

Archana M. Ghodeswar

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EDUCATION	R&D Associate staff member (Integrated Building Deployment and Analyses, ORNL)- Postdoctoral Research Associate (Combined Heat and Power, ORNL)- Ph.D. (Economics) , minor: Public Policy : Georgia Institute of Technology Atlanta, GA: “Essays on Environmental, Fiscal, and Demand-Side Policies in Electricity Markets” Masters (Economics) : Georgia Institute of Technology, Atlanta, GA Masters in Power Systems Government College of Engineering, Aurangabad (MR), India <i>From 1999 to 2016- I worked in various positions in electricity utilities as described in the professional experience section)</i> Bachelor Electrical, Electronics and Power Engineering Government College of Engineering, Aurangabad (MR), India	Apr. 24-present Oct. 22-Mar. 24 2016-22 2016-19 2000-11 1999-2016 1994-98
RESEARCH AREAS	Energy and Environmental Economics, Energy equity, Public policy, Sustainable Energy Systems, Environmental Justice	
SKILL SETS	Techno-economic analysis, Policy analysis, Cost benefit analysis, Econometric analysis, Data analysis in energy and environmental field.	
COMPUTER SKILLS	Statistical software – Stata (proficient), R (moderate), Python (beginner) Data visualization and Analytical Tool – Tableau (proficient) MS Excel (advance level), Remote sensing and GIS (latest work) using R	
PROFESSIONAL SKILLS *** (See last page)	Proficient in using tools: VERIFI (ORNL), CDF calculator (NREL), ICE calculator (NREL), EJSCREEN (EPA), CEJST (CEQ), IMPLAN, REMI, OpenLCA, OneClick LCA. Key role to develop Fuel SCC Calc for State and Community Energy Program, (SCEP) using MS Excel at ORNL.	
PUBLISHED PAPERS	Clean Energy Technology Applications on US Mine Land: Technical Analysis- ORNL report co-authored with Edgar Lara-Curzio and others in ORNL, NREL and LBNL - https://www.osti.gov/biblio/1996689 Trading one waste for another? unintended consequences of fly ash reuse policy in the Indian electric power sector: job market paper published	2023 2022

	Energy Policy: joint with Matthew Oliver. (website link to published paper)	
PROFESSIONAL EXPERIENCE	<p>Maharashtra State Electricity Distribution Company Limited, India</p> <p>A) Executive Engineer/Operations & Maintenance (Division Head)</p> <p>Planned and executed a critical 33KV ring main system for all 33/11KV substations, leading the team to initiate measures reducing distribution energy loss from 15% to 13.5%. Designed and implemented innovative initiatives to reduce revenue arrears by 10% from Rs. 32.3 million to Rs. 29.4 million.</p> <p>Conducted an extensive energy audit for a 0.5 MW plasma power plant, suggesting key corrective measures in the detail energy audit report resulting in a 40% decrease in energy loss. Responsible for the net metering and billing of consumers turning to prosumers. Maharashtra was the first state in India to implement such a project where I played an important role in the initial stage in 2016.</p>	2009-16
PUBLISHED PAPERS	<p>Clean Energy Technology Applications on US Mine Land: Technical Analysis- ORNL report co-authored with Edgar Lara-Curzio and others in ORNL, NREL and LBNL - https://www.osti.gov/biblio/1996689</p> <p>Trading one waste for another? unintended consequences of fly ash reuse policy in the Indian electric power sector: job market paper published Energy Policy: joint with Matthew Oliver. (website link to published paper)</p> <p>Quantifying the economic costs of power outages due to natural disasters: a systematic review: joint with Mahabir Bhandari and Bruce Hedman (<i>accepted for publishing in Renewable and Sustainable energy reviews</i>)</p>	<p>2023</p> <p>2022</p> <p>2024</p>
WORKING PAPERS	<p>Assessing the Efficacy of Environmental Justice Tools in the Clean Energy Transition: A Case Study of the Social and Economic Impacts of Abandoned Coal Mines: joint with Corsair Hope <i>under internal review at ORNL.</i></p> <p>Barriers and opportunities for Industrial Energy Efficiency and Decarbonization in the US: A Systematic Review: joint with Abbas Ahmad, Subodh Choudhary, Thomas Wenning. <i>in draft stage.</i></p> <p>Do Coal Plant Closures Serve Environmental Justice to Black Communities? Health Outcomes from a Natural Experiment: joint with Marilyn Brown (<i>Draft ready for publication</i>)</p> <p>Which Financial Factors Improve the Performance of Electricity Distribution Utilities? Evidence from India: joint with Usha Nair-Reichert and Matthew Oliver (<i>Included as thesis's 2nd chapter- ready to send for publication</i>)</p> <p>Energy economics of internet of things (IoT): Analysis of survey data from Ireland (<i>Included as thesis's 3rd chapter</i>)</p> <p>Impact of societal factors on under five years child mortality collaborated with Dr.Smita Pakhale, and Preshit Ambade, Ottawa Hospital Research Institute- (<i>sent for publication to Lancet</i>)- https://ssrn.com/abstract=4531646</p>	<p>2023</p> <p>2023</p> <p>2020</p> <p>2021</p> <p>2019</p>

HONORS AND AWARDS	Essay competition runner-up in the Ivan Allen College CRIDC Conference in Atlanta- Second award, \$1000.	2021
	Winner of “ Energy Case Competition – 2020 Southeastern Energy Conference” - “Case presentation on strategies to alleviate energy poverty along Atlanta beltline”	2020
	Passed LEED Green Associate Exam (Leadership in Energy and Environmental Design) conducted by USGCB	2019
	3MT Thesis Competition ” finalist- “Industrial Ecology: Alert today, Alive tomorrow”	2019
	Chhatrapati Shahu Maharaj Overseas Scholarship”, Government in India- \$173,250. (spread in four years)	2016
	Best Government Officer Award”, Chandrapur District Journalist Association	2015
	India Power Award-2014 , National Council of Power Utilities, India for Best woman’s contribution to power sector	2014
PROFESSIONAL TRAINING	Feeder Energy Management System Training, India Environment Awareness & Management Training, India Demand Side Management Training, India Solar Power Generation Avenues in India- Technical & Financial Feasibility Training, New Delhi Revenue Management & Loss Reduction Training, India Network Information Management System Training, India	2009-2016
PAPER	Panel session moderator: Nonenergy Impact of weatherization program: NHPC 2024, Minnesota	2024
PRESENTED	31 st Ivan Allen College CRIDC Conference, Atlanta, GA	2020
	88 th International Atlantic Economic Conference, Miami, FL	2019
	32 nd Ivan Allen College CRIDC Conference, Atlanta, GA	2021

VERIFI (ORNL): Energy efficiency improvement
CDF calculator (NREL): Customer Damage Function- power outage cost tool
ICE calculator (NREL): Interruption Cost Estimate
EJSCREEN (EPA): Environmental Justice screening tool
CEJST (CEQ): Climate and Economic Justice Screening Tool developed by the Council on Environmental Quality.
FuelSCCCalc: Calculates the modified fuel price indices considering cost of carbon as per WPN-22-10.
IMPLAN and REMI: Macroeconomic impact quantifying tools
OpenLCA and OneClickLCA: LCA tools