Dr. Ashish Kumar Sharma

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Career objective: To make a distinguished mark in the field of Renewable Energy, Policy and Planning especially in Solar Power Generation (Thermal & PV) Industrial Process Heating.

Interest Areas: Solar Thermal Systems (Industrial Process Heating & Power Generation), Solar Photovoltaic Power Generation (Ground Mounted, Rooftop & Floating Solar), Renewable Energy Policy and Planning, Economics & Financing of Renewable Energy Systems, Grid Energy Storage (Battery), Heat Transfer.

Academics:

- ✓ Ph.D. (April, 2018) form Centre for Energy Studies, Indian Institute of Technology Delhi, Hauz Khas, New Delhi, 110016, India

  Title of Ph.D. Thesis "***Potential and Financial Feasibility Assessment of solar industrial process heating in India***".

- ✓ Master of Technology in "Energy Technology" 2010-2012 from Centre for Energy and Environment, National Institute of Technology Hamirpur, HP 177001, India

- ✓ B. Tech in Mechanical Engineering 2006-2010 from Punjab Technical University Jalandhar, Punjab, India

Professional Experience

- ✓ **Consultant** for Technical and regulatory support on rooftop solar projects: International Finance Corporation (IFC) The World Bank Group, Worldmark 3, Aerocity, New Delhi from November, 2017 to till date.

Projects (Worked)

- Proliferation of Grid Connected Rooftop Solar in Odisha
- Replication of Grid Connected Rooftop Solar in Maharashtra
- Proliferation of Rooftop Solar Projects in Maharashtra
- Development of GHG Emissions Mitigation Calculator for the Solar Rooftop Systems (H&M, Bangladesh)

Research publications (First Author)

- **Sharma AK,** Sharma C, Mullick SC. Kandpal TC., 2016. Carbon mitigation potential of solar industrial process heating: paper industry in India. Journal of Cleaner Production 112: 1683-1691.

- **Sharma AK,** Sharma C, Mullick SC, Kandpal TC., 2017. Potential of solar industrial process heating in dairy industry in India and consequent carbon mitigation. Journal of Cleaner Production 140; 714-24.
- **Sharma AK,** Sharma C, Mullick SC, Kandpal TC., 2017. GHG mitigation potential of solar industrial process heating in producing cotton-based textile in India. Journal of Cleaner production 145; 74-84.
- **Sharma AK,** Sharma C, Mullick SC, Kandpal TC., 2017. Solar industrial process heating: A review. Renewable and Sustainable Energy Reviews 78; 124-137.
- **Sharma AK,** Sharma C, Mullick SC, Kandpal TC., 2018. Incentives for promotion of solar industrial process heating in India: a case of cotton-based textile industry. Clean Technologies and Environmental Policy, 20, 4; 813-823.
- **Sharma AK,** Sharma C, Mullick SC, Kandpal TC., 2018. Financial viability of solar industrial process heating and cost of carbon mitigation: A case of dairy industry in India Sustainable Energy Technologies and Assessment, 27; 1-8.
- **Sharma AK,** Sharma C, Mullick SC, Kandpal TC., 2019. Financial evaluation of solar industrial process heating for cotton-based textile production in India ***(Communicated)***

Co-Authored

- Sharma C, **Sharma AK,** Mullick SC, Kandpal TC., 2015. Identifying Optimal Combinations of Design for DNI, Solar Multiple and Storage Hours for Parabolic Trough Power Plants for Niche Locations in India. Energy Procedia 79; 61-66.
- Sharma C, **Sharma AK,** Mullick SC, Kandpal TC., 2015. Assessment of solar thermal power generation potential in India. Renewable and Sustainable Energy Reviews 42; 902-912.
- Sharma C, **Sharma AK,** Mullick SC, Kandpal TC., 2016. A Study of the Effect of Design Parameters on the Performance of Linear Solar Concentrator based Thermal Power Plants in India. Renewable Energy 87; 666-675.
- Sharma C, **Sharma AK,** Mullick SC, Kandpal TC., 2017. Uncertainty in estimating renewable energy utilisation potential: a case of solar thermal power generation in India. International Journal of Ambient Energy 38, 8; 765-773.
- Sharma C, **Sharma AK,** Mullick SC, Kandpal TC., 2017. Solar thermal power generation in India: effect of potential incentives on unit cost of electricity. International Journal of Sustainable Energy 36, 8; 722-737.
- Sharma C, **Sharma AK**, Purohit I, Mullick SC, Kandpal TC., 2018. Comparison of solar radiation data sources for design and performance appraisal of CSP systems in India.International Journal of Ambient Energy 39, 6; 594-605.
- Sharma C, **Sharma AK**, Mullick SC, Kandpal TC., 2018. Cost reduction potential of parabolic trough based concentrating solar power plants in India. Energy for Sustainable Development 42; 121-128.
- Sharma AK, Sharma C, Mullick SC, Kandpal TC. Financial attractiveness of solar Industrial process heating in India. Presented at World Renewable Energy Congress XVI 5-9 Feb,2017, Perth Western Australia

Publications & Participation in international conferences:

- **Sharma AK,** Sharma C, Mullick SC, Kandpal TC., 2015. Potential of Solar Energy Utilization for Process Heating in Paper Industry in India: A Preliminary Assessment. Energy Procedia 79; 284-89. (Research paper presented in "***International Conference on Alternative Energy in Developing Countries and Emerging Economies (2015 AEDCEE) : May 28-29, 2015* at Sheraton Grande Sukhumvit Hotel, Bangkok, Thailand.**
- **Sharma AK,** Sharma C, Mullick SC, Kandpal TC., 2017. Effect of Incentive on the Financial attractiveness of solar Industrial process heating in India. Renewable Energy and Environmental Sustainability 2 33; 1-5. ***Presented in World Renewable Energy Congress XVI 5-9 Feb,2017, Perth Western Australia***

Participation in workshops & short term courses:

- Short course on "Financing of Renewable Energy Technologies" from December 12-15, 2012, under the aegis of Foundation for Innovation and Technology Transfer at IIT Delhi.
- Short course on "Solar Radiation and Solar Thermal Technologies" from April 18-24, 2013, under the aegis of Foundation for Innovation and Technology Transfer at IIT Delhi.
- Short course on "Economics and Financing of Renewable Energy Technologies" from July 16-19, 2014, under the aegis of Foundation for Innovation and Technology Transfer at IIT Delhi.
- Short course on "Solar Technologies for Industrial Process Heat and Power" from April 20-22, 2015. Organized by Department of Energy Science and Engineering, IIT Bombay.

Relevant software knowledge

- System Advisor Model (SAM)
- PVsyst
- RETScreen
- HOMER

Courses taken (in Ph.D)

- Solar energy utilization (Credit)
- Non-conventional energy sources (Audit)
- Heat transfer (Credit)
- Solar Thermal Power Generation (Audit)
- Economics and planning of energy systems (Audit)
- Energy ecology and environment (Audit)

Personal Details:

Father name: R.C. Sharma
Date of Birth: 17 April, 1988
Marital status: Married
Languages known: English, Hindi
Permanent address: Village Domehra, P.O. Domehar, Distt. Bilaspur (HP) 174027

Ashish Kumar Sharma

References:

1. Prof. Tara C. Kandpal
   Head: Centre for Energy Studies,
   IIT Delhi, Hauz Khas, New Delhi, India 110016.

   Email: tarak@ces.iitd.ac.in

2. Dr. Subhash C Mullick
   Professor (Retired): Centre for Energy Studies,
   IIT Delhi, Hauz Khas, New Delhi, India 110016.

Email: mullick.iitd@gmail.com

3. Dr. Ishan Purohit
   Energy Specialist, International Finance Corporation,
   The World Bank Group, Worldmark 3, Aerocity, New Delhi, India 110037

Email: ipurohit@ifc.org