solar Power (CSP), Energy Management, Energy Audit
- Technical & Financial analysis of Solar Power Plant Projects, Expertise on general CDM aspects, CDM project development and operation

## PROFESSIONAL ACCOMPLISHMENT

- Senior Research Fellow (SRF) with The Ministry of Non-Conventional Energy Sources, Govt. of India from July 2001 to May 2003
- Senior Research Fellow (SRF) with The Council of Scientific and Industrial Research (CSIR), Govt. of India from June 2003 to June 2006
- Design and development of Solar Heating System for Industry, Department of Science and Technology, Govt. of West Bengal, India
- Development of Solar Thermal System for Industry, Department of Science and Technology, Government of India

## OTHER ACCOMPLISHMENT

- Editorial Board Member of Energy & Power - an international Journal by Scientific and Academic Publishing
- Adjudged winner for writing technical paper for [www.energymanagertraining.com](http://www.energymanagertraining.com)
- Selected judge for State level Science Seminar for school students and college level science seminar organized on Rajiv Gandhi Amar Urja Divas (Rajiv Gandhi Renewable Energy Day)
- Resource faculty for UGC Refresher course at Jadavpur University, Kolkata
- Biographed in
  - Marquis Who's Who in Science and Engineering, 2007
  - Marquis Who's Who in the World, 2008
  - Marquis Who's Who in the World, 30th Edition, 2012

## REVIEWER

- Reviewer of technical manuscript for Solar World Congress 2005, an international conference by International Solar Energy Society and American Solar Energy Society, Orlando, Florida in August 2005
- Regular Reviewer of international Journals:
  - Energy
  - Renewable and Sustainable Energy Review
  - Journal of Cleaner Production
  - Solar Energy
  - Journal of Renewable and Sustainable Energy of American Institute of Physics

## EDITOR

- Editor (Technical) for the magazine Sustainable Energy Review

## MEMBERSHIPS

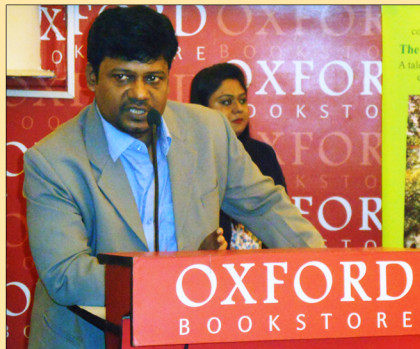
Life Member of Indian Association for the Cultivation of Science  
Life Member of Solar Energy Society of India  
Ex-member of Institute of Science Education and Culture



# Speaker, Faculty and Trainer



Speaking at the session 'Eco-system popularising EVs in India' at the 4th Smart Cities India 2018 Expo held at New Delhi



Speaking at the Book Launch ceremony at Oxford Bookstore, Kolkata



Inaugurating a workshop on Entrepreneurship at Durgapur Institute of Advanced Technology & Management (DIATM), Durgapur in 2016



As a Speaker at 'Green Audit & Our Environment', a UGC sponsored National Seminar organised by The Bhowanipore Education Society College, Kolkata jointly with the University of Calcutta in 2016



Receiving a memento for speaking at the Mega Event of the 3rd Transport India 2018 Expo in New Delhi



Receiving a memento for speaking at a workshop at the Indian Institute of Engineering, Science & Technology (IIST), Shibpur in 2019



As a Judge of one of the events at the Vaidyutak 2019 Fest at IIST, Shibpur



With the students of the School of Management Sciences (SOMS) at IIST, Shibpur after a delivering a Guest Lecture in 2018



Delivering a lecture as a Faculty for Executive Development Programme, for 40 managers across Power Sector, organised by CESC Limited at International Management Institute (IMI), Kolkata in 2015

## Directorships and other Positions

Director, EnVERT E-Vehicles Private Limited

Director, EnVERT Agro and Food Private Limited

Director, Afield Touriosity Private Limited

Director, Nandi Resources Generation Technology Private Limited

Independent Director, Genu Path Labs Limited

President, EnVERT Foundation



# CSR Activities



▲ A group photo with the happy inmates of an Old Age Home in Silchar, Assam after successful installation of Solar Lighting and Water-heating System in 2013.



▲ A Unique Art Workshop was organised by EnVERT Foundation at Princep Ghat, Kolkata in August 2016, in the presence of renowned Spanish painter Joaquin Gonzalez Dorao for underprivileged children and struggling artists of Kolkata. Seen here Dr. Paritosh Nandi, President of EnVERT Foundation and the artist giving away mementos and certificates to the participants.

Touriosity, in collaboration with EnVERT Foundation, gifted to the city of Kolkata a specially designed tram in 2016. Named as the 'Wheels of Joy' this light green tram was illustrated with 65 attractions of the city for idea of first time visitors. It plies on all the three tram routes of Kolkata currently. ➡



## Core Competencies

- Sustainability
- Clean Development Mechanism
- Concentrated solar power plant
- Electric vehicle batteries
- Energy audit
- Energy efficiency
- Energy engineering
- Energy management
- Entrepreneurship
- EV charging
- Green building
- Industrial process heat
- Internet of Things
- Marketing strategies
- Publishing
- Renewable energy
- Rooftop solar PV
- Solar energy
- Solar photovoltaic
- Solar thermal energy
- Strategy Consulting
- Sustainable Tourism
- U.S. Green Building Council

## Projects

Discussing the feasibility of a Grid-connected solar roof-top system with a Nigerian client in Kolkata in 2018 ➡





## PUBLICATIONS: CONFERENCES / WORKSHOPS / SYMPOSIUMS / JOURNALS / BOOKS

1. Paritosh Nandi, *Solar Thermal System for CDM in India, CDM Business Opportunity*, Manual by Dimension Engineering Consultants, an Indian Renewable Energy Development Agency Partner, 2003
2. Paritosh Nandi, *Duties and responsibilities of appointed Energy Managers under the Energy Conservation Act, 2001*, www.energymanagertraining.com by Bureau of Energy Efficiency, Ministry of Power, Govt. of India, August 2004
3. Paritosh Nandi, *The Association of Indian Energy Managers*, www.energymanagertraining.com by Bureau of Energy Efficiency, Ministry of Power, Govt. of India, June 2004
4. Paritosh Nandi and Sujay Basu, *Special Purpose Solar Thermal System as A Clean Development Mechanism Candidate In GHG Emission Reduction*, Proceedings of ECOS 2005 Conference, Volume III, Pg. 1541. The Norwegian University of Science and Technology (NTNU), Trondheim, June 20-22, 2005
5. Paritosh Nandi and Sujay Basu, *Heat exchanger simulation of solar concentrating system for food processing industry*, ECOS 2006, Greece, Crete, Greece, 12-14 July 2006
6. Paritosh Nandi and Sujay Basu, *Application of solar heating system using parabolic concentrator for food processing industry*, World Renewable Energy Congress IX and Exhibition Florence, Italy, 19-25 August 2006
7. Paritosh Nandi and Rupanjana De, *Production of sweetmeat utilizing solar thermal energy: Economic and thermal analysis of a case study*, Journal of Cleaner Production, 15 (2007) 373-377
8. Paritosh Nandi, *Potential Assessment of Concentrating Solar Power In India with an Emphasis on India's Opportunity*, Proceedings of SEEP 2009, 12-15 August 2009, Dublin, Ireland.
9. Paritosh Nandi and Dipankar Dey, *Suzlon Energy: The Indian Multinational*, ICFAI Journal of Environmental Economics, November 2007.
10. Paritosh Nandi and Sujay Basu, *A review of energy conservation initiatives by the Government of India*, Renewable and Sustainable Energy Review, 12(2008) 518-530.
11. Paritosh Nandi, *A detailed project report on Concentrated Solar Power Technologies - A feasibility study for Moserbaer Photovoltaic Limited*, R&D Department of Moserbaer Photovoltaic Limited, 2008
12. Paritosh Nandi, *Solar Thermal Energy Utilization in Food Processing Industry in India*, Pacific Journal of Science and Technology, May 2009.
13. Paritosh Nandi and Sujay Basu, *Assessment of solar thermal power generation technologies and an investigation on India's Opportunity*, Proceedings of Dubrovnik Conference 2009
14. Paritosh Nandi and Sujay Basu, *Zero Energy Building with Special Reference to Renewable Energy Integration*, CISBAT, 2011
15. Paritosh Nandi and Sujay Basu, *High Temperature Thermal Energy Storage: A Techno-economic Analysis*, Proceedings of ISES Solar World Congress 2011
16. Paritosh Nandi, *Renewable Energy Certificate Trading: It's Economic Efficiency in the Indian Market*, ECOS 2011, Serbia
17. Paritosh Nandi, *Sustainable Forestry in the light of Rio+20 Conference*, Touriosity Travelmag, August-September, 2012
18. Paritosh Nandi, *Deserts - The Hub for Future Energy*, TouriosityTraveirmag, December, 2012
19. Paritosh Nandi, *Potential and Opportunity of Concentrated Solar Power (CSP) in India: A Review*, Sustainable Energy Review, July, 2013
20. Paritosh Nandi, *Zero Energy Building (ZEB) in Reference to Renewable Energy Integration*, Sustainable Energy Review, January, 2013
21. Paritosh Nandi, *A Review on REC Mechanism in India*, Sustainable Energy Review ( RNI registered magazine), Vol. 1, No. 3, 2013, pp 32-36
22. Paritosh Nandi, *Renewable Energy Certificate Trading: It's Economic Efficiency in the Indian Market*, Sustainable Energy Review (RNI registered magazine), Vol. 4, No. 1, 2016, pp 12-15
23. Paritosh Nandi, *Green Audit and our Environment*, UGC Sponsored National Seminar On Environmental Awareness: Demand of the Day, Kolkata, 2016